

NISSAN

November 7, 2022

STADIUM

Project Team - NFL Projects (118)



“Creating The Science of Facility Management”

VSG sets the pace for today's public assembly facility marketplace. For over a decade, the VSG team has worked to become an industry leader in the programming, planning, preparation, and performance of sport and entertainment venues worldwide.



- Nashville based
- Founded 2011
- Work with all major professional sports Leagues (NFL, MLB, NBA, NHL, & MLS)
- Number of clients: 205
- Number of NFL Clients: 26
- Number of engagements to date: 493

NFL Clients

- AT&T Stadium (Dallas)
- Acrisure Stadium (Pittsburgh)
- FirstEnergy Stadium (Cleveland)
- BOA Stadium (Charlotte)
- Levi's Stadium (San Francisco)
- Lumen Field (Seattle)
- M&T Bank Stadium (Baltimore)
- Paycor Stadium (Cincinnati)
- SoFi Stadium (Los Angeles)
- TIAA Bank Field (Jacksonville)
- NRG Stadium (Houston)
- Raymond James Stadium (Tampa Bay)



Russ Simons

Chief Listening Officer & Managing Partner
Venue Solutions Group



- 40 years in sports and entertainment facility industry
- Former GM of Bridgestone Arena
- SVP Facility and Campus Operations; design, construction and operations for SoFi Stadium through Super Bowl LVI in 2022
- Works directly with all major professional sports leagues (NFL, MLB, NBA, NHL, MLS)
- Has worked in 25 of 30 NFL stadiums



Mike Wooley

Partner

Venue Solutions Group



- 25 years of direct experience in operations, engineering and opening of public assembly facilities
- Former interim GM of Bridgestone Arena
- Managed eight (8) NFL stadium condition assessments
- Managed over 55 facility condition assessments representing 70+ venues

"Legends Project Development has over \$30 Billion in development experience and the industry's deepest bench of sports and entertainment venue development, real estate, engineering, construction management, financial and technical expertise."



- Founded 2008
- Work with all major professional sports (NFL, MLB, NBA, NHL, MLS)
- Two dozen offices across US and internationally

NFL Clients

- AT&T Stadium (Dallas)
- Caesars Superdome (New Orleans)
- Levi's Stadium (San Francisco)
- New Buffalo Bills Stadium (Buffalo)
- SoFi Stadium (Los Angeles)



Paula Portz

Chief Operating Officer
Legends Project Development



- Paula has 27 years of sports and entertainment facility program/project management industry experience
- At Legends Paula oversees all projects relating to the selection and contracting of the project architect, consultants and contractor teams; establishing the overall budget and project costs; conducting design reviews; value engineering analysis
- Paula has directed over \$7 billion of sports and entertainment facility-related projects, ranging from renovation projects at scale to major new construction projects.
- Highlights include: SoFi Stadium, Caesars Superdome Renovation, Buffalo Bills New Stadium, Banc of California Stadium, and Snapdragon Stadium in San Diego CA

*“During the last century, **Manhattan Construction** has established a strong bond of trust with our clients and the communities in which we build. Our team members strive to provide a risk-free, problem-free experience that advances the success of all stakeholders involved.”*



- Founded 1896
- Active in US, Mexico, Central America, the Caribbean
- 18-time Associated Builders and Contractors (ABC) Accredited Quality Contractor (AQC)
- General Contractor for AT&T and NRG Stadiums

NFL Clients

- AT&T Stadium
- NRG Stadium
- Raymond James Stadium
- The Star
- Kyle Field





Jonathan Collins

VP of Preconstruction Services
Manhattan Construction



- Jonathan has 24 years in the construction industry
- Leads the preconstruction department for Manhattan's North Texas Office since 2013 and has completed over three billion dollars in projects
- Jonathan leads and coordinates the estimating staff in providing clients with effective, solution-focused preconstruction services, including document constructability review, project estimating, and scheduling from schematic to design development through final construction documents
- Prominent projects include, AT&T Stadium (Cowboys), Globe Life Field (Texas Rangers), Kyle Field renovation

Specialty Consultants



- Henderson Engineers is a national building systems design firm with 12 offices and over 1,000 staff members spread across the country. We provide a wide array of building system design engineering services across a variety of building types, specializing in five market sectors: Business, Community, Health, Retail, and Venue.



- Thornton Tomasetti was incorporated in 1933 and with over 70 years of experience, 50+ offices across the United States. Thornton Tomasetti has 10 NFL stadiums and 2,000+ professional sports and public assembly projects in their portfolio.



- Idibri assists design teams and venue owners to create spaces that connect and engage through acoustics, theatre planning & technology design. Idibri has provided consulting services for NFL venues Highmark Stadium, Ford Field, and U.S. Bank Stadium.



- VDA, Inc. is an internationally renowned elevator and escalator consulting firm that provides design and operational expertise for vertical transportation systems. Recent NFL experience includes SoFi Stadium in addition to numerous facilities that are home to major professional sports franchises.

Project Team - NFL Projects (118)



66 NFL Projects



5 NFL Projects



Manhattan
Construction

3 NFL Projects



15 NFL Projects

ThorntonTomasetti

18 NFL Projects



6 NFL Projects



5 NFL Projects

Scope of Work

Evaluation of Costs to Comply with Existing Lease

- Independently evaluate and provide projected costs required to meet the “First Class” or “Comparable Facilities” standard under the current Titans lease of Nissan Stadium
- Provide a high-level comparison of improvements and relative costs for comparable NFL facilities listed in the Existing Lease

Facility Condition Assessment

Conduct a limited review of Nissan Stadium focused on MEP, Structure, Vertical Transportation and Technology to establish potential costs to maintain Nissan Stadium through the opening of a potential new stadium in 2026

Existing Lease Requirements

Requirements Under the Existing Lease

- The Existing Lease requires the Sports Authority to fund all capital expenditures necessary to keep the Stadium in “*First Class Condition*”
- This includes “*having the level of improvements and new technology from time to time found in a reasonable number of Comparable Facilities*”
- “Comparable Facilities” means comparable professional sports facilities of a similar age – with specific examples, including those NFL/MLB stadia in Charlotte, Jacksonville, Miami, Denver, and Cleveland, among others

Current NFL Stadium Standards

Comparable NFL Stadia

- VSG examined the 17 NFL stadia that are “Comparable Facilities” under the Existing Lease
- In our professional opinion, Hard Rock Stadium in Miami, FL is the closest NFL comparative example with which to test the proposed components of any potential plan to renovate the Stadium
- Hard Rock Stadium, which was built in 1987, has undergone numerous renovations and upgrades from 1993 to 2017. Total renovation costs 2006 - 2017 totaled \$1.3 billion (escalated to 2023 dollars)
- In light examination and in our professional judgment, a wholesale renovation would be necessary to make Nissan Stadium compliant with the terms of the lease

Titans Master Plan

The Titans Master Plan

- The Titans commissioned highly experienced architecture firms, Gensler and Hastings, to produce a master plan design for a renovated Nissan Stadium (the “Gensler / Hastings Plan”)
- The Gensler / Hastings Plan is materially similar to the Hard Rock Stadium renovation and improvement program and is the closest NFL comparative example with which to test against the proposed components of the Titans’ master plan
- Hard Rock Stadium recently underwent a renovation that added components similar to those proposed in the Gensler / Hastings Plan

Does the Titans Plan Meet the Lease Requirements?

Plans for a Renovated Nissan Stadium

- In our professional opinion and based on our Comparable Facilities review, Nissan Stadium would need to be stripped down to the basic structure and rebuilt in order to comply with the Existing Lease standard
- We believe the Gensler / Hastings Plan provides a reasonable basis for what would be required in a plan that meets that standard

Master Plan Design Review

Costs of a Potential Renovation

- In September 2022, the Titans presented an estimated cost of \$1.8 Billion to the Sports Authority based on the Gensler / Hastings Plan and estimated additional costs to maintain the facility through the term of the Existing Lease in 2039
- The VSG team conducted an independent analysis of the Gensler / Hastings Plan to provide Metro with a separate assessment of the potential costs associated with the Gensler / Hastings Plan as an example of what a satisfactory renovation might cost
- The VSG team had appropriate time to develop the independent cost analysis of the Gensler / Hastings Plan and consider additional material factors in developing our analysis

Master Plan Design Review

METHODOLOGY -

- Utilization of Manhattan's historical cost database
- Current pricing of similar facilities/projects
- 2017 Facility Condition Assessment
- On-site review
- Gensler/Hastings Conceptual Design Package 2021
- 2022 Facility Condition Assessment
- Current Nashville market, escalation, and supply chain information

Master Plan Design Review

ENABLING PROJECTS –

Projects required to renovate and update Nissan Stadium to prepare the building for the renovations as well as maintain operations for the next 20 years.



Master Plan Design Review- Enabling Projects

- Removal and replacement of the corroded domestic water piping system and related work.
- Replacement of outdated or damaged mechanical and electrical systems equipment.
- Remedial repairs of concrete structure and masonry.
- Replacement of outdated and/or inefficient concession food service equipment.
- Replacement of outdated light fixtures throughout the stadium with LED technology.
- Updating vertical transportation elevators and escalators.



Master Plan Design Review- Capital Projects

CAPITAL PROJECTS, 2026 – 2039

Estimated monies necessary to maintain Nissan Stadium, its systems and equipment in the period from the completion of the Master Plan improvements to the conclusion of the extended lease term in 2039.

Master Plan Design Review Costs

• ENABLING PROJECTS -	\$256,866,581
• MASTER PLAN CONSTRUCTION –	\$983,790,226
• SOFT COSTS -	\$467,517,941
• PROJECT CONTINGENCY -	\$170,817,474
TOTAL PROJECT COSTS -	\$1,878,992,222
ON-GOING CAPITAL COSTS -	\$235,080,061
TOTAL COST -	\$2,114,072,283

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Comparable Stadium Review

Provide a high-level comparison of improvements and relative costs for comparable NFL facilities listed in the Existing Lease

Comparable Stadium Review

Methodology –

We examined the 17 NFL stadiums that meet the “Comparable Facilities” clause in the agreement.

Hard Rock Stadium is a named “Comparable Facility” in the Titans lease. In addition, it recently underwent a similar renovation program to what the Titans proposed in the Gensler/Hastings plan.

In our professional opinion, Hard Rock Stadium is the closest NFL comparative example with which to test against the proposed components of the Titans’ master plan.

Comparable Stadium Review

Key Hard Rock Stadium Components –

- Widened 40,000-square-foot concourses on the stadium's north and south sides.
- Concessions, bars, lounges, and other fan amenities were updated.
- New 10,000 seat Club Level.
- 40-foot-high glass curtain wall that encloses the Club Level and affords expansive views of the South Florida skyline.
- New Field Club, North Sideline Club and corner terraces. Innovative new “Living Room” boxes.

Comparable Stadium Review

Post-renovation additional work at Hard Rock Stadium –

- Elevator and escalator upgrades / replacements.
- Added Additional MEP.
- Field drainage replacement. (Original system did not have the capacity to handle water after the new field replacement and had to be upsized.)

Comparable Stadium Review

As a highly experienced team of industry experts, we have looked at all the NFL stadiums that qualify as “Comparable Facilities”. In our professional opinion, having reviewed the example of Hard Rock Stadium and having considered the components present in the new-built NFL stadiums (current industry standard), the plan proposed by Gensler/Hastings meets the “Comparable Facilities” standard.

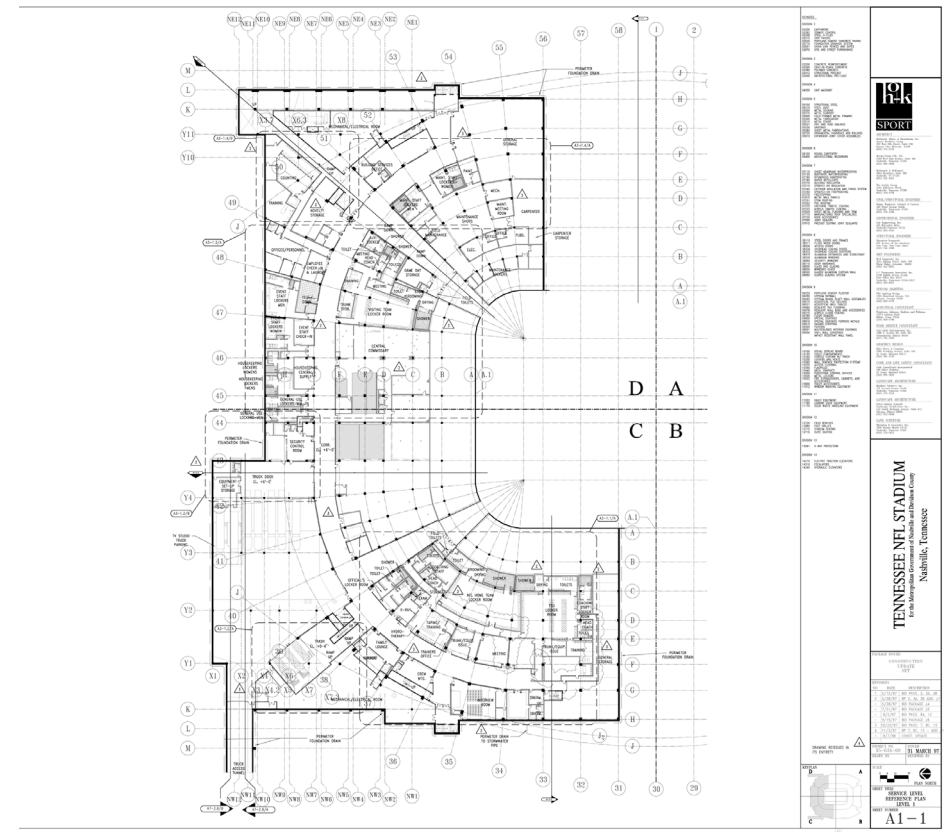
Therefore, our study provides Metro an independent assessment of how much it would cost to maintain Nissan Stadium in line with Comparable Facilities.

Facility Condition Assessment

Conduct a review of the Nissan Stadium focused on MEP, Structure, Vertical Transportation and Technology to establish potential costs for Metro between now and the anticipated opening of a new stadium in 2026.

Process

- Site review on August 30 & 31 and September 6 & 7
- Interview stadium staff
- Visual inspection of spaces
- Reviewed project drawings
- Identified systems most at risk for failure
- Developed 4 Year Capital Plan from 2023 to 2026



Findings - MEP & Fire Protection

- Mechanical systems are original and near end of life
- Chilled water piping and cooling coils have buildup of scale
- Electrical systems at or near end of life
- Emergency generators are 10 years old and in good condition
- Panelboards and transformers have nearly reached the end of their 25-year life cycle
- LED sports lighting added in 2019
- Fire alarm system devices mostly original
- Regular full system flushing required



Findings - Structure

- Cast In Place concrete aisle steps degrading rapidly
- Stadium Operations replacing 80-100 units per year
- Elevated main concourse slab above loading dock has cracking and water damage
- Corrosion of steel framing on end zone video board structures
- Caulk joints and expansion joints showing signs of failure
- Primary structural components including slabs, beams and columns is generally in good condition



Findings - Technology

- End zone video boards are at end of life (Installed in 2012)
- Signal processing for bowl sound system is at end of life and at high risk of failure
- Distributed television system is old coax cabling
- Televisions range in age from 4 to 16 years
- Data infrastructure is generally up to current standards
- Wireless access is in good condition
- Security systems have been continuously upgraded



Findings - Elevators

- 20 elevators - 8 original and 12 high speed units added in 2012
- Freight elevators (2) were modernized in 2017
- Original passenger elevators at end of life
- High speed elevators (12) should provide reliable service for next 5 years
- Access to drivers and controller will likely be an issue for the 8 original elevators



Findings – Escalators

- Escalators (4) are original
- Escalators approaching end of life based on 20–25-year life cycle
- Escalators generally in good condition for their age
- Lack of available parts due to obsolescence could be an issue in the next few years



Recommendations

- Enhance preventive maintenance programs to extend systems life span
- Where component obsolescence is occurring or likely to occur, procure parts now to minimize downtime if breakdowns do occur
 - Drivers and Controllers for elevators and escalators
 - Have access to scoreboard modules as they are at end of life
 - Replace sound system signal processing as its at end of life and at high failure risk
 - Have spares on site for electrical switchboards that are now at end of life
- Continue program to replace damaged aisle steps
- Monitor closely and address concrete spalling, caulking and expansion joints
- Create a continuity plan in case of premature electrical equipment failure

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Discussion

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