WBA
ARCHITECTURE

9 September 2019

COLISEUM SEATING REPLACEMENT
GS #343-117
1207 Mississippi Street
Jackson, MS 39202

ADDENDUM NO. 02

NOTICE TO ALL DOCUMENT HOLDERS:
The following additions, deletions, changes and clarifications to the drawings and specifications are to be included as part of the Contract Documents.

GENERAL

ITEM NO. 1 **PRE-BID MEETING**

A pre-bid meeting was held in the Red Room of the Mississippi Coliseum (1207 Mississippi Street, Jackson MS 39202) on Monday, August 26, 2019 at 2:00 PM. A brief outline of items covered is listed below:

- Instruction to Bidders
- Project Scope
- Base Bid & Alternate Structure
- Project Schedule

Questions raised in the meeting, which required further clarifications, are addressed herein.
An attendance list is attached.

SPECIFICATIONS

ITEM NO. 2 **TABLE OF CONTENTS**

REVISE Section 10.1443 to read *10.1443 Stair Nosings and Photoluminescent Egress Path Markings*

ITEM NO. 3 **00300 PROPOSAL FORM**

REPLACE the Proposal Form with attached **00300 Proposal Form**.
Clarification: The revised Proposal Form correctly lists the project days and liquidated damages.

ITEM NO. 4 **00500 STANDARD FORM OF AGREEMENT BETWEEN THE OWNER AND THE CONTRACTOR**

REPLACE the form with attached **00500 SFA Form**.
Clarification: The revised SFA form correctly lists the project information.

ITEM NO. 5 **01900 DIVISION ONE SUPPLEMENT**

REPLACE the Division One Supplement with attached **01900 Division One Supplement.**
Clarification: The revised Division One Supplement correctly lists the work stages as well as includes revisions to the description of the alternate and a revised unit cost supplement. The revised version also includes an added liquidated damages supplement.

2727 Old Canton Rd, Ste 200, Jackson, MS 39216
p 601.321.9107 | wbaarchitecture.com

ITEM NO. 6 **03 61 00 CONCRETE**

REMOVE the specification for non-shrink grout.

Clarification: The requirement for non-shrink grout has been removed. See specification section 07 18 00 for clarification on patch material.

ITEM NO. 7 **07 18 00 TRAFFIC COATINGS**

REPLACE the specification with the attached **07 18 00 Traffic Coatings** specification.

Clarification: The revised specification makes several modifications to the requirements laid out in the specification.

ITEM NO. 8 **10 14 43 STAIR NOSINGS AND PHOTOLUMINESCENT EGRESS PATH MARKINGS**

REPLACE the specification with the attached **10 14 43 Stair Nosings and Photoluminescent Egress Path Markings** specification.

Clarification: The revised specification makes several modifications to the requirements laid out in the specification.

ITEM NO. 9 **12 63 00 STADIUM AND ARENA SEATING**

REPLACE the specification with the attached **12 63 00 Stadium and Arena Seating** specification.

Clarification: The revised specification makes several modifications to the requirements laid out in the specification.

DRAWINGS

ITEM NO. 10 **SHEET A101 "BASE BID REPAIR AND COATING"**

REPLACE sheet with attached revised sheet A101

Clarification: Contractor to follow manufacturer's recommendations for vertical termination of coating (typical 6" minimum turn up is required). Beyond the required coating turn up distance, Contractor may use appropriate color matched paint on surfaces not requiring coating. A general note for verification of quantities was also modified.

ITEM NO. 11 **SHEET A103 "ALTERNATE NO 1 AND NOSINGS"**

REPLACE sheet with attached revised sheet A103.

Revise: Notes and details of new nosings were revised to correctly show the selected nosing profile.

ITEM NO. 12 **SHEET A201 "SECTION AND HANDRAILS"**

Detail 8/A201 New Picket Insert Detail

Revise: Weld note to read *"FIELD FILLET WELD TO EXISTING RAIL - 3" WELD FOR EVERY 18" "*

ITEM NO. 13 **SHEET A501 "DETAILS"**

Detail 2/A501 Removable Guardrail Detail

Revise: Note shall read *"1/4" THICK STEEL PLATE - CONTINUOUS FIELD WELD TO EXISTING STL. RAIL"*

ITEM NO. 14 **SHEET A501 "DETAILS"**

Details 3/A501 New Signage at Risers and 4/A501 New Signage at Treads

Clarification: Add signage note: *paint selected for numbering must be compatible with traffic coating system.*

ITEM NO. 15 **SHEET S501 "TYPICAL NOTES"**

Typical Floor Repair for Damage Depths Greater Than ¾"

Revise: Typical floor repair note no longer requires non-shrink grout. Refer to section 07 18 00 Traffic Coatings for clarified repair method.

Encl: Pre-Bid Conference Sign-in Sheet

Specifications (8.5x11):

00300 PROPOSAL FORM, **00500** STANDARD FORM OF AGREEMENT BETWEEN THE OWNER AND THE CONTRACTOR, **01900** DIVISION ONE SUPPLEMENT, **07 18 00** TRAFFIC COATINGS, **10 14 43** STAIR NOSINGS AND PHOTOLUMINESCENT EGRESS PATH MARKINGS, **12 63 00** STADIUM AND ARENA SEATING

Drawings (2 Sheets - 24x36):

A101 BASE BID REPAIR AND COATING, **A103** ALTERNATE NO. 1 AND NOSINGS

cc: All Document Holders
File 2219 C2

WBA

2727 Old Canton Rd, Ste 200, Jackson, MS 39216
p 601.321.9107 | wbaarchitecture.com

Proj# 2219 | Bureau of Buildings | G.S. #343-117 Coliseum Seating Replacement

Pre-Bid Conference

Monday, August 26, 2019

Sign-In Sheet

Name (please print)	Company	Phone	E-mail address
Chris Paradea	United Restoration & Preservation, Inc.	504-390-7616	Chrisp@urpinc.com
Bryson Cobb	M+M Services, Inc	601-842-2718	bryson@mandmdemolition.com
Tyler Anderson	Missco	601.606.8412	TAnderson@missco.com
Bruce Randall	FCC	6015738044	tfountaincalacoust.com
Mike Jenkins	FCC	601-540-2236	~~Fountain (a) FCC~~ estimating@Fountain Construction.com
Neill Bartling	SOPA (Hussey Seating)	601-382-0073	nbartling@sopainc.com
Johnny Ledbetter	JL Interior Const LLC	601-954-1956	JLintco@gmail.com
Guy Nelson	Paul Jackson & Son, Inc.	601-833-3453	gjsingc@pauljacksonandson.com
Jonathan Logen	Castle Black Construction	901-443-0151	jo.logen@castleblackinc.com
Timmy Peacock	FCC	601 540-2088	jpeacock2@fountainconstruction.com
Vera Hall	IPC	601.397.6941	innovativeperformancepc@yahoo.com
Steve Hutton	Fair Commission	601 209 2340	STEVE@MDAC.MS.GOV
Sam Sherrill	MFC	601 951-8403	sams@MDAC.MS.GOV
Janet Trotter	MDAC	6019400231	janet@mdac.ms.gov
Paula DeYoung	DFA	601.359.5517	paula.deyoung@dfa.ms.gov
Jon Yoste	SEA	601-366-0660	
Julie Clemmer	WBA	601-942-3829	JCLEMMER@WBA.MS
Jake Gartman	WBA	228.219.8011	jgartman@wba.ms

PROPOSAL FORM
SECTION 00300

To: Bureau of Building, Grounds and Real Property Management
501 North West Street, Suite 1401B [Woolfolk Building]
Jackson, Mississippi 39201

Re: Project # 343-117
Project Title Coliseum Seating Replacement
Location Jackson, MS

I propose to complete all work in accordance with the Project Manual and Drawings within 425 consecutive calendar days for the sum of: (Professional must specify number of days)

BASE BID: **(**Write in the amount of the base bid in words and numbers. The written word shall govern.)

Words: _____ Dollars
Figures: ($_____)

ALTERNATES: **(**Write in the amount of all of the alternates in words and numbers. The written word shall govern.)

Alternate #1 ☐ Adds ☐ Deducts
Words: _____Dollars
($_____)
Description: Installation of new stair nosings with non-slip strip and luminous stair tread markers along all existing treads throughout entire seating area. See sheet A103 and specification for additional information.

Alternate #2 ☐ Adds ☐ Deducts
Words: _____Dollars
($_____)
Description: _____
_____

Alternate #3 ☐ Adds ☐ Deducts
Words: _____Dollars
($_____)
Description: _____
_____

Alternate #4 ☐ Adds ☐ Deducts
Words: _____Dollars
($_____)
Description: _____
_____

Alternate #5 ☐ Adds ☐ Deducts
Words: _____Dollars
($_____)
Description: _____
_____

ADDENDA ACKNOWLEDGMENT: (modified dates August 2016)

No. _____ No. _____ No. _____

No. _____ No. _____ No. _____

ACCEPTANCE:

I certify that I am authorized to enter into a binding contract, if this Proposal is accepted.

Signature _____ Date _____
Name and Title _____
Name of Business _____

Complete spelling of bidder's name and address - exact as recorded at the Secretary of State [http://www.sos.state.ms.us/busserv/corp/soskb/csearch.asp] which should be the same as you applied for at the Mississippi State Board of Contractors [http://www.msboc.us/Search2.CFM] (see 2.07, 3.01, 5.01) **PLEASE LOOK IT UP at SoS. SoS rules when the 2 are different.**

Address _____(mailing)
Address _____(physical)
City/State/Zip Code _____ County _____
Phone _____ Fax _____ Email _____

■ **BIDDER'S CERTIFICATE OF RESPONSIBILITY NUMBER(S):** _____

■ **MINORITY BUSINESS ENTERPRISE? Yes** _____ **No** _____ (to assist with Code 57-1-57)

■ Attach copy of Non-Resident Bidder's Preference Law (5.04 of Bidder's Checklist)

■ **Mechanical / Plumbing / Electrical Contractors:** (modified Dec 2013 SoS per 10/17/12 Addendum 1 & Feb 2014; 021219 over $50,000.00)

Regarding said Divisions of the Specifications of the BoB Standard Form of Agreement Between The Owner and The Contractor:

List any Mechanical/Plumbing and/or Electrical Sub-Contractors that will perform work of this contract. COR must be included where sub-contract exceeds $50,000.00. If no sub-contractor is listed, and such work is within scope of contract and over $50,000.00, bidder's own COR classification(s) must be sufficient to self-perform any such work. If no sub-contractor is listed, then use of sub-contractor to perform such scope will not be permitted. This is in accordance with 5.05 and 5.06 of the Bidder's Checklist revised below.

Mechanical Contractor: _____ Certificate of Responsibility No. _____
Plumbing Contractor: _____ Certificate of Responsibility No. _____
Electrical Contractor: _____ Certificate of Responsibility No. _____

■ Mississippi Department of Agriculture & Commerce (modified 9/20/18)
Bureau of Plant Industry
HWC - Horticultural Weed Control Contractor _____ HWC License Number _____
Complete when current bid includes any herbicide application ↑ (whether general contractor, landscaping, or a project phase)
MS Code 69-19-5; 69-19-9; 69-19-15 or updated Codes and DAC Plant Industry Rules 3.11.401; 405.03

STANDARD FORM OF AGREEMENT BETWEEN THE OWNER AND THE CONTRACTOR
SECTION 00500

This Agreement made the _____ day of _____, 20_____ between the Owner,

Bureau of Building, Grounds and Real Property Management
501 North West Street, Suite 1401B [Woolfolk Building]
Jackson, Mississippi 39201

created by Section 7-1-451 et seq., and Section 31-11-1, et seq., **Mississippi Code of 1972, Annotated**, and acting for the State of Mississippi;

and between the Contractor:

Business Name _____
Address _____
City/State/Zip _____ Phone: _____Fax:_____Email:_____

The Contractor is a (check and complete one of the following):

_____ ☐ CORPORATION or ☐ LLC solely organized and existing under the laws of the State of _____ and having its principal office in _____, _____, _____
(City) (County) (State

_____ PARTNERSHIP of the following (list all partners):
_____
_____
_____

_____ SOLE PROPRIETORSHIP

For the following Project:

GS#

This Agreement entered into as of the day and year first written above:

OWNER: BUREAU OF BUILDING, GROUNDS AND REAL PROPERTY MANAGEMENT

By:_____
(Signature)

_____Director_____
(Name and Title)

CONTRACTOR:

By:_____
(Signature)

_____
(Name and Title)

APPROVED AS TO FORM:

By: _____
(Signature of Attorney)

THE OWNER AND THE CONTRACTOR AGREE AS SET FORTH IN PAGES ONE THROUGH THREE, ARTICLES ONE THROUGH FIVE, AS FOLLOWS:

ARTICLE 1: THE WORK AND CONTRACT DOCUMENTS
THE WORK

1.1.1 The Contractor will perform all the work required by the Contract Documents for the Project indicated above.

1.2 **THE CONTRACT DOCUMENTS**

1.2.1 The Contract Documents which constitute the entire Agreement between the Owner and the Contractor, are enumerated as follows:

1.2.2 Project Manual dated 6 August 2019

BIDDING REQUIREMENTS
- Advertisement for Bids
- Instructions to Bidders
- Proposal Form

STANDARD FORM OF AGREEMENT BETWEEN THE OWNER AND THE CONTRACTOR
CONTRACT BOND
POWER OF ATTORNEY
CERTIFICATE OF INSURANCE
CONDITIONS OF THE CONTRACT
- General Conditions
- Supplementary Conditions
- Labor Requirements
- Addenda

SPECIFICATIONS (check the specs listed on the contents and included in the manual)
- X Division One: General Requirements
- X Division One Supplements
- X Division Two: Site Work
- X Division Three: Concrete
- ___ Division Four: Masonry
- X Division Five: Metals
- ___ Division Six: Wood and Plastics
- X Division Seven: Thermal and Moisture Protection
- ___ Division Eight: Doors and Windows
- X Division Nine: Finishes
- X Division Ten: Specialties
- ___ Division Eleven: Equipment
- X Division Twelve: Furnishings
- ___ Division Thirteen: Special Construction
- ___ Division Fourteen: Conveying Systems
- ___ Division Fifteen: Mechanical
- ___ Division Sixteen: Electrical
- ___ Division Seventeen: Commissioning

1.2.3 Addenda
Addendum No. 1, dated August 15, 2019
Addendum No. 2, dated September 9, 2019
Addendum No. 3, dated _____
Addendum No. 4, dated _____
Addendum No. 5, dated _____

1.2.4 Drawings dated _____

Sheets No. R101 through R103	Sheets No. _____ through _____
Sheets No. A101 through A501	Sheets No. _____ through _____
Sheets No. S501 through S501	Sheets No. _____ through _____
Sheets No. _____ through _____	Sheets No. _____ through _____
Sheets No. _____ through _____	Sheets No. _____ through _____
Sheets No. _____ through _____	Sheets No. _____ through _____

1.2.5.1 Other documents, dated _____

ARTICLE 2: CONTRACT SUM

2.1 **CONTRACT SUM**

2.1.1 The Owner will pay the Contractor in current funds for the performance of the work, subject to additions and deductions by Change Order as provided in the Contract Documents, the Contract sum of

_____Dollars

($ _____). The Contract sum is determined as follows:

Base Bid		$_____
Modifications	( ) Adds ( ) Deducts	$_____
Negotiations		$_____
Alternate No. _____	( ) Adds ( ) Deducts	$_____
Alternate No. _____	( ) Adds ( ) Deducts	$_____
Alternate No. _____	( ) Adds ( ) Deducts	$_____
Alternate No. _____	( ) Adds ( ) Deducts	$_____
Alternate No. _____	( ) Adds ( ) Deducts	$_____
Total Contract Sum		$_____

2.2 **LIQUIDATED DAMAGES**

2.2.1 The stipulated liquidated damages described in Paragraph 9.11 of the *Supplementary Conditions* are in the amount of_____ _____one thousand_____ Dollars ($ _1000.00_____) for each calendar day.

ARTICLE 3: CONTRACT TIME

3.1 **TIME**

3.1.1 The work to be performed under this Contract shall be commenced upon the date stated in the *Notice to Proceed*. The work is to be substantially complete, subject to approved Change Orders, no later than __425___ calendar days from the date stated in the *Notice to Proceed*.

ARTICLE 4: PAYMENTS AND FINAL PAYMENTS

4.1 **PROGRESS PAYMENTS**

4.1.1 Based upon applications for payment submitted to the Professional by the Contractor and *Certificates for Payment* issued by the Professional, the Owner will make progress payments on account of the Contract sum to the Contractor as provided in the Contract Documents.

4.2 **FINAL PAYMENT**

4.2.1 Final payment constituting the entire balance of the Contract sum will be paid by the Owner to the Contractor when the work has been completed, the Contract fully performed and a final Certificate for Payment has been issued by the Professional and approved by the Owner.

ARTICLE 5: MISCELLANEOUS PROVISION

5.1 **DEFINITION OF TERMS**

5.1.1 Terms used in this Agreement which are defined in the Conditions of the Contract will have the meanings designated in those Conditions.

5.2 **CONTRACTOR'S INTEREST IN AGREEMENT**

5.2.1 The Contractor will not assign, sublet, or transfer the interest in this Contract agreement without the written consent of the Owner. The Owner and Contractor hereby agree to the full performance of the covenants contained herein.

5.3 **PROFESSIONAL**

5.3.1 The Professional assigned to this Project is as follows:

Name_____

Address_____

Telephone _____ Fax Number _____ E-Mail Address_____

***** END OF SECTION *****

DIVISION ONE SUPPLEMENT
SECTION 01900

PART 1 - SUMMARY OF WORK SUPPLEMENT

1.01 **WORK SEQUENCE**

A.Owner will occupy the building during construction, coordinate with Owner's Representative in scheduling work to vacate the areas as the Contractor requires. Reference Exhibit C for detailed daily allowable work schedule.

B.Construct work in stages as follows:

1._Phase 1: must be completed prior to February 5, 2020
2._Phase 2: must begin no earlier than March 23, 2020
3._____
4._____

1.02 **PARTIAL OWNER OCCUPANCY**

A.Schedule early completion of designated areas for Owner's usage prior to substantial completion of entire Project.

1.Owner will fully occupy each phase of work after acceptance.
2._____
3._____
4._____

B.Owner will occupy areas for purpose of full use.

C.Contractor will provide:

1.Access for Owner's personnel
2._____
3._____

D.Prior to occupancy, execute a *Certificate of Substantial Completion* for designated areas.

E.Upon occupancy, Owner shall provide:

1._____
2._____

PART 2 - ALLOWANCE SUPPLEMENT

2.01 **SCHEDULE OF ALLOWANCES**

A.Include in the Bid, for inclusion in the Contract Sum, the amount of $_____for purchase of_____.

(Refer to Section _____, _____)

B.Include in the Bid, for inclusion in the Contract Sum, the amount of $_____for purchase of_____

(Refer to Section _____, _____)

3.01 **DESCRIPTION OF ALTERNATES**

A. Alternate Number One. Installation of new stair nosings with non-slip strip and luminous stair tread markers along all existing treads throughout entire seating area. See sheet A103 and specification for additional information.

_____

_____

B.Alternate Number Two. _____

_____

_____

_____

_____

C.Alternate Number Three. _____

_____

_____

_____

_____

D.Alternate Number Four. _____

_____

_____

_____

_____

E.Alternate Number Five. _____

_____

_____

_____

_____

PART 4 – UNIT COST SUPPLEMENT

4.01 DESCRIPTION OF UNIT COSTS:

A. All unit costs pertain to the repair work to be completed throughout seating areas. A baseline amount of repairs concrete floor is called for in the Contract documents. Additional amounts of these types of repair may be required. The Contractor shall provide unit costs for the following types of additional repair:

1. Additional square footage of concrete spall patch/repair – add/deduct _____/sqft

2. Additional square footage of traffic coating system – add/deduct _____/sqft

PART 5 – LIQUIDATED DAMAGES SUPPLEMENT

5.01 LIQUIDATED DAMAGES:

A. There are two different amounts for liquidated damages on this project. If the work in Phase 1 (as described in the contract documents) is not substantially complete and turned over to the Owner for FULL occupancy and use by the designated February 5, 2020 date, the Contractor will be subject to liquidated damages in the amount of **two thousand five hundred dollars and 00/100 ($2500.00)** for each calendar day after February 5, 2020 until the date of acceptance by Owner.

B. As stated in the Standard Form of Agreement, Article 2: Contract Sum, if the entirety of the project is not substantially complete and turned over to the Owner for FULL occupancy and use by the designated 425 calendar days from the date noted on the Notice to Proceed, the Contractor will be subject to liquidated damages in the amount of **one thousand dollars and 00/100 ($1000.00)** for each calendar day.

SECTION 07 18 00

TRAFFIC COATINGS

PART 1 - GENERAL

1.1 SUMMARY

a. SECTION INCLUDES
Polyurethane traffic coatings for pedestrian traffic applications.

1.2 RELATED REQUIREMENTS

1.3 REFERENCES

b. References, General: Versions of the following standards current as of the date of issue of the project apply to the Work of this Section.

c. ASTM International (ASTM): www.astm.org:
ASTM C 920 - Standard Specification for Elastomeric Joint Sealants
ASTM C 957 - Standard Specification for High-Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane with Integral Wearing Surface
ASTM C 1127 - Standard Guide for Use of High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane with an Integral Wearing Surface
ASTM C 1193 - Standard Guide for Use of Joint Sealants
ASTM D 4258 - Standard Practice for Surface Cleaning Concrete for Coating
ASTM D 4259 - Standard Practice for Abrading Concrete
ASTM E 1980 - Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces

d. International Concrete Repair Institute (ICRI): www.icri.org:
ICRI 310.2R - Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair

e. Sealant, Waterproofing, and Restoration Institute (SWRI): www.swrionline.org:
SWR Institute Validation Program

f. UL Laboratories, Inc.(UL): www.ul.com:
UL 790 - Standard Test Methods for Fire Tests of Roof Coverings

g. Miami-Dade County Product Control Section Notice of Acceptance (NOA): www.miamidade.gov
NOA No.: 13-0716.15, 15-0127.02

1.4 ADMINISTRATIVE REQUIREMENTS

A. Pre-installation Conference: Conduct conference at Project Site. Two weeks prior to commending area of work, conduct conference at Project Site attended by Owners Representative, Contractor, Installer, Waterproofing Consultant or Inspector and direct employed representative of the membrane system manufacturer and interfacing Sections.

B. Review requirements for traffic coating products and installation, including surface preparation, substrate conditions, project and manufacturer details, installation procedures, mockups, testing and inspection requirements, protection and repairs, and coordination and sequencing of traffic coating work with work of other Sections.

1.5 ACTION SUBMITTALS

a. Product Data: For each type of traffic coating product specified, indicating:

1. Technical Data indicating compliance with requirements.
2. Substrate preparation instructions and recommendations.

b. Shop Drawings: Show locations for traffic coating system components. Show details for each type of substrate, moving joints, corners, and edge conditions, including penetrations, transitions, and terminations.

1.6 INFORMATIONAL SUBMITTALS

a. Qualification Data: For Installer

Written documentation of Installer's qualifications, including reference projects of similar scope and complexity with current phone contacts for Engineer/Architects and Owners for verification.

c. Warranty: Sample of unexecuted manufacturer and installer special warranties.

d. Field quality control reports.

1.7 QUALITY ASSURANCE

a. Installer Qualifications: Firm acceptable to the Manufacturer with minimum five years of experience in installation of specified products successfully used on similar projects, employing trained, skilled workers including a full-time on-site supervisor with a minimum three years experience installing similar work. Supervisor to be on-site at all times during installation.

b. Manufacturer Qualifications: A qualified manufacturer listed in this Section with minimum five years of experience in manufacture of traffic coating as one of its principal products.

Manufacturer's submitted product has been in satisfactory operation on five similar installations for at least five years.

c. Waterproofing Consultant or Inspector Qualifications: A technical representative who is experienced in the installation and maintenance of the specified traffic coating systems, and qualified to perform observation and inspection specified in Field Quality Control Article to determine Installer's compliance with the requirements of this Project, acceptable to Architect, retained by the Contractor.

d. Mockups: Provide traffic coating mockup application within mockups required in other sections, or if not specified, in an area of not less than 100 sq. ft. of surface where directed by Architect, Engineer or Owner for each type of substrate condition. Include examples of surface preparation, crack and joint treatment, traffic coating application, slip-resistant aggregate application, and flashing, transition, and termination conditions, to set quality standards for execution.

a. Include intersections of deck traffic coating with adjacent vertical coating and moisture control system applications.

1.8 DELIVERY, STORAGE AND HANDLING

B. Accept materials on site in manufacturer's unopened original packaging.

C. Store products in weather protected environment, clear of moisture, within temperature ranges recommended by traffic coating manufacturer.

D. Construction Waste: Store and dispose of packaging materials and construction waste in accordance with requirements of Division 01.

1.9 ENVIRONMENTAL REQUIREMENTS

A. Environmental Limitations: Apply traffic coating within the range of ambient and substrate temperatures recommended by traffic coating manufacturer.

1. Protect substrates from environmental conditions that affect coating performance.
2. Do not apply traffic coating to a damp or wet substrate or during rain, fog, snow or mist or when dew is present.

1.10 SCHEDULING

A. Coordinate installation of traffic coating with completion of other work requiring interface with traffic coating.

B. Schedule work so traffic coating applications may be inspected prior to concealment.

C. Ensure coating materials are properly cured before opening to traffic.

1.11 WARRANTY

E. Special Manufacturer's Warranty: Manufacturer's standard form in which traffic coating manufacturer agrees to furnish traffic coating material to repair or replace those materials installed according to manufacturer's written instructions that exhibit material defects or otherwise fail to perform as specified under normal use within warranty period specified.

1. Access for Repair: Owner shall provide unimpeded access to the Project and the traffic coating system for purposes of testing, leak investigation, and repair, and shall reinstall removed cladding and overburden materials upon completion of repair.
2. Cost Limitation: Manufacturer's obligation for repair or replacement shall be limited to the original cost of the material.
3. Warranty Period: 5 years from Substantial Completion.

F. Special Installer’s Warranty: Installer’s standard form covering workmanship

1. Warranty Period: 1 year from Substantial Completion.

G. Special warranties specified in this article exclude deterioration or failure of traffic coating materials from the following:

1. Movement of the structure caused by structural settlement or stresses on the traffic coating exceeding manufacturer's written specifications for elongation.
2. Mechanical damage caused by outside agents

1.12 MOCKUP

A. Contractor to provide a 100 sqft mock up utilizing the selected cleaner, shot blasting, and cleaning method. Contractor shall verify with manufacturer that the mock up test surface meets the manufacturer's requirements for installation of the approved coating system.

B. Contractor to provide a 100 sqft mock up with selected coating color for review and acceptance by Owner and Architect. Contractor shall not purchase or install coating top coat material until color selection mockup is approved.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Provide traffic coating products manufactured by Tremco, Inc., Commercial Sealants and Waterproofing Division, An RPM Company: Or an approved equal.
1. Basis of design concrete cleaner: Corotech V600 oil and grease emulsifier
2. Basis of design primer: Tremco Epoxy Primer – 2 part epoxy primer
3. Basis of design coating: Tremco Vulkem 350NF/TC 951

B. Source Limitations: Provide traffic coating system materials (excluding concrete cleaner), sealants and accessory products from single source manufacturer.

2.2 PERFORMANCE REQUIREMENTS

A. General: Traffic coating system shall be capable of performing as a continuous watertight installation and as a moisture drainage plane transitioned to adjacent flashings and discharging water to the structure exterior. Traffic coating shall accommodate normal substrate movement and seal control joints, construction material transitions, opening transitions, penetrations, and perimeter conditions without resultant moisture deterioration.

B. Compatibility: Provide traffic coating system materials that are compatible with one another and with adjacent materials under conditions of service and application required, as demonstrated by traffic coating manufacturer based on testing and field experience.

2.3 TRAFFIC COATING FOR PEDESTRIAN TRAFFIC

A. Traffic Coating: Manufacturer's standard, exterior exposure, traffic-bearing, seamless, high-solids-content, cold liquid-applied, elastomeric, waterproofing membrane system with integral wearing surface for pedestrian traffic; meeting ASTM C 957, SWRI validated and complying with requirements of authorities having jurisdiction. Color to be selected by Architect. Contractor to provide a 100 sqft mock up test area with selected color for Owner approval.
1. Acceptable Base Coat Material
   a. Vulkem 350NF SL applied at 25 wet mils, Tremco Inc.

Property	Test Method	Performance
Solids by weight	ASTM 1353	90 – 98%
Hardness (Shore A)	ASTM D2240	45 - 60
Tensile Strength	ASTM D412 @ 75° F	440 - 460
Elongation	ASTM D412	600 – 700%
Adhesion (peel)	ASTM D903	25 – 30 pli, unprimed
Accelerated Aging	ASTM D573	no loss of elongation or ten-

		sile strength
Adhesion (pull-off)	ASTM D4541	200 - 400 psi
Cure Time at 77°, 50% RH	ASTM D1640	4 – 6 Hrs.
Flash Point	Setaflash	160°F

1. Acceptable Intermediate and Top Coat Material

a. Vulkem 951NF applied at approximately 15 wet mils, Tremco Inc.

Property	Test Method	Performance
Solids by weight	ASTM 1353	80-85%
Hardness (Shore D)	ASTM D2240	50
Tensile Strength	ASTM D412	4,500 psi
Elongation	ASTM D412	145%
Adhesion (peel)	ASTM D903	100% cohesive
Accelerated Aging	ASTM D573	no loss of elongation or tensile strength
Adhesion (pull-off)	ASTM D4541	N/A
Cure Time at 77°, 50% RH	ASTM D1640	4 Hrs.
Flash Point	Setaflash	93°C
Abrasion Resistance	ASTM D4060	33 mg
Weathering Resistance	ASTM D820	No effect
Salt Spray	ASTM B117	No effect

B. Primer: Interlaminary - Tremco Epoxy Primer sanded

C. Aggregate: Oven dried, silica sand free of iron and contaminants, in a mesh size specified by coating manufacturer, such as Unimin 2040 from Junction City, GA.

2.4 ACCESSORY MATERIALS

A. General: Accessory materials as described in manufacturer's written installation instructions, recommended to produce complete traffic coating system meeting performance requirements, and compatible with traffic coating material and adjacent materials. Contractor is responsible for installing complete coating system that adheres to the manufacturer’s installation instructions for each element of the coating system.

B. Sealant:
1. Acceptable Product:
a. Dymonic 100, Tremco Inc. or approved equal. Apply sealant to all inside corner conditions (stairs, risers, etc) if required by manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Surface Condition: Before applying traffic coating materials, examine exposed concrete substrate and conditions to ensure substrates are fully cured and free from high spots, depressions, loose and foreign particles, oils, grease, and other deterrents to adhesion, and conditions comply with manufacturer's written recommendations.
   1. Verify concrete surfaces are visibly dry, have cured for time period recommended by traffic coating manufacturer, and are free from release agents, curing agents, laitance, and other contaminates.
   2. Mechanically prepare/scarify (ie. shot blast) all horizontal surfaces of concrete as well as any area of concrete without a sufficient texture for proper adhesion of coating.
   3. As required, test surfaces following cleaning and abrasion specified below, as required by Manufacturer.

      a. Test for capillary moisture by method recommended in writing by traffic-coating manufacturer, as required by manufacturer.
      b. Test for traffic coating adhesion per manufacturer's recommended method.
      c. Notify Architect in writing of unsatisfactory conditions.

B. Proceed with installation once unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Surface Preparation: Inspect existing concrete, removing any areas where the concrete or existing coating is loose or delaminated. (It may be prudent to seal cracks before introducing water to reduce potential for water intrusion).

B. Mechanically prepare/scarify (ie. shot blast) all horizontal surfaces of concrete as well as any area of concrete without a sufficient texture for proper adhesion of coating.

C. Clean existing concrete surface with oil and grease emulsifier following manufacturer’s instructions for installation. Remove any areas where concrete is loose, severely worn or delaminated. Remove all surface contaminates, oils, grease, etc.

D. All abandoned existing anchor bolts are to be cut flush or slightly recessed and ground smooth. Patch all holes or gaps in concrete with epoxy patch.

E. Rout, clean, and fill any exposed cracks or gaps in the concrete utilizing the shallow concrete repair method by mixing the sand with epoxy in a 3:1 ratio. See 3.4 below.

F. Clean, prepare, and treat substrates in accordance with ASTM C 1127 and traffic coating manufacturer's written instructions.
   1. Remove contaminants, curing compounds, and film-forming coatings from substrates.
   2. Remove projections and excess materials.
   3. Fill voids with Tremco Epoxy Primer, using the “Shallow Concrete Repair Method with Silica Sand” per Manufacturer’s recommendations.
   4. Mechanically abrade concrete surfaces to a uniform profile in accordance with ASTM D 4259 and meeting ICRI Surface Profile CSP 2 - 3. Do not acid etch.
   5. Clean prepared surfaces in accordance with ASTM D 4258.
   6. Clean metal surfaces to bright metal by wire brush or mechanical etching; scuff-sand lead flashing and plastic surfaces.

G. Protect adjacent finished surfaces by masking. Mask termination point on vertical surfaces.

3.3 TERMINATIONS AND PENETRATIONS

A. Prepare vertical and horizontal surfaces at horizontal to vertical transitions, terminations, joints, and penetrations through traffic coatings in accordance with ASTM C 1127 and manufacturer's written instructions, using accessory materials specified.

B. At terminations of traffic coating exposed to traffic, rout 1/4 by 1/4 inch keyway or reglet in concrete.

C. Detail Preparation: Prepare non-moving shrinkage cracks, large cracks, construction joints, expansion joints, projections and protrusions, penetrations, drains, and changes in plane in accordance with manufacturer's written instructions and details, .

1. Prepare joints and cracks in substrate in accordance with ASTM C 1127 and ASTM D 4258 and manufacturer's written instructions. Route all cracks and joints and caulk utilizing manufacturer’s recommended caulking.

D. Joint Sealant Installation: Comply with ASTM C 1193 and manufacturer's written instructions. Allow joint sealants to cure adequately before coating with traffic coating.

1. Provide one inch (1”) joint sealant cants at penetrations and at all horizontal-to-vertical intersections. Tool sealant material to form 45 degree angle transition.
2. Rout and fill cracks with joint sealant and tool flush with surface.
3. Where applicable, prime surfaces in accord with manufacturers application instructions.
4. Allow joint sealant to cure.
5. Fill expansion joints with backer rod and joint sealant. Do not apply full traffic coating system over expansion joints.

3.4 PEDESTRIAN TRAFFIC-COATING APPLICATION

A. Primer: Prime metal and concrete surfaces and preceding coats left uncoated for more than 24 hours or that have lost surface tack, with manufacturer's recommended primer. Allow to cure appropriately before proceeding. Not all primers are allowed to fully cure.

B. Apply traffic coating according to ASTM C 1127 and manufacturer's recommendations and written instruction.

1. Grid deck surfaces to assure proper coverage rates and verify coating wet-film mil thickness with gauges as work progresses.
2. Retain product containers during course of work to aid in determining whether completed coating system complies with manufacturers average thickness requirements.
3. Maintain project log documenting batch numbers, application locations and dates.

C. Apply number of coats of specified compositions for traffic coating at locations indicated on Drawings.

1. Primer: Apply one coat of epoxy primer at all areas in concrete requiring repair. Repair areas are to be filled with a 3:1 mixture of 3 parts silica sand with 1 part epoxy primer. Apply one full coat of epoxy primer on all exposed surface areas which will receive the traffic coating. Apply primer per manufacturer’s written instructions. Utilize shallow concrete repair method with silica sand in between first and second primer coats.
2. Base Coat: Single lift application of thoroughly mixed Vulkem 350NF at 40 wet mils or 40 sf^2/gallon.
3. Intermediate Coat. Apply Vulkem 951NF by roller at 13-15 wet mils in accord with manufacturer’s application instructions and immediately broadcast 20-40 mesh silica sand

aggregate at a rate required to achieve desired texture and backroll to completely encapsulate with liquid. Allow to cure per manufacturer's instructions.

4. Top Coat: Apply neat 951NF by roller at 13 wet mils in accord with manufacturers application instructions being careful not to entrap air bubbles, thoroughly mix and batch intermediate/top coat material when more than one batch number will be installed.

D. Apply traffic coatings to prepared wall terminations and vertical surfaces to height indicated

E. Cure traffic coatings. Prevent contamination and damage during application and curing stages. Allow completed work to cure a minimum of 24 hours before opening to critical pedestrian traffic or 48 hours before opening to pedestrian traffic.

3.5 FIELD QUALITY CONTROL

A. Waterproofing Consultant, Inspection or Testing Agency: Engage manufacturer's representative to inspect substrate conditions, surface preparation, traffic coating application, protection, and drainage components, and to furnish reports to Architect.

B. Coordination of Testing: Cooperate with the agency. Allow access to work areas and staging. Notify agency in writing of schedule for Work of this Section to allow sufficient time for testing and inspection.

C. Reporting: Forward written inspection reports to the Architect within 2 working days of the inspection.

D. Correction: Correct deficient applications not passing tests and inspections, make necessary repairs, and retest as required to demonstrate compliance with requirements.

3.6 CLEANING AND PROTECTING

A. Clean spills, stains, and overspray resulting from application utilizing cleaning agents recommended by manufacturers of affected construction. Remove masking materials. Maintain coating per Manufacturer's recommendations.

END OF SECTION

SECTION 10 14 43

STAIR NOSINGS AND PHOTOLUMINESCENT EGRESS PATH MARKINGS

Part 1 General

1.1 Summary

A Work Included: Furnishing and installation of [step edge strips,] [stair nosings,] [guidance and hand-rail products,] [and] [signs and markers] over specified substrates.

1.2 References

A [National Fire Protection Association (NFPA) 101 - Life Safety Code]
[International Building Code / International Fire Code (IBC/IFC)]
[New York City RS6-1 and RS6-1A Photoluminescent Exit Path Markings]

B UL 1994 Standard for Safety, Luminous Egress Path Marking Systems.

C ASTM E2072, Standard Specification for Photoluminescent (Phosphorescent) Safety Markings.

1.3 Quality Assurance

A Manufacturer Qualifications: to have minimum of 10 years experience with similar work.

B Installer Qualifications: to be manufacturer trained/authorized installer.

1.4 Submittals

A Submit the following [in accordance with Section 01 33 00 – Submittal Procedures]:

1 Product Data: Manufacturer's printed product literature for materials used in system.

2 Shop Drawings: Provide CAD drawings showing details, dimensions, extent of work, and other data necessary for the satisfactory installation of the products stated herein.

3 Samples: 6" (150 mm) size for review showing final color. Label samples with origin and intended use.

4 Manufacturer's Instructions: Pre-printed material describing installation of product, system or material, including special notices and Material Safety Data Sheets outlining hazards and safety precautions.

5 Test Reports: Showing compliance with required standards, ordinances and codes.

1.5 Mock Up

A Contractor to provide full mockup (minimum of 3 completely installed stair treads of each type) for Owner approval prior to releasing stair treads. Upon Owner approval, Contractor may proceed with the work.

1.6 Delivery, Storage and Handling

A Handle and store Products in a manner to prevent damage, deterioration and soiling to Products, other building components, assemblies, other Products, the structure, the Site and surrounding property and in accordance with manufacturer's instructions.

B Store packaged or bundled Products in original and undamaged containers and packaging with manufacturer's seals and labels intact. Do not remove from packaging or containers until required in the Work.

C Store products subject to damage from weather in weatherproof enclosures.

1.7 Warranty

A Provide a written and signed Warranty in the name of the Owner for a period of five (5) years from the date of Substantial Performance of the Work.

B Warranty to cover defects in materials and workmanship.

Part 2 Products

2.1 Manufacturers

A Basis of Design: products by Ecoglo Inc. (www.us.ecoglo.com) , or approved equal product.

2.2 Materials

A Extruded Aluminum: 6060T5 extrusion anodized to Class 1, .0007" (20 microns) thickness.

B Reflectance material: strontium aluminate-based photoluminescent pigment embedded in thermoset polyester carriers that integrally bond the active ingredients into powder coated aluminum substrates following curing at 350°F (180°C).

1 [Photoluminescent area luminance properties, from fully charged as per New York City RS6-1 brightness rating "BR 106/29/20":
- For 4 hours after lights turned off > 15 mcd/m²
- For 8 hours after lights turned off > 7 mcd/m²
- For 110 hours after lights turned off > 0.3 mcd/m²]
[Materials shall comply with either UL 1994; or
ASTM E 2072, except that the charging source shall be 1 footcandle (11 lux) of fluorescent illumination for 60 minutes, and the minimum luminance shall be 30 millicandelas per square meter at 10 minutes and 5 millicandelas per square meter after 90 minutes.]

2 UV resistance of photoluminescent properties: Loss of luminance after 1000 hrs. as per ASTM G-155 Cycle 1 exposure: < 10%.

3 Materials shall show no detrimental effects after 2,000 hrs. when tested under ASTM G-155 – Accelerated Weathering

C Non-slip surface: silicon carbide integrally bonded into powder-coated aluminum substrates following curing at 350°F (180°C).

2.3 Components

A Step Edge Strips – Nosing Inserts

1 Contrast strips: powder coated extruded aluminum insert with strontium aluminate-based photoluminescent pigment recessed into protective channels and silicon carbide non-slip material - 2" width. Basis of design: Ecoglo [E4071 Series Strips]

B Stair Nosings

1 Nosing Type A (base bid) - anodized aluminum extrusion with replaceable insert adhesively fixed into extrusion; powder coated extruded aluminum insert with silicon carbide non-slip material. Basis of design: Ecoglo RF7 Series Stair Nosing with 2" wide black non-slip insert N3070.

2 Nosing Type B (Alternate No 1)- anodized aluminum extrusion with replaceable insert adhesively fixed into extrusion; powder coated extruded aluminum insert with strontium

aluminate-based photoluminescent pigment recessed into protective channels and silicon carbide non-slip material. Basis of design: Ecoglo RF7 Series Stair Nosing with E4071 insert

C Guidance and Handrail Products

1 Handrail strip: surface adhered photoluminescent pigment strip with [1" (25.5 mm)] wide yellow-green luminescent area, 0.06" (1.5 mm) thick. Basis of design: Ecoglo G250R-H. Trim corners as recommended by manufacturer.

Part 3 Execution

3.1 Examination

A Before installation, examine surfaces on which the Work of this Section depends. Notify [Contractor] if substrates do not comply with requirements of this Section

B Do not proceed with Work of this Section until all unsatisfactory conditions have been corrected, if any.

C Commencement of Work will imply acceptance of surfaces.

3.2 Preparation

A Clean surfaces to remove dirt, dust, grease, oil, loose material, frost, paint, coatings, or other matter that may affect bonding or installation of photoluminescent products.

B Test substrates for fit with products before using adhesives or mechanical fastening.

3.3 Installation

A Unless otherwise indicated in the specifications, install Products in accordance with manufacturer's instructions. Obtain written instructions directly from manufacturer.

B New nosings to be installed over existing nosings utilizing manufacturer's recommended adhesive, cleaning method, and recommended mechanical screw attachments.

C Handrail strips to be installed per manufacturer's written installation instructions. Handrail strips to be installed on ALL new and existing sloped handrails. Viewing rails along edges of seating platforms do not require strips.

3.4 Mock Up

A Contractor to provide full mockup (minimum of 3 complete stair treads) for Owner approval prior to releasing stair treads. Upon Owner approval, Contractor may proceed with the work.

3.5 Cleaning

A At completion of installation, clean soiled Product surfaces in accordance with manufacturer's instructions.

3.6 Waste Management and Disposal

A Separate waste materials for [reuse] [and] [recycling] at nearest used building materials facility.

B Divert unused caulking, sealants and adhesive materials from landfill through appropriate disposal depot.

3.7 Protection

A Allow 24 hours for adhesive cure with no foot traffic permitted.

B Protect areas from damage using barriers, markers or temporary signs as required.

C Do not allow heavy objects to come in contact with installed products.

END OF SECTION

SECTION 12 63 00

STADIUM AND ARENA SEATING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Fixed plastic chairs with self-rising seat mechanisms, aisle and intermediate stanchions.

1. Typical applications include the following:
   a. Floor mounted chairs.
   b. Riser mounted chairs.
   c. Cast Aluminum Stanchions and Steel Stanchions
   d. Outdoor Hardware

1.02 REFERENCES

A. National Fire Protection Association (NFPA)
1. NFPA 102 Standard for Assembly Seating, Tents and Membrane Structures.

B. American Institute of Steel Construction (AISC):
1. AISC - Design of Hot Rolled Steel Structural Members.

C. American National Standards Institute (ANSI).

D. American Iron & Steel Institute (AISI):
1. AISI - Design Cold Formed Steel Structural Members.

E. American Society for Testing Materials (ASTM)
1. ASTM - Standard Specification for Properties of Materials.

F. Americans with Disability Act (ADA)
1. ADA - Standards for Accessible Design.

1.03 MANUFACTURER'S SYSTEM ENGINEERING DESCRIPTION

A. Structural Performance: Engineer, fabricate, and install stadium and arena seating to the following structural loads without exceeding allowable design working stresses of materials involved, including anchors and connection. Apply each load to produce maximum stress in each respective component of the seating unit.

B. Manufacturer's System Design Criteria:
1. Seats and Backs:
   a. Shall embody a contemporary sculptured appearance to harmonize with any architectural form or room decor.
   b. Shall exhibit moderate compound contours for supportive comfort avoiding excess anatomical pressures.
   c. Seat shall be semi-cantilevered, self-rising, for ease of passage and janitorial access.
   d. Seat shall be tested and professionally certified through an independent testing laboratory to support and withstand an evenly distributed 600 lb. [272.1Kg] static load without failure or irregularities that would impair usefulness.
   e. Self lifting seat shall be tested and professionally certified through an independent testing laboratory to withstand 350,000 operating cycles without added lubrication, spring fatigue, adjustment, or measurable bearing wear.

f. Seat shall be tested and professionally certified to withstand, without failure, 10,000 impacts, of a 40 lb. [18.14Kg] sandbag dropped on the center of seat from each of the following heights of 6 inches [152mm], 8 inches [203mm], 10 inches [254mm], 12 inches [305mm] at a rate of 18 impacts per minute for a total of 40,000 impacts.
g. Back shall be tested and professionally certified through an independent testing laboratory to withstand an evenly distributed front or rear static load of 450 lb. [204.08Kg].
h. Back shall be tested and professionally certified to withstand, without failure, 40,000 swinging impacts each to the front and rear of the back by means of two opposing 40 lb. [18.14Kg] sandbags. The sandbags shall be moved horizontally and equally for 10,000 cycles each at the following distances of 6 inches [152mm], 8 inches [203mm], 10 inches [254mm], and 12 inches [305mm] at a rate of 18 cycles per minute.
i. Horizontal Traverse Static Load to Back: Backs shall withstand an evenly distributed static load of 200 lbs [90.70Kg] to the top of the back at a 45 degree angle to the row of seats.
j. Armrests shall be tested and professionally certified to withstand an evenly distributed static load of 200 lbs [90.70Kg] applied perpendicular to the armrest.

2. Material (Flammability) shall satisfy applicable test, codes, standards, or requirements as follows:
   a. Polyethylene shall meet the Federal Motor Vehicle Safety Standard No. 302 which specifies a burning rate of less than 4 inches per minute.

1.04 SUBMITTALS

A. Section Cross-Reference: Submit required submittals in accordance with "Conditions of the Contract" and Division
   1. General Requirements sections of this "Project Manual."

B. Project Data: Manufacturer's product data for each system. Include the following:
   1. Project list: Ten (10) seating projects of similar size, complexity and in service for at least five (5) years.
   2. Deviations: List of deviations from these project specifications.

C. Shop Drawings: Indicate plastic chair seating layout. Show all equipment to be furnished with details of accessories to be supplied.

D. Samples: Seat materials and color finish as selected by Architect from manufacturers fill color finishes.

E. Manufacturer Qualifications: Certification of insurance coverage and manufacturing experience of manufacturer

F. Installer Qualifications: Installer qualifications indicating capability, experience, and manufacturer acceptance.

G. Engineer Qualifications: Certification by a professional engineer registered in the state of manufacturer that the equipment to be supplied meets or exceeds the design criteria of this specification.

H. Operating/Maintenance Manuals: Provide to Owner maintenance manuals. Demonstrate operating procedures.

I. Warranty: Manufacturers standard warranty documents.

1.05 QUALITY ASSURANCE

J. NFPA Standard: Comply with current NFPA 102 Standard for Assembly Seating, Tents and Membrane Structures, except where additional requirements are indicated or imposed by authorities having jurisdiction.

K. Insurance Qualifications: Mandatory that each bidder submit with his bid an insurance certification from the manufacture evidencing the following insurance coverage:

1. Workers Compensation - including Employers Liability with the following limits:
   a. $500,000.00 Each Accident
   b. $500,000.00 Disease - Policy Limit
   c. $500,000.00 Disease - Each Employee
2. Commercial General Liability - including premises/ operations, independent contractors and products completed operations liability. Limits of liability shall not be less than $2,000,000.00

L. Manufacturer Qualifications: Manufacturer who has ten (10) years of experience manufacturing spectator seating equipment.

M. Installer Qualifications: Engage experienced Installer who has specialized in installation of audience seating similar to types required for this project and who is acceptable to, or certified by, spectator seating manufacturer.

N. Engineer Qualifications: Engage a professional licensed engineer experienced in providing engineering services of the kind indicated that have resulted in the successful installation of audience seating similar in material, design, fabrication, and extent to those types indicated for this project.

1.06 DELIVERY, STORAGE AND HANDLING

A. Deliver seating in manufacturers packaging clearly labeled with manufacturer name and content.

B. Handle seating equipment in a manner to prevent damage.

C. Deliver the seating at a scheduled time for installation that will not interfere with other trades operating in the building.

D. Contractor is allowed to store entirety of seats on the coliseum grounds. Contractor is responsible for securing and protecting seats at all times.

1.07 PROJECT CONDITIONS

A. Field Measurements: Coordinate actual dimensions of construction affecting audience seating installation by accurate field measurements before fabrication. Show recorded measurements on final shop drawings. Coordinate field measurements and fabrication schedule with construction progress to avoid delay of Work.

1.08 WARRANTY

A. Manufacturer's Product Warranty: Submit manufacturer's warranty form for fixed and removable chairs. This warranty is in addition to, and not a limitation of other rights Owner may have under Contract Documents.
   1. Warranty Period: Limited Lifetime (Lifetime warranty on stanchions, supports, and springs with standard wear and tear. Warranty is only limited by exclusionary items such as abuse, neglect, vandalism, misuse, etc.) Plastic seats and backs to have a minimum 5 year warranty.
   2. Beneficiary: Issue warranty in legal name of project Owner.
   3. Warranty Acceptance: Owner is sole authority who will determine acceptance of warranty documents.

1.09 MAINTENANCE AND OPERATION

A. Instructions: Both operation and maintenance shall be transmitted to the Owner by the manufacturer of the seating or his representative.

B. Service: Maintenance and operation of the seating system shall be the responsibility of the Owner or his duly authorized representative, and shall include the following:

1. Only attachments specifically approved by the manufacturer for the specific installation shall be attached to the seating.
2. An annual inspection and required maintenance of each seating system shall be performed to assure safe conditions. At least biannually an inspection shall be performed by a professional engineer or factory qualified service personnel.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Manufacturer basis of design: Hussey Seating Company, U.S.A.
   1. Product: Hussey Fixed Plastic Chairs.
      a. Model: Fusion
      b. Available Chair Sizes: 19", 20", 21", 22"
      c. Back Type: Plastic
      d. Seat Type: Plastic
      e. Stanchions: Cast - Riser mount for all tiered seating location and floor mount for ADA platform areas only.
   2. Product Description/Criteria:
      a. Number of Chairs: See Plans
      b. Number of Rows: See Plans
      c. Number of Wheelchair Locations: See Plans. Provide removable sled seats in noted ADA locations indicated on plans
   3. Product Accessories:
      a. ADA easy access armrests where required
      b. Seat numbers
      c. Row numbers
      d. Cup Holders for all seats
      e. End row signage/logo decals for all end seats

B. Other Acceptable Manufacturers:
   1. Manufacturer/Product: Interkal : Aura chair, Hussey: Fusion chair, Irwin: Centurion chair

2.02 ALTERNATES

1. None.

2.03 MATERIALS

A. Cast Aluminum: Aluminum Alloy AA 380

B. Cast Iron: ASTM A48 and ASTM A536

C. Drilled-in Expansion Anchors: Stainless steel SAE grade 2 set with acrylic/epoxy adhesive

D. Blow molded plastic: Virgin high density polyethylene with a melt index of 0.40 per ASTM D1238.

2.04 FABRICATION

A. Plastic backs shall have a smooth surface for easy cleaning, and be constructed of double wall blow molded polyethylene with anti-static compound and ultra-violet light stabilizing additives. Backs shall have a nominal wall thickness of 0.125 inch [3mm] and be ergonomically contoured for posture and sitting comfort.

B. Plastic seats shall have a smooth surface for easy cleaning, and be constructed of double wall blow molded polyethylene plastic with anti-static compounds and ultra-violet light stabilizing additives. Seats shall have a nominal wall thickness of 0.125 inch [3mm] and be ergonomically contoured for posture and sitting comfort.

C. Back height to be 32 inches [813mm] from floor and extend below the seat to afford chair occupant protection from rear and eliminate any pinching hazard. Back length shall be 21 inches [533mm] nominal.

D. Stanchion back pitch shall be 15 degrees.

E. Backs shall be though bolted to stanchions at four (4) connection points. Bolt heads shall be recessed below the surface of the back.

F. Backs shall be recessed to receive an adhesive backed number label with silk screed black numbers. Label fitted in vandal resistant recess.

G. Backs shall be recessed to receive an aluminum number plate. Label fitted in vandal resistant recess and secured with two (2) aluminum pop rivets.

H. Seats shall be securely fastened to cast iron hinge arms by means of four fastening screws into threaded metal inserts molded in the underside of the plastic seat. No exposed fasteners shall be located on the seat surface.

I. Seat Hinge Arms.
   1. Seat hinge arms shall be recessed under each side of the seat and provide support for the plastic seat.
   2. Hinge arm shall be made of cast iron and its shape shall follow the contour of the seat.
   3. Hinge arms shall be finished to match stanchion color.

J. Seat Hinge Mechanism.
   1. Seat hinge mechanism shall consist of two independent dual function torsion springs designed to automatically return the seat to a ¾ upright position. Hinge design shall include a feature to allow for manual rotation of the seat from the ¾ upright position to a full vertical upright (safety fold) position. The hinge mechanism shall automatically return the seat from the safety fold to the ¾ upright position.
   2. Seat hinges shall utilize permanently lubricated oil impregnated bearings. Springs, pivot shafts, and rotational stops shall be concealed within the hinge arm to eliminate pinch points and protect the components from dirt and weather.

K. Cast Stanchions:
   1. Stanchions shall be die cast from Aluminum Alloy 380 for a rust free finish with armrests cast as an integral feature of the stanchion. Cast iron ASTM A48 and ASTM A536 is acceptable.
   2. Stanchions shall have open panel design with optional clamp-on filler panel with logo.
   3. ***Select Locations:*** Stanchions shall be floor attached, designed to maintain a constant seat height to floor.
   4. Primary Stanchions shall be riser attached.

L. Finish:
   1. Cast Iron Finish (Hinge Mechanism): Cast iron shall be cleaned, chemically pretreated, and have primer applied through a 15-stage dip immersion process. Primer shall consist of a cathodic epoxy electrodeposition coat (E coat) applied to minimum dry film thickness of 0.8 mils. Top finish coat applied over the primed cast iron shall be an architectural grade exterior polyester powder coat with a dry

film thickness of 4 - 6 mils. The performance of the powder will pass the 2H Pencil Hardness test (ASTM D3363) and 1500 hours of Salt Spray (ASTM B117a).

2. Cast Aluminum Finish (Stanchions): Cast Aluminum shall be chemically cleaned, treated with a protective sealing primer, then coated with an architectural grade exterior polyester powder coat with a dry film thickness of 2 - 3 mils. The performance of the powder will pass the 2H Pencil Hardness test (ASTM D3363) and 1500 hours of Salt Spray (ASTM B117a).
3. Plastic: Shall be blow molded polyethylene plastic pigment selected from the manufacturer's full range of color options.
4. Color: Shall be per manufacturer's full range of color options. Contractor shall submit color samples for owner's approval prior to manufacture. Contractor to include a custom color selection for all seats in phases 4 and 6 (approximately 1,160 seats)

2.05 FASTENINGS

A. Chair Assembly
   1. All structural connections shall be made with stainless steel bolts, washers and nuts. Bolts shall be applied with a nylon patch lock to prevent loosening.

B. Concrete Floor Attachment
   1. Chair stanchions shall each be attached by means of two 1/4"[6mm] stainless mechanical wedge anchors set in holes drilled to a minimum depth of 2"[50mm] in the concrete.
      a. Wedge anchors shall be tested to ASTM E488 criteria and listed by ICBO and SBCCI. Wedge anchors feature a type 18-8 stainless steel split expansion ring and a threaded stud bolt body and integral cone expander. Stanchion shall be placed on the bolts and permanently secured with a flat washer, lock washer and nut.
   2. Contractor is responsible for providing any and all additional items required for proper installation and attachment of seats. This includes but is not limited to offset plates, offset anchors, longer anchors, thru bolts, expansion anchors, wedge anchors, etc.

C. Concrete Riser Attachment
   1. Chair stanchions shall each be attached by means of two 3/8"[10mm] stainless steel threaded rods secured into concrete with a fast curing acrylic/epoxy adhesive. Adhesive and rods are set in holes drilled to a minimum depth of 2 1/2"[64mm] in the concrete.
   2. Threaded rods shall be stainless steel to suit environmental conditions.
   3. Acrylic/Epoxy adhesive shall be in conformance with ASTM Type IV, Grade 3, and covered by ICBO evaluation.
   4. Stanchion shall be placed on the bolts and permanently secured with a flat washer, lock washer and nut.
   5. Contractor is responsible for providing any and all additional items required for proper installation and attachment of seats. This includes but is not limited to offset plates, offset anchors, longer anchors, thru bolts, etc.

2.06 ACCESSORIES

A. Back Mounted Plastic Cup Holder: Cup holder shall be of injection molded polyethylene. Every chair to have cup holder provided. Location of cup holder will be selected during shop drawing phase.

B. Armrest Front Mounted Plastic Cup Holder: Cup holder shall be of injection molded polyethylene. Every chair to have cup holder provided. Location of cup holder will be selected during shop drawing phase.

C. Seat Number Plates: Chair numbers (color to be selected during shop drawings) shall be numerals etched on an aluminum plate. Number plates to be located in vandal resistant recess on the back of each chair and secured using aluminum pop rivets.

D. Renumbering of Existing Seats: Contractor to renumber all existing seats throughout entire coliseum building, including existing telescoping and movable seats. See Owner provided schedule for renumbering. Existing telescoping and movable seats are a product of Hussey.

E. Row Number Plates: Row numbers (color to be selected during shop drawings) shall be numerals etched on an aluminum plate. Number plates shall be surface mounted to the aisle end stanchion and secured using aluminum pop rivets.

F. ADA Easy Access Armrest: Armrest shall hinge on aisle end stanchion to allow easy side access for disabled patrons. Easy Access armrests shall be provided for a minimum of 1% of the fixed seating capacity to meet the American with Disabilities Act (ADA). Each accessible chair shall include the universal handicap symbol on the end aisle stanchion for clear identification. Disperse easy access armrests throughout the seating.

2.07 ATTIC STOCK

Contractor to provide additional 1% of each size seat installed on the job. Attic stock to be stored and used by the Owner.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verification of Conditions: Verify areas to receive audience seating are free of impediments interfering with installation and condition of installation substrates are acceptable to receive audience seats in accordance with seating manufacturer's recommendations. Do not commence installation until conditions are satisfactory. It is the responsibility of the contractor to verify all conditions prior to execution of the work.

3.02 INSTALLATION

A. Manufacturer's Recommendations: Comply with seating manufacturer's recommendations for product installation requirements.

B. General: Install fixed audience seating in accordance with manufacturer's installation instructions and final shop drawings. Provide all accessories, anchors, and assembly hardware for installation of seating and for permanent attachment to adjoining construction. Contractor is responsible for providing all additional items required for proper installation of seats, including offset brackets, offset anchors, longer anchors than is typical, through bolts with rear nuts, and any miscellaneous steel brackets or attachments.

C. Contractor must adhere to Owner’s provided work schedule for all phases of work. See Exhibit C.

D. Refer to Exhibit D for results from performed pull test.

3.03 ADJUSTMENT AND CLEANING

A. Adjustment: After installation completion, all equipment is to be adjusted for smooth and proper operation.

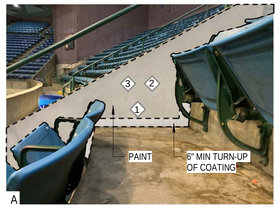
B. Cleaning: Clean work area and remove debris from site.

3.04 PROTECTION

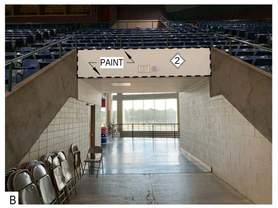
A. General: Provide final protection and maintain conditions, in a manner acceptable to manufacturer and installer to ensure audience seats are without damage or deterioration at time of substantial completion.

B. Finish Touch-up: Tough-up original manufacturer's finish coating with an approved touch-up paint whenever damage has occurred during shipment or installation. Color to match the original manufacturer's color.

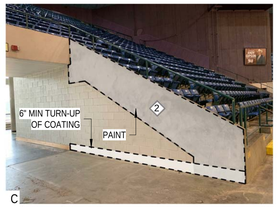
END OF SECTION



A

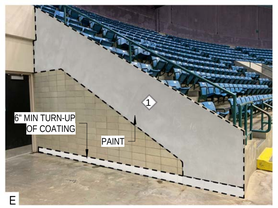


B

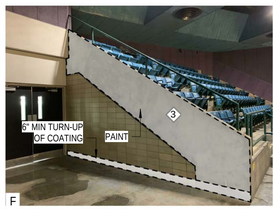


C

D

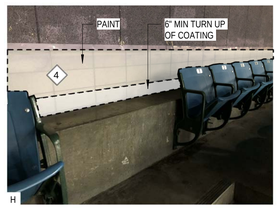


E

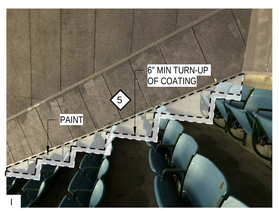


F

G



H



I


K


J

SCOPE OF WORK

1. DEMOLISH EXISTING SEATS IN THEIR ENTIRETY. DISPOSE OF ALL ASSOCIATED HARDWARE.

2. CLEAN AND PREP ALL CONCRETE FLOORS AND WALLS, REMOVING ANY LOOSE OR CHIPPED CONCRETE. THIS METHOD UTILIZES SHOT BLASTING, PRESSURE WASHING AND AN OIL AND GREASE EMULSIFICATION CLEANER.

3. ALL ABANDONED HOLES AND BOLTS FROM ORIGINAL FIXED SEATING TO BE CUT FLUSH AND PATCHED PRIOR TO INSTALLATION OF COATING.

4. APPLY EPOXY PRIMER OVER ALL AREAS REQUIRING CONCRETE PATCHES. ALL CONCRETE MUST BE COMPLETELY DRY PRIOR TO APPLICATION OF PRIMER.

5. APPLY EPOXY FILLER PATCH IN ALL AREAS REQUIRING PATCH, SEE SPEC.

6. CLEAN AND SAND SURFACE OF EPOXY FILLER WHERE REQUIRED.

7. APPLY EPOXY PRIMER TO ENTIRETY OF SURFACES THAT REQUIRE TRAFFIC COATING.

8. APPLY TRAFFIC COATING ON ALL CONCRETE SURFACES (BOTH HORIZONTAL AND VERTICAL) AS INCLUDED ON DRAWINGS. FOLLOW MANUFACTURER'S INSTRUCTIONS, SEE SPECS.

9. INSTALL NEW SEATING AND HANDRAILS AS REQUIRED.

10. MODIFY RAILINGS AT ADA PLATFORMS; SEE DRAWINGS.

11. PRIME AND PAINT ALL NEW AND EXISTING HANDRAILS.

12. APPLY PHOTOLUMINESCENT STRIP ALONG TOP OF ALL NEW AND EXISTING HANDRAILS, SEE SPECS.

13. ADD NEW NOSINGS TO ALL STEPS WHERE NOSINGS ARE MISSING AND LOOSE. REFERENCE SHEET A103 FOR BASE BID AND ALTERNATE NO. 1 SCOPE.

14. APPLY NEW IDENTIFICATION NUMBERING FOR SEATS/ ROWS TO STAIRS AND LANDINGS, INCLUDING ALL EXISTING TELESCOPING AND MOVABLE SEATING AS WELL, SEE SPECS.

15. COLORED FINISH TO BE USED @ STAIR STEPS LANDING INTO WALKWAY.

CONCRETE REPAIR

PHASE 1: ESTIMATED CONCRETE PATCHING SQ FT: ± 1,560 FT²
HORIZONTAL SQ FT: ± 6,890 FT²
VERTICAL SQ FT: ± 2,890 FT²
TOTAL COATING SQ FT: ± 9,780 FT²

PHASE 2: ESTIMATED CONCRETE PATCHING SQ FT: ± 2,210 FT²
HORIZONTAL SQ FT: ± 6,890 FT²
VERTICAL SQ FT: ± 2,890 FT²
TOTAL COATING SQ FT: ± 9,780 FT²

PHASE 3: ESTIMATED CONCRETE PATCHING SQ FT: ± 3,850 FT²
HORIZONTAL SQ FT: ± 9,170 FT²
VERTICAL SQ FT: ± 4,230 FT²
TOTAL COATING SQ FT: ± 13,400 FT²

PHASE 4: ESTIMATED CONCRETE PATCHING SQ FT: ± 2,380 FT²
HORIZONTAL SQ FT: ± 6,250 FT²
VERTICAL SQ FT: ± 1,500 FT²
TOTAL COATING SQ FT: ± 7,750 FT²

PHASE 5: ESTIMATED CONCRETE PATCHING SQ FT: ± 3,320 FT²
HORIZONTAL SQ FT: ± 9,170 FT²
VERTICAL SQ FT: ± 4,230 FT²
TOTAL COATING SQ FT: ± 13,400 FT²

PHASE 6: ESTIMATED CONCRETE PATCHING SQ FT: ± 2,080FT²
HORIZONTAL SQ FT: ± 6,250 FT²
VERTICAL SQ FT: ± 1,500 FT²
TOTAL COATING SQ FT: ± 7,750 FT²

TOTAL COATING SQ FT: ± 65,000 FT²
TOTAL ESTIMATED CONCRETE PATCHING SQ FT: ± 15,400 FT²

NOTE:

-COATING TO BE APPLIED AT VOMITORIUM WALLS

-A 6 INCH MIN. TURN UP IS REQUIRED WHERE FLOOR MEETS WALL.

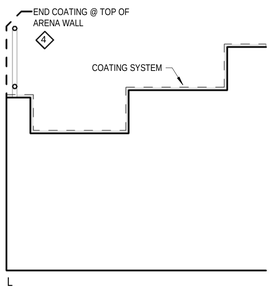
-COATING APPLICATION SHOULD STOP AT TOP OF ARENA WALL.

NOTE:

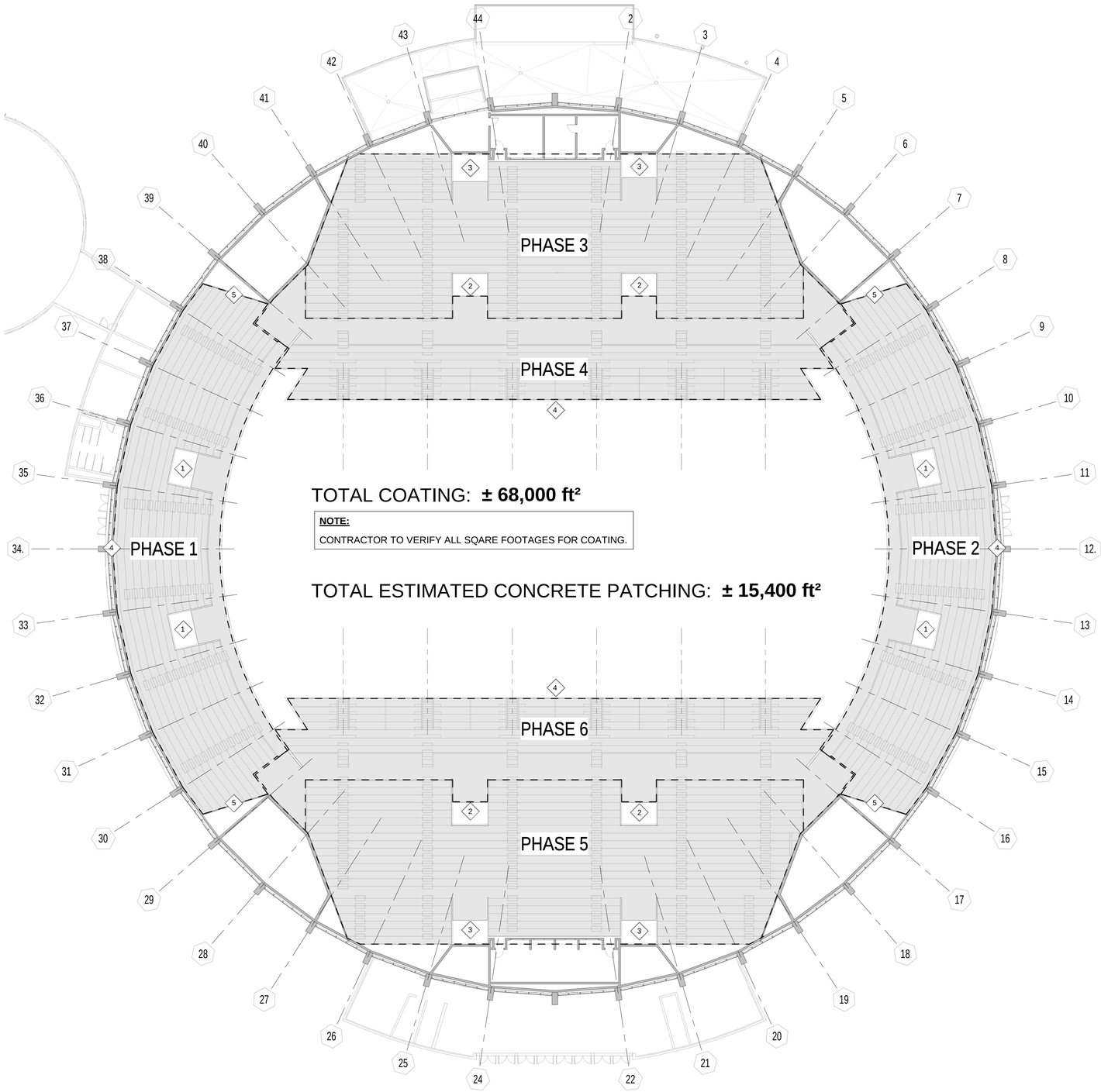
DUE TO CERTAIN EVENTS OCCURING SIMULTANOUSLY WITH THE WORK INSIDE OF THE COLISEUM, THE CONTRACTOR SHOULD BE PREPARED TO COMPLETELY COVER ALL SEATS AND COATING WITH PROTECTIVE PLASTIC AND BARRICADE OFF FROM PUBLIC ACCESS.

NOTE:

ALL WALL SURFACES TO RECEIVE COATING OR PAINT UP TO BOTTOM OF EXISITNG PURPLE TECTUM PANELS (SEE IMAGE H AND I).



L



TOTAL COATING: **± 68,000 ft²**

NOTE:

CONTRACTOR TO VERIFY ALL SQARE FOOTAGES FOR COATING.

TOTAL ESTIMATED CONCRETE PATCHING: **± 15,400 ft²**

1 BASE BID REPAIR & COATING PLAN
1" = 20'-0"

WBA ARCHITECTURE

COLISEUM SEATING REPLACEMENT

GS #343-117

1207 MISSISSIPPI STREET JACKSON
MS 39202

REGISTERED ARCHITECT
JOHN M. MANN
4812
STATE OF MISSISSIPPI

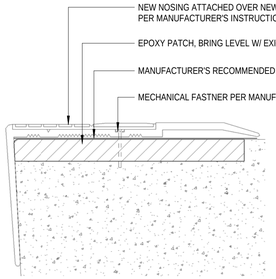
6 AUGUST 2019

CONSTRUCTION DOCUMENTS
WBA # 2219

REVISIONS

NO.	DESCRIPTION	DATE

A101
BASE BID REPAIR & COATING

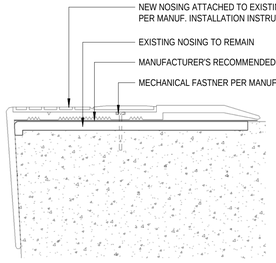


2 NOSING DTL TYPE A - BASE BID
12" = 1'-0"

NOTE:

BASE BID: INSTALL NEW NOSINGS AT EXISTING TREADS WHERE EXISITNG NOSINGS ARE MISSING OR LOOSE.

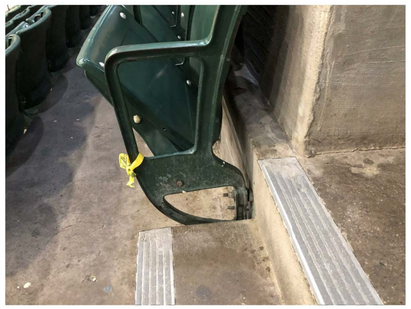
CONTRACTOR TO VERIFY ALL QUANTITIES



3 NOSING DTL TYPE B - ALTERNATE #1
12" = 1'-0"

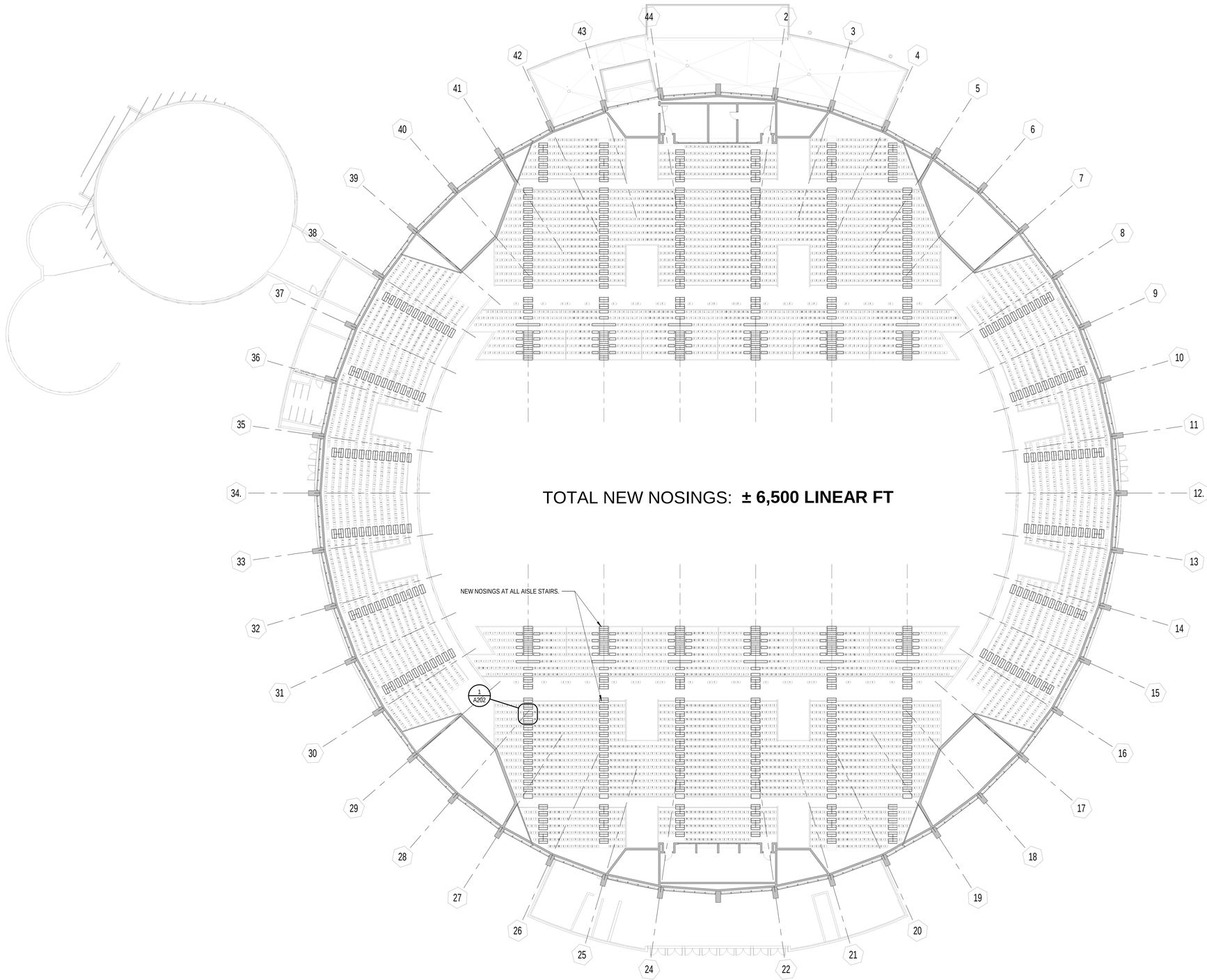
NOTE:

ALTERNATE #1: INSTALL NEW NOSINGS @ ALL STEPS, TYP. SEE SPECS.



TYPICAL TREADS (FOR REFERENCE ONLY)

TYPICAL TREADS (FOR REFERENCE ONLY)



1 ALTERNATE #1 NOSING PLAN
1" = 20'-0"

WBA ARCHITECTURE

COLISEUM SEATING REPLACEMENT

GS #343-117

1207 MISSISSIPPI STREET JACKSON
MS 39202

REGISTERED ARCHITECT JOHN M. MAUNUS 4812 STATE OF MISSISSIPPI

6 AUGUST 2019

CONSTRUCTION DOCUMENTS
WBA # 2219

REVISIONS

NO.	DESCRIPTION	DATE

A103
ALTERNATE #1 AND NOSINGS