

2021 Annual Meeting

Sofi Stadium and its Unique Transportation Challenges

TYLER KRAGE // ALLIANT ENGINEERING

VANESSA MUNOZ // WILLDAN ENGINEERING



Sofi Stadium

INGLEWOOD, CALIFORNIA

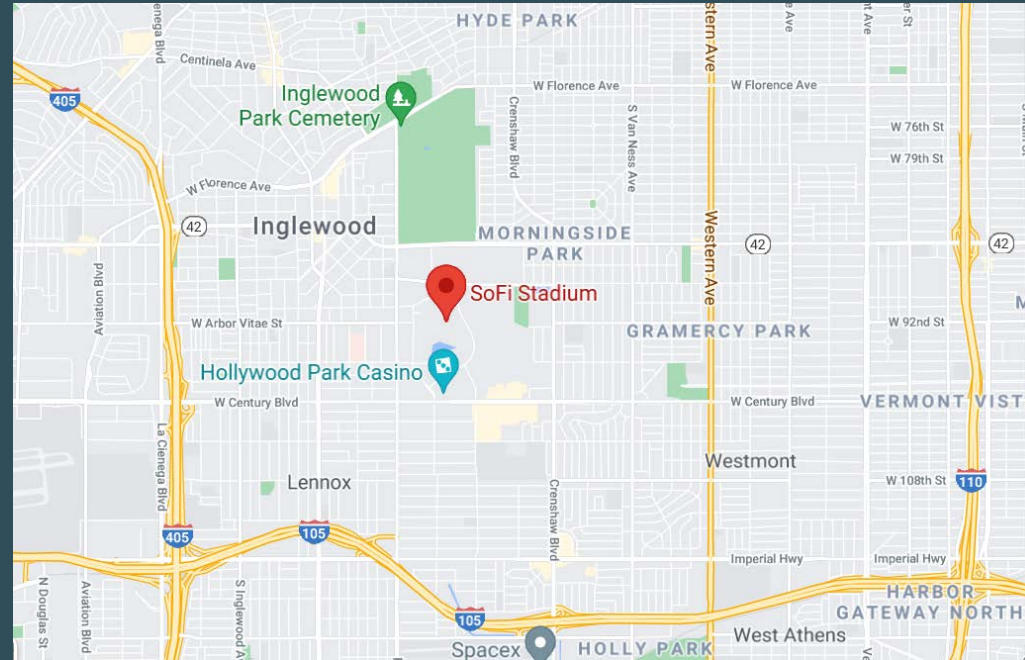
- ▶ Multi-Use Stadium with capacity of 70,000 to 100,000
 - Rams
 - Chargers
 - Concerts
 - Large Scale Events
- ▶ Built on former Hollywood Park Racetrack



Challenges

LOCATION WITHIN THE SYSTEM

| Stadium | Average Link Distance to Highway |
|---------------------------------|----------------------------------|
| Allegiant Field – Las Vegas | 3,600' |
| US Bank Stadium – Minneapolis | 3,000' |
| Mercedes Benz Stadium – Atlanta | 4,900' |
| Levi's Stadium – Santa Clara | 7,200' |
| AT & T Stadium – Dallas | 7,470' |
| Sofi Stadium – Inglewood | 12,500' |

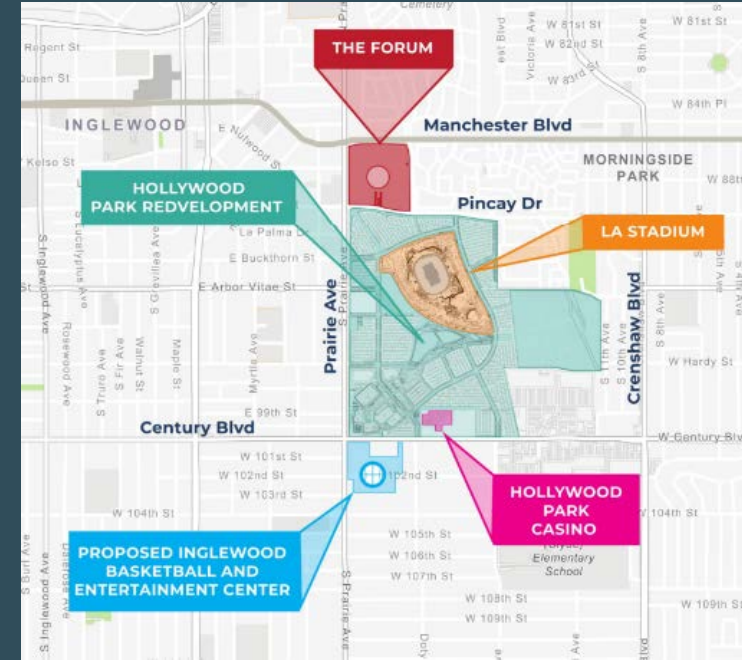


How to get people in and out?

Challenges

LAND USE

- ▶ Residential area of largely historically disadvantaged communities
- ▶ Events at least every weekend (Rams and Chargers alternate shared use weekly) in addition to other programming

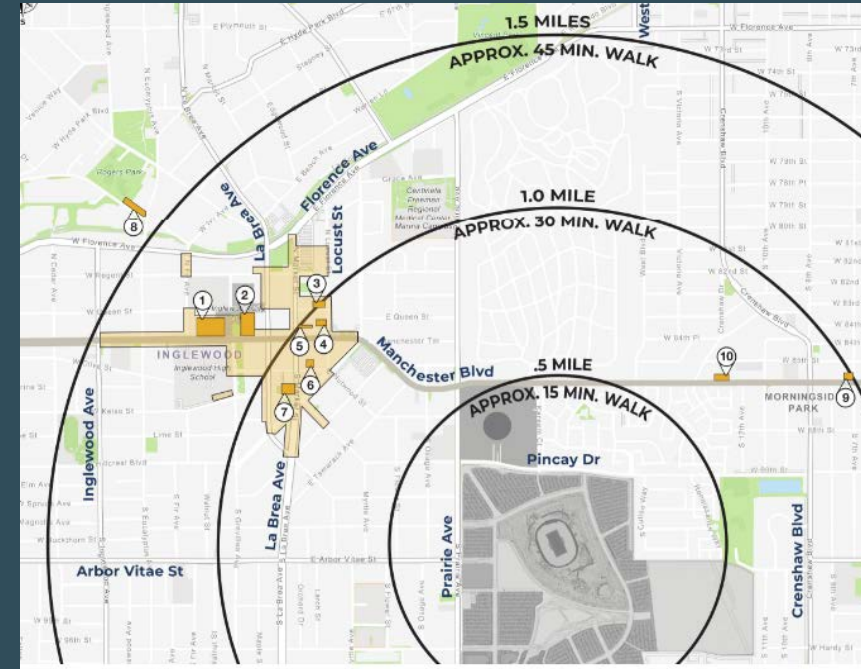


*How to get people in and out
with minimal impact to daily life for all users?*

Challenges

PARKING DEFICIENCY

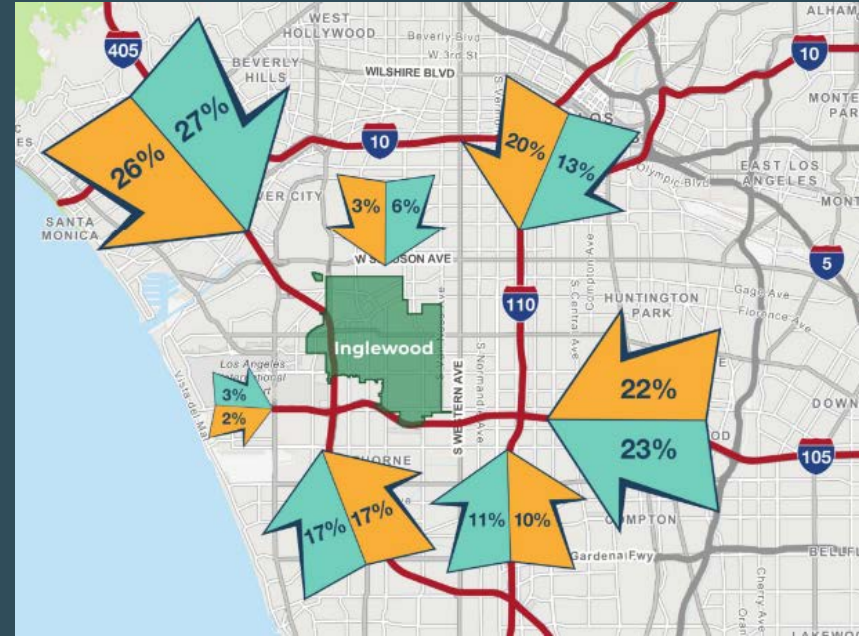
- ▶ On-site parking shortfall of 6,000-12,000 vehicles (or 20,000-36,000 people) depending on the events and scheduling
- ▶ Small amount of parking throughout the City via pay lots and meters (roughly 1,100 spaces)



*How to get people in and out with minimal impact to daily life for all users
while also preventing event-based motorists parking within residential areas?*

Where to Start?

- ▶ Utilized ZIP code data from past season ticket holders for Rams and Chargers
- ▶ Built a volume distribution model based off of available parking and directional distribution from ZIP codes
- ▶ Used those projected volumes for developing analysis model in determining traffic impacts and signal timing to get them in and out to different lots





Solutions

- ▶ Traffic Control Officers
- ▶ Stadium Operations Center
- ▶ Traffic Signal Timing
- ▶ Transit and Alternative Transportation Modes

Solutions

TRAFFIC CONTROL OFFICERS

- ▶ Utilize a crew of Officers to enforce closures, geometry changes, and facilitate other event-specific traffic operations
- ▶ Minimizes the impacts to local traffic, parking, and non-motorized users
- ▶ Mitigate delays and backups caused by system user confusion or any accidents



Solutions

STADIUM OPERATIONS CENTER

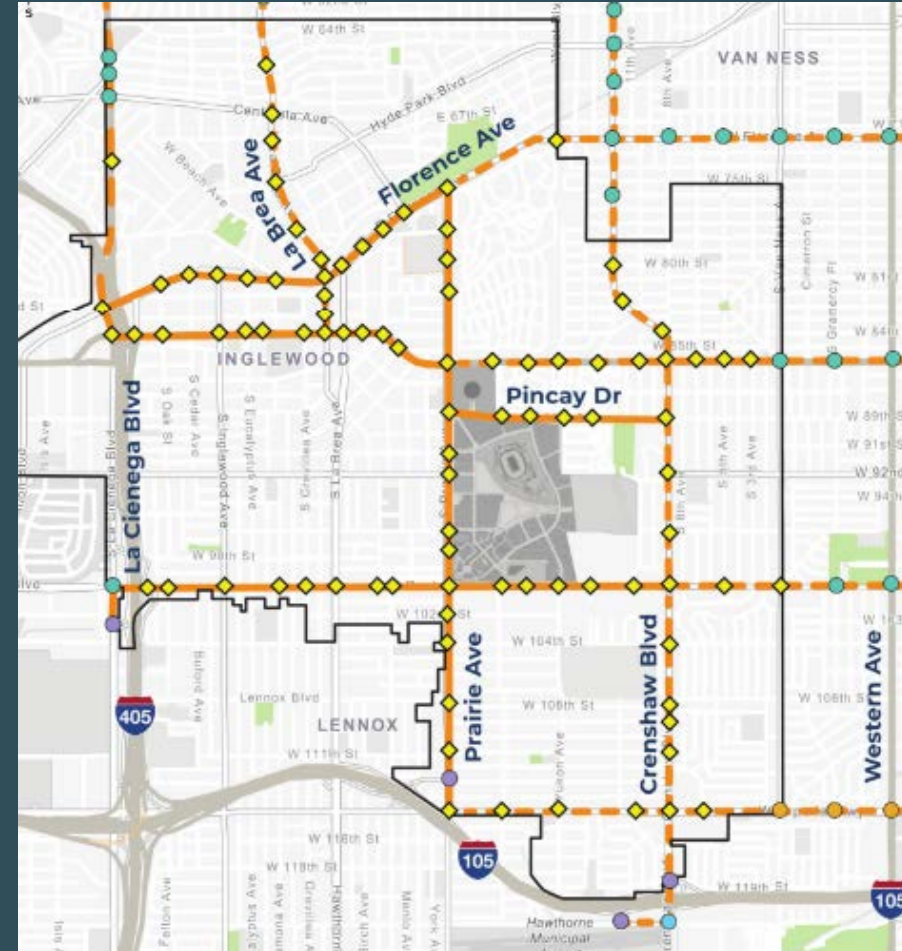
- ▶ Puts all critical personnel in a central location to promptly address issues
- ▶ Easily able to control the signal system and ITS/signage as well as view cameras, traffic flow, and operations remotely
- ▶ City was in the process of turning their system onto an interconnected management system already



Solutions

TRAFFIC SIGNAL TIMING

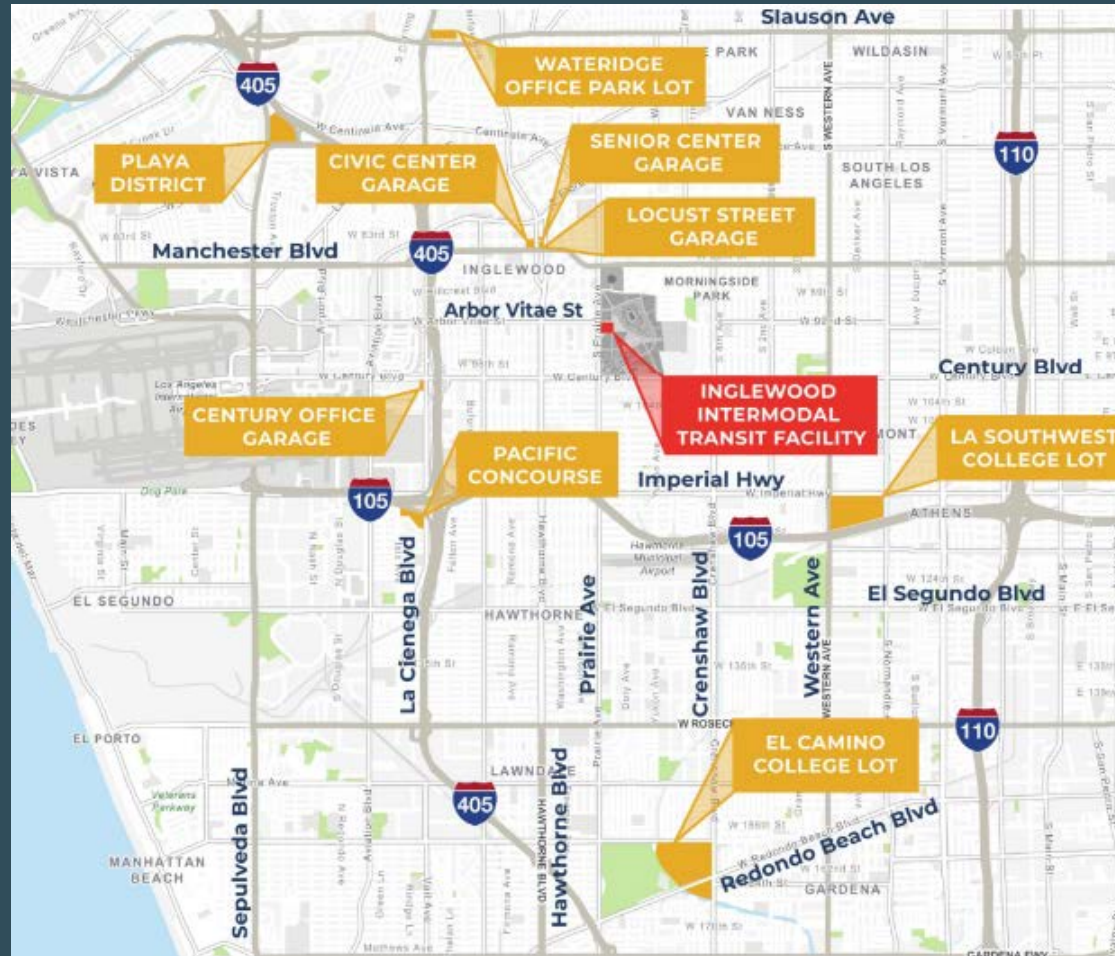
- ▶ Optimized signal system for everyday use for vehicles, pedestrians, and bikes with 6 timing plans to ensure flexibility in operations
- ▶ Developed 3 event plans aimed at progressing traffic inbound and outbound with varying levels of traffic volume flexibility
- ▶ Event plans have large cycles around stadium but allow for harmonic cycles further from event core to minimize non-event vehicle and pedestrian delay
- ▶ Transit-only lanes for event day operations with HOV progression patterns, including a reversible lane for transit for inbound and outbound events



Solutions

TRANSIT AND ALTERNATIVE TRANSPORTATION MODES

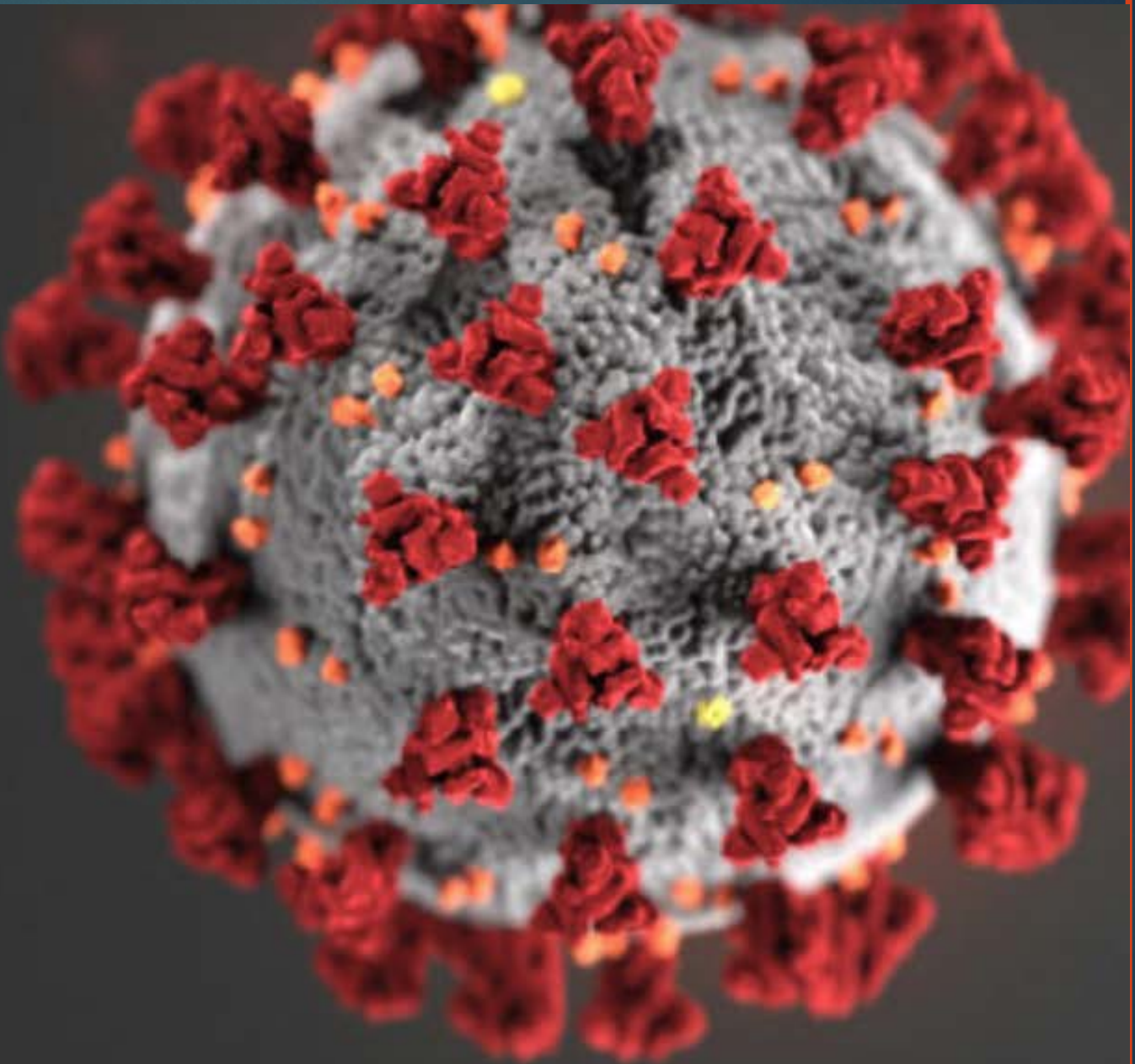
- ▶ State of the art intermodal transit center on-site
- ▶ Nine park and ride facilities
- ▶ Crenshaw rail line and transit connections in process of finishing construction
- ▶ Transit-only route on Arbor Vitae with bus-oriented signal progression
- ▶ Ride share center on-site for Uber, Lyft, and other app-based services



Game Time!



SoFi Stadium and its Unique Transportation Challenges
#ITE2021 – 2021 ITE virtual annual meeting



Just Kidding

Adjusting the Plan



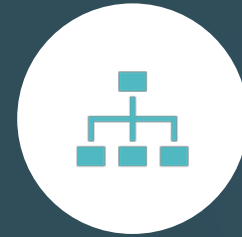
Adjusting financially and daily to life in a pandemic (construction, operations, etc)



Allowed for City to continue buildout of robust signal interconnect system



Developed new models to account for incremental step up in event caps, effectively creating flexibility for event types



Able to test out plans and event operations in a smaller context before large-scale events

Monitoring the Changed Plan

- ▶ Smaller Scale Events
 - Inglewood Vaccination Site
 - Covid Vax Live Concert
 - Rams Scrimmage
- ▶ Operations team was able to troubleshoot the changes in smaller context
 - Removal of omitted left turns At Key locations
 - Rethinking Reversible Lane
 - Streamline Ticketing and Processing

Key Takeaways

- ▶ Communication is key
 - A close line of communication between City, Stadium, and all other parties is paramount for a smoothly operating product
 - Signal and ITS interconnect of some type is critical to success of operations plan
- ▶ Be flexible and integrate that flexibility into every level of the plan
- ▶ Be intentional to make life easiest on those that may not be very receptive to the changes coming to their homes
- ▶ Common sense policies and solutions paired with hard work can be just as effective as intricate solutions or bells and whistles (Do the “boring stuff” right, then let everything else follow)

Speaking of Hard Work

- ▶ City of Inglewood
 - Public Works Traffic Services
 - Operations and Fleet Services
 - Police
 - Fire Department
 - Parking and Traffic
 - Planning
 - Code Enforcement
 - Legal Department
- ▶ Sofi Stadium Management
- ▶ Bob Brooks Consulting
- ▶ Alliant Engineering
- ▶ Willdan Engineering
- ▶ Trifiletti Consulting
- ▶ KOA
- ▶ Advantec
- ▶ Michael Baker

Questions?

Tyler Krage

ALLIANT ENGINEERING



tkrage@alliant-inc.com

Vanessa Munoz

WILLDAN ENGINEERING



vmunoz@willdan.com