DATE: August 18, 2020

TO: Honorable Mayor & City Council

FROM: John Muns, Chair, Planning & Zoning Commission

SUBJECT: Results of Planning & Zoning Commission Meeting of August 17, 2020

AGENDA ITEM NO. 1A - PUBLIC HEARING
ZONING CASE 2019-017
APPLICANT: LA-DF INVESTMENT FUND 8, LLC

Request for a Specific Use Permit for Independent Living Facility on 11.6 acres located on the south side of State Highway 121, 545 feet west of Kathryn Lane. Zoned Planned Development-104-Regional Commercial and Planned Development-476-Regional Employment and located within the State Highway 121 Overlay District. Project #ZC2019-017.

APPROVED: 6-2 **DENIED:** _____ **TABLED:** _____

The Commissioners voting in opposition expressed that this in an inappropriate location for an independent living facility citing concerns with the impacts of surrounding land uses.

Speaker Card(s) Received	Support:	9	Oppose:	0	Neutral:	0
Letters Received Within 200' Notice Area:	Support:	0	Oppose:	0	Neutral:	0
Petition Signatures Received:	Support:	0	Oppose:	0	Neutral:	0
Other Responses:	Support:	9	Oppose:	0	Neutral:	1

STIPULATIONS:

Recommended for approval as follows: (Additions are indicated by underlining; deletions are indicated by strike-through)

Recommended for approval with the consideration noted above and the following stipulations:

1. A maximum of 252 independent living facility units are allowed subject to the following restrictions:

    a. Independent living facility buildings must be set back at least 65 feet from the front property line. All units must be set back at least 75 feet from the front property line.

b. The property will be constructed substantially and functionally consistent with Figure 2. Project Day-Night Level (Ldn) Roadway Noise Exposure as shown in the addendum attached to Ordinance 2020-(number incorporated upon passage).

c. Building IV must be constructed substantially and functionally consistent with the building elevations and wall sections as shown in the addendum attached to Ordinance 2020-(number incorporated upon passage).

d. Air intake vents must be located as far away from the expressway as practical.

e. All building mechanical rooms must be located on the southern side of buildings and face away from State Highway 121.

2. If the project has not obtained a building permit and commenced physical construction activity on site before January 1, 2026, the environmental health analysis expires and must be updated before the City will issue further project approvals. The updated environmental health analysis may recommend enhanced mitigation standards and, if so, this matter must be brought to the Planning & Zoning Commission for consideration of the required noise mitigation. The Planning & Zoning Commission may not impose conditions to the SUP that are unrelated to noise mitigation, including but not limited to the number of units. Changes required by the Planning & Zoning Commission as a result of updated noise mitigation requirements will be noted on the series of plans. If the updated environmental health analysis does not recommend enhanced mitigation standards, no further consideration by the Planning & Zoning Commission is required. If minimal mitigation standards are recommended, then the developer may work with staff to integrate those measures into the plans.

3. Cross access will be constructed to Custer 121 Addition, Block 1, Lot 4R.

FOR CITY COUNCIL MEETING OF: September 14, 2020 (To view the agenda for this meeting, see www.plano.gov)

PUBLIC HEARING - ORDINANCE

CF/dz

xc: Robert Yu, LA-DF Investment Fund 8, LLC
Neda Hosseiny, Kimley-Horn
Kent Conine, Conine Residential Group
Meg Conine, Conine Residential Group
William Dahlstrom, Jackson Walker, LLP
Jeanna Scott, Building Inspections Manager

https://goo.gl/maps/81UdTyJsBXJfCPzY7

CITY OF PLANO

PLANNING & ZONING COMMISSION

August 17, 2020

Agenda Item No. 1A

Public Hearing: Zoning Case 2019-017

Applicant: LA-DF Investment Fund 8, LLC

DESCRIPTION:

Request for a Specific Use Permit for Independent Living Facility on 11.6 acres located on the south side of State Highway 121, 545 feet west of Kathryn Lane. Zoned Planned Development-104-Regional Commercial and Planned Development-476-Regional Employment and located within the State Highway 121 Overlay District. Project #ZC2019-017.

REMARKS:

Zoning Case Timeline

The applicant submitted an application requesting a Specific Use Permit (SUP) for Independent Living Facility on September 12, 2019. The request was tabled by the Planning & Zoning Commission on October 21, 2019; November 4, 2019; December 16, 2019; February 3, 2020; and March 2, 2020, to provide additional time for the applicant to refine their request and associated noise and air pollution study. On April 6, 2020, the Planning & Zoning Commission voted 4-3 to deny the SUP request.

The applicant appealed the denial to City Council who held a public hearing on July 27, 2020. City Council voted unanimously to remand the SUP request back to the Planning & Zoning Commission. The applicant has modified their request and related concept plan (agenda item 1B) in order to address concerns expressed by the Commission at the April 6, 2020, meeting.

Request

The applicant is requesting an SUP for Independent Living Facility on a vacant property. The existing zoning is Planned Development-104-Regional Commercial (PD-104-RC) and Planned Development-476-Regional Employment (PD-427-RE). The RC district is an architectural and cultural district intended for use in conjunction with an RE district in high visibility locations which are of regional cultural and architectural importance to the community due to its significance for generating economic investment. It provides for

retail and service uses at appropriate nodes within the corridor of specified tollways and expressways serving Plano and surrounding communities, in addition to office and limited manufacturing uses. The district's standards are designed to ensure compatibility between various uses within a corridor and surrounding residential neighborhoods.

The RE district is an architectural and cultural district intended to provide for office and limited manufacturing uses in high visibility locations which are of regional cultural and architectural importance to the community due to its significance for generating economic investments that are consistent with the regional status of certain tollways and expressways serving Plano and surrounding communities. Some retail uses are also appropriate when developed in conjunction with the primary uses. The district's standards are designed to ensure compatibility between the various uses within a corridor and surrounding residential neighborhoods.

A planned development district provides the ability to amend use, height, setback, and other development standards at the time of zoning to promote innovative design and better development controls to both off and onsite conditions.

An independent living facility is defined as a development providing dwelling units specifically designed for the needs of elderly persons. In addition to housing, this type of facility may provide convenience services, such as meals, housekeeping and transportation, and community facilities, such as central dining rooms and activity rooms. Independent living facilities require approval of a Specific Use Permit (SUP) in the RC and RE zoning districts.

An SUP authorizes and regulates a use not normally permitted in a district, which could in a particular case benefit the general welfare, provided that adequate development standards and safeguards are established. Additionally, Section 6.100 (Specific Use Permits) of Article 6 (Specific Use Permits and Certificates of Occupancy) states the following:

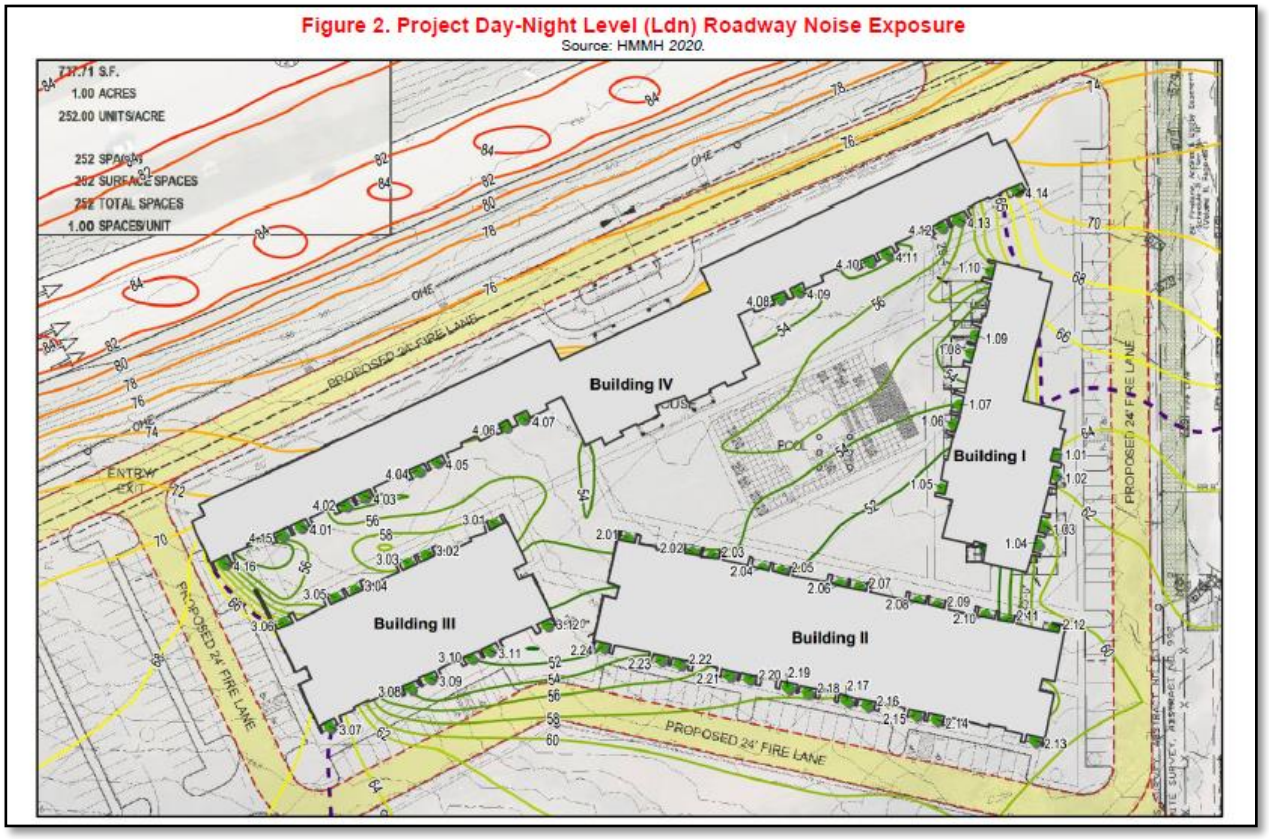
> *"The Planning & Zoning Commission in considering and determining its recommendations to the City Council on any request for a specific use permit may require from the applicant plans, information, operating data, and expert evaluation concerning the location, function, and characteristics of any building or use proposed. The City Council may, in the interest of the public welfare and to insure compliance with this ordinance, establish conditions of operation, location, arrangement, and type and manner of construction of any use for which a permit is authorized. In authorizing the location of any of the uses listed as specific use permits, the City Council may impose such development standards and safeguards as the conditions and locations indicate important to the welfare and protection of adjacent property from noise, vibration, dust, dirt, smoke, fumes, gas, odor, explosion, glare, offensive view, traffic, or other undesirable or hazardous conditions."*

The subject property is undeveloped. The property will gain access from the State Highway 121 frontage road and from the adjacent mini-warehouse development to the east. A concept plan, Plano Kathryn Senior Living, Block A, Lot 1, accompanies this request as Agenda Item No. 1B.

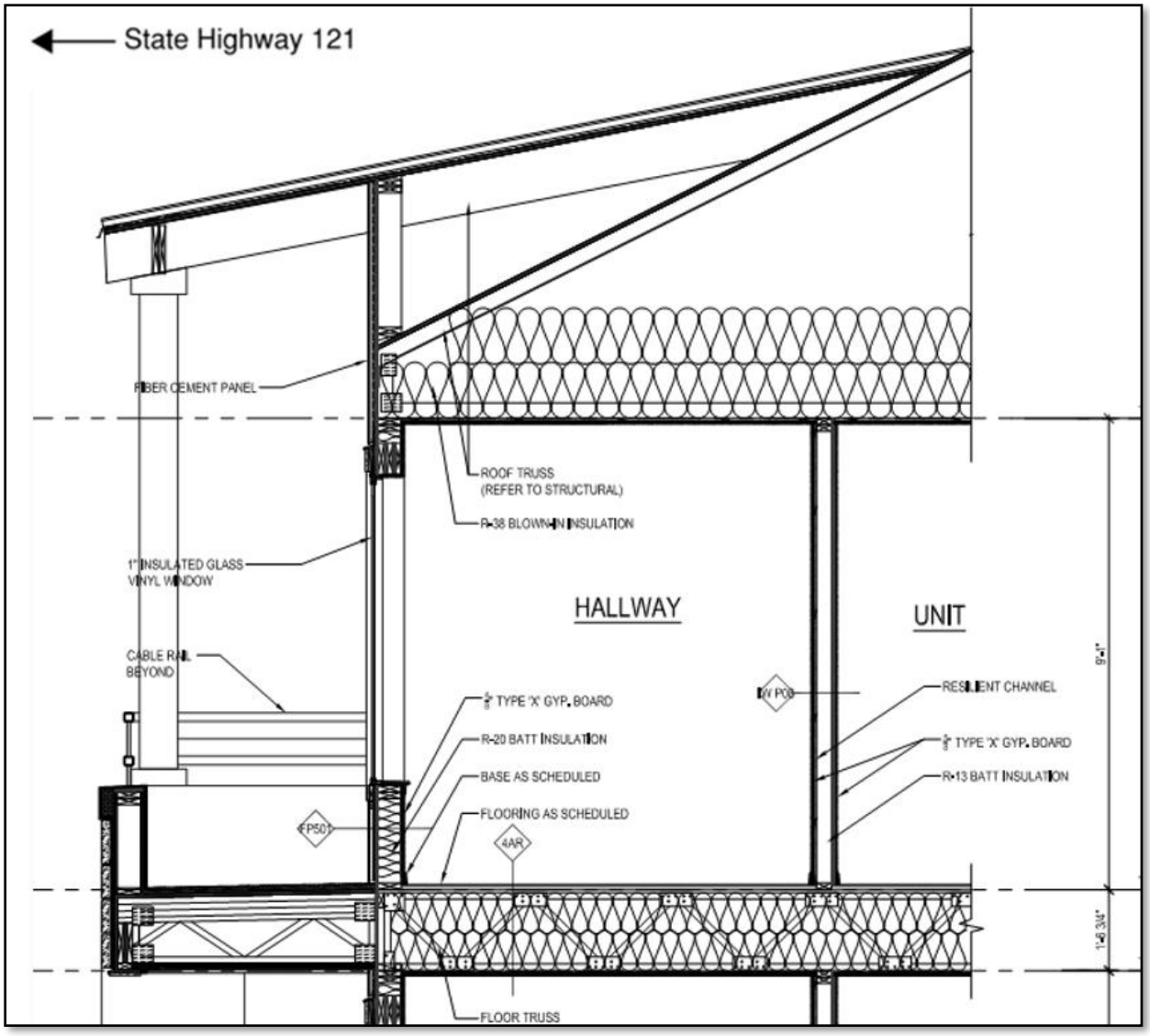
Requested Modifications

The applicant has modified their request in response to questions and concerns expressed by the Commission at their April 6, 2020, meeting. The following updates were made since the prior consideration:

1. Construction consistency with noise study: The updated noise study shows a diagram which confirms all of the units will be able to meet the city's recommended noise standards if built as shown. Because the study is specifically based in the design of the site, the applicant is proposing to build the site consistent with the diagram below from page seven of the attached noise study and shown below:



2. Building location and design: The applicant is proposing to utilize a sound wall incorporated into the building as a physical buffer between independent living facility units and the frontage road of State Highway 121 to mitigate noise impacts of the expressway for residents. From the exterior, the proposed wall will be designed to resemble living units with exterior balconies. The wall will be insulated to reduce sound and an internal corridor will be placed adjacent to the units, which will face away from State Highway 121, internal to the development. This design is shown in the following graphic:



Additionally, the applicant is proposing other building design restrictions to set buildings and units back from the expressway, and restrict the locations of resident balconies, air intake vents, and mechanical rooms. These stipulations are consistent with the recommendations of the applicant's noise study and are supported by the city's Expressway Corridor Environmental Health Guidelines. With this design, the associated noise study shows that all of the residential units will meet the recommended noise levels of 64 dBA Ldn or lower.

3. Cross Access: This change is proposed due to concerns expressed by City Council regarding site access. The applicant will be constructing cross access to the eastern property line of the subject property as shown on the companion concept plan. Although a paved driveway connection does not exist today on the adjacent property to the east, Custer 121 Addition, Block 1, Lot 4R, cross access is required by zoning and must be provided with future improvements or redevelopment. The applicant has stated that they are working with the adjacent property owner to the east to provide an access drive to Kathryn Lane.

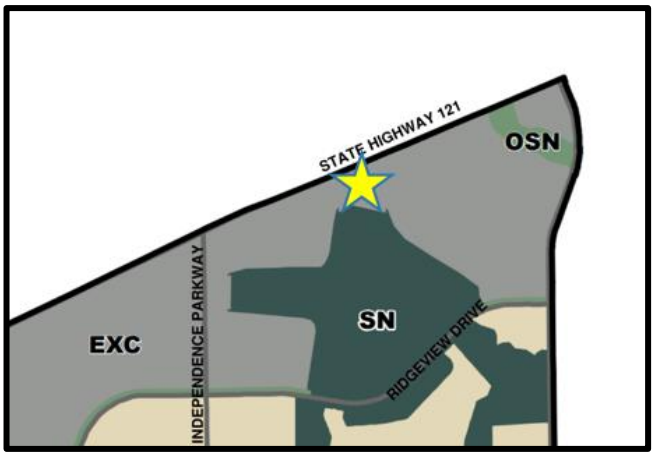
These amendments have substantially changed the design of the site as shown in the accompanying concept plan.

Surrounding Land Use and Zoning

North	State Highway 121, further north is a permanent concrete batch plant in the City of Frisco
East	Mini-warehouse/public storage facility and truck/bus leasing zoned Planned Development-106-Regional Commercial (PD-106-RC)
South	Golf course zoned PD-104-RC with SUP No. 294 for Golf Course and multifamily residence zoned Planned Development-476-Regional Employment (PD-476-RE)
West	State Highway 121 and multifamily residence zoned PD-476-RE

Conformance to the Comprehensive Plan

Future Land Use Plan - The Future Land Use Plan designates this property as Expressway Corridor (EXC).



The Expressway Corridor future land use category applies to development along major expressways serving regional and interstate commerce. Development in these corridors is expected to include a mix of retail, service, office, restaurant, medical, hotel, and technology based uses. Uses should be serviced by parking structures to reduce surface parking and encourage efficient use of land. Due to noise and health impacts of expressways, residential development is generally not appropriate in these corridors. Adequate building setbacks must be considered when development is proposed near neighborhoods.

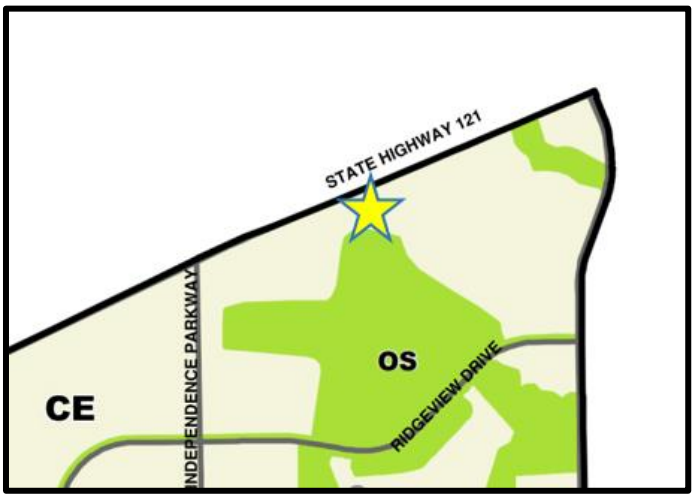
The EXC designation recommends a mix of commercial uses as the primary land uses within these corridors. Due to noise and health impacts, residential development is generally not appropriate. Independent living facilities are classified as institutional uses, because they provide housing, services, and care to residents. Although these uses are classified as institutional, they also function as housing. As a type of housing, the city should be cautious when considering the appropriateness of the location of these uses. It would be to the detriment of future residents if the city were to ignore the housing functions of these uses, as we are aware of health impacts along expressway corridors.

The applicant has performed a site specific noise study, which details the noise impacts on the subject property. The study provides detailed information on site conditions, which the applicant has utilized to propose stipulations intended to mitigate the health impacts of the expressway for future residents. The stipulations limit the number of units, specify

building setbacks, require the placement of a sound wall integrated into the building facade between the expressway and the independent living facility units, and include other building design standards. With the use of a sound wall as a buffer, the applicant has removed the previously proposed parking garage.

Although housing is generally not appropriate in these corridors, the applicant has proposed SUP restrictions that are intended to protect retirement housing residents from the impacts of State Highway 121 as detailed in the associated noise study. This request is neutral to the Future Land Use Map designation.

Growth and Change Map - The Growth and Change Map designates the subject property as Conserve and Enhance (CE).



These areas are expected to retain the current form of development, but will experience some minor infill and ongoing rehabilitation consistent with the present form and character.

The applicant's request is an infill development that would allow for multistory buildings consistent with the allowed form and character of the existing zoning. Although the building layouts and development form are consistent with the existing zoning, placing residents in close proximity to the expressway is inconsistent with the present form and character of residential development in the general area. Other residential developments in the area have more significant setbacks from the expressway, in addition to landscaping or nonresidential development buffers. This request is neutral with the CE designation.

Undeveloped Land Policy - *Plano will reserve its remaining undeveloped land for high quality development with distinctive character, emphasizing businesses offering highly skilled employment and limiting housing and retail uses, except when integrated into compact complete centers to ensure adequate land for projected employment growth.*

The proposed independent living facility is not integrated into a compact complete center and would have direct connections to adjacent nonresidential uses. The subject property has limited access due to the drainage system to the west and south but does benefit from direct highway frontage and visibility. The applicant is proposing building and site design standards that could create a high quality development and are intended to protect residents from the noise and air impacts of the expressway. This request is neutral with this policy.

Undeveloped Land Action Statement UL3 - *Situate new housing growth adjacent to existing residential neighborhoods.*

The proposed independent living facility will be an isolated community with access only to the frontage road of State Highway 121 and adjacent nonresidential

development. Although the proposed independent living facility is within proximity to multifamily residential developments in the area, the subject property is separated from these properties by existing natural barriers and commercial developments. This request is not in conformance with this action statement.

Redevelopment of Regional Transportation Corridors RTC4 - *Develop design guidelines for residential development adjacent to expressways that reduce noise and provide for proper filtering, ventilation, and exhaust of vehicle air emissions.*

On October 14, 2019, the city adopted guidelines and regulations for residential development adjacent to expressways which showed that the subject property would be impacted by noise and air pollution from the State Highway 121 expressway. Since this zoning case was submitted prior to the adoption of those requirements, they do not apply. However, staff recommended the applicant consider the city's guidelines and provide a study of their own to determine the impacts on future residents.

In response, the applicant has provided a noise study, which is attached to this report and has been updated based upon the amended request. Using the findings from the study, the applicant has identified stipulations intended to mitigate the impact of adding the independent living facility use on the subject property. The applicant's stipulations are generally consistent with the city's adopted guidelines. This request is in conformance with policy RTC4.

Housing Trends Analysis and Strategic Plan - Plano residents and workforce over 55 years of age noted quality construction, lack of HOA fees, lower maintenance living, and walkability to be chief considerations in affecting housing decisions. The city's aging population has difficulty finding diversity of housing inventory to suit their housing needs and remain in the city, sometimes due to housing affordability or ability to maintain a home. This proposal does offer a low maintenance living situation and could be affordable.

Adequacy of Public Facilities - Water and sanitary sewer services are available to serve the subject property. However, the applicant will need to verify that sanitary sewer capacity is sufficient to accommodate the proposed change in use from commercial to senior housing.

Traffic Impact Analysis (TIA) - A TIA is not required for this rezoning request. However, in considering the traffic impact using the average Institute of Traffic Engineers (ITE) trip generation rates, staff compared the proposed development with the potential build-out of the subject property as general office. The associated concept plan proposes 252 units on the eastern portion of the subject property. Using a similar professional/general administrative office building footprint, it is possible that 75,000 square feet of office could be constructed instead of the independent living facility. The table below shows the estimated traffic generation for a single hour during weekday peak hours (7:00-9:00 a.m. and 4:00-6:00 p.m.):

	AM	PM
Independent Living Facility (252 units)	73	86
Professional/General Administrative Office (75,000 square feet)	116	112

From the table above, it is evident that independent living facility development would generate less peak hour traffic.

Public Safety Response Time - Based upon existing personnel, equipment, and facilities, fire emergency response times will be sufficient to serve the site.

Independent Living Facility Use

The city has long maintained policies separating housing from major thoroughfares. The purpose for these policies has been to reserve the frontage roads for significant commercial development and to encourage a high quality of living for all residents within Plano. In most recent zoning requests, with a few exceptions, significant setbacks have been established by the city when considering placing housing in close proximity to major highways. Most recently, the zoning for the developments of Legacy Central Addition (Breezeway Farms), adjacent to U.S. Highway 75, specified minimum setbacks from the centerline of the highway and required nonresidential buildings or parking garages to be constructed to buffer residences from the highway.

Although the adjacent mini-warehouse and truck bus leasing use is not preferable adjacent to retirement housing, there are other existing residential developments and a golf course within proximity to the subject property, which are supportive of retirement housing uses.

SUP Stipulations

The applicant's request includes updates to stipulations 1.a, 1.b, 1.c, and 3 as noted in the recommendation section below. The other stipulations are unchanged. The amended restrictions are intended to adopt building design standards to create an independent living facility that will meet the city's noise guidelines. Although the amended request includes significant site design changes, including bringing the building closer to the expressway, the associated noise study shows that all units will comply with the city's recommended noise guidelines. Additionally, an access drive will be required to be extended to the eastern property line for a future cross connection with the adjacent mini-warehouse development.

Public Transportation

During the July 27, 2020, meeting, City Council members expressed concern regarding public transportation access for the subject property and surrounding area. The nearest DART bus routes, routes 452 and 211, run along Spring Creek Parkway, approximately four and a half miles to the south. The subject property is within DART's on-demand GoLink service, but mobility is limited within the Far North Plano service area which is bounded by State Highway 121, Spring Creek Parkway, Ohio Drive and Custer Road.

DART's GoLink will not take passengers outside of their service area or to destinations in nearby Frisco or McKinney.

SUMMARY:

The applicant is requesting an SUP for Independent Living Facility with specific development restrictions intended to support independent living residents on the subject property. The request is neutral to the recommendations of the Comprehensive Plan but meets housing needs in the community as defined by the Housing Trends Analysis. Existing uses in the general area include both residential and nonresidential uses. With these considerations in mind, staff recommends approval if the Planning & Zoning Commission believes that adequate development standards and safeguards are established through the proposed stipulations to protect independent living facility residents from the health impacts of State Highway 121.

RECOMMENDATION:

Recommended for approval with the consideration noted above and the following stipulations:

1. A maximum of 252 independent living facility units are allowed subject to the following restrictions:

    a. Independent living facility buildings must be set back at least 65 feet from the front property line. All units must be set back at least 75 feet from the front property line.

    b. The property will be constructed substantially and functionally consistent with Figure 2. Project Day-Night Level (Ldn) Roadway Noise Exposure as shown in the addendum attached to Ordinance 2020-(number incorporated upon passage).

    c. Building IV must be constructed substantially and functionally consistent with the building elevations and wall sections as shown in the addendum attached to Ordinance 2020-(number incorporated upon passage).

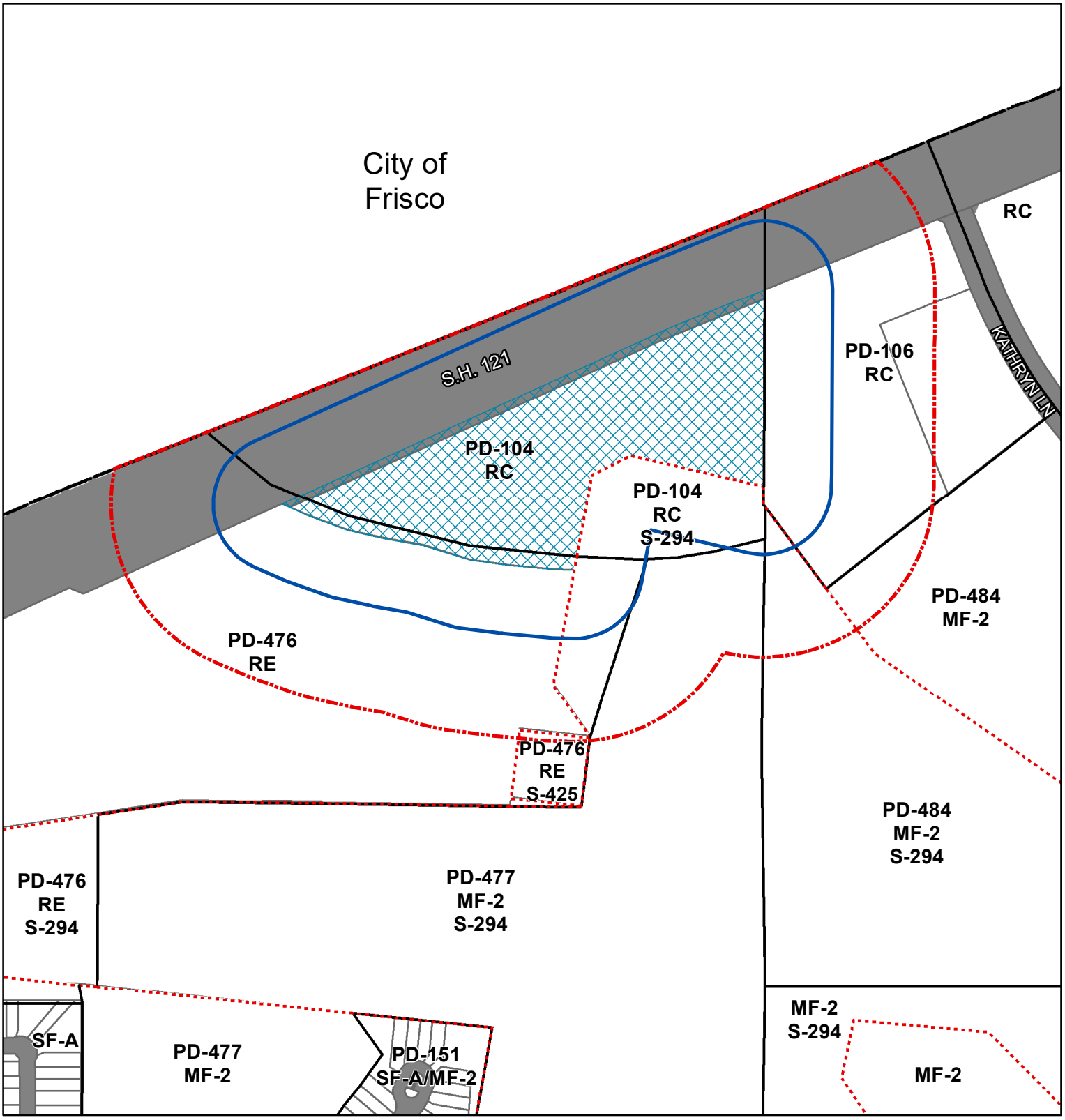
    d. Air intake vents must be located as far away from the expressway as practical.

    e. All building mechanical rooms must be located on the southern side of buildings and face away from State Highway 121.

2. If the project has not obtained a building permit and commenced physical construction activity on site before January 1, 2026, the environmental health analysis expires and must be updated before the City will issue further project approvals. The updated environmental health analysis may recommend enhanced mitigation standards and, if so, this matter must be brought to the Planning & Zoning Commission for consideration of the required noise mitigation. The Planning & Zoning Commission may not impose conditions to the SUP that are unrelated to noise mitigation, including but not limited to the number of units. Changes required by the Planning & Zoning Commission as a result of updated noise mitigation requirements will be noted on the

series of plans. If the updated environmental health analysis does not recommend enhanced mitigation standards, no further consideration by the Planning & Zoning Commission is required. If minimal mitigation standards are recommended, then the developer may work with staff to integrate those measures into the plans.

3. Cross access will be constructed to Custer 121 Addition, Block 1, Lot 4R.



Zoning Case: 2019-017

Existing Zoning: Planned Development-104-Regional Commercial and Planned Development-476-Regional Employment and located within the State Highway 121 Overlay District

Proposed Zoning: Specific Use Permit for Independent Living Facility

500' Courtesy Notification Buffer
200' Notification Buffer
Subject Property
Streets
Zoning Boundary Change/SUP
Municipal Boundaries
Zoning Boundary
Specific Use Permit

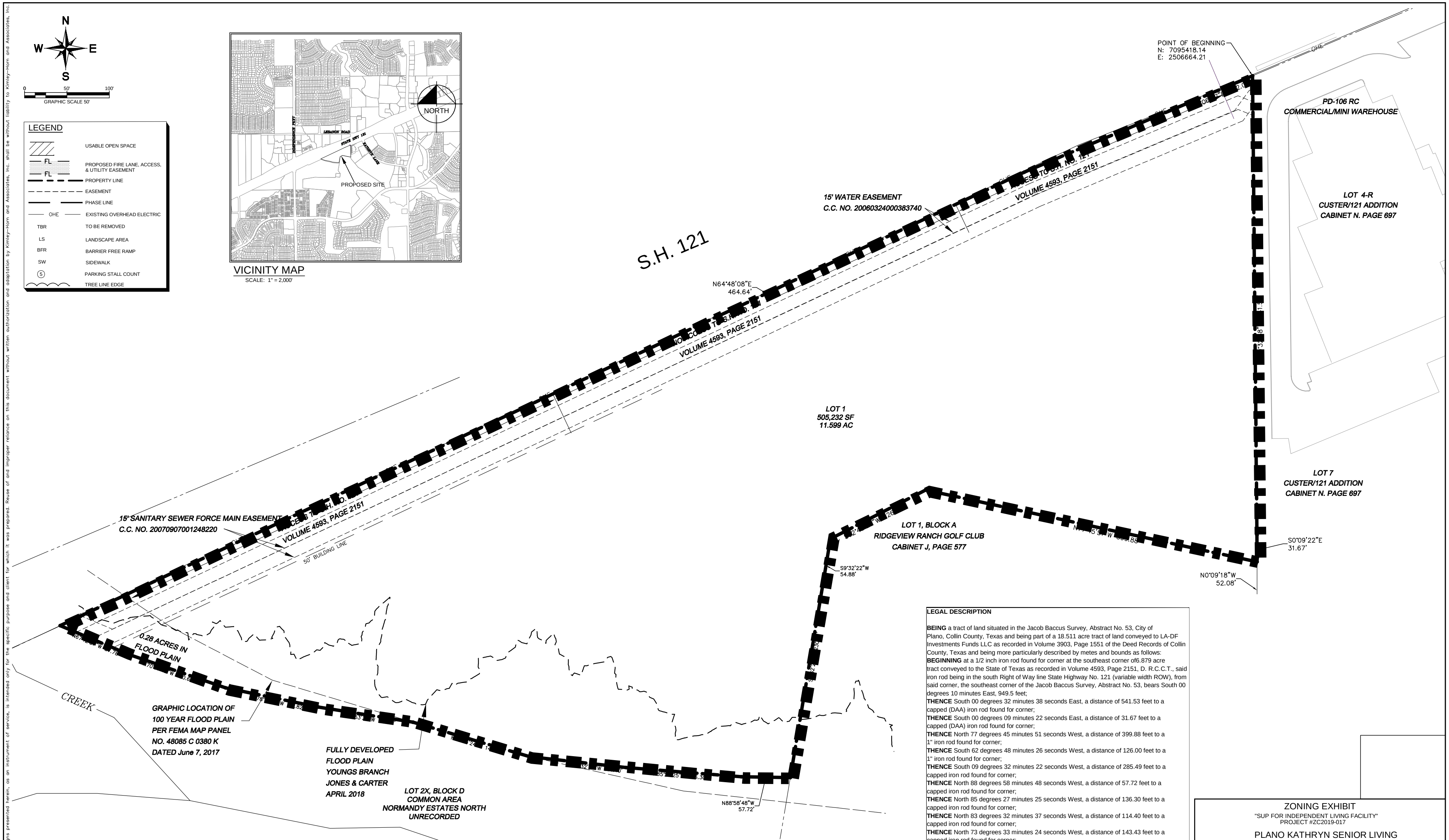
Plano

N

0 300 600 1,200
Feet

Source: City of Plano


S.H. 121
Plano
N
Zoning Case 2019-017
Area of Request
0
275
550
Feet
Source: City of Plano



APPROVAL OF THE ZONING CASE ASSOCIATED WITH THIS EXHIBIT SHALL NOT IMPLY APPROVAL OF ANY ASSOCIATED STUDY, PLAT OR PLAN, APPROVAL OF DEVELOPMENT STANDARDS SHOWN HEREON, ON THE INITIATION OF THE DEVELOPMENT PROCESS. PLANNING & ZONING COMMISSION AND/OR CITY COUNCIL ACTION ON STUDIES, PLATS, OR PLANS RELATING TO DEVELOPMENT OF THIS PROPERTY SHALL BE CONSIDERED AS AN ACTION TAKEN ON THIS ZONING CASE.

LEGAL DESCRIPTION

BEING a tract of land situated in the Jacob Baccus Survey, Abstract No. 53, City of Plano, Collin County, Texas and being part of a 18.511 acre tract of land conveyed to LA-DF Investments Funds LLC as recorded in Volume 3903, Page 1551 of the Deed Records of Collin County, Texas and being more particularly described by metes and bounds as follows:

BEGINNING at a 1/2 inch iron rod found for corner at the southeast corner of6.879 acre tract conveyed to the State of Texas as recorded in Volume 4593, Page 2151, D. R.C.C.T., said iron rod being in the south Right of Way line State Highway No. 121 (variable width ROW), from said corner, the southeast corner of the Jacob Baccus Survey, Abstract No. 53, bears South 00 degrees 10 minutes East, 949.5 feet;

THENCE South 00 degrees 32 minutes 38 seconds East, a distance of 541.53 feet to a capped (DAA) iron rod found for corner;

THENCE South 00 degrees 09 minutes 22 seconds East, a distance of 31.67 feet to a capped (DAA) iron rod found for corner;

THENCE North 77 degrees 45 minutes 51 seconds West, a distance of 399.88 feet to a 1" iron rod found for corner;

THENCE South 62 degrees 48 minutes 26 seconds West, a distance of 126.00 feet to a 1" iron rod found for corner;

THENCE South 09 degrees 32 minutes 22 seconds West, a distance of 285.49 feet to a capped iron rod found for corner;

THENCE North 88 degrees 58 minutes 48 seconds West, a distance of 57.72 feet to a capped iron rod found for corner;

THENCE North 85 degrees 27 minutes 25 seconds West, a distance of 136.30 feet to a capped iron rod found for corner;

THENCE North 83 degrees 32 minutes 37 seconds West, a distance of 114.40 feet to a capped iron rod found for corner;

THENCE North 73 degrees 33 minutes 24 seconds West, a distance of 143.43 feet to a capped iron rod found for corner;

THENCE North 80 degrees 53 minutes 52 seconds West, a distance of 112.91 feet to a capped iron rod found for corner;

THENCE North 78 degrees 17 minutes 56 seconds West, a distance of 111.82 feet to a capped iron rod found for corner;

THENCE North 70 degrees 57 minutes 42 seconds West, a distance of 120.60 feet to a capped iron rod found for corner;

THENCE North 67 degrees 12 minutes 37 seconds West, a distance of 87.78 feet to a capped 1/2 inch iron rod found in the south ROW line of said S.H. No. 121, said point lies within a creek;

THENCE North 64 degrees 48 minutes 08 seconds East following the south ROW line of said S.H. No. 121, a distance of 1256.13 feet to a broken concrete highway monument found for corner;

THENCE North 67 degrees 06 minutes 57 seconds East following the south ROW line of said S.H. No. 121, a distance of 292.08 feet to the **POINT OF BEGINNING** and containing 505,232 square feet or 11.599 acres of land.

ZONING EXHIBIT

"SUP FOR INDEPENDENT LIVING FACILITY"
PROJECT #ZC2019-017

PLANO KATHRYN SENIOR LIVING

BLOCK A, LOT 1

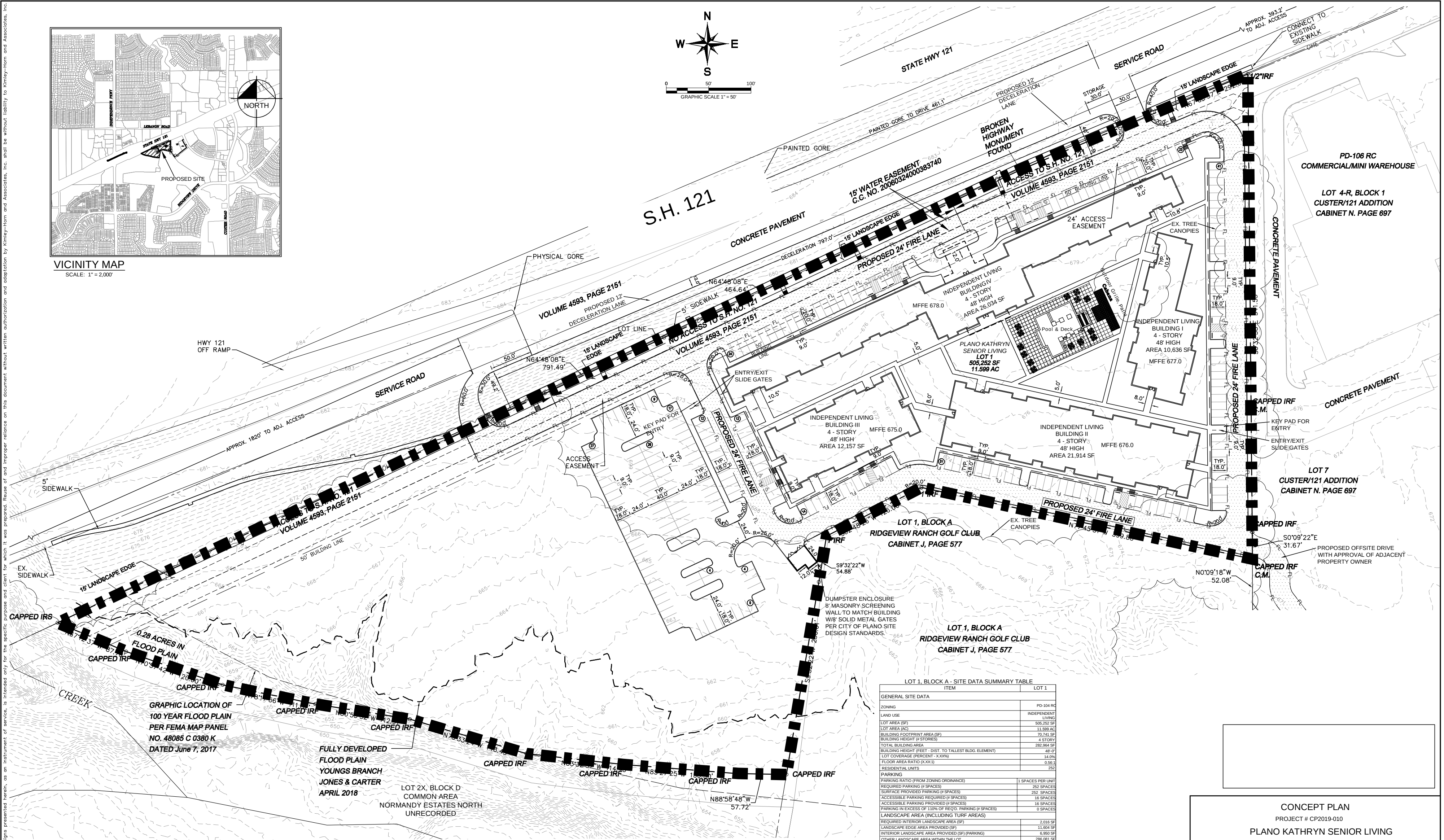
BEING 11.599 ACRES
OUT OF THE
JACOB BACCUS SURVEY, ABSTRACT NO. 53
IN THE
CITY OF PLANO, COLLIN COUNTY, TEXAS

OWNER:
LA-DF INVESTMENTS FUND & LLC
16812 DALLAS PARKWAY,
DALLAS TX 75248
Tel: (972) 386-6600 Contact:
KENT CONINE / MEG CONINE

DEVELOPER:
TX PLANO KATHRYN SENIOR LIVING , LP.
16812 DALLAS PARKWAY, #150
DALLAS, TEXAS 75248
Tel: (972) 386-6600
Contact: KENT CONINE/MEG CONINE

ENGINEER/SURVEYOR:
Kimley»Horn
6160 Warren Parkway, Suite 210
Frisco, TX 75034
Tel: (972) 335-3580
Contact: NEDA HOSSEINY, P.E.

DESIGNED	DRAWN	CHECKED	SCALE	DATE	KH PROJECT NO.	Z-1
JBA	JTH	JEM	AS SHOWN	8/14/2020	063220500	



LOT 1, BLOCK A - SITE DATA SUMMARY TABLE

ITEM	LOT 1
GENERAL SITE DATA	
ZONING	PD-104 RC
LAND USE	INDEPENDENT LIVING
LOT AREA (SF)	505,252 SF
LOT AREA (AC)	11.599 AC
BUILDING FOOTPRINT AREA (SF)	70,741 SF
BUILDING HEIGHT (# STORIES)	4 STORY
TOTAL BUILDING AREA	282,964 SF
BUILDING HEIGHT (FEET - DIST. TO TALLEST BLDG. ELEMENT)	48'-0"
LOT COVERAGE (PERCENT - X.XX%)	14.0%
FLOOR AREA RATIO (X.XX:1)	0.56:1
RESIDENTIAL UNITS	252
PARKING	
PARKING RATIO (FROM ZONING ORDINANCE)	1 SPACES PER UNIT
REQUIRED PARKING (# SPACES)	252 SPACES
SURFACE PROVIDED PARKING (# SPACES)	252 SPACES
ACCESSIBLE PARKING REQUIRED (# SPACES)	16 SPACES
ACCESSIBLE PARKING PROVIDED (# SPACES)	16 SPACES
PARKING IN EXCESS OF 110% OF REQ'D. PARKING (# SPACES)	0 SPACES
LANDSCAPE AREA (INCLUDING TURF AREAS)	
REQUIRED INTERIOR LANDSCAPE AREA (SF)	2,016 SF
LANDSCAPE EDGE AREA PROVIDED (SF)	11,604 SF
INTERIOR LANDSCAPE AREA PROVIDED (SF) (PARKING)	6,950 SF
OTHER LANDSCAPE AREA WITHIN THE LOT	286,081 SF
TOTAL LANDSCAPE AREA (SF)	304,635 SF
PERMEABLE AREA (NOT INCLUDING LANDSCAPE OR TURF AREAS)	
PERMEABLE PAVEMENT (SF)	0 SF
OTHER PERMEABLE AREA WITHIN THE LOT (NOT INCLUDING LANDSCAPE OR TURF AREAS-SF)	0 SF
TOTAL PERMEABLE AREA (SF)	
IMPERVIOUS AREA	
BUILDING FOOTPRINT AREAS (SF)	70,741 SF
AREAS OF SIDEWALKS, PAVEMENT & OTHER IMPERVIOUS FLATWORK (SF)	120,386 SF
OTHER IMPERVIOUS AREA (SF) (GRILL AND POOL)	9,480 SF
TOTAL IMPERVIOUS AREA	200,617 SF
SUM OF TOTAL LANDSCAPE AREA+TOTAL IMPERVIOUS AREA (SF)	505,252 SF

LEGEND

ACCESS EASEMENT
USABLE OPEN SPACE
FL — PROPOSED FIRE LANE, ACCESS, & UTILITY EASEMENT
PROPERTY LINE
EASEMENT
PHASE LINE
OHE — EXISTING OVERHEAD ELECTRIC
TBR — TO BE REMOVED
LS — LANDSCAPE AREA
BFR — BARRIER FREE RAMP
SW — SIDEWALK
5 — PARKING STALL COUNT
TREE LINE EDGE
ADA ACCESSIBLE ROUTE

CONCEPT PLAN
PROJECT # CP2019-010
PLANO KATHRYN SENIOR LIVING
BLOCK A, LOT 1
BEING 11.599 ACRES
OUT OF THE
JACOB BACCUS SURVEY, ABSTRACT NO. 53
IN THE
CITY OF PLANO, COLLIN COUNTY, TEXAS
PAGE 1 OF 1

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Tel: (972) 386-6600 Contact: KENT CONINE / MEG CONINE

DEVELOPER:
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6160 Warren Parkway, Suite 210
Frisco, TX 75034
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DESIGNED	DRAWN	CHECKED	SCALE	DATE	KH PROJECT NO.	
JBA	JTH	JEM	AS SHOWN	6/25/2020	063220500	C-1

Jackson Walker LLP

William S. Dahlstrom
(214) 953-5932 (Direct Dial)
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wdahlstrom@jw.com

August 14, 2020

VIA ELECTRONIC MAIL

Christina Day
City of Plano
1520 K Avenue
Plano, TX 75074

Re: ZC2019-017 and CP2019-010.

Dear Christina:

Thank you and your Staff again for their assistance with this important project. As you know, since the April P&Z hearing and City Council consideration, our team has worked diligently to address issues we heard from the City. These activities included extensive redesign of the facility, additional noise analysis, and negotiations with an adjacent property owner to secure additional access. We are respectfully requesting approval of our revised design and revised SUP stipulations in place of the plans and stipulations previously considered by the Planning and Zoning Commission.

In further support of this application, and in response to questions concerning particulates emanating from batching plants across SH 121, Conine Residential also engaged Terracon to conduct another air quality study for the subject site. That study, which was submitted to you under separate cover, concluded that the particulate matters were below the EPA National Ambient Air Quality Standards criteria. As previously indicated, Conine Residential had earlier engaged MAS-D Environmental & Associates, Inc. and its certified environmental specialists to assess the air quality for residential uses on the subject property. MAS-D Environmental & Associates, Inc. concluded, "The subject tract is acceptable for occupancy by [sic] based on air quality environmental conditions." We trust that these reports confirm that air quality has been sufficiently analyzed and acceptable for the proposed independent living facility.

Thank you very much for your consideration of this proposed request. If you need any additional information, please do not hesitate to contact us.

Regards,
William S. Dahlstrom
William S. Dahlstrom

Noise Analysis Report

Plano 121 Senior Living

(Revised June 2020)

HMMH Project Number 311300

June 23, 2020

Prepared for:

Conine Residential Group

Prepared by:

John Weston, AICP

Emma Butterfield

HMMH

700 District Ave. Suite 800

Burlington, MA 01803

Executive Summary

The purpose of this report is to evaluate the environmental noise conditions of a proposed senior living community located along Sam Rayburn Tollway (SRT) near Kathryn Lane in Plano, Texas. The site plan used for this evaluation was revised from a site plan evaluated in March 2020 by HMMH on this same site. This revised site plan includes a different building configuration and layout.

The report identifies projected noise conditions upon project completion. With the revised site plan, **no noise mitigation or abatement is necessary** to meet the Expressway Corridor Environmental Health Goal under which sensitive land uses within Expressway Corridor Environmental Health Areas should achieve a maximum outdoor noise level of less than 65 dBA Ldn. The noise analysis methodology is consistent with the spirit of the EHA Site Analysis Requirements identified in the City of Plano Expressway Corridor Environmental Health Guidelines.

The analysis was undertaken to predict 2040 day-night average sound level (L_{dn}) for each residential unit and the proposed outdoor use / recreational area. The predictions were developed by implementing the Plano city-wide model previously developed and calibrated to establish Plano Expressway Corridor Environmental Health Areas. The model was further validated with the data collected on-site that established existing noise conditions and the planned building and site configuration of the Plano 121 project. It was confirmed while conducting on-site measurements that noise at the project site is predominantly generated from the Sam Rayburn Tollway (Route 121).

The results of the analysis indicate that no residential units on the site would be subject to outdoor noise levels that exceed typically recommended levels for residential developments (65 dBA Ldn or more). Outdoor noise levels in areas where outdoor activity is planned (at the development's principal outdoor use area) will be well shielded from expressway noise and appropriate for frequent use.

Contents

Figures

Tables

1 Noise Exposure Standards

Federal and local guidelines provide the basis for understanding acceptable noise exposure at the project, specifically areas where people would sleep. The City of Plano and Federal agencies have developed guidelines related to noise that will clarify the acceptable levels of noise exposure for this project. Some additional information on the fundamentals of acoustics, is included in Appendix A of this report that further explains some of the technical information included in the government guidelines and recommendations.

1.1 City of Plano

The City of Plano recently established noise guidelines for Sensitive Land Uses (SLU) located near expressway as part of a change to the City of Plano's Comprehensive Plan. The guidance is used within two areas designated as Expressway Corridor Environmental Health Area One (EHA-1) and Expressway Corridor Environmental Health Area Two (EHA-2) both of which are located on the Plano 121 parcel. EHA-1 is defined where outdoor noise levels are greater than or equal to 65 dBA L_{dn} and less than 75 dBA L_{dn} and EHA-2 is where the outdoor noise levels are above 75 dBA L_{dn}. The areas are further defined in the City of Plano Expressway Corridor Environmental Health Map[1]. SLUs within EHA-1 are identified as appropriate if proper mitigation is achieved and evaluated through a site analysis whereas a SLU within EHA-2 may be deemed inappropriate unless it is redevelopment of an existing site. Although this newly adopted guideline does not apply to Plano 121, the analysis will be conducted with the spirit of the guideline to assess developments that are located within the areas and identify applicable mitigation.

2 Methodology

Roadway noise exposure levels for the project were computed using an acoustical planning and modeling program called SoundPLAN® (Version 8.1). SoundPLAN® was created by Braunstein & Berndt GmbH. An industry standard, SoundPLAN® was developed to provide estimates of sound levels at distances from specific noise sources taking into account the effects of terrain features including relative elevations of noise sources, receivers, and intervening objects (buildings, hills, trees), and ground effects due to areas of hard ground (pavement, water) and soft ground (grass, field, forest). In addition to computing sound levels at specific receiver positions, SoundPLAN® can produce noise contour graphics that show areas of equal and similar sound level.

2.1 Noise Model Input

The model used for this analysis was the same as the one used to in evaluation of environmental noise in the City of Plano and establishment of the Expressway Corridor Environmental Health Areas. The model included traffic data from the Statewide Traffic Analysis and Reporting System maintained by TXDOT and the North Texas Tollway Authority (NTTA) Comprehensive Traffic & Toll Revenue Study. Geometric data was incorporated from elevation contours derived from city wide 2017 Lidar provided by the City of Plano. Building data was incorporated from CAD drawings of the proposed development (Plano 121) and the City of Plano Buildings GIS layer 2016 (buildings on neighboring lots).

[1] City of Plano, City of Plano Expressway Corridor Environmental Health Map, 2019

3 Noise Measurements and Modeling

The following section summarizes the purpose of conducting on-site noise measurements, how the model is validated with the noise measurement results, and the results of noise measurements on the subject site.

3.1 Purpose of Noise Measurements/Traffic Counts

The purpose of conducting noise measurements and traffic counts at a specific project development site is solely to ensure that the model is accurately reflecting noise conditions at the site, through what is called a model validation process. Validation of the model increases the confidence that the model is accurately reflecting conditions at the project site. Reasons why the model may not accurately reflect current conditions could include:

- Noise from sources besides the expressway that significantly influenced measured noise levels;
- Changes in topography, roadway configuration, or nearby buildings since the model was originally developed;
- Changes to soil or pavement between roadway and project site since the model was originally developed;
- Small details in the study area that were not included in the original model, such as roadside safety barriers or open-water stormwater retention basins, that influence noise levels.

Standard practice is to follow Federal Highway Administration guidance, which identifies that a highway noise model is considered validated if the measured data and the modeled data are within 3 dBA. In cases where the model does not reflect measured noise levels, the model is refined until it is accurate within the 3 dBA standard.

3.2 Noise Model Validation

The model validation process includes conducting several short-term noise measurements on the site while simultaneously conducting traffic counts on the nearby expressway. The on-site data is then compared to model output to evaluate how closely the model is able to approximate on-site conditions. The model validation process can be done during any period of the day since the process is comparing the counted traffic /measured noise with the modeled noise with the same volume of traffic. However, it is recommended that noise measurements and traffic counts are conducted during periods when traffic is free-flowing. Depending upon the expressway, conducting measurements during the peak traffic hour is often avoided, since traffic is not at free-flow speeds during the peak-hour which then results in lower expressway noise levels.

Consistent with Federal Highway Administration guidance, a noise model is considered validated if the measured data and the modeled data are within 3 dBA. Once it is determined that the model is accurately reflecting on-site noise levels, the measured noise levels and traffic counts are not used in other stages of the noise modeling process.

3.3 Model Validation at Plano 121 Senior Living parcel

Noise measurements were completed to document existing noise levels and to validate the roadway noise model. Four short-term measurements (30 minutes) were collected throughout the site to validate the roadway noise model. The measurements were collected on January 2, 2020. Figure 2 is a map of the measurement locations.

Figure 1. Measurement Locations
Source: Map Image and Data © *ESRI 2020, HMMH 2020.*

The short-term measurements were completed with a Larson Davis 824 with operator present. Each sound level meter was paired with a preamplifier and 1/2" microphone. The equipment used meets the American National Standards Institute (ANSI) S1.4 specifications for a Type 1 precision meter. The sound level meters were calibrated before and after the test with calibration traceable to the National Institute of Standards and Technology (NIST).

Roadway traffic counts were collected concurrent with each short-term measurement. These traffic counts were converted to hourly equivalent volumes and applied to each of the noise model roadways for validation purposes

Appendix B provides annual calibration sheets for the equipment used in the noise measurement effort.

3.4 Noise Measurement Results

Table 1 provides the results of the short-term measurement effort and the corresponding validation model sound levels. Since the modeled sound levels are within 3 dB of the measured sound levels the roadway noise model is considered a valid predictor of noise. The dominant noises source was Sam Rayburn Tollway and the occasional breeze. Kathryn Lane did not have enough traffic to contribute to the noise.

Table 1. Short-Term Measurement and Model Validation Results

Source: HMMH 2020

Measurement Location	Time	Measured dBA L_{eq}	Modeled dBA L_{eq}	Difference (dB)
M1	9:25-9:55	66.7	68.4	1.6
M2	10:10-10:40	65.8	65.3	-0.4
M3	10:52-11:22	64.2	63.6	-0.6
M4	11:30-12:00	61.0	63.3	2.4

Since the noise measurements were within +/- 3 dBA of the modeled noise levels at the same location, the model is considered to be a valid predictor of noise at this site, consistent with TxDOT and FHWA guidance.

3.1 Noise Modeling Process

Once the model is validated, the analysis is conducted using the model incoporating future projected traffic volumes to estimate future noise levels. This includes incorporating both the Annual Average Daily Traffic (AADT) and the distribution of traffic over the course of the day. For site noise analysis, the 2040 traffic volumes are used as the base for generating the estimated future noise levels. Using a future anticipated condition is in keeping with the long-term nature of land use decisions.

Daily traffic volumes were established for the Sam Rayburn Tollway from the Statewide Traffic Analysis and Reporting System (STARS) maintained by TXDOT, which includes recent Annual Average Daily Traffic (AADT) and truck percentage data on the expressways. A forecasted growth percentage was applied to 2017 AADT data to establish the 2040 volumes. The forecasted growth percentages, hourly traffic distributions, and truck percentages were utilized from the North Texas Tollway Authority (NTTA) Comprehensive Traffic & Toll Revenue Study.

The posted speed limits were used for the noise modeling. The expressway posted speed limit is 70 mph and the frontage road is 55 mph.

As shown in Table 2, the traffic volumes used for the project noise model include a projected 50% increase in daily traffic on the primary through-lanes of the Sam Rayburn Tollway as well as the frontage road traffic lanes (Route 121).

Table 2. Traffic Data Used in Nosie Modeling

Source: HMMH 2018

Lanes	2017 AADT	2040 AADT
Sam Rayburn Tollway Mainline	93,380	141,311
Sam Rayburn Tollway Eastbound Frontage	29,410	44,506
Sam Rayburn Tollway Westbound Frontage	33,200	50,241

3.1 Noise Model Analysis at Plano 121 Senior Living parcel

The traffic projections identified above were incorporated into the validated model to develop baseline conditions under which the project was evaluated. As shown in Table 3, the noise levels at each of the

measurement locations are projected to increase by 1 to 2 decibels with the increase in traffic volumes between 2017 and 2040. The project was evaluated using the 2040 AADT traffic volumes and resultant noise conditions.

It is also noteworthy that the modeled noise levels with 2017 AADT are +/- 1 dBA of the modeled noise levels from 1/2/20 shown in Table 1, even with the variation in traffic volumes.

Table 3. Noise Levels with Change in Traffic Volumes
Source: HMMH 2020

Measurement Location	Time	Modeled dBA L_{eq} with 2017 AADT	Modeled dBA L_{eq} with 2040 AADT
M1	9:25-9:55	69.3	71.0
M2	10:10-10:40	64.7	66.4
M3	10:52-11:22	64.0	65.6
M4	11:30-12:00	63.6	65.2

4 Project Noise Exposure

The proposed project would be predominantly subject to roadway noise from the Sam Rayburn Tollway. Secondary sound sources would continue to include rustling vegetation in the wind and wildlife noise from sources such as insects and birds.

As discussed in Section 3 of this report, the latest existing (2017) AADT volumes and speeds for the roadways near the project were obtained from TxDOT and the City. AADT were not available for local roadways. Future average Day-Night Level (L_{dn}) Roadway Noise Exposure was calculated for comparison to the newly enacted Plano Comprehensive Plan's Expressway Corridor Environmental Health Guidelines.

Projected roadway noise levels were calculated for each unit location within each residential building to identify if any threshold would be exceeded. Noise levels were modelled for each floor of the buildings. Each of the four proposed buildings are 48 feet tall with 4 floors of units.

4.1 Project Noise Results

Evaluation of the proposed site plan for the Plano 121 Senior Living facility demonstrates that the project would meet the meet the Expressway Corridor Environmental Health Goal under which sensitive land uses within Expressway Corridor Environmental Health Areas should achieve a maximum outdoor noise level of less than 65 dBA Ldn.

Since the revised site plan does not include any residential units fronting along the expressway and uses the buildings themselves to provide shielding for the primary exterior windows, doors and balconies, of each unit, noise at the exterior of all units is below 65 dBA Ldn.

Particular attention was made to incorporate features into the building design to reduce outdoor noise in select locations.

- At Building III, a 28-foot-wide wall along the side of the building was included in the design to minimize noise on the upper three floors at locations 3.04, 3.05 and 3.06.
- At Building IV, the design includes an 8-foot-wide barrier along the front edge of the balcony at the units on the 2nd, 3rd and 4th floor at location 4.14. The barrier, which would be a minimum of 6 feet in height and could be constructed of wood studs with stucco exterior, 3/8-inch plate glass,

5/8-inch Plexiglas, any masonry material or a combination of these materials. The barrier would limit outdoor expressway noise from reaching the balcony.

- At Building II, the design includes a 6-foot-wide barrier along the front edge of the balcony at the unit on the 4th floor at location 2.12. The material and height of the barrier would be similar to those included at Building IV.

Included within the design is an exterior recreation area with a pool and deck located in the middle open area between the four buildings. The outdoor exterior levels of this area will be below the 65 dBA L_{dn} exterior noise threshold of the Expressway Corridor Environmental Health Goal and no mitigation will be necessary for this area. The residential buildings provide enough shielding to protect the area from the noise of the SRT.

Figure 2 provides the location and graphical depiction of the noise levels at each unit. Table 4 provides the estimated noise levels at each unit.

Figure 2. Project Day-Night Level (Ldn) Roadway Noise Exposure

Source: HMMH *2020.*

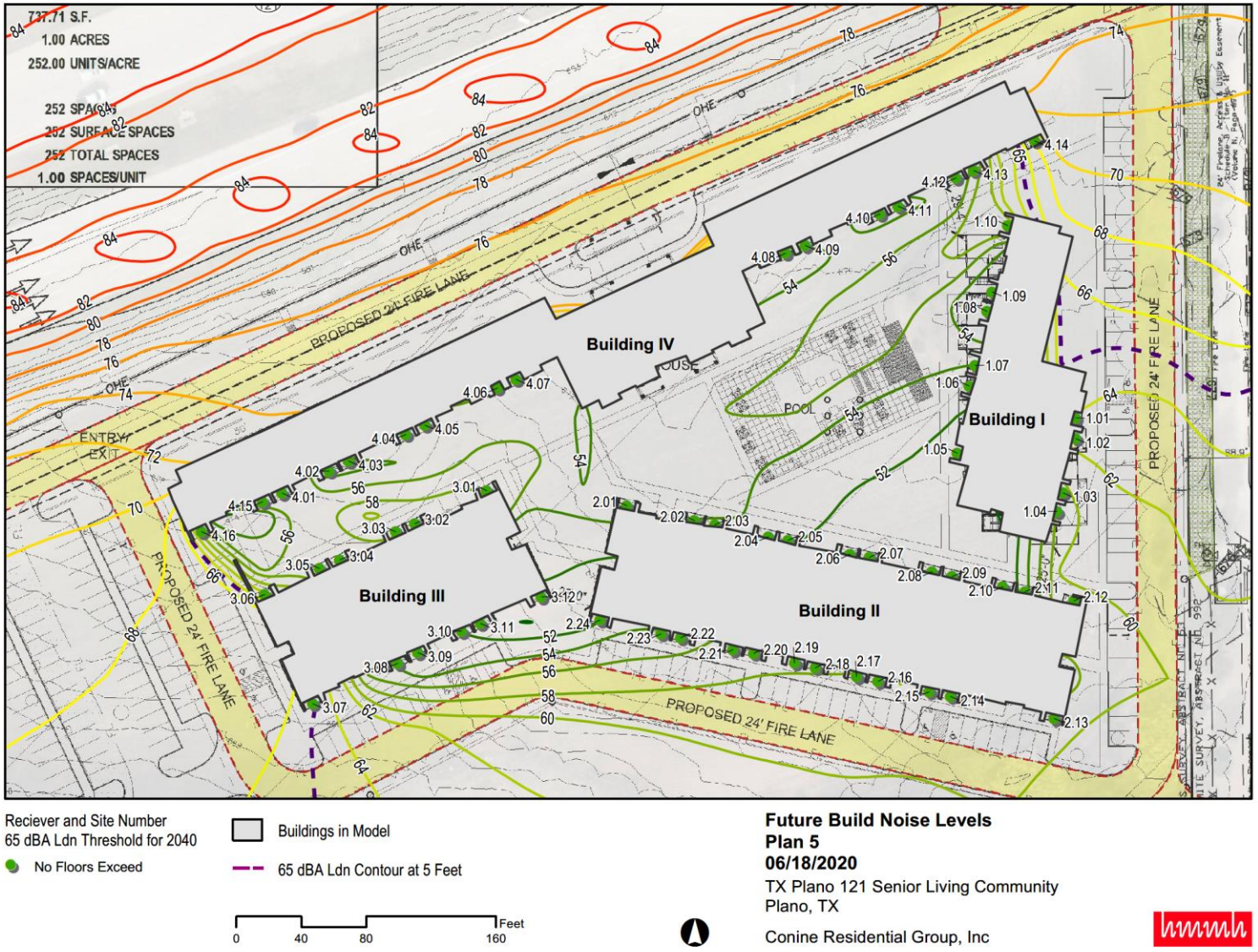

Table 4: Receiver Exterior Sound Levels

Source: HMMH 2020

Location	Ground Floor (Ldn)	2nd Floor (Ldn)	3rd Floor (Ldn)	4th Floor (Ldn)
1.01	56.9	59.4	60.4	64.3
1.02	56.6	59.1	60.0	63.6
1.03	55.2	57.6	58.6	62.7
1.04	54.3	56.7	57.5	61.6
1.05	51.1	51.8	52.7	56.4
1.06	52.0	52.8	54.6	57.3
1.07	54.1	54.3	55.4	57.8
1.08	53.5	54.1	55.6	58.2
1.09	52.6	53.2	55.4	58.2
1.10	51.9	53.1	55.5	60.0
1.11	54.0	55.3	57.9	59.7
1.12	54.0	57.0	58.7	59.9
1.13	53.3	56.2	58.2	59.5
1.14	51.6	53.5	55.5	57.7
1.15	51.4	52.9	55.0	57.3
1.16	50.7	51.7	53.6	56.1
1.17	50.4	51.7	53.8	56.5
2.01	49.8	51.3	52.4	55.3
2.02	49.7	51.3	52.4	55.9
2.03	50.5	52.0	53.2	58.6
2.04	54.9	57.5	58.3	62.0
2.05	50.4	52.9	53.6	57.1
2.06	57.2	57.6	58.1	59.2
2.07	57.2	57.8	58.2	59.3
2.08	58.5	59.1	59.6	60.6
2.09	59.2	60.0	60.3	61.4
2.10	55.5	56.7	57.4	59.3
2.11	58.5	59.4	59.8	61.1
2.12	57.4	58.6	59.1	60.4
2.13	57.1	58.5	58.9	60.4
2.14	56.7	58.2	58.7	60.5
2.15	56.7	58.2	58.7	60.5
2.16	53.4	55.9	56.9	59.5
2.17	55.9	57.9	58.8	60.7

Location	Ground Floor (Ldn)	2nd Floor (Ldn)	3rd Floor (Ldn)	4th Floor (Ldn)
3.01	52.0	55.3	57.2	60.1
3.02	57.7	58.4	59.3	60.8
3.03	59.2	60.1	61.5	62.7
3.04	58.4	60.1	61.9	62.7
3.05	58.1	62.8	64.1	64.5
3.06	57.2	61.4	62.9	63.7
3.07	53.1	57.4	58.5	59.4
3.08	56.4	58.7	59.4	59.8
3.09	51.9	55.7	56.4	57.1
3.10	53.2	56.3	57.1	56.4
3.11	51.0	54.0	55.6	57.9
3.12	51.0	53.7	55.8	58.0
4.01	50.8	53.8	55.9	58.8
4.02	49.8	52.2	53.9	57.8
4.03	50.4	52.6	53.7	58.0
4.04	51.2	53.3	54.6	58.3
4.05	53.1	56.1	58.0	59.9
4.06	53.1	56.4	58.8	60.1
4.07	53.7	56.2	58.3	59.9
4.08	54.1	56.9	59.5	60.9
4.09	53.4	54.6	57.4	59.0
4.10	53.9	55.0	57.8	59.5
4.11	52.1	53.2	56.3	58.3
4.12	51.9	52.7	55.4	58.0
4.13	52.6	53.4	56.4	58.6

5 Air Quality

As identified in the City of Plano's Expressway Corridor Environmental Health Study, exposure to highway-based air pollutants is greatly reduced at approximately 300 feet from the expressway edge and that exposure can be further mitigated through design of building ventilation system.

The site plan for the Plano 121 development includes residential units that are either located more than 300 feet from the highway edge or are located with primary doors and windows in an area that will be screened by a four story building from the direct high concentrations of highway based air pollutants. In addition, all building mechanical rooms will be located on the southern side of the building (away from the SRT), which results in the building itself acting as additional screening to exposure to highway-based air pollutants. With the combination of the location of the residential units on the site and the screening provided by the garage, residents are not expected to experience higher concentrations expressway-based air pollutants.

6 Conclusions

In conclusion, the project site design has been developed in a manner that will reduce exposure to outdoor noise from the Sam Rayburn Tollway to below the City of Plano Expressway Corridor Environmental Health Goal. The established goal is for sensitive land uses within Expressway Corridor Environmental Health Areas to achieve a maximum outdoor noise level of less than 65 dBA Ldn. Residents of the Plano 121 Senior Living facility will not be exposed to high levels of expressway noise either within the units themselves, at the unit balcony, or at the outdoor use area. The primary outdoor use area will be located among the buildings so that highway noise will be effectively screened. Air pollution impacts coming from the adjacent Sam Rayburn Tollway will be minimized since effective on-site air pollution mitigation strategies have been integrated into the project design.

Appendix A Fundamentals of Acoustics

This attachment describes the noise terminology and metrics used in this report.

A.1 Decibels (dB), Frequency and the A-Weighted Sound Level

Loudness is a subjective quantity that enables a listener to order the magnitude of different sounds on a scale from soft to loud. Although the perceived loudness of a sound is based somewhat on its frequency and duration, chiefly it depends upon the sound pressure level. Sound pressure level is a measure of the sound pressure at a point relative to a standard reference value; sound pressure level is always expressed in decibels (dB).

Decibels are logarithmic quantities, so combining decibels is unlike common arithmetic. For example, if two sound sources each produce 100 dB operating individually and they are then operated together, they produce 103 dB. Each doubling of the number of sources produces another three decibels of noise. A tenfold increase in the number of sources makes the sound pressure level go up 10 dB, and a hundredfold increase makes the level go up 20 dB. If two sources differ in sound pressure level by more than 10 decibels, then operating together, the total level will approximately equal the level of the louder source; the quieter source doesn't contribute significantly to the total.

People hear changes in sound level according to the following rules of thumb: 1) a change of 1 decibel or less in a given sound's level is generally not readily perceptible except in a laboratory setting; 2) a 5-dB change in a sound is considered to be generally noticeable in a community setting; and 3) it takes approximately a 10-dB change to be heard as a doubling or halving of a sound's loudness.

Another important characteristic of sound is its frequency, or "pitch." This is the rate of repetition of sound pressure oscillations as they reach our ears. Frequency is expressed in units known as Hertz (abbreviated "Hz" and equivalent to one cycle per second). Sounds heard in the environment usually consist of a range of frequencies. The distribution of sound energy as a function of frequency is termed the "frequency spectrum."

The human ear does not respond equally to identical noise levels at different frequencies. Although the normal frequency range of hearing for most people extends from a low of about 20 Hz to a high of 10,000 Hz to 20,000 Hz, people are most sensitive to sounds in the voice range, between about 500 Hz to 2,000 Hz. Therefore, to correlate the amplitude of a sound with its level as perceived by people, the sound energy spectrum is adjusted, or "weighted."

The weighting system most commonly used to correlate with people's response to noise is "A-weighting" (or the "A-filter") and the resultant noise level is called the "A-weighted noise level" (dBA). A-weighting significantly de-emphasizes those parts of the frequency spectrum from a noise source that occurs both at lower frequencies (those below about 500 Hz) and at very high frequencies (above 10,000 Hz) where we do not hear as well. The filter has very little effect, or is nearly "flat," in the middle range of frequencies between 500 and 10,000 Hz. In addition to representing human hearing sensitivity, A-weighted sound levels have been found to correlate better than other weighting networks with human perception of "noisiness." One of the primary reasons for this is that the A-weighting network emphasizes the frequency range where human speech occurs, and noise in this range interferes with speech communication. Another reason is that the increased hearing sensitivity makes noise more annoying in this frequency range.

A.2 Equivalent Sound Level (L_{eq})

The Equivalent Sound Level, abbreviated L_{eq}, is a measure of the total exposure resulting from the accumulation of A-weighted sound levels over a particular period of interest -- for example, an hour, an 8-hour school day, nighttime, or a full 24-hour day. However, because the length of the period can be different depending on the timeframe of interest, the applicable period should always be identified or clearly understood when discussing the metric. Such durations are often identified through a subscript, for example L_{eq1h}, or $L_{eq(24\text{-}hour)}$.

The L_{eq} may be thought of as a constant sound level over the period of interest that contains as much sound energy as (is "equivalent" to) the actual time-varying sound level with its normal peaks and valleys. It is important to recognize, however, that the two signals (the constant one and the time-varying one) would sound very different from each other. Also, the "average" sound level suggested by L_{eq} is not an arithmetic value, but a logarithmic, or "energy-averaged" sound level. Thus, the loudest events may dominate the noise environment described by the metric, depending on the relative loudness of the events.

A.3 Day-Night Sound Level (L_{dn})

The L_{dn} represents a concept of noise dose as it occurs over a 24-hour period. It is the same as a 24-hour L_{eq}, with one important exception; L_{dn} treats nighttime noise differently from daytime noise. In determining L_{dn}, it is assumed that the A-weighted levels occurring at nighttime (10 p.m. to 7 a.m.) are 10 dB louder than they really are. These penalties are applied to account for greater sensitivity to nighttime noise, and the fact that events at nighttime are often perceived to be more intrusive because the background ambient noise at night is less than the ambient noise during the day.

Appendix B Annual Calibration Sheets

Scantek, Inc.
CALIBRATION LABORATORY
ISO 17025: 2005, ANSI/NCSL Z540:1994 Part 1
ACCREDITED by NVLAP (an ILAC MRA signatory)

NVLAP®
CALIBRATION
NVLAP Lab Code: 200625-0

Calibration Certificate No.42283

Instrument: **Sound Level Meter**
Model: **824**
Manufacturer: **Larson Davis**
Serial number: **A0795**
Tested with: **Mic. 40AQ s/n 19907 & 40AE s/n 8310**
Preamp. PRM902 s/n 1208 & s/n 3185
Type (class): **1**
Customer: **Harris Miller Miller & Hanson Inc.**
Tel/Fax: **781-229-0707 x3119 / 781-229-7939**

Date Calibrated: **2/11/2019** *Cal Due:*

Status:	Received	Sent
In tolerance:	X	X
Out of tolerance:		
See comments:		

Contains non-accredited tests: __Yes X No
Calibration service: __ Basic X Standard
Address: **77 South Bedford Street, Burlington, MA 01803**

Tested in accordance with the following procedures and standards:
Calibration of Sound Level Meters, Scantek Inc., Rev. 6/26/2015
SLM & Dosimeters – Acoustical Tests, Scantek Inc., Rev. 7/6/2011

Instrumentation used for calibration: Nor-1504 Norsonic Test System:

Instrument - Manufacturer	Description	S/N	Cal. Date	Traceability evidence Cal. Lab / Accreditation	Cal. Due
483B-Norsonic	SME Cal Unit	31052	Oct 31, 2018	Scantek, Inc./ NVLAP	Oct 31, 2019
DS-360-SRS	Function Generator	33584	Oct 24, 2017	ACR Env./ A2LA	Oct 24, 2019
34401A-Agilent Technologies	Digital Voltmeter	MY47011118	Oct 1, 2018	ACR Env. / A2LA	Oct 1, 2019
HM30-Thommen	Meteo Station	1040170/39633	Nov 13, 2018	ACR Env./ A2LA	Nov 13, 2019
PC Program 1019 Norsonic	Calibration software	v.6.1T	Validated Nov 2014	Scantek, Inc.	-
1251-Norsonic	Calibrator	30878	Nov 11, 2018	Scantek, Inc./ NVLAP	Nov 11, 2019

Instrumentation and test results are traceable to SI (International System of Units) through standards maintained by NIST (USA) and NPL (UK).

Environmental conditions:

Temperature (°C)	Barometric pressure (kPa)	Relative Humidity (%)
23.0	100.78	38.7

Calibrated by:	Lydon Dawkins	Authorized signatory:	Steven E. Marshall
Signature	Lydon Dawkins	Signature	Steven E Marshall
Date	2/11/2019	Date	2/14/2019

Document stored Z:\Calibration Lab\SLM 2019\LD824-27dB_A0795_M1.doc
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Scantek, Inc.
CALIBRATION LABORATORY
ISO 17025: 2005, ANSI/NCSL Z540:1994 Part 1
ACCREDITED by NVLAP (an ILAC MRA signatory)

NVLAP®
CALIBRATION
NVLAP Lab Code: 200625-0

Calibration Certificate No.42291

Instrument:	**Acoustical Calibrator**	*Date Calibrated:*	**2/7/2019**	*Cal Due:*	
Model:	**CAL250**	*Status:*	**Received**	**Sent**	
Manufacturer:	**Larson Davis**	*In tolerance:*	X	X	
Serial number:	**4182**	*Out of tolerance:*			
Class (IEC 60942):	**1L**	*See comments:*			
Barometer type:		*Contains non-accredited tests:*	__Yes _X_ No		
Barometer s/n:					
Customer:	**Harris Miller Miller & Hanson Inc.**	*Address:*	**77 South Bedford Street,**		
Tel/Fax:	**781-229-0707 x3119 / 781-229-7939**		**Burlington, MA 01803**		

Tested in accordance with the following procedures and standards:
Calibration of Acoustical Calibrators, Scantek Inc., Rev. 10/1/2010

Instrumentation used for calibration: Nor-1504 Norsonic Test System:

Instrument - Manufacturer	Description	S/N	Cal. Date	Traceability evidence Cal. Lab / Accreditation	Cal. Due
483B-Norsonic	SME Cal Unit	31052	Oct 31, 2018	Scantek, Inc./ NVLAP	Oct 31, 2019
DS-360-SRS	Function Generator	33584	Oct 24, 2017	ACR Env./ A2LA	Oct 24, 2019
34401A-Agilent Technologies	Digital Voltmeter	MY47011118	Oct 1, 2018	ACR Env. / A2LA	Oct 1, 2019
HM30-Thommen	Meteo Station	1040170/39633	Nov 13, 2018	ACR Env./ A2LA	Nov 13, 2019
140-Norsonic	Real Time Analyzer	1406423	Nov 3, 2018	Scantek / NVLAP	Nov 3, 2019
PC Program 1018 Norsonic	Calibration software	v.6.1T	Validated Nov 2014	Scantek, Inc.	-
4134-Brüel&Kjær	Microphone	173368	Nov 11, 2018	Scantek, Inc. / NVLAP	Nov 11, 2019
1203-Norsonic	Preamplifier	14059	Feb 12, 2018	Scantek, Inc./ NVLAP	Feb 12, 2019

Instrumentation and test results are traceable to SI (International System of Units) through standards maintained by NIST (USA) and NPL (UK)

Calibrated by:	Lydon Dawkins	Authorized signatory:	Steven E. Marshall
Signature	Lydon Dawkins	Signature	Steven E Marshall
Date	2/7/2019	Date	2/12/2019

Document stored as: Z:\Calibration Lab\Cal 2019\LDCAL250_4182_M1.doc
Page 1 of 2

HMMH
700 District Avenue Suite 800
Burlington, Massachusetts 01803
781.229.0707
www.hmmh.com

MEMORANDUM

To:	Kent Conine
From:	John Weston
Date:	April 21, 2020
Subject:	Plano 121 Senior Living - Noise Model Calibration Clarification

During the City of Plano Planning & Zoning Commission Meeting on April 6, 2020 there seemed to be some confusion regarding the specific purpose and use of the traffic counts and noise measurements that we conducted on January 2, 2020. I am providing the following information to help clarify the purpose of taking noise measurements and traffic counts, how those data are used in the noise modeling process, and to provide additional insight related to the noise and traffic measurements taken at the project site.

The noise analysis undertaken for the Plano 121 Senior Living project was conducted using a noise model that was originally developed to evaluate the impacts of expressway noise across the entire City of Plano. During development of the original model, HMMH conducted twelve long-term (24-hour) measurements and six short-term (30 minute) measurements at sites near expressways throughout Plano. In addition to conducting the noise measurements, development of the model included compilation of detailed topographic information, building information, geometric roadway information, and identifying average existing and future expressway traffic volumes.

Purpose of Noise Measurements/Traffic Counts

The purpose of taking noise measurements and traffic counts at a specific project development site is solely to ensure that the model is accurately reflecting noise conditions at the site, through what is called a model validation process. Validation of the model increases the confidence that the model is accurately reflecting conditions at the project site. Reasons why the model may not accurately reflect current conditions could include:

- Noise from sources besides the expressway that significantly influenced measured noise levels;
- Changes in topography, roadway configuration, or nearby buildings since the model was originally developed;
- Changes to soil or pavement between roadway and project site since the model was originally developed;
- Small details in the study area that were not included in the original model, such as roadside safety barriers or open-water stormwater retention basins, that influence noise levels.

Standard practice is to follow Federal Highway Administration guidance, which identifies that a highway noise model is considered validated if the measured data and the modeled data are within 3 dB(A). In cases where the model does not reflect measured noise levels, the model is refined until it is accurate within the 3 dB(A) standard.

Noise Model Validation

The model validation process includes conducting several short-term noise measurements on the site while simultaneously conducting traffic counts on the nearby expressway. The on-site data is then compared to model output to evaluate how closely the model is able to approximate on-site conditions.

The model validation process can be done during any period of the day since the process is comparing the counted traffic /measured noise with the modeled noise with the same volume of traffic. However, it is recommended that noise measurements and traffic counts are conducted during periods when traffic is free-flowing. Depending upon the expressway, conducting measurements during the peak traffic hour is often

avoided, since traffic is not at free-flow speeds during the peak-hour which then results in lower expressway noise levels.

Consistent with Federal Highway Administration guidance, a noise model is considered validated if the measured data and the modeled data are within 3 dB(A). Once it is determined that the model is accurately reflecting on-site noise levels, **the measured noise levels and traffic counts are not used in other stages of the noise modeling process.**

Model Validation at Plano 121 Senior Living parcel

Noise measurements were completed to document existing noise levels and to validate the roadway noise model. Four short-term measurements (30 minutes) were collected throughout the site to validate the roadway noise model. The measurements were collected on January 2, 2020. Figure 2 is a map of the measurement locations.

Figure 1. Measurement Locations

Source: Map Image and Data © *ESRI 2020, HMMH 2020.*

The short-term measurements were completed with a Larson Davis 824 with operator present. Each sound level meter was paired with a preamplifier and 1/2" microphone. The equipment used meets the American National Standards Institute (ANSI) S1.4 specifications for a Type 1 precision meter. The sound level meters were calibrated before and after the test with calibration traceable to the National Institute of Standards and Technology (NIST).

Roadway traffic counts were collected concurrent with each short-term measurement. These traffic counts were converted to hourly equivalent volumes and applied to each of the noise model roadways for validation purposes

Noise Measurement Results

Table 1 provides the results of the short-term measurement effort and the corresponding validation model sound levels. Since the modeled sound levels are within 3 dB of the measured sound levels the roadway noise model is considered a valid predictor of noise. The dominant noises source was Sam Rayburn Tollway and the occasional breeze. Kathryn Lane did not have enough traffic to contribute to the noise.

Table 1. Short-Term Measurement and Model Validation Results

Source: HMMH 2020

Measurement Location	Time	Measured dBA L_{eq}	Modeled dBA L_{eq}	Difference (dB)
M1	9:25-9:55	66.7	68.4	1.6
M2	10:10-10:40	65.8	65.3	-0.4
M3	10:52-11:22	64.2	63.6	-0.6
M4	11:30-12:00	61.0	63.3	2.4

It is important to note that the traffic volumes counted on Sam Rayburn Tollway and the frontage road (a.k.a Route 121) did not follow the same hourly patterns on January 2, 2020 as a "typical" weekday. It was found that overall traffic volumes during the two and 1/2 hour period when noise measurements and traffic counts were actively being taken were consistent with average traffic volumes, since total volumes were only 4% to 9% less than average over the entire period. However, the pattern of traffic was different on that day since traffic volumes were below typical by as much as 40% during the 9AM hour but were greater than normal by 50% during the 10 AM hour.

Regardless of whether the traffic flows were typical, the data collected was used solely to validate the accuracy of the model and was not used to estimate future noises. Further detail regarding the data used for modeling and predicting future noise at the project site is provided below.

Noise Modeling Process

Once the model is validated, the analysis is conducted using the model with **future** projected traffic volumes to estimate **future** noise levels. This includes incorporating both the Annual Average Daily Traffic (AADT) and the distribution of traffic over the course of the day. For site noise analysis, the 2040 traffic volumes are used as the base for generating the estimated future noise levels. Using a future anticipated condition is in keeping with the long-term nature of land use decisions.

Daily traffic volumes were established for the Sam Rayburn Tollway from the Statewide Traffic Analysis and Reporting System (STARS) maintained by TXDOT, which includes recent Annual Average Daily Traffic (AADT) and truck percentage data on the expressways. A forecasted growth percentage was applied to 2017 AADT data to establish the 2040 volumes. The forecasted growth percentages, hourly traffic distributions, and truck percentages were utilized from the North Texas Tollway Authority (NTTA) Comprehensive Traffic & Toll Revenue Study.

As shown in Table 2., the traffic volumes used for the project noise model include a projected 50% increase in daily traffic on the primary through-lanes of the Sam Rayburn Tollway as well as the frontage road traffic lanes (Route 121).

Table 2. Traffic Data Used in Nosie Modeling

Source: HMMH 2018

Lanes	2017 AADT	2040 AADT
Sam Rayburn Tollway Mainline	93,380	141,311
Sam Rayburn Tollway Eastbound Frontage	29,410	44,506
Sam Rayburn Tollway Westbound Frontage	33,200	50,241

Noise Model Analysis at Plano 121 Senior Living parcel

The traffic projections identified above were incorporated into the validated model to develop baseline conditions under which the project was evaluated. As shown in Table 3, the noise levels at each of the measurement locations are projected to increase by 1 to 2 decibels with the increase in traffic volumes between 2017 and 2040. **The project was evaluated using the 2040 AADT traffic volumes and resultant noise conditions.**

It is also noteworthy that the modeled noise levels with 2017 AADT are +/- 1 dBA of the modeled noise levels from 1/2/20 shown in Table 2, even with the variation in traffic volumes.

Table 3. Noise Levels with Change in Traffic Volumes

Source: HMMH 2020

Measurement Location	Time	Modeled dBA L_{eq} with 2017 AADT	Modeled dBA L_{eq} with 2040 AADT
M1	9:25-9:55	69.3	71.0
M2	10:10-10:40	64.7	66.4
M3	10:52-11:22	64.0	65.6
M4	11:30-12:00	63.6	65.2

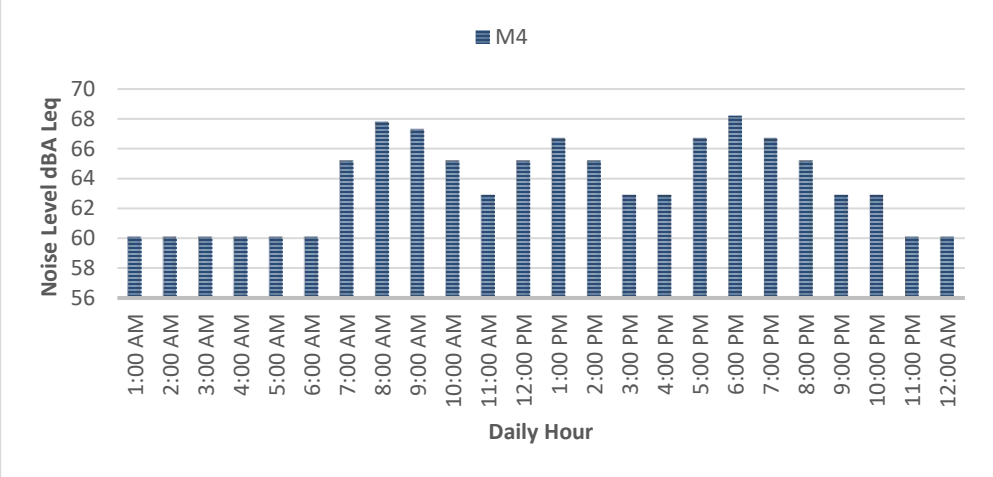
Daily Change in Noise

Clarification also appeared necessary to understand the change in noises over time. Much of the noise analysis for land use and development is conducted using a daily average noise level value (Ldn) that measures the average noise over the entire of a day (with a penalty for night time noise since noise causes more annoyance at night). This is done since noise levels are typically consistent from day to day and even the patterns of noise over the course of a day tend to be consistent. This allows a daily average value (Ldn) to be used to describe the typical conditions at a site.

However, when noise is being evaluated over a shorter time period it is important to understand the length of the time period and the time of day. This variability in noise levels has been incorporated into the noise model and the analysis of noise at Plano 121 Senior Living. An example of the variability of noise over the course of the day is included in Figure 1, which shows hourly average modeled decibel levels at measurement site #4 (M4) under 2040 traffic conditions. It is expected that hourly noise levels during peak traffic hours would increase to as much as 68 dBA but would fall to 60 dBA during the night time when traffic is limited. It should also be noted that even during the course of an hour, noise levels could vary significantly depending on the

impact and duration of a specific event (such as a loud motorcycle passing by), which would cause the instantaneous noise levels to be higher or lower but may not significantly change the average level (shown as Leq).

Figure 1. Change in Daily Noise Levels
Source: HMMH 2020



This additional information is being provided to clarify data that was included in the analysis of future noise conditions at the Plano 121 Senior Living development. Since measurement and analysis of noise is not commonly conducted as part of a development review it is understandable that some of the information included in the noise analysis needed additional clarification. I am happy to provide this additional information to bolster the confidence that the analysis was conducted using the highest level of professionalism and standards. HMMH has a long history and nationwide reputation for technical excellence in evaluating highway noise and has performed environmental noise studies and noise abatement design for highway, transit, railroad and aviation projects throughout the United States and the world.

The company was founded in 1981 to specifically focus on transportation noise issues and since that time has been a leader in the industry. In fact, based on our relentless focus on quality and technical excellence, the Federal Highway Administration, Federal Transit Administration, and Federal Railroad administration have all turned to HMMH's team of consultants when developing guidance for noise analysis and software tools for use by highway planners and engineers across the country. I hope that is clear that the analysis conducted by HMMH was conducted with the utmost integrity with the goal of providing the best possible information for you and the City to understand future noise conditions on the project site and its potential impact on future residents.

Please feel free to contact me at 781.852.3163 or jweston@hmmh.com if you have any addition questions.

HMMH
700 District Avenue Suite 800
Burlington, Massachusetts 01803
781.229.0707
www.hmmh.com

TECHNICAL MEMORANDUM

To:	Kent Conine 16812 Dallas Parkway Suite 150 Dallas, TX 75248
From:	HMMH - John Weston & Emma Butterfield
Date:	August 12, 2020
Subject:	Plano 121 Senior Living Noise Analysis Addendum
Reference:	HMMH Project Number 311300

During a previous hearing on the Plano 121 Senior Living project with the City of Plano Planning and Zoning Commission questions were raised regarding whether noise measurements previously conducted during non-peak traffic hours on January 2nd, 2020 were representative of noise conditions on the site. Although the noise measurements are used exclusively to validate the accuracy of the model, the development team conducted additional on-site measurements to confirm the model was accurately predicting current daily average noise conditions.

The original report used four short term measurements (30 minutes) taken on January 2, 2020 to validate the noise model. The field measured L_{eq} was compared to a modeled L_{eq} using traffic counted during the specific measurement period. The noise model did validate using this Federal Highway Administration supported method for conditions on the subject and therefore was used to conduct the Noise Analysis Report. To further validate the model 24-hour measurements were taken on July 23rd – 24th 2020 and were used to calculate an existing Day-Night level (L_{dn}) to compare against the L_{dn} in the existing scenario in the City of Plano's Expressway Corridor Environmental Health Study.

The long term 24-hour measurement site was located at the January 2nd, 2020 measurement location M4 shown in Figure 1. This site represented the most secure location for leaving the measurement equipment unattended for 24 hours. The measurements began at 12:30 PM on July 23rd, 2020 and ended at 11:30 AM on July 22nd, 2020 for 24 hours of continuous data. **The measured L_{dn} at site M4 is 62 dBA**. Using the SoundPLAN noise model and the existing conditions identified in the City of Plano's Expressway Corridor Environmental Health Study, **the modeled L_{dn} for site M4 is 63.1 dBA**. Therefore, the measured L_{dn} is 1.1 dBA quieter than the existing modeled value from the Environmental Health Study. TxDOT and FHWA consider a noise model to be a valid predictor of noise if a traffic noise measurement agrees with the modeled sound level within +/- 3 dB. Based on this information, the noise model used in Noise Analysis Report developed from the January 2nd, 2020 short term measurements does not need to be adjusted and therefore the calculated 2040 noise levels are an accurate representation of noise conditions in the future case.

Figure 1. Measurement Site Locations

OUTDOOR AIR QUALITY SAMPLING ASSESSMENT
Real Time Readings (H_2S, N, CO, CO_2, CH_4 and VOC's)
SWQ of Kathryn Lane and SRT 121 ("Site")
aka
Plano 121 Senior Living
Highway 121 and Kathryn Lane,
Plano, Collin County, Texas 75025

MAS-D ENVIRONMENTAL
PROJECT NO. MA1908157(M)
Novemberr 22, 2019

Prepared for:

CONINE RESIDENTIAL GROUP, INC.
5220 Spring Valley Road #204,
Dallas, Texas 75254
Attention: Ms. Meg Conine

Prepared by:

MAS-D Environmental & Associates, Inc.
PO Box 543032
Dallas, Texas 75354
Office: (972) 527-4422 Cell: (972) 670-5656
md.masdenv@gmail.com

Project No. MA1908157(M)

Noise Survey Assessment for
Plano 121 Senior Living
Highway 121 and Kathryn Lane,
Plano, Collin County, Texas

Dear Ms. Meg Conine:

MAS-D Environmental & Associates, Inc. (MAS-D Environmental) is pleased to report the results of the comparative outdoor due diligence air quality measurement of the subject and adjacent properties that was directed at real time monitoring for total volatile organic compounds (VOCs) with additional for measurements for hydrogen sulfide (H2S), methane (CH4), oxygen (O2), carbon dioxide (CO2), and carbon monoxide (CO) based on the requested scope of services.

This assessment was conducted by Mr. Michael Teeling, a senior project manager, and Mr. Maxim Dinka, an environmental consultant for MAS-D Environmental. The assessment was initiated on the 19th of November of 2019.

MAS-D Environmental has accomplished the real time measurements as approved by the Conine Residential Group, Inc. that is intended to represent current conditions with the purpose of documentation of acceptable air quality at the Site.

Rationale:

1. Hydrogen Sulfide (H2S) is a colorless chalcogen hydride gas with the characteristic foul odor of rotten eggs. It is very poisonous, corrosive, and flammable is a common additive for natural gas in order to provide an odor discernable by the common person that is attributable to a leak or rupture of lines related to heating and other uses such as stoves or other mechanical equipment.

2. Carbon monoxide is a colorless, odorless, and tasteless flammable gas that is slightly less dense than air and can be generated by incomplete combustion of natural gas.

3. Carbon Dioxide (CO2) is a colorless gas with a density about 60% higher than that of dry air. Carbon dioxide consists of a carbon atom covalently double bonded to two oxygen atoms. It occurs naturally in Earth's atmosphere as a trace gas and can represent a measurement of air exchange in a given area.

4. Volatile organic compounds (VOCs) have the potential to impact health and safety of humans and can be generated from various source points including paints, furniture, carpet, motor vehicle traffic, etc.

5. Methane (CH4) is a chemical compound with the chemical formula CH4. It is a group-14 hydride and the simplest alkane, and is the main constituent of natural gas.

Noise Survey Assessment for
Plano 121 Senior Living
Highway 121 and Kathryn Lane,
Plano, Collin County, Texas

MiniRae 3000 - SN 592-907755
Eagle 2 – SN E2H632
Real Time Measurements
H_2S, CO, CO_2, CH_4, O_2, VOCs

LOCATION	H_2S (ppm)	CO (ppm)	CO_2 (ppm)	CH_4 (% LEL)	O_2 (ppm)	VOCs (ppm)
Subject Property (vacant land)	0.0	0.0	0.2	2%	20.9	0.0
U-Haul Moving & Storage – 2560 Kathryn Lane	0.0	0.0	0.1	1%	20.9	0.0
Ridgeview Ranch Golf Course – 2701 Ridgeview Road	0.0	0.0	0.0	0%	20.9	0.0
23Hundred at Ridgeview – 2300 Kathryn Lane	0.0	0.0	0.2	2%	20.9	0.0
Estancia at Ridgeview Ranch – 10200 Independence	0.0	0.0	0.1	0%	20.9	0.0

Summary for Volatile Organic Compounds and Non-VOC Gases:

The analysis of data for the suite indicates well margined real time measurements for various air quality aspects. The data indicates acceptable levels for non-VOC and VOC considerations. No impact to the air quality is associated with the field data in comparison between the subject property and adjacent tracts with varying uses.

SUMMARY OF FINDINGS:

The results of the sampling event are as follows:

1. **Volatile organic compounds (VOC gases) real time measurements are within acceptable ranges per current industry standards for all tracts.**
2. **Non-VOC gases real time measurements are within acceptable ranges for all tracts measured.**
3. **The subject tract is acceptable for occupancy by based on air quality environmental conditions.**

Noise Survey Assessment for
Plano 121 Senior Living
Highway 121 and Kathryn Lane,
Plano, Collin County, Texas

If you have any questions or require additional clarifications/information regarding report, please do not hesitate to contact us at the office, (972) 527-4422, cell phone (972) 670-5656, or email us at md.masdenv@gmail.com.

Sincerely,

Maxim Dinka, IAC

ENVIRONMENTAL ASSESSMENT ASSOCIATION
MAXIM T. DINKA-MBA
EAA
Certified Environmental Inspector
Certified Environmental Specialist
Certified Environmental Consultant
Certified Air Quality Specialist
Member # 15060
EST 1991

APPENDIX

Noise Survey Assessment for
Plano 121 Senior Living
Highway 121 and Kathryn Lane,
Plano, Collin County, Texas

QUALIFICATIONS OF THE ENVIRONMENTAL PROFESSIONAL

SUMMARY OF EXPERIENCE:

Michael Teeling has in excess of twenty years of continuous experience in the management of environmental considerations including Phase I-III examinations though remediation projects with corporate environmental management experience. Mr. Teeling has served as a facility consultant for the review of commercial sites and structures (Property Condition Assessments). Licenses and certifications include those for a Certified Hazardous Waste Manager, Texas licensed Corrective Action Specialist, Mold Assessment Consultant, Asbestos Inspector, and Asbestos Management Planner.

PROFESSIONAL EXPERIENCE

CAMBRIDGE SERVICES GROUP, INC. 05/98-Present

Environmental Consultant for Mold, Asbestos Management, Environmental Assessment, Underground Storage Tank Assessment and Removal/Remediation, FEMA review and modification, Phase II and III activities, Municipal Setting Designation consultant.

LEXINGTON GROUP INTERNATIONAL, INC. 04/94-05/98

Manager - Environmental and Safety Services

Asbestos Management, Environmental Assessment, Underground Storage Tank Assessment and Removal/Remediation, Safety Audit and Review, Municipal Assessments and Recommendations, Process Safety Management, FEMA review and modification, Environmental Site Audit, Phase II and III activities.

SUNBELT SAVINGS ASSOCIATION, FSB 12/91-03/94

Michael Teeling was the corporate manager responsible for all environmental issues including the review of assets/and loans, design and remediation of contaminated sites, and communication with state and federal regulatory authorities.

SOUTHWEST FEDERAL SAVINGS ASSOCIATION 08/85-12/91

Michael Teeling was the corporate manager/officer for all environmental issues, real estate research, construction and environmental abatement/remediation, and contracting for corporate services.

Noise Survey Assessment for
Plano 121 Senior Living
Highway 121 and Kathryn Lane,
Plano, Collin County, Texas

EDUCATION AND QUALIFICATIONS

Bachelor of Business Administration
University of North Texas; Denton, Texas

Certified Hazardous Materials Manager - 1990:
Regulations Training in Hazardous Materials
Communication Standard for Hazardous Materials
Chemical Analysis of Hazardous Materials
Site Assessments
Hazardous Materials VII-Medical Waste
Emergency Response to Hazardous Materials
Advanced Emergency Response to Hazardous Materials
Risk Awareness (Interview and Public Media)

Certified Environmental Manager - 2002

Asbestos Building Inspector's Course (AHERA) 190-164
Asbestos Management Planner's Course (AHERA) 190-110
Texas Licensed Asbestos Inspector and Management Planner 205515
Texas Licensed Mold Assessment Consultant MAC 0221
Texas Licensed Corrective Action Specialist RCAS 00822

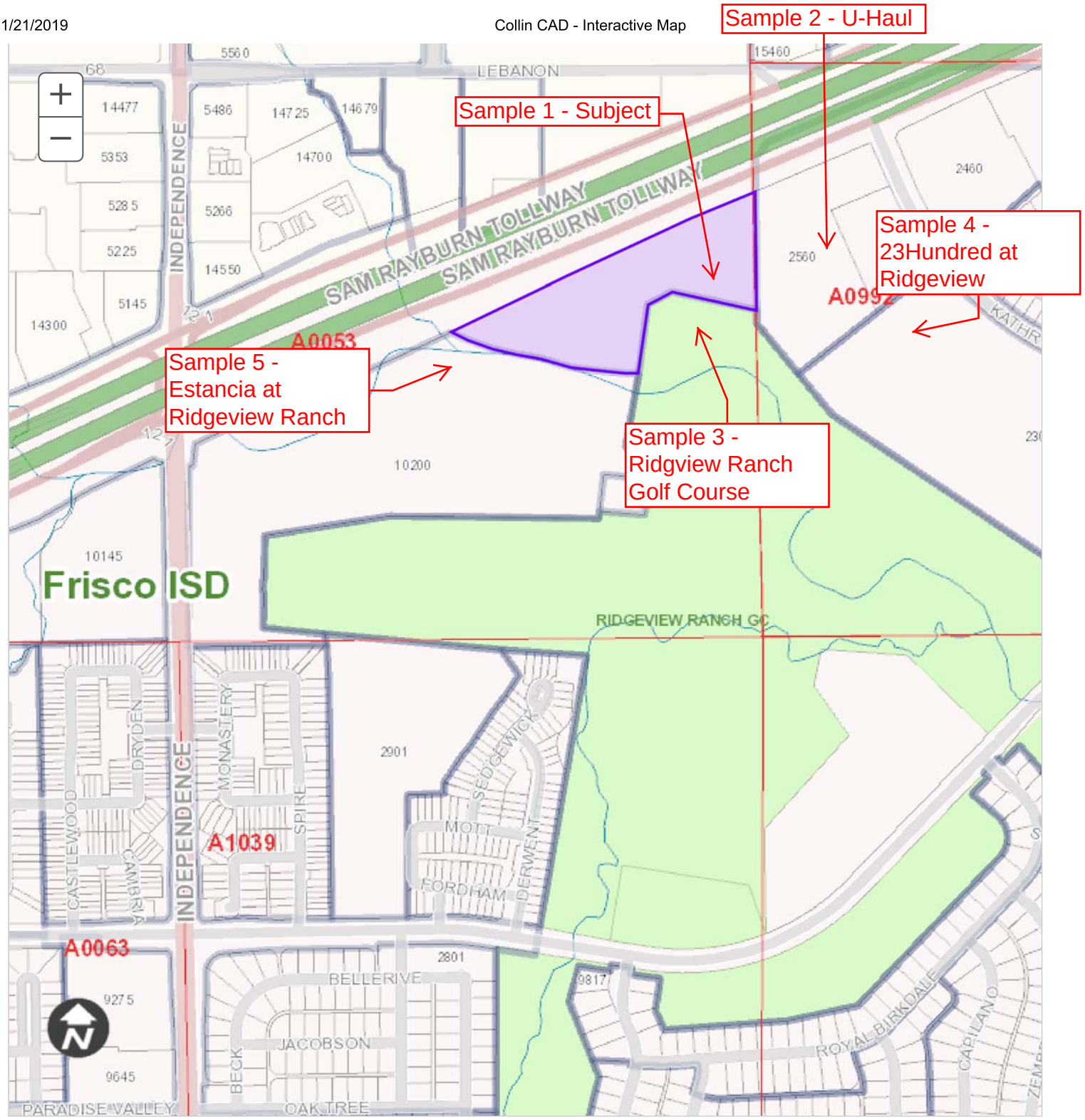
Hazard Communication and Hazardous Materials Awareness –
Texas A & M University
EPA - Air Monitoring for Hazardous Materials (165.4)
Hazardous Materials Emergency Response - Operations Level (40 Hours)

Low Flow Sampling (EPA and TCEQ) – Geotech Environmental Equipment
Air Quality Monitoring & Sampling – Geotech Environmental Equipment
Slug and Water Testing - Geotech Environmental Equipment
Survey and Transit Elevation - Geotech Environmental Equipment
Lead Based Paint Certificate – XRF - Geotech Environmental Equipment

GHH Engineering, Inc – Certified Mold Awareness and Inspector GEBCO – Mold Consultant Training (40 hrs.)

American Water College – Basic Water Works Operation (20 hrs.)

LOCATIONAL TAX AND PLAT DATA



If you'd prefer to use a standalone version of this map, please **click here**.

Property Search

Property ID: 2056041 - Tax Year: 2020

General Information

Property ID	2056041
Property Status	Active
Geographic ID	R-6053-000-0300-1
Property Type	Real
Property Address	Plano, TX
Total Land Area	11.6320 acres
Total Improvement Main Area	n/a
Abstract/Subdivision	Jacob Baccus Survey
Primary State Code	D1 (Qualified Open-space Ag Land)
Legal Description	Abs A0053 Jacob Baccus Survey, Tract 30, 11.632 Acres
Tax Agent	David Hall Consulting, Inc

Owner Information

Owner ID	371319
Owner Name(s)	L A D F Investment Fund
Exemptions	None
Percent Ownership	100.00%
Mailing Address	212 S Palm Ave Fl 2 Alhambra, CA 91801-3105

2020 Value Information

Value information for Property ID 2056041 in the 2020 tax year is unavailable. Value information for prior years may be available in the Value History section below.

Entities

Taxing Entity	Tax Rate	Collected By
CPL (Plano City)	0.448200 (2019 Rate)	Collin County Tax Office
GCN (Collin County)	0.174951 (2019 Rate)	Collin County Tax Office
JCN (Collin College)	0.081222 (2019 Rate)	Collin County Tax Office
SFR (Frisco ISD)	1.338300 (2019 Rate)	Collin County Tax Office

Improvements

Our records don't show any improvement data for Property ID 2056041 in the year 2020.

Land Segments

Land Segment #1	Cropland
State Code	D1 (Qualified Open-space Ag Land)
Homesite	No
Market Value	
Ag Use Value	1D1
Land Size	11.6320 acres 506,690 sq. ft.

Value History

Year	Improvement	Land	Market	Ag Loss	Appraised	HS Cap Loss	Assessed
2019	$0	$3,546,829	$3,546,829	$3,544,921	$1,908	$0	$1,908
2018	$0	$3,546,829	$3,546,829	$3,544,945	$1,884	$0	$1,884
2017	$0	$2,660,122	$2,660,122	$2,658,226	$1,896	$0	$1,896
2016	$0	$2,282,422	$2,282,422	$2,280,456	$1,966	$0	$1,966
2015	$0	$1,652,688	$1,652,688	$1,650,664	$2,024	$0	$2,024

Deed History

Deed Date	Seller	Buyer	Instr #	Volume/Page
05/01/1997	HRC RANCH LTD	L A D F INVESTMENT FUND		97-/0034504

SB 541 – Amends Section 25.027 of the Property Tax Code, effective September 1, 2005

RESTRICTION ON POSTING DETAILED IMPROVEMENT INFORMATION ON INTERNET WEBSITE:

Information in appraisal records may not be posted on the Internet if the information is a photograph, sketch, or floor plan of an improvement to real property that is designed primarily for use as a human residence. This section does not apply to an aerial photograph that depicts five or more separately owned buildings.

HB 394 – Amends Section 25.027 of the Property Tax Code, effective September 1, 2015

RESTRICTION ON POSTING AGE RELATED INFORMATION ON INTERNET WEBSITE:

Information in appraisal records may not be posted on the Internet if the information indicates the age of a property owner, including information indicating that a property owner is 65 years of age or older.

CALIBRATION CERTIFICATES

geotech
Calibrated at Geotech's Texas service center
1600 North I 35E Suite 114
Carrollton, TX 75006
(800) 276-5325 *Fax:* (972) 245-8889

MiniRae 3000 Calibration Certificate

Unit Number: 3829
Serial Number: 592-907755

Calibration Date 11/15/2019
Technician: Taylor Benton

- [x] Cleaned PID and Case
- [x] Visually inspect for damage and missing part
- [x] Manual is in case.
- [x] Unit display is showing fully charged

Lamp Type
- [x] 10.6eV
- [ ] 11.7eV

Charger (V)	12	**Pass**
Spare Battery (V)	4	**Pass**
Lamp Serial #	2R11475	
Sensor Serial #	23030032P3	
Pump Flow (ml/min)	500	**Pass**

Raw Readings 10A

Zero	61255	**Pass**
Span	42566	**Pass**
Delta	18689	**Pass**

Calibration

	Calibration	Reading	Variance		Calibration Gas	Gas Lot #	Exp. Date	
Zero	0 ppm	0 ppm	0.00%	**Pass**	Nitrogen	1300-3001		
Span	100 ppm	100 ppm	0.00%	**Pass**	Isobutylene	18-6534	9/21	**Pass**

Geotech Environmental Equipment, Inc. takes pride in ensuring this instrument is tested to function as specified by the manufacturer and was calibrated in accordance to manufacturer specifications. All calibration standards used are NIST traceable. With the provided lot numbers we can provide NIST documents on request. Call us at (800) 833-7958 and we will be glad to help.

geotech
Calibrated at Geotech's Texas service center
1600 North I 35E Suite 114
Carrollton, TX 75006
(800) 276-5325 *Fax:* (972) 245-8889

RKI Eagle 2 Calibration Certificate

Unit Number: 6670
Serial Number: E2H632

Field Calibration Date: 11/8/2019 12:49 PM
Technician: Taylor Benton

- ☑ Cleaned Unit and Case
- ☑ Visually inspect for damage and missing parts
- ☑ Manual is on USB.

Battery (V)	6 V	**Pass**
Spare Battery (V)	6 V	**Pass**
Pump flow	3500 ml/min	**Pass**

Zero

Gas Zered	Zero	Reading	Variance		Zero Gas	Lot #
LEL CH_4	0 %	0 %	0.00%	**Pass**	Ambient Air	Not Applicable
CO_2	0 %	0 %	0.00%	**Pass**	Ambient Air	Not Applicable
CO	0 ppm	0 ppm	0.00%	**Pass**	Ambient Air	Not Applicable
H_2S	0 ppm	0 ppm	0.00%	**Pass**	Ambient Air	Not Applicable
O_2	20.9 %	20.9 %	0.00%	**Pass**	Ambient Air	Not Applicable

Span

Gas Spaned	Span	Reading	Variance		Calibration Gas	Lot #	Exp. Date	
LEL CH_4	50 %	50 %	0.00%	**Pass**	4 Gas	18-6575	11/20	**Pass**
CO_2	15 %	15 %	0.00%	**Pass**	Gem Gas	16-5731	11/19	**Pass**
CO	50 ppm	50 ppm	0.00%	**Pass**	4 Gas	18-6575	11/20	**Pass**
H_2S	10 ppm	10 ppm	0.00%	**Pass**	4 Gas	18-6575	11/20	**Pass**
O_2	18 %	18 %	0.00%	**Pass**	4 Gas	18-6575	11/20	**Pass**

Geotech Environmental Equipment, Inc. takes pride in ensuring this instrument is tested to function as specified by the manufacturer and was calibrated in accordance to manufacturer specifications. All calibration standards used are NIST traceable. With the provided lot numbers we can provide NIST documents on request. Call us at (800) 833-7958 and we will be glad to help.

Industrial Hygiene Services Report

Plano 121 Senior Living Center
Highway 121 and Kathryn Lane
Plano, Texas

August 13, 2020
Terracon Project No. 95207417

Prepared for:
Conine Residential Group, Inc.
Dallas, Texas

Prepared by:
Terracon Consultants, Inc.
Fort Worth, Texas

August 13, 2020

Conine Residential Group, Inc.
16812 Dallas Pkwy., Suite 150
Dallas, Texas 75248-1919

Attn: Ms. Meg Conine
T: 214-533-8839
E: meg@conine.com

Re: Industrial Hygiene Services
Plano 121 Senior Living Center
Highway 121 and Kathryn Lane
Plano, Texas
Terracon Project 95207417

Dear Ms. Conine:

The purpose of this report is to present the results of the ambient air quality evaluation conducted on August 5, 2020, at the above referenced location.

Terracon appreciates the opportunity to provide this service to Conine Residential Group, Inc. If you have any questions regarding this report, please contact the undersigned at (817) 268-8600.

Sincerely,

Robert Garrison
Senior Associate
Department Manager, Industrial Hygiene

for:
Andrew Cassidy
Senior Staff Industrial Hygienist

TABLE OF CONTENTS

INDUSTRIAL HYGIENE SERVICES REPORT
PLANO 121 SENIOR LIVING CENTER
HIGHWAY 121 AND KATHRYN LANE
PLANO, TEXAS
Terracon Project 95207417
August 13, 2020

1.0 PROJECT DESCRIPTION

Terracon Consultants, Inc. (Terracon) conducted air quality measurements for particulate matter at the 11.599 acre agricultural and vacant land located south of Highway 121 and west of Kathryn Lane in Plano, Collin County, Texas. Terracon representative, Ms. Anna Humphries, performed the sampling on August 5, 2020. The evaluation was performed in general accordance with Terracon proposal P95207417, dated July 27, 2020.

1.1 Scope of Services

The air quality evaluation conducted on August 5, 2020, consisted of continuous air sampling at representative locations along the northern fence line of the property for particulate matter 2.5 micrometers or less ($PM_{2.5}$) and particulate matter 10 micrometers or less (PM_{10}), temperature and relative humidity.

1.2 Standard of Care

This air sampling was conducted at the subject site on August 5, 2020, based on information provided to Terracon regarding building conditions. Terracon did not attempt to identify every potential exposure or hazard present at the subject site.

This investigation was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale. The results, findings, conclusions, and recommendations expressed in this report are based on conditions observed during our August 5, 2020, sampling. Many factors such as weather conditions, wind patterns, and seasonal variations or local sources of outdoor particulates can affect the conditions observed. The information contained in this report should not be relied upon to represent conditions that existed previously or at a later date. Terracon does not warrant the services of regulatory agencies, laboratories, or other third parties supplying information that may have been used in the preparation of this report.

1.3 Reliance

The report has been prepared on behalf of and exclusively for use by Conine Residential Group, Inc. for specific application to their project as discussed. No other individual or entity may rely on this report without written permission of Terracon and Conine Residential Group, Inc. Reliance on

this report by Conine Residential Group, Inc. and all authorized parties will be subject to the key understandings and limitations stated in the proposal, this report, and Terracon's Agreement for Services. The limitation of liability defined in Terracon's Agreement for Services is the aggregate limit of Terracon's liability to Conine Residential Group, Inc. and all relying parties.

2.0 Evaluation Criteria

2.1 Particulate Matter

Particulate matter (PM) is the term for a mixture of solid particles and liquid droplets found in the air. Some particles such as dust, dirt, soot, or smoke are large or dark enough to be seen with the naked eye. Others are so small they can only be detected using a microscope.

Particle matter includes:

- PM_{10}: Inhalable particles with diameters that are generally 10 micrometers and smaller.
- $PM_{2.5}$: Fine inhalable particles with diameters that are generally 2.5 micrometers and smaller.

The Environmental Protection Agency (EPA) National Ambient Air Quality Standard (NAAQS) for PM_{10} is 150 micrograms per cubic meter of air ($\mu g/m^3$) averaged over a 24-hour period, and for $PM_{2.5}$ is 35 $\mu g/m^3$ as a 24-hour average. The EPA typically averages data collected over a three-year period when establishing if a geographic region is non-compliant with the NAAQS.

2.2 Temperature and Relative Humidity

There are no regulatory standards for ambient temperature and relative humidity that would apply to this study.

3.0 METHODS

3.1 SGS Smart Sense Units

Data for all parameters were collected by the SGS Smart Sense™ monitoring system using state-of-the-art optical and electrochemical sensors mounted in a weather-tight case. These are data - logging systems that collect and store one data point per minute. Following the data collection period, data were downloaded from the SGS web site for analysis. Cellular technology was used for communication with the monitoring system in real time. A Verizon Wireless Jetpack hotspot was used with each monitor to connect to the local cellular system. Ambient air sampling was conducted for approximately eight hours during normal business hours.

$PM_{2.5}$ and PM_{10} results are reported in µg/m^3. Temperature is reported in degrees Fahrenheit (°F) and relative humidity is reported in per cent (%).

4.0 RESULTS

***General Information*:** On the day of the sample event, wind speed averaged 7.1 miles per hour and was primarily from the east-northeast and east-southeast with gusts from the north-northeast and there was intermittent cloud cover. The sampling equipment was placed approximately 45 to 50 feet south of the Highway 121 frontage road at generally evenly spaced locations. The Smart Sense™ units were located near the vegetation boundary at the west end of the property, in the center of the property and on the east end of the property. An anemometer was also attached to the Smart Sense™ unit located in the center of the property to measure wind speed and direction.

A sample location site diagram is presented in Appendix A.

4.1 Particulate Matter (2.5)

$PM_{2.5}$ concentrations were averaged over the approximate 8-hour sample time. The average $PM_{2.5}$ concentrations on August 5, 2020, ranged from 3.1 µg/m^3 to 4.6 µg/m^3, with a maximum concentration of 13.8 µg/m^3 and a minimum concentration of 2.6 µg/m^3.

The $PM_{2.5}$ concentrations were below the EPA NAAQS recommended levels during the sampling period.

A summary of the $PM_{2.5}$ measurements is presented in Appendix B, Table 1.0 and in graph format in Appendix C.

4.2 Particulate Matter (10)

PM_{10} concentrations were averaged over the approximate 8-hour sample time. The average PM_{10} concentrations on August 5, 2020, ranged from 3.7 µg/m^3 to 8.6 µg/m^3, with a maximum concentration of 31.2 µg/m^3 and a minimum concentration of 2.8 µg/m^3.

A summary of the PM_{10} measurements is presented in Appendix B, Table 1.0 and in graph format in Appendix C.

4.3 Temperature and Relative Humidity

Temperature and relative humidity were measured at the same locations as previously described. The average temperature on August 5, 2020, ranged from 79.8° F to 85.3° F, with a maximum of 104.5° F and a minimum of 73.5° F.

The average relative humidity on August 5, 2020, ranged from 54.8% to 61.7%, with a maximum of 67.2% and a minimum of 45.5%.

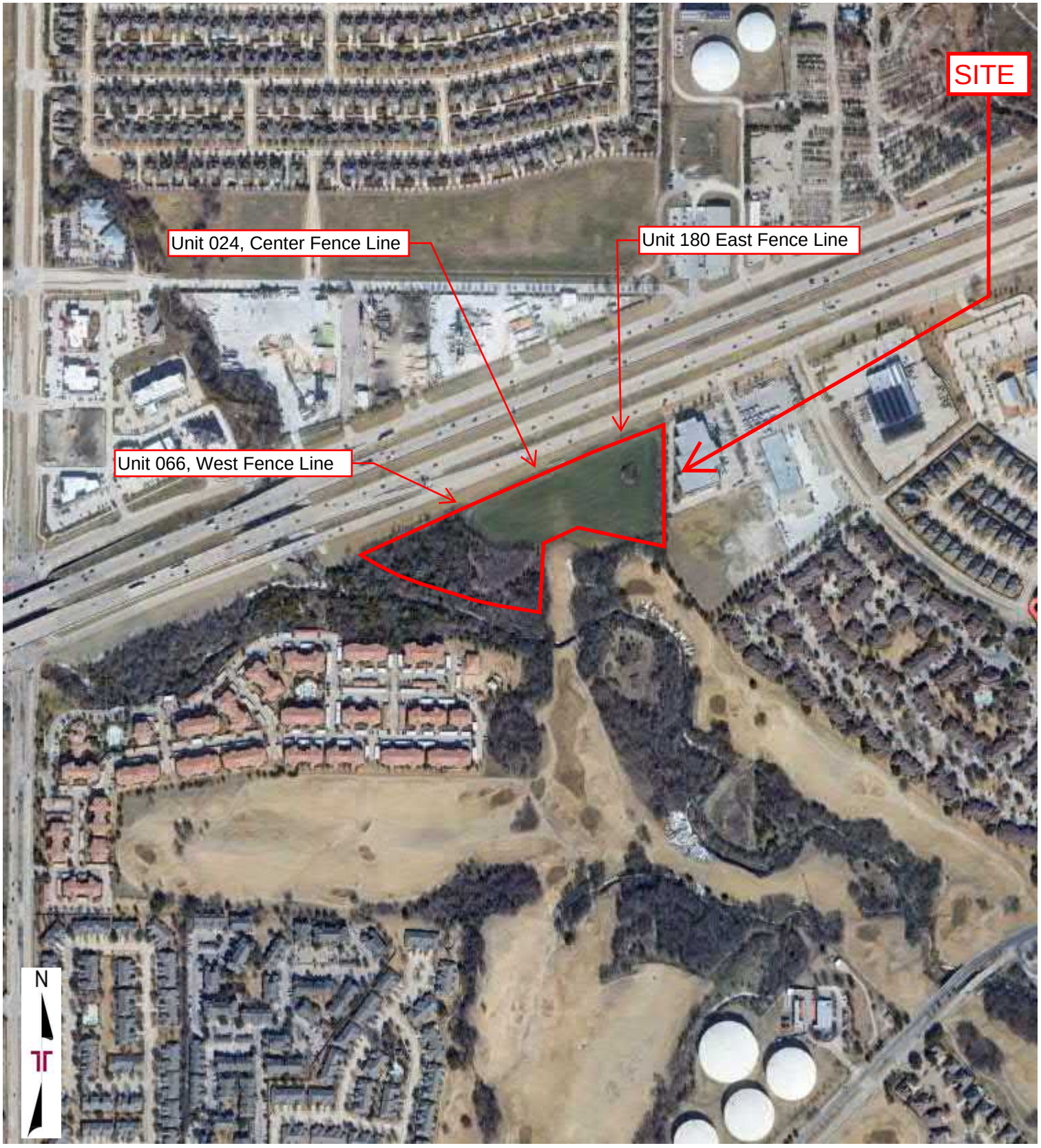
A summary of the temperature and relative measurements is presented in Appendix B, Table 1.0.

5.0 SUMMARY

The air sampling conducted on August 5, 2020, along the northern fence line of the subject property indicates that $PM_{2.5}$, and PM_{10} were below the EPA NAAQS criteria.

APPENDIX A

SAMPLE LOCATION DIAGRAM



Project No.	95207417
Scale:	1" ~ 500'
Source:	Google Earth
Date:	2018

Terracon
Consulting Engineers & Scientists
8901 Carpenter Freeway, Suite 100 Dallas, Texas 75247
PH. (214) 630-1010 FAX. (214) 630-7070

PM Sample Locations	Appendix
Plano 121 Senior Living Center Highway 121 and Kathryn Lane Plano, Collin County, Texas	A

APPENDIX B

TABLE 1.0

TABLE 1.0, RESULTS SUMMARY

WEST END OF FENCE LINE, INSTRUMENT 066								
	$PM_{2.5}$ 8/5/2020	PM_{10} 8/5/2020	Temperature 8/5/2020	RH 8/5/2020	Wind Speed 8/5/2020	Wind Direction 8/5/2020	EPA NAAQS $PM_{2.5}$ Reference	EPA NAAQS PM_{10} Reference
Average	3.1 µg/m³	3.7 µg/m³	85.3 F	54.8 %	NA	NA	35 µg/m³	150 µg/m³
Max	3.8 µg/m³	5.4 µg/m³	104.5 F	58.3 %	NA	NA	NA	NA
Min	2.6 µg/m³	2.8 µg/m³	76.2 F	45.5 %	NA	NA	NA	NA
CENTER OF FENCE LINE, INSTRUMENT 024								
	$PM_{2.5}$ 8/5/2020	PM_{10} 8/5/2020	Temperature 8/5/2020	RH 8/5/2020	Wind Speed 8/5/2020	Wind Direction 8/5/2020	EPA NAAQS $PM_{2.5}$ Reference	EPA NAAQS PM_{10} Reference
Average	4.6 µg/m³	7.8 µg/m³	83.9 F	56.6 %	7.1 mph	ENE	35 µg/m³	150 µg/m³
Max	6.7 µg/m³	27.5 µg/m³	101.9 F	61.2 %	17.4 mph	NA	NA	NA
Min	3.5 µg/m³	4.6 µg/m³	74.7 F	47.8 %	0 mph	NA	NA	NA
EAST END OF FENCE LINE, INSTRUMENT 180								
	$PM_{2.5}$ 8/5/2020	PM_{10} 8/5/2020	Temperature 8/5/2020	RH 8/5/2020	Wind Speed 8/5/2020	Wind Direction 8/5/2020	EPA NAAQS $PM_{2.5}$ Reference	EPA NAAQS PM_{10} Reference
Average	4.5 µg/m³	8.6 µg/m³	79.8 F	61.7 %	NA	NA	35 µg/m³	150 µg/m³
Max	13.8 µg/m³	31.2 µg/m³	90.6 F	67.2 %	NA	NA	NA	NA
Min	2.7 µg/m³	3.6 µg/m³	73.5 F	55.3 %	NA	NA	NA	NA

Notes: µg/m³ = micrograms per cubic meter of air
F = Degrees Fahrenheit
RH = percent Relative Humidity
Mph = miles per hour
WNW = West Northwest

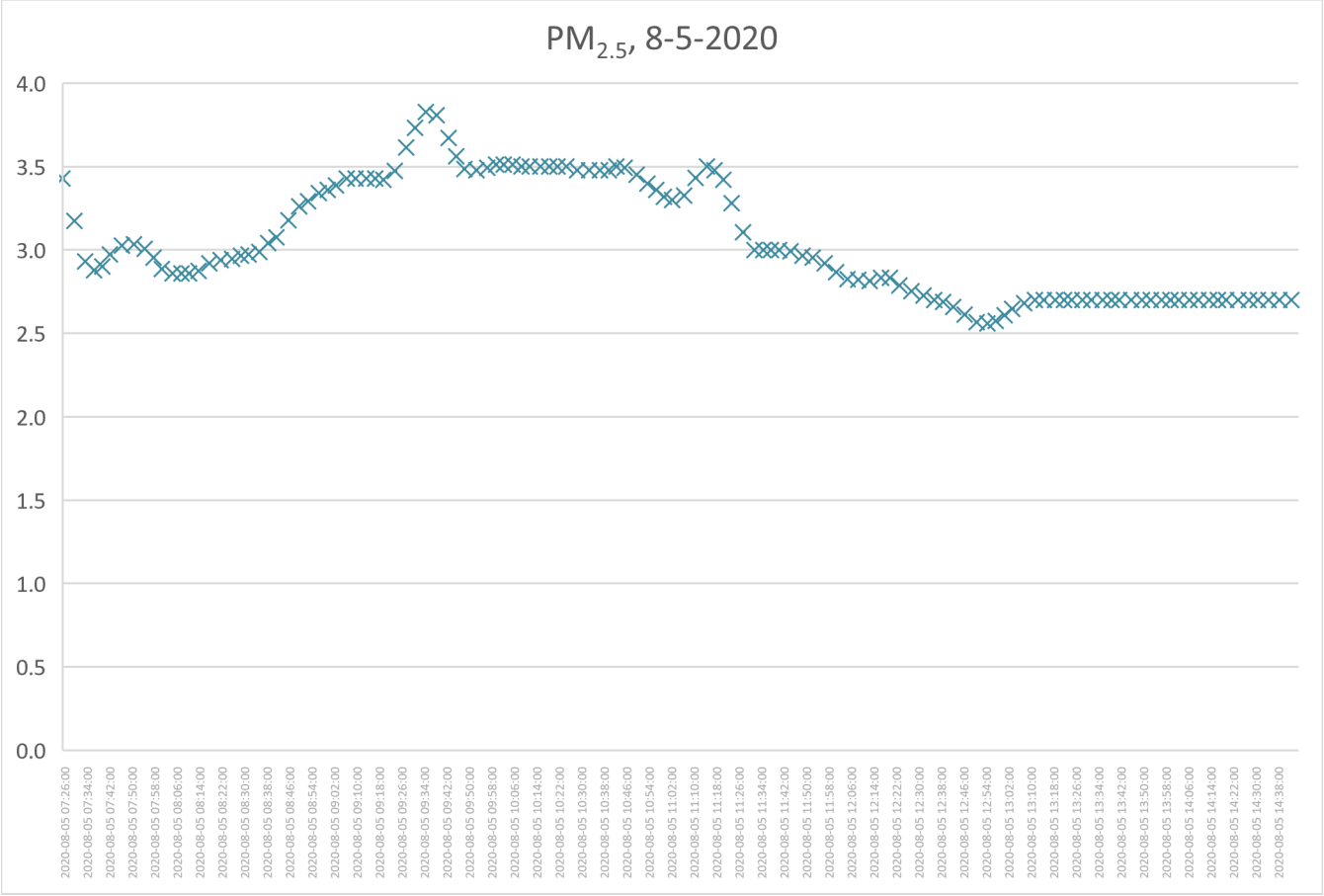
EPA National Ambient Air Quality Standard (NAAQS) for $PM_{2.5}$ of 35 µg/m³ average over three years

EPA NAAQS for PM_{10} of 150 µg/m³ not be exceeded more than once per year averaged over three years

APPENDIX C

GRAPHIC RESULTS

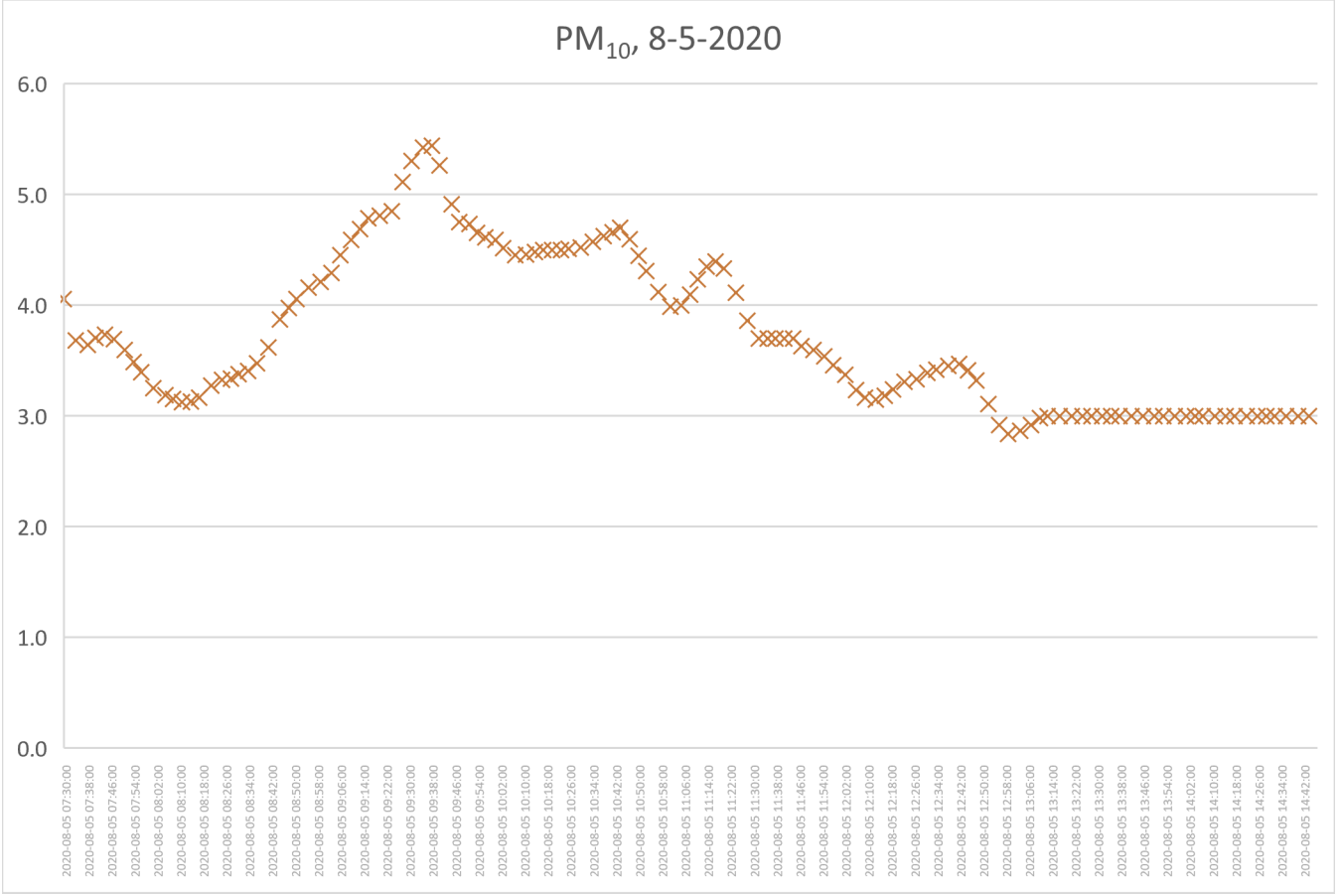
LOCATION 1, WEST END OF PROPERTY



Particulate Matter less than 2.5 micrograms per cubic meter (µg/m^3 / $PM_{2.5}$) of air over 8-hour sample period.

EPA NAAQS for $PM_{2.5}$ is 35 µg/m^3 over a 24-hour period averaged over 3-years.

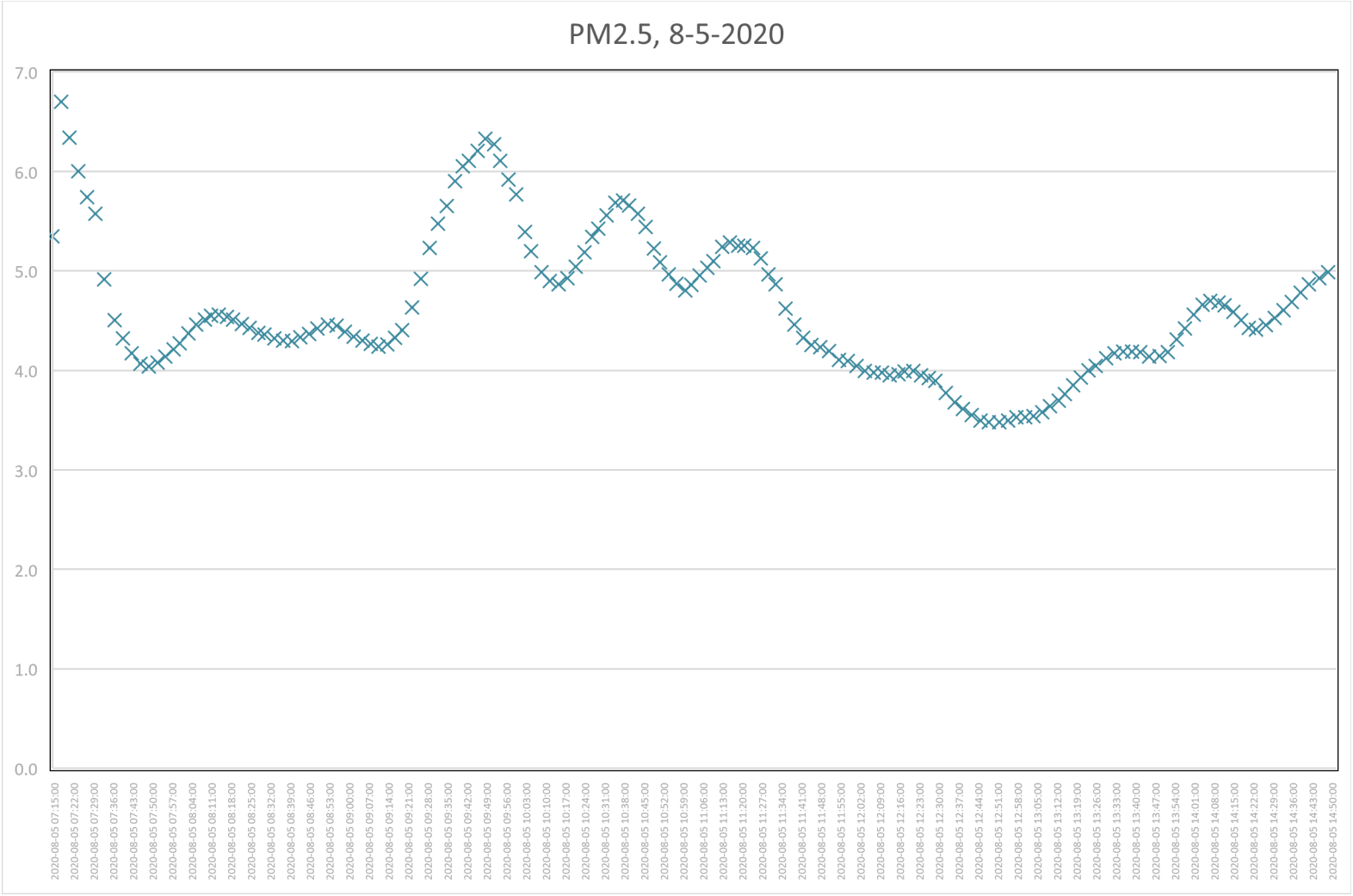
LOCATION 1, WEST END OF PROPERTY



Particulate Matter less than 10 micrograms per cubic meter (µg/m^3 / PM_{10}) of air over 8-hour sample period.

EPA NAAQS for PM_{10} is 150 µg/m^3 over a 24-hour period not to be exceeded more than once per year on average over 3 years

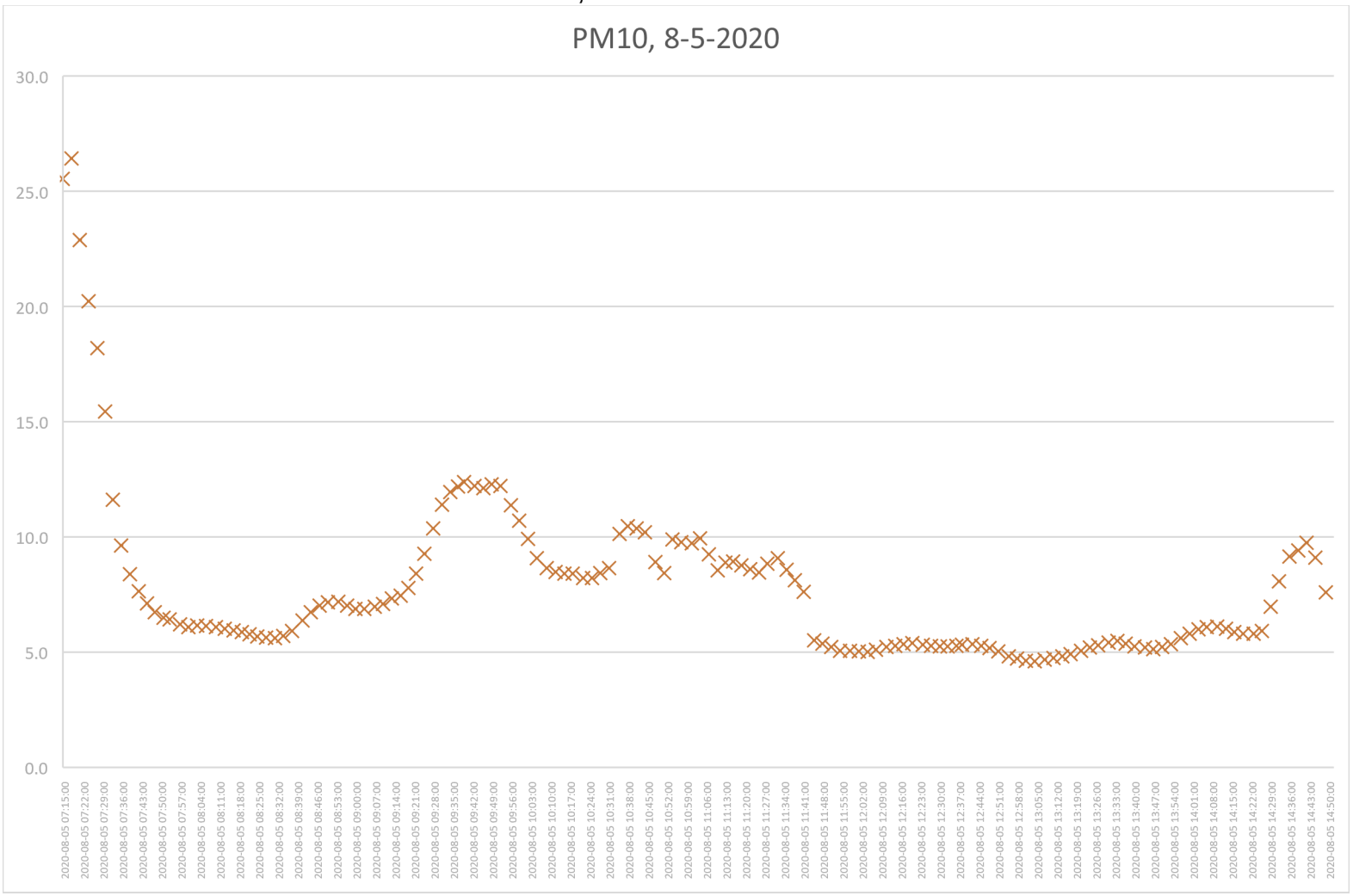
LOCATION 2, CENTER OF PROPERTY



Particulate Matter less than 2.5 micrograms per cubic meter (µg/m^3 / $PM_{2.5}$) of air over 8-hour sample period.

EPA NAAQS for $PM_{2.5}$ is 35 µg/m^3 over a 24-hour period averaged over 3-years.

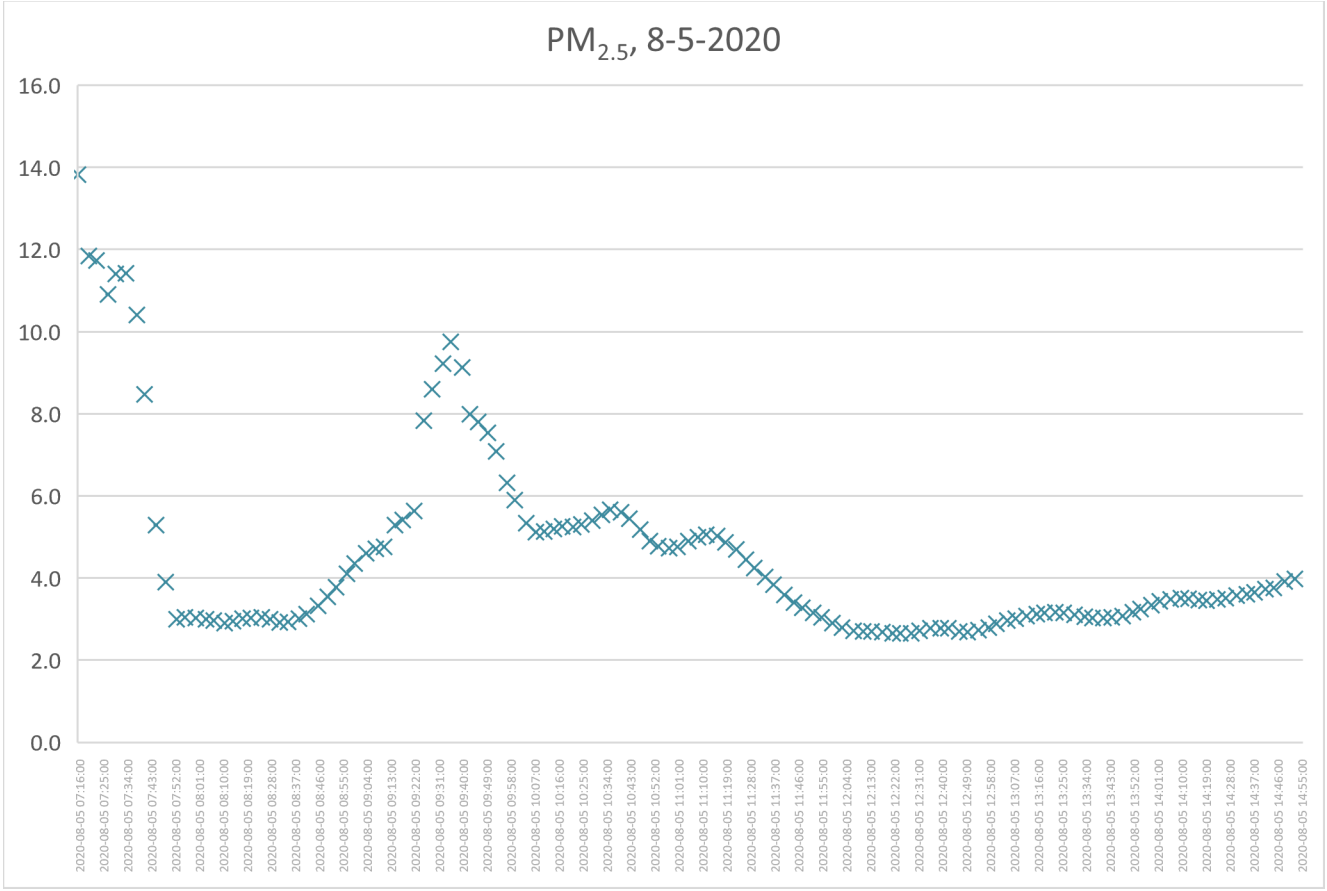
LOCATION 2, CENTER OF PROPERTY



Particulate Matter less than 10 micrograms per cubic meter ($\mu g/m^3$ / PM_{10}) of air over 8-hour sample period.

EPA NAAQS for PM_{10} is 150 $\mu g/m^3$ over a 24-hour period not to be exceeded more than once per year on average over 3 years

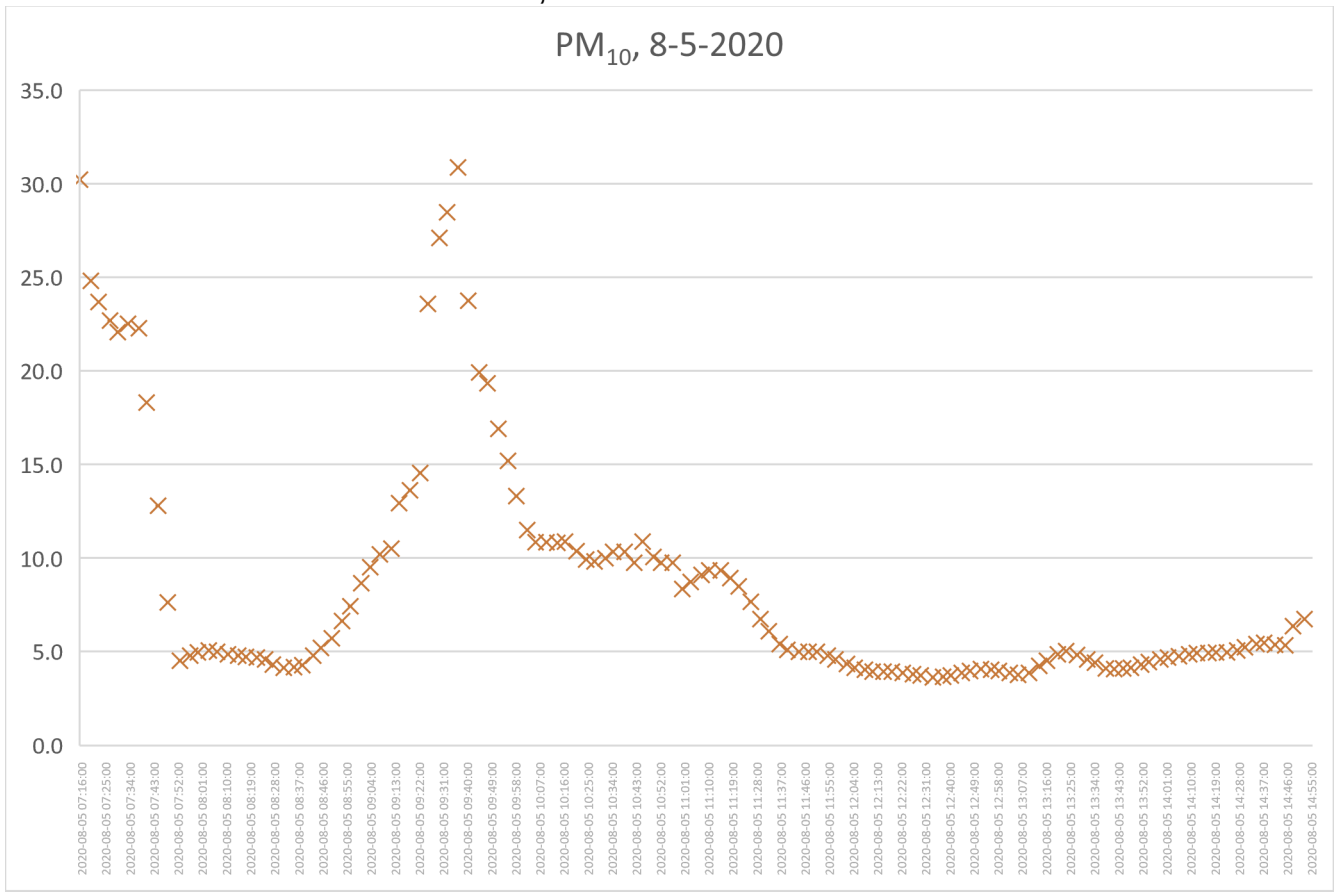
LOCATION 1, EAST END OF PROPERTY



Particulate Matter less than 2.5 micrograms per cubic meter (µg/m^3 / $PM_{2.5}$) of air over 8-hour sample period.

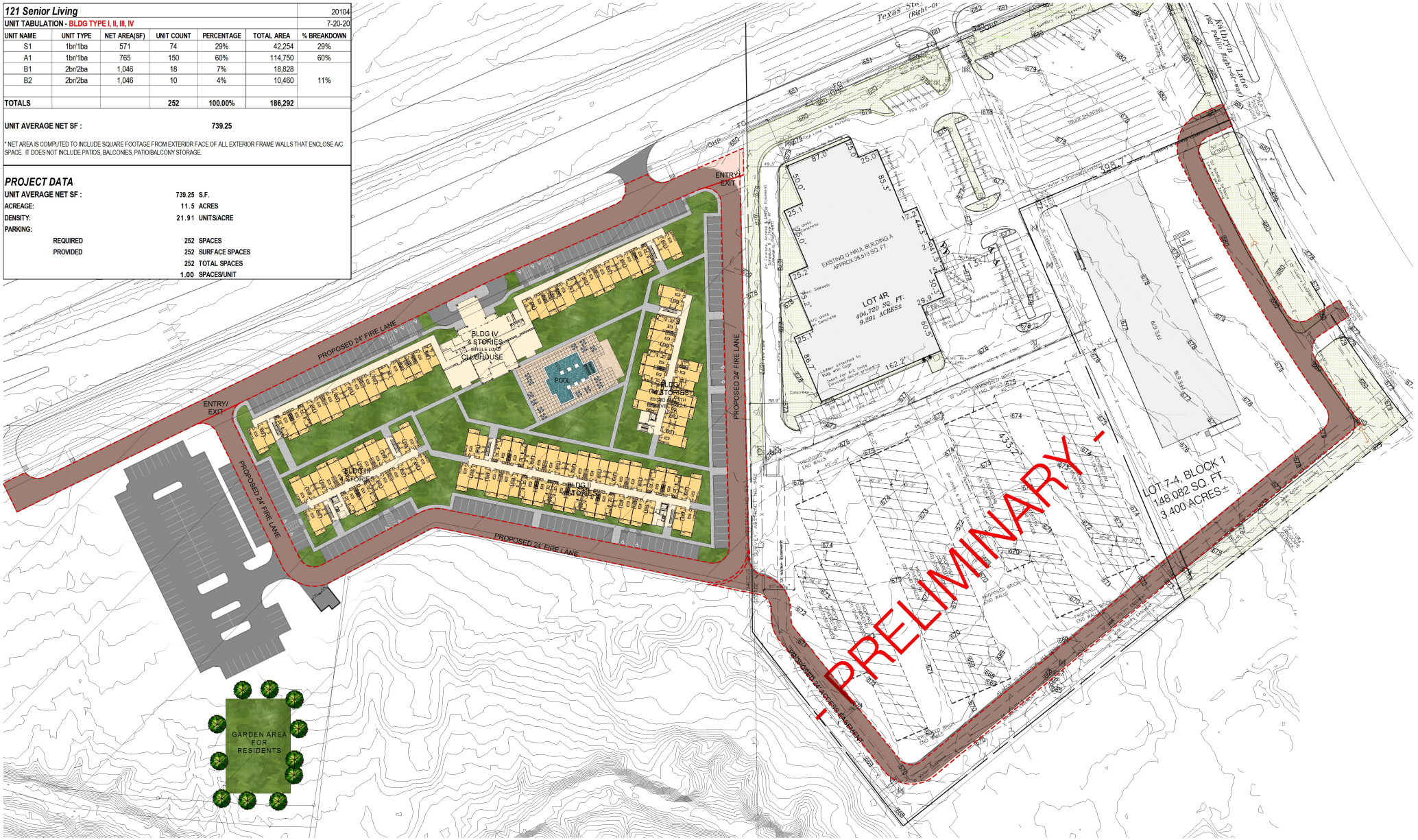
EPA NAAQS for $PM_{2.5}$ is 35 µg/m^3 over a 24-hour period averaged over 3-years.

LOCATION 1, EAST END OF PROPERTY



Particulate Matter less than 10 micrograms per cubic meter (µg/m^3 / PM_{10}) of air over 8-hour sample period.

EPA NAAQS for PM_{10} is 150 µg/m^3 over a 24-hour period not to be exceeded more than once per year on average over 3 years



121 Senior Living						20104
UNIT TABULATION - BLDG TYPE I, II, III, IV						7-20-20
UNIT NAME	UNIT TYPE	NET AREA(SF)	UNIT COUNT	PERCENTAGE	TOTAL AREA	% BREAKDOWN
S1	1br/1ba	571	74	29%	42,254	29%
A1	1br/1ba	765	150	60%	114,750	60%
B1	2br/2ba	1,046	18	7%	18,828	
B2	2br/2ba	1,046	10	4%	10,460	11%
TOTALS			252	100.00%	186,292	

UNIT AVERAGE NET SF : 739.25

* NET AREA IS COMPUTED TO INCLUDE SQUARE FOOTAGE FROM EXTERIOR FACE OF ALL EXTERIOR FRAME WALLS THAT ENCLOSE A/C SPACE. IT DOES NOT INCLUDE PATIOS, BALCONIES, PATIO/BALCONY STORAGE.

PROJECT DATA

UNIT AVERAGE NET SF :	739.25	S.F.
ACREAGE:	11.5	ACRES
DENSITY:	21.91	UNITS/ACRE
PARKING:		
REQUIRED	252	SPACES
PROVIDED	252	SURFACE SPACES
	252	TOTAL SPACES
	1.00	SPACES/UNIT

SCALE: 1" = 50' - 0" (24"x36" SHEET)

0' 50' 100' 200'

N

A201

HUMPHREYS & PARTNERS ARCHITECTS, L.P.
5339 Alpha Rd., Suite 300, Dallas, TX 75240 | 972.701.9636 | www.humphreys.com

ARCHITECTURAL SITEPLAN

July 20, 2020

121 Senior Living
Plano, TX
HPA# 20104