EPICENTER SUSTAINABLE URBAN DISTRICT, Las Vegas USA

JRDV Urban International was selected to lead the design of the Las Vegas Sports and Innovation District. The plan positioning Las Vegas to attract Innovation Companies and to have a sustainable economy that enables the City to grow dynamically into the Future requires smart cities infrastructure, integrated interoperability and the demonstration of next generation technologies.

It provided an environmental foundation for a more diversified economic base, innovative workforce and knowledge distribution centers that improve the lives of the City's diverse resident population and attracts the knowledge-based economy professionals.

Epicenter established a "living lab" model within Las Vegas that can transform downtown into a climate adapted, activated, walkable city that will allow the economy to grow dynamically into the Future and demonstrate such capabilities to other urban centers.

Cities with sustainability plans are attracting private capital investment and creating new growth centers for the 21st Century. Las Vegas' Epicenter is creating a globally significant low-carbon template for 21st Century urban development that can be shared and implemented globally.

The Epicenter Vision Plan for the Cashman parcels maximizes the opportunity to create a uniquely vibrant district for the Downtown Area that can become that "go to" destination, and becoming the key catalyst site to transform Las Vegas.

Epicenter's is designed to create a rich urban tapestry and weave it into an urban destination with a strong regional identity.

Project by E. McFarlan as Principal & Director at JRDV Urban International

EPICENTER INNOVATION DISTRICT

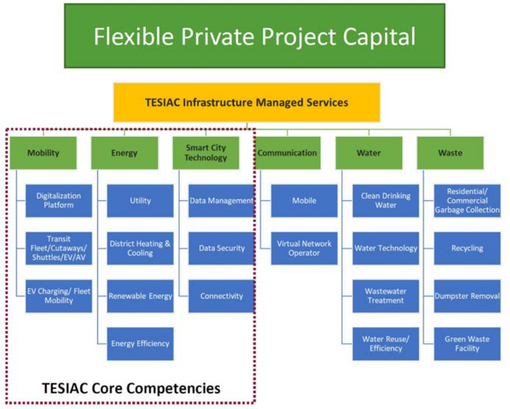
Las Vegas, NV


SOUVLA
Chez Maman
Chez Maman

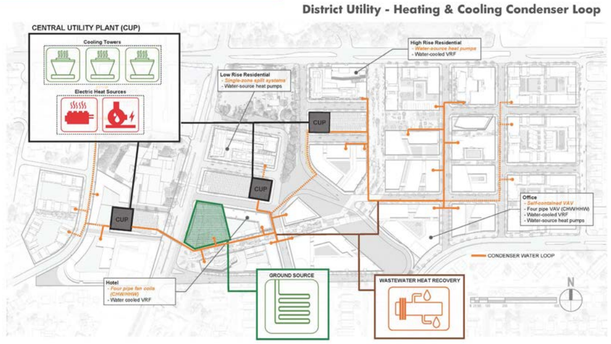

WELCOME
To Fabulous
LAS VEGAS
SAHARA
Famous
COWORKING
LOVE
Coffee


SOMA

INFRASTRUCTURE AS AN ASSET



3.3 Heating/Cooling Management



DEVELOPMENT MODEL

5.1 Development Program Overview

Overall Development Program - with Cashman

Acreage	85.0 acre
Residential	*2,900 units*
Office	*1,265,000 sqft*
United Cities	*75,000 sqft*
Retail	350,000 sqft
Hotel	750 rooms
Parking	5,250 stalls

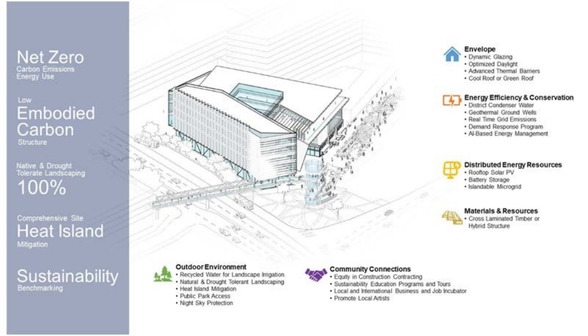
FULL BUILD-OUT WITH CASHMAN FIELD

- The Plan Build-Out with Cashman Field is designed to provide the density of uses that can support a viable residential community.
- It also has sufficient commercial office to create a globally significant Innovation Hub, that allows innovation companies, research, and other cultural uses to co-locate, expand and grow.
- The site is design allows Cashman Field to remain as long is it makes development contributions to the overall District - and will be able to sponsor sorts and other entertainment events.

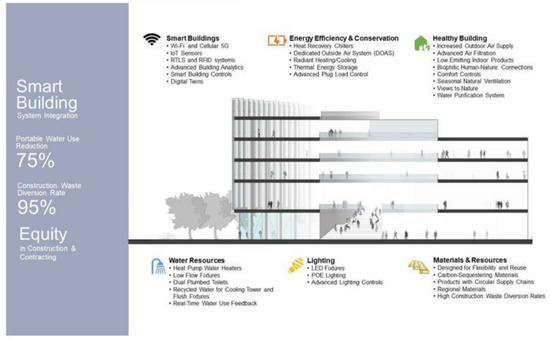
6.1 Development Plan Phase 1

CLIMATE ADAPTED SITE STRATEGY

5.6 United Cities North America

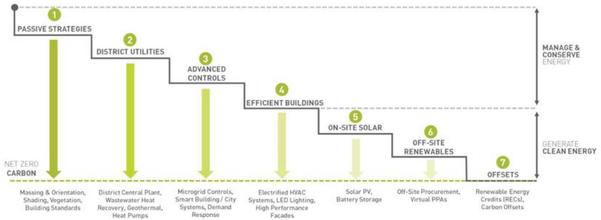


5.6 Global Knowledge Lab HQ



3.1 Carbon Emissions Management

The EPICENTER district will establish the district energy systems and infrastructure to enable vertical developers to cost effectively build net zero carbon facilities. The future proof and scalable infrastructure design will allow new technologies to be integrated into the district to continue to serve as a living laboratory. The following diagram shows the net zero carbon building pathway that will be available for buildings within the district.



3.5 Transit and Mobility: Creating a Connected City

- By implementing the as-a-service model, Epicenter has the opportunity to develop through a long-term technology continuum. As new technology becomes available, under a service contract, Epicenter can incorporate those technologies and manage them efficiently to provide enhanced benefits to end users.

Epicenter and Node Connection Phase 1

- Identify critical hubs to serve as epicenters connecting nodes and providing flexibility for riders
- Increase access to critical facilities between districts (healthcare, schools, jobs and food)
- Connect to emerging micro mobility hubs within each district

Corridor Connection Phase 1

- Increase connectivity along critical corridors integrated with existing short term and long-term planning (Dr Blvd & Maryland Ave.)
- Connect to new developments and create epicenters of live work play mobility centric neighborhoods
- Compliment existing transit services with zero emission fleets and collaborate to increase shared mobility, reducing traffic & parking demand

7.3 Climate Adaptive Building and Places

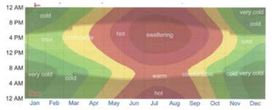
Adapting Epicenter to Dual 6-Month Climate Cycles

While the Las Vegas climate is known for its hot summers and regular extreme heat events, there are two very distinct seasons that can offer the ability to provide outdoor space.

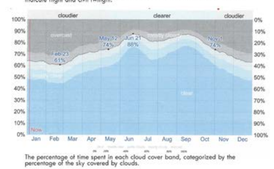
- Winter months are cooler with minimal cloud cover.
- Shoulder seasons are comfortable throughout the daylit hours.

Design Approach

- The EPICENTER urban design responds to and embraces the natural environment and local climate conditions in Las Vegas to provide a sustainable and healthy community.
- Trees and architectural features will create a connected shade system across the site to mitigate heat, combat climate change, and draw people outdoors.
- The Urban Design of the Public Spaces are encourage use by providing shade, drawing people outdoors to be physically active with year round usability



The average hourly temperature, color coded into bands. The shaded overlays indicate night and civil twilight.

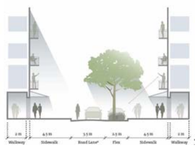


The percentage of time spent in each cloud cover band, categorized by the percentage of the sky covered by clouds.

7.3 Climate Adaptive Building and Places

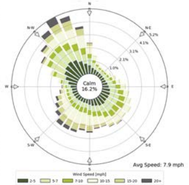
Managing Heat Island Through Urban Design

- Streets have been intentionally narrowed, and paving areas reduced.
- Pedestrian passages have been intentionally designed to connect the urban district with Shade-protected walkable connections
- Tree canopies are used extensively to protect these pedestrian passages - using recycled graywater to accelerate growth in a dry climate.
- Epicenter is designed to intentionally connect the buildings and all users to a pleasant, usable, and walkable outdoor urban environment.
- Retail, office and commercial uses are encouraged to fill the pedestrian walkways with eating, relaxing, meeting and enjoying a public city life.



7.3 Climate Adaptive Building and Places

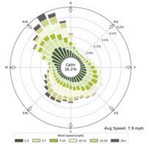
NORTH LAS VEGAS WIND ROSE



The EPICENTER development will take advantage of the seasonal wind patterns to create a comfortable, livable outdoor environment.

7.3 Climate Adaptive Building and Places

NORTH LAS VEGAS WIND ROSE



Designing Natural Ventilation to all Buildings

- Naturally ventilated buildings has a proven health and wellness benefit
- Las Vegas has a 6 month temperate season that is adaptable for high levels of natural ventilation in commercial and residential buildings.
- Epicenter's building form is designed to facilitate cross breezes through the blocks that will allow natural ventilation