

VOMITORIUM GUARDRAIL AND CONCRETE REPAIRS  
 ORIOLE PARK AT CAMDEN YARDS  
 333 W. Camden Street, Baltimore, MD 21201

**DRAWING INDEX**

SHEET NO.	SHEET TITLE
G-01	SCOPE OF WORK
PL-1	LEVEL 100 PLAN VIEW
PL-2	LEVEL 300 PLAN VIEW
PL-3	PLAN VIEW OF PRECAST PANELS
RD-1	REPAIR DETAILS
RD-2	REPAIR DETAILS

**DRAWING INFORMATION**

DIMENSIONS PROVIDED ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR.

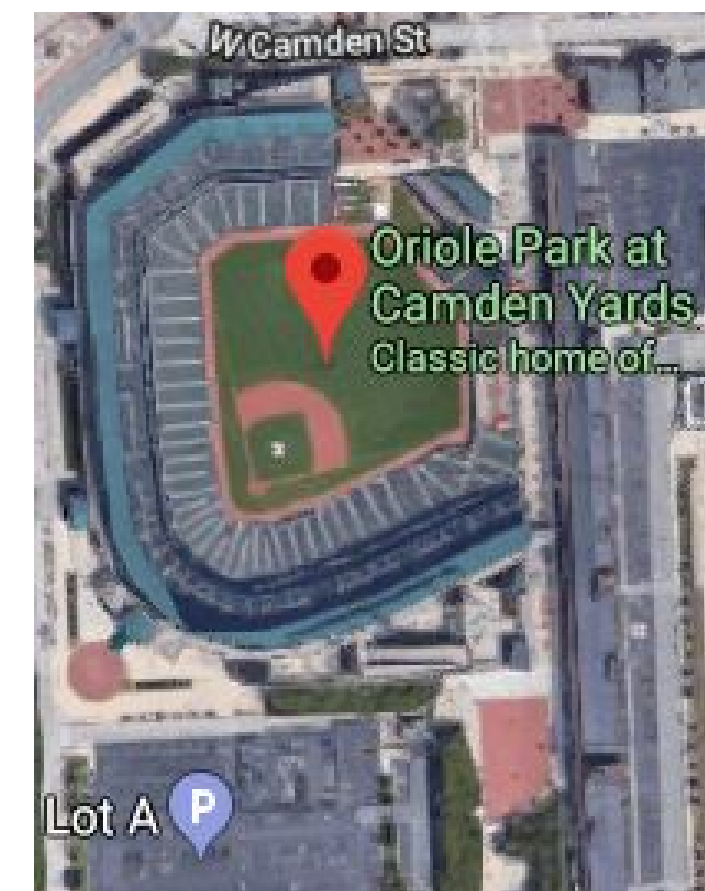
**DESIGN CRITERIA**

**BUILDING INFORMATION**

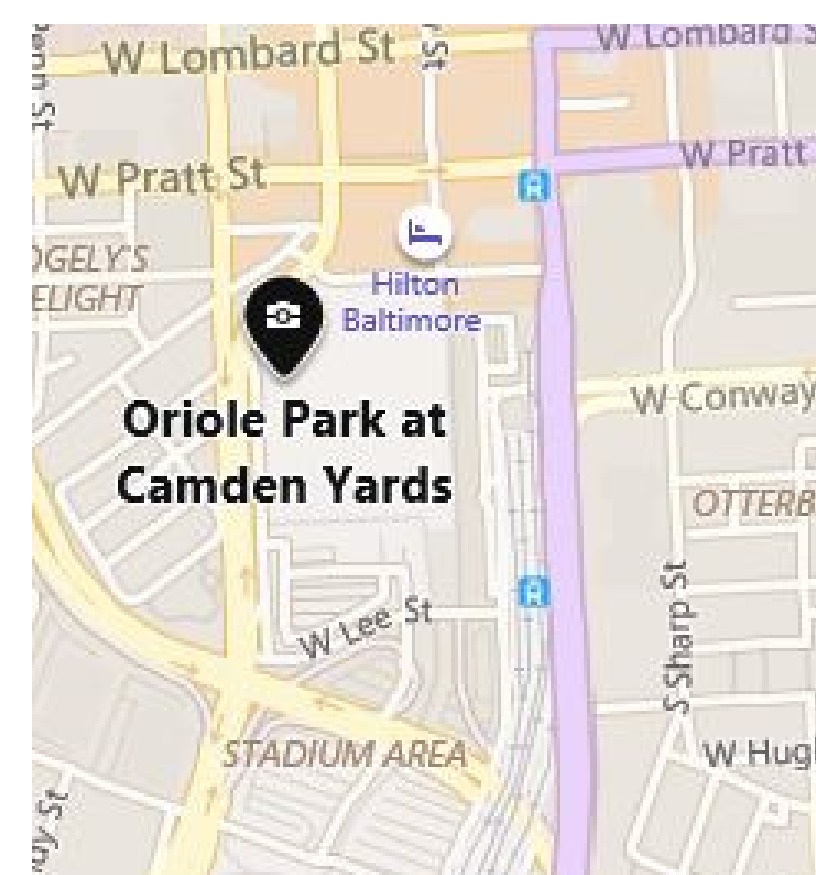
ADDRESS:	333 W. CAMDEN STREET BALTIMORE, MD 21201
YEAR OF CONSTRUCTION:	1992
USE AND OCCUPANCY CLASSIFICATION:	A-5
CONSTRUCTION TYPE:	I-B
NUMBER OF FLOORS:	3
FIRE CONTROL ROOM:	YES
FIRE SPRINKLERS:	YES
CENTRAL FIRE ALARM MONITORING:	YES
STAND PIPES:	
SQUARE FOOTAGE:	-530,000

**CODE INFORMATION**

BUILDING CODE:	IBC 2015
LOADS:	ASCE 7-10
STEEL:	AISC 360-10
CONCRETE:	ACI 318-11
MASONRY:	ACI 530-11
WOOD:	NDS-2012



**SITE MAP**  
SCALE: NOT TO SCALE



**VICINITY MAP**  
SCALE: NOT TO SCALE

**SECTION 01000 – SUMMARY OF WORK**

**1.0 GENERAL INFORMATION**

- A. The work of this contract generally involves cast-in-place concrete repair, installation of new steel surface-mounted guardrail bases, crack repair, replacement of deteriorated precast panel anchorage, and steel painting at Oriole Park at Camden Yards, 333 W. Camden Street, Baltimore, MD 21201.
- B. Include all Work listed in these Specifications and incidentals thereto. All phases of the Work shall be executed by skilled craftsmen experienced in their respective trades.
- C. The Base Bid and Add Alternate work items are required.
- D. The Contractor shall field verify dimensions and conditions needed to complete the work of this specification. Contractor shall provide means of access as needed to reach and work on all surfaces associated with this project from ground level up to and including roofs.
- E. Conduct a pre-construction damage survey prior to beginning work. Create and supply a CD photo log of existing conditions to the Owner's representative and the Engineer.
- F. Contractor shall provide complete overhead protection as needed below elevated work areas. Divert pedestrian traffic away from work areas and to building entrances using signage and physical barriers.
- G. Provide an accurate schedule that reflects the various stages of work. Update the schedule bi-weekly and submit to the Owner via e-mail with active dialogue describing work completed during each week. Notify owner immediately via email or other written correspondence of any delays to the schedule.
- H. Contractor may subcontract portions of the Work with prior approval from the Owner. Contractor shall oversee all subcontractor operations as related to completion of the work of this specification.
- I. Provide manpower, labor, equipment, power hook-ups, and materials to access and complete the operations of this work. Review work areas for access requirements. Contractor shall remove, store on site or relocate items such as cellular phone antennas, electrical lines, security cameras, lighting, and power sources near the Work as needed to comply with OSHA requirements and maintain their work schedule. Contractor shall reset these items to their original configuration and operating order upon completion of the work.
- J. Provide an allowance of \$40,000 for miscellaneous hidden and/or unforeseen conditions, additional work requested by the Owner, and quantity overages that may be encountered during the project. Allowance funds will also be used for time and materials work.
- K. Contractor shall prepare as-built drawings for each phase of work completed. Drawings will identify repair location, type, general configuration and dimensions, and overall square footages for each type of repair. Contractor shall provide the Engineer a complete set of as-built drawings upon completion of the project. The Engineer will sign, date, and take possession of the as-built drawings upon formal approval and will use the drawings to approve applications for payment submitted by the Contractor for work complete and in place. Digital copies of the as-built drawings will be made available by the Engineer once all work is completed. Original field copies will be returned to the contractor once the project is completed.
- L. Clean areas affected by the Work daily of all work-related dust and debris. Remove and dispose of all formwork, by-products, and debris associated with the Work. Remove all equipment from the site. Store extra material purchased by the Owner in a location at the site designated by the Owner. Otherwise, dispose of all excess material.

**1.1 SCOPE OF WORK**

**BASE BID REPAIRS**

1. Salvage the existing galvanized steel guardrail systems on top of all level 100 and level 300 vomitorium walls except for the embedded portion. Saw cut the existing posts just above the weep holes, or slightly higher if necessary due to corrosion. Prepare and prime the exposed saw cut section of post and securely store until ready to be reinstalled with new base plates. Carefully document the location of each guardrail to ensure they are put back at the same vomitorium wall they came from.
2. Remove the top 6" of concrete (full width) continuously from the top of all level 100 and level 300 vomitorium walls, including the embedded portion of existing guardrails. Clean, prepare, and prime exposed reinforcing steel, prepare formwork to match existing dimensions and chamfers, and pour new approved self-consolidating concrete. Carefully document existing finish heights, slopes, chamfers, etc. prior to demo to ensure new concrete matches existing profiles.
3. Prime (1 coat) and paint (2 coats) base plates, and touch up prime and paint existing guardrails where paint has chipped or failed prior to installation.
4. Install guardrails with new galvanized steel base plates. Base plates and existing posts are to lap 3" minimum, and be fillet welded together at the top of the base plate. Typical base plate details are included in the Repair Drawings, but onsite measurements and shop drawing are still required to be created by the manufacturer. Ensure base plates sit properly on slopes. Guardrail heights are to match existing heights once reinstalled.
5. Perform miscellaneous vertical concrete repair at spalls and failing previous repairs on vomitorium walls. Minimum patch depth of 2 inches. Clean, prepare, and prime exposed reinforcing steel during repairs.
6. Perform select concrete crack rout and seal at vomitorium walls.
7. Replace aging joint sealants at level 300 vomitorium walls.
8. Install new epoxy anchors at façade precast panel locations where existing bolts are broken. To be identified jointly with the Engineer.
9. Replace loose and corroded nuts and washers with new stainless-steel hardware at precast panel attachments.
10. Clean, prime, and paint precast panel attachment hardware where experiencing corrosion.
11. Clean, prime, and paint select corroded areas of steel framing.
12. Install new clip angles at precast panel locations in stairwells where the existing are missing with new stainless-steel clip angles (matching existing) and epoxy anchors. Four anchors per clip angle. To be identified jointly with the Engineer.
13. Clean up all work areas.

**Add Alternate Items**

**Alternate 1 – ADD Cost** to install a breathable mineral-based coating (2 coats) on vomitorium walls following curing of concrete repairs. Coating is to extend from top to bottom of walls both sides, and will end at the interior walls at the start of the vomitorium ceiling. Use M3P by Conproco or approved equivalent.

**Alternate 2 – ADD Cost** to fabricate and weld new galvanized steel rail section to select existing guardrails at 23 level 300 vomitoriums to meet 42" height.

**1.2 SCHEDULE**

The project is anticipated to start upon receipt of written Notice to Proceed in mid June 2019. July, August, and September will be used for preparations such as measurements, shop drawings, submittal review, and material procurement. Site work may begin in October (after conclusion of the Orioles baseball season), beginning with temperature-sensitive concrete repairs.

**2.0 PRODUCTS**

See material specification sections.

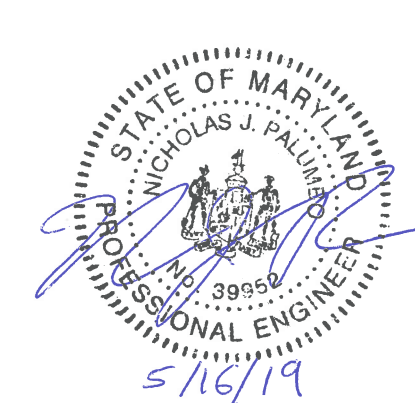
**3.0 EXECUTION**

See material specification sections.



2400 Boston Street, Suite 202-H  
 Baltimore, MD 21224  
 443-873-6203  
 www.becsm.com

STAMP:



DATE:

NOTE:

DIMENSIONS ARE PROVIDED FOR REFERENCE ONLY. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.

**PROFESSIONAL CERTIFICATION:**

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NUMBER: 39952, EXPIRATION DATE: 01/17/2021

No.	Revision/Issue	Date
	Bid Set	5/15/19

Project Name and Address:

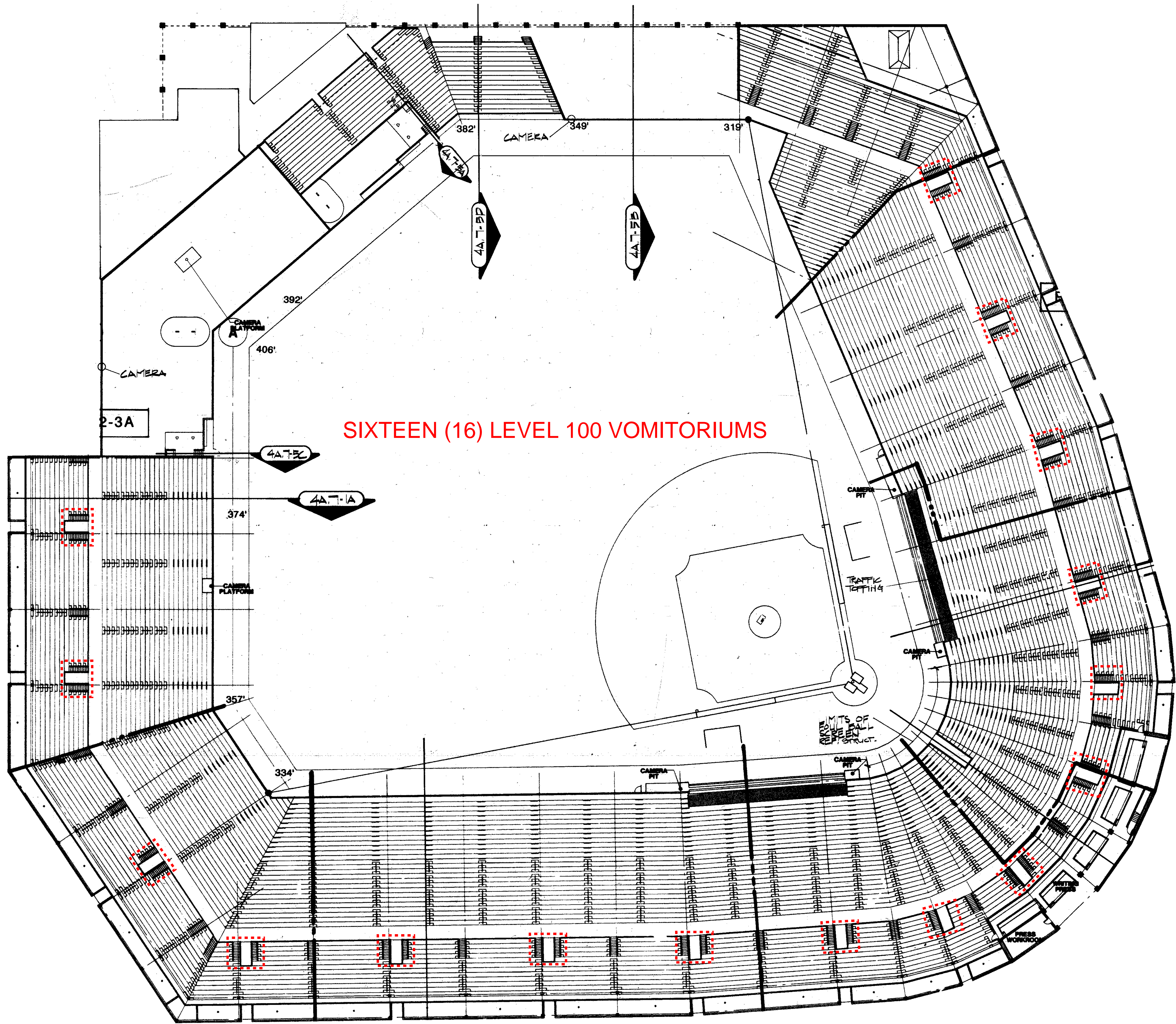
VOMITORIUM GUARDRAIL  
 AND CONCRETE REPAIRS  
 ORIOLE PARK AT  
 CAMDEN YARDS  
 333 W. Camden Street  
 Baltimore, MD 21201

Sheet Title:

**SCOPE OF WORK**

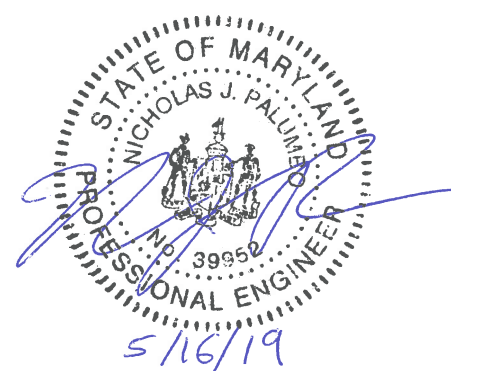
Date:	5/15/2019	Sheet:	<b>G-01</b>
Designed by:	JMB		
Drawn By:	NCL		
Scale:	AS NOTED		





SIXTEEN (16) LEVEL 100 VOMITORIUMS

**BECS**  
 Building Envelope Consultants  
 and Scientists, LLC  
 2400 Boston Street, Suite 202-H  
 Baltimore, MD 21224  
 443-873-6203  
 www.becsm.com

STAMP:  


DATE:  
 NOTE:  
 DIMENSIONS ARE PROVIDED FOR REFERENCE ONLY. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.

PROFESSIONAL CERTIFICATION:  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NUMBER: 39952, EXPIRATION DATE: 01/17/2021

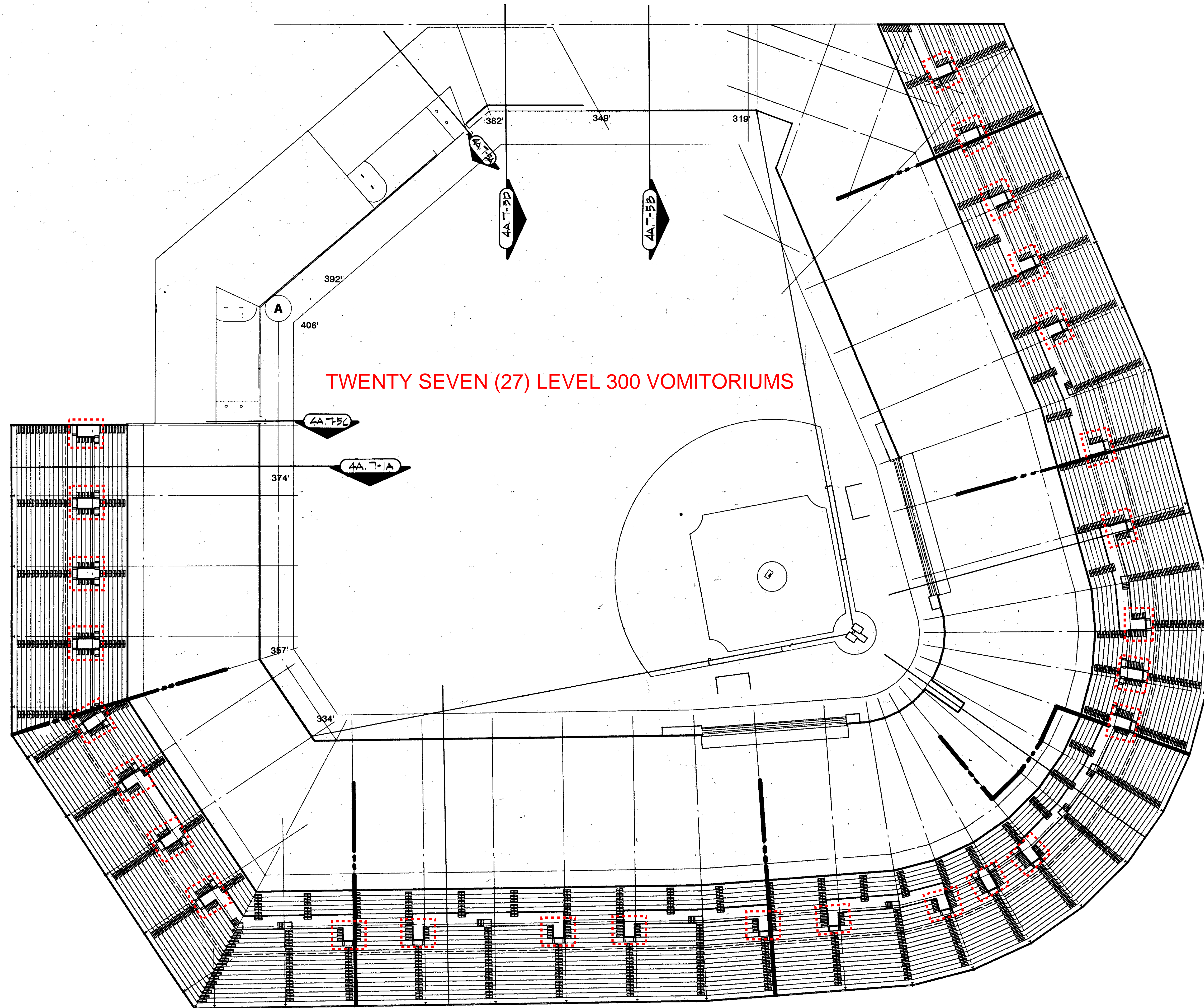
	Bid Set	5/15/19
No.	Revision/Issue	Date

Project Name and Address:  
 VOMITORIUM GUARDRAIL AND CONCRETE REPAIRS  
 ORIOLE PARK AT CAMDEN YARDS  
 333 W. Camden Street  
 Baltimore, MD 21201

Sheet Title:  
**LEVEL 100  
 (LOWER SEATING)  
 PLAN VIEW**

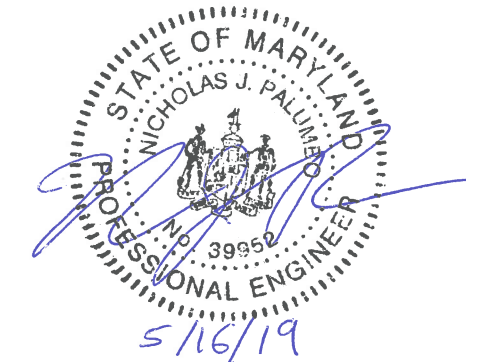
Date: 5/15/2019	Sheet:  <b>PL-1</b>
Designed by: JMB	
Drawn By: NCL	
Scale: NOT TO SCALE	





TWENTY SEVEN (27) LEVEL 300 VOMITORIUMS

STAMP:



DATE:  
NOTE:

DIMENSIONS ARE PROVIDED FOR REFERENCE ONLY. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.

PROFESSIONAL CERTIFICATION:

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NUMBER: 39952, EXPIRATION DATE: 01/17/2021

No.	Revision/Issue	Date
	Bid Set	5/15/19

Project Name and Address:  
 VOMITORIUM GUARDRAIL  
 AND CONCRETE REPAIRS  
 ORIOLE PARK AT  
 CAMDEN YARDS  
 333 W. Camden Street  
 Baltimore, MD 21201

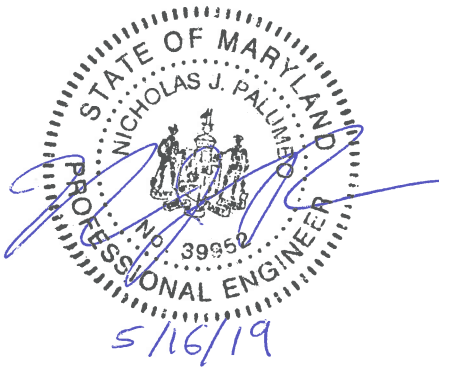
Sheet Title:  
**LEVEL 300  
 (UPPER SEATING)  
 PLAN VIEW**

Date: 5/15/2019	Sheet:  <b>PL-2</b>
Designed by: JMB	
Drawn By: NCL	
Scale: NOT TO SCALE	





STAMP:



DATE:  
NOTE:

DIMENSIONS ARE PROVIDED FOR REFERENCE ONLY. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.

**PROFESSIONAL CERTIFICATION:**

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NUMBER: 39952, EXPIRATION DATE: 01/17/2021

	Bid Set	5/15/19
No.	Revision/Issue	Date

Project Name and Address:  
 VOMITORIUM GUARDRAIL  
 AND CONCRETE REPAIRS  
 ORIOLE PARK AT  
 CAMDEN YARDS  
 333 W. Camden Street  
 Baltimore, MD 21201

Sheet Title:  
**PLAN VIEW OF  
 PRECAST PANEL  
 LOCATIONS**

Date: 5/15/2019	Sheet:  <b>PL-3</b>
Designed by: JMB	
Drawn By: NCL	
Scale: NOT TO SCALE	



STAMP:



DATE:  
NOTE:

DIMENSIONS ARE PROVIDED FOR REFERENCE ONLY. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.

PROFESSIONAL CERTIFICATION:

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NUMBER: 39952, EXPIRATION DATE: 01/17/2021

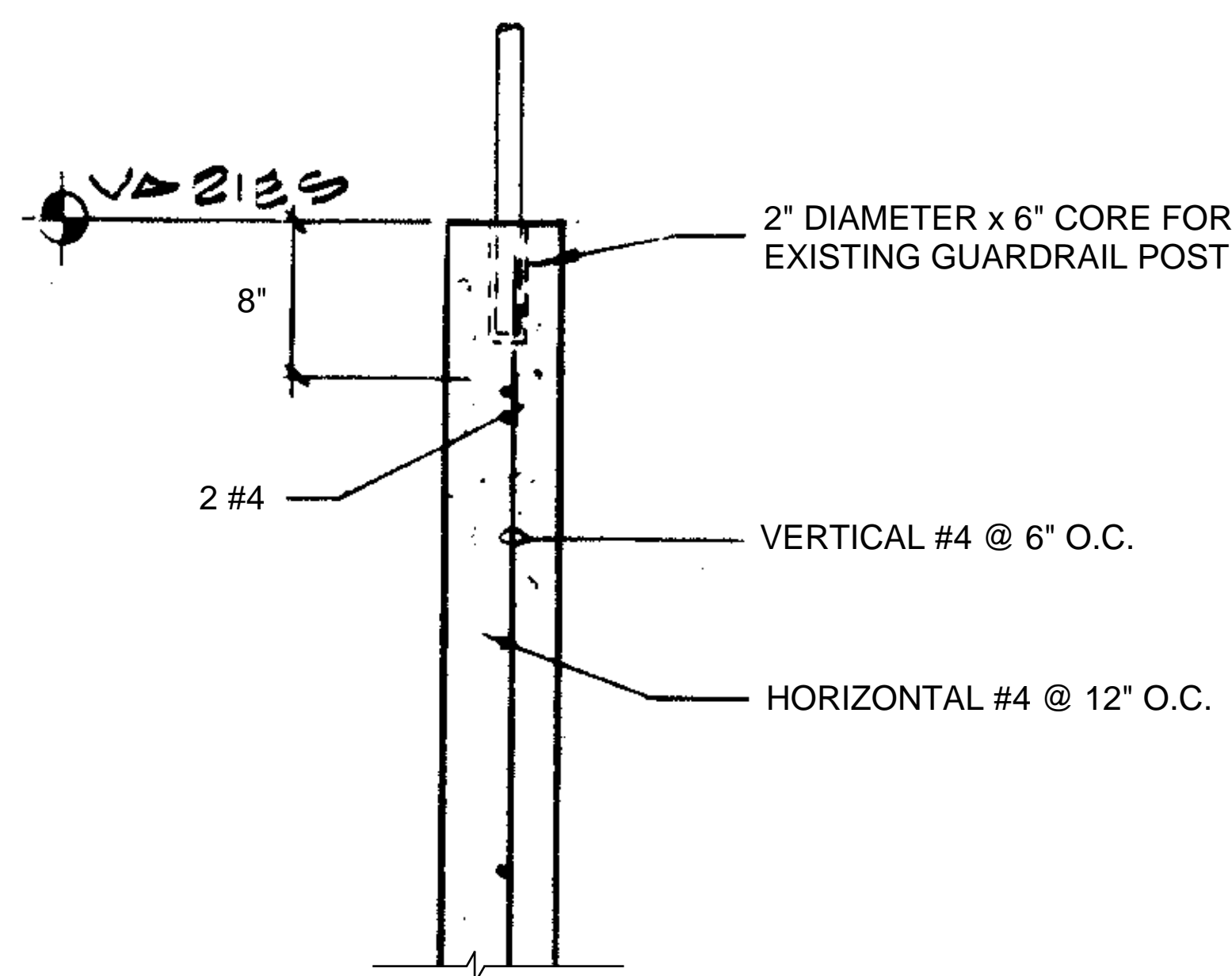
	Bid Set	5/15/19
No.	Revision/Issue	Date

Project Name and Address:  
**VOMITORIUM GUARDRAIL AND CONCRETE REPAIRS**  
ORIOLE PARK AT  
CAMDEN YARDS  
333 W. Camden Street  
Baltimore, MD 21201

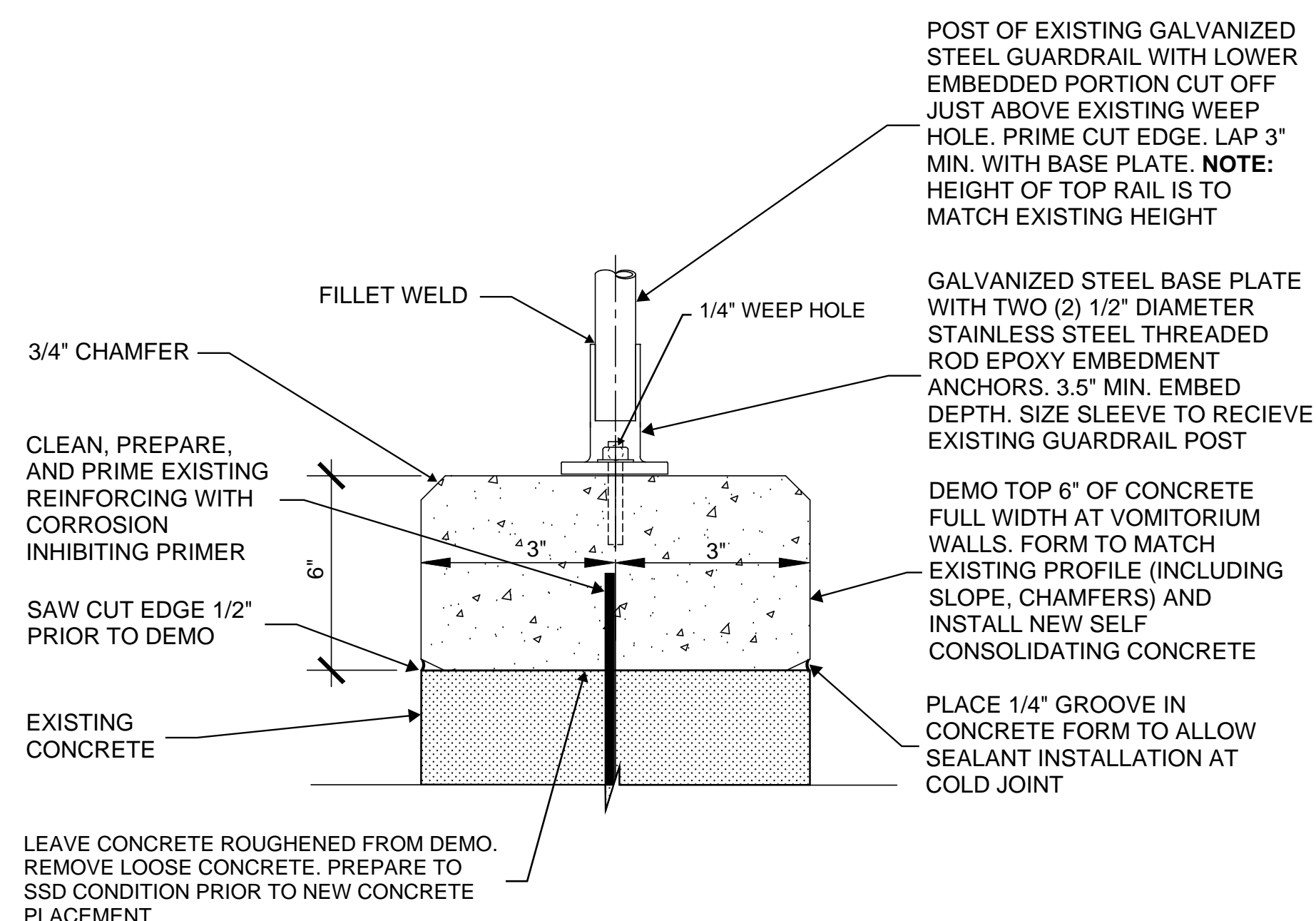
Sheet Title:

**REPAIR DETAILS**

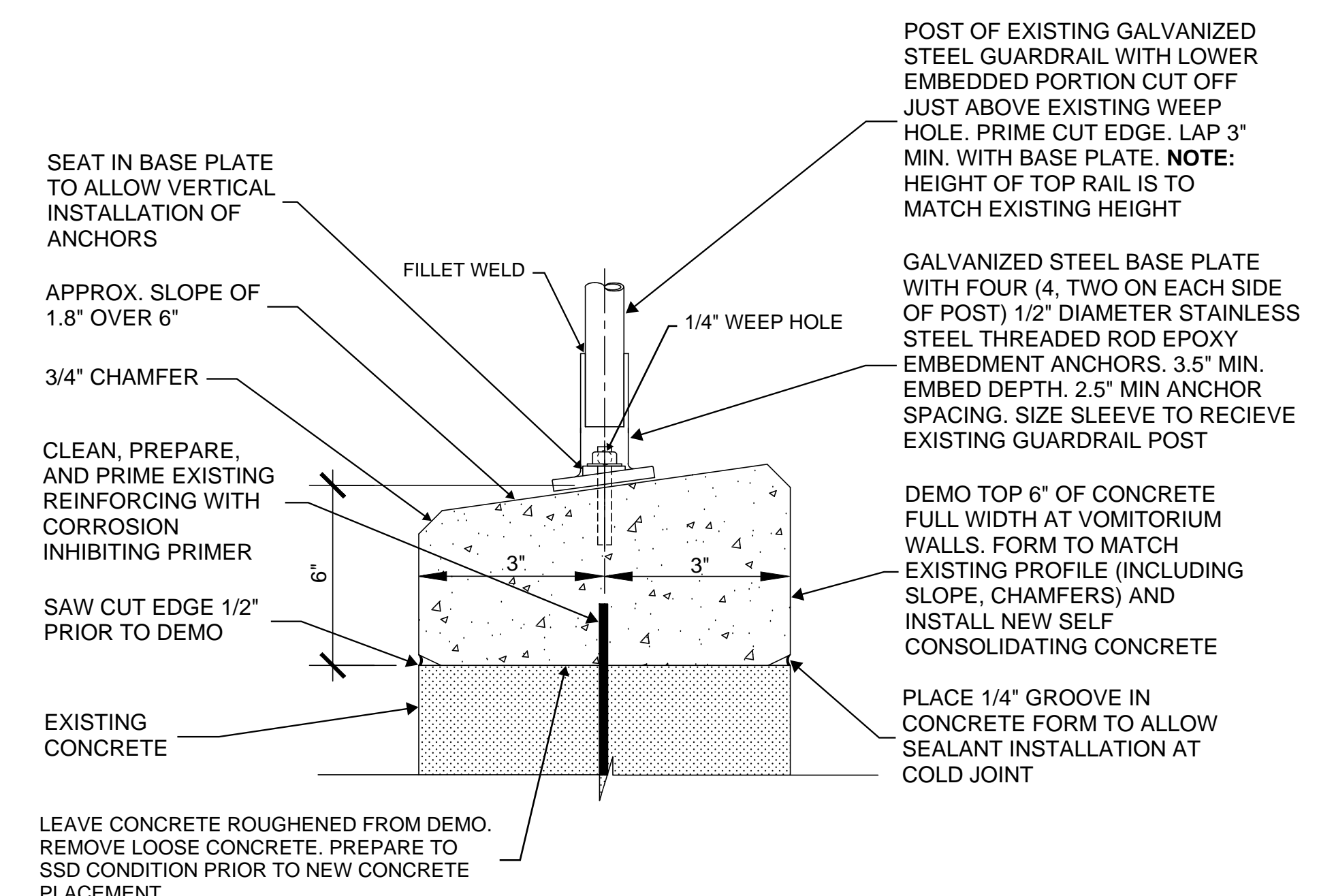
Date:	5/15/2019	Sheet:	<b>RD-1</b>
Designed by:	JMB		
Drawn By:	NCL		
Scale:	AS NOTED		



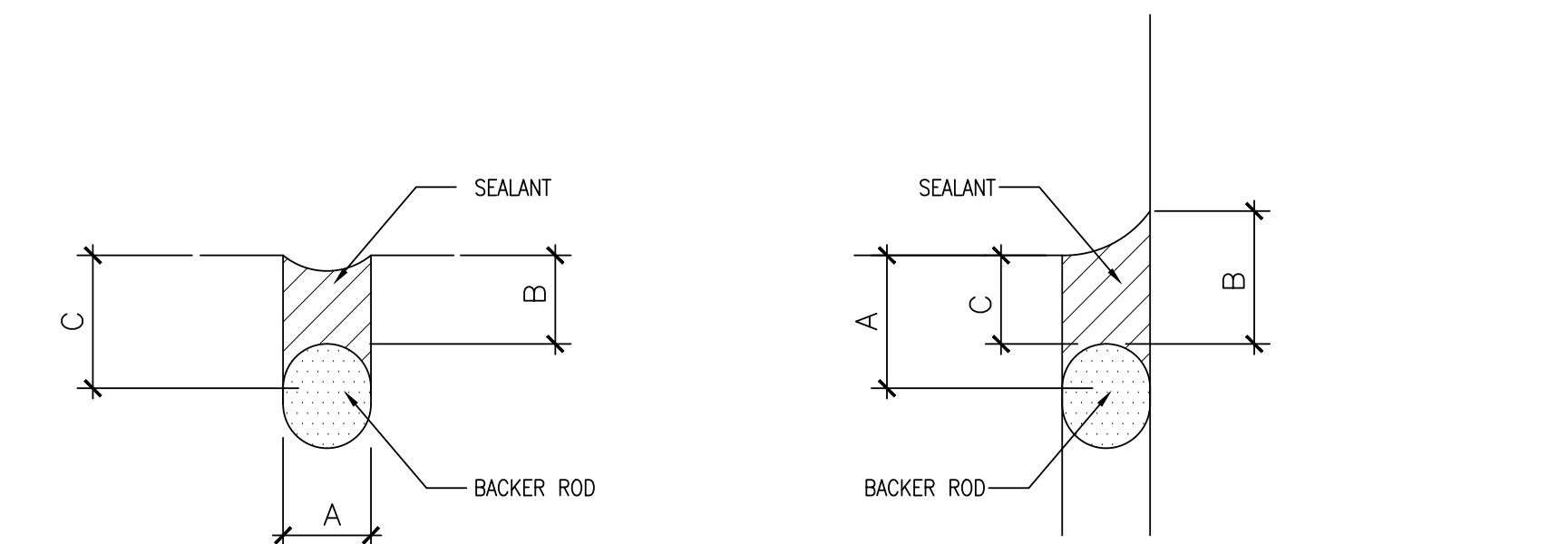
**1** TYPICAL EXISTING VOMITORIUM REINFORCING/EMBEDMENT DETAIL  
RD-1 SCALE: N.T.S.



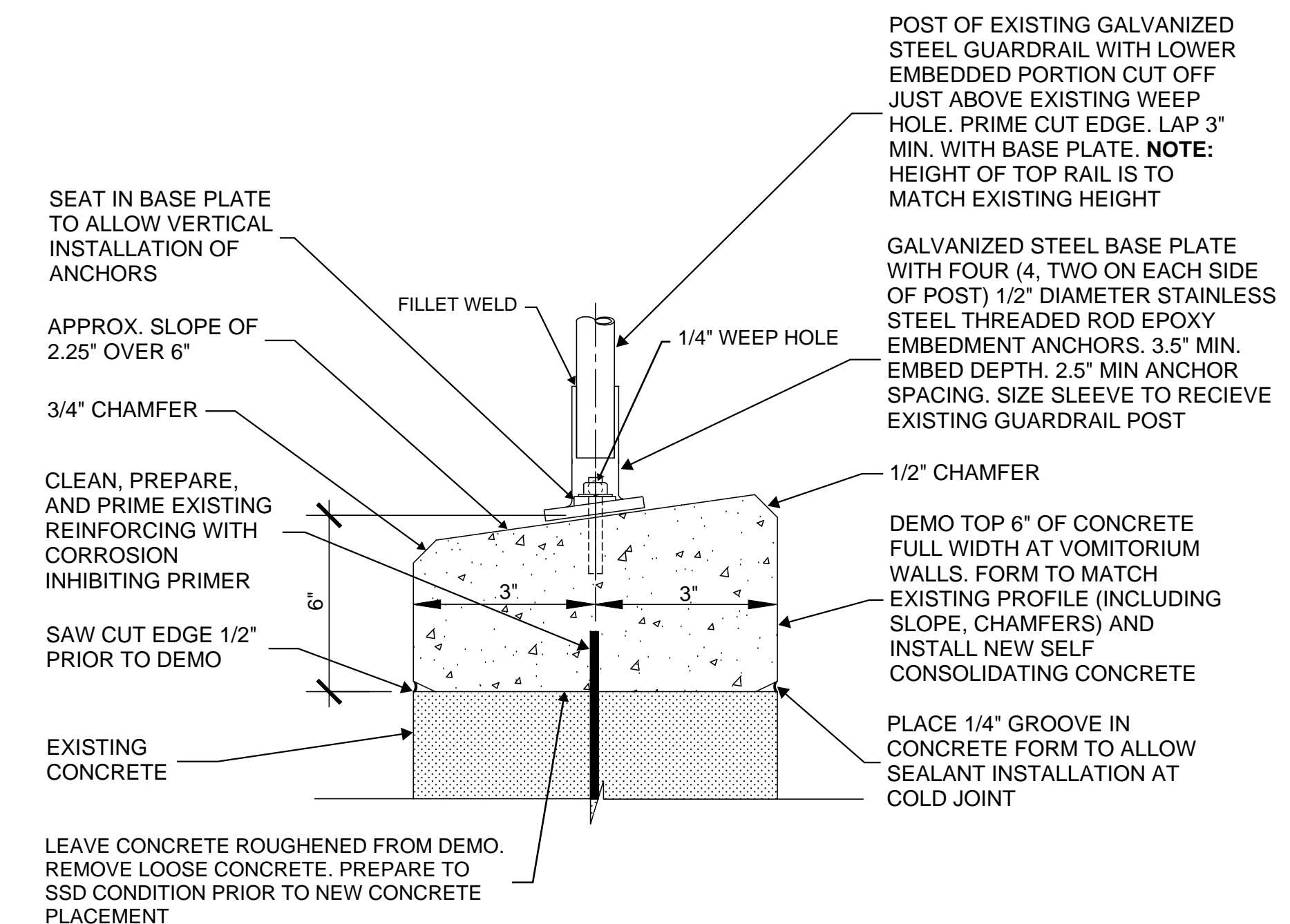
**2** LEVEL 100 VOMITORIUM SIDE WALL REPAIR SECTION  
RD-1 SCALE: N.T.S.



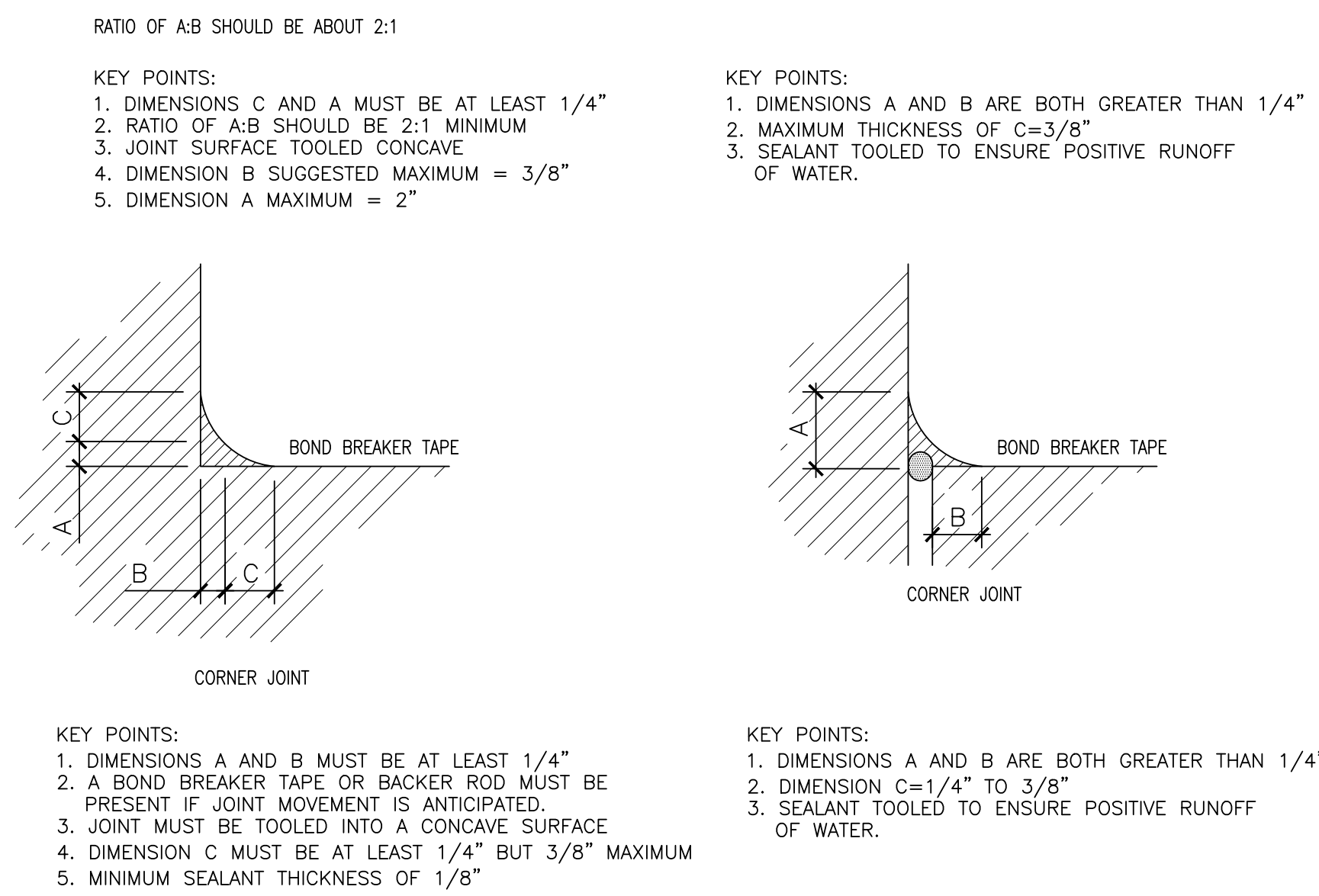
**3** LEVEL 100 VOMITORIUM TOP WALL REPAIR SECTION  
RD-1 SCALE: N.T.S.



**4** LEVEL 300 VOMITORIUM SIDE WALL REPAIR SECTION  
RD-1 SCALE: N.T.S.



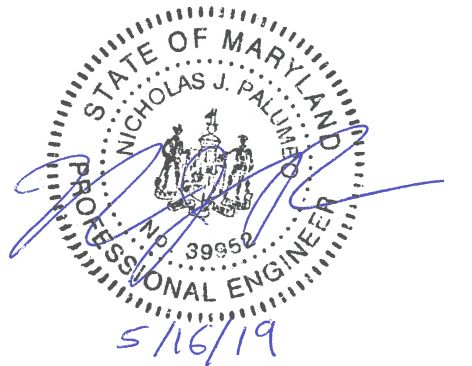
**5** LEVEL 300 VOMITORIUM TOP WALL REPAIR SECTION  
RD-1 SCALE: N.T.S.



**6** TYPICAL SEALANT DETAILS  
RD-1 SCALE: N.T.S.  
MANUFACTURER'S GUIDELINES TAKE PRECEDENCE



STAMP:



DATE:

NOTE:

DIMENSIONS ARE PROVIDED FOR REFERENCE ONLY. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.

**PROFESSIONAL CERTIFICATION:**

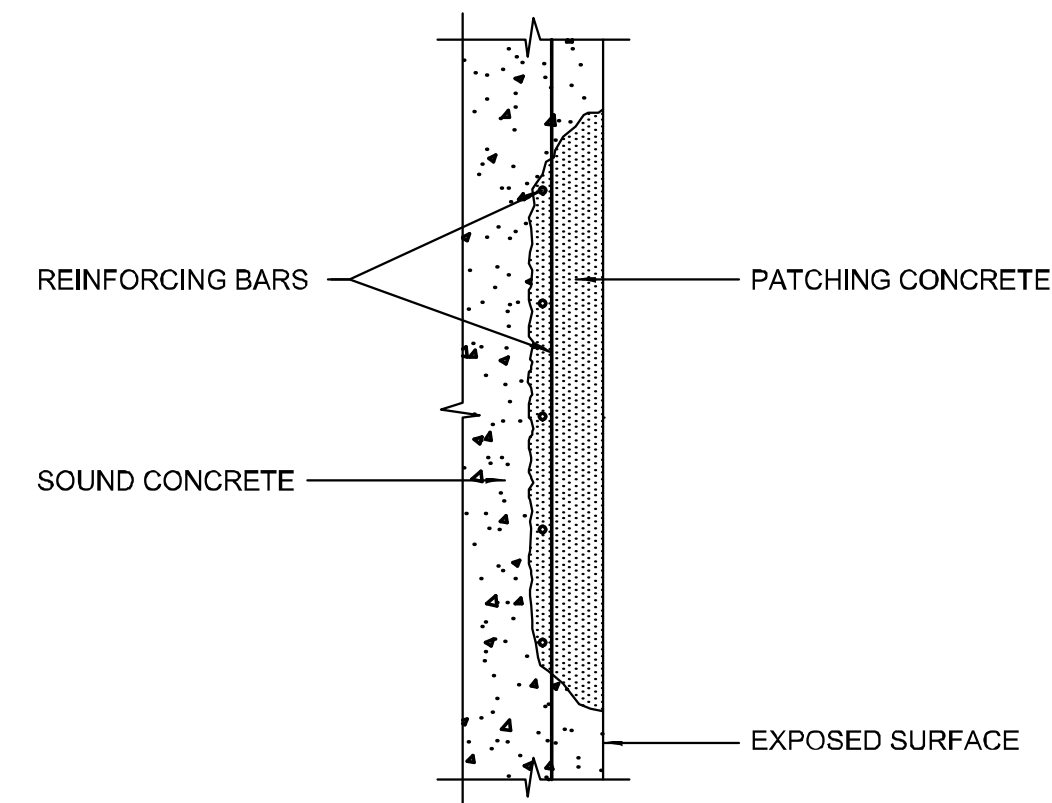
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NUMBER: 39952, EXPIRATION DATE: 01/17/2021

	Bid Set	5/15/19
No.	Revision/Issue	Date

Project Name and Address:  
 VOMITORIUM GUARDRAIL  
 AND CONCRETE REPAIRS  
 ORIOLE PARK AT  
 CAMDEN YARDS  
 333 W. Camden Street  
 Baltimore, MD 21201

Sheet Title:  
**REPAIR  
 DETAILS**

Date: 5/15/2019	Sheet:  <b>RD-2</b>
Designed by: JMB	
Drawn By: NCL	
Scale: AS NOTED	



**GENERAL NOTES**

1. LOCATE DETERIORATED AREAS BY SOUNDING. MARK AREAS OF DELAMINATED OR UNSOUND CONCRETE.
2. INSTALL SHORING, IF NEEDED. CONSULT WITH ENGINEER FOR DIRECTIONS IN SHORING.
3. LAY OUT PATCH AREAS IN RECTANGULAR SHAPES WITH SQUARE CORNERS. SAW CUT OR CHIP EDGES APPROXIMATELY 1/2" DEEP. DO NOT CUT REINFORCING BARS AT EDGES.
4. REMOVE DETERIORATED CONCRETE TO SOUND SUBSTRATE. REMOVE APPROXIMATELY 3/4" OF CONCRETE FROM UNDER LAYER OF BARS NEAREST SURFACE.
5. AT EXPOSED BARS WITH NO RUST AND AN UNBROKEN BOND TO THE CONCRETE SUBSTRATE, NO UNDERCUTTING IS REQUIRED IF LESS THAN ONE-HALF OF BAR IS EXPOSED.
6. SANDBLAST PATCH AREA TO CLEAN CONCRETE SUBSTRATE AND EXPOSED REINFORCING BARS. REMOVE RUST FROM EXPOSED BARS.
7. REPLACE BARS WITH MORE THAN 20% OF CROSS SECTIONAL AREA RUSTED. NEW BARS TO BE SAME TYPE AND SIZE AS ORIGINAL LAP ADDED BARS PER ACI 318.
8. PLACE A MINIMUM OF 1" OF PATCHING CONCRETE OVER EXPOSED BARS. THE BACK EXPOSED BARS TO INCREASE COVER, IF POSSIBLE. IF ANY BARS IN THE PATCH WILL HAVE LESS THAN 1" COVER, CONSULT ENGINEER FOR DIRECTION PRIOR TO INSTALLING REPAIR MORTAR.
9. USE CORROSION-INHIBITING ADMIXTURE IN THE PATCHING CONCRETE. SEE SPECIFICATIONS FOR DETAILS.
10. PLACE FORMS AS NEEDED TO MATCH ORIGINAL SURFACE PROFILE AND TEXTURE.
11. WET SUBSTRATE TO SURFACE, SATURATED-DRY CONDITION BEFORE PLACING PATCH MATERIAL. DO NOT USE BONDING AGENTS.
12. PLACE, VIBRATE, AND FINISH PATCH PER ACI RECOMMENDED PRACTICES. APPLY PATCHING CONCRETE PER MANUFACTURER'S INSTRUCTIONS IF BAGGED MATERIALS ARE USED.
13. FOR READY-MIX CONCRETE, WET CURE PATCH PER ACI RECOMMENDED PRACTICES FOR CURING CONCRETE. FOR BAGGED MATERIALS, CURE PER MANUFACTURER'S DIRECTIONS.
14. MAINTAIN REVEALS AND OTHER SURFACE FEATURES.

**1** TYPICAL VERTICAL CONCRETE REPAIR  
 RD-2 SCALE: N.T.S.