

MEMORANDUM

ROSEMARY A. VASSILIADIS
Director

DEPARTMENT OF AVIATION

TO: DISTRIBUTION Digitally signed by George C. Sims

FROM: GEORGE C. SIMS, PLANNER AND ANTHONY PERKINS, MANAGEMENT ANALYST

SUBJECT: APRIL THROUGH JUNE 2019 NOISE COMPLAINT NOISE COMPLAINT AND LAND USE REVIEW REPORTS

DATE: JULY 24, 2019

Attached for your review are the Clark County Department of Aviation's (CCDOA) Monthly Noise Complaint and Land Use Review Reports for April through June 2019. Please note the following airport abbreviations: **McCarran International Airport (LAS)**, **North Las Vegas Airport (VGT)**, and **Henderson Executive Airport (HND)**.

The following reports describe noise complaints and operational data regarding helicopter and fixed-wing aircraft operations at LAS, VGT, and HND. Aircraft noise complaints are received either through the CCDOA's Noise Hotline (702-261-3694), the Noise Office (702-261-5600), or calls forwarded from LAS's toll free number (1-800-261-5704). Nellis Air Force Base noise complaints are forwarded to the Nellis Public Affairs Office (702-652-2750), and noise complaints regarding aircraft operations from the Boulder City Airport are forwarded to the Boulder City Airport Coordinator (702-293-9405). Individuals who express concerns regarding aircraft operations originating from private facilities (i.e., Valley Hospital or the private helipad located near Las Vegas Blvd. and Larson Lane are asked to contact the individual property owner directly.

Added in 2019, Exhibits 10 through 17 summarize the CCDOA review of land use applications submitted to the Clark County Comprehensive Planning Department, as well as the Cities of North Las Vegas, Las Vegas, and Henderson. Applications may be issued a comment based on CCDOA concerns.

Exhibit 1 of each Monthly Noise Complaint Report illustrates the number of calls received by community as well as the number of individual callers or households. **Exhibit 2** illustrates the primary nature of the disturbance as identified by the caller. The second page of each monthly report (**Exhibit 3**) graphically illustrates all known origins of the calls received that month. **Exhibits 4 and 5** summarize arrival and departure runway use for large and non-large air carrier aircraft. Arrival and departure corridor use for helicopters are summarized in **Exhibit 6**. **Exhibit 7** provides a complete arrival fleet mix of all aircraft landing at LAS and highlights the two noisier aircraft types, the Boeing 727 series and Boeing 737-100 and 737-200 series. **Exhibit 8** illustrates the general departure direction for large aircraft.

Exhibit 9 summarizes how well large aircraft and helicopters adhered to the preferred, non-regulated departure corridors. Adherence to preferred departure corridors is voluntary, and neither Clark County nor the State of Nevada regulates aircraft in flight. The FAA, through the discretion of Congress, has sole authority over the safe and efficient utilization of the nation's navigable airspace. Therefore, local and state authorities cannot legally enforce the use of these corridors, or impose penalties to pilots who opt not to comply with preferred procedures. "Compliance gates" are located along historical/fly-quietly routes. If all aircraft flew with advanced navigational technologies and operated under Required Navigational Precision (RNP) procedures, then it could be expected that up to 95% of all aircraft would be within 0.3 nautical miles (NM) of a fly-over point. Therefore, 0.3 NM is the threshold for compliance for large air carrier aircraft. The compliance threshold for helicopters is 500 feet.

Exhibit 10 provides the total number of land use applications reviewed and the percentage of applications receiving a CCDOA comment. **Exhibit 11** breaks down the number of commented applications by airport concern. **Exhibit 12** provides the number of residential dwelling units per commented application. **Exhibit 13** gives the number of applications in which CCDOA recommends denial, as well as applications opposed in person at Commission and/or Council hearings. **Exhibit 14** displays the extent of the Airport Environs Overlay District (AEOD) for LAS, VGT, and HND. **Exhibit 15** depicts where noise-related comments were issued for applications around LAS. **Exhibit 16** depicts where noise-related comments were issued for applications around HND. Finally, **Exhibit 17** depicts where noise-related comments were issued for applications around VGT.

The following provides a synopsis of each monthly noise complaint report, land use reviews, and additional noise-related issues addressed during the reporting period. Please refer to each noise complaint report for more detailed information.

Monthly Noise Complaint Summaries

April 2019: 99 total complaints - a 254% increase from 2018 and a 115% increase from 2017. On average, each caller (or household) issued 2.9 calls. The most calls received from one household totaled 51.

Calls by Community - (Exhibits 1 and 3)

Majority (more than 50%): The **Spring Valley** community issued 62 calls (63%). This community is typically impacted by aircraft departing to the west (from Runway 26R and Runway 26L) and by aircraft departing to the north (from Runway 01R and Runway 01L) that turn left (to the west and south).

Minority (between 10% and 50%): The **Paradise and Winchester** communities issued 13 calls (13%). These communities are typically impacted by aircraft departing to the north (from Runway 01R and Runway 01L) and aircraft arriving from the north (into Runways 19R and 19L).

The **Enterprise** community issued 11 calls (11%). This community is typically impacted by aircraft departing to the south (from Runway 19L and Runway 19R).

Repeat Caller Impact: One household issued 52% of the total calls.

Calls by Operation - (Exhibit 2)

LAS: 92% of the total calls were due to **LAS** fixed-wing operations.

- 43% were due to departures to the north from Runways 01L and 01R (49% from one household).
- 37% were due to departures to the west from Runways 26L and 26R (81% from one household which is the same household that issued 49% of the calls from LAS Runways 01L and 01R).

VGT: 0% of the total calls were due to **VGT** fixed-wing operations.

HND: 2% of the total calls were due to **HND** fixed-wing operations.

Helos: 6% of the total calls were due to **helicopter** operations.

LAS Operations & Runway Use by **Large Air Carriers** - (Exhibit 4)

Overall: 515 daily *departures* – a 1% increase from 2018 and 3% increase from 2017.
▪ 60% of departures were to the west, 32% north, 6% south, and 3% east.
510 daily *arrivals* – a 2% decrease from 2018 and 1% increase from 2017.
▪ 77% of arrivals were from the east, 16% from the south, and 7% from the north.

Daytime: 416 daily *departures* – a 2% increase from 2018 and 1% increase from 2017.
▪ 59% of departures were to the west, 31% north, 7% south, and 4% east.
437 daily *arrivals* – no change from 2018 and a 1% increase from 2017.
▪ 76% of arrivals were from the east, 16% south, and 8% from the north.

Nighttime: 99 daily *departures* – a 3% decrease from 2018 and 13% increase from 2017.
▪ 62% of departures were to the west, 35% north, and 3% south.
73 daily *arrivals* – a 9% decrease from 2018 and a 6% increase from 2017.
▪ 80% of arrivals were from the east, 14% south, and 6% from the north.

Daytime vs. Nighttime: Approximately 81% of all *departures* and 86% of all *arrivals* occurred during the daytime hours.

LAS Operations & Runway Use by **Non-Large Air Carriers** - (Exhibit 5)

Overall: 103 daily *departures* – an 11% decrease from 2018 and 10% increase from 2017.
▪ 62% of departures were to the south, 28% north, 7% west, and 3% east.
102 daily *arrivals* – a 6% decrease from 2018 and 17% increase from 2017.
▪ 61% of arrivals were from the north, 24% from the south, 14% east, and 1% west.

Daytime: 93 daily *departures* – a 10% decrease from 2018 and 11% increase from 2017.
▪ 63% of departures were to the south, 27% north, 6% west, and 4% east.
94 daily *arrivals* – a 5% decrease from 2018 and a 16% increase from 2017.
▪ 61% of arrivals were from the north, 24% south, 14% east, and 1% west.

Nighttime: 10 daily *departures* – a 19% decrease from 2018 and 2% increase from 2017.
▪ 54% of departures were to the south, 32% north, and 14% west.
8 daily *arrivals* – a 10% decrease from 2018 and a 25% increase from 2017.
▪ 57% of arrivals were from the north, 30% south, 11 east, and 2% west.

Daytime vs. Nighttime: Approximately 91% of all *departures* and 92% of all *arrivals* occurred during the daytime hours.

Operations by Corridor for **Helicopter Tours** - (Exhibit 6)

Tropicana: 77 daily *departures* - a 1% increase from 2018 and 31% decrease from 2017.

Charleston: 74 daily *arrivals* - a 2% increase from 2018 and a 34% decrease from 2017.

Strip: 75 daily *touch and go's* - a 16% increase from 2018 and a 7% increase from 2017.

Daytime vs. Nighttime: Approximately 89% of all helicopter tour operations occurred during the daytime hours.

LAS Fleet Mix for All Aircraft Types - (Exhibit 7)

- Heavies:** *Very large* air carrier turbine-driven aircraft (those weighing 300,000 lbs. or more) accounted for 2% of the daily traffic.
- Large:** *Large* air carrier turbine-driven aircraft (those weighing more than 75,000 lbs. and less than 300,000 lbs.) accounted for 65% of the daily traffic.
- Medium:** *Medium* turbine-driven aircraft (those weighing more than 41,000 lbs. and less than 75,000 lbs.) accounted for 3% of the daily traffic.
- Small:** *Small* turbine-driven aircraft (those weighing 41,000 lbs. or less) accounted for 7% of the daily traffic.
- Military:** *Military* turbine-driven aircraft accounted for 0% of the daily traffic.
- Non-Jet:** *Piston-driven* aircraft and unassigned aircraft types accounted for 4% of the daily traffic.
- Helos:** *Touring helicopters* accounted for 20% of the daily traffic.
- Noisier Aircraft Types:** The hush-kitted Boeing 727 aircraft and Boeing 737 (100 & 200 series) aircraft accounted for 0% of the daily traffic.

LAS General Departure Direction for Large Aircraft - (Exhibit 8)

- Primary:** In 2019, 60% departed to the *west* (from LAS's primary departure runways). This figure was 64% in 2018 and 62% in 2017.
- Secondary:** In 2019, 6% departed to the *south* (from LAS's secondary departure runways). This figure was 3% in 2018 and 4% in 2017.
- Alternate 1:** In 2019, 32% departed to the *north* (from LAS's alternate departure runways). This figure was 26% in 2018 and 26% in 2017.
- Alternate 2:** In 2019, 3% departed to the *east* (from LAS's alternate departure runways). This figure was 8% in 2018 and 8% in 2017.

Gate Compliance for Large Aircraft and Helicopters - (Exhibit 9)

- SVHS:** In 2019, 99% of the large air carrier aircraft (excluding those destined to the Nevada National Security Site) that departed to the west from Runways 26L or 26R and made a left-hand turn were within 0.3 NM of *Sierra Vista High School* (SVHS). This figure was 98% in 2018 and 97% in 2017.

The SVHS "compliance gate" is located southwest of Warm Springs Rd. and Buffalo Dr., approximately 5 miles due west and 1.5 miles due south of the extended runway centerline of Runways 26L and 26R. This gate was established along an existing noise abatement flight track which requests pilots to proceed runway heading to 3 nautical miles from the Las Vegas very-high frequency omnidirectional range tactical air navigation (VORTAC) facility before turning left (or towards the south) - where large air carrier aircraft have historically been encouraged to operate. This noise abatement flight track avoids communities

impacted by aircraft turning early along this corridor (like the Nevada Trails community) and aircraft turning late along this corridor (like the Rhodes Ranch community).

Peace: In 2019, 97% of the large air carrier aircraft (excluding those destined to the Nevada National Security Site) that departed to the west from Runways 26L or 26R and made a right-hand turn were within 0.3 NM of the intersection of **Peace Way & Summers Shade Street**. This figure was 95% in 2018 and 94% in 2017.

The Peace “compliance gate” is located northeast of Tropicana Ave. and I-215, approximately 6 miles due west and 2 miles due north of the extended runway centerline of Runways 26L and 26R. This gate was also established along an existing noise abatement flight track which requests pilots to proceed runway heading to 4 nautical miles from the Las Vegas VORTAC before turning right (or towards the north) - where large air carrier aircraft have historically been encouraged to operate. This noise abatement flight track avoids communities impacted by aircraft turning early along this corridor (like the Spanish Trail community) and aircraft turning late along this corridor (like the Summerlin South community).

Pebble: In 2019, 97% of the large air carrier aircraft (excluding those destined to the Nevada National Security Site) that departed to the south from Runways 19L or 19R were within 0.3 NM of the intersection of **Pebble Road & Arville Street**. This figure was 95% in 2018 and 97% in 2017.

The Pebble “compliance gate” is located southeast of Blue Diamond Rd. and Decatur Blvd., approximately 4 miles due south by southwest of the extended runway centerline of Runways 19L and 19R. This gate was also established along an existing noise abatement flight track which requests pilots to proceed runway heading to 3 nautical miles from the Las Vegas VORTAC before turning - where large air carrier aircraft have historically been encouraged to operate. This noise abatement flight track avoids communities impacted by aircraft turning early along this corridor (like the Warm Spring Estates community) and aircraft turning late along this corridor (like the Southern Highlands community).

UNLV: In 2019, 92% of the large air carrier aircraft that departed to the north from Runways 01L or 01R were within 0.3 NM of the **UNLV sports complex**. This figure was 92% in 2018 and 87% in 2017.

The UNLV “compliance gate” is located southeast of Flamingo Rd. and Paradise Rd., approximately 1 mile due north by northeast of the extended runway centerline of Runways 01L and 01R. This gate was also established along an existing noise abatement flight track which requests pilots to proceed runway heading to 2 nautical miles from the Las Vegas VORTAC before turning - where large air carrier aircraft have historically been encouraged to operate. This noise abatement flight track avoids communities impacted by aircraft turning early along this corridor, located due east and due west of UNLV.

Boulder: In 2019, 98% of the large air carrier aircraft that departed to the north from Runways 08L or 08R were within 0.3 NM of the extended runway centerline, near **Boulder Highway**. This figure was 99% in 2018 and 98% in 2017.

The Boulder Hwy. “compliance gate” is located southeast of Russell Rd. and I-93/95, approximately 7 miles due east of the extended runway centerline of Runways 08L and 08R. This gate was also established along an existing noise abatement flight track which requests pilots to proceed runway heading to 7 nautical miles from the Las Vegas VORTAC before turning - where large air carrier aircraft have historically been encouraged to operate. This noise abatement flight track avoids communities impacted by aircraft turning early along this corridor (like the Green Valley community, located in the City of Henderson, and older neighborhoods located north of Patrick Ln.).

Hualapai: In 2019, 86% of the large air carrier aircraft destined to the Nevada National Security Site that departed to the west were within 0.3 NM of the extended runway centerline, near *Hualapai Way*. This figure was 70% in 2018 and 83% in 2017.

The Hualapai Way “compliance gate” is located northeast of Sunset Rd. and Hualapai Way, approximately 7 miles due west of the extended runway centerline of Runways 26L and 26R. This gate was established in May 2011 along a new noise abatement flight track which requests pilots of aircraft destined to the Nevada National Security Site to proceed runway heading to 7 nautical miles from the Las Vegas VORTAC before turning. This noise abatement flight track avoids communities impacted by aircraft turning early along this corridor (like the Spanish Trail community and the Summerlin South community).

Eastern: In 2019, 99% of the touring helicopters destined east of the Las Vegas Valley were within 500 feet of the intersection of *Tropicana Avenue & Eastern Avenue*. This figure was 98% in 2018 and 98% in 2017.

The Eastern Ave. “compliance gate” is located at Tropicana Ave. and Eastern Ave, approximately 2 miles due west of their initial departure route. This gate was also established along an existing noise abatement flight track which requests helicopter pilots to proceed along the centerline of Tropicana Ave. until 10 nautical miles from the Las Vegas VORTAC before turning. This noise abatement flight track avoids communities impacted by helicopters located north and south of the corridor.

Hollywood: In 2019, 99% of the touring helicopters returning from areas east of the Las Vegas Valley were within 500 feet of the intersection of *Charleston Boulevard & Hollywood Boulevard*. This figure was 98% in 2018 and 97% in 2017.

The Hollywood Blvd. “compliance gate” is located at Charleston Blvd. and Los Feliz St., where their initial arrival route begins over the urbanized area of the Las Vegas Valley. This gate was also established along an existing noise abatement flight track which requests helicopter pilots to proceed along the centerline of Charleston Blvd. This noise abatement flight track avoids communities impacted by helicopters located north and south of the corridor.

Stratosphere: In 2019, 99% of the north-bound helicopters providing tours of the Las Vegas Strip were within 500 feet of the intersection of Oakey Boulevard & Las Vegas Boulevard, *northeast of the Stratosphere Tower*. This figure was 99% in 2018 and 99% in 2017.

The Stratosphere Tower “compliance gate” is located northeast of Sahara Avenue and Las Vegas Blvd., where an important turn in their fly-quietly routing structure begins near a historic portion of the urbanized area of the Las Vegas Valley.

Land Use Application Reviews & Comments – (Exhibit 10)

Clark County: 124 applications were reviewed, with 9 applications (7%) issued at least one comment.

Henderson: 37 applications were reviewed, with 4 applications (11%) issued at least one comment.

Las Vegas: 62 applications were reviewed, with 0 applications issued at least one comment.

North Las Vegas: 0 applications were reviewed.

Land Use Application Comments by Airport Concern – (Exhibit 11)

Clark County: 11 comments were issued, with 8 comments issued for “noise” concerns.

Henderson: 4 comments were issued, with 3 comments issued for “noise” concerns.

Las Vegas: 0 comments were issued.

North Las Vegas: 0 applications were reviewed.

Dwelling Units per “Noise,” Commented Application – (Exhibit 12)

Clark County: 93 dwelling units were proposed in the commented applications, just outside the AEOD.

Henderson: 564 dwelling units were proposed in the commented applications, just outside the AEOD.

Las Vegas: 0 comments were issued.

North Las Vegas: 0 applications were reviewed.

Land Use Applications Denied and/or Opposed – (Exhibit 13)

0 applications were denied and/or opposed.

The information denoted in this monthly summary represents **typical** residential complaints, (with the exception of the number of complaints tied to one household), flight activity, (with the exception of increased departures to the north), fleet mix, and gate compliance.

May 2019: 109 total complaints - a 142% increase from 2018 and a 76% increase from 2017. On average, each caller (or household) issued 3.3 calls. The most calls received from one household totaled 51.

Calls by Community - (Exhibits 1 and 3)

Majority (more than 50%): The **Spring Valley** community issued 74 calls (68%). (See April 2019 synopsis of typical aircraft overflight impacts on this community.)

Minority (between 10% and 50%): The *Paradise and Winchester* communities issued 13 calls (12%). (See April 2019 synopsis of typical aircraft overflight impacts on this community.)

Repeat Caller Impact: One household issued 47% of the total calls.

Calls by Operation - (Exhibit 2)

- LAS:** 93% of the total calls were due to *LAS* fixed-wing operations.
- 43% were due to departures to the west from Runways 26L and 26R (81% from one household).
 - 40% were due to departures to the north from Runways 01L and 01R (59% from two households, one of which is the same household that issued 81% of the calls from LAS Runways 26L and 26R).
- VGT:** 5% of the total calls received were due to *VGT* fixed-wing operations (92% from one household).
- HND:** 0% of the total calls received were due to *HND* fixed-wing operations.
- Helis:** 2% of the total calls received were due to *helicopter* operations.

LAS Operations & Runway Use by *Large Air Carriers* - (Exhibit 4)

- Overall:** 523 daily *departures* – a 3% increase from 2018 and 3% increase from 2017.
- 64% of departures were to the west, 26% north, 6% south, and 4% east.
- 518 daily *arrivals* – no change from 2018 and 1% increase from 2017.
- 79% of arrivals were from the east, 13% south, 8% north, and 1% west.
- Daytime:** 415 daily *departures* – a 2% increase from 2018 and 1% decrease from 2017.
- 62% of departures were to the west, 26% north, 7% south, and 5% east.
- 440 daily *arrivals* – a 1% increase from 2018 and a 1% decrease from 2017.
- 78% of arrivals were from the east, 14% south, 8% north, and 1% west.
- Nighttime:** 108 daily *departures* – an 8% increase from 2018 and 22% increase from 2017.
- 72% of departures were to the west, 25% north, and 3% south.
- 78 daily *arrivals* – a 6% decrease from 2018 and a 14% increase from 2017.
- 84% of arrivals were from the east, 9% south, and 7% north.

Daytime vs. Nighttime: Approximately 80% of all *departures* and 85% of all *arrivals* occurred during the daytime hours.

LAS Operations & Runway Use by *Non-Large Air Carriers* - (Exhibit 5)

- Overall:** 117 daily *departures* – a 4% decrease from 2018 and 3% increase from 2017.
- 63% of departures were to the south, 26% north, 7% west, and 4% east.
- 115 daily *arrivals* – a 2% increase from 2018 and 9% increase from 2017.
- 63% of arrivals were from the north, 22% south, 14% east, and 1% west.
- Daytime:** 107 daily *departures* – a 2% decrease from 2018 and 5% increase from 2017.
- 63% of departures were to the south, 26% north, 6% west, and 5% east.
- 107 daily *arrivals* – a 3% increase from 2018 and an 11% increase from 2017.
- 64% of arrivals were from the north, 21% south, 14% east, and 1% west.

Nighttime: 10 daily *departures* – a 21% decrease from 2018 and 13% decrease from 2017.
▪ 57% of departures were to the south, 30% north, and 13% west.
8 daily *arrivals* – a 10% decrease from 2018 and an 8% decrease from 2017.
▪ 55% of arrivals were from the north, 28% south, 15% east, and 2% west.

Daytime vs. Nighttime: Approximately 91% of all *departures* and 93% of all *arrivals* occurred during the daytime hours.

Operations by Corridor for **Helicopter Tours** - (Exhibit 6)

Tropicana: 81 daily *departures* – a 5% decrease from 2018 and a 24% decrease from 2017.

Charleston: 80 daily *arrivals* - a 3% decrease from 2018 and a 25% decrease from 2017.

Strip: 106 daily *touch and go's* - no change from 2018 and a 30% increase from 2017.

Daytime vs. Nighttime: Approximately 81% of all helicopter tour operations occurred during the daytime hours.

LAS Fleet Mix for All Aircraft Types - (Exhibit 7)

Heavies: **Very large** air carrier turbine-driven aircraft (those weighing 300,000 lbs. or more) accounted for 2% of the daily traffic.

Large: **Large** air carrier turbine-driven aircraft (those weighing more than 75,000 lbs. and less than 300,000 lbs.) accounted for 61% of the daily traffic.

Medium: **Medium** turbine-driven aircraft (those weighing more than 41,000 lbs. and less than 75,000 lbs.) accounted for 3% of the daily traffic.

Small: **Small** turbine-driven aircraft (those weighing 41,000 lbs. or less) accounted for 7% of the daily traffic.

Military: **Military** turbine-driven aircraft accounted for less than 0% of the daily traffic.

Non-Jet: **Piston-driven** aircraft and unassigned aircraft types accounted for 4% of the daily traffic.

Helos: **Touring helicopters** accounted for 23% of the daily traffic.

Noisier Aircraft Types: The hush-kitted Boeing 727 aircraft and Boeing 737 (100 & 200 series) aircraft accounted for less than one operation per day.

LAS General Departure Direction for Large Aircraft - (Exhibit 8)

Primary: In 2019, 64% departed to the **west** (from LAS's primary departure runways). This figure was 73% in 2018 and 65% in 2017.

Secondary: In 2019, 6% departed to the **south** (from LAS's secondary departure runways). This figure was 4% in 2018 and 4% in 2017.

Alternate 1: In 2019, 26% departed to the **north** (from LAS's alternate departure runways). This figure was 8% in 2018 and 18% in 2017.

Alternate 2: In 2019, 4% departed to the **east** (from LAS's alternate departure runways). This figure was 15% in 2018 and 14% in 2017.

Gate Compliance for Large Aircraft and Helicopters - (Exhibit 9)

- SVHS:** In 2019, 98% of the large air carrier aircraft (excluding those destined to the Nevada National Security Site) that departed to the west from Runways 26L or 26R and made a left-hand turn were within 0.3 NM of **Sierra Vista High School** (SVHS). This figure was 98% in 2018 and 97% in 2017. (See April 2019 synopsis for specific location of the SVHS gate.)
- Peace:** In 2019, 97% of the large air carrier aircraft (excluding those destined to the Nevada National Security Site) that departed to the west from Runways 26L or 26R and made a right-hand turn were within 0.3 NM of the intersection of **Peace Way & Summers Shade Street**. This figure was 95% in 2018 and 94% in 2017. (See April 2019 synopsis for specific location of the Peace gate.)
- Pebble:** In 2019, 99% of the large air carrier aircraft (excluding those destined to the Nevada National Security Site) that departed to the south from Runways 19L or 19R were within 0.3 NM of the intersection of **Pebble Road & Arville Street**. This figure was 97% in 2018 and 97% in 2017. (See April 2019 synopsis for specific location of the Pebble gate.)
- UNLV:** In 2019, 94% of the large air carrier aircraft that departed to the north from Runways 01L or 01R were within 0.3 NM of the **UNLV sports complex**. This figure was 96% in 2018 and 91% in 2017. (See April 2019 synopsis for specific location of the UNLV gate.)
- Boulder:** In 2019, 98% of the large air carrier aircraft that departed to the north from Runways 08L or 08R were within 0.3 NM of the extended runway centerline, near **Boulder Highway**. This figure was 99% in 2018 and 98% in 2017. (See April 2019 synopsis for specific location of the Boulder Hwy. gate.)
- Hualapai:** In 2019, 85% of the large air carrier aircraft destined to the Nevada National Security Site that departed to the west were within 0.3 NM of the extended runway centerline, near **Hualapai Way**. This figure was 71% in 2018 and 83% in 2017. (See April 2019 synopsis for specific location of the Hualapai gate.)
- Eastern:** In 2019, 99% of the touring helicopters destined east of the Las Vegas Valley were within 500 feet of the intersection of **Tropicana Avenue & Eastern Avenue**. This figure was 95% in 2018 and 97% in 2017. (See April 2019 synopsis for specific location of the Eastern gate.)
- Hollywood:** In 2019, 99% of the touring helicopters returning from areas east of the Las Vegas Valley were within 500 feet of the intersection of **Charleston Boulevard & Hollywood Boulevard**. This figure was 97% in 2018 and 97% in 2017. (See April 2019 synopsis for specific location of the Hollywood gate.)
- Stratosphere:** In 2019, 99% of the north-bound helicopters providing tours of the Las Vegas Strip were within 500 feet of the intersection of Oakey Boulevard & Las Vegas Boulevard, **northeast of the Stratosphere Tower**. This figure was 99% in 2018 and 98% in 2017. (See April 2019 synopsis for specific location of the Stratosphere gate.)

Land Use Application Reviews & Comments – (Exhibit 10)

Clark County: 136 applications were reviewed, with 11 applications (8%) issued at least one comment.

Henderson: 66 applications were reviewed, with 5 applications (8%) issued at least one comment.

Las Vegas: 132 applications were reviewed, with 1 applications (1%) issued at least one comment.

North Las Vegas: 48 applications were reviewed, with 1 application (2%) issued at least one comments.

Land Use Application Comments by Airport Concern – (Exhibit 11)

Clark County: 13 comments were issued, with 7 comments issued for “noise” concerns.

Henderson: 6 comments were issued, with 5 comments issued for “noise” concerns.

Las Vegas: 1 comment was issued, with 0 comments issued for “noise” concerns.

North Las Vegas: 1 comment was issued, with 1 comment issued for “noise” concerns.

Dwelling Units per “Noise,” Commented Application – (Exhibit 12)

Clark County: 348 dwelling units was proposed in the commented applications, within the AEOD. 1124 dwelling units were proposed in the commented applications, just outside the AEOD.

Henderson: 674 dwelling units were proposed in the commented applications, just outside the AEOD.

Las Vegas: 0 dwelling units were proposed in the commented application.

North Las Vegas: 0 dwelling units were proposed in the commented application.

Land Use Applications Denied and/or Opposed – (Exhibit 13)

Clark County: 1 application received a denial recommendation from CCDOA.

The information denoted in this monthly summary represents **typical** residential complaints, (with the exception of the number of complaints tied to one household), flight activity, (with the exception of increased departures to the north), fleet mix, and gate compliance.

June 2019: 70 total complaints – a 27% increase from 2018 and a 169% increase from 2017. On average, each caller (or household) issued 5.8 calls. The most calls received from one household totaled 51.

Calls by Community - (Exhibits 1 and 3)

Majority (more than 50%): The **Spring Valley** community issued 59 calls (84%). (See April 2019 synopsis of typical aircraft overflight impacts on this community.)

Minority (between 10% and 50%): The **City of Henderson** community issued 8 calls (12%). This community is typically impacted by aircraft departing to the east (from Runway 08R and Runway 08L), and helicopter tour operations operating from HND.

Repeat Caller Impact: One household issued 73% of the total calls.

Calls by Operation - (Exhibit 2)

- LAS:** 94% of the total calls were due to **LAS** fixed-wing operations.
- 64% were due to departures to the west from Runways 26L and 26R (93% from one household).
 - 24% were due to departures to the north from Runways 01L and 01R (53% from one household, one of which is the same household that issued 93% of the calls from LAS Runways 26L and 26R).
- VGT:** 0% of the total calls received were due to **VGT** fixed-wing operations (92% from one household).
- HND:** 3% of the total calls received were due to **HND** fixed-wing operations.
- Helis:** 3% of the total calls received were due to **helicopter** operations.

LAS Operations & Runway Use by **Large Air Carriers** - (Exhibits 4)

- Overall:** 522 daily *departures* – a 2% increase from 2018 and 1% increase from 2017.
- 60% of departures were to the west, 18% east, 18% north, and 4% south.
- 517 daily *arrivals* – a 2% decrease from 2018 and 1% decrease from 2017.
- 68% of arrivals were from the east, 14% north, 12% south, and 6% west.
- Daytime:** 403 daily *departures* – a 1% decrease from 2018 and 3% decrease from 2017.
- 55% of departures were to the west, 23% east, 17% north, and 5% south.
- 429 daily *arrivals* – a 1% decrease from 2018 and 2% decrease from 2017.
- 65% of arrivals were from the east, 15% north, 12% south, and 7% west.
- Nighttime:** 119 daily *departures* – an 11% increase from 2018 and 17% increase from 2017.
- 74% of departures were to the west, 20% north, 3% south, and 3% east.
- 88 daily *arrivals* – a 7% decrease from 2018 and 3% increase from 2017.
- 80% of arrivals were from the east, 12% south, 8% north, and 1% west.

Daytime vs. Nighttime: Approximately 77% of all *departures* and 83% of all *arrivals* occurred during the daytime hours.

LAS Operations & Runway Use by **Non-Large Air Carriers** - (Exhibit 5)

- Overall:** 102 daily *departures* – a 3% increase from 2018 and an 11% increase from 2017.
- 54% of departures were to the south, 21% east, 18% north, and 7% west.
- 99 daily *arrivals* – a 3% increase from 2018 and a 16% increase from 2017.
- 61% of arrivals were from the north, 18% south, 11% east, and 10% west.

Daytime: 92 daily *departures* – a 4% increase from 2018 and 13% increase from 2017.
▪ 53% of departures were to the south, 23% east, 17% north, and 6% west.
91 daily *arrivals* – a 3% increase from 2018 and a 15% increase from 2017.
▪ 61% of arrivals were from the north, 18% south, 11% east, and 11% west.

Nighttime: 11 daily *departures* – a 3% decrease from 2018 and 4% decrease from 2017.
▪ 64% of departures were to the south, 20% north, 13% west, and 2% east.
8 daily *arrivals* – a 2% increase from 2018 and 17% increase from 2017.
▪ 69% of arrivals were from the north, 19% south, 11% east, and 2% west.

Daytime vs. Nighttime: Approximately 90% of all *departures* and 92% of all *arrivals* occurred during the daytime hours.

Operations by Corridor for **Helicopter Tours** - (Exhibit 6)

Tropicana: 71 daily *departures* – an 11% decrease from 2018 and a 25% decrease from 2017.

Charleston: 70 daily *arrivals* - an 7% decrease from 2018 and a 27% decrease from 2017.

Strip: 86 daily *touch and go's* - a 9% increase from 2018 and a 21% decrease from 2017.

Daytime vs. Nighttime: Approximately 82% of all helicopter tour operations occurred during the daytime hours.

LAS Fleet Mix for All Aircraft Types - (Exhibit 7)

Heavies: **Very large** air carrier turbine-driven aircraft (those weighing 300,000 lbs. or more) accounted for 2% of the daily traffic.

Large: **Large** air carrier turbine-driven aircraft (those weighing more than 75,000 lbs. and less than 300,000 lbs.) accounted for 65% of the daily traffic.

Medium: **Medium** turbine-driven aircraft (those weighing more than 41,000 lbs. and less than 75,000 lbs.) accounted for 3% of the daily traffic.

Small: **Small** turbine-driven aircraft (those weighing 41,000 lbs. or less) accounted for 6% of the daily traffic.

Military: **Military** turbine-driven aircraft accounted for 0% of the daily traffic.

Non-Jet: **Piston-driven** aircraft and unassigned aircraft types accounted for 4% of the daily traffic.

Helos: **Touring helicopters** accounted for 20% of the daily traffic.

Noisier Aircraft Types: The hush-kitted Boeing 727 aircraft and Boeing 737 (100 & 200 series) aircraft accounted for zero operations per day.

LAS General Departure Direction for Large Aircraft - (Exhibit 8)

Primary: In 2019, 60% departed to the **west** (from LAS's primary departure runways). This figure was 61% in 2018 and 71% in 2017.

Secondary: In 2019, 5% departed to the **south** (from LAS's secondary departure runways). This figure was 4% in 2018 and 3% in 2017.

Alternate 1: In 2019, 18% departed to the **north** (from LAS's alternate departure runways). This figure was 3% in 2018 and 1% in 2017.

Alternate 2: In 2019, 18% departed to the **east** (from LAS's alternate departure runways). This figure was 32% in 2018 and 25% in 2017.

Gate Compliance for Large Aircraft and Helicopters - (Exhibit 9)

SVHS: In 2019, 98% of the large air carrier aircraft (excluding those destined to the Nevada National Security Site) that departed to the west from Runways 26L or 26R and made a left-hand turn were within 0.3 NM of **Sierra Vista High School** (SVHS). This figure was 98% in 2018 and 97% in 2017. (See April 2019 synopsis for specific location of the SVHS gate.)

Peace: In 2019, 98% of the large air carrier aircraft (excluding those destined to the Nevada National Security Site) that departed to the west from Runways 26L or 26R and made a right-hand turn were within 0.3 NM of the intersection of **Peace Way & Summers Shade Street**. This figure was 96% in 2018 and 95% in 2017. (See April 2019 synopsis for specific location of the Peace gate.)

Pebble: In 2019, 99% of the large air carrier aircraft (excluding those destined to the Nevada National Security Site) that departed to the south from Runways 19L or 19R were within 0.3 NM of the intersection of **Pebble Road & Arville Street**. This figure was 97% in 2018 and 100% in 2017. (See April 2019 synopsis for specific location of the Pebble gate.)

UNLV: In 2019, 95% of the large air carrier aircraft that departed to the north from Runways 01L or 01R were within 0.3 NM of the **UNLV sports complex**. This figure was 93% in 2018 and 40% in 2017. (See April 2019 synopsis for specific location of the UNLV gate.)

Boulder: In 2019, 99% of the large air carrier aircraft that departed to the north from Runways 08L or 08R were within 0.3 NM of the extended runway centerline, near **Boulder Highway**. This figure was 99% in 2018 and 99% in 2017. (See April 2019 synopsis for specific location of the Boulder Hwy. gate.)

Hualapai: In 2019, 89% of the large air carrier aircraft destined to the Nevada National Security Site that departed to the west were within 0.3 NM of the extended runway centerline, near **Hualapai Way**. This figure was 68% in 2018 and 84% in 2017. (See April 2019 synopsis for specific location of the Hualapai gate.)

Eastern: In 2019, 99% of the touring helicopters destined east of the Las Vegas Valley were within 500 feet of the intersection of **Tropicana Avenue & Eastern Avenue**. This figure was 98% in 2018 and 97% in 2017. (See April 2019 synopsis for specific location of the Eastern gate.)

Hollywood: In 2019, 99% of the touring helicopters returning from areas east of the Las Vegas Valley were within 500 feet of the intersection of **Charleston Boulevard & Hollywood Boulevard**. This figure was 85% in 2018 and 97% in 2017. (See April 2019 synopsis for specific location of the Hollywood gate.)

Stratosphere: In 2019, 99% of the north-bound helicopters providing tours of the Las Vegas Strip were within 500 feet of the intersection of Oakey Boulevard & Las Vegas Boulevard, *northeast of the Stratosphere Tower*. This figure was 99% in 2018 and 99% in 2017. (See April 2019 synopsis for specific location of the Stratosphere gate.)

Land Use Application Reviews & Comments – (Exhibit 10)

Clark County: 136 applications were reviewed, with 17 applications (13%) issued at least one comment.

Henderson: 32 applications were reviewed, with 1 application (3%) issued at least one comment.

Las Vegas: 63 applications were reviewed, with 2 applications (3%) issued at least one comment.

North Las Vegas: 0 applications were reviewed.

Land Use Application Comments by Airport Concern – (Exhibit 11)

Clark County: 23 comments were issued, with 13 comments issued for “noise” concerns.

Henderson: 2 comments were issued, with 1 comments issued for “noise” concerns.

Las Vegas: 2 comments were issued, with 1 comment issued for “noise” concerns.

North Las Vegas: 0 applications were reviewed.

Dwelling Units per “Noise,” Commented Application – (Exhibit 12)

Clark County: 4 dwelling units were proposed in the commented applications, within the AEOD. 1,703 dwelling units were proposed in the commented applications, just outside the AEOD.

Henderson: 187 dwelling units were proposed in the commented applications, just outside the AEOD.

Las Vegas: 66 dwelling units were proposed in the commented applications, just outside the AEOD.

North Las Vegas: 0 applications were reviewed.

Land Use Applications Denied and/or Opposed – (Exhibit 13)

0 applications were denied and/or opposed.

The information denoted in this monthly summary represents **typical** residential complaints, (with the exception of the number of complaints tied to one household), flight activity, (with the exception of increased departures to the north), fleet mix, and gate compliance.

Other Notable Issues

Electric Daisy Carnival: On May 17 through 19, 2019, this concert event was held at the Las Vegas Motor Speedway, with a total attendance in excess of 450,000 people. Helicopter tour operators provided almost 1,600 total passenger flights, ferrying approximately 5,450 total passengers to and from the event over the three day period, resulting in zero noise complaints issued.

Northbound Departure Increase: Weather data compiled for April and May reflected increased winds from the north resulting in the FAA utilizing Runway 01R for departures. Wind speed and direction typically determine runway use safety and efficiency.

Safety and Security Threats: Any threats to DOA staff or an aircraft in flight are taken seriously, and such threats will be forwarded to the appropriate law enforcement agencies.

GCS:jj

Attachments

Airport Noise Report

July 24, 2019

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Distribution:

Commissioner Kirkpatrick, Chair	Sean Roebuck
Commissioner Weekly, Vice-Chair	Bruce Daugherty
Commissioner Naft	Sam Ingalls
Commissioner Brown	Chris Jones
Commissioner Segerblom	Christine Crews
Commissioner Jones	Tina Frias
Commissioner Gibson	Jeff Jacquart
Yolanda King	Charlie Hall
Rosemary Vassiliadis	Roben Armstrong
James Chrisley	Scott Kichline
Joseph Piurkowski	Anthony Perkins
Ralph Lepore	Susan Gersh
Jennifer Lopez	Stephanie Garcia-Vause (COH)
Sandra Cikity	Andrew Powell (COH)
Judy Villalta	William Ruggiero (FAA TRACON)
Ben Czyzewski	Thomas Miller (Nellis AFB)
Karina Tarnowska	Michael Moorer (FAA ATCT)
Donna Bergstrom	James Erbeck (CLV)
Curtis Hedgepeth	Paul Alukonis (FAA FSDO)
Blanca Vazquez	Sydney Lowe (University Libraries)
Jon Holman (FAA ATC)	Lisa Butterfield (Reno-Tahoe Airport)
Charlie Halterman (HND Tower)	Andrea Christensen (Denver Airport)
Richard Falcon (FAA FSDO)	Jennifer Lewis (Scottsdale Airport)
Bristol Ellington (COH)	Frank Iacovino (Mass Port Authority)
Elizabeth Fretwell (CLV)	Robert Butler (Papillon Helicopters)
Mayor Carolyn Goodman (CLV)	Christine Gerencher (American Airlines)
Mayor Pro Tem Lois Tarkanian (CLV)	Bert Ganoung (SFO)
Councilman S. Anthony (CLV)	San Diego Airport Noise Management
Councilman Bob Coffin (CLV)	Jeannie Denham (Citizen)
Councilman Steven S. Seroka (CLV)	Judge Bob Johnston (Citizen)
Councilwoman Michele Fiore (CLV)	Roy Fuhrmann (Metro Airports Commission)
Councilman Cedric Crear (CLV)	Tom Schaus (Sundance Helicopters)
Brok Armantrout (CBC)	Brooke Satern (Port of Portland)
David Parks (Nevada State Assembly)	Gary Brodt (Citizen)
J. Gordon Arkin (Foley & Lardner)	James P. Callahan (Nellis AFB)
John Williams (Ricondo)	Stan Shepherd (SEATAC)
Douglas Pomeroy (FAA ADO)	Eric Sheng (Long Beach Airport)
La Nea M. Conner (Boeing)	Jason Schwartz (Portland Airport)
Mike Jeck (Metro Wash. Air Auth.)	Todd Lobato (Nellis AFB)
Karen Everitt (Dallas City Hall)	Steven Peacock (Dallas City Hall)
Samuel Carter (Harris)	John Dietz (FAA TRACON)
	William Olivieri (Citizen)

Exhibit 1: Noise Complaint Calls by Community* - April 2019

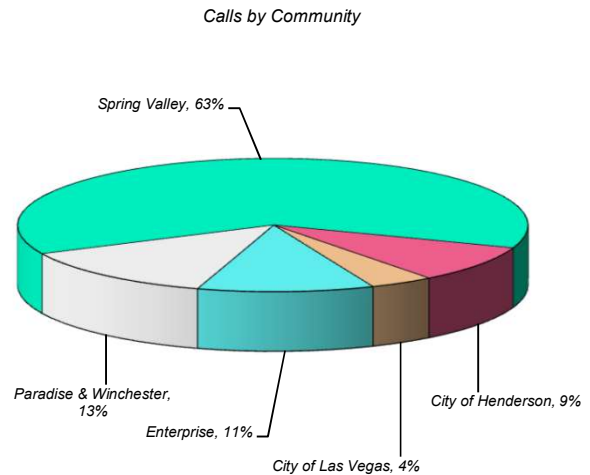
Community	No. of Calls in 2019	No. of Callers in 2019	No. of Calls in 2018	No. of Calls in 2017
City of Boulder City			2	
City of Henderson	9	7	2	3
City of Las Vegas	4	2	1	2
City of North Las Vegas			1	
Enterprise	11	7	1	5
Lone Mountain				2
Paradise & Winchester	13	13	14	26
Spring Valley	62	5	6	6
Summerlin South			1	
Sunrise Manor				
Whitney				1
Location unknown				1
Overall Total	99	34	28	46

Difference between 2019 and 2018 Total Calls: 254%

Difference between 2019 and 2017 Total Calls: 115%

Average Number of Calls per Caller: 2.9

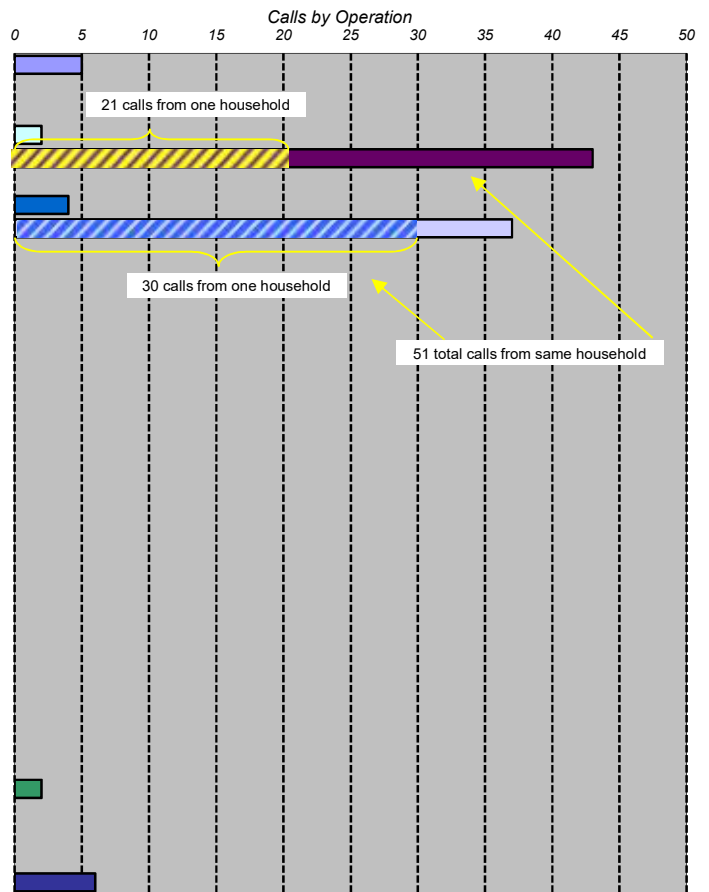
Most calls received from one household: 51



* See map on reverse side for community boundaries and location of known noise complaints.

Exhibit 2: Noise Complaint Calls by Type of Operation - April 2019

Operation	No. of Calls in 2019	Percent of Overall Total	No. of Calls in 2018	No. of Calls in 2017
LAS 01R/L Arrivals	5	5.1%		1
LAS 08R/L Arrivals				2
LAS 19R/L Arrivals				1
LAS 26R/L Arrivals	2	2.0%	1	1
LAS 01R/L Departures	43	43.4%	19	30
LAS 08R/L Departures				1
LAS 19R/L Departures	4	4.0%		1
LAS 26R/L Departures	37	37.4%	2	3
LAS Run-ups				
LAS GA				
LAS Other				
LAS Total	91	91.9%	22	39
VGT 07 Arrivals				
VGT 12R/L Arrivals				
VGT 25 Arrivals				
VGT 30R/L Arrivals				
VGT 07 Departures				
VGT 12R/L Departures				
VGT 25 Departures				
VGT 30R/L Departures				
VGT Run-ups				
VGT GA			1	2
VGT Other				
VGT Total	0	0.0%	1	2
HND 17R/L Arrivals				
HND 35R/L Arrivals				
HND 17R/L Departures				
HND 35R/L Departures				
HND Run-ups				
HND GA	2	2.0%	1	1
HND Other				
HND Total	2	2.0%	1	1
Helicopters**	6	6.1%	4	4
Overall Total	99	100%	28	46



** Note that helicopter noise complaints are not tied to a specific facility since the operation cannot always be associated to a specific airport. Additionally, helicopter calls do not include those associated with operations conducted by the Metropolitan Police Department or those associated with operations conducted at non-DOA facilities.

Exhibit 3: Aircraft Noise Complaints by Community - April 2019

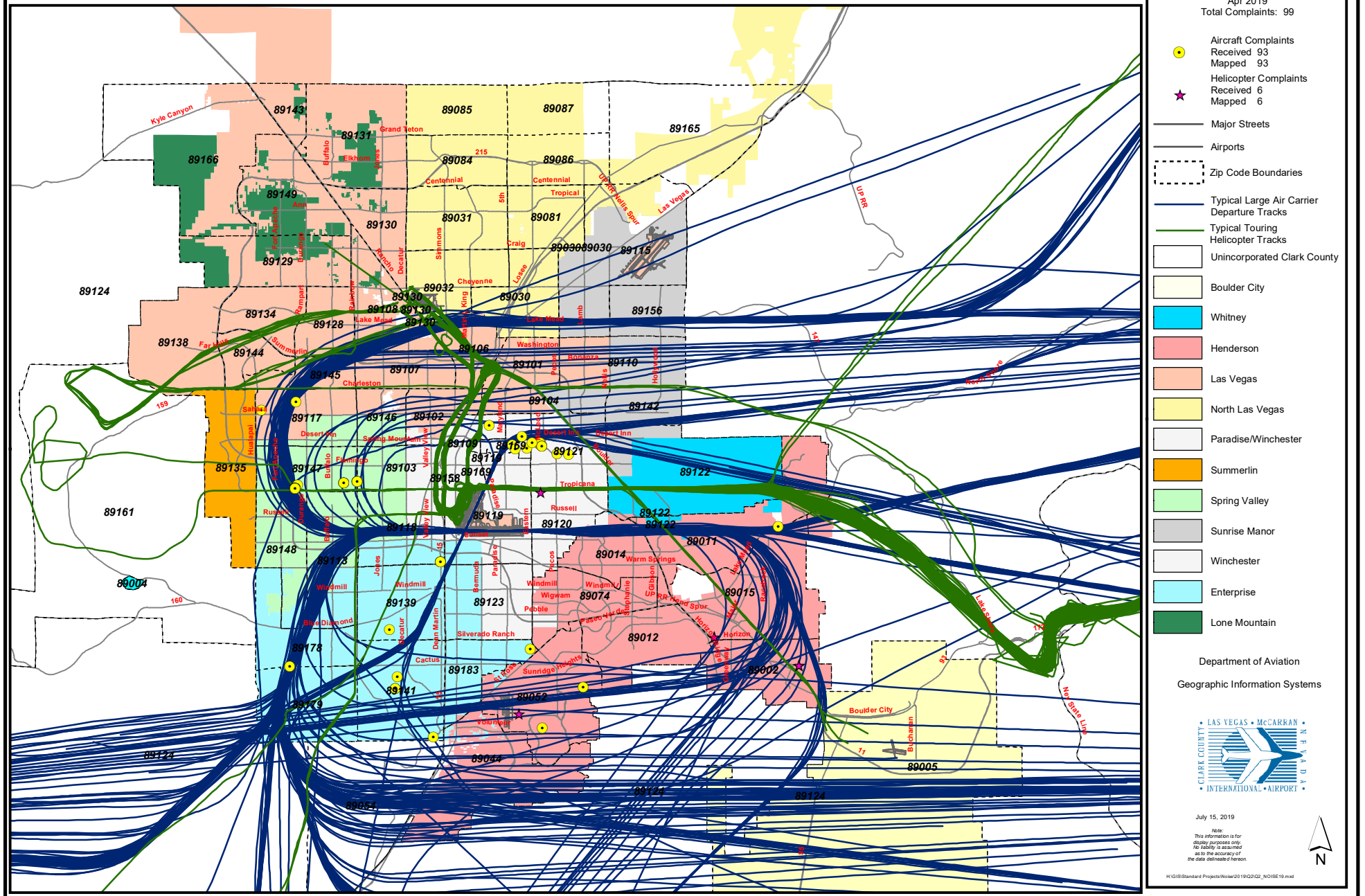
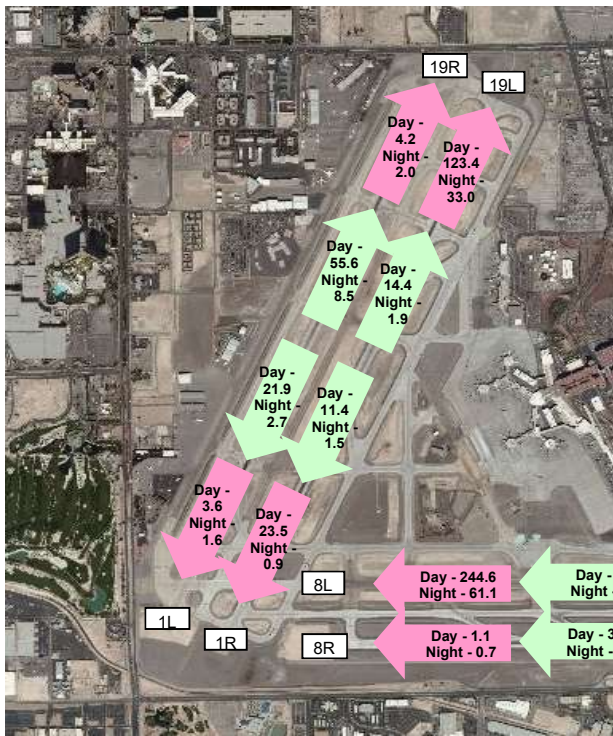


Exhibit 4: LAS Daily Average Operations Runway for Large Air Carrier Aircraft* - April 2019



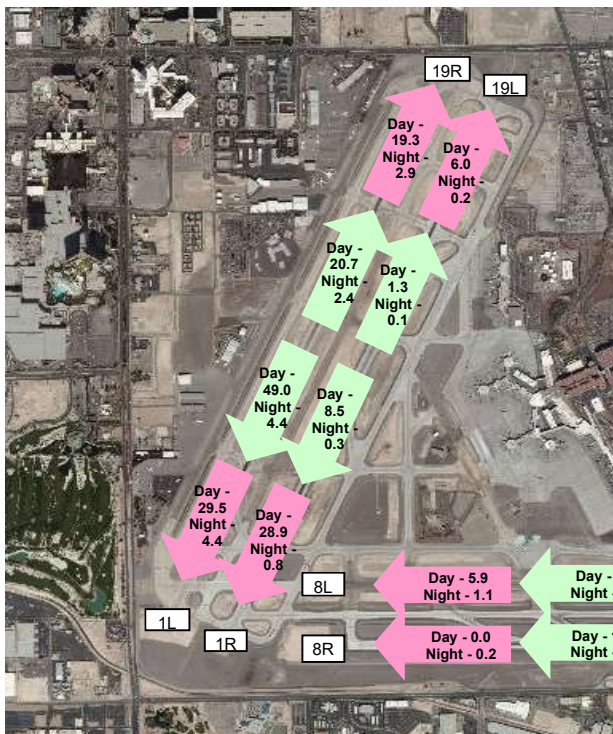
Year	2019		2018		2017	
Daytime Departures	416	81%	407	80%	411	82%
Nighttime Departures	99	19%	102	20%	88	18%
Total Departures	515	100%	509	100%	499	100%

Daytime Arrivals	437	86%	438	85%	434	86%
Nighttime Arrivals	73	14%	80	15%	69	14%
Total Arrivals	510	100%	518	100%	503	100%

Growth	Overall	Daytime	Nighttime
Depts. 2019 vs 2018	1%	2%	-3%
Depts. 2019 vs 2017	3%	1%	13%
Arrivals 2019 vs 2018	-2%	0%	-9%
Arrivals 2019 vs 2017	1%	1%	6%

* Aircraft types: All aircraft with a maximum gross take off weight of at least 75,000 pounds, including but not limited to, A306, A310, A311, A318, A319, A320, A330, A340, B707, B717, B727, B737, B747, B757, B767, B777, CRJ7, CRJ9, DC8, DC9, DC10, E170, E190, HA4T, L1011, MD80, MD90, MD10, MD11, VC10.

Exhibit 5: LAS Daily Average Operations by Runway for Non-Large Air Carrier Aircraft** - April 2019



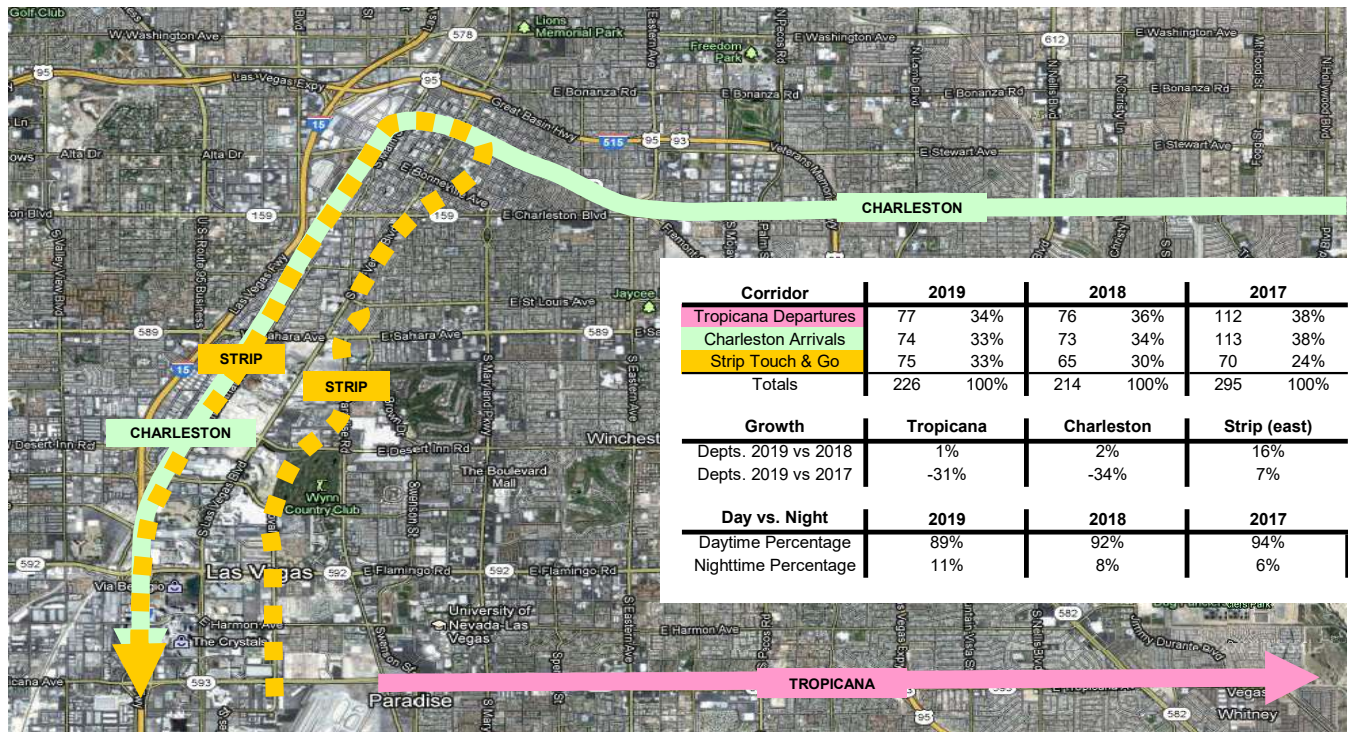
Year	2019		2018		2017	
Daytime Departures	93	91%	103	90%	84	90%
Nighttime Departures	10	9%	12	10%	10	10%
Total Departures	103	100%	115	100%	93	100%

Daytime Arrivals	94	92%	99	92%	81	93%
Nighttime Arrivals	8	8%	9	8%	7	7%
Total Arrivals	102	100%	108	100%	87	100%

Growth	Overall	Daytime	Nighttime
Depts. 2019 vs 2018	-11%	-10%	-19%
Depts. 2019 vs 2017	10%	11%	2%
Arrivals 2019 vs 2018	-6%	-5%	-10%
Arrivals 2019 vs 2017	17%	16%	25%

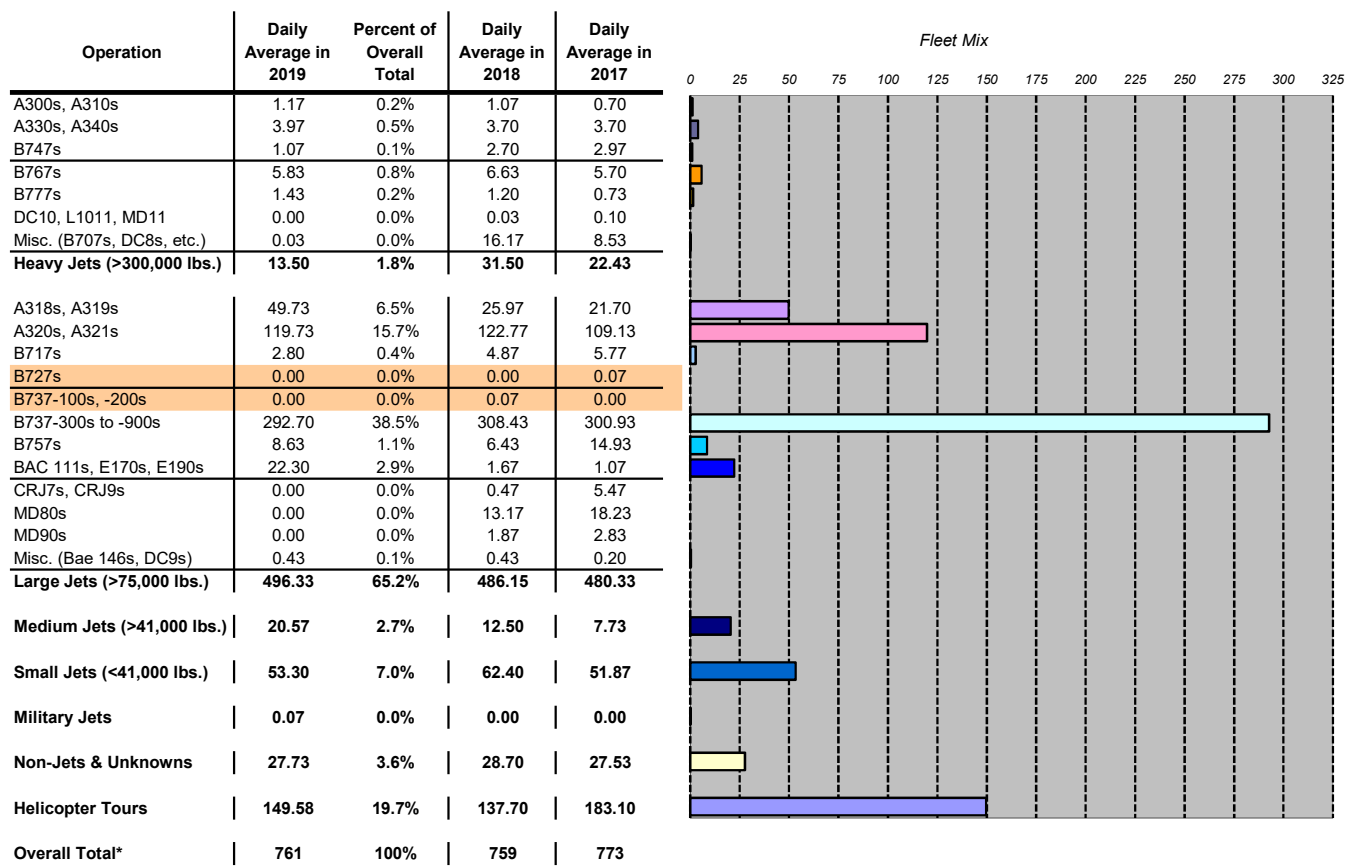
** Aircraft types: All aircraft with a maximum gross take off weight less than 75,000 pounds, excluding helicopters.

Exhibit 6: LAS Daily Average Operations by Corridor for Helicopter Tours* - April 2019



* Helicopter Tours: Note that some operations may originate from facilities besides LAS.

Exhibit 7: LAS Aircraft Arrival Fleet Mix** - April 2019



** Overall Total: Note that operation type and runway use counts are estimated by Harris Corp. EnvironmentalVue Noise and Monitoring Operations system based on radar data. Due to limitations of radar data, information for aircraft weighing less than 75,000 lbs is inexact.

Exhibit 8: LAS General Departure Direction for Large Air Carrier Aircraft* - April 2019 to 2017

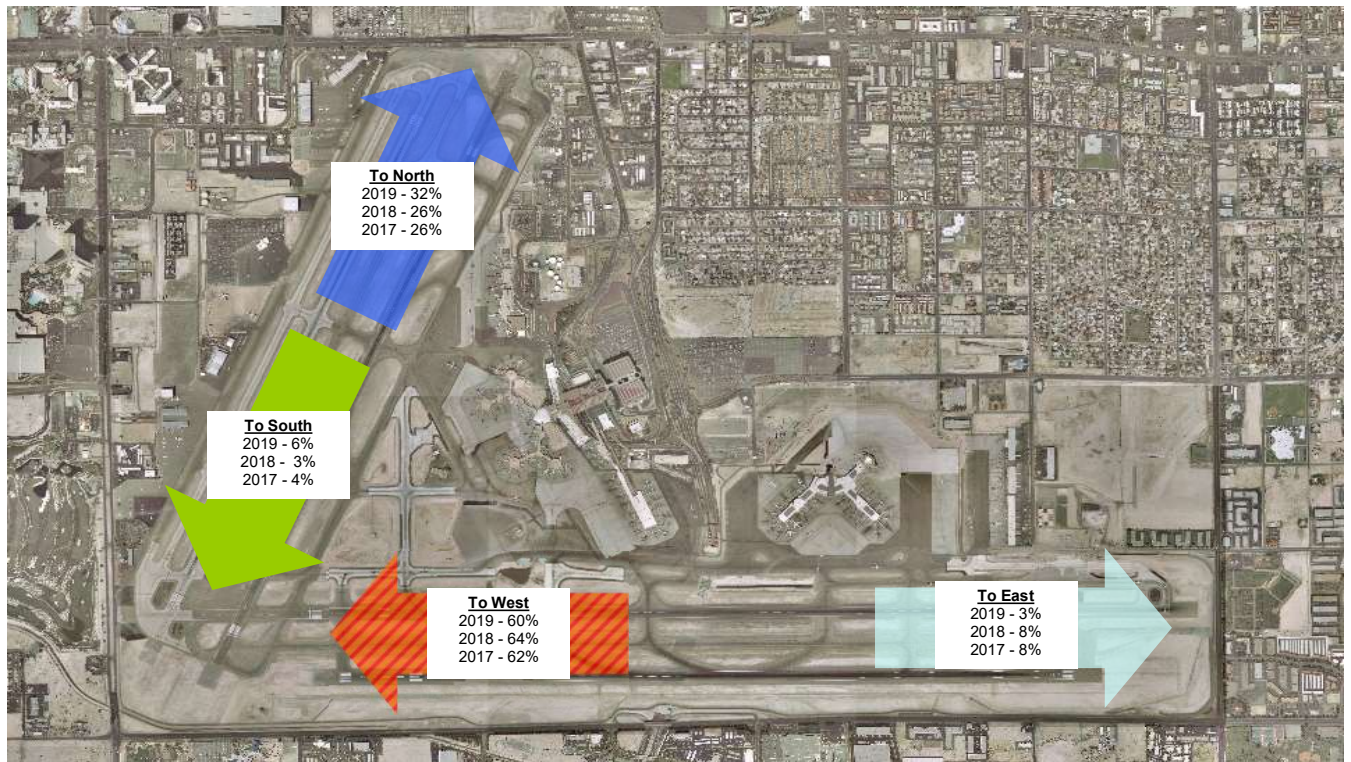
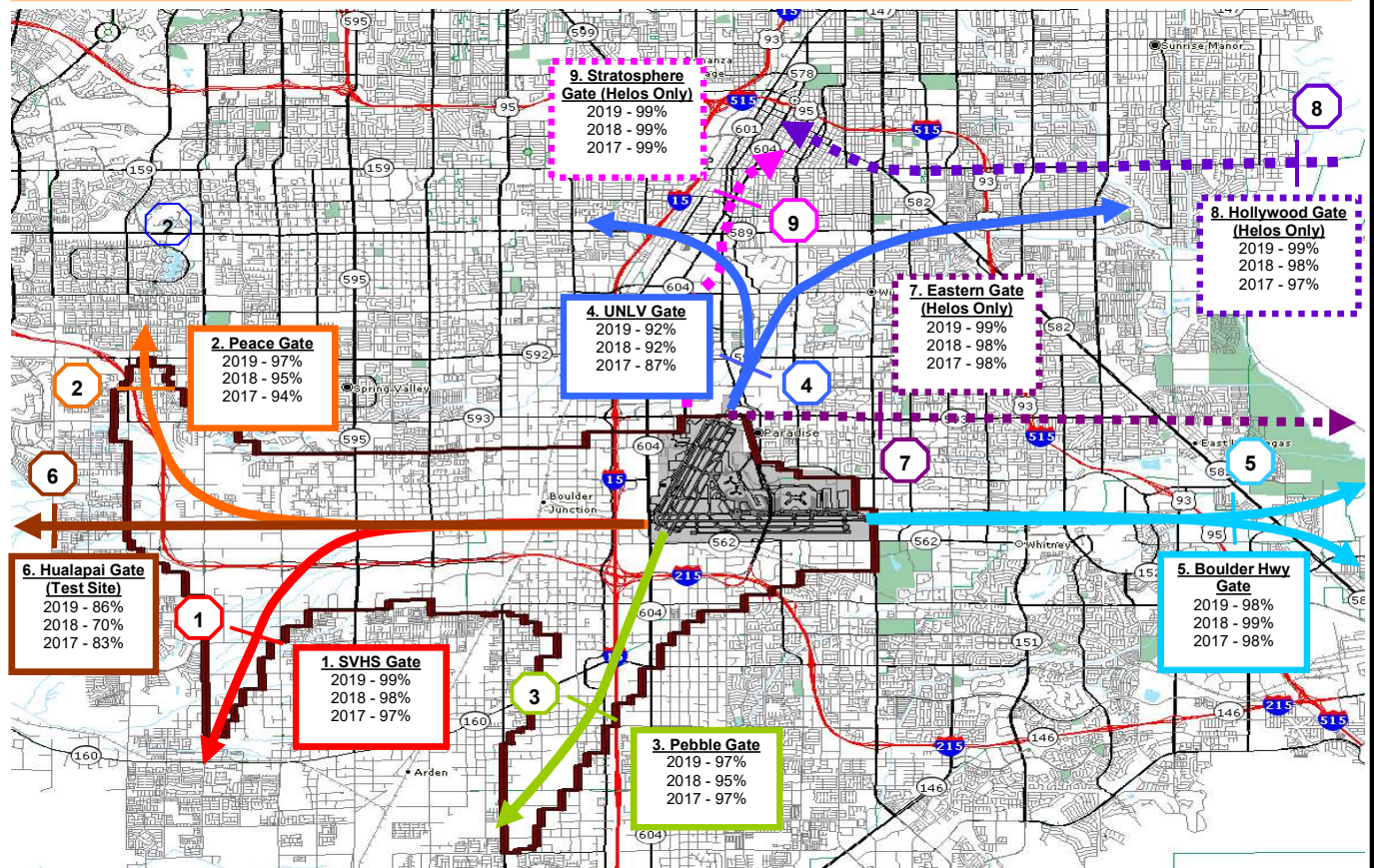


Exhibit 9: "Gate" Compliance for Large Aircraft* & LAS Helicopter Tours - April 2019



* Aircraft types: All aircraft with a maximum gross takeoff weight of at least 75,000 pounds, including but not limited to, A306, A310, A311, A318, A319, A320, A330, A B707, B717, B727, B737, B747, B757, B767, B777, CRJ7, CRJ9, DC8, DC9, DC10, E170, E190, HA4T, L1011, MD80, MD90, MD10, MD11, VC10.

Exhibit 10: Land Use Application Reviews & Comments - April 2019

Land Use Application Review Summary	Clark County	City of Henderson	City of Las Vegas	City of North Las Vegas	Overall Total
No. of Land Use Applications Reviewed	124	37	62	0	223
No. of Applications where CCDOA Issued a Comment	9	4	0	0	13
Percent of Applications where Comment Issued	7%	11%	0%	#DIV/0!	6%

Exhibit 11: Land Use Application Comments by Airport Concern - April 2019

Summary by Comment Type	Clark County	City of Henderson	City of Las Vegas	City of North Las Vegas	Overall Total
Deed Restrictions	0	0	0	0	0
Height-Penetrates Part 77 100:1 Surfaces >200'	2	1	0	0	3
Height-Penetrates Part 77 PATH-C Surfaces*	1	0	0	0	1
Heliport/Helipad	0	0	0	0	0
Noisy-Commercial within AEOD**	5	0	0	0	5
Noisy-Residential within the AEOD**	0	0	0	0	0
Noisy-Residential Just Outside the AEOD**	3	3	0	0	6
Total***	11	4	0	0	15

* Primary, Approach, Transition, Horizontal, Conical as defined by Federal Aviation Regulation (FAR) Part 77.

**AEOD-Airport Environs Overlay District (defined below).

***Comment Concern totals will not always match Comment Applications total. Some applications are issued more than one type of CCDOA comment.

Exhibit 12: Dwelling Units per Commented Application* - April 2019

Dwelling Units Proposed in Commented Applications	Clark County	City of Henderson	City of Las Vegas	City of North Las Vegas	Overall Total
Within the AEOD	0	0	0	0	0
Just Outside the AEOD	93	564	0	0	657

*Due to high variability in many land use proposals, dwelling units proposed may not reflect actual number of units built. In addition, some projects will require more than one type of application, resulting in the project total counted more than once.

Exhibit 13: Land Use Applications Denied and/or Opposed - April 2019

Summary of LUA Opposed	Clark County	City of Henderson	City of Las Vegas	City of North Las Vegas	Overall Total
Recommend Denial	0	0	0	0	0
Opposed at Hearings	0	0	0	0	0

Exhibit 14: Airport Environs Overlay Districts & Noisy Comments - Valley Wide - April 2019

AEOD - Airport Environs Overlay Districts - Noise Contours
Clark County Code (CCC) 30.48.010. The AEOD is established to:

1. Provide for a range of uses compatible with airport hazard and noise exposure areas.
2. Prohibit the development of incompatible uses that are detrimental to the general health, safety, and welfare.
3. Require noise attenuated construction, as indicated by Table 30.48-AE, in accordance with the noise attenuation construction standards of Chapter 22.22 of the CCC, within these airport environs. The regulations of the AEOD shall supersede the regulations of the underlying district if there is a conflict.
4. Comply with the Federal Aviation Administration regulations.

2008-Most recent update to the AEOD in CCC, updated the AEOD for McCarran (LAS), and added an AEOD to the North Las Vegas Airport (VGT) and the Henderson Executive Airport (HND).

2011-AEOD adopted by the cities of North Las Vegas and Henderson.

The AEOD has not been formally adopted by the City of Las Vegas. Only a small, already developed portion of the VGT AEOD lies within the incorporated City of Las Vegas boundaries.

Salmon color indicates a 1 mile zone outside the AEOD.

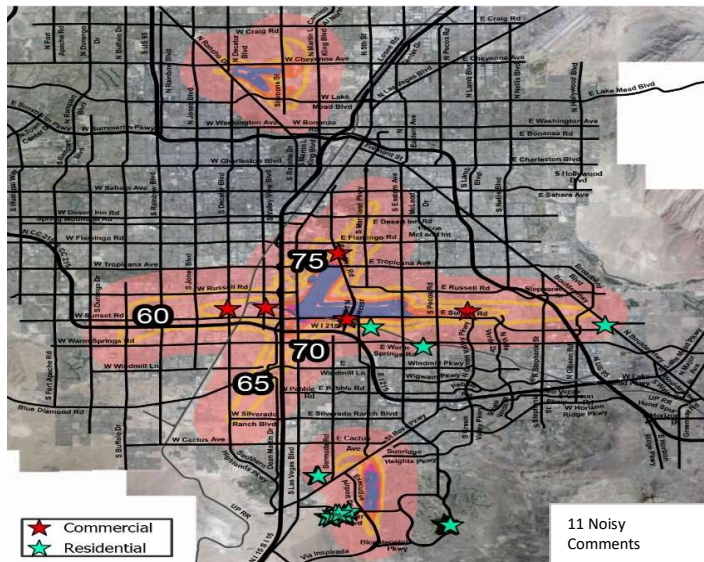


Exhibit 15: Noisy Comments - LAS Detail - April 2019

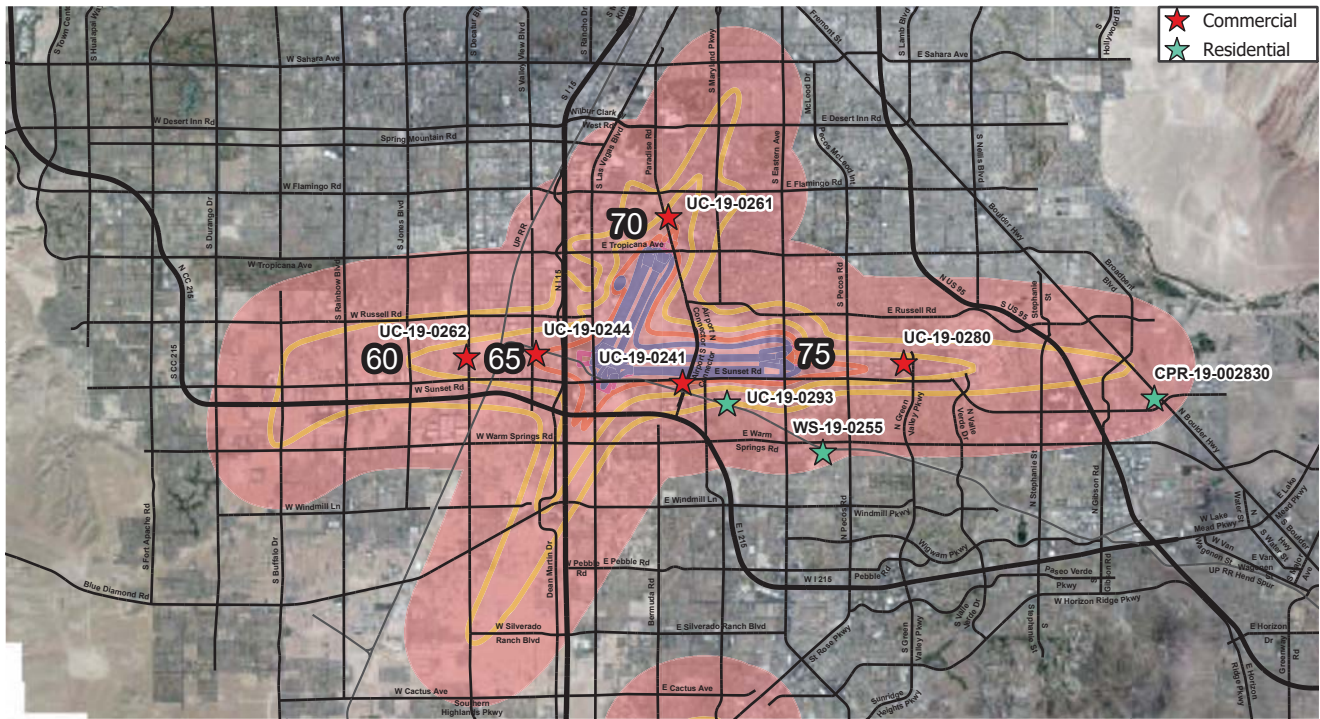


Exhibit 16: Noisy Comments - HND Detail - April 2019

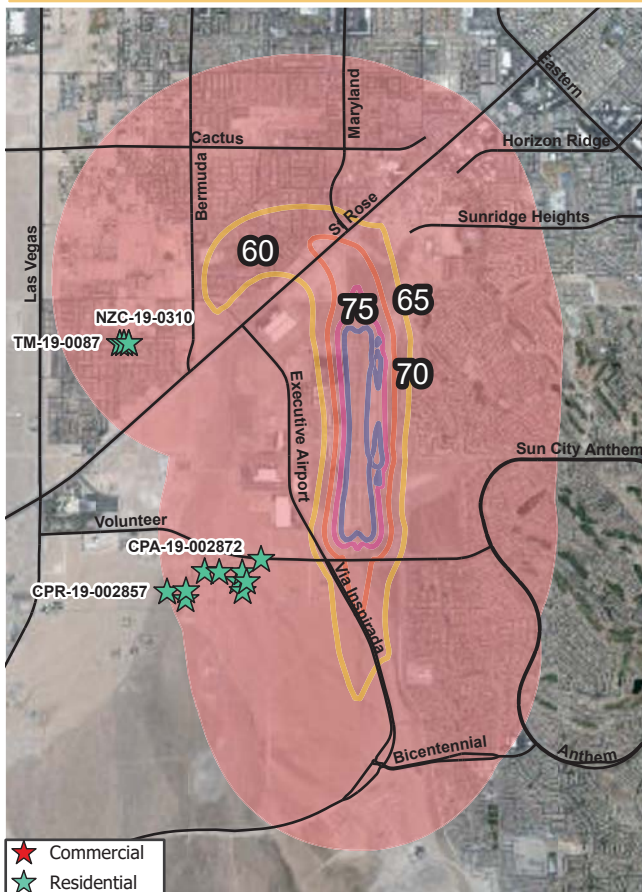


Exhibit 17: Noisy Comments - VGT Detail - April 2019

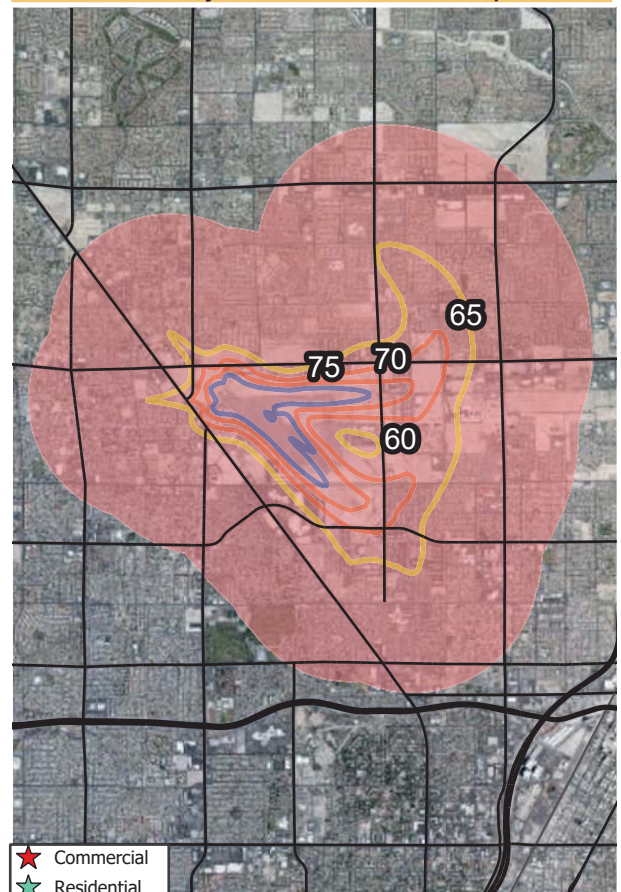


Exhibit 1: Noise Complaint Calls by Community* - May 2019

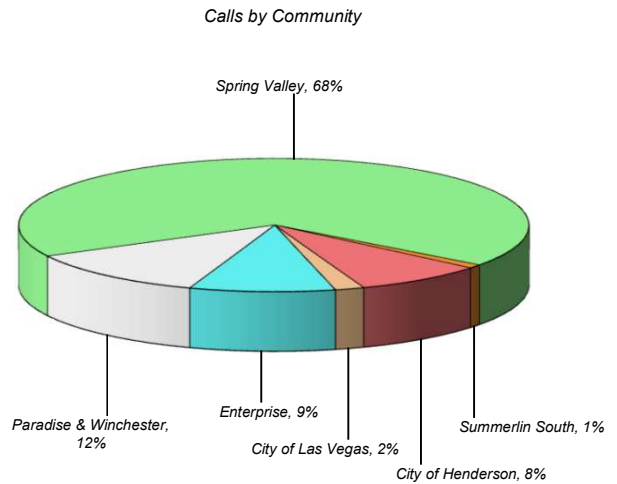
Community	No. of Calls in 2019	No. of Callers in 2019	No. of Calls in 2018	No. of Calls in 2017
City of Boulder City				
City of Henderson	9	7	5	9
City of Las Vegas	2	2	2	7
City of North Las Vegas			2	
Enterprise	10	4	2	7
Lone Mountain				11
Paradise & Winchester	13	11	9	15
Spring Valley	74	8	24	12
Summerlin South	1	1	1	
Sunrise Manor				
Whitney				1
Location unknown				
Overall Total	109	33	45	62

Difference between 2019 and 2018 Total Calls: 142%

Difference between 2019 and 2017 Total Calls: 76%

Average Number of Calls per Caller: 3.3

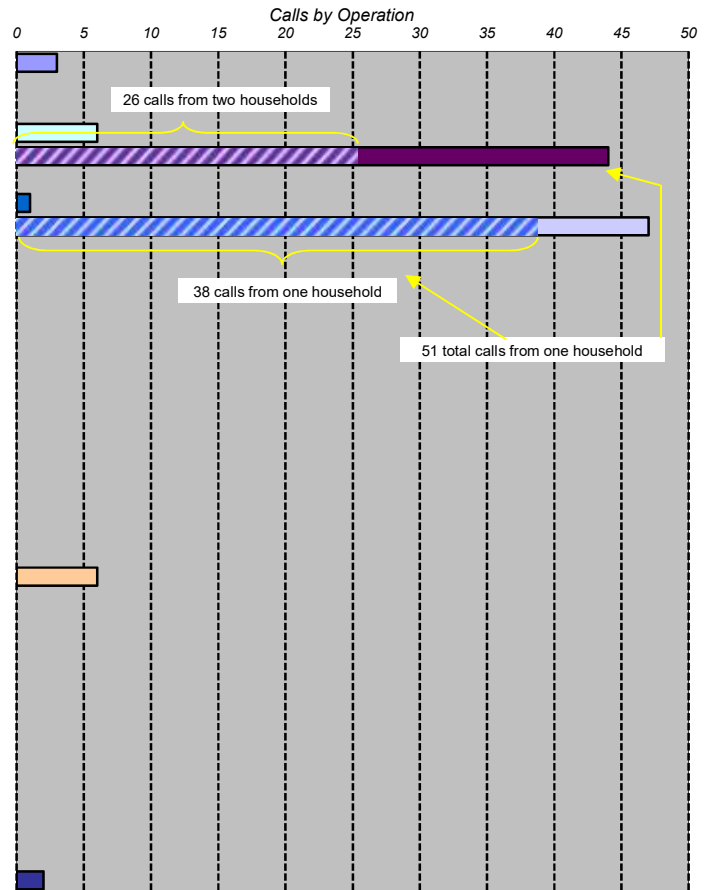
Most calls received from one household: 51



* See map on reverse side for community boundaries and location of known noise complaints.

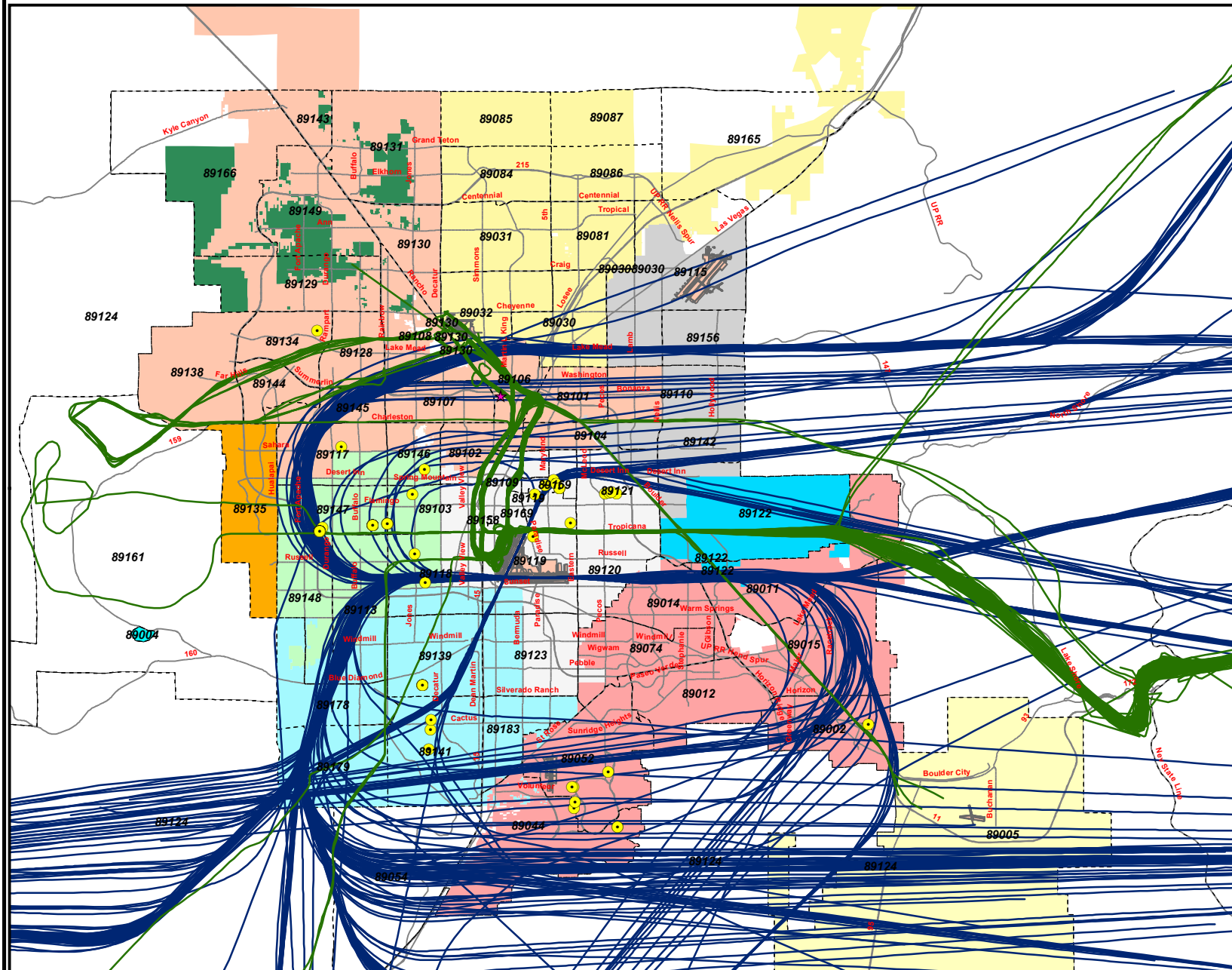
Exhibit 2: Noise Complaint Calls by Type of Operation - May 2019

Operation	No. of Calls in 2019	Percent of Overall Total	No. of Calls in 2018	No. of Calls in 2017
LAS 01R/L Arrivals	3	2.8%		1
LAS 08R/L Arrivals				1
LAS 19R/L Arrivals				
LAS 26R/L Arrivals	6	5.5%		
LAS 01R/L Departures	44	40.4%	11	21
LAS 08R/L Departures			1	2
LAS 19R/L Departures	1	0.9%		2
LAS 26R/L Departures	47	43.1%	22	13
LAS Run-ups				
LAS GA				
LAS Other				
LAS Total	101	92.7%	34	40
VGT 07 Arrivals				
VGT 12R/L Arrivals				
VGT 25 Arrivals				
VGT 30R/L Arrivals				
VGT 07 Departures				
VGT 12R/L Departures				
VGT 25 Departures				
VGT 30R/L Departures				
VGT Run-ups				
VGT GA	6	5.5%	3	12
VGT Other				
VGT Total	6	5.5%	3	12
HND 17R/L Arrivals				
HND 35R/L Arrivals				
HND 17R/L Departures				
HND 35R/L Departures				
HND Run-ups				
HND GA			4	6
HND Other				
HND Total	0	0.0%	4	6
Helicopters**	2	1.8%	4	4
Overall Total	109	100%	45	62



** Note that helicopter noise complaints are not tied to a specific facility since the operation cannot always be associated to a specific airport. Additionally, helicopter calls do not include those associated with operations conducted by the Metropolitan Police Department or those associated with operations conducted at non-DOA facilities.

Exhibit 3: Aircraft Noise Complaints by Community - May 2019



Legend

May 2019
Total Complaints: 109

- Aircraft Complaints Received 107 Mapped 107
- ★ Helicopter Complaints Received 2 Mapped 2
- Major Streets
- Airports
- - - Zip Code Boundaries
- Typical Large Air Carrier Departure Tracks
- Typical Touring Helicopter Tracks
- Unincorporated Clark County
- Boulder City
- Whitney
- Henderson
- Las Vegas
- North Las Vegas
- Paradise/Winchester
- Summerlin
- Spring Valley
- Sunrise Manor
- Winchester
- Enterprise
- Lone Mountain

Department of Aviation
Geographic Information Systems



July 15, 2019

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with the accuracy of
the data displayed hereon.

H:\GIS\Standard Projects\Noise\2019\20190202_NOISE19.mxd



Exhibit 4: LAS Daily Average Operations Runway for Large Air Carrier Aircraft* - May 2019



Year	2019		2018		2017	
Daytime Departures	415	79%	406	80%	417	82%
Nighttime Departures	108	21%	100	20%	89	18%
Total Departures	523	100%	506	100%	506	100%

Daytime Arrivals	440	85%	434	84%	443	87%
Nighttime Arrivals	78	15%	83	16%	69	13%
Total Arrivals	518	100%	517	100%	512	100%

Growth	Overall	Daytime	Nighttime
Depts. 2019 vs 2018	3%	2%	8%
Depts. 2019 vs 2017	3%	-1%	22%
Arrivals 2019 vs 2018	0%	1%	-6%
Arrivals 2019 vs 2017	1%	-1%	14%

* Aircraft types: All aircraft with a maximum gross take off weight of at least 75,000 pounds, including but not limited to, A306, A310, A311, A318, A319, A320, A330, A340, B707, B717, B727, B737, B747, B757, B767, B777, CRJ7, CRJ9, DC8, DC9, DC10, E170, E190, HA4T, L1011, MD80, MD90, MD10, MD11, VC10.

Exhibit 5: LAS Daily Average Operations by Runway for Non-Large Air Carrier Aircraft** - May 2019



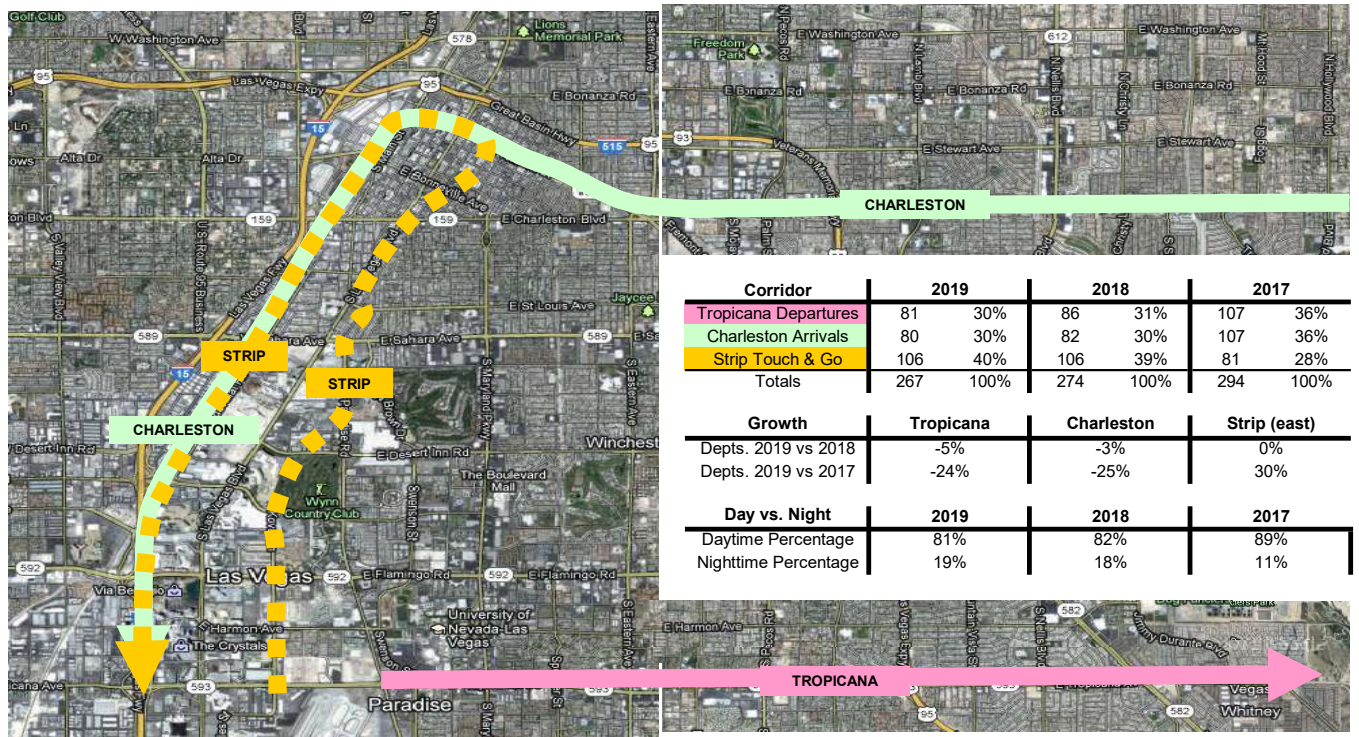
Year	2019		2018		2017	
Daytime Departures	107	91%	109	89%	102	90%
Nighttime Departures	10	9%	13	11%	12	10%
Total Departures	117	100%	122	100%	114	100%

Daytime Arrivals	107	93%	104	92%	97	92%
Nighttime Arrivals	8	7%	9	8%	9	8%
Total Arrivals	115	100%	113	100%	105	100%

Growth	Overall	Daytime	Nighttime
Depts. 2019 vs 2018	-4%	-2%	-21%
Depts. 2019 vs 2017	3%	5%	-13%
Arrivals 2019 vs 2018	2%	3%	-10%
Arrivals 2019 vs 2017	9%	11%	-8%

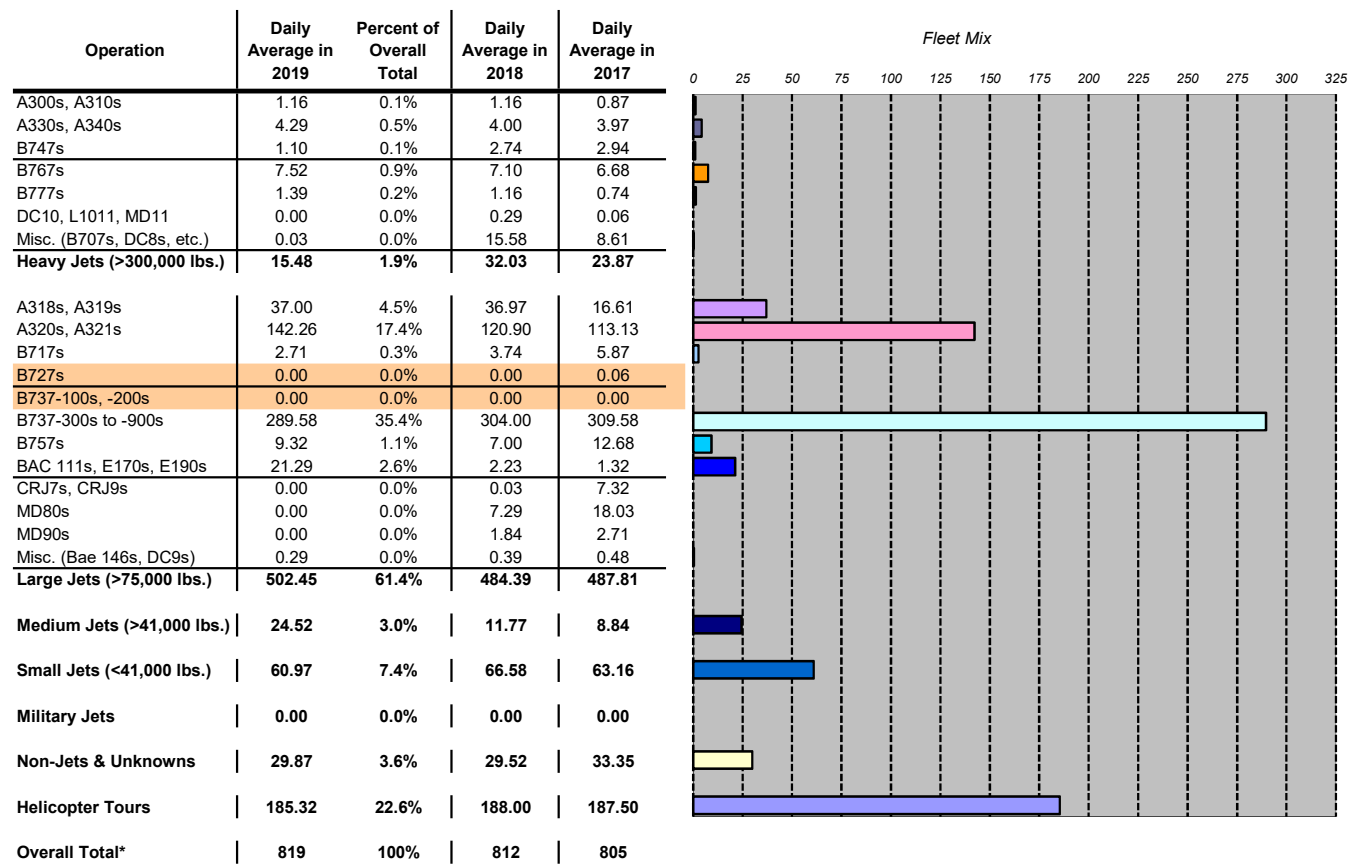
** Aircraft types: All aircraft with a maximum gross take off weight less than 75,000 pounds, excluding helicopters.

Exhibit 6: LAS Daily Average Operations by Corridor for Helicopter Tours* - May 2019



* Helicopter Tours: Note that some operations may originate from facilities besides LAS.

Exhibit 7: LAS Aircraft Arrival Fleet Mix** - May 2019



** Overall Total: Note that operation type and runway use counts are estimated by Harris Corp. EnvironmentalVue Noise and Monitoring Operations system based on radar data. Due to limitations of radar data, information for aircraft weighing less than 75,000 lbs is inexact.

Exhibit 8: LAS General Departure Direction for Large Air Carrier Aircraft* - May 2019 to 2017

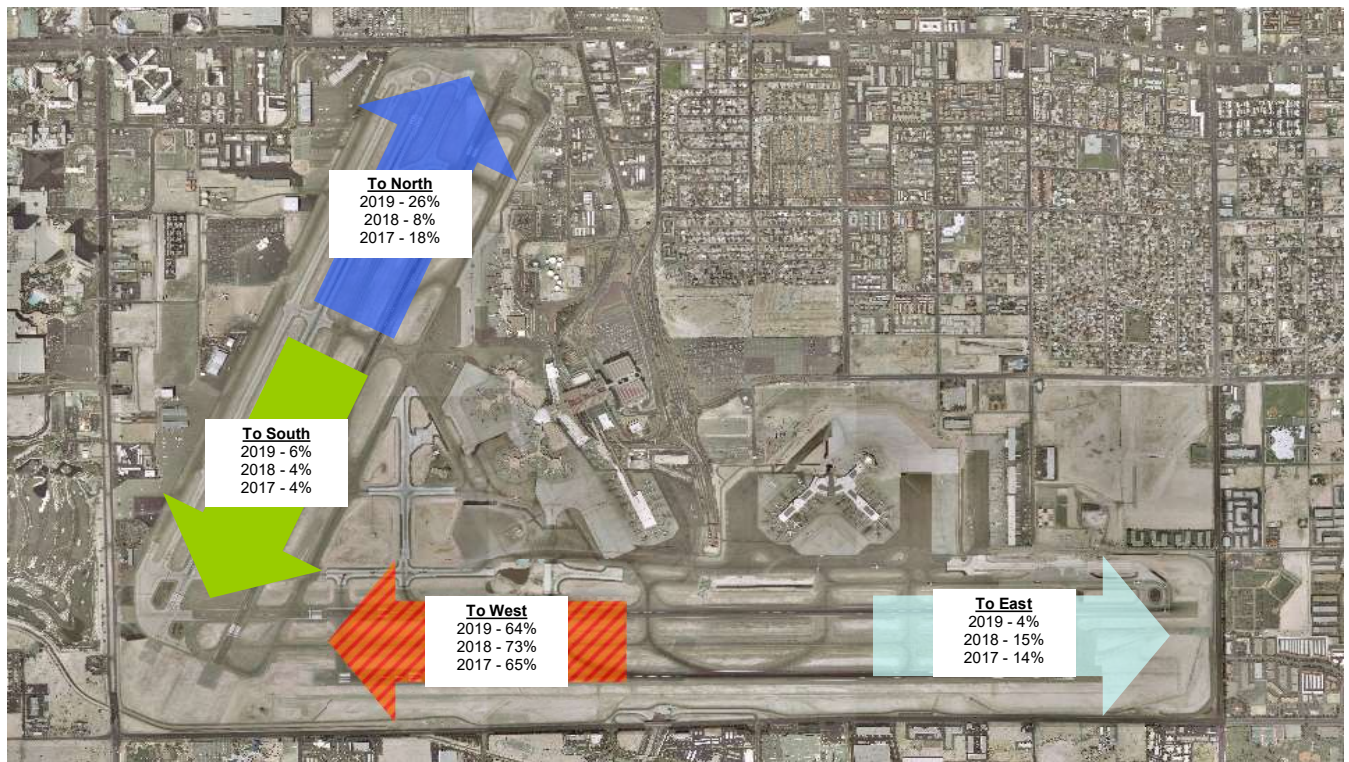
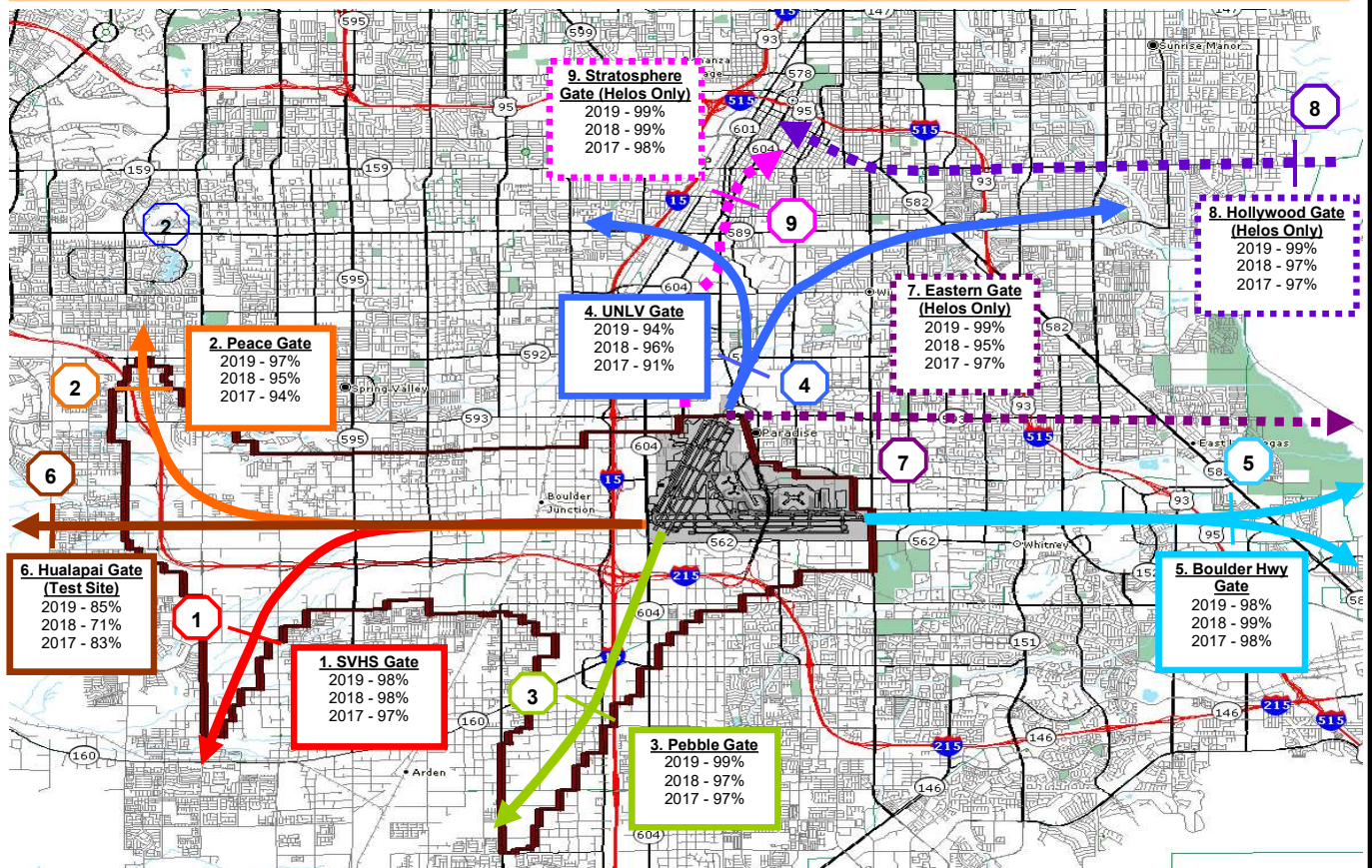


Exhibit 9: "Gate" Compliance for Large Aircraft* & LAS Helicopter Tours - May 2019



* Aircraft types: All aircraft with a maximum gross takeoff weight of at least 75,000 pounds, including but not limited to, A306, A310, A311, A318, A319, A320, A330, A350, B707, B717, B727, B737, B747, B757, B767, B777, CRJ7, CRJ9, DC8, DC9, DC10, E170, E190, HA4T, L1011, MD80, MD90, MD10, MD11, VC10.

Exhibit 10: Land Use Application Reviews & Comments - May 2019

Land Use Application Review Summary	Clark County	City of Henderson	City of Las Vegas	City of North Las Vegas	Overall Total
No. of Land Use Applications Reviewed	136	66	132	48	382
No. of Applications where CCDOA Issued a Comment	11	5	1	1	18
Percent of Applications where Comment Issued	8%	8%	1%	2%	5%

Exhibit 11: Land Use Application Comments by Airport Concern - May 2019

Summary by Comment Type	Clark County	City of Henderson	City of Las Vegas	City of North Las Vegas	Overall Total
Deed Restrictions	1	0	0	0	1
Height-Penetrates Part 77 100:1 Surfaces >200'	5	1	1	0	7
Height-Penetrates Part 77 PATH-C Surfaces*	0	0	0	0	0
Heliport/Helipad	0	0	0	0	0
Noisy-Commercial within AEOD**	1	0	0	1	2
Noisy-Residential within the AEOD**	2	0	0	0	2
Noisy-Residential Just Outside the AEOD**	4	5	0	0	9
Total***	13	6	1	1	21

* Primary, Approach, Transition, Horizontal, Conical as defined by Federal Aviation Regulation (FAR) Part 77.

**AEOD-Airport Environs Overlay District (defined below).

***Comment Concern totals will not always match Comment Applications total. Some applications are issued more than one type of CCDOA comment.

Exhibit 12: Dwelling Units per Commented Application* - May 2019

Dwelling Units Proposed in Commented Applications	Clark County	City of Henderson	City of Las Vegas	City of North Las Vegas	Overall Total
Within the AEOD	348	0	0	0	348
Just Outside the AEOD	1124	674	0	0	1,798

*Due to high variability in many land use proposals, dwelling units proposed may not reflect actual number of units built. In addition, some projects will require more than one type of application, resulting in the project total counted more than once.

Exhibit 13: Land Use Applications Denied and/or Opposed - May 2019

Summary of LUA Opposed	Clark County	City of Henderson	City of Las Vegas	City of North Las Vegas	Overall Total
Recommend Denial	1	0	0	0	1
Opposed at Hearings	0	0	0	0	0

Exhibit 14: Airport Environs Overlay Districts & Noisy Comments - Valley Wide - May 2019

AEOD - Airport Environs Overlay Districts - Noise Contours
Clark County Code (CCC) 30.48.010. The AEOD is established to:

1. Provide for a range of uses compatible with airport hazard and noise exposure areas.
2. Prohibit the development of incompatible uses that are detrimental to the general health, safety, and welfare.
3. Require noise attenuated construction, as indicated by Table 30.48-AE, in accordance with the noise attenuation construction standards of Chapter 22.22 of the CCC, within these airport environs. The regulations of the AEOD shall supersede the regulations of the underlying district if there is a conflict.
4. Comply with the Federal Aviation Administration regulations.

2008-Most recent update to the AEOD in CCC, updated the AEOD for McCarran (LAS), and added an AEOD to the North Las Vegas Airport (VGT) and the Henderson Executive Airport (HND).

2011-AEOD adopted by the cities of North Las Vegas and Henderson.

The AEOD has not been formally adopted by the City of Las Vegas. Only a small, already developed portion of the VGT AEOD lies within the incorporated City of Las Vegas boundaries.

Salmon color indicates a 1 mile zone outside the AEOD.

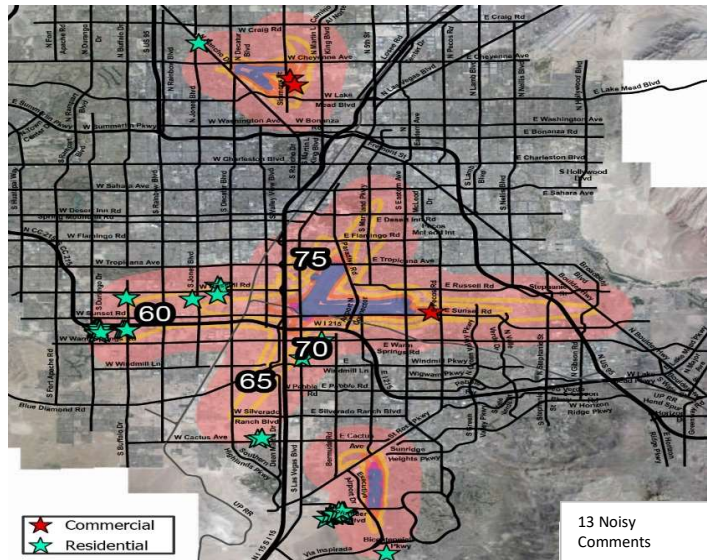


Exhibit 15: Noisy Comments - LAS Detail - May 2019

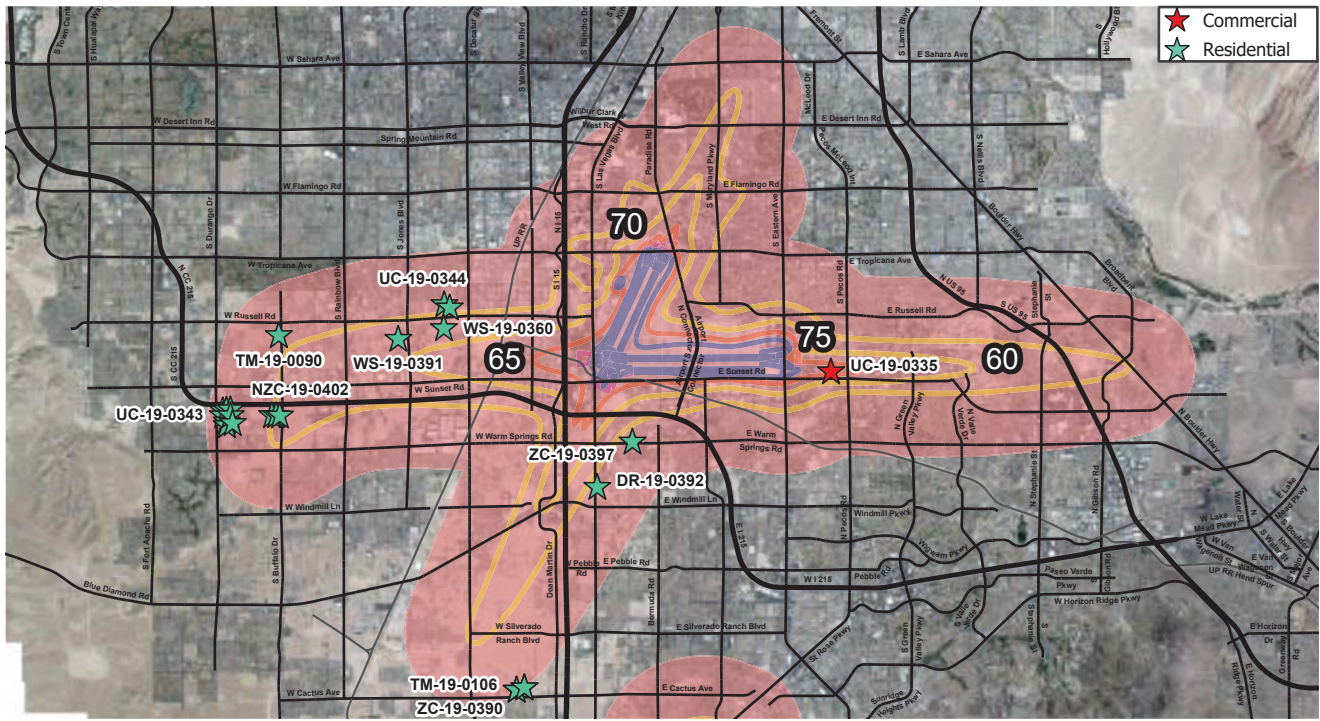


Exhibit 16: Noisy Comments - HND Detail - May 2019

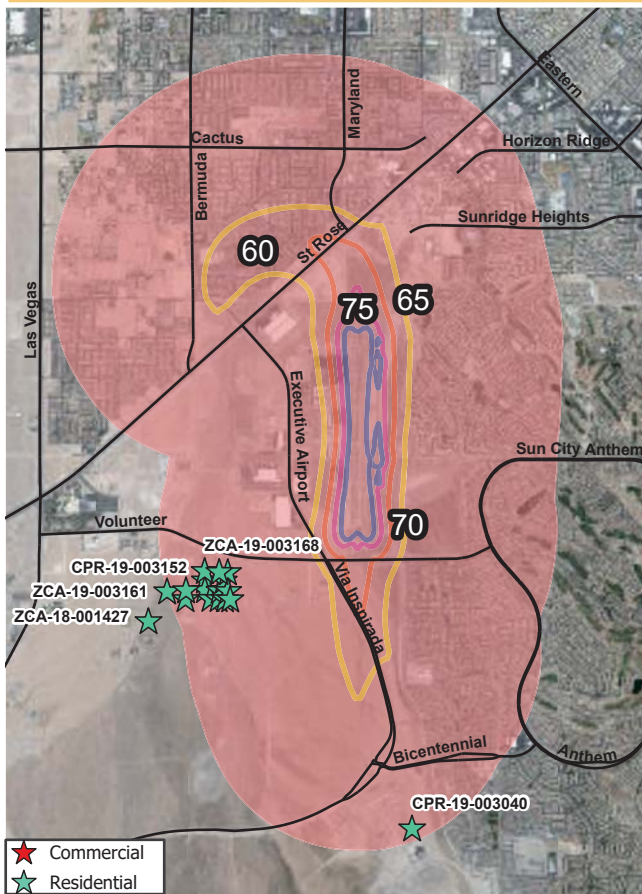


Exhibit 17: Noisy Comments - VGT Detail - May 2019

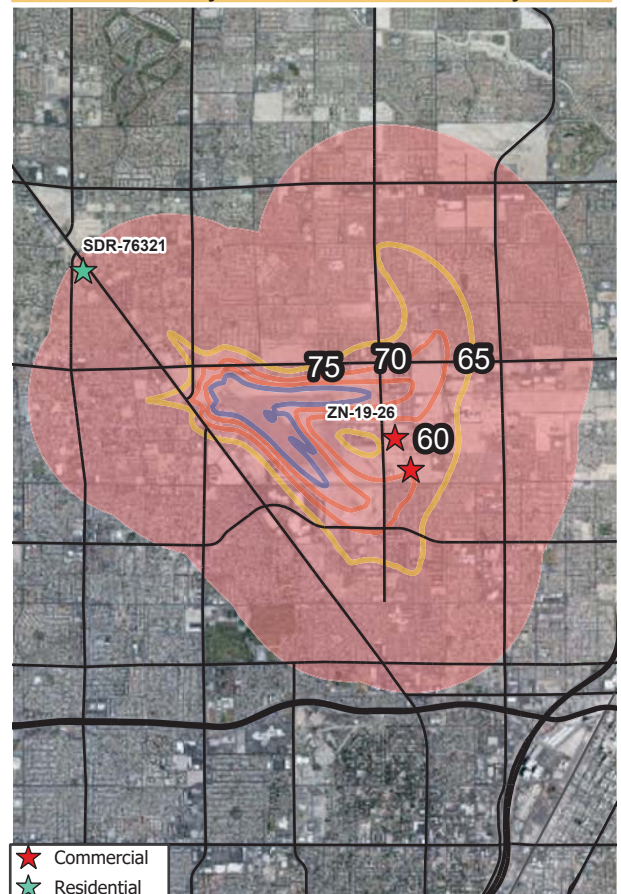


Exhibit 1: Noise Complaint Calls by Community* - June 2019

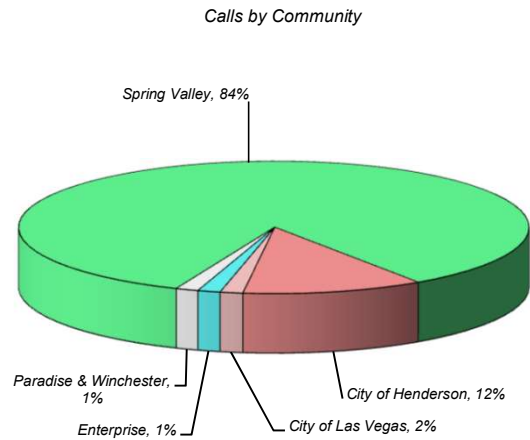
Community	No. of Calls in 2019	No. of Callers in 2019	No. of Calls in 2018	No. of Calls in 2017
City of Boulder City				
City of Henderson	8	6	1	1
City of Las Vegas	1	1		18
City of North Las Vegas				
Enterprise	1	1		4
Lone Mountain				
Paradise & Winchester	1	1	2	1
Spring Valley	59	3	51	2
Summerlin South			1	
Sunrise Manor				
Whitney				
Location unknown				
Overall Total	70	12	55	26

Difference between 2019 and 2018 Total Calls: 27%

Difference between 2019 and 2017 Total Calls: 169%

Average Number of Calls per Caller: 5.8

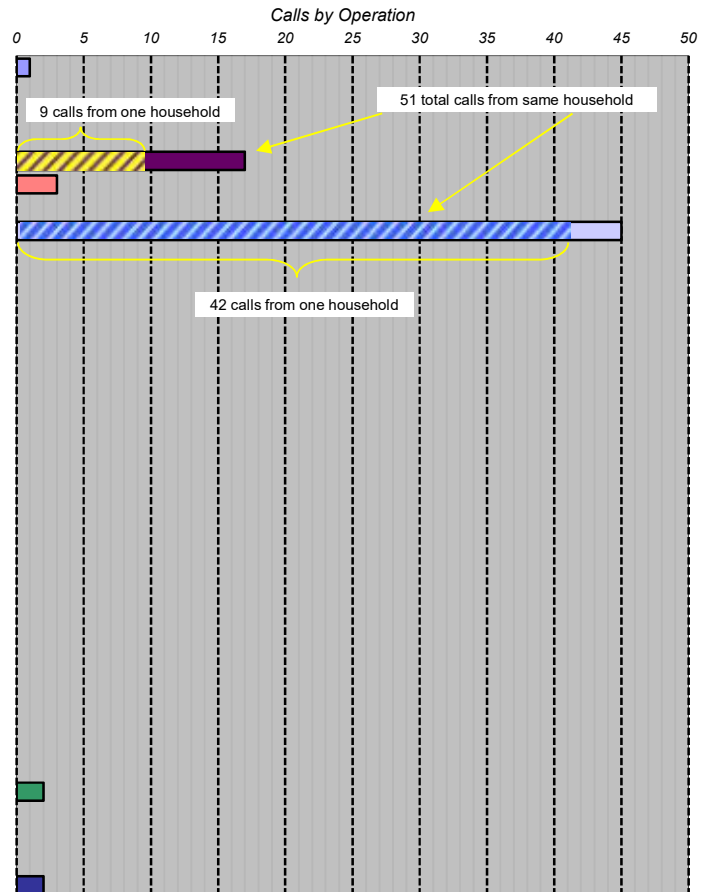
Most calls received from one household: 51



* See map on reverse side for community boundaries and location of known noise complaints.

Exhibit 2: Noise Complaint Calls by Type of Operation - June 2019

Operation	No. of Calls in 2019	Percent of Overall Total	No. of Calls in 2018	No. of Calls in 2017
LAS 01R/L Arrivals	1	1.4%		
LAS 08R/L Arrivals				
LAS 19R/L Arrivals				
LAS 26R/L Arrivals				
LAS 01R/L Departures	17	24.3%	1	1
LAS 08R/L Departures	3	4.3%	2	1
LAS 19R/L Departures				
LAS 26R/L Departures	45	64.3%	51	5
LAS Run-ups				
LAS GA				
LAS Other				
LAS Total	66	94.3%	54	7
VGT 07 Arrivals				
VGT 12R/L Arrivals				
VGT 25 Arrivals				
VGT 30R/L Arrivals				
VGT 07 Departures				
VGT 12R/L Departures				
VGT 25 Departures				
VGT 30R/L Departures				
VGT Run-ups				
VGT GA				
VGT Other				
VGT Total	0	0.0%	0	0
HND 17R/L Arrivals				
HND 35R/L Arrivals				
HND 17R/L Departures				
HND 35R/L Departures				
HND Run-ups				
HND GA	2	2.9%		
HND Other				
HND Total	2	2.9%	0	0
Helicopters**	2	2.9%	1	19
Overall Total	70	100%	55	26



** Note that helicopter noise complaints are not tied to a specific facility since the operation cannot always be associated to a specific airport. Additionally, helicopter calls do not include those associated with operations conducted by the Metropolitan Police Department or those associated with operations conducted at non-DOA facilities.

2019 Noise Complaint Report

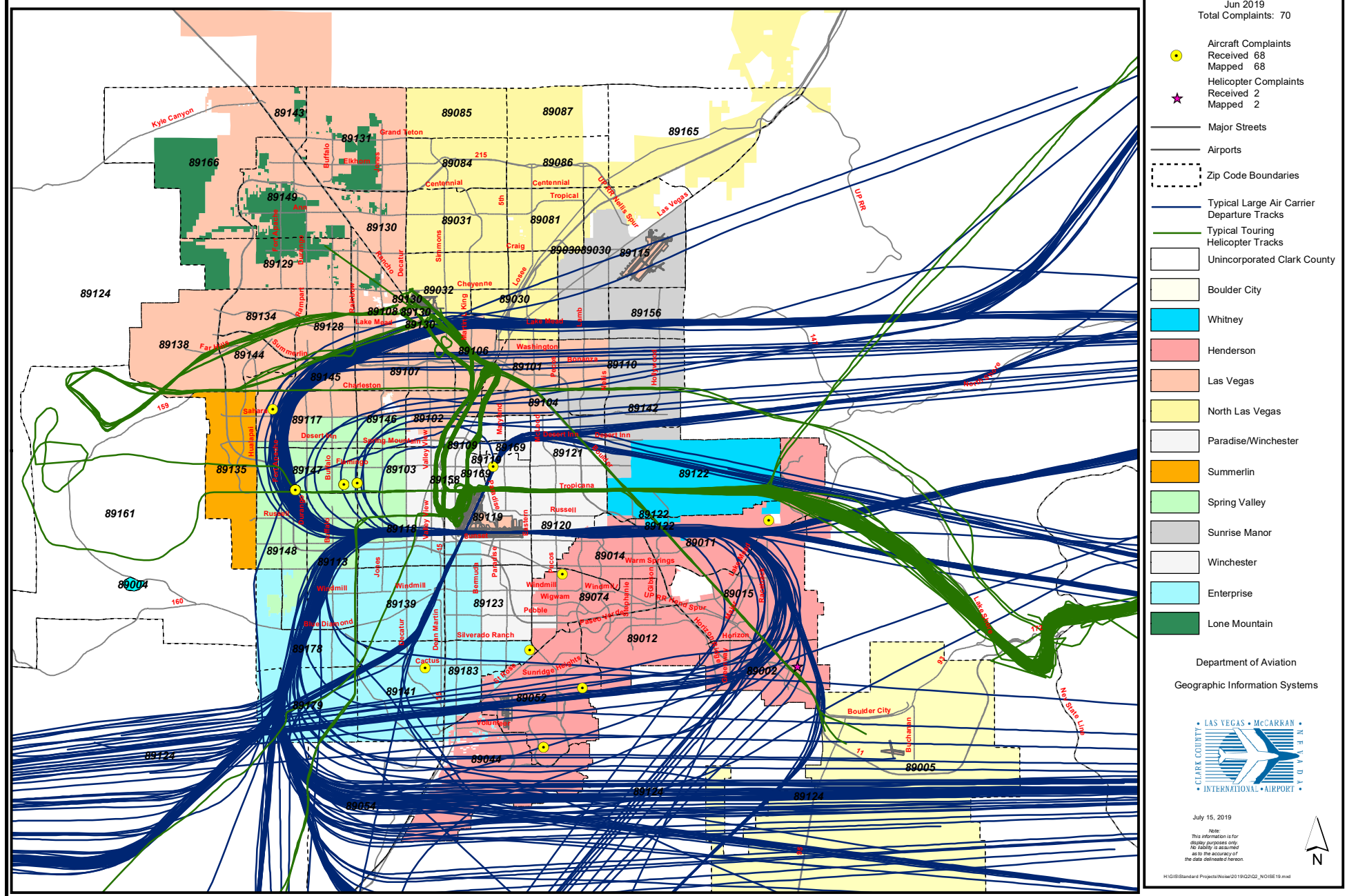
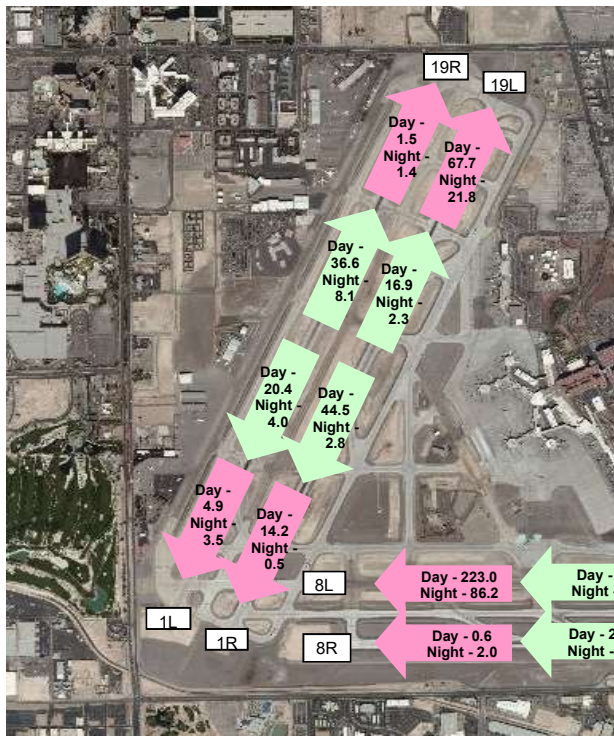


Exhibit 4: LAS Daily Average Operations Runway for Large Air Carrier Aircraft* - June 2019



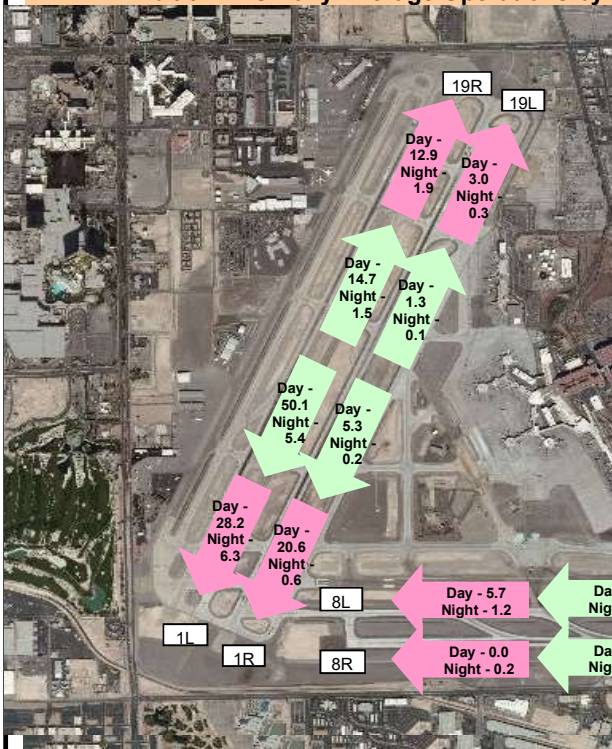
Year	2019		2018		2017	
Daytime Departures	403	77%	406	79%	415	80%
Nighttime Departures	119	23%	107	21%	102	20%
Total Departures	522	100%	513	100%	516	100%

Daytime Arrivals	429	83%	435	82%	436	84%
Nighttime Arrivals	88	17%	94	18%	85	16%
Total Arrivals	517	100%	529	100%	521	100%

Growth	Overall	Daytime	Nighttime
Depts. 2019 vs 2018	2%	-1%	11%
Depts. 2019 vs 2017	1%	-3%	17%
Arrivals 2019 vs 2018	-2%	-1%	-7%
Arrivals 2019 vs 2017	-1%	-2%	3%

* Aircraft types: All aircraft with a maximum gross take off weight of at least 75,000 pounds, including but not limited to, A306, A310, A311, A318, A319, A320, A330, A340, B707, B717, B727, B737, B747, B757, B767, B777, CRJ7, CRJ9, DC8, DC9, DC10, E170, E190, HA4T, L1011, MD80, MD90, MD10, MD11, VC10.

Exhibit 5: LAS Daily Average Operations by Runway for Non-Large Air Carrier Aircraft** - June 2019



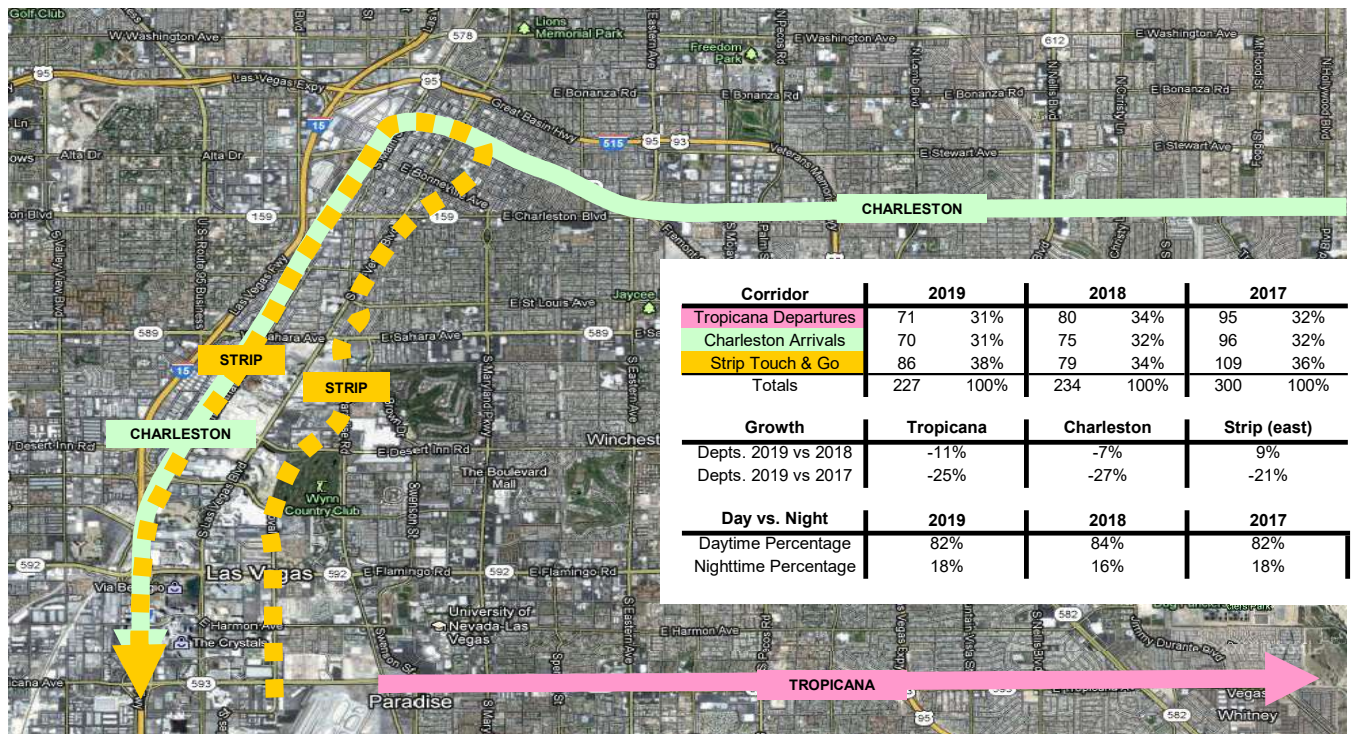
Year	2019		2018		2017	
Daytime Departures	92	90%	88	89%	81	88%
Nighttime Departures	11	10%	11	11%	11	12%
Total Departures	102	100%	99	100%	92	100%

Daytime Arrivals	91	92%	88	92%	79	92%
Nighttime Arrivals	8	8%	8	8%	7	8%
Total Arrivals	99	100%	96	100%	86	100%

Growth	Overall	Daytime	Nighttime
Depts. 2019 vs 2018	3%	4%	-3%
Depts. 2019 vs 2017	11%	13%	-4%
Arrivals 2019 vs 2018	3%	3%	2%
Arrivals 2019 vs 2017	16%	15%	17%

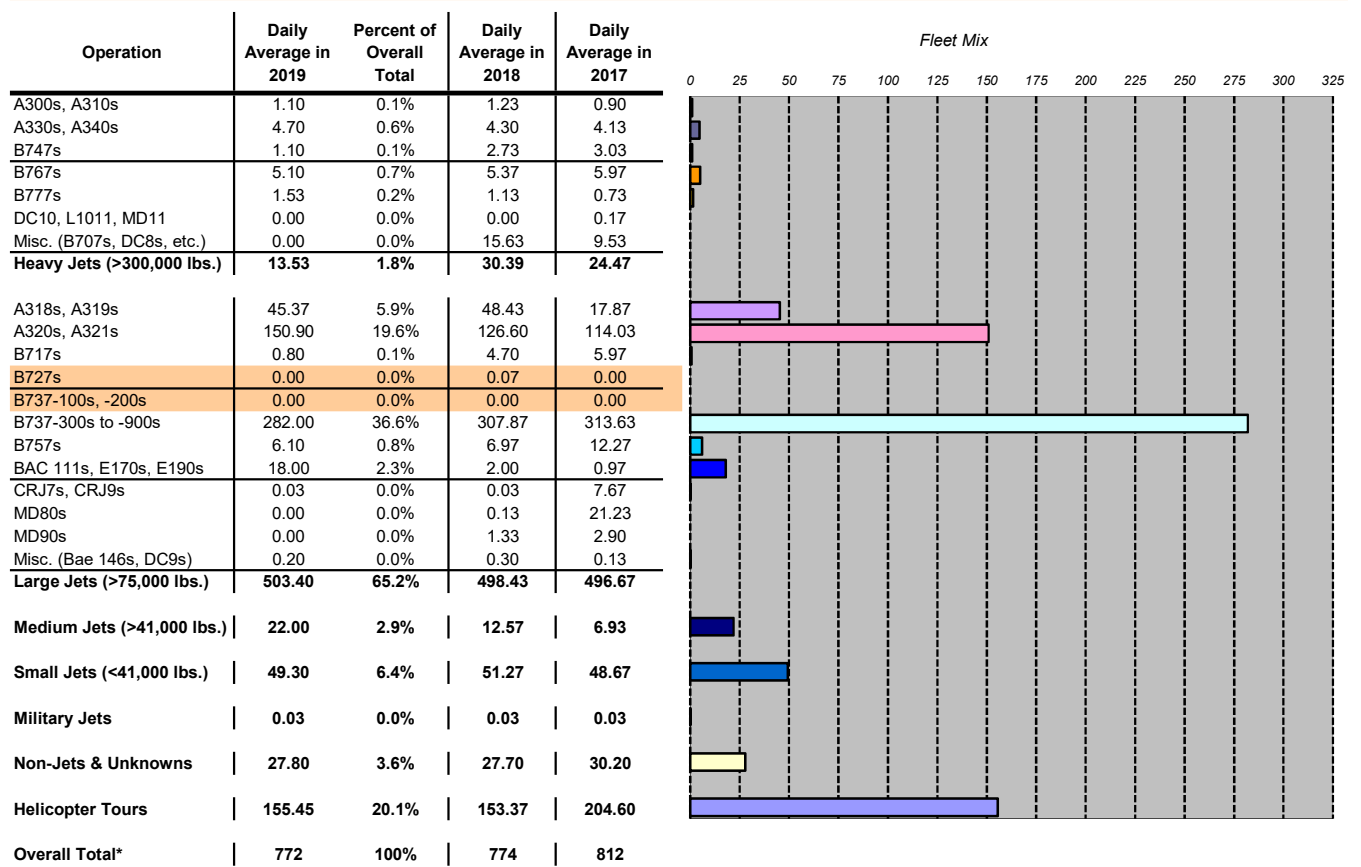
** Aircraft types: All aircraft with a maximum gross take off weight less than 75,000 pounds, excluding helicopters.

Exhibit 6: LAS Daily Average Operations by Corridor for Helicopter Tours* - June 2019



* Helicopter Tours: Note that some operations may originate from facilities besides LAS.

Exhibit 7: LAS Aircraft Arrival Fleet Mix** - June 2019



** Overall Total: Note that operation type and runway use counts are estimated by Harris Corp. Environmental/Vue Noise and Monitoring Operations system based on radar data. Due to limitations of radar data, information for aircraft weighing less than 75,000 lbs is inexact.

Exhibit 8: LAS General Departure Direction for Large Air Carrier Aircraft* - June 2019 to 2017

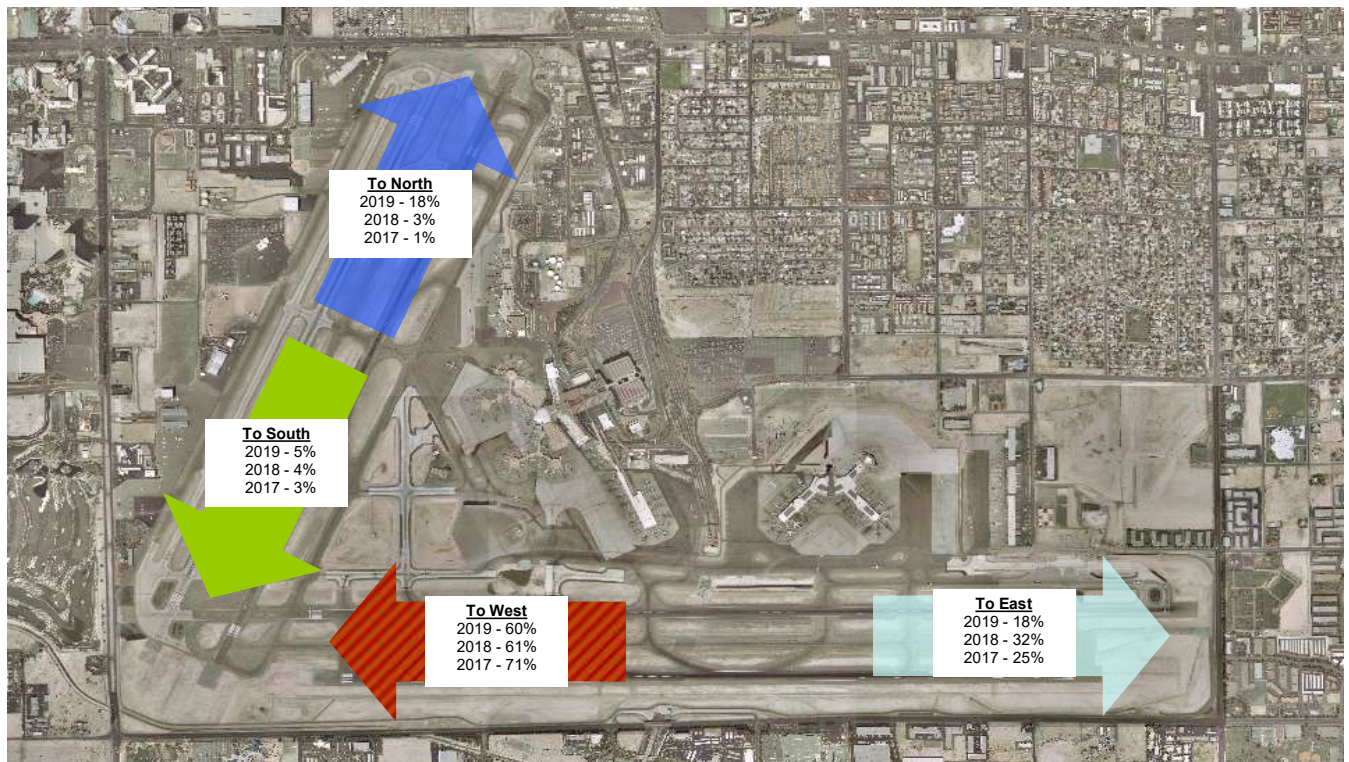
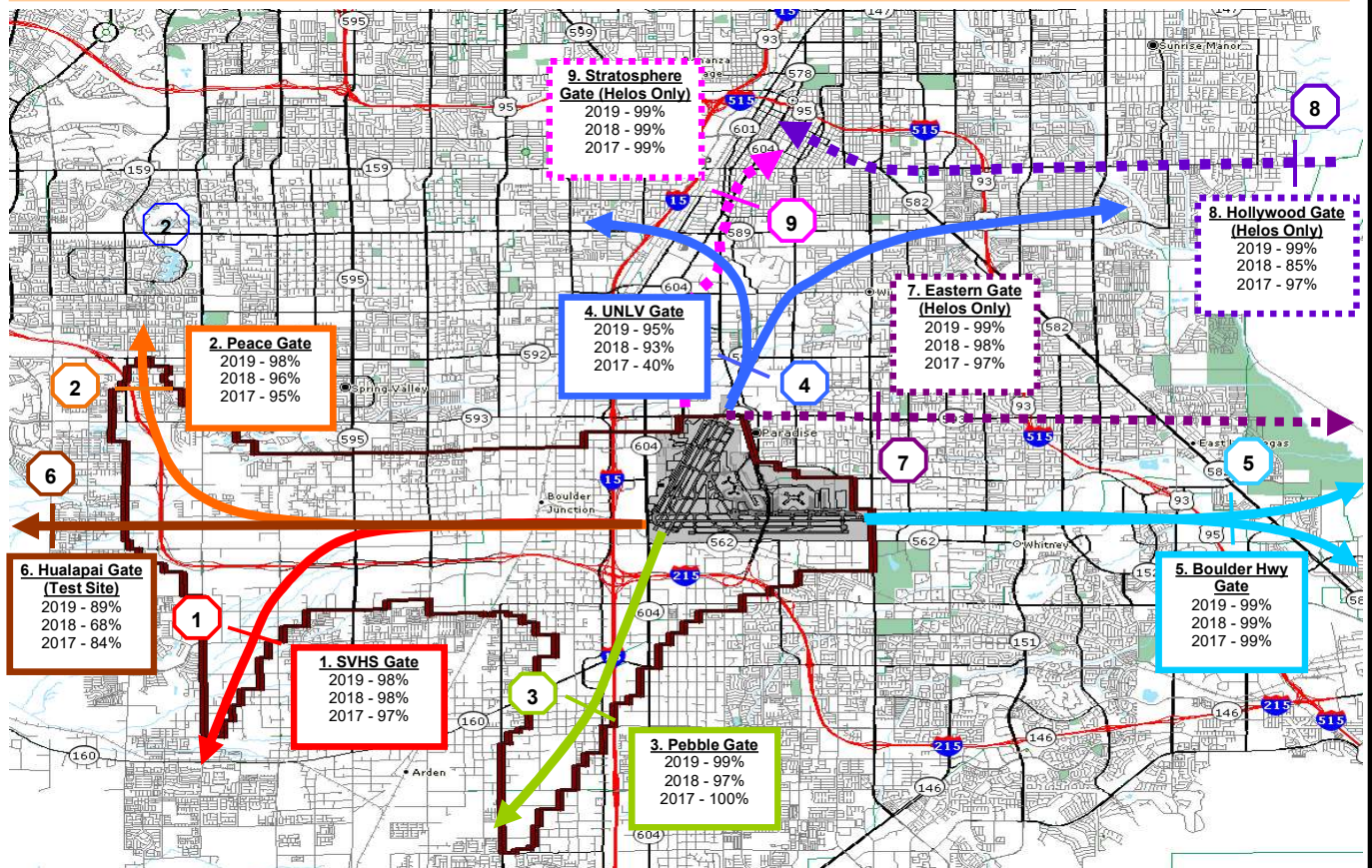


Exhibit 9: "Gate" Compliance for Large Aircraft* & LAS Helicopter Tours - June 2019



* Aircraft types: All aircraft with a maximum gross takeoff weight of at least 75,000 pounds, including but not limited to, A306, A310, A311, A318, A319, A320, A330, A350, B707, B717, B727, B737, B747, B757, B767, B777, CRJ7, CRJ9, DC8, DC9, DC10, E170, E190, HA4T, L1011, MD80, MD90, MD10, MD11, VC10.

Exhibit 10: Land Use Application Reviews & Comments - June 2019

Land Use Application Review Summary	Clark County	City of Henderson	City of Las Vegas	City of North Las Vegas	Overall Total
No. of Land Use Applications Reviewed	136	32	63	0	231
No. of Applications where CCDOA Issued a Comment	17	1	2	0	20
Percent of Applications where Comment Issued	13%	3%	3%	#DIV/0!	9%

Exhibit 11: Land Use Application Comments by Airport Concern - June 2019

Summary by Comment Type	Clark County	City of Henderson	City of Las Vegas	City of North Las Vegas	Overall Total
Deed Restrictions	1	0	0	0	1
Height-Penetrates Part 77 100:1 Surfaces >200'	9	1	1	0	11
Height-Penetrates Part 77 PATH-C Surfaces*	0	0	0	0	0
Heliport/Helipad	0	0	0	0	0
Noisy-Commercial within AEOD**	4	0	0	0	4
Noisy-Residential within the AEOD**	1	0	0	0	1
Noisy-Residential Just Outside the AEOD**	8	1	1	0	10
Total***	23	2	2	0	27

* Primary, Approach, Transition, Horizontal, Conical as defined by Federal Aviation Regulation (FAR) Part 77.

**AEOD-Airport Environs Overlay District (defined below).

***Comment Concern totals will not always match Comment Applications total. Some applications are issued more than one type of CCDOA comment.

Exhibit 12: Dwelling Units per Commented Application* - June 2019

Dwelling Units Proposed in Commented Applications	Clark County	City of Henderson	City of Las Vegas	City of North Las Vegas	Overall Total
Within the AEOD	4	0	0	0	4
Just Outside the AEOD	1,703	187	66	0	1,956

*Due to high variability in many land use proposals, dwelling units proposed may not reflect actual number of units built. In addition, some projects will require more than one type of application, resulting in the project total counted more than once.

Exhibit 13: Land Use Applications Denied and/or Opposed - June 2019

Summary of LUA Opposed	Clark County	City of Henderson	City of Las Vegas	City of North Las Vegas	Overall Total
Recommend Denial	0	0	0	0	0
Opposed at Hearings	0	0	0	0	0

Exhibit 14: Airport Environs Overlay Districts & Noisy Comments - Valley Wide - June 2019

AEOD - Airport Environs Overlay Districts - Noise Contours
Clark County Code (CCC) 30.48.010. The AEOD is established to:

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Salmon color indicates a 1 mile zone outside the AEOD.

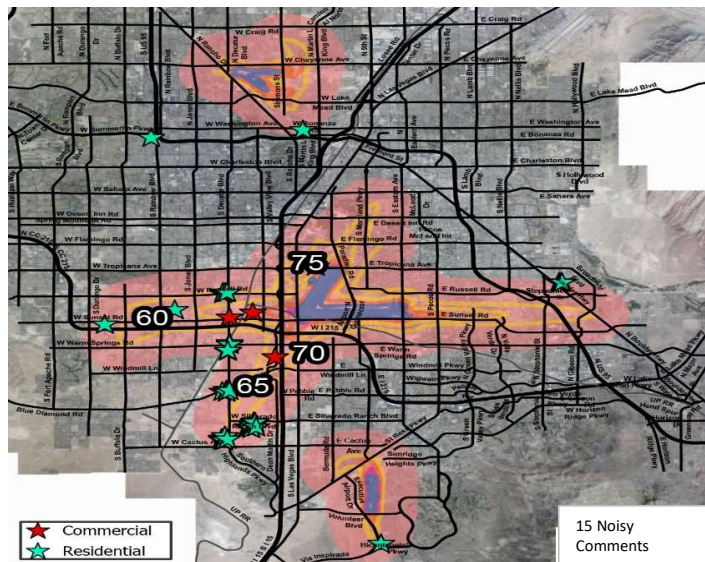


Exhibit 15: Noisy Comments - LAS Detail - June 2019

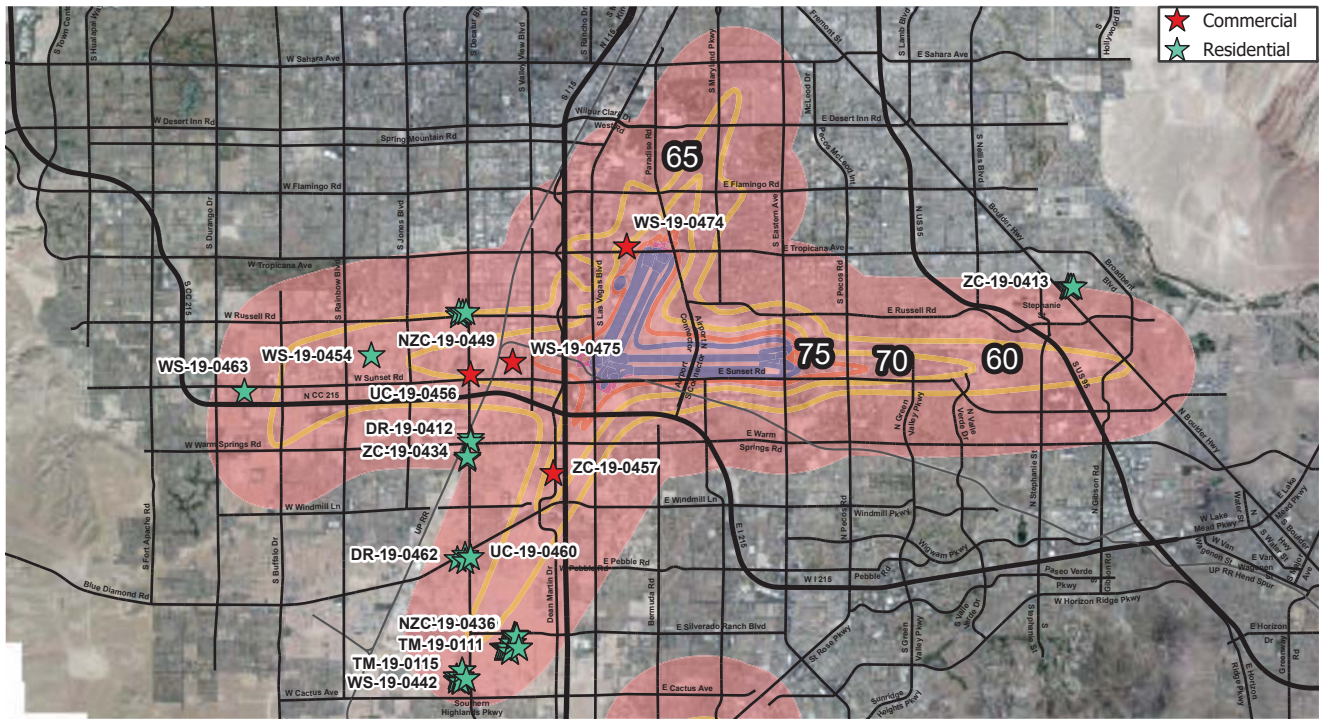


Exhibit 16: Noisy Comments - HND Detail - June 2019

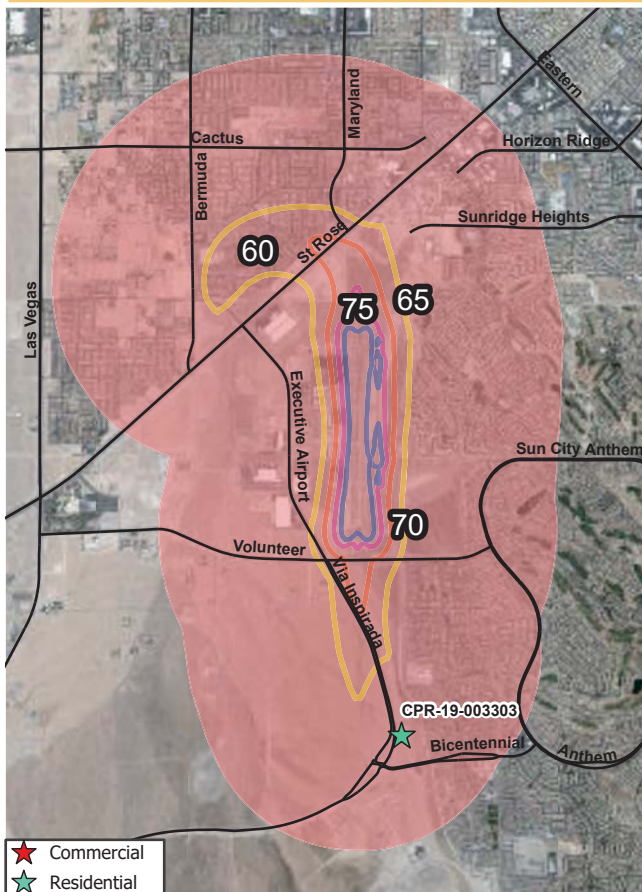


Exhibit 17: Noisy Comments - VGT Detail - June 2019

