### Artificial Turf Las Vegas warranty included

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#### **Accepting Technical Advances for Improved Efficiency**

In the ever-evolving world of modern technology, the year 2025 will undoubtedly provide a myriad of developments made to improve performance and productivity. Best <u>Artificial Turf Las Vegas</u> Nevada. As we want to maximize our capacity in this future landscape, embracing these technological advances will certainly be paramount. This essay intends to check out the significance of these advancements and offer a roadmap for leveraging them to boost performance.

In the last years, we have experienced a significant change in numerous industries as a result of technical improvements. From Artificial Intelligence (AI) to robotics, blockchain to huge information, these innovations have not only shaped our lifestyle however have actually likewise spruced up typical service designs. Their capability to simplify processes, decrease human mistake, and provide exceptional outcomes promptly and efficiently is noteworthy. As we approach 2025, these technological developments are expected to be more innovative and integrated into our everyday routines, guaranteeing improved productivity.

Firstly, consider the function of Expert system and Machine Learning. These modern technologies are currently at the leading edge of improving efficiency by automating regular tasks and providing informative information evaluation. In 2025, we can anticipate Al and ML to be much more sophisticated, with capabilities to predict patterns, make decisions, and perform complex tasks with marginal human treatment. For that reason, embracing these innovations and incorporating them into our job procedures will be necessary for taking full advantage of efficiency.

Secondly, take into consideration the impact of the Internet of Points (IoT). With an ever-increasing number of gadgets attached to the internet, the IoT gives a possibility for smooth integration and interaction, bring about improved performance. By 2025, we can anticipate a much more interconnected world, where the IoT will certainly play a crucial role in managing and controlling different facets of our job and personal lives.

Moreover, innovations in cloud computing and digital fact are anticipated to reinvent the means we work. With cloud computing, we can anticipate an extra joint and flexible work environment, as this innovation allows for real-time sharing and editing and enhancing of records, minimizing time and enhancing performance. On the other hand, virtual truth can use immersive training experiences, leading to an extra knowledgeable and efficient labor force.



Nevertheless, embracing these technological technologies is not without its obstacles. Problems such as data safety, technical inequality, and the need for continuous knowing and adaptation pose significant hurdles. Therefore, while we embrace these innovations, it is essential to deal with these problems proactively to really make the most of performance.

To conclude, the year 2025 will unquestionably provide a riches of technical innovations that assure enhanced performance. Embracing these innovations and incorporating them into our work procedures will certainly be important for making the most of efficiency

#### Implementing Time Monitoring Techniques in the Future Workplace

As we march briskly towards 2025, the future workplace is readied to go through a significant change. The advancement of technology, the surge of expert system, and the shift in the direction of remote and flexible work settings will certainly demand a brand-new approach to time management. With the goal of making the most of effectiveness, the application of reliable time management methods will be more important than ever.

One of the significant changes we expect in the future office is the boosted reliance on project monitoring devices. These electronic platforms will supply a thorough summary of tasks, target dates, and team usage. They will certainly permit us to prioritize jobs, established sensible target dates, and designate sources successfully. A well-implemented project management device will be a cornerstone in accomplishing optimal performance as it decreases the time spent on management jobs, making it possible for people to concentrate on their core responsibilities.



One more considerable time management method that will be prevalent in the future work environment is making use of expert system (AI). AI can automate regular tasks, reducing the time invested in them and maximizing time for even more tactical obligations. Additionally, AI can provide understandings right into work patterns and habits, assisting people recognize where they are wasting time and exactly how they can work extra efficiently.

The limit in between job and individual life is expected to blur better in the future work environment. As a result, preserving a healthy work-life equilibrium will end up being more tough however also more vital. Consequently, time blocking techniques will certainly obtain appeal. Time obstructing includes organizing specific time ports for different jobs or activities throughout the day. It makes certain that there is an equilibrium in between job and individual life, which time is alloted effectively.

Remote job is another trend that is here to stay. With this new standard, the traditional 9 to 5 day might become much less relevant, and adaptable job hours can end up being much more common. This versatility could potentially bring about an "always-on" job culture, making it vital to establish clear limits and manage time successfully.

# Unlocking the Future: Al Innovations to Expect in 2025 - Artificial Turf Las Vegas warranty included

- 1. Synthetic Turf Las Vegas durability reviews
- 2. Artificial Grass Las Vegas commercial applications
- 3. Synthetic Turf Las Vegas modern yard designs
- 4. Synthetic Turf Las Vegas installation
- 5. Artificial Grass Las Vegas vs natural grass

Methods such as the Pomodoro strategy, where work is damaged down into intervals typically 25 mins in size, separated by time-outs, can help take care of time a lot more efficiently.

Finally, the future workplace in 2025 will provide new obstacles and opportunities for time monitoring. The implementation of sophisticated devices and methods, combined with a raised concentrate on work-life equilibrium and adaptability, will be critical in maximizing efficiency.

# Unlocking the Future: Al Innovations to Expect in 2025 - Synthetic Turf Las Vegas Las Vegas summer lawns

- 1. Synthetic Turf Las Vegas best rated brands
- 2. Artificial Turf Las Vegas durability reviews
- 3. Artificial Turf Las Vegas sports field turf
- 4. Synthetic Turf Las Vegas maintenance tips
- 5. Artificial Grass Las Vegas Las Vegas summer lawns

By accepting these modifications and adapting to new methods of working, we can ensure that we are planned for the future and can flourish in the progressing work environment.



#### Adapting to the Transforming Nature of Job and Company

#### Utilizing Expert System and Artificial Intelligence Equipment for Performance

Making Use Of Expert System and Artificial Intelligence Tools for Efficiency in 2025

The future holds immense possibilities, and 2025 is no exception. Among the key facets to consider is maximizing performance in different rounds of life. This essay will certainly go over exactly how the usage of Expert system (AI) and Artificial Intelligence (ML) tools can improve performance and efficiency in several domain names by 2025.

Al and ML are 2 of one of the most transformative innovations of the 21st century. They have the potential to redefine the means we live, function, and engage with the globe.

# Unlocking the Future: Al Innovations to Expect in 2025 - Synthetic Turf Las Vegas Las Vegas summer lawns

- 1. Artificial Grass Las Vegas custom installations
- 2. Artificial Grass Las Vegas for front yard
- 3. Artificial Grass Las Vegas landscaping ideas
- 4. Artificial Grass Las Vegas for backyards
- 5. Synthetic Turf Las Vegas design ideas

In 2025, these modern technologies will be more mature, more easily accessible, and a lot more integrated right into our day-to-days live, using countless possibilities for performance improvements.

In a business situation, Al and ML can be leveraged to automate mundane tasks, freeing up time for workers to concentrate on more facility and creative job. As an example, Al-powered chatbots can deal with customer queries, while ML formulas can analyze substantial amounts

of data to supply actionable understandings for calculated decision-making.

# Unlocking the Future: Al Innovations to Expect in 2025 - Artificial Grass Las Vegas fake grass installer

- 1. Artificial Grass Las Vegas eco friendly options
- 2. Artificial Turf Las Vegas maintenance tips
- 3. Artificial Grass Las Vegas for playgrounds
- 4. Artificial Turf Las Vegas for playgrounds
- 5. Artificial Grass Las Vegas modern yard designs

This not only accelerates procedures however additionally reduces the danger of human mistake, consequently enhancing total efficiency.

In the field of education, Al and ML tools can offer customized learning experiences, adapting to private students requires in real-time. These algorithms can identify locations where a pupil is struggling and offer tailored support, thereby making best use of learning effectiveness.

In healthcare, AI and ML can enhance diagnostics and treatment plans. Making use of predictive evaluation, these innovations can help spot conditions at a beginning, making treatment a lot more efficient and effective.

# Unlocking the Future: Al Innovations to Expect in 2025 - Synthetic Turf Las Vegas commercial applications

- 1. Artificial Turf Las Vegas warranty included
- 2. Artificial Grass Las Vegas fake grass installer
- 3. Synthetic Turf Las Vegas bulk supplier
- 4. Synthetic Turf Las Vegas Las Vegas summer lawns
- 5. Synthetic Turf Las Vegas commercial applications

In addition, Al and ML can automate administrative jobs, allowing medical care specialists to commit more time to person care.

The home front is not left out in the efficiency revolution. Smart homes powered by AI and ML can automate various tasks, from regulating temperature and lights to taking care of safety and security systems and home appliances. This not just enhances convenience yet likewise boosts energy effectiveness, minimizing carbon impact.

Lastly, in transportation, Al and ML are currently changing the method we relocate. Self-driving cars, optimized logistics, anticipating upkeep, and web traffic administration are simply a few instances of just how these technologies can improve effectiveness and safety.

Nonetheless, it is essential to keep in mind that the effective execution of AI and ML devices calls for a mindful balance. Moral factors to consider, personal privacy issues, and the risk of work displacement have to be resolved. Moreover, the possible benefits of these modern technologies should come to all, not simply a privileged few.

In conclusion, as we come close to 2025, AI and ML will certainly play a critical

#### **Useful links**

- https://rocknblocklandscape.com/locations/las-vegas/artificial-turf-boulder-city/
- https://rocknblocklandscape.com/locations/las-vegas/artificial-turf-henderson/
- o https://rocknblocklandscape.com/locations/las-vegas/artificial-turf-north-las-vegas/
- https://rocknblocklandscape.com/locations/las-vegas/artificial-turf-pahrump/
- o https://rocknblocklandscape.com/locations/las-vegas/artificial-turf-paradise/

#### **About Las Vegas Valley**

# Las Vegas Valley

Metropolitan Statistical Area

## Las Vegas Strip

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Red Rock Canyo This addio trad t Catr Generational Maryellanch

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Left-right from top: Las Vegas Strip, Stratosphere Tower, Fremont Street Experience, Waldorf Astoria Las Vegas, Red Rock Canyon National Conservation Area, The District at Green Valley Ranch

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Interactive Map of Las Vegas-Henderson, NV CSA

City of Henderson

City of North Las Vegas

Town of Enterprise

Town of Spring Valley

Town of Sunrise Manor

Town of Paradise

Town of Whitney

Town of Winchester

City of Boulder City

Nellis Air Force Base

Las Vegas-Henderson-North Las Vegas MSA (Remainder)

Pahrump µSA

## City of Las Vegas

CountryUnited StatesStateNevadaLargest cityLas VegasOther major cities

- Henderson
- North Las Vegas
- o Enterprise
- Spring Valley
- Sunrise Manor
- Paradise
- Whitney

- Winchester
- Boulder City

Area

· Urban

500 sq mi  $(1,400 \text{ km}^2) \cdot \text{Metro}$ 

 $1,600 \text{ sq mi } (4,100 \text{ km}^2)$ Population

(2024 estimate)

Metropolitan Statistical Area

2,421,685GDP

[1]

· MSA\$160.7 billion (2022)Time zoneUTC-8 (PST) · Summer (DST)UTC-7 (PDT)Area code(s)702 and 725

The Las Vegas Valley is a major metropolitan area in the southern part of the U.S. state of Nevada, and the second largest in the Southwestern United States. The state's largest urban agglomeration, the Las Vegas Metropolitan Statistical Area is coextensive since 2003 with Clark County, Nevada.[2] The Valley is largely defined by the Las Vegas Valley land formation, a 600 sq mi (1,600 km²) basin area surrounded by mountains to the north, south, east and west of the metropolitan area. The Valley is home to the three largest incorporated cities in Nevada: Las Vegas, Henderson and North Las Vegas.[3] Eleven unincorporated towns governed by the Clark County government are part of the Las Vegas Township and constitute the largest community in the state of Nevada.[4]

The names **Las Vegas** and **Vegas** are interchangeably used to indicate the Valley, the Strip, and the city, and as a brand by the Las Vegas Convention and Visitors Authority

to denominate the region.[5][6] The Valley is affectionately known as the **Ninth Island** by Hawaii natives and Las Vegans alike, in part due to the large number of people originally from Hawaii who live in and regularly travel to Las Vegas.[7]

Since the 1990s, the Las Vegas Valley has seen rapid growth, tripling its population from 741,459 in 1990 to 2,227,053 estimated in 2018, increasing to 2,421,685 in 2024.[8] The Las Vegas Valley remains one of the fastest growing metropolitan areas in the United States. In its relatively short history, it has established a diverse presence in international business, commerce, urban development, and entertainment, as well as one of the most visited tourist attractions destinations in the world. In 2014, a record-breaking 41 million people visited the Las Vegas area, producing a gross metropolitan product of more than \$100 billion.[9]

## History

#### [edit]

Main article: History of Las Vegas

The first reported non-Native American visitor to the Las Vegas Valley was the Mexican scout Rafael Rivera in 1829.[10][11][12] Las Vegas was named by Mexicans in the Antonio Armijo party,[4] including Rivera, who used the water in the area while heading north and west along the Old Spanish Trail from Texas. In the 19th century, areas of the valley contained artesian wells that supported extensive green areas, or meadows, hence the name Las Vegas (vegas being Spanish for "meadows").[11]

The area was previously settled by Mormon farmers in 1854 and later became the site of a United States Army fort in 1864, beginning a long relationship between southern Nevada and the U.S. military. Since the 1930s, Las Vegas has generally been identified as a gambling center as well as a resort destination, primarily targeting adults.

Nellis Air Force Base is located in the northeast corner of the valley. The ranges that the Nellis pilots use and various other land areas used by various federal agencies, limit growth of the valley in terms of geographic area.

Businessman Howard Hughes arrived in the late 1960s and purchased many casino hotels, as well as television and radio stations in the area. Legitimate corporations began to purchase casino hotels as well, and the mob was run out by the federal government

over the next several years. The constant stream of tourist dollars from the hotels and casinos was augmented by a new source of federal money from the establishment of what is now Nellis Air Force Base. The influx of military personnel and casino jobhunters helped start a land building boom which is now leveling off. [according to whom?]

The Las Vegas area remains one of the world's top entertainment destinations.[13][14]

#### **Boundaries**

#### [edit]

The valley is contained in the Las Vegas Valley landform. This includes the cities of Las Vegas, North Las Vegas, and Henderson, and the unincorporated towns of Summerlin South, Paradise, Spring Valley, Sunrise Manor, Enterprise, Winchester, and Whitney. The valley is located within the larger metropolitan area, as the metropolitan area covers all of Clark County including parts that do not fall within the valley.

The government of Clark County has an "Urban Planning Area" of Las Vegas. This definition is a roughly rectangular area, about 20 mi (32 km) from east to west and 30 miles (48 km) from north to south. Notable exclusions from the "Urban Planning Area" include Red Rock, Blue Diamond, and Mount Charleston.

The Las Vegas Metropolitan Police Department is the largest police department in the valley and the state and exercises jurisdiction in the entire county. There are approximately 3,000 police officers who cover the city of Las Vegas; unincorporated areas; the town of Laughlin, about 90 mi (140 km) from Downtown Las Vegas; and desert, park, and mountain areas within Clark County. The department does not exercise primary jurisdiction in areas with separate police forces such as North Las Vegas, Henderson, Boulder City, Nellis Air Force Base and the Paiute reservation.

The metropolitan area was created for the 1970 census when it only included Clark County. In 2000, the metropolitan area was changed to include Nye County, Nevada, and Mohave County, Arizona,[15][16][17] but it later returned to only being Clark County.

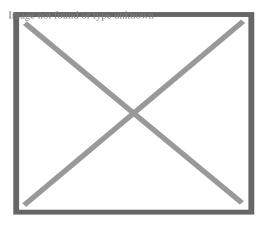
The Office of Management and Budget has designated Clark County as the Las Vegas-Henderson-Paradise, NV Metropolitan Statistical Area.[18] The United States Census Bureau ranked the Las Vegas-Henderson-Paradise, NV Metropolitan Statistical Area as

the 31st most populous metropolitan statistical area of the United States as of July 1, 2012.[19]

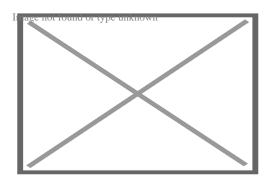
The Office of Management and Budget has further designated the Las Vegas-Henderson-Paradise, NV Metropolitan Statistical Area as a component of the more extensive Las Vegas-Henderson, NV-AZ CSA,[18] the 27th most populous combined statistical area and the 30th most populous primary statistical area of the United States as of July 1, 2012.[19][20]

## Geography and environment

#### [edit]



Las Vegas Valley viewed in false color, from 438 mi (705 km) by TERRA satellite. Grass-covered land, such as golf courses, appears in red. The picture bottom is just south of Sunset Road and the airport, the Spring Mountains on the west and Sunrise Mountain on the east.



Las Vegas at night in 2010

The Las Vegas Valley lies in the Mojave Desert. The valley in the northwest section is a northwest-by-southeast[21] trending area, and trending parallel to Las Vegas Wash, lies at the northeast of the Spring Mountains massif.

U.S. Route 95 leaves Las Vegas's northwest and goes northwesterly through the northwest valley section, with Las Vegas Wash about 2 miles (3 km)[22] northeast. U.S. 95 lies on the southwest perimeter of the valley bottomlands, and small alluvial fan areas from the northeast Spring Mountains border southwest.

A "distorted surface",[23] a playa-like region, occurs at the farthest northwest area, for about 15 to 18 miles (24 to 29 km), starting from Nevada Route 157. At Nevada Route 156, 10 miles (16 km) northwest, the distorted surface, bottom land turns north, a 6 miles (9.7 km) area in length and about 3 miles (4.8 km) wide. It lies at the south drainage section of the Three Lakes Valley, where a water divide separates Dog Bone Lake in the valley's center from the southwest washes that drain into the Las Vegas Valley (upland Las Vegas Wash).

The Corn Creek Dunes lie about 5 miles (8.0 km) southwest of Route 156's intersection with U.S. 95, and they are slightly northeast of Las Vegas Wash.

The Las Vegas Valley is around 1,600 square miles (4,100 km<sup>2</sup>).[24] All perimeters, except the northwest, are foothills or mountain ranges, with all highway routes entering the foothills; this includes the Interstate 15 to the southwest, as it climbs to Jean Pass (north), before traversing Ivanpah Valley. Only the U.S. Route 95 northwest follows an actual valley. The northwest section, thus describes the entire landform as a central, and large valley with an attached feeder valley northwest, and in this case the northwest source, and actual course of the Las Vegas Wash.

The valley is a fault-bounded structural and hydrologic basin[25] made of alluvial-fan deposits. There are several aquifers contained within the valley including the Las Vegas Aquifer. These heavily depleted water sources exist at about 660–980 feet (200–300 m) in depth.[25] As of 1986, estimate show that the valley floor in Downtown Las Vegas has subsided by about 6.2 feet (1.9 m) and about 2.9 feet (0.88 m) along The Strip as a result of pumping from these aquifers.[26]

# **Climate**

The Las Vegas Valley lies in a relatively high-altitude portion of the Mojave Desert, with a subtropical hot-desert climate. The Valley generally averages less than 5 in (130 mm) of rain annually.[27] Daily daytime summer temperatures in July and August typically range from 100 °F (38 °C) to 110 °F (43 °C), while nights generally range from 72 °F (22 °C) to 80 °F (27 °C).[27] Very low humidity, however, tempers the effect of these temperatures, though dehydration, heat exhaustion, and sun stroke can occur after even a limited time outdoors in the summer. The interiors of automobiles often prove deadly to small children and pets during the summer and surfaces exposed to the sun can cause first- and second-degree burns to unprotected skin. July and August can also be marked by monsoon season, when moist winds from the Gulf of California soak much of the Southwestern United States. While not only raising humidity levels, these winds develop into dramatic desert thunderstorms that can sometimes cause flash flooding.

Winter days in metropolitan Las Vegas range from mild to quite chilly, and sunny most days; while winter itself is of short duration. Winter highs in December and January usually range from 52 °F (11 °C) to 60 °F (16 °C), while nighttime lows range from 34 °F (1 °C) to 42 °F (6 °C).[27] The mountains surrounding the valley are snow-covered during the winter season, but snow accumulation in the metropolitan area itself is uncommon. Every few years apart, however, Las Vegas does get a small measurable snowfall.

Spring and fall are generally dry and with hot, sunny days and cool nights.

## Climate data for Las Vegas, Nevada

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Record high	80	89	96	102	114	117	120	116	114	103	89	91	120
°F (°C)	(27)	(32)	(36)	(39)	(46)	(47)	(49)	(47)	(46)	(39)	(32)	(33)	(49)
Mean daily	57.9	62.2	69.9	77.9	88.0	98.0	103.8	101.4	93.4	80.2	66.4	56.3	79.6
maximum °F (°C)	(14.4)	(16.8)	(21.1)	(25.5)	(31.1)	(36.7)	(39.9)	(38.6)	(34.1)	(26.8)	(19.1)	(13.5)	(26.4)
Mean daily	37.1	41.0	46.8	53.3	63.2	71.7	77.8	76.3	68.0	56.0	44.3	36.6	56.0
minimum °F (°C)	(2.8)	(5.0)	(8.2)	(11.8)	(17.3)	(22.1)	(25.4)	(24.6)	(20.0)	(13.3)	(6.8)	(2.6)	(13.3)
Record low	8	10	16	26	28	33	40	46	38	26	14	11	8
°F (°C)	(-13)	(-12)	(-9)	(-3)	(-2)	(1)	(4)	(8)	(3)	(-3)	(-10)	(-12)	(-13)

Average precipitation	0.61	0.68	0.60	0.16	0.25	0.08	0.43	0.46	0.31	0.25	0.33	0.40	4.56
precipitation inches (mm)	(15)	(17)	(15)	(4.1)	(6.4)	(2.0)	(11)	(12)	(7.9)	(6.4)	(8.4)	(10)	(116)

Source: [28][29]

## Fault zones

#### [edit]

The valley is an active earthquake zone crossed by multiple fault and thrust lines. These include the 20-mile (32 km) long Frenchman Mountain Fault capable of a magnitude 7 event, Whitney Mesa Fault, Cashman Fault, Valley View Fault, Decatur Fault, Eglington Fault and the West Charleston Fault.[30][31][32][33]

# Air quality

#### [edit]

Having part of the region in a desert basin creates problems with air quality. From the dust the wind picks up, to the smog produced by vehicles, to the pollen in the air, the valley has several bad air days.

Pollen can be a major problem several weeks a year, with counts occasionally in the 70,000-plus range. Local governments are trying to control this by banning plants that produce the most pollen.

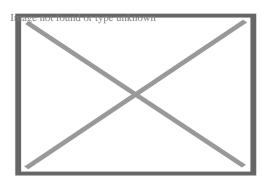
The dust problems usually happen on very windy days, so they tend to be short and seasonal. Full-fledged dust storms are rare.

Smog, on the other hand, gets worse when there is no wind to move the air out of the valley. Also, in winter it is possible for an inversion to form in the valley.

Since manufacturing is not a dominant industry of Las Vegas, and with Clark County working to control air quality problems, success has been shown over the years.

## Water

#### [edit]



Lake Mead shown behind Hoover Dam on the Colorado River

The native flora does little to help the soil retain water. During the intense rains of monsoon season or (relatively) wet months of January and February, a network of dry natural channels, called washes or arroyos, carved into the valley floor allows water to flow down from the mountains and converge in the Las Vegas Wash which runs through the Clark County Wetlands Park. The wash system used to form a large natural wetlands which then flowed into the Colorado River, until the construction of Hoover Dam on the Colorado River led to the creation of Lake Mead. Further development in the 1980s and 1990s made Lake Las Vegas, which required directing the Las Vegas Wash into tunnels which run under Lake Las Vegas and into Lake Mead.

Nevada receives an allocation 300,000 acre-feet (370,000,000 m<sup>3</sup>) of water[34] each year from Lake Mead, with credits for water it returns to the lake. The allocations were made with the Colorado River Compact when Nevada had a much smaller population and very little agriculture. The allocations were also made during a wet string of years, which overstated the available water in the entire watershed. As a result, precipitation that is below normal for a few years can significantly affect the Colorado River reservoirs. The Las Vegas area uses most of this allocation with Laughlin, Nevada using most of the remaining allocation. In June 2007, the price of a cubic meter was 57 cents in Las Vegas.[35] Las Vegas gets around 90 percent of its water from Lake Mead.[36]

Early Vegas depended on the aquifer which fed the flowing springs supporting the meadows that gave the area its name, but the pumping of water from these caused a large drop in the water levels and ground subsidence over wide areas of the valley.

Today, the aquifers are basically used to store water that is pumped from the lake during periods of low demand and pumped out during periods of high demand.

# **Urbanization**

#### [edit]

The population doubling time in the greater metropolitan area was under ten years, since the early 1970s and the Las Vegas metropolitan area now has a population approaching three million people.[8] This rapid population growth led to a significant urbanization of desert lands into industrial and commercial areas (see suburbia).

#### **Economy**

#### [edit]

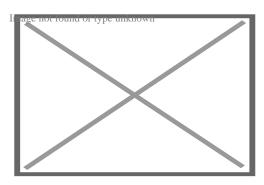
Four-segment panorama of the Cosmopolitan, Bellagio, and Caesars Palace (left to right)

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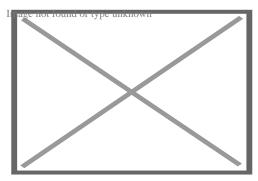
Four-segment panorama of the Cosmopolitan, Bellagio, and Caesars Palace (left to right) from the Las Vegas Strip, across from the Bellagio fountains.

The driving economic force in Las Vegas is the tourism industry. The area has about 150,000 hotel rooms, more than any other city in the world.[37] In the past, casinos and celebrity shows were the two major attractions for the area. Now shopping, conventions, fine dining, and outdoor beauty [clarification needed] are also major forces in attracting tourist dollars.

Las Vegas serves as world headquarters for the world's largest Fortune 500 gaming company, MGM Resorts International.[38] Several companies involved in the manufacture of electronic gaming machines, such as slot machines, are located in the Las Vegas area. In the first decade of the 21st century, shopping and dining have become attractions of their own. Tourism marketing and promotion are handled by the Las Vegas Convention and Visitors Authority, a county-wide agency. Its annual Visitors Survey provides detailed information on visitor numbers, spending patterns, and resulting revenues.[39]



The Las Vegas Strip looking south at night



Exterior of the Palazzo hotel. A major part of the city economy is based on tourism including gambling and ultra-luxury hotels.

While Las Vegas has historically attracted high-stake gamblers from around the world, it is now facing tougher competition from the UK, Hong Kong and Macau (China), Eastern Europe and developing areas in the Middle East.[40]

Las Vegas has recently enjoyed a boom in population and tourism. The urban area has grown outward so quickly that it borders Bureau of Land Management holdings along its edges. This has led to an increase in land values such that medium- and high-density development is occurring closer to the core. The Chinatown of Las Vegas was constructed in the early 1990s on Spring Mountain Road. Chinatown initially consisted of only one large shopping center complex, but the area was expanded with shopping centers that contain various Asian businesses. Over the past few years, retirees have

been moving to the metro area, driving businesses that support them from housing to health care.

While the cost of housing spiked up over 40% in 2004, the lack of business and income taxes still makes Nevada an attractive place for many companies to relocate to or expand existing operations. Being a true twenty-four-hour city, call centers have always seemed to find Las Vegas a good place to hire workers who are accustomed to working at all hours. [citation needed]

The construction industry accounts for a share of the economy in Las Vegas. Hotel casinos planned for the Strip can take years to build and employ thousands of workers. Developers discovered that there was demand for high-end condominiums.[41] By 2005, more than 100 condominium buildings were in various stages of development,[42] however, in 2008, the construction industry went into a downturn due to the Great Recession, though the industry has since seen a rebound.

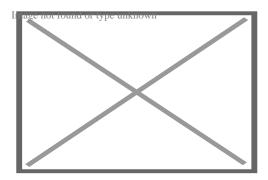
In 2000, more than 21,000 new homes and 26,000 resale homes were purchased. In early 2005, there were 20 residential development projects of more than 300 acres (120 ha) each underway. During that same period, Las Vegas was regarded as the fastest-growing community in the United States.

Other promising residential and office developments have begun construction around Downtown Las Vegas. New condominium and high-rise hotel projects have changed the Las Vegas skyline dramatically in recent years. Many large high-rise projects are planned for Downtown Las Vegas, as well as the Las Vegas Strip.[43]

# Construction

## [edit]

See also: List of tallest buildings in Las Vegas



### Construction on The Strip (2009)

Construction in Las Vegas is a major industry and quickly growing with the population. In March 2011, construction employed 40,700 people and is expected to grow with the recovering economy. [44] Since the mega resorts that define Las Vegas today began going up in the early 1970s, construction has played a vital role in both commercial and non commercial developments. Cranes are a constant part of the Las Vegas Skyline. At any given time there are 300 new homes being constructed in Las Vegas. [citation needed] In addition, in recent years [when?] Las Vegas has seen a spike in high-rise housing units. New suburban master planned communities are also becoming common in Las Vegas ever since The Howard Hughes Corporation began work on Summerlin, an upper-class community on the west side of the valley.

The massive CityCenter project, by MGM Mirage, broke ground on the Strip in 2006.[45] It put a massive strain on the construction ability and workforce of the area due to number of laborers and amount of materials required. Because of this, prices of almost any construction project in Las Vegas doubled. Citation needed The project was completed in 2009 and includes multiple hotels and condominiums, as well as shopping and a casino. At a cost of \$8.5 billion, it is the most expensive privately funded construction project in U.S. history.[46]

The Tropicana Hotel, opened in 1957, will be demolished in April 2025 in order to create a new baseball stadium.[47] Bally's Corporation, the owner of the hotel, indicated that upon completion of the stadium it would further develop the site.[48]

# Housing

#### [edit]

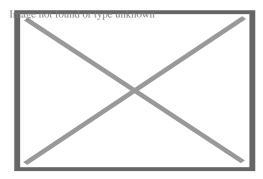
Traditionally, housing consisted primarily of single-family detached homes. Slab-on-grade foundations are the common base for residential buildings in the valley. Apartments generally were two-story buildings. Until the 1990s, there were exceptions, but they were few and far between. In the 1990s, Turnberry Associates constructed the first high rise condominium towers. Prior to this, there were only a handful of mid-rise multi-family buildings. By the mid-2000s, there was a major move into high rise

condominiums towers, which affected the region's skyline around the Strip.

The Las Vegas Valley is home to various suburban master planned communities that include extensive recreational amenities such as lakes, golf courses, parks, bike paths and jogging trails. Planned communities in the valley include Aliante, Anthem, Cadence, Centennial Hills, Green Valley, Inspirada, Lake Las Vegas, The Lakes, Mountain's Edge, Peccole Ranch, Providence, Rhodes Ranch, Seven Hills, Skye Canyon, Southern Highlands, and Summerlin.

# **Technology companies**

## [edit]



A full-scale mockup of Bigelow Aerospace's Space Station Alpha inside their facility in North Las Vegas

Some technology companies have either relocated to Las Vegas or were created there. For various reasons, Las Vegas has had a high concentration of technology companies in electronic gaming and telecommunications industries. [further explanation needed]

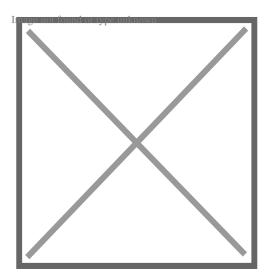
Some current technology companies in southern Nevada include: Bigelow Aerospace, Petroglyph, Switch Communications, US Support LLC, Fanatics, and Zappos.

In 2015, Electric vehicle startup Faraday Future has chosen North Las Vegas's Apex Industrial Park for its \$1 billion car factory.

Companies that originally were formed in the Las Vegas region, but have since sold or relocated include Westwood Studios (sold to Electronic Arts), Systems Research & Development (Sold to IBM), Yellowpages.com (Sold to BellSouth and SBC), and MPower Communications.

# **Tourism**

#### [edit]



The Welcome to Fabulous Las Vegas sign

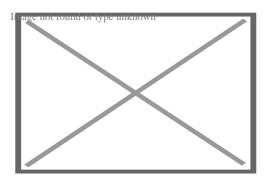
The major attractions in the Las Vegas Valley are the hotel/casinos. These hotels generally consist of large gambling areas, theaters for live performances, shopping, bars/clubs, and several restaurants and cafes. There are clusters of large hotel/casinos located in both downtown Las Vegas and on the Las Vegas Strip. The largest hotels are mainly located on the Strip,[49] which is a four-mile section of Las Vegas Boulevard. These hotels provide thousands of rooms of various sizes. Fifteen of the world's 30 largest hotels by room count are on the Strip, with a total of over 62,000 rooms. There are many hotel/casinos in the city's downtown area as well, which was the original focal point of the Valley's gaming industry. Several hotel/casinos ranging from large to small are also located around the city and metro area. Many of the largest hotel, casino, and resort properties in the world are located on the Las Vegas Strip.

The valley's casinos can be grouped into several locations. The largest is the Las Vegas Strip, followed by Downtown Las Vegas, and then the smaller Boulder Strip. There are also several one-off single standing hotel/casinos dotted around the valley and the metro area.

In 2011, the majority of tourists arrived from the western states (55%) with 31% from California alone. Approximately 16% of tourists arrived from outside North America.[50]

# **Shopping**

#### [edit]



Chanel and Giorgio Armani boutiques at Via Bellagio

Las Vegas has expanded its attractiveness to visitors by offering both affordable and high-end merchandise in many shops and shopping malls. Many hotels on the Las Vegas Strip also have adjacent shopping malls, giving the Las Vegas area the highest concentration of shopping malls in any four mile stretch of road. In addition to the malls on the Strip, there are several outlying malls in the City of Las Vegas, Henderson, and the surrounding area. The monorail, lying somewhat east of the Strip, facilitates north-south travel, including stations at several casinos and the Las Vegas Convention Center.

Major shopping attractions include:

- Bonanza Gift Shop
- The Boulevard Mall
- Broadacres Marketplace[a]
- The Shops at Crystals
- Downtown Summerlin
- Galleria at Sunset
- Grand Canal Shoppes
- Fantastic Indoor Swap Meet[b]
- Fashion Show Mall
- The Forum Shops at Caesars
- Las Vegas Premium Outlets

- Meadows Mall
- Miracle Mile Shops
- Stratosphere Tower Shops
- Tivoli Village
- Town Square

# **Conventions**

### [edit]

Las Vegas holds many of the world's largest conventions each year, including CES, SEMA, and Conexpo. The Las Vegas Convention Center is one of the largest in the world with 1,940,631 sq ft (180,290.5 m<sup>2</sup>) of exhibit space. These events bring in an estimated \$7.4 billion of revenue to the city each year, and host over 5 million attendees.[60][61]

o Las Vegas Boulevard facing south and Planet Hollywood Las Vegas

Image not found or type unknown

Las Vegas

**Boulevard facing** 

south and Planet

Hollywood Las

Vegas

Fremont East

С

Image not found or type unknown

Fremont East

o The Bellagio (left) and Caesar's Palace (right)

Image not found or type unknown
The Bellagio (left)
and Caesar's Palace
(right)

o MacDonald Highlands, one of many affluent neighborhoods in the valley

Image not found or type unknown MacDonald Highlands, one of many affluent neighborhoods in the valley

CityCenter complex

Image not found or type unknown
CityCenter
complex
Wynn Las Vegas

o
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Wynn Las Vegas

The Fashion Show Mall

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The Fashion Show Mall

## o Fountains of Bellagio

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Fountains of

Bellagio

Crystals at CityCenter

 $\cap$ 

Image not found or type unknown

Crystals at

CityCenter

High Roller

Image not found or type unknown

High

Roller

• The Forum Shops at Caesars

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The Forum Shops at

Caesars

Red Rock Canyon National Conservation Area

С

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Red Rock Canyon

**National Conservation** 

Area

## Las Vegas Arts District

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Las Vegas Arts District Seven Magic Mountains

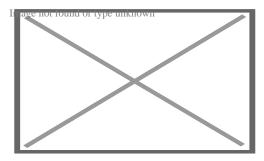
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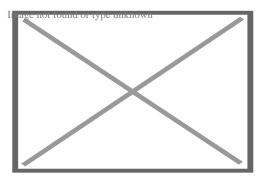
Mountains

#### Culture and the arts

#### [edit]



The Smith Center for the Performing Arts located in downtown Las Vegas



Reynolds Hall main stage at The Smith Center

The "First Friday" celebration, held on the first Friday of each month, exhibits the works of local artists and musicians in an area just south of downtown. The city is home to an extensive Downtown Arts District which hosts numerous galleries, film festivals, and events.[62]

The Southern Nevada Zoological-Botanical Park, also known as the Las Vegas Zoo, used to exhibit over 150 species of animals and plants. The Zoo closed its doors in September 2013.[63]

The Shark Reef Aquarium at Mandalay Bay is the only aquarium that is accredited by the Association of Zoos and Aquariums in the state of Nevada. It features over 2,000 animals and 1,200 species in 1.6 million gallons of seawater.

The \$485 million Smith Center for the Performing Arts is located downtown in Symphony Park. The center is appropriate for Broadway shows and other major touring attractions as well as orchestral, opera, choir, jazz, and dance performances.

Bellagio Gallery of Fine Art is a facility presenting high-quality art exhibitions from major national and international museums. Past exhibits have included the works of Andy Warhol, Alexander Calder, and Peter Carl Fabergé. A self-guided audio tour is also offered.

The Las Vegas Natural History Museum features robot dinosaurs, live fish, and more than 26 species of preserved animals. There are several "hands-on" areas where animals can be petted.

The Atomic Testing Museum, affiliated with the Smithsonian Institution, houses artifacts from the Nevada Test Site and records the dramatic history of the atomic age through a series of interactive modules, timelines, films, and actual equipment and gadgets from the site.

In 2019, *The New York Times* noted that there was a "burgeoning literary scene" at Las Vegas centered around the Black Mountain Institute, a literature organization at the University of Nevada, Las Vegas, and its literary magazine, *The Believer*.[64]

The valley is home to numerous other art galleries, orchestras, ballets, theaters, sculptures, and museums as well.

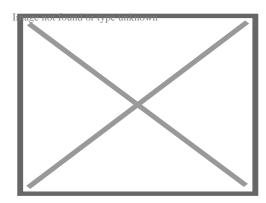
## **Festivals**

- CineVegas
- Helldorado Days
- Electric Daisy Carnival
- Feast of San Gennaro
- Las Vegas Pride Festival
- The Dam Short Film Festival[nb11]
- Life is Beautiful

C

# **Gardens**

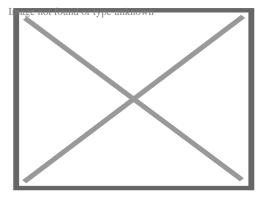
### [edit]



The Bellagio Conservatory & Botanical Gardens

- Alan Bible Botanical Garden
- Ethel M Botanical Cactus Garden
- o Bellagio Conservatory & Botanical Gardens
- o The Gardens at the Las Vegas Springs Preserve
- UNLV Arboretum

# Libraries and bookstores



The Lied Library

- The Writer's Block
- Architecture Studies Library
- Las Vegas-Clark County Library District
- Lied Library (at UNLV)
- North Las Vegas Library District

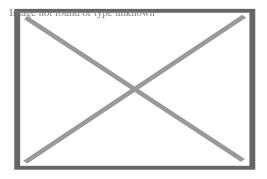
## Museums

- Atomic Testing Museum
- Burlesque Hall of Fame
- o Clark County Heritage Museum
- Discovery Children's Museum
- Erotic Heritage Museum
- Howard W. Cannon Aviation Museum
- The Linq Auto Collection
- Las Vegas Art Museum
- Las Vegas Museum of Organized Crime and Law Enforcement
- Las Vegas Natural History Museum
- Liberace Museum
- Lost City Museum[nb1 1]
- Madame Tussauds
- o Marjorie Barrick Museum (at UNLV)
- Neon Museum

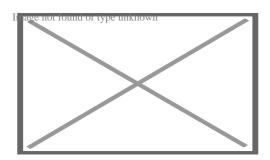
- Nevada State Museum
- Nevada Southern Railroad Museum
- Pinball Hall of Fame
- Shelby Museum
- Southern Nevada Museum of Fine Art
- Thunderbirds Museum

# Parks and attractions

## [edit]



Wildflowers in Red Rock Canyon National Conservation Area



Mount Charleston

- Acacia Demonstration Gardens
- o The Amanda & Stacy Darling Memorial Tennis Center
- Bettye Wilson Soccer Complex
- Clark County Shooting Park
- Clark County Wetlands Park
- Floyd Lamb Park at Tule Springs
- Hoover Dam[nb11]
- Lake Mead National Recreation Area[nb11]

- Las Vegas Motor Speedway
- Las Vegas Springs Preserve
- Mount Charleston[nb1 1]
- Old Las Vegas Mormon Fort State Historic Park
- o Red Rock Canyon National Conservation Area
- Spring Mountains National Recreation Area[nb11]
- Sunset Park
- Tule Springs Fossil Beds National Monument
- Valley of Fire State Park[nb11]
- o Cowabunga Canyon Waterpark[65]

## **Theaters**

## [edit]

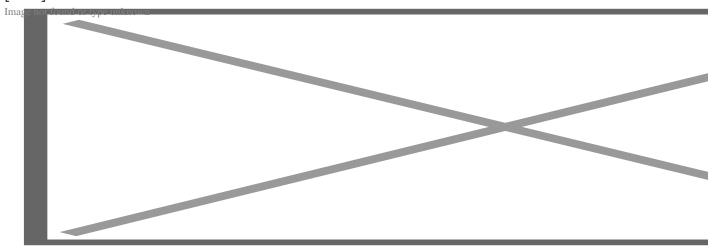
- Huntridge Theater
- Lance Burton Theatre
- Las Vegas Little Theater
- The Smith Center for the Performing Arts
- Theatre for the Performing Arts

# Wildlife

- Southern Nevada Zoological-Botanical Park
- Shark Reef at Mandalay Bay
- Siegfried & Roy's Secret Garden and Dolphin Habitat
- ^ a b c d e f g While outside of the Valley, considered to be a Las Vegas destination due to close proximity.

#### **Communities**

## [edit]



The Las Vegas Strip in 2004, as seen from the top of the Rio. The Strip is largely within Paradise.

## Cities

## [edit]

- Boulder City
- Henderson
- Las Vegas
- North Las Vegas

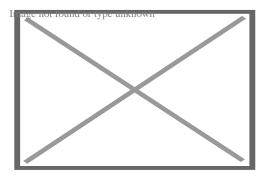
# Las Vegas neighborhoods

- Aliante
- Anthem/Anthem Country Club
- Cadence
- Centennial Hills
- Chinatown

- Downtown Las Vegas
- Green Valley
- Lake Las Vegas
- Las Vegas Country Club
- MacDonald Highlands
- o Mountain's Edge
- Paradise Palms
- Queensridge & One Queensridge Place
- o Red Rock Country Club
- Rhodes Ranch
- Seven Hills
- Southern Highlands
- Southern Highlands Golf Club
- Summerlin
- Summerlin South
- The Lakes
- The Ridges
- Tuscany Village
- West Las Vegas

# Census-designated places

## [edit]



The entrance to Summerlin, an affluent planned community

- Blue Diamond
- Enterprise

- Paradise
- Spring Valley
- Summerlin South
- Sunrise Manor
- Whitney
- Winchester

# Other communities

[edit]

Sloan

Media

[edit]

# Newspapers

- o Las Vegas Review-Journal, the area's largest daily newspaper, is published every morning. It was formed in 1909 but has roots back to 1905. It is the largest newspaper in Nevada and is ranked as one of the top 25 newspapers in the United States by circulation. In 2000, the Review-Journal installed the largest newspaper printing press in the world. It cost \$40 million, weighs 910 tons and consists of 16 towers. [66] The newspaper was owned by casino magnate Sheldon Adelson, who purchased the newspaper for \$140 million in December 2015. In 2018, the Review-Journal received the Sigma Delta Chi Award from the Society of Professional Journalists for reporting the 2017 Las Vegas shooting. In 2018, Editor and Publisher magazine named the Review-Journal as one of 10 newspapers in the United States "doing it right". [67]
- Las Vegas Sun is a daily 8-page newspaper distributed as a section of the Review-Journal. It is owned by the Greenspun family and is affiliated with Greenspun Media

Group. The Sun was founded in 1950 and in 1989 entered into a Joint Operating Agreement with the Review-Journal, which runs through 2040. It has been described as "politically liberal." [68] In 2009, the Sun was awarded a Pulitzer Prize for Public Service for coverage of the high death rate of construction workers on the Las Vegas Strip amid lax enforcement of regulations.

 Las Vegas Weekly is a free alternative weekly newspaper based in Henderson, Nevada. It covers Las Vegas arts, entertainment, culture and news. Las Vegas Weekly was founded in 1992 and is published by Greenspun Media Group.

## **Broadcast**

#### [edit]

Las Vegas is served by 22 television and 46 radio stations. The area is also served by two NOAA Weather Radio transmitters (162.55 MHz located in Boulder City and 162.40 MHz located on Mount Potosi).

- Radio stations in Las Vegas
- Television stations in Las Vegas

# **Magazines**

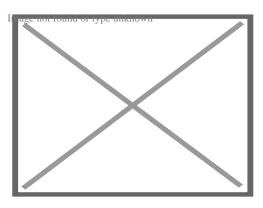
## [edit]

- Desert Companion
- Las Vegas Weekly
- Luxury Las Vegas

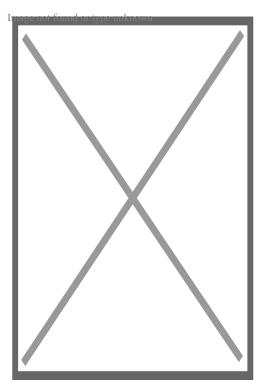
## Transportation



The Las Vegas Monorail pulling into the Sahara station in Paradise



Harry Reid International Airport Terminal 3



A JetBlue Airbus A320 taking off from Harry Reid International Airport

Harry Reid International Airport (LAS) provides commercial flights into the Las Vegas Valley. The airport serves domestic, international and cargo flights, as well as some private aircraft. General aviation traffic, however, will typically use the much smaller North Las Vegas Airport or other airfields in the county. Public transportation is provided by RTC Transit. Numerous bus routes cover Las Vegas, Henderson, North Las Vegas and other suburban areas.

The Las Vegas Monorail runs from MGM Grand Las Vegas at the south end of the Strip to the Sahara Las Vegas at the north end of the Strip. The street numbering system is divided by the following streets:

- Westcliff Drive, US 95, Fremont Street and Charleston Boulevard divide the north-south block numbers from west to east.
- Las Vegas Boulevard divides the east-west streets from the Las Vegas Strip to near the Stratosphere, then Main Street becomes the dividing line from the Stratosphere to the North Las Vegas border, after which the Goldfield Street alignment officially divides east and west.
- On the east side of Las Vegas, block numbers between Charleston Boulevard and Washington Avenue are different along Nellis Boulevard, which is the eastern border of the city limits.
- All city street signs begin with a N, S, W or E designation.

Until 1997, the Amtrak *Desert Wind* train service ran through Las Vegas using the Union Pacific Railroad (UP) rails that run through the city; Amtrak service to Las Vegas has since been replaced by Amtrak's Thruway Motorcoach bus service. Plans to restore Los Angeles to Las Vegas Amtrak service using a Talgo train have been discussed but no plan for a replacement has been implemented. The Las Vegas Amtrak station was located in the Plaza Hotel. It had the distinction of being the only train station located in a casino.

# **Airports**

#### [edit]

- Henderson Executive Airport
- Ivanpah Valley Airport (planned)
- Harry Reid International Airport
- North Las Vegas Airport

## Rail and bus

While the Las Vegas area does not have any passenger rail service, Brightline West intends to revive passenger trains with a high-speed train between the Las Vegas station and the Rancho Cucamonga station in Greater Los Angeles.

Las Vegas receives about 30 freight trains per day as of 2004, and serves as a district crew change point, requiring all trains to stop in downtown. Freight traffic was 179,284 cars in 2004.[69]

## **Existing services**

#### [edit]

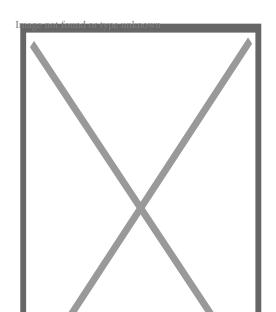
- RTC Transit
  - Las Vegas Monorail

#### **Resort trams**

## [edit]

- Aria Express
- Mandalay Bay Tram
- The Mirage-Treasure Island Tram

# Roads



## Las Vegas Boulevard looking south from the Stratosphere

Two major freeways—Interstate 15 and Interstate 11 (including US 93 and US 95)—cross in downtown Las Vegas. I-15 connects Las Vegas to Los Angeles and San Diego, and heads northeast to Salt Lake City and beyond. I-11 goes northwest to the Las Vegas Paiute Indian Reservation and southeast to Henderson, bypassing downtown Boulder City just to the south, and then to the Mike O'Callaghan—Pat Tillman Memorial Bridge over the Colorado River, from there U.S. Route 93 continues towards Phoenix, Arizona. I-11 will eventually be the connection from Nogales, Arizona to the Reno and Sparks vicinity of either Fernley or at the Reno Spaghetti Bowl in Reno when completed. US 95 connects the city to northwestern Nevada, including Carson City (the state capitol) and Reno. US 93 splits from I-15 northeast of Las Vegas and goes north through the northeastern part of the state, serving Ely and Wells and US 95 heads south from I-11 and US 93 in Boulder City through far southeastern California. A three-quarters of the Las Vegas Beltway has been built, consisting of Interstate 215 on the south and Clark County 215 on the west and north. Other radial routes include SR 160 to Pahrump and SR 147 and SR 564 (former SR 146) to Lake Mead.

With the notable exceptions of Las Vegas Boulevard, Boulder Highway and Tonopah Highway (better known as the northern part of Rancho Drive), the majority of surface streets outside downtown Las Vegas are laid out along Public Land Survey System section lines. Many are maintained, in part, by the Nevada Department of Transportation (NDOT) as state highways.

East-west roads, north to south[70]

- Elkhorn Road
- o Las Vegas Beltway (CC 215)
- Ann Road
- o Craig Road (SR 573)
- Cheyenne Avenue (SR 574)
- Carey Avenue
- o Lake Mead Boulevard (SR 147)
- Washington Avenue (SR 578)
- o Summerlin Parkway (SR 613) on the west side past Rainbow Boulevard
- o Bonanza Road (SR 579)

- o Interstate II and US 95 on the west side of the valley
- o Interstate 11, US 93 and US 95 on the east side of the valley
- o Charleston Boulevard (SR 159)
- Sahara Avenue (former SR 589)
- Desert Inn Road
- Spring Mountain Road (former SR 591)
- o Flamingo Road (SR 592)
- o Tropicana Avenue (SR 593)
- Russell Road (SR 594)
- Sunset Road (SR 562)
- Warm Springs Road
- o Blue Diamond Road (SR 160)
- o Las Vegas Beltway (I-215)
- o Lake Mead Parkway (formerly Lake Mead Drive) (SR 564)
- Horizon Ridge Parkway
- o Saint Rose Parkway (formerly Lake Mead Drive) (SR 146)

#### North-south roads, west to east

- o Las Vegas Beltway (CC 215)
- Durango Drive
- o Buffalo Drive
- o Rainbow Boulevard (SR 595)
- o lines Boulevard (SR 596)
- Decatur Boulevard
- Valley View Boulevard
- Dean Martin Drive (formerly Industrial Road)
- o Interstate 15
- o Las Vegas Boulevard (SR 604)
- Rancho Drive (SR 599)
- Paradise Road (SR 605)
- Maryland Parkway
- Eastern Avenue (SR 607)
- Pecos Road
- o Interstate 11, US 93 and US 95 south of Charleston Boulevard

- o Lamb Boulevard (SR 610)
- o Nellis Boulevard (SR 612)

## Major Freeways

- o Interstate II
- o Interstate 15
- o Las Vegas Beltway (I-215)
- o Las Vegas Beltway (CC 215)
- mage not found or type unknown
- o Summerlin Parkway (SR 613)

## **Fuel**

### [edit]

The Las Vegas area is dependent on imported gasoline, diesel and aviation fuel as is most of Nevada, which has only one refinery. The region is dependent on the Calnev Pipeline and Unev pipeline as its two main sources of supply. Limited diesel is delivered to a dedicated terminal in North Las Vegas by rail. Diversified supply was provided by the completion of construction on the Unev pipeline in 2011 and its full operational status in 2012.

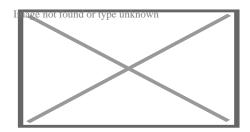
# **Electricity**

### [edit]

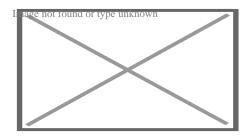
About 25% of the electric power from Hoover Dam goes to Nevada,[71] and about 70% of power to Southern Nevada comes from natural gas fired power stations.[72]

## **Sports**

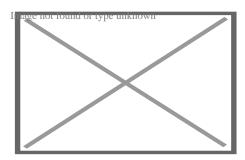
## Main article: Sports in the Las Vegas metropolitan area



Allegiant Stadium



T-Mobile Arena as seen from Toshiba Plaza



The Wynn Golf Club

Las Vegas is home to several notable minor league teams, as well as the UNLV Rebels, and three major professional teams, the Las Vegas Raiders of the National Football League, the Vegas Golden Knights of the National Hockey League, and the Las Vegas Aces of the Women's National Basketball Association. The Oakland Athletics of Major League Baseball plan to move to Las Vegas in 2028.

Professional sports teams

Club	Sport	League	Venue (capacity)	Since	Titles
Las Vegas Raiders	Football	NFL	Allegiant Stadium (65,000)	2020	3[c]
Vegas Golden Knights	Ice hockey	NHL	T-Mobile Arena (17,368)	2017	1
Las Vegas Aces	Basketball	WNBA	Michelob Ultra Arena (12,000)	2018	2
Las Vegas Aviators	Baseball	PCL	Las Vegas Ballpark (10,000)	1983	2
Henderson Silver Knights	Ice hockey	AHL	Dollar Loan Center (5,567)	2021	0

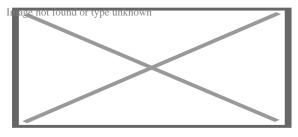
Las Vegas Lights FC	Soccer	USLC	Cashman Field (9,300)	2018	0
Las Vagas Dasart Dags	Box	NII I	Michelob Ultra Arena	2021	1
Las Vegas Desert Dogs	Lacrosse	INLL	(12.000)	2021	1

#### Recreation

#### [edit]

Las Vegas has many natural outdoor recreational options.

There are several multi-use trail systems within the valley operated by multiple organizations. The River Mountains Loop Trail is a 35-mile-long (56 km) trail that connects the west side of the valley with Hoover Dam and Lake Mead.[73] Summerlin offers more than 150 miles of award-winning trails within the 22,500-acre (9,100 ha) community.[74] There are also the 3-mile (4.8 km) Angel Park Trail, Bonanza Trail, and the county's Flamingo Arroyo Trail,[75] I-215 West Beltway Trail (5 miles (8.0 km)), I-215 East Beltway Trail (4 miles (6.4 km)), Tropicana/Flamingo Washes Trail and the Western Trails Park Area Equestrian Trails (4 miles).[76][77]



Sunset Park at dusk

The Las Vegas Valley also hosts world class mountain biking including Bootleg Canyon Mountain Bike Park located in Boulder City which boasts itself as one of the International Mountain Biking Association's "epic rides".[78]

#### **Education**

[edit]

# Primary and secondary

The Clark County School District operates all of the public primary and secondary schools in the county with the exception of 37 sponsored public charter schools.

Selected private schools

Alexander Dawson School
Bishop Gorman High School
Faith Lutheran Jr/Sr High School
The Meadows School

# Colleges and universities

#### [edit]

The University of Nevada, Las Vegas (UNLV) is in Paradise, about three miles (5 km) south of the Las Vegas city limits and roughly two miles east of the Strip. Several national colleges, including the University of Phoenix and Le Cordon Bleu, have campuses in the Las Vegas area. Nevada State College, National University and Touro University Nevada are nearby Henderson. The College of Southern Nevada has campuses in Las Vegas, North Las Vegas and Henderson. Henderson also is home to DeVry University, as well as the Roseman University of Health Sciences. The for-profit Carrington College also has a location in the Las Vegas valley.

## Venues in Las Vegas

## [edit]

- Music venues in Las Vegas
- Sports venues in Las Vegas
- City of Rock (Las Vegas)

#### See also

#### [edit]

o flag Nevada portahown

- Architecture of Las Vegas
- List of Las Vegas Strip hotels
- List of people from Las Vegas
- List of restaurants in the Las Vegas Valley
- Las Vegas shows

#### **Notes**

#### [edit]

- An outdoor swap meet located in North Las Vegas, opened as Broadacres Swap Meet in 1977.[51][52][53]
- 2. ^ Opened in 1991,[54][55] in the former Fantastik Furniture store, which originated as the Vegas Village shopping center in the 1960s.[56][57] It has more than 500 vendor booths.[58][59]
- 3. ^ Two titles were won when the team was based in Oakland, California and one was won when they were based in Los Angeles, California.

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- 2. ^ "Metropolitan Statistical Areas and Components, December 2005, with codes". Archived from the original on February 9, 2006. Retrieved March 23, 2007.
- 3. ^ "2013 Estimates". Nevada State Demographer's Office. Archived from the original on February 9, 2014. Retrieved July 17, 2014.
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#### **External links**

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Wikimedia Commons has media related to Las Vegas Valley.



## Wikivoyage has a travel guide for Las Vegas.

- CAC (Civil Applications Committee)/USGS Global Fiducials Program web page containing scientific description of the region and interactive map viewer featuring declassified high-resolution time-series imagery
- City of Las Vegas official website
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Las Vegas Valley

- Las Vegas MSA
- State of Nevada

### Airports

- Harry Reid International Airport
- North Las Vegas Airport
- Henderson Executive Airport
- Southern Nevada Supplemental Airport (planned)

## LV Transportation

- Brightline West (planned)
- Brightline West station (planned)
- Las Vegas Monorail
- RTC Transit
- Silver Rider Transit
- Resort trams
- Loop
- Amtrak station (defunct)

- 18b The Las Vegas Arts District
- Southern Nevada Zoological-Botanical Park
- Symphony Park
  - Smith Center for the Performing Arts
- Huntridge Theater
- Lance Burton Theatre
- Las Vegas Little Theater
- Majestic Repertory Theatre
- Smith Center for the Performing Arts
- o PH Live



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## Museums in Clark County, Nevada

- Bellagio Gallery of Fine Art
- Boulder City/Hoover Dam Museum
- Burlesque Hall of Fame
- Clark County Museum
- Discovery Children's Museum
- Erotic Heritage Museum
- Howard W. Cannon Aviation Museum
- Imperial Palace Auto Collection
- Las Vegas Gambling Museum
- Las Vegas Historical Society
- Las Vegas Natural History Museum

#### Active

- Lost City Museum
- Madame Tussauds Las Vegas
- Marjorie Barrick Museum of Art
- Mob Museum
- National Atomic Testing Museum
- Neon Museum
- Nevada State Museum
- Nevada Southern Railroad Museum
- o Old Las Vegas Mormon Fort State Historic Park
- Pinball Hall of Fame



- Allegiant Stadium
- Bettye Wilson Soccer Complex
- o Cashman Field
- City National Arena
- Darling Tennis Center
- Las Vegas Motor Speedway
- Las Vegas Ballpark
  - Mandalay Bay Events Center
  - MGM Grand Garden Arena
  - New Las Vegas Stadium
  - Sam Boyd Stadium
  - Sphere
  - o T-Mobile Arena
  - Thomas & Mack Center
  - Las Vegas City Hall
  - Clark County Government Center
- Government
- o Lloyd D. George Federal Courthouse
- Las Vegas Metropolitan Police Department
- o Clark County Coroner's Office

#### Cities

- Henderson
- Las Vegas
- North Las Vegas
- Blue Diamond
- Enterprise
- Paradise
- Census-designated places
- Spring Valley
- Summerlin South
- Sunrise Manor
- Whitney
- Winchester
- Aliante
- Anthem/Anthem Country Club
- Centennial Hills
- Chinatown
- Downtown Las Vegas
- Green Valley
- Lake Las Vegas
- Las Vegas Country Club
- MacDonald Highlands
- Mountain's Edge
- Paradise Palms
- Queensridge/One Queensridge Place
- Rhodes Ranch
- Seven Hills
- Southern Highlands
- Summerlin
- Summerlin South
- The Lakes
- The Ridges
- Tuscany Village
- West Las Vegas

#### **Communities**

# Neighborhoods

0	Unive	rsity o	of N	evada	a, Las ˈ	Ve	gas
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Nevada State University

# Research

- National University
- and education
- Touro University Nevada
- College of Southern Nevada
- o Roseman University of Health Sciences
- Acacia Demonstration Gardens
- Clark County Shooting Complex
- o Clark County Wetlands Park
- Floyd Lamb Park at Tule Springs
- Lake Mead National Recreation Area

# Parks and public spaces

- Springs Preserve
- Mount Charleston
- o Red Rock Canyon National Conservation Area
- o Spring Mountains National Recreation Area
- Sunset Park
- o Tule Springs Fossil Beds National Monument
- Valley of Fire State Park

- 63 CityCenter
- o Blvd
- Bonanza Gift Shop
- The Boulevard Mall
- The Shops at Crystals
- Downtown Container Park
- Downtown Summerlin
- Galleria at Sunset
- Grand Canal Shoppes

## **Area shopping**

- Fashion Show Mall
- The Forum Shops at Caesars
- o Las Vegas Premium Outlets North
- Meadows Mall
- Miracle Mile Shops
- Stratosphere Tower Shops
- The Shoppes at the Palazzo
- Tivoli Village
- Town Square
- Water Street District
- Architecture
- History
- Timeline
- Landmarks
- Other
- Skyscrapers
- Las Vegas Strip
- Restaurants
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#### State of Nevada

## Carson City (capital)

- Index
- Geography
- Government
  - Delegations
- History

## **Topics**

- Nevada Territory
- o World War II
- o People
- Symbols
- Tourist attractions
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- Crime
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## Society

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- Lake Mead
- Lake Tahoe

## **Regions**

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- Mojave Desert
- Pahranagat Valley
- Sierra Nevada
- Trout Creek Mountains
- Truckee Meadows

### **Metro** areas

- Las Vegas
- o Reno
- o Churchill
- o Clark
- Douglas
- o Elko
- o Esmeralda
- Eureka
- Humboldt

#### Counties

- Lander
- Lincoln
- Lyon
- Mineral
- Nye
- Pershing
- Storey
- Washoe
- White Pine

- o Alamo
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- Austin
- o Baker
- Battle Mountain
- Beatty
- Boulder City
- Caliente
- o Carlin
- Carson City
- o Elko
- o Ely
- Enterprise
- Eureka
- Fallon
- Fernley
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- Gerlach
- Goldfield
- Hawthorne
- Henderson
- Incline Village
- Las Vegas
- Laughlin

# Cities and communities

- Lovelock
- Mesquite
- Minden
- North Las Vegas
- o Panaca
- Pahrump
- Paradise
- o Pioche
- o Primm
- Rachel
- o Reno
- Spanish Springs
- Sparks
- Spring Crook

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## Southern California megaregion

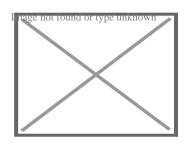
Metropolitan areas and cities in italics are located outside of California

# Metropolitan Los Angeles

- Major cities: Los Angeles
- Long Beach
- Anaheim
- Santa Ana
- Santa Clarita
- Irvine
- Glendale
- Huntington Beach
- Garden Grove
- o Major cities: San Bernardino
- Riverside
- Fontana

## **Inland Empire**

- Moreno Valley
- Ontario
- o Rancho Cucamonga
- o Corona



## San Diego-*Tijuana*

- o Major cities: San Diego
- o Tijuana
- o Chula Vista
- Oceanside
- Escondido
- Rosarito

#### **Central Coast**

- o Major cities: Santa Barbara
- Santa Maria
- San Luis Obispo

## Las Vegas Valley

- o Major cities: Las Vegas
- Henderson
- North Las Vegas

## Megapolitan areas of California

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International • VIAF

United States

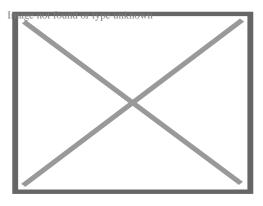
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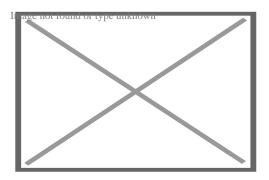
#### **About Artificial turf**

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Find sources: "Artificial turf" – news · newspapers · books · scholar · JSTOR (May 2024) (Learn how and when to remove this message)



Artificial turf with rubber crumb infill



Side view of artificial turf

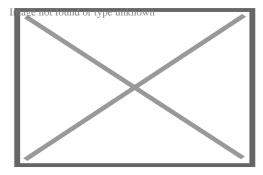
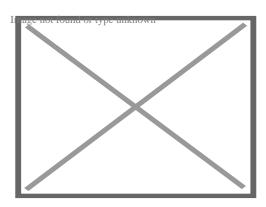


Diagram of the structure of modern artificial turf



Artificial turf square mats

Artificial turf is a surface of synthetic fibers made to look like natural grass, used in sports arenas, residential lawns and commercial applications that traditionally use grass. It is much more durable than grass and easily maintained without irrigation or trimming, although periodic cleaning is required. Stadiums that are substantially covered and/or at high latitudes often use artificial turf, as they typically lack enough sunlight for photosynthesis and substitutes for solar radiation are prohibitively expensive and energy-intensive. Disadvantages include increased risk of injury especially when used in athletic competition, as well as health and environmental concerns about the petroleum and toxic chemicals used in its manufacture.

Artificial turf first gained substantial attention in 1966, when ChemGrass was installed in the year-old Astrodome, developed by Monsanto and rebranded as AstroTurf, now a generic trademark (registered to a new owner) for any artificial turf.

The first-generation system of shortpile fibers without infill of the 1960s has largely been replaced by two more. The second features longer fibers and sand infill and the third adds recycled crumb rubber to the sand. Compared to earlier systems, modern artificial turf more closely resembles grass in appearance and is also considered safer for

athletic competition. However, it is still not widely considered to be equal to grass. Sports clubs, leagues, unions and individual athletes have frequently spoken out and campaigned against it, while local governments have enacted and enforced laws restricting and/or banning its use.

#### History

#### [edit]

David Chaney, who moved to Raleigh, North Carolina, in 1960 and later served as Dean of the North Carolina State University College of Textiles, headed the team of Research Triangle Park researchers who created the first notable artificial turf. That accomplishment led *Sports Illustrated* to declare Chaney as the man "responsible for indoor major league baseball and millions of welcome mats."

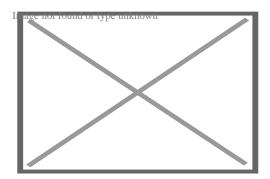
Artificial turf was first installed in 1964 on a recreation area at the Moses Brown School in Providence, Rhode Island.[1] The material came to public prominence in 1966, when AstroTurf was installed in the Astrodome in Houston, Texas.[1] The state-of-the-art indoor stadium had attempted to use natural grass during its initial season in 1965, but this failed miserably and the field conditions were grossly inadequate during the second half of the season, with the dead grass painted green. Due to a limited supply of the new artificial grass, only the infield was installed before the Houston Astros' home opener in April 1966; the outfield was installed in early summer during an extended Astros road trip and first used after the All-Star Break in July.

The use of AstroTurf and similar surfaces became widespread in the U.S. and Canada in the early 1970s, installed in both indoor and outdoor stadiums used for baseball and football. More than 11,000 artificial turf playing fields have been installed nationally.[2] More than 1,200 were installed in the U.S. in 2013 alone, according to the industry group the Synthetic Turf Council.[2]

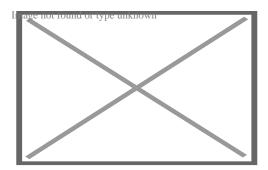
## **Sports applications**

## **Baseball**

### [edit]



Tropicana Field with its artificial turf field.

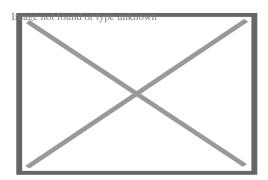


An artificial-turf field at a high school in Oregon.

Artificial turf was first used in Major League Baseball in the Houston Astrodome in 1966, replacing the grass field used when the stadium opened a year earlier. Even though the grass was specifically bred for indoor use, the dome's semi-transparent Lucite ceiling panels, which had been painted white to cut down on glare that bothered the players, did not pass enough sunlight to support the grass. For most of the 1965 season, the Astros played on green-painted dirt and dead grass.

The solution was to install a new type of artificial grass on the field, ChemGrass, which became known as AstroTurf. Given its early use, the term *astroturf* has since been genericized as a term for any artificial turf.[3] Because the supply of AstroTurf was still low, only a limited amount was available for the first home game. There was not enough for the entire outfield, but there was enough to cover the traditional grass portion of the infield. The outfield remained painted dirt until after the All-Star Break. The team was sent on an extended road trip before the break, and on July 19, 1966, the installation of the outfield portion of AstroTurf was completed.

The Chicago White Sox became the first team to install artificial turf in an outdoor stadium, as they used it only in the infield and adjacent foul territory at Comiskey Park from 1969 through 1975.[4] Artificial turf was later installed in other new multi-purpose stadiums such as Pittsburgh's Three Rivers Stadium, Philadelphia's Veterans Stadium, and Cincinnati's Riverfront Stadium. Early AstroTurf baseball fields used the traditional all-dirt path, but starting in 1970 with Cincinnati's Riverfront Stadium,[5] teams began using the "base cutout" layout on the diamond, with the only dirt being on the pitcher's mound, batter's circle, and in a five-sided diamond-shaped "sliding box" around each base. With this layout, a painted arc would indicate where the edge of the outfield grass would normally be, to assist fielders in positioning themselves properly. The last stadium in MLB to use this configuration was Rogers Centre in Toronto, when they switched to an all-dirt infield (but keeping the artificial turf) for the 2016 season.[6][7]



Artificial turf being installed on a baseball field in Queens, New York City.

The biggest difference in play on artificial turf was that the ball bounced higher than on real grass and also traveled faster, causing infielders to play farther back than they would normally so that they would have sufficient time to react. The ball also had a truer bounce than on grass so that on long throws fielders could deliberately bounce the ball in front of the player they were throwing to, with the certainty that it would travel in a straight line and not be deflected to the right or left. The biggest impact on the game of "turf", as it came to be called, was on the bodies of the players. The artificial surface, which was generally placed over a concrete base, had much less give to it than a traditional dirt and grass field did, which caused more wear-and-tear on knees, ankles, feet, and the lower back, possibly even shortening the careers of those players who played a significant portion of their games on artificial surfaces. Players also complained that the turf was much hotter than grass, sometimes causing the metal spikes to burn their feet or plastic ones to melt. These factors eventually provoked a number of stadiums, such as the Kansas City Royals' Kauffman Stadium, to switch from artificial turf back to natural grass.

In 2000, St. Petersburg's Tropicana Field became the first MLB field to use a thirdgeneration artificial surface, FieldTurf. All other remaining artificial turf stadiums were either converted to third-generation surfaces or were replaced entirely by new natural grass stadiums. In a span of 13 years, between 1992 and 2005, the National League went from having half of its teams using artificial turf to all of them playing on natural grass. With the replacement of Minneapolis's Hubert H. Humphrey Metrodome by Target Field in 2010, only two MLB stadiums used artificial turf from 2010 through 2018: Tropicana Field and Toronto's Rogers Centre. This number grew to three when the Arizona Diamondbacks switched Chase Field to artificial turf for the 2019 season; the stadium had grass from its opening in 1998 until 2018, but the difficulty of maintaining the grass in the stadium, which has a retractable roof and is located in a desert city, was cited as the reason for the switch.[8] In 2020, Miami's Marlins Park (now loanDepot Park) also switched to artificial turf for similar reasons, while the Texas Rangers' new Globe Life Field was opened with an artificial surface, as it is also a retractable roof ballpark in a hot weather city; this puts the number of teams using synthetic turf in MLB at five as of 2023.

## American football

### [edit]

The first professional American football team to play on artificial turf was the Houston Oilers, then part of the American Football League, who moved into the Astrodome in 1968, which had installed AstroTurf two years prior. In 1969, the University of Pennsylvania's Franklin Field in Philadelphia, at the time also home field of the Philadelphia Eagles, switched from grass to AstroTurf, making it the first National Football League stadium to use artificial turf.

In 2002, CenturyLink Field, originally planned to have a natural grass field, was instead surfaced with FieldTurf upon positive reaction from the Seattle Seahawks when they played on the surface at their temporary home of Husky Stadium during the 2000 and 2001 seasons. This would be the first of a leaguewide trend taking place over the next several seasons that would not only result in teams already using artificial surfaces for their fields switching to the new FieldTurf or other similar surfaces but would also see

several teams playing on grass adopt a new surface. (The Indianapolis Colts' RCA Dome and the St. Louis Rams' Edward Jones Dome were the last two stadiums in the NFL to replace their first-generation AstroTurf surfaces for next-generation ones after the 2004 season). For example, after a three-year experiment with a natural surface, Giants Stadium went to FieldTurf for 2003, while M&T Bank Stadium added its own artificial surface the same year (it has since been removed and replaced with a natural surface, which the stadium had before installing the turf). Later examples include Paul Brown Stadium (now Paycor Stadium), which went from grass to turf in 2004; Gillette Stadium, which made the switch in 2006;[9] and NRG Stadium, which did so in 2015. As of 2021, 14 NFL fields out of 30 are artificial. NFL players overwhelmingly prefer natural grass over synthetic surfaces, according to a league survey conducted in 2010. When asked, "Which surface do you think is more likely to shorten your career?", 90% responded artificial turf.[10] When players were asked "Is the Turf versus Grass debate overblown or a real concern"[11] in an anonymous player survey, 83% believe it is a real concern while 12.3% believe it is overblown.

Following receiver Odell Beckham Jr.'s injury during Super Bowl LVI, other NFL players started calling for turf to be banned since the site of the game, SoFi Stadium, was a turf field.[12]

Arena football is played indoors on the older short-pile artificial turf.

## Canadian football

#### [edit]

The first professional Canadian football stadium to use artificial turf was Empire Stadium in Vancouver, British Columbia, then home of the Canadian Football League's BC Lions, which installed 3M TartanTurf in 1970. Today, eight of the nine stadiums in the CFL currently use artificial turf, largely because of the harsh weather conditions in the latter-half of the season. The only one that does not is BMO Field in Toronto, which initially had an artificial pitch and has been shared by the CFL's Toronto Argonauts since 2016 (part of the endzones at that stadium are covered with artificial turf).[13] The first stadium to use the next-generation surface was Ottawa's Frank Clair Stadium (now TD Place Stadium), which the Ottawa Renegades used when they began play in 2002. The

Saskatchewan Roughriders' Taylor Field was the only major professional sports venue in North America to use a second-generation artificial playing surface, Omniturf, which was used from 1988 to 2000, followed by AstroTurf from 2000 to 2007 and FieldTurf from 2007 to its 2016 closure.[14]

## **Cricket**

#### [edit]

Some cricket pitches are made of synthetic grass[15] or of a hybrid of mostly natural and some artificial grass, with these "hybrid pitches" having been implemented across several parts of the United Kingdom[16] and Australia.[17] The first synthetic turf cricket field in the USA was opened in Fremont, California in 2016.[18]

## Field hockey

#### [edit]

Further information: Field hockey history § The synthetic revolution

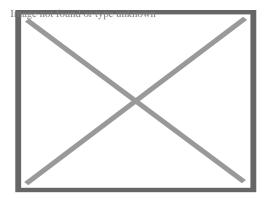
The introduction of synthetic surfaces has significantly changed the sport of field hockey. Since being introduced in the 1970s, competitions in western countries are now mostly played on artificial surfaces. This has increased the speed of the game considerably and changed the shape of hockey sticks to allow for different techniques, such as reverse stick trapping and hitting.

Field hockey artificial turf differs from artificial turf for other sports, in that it does not try to reproduce a grass feel, being made of shorter fibers. This allows the improvement in speed brought by earlier artificial turfs to be retained. This development is problematic for areas which cannot afford to build an extra artificial field for hockey alone. The International Hockey Federation and manufacturers are driving research in order to produce new fields that will be suitable for a variety of sports.

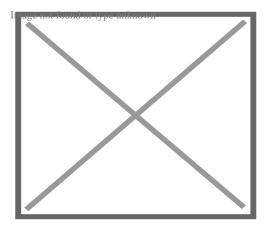
The use of artificial turf in conjunction with changes in the game's rules (e.g., the removal of offside, introduction of rolling substitutes and the self-pass, and to the interpretation of obstruction) have contributed significantly to change the nature of the game, greatly increasing the speed and intensity of play as well as placing far greater demands on the conditioning of the players.

## **Association football**

#### [edit]



Aspmyra, Norway: home of the football club FK Bodø/Glimt



A slide tackle driving up crumbed rubber in the playing surface

The use of artificial turf, and whether they are not allowed or not, varies between different tournaments and time periods. Though grass is preferred in general in association football, artificial turf is found in areas where it is seen as impractical to maintain natural grass season-long, with causes including very cold climates (For instance Norway's Eliteserien) or multi-purpose stadiums (Seattle's Lumen Field).

#### Use permitted

#### [edit]

- UEFA Champions League (2005–)
- UEFA Europa League (2005–)
- UEFA Conference League
- FIFA national team matches (200?–)
- UEFA national team matches (2005–)
- FA Cup
- Swiss Super League
- Allsvenskan
- Danish Superliga
- Eliteserien
- Veikkausliiga
- Meistriliiga
- Cymru Premier
- CONMEBOL tournaments[19]
- o Campeonato Brasileiro Série A (2016-)
- o Bolivian Primera División[19]
- Major League Soccer

#### Use prohibited

#### [edit]

- Football League First Division / Premier League (1991–)
- o Football League tiers 2-4 (1995-)
- Indian Super League (2015–)
- o Eredivisie (2025–)
- Scottish Premiership (2026–)[20]

### **History in United Kingdom**

[edit]

Some association football clubs in Europe installed synthetic surfaces in the 1980s, which were called "plastic pitches" (often derisively) in countries such as England. There, four professional club venues had adopted them; Queens Park Rangers's Loftus Road (1981–1988), Luton Town's Kenilworth Road (1985–1991), Oldham Athletic's Boundary Park (1986–1991) and Preston North End's Deepdale (1986–1994). QPR had been the first team to install an artificial pitch at their stadium in 1981, but were the first to remove it when they did so in 1988.

Artificial pitches were banned from top-flight (then First Division) football in 1991, forcing Oldham Athletic to remove their artificial pitch after their promotion to the First Division in 1991, while then top-flight Luton Town also removed their artificial pitch at the same time. The last Football League team to have an artificial pitch in England was Preston North End, who removed their pitch in 1994 after eight years in use. Artificial pitches were banned from the top four divisions from 1995.

Artificial turf gained a bad reputation neutrality is disputed globally, with fans and especially with players. The first-generation artificial turf surfaces were carpet-like in their look and feel, and thus, a far harder surface than grass and soon became known by whom as an unforgiving playing surface that was prone to cause more injuries, and in particular, more serious joint injuries, than would comparatively be suffered on a grass surface. This turf was also regarded as aesthetically unappealing to many fans weasel words

In 1981, London football club Queens Park Rangers dug up its grass pitch and installed an artificial one. Others followed, and by the mid-1980s there were four artificial surfaces in operation in the English league. They soon became a national joke: the ball pinged round like it was made of rubber, the players kept losing their footing, and anyone who fell over risked carpet burns. Unsurprisingly, fans complained that the football was awful to watch and, one by one, the clubs returned to natural grass.[21]

In November 2011, it was reported that a number of English football clubs were interested in using artificial pitches again on economic grounds.[22] As of January 2020, artificial pitches are not permitted in the Premier League or Football League but are permitted in the National League and lower divisions. Bromley are an example of an English football club who currently use a third-generation artificial pitch.[23] In 2018,

Sutton United were close to achieving promotion to the Football League and the debate in England about artificial pitches resurfaced again. It was reported that, if Sutton won promotion, they would subsequently be demoted two leagues if they refused to replace their pitch with natural grass.[24] After Harrogate Town's promotion to the Football League in 2020, the club was obliged to install a natural grass pitch at Wetherby Road;[25] and after winning promotion in 2021 Sutton Utd were also obliged to tear up their artificial pitch and replace it with grass, at a cost of more than £500,000.[26] Artificial pitches are permitted in all rounds of the FA Cup competition.

#### History elsewhere

#### [edit]

In the 1990s, many North American soccer clubs also removed their artificial surfaces and re-installed grass, while others moved to new stadiums with state-of-the-art grass surfaces that were designed to withstand cold temperatures where the climate demanded it. The use of artificial turf was later banned by FIFA, UEFA and by many domestic football associations, but FIFA and UEFA allowed it again from the mid-2000's (UEFA from the 2005-06 season onwards), provided that the turfs are FIFA Recommended. UEFA has now been heavily involved in programs to test artificial turf, with tests made in several grounds meeting with FIFA approval. A team of UEFA, FIFA and German company Polytan conducted tests in the Stadion Salzburg Wals-Siezenheim in Salzburg, Austria which had matches played on it in UEFA Euro 2008. It is the second FIFA 2 Star approved artificial turf in a European domestic top flight, after Dutch club Heracles Almelo received the FIFA certificate in August 2005.[27] The tests were approved.[28]

FIFA originally launched its FIFA Quality Concept in February 2001.

A full international fixture for the 2008 European Championships was played on October 17, 2007, between England and Russia on an artificial surface, which was installed to counteract adverse weather conditions, at the Luzhniki Stadium in Moscow.[29][30] It was one of the first full international games to be played on such a surface approved by FIFA and UEFA. The latter ordered the 2008 European Champions League final hosted in the same stadium in May 2008 to place on grass, so a temporary natural grass field was installed just for the final.

In 2007, UEFA stressed that artificial turf should only be considered an option where climatic conditions necessitate.[31] One Desso "hybrid grass" product incorporates both natural grass and artificial elements.[32]

In June 2009, following a match played at Estadio Ricardo Saprissa in Costa Rica, American national team manager Bob Bradley called on FIFA to "have some courage" and ban artificial surfaces.[33]

FIFA designated a star system for artificial turf fields that have undergone a series of tests that examine quality and performance based on a two star system.[34]
Recommended two-star fields may be used for FIFA Final Round Competitions as well as for UEFA Europa League and Champions League matches.[35] There are currently 130 FIFA Recommended 2-Star installations in the world.[36]

In 2009, FIFA launched the Preferred Producer Initiative to improve the quality of artificial football turf at each stage of the life cycle (manufacturing, installation and maintenance).[37] Currently, there are five manufacturers that were selected by FIFA: Act Global, Limonta, Desso, GreenFields, and Edel Grass. These firms have made quality guarantees directly to FIFA and have agreed to increased research and development.

In 2010, Estadio Omnilife with an artificial turf opened in Guadalajara to be the new home of Chivas, one of the most popular teams in Mexico. The owner of Chivas, Jorge Vergara, defended the reasoning behind using artificial turf because the stadium was designed to be "environment friendly and as such, having grass would result [in] using too much water."[38] Some players criticized the field, saying its harder surface caused many injuries. When Johan Cruyff became the adviser of the team, he recommended the switch to natural grass, which the team did in 2012.[39]

The 2015 FIFA Women's World Cup took place entirely on artificial surfaces, as the event was played in Canada, where almost all of the country's stadiums use artificial turf due to climate issues. This plan garnered criticism from players and fans, some believing the artificial surfaces make players more susceptible to injuries. Over fifty of the female athletes protested against the use of artificial turf on the basis of gender discrimination.[40][41] Australia winger Caitlin Foord said that after playing 90 minutes there was no difference to her post-match recovery – a view shared by the rest of the squad. The squad spent much time preparing on the surface and had no problems with its use in Winnipeg. "We've been training on [artificial] turf pretty much all year so I think we're

kind of used to it in that way ... I think grass or turf you can still pull up sore after a game so it's definitely about getting the recovery in and getting it right", Foord said.[42] A lawsuit was filed on October 1, 2014, in an Ontario tribunal court by a group of women's international soccer players against FIFA and the Canadian Soccer Association and specifically points out that in 1994 FIFA spent \$2 million to plant natural grass over artificial turf in New Jersey and Detroit.[43] Various celebrities showed their support for the women soccer players in defense of their lawsuit, including actor Tom Hanks, NBA player Kobe Bryant and U.S. men's soccer team keeper Tim Howard. Even with the possibility of boycotts, FIFA's head of women's competitions, Tatjana Haenni, made it clear that "we play on artificial turf and there's no Plan B."[44][45]

The first stadium to use artificial turf in Brazil was Atlético Paranaense's Arena da Baixada in 2016. In 2020, the administration of Allianz Parque, home of Sociedade Esportiva Palmeiras, started the implementation of the second artificial pitch in the country.[46]

In 2024, the Eredivisie banned artificial turfs, meaning hybrid grass and natural grass became mandatory, starting from the 2025-26 season.[47]

In UEFA tournaments, teams who are used to playing on artificial turf are seen as having a large home advantage against teams who don't, as was the case for Bodø/Glimt's semi-final campaign in the 2024–25 UEFA Europa League.[48]

## Rugby union

#### [edit]

Rugby union also uses artificial surfaces at a professional level. Infill fields are used by English Premiership Rugby teams Gloucester, Newcastle Falcons, Saracens F.C. and the now defunct Worcester Warriors, as well as United Rugby Championship teams Cardiff, Edinburgh and Glasgow Warriors. Some fields, including Twickenham Stadium, have incorporated a hybrid field, with grass and synthetic fibers used on the surface. This allows for the field to be much more hard wearing, making it less susceptible to weather conditions and frequent use.

## **Tennis**

#### [edit]

Main article: Tennis court

Carpet has been used as a surface for indoor tennis courts for decades, though the first carpets used were more similar to home carpets than a synthetic grass. After the introduction of AstroTurf, it came to be used for tennis courts, both indoor and outdoor, though only a small minority of courts use the surface.[49][50] Both infill and non-infill versions are used, and are typically considered medium-fast to fast surfaces under the International Tennis Federation's classification scheme.[49] A distinct form found in tennis is an "artificial clay" surface,[49] which seeks to simulate a clay court by using a very short pile carpet with an infill of the same loose aggregate used for clay courts that rises above the carpet fibers.[49]

Tennis courts such as Wimbledon are considering using an artificial hybrid grass to replace their natural lawn courts. Such systems incorporate synthetic fibers into natural grass to create a more durable surface on which to play.[51] Such hybrid surfaces are currently used for some association football stadiums, including Wembley Stadium.

## Golf

#### [edit]

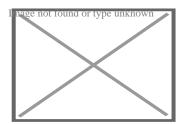
This section **does not cite any sources**. Please help improve this section by adding citations to reliable sources. Unsourced material may be challenged and removed. (October 2021) (Learn how and when to remove this message)

Synthetic turf can also be used in the golf industry, such as on driving ranges, putting greens and even in some circumstances tee boxes. For low budget courses, particularly those catering to casual golfers, synthetic putting greens offer the advantage of being a relatively cheap alternative to installing and maintaining grass greens, but are much more similar to real grass in appearance and feel compared to sand greens which are

the traditional alternative surface. Because of the vast areas of golf courses and the damage from clubs during shots, it is not feasible to surface fairways with artificial turf.

## Pesäpallo

#### [edit]



The surface on Veikkolan pesäpallostadion in Lappajärvi.

Though all pesäpallo teams in the higher leagues (including Superpesis) play on clay courts, several teams' stadiums use carpet-type artificial grass below the clay.

## **Motor racing**

#### [edit]

Artificial grass is used to line the perimeter of some sections of some motor circuits, and offers less grip than some other surfaces.[52] It can pose an obstacle to drivers if it gets caught on their car.[53]

### Other applications

[edit]

## Landscaping

#### [edit]



A home's yard with artificial grass.

Since the early 1990s, the use of synthetic grass in the more arid western states of the United States has moved beyond athletic fields to residential and commercial landscaping.[54] New water saving programs, as of 2019, which grant rebates for turf removal, do not accept artificial turf as replacement and require a minimum of plants.[55][56]

The use of artificial grass for convenience sometimes faces opposition: Legislation frequently seeks to preserve natural gardens and fully water permeable surfaces, therefore restricting the use of hardscape and plantless areas, including artificial turf. In several locations in different countries, homeowners have been fined, ordered to remove artificial turf and/or had to defend themselves in courts. Many of these restrictions can be found in local bylaws and ordinances. These not always applied in a consistent manner,[57][58][59] especially in municipalities that utilize a complaint-based model for enforcing local laws.

Sunlight reflections from nearby windows can cause artificial turf to melt. This can be avoided by adding perforated vinyl privacy window film adhesive to the outside of the window causing the reflection.

## **Airports**

#### [edit]

Artificial turf has been used at airports.[60] Here it provides several advantages over natural turf – it does not support wildlife, it has high visual contrast with runways in all seasons, it reduces foreign object damage (FOD) since the surface has no rocks or clumps, and it drains well.[61]

Some artificial turf systems allow for the integration of fiber-optic fibers into the turf. This would allow for runway lighting to be embedded in artificial landing surfaces for aircraft (or lighting or advertisements to be directly embedded in a playing surface).[62]

## Tanks for octopuses

#### [edit]

Artificial turf is commonly used for tanks containing octopusses, in particular the Giant Pacific octopus since it is a reliable way to prevent the octopusses from escaping their tank, as they prevent the suction cups on the tentacles from getting a tight seal.[63]

#### **Environmental and safety concerns**

[edit]

## **Environmental footprint**

#### [edit]

The first major academic review of the environmental and health risks and benefits of artificial turf was published in 2014;[64] it was followed by extensive research on possible risks to human health, but holistic analyses of the environmental footprint of artificial turf compared with natural turf only began to emerge in the 2020s,[65][66] and frameworks to support informed policymaking were still lacking.[67][68] Evaluating the relative environmental footprints of natural and artificial turf is complex, with outcomes depending on a wide range of factors, including (to give the example of a sports field):[64]

- o what ecosystem services are lost by converting a site to a sports pitch
- how resource-intensive is the landscaping work and transport of materials to create a pitch
- whether input materials are recycled and whether these are recycled again at the end of the pitch's life
- how resource-intensive and damaging maintenance is (whether through water, fertiliser, weed-killer, reapplication of rubber crumb, snow-clearing, etc.)
- how intensively the facility is used, for how long, and whether surface type can reduce the overall number of pitches required

Artificial turf has been shown to contribute to global warming by absorbing significantly more radiation than living turf and, to a lesser extent, by displacing living plants that could sequester carbon dioxide through photosynthesis;[69] a study at New Mexico State University found that in that environment, water-cooling of artificial turf can demand as much water as natural turf.[70] However, a 2022 study that used real-world data to model a ten-year-life-cycle environmental footprint for a new natural-turf soccer field compared with an artificial-turf field found that the natural-turf field contributed twice as much to global warming as the artificial one (largely due to a more resource-intensive construction phase), while finding that the artificial turf would likely cause more pollution of other kinds. It promoted improvements to usual practice such as the substitution of cork for rubber in artificial pitches and more drought-resistant grasses and electric mowing in natural ones.[65] In 2021, a Zurich University of Applied Sciences study for the city of Zurich, using local data on extant pitches, found that, per hour of use, natural turf had the lowest environmental footprint, followed by artificial turf with no infill, and then artificial turf using an infill (e.g. granulated rubber). However, because it could tolerate more hours of use, unfilled artificial turf often had the lowest environmental footprint in practice, by reducing the total number of pitches required. The study recommended optimising the use of existing pitches before building new ones, and choosing the best surface for the likely intensity of use.[66] Another suggestion is the introduction of green roofs to offset the conversion of grassland to artificial turf.[71]

### **Maintenance**

[edit]

Contrary to popular belief, artificial turf is not maintenance free. It requires regular maintenance, such as raking and patching, to keep it functional and safe.[72]

## Pollution and associated health risks

[edit]

#### Further information: Artificial turf-cancer hypothesis

Some artificial turf uses infill such as silicon sand, but most uses granulated rubber, referred to as "crumb rubber". Granulated rubber can be made from recycled car tires and may carry heavy metals, PFAS chemicals, and other chemicals of environmental concern. The synthetic fibers of artificial turf are also subject to degradation. Thus chemicals from artificial turfs leach into the environment, and artificial turf is a source of microplastics pollution and rubber pollution in air, fresh-water, sea and soil environments. [73][74][75][76][77][78][64] excessive citations In Norway, Sweden, and at least some other places, the rubber granulate from artificial turf infill constitutes the second largest source of microplastics in the environment after the tire and road wear particles that make up a large portion of the fine road debris. [79][80][81] As early as 2007, Environment and Human Health, Inc., a lobby-group, proposed a moratorium on the use of ground-up rubber tires in fields and playgrounds based on health concerns; [82] in September 2022, the European Commission made a draft proposal to restrict the use of microplastic granules as infill in sports fields. [83]

What is less clear is how likely this pollution is in practice to harm humans or other organisms and whether these environmental costs outweigh the benefits of artificial turf, with many scientific papers and government agencies (such as the United States Environmental Protection Agency) calling for more research.[2] A 2018 study published in Water, Air, & Soil Pollution analyzed the chemicals found in samples of tire crumbs, some used to install school athletic fields, and identified 92 chemicals only about half of which had ever been studied for their health effects and some of which are known to be carcinogenic or irritants. It stated "caution would argue against use of these materials where human exposure is likely, and this is especially true for playgrounds and athletic playing fields where young people may be affected".[84] Conversely, a 2017 study in Sports Medicine argued that "regular physical activity during adolescence and early adulthood helps prevent cancer later in life. Restricting the use or availability of all-weather year-round synthetic fields and thereby potentially reducing exercise could, in the long run, actually increase cancer incidence, as well as cardiovascular disease and other chronic illnesses."[85]

The possibility that carcinogenic substances in artificial turf could increase risks of human cancer (the artificial turf-cancer hypothesis) gained a particularly high profile in the first decades of the twenty-first century and attracted extensive study, with

scientific reports around 2020 finding cancer-risks in modern artificial turf negligible. [86][87][88][89] But concerns have extended to other human-health risks, such as endocrine disruption that might affect early puberty, obesity, and children's attention spans. [90][91][92][93] Potential harm to fish[75] and earthworm[94] populations has also been shown.

A study for the New Jersey Department of Environmental Protection analyzed lead and other metals in dust kicked into the air by physical activity on five artificial turf fields. The results suggest that even low levels of activity on the field can cause particulate matter containing these chemicals to get into the air where it can be inhaled and be harmful. The authors state that since no level of lead exposure is considered safe for children, "only a comprehensive mandated testing of fields can provide assurance that no health hazard on these fields exists from lead or other metals used in their construction and maintenance."[95]

## Kinesiological health risks

#### [edit]

A number of health and safety concerns have been raised about artificial turf.[2] Friction between skin and older generations of artificial turf can cause abrasions and/or burns to a much greater extent than natural grass.[96] Artificial turf tends to retain heat from the sun and can be much hotter than natural grass with prolonged exposure to the sun.[97]

There is some evidence that periodic disinfection of artificial turf is required as pathogens are not broken down by natural processes in the same manner as natural grass. Despite this, a 2006 study suggests certain microbial life is less active in artificial turf.[96]

There is evidence showing higher rates of player injury on artificial turf. By November 1971, the injury toll on first-generation artificial turf had reached a threshold that resulted in congressional hearings by the House subcommittee on commerce and finance. [98][99][100] In a study performed by the National Football League Injury and Safety Panel, published in the October 2012 issue of the *American Journal of Sports* 

Medicine, Elliott B. Hershman et al. reviewed injury data from NFL games played between 2000 and 2009, finding that "the injury rate of knee sprains as a whole was 22% higher on FieldTurf than on natural grass. While MCL sprains did not occur at a rate significantly higher than on grass, rates of ACL sprains were 67% higher on FieldTurf."[ 101] Metatarsophalangeal joint sprain, known as "turf toe" when the big toe is involved, is named from the injury being associated with playing sports on rigid surfaces such as artificial turf and is a fairly common injury among professional American football players. Artificial turf is a harder surface than grass and does not have much "give" when forces are placed on it.[102]

#### See also

#### [edit]

- International Association for Sports Surface Sciences
- List of college football stadiums with non-traditional field colors
- Poly-Turf
- The Flying Grass Carpet

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#### [edit]

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# Authority control databases: National mage not denited Strategy

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## Things To Do in



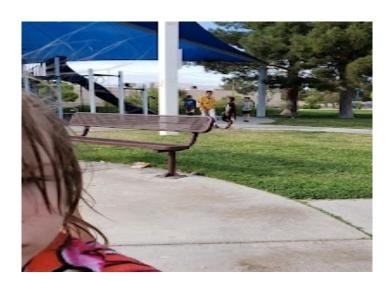
**Buckskin Basin Park** 

4.4 (453)



### Pioneer Park

4.5 (466)



Nicholas E. Flores Jr.Park

4.2 (325)



Doc Romeo Park

4.4 (479)



#### **Aloha Shores Park**

4.4 (198)



Children's Memorial Park

4.5 (1101)



**Durango Hills Park Pickleball Courts** 

4.6 (273)



#### **Ed Fountain Park**

4.4 (1371)



Las Vegas Mini Grand Prix Family Fun Center

4.4 (4312)

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**Driving Directions From TURFIT LAS VEGAS to** 

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**Driving Directions From TurFresh to** 

**Driving Directions From SYNLawn Las Vegas to** 

**Driving Directions From Synthetic Grass Warehouse to** 

**Driving Directions From Realturf Las Vegas to** 

#### Driving Directions From [AGW] Artificial Grass Wholesale LLC to

Driving Directions From Everything Turf Pros - Artificial Turf - Artificial Grass - Las Vegas to

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https://www.google.com/maps/dir/Synthetic+Grass+Warehouse/Rock+N+Block+-+Turf+N+Hardscapes/@36.0665296,-115.2158121,14z/data=!3m1!4b1!4m14!4m13!1m5!1m1!1sChlJAQBAQoTGylAR2PlduTYWHTs!2m2!1d-115.2158121!2d36.0665296!1m5!1m1!1sChlJD11n\_FrrylARH8EGWmcGnAE!2m2!1d-115.2343937!2d36.2187971!3e0

https://www.google.com/maps/dir/Realturf+Las+Vegas/Rock+N+Block+-+Turf+N+Hardscapes/@36.2410963,-115.1205544,14z/data=!3m1!4b1!4m14!4m13!1m5!1m1!1sChlJQwgkibTpylARmaElgLXFZqk!2m2!1d-115.1205544!2d36.2410963!1m5!1m1!1sChlJD11n\_FrrylARH8EGWmcGnAE!2m2!1d-115.2343937!2d36.2187971!3e1

https://www.google.com/maps/dir/Purchase+Green+Artificial+Grass+North+Las+Vegas/Rock+N+Blo+Turf+N+Hardscapes/@36.2388488,115.1159838,14z/data=!3m1!4b1!4m14!4m13!1m5!1m1!1sChlJ69w90lzCylARjglk6aQ7apl!2m2!1d115.1159838!2d36.2388488!1m5!1m1!1sChlJD11n\_FrrylARH8EGWmcGnAE!2m2!1d115.2343937!2d36.2187971!3e3

**Driving Directions From Fountains of Bellagio to** 

**Driving Directions From Suncoast Hotel and Casino to** 

#### **Driving Directions From Paris Las Vegas to**

#### **Driving Directions From Encore Las Vegas to**

https://www.google.com/maps/dir/Paris+Las+Vegas/Rock+N+Block+-+Turf+N+Hardscapes/@36.112462,-115.1707075,14z/data=!3m1!4b1!4m14!4m13!1m5!1m1!1sunknown!2m2!1d-115.1707075!2d36.112462!1m5!1m1!1sChlJD11n\_FrrylARH8EGWmcGnAE!2m2!1d-115.2343937!2d36.2187971!3e0

https://www.google.com/maps/dir/Kiel+Ranch+Historic+Site/Rock+N+Block+-+Turf+N+Hardscapes/@36.2032787,-115.1404553,14z/data=!3m1!4b1!4m14!4m13!1m5!1m1!1sunknown!2m2!1d-115.1404553!2d36.2032787!1m5!1m1!1sChlJD11n\_FrrylARH8EGWmcGnAE!2m2!1d-115.2343937!2d36.2187971!3e2

https://www.google.com/maps/dir/Caesars+Palace/Rock+N+Block+-+Turf+N+Hardscapes/@36.1172612,-115.176141,14z/data=!3m1!4b1!4m14!4m13!1m5!1m1!1sunknown!2m2!1d-115.176141!2d36.1172612!1m5!1m1!1sChlJD11n\_FrrylARH8EGWmcGnAE!2m2!1d-115.2343937!2d36.2187971!3e1

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https://www.google.com/maps/dir/Flamingo+Las+Vegas/Rock+N+Block+-+Turf+N+Hardscapes/@36.1166377,-115.1703905,14z/data=!3m1!4b1!4m14!4m13!1m5!1m1!1sunknown!2m2!1d-115.1703905!2d36.1166377!1m5!1m1!1sChlJD11n\_FrryIARH8EGWmcGnAE!2m2!1d-115.2343937!2d36.2187971!3e0 https://www.google.com/maps/dir/Suncoast+Hotel+and+Casino/Rock+N+Block+-+Turf+N+Hardscapes/@36.1689957,-115.2908908,14z/data=!3m1!4b1!4m14!4m13!1m5!1m1!1sunknown!2m2!1d-115.2908908!2d36.1689957!1m5!1m1!1sChlJD11n\_FrrylARH8EGWmcGnAE!2m2!1d-115.2343937!2d36.2187971!3e2

https://www.google.com/maps/dir/Floyd+Lamb+Park/Rock+N+Block+-+Turf+N+Hardscapes/@36.3215465,-115.2685145,14z/data=!3m1!4b1!4m14!4m13!1m5!1m1!1sunknown!2m2!1d-115.2685145!2d36.3215465!1m5!1m1!1sChlJD11n\_FrrylARH8EGWmcGnAE!2m2!1d-115.2343937!2d36.2187971!3e1

https://www.google.com/maps/dir/Fountains+of+Bellagio/Rock+N+Block+-+Turf+N+Hardscapes/@36.1127187,115.1739109,14z/data=!3m1!4b1!4m14!4m13!1m5!1m1!1sunknown!2m2!1d115.1739109!2d36.1127187!1m5!1m1!1sChlJD11n\_FrrylARH8EGWmcGnAE!2m2!1d115.2343937!2d36.2187971!3e3

#### **Reviews for**



Josh Bodell

(5)

Eric and team did an amazing job. They worked with me for months while I got HOA approval for the project. Once they began working they were great, going over everything in detail and making sure things were perfect. This project included wall repair, stucco and paint repair, paver and turf installation. Extremely satisfied with this experience.



Shana Shapiro

(5)

Chris, the design consultant, Dave the production manager, along with their install team Opulent were affordable, upfront with costs, efficient and professional. Attached are some before and after pictures. Highly recommend their services.



#### Dawna OgleYohe

(5)

My initial contact was with Ray, whom did an excellent job giving me an estimate on what I wanted done in my small yard and walkway., the guys that came out and did the work were superior. They did an excellent job. I'm very pleased with this company. I will highly recommend them to family and friends, and I will be using them in the near future for other little projects.



#### Zachary Maley

(5)

Albert and his team at RockNBlock are the definition of true professionals. At the end of our project, there were a couple of outstanding issues. When Albert heard I was dissatisfied with the original work, he immediately called me to discuss the next steps. After coming over and walking the property, he came up with multiple solutions to the issues, and his team started the following Tuesday. Within a couple of days, our backyard has never looked better. They did an unbelievable job and went above and beyond anything we expected. I can not recommend this crew enough. It is rare to find vendors who will go out of their way to ensure their customers are 100% happy. For any landscaping projects around the valley – going with RockNBlock is a safe bet.



#### **Rob Foster**

(5)

We have been working with AI and the team for many years (8) to be exact. We have had the pleasure of working with many of their clients throughout this time and we absolutely love how their clients are so pleased with the work they do and the outcome of the projects! The sales team and staff have been very supportive and professional and that's hard to come by. We look forward to many more years of this partnership with a very positive and motivated company that's always looking out for the best interests of the community!

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