

MEMORANDUM

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Director

DEPARTMENT OF AVIATION

TO: DISTRIBUTION Digitally signed by George C. Sims

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

SUBJECT: JULY THROUGH SEPTEMBER 2019 NOISE COMPLAINT NOISE COMPLAINT AND
LAND USE REVIEW REPORTS

DATE: OCTOBER 24, 2019

Attached for your review are the Clark County Department of Aviation's (CCDOA) Monthly Noise Complaint and Land Use Review Reports for July through September 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**. Totals for helicopter operations along the Strip include tour operations originating from other airport facilities. **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

July 2019: 65 total complaints - a 16% decrease from 2018 and a 171% increase from 2017. On average, each caller (or household) issued 7.2 calls. The most calls received from one household totaled 54.

Calls by Community - (Exhibits 1 and 3)

Majority (more than 50%): The **Spring Valley** community issued 58 calls (89%). 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%): (Not applicable.)

Repeat Caller Impact: One household issued 83% of the total calls.

Calls by Operation - (Exhibit 2)

LAS: 91% of the total calls were due to **LAS** fixed-wing operations.

- 83% were due to departures to the west from Runways 26L and 26R (100% from one household).

VGT: 1% of the total calls were due to **VGT** fixed-wing operations.

HND: 3% of the total calls were due to **HND** fixed-wing operations.

Helos: 5% of the total calls were due to **helicopter** operations.

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

Overall: 524 daily *departures* – a 2% increase from 2018 and 3% increase from 2017.

- 68% of departures were to the west, 27% east, 4% south, and 1% north.

518 daily *arrivals* – a 2% increase from 2018 and 3% increase from 2017.

- 66% of arrivals were from the east, 22% north, 12% west, and 1% south.

Daytime: 402 daily *departures* – a 1% decrease from 2018 and 1% decrease from 2017.

- 62% of departures were to the west, 33% east, and 5% south.

428 daily *arrivals* – a 2% increase from 2018 and a 2% increase from 2017.

- 62% of arrivals were from the east, 24% north, and 14% west.

Nighttime: 122 daily *departures* – a 12% increase from 2018 and 20% increase from 2017.
▪ 90% of departures were to the west, 4% east, 3% north, and 3% south.
90 daily *arrivals* – a 2% decrease from 2018 and an 8% increase from 2017.
▪ 85% of arrivals were from the east, 12% north, 2% west, and 2% south.

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: 93 daily *departures* – a 6% increase from 2018 and 9% increase from 2017.
▪ 59% of departures were to the south, 33% east, 7% west, and 1% north.
91 daily *arrivals* – a 7% increase from 2018 and 10% increase from 2017.
▪ 76% of arrivals were from the north, 18% west, 5% east, and 1% south.

Daytime: 83 daily *departures* – a 5% increase from 2018 and 10% increase from 2017.
▪ 57% of departures were to the south, 37% east, 6% west, and 1% north.
83 daily *arrivals* – a 6% increase from 2018 and a 10% increase from 2017.
▪ 75% of arrivals were from the north, 19% west, 5% east, and 1% south.

Nighttime: 10 daily *departures* – a 13% increase from 2018 and 5% increase from 2017.
▪ 76% of departures were to the south, 16% west, 5% north, and 3% east.
7 daily *arrivals* – a 12% increase from 2018 and a 9% increase from 2017.
▪ 91% of arrivals were from the north, 4% east, 3% south, and 2% west.

Daytime vs. Nighttime: Approximately 89% of all *departures* and 92% of all *arrivals* occurred during the daytime hours.

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

Tropicana: 80 daily *departures* - a 16% decrease from 2018 and 27% decrease from 2017.

Charleston: 79 daily *arrivals* - a 9% decrease from 2018 and a 27% decrease from 2017.

Strip: 89 daily *touch and go's* - a 29% increase from 2018 and a 6% increase 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 4% 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 63% 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 2% of the daily traffic.

Helos: *Touring helicopters* accounted for 22% 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, 69% departed to the *west* (from LAS's primary departure runways). This figure was 51% in 2018 and 60% in 2017.

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

Alternate 1: In 2019, 1% departed to the *north* (from LAS's alternate departure runways). This figure was 2% in 2018 and 3% in 2017.

Alternate 2: In 2019, 26% departed to the *east* (from LAS's alternate departure runways). This figure was 44% in 2018 and 35% 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 96% 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 97% 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, 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 99% in 2018 and 98% 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, 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 92% in 2018 and 88% 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, 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 98% in 2018 and 97% 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, 91% 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 72% in 2018 and 85% 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 97% in 2017.

The Eastern Ave. “compliance gate” is located at Tropicana Ave. and Eastern Ave, approximately 2 miles due west of the 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 98% 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 89% in 2018 and 98% 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: 154 applications were reviewed, with 13 applications (8%) issued at least one comment.

Henderson: 48 applications were reviewed, with 2 applications (4%) issued at least one comment.

Las Vegas: 107 applications were reviewed, with 2 applications (2%) issued at least one comment.

North Las Vegas: 15 applications were reviewed, with 0 applications issued at least one comment.

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

Clark County: 16 comments were issued, with 9 comments issued for “noise” concerns.

Henderson: 3 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 comments were issued.

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

Clark County: 524 dwelling units were proposed in the commented applications, within the AEOD, 566 dwelling units were proposed in the commented applications, just outside the AEOD.

Henderson: 530 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 issued.

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

Clark County: 1 application received a denial recommendation from CCDOA. 1 application was opposed in person.

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 east), fleet mix, and gate compliance.

August 2019: 35 total complaints - a 96% decrease from 2018 and an 8% decrease from 2017. On average, each caller (or household) issued 5.8 calls. The most calls received from one household totaled 28.

Calls by Community - (Exhibits 1 and 3)

Majority (more than 50%): The **Spring Valley** community issued 30 calls (86%). (See July 2019 synopsis of typical aircraft overflight impacts on this community.)

Minority (between 10% and 50%): (Not applicable.)

Repeat Caller Impact: One household issued 80% of the total calls.

Calls by Operation - (Exhibit 2)

- LAS:** 94% of the total calls were due to **LAS** fixed-wing operations.
- 86% were due to departures to the west from Runways 26L and 26R (93% from one household).
- 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** - (Exhibit 4)

- Overall:** 530 daily *departures* – a 3% increase from 2018 and 4% increase from 2017.
- 66% of departures were to the west, 31% east, 3% south, and 1% north.
- 525 daily *arrivals* – a 2% increase from 2018 and 4% increase from 2017.
- 63% of arrivals were from the east, 23% north, 14% west, and 1% south.
- Daytime:** 420 daily *departures* – a 1% increase from 2018 and 3% increase from 2017.
- 58% of departures were to the west, 38% east, 3% south, and 1% north.
- 445 daily *arrivals* – a 2% increase from 2018 and a 4% increase from 2017.
- 58% of arrivals were from the east, 25% north, 16% west, and 1% south.
- Nighttime:** 109 daily *departures* – a 10% increase from 2018 and 10% increase from 2017.
- 96% of departures were to the west, 3% south, and 1% east.
- 80 daily *arrivals* – a 2% increase from 2018 and a 3% increase from 2017.
- 90% of arrivals were from the east, and 9% north.
- Daytime vs. Nighttime:** Approximately 79% 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:** 91 daily *departures* – a 5% increase from 2018 and 1% decrease from 2017.
- 55% of departures were to the south, 37% east, 6% west, and 1% north.
- 90 daily *arrivals* – a 6% increase from 2018 and 1% increase from 2017.
- 75% of arrivals were from the north, 20% west, 4% east, and 1% south.
- Daytime:** 82 daily *departures* – a 6% increase from 2018 and no change from 2017.
- 53% of departures were to the south, 42% east, 5% west, and 1% north.
- 82 daily *arrivals* – a 5% increase from 2018 and no change from 2017.
- 73% of arrivals were from the north, 22% west, and 5% east.
- Nighttime:** 9 daily *departures* – no change from 2018 and 15% decrease from 2017.
- 81% of departures were to the south, 16% west, 2% north, and 1% east.
- 8 daily *arrivals* – a 21% increase from 2018 and a 23% increase from 2017.
- 93% of arrivals were from the north, 4% east, 3% south, and 1% west.
- Daytime vs. Nighttime:** Approximately 90% of all *departures* and 91% of all *arrivals* occurred during the daytime hours.

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

Tropicana: 79 daily *departures* – a 17% decrease from 2018 and a 30% decrease from 2017.

Charleston: 78 daily *arrivals* - a 7% decrease from 2018 and a 31% decrease from 2017.

Strip: 92 daily *touch and go's* - an 18% increase from 2018 and a 15% increase from 2017.

Daytime vs. Nighttime: Approximately 86% 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 4% 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 63% 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 less than 0% of the daily traffic.

Non-Jet: **Piston-driven** aircraft and unassigned aircraft types accounted for 2% of the daily traffic.

Helos: **Touring helicopters** accounted for 22% 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, 66% departed to the **west** (from LAS's primary departure runways). This figure was 76% in 2018 and 60% in 2017.

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

Alternate 1: In 2019, 1% departed to the **north** (from LAS's alternate departure runways). This figure was <1% in 2018 and 7% in 2017.

Alternate 2: In 2019, 31% departed to the **east** (from LAS's alternate departure runways). This figure was 21% in 2018 and 30% 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. (See July 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 97% in 2018 and 95% in 2017. (See July 2019 synopsis for specific location of the Peace gate.)
- Pebble:** In 2019, 98% 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 98% in 2018 and 98% in 2017. (See July 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 89% in 2018 and 91% in 2017. (See July 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 98% in 2018 and 98% in 2017. (See July 2019 synopsis for specific location of the Boulder Hwy. gate.)
- Hualapai:** In 2019, 94% 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 91% in 2018 and 79% in 2017. (See July 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 97% in 2018 and 98% in 2017. (See July 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 98% in 2018 and 97% in 2017. (See July 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 July 2019 synopsis for specific location of the Stratosphere gate.)

Land Use Application Reviews & Comments – (Exhibit 10)

Clark County: 151 applications were reviewed, with 14 applications (9%) issued at least one comment.

Henderson: 58 applications were reviewed, with 4 applications (7%) issued at least one comment.

Las Vegas: 73 applications were reviewed, with 1 applications (1%) issued at least one comment.

North Las Vegas: 19 applications were reviewed, with 0 applications issued at least one comments.

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

Clark County: 16 comments were issued, with 9 comments issued for “noise” concerns.

Henderson: 5 comments were issued, with 2 comments issued for “noise” concerns.

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

North Las Vegas: 0 comments were issued.

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

Clark County: 1 dwelling units was proposed in the commented applications, within the AEOD. 347 dwelling units were proposed in the commented applications, just outside the AEOD.

Henderson: 396 dwelling units were proposed in the commented applications, just outside the AEOD.

Las Vegas: 0 dwelling units were proposed in the commented applications, within the AEOD and just outside the AEOD.

North Las Vegas: 0 comments were issued.

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

Clark County: 1 application was opposed in person.

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 east), fleet mix, and gate compliance.

September 2019: 36 total complaints – an 82% decrease from 2018 and a 53% decrease from 2017. On average, each caller (or household) issued 2.1 calls. The most calls received from one household totaled 9.

Calls by Community - (Exhibits 1 and 3)

Majority (more than 50%): (Not applicable.)

Minority (between 10% and 50%): The **Spring Valley** community issued 13 calls (36%). (See July 2019 synopsis of typical aircraft overflight impacts on this community.)

The **Enterprise** community issued 11 calls (30%). This community is typically impacted by aircraft departing to the south (from Runway 19L and Runway 19R).

The **City of Henderson** community issued 5 calls (14%). This community is typically impacted by aircraft departing to the east (from Runway 08R and Runway 08L), and helicopter tour operations operating from HND.

The **Paradise and Winchester** communities issued 5 calls (14%). 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).

Repeat Caller Impact: One household issued 25% of the total calls.

Calls by Operation - (Exhibit 2)

- LAS:** 83% of the total calls were due to **LAS** fixed-wing operations.
- 47% were due to departures to the north from Runways 01L and 01R.
 - 28% were due to departures to the west from Runways 26L and 26R (90% from one household).
- VGT:** 0% of the total calls received were due to **VGT** fixed-wing operations (92% from one household).
- HND:** 6% of the total calls received were due to **HND** fixed-wing operations.
- Helis:** 11% of the total calls received were due to **helicopter** operations.

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

- Overall:** 535 daily *departures* – a 5% increase from 2018 and 7% increase from 2017.
- 75% of departures were to the west, 11% north, 8% east, and 6% south.
- 529 daily *arrivals* – a 4% increase from 2018 and 6% increase from 2017.
- 80% of arrivals were from the east, 10% north, 6% south, and 3% west.
- Daytime:** 439 daily *departures* – a 3% increase from 2018 and 5% increase from 2017.
- 72% of departures were to the west, 13% north, 9% east, and 7% south.
- 460 daily *arrivals* – a 4% increase from 2018 and 6% increase from 2017.
- 80% of arrivals were from the east, 10% north, 7% south, and 3% west.

Nighttime: 96 daily *departures* – a 16% increase from 2018 and 15% increase from 2017.
▪ 89% of departures were to the west, 4% north, 4% south, and 3% east.
68 daily *arrivals* – a 5% increase from 2018 and 6% increase from 2017.
▪ 85% of arrivals were from the east, 11% north, 2% south, and 1% west.

Daytime vs. Nighttime: Approximately 82% of all *departures* and 87% of all *arrivals* occurred during the daytime hours.

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

Overall: 116 daily *departures* – a 12% increase from 2018 and a 16% increase from 2017.
▪ 73% of departures were to the south, 13% north, 8% east, and 6% west.
112 daily *arrivals* – a 10% increase from 2018 and a 14% increase from 2017.
▪ 71% of arrivals were from the north, 13% south, 12% east, and 4% west.

Daytime: 106 daily *departures* – a 14% increase from 2018 and 17% increase from 2017.
▪ 72% of departures were to the south, 14% north, 8% east, and 5% west.
106 daily *arrivals* – an 11% increase from 2018 and a 15% increase from 2017.
▪ 70% of arrivals were from the north, 13% south, 13% east, and 4% west.

Nighttime: 10 daily *departures* – an 8% decrease from 2018 and 2% increase from 2017.
▪ 85% of departures were to the south, 9% west, 4% east, and 3% north.
7 daily *arrivals* – a 1% decrease from 2018 and 5% decrease from 2017.
▪ 69% of arrivals were from the north, 19% south, 11% east, and 2% west.

Daytime vs. Nighttime: Approximately 91% of all *departures* and 94% of all *arrivals* occurred during the daytime hours.

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

Tropicana: 77 daily *departures* – an 11% decrease from 2018 and a 34% decrease from 2017.

Charleston: 76 daily *arrivals* - a 6% decrease from 2018 and a 35% decrease from 2017.

Strip: 87 daily *touch and go's* - a 12% increase from 2018 and a 16% increase from 2017.

Daytime vs. Nighttime: Approximately 93% 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 4% 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 62% 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 8% 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 2% 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, 75% departed to the *west* (from LAS's primary departure runways). This figure was 89% in 2018 and 63% in 2017.

Secondary: In 2019, 7% departed to the *south* (from LAS's secondary departure runways). This figure was 4% in 2018 and 3% in 2017.

Alternate 1: In 2019, 11% departed to the *north* (from LAS's alternate departure runways). This figure was 2% in 2018 and 24% in 2017.

Alternate 2: In 2019, 8% departed to the *east* (from LAS's alternate departure runways). This figure was 5% in 2018 and 10% 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 96% in 2017. (See July 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 97% in 2018 and 93% in 2017. (See July 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 98% in 2018 and 98% in 2017. (See July 2019 synopsis for specific location of the Pebble gate.)

UNLV: In 2019, 93% 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 95% in 2018 and 93% in 2017. (See July 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 98% in 2017. (See July 2019 synopsis for specific location of the Boulder Hwy. gate.)

Hualapai: In 2019, 90% 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 90% in 2018 and 82% in 2017. (See July 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 97% in 2018 and 98% in 2017. (See July 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 98% in 2018 and 97% in 2017. (See July 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 100% in 2018 and 98% in 2017. (See July 2019 synopsis for specific location of the Stratosphere gate.)

Land Use Application Reviews & Comments – (Exhibit 10)

Clark County: 143 applications were reviewed, with 16 applications (11%) issued at least one comment.

Henderson: 40 applications were reviewed, with 6 application (15%) issued at least one comment.

Las Vegas: 47 applications were reviewed, with 0 applications issued at least one comment.

North Las Vegas: 19 applications were reviewed, with 1 application issued at least one comment.

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

Clark County: 18 comments were issued, with 13 comments issued for “noise” concerns.

Henderson: 7 comments were issued, with 4 comments issued for “noise” concerns.

Las Vegas: 0 comments were issued.

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

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

Clark County: 1,222 dwelling units were proposed in the commented applications, just outside the AEOD.

Henderson: 559 dwelling units were proposed in the commented applications, just outside the AEOD.

Las Vegas: 0 comments were issued.

North Las Vegas: 21 dwelling units were proposed in the commented application, just outside the AEOD.

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, flight activity, fleet mix, and gate compliance.

Other Notable Issues

Helicopter Operator Users Meeting: On September 19, 2019, DOA staff members met with FAA, Las Vegas Metropolitan Police, and local helicopter tour operators to discuss noise complaints tied to helicopter operations, route compliance, and operational growth. Operators and DOA staff discussed residential complaints tied to increased tour operations and reviewed route procedures for the new Allegiant stadium currently under construction. Additionally, the FAA and Metropolitan Police provided information associated with the increased use of drones and the impact these operations pose to safety and security.

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

October 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	James Borget (FAA ATCT/TRACON)
Karina Tarnowska	Thomas Miller (Nellis AFB)
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)	William Olivieri (Citizen)

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

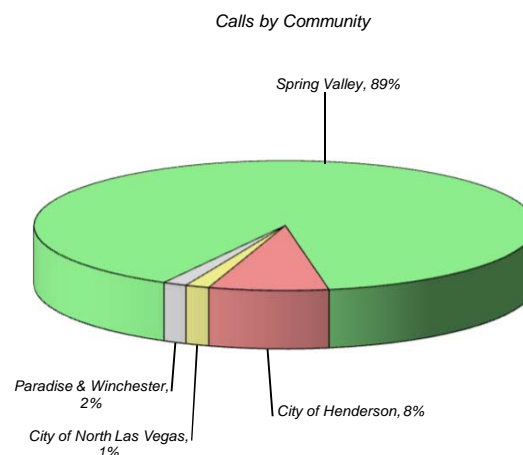
Community	No. of Calls in 2019	No. of Callers in 2019	No. of Calls in 2018	No. of Calls in 2017
City of Boulder City	5	4	3	7
City of Henderson			1	2
City of Las Vegas	1	1	1	2
City of North Las Vegas			3	2
Enterprise				
Lone Mountain				
Paradise & Winchester	1	1	4	5
Spring Valley	58	3	56	8
Summerlin South			9	
Sunrise Manor				
Whitney				
Location unknown				
Overall Total	65	9	77	24

Difference between 2019 and 2018 Total Calls: -16%

Difference between 2019 and 2017 Total Calls: 171%

Average Number of Calls per Caller: 7.2

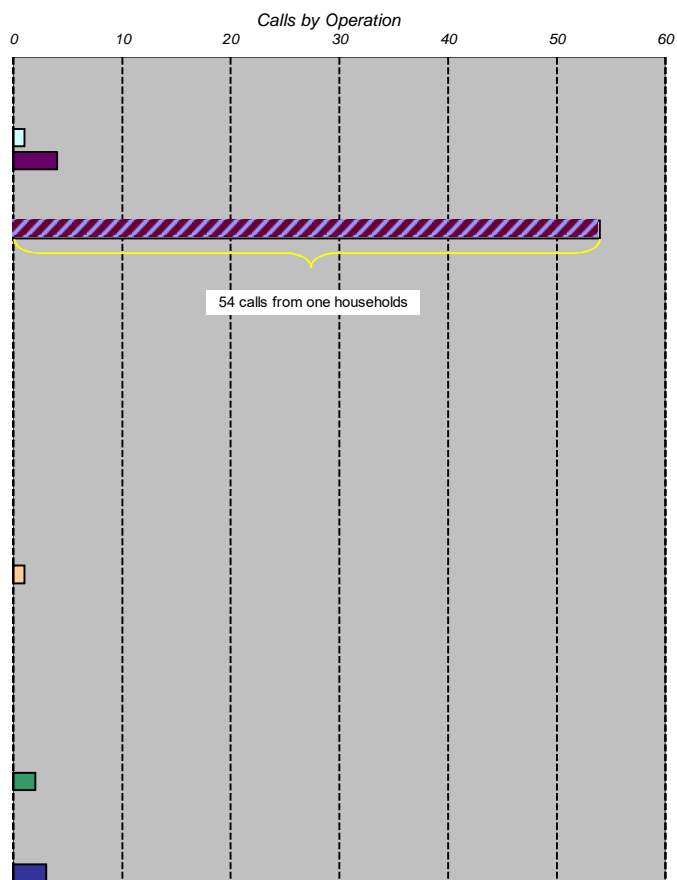
Most calls received from one household: 54



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

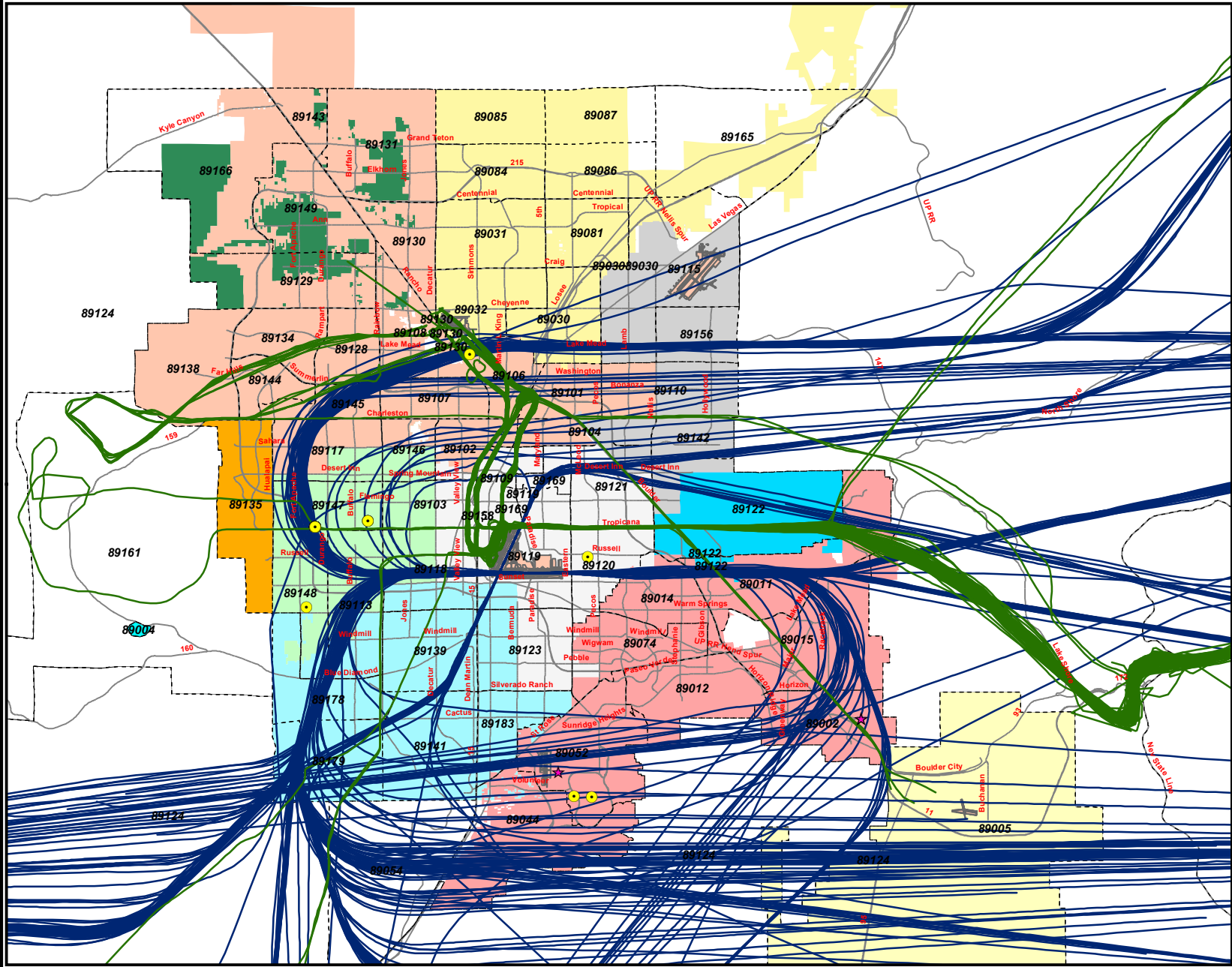
Exhibit 2: Noise Complaint Calls by Type of Operation - July 2019

Operation	No. of Calls in 2019	Percent of Overall Total	No. of Calls in 2018	No. of Calls in 2017
LAS 01R/L Arrivals			2	1
LAS 08R/L Arrivals			1	
LAS 19R/L Arrivals				
LAS 26R/L Arrivals	1	1.5%		
LAS 01R/L Departures	4	6.2%	2	3
LAS 08R/L Departures			7	2
LAS 19R/L Departures				
LAS 26R/L Departures	54	83.1%	65	9
LAS Run-ups				1
LAS GA				
LAS Other				
LAS Total	59	90.8%	77	16
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	1.5%		2
VGT Other				
VGT Total	1	1.5%	0	2
HND 17R/L Arrivals				
HND 35R/L Arrivals				
HND 17R/L Departures				
HND 35R/L Departures				
HND Run-ups				
HND GA	2	3.1%		
HND Other				
HND Total	2	3.1%	0	0
Helicopters**	3	4.6%		6
Overall Total	65	100%	77	24



** 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 - Jul 2019



Legend

Jul 2019
Total Complaints: 65

- Aircraft Complaints
Received 62
Mapped 62
- Helicopter Complaints
Received 3
Mapped 3
- 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

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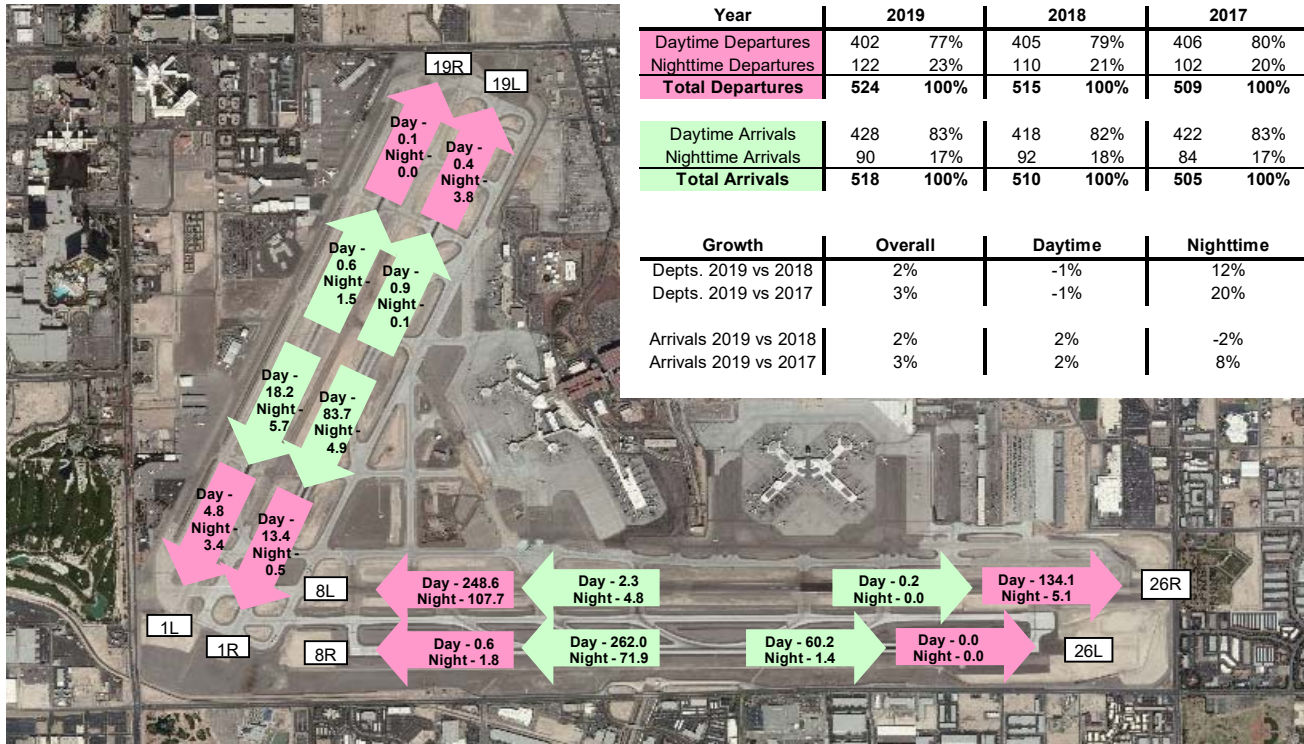
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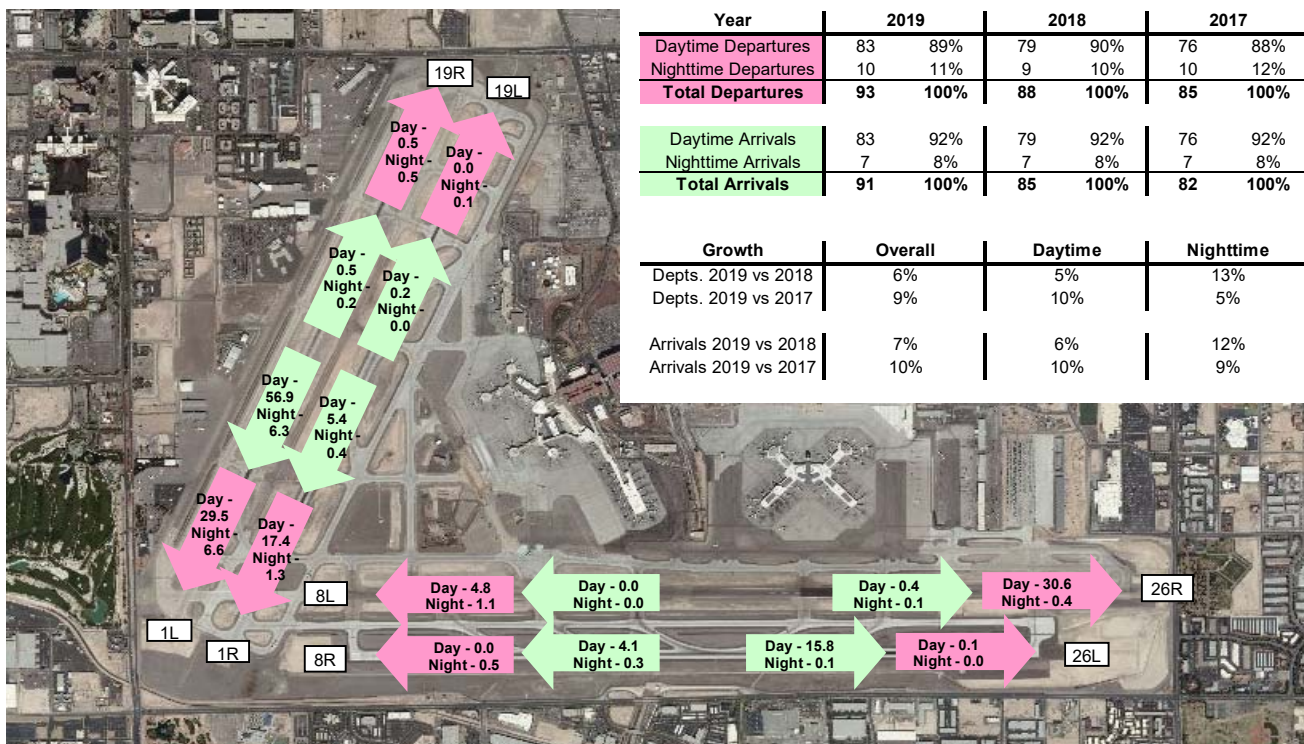
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Exhibit 4: LAS Daily Average Operations Runway for Large Air Carrier Aircraft* - July 2019



* 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** - July 2019



** 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* - July 2019

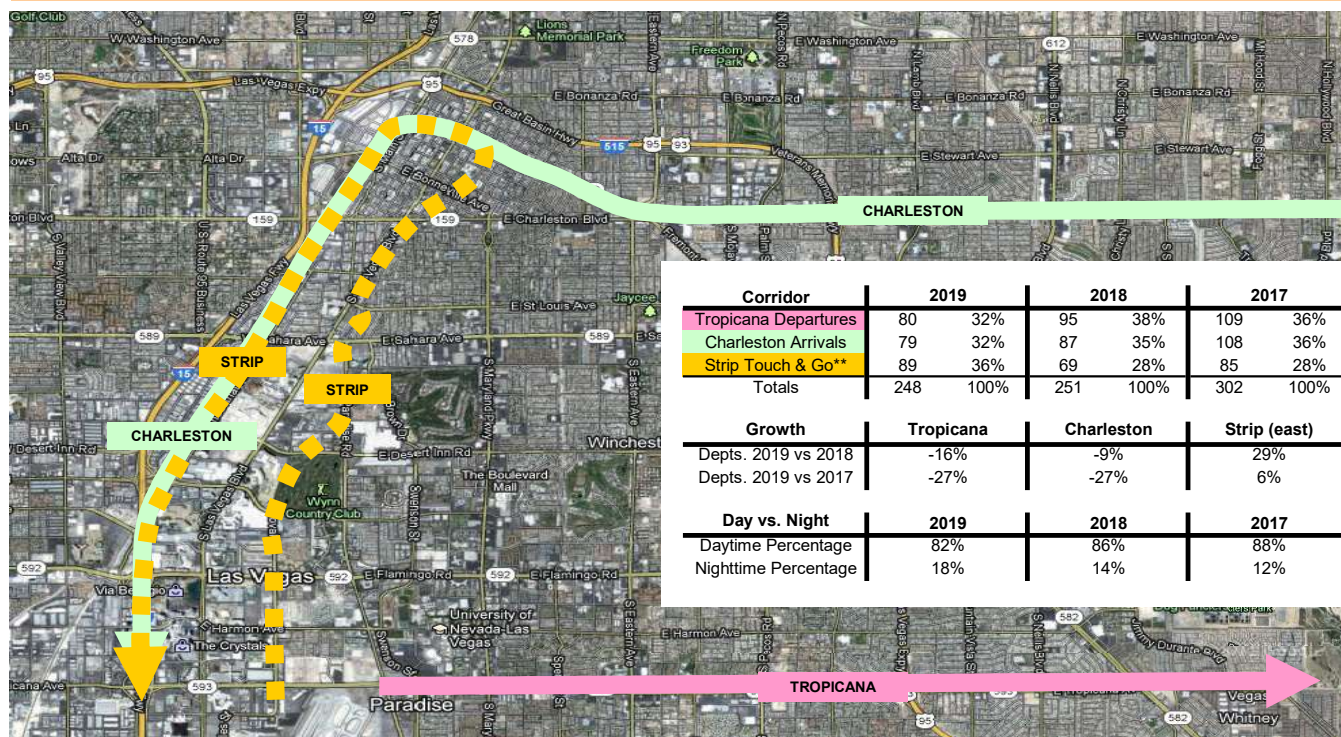
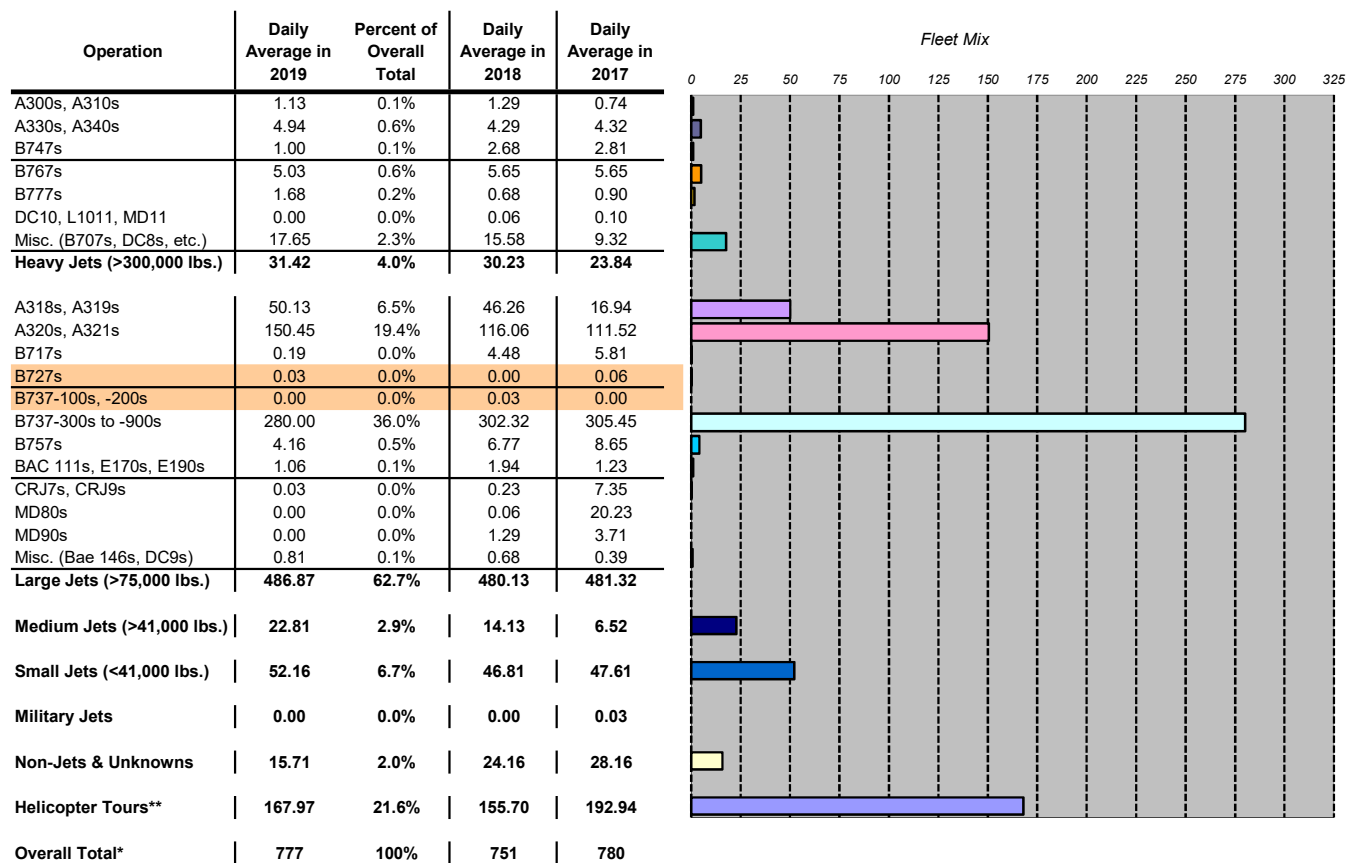


Exhibit 7: LAS Aircraft Arrival Fleet Mix** - July 2019



* 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. **Totals include tour operations from other airport facilities.

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

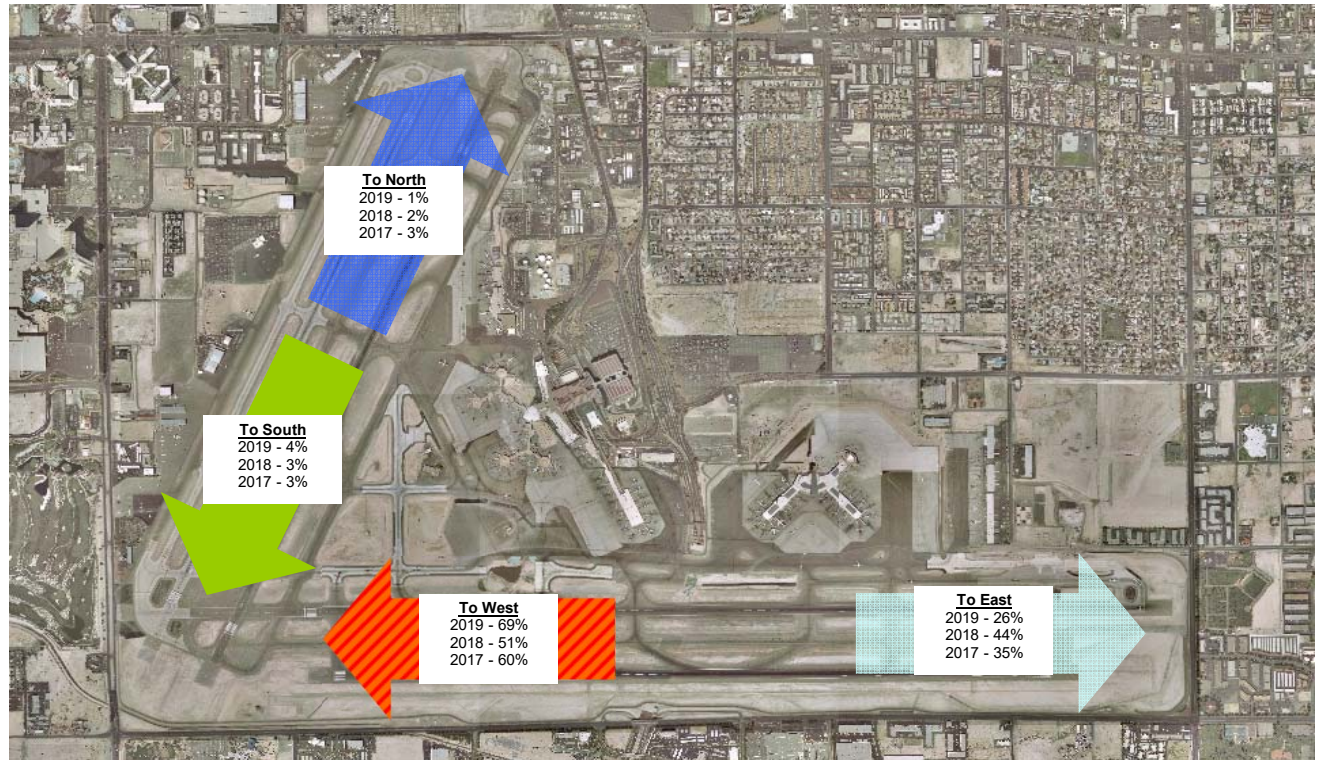
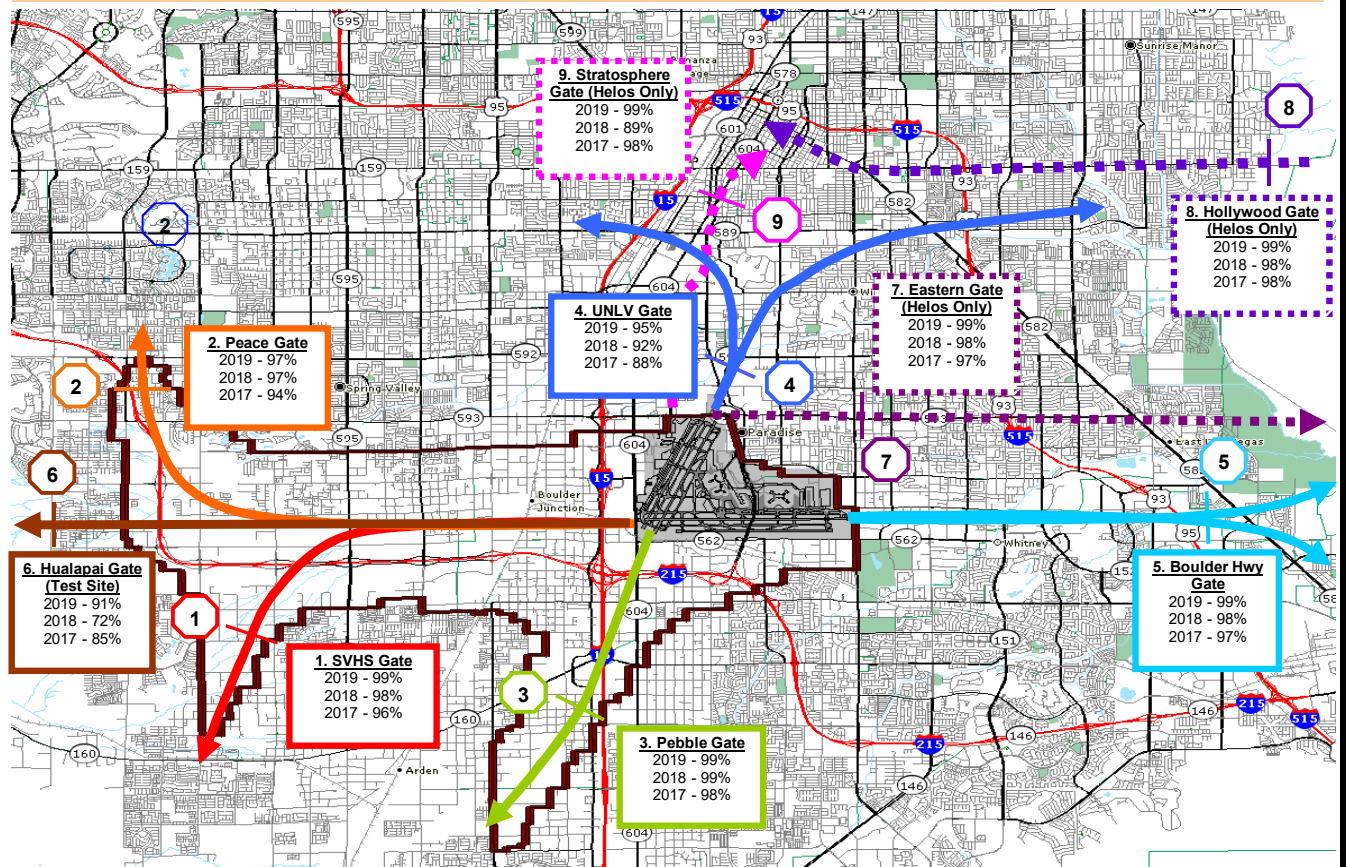


Exhibit 9: "Gate" Compliance for Large Aircraft* & Helicopter Tours - July 2019



* 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, 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 - July 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	154	48	107	15	324
No. of Applications where CCDOA Issued a Comment	13	2	2	0	17
Percent of Applications where Comment Issued	8%	4%	2%	0%	5%

Exhibit 11: Land Use Application Comments by Airport Concern - July 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'	7	2	1	0	10
Height-Penetrates Part 77 PATH-C Surfaces*	0	0	0	0	0
Helipad/Helipad	0	0	0	0	0
Noisy-Commercial within AEOD**	2	0	0	0	2
Noisy-Residential within the AEOD**	1	0	0	0	1
Noisy-Residential Just Outside the AEOD**	6	1	1	0	8
Total***	16	3	2	0	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* - July 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	524	0	0	0	524
Just Outside the AEOD	566	530	66	0	1,162

*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 - July 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	1	0	0	0	1

Exhibit 14: Airport Environs Overlay Districts & Noisy Comments - Valley Wide - July 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.

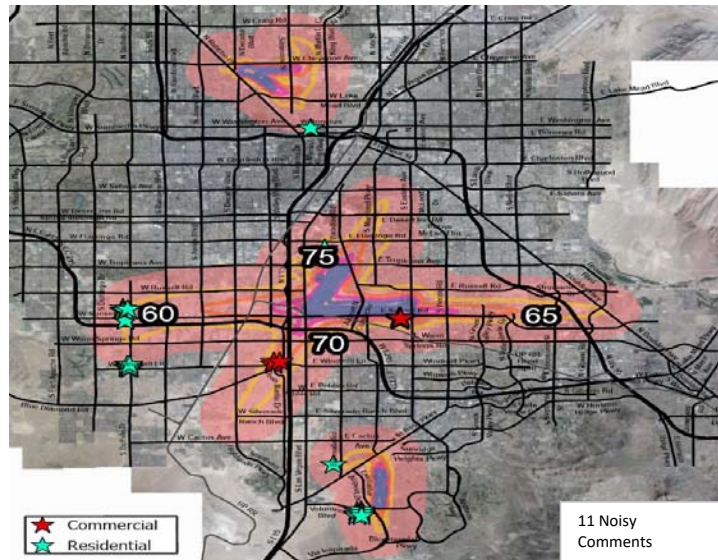


Exhibit 15: Noisy Comments - LAS Detail - July 2019

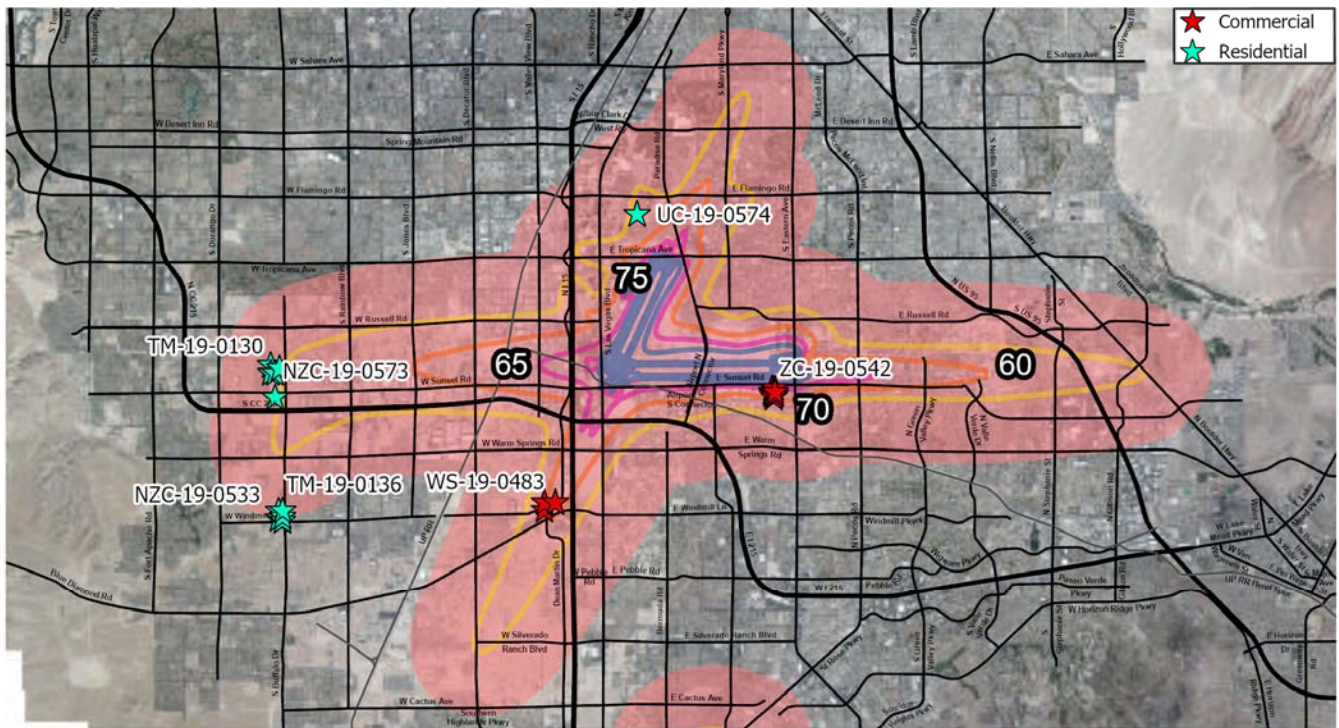


Exhibit 16: Noisy Comments - HND Detail - July 2019

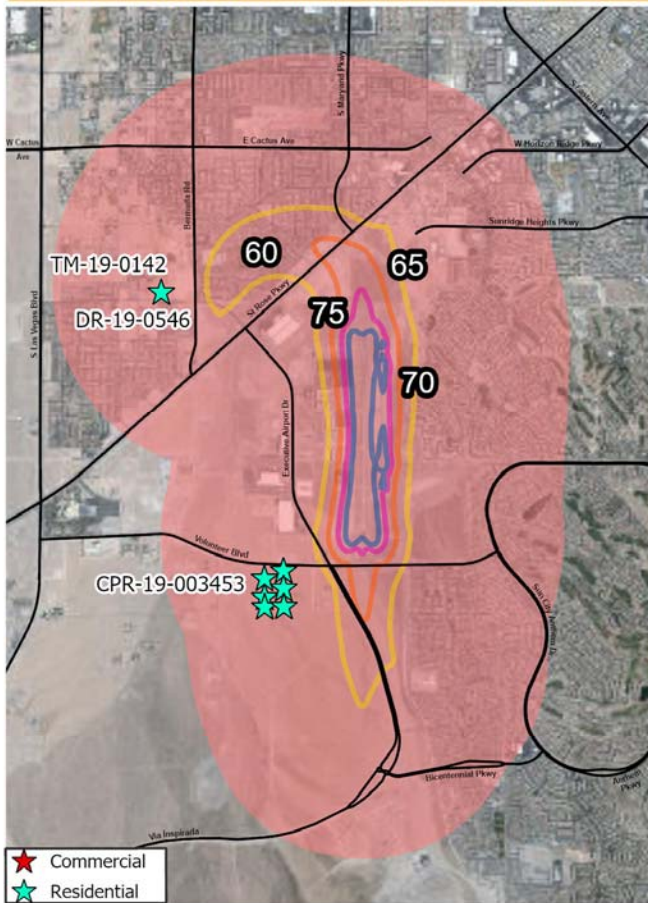


Exhibit 17: Noisy Comments - VGT Detail - July 2019

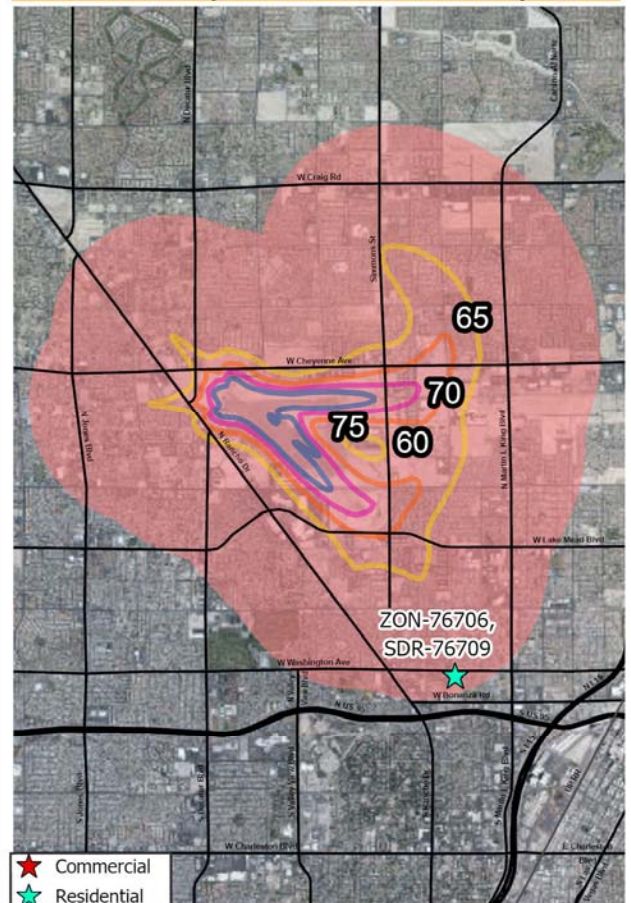


Exhibit 1: Noise Complaint Calls by Community* - August 2019

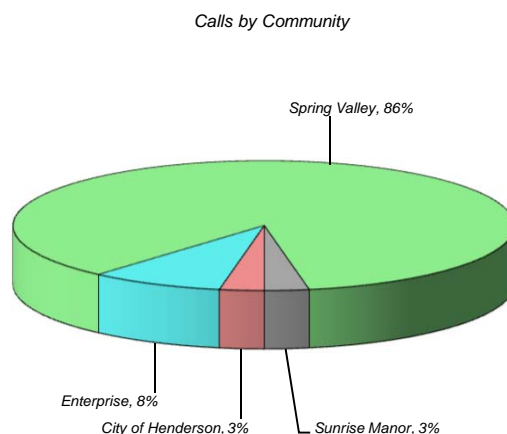
Community	No. of Calls in 2019	No. of Callers in 2019	No. of Calls in 2018	No. of Calls in 2017
City of Boulder City	1	1	2	7
City of Henderson			1	1
City of Las Vegas				
City of North Las Vegas				
Enterprise	3	1	1	3
Lone Mountain				
Paradise & Winchester			2	8
Spring Valley	30	3	62	18
Summerlin South			722	
Sunrise Manor	1	1		1
Whitney				
Location unknown				
Overall Total	35	6	790	38

Difference between 2019 and 2018 Total Calls: -96%

Difference between 2019 and 2017 Total Calls: -8%

Average Number of Calls per Caller: 5.8

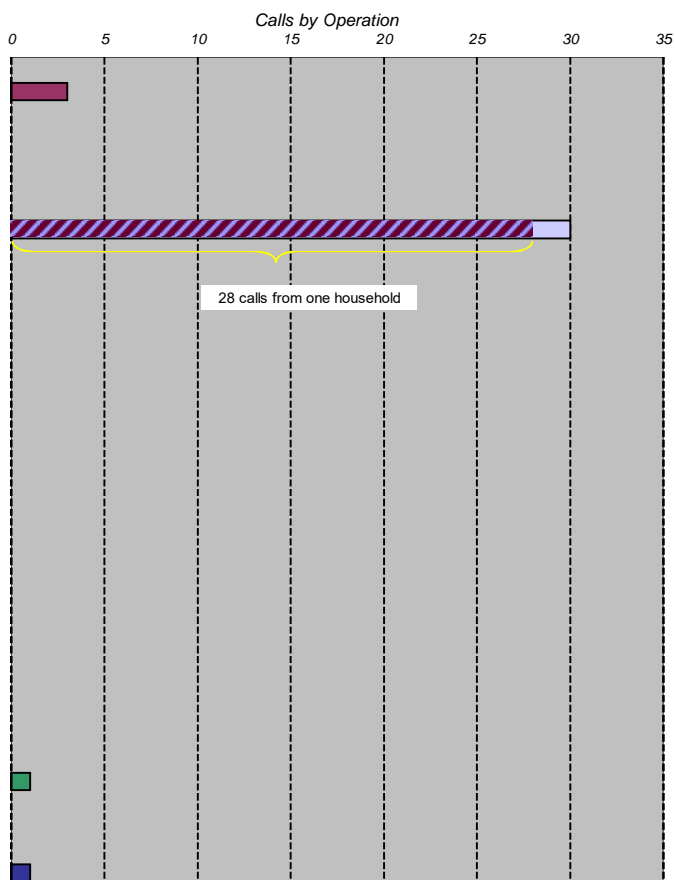
Most calls received from one household: 28



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

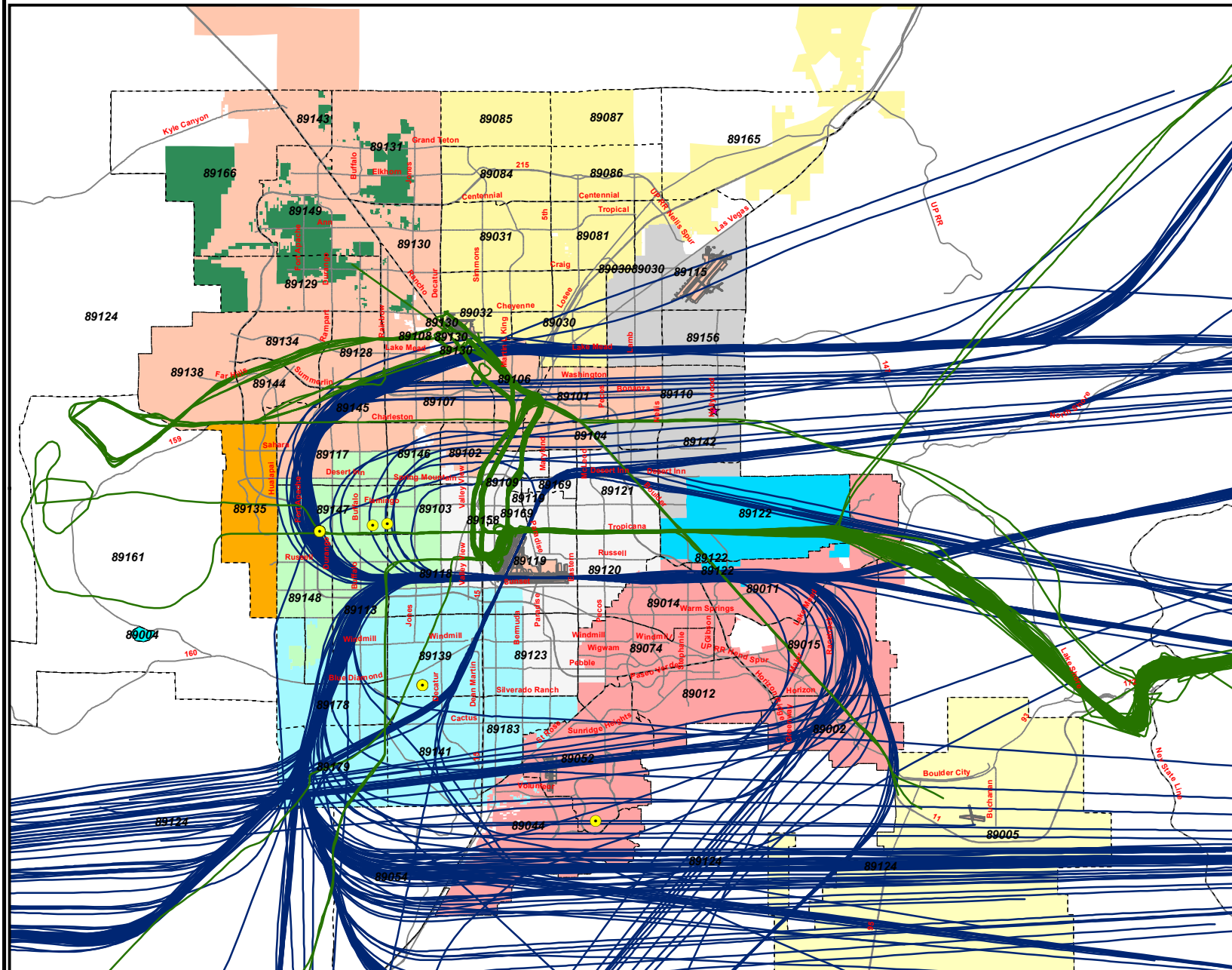
Exhibit 2: Noise Complaint Calls by Type of Operation - August 2019

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
LAS 08R/L Arrivals	3	8.6%		1
LAS 19R/L Arrivals				2
LAS 26R/L Arrivals				3
LAS 01R/L Departures			1	7
LAS 08R/L Departures				
LAS 19R/L Departures				
LAS 26R/L Departures	30	85.7%	786	20
LAS Run-ups				
LAS GA				
LAS Other				
LAS Total	33	94.3%	788	34
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	1	2.9%		4
HND Other				
HND Total	1	2.9%	0	4
Helicopters**	1	2.9%	2	
Overall Total	35	100%	790	38



** 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 - Aug 2019



Legend

Aug 2019
Total Complaints: 35

- Aircraft Complaints
Received 34
Mapped 34
- Helicopter Complaints
Received 1
Mapped 1
- 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

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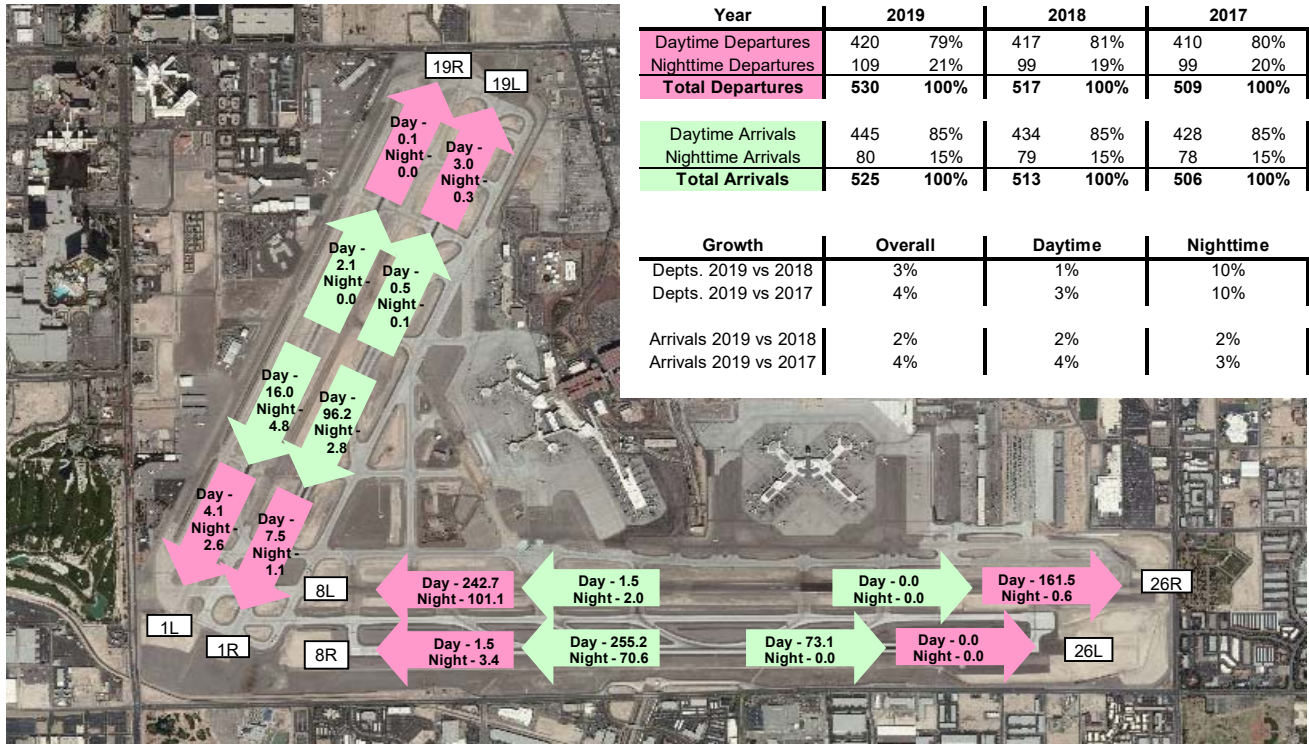
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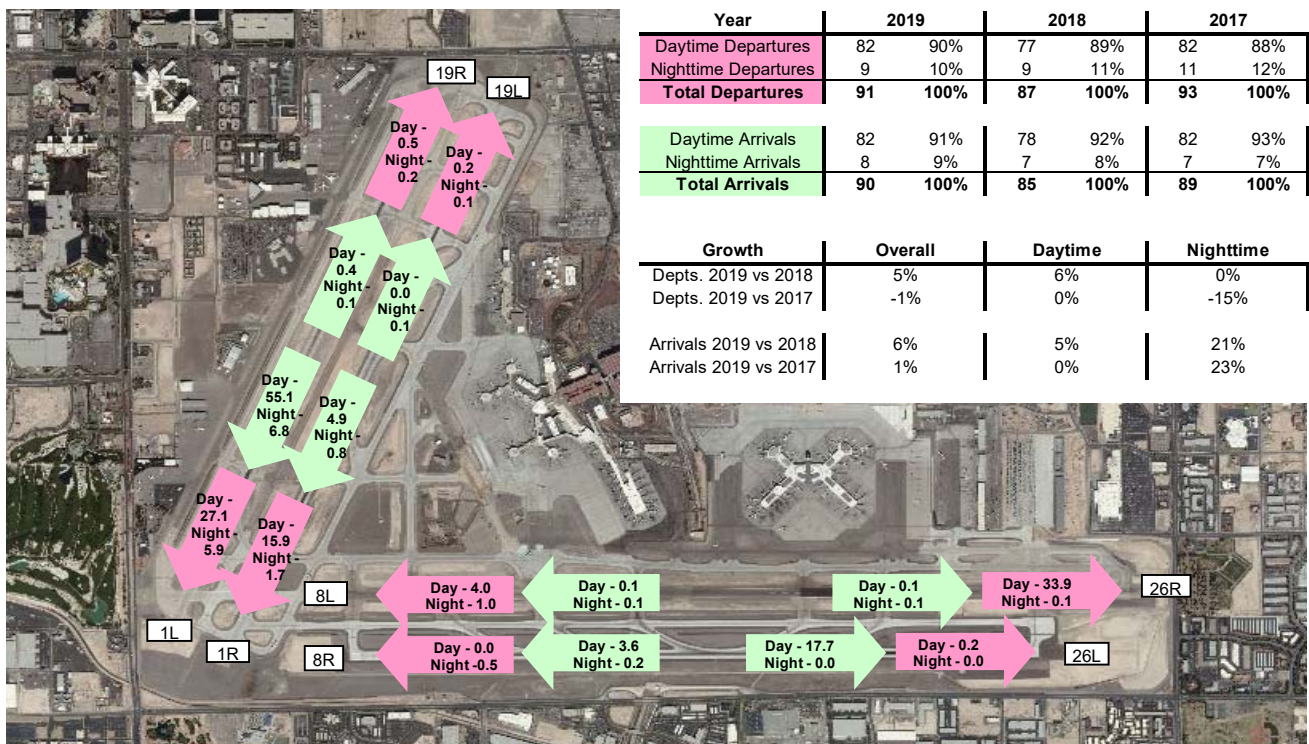
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Exhibit 4: LAS Daily Average Operations Runway for Large Air Carrier Aircraft* - August 2019



* 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** - August 2019



** 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* - August 2019

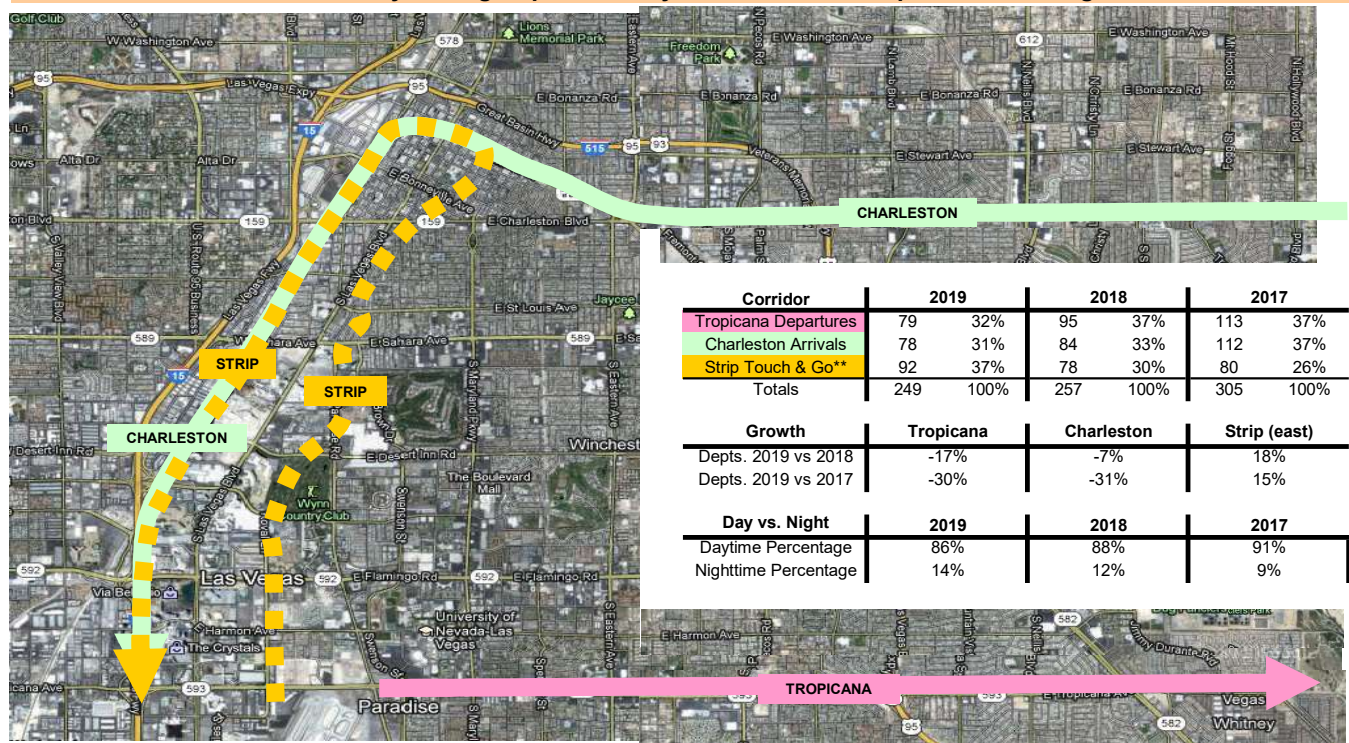
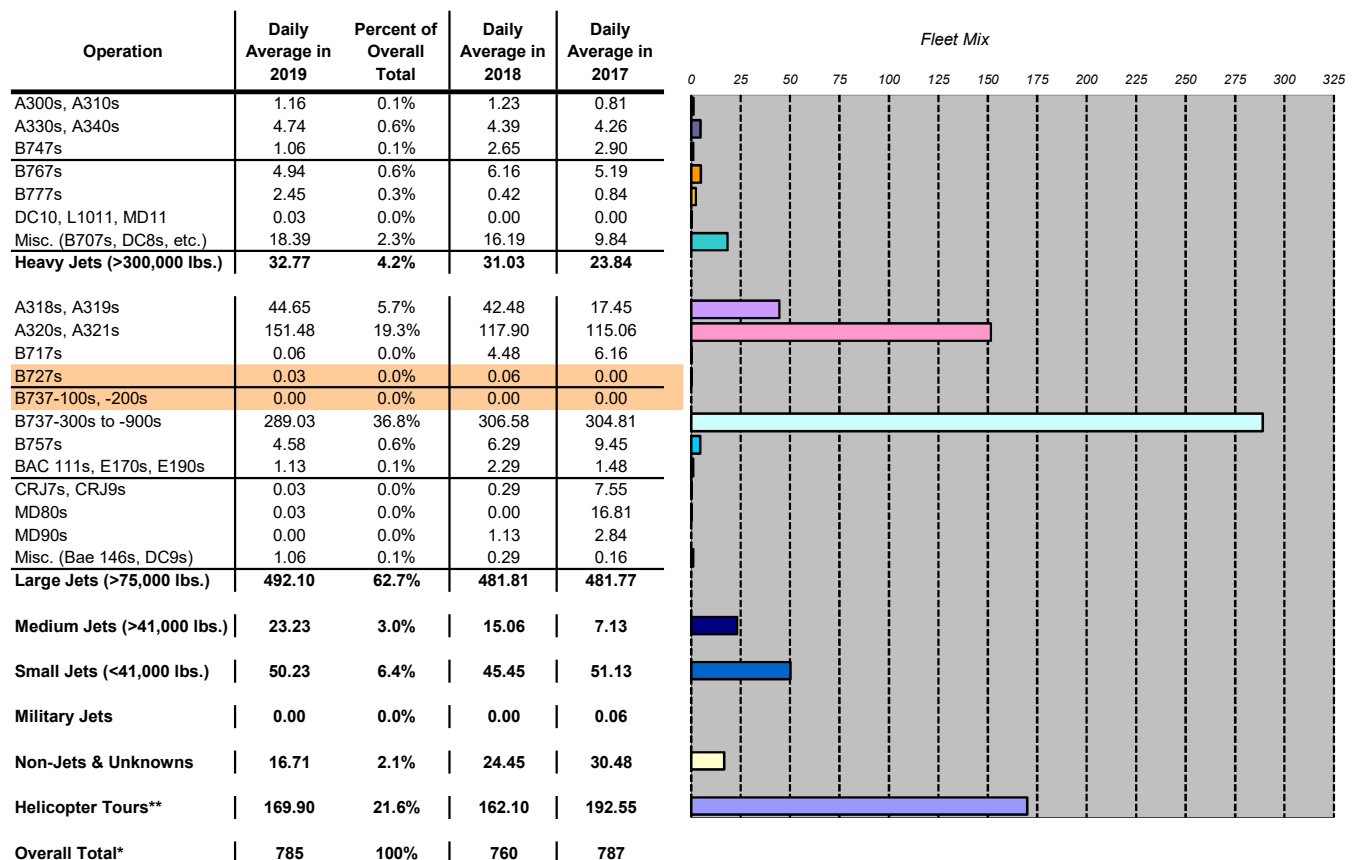


Exhibit 7: LAS Aircraft Arrival Fleet Mix** - August 2019



* 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. ** Totals include tour operations from other airport facilities.

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

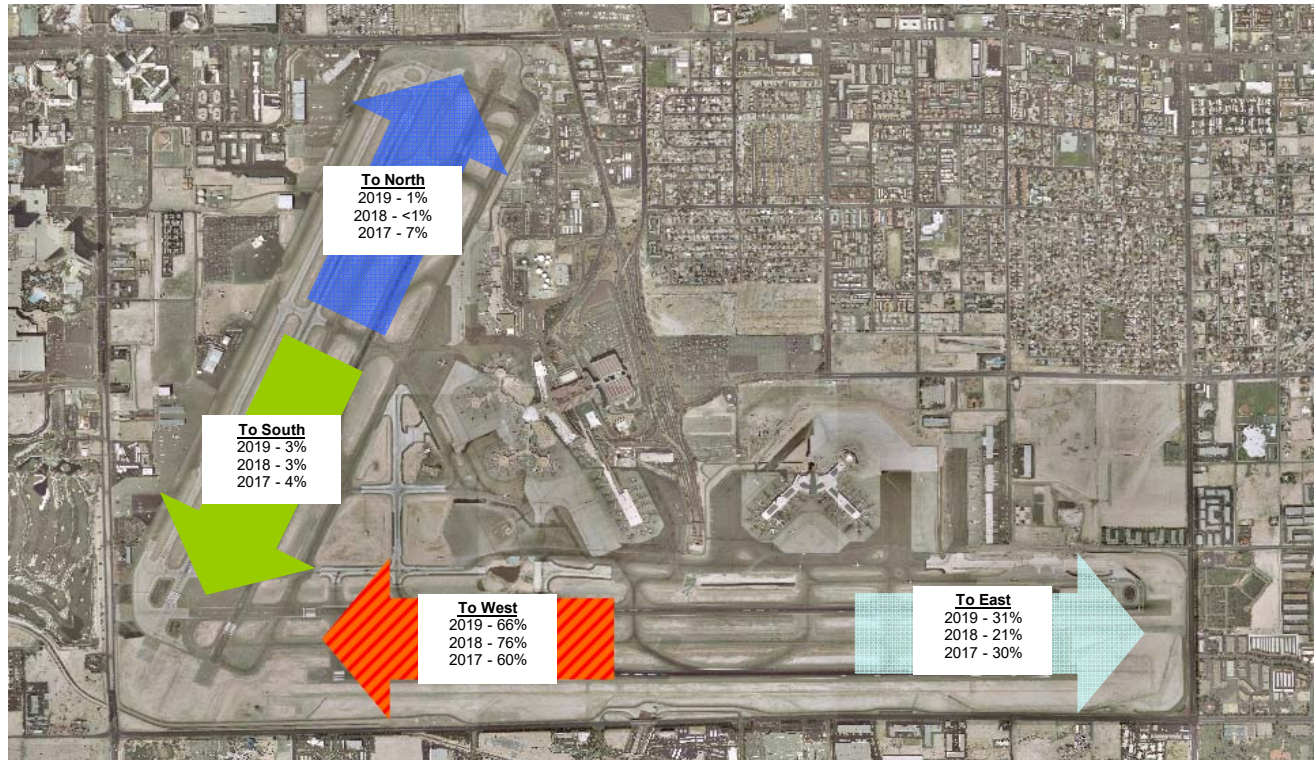
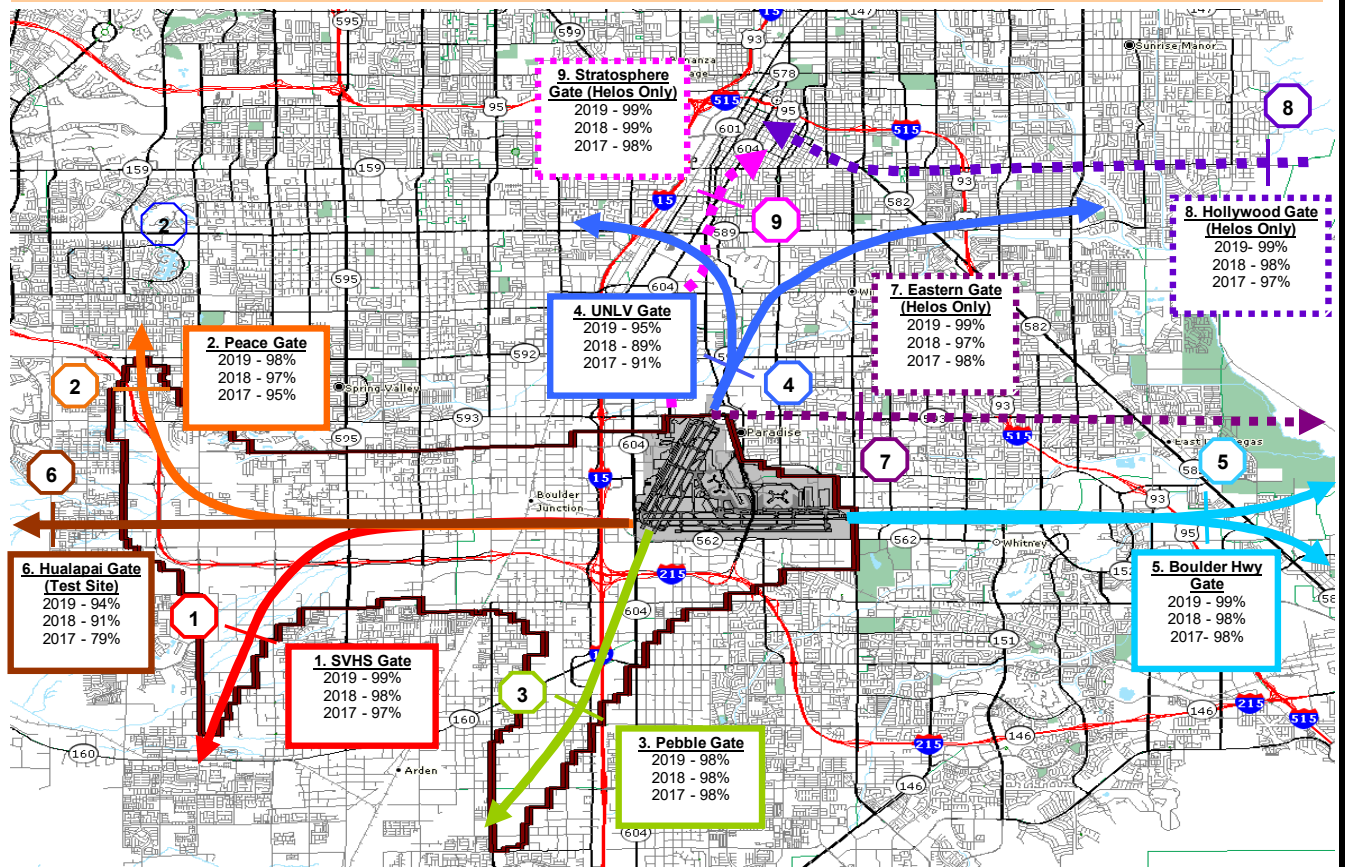


Exhibit 9: "Gate" Compliance for Large Aircraft* & Helicopter Tours - August 2019



* 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, 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 - August 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	151	58	73	19	301
No. of Applications where CCDOA Issued a Comment	14	4	1	0	19
Percent of Applications where Comment Issued	9%	7%	1%	0%	6%

Exhibit 11: Land Use Application Comments by Airport Concern - August 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'	5	3	1	0	9
Height-Penetrates Part 77 PATH-C Surfaces*	2	0	0	0	2
Helipad/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**	4	2	0	0	6
Total***	16	5	1	0	22

* 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* - August 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	1	0	0	0	1
Just Outside the AEOD	347	396	0	0	743

*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 - August 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	1	0	0	0	1

Exhibit 14: Airport Environs Overlay Districts & Noisy Comments - Valley Wide - August 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.

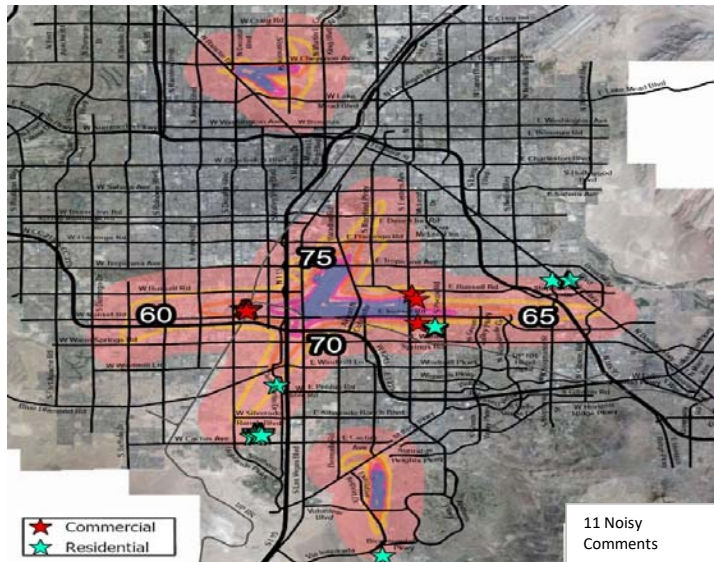


Exhibit 15: Noisy Comments - LAS Detail - August 2019

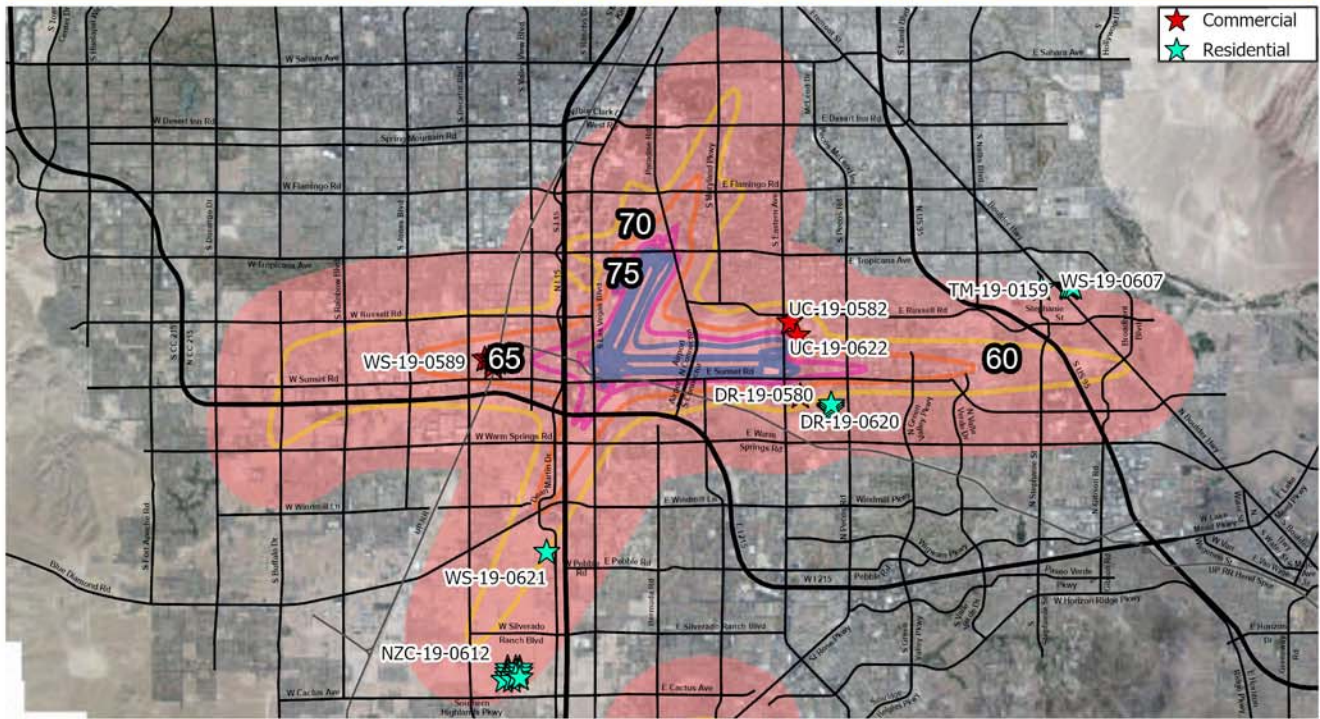


Exhibit 16: Noisy Comments - HND Detail - August 2019

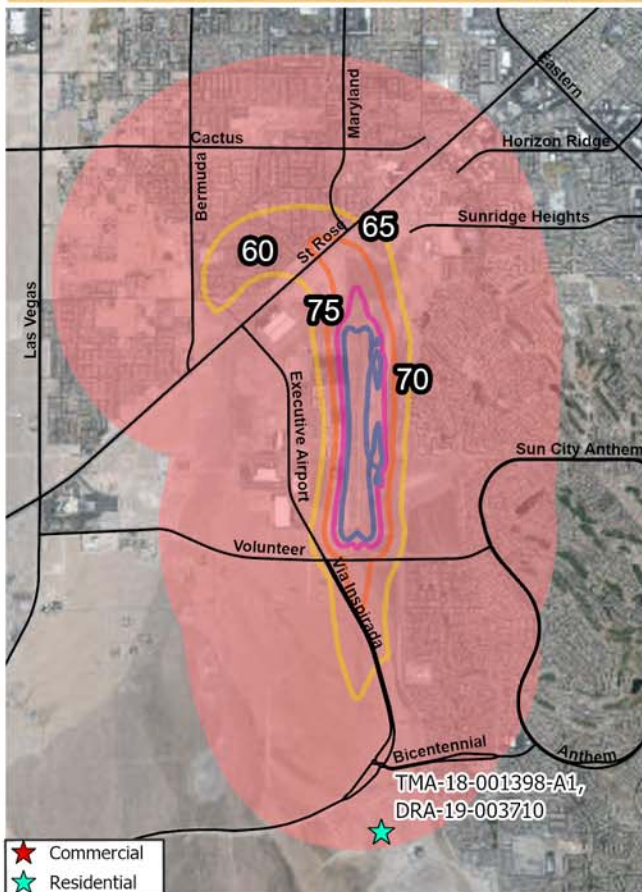


Exhibit 17: Noisy Comments - VGT Detail - August 2019

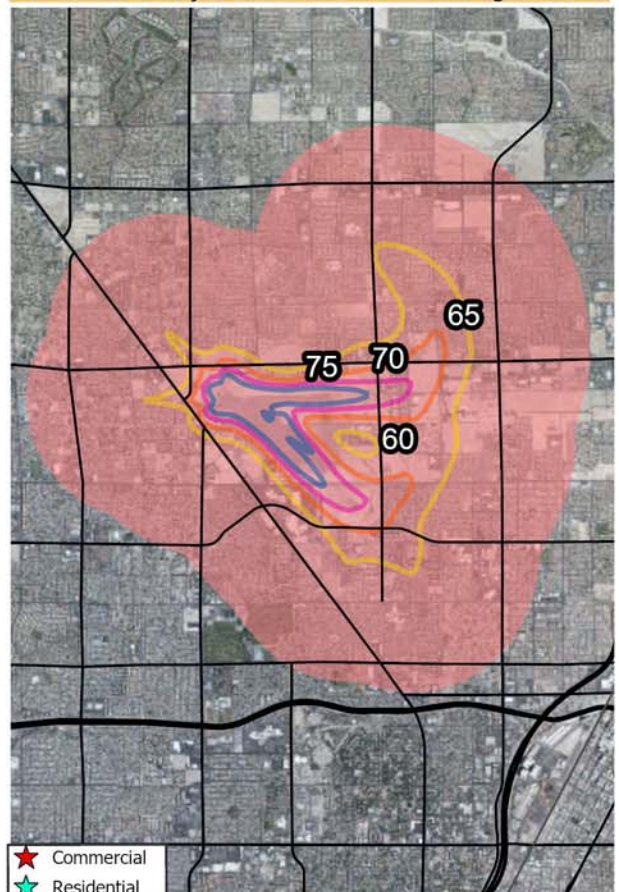


Exhibit 1: Noise Complaint Calls by Community* - September 2019

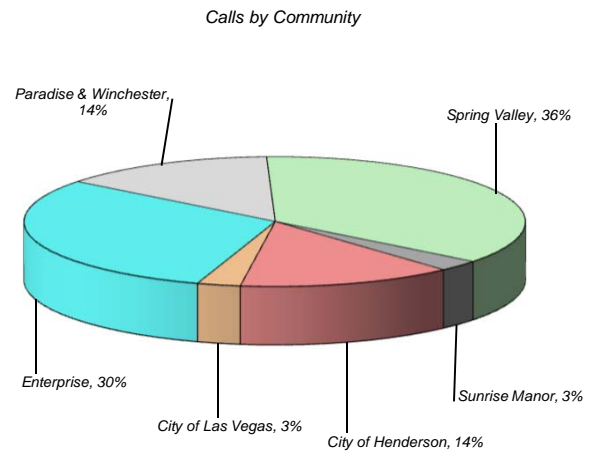
Community	No. of Calls in 2019	No. of Callers in 2019	No. of Calls in 2018	No. of Calls in 2017
City of Boulder City	5	5	4	4
City of Henderson	1	1		3
City of Las Vegas				
City of North Las Vegas				
Enterprise	11	3	4	4
Lone Mountain				
Paradise & Winchester	5	4	7	26
Spring Valley	13	3	53	39
Summerlin South			134	1
Sunrise Manor	1	1		
Whitney				
Location unknown				
Overall Total	36	17	202	77

Difference between 2019 and 2018 Total Calls: -82%

Difference between 2019 and 2017 Total Calls: -53%

Average Number of Calls per Caller: 2.1

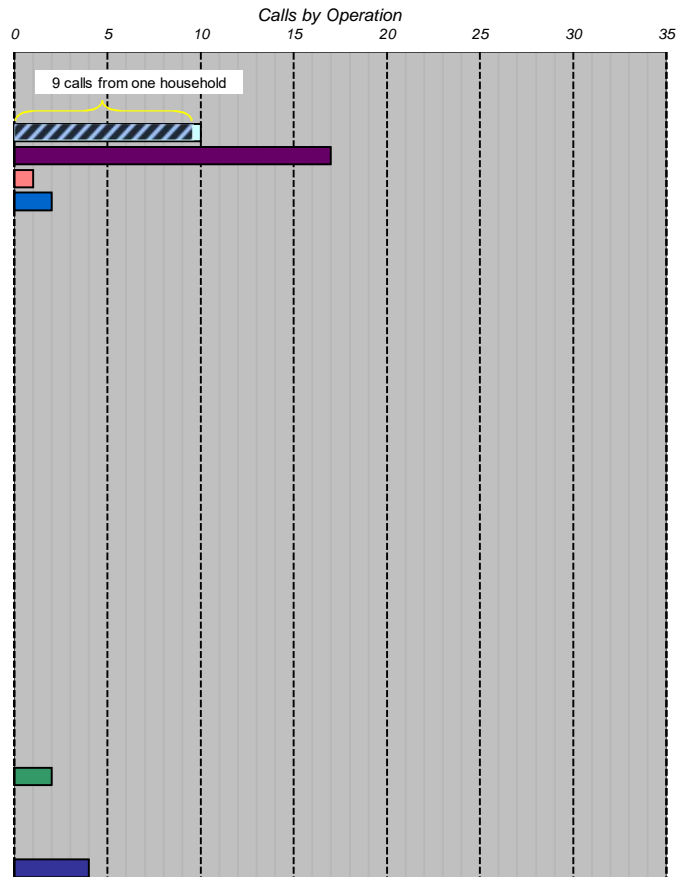
Most calls received from one household: 9



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

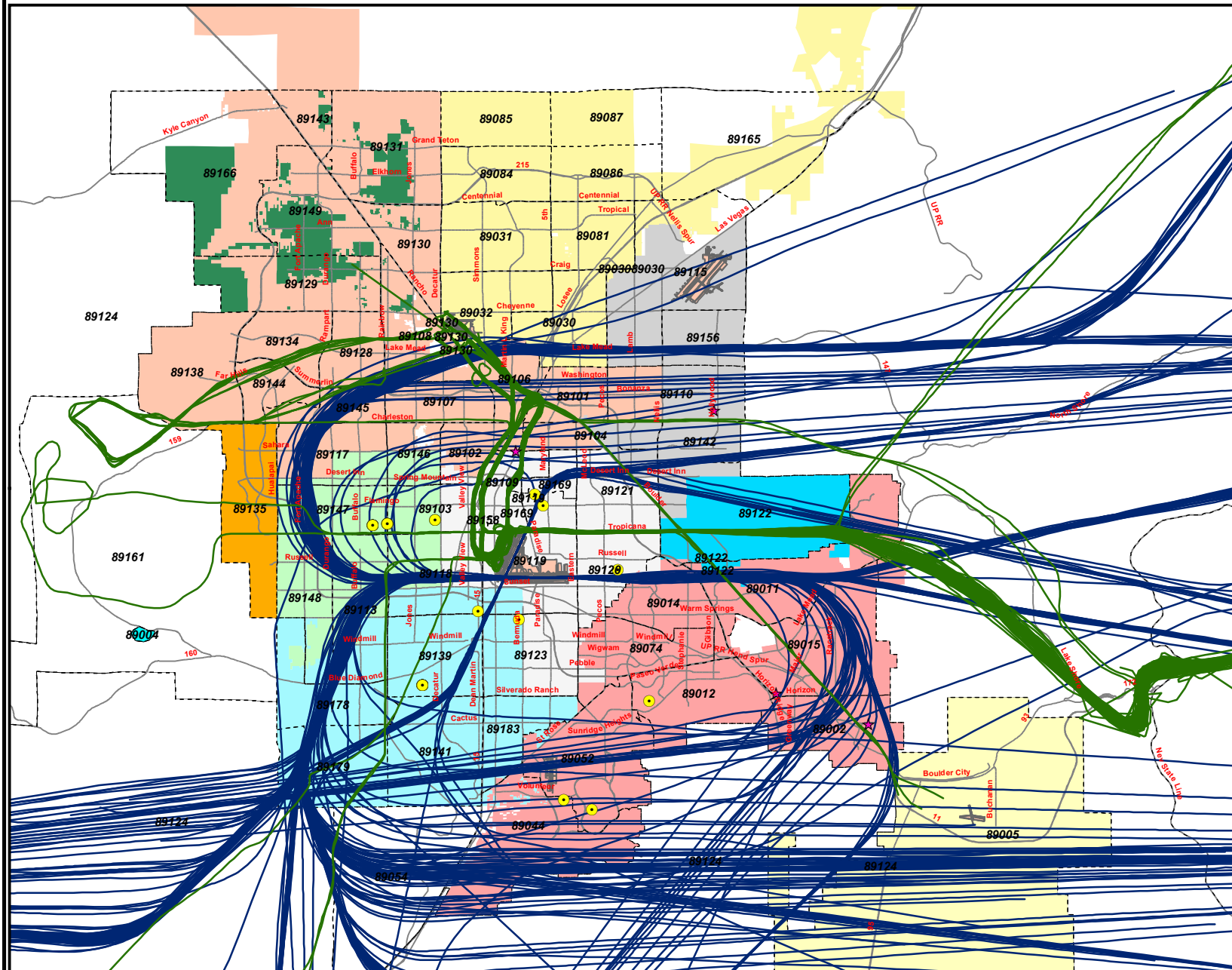
Exhibit 2: Noise Complaint Calls by Type of Operation - September 2019

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
LAS 08R/L Arrivals				
LAS 19R/L Arrivals				
LAS 26R/L Arrivals	10	27.8%	5	1
LAS 01R/L Departures	17	47.2%	2	34
LAS 08R/L Departures	1	2.8%	2	7
LAS 19R/L Departures	2	5.6%		1
LAS 26R/L Departures			191	28
LAS Run-ups				
LAS GA				
LAS Other				
LAS Total	30	83.3%	200	72
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	5.6%	1	1
HND Other				
HND Total	2	5.6%	1	1
Helicopters**	4	11.1%	1	4
Overall Total	36	100%	202	77



** 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 - Sep 2019



Legend

Sep 2019
Total Complaints: 36

- ★ Aircraft Complaints
Received 32
Mapped 30
- ★ Helicopter Complaints
Received 4
Mapped 4
- 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



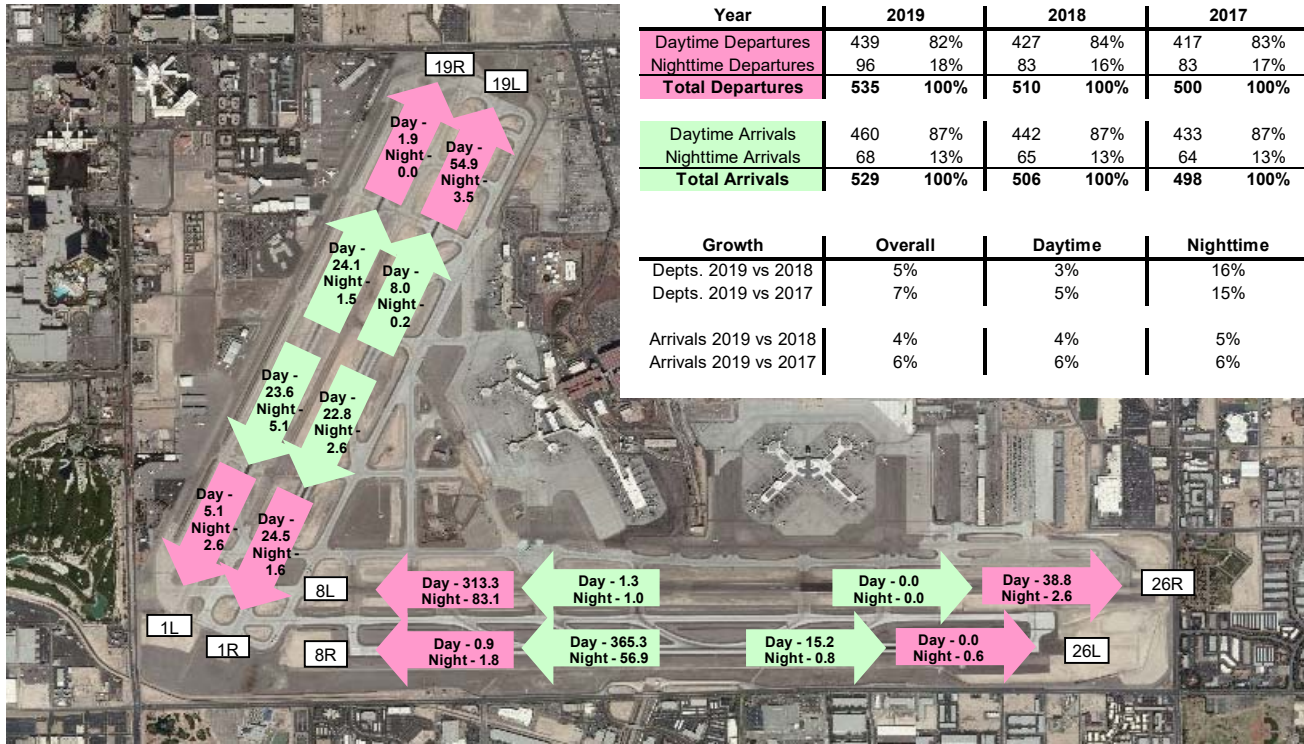
Oct 7, 2019

Note:
This information is for
display purposes only.
No liability is assumed
with the accuracy of
the data displayed hereon.

H:\GIS\Standard Projects\Noise\2019\20190901_20190919.mxd

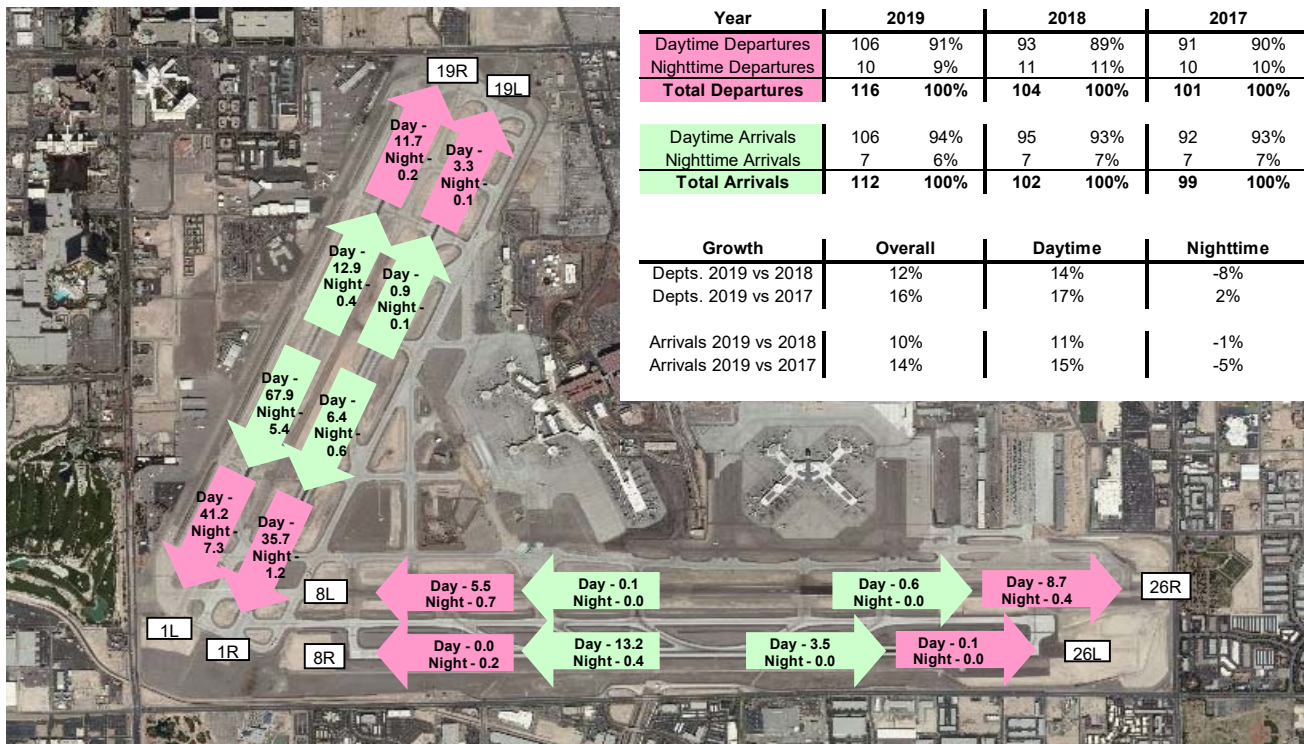


Exhibit 4: LAS Daily Average Operations Runway for Large Air Carrier Aircraft* - September 2019



* 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** - September 2019



** 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* - September 2019

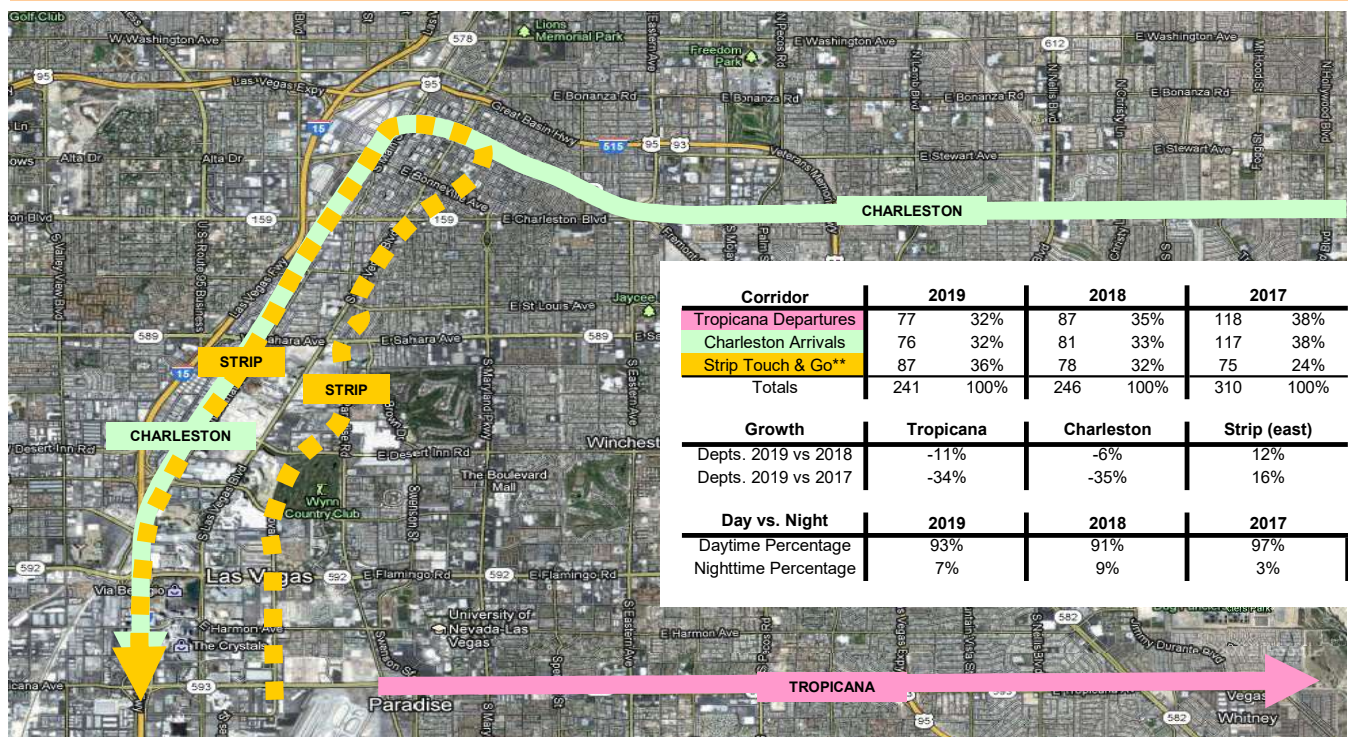
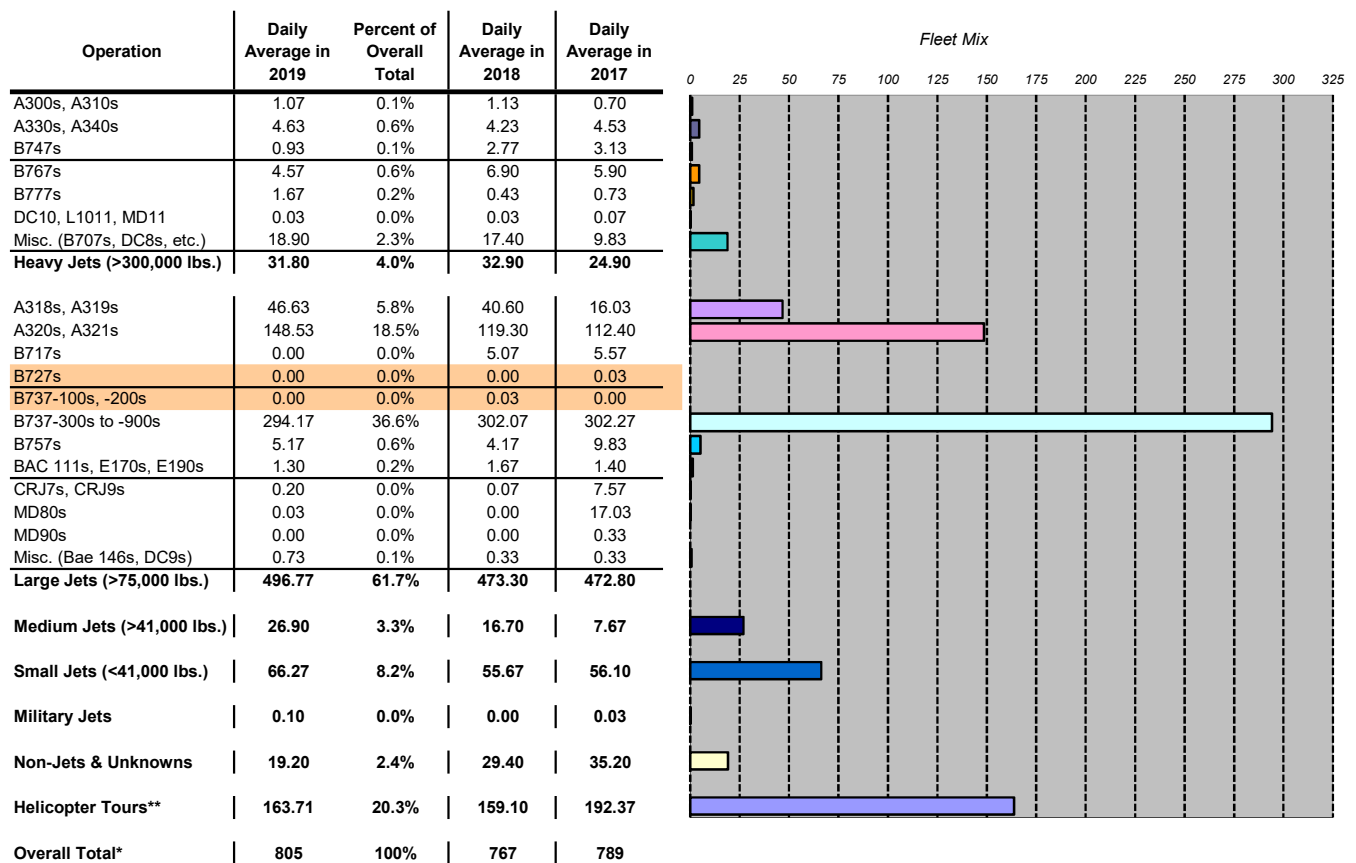


Exhibit 7: LAS Aircraft Arrival Fleet Mix** - September 2019



* 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. **Totals include tour operations from other airport facilities.

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

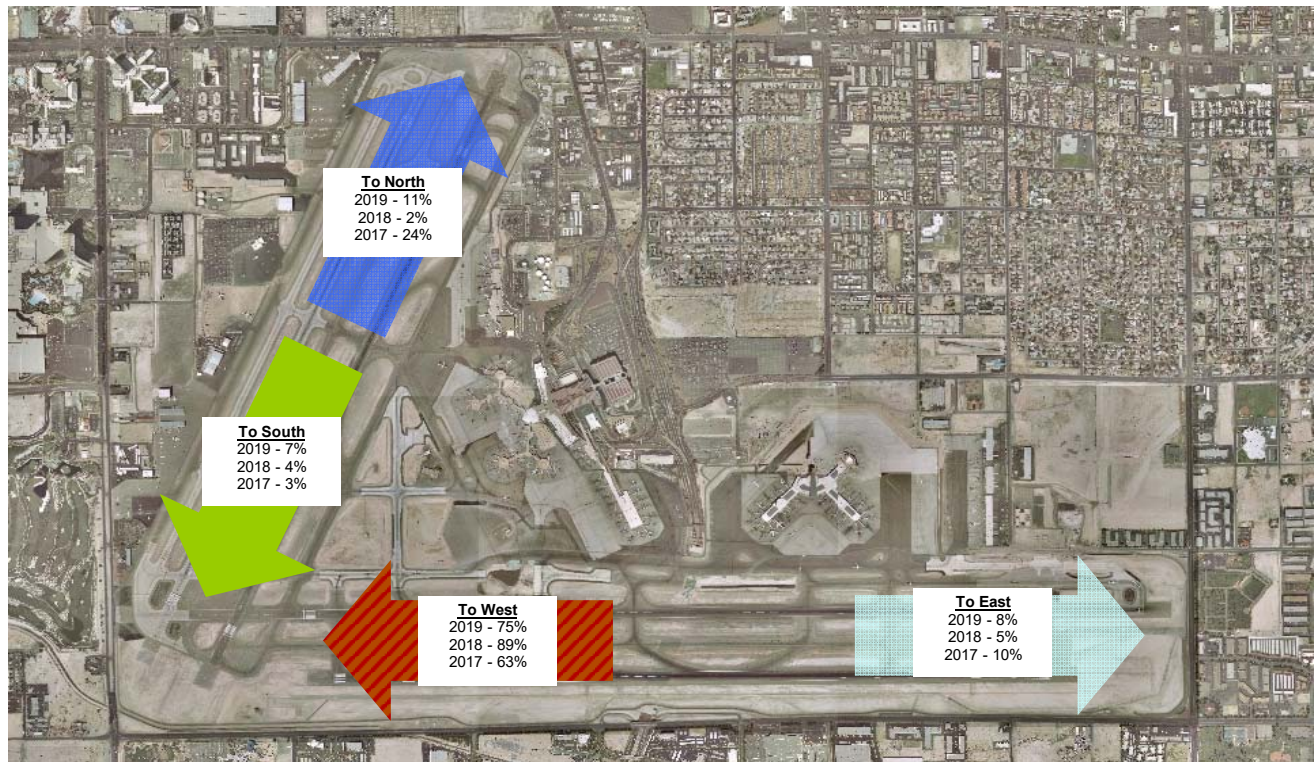
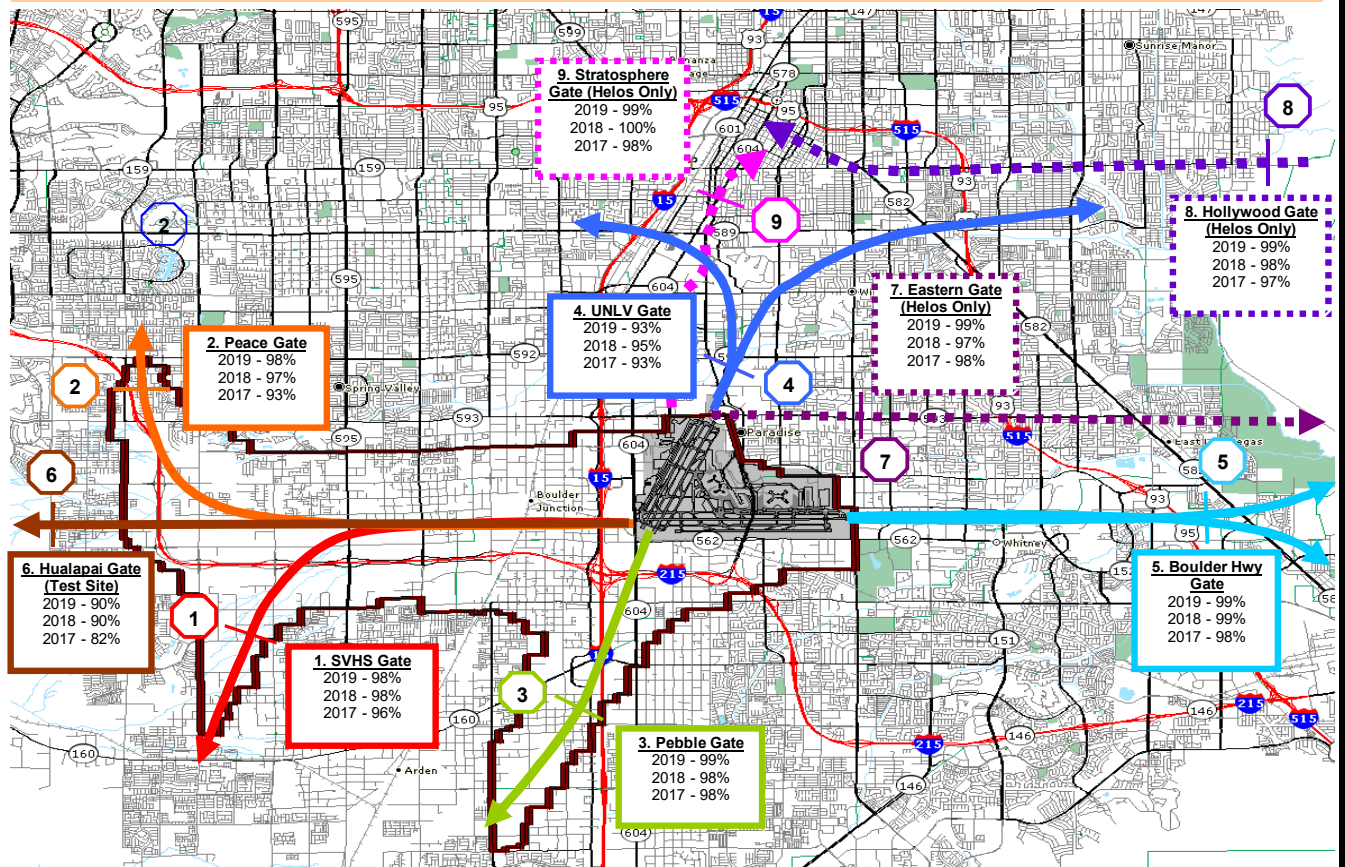


Exhibit 9: "Gate" Compliance for Large Aircraft* & Helicopter Tours - September 2019



* 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, 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 - September 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	143	40	47	19	249
No. of Applications where CCDOA Issued a Comment	16	6	0	1	23
Percent of Applications where Comment Issued	11%	15%	0%	5%	9%

Exhibit 11: Land Use Application Comments by Airport Concern - September 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'	3	3	0	0	6
Height-Penetrates Part 77 PATH-C Surfaces*	2	0	0	0	2
Helipad/Helipad	0	0	0	0	0
Noisy-Commercial within AEOD**	3	1	0	0	4
Noisy-Residential within the AEOD**	0	0	0	0	0
Noisy-Residential Just Outside the AEOD**	10	3	0	1	14
Total***	18	7	0	1	26

* 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* - September 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	1,222	559	0	21	1,802

*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 - September 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 - September 2019

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

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4. Comply with the Federal Aviation Administration regulations.

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Salmon color indicates a 1 mile zone outside the AEOD.

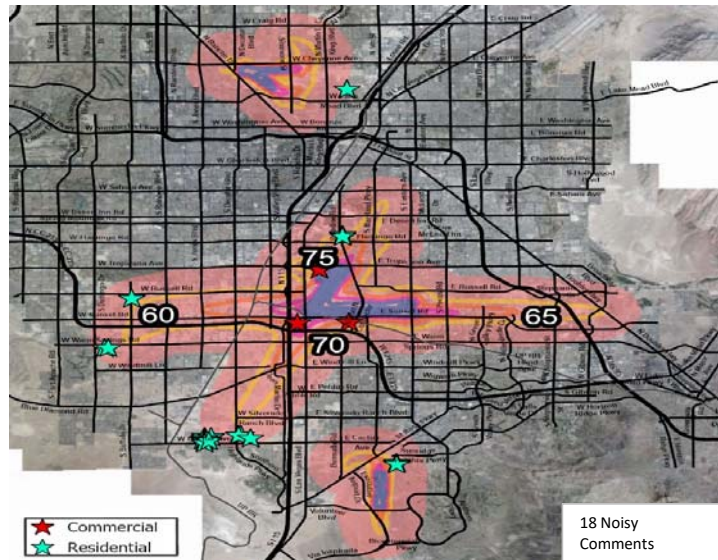


Exhibit 15: Noisy Comments - LAS Detail - September 2019

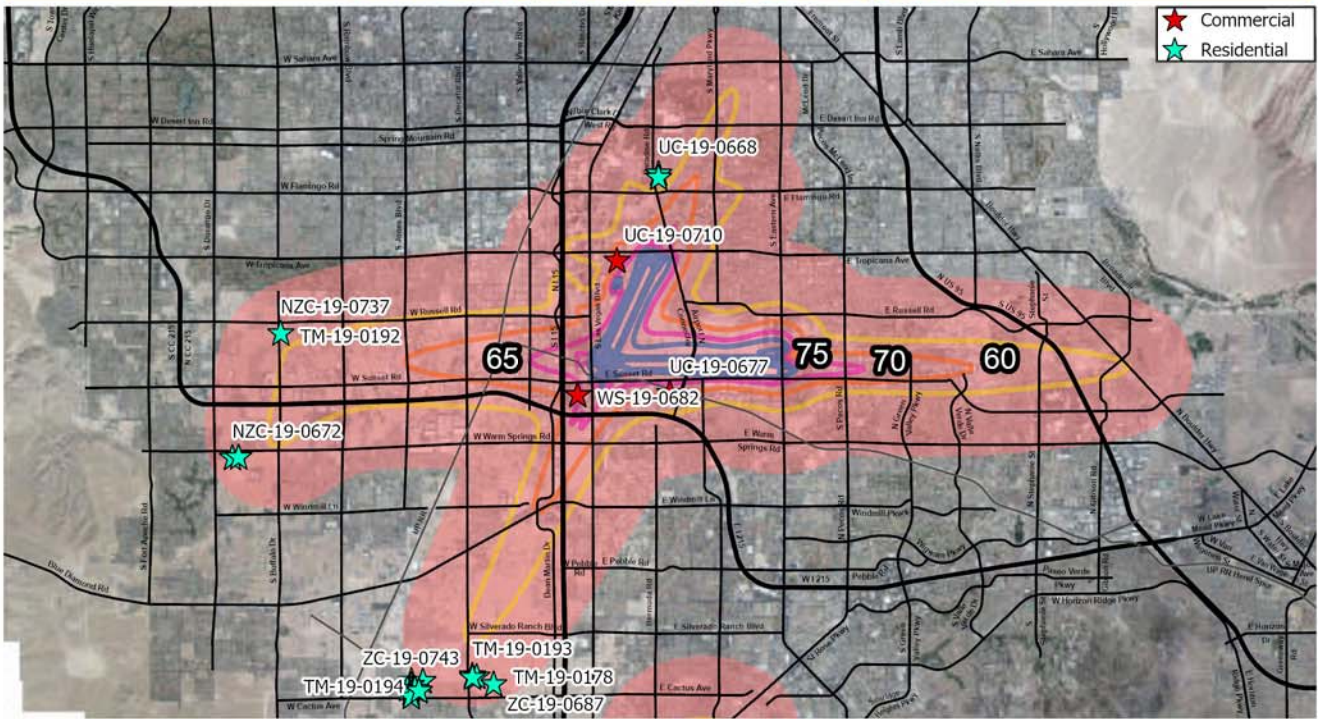


Exhibit 16: Noisy Comments - HND Detail - September 2019

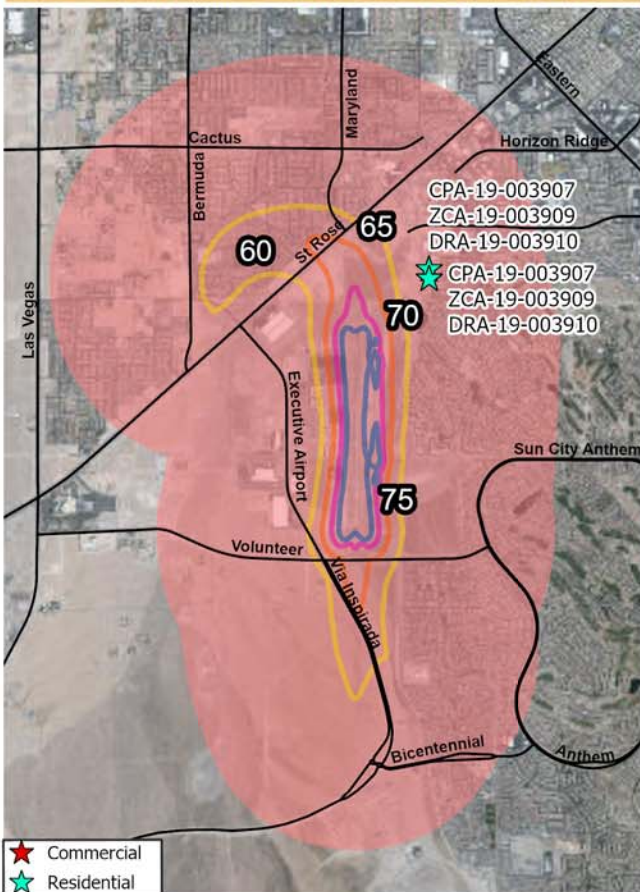


Exhibit 17: Noisy Comments - VGT Detail - September 2019

