



# **2023 CAPITAL REPAIR AUDIT OF CLEVELAND BROWNS STADIUM FOR THE CITY OF CLEVELAND**

PREPARED BY OSBORN ENGINEERING

February 22, 2024



**OSBORN  
ENGINEERING**

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# SECTION 1

Cover Letter

# Cover Letter



January 4, 2024

Mr. James DeRosa  
Director MOCAP  
City of Cleveland  
601 Lakeside Avenue  
Cleveland, Ohio 44114

Re: 2023 Capital Repair Audit of Cleveland Browns Stadium

Dear Mr. DeRosa:

Attached herein is the Capital Repair Audit of Cleveland Browns Stadium per the requirements of our Agreement with the City dated October 2, 2023. In accordance with your request, we are submitting this as a 'draft' for the City's review and comment.

Our draft copy deliverable includes three (3) hard copies to the City, and (1) hard copy to the Cleveland Browns.

The final version of this report can be issued within two (2) weeks of receipt of comments from the City.

In addition, we will ensure that the City has on-going access to the cloud based PlanGrid files should you need additional information. As per our Agreement with the City, Osborn will provide two (2) additional years of access to PlanGrid for both the City and the Browns.

Osborn greatly appreciates the opportunity to work with the City of Cleveland on this important project. Please do not hesitate to contact us should you have any questions.

Sincerely,

**Osborn Engineering**  
Gary A. Hribar, CEO

A handwritten signature in blue ink that reads "Jack Krebs".

By: Jack Krebs, PE  
Director of Sports Engineering



# SECTION 1.1

## Executive Summary

# Executive Summary

The City of Cleveland owns Cleveland Browns Stadium, and it is the home of the Browns. The Stadium was originally constructed in 1999. The City and the Browns as part of their mutual Lease require that a facility condition Audit be done every five (5) years. This Capital Report Audit is intended to satisfy that Lease requirement.

The Osborn Engineering team was directed to develop this Audit Report based on Osborn's evaluation of all building systems. The development of this Report has been monitored periodically since commencement of the project in October of 2023 by both the City and the Browns.

The City required that all site findings be documented using PlanGrid software. This software is an enhanced data base that captures the assessment team's comments, repair quantities, relevant photographs, and cost information. This written Report is intended to act as a compliment to the information contained within PlanGrid. The City and Browns have complete access to all information input into PlanGrid. Access to the software is available until April 1, 2026. Please note that this software can be used by stadium maintenance staff to track repairs as they are completed. In addition, the data can be revised as tasks are completed.

Overall, Cleveland Browns Stadium is in good condition considering the age of the facility. Based on the assessment team's observations, the Stadium is considered to be well maintained thus maximizing the useful service life of the various system that comprise a modern-day professional sports facility. It should also be noted that the City and Browns have been pro-actively addressing issues via implementation of annual repair/replacement program using available funding sources.

The following discipline summaries highlight issues observed by the Osborn team. The reader is encouraged to review the details of the Report included within for further specific information.

**Civil / Landscape:** The areas of the site surrounding the building require on-going repairs to concrete slabs/walls and joints. The number of trees, shrubbery and ground cover have been greatly reduced since 1999. The reduction is due to failure of the landscaping and/or a result of recently installed NFL-directed security provisions. Overall, the landscaping is considered to be in fair to poor condition. The components of the site sprinkler system are beyond their useful service life and should be replaced.

**Architectural:** The fixed seats in the Upper Bowl are generally in good condition. However, the seats and associated hardware in the Lower Bowl are 25 years old and in fair to poor condition. Water infiltration through seat deck joint openings damage finishes within the suites and other finished spaces. A significant percentage of concourse doors/frames are corroded requiring replacement.

**Structural:** As noted previously, the City and Browns have been addressing structural deterioration on a yearly basis. Such attention will be required each year to prevent greater distress/costs if such repairs are delayed. Some of the pedestrian ramps are in fair to poor condition. Thus far 30 of the 46 ramps in the stadium have been replaced. Replacement of ramps must continue on an annual basis as funds permit.

**Plumbing:** The domestic 4" and 6" galvanized pipes are beginning to corrode internally resulting in the damage to systems being fed by these pipes. Replacement of all such pipes is recommended. The existing 3,000 gallon hot water storage tank is original and approaching the end of its useful service life.

It is suggested to replace the tank with a pair of 1,500 gallon tanks. All remaining grease traps should be replaced.

**Mechanical:** The AHUs are approaching the end of their useful service life and should be replaced. Similarly, the electrical resistance heaters too require replacement. The remaining cooler/freezer refrigeration system should be replaced because they still rely on difficult to obtain R-22 refrigerant.

**Fire Alarm / Fire Protection:** A new fire alarm system is currently being installed. Excessive corrosion of the main 12" incoming fire service will necessitate replacement of that pipe. The assessment team recommends that a comprehensive hazard occupancy analysis be conducted to identify the design basis of all existing systems and compare them against current occupancy.

**Electrical:** The primary electrical distribution and backup power systems are well maintained and should be operational for 10+ years. All non-LED fixtures should be replaced with energy efficient LED types.

**Technology:** The existing low voltage cabling is unsuited for many current and future technologies. It is recommended that all such cabling be replaced with new cabling to ensure continued use of the system. The suite VGA video projectors and processors are recommended to be replaced with newer technology.

**Broadcast:** The concourse audio is in severe disrepair and should be replaced very soon. The three (3) primary videoboards and the switcher/console are approaching the end of their useful service life in two (2) to five (5) years. In addition, the video router, production intercom system, and video distribution to concourse/suite displays too should be replaced in the same timeframe.

All items identified for repair/replacement in this Report were on a prioritized time basis considering life/safety, remaining service life, and other such factors. The time periods considered: 0 year; 0-1 years; 2-5 years; and 6-10 years.

Included within this Report are Capital Repair costs for all documented items that are recommended for repair/replacement. The costs as shown below are solely hard construction costs. They include annual cost of living escalation. There was no attempt to apply soft costs to these budgetary numbers. The costs exclude the new plaza light poles/fixtures project that will be implemented in 2024: These costs are segregated by the four (4) priority-based time periods noted above. The following is a summary of these costs:

Type	Time Period	Capital Repair Cost
Immediate	0 Year (2024)	\$252,300
Emergency	0 - 1 Years (2024 - 2025)	\$10,403,700
Capital Repair	2 - 5 Years (2026 - 2029)	\$56,887,000
Capital Repair	6 - 10 Years (2030 - 2034)	\$49,406,300

Osborn Engineering appreciates the opportunity to team with the City of Cleveland and the Cleveland Browns on the five (5) year Audit of FirstEnergy Stadium.

# **SECTION 1.2**

## **Purpose of Audit**

# Purpose of Audit

Cleveland Browns Stadium (the Stadium) is a professional football venue that hosts the Cleveland Browns (Browns) NFL team as well as other events throughout any given year. The stadium was constructed between 1997 and 1999. The facility opened for operations in August 1999.

The stadium is owned by the City of Cleveland and leased to the Browns per the attached Lease excerpt document included within Appendix B of this Report. The provisions of the Lease contained within this report, Appendix B is focused on the requirements related the Capital Repair Audit. Information includes relevant definitions of 'capital repairs', 'capital improvements', and other terminology that informs both the City and Browns as to their respective obligations.

The Lease also includes an explanation of the requirement for the City to conduct a Capital Repair Audit every five (5) years. The Audit must be performed by a qualified licensed architect/engineer reasonably acceptable to the Lessee. The Audit shall report on the condition of the structure and capital components of the Leased Premises. The Report shall include recommendations for any current Capital Repairs that are necessary to the Leased Premises and the associated construction cost to implement those recommendations.

This Report as authored by Osborn Engineering is intended to satisfy the City's requirements per the Lease provisions contained within Appendix B and summarized above.

# **SECTION 1.3**

PlanGrid Data Base



# PlanGrid Data Base

This written 2023 Capital Repair Audit Report of Cleveland Browns Stadium is to be considered as a complimentary document to the database contained within the PlanGrid software. At the City's request, Osborn Engineering's field survey information is documented and recorded within the PlanGrid software. This software provides detailed information of all capital repair work items for all disciplines. Information includes:

- Name of repair item
- Description of repair item
- Repair item identification number
- Location of repair item
- Quantity of repair
- Recommended time frame for repair implementation
- Budgetary construction cost based on repair recommendations
- Photographs of representative conditions

The reader is encouraged to review the information contained within PlanGrid to provide a comprehensive understanding of the extent of capital repairs required at Cleveland Browns Stadium. The data base includes architectural backgrounds of all stadium floor levels as well as the site surrounding the Stadium. Each level is segregated into four (4) quadrants to ease in understanding what repairs are located in what room, space, etc.

Our field findings are recorded via color coded 'stamps' with each color representing a specific discipline. In addition, each discipline is further broken down into sub-categories to ease in organizing the large quantity of data.

Appendix A of this Report includes a description of each 'stamp' to aid in one making the transition from this written Report to the content contained within PlanGrid.

The Agreement between the City of Cleveland and Osborn Engineering includes provisions for access to a total of four (4) PlanGrid licenses for City use. Osborn Engineering also has a license to access software. These licenses are currently active allowing access to the PlanGrid data until the license expiration date of April 1, 2026. The City has subsequently provided two (2) of these licenses to the Cleveland Browns for their use until April 1, 2026. The City, Browns and Osborn Engineering can extend these licenses beyond the expiration date at their own cost if desired at a later date.

# SECTION 1.4

## Methodology

# Methodology

The Osborn Engineering Capital Repair Audit team consisted of the following members: Osborn's staff self-performed the assessment of the civil, architectural, structural, mechanical, plumbing, fire alarm, fire protection, technology and broadcast systems. Our EDGE sub-consultant, Behnke, provided the assessment of the landscaping surrounding the stadium. While our EDGE sub-consultant, McGuiness Unlimited Inc. was responsible for development of the budgetary construction cost information.

Both Osborn and Behnke visited the facility several times for each of the above disciplines. The site visits consisted of walking the stadium to identify required Capital Repairs. The observations were done of readily visible construction. There was only limited intent to observe partially concealed construction such as utilities located above ceiling tiles. There was no intent to conduct non-destructive or destructive testing of any kind. All field findings were recorded in PlanGrid software.

The recommended Capital Repair tasks include both deterioration that is currently visible as well as consideration for future deterioration of the next ten years. This future system deterioration is based on the team member's experience with similar systems at other outdoor stadium venues. In addition, the team assessed the anticipated useful service life of equipment to inform the engineer on expected remaining life and necessary future replacement.

The visual observations were complimented by interviews of the stadium operation maintenance staff. These interviews proved invaluable in our effort to identify potential Capital Repair issues. The maintenance staff's day-to-day exposure to the various systems allowed us to conduct a more comprehensive assessment than would otherwise be possible.

Our team utilized existing reference drawings and published system reports to aid in our evaluation of all systems. It should be noted that Osborn Engineering was the structural engineer-of-record for the original stadium construction; as well as the engineer-of-record for the 2014 Phase 1 stadium renovation project. Many of the Osborn team members participating in this Audit were involved on the 2014 project and subsequent projects at Cleveland Browns Stadium. The inherent historical knowledge of the facility allowed the Osborn team to focus more heavily on specific building systems that likely required Capital Repair considerations.

Upon conclusion of the site investigations, the team reviewed the PlanGrid input and developed suggested repairs for each identified task. In addition, the team assigned repair implementation time frames to each item. The intent of assigning a time frame was to prioritize one repair versus another. The organization of the data in this manner will allow the City to formulate an informed Capital Repair Program for the next ten years. The following are the four (4) time frames used in the assessment. These time frame durations correspond with the four (4) periods included in the 2018 Osborn Engineering Capital Audit Report:

- Immediate Repairs: Year 0
- Emergency Repairs: Year 1
- Material Repairs: Years 2 – 5
- Material Repairs: Years 6 - 10

Each task was quantified and a construction cost assigned. The calculated cost was adjusted for inflation based on the recommended date of implementation.

Due to the sheer size of the stadium it was necessary to break the various systems into manageable sub-systems based on disciplines. The following discipline narratives were established to clarify what Capital Repairs are needed for each system:

- Civil Narrative
- Landscape Narrative
- Architectural Narrative
- Structural Narrative
- Mechanical Narrative
- Plumbing Narrative
- Fire Alarm Narrative
- Fire Protection Narrative
- Electrical Narrative
- Technology Narrative
- Broadcast Narrative

Upon completion of PlanGrid input and also the written narratives, McGuiness Unlimited Inc. then developed the construction costs listed in Appendix C.

# SECTION 2

## Civil Narrative

# Civil Narrative

## SCOPE OF INVESTIGATION

The civil audit consisted of the review of the many items that comprise the site surrounding the stadium. The site includes the area from the outside wall of the stadium out to the curb on perimeter City roads. Below is a listing of the types of items surveyed and an explanation of their relative importance in maintaining a viable site for both the City of Cleveland and the Cleveland Browns. The actual condition of each item and recommendations for repair follow later within this Civil Narrative.

The civil evaluation is limited to the site surrounding the building itself. This evaluation does not include landscaping, planters, nor sprinkler systems. Those site related items are included within the Landscape Narrative.

As required within the Lease, we have provided a forecast of future deterioration based on our experience with concrete and joint material deterioration as well as Osborn's long history of identifying and repairing these site features surrounding the Cleveland Browns Stadium structure. Please note that attempting to anticipate the level of deterioration beyond one year in the future is very subjective and highly dependent on the individual conducting the observations and that person's personal experience with the on-going deterioration of concrete and joint materials. Individual structural items assessed within this section include:

### GENERAL REPAIR TYPES

#### Patching

Includes the removal of loose, delaminated or spalled concrete surfaces on retaining walls, drives, plaza and sidewalk surfaces and other areas where the substrate is concrete.

#### Non-Structural Cracks

These types of cracks are generally less than 1/4" in width. These cracks are not considered to jeopardize the structural integrity of the overall concrete member. Instead, these cracks are addressed to prevent infiltration of water into the concrete substrate.

#### Structural Cracks

These types of cracks do represent a structural concern that potentially can impact the structural integrity of the concrete member.

#### Guard Rail Post

Includes the removal and replacement of concrete and/or sealant at the base of the guardrail post. Any concrete repairs would be similar in nature to the 'patching' of concrete as noted above. The sealant repair at the base of the post prevents water infiltration into the cold joint between the metal post and concrete/grout.

### JOINT REPAIRS TYPES

#### Backer Rod & Sealants

Includes the removal and replacement of the backer rod and sealant within a joint opening at slabs or walls.



## Control Joints

This scope includes the removal and replacement of sealants in non-structural preformed joints in slabs and walls. Control joints include construction joints and also joints strategically located to control shrinkage cracks during the original concrete curing process.

## OBSERVATIONS

The deterioration of site concrete and joints as observed at Cleveland Browns Stadium is consistent with a 25-year old exterior construction in northern climates. The annual varying temperatures along with abundant rain/snow experienced in Cleveland, Ohio contribute to accelerated deterioration over what one would experience in a more temperate environment. The following represent our findings based solely on visual observations of readily accessible construction. The scope of this audit did not include invasive exploration of existing construction nor testing of any materials.

It must be noted that the City and the Browns have continually implemented annual concrete repair projects to address deterioration as it becomes visible. In addition, these renovation projects included pro-active measures to minimize or eliminate future deterioration that otherwise would have developed sooner at greater expense.

The observed concrete spalls are found in varying locations including retaining walls, drives, sidewalks, plaza areas and curbs. In general the areas to be patched are partial depth and predominantly a result of the corrosion of the embedded steel reinforcing. **See Photo C1.**

The existence of non-structural cracks are inherent in concrete construction. Therefore, it was anticipated that we observed non-structural cracks throughout the site. Most of the cracks could be found in cast-in-place walls, plaza areas and drives.

Structural cracks typically result from unanticipated loads acting upon the structural member. We identified structural cracks in several of the concrete retaining walls.

We observed deterioration of the concrete at several guard rails posts atop retaining walls and edges of elevated plazas. Failed sealant at base of posts were found in many locations. **See Photo C2.**

Typically sealant materials exposed to the environment and UV can be expected to have a useful service life of 7 to 10 years. As a result, the continual repair of such joints can be expected annually for the hardscaped areas surrounding the stadium. We did observe failed joint sealants in a variety of locations as anticipated.



Photo C1 – Typical Cracked Concrete



Photo C2 – Typical Failed Sealant at Guardrail Post



Photo C3 – Typical Failed Curb

Concrete construction inherently requires a large quantity of control joints to manage unavoidable shrinkage cracks. These joints are also necessary where one concrete pour ends and the next begins. Due to the large areas of open plaza there are a vast number of joints that require regular maintenance.

Several areas of failed curb was observed at the curbs located by the roads surrounding the stadium site.  
**See Photo C3.**

## **DISCUSSION**

The following narrative expounds on the above observations. This section includes commentary on the above observations, possible repair options, and repair/replacement recommendations. Continual repair of concrete and joints should be expected to occur annually. Left unattended, deterioration often continues to increase in size and correspondingly expenses. This on-going deterioration grows at an exponential rate resulting in higher life-cycle costs than if the repairs were implemented in a pro-active systematic manner. As stated above, the City and the Browns have implement annual repair programs to address not only visible deterioration but also in an attempt to arrest the on-going development of distressed structural components.

As noted previously, the spalling of concrete is primarily attributable to corroding embedded reinforcing steel. The corrosion process increases the volume taken up by the corrosion by-product. This process can potentially increase the volume 7x the volume of the parent reinforcing steel. The resulting internal stress within the concrete is sufficient to induce micro-cracking of the concrete substrate. In turn, water infiltrates the crack to initiate further advancement of the corrosion process at an exponential rate. Repairing deteriorated concrete as it develops is the standard means to combat spalling concrete.

The sealing of non-structural cracks is an example of proactive maintenance. Such action eliminates the infiltration of water into the crack thus preventing corrosion of reinforcing steel. The annual repair program should evaluate such cracks and consider the impact of any decision not to repair such cracks.

As structural cracks appear they should be addressed on an annual basis. It is important to reestablish the full structural integrity of a concrete member. Typically, these cracks are filled with a specialized epoxy manufactured in a high viscosity liquid that can penetrate very fine cracks bonding the substrate together. Prior to any such repair, it is important to identify the likely cause of the structural crack. Without addressing this primary cause it can be expected that the crack will reappear in the near future.

Due to the relatively short useful lifespan of joint materials it can be expected to be an on-going maintenance issue in this area of the country. The backer rod and sealant repair detail must consider the width of the joint opening and possible movement of the structure on each side of the opening. It is important to detail and construct the joint accordingly in order to maximize the useful service life of the repair.

Due to the very high quantity of control joints at the site surrounding the stadium, it is an on-going maintenance effort to prevent water infiltration through the joint opening. While the cost per foot to repair these joints is relatively minor, the excessive quantity of joints can result in a significant annual expense.

## **RECOMMENDATIONS**

As noted previously, the City of Cleveland in conjunction with the Cleveland Browns have implemented a series of annual structural repair projects over the past number of years. These repairs have been successful in managing the expected on-going deterioration on the site. Without such action, the quantity of deterioration and the scope of distress would undoubtedly been much greater than we observed as part

of this Audit process.

We recommend that annual repairs continue to proceed for the foreseeable future because it should be fully expected that deterioration of concrete and joints will continue. The on-going pro-active approach to addressing repairs as identified annually is the most appropriate tactic and best use of available funding.

## **COST ESTIMATE**

The Civil cost is based on the Summary of cost from PlanGrid:

<b>Type</b>	<b>Time Period</b>	<b>Capital Repair Cost</b>
Immediate	0 Year	\$0
Emergency	0 - 1 Years	\$151,200
Capital Repair	2 - 5 Years	\$164,100
Capital Repair	6 - 10 Years	\$443,000



# SECTION 3

## Landscape Narrative

# Landscape Narrative

## SCOPE OF INVESTIGATION

The audit of the landscaping components of the facility is divided into the following categories:

- Irrigation System
- Trees and Mulch
- Shrubs including Ornamental Grasses
- Groundcover
- Annuals/Planters
- Turf/Lawn and Fine Grading

Each category was observed by the Osborn team and is described in its own narrative section below.

## DESCRIPTION OF SITE SYSTEMS

### Irrigation System

The irrigation system has three points of connection at the northeast, southwest, and northwest corners of the stadium. Each point of connection has a 4" main and a controller. Zones basically consist of pop-up rotary sprinklers in lawn areas and pop-up spray sprinklers in shrub and groundcover beds. Control wires follow the main pipe in conduit back to each controller. Main pipes (2" or larger) are buried 30" deep and all other pipes are buried 18" deep.

## OBSERVATIONS

### Irrigation System

A visual observation was completed for the entire exterior system while in operation. Overall, the irrigation system is in fair condition, as the system requires only a small amount of immediate action. Minor adjustments to the fixtures should occur during yearly maintenance activities on the system (0-0 years). Additionally, there are select turf and plant bed areas not irrigated as intended or as originally designed. In several cases, this is due to overgrown vegetation adjacent to sprinkler heads.

More significant concerns regarding the irrigation system center around aging components such as valves, sprinklers, and controllers. For example, the bronze GB solenoid valves originally specified for the project are at the end of their service life and are no longer available, making parts replacement difficult. Similarly, sprinkler head models have changed, making one of the rotor sprinklers originally specified for the project (T-6) obsolete as it is no longer manufactured. The three irrigation controllers have been replaced within the past five years; however, they will likely need to be replaced again as a material repair (6-10 years). The controllers used for this system are becoming obsolete and are typically replaced with the much preferred two-wire control systems with ET capabilities.

Finally, some components are just worn out or missing or not working. For example, manual gate valves are not properly closing. Pipe leaks have become increasingly evident. Quick coupler valves are no longer used. Irrigation has been turned off for several plant beds and is no longer utilized, including the plant beds at the northeast and northwest corners of the stadium. There are several areas in which the original designed irrigation system has been modified or rerouted due to construction activity or the addition of new amenities. When modifying the irrigation system, it should remain a goal to provide "head-to-head"



spacing for all irrigation heads to provide full coverage.

### Trees and Mulch

When the stadium opened in 1999, there were over 300 trees planted. Today, approximately one-third of the original trees remain. This indicates the half-life of the original trees is less than 20 years. This suggests that in another ten years (Year 2033), most of the remaining trees will be at the end of their useful life.

To reduce the cost of a total replant in ten years, measures need to be taken soon to extend the remaining trees that are desirable. The Autumn Blaze Maples on the west and east sides of the stadium and the Ginkgo trees on the south side of the stadium are the most desirable trees remaining and have the highest likelihood of exceeding the anticipated lifespan mentioned above. When looking at the site's trees in totality, less than half of the remaining trees on the property are desirable and most of them should be systematically replaced. Many of the previously removed trees should be replanted to provide visual cohesion and shade to the site.

Most of the remaining trees are over-mulched. **See Photo L1.** This has and will continue to result in root girdling of the trees and their quickened demise.

### Shrubs Including Ornamental Grasses

The only significant remaining beds of shrubs are at the southwest and southeast stadium entrances. These beds consist of Little Princess Spirea and a yew hedge. The Little Princess Spirea are likely at the end of their useful life. They have become leggy and contain deadwood.

**See Photo L2.** It is possible that a significant cut-back the Spirea will cause them to regrow with renewed vigor; however, this is not guaranteed and therefore, not worth the effort.

Since the 1999 planting installation, most shrubs have around the stadium have died or have been intentionally removed. In recent years, maintenance activities on the north side of the stadium have left any shrubs remaining here in disarray. Any remaining shrubs on the north half of the building are in poor condition and should be removed and/or replaced.

### Groundcover

The extent of groundcover has been greatly reduced since the stadium was originally planted in 1999. As noted below, the removal of the plants beds as a memorial to the Donald Gray Gardens has resulted in removal of much of the groundcover on the north side of the stadium. Ivy beds still exist on the west side of the stadium and the



Photo L1 – Over-Mulching Around Trees



Photo L2 – Little Princess Spirea in Poor Condition

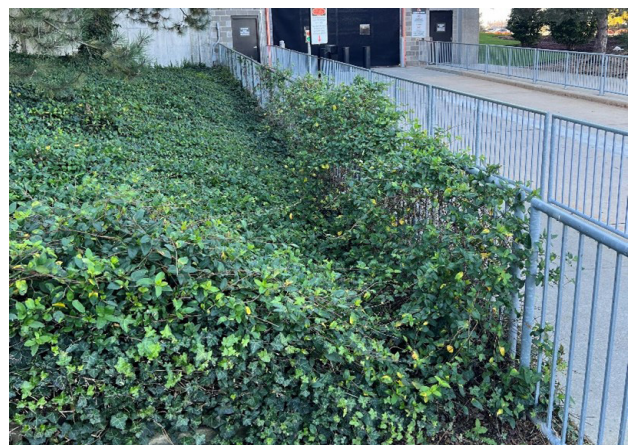


Photo L3 – Ivy Beds at the Northeast Corner of the Stadium



northeast corner of the stadium. **See Photo L3.**

### Annuals/Planters

Annuals are grown in permanent beds flanking the monumental stairway on the north side of the stadium. Additionally, they are present in large, circular, precast concrete planters along the sidewalk north of the stadium. **See Photo L4.** The presence of these precast planters is a result of increased security measures taken after 2001.

The four, square planters on the south side of the stadium were previously flagged in the 2018 Audit Report for immediate repairs. **See Photo L5.** These repairs have still not occurred. Additionally, some curbed planters, particularly on the north side, are in poor condition and need replaced. **See Photo L6.**

### Turf/Lawn and Fine Grading

Overall, lawn areas outside the stadium are in good condition. There are a few select dead lawn areas on the perimeter that do not receive enough irrigation or suffer from receiving excess salt in the winter. Any dead lawn areas should be scarified with a rake, top-dressed with 1" of topsoil, then reseeded and mulched with straw.

## DISCUSSION

In general, while the existing landscape drastically differs from the original installation, landscape areas (including irrigation) around the stadium are in fair condition. There are numerous tasks that will be necessary over the next 0-5 years with a lesser amount of work needing to occur over the subsequent 6-10-year period. There is a large amount of missing or dead plant material that should be partially replaced. The lawn areas outside the stadium are in good condition with only minor bare spots requiring repair seeding.

The biggest question regarding the landscape is "Why has so much vegetation disappeared since the stadium opened in 1999?" As originally conceived, the area north of the stadium was originally a terraced garden as a memorial to the Donald Gray Gardens that had resided there since 1936. Most of these plantings, including the terraces, have been removed due to various maintenance activities to the stadium itself and have not been replaced. In this same area, two semi-permanent event tents have been erected resulting in lost greenspace.

Similarly, the roads ringing the stadium were originally planted with street trees. These trees were removed as part of the City's program to preventatively eliminate ash



Photo L4 –Precast Concrete Planters



Photo L5 – Planter Bed Precast Concrete Coping In Poor Condition



Photo L5 – Planter Bed Precast Concrete Coping In Poor Condition



Photo L6 – Curbed Plant Bed – In Poor Condition

trees beginning in 2013. Subsurface installation of an electric utility has disrupted several Crabapple trees on the south side of the stadium leading to their demise. New stairways at the east and west end of the field have resulted in lost trees. Finally, new security measure implemented since 2001 have generally resulted in removing vegetation near the building structure.

## **RECOMMENDATIONS**

### **Irrigation System**

It is recommended that immediate repairs (0-0 years) be made to broken and/or missing pipes and sprinklers. Emergency repairs (0-1 years) should be undertaken to replace all 4" manual gate valves and brass solenoid valves.

The priority 2-5-year period should replace remaining pop-up spray sprinklers and discontinued T-Bird rotor sprinklers. Longer term improvements (6-10 years) will focus on replacing lateral pipes (less than 2" size) and any remaining sprinklers, including 6504 rotors. A single controller with two-wire and ET capabilities should replace the existing controllers during the 6-10 year material repair schedule. Beyond 10 years, the irrigation main pipes (2" to 4" size), will need to be replaced.

### **Trees and Mulch**

Priority (2-5 years) should be given to replacing remaining trees that are wind swept (leaning) and/or suffering and dying. Chief among these are Blue Spruce, Crabapples, Pines, Magnolia trees, and two ginkgo trees on the south side of the stadium. Other plants, such as the Redspire Pear tree, are near the end of their lifespan and are now considered to be invasive. These trees should be replaced with a different species. Some replacement Elm trees planted around the chillers are inappropriate in this location and should be replaced.

Replanting of missing trees is of lower priority (6-10 years). Furthermore, given new security concerns, the total number of trees should be reduced to no more than 200. However, if new tree plantings do not begin within the next 10 years, it is likely that there will be very few trees left on the site by 2035.

As an emergency repair (0-1 years), the remaining Ginkgo and Autumn Blaze Maples should be air-spaded and root pruned to reverse tree girdling. Subsequently, hardwood mulch should be re-applied to a maximum 3" depth allowing the root flare to be observable on these trees.

### **Shrubs including Ornamental Grasses**

Serious consideration must be given to totally eliminating the remaining beds originally planted on the north side of the building. For all intents and purposes, the intended acknowledgement to the Donald Gray Gardens no longer exists. If this intention is no longer desirable, then a simplified landscape design consisting primarily of lawns and trees should be considered for the north side of the stadium. This decision and action should be made a priority within a 2-5-year period.

A more interesting planting and/or hardscape should be provided for the two Spirea planters on the high profile, southern corners as an emergency repair (0-1 years). Blue Lyme Grass planted as infill around the Chillers is considered invasive in Wisconsin and Michigan and should be removed as an emergency repair (0-1 years). A new planting plan for the Chiller area needs to be developed as a priority within a 2-5-year period.

### **Groundcover**

Given new security measures at the stadium, it would be best to remove most of the groundcover beds around the stadium. These beds have become 1) places to hide items that cannot be passed through the security gates, as well as 2) maintenance problems as the ivy tries to climb up concrete retaining walls, fences, and railings. This removal would occur in conjunction with the shrub removal previously discussed

(2-5-year period).

Similarly, the liriopse in the square and/or rectangular planters has become a place to hide discarded items that cannot pass through the security gates. A low growing carpet rose might serve as a better deterrent as a hiding place. These areas should be changed out when the Redspire Pear trees are replaced in the 2-5-year period.

### **Annuals/Planters**

Annuals have limited impact during the football season when the stadium is mostly in use. Therefore, their use should also be limited. Furthermore, maintaining the annuals in the precast planters is a huge expense as they need daily attention during the hot summer months.

Consideration should be given to eliminating the precast planters and replacing them with an element requiring minimal maintenance. The remaining permanent flower beds on the north side should become a mixture of shrubs, perennials and annuals that would require less maintenance and extend the season of interest.

Several of the precast planters are beginning to crumble and will need to be replaced as an emergency repair (0-1 years). The remaining planters, which are beginning to crack, should be replaced within the 2-5-year window. The broken coping corners on the square planter planters create a safety hazard and should be replaced immediately (0-0 years). The broken planter curb should be done as an emergency repair (0-1 years).

### **Turf/Lawn and Fine Grading**

The low areas should be filled to proper grade or slightly above with topsoil, then re-seeded and mulched with straw as an emergency repair (0-1 years).

## **COST ESTIMATE**

The Landscape cost is based on the Summary of cost from PlanGrid:

<b>Type</b>	<b>Time Period</b>	<b>Capital Repair Cost</b>
Immediate	0 Year	\$10,800
Emergency	0 - 1 Years	\$171,000
Capital Repair	2 - 5 Years	\$479,900
Capital Repair	6 - 10 Years	\$728,300



# SECTION 4

## Architecture Narrative



# Architecture Narrative

## SCOPE OF INVESTIGATION

The Audit of the Architectural components of the facility were organized into the following categories: Exterior Envelope, Concourse Areas, General Seating, Vertical Transportation, Suites, Food Service Areas, and Miscellaneous Spaces. Each of these categories were observed by the Osborn team. Each group has its own Narrative section below.

The assessment of these categories is based upon visual observation of the identified areas, systems, and equipment. The assessment services were limited to a visual survey of existing conditions and discussions with facility personnel. Destructive and non-destructive testing are excluded.

## EXTERIOR ENVELOPE

### DESCRIPTION OF SYSTEM

The exterior envelope includes roofing, granite base panels, aluminum curtainwall/glazing systems, metal panels, and the concealed & exposed gutter system under the concrete seating decks.

### OBSERVATIONS

Roofing consists of single-ply membranes and exposed galvanized metal deck. The membrane roofs are located at the Club and Upper Concourse Areas. The metal roofing is located on the canopies above the Upper Deck Seating Areas. Observed conditions of the membrane roofing showed no signs of leaking. Flashing and seams appear undamaged. No major water ponding was seen. Some roof areas had collected debris throughout the field membrane. Several roof drains are missing protective roof strainers. Sealant joints at parapet caps are not weathertight. Profile of joint sealants are inconsistent. Multiple repair attempts are apparent. **See Photo A1.** Observed sealant at repair areas lack appropriate backing and profile to function long-term as a durable joint. Holes and tearing observed in sealant joints at limited areas. Surface rust was observed on roughly 30% to 40% of the metal roofing above the north Upper Deck Seating Area. Material loss of the decking was not seen.

The granite panels are located at the base of the exterior wall. The panels have little to no deterioration. Sealant at the bottom joint of the granite panels, adjacent to the concrete sidewalk, has significant deterioration. Holes and tearing observed of the sealant throughout these perimeter locations. **See Photo A2.**

The aluminum curtainwall systems and metal panels are located on various portions of the exterior. Majority of curtainwall, with related glazing systems, and metal panels were observed. Aluminum finish shows little deterioration. No signs of moisture intrusion or gasket failure



Photo A1 – Sealant Joints At Roof Parapet Cap.

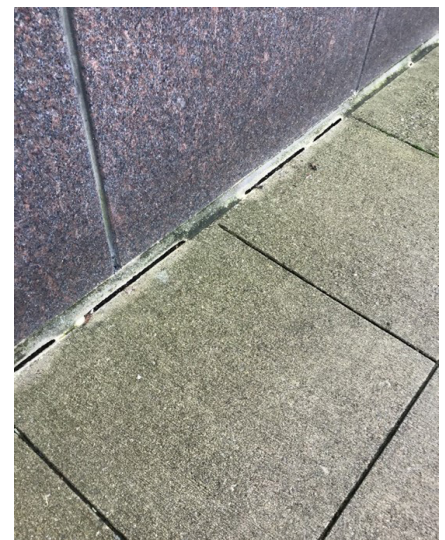


Photo A2 – Typical Sealant At The Bottom Joint Of The Granite Panels.

was observed with the glazing system. Perimeter and joint sealants appear weathertight and undamaged. All are performing function as intended.

As a secondary backup to collect and drain water off the lower and club concrete seating decks, the stadium design uses a gutter system located at the interior ends of the seating decks. The gutters are exposed and/or concealed at unoccupied, back of house, or suite areas. Gutters observed show significant deterioration having heavy surface corrosion.

**See Photo A3.**

## DISCUSSION

The exterior envelope is in good condition, acceptably weathertight at majority of areas observed, and performing as designed

The single-ply membranes are generally in good condition. These roofs are at the end of their assumed 15 to 20 year warranty period and should be monitored as part of a routine maintenance plan. Collected debris should be removed. New roof strainers should be installed to protect exposed, open roof drains.

The overall condition of the coping sealant joints at the roof copings and the granite panel bases are poor. Replacement with routine maintenance of the exterior sealant will be necessary to provide a continued long term watertight building.

The metal roofing above the north upper deck seating areas are in fair to poor condition and should be replaced.

The curtainwall framing, glazing system, and metal panels are in good condition and weathertight. Similar to the membrane roofing, the sealant at the perimeter of the curtainwall framing and at the joints of the metal panels should be monitored as part of a routine maintenance plan.

The Concealed and Exposed Gutter System is in poor to obsolete condition. The heavy surface corrosion has created material loss, and as a result, the gutters cannot contain the water. The system is original and is no longer functioning as intended. This is a potential hazard to the overall condition of the facility as occupied and unoccupied areas experience significant water damage over the years. Portions of this gutter system have been replaced as a continuing maintenance effort. As part of a 2022 gutter restoration program an estimated 1,335 linear feet of existing gutters have been replaced. This project is using new stainless steel fabricated units.

## RECOMMENDATIONS

Comprehensive replacement of joint sealant at base of exterior granite panels within 2-5 year time frame. Joint sealant replacement at failing roof coping locations within 2-5 year time frame with full replacement over majority of coping joint locations within 6-10 year time frame.

## COST ESTIMATE

The Architectural cost to replace the joint sealant at the base of exterior granite panels:

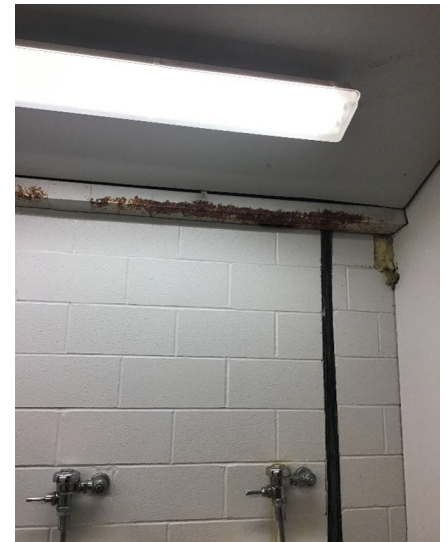


Photo A3 – Gutter Below Concrete Seating Deck, Exposed Condition.



Type	Time Period	Capital Repair Cost
Material Repair	2-5 Year	\$54,492

The Architectural cost to replace the joint sealant at failing and all roof coping locations:

Type	Time Period	Capital Repair Cost
Material Repair	2-5 Years	\$5,107
Capital Repair	6 - 10 Years	\$20,663

## CONCOURSE AREAS

### DESCRIPTION OF SYSTEM

The concourse items assessed include doors and frames, concrete masonry walls, concrete floor slabs, and supporting structure located at the Main, Club, and Upper Concourse levels. Included in this portion of the evaluation are the perimeter security entrance gates located at the main concourse level.

### OBSERVATIONS

Both hollow metal and aluminum storefront doors and frames on all concourse levels are generally functioning with hardware in fair to poor condition. On the Main and Upper Concourse levels roughly 30% of the hollow metal door and frame assemblies have visible weathered surfaces with apparent face rust developing, specifically at the frame bases. **See Photo A4.** An estimated 30% of the hollow metal doors have physical damage, are misaligned, and do not latch properly. This includes the fire rated door assemblies leading into the vertical exit enclosures. **See Photos A5 and A6.** The perimeter entrance gates at the main concourse level have little deterioration. The gate hinges and related cane bolts/drop rods show limited weathering, no physical damage, and are correctly aligned.

Concrete masonry unit walls defining the main circulation hallways and paths were observed. Walls were generally found to be in good condition. Majority of mortar joints were undamaged. Coverage and quality of the painted finish was good. Control joints were sealed. In the Service and Main Concourse areas, some step-cracking in the mortar head and bed joints were observed.

### DISCUSSION

The door assemblies located in the open concourses are in fair to poor condition. These doors are heavily used throughout the season, are exposed to equipment, and weather damage. Damaged doors with

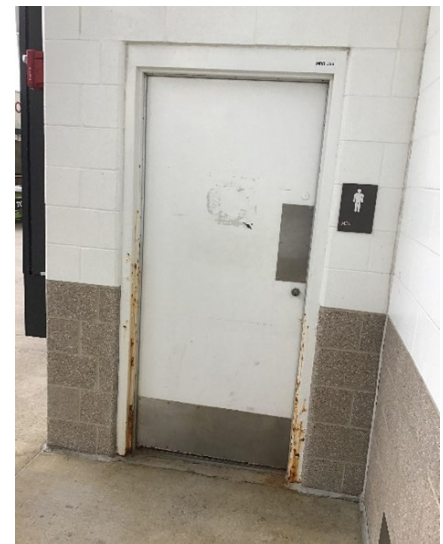


Photo A4 – Typical Hollow Metal Door Assembly



Photo A5 – Main And Upper Concourse Typical Fire Rated Door Assembly.

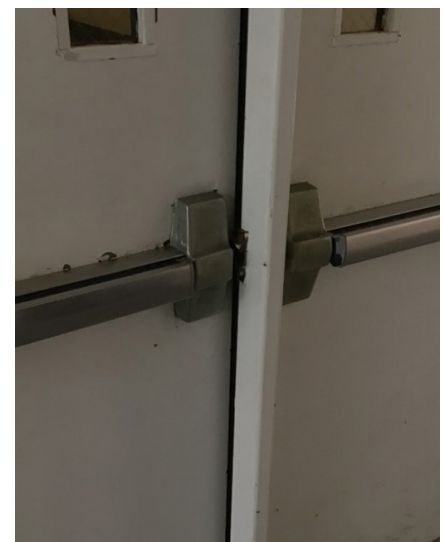


Photo A6 – Main And Upper Concourse Typical Fire Rated Door Assembly.

associated hardware should be replaced. Misaligned doors can be adjusted in the short term and do not need replacement. The fire rated exit door assemblies leading into the vertical exit enclosures are in fair to poor condition. Assemblies cannot function as intended. These doors are required to be self-closing, self-latching, and fully sealed per the Ohio Building Code. Damaged, non-conforming hardware should be replaced. New hardware will need be installed.

All cracks found in non-bearing concrete masonry unit walls should be tuck-pointed.

RECOMMENDATIONS

Replace damaged/improper functioning hardware on fire rated door assemblies immediately to satisfy building code requirements. Adjust door leafs to allow proper closing. At the Main, Club, and Upper Concourse levels, replace all hollow metal door assemblies with hardware over 2-5 year time period.

COST ESTIMATE

The Architectural cost to replace the hollow metal door assemblies in the concourse areas, including miscellaneous associated repairs:

Type	Time Period	Capital Repair Cost
Material Repair	2-5 Years	\$794,304

The Architectural cost to adjust door leafs and hardware on fire rated assemblies to allow proper closing and latching:

Type	Time Period	Capital Repair Cost
Immediate Repair	0-0 Years	\$12,960

GENERAL SEATING

DESCRIPTION OF SYSTEM

The general seating was visually assessed on a sample basis. Roughly 15-20% of the seating located in each quad of the Upper Bowl, the Club Level, and the Lower Bowl sections were observed.

OBSERVATIONS

Seating in the Upper Bowl and Club Levels are in good condition. No rust or seat spring failure was observed. In the Lower Bowl sections, rust is present on standard feet and bases. Seat standards have spring failure. Fading of the seat color is clearly visible. Within the percentage of seats assessed, none were found to be loose from the concrete deck. Seating was secure. **See Photos A7 and A8.** Seating in the “Dawg Pound” area of the lower bowl level consists of aluminum bench seating, both new and old. Paint is in good condition. Seating was secure to concrete deck.

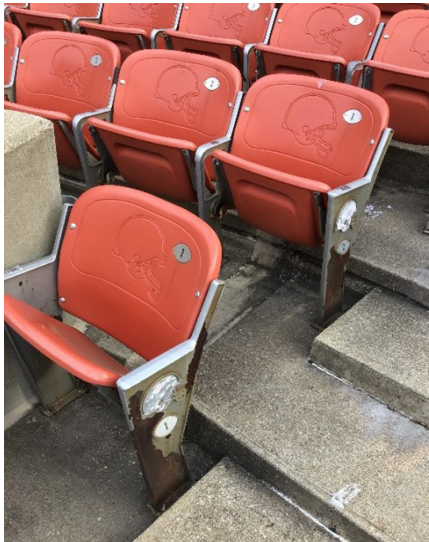


Photo A7 – Lower Bowl Seating



Photo A8 – Lower Bowl Seating

## DISCUSSION

The seating in the Upper Bowl and Club Levels are in better condition compared to the Lower Bowl. These seats have been replaced in the recent past. Lower Bowl can be refurbished or replaced. As part of a seating refurbishment process, the plastic seats, springs, and mounting bolts can be replaced. Given the condition of the seats in these sections, complete replacement is a better option. Bench seating in the Dawg Pound area can be maintained by repainting.

## RECOMMENDATIONS

Replace seats within the Lower Bowl sections over 6 – 10 year time frame. Seating in the Upper Bowl areas should be monitored for rusting, spring failure, and bolt fastening to deck condition.

## COST ESTIMATE

The Architectural cost to replace the seating in the Lower Bowl sections:

Type	Time Period	Capital Repair Cost
Capital Repair	6-10 Years	\$21,576,000

## VERTICAL TRANSPORTATION

### DESCRIPTION OF SYSTEM

Vertical Transportation includes the elevators, escalators, and enclosed stairwells.

### OBSERVATIONS

Assessment of the elevators and escalators were not part of this assessment scope, and are not addressed in this valuation. Both systems are maintained by KONE through a maintenance and service contract directly with the city. All enclosed stairwells were observed. Stair assembly miscellaneous metal components have limited surface rust developing. Typical areas include the stair risers and underside of stair landings. The stair enclosure roof joists and underside of metal decking have little deterioration. Refer to “Concourse Areas” of this assessment for valuation of the fire rated door assemblies at these enclosed stairwells.

## DISCUSSION

The fire rated door assemblies at the enclosed stairwells are heavily used, and in the open concourse areas, are exposed to the weather and physical damage. Refer to “Concourse Areas” of this assessment for complete discussion of these rated assemblies. The amount of rusting observed on the stair components require only spot repair. It is surface rust developing and does not require full painting of the entire stair and roof system.

## RECOMMENDATIONS

Replace damaged/improper function hardware on fire rated door assemblies immediately to satisfy building code requirements. Adjust door leafs to allow proper closing. As continuing, routine maintenance, repaint stair components.

## COST ESTIMATE



The Architectural cost to adjust door leafs and hardware on fire rated assemblies to allow proper closing and latching: Immediate Repair (0-0 years) = Refer to “Concourse Areas” of this assessment for Cost Estimate.

## SUITES

### DESCRIPTION OF SYSTEM

The suites are located on the lower and upper levels. Suite balconies, and related seating, suite corridors, and elevator lobbies are included.

### OBSERVATIONS

Majority of suites were observed and assessed separately to identify work related to floors, walls, and ceilings. The suites, related corridors, and elevator lobbies show little deterioration and are performing functions as intended. A large number of suites observed had new floor, wall, and ceiling finishes. Suites were observed to be very well maintained. **See Photo A9.** The suite doors and related hardware show little deterioration. Door frames show minor signs of normal wear. Flooring, in suite corridors and elevator lobbies, have been replaced and are in a “like new state”. The seating in the exterior balconies have minor rust on standard feet and bases. Seat standards have no spring failure, and no damage to the vinyl coverings were observed. **See Photo A10.**

### DISCUSSION

The suites, related corridors, and elevator lobbies are in good to very good condition. This is a result of the modernization phase, conducted in 2015, and the completed maintenance repair items identified in the 2018 capital repair audit. Seating in the exterior balcony areas are in good to fair condition having been partially replaced in the recent past as part of an overall seating refurbishment process.

### RECOMMENDATIONS

Seating in the exterior balcony areas should be monitored for rusting, spring failure, and bolt fastening to deck condition. Maintain seat replacement process over 6 – 10 year time frame. Continue routine maintenance of the suites, related corridors, and elevator lobbies to ensure current conditions.

## COST ESTIMATE

The Architectural cost to replace the seating in the Exterior Balcony Areas:

Type	Time Period	Capital Repair Cost
Capital Repair	6-10 Years	\$15,624,000



Photo A9 – Typical Suite.



Photo A10 – Seating At Suite Balconies.

# FOOD SERVICE AREAS

## DESCRIPTION OF SYSTEM

Food Service Areas include concourse concessions, kitchen areas, and adjacent/related storage. These areas are located on all levels of the stadium.

## OBSERVATIONS

Majority of food service areas were observed and assessed separately to identify work related to floors, walls, and ceilings. Food service equipment was not part of the assessment scope and is not addressed in this report. The food service areas show minor to little deterioration. Upgrades were observed in specific concession areas based on marketing preference of the food and beverage provider. Floor finishes vary from sealed concrete, epoxy resin, and tile. Concrete floors have minor deterioration with no cracking. Tile in limited areas was cracked. Epoxy flooring appears “like new” in specific concession areas. Other locations have little deterioration. **See Photo A11.** Majority of wall finish is fiberglass reinforced panel. The panels appear in fair to good condition. Finish ceilings are 2’x2’ and 2’x4’ ACT. Limited areas are open to the structure above. Majority of the finish ceilings in concession and kitchen areas are performing function as intended and show minor to little deterioration. **See Photos A11 and A12.**

## DISCUSSION

The majority of the food service areas are in good to very good condition. This is a result of new food and beverage vendor leases and the completed maintenance repair items identified in the 2018 capital repair audit.

## RECOMMENDATIONS

Continue routine maintenance of the food service areas to ensure current conditions.

## COST ESTIMATE

N/A.

## MISCELLANEOUS SPACES

### DESCRIPTION OF SYSTEM

Miscellaneous Spaces involve the service level corridors, service level offices, housekeeping areas, and janitor rooms.

## OBSERVATIONS

All miscellaneous spaces were observed and assessed separately to identify work related to floors, walls, doors & frames, and ceilings. Floor finishes in these spaces vary from sealed concrete in the service level corridors, to epoxy flooring in janitor rooms, to carpet and VCT in the service level offices. Finish flooring appeared to have minor deterioration. Wall finishes include painted CMU in the service level corridors and related spaces, and



Photo A11 – Epoxy Floor In Kitchen Areas



Photo A12 – Finish Ceiling In Kitchen Areas

painted gypsum board in the offices areas. No water damage was visible on the wall surfaces in the service level offices located in the southeast portion of Quad A. This condition was a consistent observation in the service level areas of Quads A and D. **See Photos A13 & A14.** Ceiling material and finish varies in the miscellaneous spaces from unpainted concrete structure to 2'x2' and 2'x4' ACT with suspended grid. Similar to the walls, no water damage was observed on the majority of the 2'x2' and 2'x4' ACT finish ceilings. Where water damage was seen on finish ceiling areas, the cause was repaired and finish ceiling material was not replaced. In a few areas having no finish ceiling, insulation was present, consistent, and showing little deterioration.

Hollow metal doors and frames in the service level corridor are in fair condition. Doors and frames show signs of heavy use. Majority of doors observed are dented, however, they are performing function as intended.

## DISCUSSION

The majority of the miscellaneous spaces are in good condition. This is a result of completed maintenance repair items identified in the 2018 capital repair audit.

## RECOMMENDATIONS

Continue routine maintenance of the food service areas to ensure current conditions.

## COST ESTIMATE

N/A.

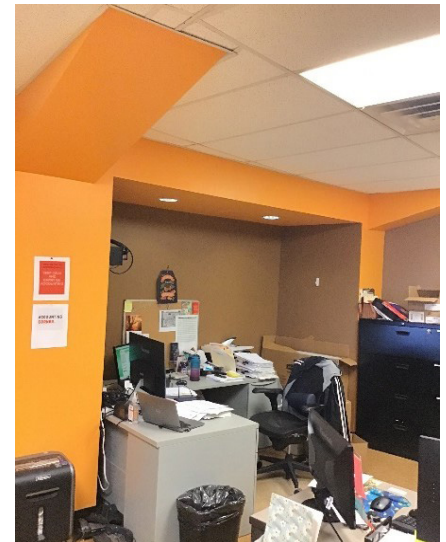


Photo A13 – Wall And Ceiling Finishes, Service Level Office Area.



Photo A14 – Wall And Ceiling Finishes, Service Level Office Area.

# SECTION 5

## Structural Narrative



# Structural Narrative

## SCOPE OF INVESTIGATION

The structural audit consisted of the review of many items that comprise the structural system at the stadium. Below is a listing of the types of items surveyed and an explanation of their relative importance in maintaining a viable venue for both the City of Cleveland and the Cleveland Browns. The actual condition of each item and recommendations for repair follow later within this Structural Narrative.

The structural evaluation is limited to the building itself. This evaluation does not include site retaining walls, drives, sidewalks, etc. Those site related items are included within the Civil Narrative.

As required within the Lease, we have provided a forecast of future deterioration based on our experience with structural deterioration as well as our long history of identifying and repairing the Cleveland Browns Stadium structure. Please note that attempting to anticipate the level of deterioration beyond one year in the future is very subjective and highly dependent on the individual conducting the observations and that person's personal experience with the on-going deterioration of concrete, steel, and joint materials.

## OBSERVATIONS

The deterioration of concrete, joints, ramps, and superstructure as observed at Cleveland Browns Stadium is consistent with a 25-year old outdoor stadium in northern climates. The annual varying temperatures along with abundant rain/snow experienced in Cleveland, Ohio contribute to accelerated deterioration over what one would experience in a more temperate environment. The following represent our findings based solely on visual observations of readily accessible construction. The scope of this audit did not include invasive exploration of existing construction nor testing of any materials.

The individual repair types are commonly found throughout the exposed areas of the stadium's seat deck and concourse areas unless specifically noted otherwise.

It must be noted that the City and the Browns have continually implemented annual concrete repair projects to address deterioration as it becomes visible. In addition, these renovation projects included pro-active measures to minimize or eliminate future deterioration that otherwise would have developed sooner at greater expense.

## GENERAL REPAIR TYPES

### PATCHING

The observed concrete spalls are found in varying locations including tread & risers, vomitory walls, and curbs. In general, the areas to be patched are partial depth and predominantly a result of the corrosion of the embedded steel reinforcing. **See Photo S1.** Some areas of failed concrete can be found immediately adjacent to a failed joint sealant. The infiltration of water into a failed sealant allows for additional moisture to advance to the reinforcing steel accelerating overall deterioration.



Photo S1 – Typical Spalled Concrete

## NON-STRUCTURAL CRACKS

The existence of these types of cracks are inherent in concrete construction. Therefore, it was anticipated that we observed non-structural cracks throughout the stadium. Most of the cracks could be found in cast-in-place walls and concourse slabs. The extent of non-structural cracks in the precast seat deck was predictably less because the pre-stressed precast was fabricated under controlled environmental conditions thus minimizing the existence of tensile forces that induce such cracking. **See Photo S2.**

## STRUCTURAL CRACKS

These types of cracks typically result from unanticipated loads acting upon the structural member. We identified structural cracks in varying locations throughout the building. Typical locations included elevated concrete slabs and cast-in-place walls. However, the quantity of structural cracks in the building were far less than the number of observed non-structural cracks.

## GUARD RAIL POSTS

We observed deterioration of the concrete at several guard rails posts at both vomitory walls as well as in the seat deck aisles. Considering the number of guard rail posts in the stadium the number of observed failures is considered very low. **See Photo S3.**

## STEPS

The steps located within the seat deck aisles often include an embedded guardrail post. As noted above there are locations where the concrete surrounding the post has cracked resulting in the need to replace that step. In addition, some steps are deteriorating from failed concrete substrate. **See Photo S4.**

## MASONRY

We observed localized failure of masonry in several of the vomitory entrance walls. The failure consists of cracked cmu block. It appears as if the cracks originated from unanticipated load from the precast seat deck unit above. **See Photo S5.**

## JOINT REPAIR TYPES

### BACKER ROD & SEALANT

Typically, sealant materials exposed to the environment and UV can be expected to have a useful service life of 7 to 10 years. As a result, the continual repair of such joints can be expected annually for the life of the stadium. We did observe failed joint sealants in a variety of locations as anticipated. **See Photo S6.** It should be noted that a significant quantity of repair is located behind the fixed seats throughout the seating bowl.

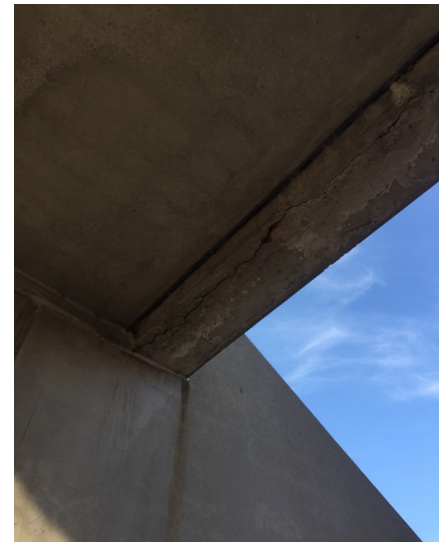


Photo S2 – Typical Cracked Concrete



Photo S3 – Typical Concrete Damage at Guard Rail Post

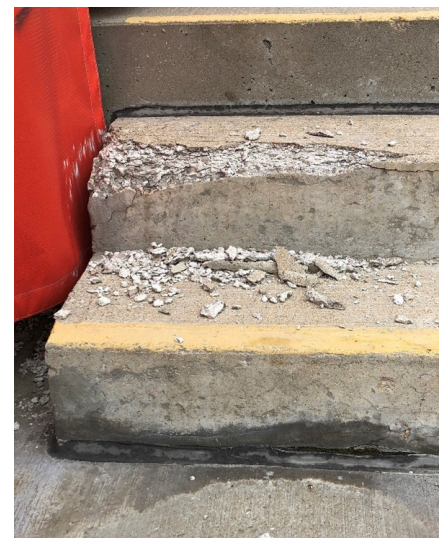


Photo S4 – Typical Deteriorated Aisle Step



Removal and reinstallation of the seats is time consuming and likely will necessitate replacement of the removed 25-year old fixed seats. See the Architectural Narrative for additional information on fixed seat replacement.

## COVE JOINTS

Much like the backer rod & sealant narrative above we did find numerous joints that require attention. Cove joints are segregated from the typical backer & sealant joints solely because cove joints potentially are slightly more costly to replace than is a single plane conventional backer rod & sealant joint.

## PRECAST JOINTS

Each unit typically includes up to (3) three rows of seat deck. The precast units when originally installed necessitate filling the open joint between adjacent joints on both ends. The joints were filled with a pre-formed sealant material that is epoxied into position. As with other types of joints, the joint material begins to fail due to exposure to environmental conditions and UV rays. Many of the original joints have already been replaced over the past 10 years but there remain areas of seat deck where the joint material was installed during the original stadium construction. **See Photo S7.**

## SEALANT PLUGS

Typically, each precast unit includes several voids that must be filled with sealant. The voids were originally cast into the precast unit to allow the installer's crane to pick up and maneuver the unit into its position. The void no longer serves a purpose, but the void must be filled to prevent water from ponding in the depression. Again, the installed joint material has a useful service life of 7 to 10 years.

## CONTROL JOINTS

Concrete construction inherently requires a large quantity of control joints to manage unavoidable shrinkage cracks. These joints are also necessary where one concrete pour ends and the next begins. In a stadium as large as the Cleveland Browns Stadium there are a vast number of joints that require regular maintenance.

## RAMPS / BRIDGES / RAMP LANDINGS

It must be noted that the City and Browns began implementing a replacement project for the ramps, bridges and ramp landings several years ago. As of this writing, all of the bridge slabs and ramp landings have been replaced and require no additional work at this time.



Photo S5 – Typical Masonry Cracking at Vomitory Wall



Photo S6 – Typical Failed Backer Rod & Sealant Joint

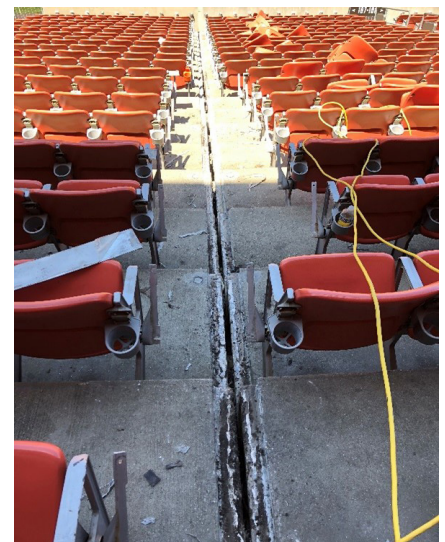


Photo S7 – Typical Precast Joint



Photo S8 – Typical Corroded Metal Floor Deck at Ramps

Many of the ramp slabs have been replaced over the past few years. With that said, there are (16) additional ramps to be replaced in the stadium's four ramp systems located in each corner of the building. **See Photo S8.**

The following deterioration narrative is solely applicable to those ramps that have not yet been addressed.

## SLAB ON METAL DECK

The metal floor deck supporting the ramp slabs has begun to deteriorate due to the infiltration of water through the slab joints. The trapped moisture located between the slab and metal deck causes the deck to fail along a line directly below the slab joint above. Over time, the deck corrosion advances to a point where the structural integrity of the slab is jeopardized.

## SUPERSTRUCTURE REPAIR TYPE

Touch-up painting: The quantity of exposed structural steel frame at the stadium is extensive with much of the building's steel columns and raker beams visible. Over time, the high performance paint coating begins to fail resulting in the development of surface corrosion. Due to the age of the coating, it was expected that areas of failed paint can be found in localized areas throughout the stadium. **See Photo S9.**

## DISCUSSION

The following narrative expounds on the above observations. This section includes commentary on the above observations, possible repair options, and repair/replacement recommendations. Continual repair of concrete, steel and joints should be expected to occur annually at an open-air stadium. Left unattended, deterioration often continues to increase in size and correspondingly expenses. This on-going deterioration grows at an exponential rate resulting in higher life-cycle costs than if the repairs were implemented in a pro-active systematic manner. As stated above, the City and the Browns have implemented annual repair programs to address not only visible deterioration but also in an attempt to arrest the on-going development of distressed structural components.

As noted previously, the spalling of concrete is primarily attributable to corroding embedded reinforcing steel. The corrosion process increases the volume taken up by the corrosion by-product. This process can potentially increase the volume 7x the volume of the parent reinforcing steel. The resulting internal stress within the concrete is sufficient to induce micro-cracking off the concrete substrate. In turn, water infiltrates the crack to initiate further advancement of the corrosion process at an exponential rate. Repairing deteriorated concrete as it develops is the standard means to combat spalling concrete. Another option for consideration is the application of a protective coating to eliminate water infiltration into the concrete substrate. Such coatings can have a high initial cost and typically have a useful lifespan of about 10 years. The decision to apply a protective coating should be done on a location-by-location basis considering initial expense and anticipated duration of protection.

The sealing of non-structural cracks is an example of proactive maintenance. Such action eliminates the infiltration of water into the crack thus preventing corrosion of reinforcing steel; or consequential damages to finished spaces below the cracked concrete. The annual repair program should evaluate such cracks and consider the impact of any decision not to repair such cracks.



Photo S9 – Typical Surface Corrosion on Structural Framing Member

As structural cracks appear, they should be addressed on an annual basis. It is important to reestablish the full structural integrity of a concrete member. Typically, these cracks are filled with a specialized epoxy manufactured in a high viscosity liquid that can penetrate very fine cracks bonding the substrate together. Prior to any such repair, it is important to identify the likely cause of the structural crack. Without addressing the primary cause, it can be expected that the crack will reappear in the near future.

A guard rail post must be properly anchored within the concrete substrate in order to maintain stability of the rail. Often, water migrates in the cold joint between the rail and the concrete. This condition under reoccurring freeze/thaw cycles quickly causes cracks to form radiating from the post. The cracks cause the concrete to fail via a large spall. Without the proper stabilization of the guard rail assembly, it cannot withstand the code-mandated lateral loads resulting in a potential safety hazard.

The process described above for guard rail posts is applicable to seat deck aisle steps. Steps are especially susceptible to cracking and failure due to the relative proximity of the post to the edge of the step. Again, a potential safety hazard can develop should the concrete surrounding the post fail.

While not necessarily a significant structural concern, the cracked masonry should be addressed to prevent water infiltration through the wall assembly. Such moisture intrusion can damage finished spaces behind the wall and potentially create an environment favorable to the advancement of deterioration to concealed structural components.

Due to the relatively short useful lifespan of joint materials, it can be expected to be an on-going maintenance issue at an open-air stadium facility. The repair detail must consider the width of the joint opening and possible movement of the structure on each side of the opening. It is important to detail and construct the joint accordingly in order to maximize the useful service life of the repair.

Cove joints do not often have the same substrate movement considerations of a typical backer rod & sealant joint. However, detailing and construction of the joint is important to prevent premature joint failure and water infiltration.

As noted previously, some of the original precast joints still exist from original stadium construction. 25-year old joint material should fully expect water to readily migrate through the joint opening. It is especially important to replace these joints where located over usable and sometimes finished space below. However, the joints located in the stadium's lower deck on the east and south sides of the stadium only have a crawl space below so the repair of these joints can be delayed if necessary.

Repair of the sealant plug voids is a relatively insignificant item for consideration. However, it remains necessary to fill the voids to prevent water ponding on the tread surface.

Due to the very high quantity of control joints at the stadium, it is an on-going maintenance effort to prevent water infiltration through the joint opening. While the cost per foot to repair these joints is relatively minimal the excessive quantity of joints can result in a significant annual expense.

## **RAMPS / BRIDGES / RAMP LANDINGS**

### **SLAB AND METAL DECK**

There are 46 ramp slabs at the stadium. To date, 30 have been replaced. Conversely, all the bridge and ramp landings have already been replaced. The unrepaired ramps must be replaced as funding becomes available because of the advanced deterioration of the metal floor decks. Based on recent past experience at the stadium, the cost to repair one ramp section is approximately \$400,000 in 2023 dollars. These floor decks act compositely with the concrete slab to support pedestrian and equipment loading. When

the corrosion of the metal deck advances far enough it becomes necessary to either replace the slab or implement remedial repairs. Without such action the ramps must be closed and unusable to all traffic.

## SUPERSTRUCTURE REPAIR TYPE

### TOUCH-UP PAINTING

The touch-up repairs to the high performance paint coating system on exposed structural steel is important for two (2) primary reasons: First, the repair work will prevent the corrosion from advancing thus jeopardizing the structural integrity of the steel framing member. Secondly, timely repair of the coating prevents unsightly discoloration of the adjacent painted surfaces due to corrosion-induced staining.

### RECOMMENDATIONS

As noted previously, the City of Cleveland in conjunction with the Cleveland Browns have implemented a series of annual structural repair projects over the past number of years. These repairs have been successful in managing the expected on-going deterioration of this open-air facility. Without such action, the quantity of deterioration and the scope of distress would undoubtedly been much greater than we observed as part of this Audit process.

We recommend that annual repairs continue to proceed for the foreseeable future because it should be fully expected that deterioration of concrete, joints and structural steel will continue. The on-going pro-active approach to addressing repairs as identified annually is the most appropriate tactic and best use of available funding.

Osborn recommends the following be implemented on an annual basis:

- August: Structural engineer conducts a structural survey of the stadium
- September: City/Browns decide on project scope
- October to December: Capital repair construction documents developed
- January: City/Browns authorize construction
- February: Capital repair bid process concludes
- March to July: Construction phase

## COST ESTIMATE

The Structural cost is based on the Summary of cost from PlanGrid:

Type	Time Period	Capital Repair Cost
Immediate	0 Year	\$0
Emergency	0 - 1 Years	\$228,720
Capital Repair	2 - 5 Years	\$8,345,504
Capital Repair	6 - 10 Years	\$35,712

# SECTION 6

## Plumbing Narrative



# Plumbing Narrative

## SCOPE OF INVESTIGATION

The audit of the mechanical systems has been organized into the following categories:

- Domestic Cold Water System
- Sanitary and Storm Piping
- Domestic Water Heaters
- Grease Traps

This report is based upon our inspection of the facility's plumbing equipment and associated piping. All areas of the facility were limited to a visual survey of existing conditions and exclude both non-destructive and destructive testing. This level of inspection does not clearly reveal all defects and requires certain engineering assumptions be made to establish condition. These assumptions cannot always be verified without extensive testing, some of which can be destructive. Therefore, this report is not to be considered a guarantee of the exact condition, life expectancy and total extent of potential repairs of the plumbing systems inspected.

## DOMESTIC COLD WATER SYSTEM

### DESCRIPTION OF SYSTEM

The domestic cold water enters the facility with adequate backflow prevention. After a flooding incident that occurred in 2007 when debris became clogged in the water closet flush valves, a 100 micron filtration system was added. Domestic water booster pumps with variable frequency drives are located in the Service level main mechanical room and the controllers have been replaced recently. The domestic cold water is routed throughout the facility to all concessions, suites, restrooms, and Club Areas.

The facility has manually operated Plumbing fixtures for water closets, urinals, and sinks. They are standard flow rate, no low flow fixtures are used in the facility.

Each suite has a water closet & lavatory in the restroom and bar sink in the main seating area. All fixtures observed were in good condition.

### OBSERVATIONS

On the Main Concourse, it was observed that the paper jacket on several domestic water branch lines was deteriorating from being exposed to the weather. This exposed the fiberglass insulation reduces its effectiveness. In addition to the deteriorating paper jackets, several pipe hangers were observed to be rusted over presenting a risk of failure in the future. **See**

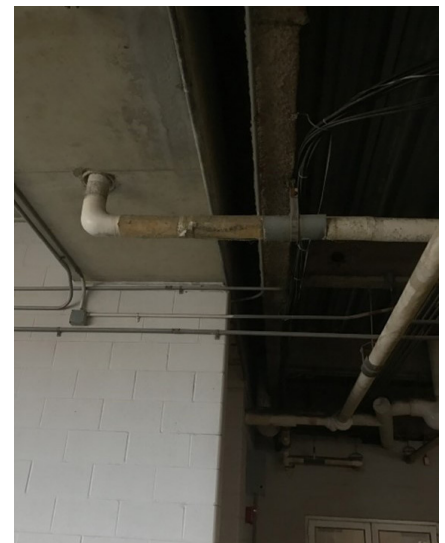


Photo P1 – Domestic water insulation with worn off paper jacket



Photo P2 – Deteriorating pipe hangers

## **Photo P1 & Photo P2.**

The general condition of the domestic water piping is poor. Distribution piping 4" and larger is galvanized steel with smaller piping copper. Maintenance is required to flush the domestic water system 48 hours prior to any event to clear the debris and discoloration from the water.

The domestic water booster pump was observed to be original, with updates made to the controllers. The booster pump is reaching the end of its expected life and we were not able to confirm any level of maintenance / repair from the maintenance staff.

Based on discussion with Stadium maintenance staff, heat tracing applied to the piping exposed to ambient conditions has failed in numerous areas on the concourses.

## **DISCUSSION**

The flood of 2007 inside the Stadium was believed to be caused by stirring up of sediment inside the domestic water main entering the Stadium and clogging the flush valves diaphragms. This led to the installation of an Orival water filtration system at the domestic water entrance to the building. The filters have been relatively clean over the years during inspections. The constant filling and draining of the domestic water system is causing the interior of the galvanized pipes to corrode and rust. The stadium must flush the pipes 2 days prior to games to remove the debris and rust coloring of the water. The fine rust particles have also reduced the life of the small water heaters in the building. 20-40 gallon Electric water heaters and in some locations instantaneous heaters are located in concession areas inside the Stadium. The fine rust particles plug the orifices on the heaters, leading to premature failure.

The presence of the corrosion in the galvanized pipes leads to additional pressure drop in the system and decreased efficiency of the domestic water heater. A common problem in the kitchen and concessions is the flowing of hot water into the cold water system as the hot water piping is at a higher pressure than the cold water piping. Further investigation will be required to determine if this is just an issue with the settings on the cold water pressure reducing valves.

## **RECOMMENDATIONS**

We recommend removing and replacing of all 4" and 6" galvanized domestic water piping in the stadium. This will reduce the amount of the water and sewer utility costs for the city. There would also be maintenance labor savings by not having to flush the system so frequently.

We recommend that the domestic booster pump be inspected, and any immediate maintenance be performed to prevent potential failure.

## **SANITARY AND STORM PIPING**

### **DESCRIPTION OF SYSTEM**

Storm and sanitary piping is routed horizontally to storm and sewage ejection pumps located in the lower level of the building. The storm and sanitary forced main piping is routed to the city mains on the exterior of the building. Floor drains are in all mechanical equipment rooms, restrooms, and concession work rooms.



Photo P3 – Deteriorated storm pipe insulation

## **OBSERVATIONS**

On the concourse level, we observed storm and domestic piping insulation to be very dirty and the paper jacket torn in numerous areas. **See Photo P3.**

The seating area of the stadium is pressure washed after games to clear the debris from the stands. Any dirt and fine debris are pushed toward the bowl drains, which is a part of the storm system. This has also led to ponding of water near the drains under the seats.

## **DISCUSSION**

The paper insulation cover on Concourse storm and sanitary being torn and dirty is more of an aesthetic issue as it does present the Stadium as not having a clean appearance.

Based upon discussions with Stadium Maintenance, the storm or sanitary lines have never been jetted out with a pressure system. Years of debris, beer, and cola syrup entering the sanitary system may have caused some issues.

Based on discussion with Stadium maintenance staff, heat tracing has failed on numerous areas of the storm and sanitary piping that is exposed in the Lower concourse area. Insulation has also damaged in areas, which exposes the heat trace and loses its effectiveness.

## **RECOMMENDATIONS**

- We recommend that the insulation with a damaged or dirty cover be covered with a PVC jacket.
- We recommend the main underground sanitary lines and bowl drains be jetted out and cleaning of the sanitary holding tank to ensure adequate flow in the future.

## **DOMESTIC WATER HEATERS**

### **DESCRIPTION OF SYSTEM**

All concession areas above the service level have individual 30-50 gallon electric water heaters to serve various locations.

The service level Mechanical room houses three (3) natural gas water heaters manifolded together with (1) 3000 gallon hot water storage tank to serve all areas not served by an individual electric water heater. All three (3) of the domestic water heaters were replaced in the past 15 years. Temperature and pressure relief valves have been replaced recently on the hot water heaters. An upgraded hot water thermostatic mixing valve for the Stadium was installed for precise temperature control in low flow situations such as on non-game days.

The hot water for the Suite lavatory and bar sink is provided by an instantaneous hot water heater located under the bar sink. The lifespan of the heaters varies, and they are replaced on an as needed basis by the Maintenance staff upon failure.

## **OBSERVATIONS**

All natural gas water heaters in the service level mechanical room are new and in good operating condition, however, the associated hot water storage tank is original to the stadium and at the end of its useful life. Per Browns maintenance staff, electric instantaneous water heaters in the suites and family toilets are

being replaced as needed. Electric water heaters serving the concessions have also been replaced on an as-needed basis. In discussions with Stadium maintenance staff, the bladder of the expansion tank at the main gas fired heaters has failed.

## DISCUSSION

Hot water storage tanks have a typical service life of around twenty (20) years. While functioning at an acceptable capacity, a rupture might not be imminent, but would lead to no hot water availability throughout the stadium. Given, the size of the storage tank, adequate time must be allotted to install new tanks and provide resources to remove the existing tank.

Our opinions and recommendations within this document are based on manufacturer specifications and input from Browns facility staff. It has been indicated that heavy sediment build up from the domestic water supply has infiltrated the water tank. This sediment build up is result of a stagnant water in pipes and the corrosion of the pipe inner walls. Sediment builds up in the hot water storage tank further degrades its structural integrity and increases the probability of a catastrophic rupture.

## RECOMMENDATIONS

As a proactive measure to eliminate the chance of a catastrophic rupture leading to loss of hot water in the stadium, we recommend the existing 3,000 gallon hot water storage should be removed during an off-season and replaced with two (2) 1500 gallon storage tanks. The size of the existing storage is very large, requiring a shut-down of essential water services and a staged removal. The installation of two smaller tanks would allow for easier maintenance, and in the case of a rupture or emergency, these tanks can be removed and replaced with equivalents that have a much lower manufacturer lead time.

## GREASE TRAPS

### DESCRIPTION OF SYSTEM

Installed during the stadium original construction, grease traps are installed at kitchen sinks at all concessions and the main kitchen in the service level. When water and food elements drain from the sink into the grease trap, solid foods sink to the bottom while lighter grease and oil floats to the surface. If an excess quantity of food solid waste enters the grease trap, heavy build up can occur which leads to blockage.

### OBSERVATIONS

An inspection of several grease traps in the stadium showed that many of the grease traps in the concessions have been replaced in the past few years, yet there are still a number of grease traps that have not been updated and show signs of heavy wear. The ability to capture and intercept grease is greatly diminished due to heavy usage, age, and rotting. **See Photo P4.**

## DISCUSSION

The grease traps are heavily used and often handled incorrectly by concession staff. Concession staff are comprised of volunteer workers who, in some cases, are not aware of food waste that cannot be drained into the sanitary system. In many cases, as reported by Browns facility staff, large amounts of solid food waste are drained into the kitchen



Photo P4 – Rotted grease trap

sinks, leading to an excessive levels of waste in the bottom of the trap. This adds additional wear to the grease traps and limits the effectiveness to intercept grease before it enters the sanitary system.

## RECOMMENDATIONS

To eliminate further clogging of the sanitary system, it is recommended that all remaining grease traps in the facility be replaced with new equivalent units, as the current units that are rotting out are no longer effective.

## COST ESTIMATE

The Plumbing cost is based on the Summary of cost from PlanGrid:

Type	Time Period	Capital Repair Cost
Immediate	0 Year	\$4,920
Emergency	0 - 1 Years	\$185,160
Capital Repair	2 - 5 Years	\$163,312

# SECTION 7

## Mechanical Narrative



# Mechanical Narrative

## SCOPE OF INVESTIGATION

The audit of the mechanical systems has been organized into the following categories:

- Chiller Plant and Piping
- Air Handling Units / Fan Coil Units / VAV boxes
- Return, exhaust and grease exhaust fans.
- Refrigeration Systems (Walk-in Coolers and Freezers)
- Exhaust Systems
- Technology Rooms air conditioning

This report is based upon our inspection of the facility's mechanical equipment and associated piping and ductwork. All areas of the facility were limited to a visual survey of existing conditions and exclude both non-destructive and destructive testing. This level of inspection does not clearly reveal all defects and requires certain engineering assumptions be made to establish condition. These assumptions cannot always be verified without extensive testing, some of which can be destructive. Therefore, this report is not to be considered a guarantee of the exact condition, life expectancy and total extent of potential repairs of the mechanical systems inspected.

## CHILLER PLANT AND PIPING

### DESCRIPTION OF SYSTEM

Upgraded to new chillers in 2016, the plant consists of three (3) 400 nominal ton Johnson Controls air-cooled screw chillers (CH-1 through 3), each rated for 366 tons capacity with glycol at original design conditions. The total plant capacity is 1,098 tons. The design entering and leaving chilled water temperatures for CH-1-3 are 56.0°F and 44.0°F, respectively. The chilled water mains are 12-inch and the system is configured as variable speed primary / variable speed secondary, with 30% propylene glycol as the fluid.

The primary pumps are headered together and each chiller has an automatic isolation control valve so that any pump can serve any chiller. Each primary chilled water pump (P-1 through 3) has a design flow rate of 800 GPM at 100 feet of head. There are two sets of variable speed secondary chilled water pumps, one set serves the north half of the stadium, and the other set serves the south half of the stadium. Each set of pumps has a lead and standby pump. The north pumps (P-N-1A and P-N-1B) have a design flow rate of 1,000 GPM at 100 feet of head. The south pumps (P-S-1A and P-S-1B) have a design flow rate of 1,100 GPM at 140 feet of head. These series of north and south pumps supply chilled water to the AHUs and FCUs on the north and south sides of the building, respectively. All pumps have variable frequency drives added to them during the 2016 renovation for energy savings.

### OBSERVATIONS

As part of a modernization of the chiller plant in 2016, all three (3) 400 nominal ton Trane chillers were replaced with new 410 nominal ton Johnson Controls air-cooled constant speed screw chillers. All existing piping and systems have been adequately maintained after the upgrade. However, it was discovered that the primary-secondary bridge piping original to the building was incorrectly installed, limiting the

effectiveness of the chilled water loop, and leading to inadequate flow to the south side of the stadium.

## DISCUSSION

As a result of the original design in 1998 on the chilled water primary-secondary bridge piping, the inadequate flow to the south side results in higher supply temperature water to air handling units, limiting the air handlers' ability to keep with demanded space temperatures during the months of August and September.

## RECOMMENDATIONS

The original design from 1997 had an error in the piping layout. The solution to reconnect the piping for the south set of pumps to a different portion of the main. This will ensure adequate flow to both north and south sides of the building and will stop the water from backflowing in the system piping.

## AIR HANDLING UNITS / FAN COILS / VAV BOXES

### DESCRIPTION OF SYSTEM

Air Conditioning is provided at the Stadium for areas such as the Suites, Offices, Club Areas, Locker Rooms, and Press Areas. Air is distributed with ductwork from approximately 28 Air Handling Units (AHU), (8) Heating and Ventilating units, 116 Club and office variable air volume (VAV boxes), and 110 Suite Fan Coil units (FCU) to supply air distribution devices which are typically 24" x 24" diffusers located in lay-in ceilings. Larger areas such as the offices and club level concessions have rooms that are zoned with variable air volume (VAV) boxes.

On the Lower and Upper Suite levels, each has a chilled water fan coil unit with an electric heating coil integral that is located above the ceiling. Supply air is ducted to two (2) supply air diffusers in the ceiling grid in each suite. A wall mounted Siemens temperature sensor controls the sequencing of the heating and cooling in the Suite. The fan coils were found to be in fair condition with small amounts of surface corrosion.

On the service level, heating and ventilating makeup air units are used to supply supplemental air to the service level space as a means of pressurization, such as service corridors, dock, and field/maintenance areas, in conjunction with some areas having conditioned air.

### OBSERVATIONS

The AHU's across the facility are in fair condition for their age and expected to last another two to five (2-5) years. The Browns Maintenance staff does regular preventative maintenance such as filter changing, fan bearing greasing & alignment, and belt tensioning on the fans to the proper tightness. The unit door gaskets are intact and there are only a few AHU's with door issues. However, the internal lining on multiple sections of AHU casing has steadily disintegrated over the years, due to typical usage.

The fan coils, also located in the ceiling space of each suite, were found



Photo M1 – Door Off The Hinges  
On Ahu



Photo M2 – Ahu Deterioration

to be in good condition with no surface corrosion. The inside of the units were not inspected for condition, but from the condition of the exterior of the unit and other components above the ceiling, we expect the Fan Coils to last at least another two to five (2-5) years.

**Refer to Photos M1, M2, and M3** for conditions of the AHU in the poorest condition.

## DISCUSSION

The typical lifespan for AHU/Fan Coils/ VAVs 's is 20 – 30 years where not exposed to harsh environments. As all equipment is located indoors under controlled conditions, the 30 year lifespan is only 5 years away. Regular, scheduled maintenance needs to continue. All major air conveying devices such as AHU/FCU/VAV boxes are original to the building.

The VAV boxes located above the ceiling have issues with the electric heat. Internal components on the heaters such as contactors have needed replacement with the parts becoming increasing difficult to obtain.

## RECOMMENDATIONS

We recommend replacement of the All AHUs/Fan Coils/VAVs equipment in the next 2-5 years since they are at the end of their useful life and are becoming very difficult to obtain parts.

AHU replacement in the next 2-5 years as they have reached the end of their useful life expectancy. and a working unit is necessary for the proper ventilation of the indoor areas. Energy saving methods such as adding variable frequency drives to all units.

We recommend replacement of the all the Hastings heating and ventilating unit (HV-1D1) as it has reached its useful life expectancy and a working unit is necessary for the proper ventilation of the service corridor.

## HEATING

### DESCRIPTION OF SYSTEM

The heating system for the building consists of electrical resistance heating in the air conditioning units such as large air handling units, fan coils, and variable air volume boxes, in conjunction with electric heaters placed in concessions, outdoor bathrooms, outdoor suite seating, mechanical rooms, and lobbies.

In the lower and upper suite level outdoor seating, each suite is provided with an array of four (4) electric radiant unit heaters. Each suite is equipped with an indoor wall timer that controls the radiant heater. All heaters were replaced in 2021 and are in good working order.

The stadium is also equipped with a field heating system. This system consists of four (4) natural gas boilers where water/ ethylene glycol mix is fed through a series of rows underneath the turf to heat the playing surface to a comfortable level and avoid player injury from a hard and frozen field.



Photo M3 – Edge And Door Seals Worn On Ahu Access Door.

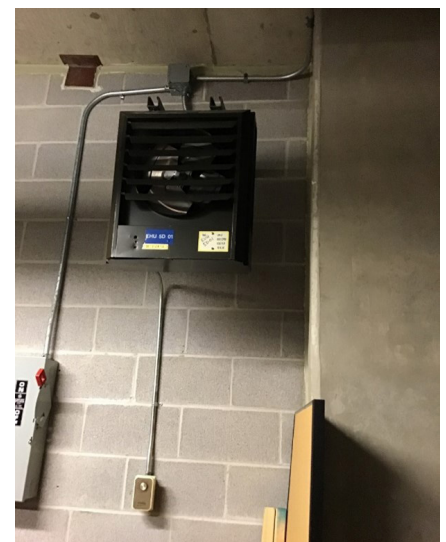


Photo M4 – Typical Electric Resistance Unit Heater

## OBSERVATIONS

The cabinet heaters in the restrooms and concessions are visually in poor shape; with rust and heavy usage visibly apparent. Internal components on the heaters such as contactors have needed replacement with the parts becoming increasingly difficult to obtain.

Numerous unit heaters are located in storage and electrical rooms have failed and have not been replaced.

From an inspection perspective, all other heating equipment integral to AHUs and FCUs are in functioning condition and expected to last another 2-5 years; the typical useful service life of that equipment.

## DISCUSSION

All electrical resistance heating equipment is at the end of their useful life and are becoming very difficult to obtain parts.

The gas fired field heating boilers were replaced in 2020 and in good condition.

## RECOMMENDATIONS

We recommend replacement of all cabinet and unit heating equipment in the next 2-5 years as they have reached the end of their useful life expectancy. **Refer to Photo M4** for the typical for a typical hanging unit heater.

## EXHAUST SYSTEMS

### DESCRIPTION OF SYSTEM

Several exhaust systems are in the building for restrooms, cooking surfaces, dishwashers, mechanical rooms, and other spaces. All indoor AHU's have a return air fan located in the Mechanical room.

### OBSERVATIONS

Most of the roof and in-line mounted exhaust fans for restrooms, grease, dishwashers are past their expected life of 20 years per the ASHRAE equipment life expectancy chart. **Refer to Photo M5** for a grease fan that has surface corrosion.

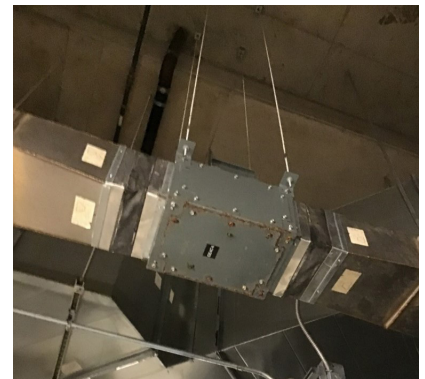


Photo M5 – Grease Fan Corrosion

### DISCUSSION

All Toilet , AHU Return, and Kitchen exhaust fans are past their useful life according to ASHRAE Equipment Life expectancy charts. Parts such as contactors are not readily available. The motor shaft bearings also are at the end of their useful life also.

### RECOMMENDATIONS

We recommend replacement of all roof and in-line mounted fans in the next 2-5 years as they have reached the end of their useful life expectancy.

## COOLERS AND FREEZERS

### DESCRIPTION OF SYSTEM



Throughout the upper and lower concourse levels of the stadium that serve customers, walk-in coolers, originally installed in 1999.

## **OBSERVATIONS**

The enclosures are all exhibiting typical wear of twenty-four (24) year old systems and are in poor condition. Door seals appeared to be working at most locations. Conditioned air is provided through wall mounted condensers mounted on top of the enclosures for all concession stands.

## **DISCUSSION**

The main kitchen had all walk-in coolers and freezers evaporators and compressors replaced in 2020. Over half of them were replaced after the 2018 Audit report. Conditions of the units vary; all are past their expected useful service life of twenty (20) years. Typical for all concession and vending walk-in coolers, condensers are mounted on top of the units and the associated evaporator is wall mounted in the unit.

Although some units are functioning as originally designed, Browns facility staff have indicated parts are not readily available, and units are failing and need repair at an increasing rate.

The existing systems still utilize R-22 refrigerant, a Class II hydrochlorofluorocarbon (HCFC) which is no longer be produced or imported in The United States.

## **RECOMMENDATIONS**

Our recommendation is to replace the remaining concession cooler / freezer refrigeration systems based on their age and the lack of available R-22. The insulated wall and roof panels should all be checked to ensure they are sealed, and doors are closing and sealing properly.

## **TECHNOLOGY ROOMS**

### **DESCRIPTION OF SYSTEM**

Currently a ductless split air conditioning exists in only eight (8) of the Technology rooms that have been added to the Stadium over the past few years. Data racks have been installed in unused space or electrical rooms that had a small amount of exhaust in them.

## **OBSERVATIONS**

Almost half of the Technology rooms are very warm as they have no air conditioning in them. Some rooms that house electrical transformers do have an exhaust system from the original Stadium installation. Temperatures are still well above the ambient temperature even with this exhaust system installed because of the internal heat generation.

## **DISCUSSION**

Ten (10) ductless splits were budgeted and installed after the 2018 Stadium Audit per recommendations. Industry standard for rooms with data racks is to have an air conditioning unit. Elevated temperatures lead to overheating equipment which affects performance and useful life of the equipment.

## **RECOMMENDATIONS**

Air conditioning should be added to the remaining Technology rooms. In the past, 2-ton ductless split units have been installed in Tele room successfully.

## COST ESTIMATE

The HVAC cost is based on the Summary of items from PlanGrid:

Type	Time Period	Capital Repair Cost
Immediate	0 Year	\$0
Emergency	0 - 1 Years	\$228,720
Capital Repair	2 - 5 Years	\$8,345,504
Capital Repair	6 - 10 Years	\$35,712



# **SECTION 8**

## **Fire Alarm Narrative**

# Fire Alarm Narrative

## SCOPE OF INVESTIGATION

Investigation of the condition of the building fire alarm system was limited, as a new fire alarm system along with all new wiring, is currently being installed. Construction shall be completed in 2023. The narrative is based on a field visual inspection conducted in October 2023 and ongoing discussions with the installing contractor. The following is a summary of the fire alarm system replacement project. No systems testing was conducted.

## DESCRIPTION OF SYSTEM

The fire alarm system is a Simplex 4100 ES emergency voice system with addressable notification appliances. The head-end equipment is located on the Main Concourse, Level 200 in the Fire Command Center. Transponder panels are located in each Quad, on both the Main Concourse, Level 200 and Press/Upper Suites, Level 500. Building notification is initiated by sprinkler waterflow switches, manual pull stations, and various smoke and heat detection. The fire alarm system also monitors some of the cooking suppression equipment.

## OBSERVATIONS

Installation of the fire alarm system is being performed by Quad. Each Quad is being tested and brought on-line as the fire alarm system installation is completed in respected Quad. A total system test is also required at project completion.

### Quad A

- 100% complete on install (head end, conduit, wire, trim).
- Testing completed, except elevators.
- Field Visit: No issues.

### Quad B

- 100% complete on install (head end, conduit, wire, trim)
- Testing completed 11/02/2023.
- Field Visit: Final commissioning to be completed.

### Quad C

- 100% complete on install (head end, conduit, wire, trim).
- Testing of notification appliances only completed 11/02/2023.
- Field Visit: Complete install, programming, pretest activities, and final commissioning.

### Quad D

- 100% complete on install (head end, conduit, wire, trim).
- Testing completed, except elevators.
- Field Visit: There is a label on Transponder 2 indicating that it is fed from emergency panel ER1D-2, circuit 16. The circuit breaker lock provided in panel ER1D-2 for Transponder 2 is located on circuit 18. Either the label is incorrect, or the circuit breaker lock is located on the wrong circuit.



Photo FA1 – Quad D Level 200  
Transponder Panel

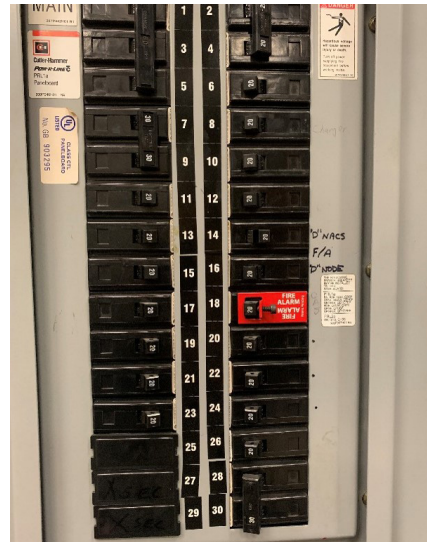


Photo FA2 – Quad D Level 100  
Panel ER1D-2

## DISCUSSION

In summary, the new fire alarm system installation is a work-in-progress and nearly complete. With the notification appliance now being addressable, this will be advantageous for the Stadium maintenance personnel as for example if there is a wiring issue, the specific appliance address will initiate a trouble at the FACP.

## RECOMMENDATIONS

It is Osborn Engineering's recommendation for any upcoming renovations of the Stadium, the design shall be coordinated with the fire alarm system replacement project until completion.

## COST ESTIMATE

There shall be no cost associated with the Transponder 2 label or emergency panel ER1D-2 circuit breaker issue as this scope of work is included in the fire alarm system project.



# **SECTION 9**

## Fire Protection Narrative

# Fire Protection Narrative

## SCOPE OF INVESTIGATION

The audit of building fire protection systems included the following sub-systems:

- Fire Water Pumping System
- Standpipe Systems
- Wet Pipe Sprinkler Systems
- Dry Pipe Sprinkler Systems

This report is based upon our inspection of the facility's fire protection systems and equipment. We have endeavored to access and inspect as many areas of the facility as possible. The inspection services were limited to a visual survey of existing conditions and exclude both non-destructive and destructive testing as well as internal and performance inspections of the equipment and systems. However, this type of inspection does not clearly reveal all defects and requires certain engineering assumptions be made to establish condition. These assumptions cannot always be verified without extensive testing, some of which can be destructive. Therefore, this report is not to be considered a guarantee of the exact condition, lifespan, and total extent of potential repairs of the fire protection equipment and systems inspected.

## FIRE WATER PUMPING SYSTEM

### DESCRIPTION OF SYSTEM

Fire water is automatically supplied to the standpipe and sprinkler systems by a 2,000 GPM fire pump rated at 95 psi of pressure boost. The pump is located in the main mechanical room of Quad D on the service level of the stadium. A 12" tap of the 12" city water main located on West 3rd Street splits outside of the building into the dedicated 12" fire service and domestic water feeds. Backflow prevention is indicated on the original drawings on site in an underground vault and was not able to be inspected or observed. Fire water from the pump is distributed throughout the Service Level of the stadium via an 8" fire main supplying the various standpipes, sprinkler risers, and sprinkler zones.

### OBSERVATIONS

Given the requirements of inspection, testing, and maintenance required for a fire pump installation, it is reasonable to assume the fire pump and associated components are in good operating condition and catastrophic failures of the equipment should not be expected in the near future. With this being said, for an installation of this age, expected "wear and tear" is becoming increasingly noticeable and with the excessive leakage noted around the fire pump drive shaft seals, the fire pump assembly is reaching its end of useful life. **See Photo FP1.** In addition, excessive corrosion was also noted on the main 12" incoming fire service and associated couplings and hangers. **See Photo FP2.**

The fire pump installation appeared to be compliant with the applicable codes and standards in effect at the time of the construction, however at the time of replacement, discussions with the Authority Having Jurisdiction (AHJ) will need to occur as there have been code updates,

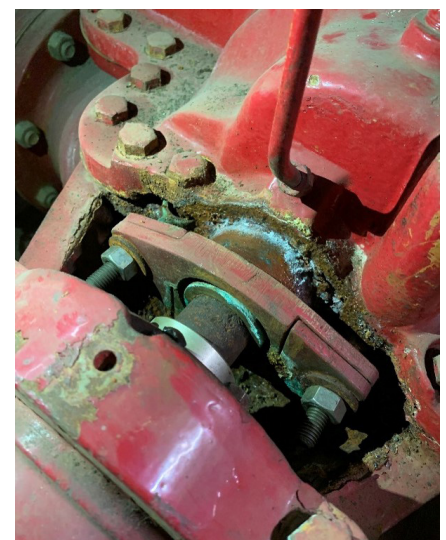


Photo FP1 – Fire Pump Drive Shaft Seals



including the location and access to the fire pump room. It was observed that the facility did not have a list of sprinklers installed on the property posted in fire sprinkler head cabinet. In addition, the fire sprinkler head cabinet did not have one sprinkler wrench for each type of sprinkler installed.

Various sprinkler risers are not labeled, specifically not individually labeled, in accordance with NFPA 13.

## DISCUSSION

Overall, the conditions observed regarding the fire pump and associated piping were as anticipated. It is becoming more concerning that these deficiencies noted may affect the capability of the fire pump from supplying the required fire water to the standpipe and sprinkler systems in an emergency situation. The excessive leakage around the fire pump drive shaft seals and the corrosion on the incoming fire service piping, couplings, and hangers should be addressed in the near future in order to have continued confidence in the reliability of the systems. Continued inspection, testing, and maintenance in accordance with Chapter 8 of NFPA 25 shall be performed for the system as well as identify future deficiencies based on a comparison of year-to-year testing records and in order to have continued confidence in the reliability of the systems.

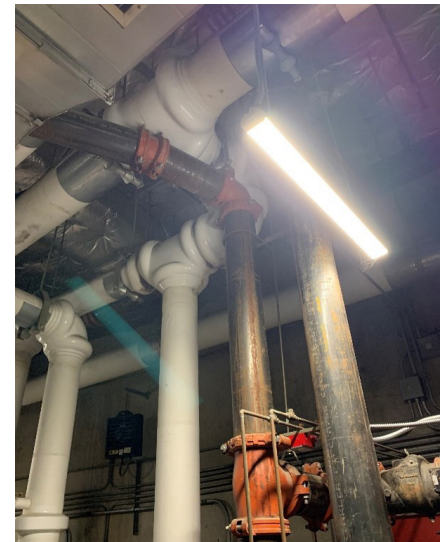


Photo FP2 – Main 12” Incoming Fire Service Lines

In accordance with NFPA 25, a list of sprinklers installed on the property shall be posted in the sprinkler cabinet. In accordance with NFPA 13, one sprinkler wrench as specified by the sprinkler manufacturer shall be provided in the cabinet for each type of sprinkler installed.

As part of NFPA 13 sprinkler system acceptance requirements, all hydraulically designed sprinkler systems must be appropriately labeled as such “with a permanently marked weatherproof metal or rigid plastic sign secured with corrosion-resistant wire, chain, or other approved means.” These signs shall be placed at every system riser, floor control assembly, alarm valve, dry pipe valve, pre-action valve, or deluge valve supplying the corresponding hydraulically designed area unless the AHJ approves an alternate location.

## RECOMMENDATIONS

Based on the aforementioned observations of the fire water pumping system, it is recommended that the fire pump, associated components, and the main 12” incoming fire service along with associated couplings and hangers be replaced immediately. While there doesn’t appear to be an imminent danger of failure, the corrosion will only continue to worsen over time and given the critical nature of the pipe, supplying 100% of the fire water to the facility, the replacement of this line should be considered a priority.

A list of sprinklers installed in the property shall be posted as well as one sprinkler wrench as specified by the sprinkler manufacturer shall be provided in the fire sprinkler head cabinet.

Every sprinkler riser shall be labeled in accordance with NFPA 13.

## STANDPIPE SYSTEMS

### DESCRIPTION OF SYSTEM

The facility standpipe system consists of 12 automatic dry standpipes fed directly from the fire pump. Each standpipe is provided with a 2-1/2” fire hose connection at each level for use by the local fire department.

Automatic dry standpipes are normally filled with pressurized air and arranged through the use of a dry pipe valve to admit water into the system upon opening of a hose valve. These systems are intended to be used solely by the local fire department in the event of a fire situation. The dry pipe valves controlling each of the 12 standpipes are connected directly to the fire pump to automatically supply the required system demand.

## **OBSERVATIONS**

The general condition of the standpipes and hose connections appeared to be good to very good. It appears some portions of the piping are relatively new. The dry pipe valves and associated air compressors were replaced in 2022. Additionally, a master nitrogen generator was also installed in 2022 to minimize the internal piping corrosion associated with dry systems.

## **DISCUSSION**

The biggest issue that dry type systems encounter is corrosion on the interior portions of the piping. By design, these systems are pressurized through the use of an external air compressor that compresses the atmospheric air and pumps it into the system to displace the water. Once this air pressure is released, the dry valve opens allow the system to fill with water. With the use of atmospheric air, the system is introducing unwanted moisture into the system that is intended to be dry. This small amount of moisture contributes to the progression of corrosion. While the compressor is still used for the immediate filling of the dry-pipe systems, the addition of the master nitrogen generator allows for 98% pure nitrogen to be introduced to the system over time and inhibits the corrosion process.

## **RECOMMENDATIONS**

Label new valves and risers in accordance with NFPA 13.

## **WET PIPE SPRINKLER SYSTEMS**

### **DESCRIPTION OF SYSTEM**

Wet pipe sprinkler systems are located in various areas of the facility including the service level, main concourse in conditioned spaces, the upper and lower suite levels, and the north and south areas of the club level. These systems are supplied from the building fire pump and are monitored through local flow switches and valve supervisory switches by the building fire alarm panel as required by NFPA 13.

## **OBSERVATIONS**

The general condition of the wet pipe sprinkler systems was observed to be good to very good condition from a physical standpoint but as the system is aging, there is visible corrosion on select mains and branch lines throughout the facility as well as visible corrosion noticeable on sprinkler heads, and apparent clearance issues regarding sprinkler head deflector locations. In the main mechanical room located on the service level Quad D, there is duct insulation sagging causing a possible deflector clearance issue. **See Photo FP3.** The inspection, testing, and maintenance records were up to date.

## **RECOMMENDATIONS**

Regarding the sprinkler deflector clearance issues, it is recommended



Photo FP3 – Duct Insulation  
Sagging Interfering With Sprinkler  
Deflector Clearance.

that the insulation be re-attached to prevent sagging and subsequent obstruction.

As the facility performs various renovations throughout the years, it is also recommended that a full hazard occupancy analysis be performed by a licensed professional engineer to identify the design basis of all existing systems and compare them against the current occupancy. This will ensure the use of all spaces is adequately protected and identify areas that are inadequately protected. Typically, a visual observation is not adequate to verify the design density of an existing installation and review of shop drawings and hydraulic calculations is necessary.

## DRY PIPE SPRINKLER SYSTEMS

### DESCRIPTION OF SYSTEM

Dry pipe sprinkler systems are located in various areas of the facility including where unconditioned areas subject to freezing are protected. These systems are supplied from the building fire pump and are monitored through the use of pressure switches at the system dry valve(s) by the building fire alarm panel as required by NFPA 13.

### OBSERVATIONS

The general condition of the dry pipe sprinkler systems was fair to good. Inspection, testing, and maintenance records were up to date. In some areas, excessive corrosion was noted on the exterior piping. These areas were primarily in the main concourse where the piping is exposed to the elements. Portions of the system have been recently replaced with galvanized piping due to corrosion issues. Select sprinklers in the vending spaces showed significant corrosion.

It was observed on the service level Quad A, in the service drive (east), the sprinkler head deflector clearance appears to not meet NFPA minimum distance clearance requirements. In accordance with NFPA 13, clearance to structure is minimum 1" away from the deflector. **See Photo FP4.**

### DISCUSSION

The biggest issue that dry type systems encounter is corrosion on the interior portions of the piping. By design, these systems are pressurized through the use of an external air compressor that compresses the atmospheric air and pumps it into the system to displace the water. Once this air pressure is released, the dry valve opens allow the system to fill with water. With the use of atmospheric air, the system is essentially introducing unwanted moisture into the system that is intended to be dry. This small amount of moisture aides in the progression of corrosion. While the dry pipe valves have been replaced and a bulk nitrogen generator installed the previous years of corrosion have impacted the system piping.

The replacement of certain areas of dry sprinkler piping with galvanized piping was noted. While the use of this piping is permitted per code and has been industry standard for use in dry pipe, new studies in recent times have begun to dispute this. In theory, the interior surfaces of dry pipe systems should remain dry however, this is rarely the case



Photo FP4 – Services Drive  
Sprinkler Deflector Clearance

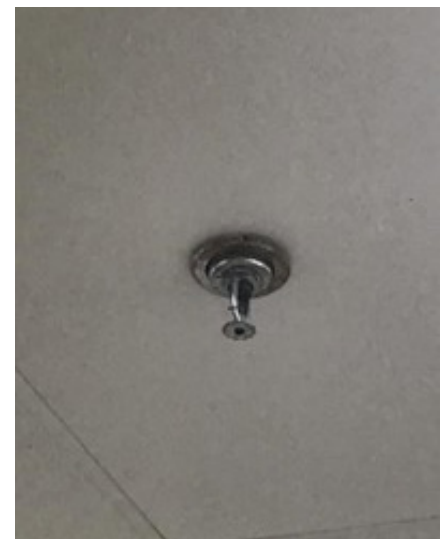


Photo FP5 – Main Concourse  
Typical Sprinkler Head Visible  
Corrosion

for systems maintained with an air compressor. If residual water is trapped within a dry piping network fabricated with galvanized piping, the zinc layer will quickly break down and ultimately lead to a pinhole leak. Since the corrosion is localized to a very small area, a breach in the piping can occur in as little as 2-3 years. The use of black steel in a dry pipe system can disperse the potential corrosion of a significantly larger area.

## RECOMMENDATIONS

It was observed on the service level Quad A, in the service drive (east), the sprinkler head deflector clearance appears to not be meet NFPA minimum distance clearance requirements. In accordance with NFPA 13, clearance to structure is minimum 1" away from the deflector. It is recommended that the upright sprigs be adjusted immediately.

In areas identified with excessive corrosion such as the various areas of the main concourse noted with PlanGrid, it is recommended to replace this piping with schedule 40 black steel. As new pinhole leaks develop within the system(s), these areas should be also replaced with new, schedule 40 black steel. The use of galvanized piping should be avoided with any further piping replacement. The replacement of certain areas of dry sprinkler piping was noted, it is recommended to replace portions of the piping in 2-5 years.

In the case of the sprinklers that are showing signs of corrosion at the time of the annual sprinkler inspection corroded sprinklers should be replaced. It is recommended to budget approximately 50 new sprinklers per year for the next 5 years.

## COST ESTIMATE

The HVAC cost is based on the Summary of items from PlanGrid:

Type	Time Period	Capital Repair Cost	Repair Type
Immediate	0 Year	\$90,000	<ul style="list-style-type: none"> <li>Replace Fire Pump &amp; Main Suction Piping and valves</li> <li>Adjust sprig ups for proper clearance in parking area.</li> </ul>
Emergency	0 - 1 Years	\$7,788	<ul style="list-style-type: none"> <li>Sprinkler Head Cabinet: provide sprinkler list &amp; wrenches</li> <li>Label risers in accordance with NFPA 13</li> <li>Sagging duct insulation to be tightened to keep deflector clearance.</li> </ul>
Capital Repair	2 - 5 Years	\$184,800	<ul style="list-style-type: none"> <li>Visible corrosion on mains &amp; branch lines sections of pipe replacement (\$168,000)</li> <li>Visible corrosion on sprinkler heads-allowance for replacement of approximately 50 sprinklers (\$16,800)</li> </ul>
Capital Repair	6 - 10 Years	\$0	N/A

# **SECTION 10**

## Electrical Narrative



# Electrical Narrative

## SCOPE OF INVESTIGATION

The audit of building electrical systems included the following sub-systems:

- Power distribution: normal and emergency / standby.
- Building lighting: interior and exterior.
- Field lighting.

This report is based upon our inspection of the facility's electrical equipment. We have endeavored to access and inspect all areas of the facility. The inspection services were limited to a visual survey of existing conditions and exclude both non-destructive and destructive testing. However, this type of inspection does not clearly reveal all defects and requires certain engineering assumptions be made to establish condition. These assumptions cannot always be verified without extensive testing, some of which can be destructive. Therefore, this report is not to be considered a guarantee of the exact condition, lifespan, and total extent of potential repairs of the electrical equipment inspected.

## POWER DISTRIBUTION SYSTEM

### DESCRIPTION OF SYSTEM

Power is supplied at medium voltage by Cleveland Public Power (CPP) through two feeders which circle the facility feeding 2 – 2500 kVA outdoor oil filled transformers at each of four locations (A, B, C, and D quads). In addition, a 500 kVA transformer is provided on the east and west sides for power to the scoreboards. All Transformers are owned and maintained by CPP. Power is stepped down to 480/277 volts and run to four main switchgears (A, B, C, and D quads). These switchgears are of the Main-Tie-Main arrangement. From here power is distributed to large load blocks as well as a plug-in bus duct riser in each quad which allows taps at each level to serve lighting and power loads. At each level of each quad there are electrical rooms containing distribution panels, step down transformers and lighting/receptacle branch circuit panels.

### OBSERVATIONS

The general condition of the Main Switchgear, distribution panels and branch circuit panels were good to fair. Most electrical rooms are used as storage rooms. They are below average due to clutter (fire hazards). Most are dry and have adequate ventilation, some had water leaks.

**See Photo E1.** It is apparent the equipment hasn't been maintained on a regular schedule, though the main Switchgear was last serviced in September 2022 by Resa Service (2018 prior to that). Equipment showed signs of "wear and tear" such as branch circuit panels in the

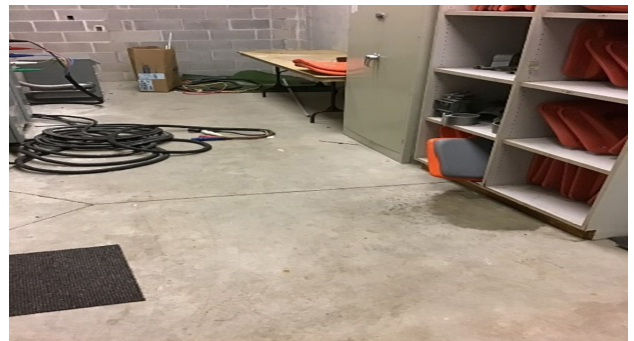


Photo E1 – Water Leak Close To Panels And Cam-Loks.



Photo E2 – Field Light Disconnect

concessions had broken locks/latches. The equipment overall is still in fair operable condition. It was observed there were no Arc Flash Warning labels on equipment covers, this will be discussed later in the report.

It was noted during discussions with operations, that the emergency generators are exercised per manufacturer schedule, however it was done so with no load.

Field Light disconnects though functioning as designed are in fair condition. Considering the location – field light balcony – disconnect enclosure is corroded and might prevent operation of the disconnect armature. See Photos **E2** and **E3**.

## **DISCUSSION**

Overall, the electrical system provides power conveniently to all load points, equipment generally still has spare/spaces. There are no overloading conditions that were identified during the investigation, however in discussing with operations, it was pointed out that under normal conditions some breakers are tripping; it is assumed by operations that a voltage drop is the culprit; further investigation is required.

## **RECOMMENDATIONS**

The typical lifespan for electrical equipment is 25 – 35 years where not exposed to harsh environments. As most equipment is located indoors under controlled conditions, the 35 year target should easily be achievable with regular, scheduled maintenance. This would include and not limited to yearly thermal imaging and maintenance. Maintenance can be scheduled to correct the identified issue during thermal imaging. Also, yearly scheduled preventative maintenance (manually operating circuit breakers) helps keep the contacts clean and helps operating mechanisms move freely. Main Switchgear should be cleaned, inspected, tightened, lubricated, and exercised on a regular basis. This was already done in 2022. A complete Electrical System Analysis including a Short Circuit Study, a Device Evaluation, an Overcurrent Device Coordination study, and an Arc Flash Hazard Analysis should be undertaken to comply with NFPA 70E and OSHA requirements.

## **EMERGENCY/STANDBY POWER DISTRIBUTION SYSTEM**

### **DESCRIPTION OF SYSTEM**

Power is supplied by two diesel fueled generator sets located in dedicated rooms in the A and D quads service level. Units are manufactured by Caterpillar, model #3412, and date from original construction. The A quad unit is rated 600 kW and the D quad unit is 700 kW, the generator in Quad D also carries the additional load of the Fire Pump. Each Generator output feeds a 1600 Amp automatic transfer switch, manufactured by ASCO, which in turn feeds distribution panels for emergency loads consisting of life safety loads, lighting, select elevators, audio, security, and technology loads. The Fire Pump is powered from a separate output breaker on the D quad generator and its transfer switch is integral to the fire pump controller.

### **OBSERVATIONS**

The Generators are well maintained. Dedicated rooms are cluttered with items stored there. Boxes are blocking room ventilations. The Automatic Transfer Switches and downstream distribution components (panelboards, transformers, etc.) are in good condition.



Photo E3 – Field Light Disconnect

## **DISCUSSION**

The typical lifespan for the emergency system components is 25 – 35 years, as the system here has been well maintained, with continued maintenance, the full-service life should be achievable. Discussion with the facility operators resulted in a concern that generators aren't being exercised appropriately (ie: no load). It is important that the generators get exercised with loads per manufacturer recommendations. Another concern was if additional loads were added to the system, would there be sufficient capacity in the generators to accommodate future load growth. With changing Code requirements and demands for system continuity during events, this merits further investigation.

## **RECOMMENDATIONS**

The emergency Generators should be maintained and exercised per manufacturers and Code requirements for emergency systems. A load bank test should be performed annually. Off season the ATS's should be maintained, tested, and moving parts lubricated per manufacturer's requirements. Emergency power circuit breakers should be exercised as well. Perform an emergency load study incorporating projected needs to determine if a generator upgrade and system expansion is required.

## **BUILDING LIGHTING SYSTEM**

### **DESCRIPTION OF SYSTEM**

The building lighting systems consists of both indoor and outdoor fixtures of a large variety of both style and lamping. The age varies, but typically most fixtures date from the original construction (1999). Lighting control system was recently upgraded and connected to the BAS system.

### **OBSERVATIONS**

The observations of the lighting system will be broken down onto three components: exterior and building mounted, interior – exposed, interior – back of house.

### **EXTERIOR & BUILDING MOUNTED**

Located in the tree wells and landscaped beds are ground mounted fixtures, both incandescent and HID types. Most of these are in poor condition, many show signs of water infiltration, and housings damaged or corroded and are not operational. Attached to the monumental columns around the exterior are mounted floodlights to provide decorative up-lighting of the structure, although functional, they are dated and utilize HID lamping. Most floodlights were operational during the day; possible timer/controller issue. Further investigation is required.

### **RAMPS**

The exterior ramps are illuminated by column mounted round LED fixtures recently upgraded.

### **GATES**

The exterior gates have down-lights that provide area lighting and utilize HID lamping. Most were lit during the day.

### **UPPER CONCOURSE**

The linear fixtures which provide accent lighting are



Photo E4 - Linear Fluorescent Fixture Mounted In Concourse.



fluorescent in 4 and 8 foot lengths. They run along the side of the concourse and are mounted over the niches at toilet rooms. Wall bracket types are mounted at the entrances to the vomitories. These all date from original construction and are in poor condition. **See Photo E4.**

## WINDSCREENS

The perforated metal windscreens are located around the circumference of the stadium, typically at stair towers. They are backlit by HID floodlights (**See Photo E5**). The fixtures are mostly non-working due to the difficulty in re-lamping, they have also deteriorated over the years. The maintenance staff would prefer they be removed and not replaced.

## MAIN CONCOURSE

The overhead lighting in the main concourse has been updated to LED. However, the ancillary linear fixtures which provide accent lighting are fluorescent in 4 and 8 foot lengths. These date from original construction and are in fair condition. They run along the side of the concourse and are mounted over the niches at toilet rooms (**See Photo E6**).

There are other miscellaneous HID wall bracket fixtures throughout, most in fair to poor condition (**See Photos E7 & E8**).

## END ZONES

The end zones were renovated in 2013 and the majority of the fixtures were replaced with LED. There are a few pockets of fluorescent/HID fixtures, generally these are original and are in fair to poor condition.

## INTERIOR

This section includes stairways, concessions, toilet rooms, storage, offices, broadcast, corridors, suites, kitchen and food prep, other interior rooms.

1. Stairways: Existing is 4 foot fluorescent fixtures, these are original, and many lenses have deteriorated which leads to lower light levels, need higher illumination values in these spaces.
2. Concessions and Food Service: Lighting in the concessions is primarily fluorescent troffers, these date from original construction and show extreme wear from game day cooking. Condition is fair to poor; most all need new lenses due to cooking fumes. **See Photo E9.**
3. Toilet rooms: Concourses, back of house. Typically, lighting is fluorescent, 4' linear in concourse rooms, troffer type in back of house. **See Photos E10, E11, E12.** Although fixtures are generally in good condition, they are dated and energy inefficient.
4. Corridors: The lower and upper suite levels use 2 x 2 fluorescent troffers, downlights with CFL's spiral



Photo E5 - Hid Fixture Mounted Behind Windscreen

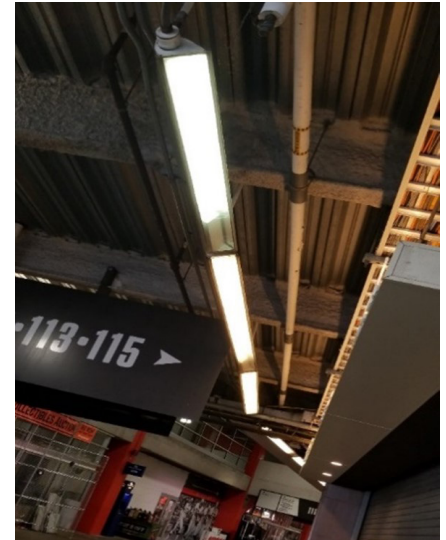


Photo E6 - Main Concourse Linear Fixture

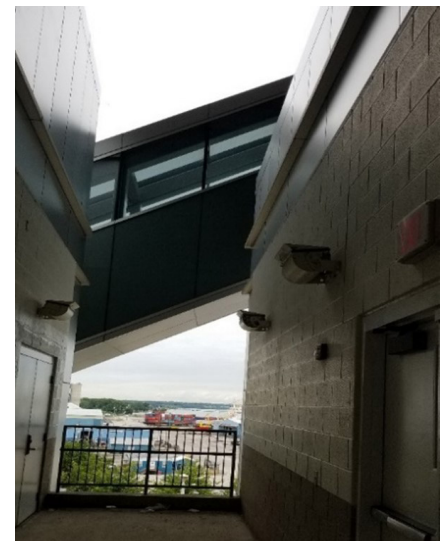


Photo E7 - Typical Wall Mounted Hid Fixture

type fluorescent. **See Photo E13.** Again, the lighting is dated and energy inefficient, in particular the downlights need to be upgraded to LED.

5. Suites: Most suite lighting has been upgraded to LED throughout, some like the Banquet room still have fixtures that date from original construction. Fixtures take long time to warm up and make a lot of noise and again energy inefficient. **See Photo E14.**
6. Offices, Press areas, Broadcast Booths: These areas typically use fluorescent troffers, downlights also in booths, many incandescent. Fixtures generally are fair but dated and energy inefficient.
7. Storage, mechanical, electrical, and technology rooms: these rooms use open industrial type fluorescent fixtures, most are still of T-12 origin. Again, the fixtures are generally in good condition but dated and energy inefficient. **See Photos 15, 16, 17.**
8. Service Level Food Service and Kitchen: Typically, lighting is fluorescent, troffer type. Fixtures are generally in fair condition; they are dated and energy inefficient.
9. Service Level all other: Open industrial type fluorescent fixtures, some are still of T-12 origin. Again, the fixtures are generally in fair condition but dated and energy inefficient.
10. Browns Store: Above counter fixtures all have HID lights and take time to warm up. Mezzanine space above has HID lights as well. Fixtures are dated and energy inefficient. Lighting control switches aren't located conveniently, some are locked in the Tech room, some are behind the counter, and some are on the wall next to clothing rack. Center display has Twist lock MR16 halogen bulbs for spotlights, creating lots of heat, also dated and energy inefficient. **See Photo E18.**
11. Floors behind score boards: All fixtures are industrial type fluorescent fixtures; most are still of T-12 origin. Some fixtures are completely dysfunctional, some are 50% operational. Some fixtures have damaged lenses or open/hanging. Emergency bug eyes and exit lights have no power and battery packs are drained. See Photos **E19, E20, E21 & E22.**



Photo E8 - Typical Wall Mounted Hid Fixture Showing Corrosion.

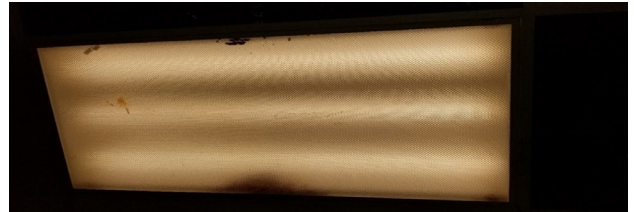


Photo E9 - Troffer Type Fluorescent In Concession

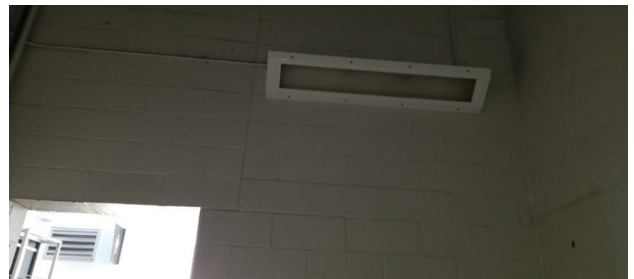


Photo E10 - Typical Toilet Room Corner Mounted Fluorescent Fixture

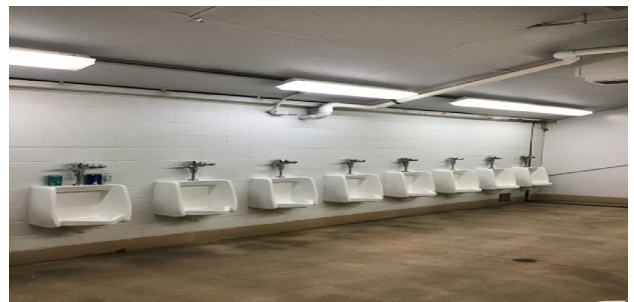


Photo E11 - Typical Toilet Room Wall Mounted Fluorescent Fixture



Photo E12 - Typical Toilet Room Wall Mounted Fluorescent Fixture.



## DISCUSSION

Although functional, overall, the lighting fixtures are severely dated, many in poor condition, especially in the outdoor areas and concessions. This large variety of lamp styles creates a maintenance challenge for replacement stocking. Fixture life is typically considered to be 15 years. As most here date to original construction they are well past expected life and have become obsolete. Many of the lamp types are no longer manufactured and replacements are not available. There are great potential energy savings available with a conversion to LED fixtures.

## RECOMMENDATIONS

For reasons of energy efficiency, maintenance, and esthetics, it is strongly recommended a program be undertaken to systematically replace, all fixtures not currently LED with an LED equivalent. This will result in a brighter, more uniformly lit facility with lower operating costs. Other advantages include the instant ON ability of LEDs with full dimming capabilities. Life expectancy of LEDs far exceeds that of typical lamp types, 50,000 operating hours or more, which reduces total-cost-of-ownership through maintenance avoidance.

## FIELD LIGHTING SYSTEM

### DESCRIPTION OF SYSTEM

The Field Lighting System was upgraded to a full LED system back in 2018, including new controls.

### OBSERVATIONS

The system is fully functional and complies with NFL requirements.

## DISCUSSION

This system should fulfill facility needs until broadcast requirements significantly change or there is a major innovation in lighting technology.

## RECOMMENDATIONS

Maintain lighting fixtures per manufacturer's recommendations.

## COST ESTIMATE

Type	Time Period	Capital Repair Cost
Immediate	0 Year	\$97,650
Emergency	0 - 1 Years	\$443,700
Capital Repair	2 - 5 Years	\$137,760
Capital Repair	6 - 10 Years	\$0



Photo E13 - Typical Fluorescent Downlight.

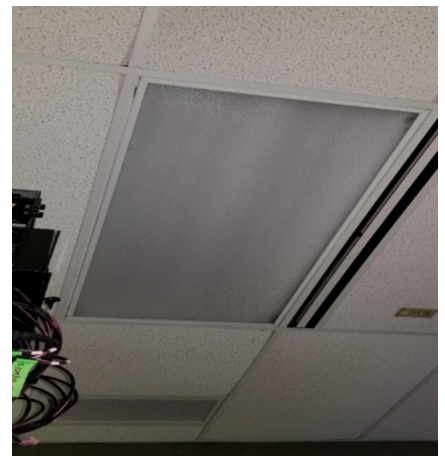


Photo E14 - Typical Troffer Type Fluorescent In "Back-Of-House" Location

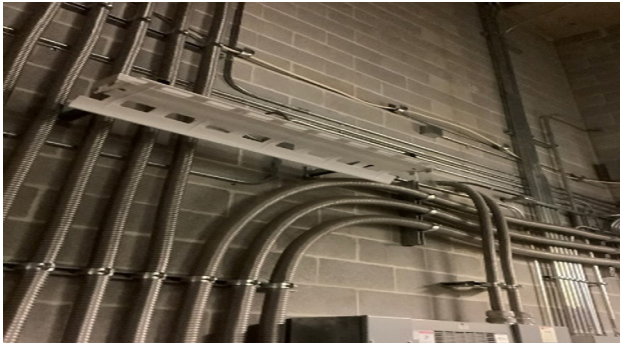


Photo E15 - Typical Type Fluorescent In Electrical Room.



Photo E16 - Typical Type Fluorescent In Electrical Room.



Photo E17 - Typical Type Fluorescent In Electrical Room.



Photo E18 - Browns Store Lights



Photo E19 - Lights Behind Score Board



Photo E20 - Lights Behind Score Board



Photo E21 - Emergency Lights Behind Score Board

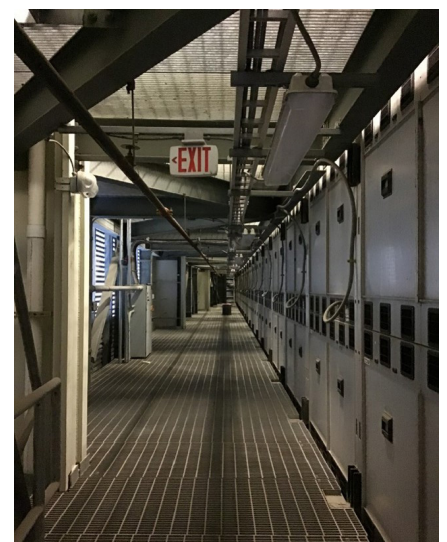


Photo E22 - Exit Lights Behind Score Board

# SECTION 11

## Technology Narrative

# Technology Narrative

## SCOPE OF INVESTIGATION

The audit of stadium technology systems included the following sub-systems:

- Low Voltage Infrastructure (TL stamp)
- RF Systems (TR stamp)
- Audio Visual/Security (TV stamp)

This report is based upon our inspection of the facility's technology equipment and cabling. We have endeavored to access and inspect all areas of the facility. The inspection services were limited to a visual survey of existing conditions and exclude both non-destructive and destructive testing. However, this type of inspection does not clearly reveal all defects and requires certain engineering assumptions be made to establish condition. These assumptions cannot always be verified without extensive testing, some of which can be destructive. Therefore, this report is not to be considered a guarantee of the exact condition, life and total extent of potential repairs of the technology systems inspected.

## LOW VOLTAGE INFRASTRUCTURE

### DESCRIPTION OF SYSTEM

The MDF is located on the Service Level. All stadium backbone fiber optic cabling, both singlemode and multimode, terminate in this large room. All stadium voice backbone cabling also terminates in this room. This MDF also houses the following headend equipment: active network electronics, telephony equipment, video surveillance, access control and NFL-specific headend equipment and electronics. Both AT&T and Verizon have their own service provider entry rooms in close proximity to the MDF.

The remainder of the stadium is serviced by approximately (40) telecommunications rooms (TR) that range in size from wall-mounted cabinets located under the stadium to adequately sized TRs with proper cooling, lighting, and grounding to telecommunication enclosures located on the roof level.

Both backbone and horizontal low voltage cabling is run in either cable tray, conduit, conduit sleeves and/or open cabling. Most penetrations are firestopped, though not all. Most telecommunication rooms are serviced by the telecommunications grounding system, though not all. Note - While auditing the roof level exterior cabinets, we noted several cables were so poorly installed that some cables are laying on and crossing the catwalk constituting tripping hazards.

### OBSERVATIONS

Each of the Telecommunication Rooms were observed during the audit. Existing conditions of all spaces, cabling and hardware are documented on a space-by-space basis within PlanGrid and are listed as "Informational." All of the systems observed have been adequately maintained.

### DISCUSSION

Our opinions within this document and PlanGrid are based on current BICSI and EIA/TIA standards as well as best practices used within the Telecommunications Industry today. Many of the TR's were found to not be cooled properly and these issues are quantified within the Mechanical scope.



## **RECOMMENDATIONS**

Based on our observations, again on a space by space basis, our recommendations are recorded within Plan Grid. Each recommendation is logged and listed with a timeframe as directed by the Audit.

In summary, some of the existing cabling systems are not suited for many current and future technologies. For instance, all of the existing Category 5 UTP cabling is past its warranty period and usable life, and we recommend replacing all of this cabling with a minimum of Category 6 UTP cabling as this will allow for higher bandwidth and speeds. This new Category 6 UTP cabling should also be provided for all current analog telephone locations to be able to migrate to a VoIP telephone system to keep on par with the rest of the stadium.

Regarding the existing 62.5 micron multimode fiber optic cabling, we recommend replacing this cabling with new 50 micron multimode fiber optic cabling as this also allows for higher bandwidths and speeds needed for more demanding technologies. For this new cabling, we recommend providing new cable trays throughout the facility as most cable trays are at maximum capacity.

Many of the TR's have a grounding backbone, though not all. We recommend providing a Telecommunications Grounding backbone to each TR that is currently deficient and providing a dedicated Telecommunications Grounding Busbar (TGB) for all TR's. Once these TGB's are in place, we recommend properly bonding all racks, cable trays and conduits to this busbar as this is not currently the case.

All penetrations into each TR needs to be firestopped as this was not observed in 100% of the TR's. We recommend providing new firestopping for all penetrations into each TR as many of the existing firestopping putties are starting to decay, crumble or are missing. Most of the existing firestopping pillows are missing and we are recommending providing new pillows in a method that secures these new pillows in place as recommended by the firestopping manufacturers.

## **RADIO FREQUENCY (RF) SYSTEMS**

### **DESCRIPTION OF SYSTEM**

Both Verizon and AT&T house their Distributed Antenna Systems (DAS) equipment, hardware and cabling within many of the TR's and many distribution amplifiers are found attached to different building structures. These DAS's provide cellular coverage within the stadium.

The stadium is covered by WiFi for a wireless public network which is separate from the Browns corporate network. The stadium also has their own facilities radio system that is used throughout the facility.

### **OBSERVATIONS**

Both the cellular DAS and the public WiFi were found to be installed around 2018 and in good condition. All DAS backbone cabling is by means of armored singlemode fiber optic cabling and all horizontal cabling is by means of coax. All WiFi backbone cabling is also armored singlemode fiber optic cabling and all horizontal cabling is Category 6A U/STP and is terminated on dedicated WiFi patch panels. The stadium's radio system was also found to be installed recently and is shared by both the Browns and the Cleveland Police Department. All of the systems observed have been adequately maintained.

### **DISCUSSION**

The cellular DAS, public WiFi and stadium radio networks were found to be in good working condition. Coverage and capacity of each system appears to be adequate for a stadium of this size, including on



game day. Much of the WiFi is provided on its own wall mounted rack in a shared space while other WiFi installations consist of backbone and horizontal cabling and active electronics provided in existing TR's.

## **RECOMMENDATIONS**

Continue to provide both DAS and WiFi coverage and capacity as needed, based on services being provided and on public demand. The WiFi systems are designed for ample future expansion.

## **AUDIO VISUAL AND SECURITY SYSTEMS**

### **DESCRIPTION OF SYSTEM**

All of the Access Control and Video Surveillance main headend equipment reside in the MDF. TRs throughout the facility house remote access control panels and power supplies and for video surveillance, all camera cabling is terminated on dedicated patch panels.

All suites are provided with both audio and video systems used to enhance the game day experience. In addition, all of the Browns Premium Clubs also use updated audio visual systems to enhance game day experiences.

### **OBSERVATIONS**

Both the Access Control and Video surveillance systems were found to be installed recently. The networking of both systems run on a fiber optic backbone and are segmented on their own VLAN.

All of the suite's video systems consist of a combination of ceiling mounted projectors and wall mounted TV monitors that are used to show both live game-day content as well as offering other broadcast television channels. Live game-day audio is also provided in each suite. An AV control panel is also located in the suite to control the projector's power as well as channel selection.

All broadcast media content is provided over the stadium-wide broadband coax cabling infrastructure. All broadband amplifiers are located within the TR's and each video display uses either an internal or external tuner to change channels. All of the broadband video cabling originates from the dedicated video distribution room located adjacent to the press box where individual channels are modulated from individual DirecTV set top boxes. These signals are then combined into one broadband network.

### **DISCUSSION**

The video surveillance and access control systems were found to be in good working condition. Both systems appear to be designed adequately in both coverage and quantity. All of the systems observed have been adequately maintained.

Each of the suites and Premium Clubs were observed during the audit. Existing conditions of all suites and clubs are documented on a space by space basis within PlanGrid. Each of the projectors within the suites are mostly only able to display a VGA signal and some are not functioning properly as addressed in our individual PlanGrid comments.

## **RECOMMENDATIONS**

We recommend replacing the suite VGA video projectors with a minimum of 3000 lumen, 4K projectors to enhance the game-day experience within the next 2-5 years. In addition, we recommend providing new video processors in each suite with the capability for control and provide a side-by-side picture processor to mimic the current capabilities of the existing projectors. We also recommend immediately replacing the

existing projectors that are currently either not functioning at all or not functioning properly (distorted and green-shifting images).

## **COST ESTIMATE**

The Technology cost is based on the Summary of cost from PlanGrid:

### **LOW VOLTAGE INFRASTRUCTURE**

<b>Type</b>	<b>Time Period</b>	<b>Capital Repair Cost</b>
Immediate	0 Year	\$18,408
Emergency	0 - 1 Years	\$542,654
Capital Repair	2 - 5 Years	\$4,058,720
Capital Repair	6 - 10 Years	\$0

### **AV/SECURITY**

<b>Type</b>	<b>Time Period</b>	<b>Capital Repair Cost</b>
Immediate	0 Year	\$0
Emergency	0 - 1 Years	\$25,837
Capital Repair	2 - 5 Years	\$1,522,135
Capital Repair	6 - 10 Years	\$0

# **SECTION 12**

## **Scoreboard Operations/Broadcast Narrative**

# Scoreboard Operations/Broadcast Narrative

## SCOPE OF INVESTIGATION

The scope of this audit of the facility is to investigate and understand the desired use of the current operating systems and equipment employed at the Cleveland Browns stadium relative to audio, video, and scoreboard operations.

- Systems in this scope include:
- Broadcast Infrastructure to support Mobile Remote TV Trucks
- Gameday operations systems and communications
- Video Scoreboards, and associated processing equipment
- Audio and Video content creation, storage, and playback
- Audio and Video distribution to in-house displays and sound systems
- In bowl audio and related equipment
- Suite audio/video systems
- Concourse audio and video distribution
- Production network equipment

This report is based upon our inspection of the facility's audio, video, and communications systems for Scoreboard/Broadcast functionality. We had access and examined the control rooms (**See Photos B1, B2, B3 and B4**), tech core and supporting spaces utilized in this function of the facility. The inspection services were limited to a visual survey of existing conditions and exclude both non-destructive and destructive testing. This type of inspection, combined with the interview of certain key personnel does not clearly reveal all defects and requires certain engineering assumptions be made to establish condition. These assumptions cannot always be verified without extensive testing, some of which can be destructive. Therefore, this report is not to be considered a guarantee of the exact condition, lifespan, and total extent of potential repairs of the audio, video, control, and communications equipment inspected.



Photo B1 – Video/Scoreboard Control Room

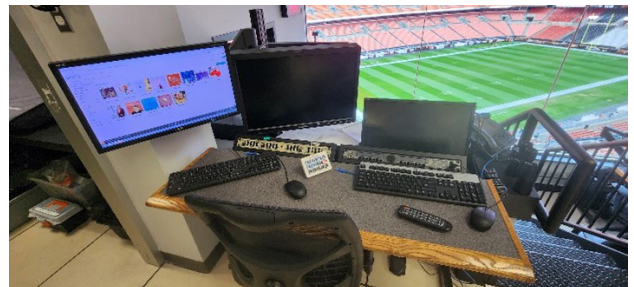


Photo B2 – Scoreboard Graphic Playout

## DESCRIPTION OF SYSTEM

The current systems are consistent with those of other like NFL facilities. Equipment is consistently maintained, and is subject to an ongoing process of maintenance, upgrade, and replacement as necessary. While Audio, Video and Communications are integral to the fan experience and integrated to each other, for the sake of organization, this information is broken up into Video Systems, Audio Systems and Communications.



Photo B3 – Time/Score and Scoreboard Control

## VIDEO

The scoreboards include the three monumental direct view LED canvasses, at the east and west end displays facing into the stadium and the east exterior facing east. A square and rectangular sponsored display flank each of the internal east and west monumental displays. Ribbons span the circumference of the club level seating fascia and the upper deck fascia. The vomitories at both ends of the field are topped with displays. The direct view LED boards are manufactured by Daktronics, with Daktronics processing systems driving them. All LED canvasses were installed in 2014, with the exception of the vomitory which were added for the 2022 season.

Video graphics for the scoreboards are controlled by a Grass Valley Kayenne production switcher built on a K2-Frame chassis (**Photo B5 and B6**) with 64 in and 30 auxiliary busses supporting 1080p resolution, though 1080i is the active resolution in use during production. Video playback is by means of Daktronics Live Clips (**Photo B7**), with (2) Chyron Prime MX (**Photo B8**) rendering Computer Graphics. All storage for this content is on a Storage Area Network provided by the Browns organization.

The in-house camera operation utilizes two wireless and four wired cameras. For NFL broadcast games, the additional camera locations required by the NFL utilize termination cabinets that homerun back to the truck cabling cross connect. (**Photo B9**) All field connectivity for both functions of camera usage, which were indicated as requiring replacement/upgrading in previous generations of this report have been replaced as of last season. The current configuration of the camera terminal panels include SMPTE hybrid fiber connectivity, having single mode fiber, aux cabling, triax and data cabling. All camera runs are now thoroughly tested and replaced as needed.

Pixel mapping video processing utilizes three Christie Spyders. (**Photo B10**) Video synchronization is currently provided by Cobalt cards in a two Cobalt HPF-900 card frames. (**Photo B11**) The ForA Frame Synchronizers (**Photo B12**) identified in the previous report are being decommissioned.

Replay of the internal video (CCTV) is captured and played back from a bank of Evertz Dream Catchers (**Photo B13**) processors and storage.

Time and Score data is generated by a Daktronics AllSport 5000 (**Photo B14**) and routed into the video production core.

Video is routed through a Harris Broadcast, now Imagine Communications, Router. (**Photo B15 and B16**) The router is currently configured in a 256 x 256 configuration with capability to upgrade up to 512 x 512. From the router the video is distributed to a network of ~3000 displays in and around the concourses and other public areas of the stadium, as well as to the Suites by means of a traditional broadband RF system which creates a channel plan of more than 40 channels. (**Photos B17, B18, B19, and B20**) The system

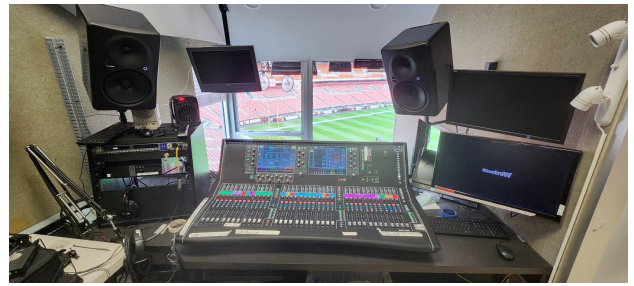


Photo B4 – Audio Control



Photo B5 – Grass Valley Kayenne Control Surface

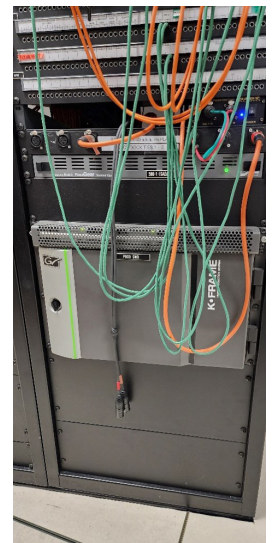


Photo B6 – K-Frame



utilizes ZeeVee HD2620 modulators which are fed with the in-house video production sources, and an array of more than two dozen satellite television demodulators.

## AUDIO

Like the video systems, the audio can be viewed as a system having primarily three partitions or primary zones. They are within the bowl, on the concourses and in the Suites. Other ancillary destinations including, radio feed, and TV truck feed are also processed through the control and switching of this system.

The bowl audio consists of a distribution of speakers throughout the stands. The speakers are powered by a network of Crown amplifiers **(Photo B21)**, though a small compilation of QSC amplifiers **(Photo B22)** have been installed recently, probably due to the supply chain issues that were experienced by the Harman companies. The amplifiers are interconnected to the audio core through networked Digital Signal Processors (DSP's).

Concourse audio is distributed throughout primarily the entry level and club level areas. These are also fed from the central audio core.

The audio is controlled by a new Allen & Heath dLive console **(Photo B23)** with Dante networking capability. New network attached remote I/O for the digital mixer has been installed at the truck bays. **(Photo B24)** Post mix audio is routed to the existing BSS Blu DSP's **(Photo B25)** and distributed as described above.

Microphones utilized for production are a combination of wireless and wired. There are currently 16 channels of Shure Axient wireless. Additionally, there are homerun copper audio lines throughout the stadium in excess of 76 channels. These provide connectivity from the control booth to the field, coaches' booth, truck dock, radio booth and I/O panels distributed throughout the bowl.

Audio clip playback is provided by a ClickEffects ProAudio system. **(Photo 26)**

## COMMUNICATIONS

The production intercom is based on a wired 54 channel RTS Cronus Intercom System **(Photo B27)**, and wireless Clear-Com Tempest. **(Photo B28)**

## OBSERVATIONS

The system is based on HD-SDI connectivity to transmit 1080i resolution to the technology core. The control room which was rebuilt in 2016 is capable of 1080p. Scoreboard personnel believes this resolution to be more than sufficient at this time. The router while being configured with all HD-SDI ports, can be configured for IP connectivity if it becomes a requirement. Staff believes there is no motivation to move to a 4k resolution at this time.

The videoboards, other than the vomitory are beginning their 10th year of service. These board have an average life cycle of 8 – 10 years before needing replacement. While a Daktronics technician actively maintains these boards, which would tend to increase life expectancy, the concern over available replacement parts begins to drive the motivation for replacement after this amount of time.

The production switcher is reaching end of life. Given the key factor this is to the operation, and the lack of any type of hot backup, the best option would be to proactively replace the production switcher with current equipment.

The video router has seen the benefit regular maintenance and has some upgradability. Furthermore, it has already served the team for more than 8 years. As with most electronic equipment it has a finite service life, and planning should begin for the replacement of the router. Serious consideration should be given to pursuing the inclusion of SMPTE 2110 signal routing as a base feature.

The field boxes, which were installed throughout the bowl in 1999 have had the recommended repairs sited in the previous report and are no longer an issue. Connectivity to these are now current technology SMPTE Hybrid fiber connections.

The network technology that has been the basis of the networked audio is based on an older proprietary protocol of the DSP manufacturer. Additionally, the DSP supporting the audio system are reaching end of life. We recommend replacement of the DSPs with current product that supports industry standard network protocols such as AES67 or Dante. The staff have reported have recently begun using one of the newer standards-based protocols.

The speakers within the bowl were replaced in 2016 and are inspected and maintained on a yearly basis. Speakers with issues are either repaired back to full performance or replaced during this process. There are a couple of issues that are currently an issue that will be addressed in the next off season maintenance cycle. Though the life cycle of speakers is reduced when installed in an outdoor environment, the ongoing maintenance should somewhat balance that concern out. These speakers should last for 18-20 years when receiving the care they are currently receiving. Therefore, replacement of these would be expected at about 2030+.

The concourse speakers currently have significant failures and past their expected life. These should be replaced with new speakers, along with the DSP's and amplification supporting them. Inability of these speakers to perform, while not essential life safety audio, could markedly diminish the fan's game day experience.

The 18 network switches supporting the audio system are at/beyond end of life and need to be replaced. The current audio distribution relies heavily on these switches. Loss of any one or more of these will cause noticeable audio loss. In an environment such as an NFL football stadium where ambient sound levels can reach more than 100 dB SPL, i.e. significant levels, any loss of audio could and would make any audio coming over the audio system at minimum unintelligible or worse imperceptible.

The production intercom's local station panels are failing and will periodically requiring replacing by a refurbished panel, as the system is beyond end of life. Old panels being replaced are kept to for emergency parts only. As communications is a critical during game day, these systems failures create significant operational issues.

Both the control room and tech core are well kept and organized. Discussions of the ongoing maintenance and upkeep of the systems seem practical and conservative, upgrading where prudent and keeping existing systems fully operational. However, these measures cannot nullify the effects of equipment aging and the obsolescence of electronic equipment. Therefore, a pragmatic plan of equipment replacement is required to continue effective operations for this area.

## **RECOMMENDATIONS**

The videoboards, with the exception of the vomitory, are reaching end of life. Given the lead times required for implementation, begin the replacement planning process, and replace the videoboards and associated control drivers in the next 2 – 5 years.

The life span of the production switcher and console are approaching end of life. Replace them with current product in the next 2-5 years.

Since a loss of the video router could prove catastrophic during production, and given the age of the unit, replace the video router before end of life causes a major failure in the next 2-5 years. Include a unit that can support SMPTE 2110 as the transport.

Replacing the DSP's with units that support a standards based network protocol will address the age of the units, and create a more diverse and cost effective path for future upgrades and any needed functional expansion. The new units should support AVB or AES 67.

The concourse audio is in severe disrepair. Replace the concourse audio systems in whole in the next 0-2 years.

The production intercom system is in a growing state of decay requiring continuous replacement of stations. To prevent a major system loss during production use, replace the system with a new system in the next 2-5 years.

The video distribution to the concourse displays and suites is based on technology that has decreasing support. Other than the current manufacturer of the headend equipment, manufacturer of comparable parts has virtually ceased. Major devices can only be replaced, not repaired. We recommend upgrading the system to an IPTV based distribution system in the next 2-5 years.

## **COST ESTIMATE**

- Videoboard replacement: \$14,400,000
- Production Switcher and Console: \$820,000
- Video Router: \$745,000
- Digital Signal Processors: \$96,800
- Concourse Audio: \$1,250,000
- Production Intercom: \$148,000
- IPTV: \$10,185,000
- AV Network Switches: \$154,000

Type	Time Period	Capital Repair Cost
Immediate	0 Year	\$0
Emergency	0 - 1 Years	\$1,250,000
Capital Repair	2 - 5 Years	\$25,810,000
Capital Repair	6 - 10 Years	\$0



Photo B7 – Daktronics Live Clips



Photo B8 – Chyron Prime MX



Photo B9 – Truck Dock Panels



Photo B10 – Christie Spyders

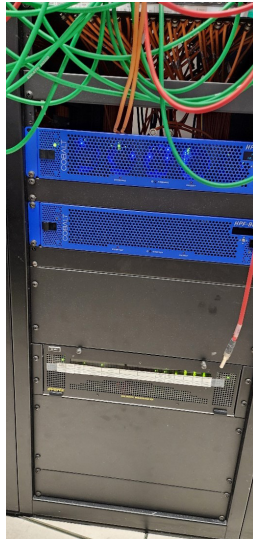


Photo B11 – Cobalt



Photo B12 – ForA Frame Sync



Photo B13 – Evertz Dream Catchers

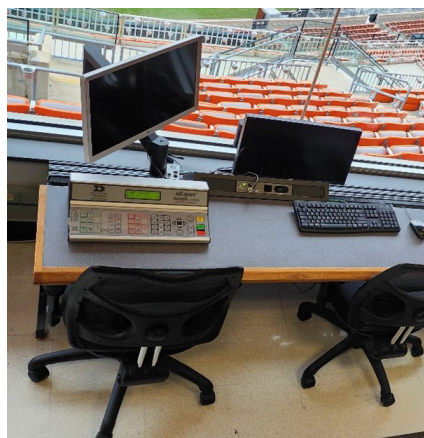


Photo B14 – Daktronics AllSport

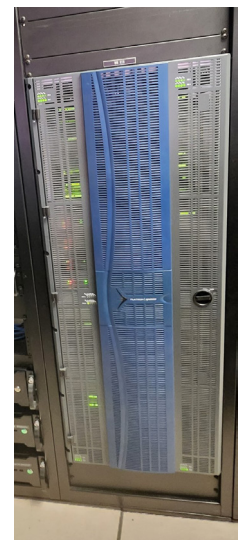


Photo B15 – Video Router Ext.





Photo B16 – Video Router Int.



Photos B17 – Modulators, Satellite Receivers and Trunk Amplifier



Photos B18 – Modulators, Satellite Receivers and Trunk Amplifier



Photos B19 – Modulators, Satellite Receivers and Trunk Amplifier



Photos B20 – Modulators, Satellite Receivers and Trunk Amplifier

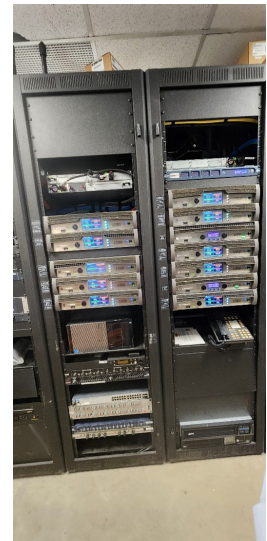


Photo B21 – Typical Crown Amp Stack



Photo B22 – QSC Amplifiers



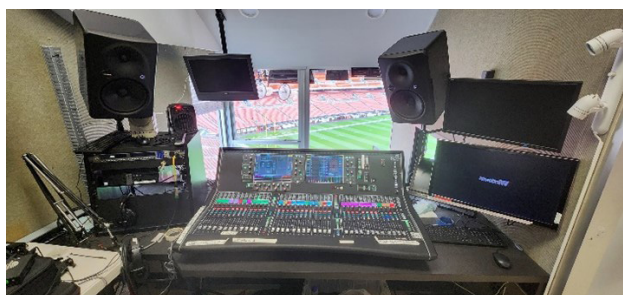


Photo B23 – Allen & Heath Live Console

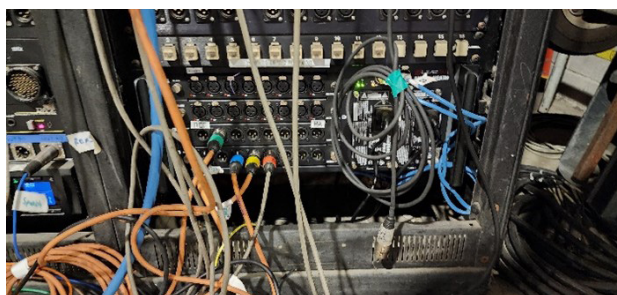


Photo B24 – Networked I/O in Truck Bay



Photo B25 – BSS DSP's



Photo B26 - ClickEffects ProAudio



Photo B27 – RTS Intercom



Photo B28 – Clear Comm Tempest Belt Packs

# APPENDIX A

## PlanGrid Category Listing

# PlanGrid Category Listing

## DISCIPLINE COLORS

Landscape – Green

Civil – Red

Architectural – Orange

Structural – Light Blue

Mechanical – Pink

Electrical – Dark Blue

Fire Protection – Red

Technology – Purple

## LIST OF SYSTEM CATEGORIES

### LANDSCAPE

#### PlanGrid Stamp **CL**

- A. Landscaping
  - 2. Lawns, Groundcovers, Ornamental Grasses, Perennials, Deciduous Shrubs/Trees, Evergreen Shrubs/Trees
- B. Irrigation
  - 3. Controllers, Manual Valves, Solenoid Valves, Turf Pop-Sprinklers, Quick Coupler Valves
- C. Site Amenities
  - 4. Planters, Benches, Trash Receptacles, Bicycle Racks, Picnic Tables
- D. Fencing and Gates

### CIVIL

#### PlanGrid Stamp **CC**

- E. Sidewalks/Curbs
  - 6. Exterior Ramps
- F. Pavements
  - 1. Drives, Plazas, Decorative Pavers
- G. Retaining Walls

### ARCHITECTURAL

#### PlanGrid Stamp **AG**

- A. Exterior Envelope
- B. Concourse Areas

C. Ramps

D. General Seating

**PlanGrid Stamp AT**

E. Vertical Transportation

1. Stairs, Escalators, Elevators

**PlanGrid Stamp AS**

F. Suites, Suite Corridors, Suite Elevator Lobbies

G. NFL Spaces

H. Food Service Areas

I. Miscellaneous Spaces

**STRUCTURAL**

**PlanGrid Stamp SS**

A. Concrete/Steel

1. Spalls, Cracks, Guardrail Posts, Corrosion

**PlanGrid Stamp SR**

B. Interior Ramps and Bridges

**PlanGrid Stamp SJ**

C. Joints

1. Expansion Joints, Control Joints

**PLUMBING**

**PlanGrid Stamp PE**

A. Plumbing hot water heaters

B. Backflow Preventers

**PlanGrid Stamp PP**

C. Plumbing fixtures

D. Distribution piping

**MECHANICAL**

**PlanGrid Stamp HG**

A. VAV boxes

B. Air Handling units

C. Building Automation Systems

**PlanGrid Stamp HE**

- D. Pumps
- E. Chillers
- F. AC Split systems

## **ELECTRICAL**

### **PlanGrid Stamp EL**

- A. Lighting
  - 1. Controls
  - 2. Facility lighting
  - 3. Site lighting
  - 4. Field lighting

### **PlanGrid Stamp EP**

- B. Power:
  - 1. Normal Power, Unit Substations, Distribution
  - 2. Emergency Power, Generators, Distribution

### **PlanGrid Stamp EG**

- C. Lightning Protection

## **FIRE PROTECTION**

### **PlanGrid Stamp FA**

- A. Fire Alarm

### **PlanGrid Stamp FS**

- B. Fire Suppression
  - 1. Fire Pump & Standpipe Systems
  - 2. Fire Suppression Systems (Wet pipe, dry pipe, chemical)

## **TECHNOLOGY**

### **PlanGrid Stamp TL**

- A. Low Voltage Infrastructure
  - 1. Telecom Spaces and Pathways
  - 2. Structured Cabling Systems
  - 3. Horizontal Distribution
  - 4. Backbone
  - 5. Telecom Grounding Systems

- B. Telephone System

- C. Data System

### **PlanGrid Stamp TR**

- D. RF Systems
  - 1. Cellular
  - 2. WiFi



3. Service and Operations
4. Security
5. First Responder

#### **PlanGrid Stamp TB**

- E. Broadcast Audio Visual
  1. Television Production
  2. Control Room and Equipment
  3. Field Equipment
  4. Scoreboard/Videoboards
  5. Distribution
  6. Stadium Sound

#### **PlanGrid Stamp TV**

- F. Audio Visual
  1. Suites and Premium Club
- G. Sound
  1. Local Sound and/or Video Systems
- H. Security
  1. Access Control
  2. Video Surveillance
  3. Guard Tour
  4. Intrusion Detection

# **APPENDIX B**

## Stadium Lease Excerpt

**Exhibit G: CAPITAL REPAIRS DEFINITION AND AUDIT REQUIREMENT  
FROM STADIUM LEASE**

approval upon receipt of any consideration from either the Lessee or the party acquiring the naming rights.

(b) Promotions. All revenues, fees and charges from promotional activities relating to Browns and non-Browns activities.

(i) Other Events. Except for City Events, all revenues, fees and charges from all sporting, entertainment and other events held in the New Stadium including, without limitation, New Stadium rent, tickets, ticket surcharges, concessions, programs, novelties, and advertising.

13. Existing Pedestrian Walkway. The City shall undertake to maintain in a safe and prudent manner that certain existing pedestrian walkway extending from the Mall "C" ("Walkway") over certain railroad rights and under the Cleveland Memorial Shoreway to the Leased Premises.

14. Capital Repairs.

(a) Definition of Capital Repairs. Subject to the provisions of this Lease, including without limitation Sections 14(f) and 22(h), all Capital Repairs and, to the extent provided in Section 14(h), Emergency Repairs, shall be made by the City at the times and subject to the procedures and limitations specified in this Section 14, including without limitation Section 14(f). The principal source of funds for Capital Repairs shall be the Capital Repair Fund. The Capital Repair Fund shall be established and funded by the City as provided herein and (except as provided in Section 19(b)) shall be available only to make Capital Repairs. The Capital Repair Fund shall not be used for ordinary maintenance and repair obligations or for alterations, which are the responsibility of Lessee and are described in Section 11 of this Lease. "Capital Repairs" shall be defined as all Work for:

- (i) prudent and extraordinary repairs;
- (ii) repairs that have a useful life of greater than seven (7) years;
- (iii) repairs that are necessary, in the Lessee's reasonable judgment, to maintain the roof, foundation and the structural integrity of the New Stadium and preserve its usefulness for the purposes for which it is being leased hereunder;
- (iv) all "Capital Improvements," which are defined as all capital modifications or additions to the existing facilities in the New Stadium that maintain both the economic competitiveness of the New Stadium and its revenue potential as compared to other NFL stadia generally and create new revenue enhancing opportunities consistent with those provided in the top one-half of NFL stadia generally, and including modifications and additions that are intended to reduce the cost of the operation and maintenance of the New Stadium; and
- (v) such modifications or additions required by applicable City of Cleveland, County of Cuyahoga, State of Ohio or federal laws, rules, regulations, or building codes, including accommodations required to be made under the Americans with Disabilities Act of 1990, as amended.

Capital Repairs shall also include:



- (A) painting or application of protective coatings no more often than once every five (5) years;
- (B) after exhaustion of claims against any third parties, items covered under warranty and items that are the result of unsatisfactory work on the initial construction of the New Stadium and replacements caused by settling (i.e., broken glass, cracked windows, concrete);
- (C) replacement of carpeting no more than once every five (5) years;
- (D) repairs to or replacement of the playing surface of the New Stadium but only if such repair or replacement is required as a result of the City's construction of other Capital Repairs;
- (E) upgrades of components to field lighting and the scoreboard (including message board, bulbs and circuit breaker panels) no more often than once every ten (10) years; and
- (F) cleaning of the exterior facade of the New Stadium no more often than once every ten (10) years.

Notwithstanding the foregoing, for the first ten (10) years following the Commencement Date, no Capital Improvements shall be deemed to be Capital Repairs; provided, however, that modifications or additions to existing television or cable broadcasting infrastructure and field lighting systems may be deemed to be Capital Repairs during such ten-year period if such modifications or improvements are required by NFL standards that apply generally to all stadia in which NFL football games are played.

Capital Repairs shall not include:

- (H) items that would otherwise be Capital Repairs but that are necessitated by the actions of the Lessee and are not attributable to ordinary wear and tear;
- (I) periodic painting or the application of protective coatings more frequently than once every five (5) years;
- (J) repairs to carpeting or replacement of carpeting more frequently than once every five (5) years;
- (K) repairs to or replacement of the playing surface within the New Stadium (unless such repair or replacement is required as a result of City's construction of other Capital Repairs);
- (L) upgrades to components of the scoreboard more frequently than once every ten (10) years;
- (M) upkeep of the exterior facade of the New Stadium, or cleaning the exterior facade of the New Stadium more frequently than once every ten (10) years;
- (N) routine maintenance of plumbing systems, electrical systems, mechanical systems or heating, ventilation or air conditioning systems; or
- (O) tenant fixtures, finishes, build-out materials and supplementary equipment in any public restaurants in the New Stadium.

Section 14, including Section 14(f). In any arbitration, the parties shall be entitled to conduct discovery in accordance with the applicable rules of the Federal Rules of Civil Procedure, with such modifications thereto as may be mutually agreeable to the parties. In the event the parties are unable to agree on the three arbitrators, the parties shall select the three arbitrators by striking alternatively (the first to strike being chosen by lot) from a list of thirteen arbitrators designated by the American Arbitration Association. Each of the parties to the arbitration shall bear the cost of the arbitration on such equitable basis as the arbitrators of the matter shall determine. Notwithstanding the foregoing, nothing in this Agreement shall preclude any party from filing any action in a court of competent jurisdiction seeking any temporary restraining order or preliminary injunction.

(f) Capital Repair Fund.

(i) The City shall establish a Capital Repair Fund as a segregated fund of the City, separate and apart from other funds of the City. The City shall annually deposit in the Capital Repair Fund the amounts shown on Schedule 14(f) (as such Schedule may be modified by the City to account for advance contributions in accordance with this subsection (f)), less amounts redirected from the Capital Repair Fund to the costs of constructing the New Stadium as described in Section 3.6 of the Stadium Financing Agreement.

(1) The funds in the Capital Repair Fund shall be invested by the City in the same manner as other City funds. Investment income earned on the amounts in the Capital Repair Fund shall remain in the Capital Repair Fund and shall not be used as a credit against future contributions. The City and the Lessee shall, prior to the Commencement Date, jointly develop an initial Capital Repair Fund Budget, which shall include, to the extent reasonably practicable, a percentage allocation of the

aggregate Capital Repair Fund as between Capital Improvement items and other Capital Repair items, schedules showing the various components of the improvements for which reserves should be established, appropriate reserves over the Term of the Lease for certain Capital Repairs that are not Capital Improvements (the "Reserves"), and any portions of the Reserves that the City believes will or may need to be used for Capital Repairs during any particular calendar year. Each year, after reviewing the then current Capital Repair Audit (as defined in Section 14(g)) and written requests by the Lessee for Capital Repairs, the City shall propose revisions to the Capital Repair Fund Budget. The Lessee shall have the opportunity to review and approve such proposed revisions to such percentages, schedules and Reserves, which approval shall not be unreasonably withheld, delayed or conditioned. The City and the Lessee agree to work together in good faith to agree on such percentages, schedules and Reserves. As provided in the NFL Agreement, in the event that any amount of the Capital Repair Fund is used for the initial construction of the New Stadium, a minimum amount of \$500,000.00 should remain available for Capital Repairs upon completion of the New Stadium.

(2) The City shall proceed with reasonable diligence to make all Material Capital Repairs.

(3) If the Capital Repair is a Capital Improvement, the City shall be obligated to make such Capital Improvement only if funds other than Reserves and other than those previously allocated for Capital Repairs are available in the Capital Repair Fund. If sufficient funds are not then available in the Capital Repair Fund, the Lessee shall have the

right, but not the obligation, to fund the shortfall for such Capital Improvement as provided in Section 14(i). In no event shall the City be required to make Capital Improvements to the Leased Premises in excess of the amounts allocated to Capital Improvements in the Capital Repair Fund Budget.

(4) If there are not adequate funds available in the Capital Repair Fund (net of amounts committed for use) to cover the cost of a Capital Repair that is not a Capital Improvement or a Material Capital Repair, the City shall make the repair as soon as it is practical and prudent to do so, in the City's reasonable discretion, taking into account the City's responsibility as owner of the Stadium facility, the fiscal constraints of the City and the amount of Reserves then available and the amount of Reserves projected to be needed for other Capital Repairs pursuant to the Capital Repair Plans. To the extent that the City makes any Capital Repairs costing more than the amounts then available in the Capital Repair Fund to pay for such repairs, the City may pay for such Capital Repairs with advances of deposits scheduled to be made in future years, whereupon the City shall be permitted to revise the Capital Repair Fund amounts set forth on Schedule 14(f) and reduce dollar for dollar such deposits scheduled to be made in the future.

(ii) Any amounts from the Capital Repair Fund applied toward the construction of any Capital Repair may be distributed to the Lessee, to third parties or to the City as provided in this Section 14(f). The amounts payable shall be reimbursed, to the extent available from the Capital Repair Fund, following the Lessee's or the City's submission in writing to the City (or the Lessee) of a pay request which shall include:



(1) a summary of bills aggregating the total for which a reimbursement is being requested;

(2) a copy of each individual invoice from any architect, contractor or engineer or any other person charging a fee for work performed pursuant to Section 14;

(3) lien-releases in a form reasonably satisfactory to the City, executed by such architect, contractor or engineer relating to invoices previously paid pursuant to a pay request; and

(4) requisitions for work completed which have been agreed to by the Lessee's contractor, the Lessee, the Lessee's architect and the Lessee's construction manager, if any.

(iii) All withdrawals from the Capital Repair Fund for the purpose of making Capital Repairs shall be countersigned by both parties. Any party refusing to sign such withdrawal request shall deliver to the other party a statement of the basis (with reasonable detail) for such recipient's objection thereto.

(g) Capital Repair Audit. Commencing on the fifth (5th) January 1 after the Commencement Date, and on each fifth (5th) January 1 thereafter during the term of this Lease, the City shall, as an expense of the Capital Repair Fund, provide the Lessee with a structural and capital component inspection report from a licensed engineer, reasonably acceptable to the Lessee, having at least ten (10) years of experience in performing structural and capital component inspections of commercial buildings, including stadia, and otherwise qualified to provide the information required hereunder (the "Capital Repair Engineer"). The

Capital Repair Engineer shall report on the condition of the structure and each capital component of the Leased Premises, which report shall include suggestions for any current Capital Repairs that are necessary to the Leased Premises and suggestions for revisions to the allocations in the Capital Repair Fund Budget (such report, the "Capital Repair Audit"). The City shall maintain a log for the Leased Premises, which log shall include a copy of all Capital Repair Audits as well as a record in reasonable detail of all Capital Repairs undertaken by the City or the City's agents or representatives.

(h) Emergency Repairs. Emergency Repairs shall be made by the City in accordance with law. However, in the event that the City does not timely make such Emergency Repairs, then the Lessee shall have the right to make such repairs, so long as the Lessee undertakes best efforts to notify the City of the need for such repairs before commencing to undertake the same. "Emergency Repairs" are those Capital Repairs which, if not immediately made, would endanger the health and safety of the people working in or attending an event in the New Stadium, would cause imminent damage to any significant component of the New Stadium, or would render the New Stadium, or any material mechanical, electrical or plumbing system or other significant component thereof, unusable for previously scheduled events. Notwithstanding the other provisions of Section 14, the Lessee may submit a request to the Lessor for payment of the cost of the repairs made by the Lessee for approval by the Lessor in accordance with the procedures and requirements set forth in Section 14(f). In the event that such repair qualifies as an Emergency Repair, then the Capital Repair Fund may be an eligible funding source for such repair. In making such Emergency Repairs, the Lessee shall comply with all the requirements of Section 14(f)(ii), and the costs of such Emergency Repairs shall be eligible for reimbursement to the Lessee from the Capital Repair Fund by the City only if the Lessee has complied with all of such requirements. The Emergency Repairs shall be the only exception to the normal pre-approval procedures established in this Section 14.

# **APPENDIX C**

## **Budgetary Capital Repair Costs**

Task #	Stamp	Title	Description	Cost	Time Period
710	AG	Architectural General	Fire rated door assembly out of adjustment. Not self-closing or self-latching. Adjust door leafs and hardware to allow proper closing and latching. 2 door pairs (Quad D).	\$960	0-0 - Immediate Repairs
593	AG	Architectural General	Fire rated door assembly out of adjustment. Not self-closing or self-latching. Adjust door leafs and hardware to allow proper closing and latching. 1 door pair (Quad A).	\$480	0-0 - Immediate Repairs
587	AG	Architectural General	Fire rated door assembly out of adjustment. Not self-closing or self-latching. Adjust door leafs and hardware to allow proper closing and latching. 1 door pair (Quad D).	\$480	0-0 - Immediate Repairs
583	AG	Architectural General	Fire rated door assembly out of adjustment. Not self-closing or self-latching. Adjust door leafs and hardware to allow proper closing and latching. 1 door pair (Quad C).	\$480	0-0 - Immediate Repairs
580	AG	Architectural General	Fire rated door assembly out of adjustment. Not self-closing or self-latching. Adjust door leafs and hardware to allow proper closing and latching. 1 door pair (Quad B).	\$480	0-0 - Immediate Repairs
572	AG	Architectural General	Fire rated door assembly out of adjustment. Not self-closing or self-latching. Adjust door leafs and hardware to allow proper closing and latching. 1 door pair (Quad B).	\$480	0-0 - Immediate Repairs
559	AG	Architectural General	Fire rated door assembly out of adjustment. Not self-closing or self-latching. Adjust door leafs and hardware to allow proper closing and latching. 1 door pair and 1 single door (Quad D).	\$720	0-0 - Immediate Repairs
555	AG	Architectural General	Fire rated door assembly out of adjustment. Not self-closing or self-latching. Adjust door and hardware to allow proper closing and latching. 1 single door (Quad B).	\$240	0-0 - Immediate Repairs
552	AG	Architectural General	Fire rated door assembly out of adjustment. Not self-closing or self-latching. Adjust door leafs and hardware to allow proper closing and latching. 1 door pair (Quad A).	\$480	0-0 - Immediate Repairs
533	AG	Architectural General	Fire rated door assembly out of adjustment. Not self-closing or self-latching. Adjust door leafs and hardware to allow proper closing and latching. 2 door pairs (Quad C).	\$960	0-0 - Immediate Repairs
277	AG	Architectural General	Fire rated door assembly out of adjustment. Not self-closing or self-latching. Adjust door leafs and hardware to allow proper closing and latching. 1 door pair (Quad C).	\$480	0-0 - Immediate Repairs
274	AG	Architectural General	Fire rated door assembly out of adjustment. Not self-closing or self-latching. Adjust door leafs and hardware to allow proper closing and latching. 1 door pair (Quad B).	\$480	0-0 - Immediate Repairs
269	AG	Architectural General	Fire rated door assembly out of adjustment. Not self-closing or self-latching. Adjust door leafs and hardware to allow proper closing and latching. 1 door pair (Quad A).	\$480	0-0 - Immediate Repairs
266	AG	Architectural General	Fire rated door assembly out of adjustment. Not self-closing or self-latching. Adjust door leafs and hardware to allow proper closing and latching. 1 door pair (Quad D).	\$480	0-0 - Immediate Repairs
264	AG	Architectural General	Fire rated door assembly out of adjustment. Refer to Task #256.	\$960	0-0 - Immediate Repairs
261	AG	Architectural General	Fire rated door assembly out of adjustment. Not self-closing or self-latching. Adjust door leafs and hardware to allow proper closing and latching. 2 door pairs (Quad A).	\$960	0-0 - Immediate Repairs
259	AG	Architectural General	Fire rated door assembly out of adjustment. Not self-closing or self-latching. Adjust door leafs and hardware to allow proper closing and latching. 1 door pair (Quad B).	\$480	0-0 - Immediate Repairs
258	AG	Architectural General	Fire rated door assembly out of adjustment. Not self-closing or self-latching. Adjust door leafs and hardware to allow proper closing and latching. 1 door pair (Quad C).	\$480	0-0 - Immediate Repairs
256	AG	Architectural General	Fire rated door assembly out of adjustment. Not self-closing or self-latching. Adjust door leafs and hardware to allow proper closing and latching. 2 door pairs (Quad D).	\$960	0-0 - Immediate Repairs
248	AG	Architectural General	Fire rated door assembly out of adjustment. Not self-closing or self-latching. Adjust door leafs and hardware to allow proper closing and latching. 2 door pairs (Quad A).	\$960	0-0 - Immediate Repairs
429	EP	Architectural Suites	Panel cover latch broken	\$240	0-0 - Immediate Repairs
766	CL	Civil Landscape	Missing lid to trash receptacle. Replace 1 (one) trash receptacle lid.	\$600	0-0 - Immediate Repairs
727	CL	Civil Landscape	Existing truncated domes are damaged should be replaced with new tiles which meets ADA standards.	\$2,400	0-0 - Immediate Repairs
687	CL	Civil Landscape	Site Irrigation: Solenoid valves for these two (2) adjacent zones are in poor condition. Replace two (2) solenoid valves within quadrant with Rainbird PGA without pressure regulation.	\$3,600	0-0 - Immediate Repairs
662	CL	Civil Landscape	Site Irrigation: Irrigation leak. Replace broken irrigation line or head.	\$3,600	0-0 - Immediate Repairs
657	CL	Civil Landscape	Site Irrigation: Broken Irrigation head. Replace.	\$600	0-0 - Immediate Repairs
599	EL	Electrical Lighting	Light does not turn on.	\$600	0-0 - Immediate Repairs
471	EL	Electrical Lighting	No Power. Battery dead.	\$1,200	0-0 - Immediate Repairs

470	EL	Electrical Lighting	Exit lights off.	\$480	0-0 - Immediate Repairs
452	EL	Electrical Lighting	Fluorescent lights on 3rd floor behind scoreboard. All off not working.	\$7,200	0-0 - Immediate Repairs
443	EL	Electrical Lighting	Several second delay between toggling light switch No and lights coming ON. All light fixtures in this room are fluorescent lights. Approx. qty 18.	\$10,800	0-0 - Immediate Repairs
440	EL	Electrical Lighting	One of the spot lights on the track is not functioning.	\$360	0-0 - Immediate Repairs
419	EL	Electrical Lighting	Elevator room above, lights do not work	\$2,400	0-0 - Immediate Repairs
390	EL	Electrical Lighting	All wall mounted lights are turned ON during day.	\$600	0-0 - Immediate Repairs
382	EL	Electrical Lighting	Fluorescent lights. 50% don't work.	\$1,200	0-0 - Immediate Repairs
380	EL	Electrical Lighting	Pendant LED fixture not stable. Open vent blowing at it. In time mounts will fail.	\$900	0-0 - Immediate Repairs
359	EL	Electrical Lighting	Lights not working. All light fixtures in this room are fluorescent lights. Approx. qty 4.	\$2,400	0-0 - Immediate Repairs
350	EL	Electrical Lighting	Lights don't work	\$2,400	0-0 - Immediate Repairs
315	EL	Electrical Lighting	Normal Lights don't work. Night lights are on. Door was left unlocked. All light fixtures in this room are fluorescent lights. Approx. qty 4.	\$2,400	0-0 - Immediate Repairs
310	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 4. Lights either dim or not working.	\$2,400	0-0 - Immediate Repairs
221	EL	Electrical Lighting	Downlights in this area are HID.	\$2,400	0-0 - Immediate Repairs
220	EL	Electrical Lighting	Downlights in this area are HID. All on during day.	\$1,800	0-0 - Immediate Repairs
219	EL	Electrical Lighting	Downlights in this area are HID.	\$2,400	0-0 - Immediate Repairs
218	EL	Electrical Lighting	Downlights in this area are HID. Some are on during the day.	\$1,200	0-0 - Immediate Repairs
217	EL	Electrical Lighting	Downlights in this area are HID.	\$2,400	0-0 - Immediate Repairs
214	EL	Electrical Lighting	All lights are dim and take time to turn on. None are LED. Lots of buzzing noise coming from center down lights.	\$8,400	0-0 - Immediate Repairs
168	EL	Electrical Lighting	Lights not working.	\$2,400	0-0 - Immediate Repairs
103	EL	Electrical Lighting	No lights.	\$600	0-0 - Immediate Repairs
99	EL	Electrical Lighting	Down lights don't work. 4' lights with weather proof housing above RTU-2B1 & 2C1 & 2C2 work as they should.	\$2,400	0-0 - Immediate Repairs
97	EL	Electrical Lighting	No lights in data room.	\$600	0-0 - Immediate Repairs
96	EL	Electrical Lighting	HID bulbs above counter.	\$3,600	0-0 - Immediate Repairs
66	EL	Electrical Lighting	No lights.	\$600	0-0 - Immediate Repairs
64	EL	Electrical Lighting	Lights don't work	\$600	0-0 - Immediate Repairs
44	EL	Electrical Lighting	Light fixture weighed down by wire from adjacent motor. Motor fed by a none motor rated switch. Location very high. All light fixtures in this room are fluorescent lights. Approx. qty 2.	\$1,200	0-0 - Immediate Repairs
39	EL	Electrical Lighting	No lights.	\$6,000	0-0 - Immediate Repairs
20	EL	Electrical Lighting	Lights not working.	\$2,400	0-0 - Immediate Repairs
466	EP	Electrical Power	Panels unlocked with broken latches.	\$600	0-0 - Immediate Repairs
465	EP	Electrical Power	Penetrations not seal/fire rated	\$300	0-0 - Immediate Repairs
461	EP	Electrical Power	Pull box cover missing.	\$600	0-0 - Immediate Repairs
449	EP	Electrical Power	Penetrations not sealed/fire rated	\$300	0-0 - Immediate Repairs
442	EP	Electrical Power	No AFHA labels.	\$180	0-0 - Immediate Repairs
437	EP	Electrical Power	Wall penetration not sealed/fire rated.	\$300	0-0 - Immediate Repairs
435	EP	Electrical Power	Conduit support system broken.	\$2,400	0-0 - Immediate Repairs
431	EP	Electrical Power	Tripped breaker	\$90	0-0 - Immediate Repairs
426	EP	Electrical Power	J-box cover missing	\$180	0-0 - Immediate Repairs
415	EP	Electrical Power	Receptacles not gfci, not weather protected. Typical across front of concessions	\$6,000	0-0 - Immediate Repairs



411	EP	Electrical Power	J-box cover	\$180	0-0 - Immediate Repairs
407	EP	Electrical Power	Latch broken	\$240	0-0 - Immediate Repairs
392	EP	Electrical Power	J-box cover	\$180	0-0 - Immediate Repairs
369	EP	Electrical Power	Missing bolts; wall open	\$1,800	0-0 - Immediate Repairs
368	EP	Electrical Power	Exposed bus in panels. Spaces need covered	\$600	0-0 - Immediate Repairs
365	EP	Electrical Power	Wire trough cover	\$600	0-0 - Immediate Repairs
363	EP	Electrical Power	Penetrations not sealed/fire rated.	\$300	0-0 - Immediate Repairs
355	EP	Electrical Power	Penetrations not sealed/Fire rated.	\$300	0-0 - Immediate Repairs
354	EP	Electrical Power	Cover on wire trough	\$600	0-0 - Immediate Repairs
343	EP	Electrical Power	Breaker tripped	\$90	0-0 - Immediate Repairs
341	EP	Electrical Power	Food service hot plates not on GFCI.	\$1,800	0-0 - Immediate Repairs
340	EP	Electrical Power	Tripped breaker	\$90	0-0 - Immediate Repairs
339	EP	Electrical Power	Missing Breaker covers	\$240	0-0 - Immediate Repairs
335	EP	Electrical Power	Floor penetrations not sealed/fire rated.	\$300	0-0 - Immediate Repairs
331	EP	Electrical Power	No Arc Flash Labels	\$180	0-0 - Immediate Repairs
329	EP	Electrical Power	Ground wire not coming out of knockout and zip tied	\$600	0-0 - Immediate Repairs
326	EP	Electrical Power	Penetrations not sealed/fire rated.	\$300	0-0 - Immediate Repairs
325	EP	Electrical Power	Rec breaker tripped	\$90	0-0 - Immediate Repairs
316	EP	Electrical Power	No Arc Flash labels. Check Preventative Maintenance Report done by RESA SERVICE for any requirements	\$180	0-0 - Immediate Repairs
314	EP	Electrical Power	Penetration not sealed/fire rated	\$300	0-0 - Immediate Repairs
308	EP	Electrical Power	Penetration not fire sealed	\$300	0-0 - Immediate Repairs
300	EP	Electrical Power	Wire trough not covered	\$600	0-0 - Immediate Repairs
299	EP	Electrical Power	Seal is not Fire rated	\$300	0-0 - Immediate Repairs
298	EP	Electrical Power	Wall penetrations not sealed/fire rated	\$300	0-0 - Immediate Repairs
281	EP	Electrical Power	No Arc Flash Labels	\$180	0-0 - Immediate Repairs
134	EP	Electrical Power	Unlocked panels in kitchen have broken latch.	\$180	0-0 - Immediate Repairs
63	EP	Electrical Power	In panel R4C-14, POS station 20A breaker, Circuit 20 is tripped.	\$90	0-0 - Immediate Repairs
58	EP	Electrical Power	Missing breaker space cover in HP3C-4 exposing bus.	\$240	0-0 - Immediate Repairs
46	EP	Electrical Power	Some wires laying on the ground. Some panels locked.	\$240	0-0 - Immediate Repairs
45	EP	Electrical Power	No Arc Flash Labels. Apply them inside Panels. Keep panels in this location locked.	\$180	0-0 - Immediate Repairs
43	EP	Electrical Power	No Arc Flash labels	\$180	0-0 - Immediate Repairs
29	EP	Electrical Power	No Arc Flash labels on ATS QUAD D-C	\$180	0-0 - Immediate Repairs
23	EP	Electrical Power	No Arc Flash labels on New ATS QUAD A-B	\$180	0-0 - Immediate Repairs
252	FS	Fire Suppresion	Provide placard.	\$180	0-0 - Immediate Repairs
245	FS	Fire Suppresion	Confirm NFPA 13 clearances of sprinkler head.	\$2,688	0-0 - Immediate Repairs
244	FS	Fire Suppresion	Provide riser labels.	\$180	0-0 - Immediate Repairs
239	FS	Fire Suppresion	Provide riser label.	\$180	0-0 - Immediate Repairs
238	FS	Fire Suppresion	Provide riser label.	\$180	0-0 - Immediate Repairs
237	FS	Fire Suppresion	Provide riser labels.	\$180	0-0 - Immediate Repairs

			Fire Sprinkler Head Cabinet - List: In accordance with NFPA 25 - a list of sprinklers installed in the property is not posted in the sprinkler cabinet. Provide and post a list of sprinklers installed in the property.		
231	FS	Fire Suppresion	Fire Sprinkler Head Cabinet - Wrenches: In accordance with NFPA 13 - one sprinkler wrench as specified by the sprinkler manufacturer shall be provided in the cabinet for each type of sprinkler installed. Provide one sprinkler wrench for each type of sprinkler installed.	\$600	0-0 - Immediate Repairs
230	FS	Fire Suppresion	Label each riser separately. Both tags are on one riser.	\$2,400	0-0 - Immediate Repairs
229	FS	Fire Suppresion	Replace main branch piping.	\$60,000	0-0 - Immediate Repairs
228	FS	Fire Suppresion	Visible corrosion on pump shaft and excessive leakage around the fire pump drive shaft seals. Replace fire pump.	\$30,000	0-0 - Immediate Repairs
227	FS	Fire Suppresion	Sprinkler heads touching duct insulation - Recommend adjusting insulation.	\$1,200	0-0 - Immediate Repairs
516	PP	Plumbing Piping/Fixtures	Lower water fountain will not activate when button is depressed. Replace button mechanism.	\$1,440	0-0 - Immediate Repairs
514	PP	Plumbing Piping/Fixtures	Urinal flush valve is stuck open and running water is being discharged into urinal.	\$1,440	0-0 - Immediate Repairs
512	PP	Plumbing Piping/Fixtures	Mop sink drain clogged. Recommended to snake drain and monitor mop sink for future clogs.	\$600	0-0 - Immediate Repairs
511	PP	Plumbing Piping/Fixtures	Upper Water fountain has little to no flow when button is depressed.	\$1,440	0-0 - Immediate Repairs
1575	SS	Structural Concrete/Steel	Overhead & Vertical Patching = 6 SF	\$1,100	0-0 - Immediate Repairs
1574	SS	Structural Concrete/Steel	Overhead & Vertical Patching = 2 SF	\$360	0-0 - Immediate Repairs
			All broadcast TV over coax Projector using VGA PIP not working  Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.		
1490	TV	Technology AV/Security	2 monitors	\$14,225	0-0 - Immediate Repairs
1549	TL	Technology Low Voltage	2 monitors functioning.	\$575	0-0 - Immediate Repairs
			Racks were removed. DAS cable pass through		
1543	TL	Technology Low Voltage	Provide firestopping for (7) 4" c Provide firestopping for 9" cable tray, new bricks	\$5,930	0-0 - Immediate Repairs
			Racks were removed. DAS cable pass through (13) cat 6 cabling on 110 block cross connect		
1453	TL	Technology Low Voltage	Provide firestop for (8) 4" c Provide firestop for 9" cable tray, new bricks	\$6,503	0-0 - Immediate Repairs

TOTAL \$252,331

Task #	Stamp	Title	Description	Cost	Time Period
478	CC	Civil Concrete	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Non-structural crack = 30 LF  Guardrail post sealant = 190 EA  Backer rod &amp; sealant = 200 LF  Cove joint sealant = 1,000 LF  Control joint sealant = 200 LF  Overhead &amp; Vertical patching = 4 SF  Horizontal patching = 4 SF  Guardrail post concrete repair = 7 EA  Curb replacement = 8 LF</p>	\$36,420	0-1 - Emergency Repairs
475	CC	Civil Concrete	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Non-structural crack = 50 LF  Guardrail post sealant = 60 EA  Backer rod &amp; sealant = 700 LF  Cove joint sealant = 900 LF  Control joint sealant = 100 LF  Horizontal patching = 12 SF  Curb replacement = 4 LF</p>	\$37,920	0-1 - Emergency Repairs
472	CC	Civil Concrete	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Non-structural crack = 70 LF  Backer rod &amp; sealant = 700 LF  Cove joint sealant = 50 LF  Control joint sealant = 500 LF  Horizontal patching = 20 SF  Curb replacement = 12 LF</p>	\$31,380	0-1 - Emergency Repairs
113	CC	Civil Concrete	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Non-structural crack = 20 LF  Guardrail post sealant = 50 EA  Backer rod &amp; sealant = 250 LF  Cove joint sealant = 1,400 LF  Control joint sealant = 200 LF  Overhead &amp; Vertical patching = 10 SF  Horizontal patching = 20 SF  Structural crack repair = 10 LF  Guardrail post concrete repair = 4 EA  Curb replacement = 10 LF</p>	\$45,480	0-1 - Emergency Repairs
782	CL	Civil Landscape	Concrete planters have significant damage and should be replaced. Quantity = 5 planters	\$12,000	0-1 - Emergency Repairs
779	CL	Civil Landscape	Rusting on lid of trash receptacle. Replace one (1) trash receptacle lid.	\$600	0-1 - Emergency Repairs
778	CL	Civil Landscape	Rusting on lid of trash receptacle. Replace one (1) trash receptacle lid.	\$600	0-1 - Emergency Repairs
773	CL	Civil Landscape	Planter wall is cracked. Patch or replace in order to maintain structural integrity of railing.	\$12,000	0-1 - Emergency Repairs
772	CL	Civil Landscape	Trash receptacle beginning to rust. Replace one (1) trash receptacle.	\$2,400	0-1 - Emergency Repairs

771	CL	Civil Landscape	Excessive mulching creates girdling roots and can cause tree suffocation, diminishing the lifespan of the tree. Remove excessive mulch, air-spade and root prune trees to reverse negative effects. Quantity = 5 trees needing treatment in plant bed.	\$1,800	0-1 - Emergency Repairs
760	CL	Civil Landscape	Stones at base of concrete seat wall have shifted and pose a tripping/safety hazard. The gap between the stone and the wall should be filled.	\$1,200	0-1 - Emergency Repairs
759	CL	Civil Landscape	Trash receptacle beginning to rust. Replace one (1) trash receptacle.	\$2,400	0-1 - Emergency Repairs
753	CL	Civil Landscape	The corner of the planting bed/wall has chipped off and should be patched or replaced (handrail needs also to be secured and firm).	\$4,800	0-1 - Emergency Repairs
745	CL	Civil Landscape	Rusting on lid of trash receptacle. Replace one (1) trash receptacle lid.	\$600	0-1 - Emergency Repairs
741	CL	Civil Landscape	Picnic table legs are bowing. Replace one (1) picnic table.	\$3,600	0-1 - Emergency Repairs
740	CL	Civil Landscape	Rusting on lid of trash receptacle. Replace one (1) trash receptacle lid.	\$600	0-1 - Emergency Repairs
739	CL	Civil Landscape	Trash receptacle beginning to rust (ill-fitting lid). Replace one (1) trash receptacle.	\$2,400	0-1 - Emergency Repairs
738	CL	Civil Landscape	Rusting on lid of trash receptacle. Replace one (1) trash receptacle lid.	\$600	0-1 - Emergency Repairs
734	CL	Civil Landscape	Excessive mulching creates girdling roots and can cause tree suffocation, diminishing the lifespan of the tree. Remove excessive mulch, air-spade and root prune trees to reverse negative effects. Quantity = 8 trees needing treatment in plant bed.	\$2,880	0-1 - Emergency Repairs
729	CL	Civil Landscape	Trash receptacle beginning to rust. Replace one (1) trash receptacle.	\$2,400	0-1 - Emergency Repairs
724	CL	Civil Landscape	Precast concrete copings on plant bed are breaking. Replace all copings on plant bed. Please see attached drawing for dimensions. (Please note, thickness of coping is 6").	\$15,120	0-1 - Emergency Repairs
722	CL	Civil Landscape	Precast concrete copings on plant bed are breaking. Replace all copings on plant bed. Please see attached drawing for dimensions. (Please note, thickness of coping is 6").	\$15,120	0-1 - Emergency Repairs
718	CL	Civil Landscape	Precast concrete copings on plant bed are breaking. Replace all copings on plant bed. Please see attached drawing for dimensions. (Please note, thickness of coping is 6").	\$15,120	0-1 - Emergency Repairs
716	CL	Civil Landscape	Rusting on lid of trash receptacle. Replace one (1) trash receptacle lid.	\$600	0-1 - Emergency Repairs
714	CL	Civil Landscape	Trash receptacle beginning to rust (ill-fitting lid + wrap is in below-average condition). Replace one (1) trash receptacle.	\$2,400	0-1 - Emergency Repairs
713	CL	Civil Landscape	Precast concrete copings on plant bed are breaking. Replace all copings on plant bed. Please see attached drawing for dimensions. (Please note, thickness of coping is 6").	\$15,120	0-1 - Emergency Repairs
694	CL	Civil Landscape	Site Irrigation: Irrigation spray sprinkler and nozzle missing in the corner west of the stairs. Install new sprinkler and nozzle to match.	\$600	0-1 - Emergency Repairs
671	CL	Civil Landscape	Site Irrigation: Edge of irrigation zone was previously modified/relocated to accommodate the installation of a new concrete sidewalk. When the relocation occurred, the Rainbird heads were moved too far into the lawn area, preventing the edge lawn from being irrigated. As shown in the attached photo, the edge of the lawn is showing brown spots due to lack of irrigation. Relocate irrigation heads to the edge of the concrete sidewalk (approximately 150LF).	\$9,000	0-1 - Emergency Repairs
670	CL	Civil Landscape	Site Irrigation: Irrigation zone does not work. Replace valves, sprinklers, and pipes with leaks. Investigate if zone has been capped.	\$12,000	0-1 - Emergency Repairs
663	CL	Civil Landscape	Site Irrigation: Irrigation zone does not work. Replace valves, sprinklers and pipes with leaks. Investigate if zone has been capped.	\$12,000	0-1 - Emergency Repairs
661	CL	Civil Landscape	Site Irrigation: One (1) Rainbird irrigation head is missing in zone. Replace irrigation head with Rainbird rotor sprinkler.	\$600	0-1 - Emergency Repairs
660	CL	Civil Landscape	Site Irrigation: Irrigation line along the stadium is missing or does not work. Replace/install fifteen (15) irrigation heads and approximately 300LF of lateral irrigation pipe.	\$20,700	0-1 - Emergency Repairs
655	CL	Civil Landscape	Site Irrigation: Irrigation spray head clogged. Clean-out existing irrigation head or replace irrigation sprinkler/nozzle.	\$600	0-1 - Emergency Repairs
644	CL	Civil Landscape	Site Irrigation: Two (2) Rainbird irrigation heads missing in the southwest corner of the irrigation zone. Both missing heads are located along the off-ramp near West 3rd. Replace irrigation heads with Rainbird 5000 Series rotors.	\$1,200	0-1 - Emergency Repairs
1607	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 10.	\$6,000	0-1 - Emergency Repairs
1606	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 10.	\$6,000	0-1 - Emergency Repairs
1605	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 10.	\$6,000	0-1 - Emergency Repairs
1604	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 10.	\$6,000	0-1 - Emergency Repairs
1603	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 8.	\$4,800	0-1 - Emergency Repairs

1602	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 8.	\$4,800	0-1 - Emergency Repairs
1588	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 10.	\$6,000	0-1 - Emergency Repairs
1587	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 10.	\$6,000	0-1 - Emergency Repairs
1586	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 10.	\$6,000	0-1 - Emergency Repairs
1585	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights.	\$2,400	0-1 - Emergency Repairs
600	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 10.	\$6,000	0-1 - Emergency Repairs
469	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 24. Lights behind east score board 2nd floor don't work.	\$14,400	0-1 - Emergency Repairs
463	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 2.	\$1,200	0-1 - Emergency Repairs
459	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 4.	\$2,400	0-1 - Emergency Repairs
456	EL	Electrical Lighting	Fluorescent lights on 4th floor behind scoreboard. Cover removed. All light fixtures in this space are fluorescent lights. Approx. qty 24.	\$14,400	0-1 - Emergency Repairs
454	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 4.	\$2,400	0-1 - Emergency Repairs
453	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 6.	\$3,600	0-1 - Emergency Repairs
450	EL	Electrical Lighting	Fluorescent lights on 2nd floor behind scoreboard. Some burned out. Switch cover not found.	\$7,200	0-1 - Emergency Repairs
448	EL	Electrical Lighting	Fluorescent lights on 1st floor behind scoreboard. Some not turning on. Lights on all floors take long time to turn on.	\$7,200	0-1 - Emergency Repairs
447	EL	Electrical Lighting	All bathrooms in this area do not have night lights nor occupancy sensors nor ON/OFF Switches. All light fixtures in this room are fluorescent lights. Approx. qty 10.	\$7,800	0-1 - Emergency Repairs
439	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 4.	\$2,400	0-1 - Emergency Repairs
417	EL	Electrical Lighting	Inadequate lighting	\$600	0-1 - Emergency Repairs
405	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 4.	\$2,400	0-1 - Emergency Repairs
404	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 10.	\$6,000	0-1 - Emergency Repairs
402	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 10.	\$6,000	0-1 - Emergency Repairs
401	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 10.	\$6,000	0-1 - Emergency Repairs
400	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 10.	\$6,000	0-1 - Emergency Repairs
399	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 10.	\$6,000	0-1 - Emergency Repairs
398	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 10.	\$6,000	0-1 - Emergency Repairs
397	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 3.	\$1,800	0-1 - Emergency Repairs
396	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 10.	\$6,000	0-1 - Emergency Repairs
395	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 10.	\$6,000	0-1 - Emergency Repairs
394	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 6.	\$3,600	0-1 - Emergency Repairs
393	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 10.	\$6,000	0-1 - Emergency Repairs
391	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 10.	\$6,000	0-1 - Emergency Repairs
389	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 10.	\$6,000	0-1 - Emergency Repairs
384	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 10.	\$6,000	0-1 - Emergency Repairs
383	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 4.	\$2,400	0-1 - Emergency Repairs
381	EL	Electrical Lighting	Lighting inadequate/not operational	\$600	0-1 - Emergency Repairs
374	EL	Electrical Lighting	Not on occ sensor	\$480	0-1 - Emergency Repairs
364	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 2.	\$1,200	0-1 - Emergency Repairs
348	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 4.	\$2,400	0-1 - Emergency Repairs
344	EL	Electrical Lighting	Replace lamp	\$180	0-1 - Emergency Repairs
338	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 4.	\$2,400	0-1 - Emergency Repairs



[illegible]

37	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 4.	\$2,400	0-1 - Emergency Repairs
33	EL	Electrical Lighting	All light fixtures in this room are fluorescent lights. Approx. qty 6.	\$3,600	0-1 - Emergency Repairs
432	EP	Electrical Power	Ground in frame	\$1,200	0-1 - Emergency Repairs
406	EP	Electrical Power	House keeping needed.	\$480	0-1 - Emergency Repairs
385	EP	Electrical Power	J-box cover	\$180	0-1 - Emergency Repairs
373	EP	Electrical Power	Hot plates not on GFCI	\$1,500	0-1 - Emergency Repairs
370	EP	Electrical Power	Ceiling tiles missing	\$1,200	0-1 - Emergency Repairs
356	EP	Electrical Power	Wire trough cover	\$600	0-1 - Emergency Repairs
324	EP	Electrical Power	Ground not routed through knockout.	\$900	0-1 - Emergency Repairs
306	EP	Electrical Power	Fire pump power, is this RIP? If retired in place, label as such. Switchs are "on" indicator lights show no power. Verify source.	\$900	0-1 - Emergency Repairs
297	EP	Electrical Power	Xfmr ground wire. Goes to MCCIA-I. Not in conduit does not come through punch out.	\$1,800	0-1 - Emergency Repairs
283	EP	Electrical Power	Not enough service loop on heater. Broken cable armor/protection.	\$1,800	0-1 - Emergency Repairs
52	EP	Electrical Power	GFCI work but old.	\$360	0-1 - Emergency Repairs
21	EP	Electrical Power	Wires not mounted properly. Wires heading to the field according to maintenance for additional cam-lok.	\$6,000	0-1 - Emergency Repairs
1618	HE	HVAC Equipment	First air AC unit is not operational and needs to be replaced.	\$15,000	0-1 - Emergency Repairs
1617	HE	HVAC Equipment	First aid AC unit is not operational and needs replaced.	\$15,000	0-1 - Emergency Repairs
1616	HE	HVAC Equipment	Split system air conditioning is dead and needs replaced. Typical for 3 first aid rooms.	\$45,000	0-1 - Emergency Repairs
1610	HE	HVAC Equipment	Chilled water piping secondary bridge piping incorrectly. Provide check valve in 8" pipe.	\$6,720	0-1 - Emergency Repairs
1609	HE	HVAC Equipment	Chilled water pump is leaking glycol and needs to have the seals replaced.	\$3,000	0-1 - Emergency Repairs
1601	HE	HVAC Equipment	Hv-1A1 needs a motor replacement HV-1A3 is not operating AHU 1A2 is not operating as fan belt is missing AHU 1A3 filter access door has fallen off	\$29,160	0-1 - Emergency Repairs
1599	HE	HVAC Equipment	Data racks installed in janitors closet. Room is too warm and will require AC	\$15,000	0-1 - Emergency Repairs
1595	HE	HVAC Equipment	Room is too warm and requires 2 ton air conditioning unit	\$30,000	0-1 - Emergency Repairs
1590	HE	HVAC Equipment	Tele room is too warm and will require air conditioning , 2 ton.	\$30,000	0-1 - Emergency Repairs
116	HE	HVAC Equipment	Room is without cooling, requires AC	\$18,000	0-1 - Emergency Repairs
1619	PP	Plumbing Piping/Fixtures	Recommended maintenance of pumps, check pump seals, motor alignment, and condition of impellers.	\$4,320	0-1 - Emergency Repairs
755	PP	Plumbing Piping/Fixtures	A number of pipe hangers in exposed areas have been rusted over and deteriorated due to exposure to the elements. Recommended to replace pipe hangers to prevent collapse of pipes under load.	\$22,560	0-1 - Emergency Repairs
754	PP	Plumbing Piping/Fixtures	Worn/turn piping insulation on domestic cold supply pipe. Approximately 50ft. Provide weather proof jacket.	\$1,080	0-1 - Emergency Repairs
707	FS	Plumbing Piping/Fixtures	Grease interceptors are outdated in upper club areas. Recommended to replace all grease interceptors that were not replaced in the last batch.	\$46,080	0-1 - Emergency Repairs
706	PP	Plumbing Piping/Fixtures	Grease interceptors are outdated in upper club areas. Recommended to replace all grease interceptors that were not replaced in the last batch.	\$46,080	0-1 - Emergency Repairs
705	PP	Plumbing Piping/Fixtures	Grease interceptors are outdated in upper club areas. Recommended to replace all grease interceptors that were not replaced in the last batch.	\$46,080	0-1 - Emergency Repairs
517	PP	Plumbing Piping/Fixtures	Hot water temp on water heater reading 60F on outlet. Inspect and investigate heaters are operating when turned on. Typical of all janitors closets.	\$23,040	0-1 - Emergency Repairs
515	PP	Plumbing Piping/Fixtures	Clean out is corroded and raised from finished floor.	\$3,600	0-1 - Emergency Repairs
513	PP	Plumbing Piping/Fixtures	Indirect drains are spread out all over floor creating hazardous conditions across all food service stations. Recommended drains to be raise off of ground to prevent discharge onto floor.	\$38,400	0-1 - Emergency Repairs
1582	SS	Structural Concrete/Steel	Metal gutter replacement = 140 LF Sub-roof replacement = 100 SF	\$16,000	0-1 - Emergency Repairs

1579	SS	Structural Concrete/Steel	Metal gutter replacement = 100 LF Sub-roof replacement = 100 SF	\$12,000	0-1 - Emergency Repairs
1576	SS	Structural Concrete/Steel	Metal gutter replacement = 100 LF Sub-roof replacement = 100 SF	\$12,000	0-1 - Emergency Repairs
867	SS	Structural Concrete/Steel	Overhead / Vertical Patching = 4 SF Horizontal Patching = 4 SF Structural crack = 0 LF Guardrail post concrete = 7 EA Touch up painting = 0 SF Metal gutter replacement = 0 LF Curb replacement = 8 LF	\$4,200	0-1 - Emergency Repairs
864	SS	Structural Concrete/Steel	Overhead / Vertical Patching = 0 SF Horizontal Patching = 12 SF Structural crack = 0 LF Guardrail post concrete = 0 EA Touch up painting = 0 SF Metal gutter replacement = 0 LF Curb replacement = 4 LF	\$1,700	0-1 - Emergency Repairs
861	SS	Structural Concrete/Steel	Overhead / Vertical Patching = 0 SF Horizontal Patching = 20 SF Structural crack = 0 LF Guardrail post concrete = 0 EA Touch up painting = 0 SF Metal gutter replacement = 0 LF Curb replacement = 12 LF	\$1,400	0-1 - Emergency Repairs
858	SS	Structural Concrete/Steel	Overhead / Vertical Patching = 10 SF Horizontal Patching = 20 SF Structural crack = 10 LF Guardrail post concrete = 4 EA Touch up painting = 0 SF Metal gutter replacement = 0 LF Curb replacement = 10 LF	\$8,400	0-1 - Emergency Repairs
855	SS	Structural Concrete/Steel	Overhead / Vertical Patching = 52 SF Horizontal Patching = 10 SF Structural crack = 20 LF Guardrail post concrete = 0 EA Touch up painting = 0 SF Metal gutter replacement = 0 LF Step replacement = 0 EA	\$14,700	0-1 - Emergency Repairs
852	SS	Structural Concrete/Steel	Overhead / Vertical Patching = 52 SF Horizontal Patching = 10 SF Structural crack = 20 LF Guardrail post concrete = 0 EA Touch up painting = 0 SF Metal gutter replacement = 60 LF Step replacement = 0 EA Sub-roof replacement = 100 SF	\$34,800	0-1 - Emergency Repairs

849	SS	Structural Concrete/Steel	Overhead / Vertical Patching = 52 SF Horizontal Patching = 10 SF Structural crack = 20 LF Guardrail post concrete = 0 EA Touch up painting = 0 SF Metal gutter replacement = 60 LF Step replacement = 0 EA Sub-roof replacement = 100 SF	\$22,700	0-1 - Emergency Repairs
846	SS	Structural Concrete/Steel	Overhead / Vertical Patching = 52 SF Horizontal Patching = 10 SF Structural crack = 20 LF Guardrail post concrete = 0 EA Touch up painting = 0 SF Metal gutter replacement = 0 LF Step replacement = 0 EA	\$14,700	0-1 - Emergency Repairs
843	SS	Structural Concrete/Steel	Overhead / Vertical Patching = 400 SF Horizontal Patching = 100 SF Structural crack = 400 LF Guardrail post concrete = 4 EA Touch up painting = 0 SF Metal gutter replacement = 200 LF Step replacement = 2 EA Sub-roof replacement = 100 SF	\$192,400	0-1 - Emergency Repairs
840	SS	Structural Concrete/Steel	Overhead / Vertical Patching = 400 SF Horizontal Patching = 100 SF Structural crack = 400 LF Guardrail post concrete = 4 EA Touch up painting = 0 SF Metal gutter replacement = 0 LF Step replacement = 2 EA Sub-roof replacement = 100 SF	\$172,400	0-1 - Emergency Repairs
836	SS	Structural Concrete/Steel	Overhead / Vertical Patching = 400 SF Horizontal Patching = 100 SF Structural crack = 400 LF Guardrail post concrete = 4 EA Touch up painting = 0 SF Metal gutter replacement = 50 LF Step replacement = 2 EA Sub-roof replacement = 100 SF	\$177,400	0-1 - Emergency Repairs
833	SS	Structural Concrete/Steel	Overhead / Vertical Patching = 400 SF Horizontal Patching = 100 SF Structural crack = 400 LF Guardrail post concrete = 4 EA Touch up painting = 0 SF Metal gutter replacement = 150 LF Step replacement = 2 EA Sub-roof replacement = 100 SF	\$187,400	0-1 - Emergency Repairs

699	SS	Structural Concrete/Steel	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Includes half of West Endzone Seating and 300 Level Concourse.</p> <p>Overhead or Vertical Patching = 60 SF  Horizontal Patching = 50 SF  Structural Crack = 100 LF  Guard Post Concrete Repair = 10 Each  Step Replacement = 5 Each  Touch Up Painting = 1000 SF  Metal Gutter Replacement = 200 FT  Metal Sub Roof = 200 SF  CMU Repair = 10 SF</p>	\$83,050	0-1 - Emergency Repairs
690	SS	Structural Concrete/Steel	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Includes half of West Endzone Seating and 300 Level Concourse.</p> <p>Overhead or Vertical Patching = 70 SF  Horizontal Patching = 50 SF  Structural Crack = 100 LF  Guard Post Concrete Repair = 25 Each  Step Replacement = 3 Each  Touch Up Painting = 500 SF  Metal Gutter Replacement = 200 FT  Metal Sub Roof = 100 SF  CMU Repair = 10 SF</p>	\$78,650	0-1 - Emergency Repairs
681	SS	Structural Concrete/Steel	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Includes half of East Endzone Seating and 300 Level Concourse.</p> <p>Overhead or Vertical Patching = 80 SF  Horizontal Patching = 50 SF  Structural Crack = 100 LF  Guard Post Concrete Repair = 10 Each  Step Replacement = 5 Each  Touch Up Painting = 1000 SF  Metal Gutter Replacement = 200 FT  Metal Sub Roof = 100 SF  CMU Repair = 10 SF</p>	\$84,650	0-1 - Emergency Repairs
667	SS	Structural Concrete/Steel	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Includes half of East Endzone Seating and 300 Level Concourse.</p> <p>Overhead or Vertical Patching = 75 SF  Horizontal Patching = 75 SF  Structural Crack = 200 LF  Guard Post Concrete Repair = 15 Each  Step Replacement = 2 Each  Touch Up Painting = 1000 SF  Metal Gutter Replacement = 200 FT  Metal Sub Roof = 200 SF</p>	\$108,700	0-1 - Emergency Repairs

639	SS	Structural Concrete/Steel	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Overhead or Vertical Patching = 15 SF Horizontal Patching = 15 SF Guardrail Post Concrete Repair = 2 Each Touch Up Painting = 500 SF</p>	\$12,300	0-1 - Emergency Repairs
632	SS	Structural Concrete/Steel	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Overhead or Vertical Patching = 10 SF Horizontal Patching = 10 SF Metal Gutter Replacement = 30 FT Metal Sub Roof Replacement = 100 SF</p>	\$7,800	0-1 - Emergency Repairs
622	SS	Structural Concrete/Steel	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Northeast quadrant includes concourse above 300 level seating at East Endzone.</p> <p>Overhead or Vertical Patching = 60 SF Horizontal Patching = 20 SF Guard Post Concrete Repair = 5 Each Touch Up Painting = 1000 SF Metal Gutter Replacement = 60 FT Metal Sub Roof Replacement = 50 SF</p>	\$36,300	0-1 - Emergency Repairs
615	SS	Structural Concrete/Steel	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Northeast quadrant includes concourse above 300 level seating &amp; stair up to Sponsorship Deck at East Endzone.</p> <p>Overhead or Vertical Patching = 10 SF Horizontal Patching = 10 SF Step Replacement = 5 Each Touch Up Painting = 2000 SF Provide Weep Holes for Drainage (Drill through gusset/end plates at truss bottom chords supporting sponsorship deck above). = 10 locations.</p>	\$38,300	0-1 - Emergency Repairs
506	SS	Structural Concrete/Steel	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Overhead or Vertical Patching = 15 SF Touch Up Painting = 2000 SF CMU Repair = 5 SF</p>	\$33,075	0-1 - Emergency Repairs
501	SS	Structural Concrete/Steel	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Overhead or Vertical Patching = 10 SF Touch Up Painting = 2000 SF CMU Repair = 5 SF</p>	\$32,175	0-1 - Emergency Repairs



497	SS	Structural Concrete/Steel	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Overhead or Vertical Patching = 10 SF Touch Up Painting = 2000 SF</p>	\$31,800	0-1 - Emergency Repairs
487	SS	Structural Concrete/Steel	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. (Northwest includes west endzone connection)</p> <p>Overhead or Vertical Patching = 40 SF Guard Post Concrete Repair = 21 EA Touch Up Painting = 2000 SF CMU Repair = 10 SF</p>	\$44,250	0-1 - Emergency Repairs
482	SS	Structural Concrete/Steel	<p>Vertical/Overhead Patch = 10 SF Touch Up Painting = 400 SF</p>	\$7,800	0-1 - Emergency Repairs
206	SS	Structural Concrete/Steel	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Overhead or Vertical Patching = 75 SF Horizontal Patching = 5 SF Structural Crack = 200 LF Guard Post Concrete Repair = 5 Each Step Replacement = 5 Each Touch Up Painting = 1000 SF Metal Gutter Replacement = 100 FT</p>	\$86,500	0-1 - Emergency Repairs
199	SS	Structural Concrete/Steel	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Overhead or Vertical Patching = 85 SF Horizontal Patching = 5 SF Structural Crack = 200 LF Guard Post Concrete Repair = 15 Each Step Replacement = 2 Each Touch Up Painting = 1000 SF Metal Gutter Replacement = 100 FT</p>	\$89,500	0-1 - Emergency Repairs
191	SS	Structural Concrete/Steel	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Overhead or Vertical Patching = 60 SF Horizontal Patching = 15 SF Structural Crack = 200 LF Guard Post Concrete Repair = 10 Each Step Replacement = 5 Each Metal Gutter Replacement = 100 FT Touch Up Painting = 1000 SF</p>	\$86,300	0-1 - Emergency Repairs

			Repair quantities given within this stamp represent total values for Upper Deck within this quadrant. See separate stamp for sponsorship deck.  Overhead or Vertical Patching = 80 SF Horizontal Patching = 25 SF Structural Crack = 200 LF Guard Post Concrete Repair = 11 Each Touch Up Painting = 1000 SF Step Replacement = 5 Each Metal Gutter Replacement = 100 FT CMU Repair = 8 SF		
124	SS	Structural Concrete/Steel		\$91,800	0-1 - Emergency Repairs
830	SJ	Structural Joints	Non-structural crack = 30 LF Guardrail post sealant = 190 EA Backer rod & sealant = 200 LF Cove joint = 1,000 LF Precast joint sealant = 0 LF Precast sealant plugs = 0 EA Control joint sealant = 200 LF	\$44,500	0-1 - Emergency Repairs
827	SJ	Structural Joints	Non-structural crack = 50 LF Guardrail post sealant = 60 EA Backer rod & sealant = 700 LF Cove joint = 900 LF Precast joint sealant = 0 LF Precast sealant plugs = 0 EA Control joint sealant = 100 LF	\$52,300	0-1 - Emergency Repairs
824	SJ	Structural Joints	Non-structural crack = 70 LF Guardrail post sealant = 0 EA Backer rod & sealant = 700 LF Cove joint = 50 LF Precast joint sealant = 0 LF Precast sealant plugs = 0 EA Control joint sealant = 500 LF	\$34,000	0-1 - Emergency Repairs
821	SJ	Structural Joints	Non-structural crack = 20 LF Guardrail post sealant = 50 EA Backer rod & sealant = 250 LF Cove joint = 1,400 LF Precast joint sealant = 0 LF Precast sealant plugs = 0 EA Control joint sealant = 200 LF	\$54,900	0-1 - Emergency Repairs
818	SJ	Structural Joints	Non-structural crack = 0 LF Guardrail post sealant = 241 EA Backer rod & sealant = 2,000 LF Cove joint = 0 LF Precast joint sealant = 0 LF Precast sealant plugs = 0 EA Control joint sealant = 0 LF	\$64,800	0-1 - Emergency Repairs

815	SJ	Structural Joints	Non-structural crack = 0 LF Guardrail post sealant = 241 EA Backer rod & sealant = 2,000 LF Cove joint = 0 LF Precast joint sealant = 0 LF Precast sealant plugs = 0 EA Control joint sealant = 0 LF	\$64,800	0-1 - Emergency Repairs
812	SJ	Structural Joints	Non-structural crack = 0 LF Guardrail post sealant = 241 EA Backer rod & sealant = 2,000 LF Cove joint = 0 LF Precast joint sealant = 0 LF Precast sealant plugs = 0 EA Control joint sealant = 0 LF	\$64,800	0-1 - Emergency Repairs
809	SJ	Structural Joints	Non-structural crack = 0 LF Guardrail post sealant = 51 EA Backer rod & sealant = 2,000 LF Cove joint = 0 LF Precast joint sealant = 0 LF Precast sealant plugs = 0 EA Control joint sealant = 0 LF	\$64,900	0-1 - Emergency Repairs
806	SJ	Structural Joints	Non-structural crack = 0 LF Guardrail post sealant = 150 EA Backer rod & sealant = 500 LF Cove joint = 120 LF Precast joint sealant = 0 LF Precast sealant plugs = 0 EA Control joint sealant = 0 LF	\$21,600	0-1 - Emergency Repairs
803	SJ	Structural Joints	Non-structural crack = 0 LF Guardrail post sealant = 150 EA Backer rod & sealant = 500 LF Cove joint = 120 LF Precast joint sealant = 0 LF Precast sealant plugs = 0 EA Control joint sealant = 0 LF	\$21,600	0-1 - Emergency Repairs
800	SJ	Structural Joints	Non-structural crack = 0 LF Guardrail post sealant = 241 EA Backer rod & sealant = 2,000 LF Cove joint = 0 LF Precast joint sealant = 0 LF Precast sealant plugs = 0 EA Control joint sealant = 0 LF	\$21,600	0-1 - Emergency Repairs
797	SJ	Structural Joints	Guardrail post sealant = 150 EA Backer rod and sealant = 500 LF Cove joint = 120 LF	\$21,600	0-1 - Emergency Repairs

697	SJ	Structural Joints	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Includes half of West Endzone Seating and 300 Level Concourse.</p> <p>Non-Structural crack = 1500 FT  Guard Post Sealant = 250 Each  Backer Rod and Selant = 750 FT  Cove Joint = 600 FT  Precast Joint Sealant = 500 FT  Precast Selant Plugs = 400 Each  Control Joint Sealant = 2000 FT</p>	\$182,500	0-1 - Emergency Repairs
691	SJ	Structural Joints	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Includes half of West Endzone Seating and 300 Level Concourse.</p> <p>Non-Structural crack = 1200 FT  Guard Post Sealant = 220 Each  Backer Rod and Selant = 1000 FT  Cove Joint = 1550 FT  Precast Joint Sealant = 600 FT  Precast Selant Plugs = 150 Each  Control Joint Sealant = 400 FT</p>	\$180,550	0-1 - Emergency Repairs
683	SJ	Structural Joints	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Includes half of East Endzone Seating and 300 Level Concourse.</p> <p>Non-Structural crack = 1200 FT  Guard Post Sealant = 330 Each  Backer Rod and Selant = 900 FT  Cove Joint = 2250 FT  Precast Joint Sealant = 400 FT  Precast Selant Plugs = 150 Each  Control Joint Sealant = 500 FT</p>	\$182,750	0-1 - Emergency Repairs
666	SJ	Structural Joints	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Includes half of East Endzone Seating and 300 Level Concourse.</p> <p>Non-Structural crack = 1700 FT  Guard Post Sealant = 300 Each  Backer Rod and Selant = 1300 FT  Cove Joint = 1300 FT  Precast Joint Sealant = 250 FT  Precast Selant Plugs = 500 Each  Control Joint Sealant = 1100 FT</p>	\$185,900	0-1 - Emergency Repairs
619	SJ	Structural Joints	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Northeast quadrant includes concourse above 300 level seating at East Endzone.</p> <p>Non-Structural crack = 150 FT  Guard Post Sealant = 25 Each  Cove Joint = 100 FT  Control Joint Sealant = 250 FT</p>	\$11,800	0-1 - Emergency Repairs

618	SJ	Structural Joints	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Northeast quadrant includes concourse above 300 level seating &amp; stair up to Sponsorship Deck at East Endzone.</p> <p>Non-Structural crack = 150 FT Guard Post Sealant = 10 Each Cove Joint = 50 FT Control Joint Sealant = 50 FT</p>	\$6,000	0-1 - Emergency Repairs
507	SJ	Structural Joints	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Non-Structural crack = 250 FT Guard Post Sealant = 360 Each Cove Joint = 100 FT Control Joint Sealant = 300 FT</p>	\$21,700	0-1 - Emergency Repairs
504	SJ	Structural Joints	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Non-Structural crack = 100 FT Guard Post Sealant = 140 Each Cove Joint = 60 FT Control Joint Sealant = 500 FT</p>	\$16,800	0-1 - Emergency Repairs
498	SJ	Structural Joints	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Non-Structural crack = 150 FT Guard Post Sealant = 700 Each Cove Joint = 150 FT Control Joint Sealant = 400 FT</p>	\$29,800	0-1 - Emergency Repairs
488	SJ	Structural Joints	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. (Northwest includes west endzone connection)</p> <p>Non-Structural crack = 350 FT Guard Post Sealant = 470 Each Cove Joint = 300 FT Control Joint Sealant = 600 FT</p>	\$38,100	0-1 - Emergency Repairs
481	SJ	Structural Joints	<p>Non-Structural crack = 100 FT Guard Post Sealant = 6 Each Cove Joint = 100 FT Precast Selant Plugs = 20 Each</p>	\$6,020	0-1 - Emergency Repairs
209	SJ	Structural Joints	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Non-Structural crack = 1000 FT Guard Post Sealant = 100 Each Backer Rod and Selant = 2000 FT Cove Joint = 1500 FT Precast Joint Sealant = 900 FT Precast Selant Plugs = 250 Each Control Joint Sealant = 200 FT</p>	\$231,750	0-1 - Emergency Repairs

202	SJ	Structural Joints	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Non-Structural crack = 1000 FT  Guard Post Sealant = 100 Each  Backer Rod and Selant = 2000 FT  Cove Joint = 1500 FT  Precast Joint Sealant = 900 FT  Precast Selant Plugs = 250 Each  Control Joint Sealant = 200 FT</p>	\$231,750	0-1 - Emergency Repairs
194	SJ	Structural Joints	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Non-Structural crack = 1000 FT  Guard Post Sealant = 100 Each  Backer Rod and Sealant = 2000 FT  Cove Joint = 1500 FT  Precast Joint Sealant = 900 FT  Precast Selant Plugs = 250 Each  Control Joint Sealant = 200 FT</p>	\$231,750	0-1 - Emergency Repairs
128	SJ	Structural Joints	<p>Repair quantities given within this stamp represent total values for Upper Deck within this quadrant. See separate stamp for sponsorship deck.</p> <p>Non-Structural crack = 1000 FT  Guard Post Sealant = 100 Each  Backer Rod and Selant = 2500 FT  Cove Joint = 1500 FT  Precast Joint Sealant = 900 FT  Precast Selant Plugs = 350 Each  Control Joint Sealant = 200 FT</p>	\$250,250	0-1 - Emergency Repairs
876	SR	Structural Ramps/Bridges	Guardrail post sealant = 320 EA	Unspecified	0-1 - Emergency Repairs
874	SR	Structural Ramps/Bridges	<p>Replace entire ramp structure including slab, curb, metal deck and control joint sealants. Also salvage existing handrails for reinstallation.</p> <p>Cost = \$400,000.</p>	\$400,000	0-1 - Emergency Repairs
873	SR	Structural Ramps/Bridges	<p>Replace entire ramp structure including slab, curb, metal deck and control joint sealants. Also salvage existing handrails for reinstallation.</p> <p>Cost = \$400,000.</p>	Unspecified	0-1 - Emergency Repairs
872	SR	Structural Ramps/Bridges	Guardrail post sealant = 120 EA	Unspecified	0-1 - Emergency Repairs
871	SR	Structural Ramps/Bridges	Guardrail post sealant = 640 EA	Unspecified	0-1 - Emergency Repairs
870	SR	Structural Ramps/Bridges	<p>Guardrail post concrete = 19 EA  Guardrail post sealant = 240 EA</p>	Unspecified	0-1 - Emergency Repairs
839	SR	Structural Ramps/Bridges	Remove and replace slab and metal deck.	\$75,000	0-1 - Emergency Repairs
650	SR	Structural Ramps/Bridges	<p>Replace entire ramp structure including slab, curb, metal deck and control joint sealants. Also salvage existing handrails for reinstallation.</p> <p>Cost of \$400k is based on actual cost from 2024 contractor pricing.</p>	\$400,000	0-1 - Emergency Repairs
649	SR	Structural Ramps/Bridges	<p>Replace entire ramp structure including slab, curb, metal deck and control joint sealants. Also salvage existing handrails for reinstallation.</p> <p>Cost of \$400k is based on actual cost from 2024 contractor pricing.</p>	\$400,000	0-1 - Emergency Repairs



648	SR	Structural Ramps/Bridges	Replace entire ramp structure including slab, curb, metal deck and control joint sealants. Also salvage existing handrails for reinstallation. Cost of \$400k is based on actual cost from 2024 contractor pricing.	\$400,000	0-1 - Emergency Repairs
647	SR	Structural Ramps/Bridges	Replace entire ramp structure including slab, curb, metal deck and control joint sealants. Also salvage existing handrails for reinstallation. Cost of \$400k is based on actual cost from 2024 contractor pricing.	\$400,000	0-1 - Emergency Repairs
646	SR	Structural Ramps/Bridges	Replace entire ramp structure including slab, curb, metal deck and control joint sealants. Also salvage existing handrails for reinstallation. Cost of \$400k is based on actual cost from 2024 contractor pricing.	\$400,000	0-1 - Emergency Repairs
643	SR	Structural Ramps/Bridges	Replace entire ramp structure including slab, curb, metal deck and control joint sealants. Also salvage existing handrails for reinstallation. Cost of \$400k is based on actual cost from 2024 contractor pricing.	\$400,000	0-1 - Emergency Repairs
642	SR	Structural Ramps/Bridges	Replace entire ramp structure including slab, curb, metal deck and control joint sealants. Also salvage existing handrails for reinstallation. Cost of \$400k is based on actual cost from 2024 contractor pricing.	\$400,000	0-1 - Emergency Repairs
641	SR	Structural Ramps/Bridges	Replace entire ramp structure including slab, curb, metal deck and control joint sealants. Also salvage existing handrails for reinstallation. Cost of \$400k is based on actual cost from 2024 contractor pricing.	\$400,000	0-1 - Emergency Repairs
640	SR	Structural Ramps/Bridges	Replace entire ramp structure including slab, curb, metal deck and control joint sealants. Also salvage existing handrails for reinstallation. Cost of \$400k is based on actual cost from 2024 contractor pricing.	\$400,000	0-1 - Emergency Repairs
1479	TV	Technology AV/Security	All broadcast TV over coax Projector using VGA 2 monitors functioning.  Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. No paging speakers.	\$11,612	0-1 - Emergency Repairs
1565	TB	Technology Broadcast Systems	Replace RTS Communications System. RTS communications frame and Intercom system should be considered for replacement in 2019, but no later than 2020	\$232,243	0-1 - Emergency Repairs
1564	TB	Technology Broadcast Systems	Replace Truck Interface Panels, Replace Worn Connectors only.	\$58,061	0-1 - Emergency Repairs
1563	TB	Technology Broadcast Systems	Replace interface boxes.  Interface boxes for Talent and Camera locations should be replaced.	\$116,122	0-1 - Emergency Repairs
1561	TL	Technology Low Voltage	No TGB Fs missing or deteriorating for all conduits, 2 4" c No UPS for network electronics No cooling Adjacent to hot water tank  Provide TGB Bond all racks and cable runways to TGB Provide firestopping for all conduits, 2 4" c Provide UPS for active network electronics Provide cooling	\$12,773	0-1 - Emergency Repairs

1559	TL	Technology Low Voltage	<p>No TGB Fs missing or deteriorating for all conduits, 2 4" c No UPS for network electronics No cooling Adjacent to hot water tank</p> <p>Provide TGB Bond all racks and cable runways to TGB Provide firestopping for all conduits, 2 4" c Provide UPS for active network electronics Provide cooling</p>	\$12,773	0-1 - Emergency Repairs
1557	TL	Technology Low Voltage	<p>No TGB Fs missing or deteriorating for all conduits, 6 4" c Fs missing or deteriorating for 24" CT new bricks Room is warm, HVAC does not appear to be on</p> <p>Provide TGB Bond all racks and cable runways to TGB Provide firestopping for all conduits, 6 4" c Provide firestopping for 24" CT, new bricks Repair HVAC unit</p>	\$10,257	0-1 - Emergency Repairs
1555	TL	Technology Low Voltage	<p>No TGB Fs missing or deteriorating for all conduits, 2 4" c No UPS for network electronics No cooling Adjacent to hot water tank</p> <p>Provide TGB Bond all racks and cable runways to TGB Provide firestopping for all conduits, 2 4" c Provide UPS for active network electronics Provide cooling</p>	\$12,773	0-1 - Emergency Repairs
1553	TL	Technology Low Voltage	<p>No TGB Fs missing or deteriorating for all conduits, 2 4" c No UPS for network electronics No cooling Adjacent to hot water tank</p> <p>Provide TGB Bond all racks and cable runways to TGB Provide firestopping for all conduits, 2 4" c Provide UPS for active network electronics Provide cooling</p> <p>It would appear this janitors closet has had extensive water damage. All lighting, cables, electronics show yellow rust water stains. All but 5 of the 96 cables at CMR NOT RATED FOR EXTERIOR.</p>	\$12,773	0-1 - Emergency Repairs

1551	TL	Technology Low Voltage	<p>No TGB Fs missing or deteriorating for all conduits, 11 4" c Fs missing or deteriorating for 12" CT new bricks No UPS for network electronics</p> <p>Provide TGB Bond all racks and cable runways to TGB Provide firestopping for all conduits, 11 4" c Provide firestopping for 12" CT, new bricks Provide UPS for active network electronics Lighting fixtures bulbs not functioning</p>	\$19,934	0-1 - Emergency Repairs
1547	TL	Technology Low Voltage	<p>No TGB Fs missing or deteriorating for all conduits, 18 4" c Fs missing or deteriorating for 24" CT new bricks No cooling, hot</p> <p>Provide TGB Bond all racks and cable runways to TGB Provide firestopping for all conduits, 18 4" c Provide firestopping for 24" CT, new bricks Provide cooling</p>	\$16,838	0-1 - Emergency Repairs
1545	TL	Technology Low Voltage	<p>No TGB Provide fs for all conduits, 10 4" c Provide fs for 12" CT new bricks No UPS for network electronics</p> <p>Provide TGB Bond all racks and cable runways to TGB Provide firestopping for all conduits, 10 4" c Provide firestopping for 12" CT, new bricks Provide UPS for active network electronics</p>	\$19,354	0-1 - Emergency Repairs
1542	TL	Technology Low Voltage	Bond rack and cable runway to TGB Provide firestopping for all conduits, 4 4" c Provide UPS for network electronics	\$12,967	0-1 - Emergency Repairs
1539	TL	Technology Low Voltage	<p>No TGB Provide fs for all conduits, 10 4" c Provide fs for 12" CT new bricks No UPS for network electronics</p> <p>Provide TGB Bond all racks and cable runways to TGB Provide firestopping for all conduits, 10 4" c Provide firestopping for 12" CT, new bricks Provide UPS for active network electronics Provide cooling</p>	\$19,354	0-1 - Emergency Repairs

1537	TL	Technology Low Voltage	<p>No TGB Provide fs for all conduits, 16 4" c Provide fs for 18" CT new bricks No UPS for network electronics</p> <p>Provide TGB Bond all racks and cable runways to TGB Provide firestopping for all conduits, 16 4" c Provide firestopping for 18" CT, new bricks Provide UPS for active network electronics</p>	\$23,805	0-1 - Emergency Repairs
1535	TL	Technology Low Voltage	<p>No TGB Provide fs for all conduits, 4 4" c Provide fs for 18" CT new bricks Lights are not working</p> <p>Provide TGB Bond all racks and cable runways to TGB Provide firestopping for all conduits, 4 4" c Provide firestopping for 18" CT, new bricks Repair lighting within room</p>	\$11,032	0-1 - Emergency Repairs
1533	TL	Technology Low Voltage	<p>No TGB Provide fs for all conduits, 20 4" c Provide fs for 18" CT new bricks No UPS for network electronics No cooling, hot</p> <p>Provide TGB Bond all racks and cable runways to TGB Provide firestopping for all conduits, 20 4" c Provide firestopping for 18" CT, new bricks Provide UPS for active network electronics Provide cooling</p>	\$26,127	0-1 - Emergency Repairs
1531	TL	Technology Low Voltage	<p>No TGB Provide fs for all conduits, 4 4" c No UPS for network electronics No cooling, hot</p> <p>Provide TGB Bond all racks and cable runways to TGB Provide firestopping for all conduits, 4 4" c Provide UPS for active network electronics Provide cooling</p>	\$13,935	0-1 - Emergency Repairs

1529	TL	Technology Low Voltage	<p>No TGB Provide fs for all conduits, 30 4" c Provide fs for 18" CT new bricks No cooling, hot</p> <p>Provide TGB Bond all racks and cable runways to TGB Provide firestopping for all conduits, 30 4" c Provide firestopping for 18" CT, new bricks Provide cooling</p>	\$24,192	0-1 - Emergency Repairs
1527	TL	Technology Low Voltage	<p>No TGB No UPS for network electronics No cooling Lights not working</p> <p>Provide TGB Bond all racks and cable runways to TGB Provide UPS for active network electronics Provide cooling Repair lighting</p>	\$13,548	0-1 - Emergency Repairs
1525	TL	Technology Low Voltage	<p>Network rack and cable runway not bonded to TGB Provide fs for all conduits, 6 4" c</p> <p>Bond all racks and cable runways to TGB Provide firestopping for all conduits, 6 4" c</p>	\$6,387	0-1 - Emergency Repairs
1523	TL	Technology Low Voltage	<p>No TGB Provide fs for all conduits, 16 4" c Provide fs for 18" CT new bricks No UPS for network electronics DX4D1 Cooling not working, blowing hot air, hot Volume control for club not working</p> <p>Provide TGB Bond all racks and cable runways to TGB Provide firestopping for all conduits, 16 4" c Provide firestopping for 18" CT, new bricks Provide UPS for active network electronics Provide new volume control Provide cooling</p>	\$24,773	0-1 - Emergency Repairs
1521	TL	Technology Low Voltage	<p>No TGB Provide fs for all conduits, 19 4" c Provide fs for 18" CT new bricks No UPS for network electronics No cooling, hot</p> <p>Provide TGB Bond all racks and cable runways to TGB Provide firestopping for all conduits, 19 4" c Provide firestopping for 18" CT, new bricks Provide UPS for active network electronics Provide cooling</p>	\$25,547	0-1 - Emergency Repairs

1515	TL	Technology Low Voltage	<p>No TGB  Fs all conduits 7 4" c  No cooling, hot  No UPS for network electronics  Light switch or lighting does not work  Power does not appear to be on emergency  Door is sticking closed, very difficult to enter</p> <p>Provide TGB  Bond all racks and cable runways to TGB  Provide firestopping for all conduits, 7 4" c  Provide firestopping for 18" CT, new bricks  Provide UPS for active network electronics  Provide cooling  Repair power and lighting  Repair door/frame</p>	\$22,450	0-1 - Emergency Repairs
1513	TL	Technology Low Voltage	<p>Add TGB  Fs conduits, 18 4" c  No cooling, hot  Add ups for network electronics</p> <p>Provide TGB  Bond all racks and cable runways to TGB  Provide firestopping for all conduits, 18 4" c  Provide UPS for active network electronics  Provide cooling  The batteries in the Vertive NetSure ups are deteriorating and require service.</p>	\$22,063	0-1 - Emergency Repairs
1511	TL	Technology Low Voltage	<p>No TGB  Power does not appear to be on emergency  Fs 12" CT with new bricks  Fs conduits, 4 4" c.  No cooling in room</p> <p>Provide TGB  Bond all racks and cable runways to TGB  Provide firestopping for all conduits, 4 4" c  Provide firestopping for 12" CT, new bricks  Provide cooling</p>	\$8,129	0-1 - Emergency Repairs
1509	TL	Technology Low Voltage	<p>Fs all CT with new bricks  Fs all conduits, 11 4" c  No ups for network electronics  Provide TGB  No cooling in room</p> <p>Provide TGB  Bond all racks and cable runways to TGB  Provide firestopping for all conduits, 11 4" c  Provide firestopping for 18" CT, new bricks  Provide UPS for active network electronics  Provide cooling</p>	\$20,902	0-1 - Emergency Repairs



1507	TL	Technology Low Voltage	<p>This is a storage room now Fs 9" CT passing through room</p> <p>Provide firestopping for 9"CT, new bricks</p>	\$1,935	0-1 - Emergency Repairs
1506	TL	Technology Low Voltage	<p>No grounding</p> <p>Provide TGB Bond all racks and cable runways to TGB</p>	\$3,871	0-1 - Emergency Repairs
1505	TL	Technology Low Voltage	<p>1 wall mount rack 12 SM to Mdf WiFi 24pp, 24 cat 6a 24pp, 19 cat 6a No TGB</p> <p>Provide TGB Bond all racks and cable runways to TGB</p>	\$3,871	0-1 - Emergency Repairs
1504	TL	Technology Low Voltage	<p>Add TGB Fs all conduits, including (6) 6"c, (25) 4"c Fs 24" CT with new bricks Copper plumbing piping is leaking in room Room is not conditioned Shared space with large sprinkler piping, valves and test drain</p> <p>Provide TGB Bond all racks and cable runways to TGB Provide firestopping for all conduits, 25 4"c and 6 6"c Provide firestopping for 24"CT, new bricks Provide UPS for active network electronics Provide cooling Repair leak</p>	\$32,514	0-1 - Emergency Repairs
1501	TL	Technology Low Voltage	<p>No grounding 1 4"c down not fs No cooling, hot Power does not appear to be emergency</p> <p>Provide TGB Bond all racks and cable runways to TGB Provide firestopping for all conduits, 1 4"c Provide cooling</p>	\$4,451	0-1 - Emergency Repairs

1500	TL	Technology Low Voltage	<p>Called Wess Storage, 5/3 Gate, Club 46 Between 145 women's rr and 146 concession C'Town Eats 2 wall mount racks No TGB</p> <p>Rack 1 12 SM to MDF WiFi 12 SM to MDF WiFi 48pp, 48 cat 6a 48pp, 37 cat 6a</p> <p>Rack 2 12 SM for cams, unlabeled 24pp, 18 cat 6 UPS</p> <p>Provide TGB Bond all racks and cable runways to TGB Provide UPS for active network electronics</p>	\$11,612	0-1 - Emergency Repairs
1499	TL	Technology Low Voltage	<p>Fs all conduits, including 18 4"C Provide TGB Fs 12" CT with new bricks Provide cooling</p> <p>Provide TGB Bond all racks and cable runways to TGB Provide firestopping for all conduits, 18 4"c Provide firestopping for 12"CT, new bricks Provide UPS for active network electronics Provide cooling The batteries in the Vertiv NetSure 5000 ups are deteriorating and need servicing or replaced.</p>	\$23,998	0-1 - Emergency Repairs
1497	TL	Technology Low Voltage	<p>Multiple conduits are missing fs, 20 4"C Grounding not per standards, TBB but no TGB No hvac in room. Very hot Remove all abandoned cables</p> <p>Provide TGB Bond all racks and cable runways to TGB Provide firestopping for all conduits, 20 4"c Provide cooling Remove all abandoned cabling</p>	\$17,418	0-1 - Emergency Repairs
1495	TL	Technology Low Voltage	<p>No grounding Shared space with first aid</p> <p>Provide TGB Bond all racks and cable runways to TGB</p>	\$3,871	0-1 - Emergency Repairs

1493	TL	Technology Low Voltage	<p>Appears to be no fs for all cable entries  Fs bricks laying in ct, not installed  TBB with no TGB, not properly grounded  VZW with no apparent grounding  Rack does not appear properly grounded Room is warm with no hvac  Abandoned cabling left in room  Some cable supported with bridle rings  No drip pans for plumbing above</p> <p>Provide TGB  Bond all racks and cable runways to TGB  Provide firestopping for all conduits, 16 4" c  Provide firestopping for 18" CT, new bricks  Support UTP cabling with J hooks approx 30'  Provide cooling</p>	\$16,644	0-1 - Emergency Repairs
1351	TL	Technology Low Voltage	<p>MM FIBER 62.5  NEW A/c  Backup Unit exhausts into hallway  Limited ground  original fiber racks are bonded to tray</p> <p>Provide TGB  Bond all racks and cable runways to TGB</p> <p>Replace all 62.5 micron MM (multimode) fiber optic cabling with new laser optimized 50 micron fiber optic cabling.  Assume:  1000' length of armored, indoor/outdoor cabling.</p>	\$29,783	0-1 - Emergency Repairs

TOTAL \$10,403,742

Task #	Stamp	Title	Description	Cost	Time Period
709	AG	Architectural	Replace hollow metal door, frame, and hardware. 2 door pairs. 6 F.T. wide by 7 F.T. high each. (Quad C).	13440	2-5 - Material Repairs
708	AG	Architectural	Replace sealant at bottom of stone granite panels. Horizontal joint sealant. Two-part polyurethane. Quantity: 570 L.F. (Quad B).	11491	2-5 - Material Repairs
526	AG	Architectural	Concourse hollow metal door and frames. Physical damage due to heavy use and exposure to weather. Replace door, frame, and hardware. 30 single doors. 3 double doors (pairs) (Quad B).	102816	2-5 - Material Repairs
525	AG	Architectural	Concourse hollow metal door and frames. Physical damage due to heavy use and exposure to weather. Replace door, frame, and hardware. 20 single doors. 4 double doors (pairs) (Quad C).	69888	2-5 - Material Repairs
280	AG	Architectural	Upper concourse roof areas. Clean roof membrane of debris. Snake complete roof drain lines. Clean roof drain bowls. Replace roof strainers. 850 S.F. of roof area. 4 roof drains.  Coping sealant joint failure. Holes/tearing observed in sealant joints. Multiple repair attempts are apparent. Replacement of joint sealant needed. 30 L.F. (2-5 yr. material repair). 100 L.F. (6-10 yr. material repair).	5107	2-5 - Material Repairs
279	AG	Architectural	Upper concourse roof areas. Clean roof membrane of debris. Snake complete roof drain lines. Clean roof drain bowls. Replace roof strainers. 850 S.F. of roof area. 4 roof drains.  Coping sealant joint failure. Holes/tearing observed in sealant joints. Multiple repair attempts are apparent. Replacement of joint sealant needed. 40 L.F. (2-5 yr. material repair). 200 L.F. (6-10 yr. material repair).	4368	2-5 - Material Repairs
278	AG	Architectural	Concourse hollow metal door and frames. Physical damage due to heavy use and exposure to weather. Replace door, frame, and hardware. 20 single doors (Quad C).	67200	2-5 - Material Repairs
276	AG	Architectural	Concourse hollow metal door and frames. Physical damage due to heavy use and exposure to weather. Replace door, frame, and hardware. 20 single doors (Quad B).	67200	2-5 - Material Repairs
273	AG	Architectural	Upper concourse roof areas. Clean roof membrane of debris. Snake complete roof drain lines. Clean roof drain bowls. Replace roof strainers. 2,765 S.F. of roof area. 8 roof drains.	9092	2-5 - Material Repairs
272	AG	Architectural	Upper concourse roof areas. Clean roof membrane of debris. Snake complete roof drain lines. Clean roof drain bowls. Replace roof strainers. 837 S.F. of roof area. 4 roof drains.  Coping sealant joint failure. Holes/tearing observed in sealant joints. Multiple repair attempts are apparent. Replacement of joint sealant needed. 40 L.F. (2-5 yr. material repair). 200 L.F. (6-10 yr. material repair).	7203	2-5 - Material Repairs
270	AG	Architectural	Concourse hollow metal door and frames. Physical damage due to heavy use and exposure to weather. Replace door, frame, and hardware. 21 single doors (Quad A).	70560	2-5 - Material Repairs
267	AG	Architectural	Concourse hollow metal door and frames. Physical damage due to heavy use and exposure to weather. Replace door, frame, and hardware. 20 single doors (Quad D).	67200	2-5 - Material Repairs
263	AG	Architectural	Concourse hollow metal door and frames. Physical damage due to heavy use and exposure to weather. Replace door, frame, and hardware. 6 single doors. 1 double door (pair) (Quad A).	26880	2-5 - Material Repairs
260	AG	Architectural	Concourse hollow metal door and frames. Physical damage due to heavy use and exposure to weather. Replace door, frame, and hardware. 6 single doors. 1 double door (pair) (Quad B).	26880	2-5 - Material Repairs
257	AG	Architectural	Concourse hollow metal door and frames. Physical damage due to heavy use and exposure to weather. Replace door, frame, and hardware. 6 single doors. 1 double door (pair) (Quad C).	3360	2-5 - Material Repairs
255	AG	Architectural	Concourse hollow metal door and frames. Physical damage due to heavy use and exposure to weather. Replace door, frame, and hardware. 6 single doors. 1 double door (pair) (Quad D).	3360	2-5 - Material Repairs
254	AG	Architectural	Hollow metal door and frame replacement. Physical damage cannot close. Refer to Task #255.	3360	2-5 - Material Repairs
250	AG	Architectural	Concourse hollow metal door and frames. Physical damage due to heavy use and exposure to weather. Replace door, frame, and hardware. 30 single doors. 5 double doors (pairs) (Quad A).	134400	2-5 - Material Repairs
242	AG	Architectural	Concourse hollow metal door and frames. Physical damage due to heavy use and exposure to weather. Replace door, frame, and hardware. 30 single doors. 5 double doors (pairs) (Quad D).	134400	2-5 - Material Repairs

189	AG	Architectural	Replace weatherstripping/sweeps at base of storefront doors. Manufacture standard bottom sweeps. 6 door pairs. 3 F.T. width per door leaf. 36 L.F. total (Quad A).	4032	2-5 - Material Repairs
188	AG	Architectural	Replace sealant at bottom of stone granite panels. Horizontal joint sealant. Two-part polyurethane. Quantity: 765 L.F. (Quad A).	15422	2-5 - Material Repairs
187	AG	Architectural	Replace weatherstripping/sweeps at base of storefront doors. Manufacture standard bottom sweeps. 1 door pair. 3 F.T. width per door leaf. 6 L.F. total (Quad B).	672	2-5 - Material Repairs
186	AG	Architectural	Replace hollow metal door, frame, and hardware. 1 door pair. 6 F.T. wide by 7 F.T. high. (Quad B).	6720	2-5 - Material Repairs
185	AG	Architectural	Replace sealant at bottom of stone granite panels. Horizontal joint sealant. Two-part polyurethane. Quantity: 606 L.F. (Quad C).	12217	2-5 - Material Repairs
184	AG	Architectural	Replace weatherstripping/sweeps at base of storefront doors. Manufacture standard bottom sweeps. 2 door pairs. 3 F.T. width per door leaf. 12 L.F. total (Quad D).	1344	2-5 - Material Repairs
183	AG	Architectural	Replace sealant at bottom of stone granite panels. Horizontal joint sealant. Two-part polyurethane. Quantity: 762 L.F. (Quad D).	15362	2-5 - Material Repairs
1626	TB	Audio Production	Replace digital signal processors Replace production intercoms	244800	2-5 - Material Repairs
1630	TB	Audio Visual	Replace AV Network Switches	154000	2-5 - Material Repairs
735	CC	Civil Concrete	Concrete curb is cracking at corner. Replace 10' LF of curb on either side.	2688	2-5 - Material Repairs
			Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.  Non-structural crack = 50 LF Guardrail post sealant = 150 EA Backer rod & sealant = 150 LF Cove joint sealant = 650 LF Control joint sealant = 200 LF Overhead & Vertical patching = 10 SF Horizontal patching = 50 SF Structural crack repair = 20 LF Guardrail post concrete repair = 10 EA		
479	CC	Civil Concrete	Curb replacement = 20 LF	50198	2-5 - Material Repairs
			Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.  Non-structural crack = 100 LF Control joint sealant = 100 LF Overhead & Vertical patching = 10 SF Horizontal patching = 40 SF		
476	CC	Civil Concrete	Curb replacement = 15 LF	21840	2-5 - Material Repairs

			Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.		
			Non-structural crack = 300 LF Guardrail post sealant = 50 EA Backer rod & sealant = 200 LF Cove joint sealant = 300 LF Control joint sealant = 250 LF Overhead & Vertical patching = 10 SF Horizontal patching = 20 SF Structural crack repair = 10 LF Guardrail post concrete repair = 5 EA		
473	CC	Civil Concrete	Curb replacement = 100 LF	45091	2-5 - Material Repairs
			Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.		
			Non-structural crack repair 30 LF Guardrail post sealant repair 150 EA Backer rod & sealant 400 LF Cove joint sealant 100 LF Control joint sealant 200 LF Overhead & Vertical patching 20 SF Horizontal patching 40 SF Structural crack repair 25 LF Guardrail post concrete repair 10 EA		
127	CC	Civil Concrete	Curb replacement 30 LF	44285	2-5 - Material Repairs
			Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.		
794	CL	Civil Landscap	Irrigation: Replace all remaining pop-up spray sprinklers and nozzles including flexible pipe (42 total). Replace all remaining T-Bird rotor sprinklers with Series 5000 rotor sprinklers (14 total).	30106	2-5 - Material Repairs
			Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.		
791	CL	Civil Landscap	Irrigation: Replace all pop-up spray sprinklers and nozzles including flexible pipe (48 total). Replace all remaining T-Bird rotor sprinklers with Series 5000 rotor sprinklers (20 total)	36557	2-5 - Material Repairs
			Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.		
788	CL	Civil Landscap	Irrigation: Replace all pop-up spray sprinklers and nozzles including flexible pipe (67 total). Replace all remaining T-Bird rotor sprinklers with Series 5000 rotor sprinklers (35 total)	54835	2-5 - Material Repairs
786	CL	Civil Landscap	Site Irrigation: Irrigation zone is currently inactive and needs to be replaced when landscaping is redone (4,000 SF)	13440	2-5 - Material Repairs
785	CL	Civil Landscap	Remove dead tree in this area.	672	2-5 - Material Repairs
784	CL	Civil Landscap	Remove dead tree in this area.	672	2-5 - Material Repairs
783	CL	Civil Landscap	Concrete planters are experiencing minor cracking and deficiencies. Replace forty (40) planters.	107520	2-5 - Material Repairs
781	CL	Civil Landscap	Single leaning bollard should be replaced with bollard of similar style.	2016	2-5 - Material Repairs
780	CL	Civil Landscap	Finish on ornamental fence is starting to peel off. Fence should be refinished.	1344	2-5 - Material Repairs
777	CL	Civil Landscap	Cracking in curb. Replace 10 feet of concrete curb.	1344	2-5 - Material Repairs



776	CL	Civil Landscap	Crabapple trees are in below average to poor condition. Remove and replace with 10 new Crabapple (Malus) trees (minimum 3" caliper). Quantity = 10 trees.	1344	2-5 - Material Repairs
775	CL	Civil Landscap	Remove dying Ginkgo tree and replace tree of same species (minimum 3" caliper).	1344	2-5 - Material Repairs
774	CL	Civil Landscap	Shrubs (Little Princess Spirea) are "leggy" and in below-average condition. Replace with new plantings or an interesting hardscape feature. (Quantity is approx. 1925 ft²).	15523	2-5 - Material Repairs
770	CL	Civil Landscap	Top of trash receptacle is rusting. Concrete is experiencing minor cracking. One (1) trash receptacle shall be replaced.	2688	2-5 - Material Repairs
769	CL	Civil Landscap	Concrete curb is cracked. Replace 5' LF of curb on either side.	2016	2-5 - Material Repairs
768	CL	Civil Landscap	Security/safety concern created due to dense groundcover. Remove groundcover and mulch and replace with topsoil, turf/lawn seed, and straw. (Quantity is approx. 2300 ft²).	12365	2-5 - Material Repairs
767	CL	Civil Landscap	Concrete planters are experiencing minor cracking and deficiencies. Consider either replacing planters or eliminating the planters and replacing with crash-rated bollards. Quantity = 2 planters at ramp entrance.	5376	2-5 - Material Repairs
765	CL	Civil Landscap	Security/safety concern created due to dense groundcover. Remove groundcover and mulch and replace with topsoil, turf/lawn seed, and straw. (Quantity is approx. 2850 ft²).	15322	2-5 - Material Repairs
763	CL	Civil Landscap	Hemlock tree is in poor condition. Remove and replace one Hemlock tree.	1344	2-5 - Material Repairs
762	CL	Civil Landscap	Single section of fence is bent out of place and should be replaced.	1613	2-5 - Material Repairs
761	CL	Civil Landscap	Security/safety concern created due to dense groundcover. Remove groundcover and mulch and replace with either new shrubs or new topsoil, turf/lawn seed, and straw. (Quantity is approx. 925 ft²).	4973	2-5 - Material Repairs
758	CL	Civil Landscap	Cracking in corner of concrete (planter) curb. Replace corner of curb (5ft).	2016	2-5 - Material Repairs
757	CL	Civil Landscap	Cracking in corner of concrete (planter) curb. Replace corner of curb (5ft).	2016	2-5 - Material Repairs
752	CL	Civil Landscap	Excessive tree lean (Hawthorn). Remove and replace tree with a 3" caliper tree of same species.	1344	2-5 - Material Repairs
751	CL	Civil Landscap	Security/safety concern created due to dense groundcover. Remove groundcover and mulch and replace with topsoil, turf/lawn seed, and straw. (Quantity is approx. 3600 ft²).	19354	2-5 - Material Repairs
750	CL	Civil Landscap	Excessive tree (Black Pine) lean. Replace with 8' tall Black Pine (Pinus nigra).	1344	2-5 - Material Repairs
749	CL	Civil Landscap	Single section of fence is bent out of place and should be replaced.	1613	2-5 - Material Repairs
748	CL	Civil Landscap	Single section of fence is bent out of place and should be replaced.	1613	2-5 - Material Repairs
746	CL	Civil Landscap	Existing Picea tree is "leggy" and should be removed. Replace with 8' tall tree of same species.	1344	2-5 - Material Repairs
744	CL	Civil Landscap	Ivy growing rampant on trees and along fence. Trim ivy back or remove entirely.	4032	2-5 - Material Repairs
743	CL	Civil Landscap	Security/safety concern created due to dense groundcover. Remove groundcover and mulch and replace with topsoil, turf/lawn seed, and straw. (Quantity is approx. 7505 ft²).	40347	2-5 - Material Repairs
742	CL	Civil Landscap	Excessive tree (crabapple) lean. Remove and replace with new Crabapple (Malus) tree (minimum 3" caliper).	1344	2-5 - Material Repairs
737	CL	Civil Landscap	Concrete planters are experiencing minor cracking and deficiencies. Replace 1 (one) concrete planter.	2688	2-5 - Material Repairs
736	CL	Civil Landscap	Concrete curb cracking at joint. Replace 10' LF of curb on either side.	2688	2-5 - Material Repairs
733	CL	Civil Landscap	Security/safety concern created due to dense groundcover. Replace with new plantings or an interesting hardscape feature. (Quantity is approx. 802 ft²).	4312	2-5 - Material Repairs
732	CL	Civil Landscap	Shrubs (Little Princess Spirea) are "leggy" and in below-average condition. Replace plantings in plant bed with new plantings or an interesting hardscape feature. (Quantity is approx. 1400 ft²).	11290	2-5 - Material Repairs
731	CL	Civil Landscap	Concrete curb is cracking at corner. Replace 10' LF of curb on either side.	2688	2-5 - Material Repairs
730	CL	Civil Landscap	Security/safety concern created due to dense groundcover. Remove existing groundcover. (Quantity is approx. 550 ft²).	2957	2-5 - Material Repairs
728	CL	Civil Landscap	Remove dying Ginkgo tree and replace with tree of same species (minimum 3" caliper).	1344	2-5 - Material Repairs
725	CL	Civil Landscap	Security/safety concern created due to dense groundcover. Remove existing groundcover.(Quantity is approx. 361 ft²).	1941	2-5 - Material Repairs
721	CL	Civil Landscap	Security/safety concern created due to dense groundcover. Remove existing groundcover. (Quantity is approx. 361 ft²).	1941	2-5 - Material Repairs
719	CL	Civil Landscap	Flagpoles are showing signs of wear. Replace missing hardware and refinish per manufacturer recommendations.	3360	2-5 - Material Repairs

715	CL	Civil Landscap	Security/safety concern created due to dense groundcover. Remove existing groundcover. (Quantity is approx. 361 ft²).	1941	2-5 - Material Repairs
711	CL	Civil Landscap	Security/safety concern created due to dense groundcover. Remove existing groundcover.(Quantity is approx. 361 ft²).	1941	2-5 - Material Repairs
684	CL	Civil Landscap	Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.  Irrigation: Replace all pop-up spray sprinklers and nozzles (40 total) including flexible pipe. Replace all remaining T-Bird rotor sprinklers with Series 5000 rotor sprinklers (8 total)	25805	2-5 - Material Repairs
659	CL	Civil Landscap	Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.  Site Irrigation: Replace all solenoid valves within quadrant with Rainbird PGA without pressure regulation. Approximately eight (8) valves are located within quadrant.	8064	2-5 - Material Repairs
658	CL	Civil Landscap	Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.  Site Irrigation: Replace all solenoid valves within quadrant to Rainbird PGA without pressure regulation. Nine (9) valves are located within quadrant.	9072	2-5 - Material Repairs
656	CL	Civil Landscap	Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.  Site Irrigation: Replace all solenoid valves within quadrant with Rainbird PGA without pressure regulation. Five (5) valves are located within quadrant.	5040	2-5 - Material Repairs
654	CL	Civil Landscap	Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.  Site Irrigation: Replace all solenoid valves within quadrant with Rainbird PGA without pressure regulation. Four (4) valves are located within quadrant.	4032	2-5 - Material Repairs
612	EP	Electrical Pow	Rusted disconnect enclosure.	6720	2-5 - Material Repairs
610	EP	Electrical Pow	Rusted disconnect enclosure.	6720	2-5 - Material Repairs
609	EP	Electrical Pow	Rusted disconnect enclosure.	6720	2-5 - Material Repairs
608	EP	Electrical Pow	Rusted disconnect enclosure.	6720	2-5 - Material Repairs
607	EP	Electrical Pow	Rusted disconnect enclosure.	6720	2-5 - Material Repairs
606	EP	Electrical Pow	Rusted disconnect enclosure.	6720	2-5 - Material Repairs
605	EP	Electrical Pow	Rusted disconnect enclosure.	6720	2-5 - Material Repairs
604	EP	Electrical Pow	Rusted disconnect enclosure.	6720	2-5 - Material Repairs
603	EP	Electrical Pow	Rusted disconnect enclosure.	6720	2-5 - Material Repairs
602	EP	Electrical Pow	Rusted disconnect enclosure.	6720	2-5 - Material Repairs
601	EP	Electrical Pow	Rusted wire trough.	3360	2-5 - Material Repairs
433	EP	Electrical Pow	Rusted disconnect enclosure.	6720	2-5 - Material Repairs
430	EP	Electrical Pow	Rusted disconnect enclosure.	6720	2-5 - Material Repairs
427	EP	Electrical Pow	Rusted disconnect enclosure.	6720	2-5 - Material Repairs
424	EP	Electrical Pow	Rusted disconnect enclosure.	6720	2-5 - Material Repairs
420	EP	Electrical Pow	Rusted disconnect enclosure.	6720	2-5 - Material Repairs
416	EP	Electrical Pow	Rusted disconnect enclosure.	6720	2-5 - Material Repairs
414	EP	Electrical Pow	Rusted disconnect enclosure.	6720	2-5 - Material Repairs
412	EP	Electrical Pow	Rusted disconnect enclosure.	6720	2-5 - Material Repairs
409	EP	Electrical Pow	Rusted disconnect enclosure.	6720	2-5 - Material Repairs

408	EP	Electrical Pow	Rusted disconnect enclosure.	6720	2-5 - Material Repairs
253	FS	Fire Suppresio	Starting to see visible corrosion on sprinkler head - green	16800	2-5 - Material Repairs
249	FS	Fire Suppresio	Visible corrosion on select branch lines.	20160	2-5 - Material Repairs
247	FS	Fire Suppresio	Visible corrosion on select branch lines.	20160	2-5 - Material Repairs
241	FS	Fire Suppresio	Visible corrosion on select branch lines.	20160	2-5 - Material Repairs
235	FS	Fire Suppresio	Visible corrosion on select branch lines.	20160	2-5 - Material Repairs
233	FS	Fire Suppresio	Visible corrosion on select branch lines.	20160	2-5 - Material Repairs
232	FS	Fire Suppresio	Visible corrosion on mains and select branch lines.	20160	2-5 - Material Repairs
226	FS	Fire Suppresio	Visible corrosion on mains and select branch lines.	20160	2-5 - Material Repairs
1620	HE	HVAC Equipm	Refrigeration equipment for beer cooler is r-22 no longer manufactured. It is at the end of its useful life. Refer to equipment list for quantity.	47040	2-5 - Material Repairs
1614	HE	HVAC Equipm	Return fans in mechanical rooms are at the end of their useful life and need to be replaced. Typ of all in-line return fans in the mechanical rooms.	516096	2-5 - Material Repairs
1613	HE	HVAC Equipm	Vav boxes with electric heat are at the end of their useful life and need to be replaced. Typ of all in building.	685978	2-5 - Material Repairs
1600	HE	HVAC Equipm	Shaft on return fan has broken, will be require replacement. Fan is at the end of its useful life.	6000	2-5 - Material Repairs
1594	HE	HVAC Equipm	Exterior of unit has deteriorated due to age. AHU will	1243200	2-5 - Material Repairs
1593	HE	HVAC Equipm	Grease fan exterior has deteriorated due to the age of the unit. Fan will require replacement. Typ of all fans.refer to equipment list.	10080	2-5 - Material Repairs
1591	HE	HVAC Equipm	Chilled water insulation at coil is saturated and requires replacement	953568	2-5 - Material Repairs
1589	HE	HVAC Equipm	Fan coil is at the end of its useful life. Will require replacement, typ for all.	192192	2-5 - Material Repairs
118	HE	HVAC Equipm	Electric unit heater is not operational. Typical of all unit and replacement will be required due to age of the original heaters in the entire stadium.	10080	2-5 - Material Repairs
117	HE	HVAC Equipm	Grease duct outer casing showing signs of leakage of grease.	26880	2-5 - Material Repairs
115	HE	HVAC Equipm	Chilled water piping insulation is saturated and requires replacement.	4650362	2-5 - Material Repairs
756	PP	Plumbing Pip	Interior of AHU is deteriorating due to age of unit. Entire unit is at the end of its useful life. Refer to equipment list for quantities and size, Typ all	16128	2-5 - Material Repairs
702	PP	Plumbing Pip	Deteriorated pipe insulation on both sanitary and storm lines. Primarily in open spaces exposed to the elements. Approximately 500 ft of pipe insulation to be replaced. Provide weather proof jacketing.	100800	2-5 - Material Repairs
701	PP	Plumbing Pip	Booster pump at the end of it's expected life. Recommended replacement of booster pump.	40320	2-5 - Material Repairs
9	PP	Plumbing Pip	3000 gallon hot water storage tank is reaching the end of its expected life. Recommended to replace single 3000 gallon tank with two 1500 gallon tanks.	8064	2-5 - Material Repairs
1583	SS	Structural Co	Various floor drain grates throughout the building are cracked, corroded, or damage. Recommended to replace floor drain covers. Approximately 12 drains throughout building.	17900	2-5 - Material Repairs
1580	SS	Structural Co	Metal gutter replacement = 140 LF Sub-roof replacement = 100 SF	10600	2-5 - Material Repairs
1577	SS	Structural Co	Metal gutter replacement = 75 LF Sub-roof replacement = 100 SF	22400	2-5 - Material Repairs
868	SS	Structural Co	Metal gutter replacement = 180 LF Sub-roof replacement = 100 SF Overhead / Vertical Patching = 10 SF Horizontal Patching = 50 SF Structural crack = 20 LF Guardrail post concrete = 10 EA Touch up painting = 0 SF Metal gutter replacement = 0 LF Curb replacement = 20 LF	18500	2-5 - Material Repairs

865	SS	Structural Co	Overhead / Vertical Patching = 40 SF Horizontal Patching = 100 SF Structural crack = 0 LF Guardrail post concrete = 0 EA Touch up painting = 0 SF Metal gutter replacement = 0 LF Curb replacement = 15 LF	21300	2-5 - Material Repairs
862	SS	Structural Co	Overhead / Vertical Patching = 0 SF Horizontal Patching = 20 SF Structural crack = 10 LF Guardrail post concrete = 5 EA Touch up painting = 0 SF Metal gutter replacement = 0 LF Curb replacement = 100 LF	19800	2-5 - Material Repairs
859	SS	Structural Co	Overhead / Vertical Patching = 20 SF Horizontal Patching = 40 SF Structural crack = 25 LF Guardrail post concrete = 10 EA Touch up painting = 0 SF Metal gutter replacement = 0 LF Curb replacement = 30 LF	21900	2-5 - Material Repairs
856	SS	Structural Co	Overhead / Vertical Patching = 75 SF Horizontal Patching = 20 SF Structural crack = 40 LF Guardrail post concrete = 5 EA Touch up painting = 0 SF Metal gutter replacement = 0 LF Step replacement = 2 EA	30000	2-5 - Material Repairs
853	SS	Structural Co	Overhead / Vertical Patching = 75 SF Horizontal Patching = 20 SF Structural crack = 40 LF Guardrail post concrete = 5 EA Touch up painting = 0 SF Metal gutter replacement = 140 LF Step replacement = 2 EA Sub-roof replacement = 100 SF	47900	2-5 - Material Repairs
850	SS	Structural Co	Overhead / Vertical Patching = 75 SF Horizontal Patching = 20 SF Structural crack = 40 LF Guardrail post concrete = 5 EA Touch up painting = 0 SF Metal gutter replacement = 140 LF Step replacement = 2 EA Sub-roof replacement = 100 SF	47900	2-5 - Material Repairs

847	SS	Structural Co	Overhead / Vertical Patching = 75 SF Horizontal Patching = 20 SF Structural crack = 40 LF Guardrail post concrete = 5 EA Touch up painting = 0 SF Metal gutter replacement = 0 LF Step replacement = 2 EA	30000	2-5 - Material Repairs
844	SS	Structural Co	Overhead / Vertical Patching = 200 SF Horizontal Patching = 50 SF Structural crack = 100 LF Guardrail post concrete = 8 EA Touch up painting = 0 SF Metal gutter replacement = 800 LF Step replacement = 4 EA Sub-roof replacement = 200 SF	169500	2-5 - Material Repairs
841	SS	Structural Co	Overhead / Vertical Patching = 400 SF Horizontal Patching = 100 SF Structural crack = 200 LF Guardrail post concrete = 10 EA Touch up painting = 0 SF Metal gutter replacement = 0 LF Step replacement = 4 EA Sub-roof replacement = 100 SF	151000	2-5 - Material Repairs
837	SS	Structural Co	Overhead / Vertical Patching = 200 SF Horizontal Patching = 50 SF Structural crack = 100 LF Guardrail post concrete = 8 EA Touch up painting = 0 SF Metal gutter replacement = 50 LF Step replacement = 4 EA Sub-roof replacement = 100 SF	83200	2-5 - Material Repairs
834	SS	Structural Co	Overhead / Vertical Patching = 200 SF Horizontal Patching = 50 SF Structural crack = 100 LF Guardrail post concrete = 8 EA Touch up painting = 0 SF Metal gutter replacement = 270 LF Step replacement = 4 EA Sub-roof replacement = 100 SF	107900	2-5 - Material Repairs

698	SS	Structural Co	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Includes half of West Endzone Seating and 300 Level Concourse.</p> <p>Overhead or Vertical Patching = 75 SF  Horizontal Patching = 75 SF  Structural Crack = 100 LF  Guard Post Concrete Repair = 20 Each  Step Replacement = 5 Each  Metal Gutter Replacement = 300 FT  Metal Sub Roof = 200 SF  Touch Up Painting = 3000 SF  CMU Repair = 30 SF  Expansion Joint Replacement = 40 LF</p>	164360	2-5 - Material Repairs
689	SS	Structural Co	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Includes half of West Endzone Seating and 300 Level Concourse.</p> <p>Overhead or Vertical Patching = 80 SF  Horizontal Patching = 50 SF  Structural Crack = 200 LF  Guard Post Concrete Repair = 20 Each  Step Replacement = 5 Each  Metal Gutter Replacement = 300 FT  Metal Sub Roof = 100 SF  Touch Up Painting = 2000 SF  CMU Repair = 20 SF</p>	151088	2-5 - Material Repairs
682	SS	Structural Co	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Includes half of East Endzone Seating and 300 Level Concourse.</p> <p>Overhead or Vertical Patching = 110 SF  Horizontal Patching = 60 SF  Structural Crack = 250 LF  Guard Post Concrete Repair = 20 Each  Step Replacement = 5 Each  Metal Gutter Replacement = 300 FT  Metal Sub Roof = 100 SF  Touch Up Painting = 2000 SF  CMU Repair = 20 SF</p>	170296	2-5 - Material Repairs

665	SS	Structural Co	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Includes half of East Endzone Seating and 300 Level Concourse.</p> <p>Overhead or Vertical Patching = 100 SF  Horizontal Patching = 100 SF  Structural Crack = 100 LF  Guard Post Concrete Repair = 20 Each  Step Replacement = 5 Each  Metal Gutter Replacement = 300 FT  Metal Sub Roof = 200 SF  Touch Up Painting = 4000 SF  CMU Repair = 10 SF  Expansion Joint Replacement = 40 LF</p>	187320	2-5 - Material Repairs
637	SS	Structural Co	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Overhead or Vertical Patching = 10 SF  Horizontal Patching = 10 SF  Guardrail Post Concrete Repair = 5 Each  Touch Up Painting = 1000 SF</p>	21616	2-5 - Material Repairs
633	SS	Structural Co	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Overhead or Vertical Patching = 10 SF  Horizontal Patching = 10 SF  Metal Gutter Replacement = 30 FT  Metal Sub Roof Replacement = 100 SF</p>	8736	2-5 - Material Repairs
624	SS	Structural Co	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Northeast quadrant includes concourse above 300 level seating at East Endzone.</p> <p>Overhead or Vertical Patching = 70 SF  Horizontal Patching = 20 SF  Guard Post Concrete Repair = 2 Each  Touch Up Painting = 1000 SF  Metal Gutter Replacement = 60 FT  Metal Sub Roof Replacement = 100 SF</p>	42784	2-5 - Material Repairs
613	SS	Structural Co	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Northeast quadrant includes concourse above 300 level seating &amp; stair up to Sponsorship Deck at East Endzone.</p> <p>Overhead or Vertical Patching = 50 SF  Horizontal Patching = 10 SF  Touch Up Painting = 3000 SF</p>	61600	2-5 - Material Repairs



505	SS	Structural Co	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Overhead or Vertical Patching = 40 SF  Horizontal Patching = 25  Guardrail Post Concrete Repair = 4 Each  Touch Up Painting = 4000 SF  CMU Repair = 50 SF  Deck Expansion Joint Replacement = 40 LF</p>	99288	2-5 - Material Repairs
500	SS	Structural Co	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Overhead or Vertical Patching = 40 SF  Horizontal Patching = 30  Guardrail Post Concrete Repair = 4 Each  Touch Up Painting = 4000 SF  CMU Repair = 50 SF  Deck Expansion Joint Replacement = 40 LF</p>	99848	2-5 - Material Repairs
495	SS	Structural Co	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Overhead or Vertical Patching = 25 SF  Horizontal Patching = 50  Guardrail Post Concrete Repair = 2 Each  Touch Up Painting = 4000 SF  CMU Repair = 60 SF  Deck Expansion Joint Replacement = 40 LF</p>	99232	2-5 - Material Repairs
489	SS	Structural Co	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. (Northwest includes west endzone connection)</p> <p>Overhead or Vertical Patching = 25 SF  Horizontal Patching = 40  Guardrail Post Concrete Repair = 2 Each  Touch Up Painting = 4000 SF  CMU Repair = 60 SF  Deck Expansion Joint Replacement = 40 LF</p>	98112	2-5 - Material Repairs
483	SS	Structural Co	<p>Overhead or Vertical Patching = 20 SF  Horizontal Patching = 10 SF  Guard Post Concrete Repair = 5 Each  Touch Up Painting = 150 SF</p>	9352	2-5 - Material Repairs

208	SS	Structural Co	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Overhead or Vertical Patching = 120 SF  Horizontal Patching = 75 SF  Structural Crack = 150 LF  Guard Post Concrete Repair = 20 Each  Step Replacement = 5 Each  Touch Up Painting = 1000 SF  Metal Gutter Replacement = 200 FT  Metal Sub Roof = 500 SF</p>	129192	2-5 - Material Repairs
201	SS	Structural Co	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Overhead or Vertical Patching = 120 SF  Horizontal Patching = 75 SF  Structural Crack = 150 LF  Guard Post Concrete Repair = 20 Each  Step Replacement = 5 Each  Touch Up Painting = 1000 SF  Metal Gutter Replacement = 200 FT  Metal Sub Roof = 500 SF</p>	129192	2-5 - Material Repairs
192	SS	Structural Co	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Overhead or Vertical Patching = 120 SF  Horizontal Patching = 75 SF  Structural Crack = 150 LF  Guard Post Concrete Repair = 20 Each  Step Replacement = 5 Each  Metal Gutter Replacement = 250 FT  Metal Sub Roof = 500 SF  Touch Up Painting = 1000 SF</p>	134792	2-5 - Material Repairs
125	SS	Structural Co	<p>Repair quantities given within this stamp represent total values for Upper Deck within this quadrant. See separate stamp for sponsorship deck.</p> <p>Overhead or Vertical Patching = 120 SF  Horizontal Patching = 75 SF  Structural Crack = 150 LF  Guard Post Concrete Repair = 20 Each  Step Replacement = 5 Each  Touch Up Painting = 1000 SF  Metal Gutter Replacement = 250 FT  Metal Sub Roof = 500 SF</p>	134792	2-5 - Material Repairs

			Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.		
111	SS	Structural Co	Touch Up Painting of Roof Deck - 4000 SF Touch Up Painting of Structural Steel & Light Rack Framing/Catwalk - 2000 SF Clean Out Gutter - 450 FT Clean Out Drainpipes - 10 Locations	108920	2-5 - Material Repairs
			Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.		
109	SS	Structural Co	Touch Up Painting of Roof Deck - 4000 SF Touch Up Painting of Structural Steel & Light Rack Framing/Catwalk - 2000 SF Clean Out Gutter - 450 FT Clean Out Drainpipes - 10 Locations	108920	2-5 - Material Repairs
			Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.		
107	SS	Structural Co	Painting of Roof Deck - 16700 SF Touch Up Painting of Structural Steel & Light Rack Framing/Catwalk - 2000 SF Clean Out Gutter - 450 FT Clean Out Drainpipes - 10 Locations	322280	2-5 - Material Repairs
			Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.		
101	SS	Structural Co	Painting of Roof Deck - 16700 SF Touch Up Painting of Structural Steel & Light Rack Framing/Catwalk - 2000 SF Clean Out Gutter - 450 FT Clean Out Drainpipes - 10 Locations	322280	2-5 - Material Repairs
			Non-structural crack = 50 LF Guardrail post sealant = 150 EA Backer rod & sealant = 150 LF Cove joint = 650 LF Precast joint sealant = 0 LF Precast sealant plugs = 0 EA Control joint sealant = 200 LF	36000	2-5 - Material Repairs
831	SJ	Structural Joi			
			Non-structural crack = 100 LF Guardrail post sealant = 0 EA Backer rod & sealant = 0 LF Cove joint = 0 LF Precast joint sealant = 0 LF Precast sealant plugs = 0 EA Control joint sealant = 100 LF	4700	2-5 - Material Repairs
828	SJ	Structural Joi			
			Non-structural crack = 300 LF Guardrail post sealant = 50 EA Backer rod & sealant = 200 LF Cove joint = 300 LF Precast joint sealant = 0 LF Precast sealant plugs = 0 EA Control joint sealant = 250 LF	30900	2-5 - Material Repairs
825	SJ	Structural Joi			

822	SJ	Structural Joint	Non-structural crack = 30 LF Guardrail post sealant = 150 EA Backer rod & sealant = 400 LF Cove joint = 100 LF Precast joint sealant = 0 LF Precast sealant plugs = 0 EA Control joint sealant = 200 LF	25400	2-5 - Material Repairs
819	SJ	Structural Joint	Non-structural crack = 100 LF Guardrail post sealant = 0 EA Backer rod & sealant = 0 LF Cove joint = 1,300 LF Precast joint sealant = 770 LF Precast sealant plugs = 40 EA Control joint sealant = 0 LF	134000	2-5 - Material Repairs
816	SJ	Structural Joint	Non-structural crack = 100 LF Guardrail post sealant = 0 EA Backer rod & sealant = 0 LF Cove joint = 1,300 LF Precast joint sealant = 770 LF Precast sealant plugs = 40 EA Control joint sealant = 0 LF	134000	2-5 - Material Repairs
813	SJ	Structural Joint	Non-structural crack = 100 LF Guardrail post sealant = 0 EA Backer rod & sealant = 0 LF Cove joint = 1,300 LF Precast joint sealant = 770 LF Precast sealant plugs = 40 EA Control joint sealant = 0 LF	134000	2-5 - Material Repairs
810	SJ	Structural Joint	Non-structural crack = 100 LF Guardrail post sealant = 0 EA Backer rod & sealant = 0 LF Cove joint = 1,300 LF Precast joint sealant = 770 LF Precast sealant plugs = 40 EA Control joint sealant = 0 LF	134000	2-5 - Material Repairs
807	SJ	Structural Joint	Non-structural crack = 200 LF Guardrail post sealant = 0 EA Backer rod & sealant = 4,400 LF Cove joint = 1,550 LF Precast joint sealant = 1,040 LF Precast sealant plugs = 960 EA Control joint sealant = 472 LF	337300	2-5 - Material Repairs
804	SJ	Structural Joint	Non-structural crack = 200 LF Guardrail post sealant = 0 EA Backer rod & sealant = 4,400 LF Cove joint = 1,550 LF Precast joint sealant = 1,040 LF Precast sealant plugs = 960 EA Control joint sealant = 472 LF	369600	2-5 - Material Repairs

801	SJ	Structural Joints	Non-structural crack = 100 LF Guardrail post sealant = 0 EA Backer rod & sealant = 0 LF Cove joint = 1,300 LF Precast joint sealant = 770 LF Precast sealant plugs = 40 EA Control joint sealant = 0 LF	336100	2-5 - Material Repairs
798	SJ	Structural Joints	Non-structural crack = 200 LF Backer rod & sealant = 4,400 LF Cove joint = 1,550 LF Precast joint sealant = 1,040 LF Precast sealant plugs = 960 EA Control joint sealant = 472 LF	336100	2-5 - Material Repairs
700	SJ	Structural Joints	Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Includes half of West Endzone Seating and 300 Level Concourse.  Non-Structural crack = 3000 FT Guard Post Sealant = 250 Each Backer Rod and Sealant = 5100 FT Cove Joint = 2500 FT Precast Joint Sealant = 2500 FT Precast Sealant Plugs = 400 Each Control Joint Sealant = 3000 FT Traffic Coating Touch Up = 600 SF	707840	2-5 - Material Repairs
693	SJ	Structural Joints	Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Includes half of West Endzone Seating and 300 Level Concourse.  Non-Structural crack = 1600 FT Guard Post Sealant = 200 Each Backer Rod and Sealant = 3700 FT Cove Joint = 1500 FT Precast Joint Sealant = 1000 FT Precast Sealant Plugs = 350 Each Control Joint Sealant = 400 FT Traffic Coating Touch Up = 1000 SF	370104	2-5 - Material Repairs
680	SJ	Structural Joints	Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Includes half of East Endzone Seating and 300 Level Concourse.  Non-Structural crack = 2200 FT Guard Post Sealant = 350 Each Backer Rod and Sealant = 4100 FT Cove Joint = 2200 FT Precast Joint Sealant = 900 FT Precast Sealant Plugs = 400 Each Control Joint Sealant = 1000 FT Traffic Coating Touch Up = 600 SF	422688	2-5 - Material Repairs

664	SJ	Structural Joints	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Includes half of East Endzone Seating and 300 Level Concourse.</p> <p>Non-Structural crack = 3000 FT  Guard Post Sealant = 200 Each  Backer Rod and Sealant = 4000 FT  Cove Joint = 2900 FT  Precast Joint Sealant = 1100 FT  Precast Sealant Plugs = 350 Each  Control Joint Sealant = 2000 FT  Traffic Coating Touch Up = 600 SF</p>	502040	2-5 - Material Repairs
620	SJ	Structural Joints	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Northeast quadrant includes concourse above 300 level seating at East Endzone.</p> <p>Non-Structural crack = 250 FT  Guard Post Sealant = 25 Each  Cove Joint = 250 FT  Control Joint Sealant = 500 FT</p>	26320	2-5 - Material Repairs
617	SJ	Structural Joints	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Northeast quadrant includes concourse above 300 level seating &amp; stair up to Sponsorship Deck at East Endzone.</p> <p>Non-Structural crack = 200 FT  Guard Post Sealant = 20 Each  Cove Joint = 300 FT  Control Joint Sealant = 500 FT</p>	26656	2-5 - Material Repairs
509	SJ	Structural Joints	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Non-Structural crack = 500 FT  Guard Post Sealant = 5 Each  Cove Joint = 600 FT  Control Joint Sealant = 1000 FT</p>	54992	2-5 - Material Repairs
503	SJ	Structural Joints	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Non-Structural crack = 500 FT  Guard Post Sealant = 5 Each  Cove Joint = 600 FT  Control Joint Sealant = 1000 FT</p>	54992	2-5 - Material Repairs
494	SJ	Structural Joints	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Non-Structural crack = 500 FT  Guard Post Sealant = 20 Each  Cove Joint = 200 FT  Control Joint Sealant = 2000 FT</p>	64288	2-5 - Material Repairs

			Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. (Northwest includes west endzone connection)		
491	SJ	Structural Joints	Non-Structural crack = 500 FT Guard Post Sealant = 5 Each Cove Joint = 200 FT Control Joint Sealant = 2000 FT	63952	2-5 - Material Repairs
485	SJ	Structural Joints	Non-Structural crack = 150 FT Guard Post Sealant = 10 Each Backer Rod and Sealant = 150 FT Cove Joint = 250 FT Precast Joint Sealant = 100 FT Precast Sealant Plugs = 50 Each Control Joint Sealant = 400 FT	39480	2-5 - Material Repairs
204	SJ	Structural Joints	Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.  Non-Structural crack = 1500 FT Guard Post Sealant = 250 Each Backer Rod and Sealant = 5000 FT Cove Joint = 3500 FT Precast Joint Sealant = 1100 FT Precast Sealant Plugs = 800 Each Control Joint Sealant = 500 FT Traffic Coating Touch Up = 1000 SF	510720	2-5 - Material Repairs
197	SJ	Structural Joints	Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.  Non-Structural crack = 1500 FT Guard Post Sealant = 250 Each Backer Rod and Sealant = 5000 FT Cove Joint = 3500 FT Precast Joint Sealant = 1100 FT Precast Sealant Plugs = 800 Each Control Joint Sealant = 500 FT Traffic Coating Touch Up = 1000 SF	510720	2-5 - Material Repairs
195	SJ	Structural Joints	Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.  Non-Structural crack = 1500 FT Guard Post Sealant = 250 Each Backer Rod and Sealant = 6000 FT Cove Joint = 3750 FT Precast Joint Sealant = 1400 FT Precast Sealant Plugs = 850 Each Control Joint Sealant = 500 FT Traffic Coating Touch Up = 1000 SF	588280	2-5 - Material Repairs



			Repair quantities given within this stamp represent total values for Upper Deck within this quadrant. See separate stamp for sponsorship deck.		
			Non-Structural crack = 1500 FT Guard Post Sealant = 250 Each Backer Rod and Selant = 6000 FT Cove Joint = 3750 FT Precast Joint Sealant = 1400 FT Precast Selant Plugs = 850 Each Control Joint Sealant = 500 FT		
181	SJ	Structural Joi	Traffic Coating Touch Up = 1000 SF	638680	2-5 - Material Repairs
			Replace entire ramp structure including slab, curb, metal deck and control joint sealants. Also salvage existing handrails for reinstallation.		
875	SR	Structural Ra	Cost of \$450k is based on actual cost from 2024 contractor pricing of \$400,000.	450000	2-5 - Material Repairs
			Replace entire ramp structure including slab, curb, metal deck and control joint sealants. Also salvage existing handrails for reinstallation.		
653	SR	Structural Ra	Cost of \$450k is based on actual cost from 2024 contractor pricing of \$400,000.	448000	2-5 - Material Repairs
			Replace entire ramp structure including slab, curb, metal deck and control joint sealants. Also salvage existing handrails for reinstallation.		
652	SR	Structural Ra	Cost of \$450k is based on actual cost from 2024 contractor pricing of \$400,000.	448000	2-5 - Material Repairs
			Replace entire ramp structure including slab, curb, metal deck and control joint sealants. Also salvage existing handrails for reinstallation.		
651	SR	Structural Ra	Cost of \$450k is based on actual cost from 2024 contractor pricing of \$400,000.	400000	2-5 - Material Repairs
			Replace entire ramp structure including slab, curb, metal deck and control joint sealants. Also salvage existing handrails for reinstallation.		
645	SR	Structural Ra	Cost of \$450k is based on actual cost from 2024 \$400k contractor pricing.	448000	2-5 - Material Repairs
			All broadcast TV over coax Projector using VGA		
			Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.		
1491	TV	Technology A		14225	2-5 - Material Repairs
			All broadcast TV over coax projectors have green color shift in Lamp Projector using VGA PIP has no video input 2 monitors functioning. Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.		
1489	TV	Technology A		14225	2-5 - Material Repairs
			All broadcast TV over coax Projector using VGA PiP not working		
			Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.		
1488	TV	Technology A	2 monitors	14225	2-5 - Material Repairs

1487	TV	Technology A	<p>All broadcast TV over coax</p> <p>projectors have green color shift in Lamp</p> <p>Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs.</p> <p>Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1486	TV	Technology A	<p>All broadcast TV over coax</p> <p>Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs.</p> <p>Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors functioning.</p>	14225	2-5 - Material Repairs
1485	TV	Technology A	<p>All broadcast TV over coax</p> <p>Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs.</p> <p>Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1484	TV	Technology A	<p>All broadcast TV over coax</p> <p>Projector using VGA</p> <p>PiP not working on second input</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs.</p> <p>Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1483	TV	Technology A	<p>All broadcast TV over coax</p> <p>2 systems</p> <p>west system no PIP Video</p> <p>east system no PIP video</p> <p>Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs.</p> <p>Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>8 monitors</p>	14225	2-5 - Material Repairs
1482	TV	Technology A	<p>All broadcast TV over coax</p> <p>Projector using VGA</p> <p>No PiP</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs.</p> <p>Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 wall mounted monitors functioning.</p>	14225	2-5 - Material Repairs

1481	TV	Technology A	<p>Broadcast video on Coax projector on VGA green shift in lamp color</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1480	TV	Technology A	<p>Broadcast video on Coax projector on VGA green shift in lamp color</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1478	TV	Technology A	<p>Broadcast video on Coax projector on VGA PiP not working</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors, Sharp monitor not working</p>	14225	2-5 - Material Repairs
1477	TV	Technology A	<p>All broadcast TV over coax Projector using Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. Monitor w sound bar functioning.</p>	14225	2-5 - Material Repairs
1476	TV	Technology A	<p>Broadcast video on Coax projector on VGA PiP not working</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors</p>	14225	2-5 - Material Repairs
1475	TV	Technology A	<p>Broadcast video on Coax projector on VGA green shift in lamp color</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs

1474	TV	Technology A	<p>Broadcast video on Coax projector on VGA green shift in lamp color channel select reversed PIP Color reversed LED but works</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors functioning.</p>	14225	2-5 - Material Repairs
1473	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1472	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1471	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1470	TV	Technology A	<p>All broadcast TV over coax Projector using VGA PiP not working on second input</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors</p>	14225	2-5 - Material Repairs
1469	TV	Technology A	<p>All broadcast TV over coax Projector using VGA PiP not working properly</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors</p>	14225	2-5 - Material Repairs

1468	TV	Technology A	<p>Broadcast video on Coax projector on VGA green shift in lamp color</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1467	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1466	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1465	TV	Technology A	<p>All broadcast TV over coax Projector using VGA PiP not working</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors</p>	14225	2-5 - Material Repairs
1464	TV	Technology A	<p>All broadcast TV over coax Projector using VGA PiP not working on second input</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 4 monitors.</p>	14225	2-5 - Material Repairs
1463	TV	Technology A	<p>All broadcast TV over coax Projector using VGA PiP not working on second input</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. No Extron controller 2 monitors functioning.</p>	14225	2-5 - Material Repairs

1462	TV	Technology A	<p>All broadcast TV over coax Projector using VGA PiP not working</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors</p>	14225	2-5 - Material Repairs
1461	TV	Technology A	<p>All broadcast TV over coax Projector using VGA PiP not working</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors</p>	14225	2-5 - Material Repairs
1460	TV	Technology A	<p>All broadcast TV over coax Projector using VGA PiP not working on second input</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>3 monitors functioning. Exterior screen is stained on right side</p>	14225	2-5 - Material Repairs
1459	TV	Technology A	<p>All broadcast TV over coax Projector using Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>3 monitors functioning</p>	14225	2-5 - Material Repairs
1458	TV	Technology A	<p>All broadcast TV over coax Projector using VGA PiP not working</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors</p>	14225	2-5 - Material Repairs

1457	TV	Technology A	<p>Broadcast video on Coax projector on VGA PIP not working</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors</p>	14225	2-5 - Material Repairs
1454	TV	Technology A	<p>All broadcast video is coax</p> <p>Exterior monitor</p>	14225	2-5 - Material Repairs
1440	TV	Technology A	<p>All broadcast TV over coax Green shift in color temp of projector</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors functioning</p>	14225	2-5 - Material Repairs
1438	TV	Technology A	<p>All broadcast TV over coax Projector using VGA PIP not working</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors functioning.</p>	14225	2-5 - Material Repairs
1437	TV	Technology A	<p>All broadcast TV over coax Green shift in color temp of projector</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors functioning.</p>	14225	2-5 - Material Repairs
1436	TV	Technology A	<p>All broadcast TV over coax Projector using VGA Green shift in color temp of projector PIP indicator red but working</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors functioning.</p>	14225	2-5 - Material Repairs



1435	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors functioning.</p>	14225	2-5 - Material Repairs
1434	TV	Technology A	<p>All broadcast TV over coax Projector using VGA PiP not working on second input</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors functioning.</p>	14225	2-5 - Material Repairs
1433	TV	Technology A	<p>All broadcast TV over coax Projector using VGA Green shift in color temp of projector PiP indicator red but working</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors functioning.</p>	14225	2-5 - Material Repairs
1432	TV	Technology A	<p>All broadcast TV over coax Projector using VGA PiP not working on second input</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors functioning.</p>	14225	2-5 - Material Repairs
1431	TV	Technology A	<p>All broadcast TV over coax Projector using VGA Green shift in color temp of projector</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors functioning.</p>	14225	2-5 - Material Repairs
1430	TV	Technology A	<p>All broadcast TV over coax Projector using VGA Green shift in color temp of projector</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors functioning.</p>	14225	2-5 - Material Repairs

1429	TV	Technology A	<p>All broadcast TV over coax Projector using VGA PiP not working on second input</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side 5 monitors functioning.</p>	14225	2-5 - Material Repairs
1428	TV	Technology A	<p>All broadcast TV over coax Projector using VGA Green shift in color temp of projector</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 3 monitors functioning.</p>	14225	2-5 - Material Repairs
1427	TV	Technology A	<p>All broadcast TV over coax Projector using VGA PiP not working on second input</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1426	TV	Technology A	<p>All broadcast TV over coax Projector using VGA Green shift in color temp of projector</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 4 monitors functioning.</p>	14225	2-5 - Material Repairs
1425	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning</p>	14225	2-5 - Material Repairs
1424	TV	Technology A	<p>All broadcast TV over coax Projector using VGA 2 monitors Green shift in color temp of projector</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs

1423	TV	Technology A	<p>All broadcast TV over coax  Projector using VGA  2 monitors  Green shift in color temp of projector</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs.  Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.  2 monitors functioning.</p>	14225	2-5 - Material Repairs
1422	TV	Technology A	<p>All broadcast TV over coax  Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs.  Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.  2 monitors functioning.</p>	14225	2-5 - Material Repairs
1421	TV	Technology A	<p>All broadcast TV over coax  Projector using VGA  2 monitors  Green shift in color temp of projector  2 monitors functioning.</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs.  Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p>	14225	2-5 - Material Repairs
1420	TV	Technology A	<p>All broadcast television over Coax 2 TVs  Projector fed w/VGA  PIP button no green but works  No Video source for PIP</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs.  Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.  2 monitors functioning</p>	14225	2-5 - Material Repairs
1419	TV	Technology A	<p>All broadcast TV over coax  Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs.  Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.  2 monitors functioning.</p>	14225	2-5 - Material Repairs
1418	TV	Technology A	<p>All broadcast TV over coax  Projector using VGA  PIP not working on second input</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs.  Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.  2 monitors functioning</p>	14225	2-5 - Material Repairs

1416	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors functioning.</p>	14225	2-5 - Material Repairs
1402	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors functioning.</p>	14225	2-5 - Material Repairs
1401	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>3 monitors functioning. Projector needs set up.</p>	14225	2-5 - Material Repairs
1400	TV	Technology A	<p>All broadcast TV over coax Projector using VGA PIP Video blue no video channel select for two video sources reversed</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors functioning</p>	14225	2-5 - Material Repairs
1399	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors functioning.</p>	14225	2-5 - Material Repairs
1398	TV	Technology A	<p>All broadcast TV over coax Projector using VGA channel select for two video sources reversed</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors functioning.</p>	14225	2-5 - Material Repairs

1397	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors functioning.</p>	14225	2-5 - Material Repairs
1396	TV	Technology A	<p>All broadcast TV over coax Projector using VGA PiP not working on second input</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>3 monitors functioning.</p>	14225	2-5 - Material Repairs
1395	TV	Technology A	<p>All broadcast TV over coax Projector using VGA PiP not working on second input channel select for two video sources reversed</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>3 monitors functioning.</p>	14225	2-5 - Material Repairs
1394	TV	Technology A	<p>All broadcast TV over coax Projector using VGA PiP not working on second input</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors functioning.</p>	14225	2-5 - Material Repairs
1393	TV	Technology A	<p>All broadcast TV over coax Projector using VGA PiP indicator is always red but works</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors functioning.</p>	14225	2-5 - Material Repairs
1392	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors functioning.</p>	14225	2-5 - Material Repairs

1391	TV	Technology A	<p>All broadcast TV over coax Projector using VGA 2 monitors functioning.</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p>	14225	2-5 - Material Repairs
1390	TV	Technology A	<p>All broadcast TV over coax Projector using VGA PiP not working on second input</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1389	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1388	TV	Technology A	<p>All broadcast TV over coax Projector using VGA PiP not working on second input</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1387	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1386	TV	Technology A	<p>All broadcast TV over coax Projector using RGB Projector overheats during games</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 4 monitors functioning.</p>	14255	2-5 - Material Repairs

1385	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1384	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1383	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1382	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1381	TV	Technology A	<p>All broadcast TV over coax Projector using VGA PiP not working on second input</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1380	TV	Technology A	<p>Suites 224 &amp; 225 combined to become suite 224 All broadcast TV over coax Projector using VGA PiP not working on second input</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 3 interior monitors, 1 exterior monitor.</p>	14225	2-5 - Material Repairs



1379	TV	Technology A	<p>All broadcast TV over coax Projector using VGA PiP not working on second input</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p>	14225	2-5 - Material Repairs
1378	TV	Technology A	<p>All broadcast TV over coax Projector using VGA PiP not working on second input</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1377	TV	Technology A	<p>All broadcast TV over coax Projector using VGA PiP not working on second input</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1376	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1375	TV	Technology A	<p>All broadcast TV over coax Projector using VGA PiP not working on second input</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1374	TV	Technology A	<p>AV system will not power on</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs

1373	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors functioning.</p>	14225	2-5 - Material Repairs
1372	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>4 monitors functioning.</p>	14225	2-5 - Material Repairs
1371	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors functioning.</p>	14225	2-5 - Material Repairs
1370	TV	Technology A	<p>All broadcast TV over coax Projector using VGA PiP not working on second input</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors functioning.</p>	14255	2-5 - Material Repairs
1369	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors functioning.</p>	14225	2-5 - Material Repairs
1368	TV	Technology A	<p>All broadcast TV over coax Projector using VGA Abandoned Coax</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors functioning.</p>	14225	2-5 - Material Repairs

1367	TV	Technology A	<p>All broadcast TV over coax Projector using VGA PiP not working on second input</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1366	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1365	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1364	TV	Technology A	<p>All broadcast TV over coax Projector using VGA No signal on 2nd PiP</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1363	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1362	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs

1361	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors functioning.</p>	14225	2-5 - Material Repairs
1360	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors functioning.</p>	14225	2-5 - Material Repairs
1359	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>4 monitors functioning.</p>	14225	2-5 - Material Repairs
1358	TV	Technology A	<p>Combined 2 suites All broadcast TV over coax Both Projectors using VGA</p> <p>Provide (2) (minimum) 3000 lumen, 4K projectors with HDMI inputs. Provide (2) video processors, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side, on each projector.</p> <p>3 monitors functioning.</p>	14225	2-5 - Material Repairs
1357	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors functioning.</p>	14225	2-5 - Material Repairs
1356	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side.</p> <p>2 monitors functioning.</p>	14225	2-5 - Material Repairs

1355	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1354	TV	Technology A	<p>All broadcast TV over coax Projector using VGA</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 2 monitors functioning.</p>	14225	2-5 - Material Repairs
1347	TV	Technology A	<p>All broadcast TV over coax Projector using VGA PiP not working on second input</p> <p>Provide (minimum) 3000 lumen, 4K projector with HDMI inputs. Provide video processor, with control and side by side picture processor. This video processor should have a similar feature set of displaying (2) unique videos, side by side. 3 monitors functioning.</p>	14225	2-5 - Material Repairs
1570	TB	Technology B	<p>Replace Midas Audio Board. Consider Digital models now available by 2023.</p>	592704	2-5 - Material Repairs
1569	TB	Technology B	<p>Replace Harris Platinum Multi format Router. Start looking at IP routing no later than 2022.</p>	948326	2-5 - Material Repairs
1568	TB	Technology B	<p>Replace Control Room Graphics System. The Chyron Graphics system should be considered for replacement no later than 2021.</p>	592704	2-5 - Material Repairs
1567	TB	Technology B	<p>Replace Network Gear (Control Room Hub and Fiber Run). Control room Network Hub is currently a 10gig. Pipe for all operations. Each control station is allowed 1gig. of bandwidth from the router. Extra capacity if allowed by the Network core should be considered. As well as expanded NIC sizes in the various PC's There is currently 1 core fiber totaling 6 fiber lines. A separate core run from a different stadium direction should also be considered for a redundant back up and future expansion.</p>	66383	2-5 - Material Repairs
1566	TB	Technology B	<p>Replace Frame Syncs (total 6). Frame syncs. Most of the frame syncs were replaced in the 2016 rebuild. There are still 6 that were installed in 2010 that should be considered for replacement in 2019.</p>	35562	2-5 - Material Repairs

1550	TL	Technology L	<p>1 ATT rack 3 audio racks</p> <p>Rack 1, floor 12 SM to Mdf WiFi 48pp, 40 cat 5, 4 cat 5e 48pp, 30 cat 5e 48pp, 4 cat 5, 24 cat 6 48pp, 0 cables 48pp, 31 cat 6a</p> <p>Rack 2, wall 12 SM for cams 24pp, 17 cat 6 UPS</p> <p>Wall field 24 MM 62.5 to Mdf 150 pr voice backbone, 72 voice grade station cables on wall mounted patch panels CATV 2 unlabeled BT amps</p> <p>Replace all Cat 5 UTP cabling with Cat 6 UTP cabling. Replace all voice grade station cabling with Cat 6 UTP cabling. Assume: 250' length per each new Cat 6 UTP (1) new rack mounted Cat 6 patch panel per 48 cables. (2) new 3' Cat 6 patch cords per each new Cat 6 UTP cable.</p> <p>Replace all 62.5 micron MM (multimode) fiber optic cabling with new OM3 50 micron fiber optic cabling. Assume: 1000' length of armored, indoor/outdoor cabling.</p>	177337	2-5 - Material Repairs
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			<div>1 NEW Rack</div> <div>1 ATT rack</div> <div></div> <div>Rack 1, floor</div> <div>12 SM to Mdf WiFi</div> <div>48pp, 48 cat 5</div> <div>48pp, 48 cat 5</div> <div>48pp, 48 cat 5</div> <div>48pp, 48 cat 5</div> <div>UPS</div> <div>UPS on floor behind rack</div> <div></div> <div>Rack 2, floor</div> <div>48pp, 48 cat 5e</div> <div>48pp, 31 cat 6</div> <div>48pp, 15 cat 5</div> <div>48pp, 36 cat 6a</div> <div>NFL active electronics and fiber cabling</div> <div></div> <div>Rack 3, wall</div> <div>12 SM for cams</div> <div>24pp, 24 cat 6</div> <div>24pp, 1 cat 6</div> <div>UPS</div> <div></div> <div>Wall field</div> <div>24 MM 62.5 to Mdf</div> <div>500 pr voice backbone, 324 voice grade station cables</div> <div>CATV unlabeled BT amp</div> <div></div> <div>Replace all Cat 5 UTP cabling with Cat 6 UTP cabling.</div> <div>Replace all voice grade station cabling with Cat 6 UTP cabling.</div> <div>Assume:</div> <div>250' length per each new Cat 6 UTP</div>		
1546	TL	Technology L		700784	2-5 - Material Repairs

			1 ATT rack 4 audio racks  Rack 1 12 SM for cams 24pp, 24 cat 6 24pp, 11 cat 6 UPS  Rack 2 12 SM to Mdf WiFi 48pp, 44 cat 5 48pp, 17 cat 5e 48pp, 32 cat 5e 48pp, 0 cables 48pp, 40 cat 6a  Wall field 24 MM 62.5 to Mdf 4D 150 pr voice backbone, 96 voice grade station cables on wall mounted patch panels CATV unlabeled BT amp Abandoned wall mounted audio cabinet  Replace all Cat 5 UTP cabling with Cat 6 UTP cabling. Replace all voice grade station cabling with Cat 6 UTP cabling. Assume: 250' length per each new Cat 6 UTP (1) new rack mounted Cat 6 patch panel per 48 cables. (2) new 3' Cat 6 patch cords per each new Cat 6 UTP cable.  Replace all 62.5 micron MM (multimode) fiber optic cabling with new OM3 50 micron fiber optic cabling. Assume: 1000' length of armored, indoor/outdoor cabling.		
1544	TL	Technology L	1000' length of armored, indoor/outdoor cabling.	213136	2-5 - Material Repairs
1541	TL	Technology L	Rack 112 SM to Mdf WiFi 24 SM to Telco 12 MM 62.5 to Telco 48pp, 5 cat 6, 4 cat 6a 24pp, 5 cat 6 Wall field 50 pr voice backbone, no station cables Replace all 62.5 micron MM (multimode) fiber optic cabling with new OM3 50 micron fiber optic cabling. Assume:1000' length of armored, indoor/outdoor cabling.	8796	2-5 - Material Repairs
1540	TL	Technology L	1.5 VZW racks 2 Browns radio racks 1 audio rack Rack 112 SM to Mdf WiFi 24 SM to Telco 12 MM 62.5 to Telco 48pp, 26 cat 6 24pp, 10 cat 6 48pp, 25 cat 6, 18 cat 6a UPS Rack 2.5 12 SM for cams 24pp, 11 cat 6 Wall field 100 pr voice backbone, no station cables CATV BIDA 100A 30 Replace all 62.5 micron MM (multimode) fiber optic cabling with new OM3 50 micron fiber optic cabling. Assume:1000' length of armored, indoor/outdoor cabling.	8796	2-5 - Material Repairs



1538	TL	Technology L	<p>1 ATT rack 3 audio racks</p> <p>Rack 1 12 SM to Mdf WiFi 48pp, 48 cat 5 48pp, 17 cat 5e 48pp, 38 cat 5e 48pp, 0 cables 48pp, 36 cat 6a</p> <p>Rack 2 12 SM for cams 24pp, 20 cat 6 24pp, 15 cat 6 UPS</p> <p>Abandoned wall mount audio cabinet</p> <p>Wall field 24 MM 62.5 to Mdf 150 pr voice backbone, 96 voice grade station cables on wall mounted patch panels CATV unlabeled BT amp</p> <p>Replace all Cat 5 UTP cabling with Cat 6 UTP cabling. Replace all voice grade station cabling with Cat 6 UTP cabling. Assume: 250' length per each new Cat 6 UTP (1) new rack mounted Cat 6 patch panel per 48 cables. (2) new 3' Cat 6 patch cords per each new Cat 6 UTP cable.</p> <p>Replace all 62.5 micron MM (multimode) fiber optic cabling with new OM3 50 micron fiber optic cabling. Assume:</p>	258959	2-5 - Material Repairs
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1536	TL	Technology Lab	<p>1 audio rack</p> <p>Rack 1, floor 12 SM to Mdf WiFi 48pp, 6 cat 5, 9 cat 5e 48pp, 10 cat 5e, 12 cat 6 48pp, 10 cat 6 48pp, 7 cat 6 24pp, 10 cat 6a</p> <p>Rack 2, wall mount 12 SM for cams 24pp, 3 cat 6 UPS</p> <p>Wall field 24 MM 62.5 to Mdf CATV BHA 75 50 pr voice backbone, 32 voice grade station cables</p> <p>Replace all Cat 5 UTP cabling with Cat 6 UTP cabling. Replace all voice grade station cabling with Cat 6 UTP cabling. Assume: 250' length per each new Cat 6 UTP (1) new rack mounted Cat 6 patch panel per 48 cables. (2) new 3' Cat 6 patch cords per each new Cat 6 UTP cable.</p> <p>Replace all 62.5 micron MM (multimode) fiber optic cabling with new OM3 50 micron fiber optic cabling. Assume: 1000' length of armored, indoor/outdoor cabling.</p>	92946	2-5 - Material Repairs
1534	TL	Technology Lab	<p>Appears abandoned by IT No network electronics</p> <p>2 audio racks</p> <p>Rack 1 48pp, 1 cat 5</p> <p>Wall field 24 MM 62.5 to MDF FO cabinet 4EZ</p> <p>Replace all 62.5 micron MM (multimode) fiber optic cabling with new OM3 50 micron fiber optic cabling. Assume: 1000' length of armored, indoor/outdoor cabling.</p>	24419	2-5 - Material Repairs

1532	TL	Technology L	<p>1 audio rack</p> <p>Rack 1</p> <p>12 SM to Mdf WiFi</p> <p>48pp, 6 cat 5, 2 cat 5e</p> <p>48pp, 4 cat 5e, 15 cat 6</p> <p>48pp, 10 cat 6</p> <p>24pp, 20 cat 6a</p> <p>Rack 2</p> <p>12 SM for cams</p> <p>24pp, 3 cat 6</p> <p>UPS</p> <p>Wall field</p> <p>50 pr voice backbone, 32 voice grade station cables</p> <p>24 MM 62.5 to Mdf</p> <p>CATV GI BHA 75</p> <p>Replace all Cat 5 UTP cabling with Cat 6 UTP cabling.</p> <p>Replace all voice grade station cabling with Cat 6 UTP cabling.</p> <p>Assume:</p> <p>250' length per each new Cat 6 UTP</p> <p>(1) new rack mounted Cat 6 patch panel per 48 cables.</p> <p>(2) new 3' Cat 6 patch cords per each new Cat 6 UTP cable.</p> <p>Replace all 62.5 micron MM (multimode) fiber optic cabling with new OM3 50 micron fiber optic cabling.</p> <p>Assume:</p> <p>1000' length of armored, indoor/outdoor cabling.</p>	76027	2-5 - Material Repairs
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1528	TL	Technology L	<p>1 VZW rack 1 audio rack</p> <p>Rack 1 12 SM to Mdf WiFi 48pp, 4 cat 5, 9 cat 5e 48pp, 19 cat 6 48pp, 10 cat 6 24pp, 19 cat 6a 24pp, 3 cat 6 UPS</p> <p>Wall field 50 pr voice backbone, 45 voice grade station cables 24 MM 62.5 to Mdf CATV GI BHA 75 amp</p> <p>Replace all Cat 5 UTP cabling with Cat 6 UTP cabling. Replace all voice grade station cabling with Cat 6 UTP cabling. Assume: 250' length per each new Cat 6 UTP (1) new rack mounted Cat 6 patch panel per 48 cables. (2) new 3' Cat 6 patch cords per each new Cat 6 UTP cable.</p> <p>Replace all 62.5 micron MM (multimode) fiber optic cabling with new OM3 50 micron fiber optic cabling. Assume: 1000' length of armored, indoor/outdoor cabling.</p>	94064	2-5 - Material Repairs
1524	TL	Technology L	<p>2 audio cabinets, amps</p> <p>Rack 1 6 MM 62.5 to 3D 48pp, 48 cat 6 24pp, 9 cat 6, 3 cat 6a 12 SM to Mdf WiFi 24pp, 11 cat 6</p> <p>Replace all 62.5 micron MM (multimode) fiber optic cabling with new OM3 50 micron fiber optic cabling. Assume: 1000' length of armored, indoor/outdoor cabling.</p>	10503	2-5 - Material Repairs

			<div>1 audio rack</div> <div>Rack 1, floor mounted</div> <div>12 SM to Mdf WiFi</div> <div>48pp, 8 cat 5, 2 cat 5e</div> <div>48pp, 33 cat 6</div> <div>48pp, 18 cat 6</div> <div>48pp, 3 cat 6</div> <div>24pp, 7 cat 6a</div> <div>Rack 2, wall</div> <div>12 SM for cams</div> <div>24pp, 12 cat 6</div> <div>UPS</div> <div>Wall field</div> <div>24 MM 62.5 to Mdf</div> <div>6 MM 62.5 to 3W</div> <div>CATV BIDA 86a 43p</div> <div>100 pr voice backbone, 48 voice grade station cables</div> <div>Replace all Cat 5 UTP cabling with Cat 6 UTP cabling.</div> <div>Replace all voice grade station cabling with Cat 6 UTP cabling.</div> <div>Assume:</div> <div>250' length per each new Cat 6 UTP</div> <div>(1) new rack mounted Cat 6 patch panel per 48 cables.</div> <div>(2) new 3' Cat 6 patch cords per each new Cat 6 UTP cable.</div> <div>Replace all 62.5 micron MM (multimode) fiber optic cabling with new OM3 50 micron fiber optic cabling.</div> <div>Assume:</div> <div>1000' length of armored, indoor/outdoor cabling.</div>		
1522	TL	Technology L		104567	2-5 - Material Repairs

			<p>1 ATT rack</p> <p>Rack 1</p> <p>12 SM to Mdf WiFi</p> <p>48pp, 48 cat 5</p> <p>48pp, 40 cat 5</p> <p>48pp, 28 cat 5e</p> <p>48pp, 47 cat 6a</p> <p>Rack 2</p> <p>12 SM for cams</p> <p>24pp, 8 cat 6</p> <p>UPS</p> <p>Wall field</p> <p>24 MM 62.5 duplex SC</p> <p>200 pr voice backbone, 96 voice grade station cables</p> <p>Catv BT unlabeled</p> <p>Replace all Cat 5 UTP cabling with Cat 6 UTP cabling.</p> <p>Replace all voice grade station cabling with Cat 6 UTP cabling.</p> <p>Assume:</p> <p>250' length per each new Cat 6 UTP</p> <p>(1) new rack mounted Cat 6 patch panel per 48 cables.</p> <p>(2) new 3' Cat 6 patch cords per each new Cat 6 UTP cable.</p> <p>Replace all 62.5 micron MM (multimode) fiber optic cabling with new OM3 50 micron fiber optic cabling.</p> <p>Assume:</p> <p>1000' length of armored, indoor/outdoor cabling.</p>		
1520	TL	Technology L		273507	2-5 - Material Repairs
			<p>No TGB</p> <p>Provide fs for all conduits, 20 4"c</p> <p>Provide fs for CT new bricks</p> <p>No cooling, hot</p> <p>Provide TGB</p> <p>Bond all racks and cable runways to TGB</p> <p>Provide firestopping for all conduits, 20 4"c</p> <p>Provide firestopping for 18"CT, new bricks</p> <p>Provide cooling</p>		
1519	TL	Technology L		22523	2-5 - Material Repairs

			<p>1 ATT rack</p> <p>Rack 1, floor</p> <p>12 SM to Mdf WiFi</p> <p>48pp, 30 cat 5</p> <p>48pp, 16 cat 5e</p> <p>24pp, 12 cat 6a</p> <p>Rack 2, wall</p> <p>12 SM for cams</p> <p>24pp, 15 cat 6</p> <p>UPS</p> <p>Wall field</p> <p>50 pr voice backbone, 45 voice grade station cables</p> <p>Fiber LIU 24 MM 62.5</p> <p>Catv BT unlabeled</p> <p>Replace all Cat 5 UTP cabling with Cat 6 UTP cabling.</p> <p>Replace all voice grade station cabling with Cat 6 UTP cabling.</p> <p>Assume:</p> <p>250' length per each new Cat 6 UTP</p> <p>(1) new rack mounted Cat 6 patch panel per 48 cables.</p> <p>(2) new 3' Cat 6 patch cords per each new Cat 6 UTP cable.</p> <p>Replace all 62.5 micron MM (multimode) fiber optic cabling with new OM3 50 micron fiber optic cabling.</p> <p>Assume:</p> <p>1000' length of armored, indoor/outdoor cabling.</p>		
1518	TL	Technology L		130993	2-5 - Material Repairs
			<p>No TGB</p> <p>Fs all conduits, 17 4"c</p> <p>Provide UPS for network electronics</p> <p>Provide fs for 12" CT new bricks</p> <p>Water leaking from pipes</p> <p>Provide TGB</p> <p>Bond all racks and cable runways to TGB</p> <p>Provide firestopping for all conduits, 17 4"c</p> <p>Provide firestopping for 12"CT, new bricks</p> <p>Provide UPS for active network electronics</p> <p>Provide cooling</p> <p>Repair leak</p>		
1517	TL	Technology L		28687	2-5 - Material Repairs

1516	TL	Technology L	<p>1 ATT rack</p> <p>Rack 1, floor 48pp, 26 cat 5 48pp, 20 cat 5e 24pp, 9 cat 6a</p> <p>Rack 2, wall mount 12 SM for cams 24pp, 16 cat 6 UPS</p> <p>Wall field Fiber LIU, 24 MM 62.5 duplex SC 6 MM 62.5 simplex SC 50 pr voice backbone, 40 voice grade station cables Catv, BT unlabeled</p> <p>Replace all Cat 5 UTP cabling with Cat 6 UTP cabling. Replace all voice grade station cabling with Cat 6 UTP cabling. Assume: 250' length per each new Cat 6 UTP (1) new rack mounted Cat 6 patch panel per 48 cables. (2) new 3' Cat 6 patch cords per each new Cat 6 UTP cable.</p> <p>Replace all 62.5 micron MM (multimode) fiber optic cabling with new OM3 50 micron fiber optic cabling. Assume: 1000' length of armored, indoor/outdoor cabling. Replace batteries in the Vertiv NetSure 5000. One battery has deteriorated and cracked</p>	135900	2-5 - Material Repairs
1514	TL	Technology L	<p>AV rack for Kardiac Club</p> <p>Rack 1 12 SM to Mdf WiFi 48pp, 42 cat 5e 48pp, 48 cat 6 48pp, 46 cat 6a</p> <p>Wall field 24 MM 62.5 to MDF</p> <p>Replace all 62.5 micron MM (multimode) fiber optic cabling with new OM3 50 micron fiber optic cabling. Assume: 1000' length of armored, indoor/outdoor cabling.</p>	24419	2-5 - Material Repairs



			<p>1 VZW rack 1 ATT rack</p> <p>Rack 1 12 SM for cams 24pp, 13 cat 6 UPS</p> <p>Rack 2 12 SM to Mdf 48pp,24 cat 5, 20 cat 5e 48pp, 40 cat 5e 48pp,36 cat 5e 48pp, 46 cat 6a</p> <p>Wall field 200 pr voice backbone, 102 voice grade station cables Fiber LIU 24 MM 62.5 SC duplex 6 MM 62.5 SC simplex Catv, BT amp unlabeled</p> <p>Replace all Cat 5 UTP cabling with Cat 6 UTP cabling. Replace all voice grade station cabling with Cat 6 UTP cabling. Assume: 250' length per each new Cat 6 UTP (1) new rack mounted Cat 6 patch panel per 48 cables. (2) new 3' Cat 6 patch cords per each new Cat 6 UTP cable.</p> <p>Replace all 62.5 micron MM (multimode) fiber optic cabling with new OM3 50 micron fiber optic cabling. Assume: 1000' length of armored, indoor/outdoor cabling.</p>		
1512	TL	Technology L		272820	2-5 - Material Repairs

1510	TL	Technology L	<p>1 VZW Rack</p> <p>Rack 1 only  12 SM for cams  24pp, 24 cat 6  24pp, 6 cat 6  UPS</p> <p>Wall field  24 MM 62.5 to Mdf  50pr voice backbone, 14 voice grade station cables</p> <p>Replace all voice grade station cabling with Cat 6 UTP cabling.  Assume:  250' length per each new Cat 6 UTP  (1) new rack mounted Cat 6 patch panel per 48 cables.  (2) new 3' Cat 6 patch cords per each new Cat 6 UTP cable.</p> <p>Replace all 62.5 micron MM (multimode) fiber optic cabling with new OM3 50 micron fiber optic cabling.  Assume:  1000' length of armored, indoor/outdoor cabling.</p>	42456	2-5 - Material Repairs
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1508	TL	Technology L	<p>Rack 1 12 SM for cameras 24pp, 19 cat 6 UPS</p> <p>Rack 2 12 SM to Mdf WiFi 48pp, 7 cat 5e, 1 cat 5 48pp, 32 cat 6 48pp, 18 cat 6 24pp, 16 cat 6 24pp, 22 cat 6a</p> <p>Wall field 50 pr voice backbone, 27 voice grade station cables Catv, BHA 74 and BIDA 86A 43 Fiber LIU 24 MM, 62.5</p> <p>Replace all Cat 5 UTP cabling with Cat 6 UTP cabling. Replace all voice grade station cabling with Cat 6 UTP cabling. Assume: 250' length per each new Cat 6 UTP (1) new rack mounted Cat 6 patch panel per 48 cables. (2) new 3' Cat 6 patch cords per each new Cat 6 UTP cable.</p> <p>Replace all 62.5 micron MM (multimode) fiber optic cabling with new OM3 50 micron fiber optic cabling. Assume: 1000' length of armored, indoor/outdoor cabling.</p>	65956	2-5 - Material Repairs
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1503	TL	Technology L	<p>1 VZW rack</p> <p>Rack 1</p> <p>12 SM for cams</p> <p>24pp, 24 cat 6</p> <p>24pp, 10 cat 6</p> <p>UPS</p> <p>Rack 2</p> <p>12 SM to Mdf WiFi</p> <p>48pp, 4 cat 5</p> <p>48pp, 4 cat 5</p> <p>48pp, 38 cat 6</p> <p>48pp, 17 cat 6</p> <p>48pp, 16 cat 6a</p> <p>Wall field</p> <p>100 pr backbone, 76 voice grade station cables</p> <p>Fiber LIU, 24 MM, 62.5 to Mdf</p> <p>CATV</p> <p>1 BHA 75</p> <p>2 BT BIDA 86a 43</p> <p>Replace all Cat 5 UTP cabling with Cat 6 UTP cabling.</p> <p>Replace all voice grade station cabling with Cat 6 UTP cabling.</p> <p>Assume:</p> <p>250' length per each new Cat 6 UTP</p> <p>(1) new rack mounted Cat 6 patch panel per 48 cables.</p> <p>(2) new 3' Cat 6 patch cords per each new Cat 6 UTP cable.</p> <p>Replace all 62.5 micron MM (multimode) fiber optic cabling with new OM3 50 micron fiber optic cabling.</p> <p>Assume:</p> <p>1000' length of armored, indoor/outdoor cabling.</p>	123159	2-5 - Material Repairs
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1498	TL	Technology L	<p>2 NEW RACKS</p> <p>Rack 1 12 strand SM to MDF WiFi 48pp, 18 cat 5 48pp, 19 cat 6 48pp 22 cat 5e 48pp 16 cat 6a</p> <p>Rack 2 12 SM, camera 24pp, 12 cat 6</p> <p>Wall Fiber LIU SC, to Mdf, 24 mm 62.5 Copper voice 50 pr, 48 voice grade station cables on 110 CATV BHA 75</p> <p>Replace all Cat 5 UTP cabling with Cat 6 UTP cabling. Replace all voice grade station cabling with Cat 6 UTP cabling. Assume: 250' length per each new Cat 6 UTP (1) new rack mounted Cat 6 patch panel per 48 cables. (2) new 3' Cat 6 patch cords per each new Cat 6 UTP cable.</p> <p>Replace all 62.5 micron MM (multimode) fiber optic cabling with new OM3 50 micron fiber optic cabling. Assume: 1000' length of armored, indoor/outdoor cabling.</p>	113959	2-5 - Material Repairs
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1496	TL	Technology Lab	<p>Belden 1857a super flex stranded rg59 triax with kings 7705 3 9931 connector</p> <p>Rack 1  12SM to MDF WiFi  2 48pp cat5  1 48pp cat 5e  124pp cat 6  1 24p 10 cat6a, shielded, 11 cat 6  1 48 with cat 6 and 50% cat 5  No ups</p> <p>2nd rack  18SM  3 24 cat 6 plus 1 cat 6 on 4th pp  Back wall  24mm 62.5 to MDF SC  12mm 62.5 ST  150pr feed, 120 voice grade station cabling  Catv BHA 75 GI amp</p> <p>Replace all Cat 5 UTP cabling with Cat 6 UTP cabling.  Replace all voice grade station cabling with Cat 6 UTP cabling.  Assume:  250' length per each new Cat 6 UTP  (1) new rack mounted Cat 6 patch panel per 48 cables.  (2) new 3' Cat 6 patch cords per each new Cat 6 UTP cable.</p> <p>Replace all 62.5 micron MM (multimode) fiber optic cabling with OM3 50 micron fiber optic cabling.  Assume:  1000' length of armored, indoor/outdoor cabling.</p>	346276	2-5 - Material Repairs
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			12 SM to Mdf WiFi rack 12 MM 62.5 to mdf 48pp Cat5 48pp, 48 cat 5 48pp, 48 cat 5 24 pp, 18 cat 5e, 6 Cat6 48pp, 45 cat 6a Ups  Wall field CATV 1 BT amp BoDA Appears to feed south and west Truck dock video 25pr voice backbone Truck dock audio 25pr voice backbone 400pr backbone 100pr backbone tie lines 60 analog voice grade station cables 420 voice grade station cables  Replace all Cat 5 UTP cabling with Cat 6 UTP cabling. Replace all voice grade station cabling with Cat 6 UTP cabling. Assume: 250' length per each new Cat 6 UTP (1) new rack mounted Cat 6 patch panel per 48 cables. (2) new 3' Cat 6 patch cords per each new Cat 6 UTP cable.  Replace all 62.5 micron MM (multimode) fiber optic cabling with new OM3 50 micron fiber optic cabling. Assume: 1000' length of armored, indoor/outdoor cabling.		
1492	TL	Technology L		707731	2-5 - Material Repairs
1629	TB	Video Distribu	Replace existing broadband video distribution with IPTV	10185000	2-5 - Material Repairs
			Upgrade production switcher and console		
1627	TB	Video Produc	Upgrade Video Router	1565000	2-5 - Material Repairs
1628	TB	Videoboard P	Replace video boards and associated infrastructure	14400000	2-5 - Material Repairs
			TOTAL	56887415	

Task #	Stamp	Title	Description	Cost	Time Period
796	AG	Architectural General	Seating at exterior balconies of Suites. Visible rust on standard feet and bases. No observed spring failure or damaged vinyl coverings (addressed/completed per 2018 Audit). Replace seating due to rust as noted. Quantity: 3,000 seats, Quad B.	\$2,232,000	6-10 - Material Repairs
592	AG	Architectural General	Seating at exterior balconies of Suites. Visible rust on standard feet and bases. No observed spring failure or damaged vinyl coverings (addressed/completed per 2018 Audit). Replace seating due to rust as noted. Quantity: 3,000 seats, Quad A.	\$2,232,000	6-10 - Material Repairs
588	AG	Architectural General	Seating at exterior balconies of Suites. Visible rust on standard feet and bases. No observed spring failure or damaged vinyl coverings (addressed/completed per 2018 Audit). Replace seating due to rust as noted. Quantity: 3,000 seats, Quad D.	\$2,232,000	6-10 - Material Repairs
578	AG	Architectural General	Seating at exterior balconies of Suites. Visible rust on standard feet and bases. No observed spring failure or damaged vinyl coverings (addressed/completed per 2018 Audit). Replace seating due to rust as noted. Quantity: 3,000 seats, Quad C.	\$2,232,000	6-10 - Material Repairs
573	AG	Architectural General	Seating at exterior balconies of Suites. Visible rust on standard feet and bases. No observed spring failure or damaged vinyl coverings (addressed/completed per 2018 Audit). Replace seating due to rust as noted. Quantity: 3,000 seats, Quad B.	\$2,232,000	6-10 - Material Repairs
569	AG	Architectural General	Seating at exterior balconies of Suites. Visible rust on standard feet and bases. No observed spring failure or damaged vinyl coverings (addressed/completed per 2018 Audit). Replace seating due to rust as noted. Quantity: 3,000 seats, Quad A.	\$2,232,000	6-10 - Material Repairs
568	AG	Architectural General	Seating at exterior balconies of Suites. Visible rust on standard feet and bases. No observed spring failure or damaged vinyl coverings (addressed/completed per 2018 Audit). Replace seating due to rust as noted. Quantity: 3,000 seats, Quad D.	\$2,232,000	6-10 - Material Repairs
524	AG	Architectural General	Seating replacement: Rusting of standard feet and bases. Seat standards have spring failure. Recommend complete seat replacement. Assume 7,250 seats Quad C, Lower Bowl.	\$5,394,000	6-10 - Material Repairs
523	AG	Architectural General	Seating replacement: Rusting of standard feet and bases. Seat standards have spring failure. Recommend complete seat replacement. Assume 7,250 seats Quad B, Lower Bowl.	\$5,394,000	6-10 - Material Repairs
519	AG	Architectural General	Seating replacement: Rusting of standard feet and bases. Seat standards have spring failure. Recommend complete seat replacement. Assume 7,250 seats Quad A, Lower Bowl.	\$5,394,000	6-10 - Material Repairs
518	AG	Architectural General	Seating replacement: Rusting of standard feet and bases. Seat standards have spring failure. Recommend complete seat replacement. Assume 7,250 seats Quad D, Lower Bowl.	\$5,394,000	6-10 - Material Repairs
480	CC	Civil Concrete	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Non-structural crack = 75 LF  Guardrail post sealant = 190 EA  Backer rod &amp; sealant = 200 LF  Cove joint sealant = 1,000 LF  Control joint sealant = 200 LF  Overhead &amp; Vertical patching = 40 SF  Horizontal patching = 150 SF  Structural crack repair = 40 LF  Guardrail post concrete repair = 20 EA  Curb replacement = 40 LF</p>	\$113,014	6-10 - Material Repairs



477	CC	Civil Concrete	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Non-structural crack = 200 LF  Guardrail post sealant = 60 EA  Backer rod &amp; sealant = 700 LF  Cove joint sealant = 900 LF  Control joint sealant = 100 LF  Overhead &amp; Vertical patching = 40 SF  Horizontal patching = 300 SF  Curb replacement = 30 LF</p>	\$155,496	6-10 - Material Repairs
474	CC	Civil Concrete	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Non-structural crack = 300 LF  Backer rod &amp; sealant = 700 LF  Cove joint sealant = 50 LF  Control joint sealant = 500 LF  Horizontal patching = 50 SF  Structural crack repair = 50 LF  Guardrail post concrete repair = 10 EA  Curb replacement = 100 LF</p>	\$77,004	6-10 - Material Repairs
180	CC	Civil Concrete	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Non-structural crack repair 50 LF  Guardrail post sealant repair 50 EA  Backer rod &amp; sealant 50 LF  Cove joint sealant 1,400 LF  Control joint sealant 200 LF  Overhead &amp; vertical patching 40 SF  Horizontal patching 100 SF  Structural crack repair 50 LF  Guardrail post concrete repair 15 EA  Curb replacement 50 LF</p>	\$97,464	6-10 - Material Repairs
795	CL	Civil Landscape	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Irrigation: Replace remaining 6504 rotor sprinklers (22 total). Replace all lateral piping (1,800 LF).</p>	\$133,622	6-10 - Material Repairs
793	CL	Civil Landscape	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Irrigation: Replace irrigation controls on entire site with a new two-wire system. In this quadrant, replace existing controller with one (1) two-wire ET-capable controller (including a minimum of 1,100 linear feet of rewiring) and install 8 decoders for solenoid valves. (Please note, all solenoid valves should also be replaced regardless of a two-wire system conversion; therefore, solenoid valve replacement has been called out as a separate issue).</p>	\$18,154	6-10 - Material Repairs
792	CL	Civil Landscape	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Irrigation: Replace remaining 6504 rotor sprinklers (30 total). Replace all lateral piping (2,100 LF).</p>	\$158,472	6-10 - Material Repairs

790	CL	Civil Landscape	Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.  Irrigation: Replace irrigation controls on entire site with a new two-wire system. In this quadrant, replace existing controller with one (1) two-wire ET-capable controller (including a minimum of 720 linear feet of rewiring) and install 4 decoders for solenoid valves. (Please note, all solenoid valves should also be replaced regardless of a two-wire system conversion; therefore, solenoid valve replacement has been called out as a separate issue).	\$11,606	6-10 - Material Repairs
789	CL	Civil Landscape	Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.  Irrigation: Replace remaining 6504 rotor sprinklers (21 total). Replace all lateral piping (2,200 LF).	\$159,811	6-10 - Material Repairs
787	CL	Civil Landscape	Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.  Irrigation: Replace irrigation controls on entire site with a new two-wire system. In this quadrant, replace a minimum of 690 linear feet of existing wire and install 5 decoders for solenoid valves. (Please note, all solenoid valves should also be replaced regardless of a two-wire system conversion; therefore, solenoid valve replacement has been called out as a separate issue).	\$11,383	6-10 - Material Repairs
726	CL	Civil Landscape	Ornamental Pear trees are reaching the end of their typical life expectancy of 20-30 years. Remove four (4) trees and replace them with approved urban-tolerant species (minimum 3" caliper).	\$5,920	6-10 - Material Repairs
723	CL	Civil Landscape	Ornamental Pear trees are reaching the end of their typical life expectancy of 20-30 years. Remove four (4) trees and replace them with approved urban-tolerant species (minimum 3" caliper).	\$5,952	6-10 - Material Repairs
717	CL	Civil Landscape	Ornamental Pear trees are reaching the end of their typical life expectancy of 20-30 years. Remove four (4) trees and replace them with approved urban-tolerant species (minimum 3" caliper).	\$5,952	6-10 - Material Repairs
712	CL	Civil Landscape	Ornamental Pear trees are reaching the end of their typical life expectancy of 20-30 years. Remove four (4) trees and replace them with approved urban-tolerant species (minimum 3" caliper).	\$5,952	6-10 - Material Repairs
686	CL	Civil Landscape	Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.  Irrigation: Replace irrigation controls on entire site with a new two-wire system. In this quadrant, replace existing controller with one (1) two-wire ET-capable controller (including a minimum of 830 linear feet of rewiring) and install 9 decoders for solenoid valves. (Please note, all solenoid valves should also be replaced regardless of a two-wire system conversion; therefore, solenoid valve replacement has been called out as a separate issue).	\$14,359	6-10 - Material Repairs
685	CL	Civil Landscape	Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.  Irrigation: Replace remaining 6504 rotor sprinklers (50 total). Replace all lateral piping (2,500 LF).	\$197,160	6-10 - Material Repairs
1598	HE	HVAC Equipment	Liebert unit in room is an older unit and not the standard of the ductless splits currently installed in the stadium.	\$35,712	6-10 - Material Repairs
1584	SS	Structural Concrete/Steel	Metal gutter replacement = 40 LF Sub-roof replacement = 100 SF	\$7,400	6-10 - Material Repairs
1581	SS	Structural Concrete/Steel	Metal gutter replacement = 0 LF Sub-roof replacement = 100 SF	\$2,500	6-10 - Material Repairs
1578	SS	Structural Concrete/Steel	Metal gutter replacement = 0 LF Sub-roof replacement = 100 SF	\$2,480	6-10 - Material Repairs
869	SS	Structural Concrete/Steel	Overhead / Vertical Patching = 40 SF Horizontal Patching = 150 SF Structural crack = 40 LF Guardrail post concrete = 20 EA Touch up painting = 0 SF Metal gutter replacement = 0 LF Curb replacement = 40 LF	\$51,600	6-10 - Material Repairs

866	SS	Structural Concrete/Steel	Overhead / Vertical Patching = 40 SF Horizontal Patching = 300 SF Structural crack = 0 LF Guardrail post concrete = 0 EA Touch up painting = 0 SF Metal gutter replacement = 0 LF Curb replacement = 30 LF	\$50,600	6-10 - Material Repairs
863	SS	Structural Concrete/Steel	Overhead / Vertical Patching = 0 SF Horizontal Patching = 50 SF Structural crack = 50 LF Guardrail post concrete = 10 EA Touch up painting = 0 SF Metal gutter replacement = 0 LF Curb replacement = 100 LF	\$38,100	6-10 - Material Repairs
860	SS	Structural Concrete/Steel	Overhead / Vertical Patching = 40 SF Horizontal Patching = 100 SF Structural crack = 50 LF Guardrail post concrete = 15 EA Touch up painting = 0 SF Metal gutter replacement = 0 LF Curb replacement = 50 LF	\$47,700	6-10 - Material Repairs
857	SS	Structural Concrete/Steel	Overhead / Vertical Patching = 100 SF Horizontal Patching = 50 SF Structural crack = 50 LF Guardrail post concrete = 10 EA Touch up painting = 0 SF Metal gutter replacement = 0 LF Step replacement = 5 EA	\$49,300	6-10 - Material Repairs
854	SS	Structural Concrete/Steel	Overhead / Vertical Patching = 100 SF Horizontal Patching = 50 SF Structural crack = 50 LF Guardrail post concrete = 10 EA Touch up painting = 0 SF Metal gutter replacement = 0 LF Step replacement = 5 EA Sub-roof replacement = 100 SF	\$51,800	6-10 - Material Repairs
851	SS	Structural Concrete/Steel	Overhead / Vertical Patching = 100 SF Horizontal Patching = 50 SF Structural crack = 50 LF Guardrail post concrete = 10 EA Touch up painting = 0 SF Metal gutter replacement = 0 LF Step replacement = 5 EA Sub-roof replacement = 100 SF	\$51,800	6-10 - Material Repairs
848	SS	Structural Concrete/Steel	Overhead / Vertical Patching = 100 SF Horizontal Patching = 50 SF Structural crack = 50 LF Guardrail post concrete = 10 EA Touch up painting = 0 SF Metal gutter replacement = 0 LF Step replacement = 5 EA	\$49,300	6-10 - Material Repairs

845	SS	Structural Concrete/Steel	Overhead / Vertical Patching = 400 SF Horizontal Patching = 100 SF Structural crack = 200 LF Guardrail post concrete = 10 EA Touch up painting = 0 SF Metal gutter replacement = 100 LF Step replacement = 8 EA Sub-roof replacement = 200 SF	\$182,000	6-10 - Material Repairs
842	SS	Structural Concrete/Steel	Overhead / Vertical Patching = 400 SF Horizontal Patching = 100 SF Structural crack = 200 LF Guardrail post concrete = 10 EA Touch up painting = 0 SF Metal gutter replacement = 0 LF Step replacement = 8 EA Sub-roof replacement = 100 SF	\$167,200	6-10 - Material Repairs
838	SS	Structural Concrete/Steel	Overhead / Vertical Patching = 400 SF Horizontal Patching = 100 SF Structural crack = 200 LF Guardrail post concrete = 10 EA Touch up painting = 0 SF Metal gutter replacement = 0 LF Step replacement = 8 EA Sub-roof replacement = 100 SF	\$167,200	6-10 - Material Repairs
835	SS	Structural Concrete/Steel	Overhead / Vertical Patching = 400 SF Horizontal Patching = 100 SF Structural crack = 200 LF Guardrail post concrete = 10 EA Touch up painting = 0 SF Metal gutter replacement = 100 LF Step replacement = 8 EA Sub-roof replacement = 100 SF	Unspecified	6-10 - Material Repairs
695	SS	Structural Concrete/Steel	Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Includes half of West Endzone Seating and 300 Level Concourse.  Overhead or Vertical Patching = 100 SF Horizontal Patching = 80 SF Structural Crack = 200 LF Guard Post Concrete Repair = 20 Each Step Replacement = 5 Each Metal Gutter Replacement = 250 FT Metal Sub Roof = 200 SF Touch Up Painting = 4000 SF CMU Repair = 30 SF	\$209,870	6-10 - Material Repairs

692	SS	Structural Concrete/Steel	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Includes half of West Endzone Seating and 300 Level Concourse.</p> <p>Overhead or Vertical Patching = 100 SF Horizontal Patching = 60 SF Structural Crack = 200 LF Guard Post Concrete Repair = 20 Each Step Replacement = 5 Each Metal Gutter Replacement = 150 FT Metal Sub Roof = 100 SF Touch Up Painting = 4000 SF CMU Repair = 30 SF</p>	\$192,510	6-10 - Material Repairs
679	SS	Structural Concrete/Steel	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Includes half of East Endzone Seating and 300 Level Concourse.</p> <p>Overhead or Vertical Patching = 140 SF Horizontal Patching = 75 SF Structural Crack = 250 LF Guard Post Concrete Repair = 25 Each Step Replacement = 5 Each Metal Gutter Replacement = 150 FT Metal Sub Roof = 100 SF Touch Up Painting = 3000 SF CMU Repair = 30 SF</p>	\$199,888	6-10 - Material Repairs
669	SS	Structural Concrete/Steel	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Includes half of East Endzone Seating and 300 Level Concourse.</p> <p>Overhead or Vertical Patching = 140 SF Horizontal Patching = 140 SF Structural Crack = 200 LF Guard Post Concrete Repair = 25 Each Step Replacement = 5 Each Metal Gutter Replacement = 250 FT Metal Sub Roof = 200 SF Touch Up Painting = 4000 SF CMU Repair = 30 SF</p>	\$228,098	6-10 - Material Repairs
638	SS	Structural Concrete/Steel	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Overhead or Vertical Patching = 20 SF Horizontal Patching = 20 SF Guardrail Post Concrete Repair = 5 Each Touch Up Painting = 2000 SF</p>	\$46,004	6-10 - Material Repairs
634	SS	Structural Concrete/Steel	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Overhead or Vertical Patching = 15 SF Horizontal Patching = 15 SF Metal Gutter Replacement = 30 FT Metal Sub Roof Replacement = 100 SF</p>	\$11,408	6-10 - Material Repairs

621	SS	Structural Concrete/Steel	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Northeast quadrant includes concourse above 300 level seating at East Endzone.</p> <p>Overhead or Vertical Patching = 75 SF Horizontal Patching = 30 SF Guard Post Concrete Repair = 2 Each Touch Up Painting = 1000 SF Metal Sub Roof Replacement = 100 SF</p>	\$42,284	6-10 - Material Repairs
616	SS	Structural Concrete/Steel	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Northeast quadrant includes concourse above 300 level seating &amp; stair up to Sponsorship Deck at East Endzone.</p> <p>Overhead or Vertical Patching = 50 SF Horizontal Patching = 30 SF Touch Up Painting = 3000 SF</p>	\$70,680	6-10 - Material Repairs
508	SS	Structural Concrete/Steel	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Overhead or Vertical Patching = 50 SF Horizontal Patching = 40 SF Guardrail Post Concrete Repair = 5 Each Touch Up Painting = 4000 SF CMU Repair = 50 SF</p>	\$97,030	6-10 - Material Repairs
499	SS	Structural Concrete/Steel	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Overhead or Vertical Patching = 60 SF Horizontal Patching = 60 SF Guardrail Post Concrete Repair = 6 Each Touch Up Painting = 4000 SF CMU Repair = 50 SF</p>	\$102,114	6-10 - Material Repairs
496	SS	Structural Concrete/Steel	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Overhead or Vertical Patching = 60 SF Horizontal Patching = 100 SF Guardrail Post Concrete Repair = 5 Each Touch Up Painting = 4000 SF CMU Repair = 100 SF</p>	\$111,352	6-10 - Material Repairs
490	SS	Structural Concrete/Steel	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. (Northwest includes west endzone connection)</p> <p>Overhead or Vertical Patching = 40 SF Horizontal Patching = 100 SF Guardrail Post Concrete Repair = 5 Each Touch Up Painting = 4000 SF CMU Repair = 100 SF</p>	\$106,888	6-10 - Material Repairs
484	SS	Structural Concrete/Steel	<p>Overhead or Vertical Patching = 30 SF Horizontal Patching = 10 SF Guard Post Concrete Repair = 5 Each Touch Up Painting = 400 SF</p>	\$17,236	6-10 - Material Repairs

			<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Overhead or Vertical Patching = 140 SF  Horizontal Patching = 75 SF  Structural Crack = 150 LF  Guard Post Concrete Repair = 20 Each  Step Replacement = 8 Each  Touch Up Painting = 2000 SF  Metal Gutter Replacement = 150 FT  Metal Sub Roof = 500 SF</p>		
207	SS	Structural Concrete/Steel		\$162,130	6-10 - Material Repairs
			<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Overhead or Vertical Patching = 140 SF  Horizontal Patching = 75 SF  Structural Crack = 150 LF  Guard Post Concrete Repair = 20 Each  Step Replacement = 8 Each  Touch Up Painting = 2000 SF  Metal Gutter Replacement = 150 FT  Metal Sub Roof = 500 SF</p>		
200	SS	Structural Concrete/Steel		\$162,130	6-10 - Material Repairs
			<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Overhead or Vertical Patching = 140 SF  Horizontal Patching = 75 SF  Structural Crack = 150 LF  Guard Post Concrete Repair = 20 Each  Step Replacement = 8 Each  Metal Gutter Replacement = 250 FT  Metal Sub Roof = 500 SF  Touch Up Painting = 2000 SF</p>		
193	SS	Structural Concrete/Steel		\$174,530	6-10 - Material Repairs
			<p>Repair quantities given within this stamp represent total values for Upper Deck within this quadrant. See separate stamp for sponsorship deck.</p> <p>Overhead or Vertical Patching = 140 SF  Horizontal Patching = 75 SF  Structural Crack = 150 LF  Guard Post Concrete Repair = 20 Each  Step Replacement = 8 Each  Touch Up Painting = 2000 SF  Metal Gutter Replacement = 250 FT  Metal Sub Roof = 500 SF</p>		
126	SS	Structural Concrete/Steel		\$168,578	6-10 - Material Repairs
			<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Touch Up Painting of Roof Deck - 4000 SF  Touch Up Painting of Structural Steel &amp; Light Rack Framing/Catwalk - 2000 SF  Clean Out Gutter - 450 FT  Clean Out Drainpipes - 10 Locations</p>		
112	SS	Structural Concrete/Steel		\$120,590	6-10 - Material Repairs

110	SS	Structural Concrete/Steel	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Touch Up Painting of Roof Deck - 4000 SF  Touch Up Painting of Structural Steel &amp; Light Rack Framing/Catwalk - 2000 SF  Clean Out Gutter - 450 FT  Clean Out Drainpipes - 10 Locations</p>	\$120,590	6-10 - Material Repairs
108	SS	Structural Concrete/Steel	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Touch Up Painting of Roof Deck - 4000 SF  Touch Up Painting of Structural Steel &amp; Light Rack Framing/Catwalk - 2000 SF  Clean Out Gutter - 450 FT  Clean Out Drainpipes - 10 Locations</p>	\$120,590	6-10 - Material Repairs
102	SS	Structural Concrete/Steel	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Touch Up Painting of Roof Deck - 4000 SF  Touch Up Painting of Structural Steel &amp; Light Rack Framing/Catwalk - 2000 SF  Clean Out Gutter - 450 FT  Clean Out Drainpipes - 10 Locations</p>	\$120,590	6-10 - Material Repairs
832	SJ	Structural Joints	<p>Non-structural crack = 75 LF  Guardrail post sealant = 190 EA  Backer rod &amp; sealant = 200 LF  Cove joint = 1,000 LF  Precast joint sealant = 0 LF  Precast sealant plugs = 0 EA  Control joint sealant = 200 LF</p>	\$56,400	6-10 - Material Repairs
829	SJ	Structural Joints	<p>Non-structural crack = 200 LF  Guardrail post sealant = 60 EA  Backer rod &amp; sealant = 700 LF  Cove joint = 900 LF  Precast joint sealant = 0 LF  Precast sealant plugs = 0 EA  Control joint sealant = 100 LF</p>	\$68,900	6-10 - Material Repairs
826	SJ	Structural Joints	<p>Non-structural crack = 300 LF  Guardrail post sealant = 0 EA  Backer rod &amp; sealant = 700 LF  Cove joint = 50 LF  Precast joint sealant = 0 LF  Precast sealant plugs = 0 EA  Control joint sealant = 500 LF</p>	\$48,500	6-10 - Material Repairs
823	SJ	Structural Joints	<p>Non-structural crack = 50 LF  Guardrail post sealant = 50 EA  Backer rod &amp; sealant = 50 LF  Cove joint = 1,400 LF  Precast joint sealant = 0 LF  Precast sealant plugs = 0 EA  Control joint sealant = 200 LF</p>	\$61,500	6-10 - Material Repairs



820	SJ	Structural Joints	Non-structural crack = 100 LF Guardrail post sealant = 241 EA Backer rod & sealant = 2,000 LF Cove joint = 0 LF Precast joint sealant = 0 LF Precast sealant plugs = 0 EA Control joint sealant = 0 LF	\$85,800	6-10 - Material Repairs
817	SJ	Structural Joints	Non-structural crack = 200 LF Guardrail post sealant = 241 EA Backer rod & sealant = 2,000 LF Cove joint = 0 LF Precast joint sealant = 0 LF Precast sealant plugs = 0 EA Control joint sealant = 0 LF	\$85,800	6-10 - Material Repairs
814	SJ	Structural Joints	Non-structural crack = 200 LF Guardrail post sealant = 241 EA Backer rod & sealant = 2,000 LF Cove joint = 0 LF Precast joint sealant = 0 LF Precast sealant plugs = 0 EA Control joint sealant = 0 LF	\$85,800	6-10 - Material Repairs
811	SJ	Structural Joints	Non-structural crack = 200 LF Guardrail post sealant = 241 EA Backer rod & sealant = 2,000 LF Cove joint = 0 LF Precast joint sealant = 0 LF Precast sealant plugs = 0 EA Control joint sealant = 0 LF	\$85,800	6-10 - Material Repairs
808	SJ	Structural Joints	Non-structural crack = 200 LF Guardrail post sealant = 150 EA Backer rod & sealant = 500 LF Cove joint = 120 LF Precast joint sealant = 0 LF Precast sealant plugs = 0 EA Control joint sealant = 3,000 LF	\$404,200	6-10 - Material Repairs
805	SJ	Structural Joints	Non-structural crack = 200 LF Guardrail post sealant = 150 EA Backer rod & sealant = 500 LF Cove joint = 120 LF Precast joint sealant = 0 LF Precast sealant plugs = 0 EA Control joint sealant = 3,000 LF	\$106,700	6-10 - Material Repairs
802	SJ	Structural Joints	Non-structural crack = 200 LF Guardrail post sealant = 241 EA Backer rod & sealant = 2,000 LF Cove joint = 0 LF Precast joint sealant = 0 LF Precast sealant plugs = 0 EA Control joint sealant = 0 LF	\$404,200	6-10 - Material Repairs

799	SJ	Structural Joints	Non-structural crack = 200 LF Guardrail post sealant = 150 EA Backer rod & sealant = 500 LF Cove joint = 120 LF Precast joint sealant = 0 LF Precast sealant plugs = 0 EA Control joint sealant = 3,700 LF	\$493,500	6-10 - Material Repairs
696	SJ	Structural Joints	Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Includes half of West Endzone Seating and 300 Level Concourse.  Non-Structural crack = 4000 FT Guard Post Sealant = 300 Each Backer Rod and Selant = 3500 FT Cove Joint = 2000 FT Precast Joint Sealant = 2000 FT Precast Selant Plugs = 400 Each Control Joint Sealant = 2500 FT Traffic Coating Touch Up = 300 SF	\$654,100	6-10 - Material Repairs
688	SJ	Structural Joints	Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Includes half of West Endzone Seating and 300 Level Concourse.  Non-Structural crack = 2100 FT Guard Post Sealant = 150 Each Backer Rod and Selant = 3500 FT Cove Joint = 1200 FT Precast Joint Sealant = 1000 FT Precast Selant Plugs = 400 Each Control Joint Sealant = 500 FT Traffic Coating Touch Up = 300 SF	\$395,188	6-10 - Material Repairs
678	SJ	Structural Joints	Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Includes half of East Endzone Seating and 300 Level Concourse.  Non-Structural crack = 3200 FT Guard Post Sealant = 400 Each Backer Rod and Selant = 3500 FT Cove Joint = 2200 FT Precast Joint Sealant = 1000 FT Precast Selant Plugs = 400 Each Control Joint Sealant = 1000 FT Traffic Coating Touch Up = 300 SF	\$480,996	6-10 - Material Repairs
668	SJ	Structural Joints	Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Includes half of East Endzone Seating and 300 Level Concourse.  Non-Structural crack = 4000 FT Guard Post Sealant = 300 Each Backer Rod and Selant = 3500 FT Cove Joint = 2600 FT Precast Joint Sealant = 700 FT Precast Selant Plugs = 650 Each Control Joint Sealant = 2000 FT Traffic Coating Touch Up = 600 SF	\$519,250	6-10 - Material Repairs

623	SJ	Structural Joints	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Northeast quadrant includes concourse above 300 level seating at East Endzone.</p> <p>Non-Structural crack = 500 FT Guard Post Sealant = 30 Each Cove Joint = 250 FT Control Joint Sealant = 700 FT</p>	\$41,044	6-10 - Material Repairs
614	SJ	Structural Joints	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. Northeast quadrant includes concourse above 300 level seating &amp; stair up to Sponsorship Deck at East Endzone.</p> <p>Non-Structural crack = 250 FT Guard Post Sealant = 20 Each Cove Joint = 200 FT Control Joint Sealant = 700 FT</p>	\$32,116	6-10 - Material Repairs
510	SJ	Structural Joints	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Non-Structural crack = 1000 FT Guard Post Sealant = 360 Each Cove Joint = 1000 FT Control Joint Sealant = 4000 FT</p>	\$172,608	6-10 - Material Repairs
502	SJ	Structural Joints	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Non-Structural crack = 1000 FT Guard Post Sealant = 160 Each Cove Joint = 1000 FT Control Joint Sealant = 4000 FT</p>	\$167,648	6-10 - Material Repairs
493	SJ	Structural Joints	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Non-Structural crack = 2000 FT Guard Post Sealant = 650 Each Cove Joint = 1000 FT Control Joint Sealant = 4000 FT</p>	\$207,080	6-10 - Material Repairs
492	SJ	Structural Joints	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed. (Northwest includes west endzone connection)</p> <p>Non-Structural crack = 2000 FT Guard Post Sealant = 250 Each Cove Joint = 1000 FT Control Joint Sealant = 4000 FT</p>	\$197,160	6-10 - Material Repairs
486	SJ	Structural Joints	<p>Non-Structural crack = 150 FT Guard Post Sealant = 10 Each Backer Rod and Selant = 150 FT Cove Joint = 250 FT Precast Joint Sealant = 100 FT Precast Selant Plugs = 50 Each Control Joint Sealant = 400 FT</p>	\$43,710	6-10 - Material Repairs

205	SJ	Structural Joints	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Non-Structural crack = 3000 FT  Guard Post Sealant = 250 Each  Backer Rod and Selant = 5000 FT  Cove Joint = 3500 FT  Precast Joint Sealant = 1100 FT  Precast Selant Plugs = 800 Each  Control Joint Sealant = 500 FT  Traffic Coating Touch Up = 1000 SF</p>	\$606,360	6-10 - Material Repairs
198	SJ	Structural Joints	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Non-Structural crack = 3000 FT  Guard Post Sealant = 250 Each  Backer Rod and Selant = 5000 FT  Cove Joint = 3500 FT  Precast Joint Sealant = 1100 FT  Precast Selant Plugs = 800 Each  Control Joint Sealant = 500 FT  Traffic Coating Touch Up = 1000 SF</p>	\$606,360	6-10 - Material Repairs
196	SJ	Structural Joints	<p>Repair quantities given within this stamp represent total values for the level and quadrant of the sheet on which the stamp is placed.</p> <p>Non-Structural crack = 3000 FT  Guard Post Sealant = 250 Each  Backer Rod and Selant = 6000 FT  Cove Joint = 3750 FT  Precast Joint Sealant = 1400 FT  Precast Selant Plugs = 850 Each  Control Joint Sealant = 500 FT  Traffic Coating Touch Up = 1000 SF</p>	\$692,230	6-10 - Material Repairs
182	SJ	Structural Joints	<p>Repair quantities given within this stamp represent total values for Upper Deck within this quadrant. See separate stamp for sponsorship deck.</p> <p>Non-Structural crack = 3000 FT  Guard Post Sealant = 250 Each  Backer Rod and Selant = 6000 FT  Cove Joint = 3750 FT  Precast Joint Sealant = 1400 FT  Precast Selant Plugs = 850 Each  Control Joint Sealant = 500 FT  Traffic Coating Touch Up = 1000 SF</p>	\$692,230	6-10 - Material Repairs

TOTAL \$49,406,283