

**SECTION 32 18 13**  
**SYNTHETIC GRASS SURFACING REPLACEMENT**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Synthetic grass surfacing and infill.
- B. Edge anchoring and borders.
- C. Shock absorbing course.
- D. Correction of grades and subgrade.
- E. Field graphics.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 23 00 - Alternates
- B. Section 31 23 23 - Fill.
- C. Section 32 31 13 - Chain Link Fences and Gates.

**1.03 REFERENCE STANDARDS**

- A. ASTM C920 - Standard Specification for Elastomeric Joint Sealants 2018.
- B. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete 2021b.
- C. ASTM C136/C136M - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates 2019.
- D. ASTM C476 - Standard Specification for Grout for Masonry 2020.
- E. ASTM D2859 - Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials 2016 (Reapproved 2021).
- F. ASTM D5823 - Standard Test Method for Tuft Height of Pile Floor Coverings 2019.
- G. ASTM D6662 - Standard Specification for Polyolefin-Based Plastic Lumber Decking Boards 2022.
- H. ASTM F1487 - Standard Consumer Safety Performance Specification for Playground Equipment for Public Use 2021.
- I. ASTM F1632 - Standard Test Method for Particle Size Analysis and Sand Shape Grading of Golf Course Putting Green and Sports Field Rootzone Mixes 2003 (Reapproved 2018).
- J. ASTM F1667 - Standard Specification for Driven Fasteners: Nails, Spikes, and Staples 2021.
- K. ASTM F1936 - Standard Specification for Impact Attenuation of Turf Playing Systems as Measured in the Field 2010 (Reapproved 2015).
- L. ASTM F2898 - Standard Test Method for Permeability of Synthetic Turf Sports Field Base Stone and Surface System by Non-confined Area Flood Test Method 2011 (Reapproved 2019).
- M. CPSC Pub. No. 325 - Public Playground Safety Handbook 2015.

**1.04 ADMINISTRATIVE REQUIREMENTS**

- A. See Section 01 30 00 - Administrative Requirements - Administrative Requirements, for project meetings.
- B. Preinstallation Meeting: Conduct a preinstallation meeting at least one week prior to the start of the work of this section; require attendance by all affected installers.
- C. Sequencing: Ensure that utility connections are achieved in an orderly and expeditious manner.

**1.05 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: For all manufactured surfacing products, provide manufacturer's product data showing materials of construction, compliance with specified standards, installation procedures,

and safety limitations.

- C. Shop Drawings: Carpet Roll: Show locations of seams and methods of seaming.
- D. Samples: For each product for which color must be selected provide color chart showing full range of colors.
- E. Samples: Provide the following prior to ordering material:
  - 1. Synthetic Grass carpet: Two 12 inch by 12 inch (305 mm by 305 mm) pieces.
  - 2. Infill material: Two 1 gallon bags for each type.
  - 3. Seamed synthetic grass carpet: Two 12 inch by 24 inch (305 mm by 610 mm) pieces seamed together for each seaming method indicated on drawings.
- F. Percolation Test Report: Describing test method used and results.
- G. Installer's Qualification Statement.
- H. Maintenance Data:
  - 1. For manufactured surfacing products, provide manufacturer's recommended maintenance instructions and list of repair products, with address and phone number of source of supply.
  - 2. For loose fill surfacing products, provide detailed re-ordering information to enable Owner to match installed material exactly.
- I. Manufacturer's Field Report.
- J. Topographical survey of loose fill layer prior to installation of synthetic grass carpet.

#### **1.06 QUALITY ASSURANCE**

- A. See section 01 40 00 - Quality Requirements, for procedures for testing, inspection, mock-ups, reports, certificates, use of reference standards.
- B. Maintain one copy of the latest edition of ASTM F1487 and CPSC Pub. No. 325 at project site.
- C. Installer Qualifications: Company certified by manufacturer for training and experience installing the protective surfacing; provide installer's company name and address, and training and experience certificate.

#### **1.07 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver, handle, and store synthetic grass surfacing to project site in accordance with manufacturer's recommendations.
- B. Store materials in a dry, covered area, elevated above grade.

#### **1.08 FIELD CONDITIONS**

- A. Ambient Conditions: Work under this section will cease when:
  - 1. Temperatures are below 55 degrees F.
  - 2. Humidity levels are above the adhesive manufacturer's requirements.
  - 3. Rain is imminent or falling.
  - 4. Surfaces are wet or damp.

#### **1.09 WARRANTY**

- A. See Section 01 78 00 - Closeout Submittals - Closeout Submittals, for additional warranty requirements.
- B. Provide 8 year minimum warranty from the date of substantial completion for materials and installation covering:
  - 1. Excessive wear.
  - 2. Fiber tensile strength.
  - 3. Deterioration or fading from UV light.
  - 4. Seam integrity.
  - 5. Shock absorption.

## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A. Basis of Design: Prestige Vertex 57 by Fieldturf.
- B. Acceptable Manufacturer: Legion by Shaw Sports Turf.
- C. Substitutions: See Section 01 60 00 - Product Requirements.

### **2.02 SYNTHETIC GRASS SURFACING**

- A. Synthetic Grass Carpet: Yarn fibers tufted through and adhered to a porous fiber backing.
  - 1. Primary Blades:
    - a. Weight: 43 ounce.
    - b. Height: 2 1/4", in compliance with ASTM D5823.
  - 2. Noncombustible: Pass ASTM D2859 for flammability.
  - 3. Field Graphics to match existing:
    - a. Applied Marking: Permanent paint, per manufacturer's approval.
    - b. Trimmed letters "MELROSE" in both endzones
    - c. Block "M" at midfield
    - d. Football / Soccer markings
- B. Synthetic Grass Infill: 6 lbs per sq. ft., minimum at 50 to 50 percent granule to synthetic sand:
  - 1. 3 lbs per sq. ft. minimum ambient rubber.
  - 2. Sand: Silica, 10 to 20 mesh, free of silts, clays, and contaminants, roundness of subangular, minimum, per ASTM F1632.

### **2.03 MATERIALS**

- A. Edge Anchoring: Wood-polymer composite lumber complying with ASTM D6662; factory finished, free of sharp vertical edges, protruding elements, and trip hazards, capable of being secured to the border.
  - 1. Minimum Edge Radius: 1/2 inch.
- B. Border: Permanent element surrounding edge anchoring, consisting of exterior walls:
  - 1. Cast-In-Place Concrete Curb: 12 inch wide by 6 inch deep (305 mm by 152 mm), smooth top. Ready mix concrete in compliance with ASTM C94/C94M.
  - 2. Chain Link Fence: As indicated on drawings.
- C. Drainage (Loose Surfacing) Course: Fractured, non-rounded gravel; washed; free of dust, clay, dirt, organic material, hazardous substances, or foreign objects; rounded particles, either naturally or mechanically; sieved in compliance with ASTM C136/C136M in the specified gradation range.
  - 1. Percent Passing Sieve Size 1/2 inch: 100 percent.
  - 2. Percent Passing Sieve Size 3/8 inch: 75 to 85 percent.
  - 3. Percent Passing Sieve Size No. 4: 0 percent.
- D. Drainage Pipes: Uniform material, free of defects:
  - 1. Verify existing is in good condition and replace as needed.
  - 2. Perforations: As indicated on drawings.
  - 3. Size: As indicated on drawings.
- E. Geotextile: Nonwoven polypropylene sheet.

### **2.04 ACCESSORIES**

- A. Fasteners, Synthetic Grass to Edging: 1/2 inch (13 mm) stainless steel staples, in compliance with ASTM F1667.
- B. Fasteners, Edging to Border: Self drilling, stainless steel screws, in compliance with ASTM F1667.
- C. Fasteners, Seams:
- D. Rebar: Number 4 rod.



- E. Cementitious Grout: Fine, in compliance with ASTM C476.
- F. Joint Sealant: As recommended by curbing manufacturer, in compliance with ASTM C920.

## **2.05 SOURCE QUALITY CONTROL**

- A. See Section 01 40 00 - Quality Requirements, for additional requirements.
- B. Supply individual components from a single source.

## **PART 3 EXECUTION**

### **3.01 PREPARATION**

- A. Remove existing system.
- B. Lay out entire project perimeter as indicated on drawings prior to starting work.
- C. Measure the location of all synthetic grass elements, including perimeter of existing synthetic grass surfacing, access and egress points, hard surfaces, walls, fences, and structures.
- D. Verify location of underground utilities and facilities in the project area. Damage to underground utilities and facilities will be repaired at Contractor's expense.

### **3.02 EDGE ANCHORING**

- A. Layout composite nailer boards. Approval of locations by Architect required prior to installing.
- B. Install along full perimeter of synthetic grass.
- C. Fasten to border with case hardened screws at 24 inch on center, minimum.
- D. Set top of edging flush or recessed 1/2 inch below top of border, maximum.

### **3.03 BORDER**

- A. Verify that site furnishings and composite nailer boards located within project area are complete.
- B. Chain Link Fence: Align centerlines of fence and curb. Apply grout to each curb hole installed with fence post, securing post in place. See Section 32 31 13 for chain link fences and gates.

### **3.04 SYNTHETIC GRASS**

- A. Carpet Rolls:
  - 1. Unroll all carpet in the same direction.
  - 2. Prevent seams from being located over impact mats.
  - 3. Allow carpet to rest for at least 4 hours after unrolling and prior to seaming.
  - 4. Smooth seams and edges, eliminate overlaps and gaps.
- B. Seaming:
  - 1. Cut: Straight, with a clean and smooth edge.
  - 2. Method:
- C. Securing: Staple carpet to edging 1 inch (25 mm) on center.
- D. Field Graphics:
  - 1. Applied Marking: Per manufacturer recommendations, in dimensions and color patterns indicated on drawings.
  - 2. Inlaid Marking:

### **3.05 INFILL**

- A. Apply during dry weather without signs of moisture on synthetic grass.
- B. Thoroughly brush synthetic grass prior to infill installation.
- C. Apply infill uniformly in multiple lifts, brush fibers between each application.
- D. Measure depth to confirm accordance with plans.

### **3.06 FIELD QUALITY CONTROL**

- A. See Section 01 40 00 - Quality Requirements, for additional requirements.

- B. Owner or Owner's representative will inspect synthetic grass after installation to verify that surfacing is of proper type and meets specified design safety and accessibility requirements.
- C. Repair or replace rejected work until compliant with specified requirements and design criteria.
- D. Confirm rainfall permeability meets design, per ASTM F2898.
- E. Confirm impact attenuation meets design, per ASTM F1936.
- F. Replace damaged products before Date of Substantial Completion.

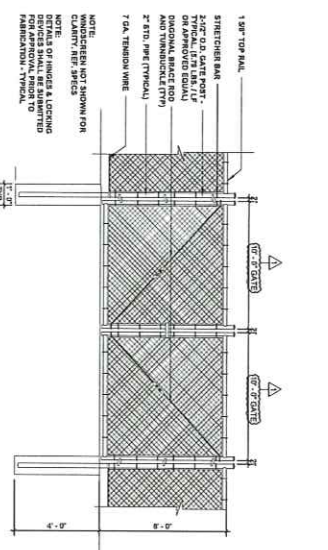
**3.07 CLEANING**

- A. Clean surrounding areas of excess construction materials, debris, and waste.
- B. Remove excess and waste material and dispose of off-site in accordance with requirements of authorities having jurisdiction.

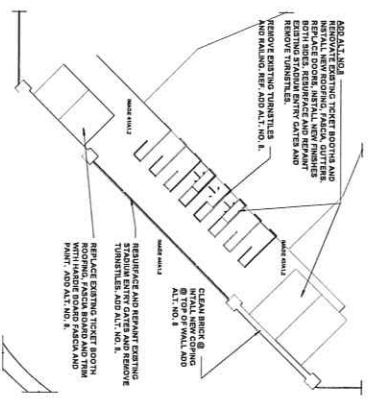
**3.08 PROTECTION**

- A. Protect installed products until Date of Substantial Completion.
- B. Restore adjacent existing areas that have been damaged by work of this section.

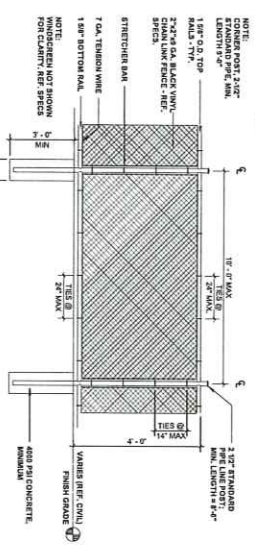
**END OF SECTION**



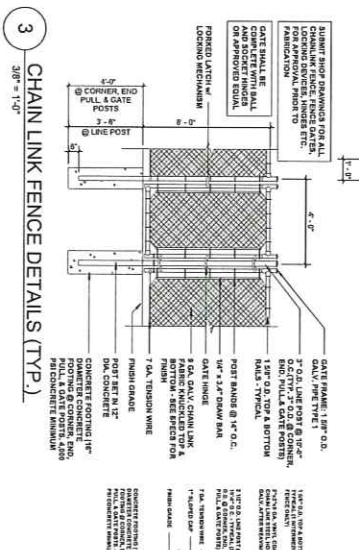
2 CHAIN LINK GATE DETAILS @ BUS PARKING  
3/4\"/>



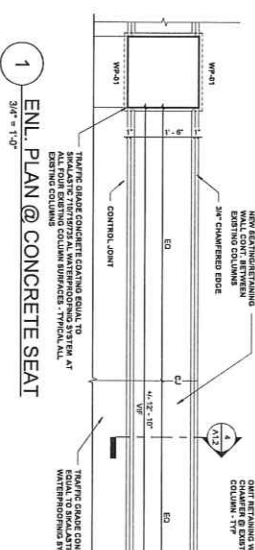
7 ENL. PLAN @ TICKET BOOTHS  
1/8\"/>



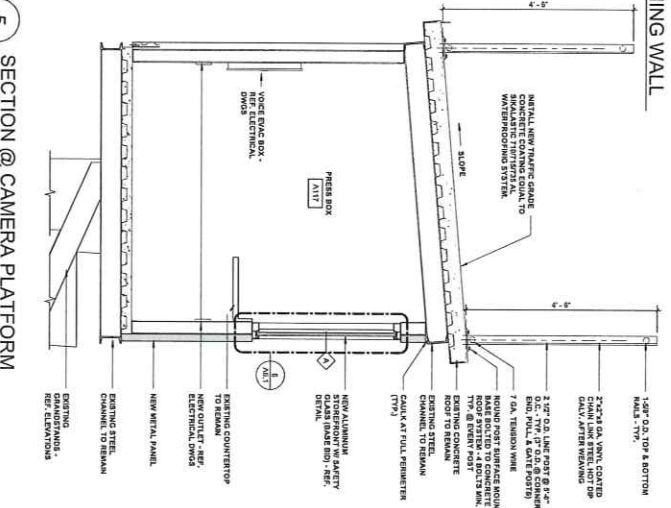
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3/4\"/>



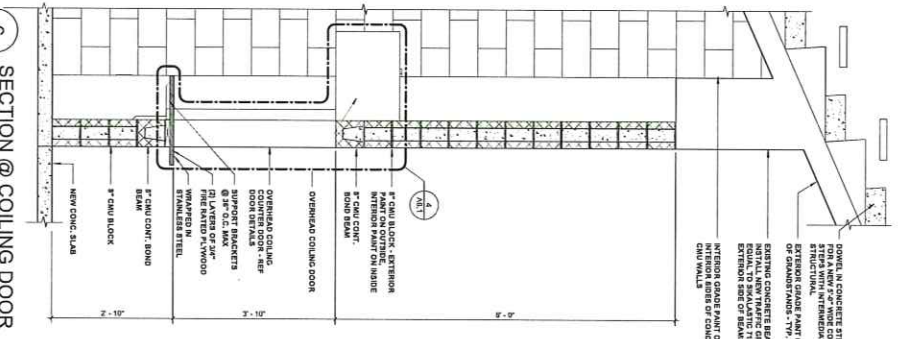
3 CHAIN LINK FENCE DETAILS (TYP.)  
3/4\"/>



1 ENL. PLAN @ CONCRETE SEAT  
3/4\"/>



5 SECTION @ CAMERA PLATFORM  
3/4\"/>



6 SECTION @ COLLING DOOR  
3/4\"/>



CONSTRUCTION DOCUMENTS SET  
FOR RENOVATIONS TO

**MELROSE STADIUM**

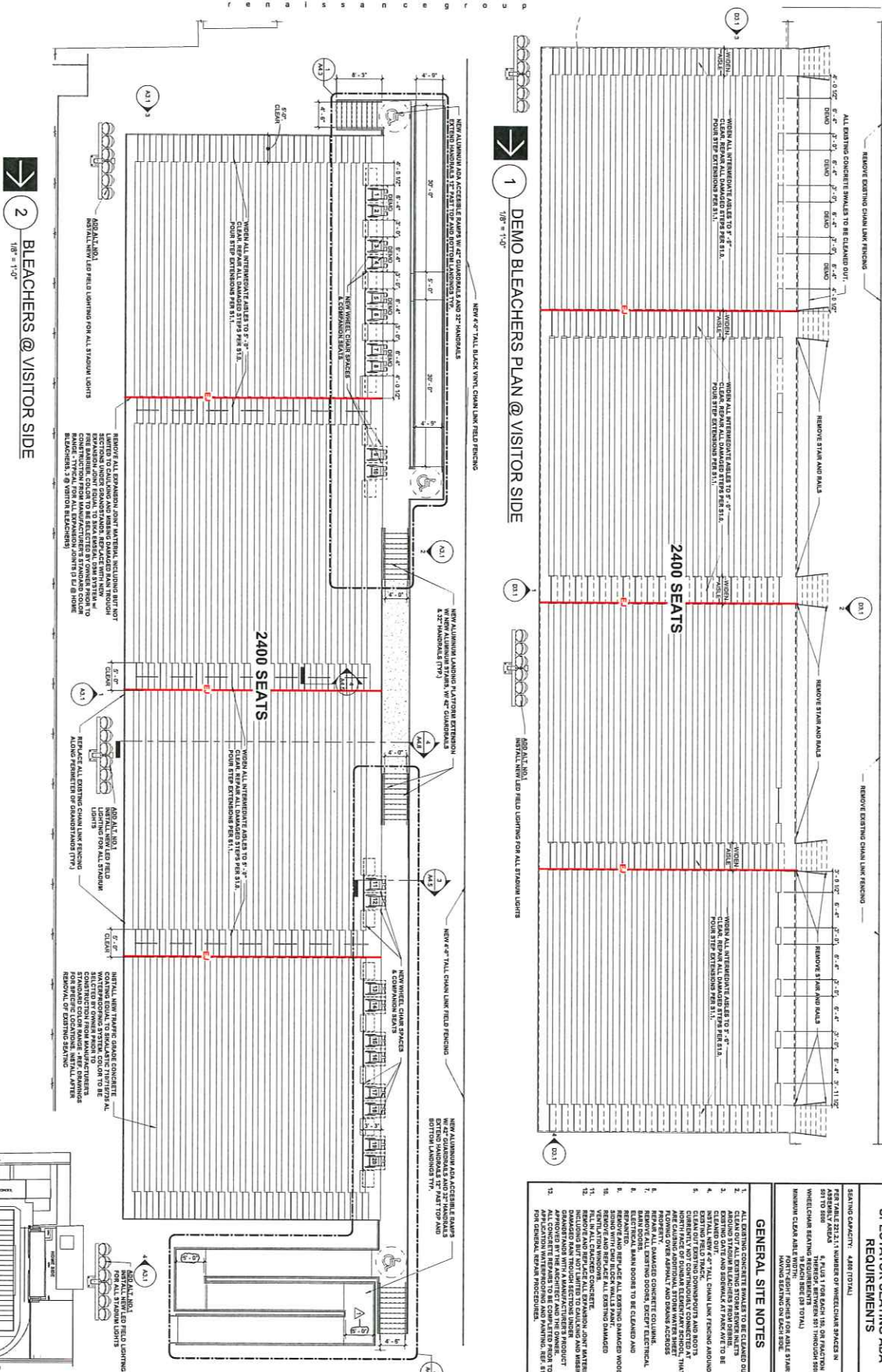
2619 PARK AVE,  
MEMPHIS, TN 38114

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| NO. | DESCRIPTION             | DATE    |
| 1   | ISSUED FOR PERMITS      | 6/13/22 |
| 2   | ISSUED FOR BIDDING      | 6/13/22 |
| 3   | ISSUED FOR CONSTRUCTION | 6/13/22 |





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1 DEMO BLEACHERS @ VISITOR SIDE  
1/8" = 1'-0"

2 BLEACHERS @ VISITOR SIDE  
1/8" = 1'-0"

**SPECTATOR SEATING ADA REQUIREMENTS**

SEATING CAPACITY: 488 (100%)  
PER TABLE 222.1.1: 4% MINIMUM OF UNOCCUPIED SPACES IN ASSEMBLY AREAS  
4% MINIMUM OF UNOCCUPIED SPACES IN UNOCCUPIED AREAS  
WHEN SEATING IS PROVIDED IN UNOCCUPIED AREAS  
MINIMUM CLEARANCE FROM SEATING FOR ALL STAIRS  
MAY VARY DEPENDING ON EACH SIDE

**GENERAL SITE NOTES**

1. ALL EXISTING CONCRETE SWALES TO BE CLEANED OUT.
2. REMOVE EXISTING CHAIN LINK FENCING AND DEMO EXISTING STAIRS AND BALS.
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13. REMOVE EXISTING CHAIN LINK FENCING AND DEMO EXISTING STAIRS AND BALS.

**CONSTRUCTION DOCUMENTS SET FOR RENOVATIONS TO**

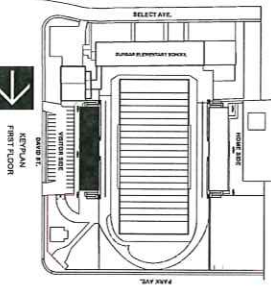
**MELROSE STADIUM**

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| NO. | DESCRIPTION | DATE |
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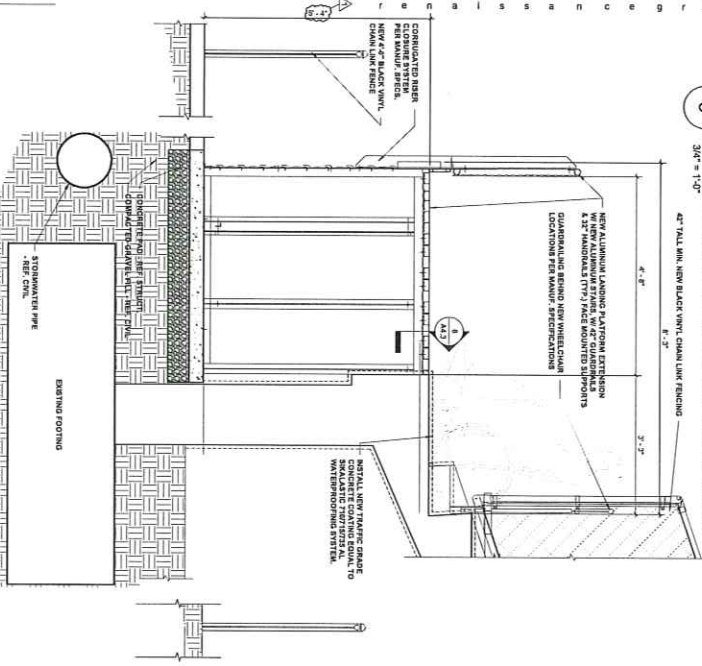
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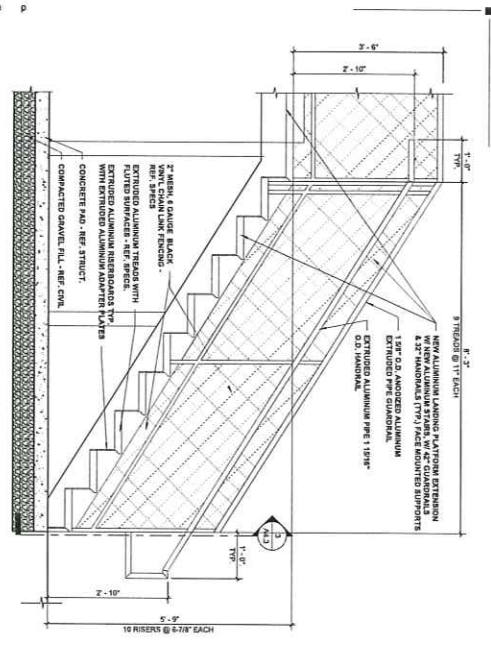




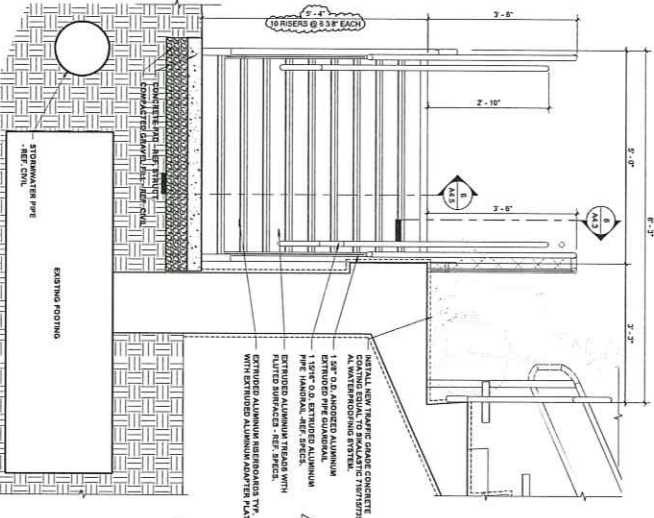
3 SECTION @ VISITOR SIDE ADA PLATFORM  
3/4" = 1'-0"



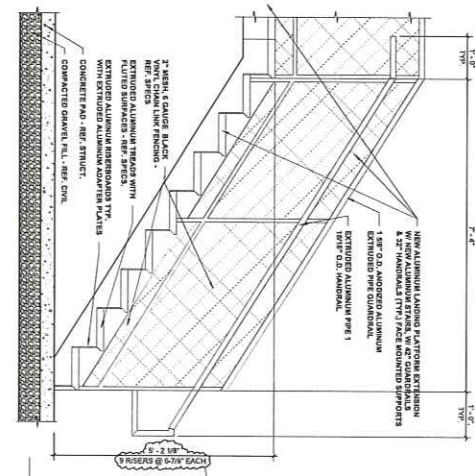
5 SECTION @ VISITOR SIDE STAIR NORTH  
3/4" = 1'-0"



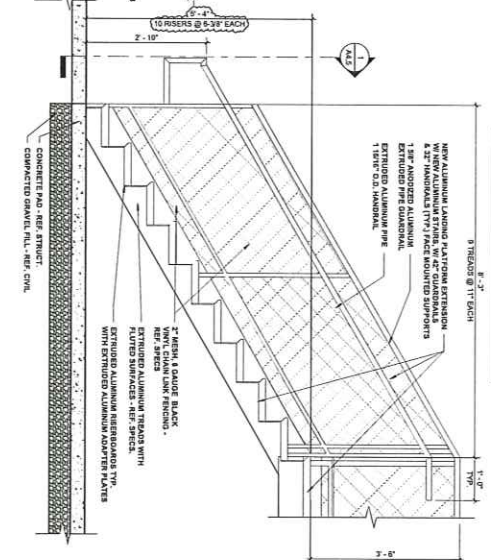
1 SECTION @ VISITOR SIDE STAIR (TYP.)  
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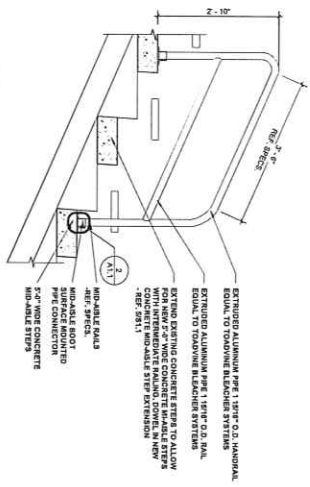
2 MIDDLE STAIR SECTION @ VISITOR'S BLEACH  
3/4" = 1'-0"



6 MID. STAIR SECTION @ VISITOR'S BLEACHERS  
3/4" = 1'-0"



4 SECTION @ MID-AISLE RAIL  
3/4" = 1'-0"



NOTE:  
ALL SECTIONS AND DETAILS SHOW DESIGN INTENT AND SHALL BE CONSIDERED AS APPROXIMATE UPON SELECTION OF SUCCESSFUL BIDDER

CONSTRUCTION DOCUMENTS SET  
FOR RENOVATIONS TO

MELROSE STADIUM

2619 PARK AVE,  
MEMPHIS, TN 38114

A4.5

|          |                   |
|----------|-------------------|
| DATE     | DESCRIPTION       |
| 04-20-22 | ISSUE FOR BIDDING |
| 04-20-22 | ISSUE FOR BIDDING |
| 04-20-22 | ISSUE FOR BIDDING |

|     |                   |          |
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| NO. | REVISION          | DATE     |
| 1   | ISSUE FOR BIDDING | 04/20/22 |
| 2   | ISSUE FOR BIDDING | 04/20/22 |



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