

Via: E-mail (danita_brown@nps.gov) and FTP

July 15, 2019

Ms. Danita Brown
Historical Architect
National Park Service
Southeast Region Cultural Resources Division

Re: Battery Cullum-Sevier, Gulf Islands National Seashore
Architectural/Engineering Services – Stabilization and Repair Scenario
WJE No. 2017.4360.1

Dear Danita:

This letter report and the accompanying conceptual drawings and cost estimate provide documentation of the stabilization and repair scenario for Battery Cullum-Sevier at Gulf Islands National Seashore identified by the National Park Service for further evaluation.

Findings of the condition assessment of Battery Cullum-Sevier conducted in November 2018, together with initial documentation and outline stabilization/repair scenarios for review, were presented in our memo of December 7, 2018, for consideration by the National Park Service. Following NPS selection of a scenario for further development, we submitted a draft narrative with attached documentation and cost estimate for NPS review on April 24, 2019. The following narrative and attached documentation and cost estimate comprise the final submittal for this project. Conceptual drawings illustrating the selected repair scenario are provided with this memo (see Appendix A), and the scenario is described in further detail below. The conceptual cost estimate is attached as Appendix B.

Architectural and engineering services for this project are being provided by Wiss, Janney, Elstner Associates, Inc. (WJE) as sub-consultant to Panamerican Consultants, Inc. (Panamerican) under NPS SERO IDIQ Contract No. P16PC00097.

Background

Battery Cullum-Sevier is a contributing structure in the National Register-listed historic district for the Pensacola Harbor Defense Project.¹ The period of significance for the historic district extends from 1896 to 1947. The battery is significant for its association with Spanish-American War, World War I, and World War II-era activities conducted by the U. S. Army to protect the strategically important Pensacola Harbor. It retains the integrity to convey its historic associations.

The condition assessment conducted for this study, which updated and expanded upon findings of the Historic Structure Report completely concurrently by the project team, included visual assessment, nondestructive testing, and concrete sample removal and materials studies. The condition assessment

¹ Deborah Slaton, Liz Sargent, Tim Penich, and Andi Mele, *Pensacola Harbor Defense Project National Register Nomination*, August 26, 2016, entered into the National Register, May 15, 2017, (National Register no. 100000992).

findings indicated that portions of the concrete structure, particularly those associated with improvements made circa 1910s–1920s, are severely deteriorated. The portions of the upper level walkway added during this period have collapsed in several locations along the north side of the battery. The storm protection hoods that previously covered the stairs leading from grade to the lower level have also collapsed. Concrete deterioration was observed throughout the exterior and interior structure. Steel structural members, reinforcement, doors and windows, and railings exhibit corrosion and other deterioration. Evidence of water infiltration, vegetation, and graffiti were noted at various locations, as well as deterioration of roofing and paving where present. (Refer to our memo of December 7, 2018, for further discussion of conditions observed, as well as photographs illustrating conditions observed at the time of the site visit in November 2018.)

As noted in our previous memo, discussion with NPS project team members identified four primary NPS goals for the battery:

1. To provide proper care for cultural resources, with the Historic Structure Report as a starting point including treatment recommendations.
2. To improve visitor experience of the park, including removal of the chain link fence and repair of Battery Cullum-Sevier.
3. To provide safe visitor access to the battery as possible (access may be controlled, e.g., visitors escorted by park staff).
4. To provide for better interpretation of the battery.

The overarching treatment for Battery Cullum-Sevier is *Preservation*, as characterized in the Secretary of the Interior’s Standards for Treatment of Historic Properties. The overarching treatment *Preservation* will involve stabilization, retaining, and repairing historic fabric. Selective replacement—in-kind or with another material—is included where areas of concrete are missing or significantly deteriorated. Stabilization/repair scenarios for the battery have been developed based on the Secretary of the Interior’s Standards for Preservation, especially standards 5 and 6:

5. Distinctive materials, features, finishes and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. The existing condition of historic features will be evaluated to determine the appropriate level of intervention needed. Where the severity of deterioration requires repair or limited replacement of a distinctive feature, the new materials will match the old in composition, design, color and texture.²

The Secretary of the Interior’s Standards were the primary reference used to guide development of the conceptual repair scenarios. Other relevant standards and codes should be referenced in design development and preparation of construction documents for stabilization and repair.

Stabilization/Repair Scenarios

Our memo of December 7, 2018, identified three stabilization/repair scenarios for Battery Cullum-Sevier:

² Anne E. Grimmer, *The Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings* (Washington, D.C.: U.S. Department of the Interior, National Park Service, Technical Preservation Services, 2017).

- Scenario 1 – Limited Stabilization Repairs and Access
- Scenario 2 – More Extensive Stabilization Repairs and Access
- Scenario 3 – Comprehensive Repairs and Access

Following review of the above-mentioned memo, National Park Service project team members requested that WJE prepare a conceptual cost estimate in advance of selection and development of a scenario, to inform NPS selection. The conceptual cost estimate was submitted on February 12, 2019. Following review of the estimate, NPS reviewers selected Scenario 2 for further development, and asked that WJE divide the work of this scenario into phases to provide stabilization and repair projects with costs of approximately \$500,000 each. (See e-mail correspondence from NPS to WJE of March 8, 2019.) This approach has been followed for the documentation provided in this submittal.

Discussion of phasing of Scenario 2 and the conceptual scope of work for each phase follows. Refer to the drawings for Scenario 2 provided in Appendix A. An updated cost estimate for the phases of work is provided in Appendix B.

In discussion of the overarching preservation treatment with the project team, the park expressed interest in considering repair of portions of the elevated walkways added to the battery in the 1910s–1920s where this is possible.³ Many areas of the elevated walkways are severely deteriorated and collapsed or in a state of imminent collapse; these areas are considered too severely deteriorated to be repaired. However, it may be possible (pending further investigation) to stabilize portions of the walkway that have not collapsed. Further study is needed to confirm whether it is feasible to repair surviving severely deteriorated portions of the walkway. Where the walkway is removed, it should be documented through annotations on drawings, photographs, and retrieval of materials samples for archival purposes. For purposes of this study and as indicated in the conceptual cost estimate, stabilization of walkways is based on the anticipated maximum area that can be stabilized and repaired (rather than removed) under each phase.

Following the NPS request that each phase comprise a project budgeted at \$500,000 or less, and noting that the scope of work and estimates are conceptual in nature, Scenario 2 has been divided into five phases, as outlined below. Phases could be combined based on available funding. The phases have been identified to reflect prioritization in accordance with NPS project goals and to provide a logical progression of the work. Specific considerations in developing phasing include:

- In terms of prioritization of recommended stabilization work, debris from collapsed areas throughout the structure should be removed as an initial step. Material that is too severely deteriorated to be repaired, or has already collapsed, will be removed as part of Phase 1. This will permit further assessment of existing conditions in the affected areas. In general, compromised areas inside the suggested location of the new (temporary) fencing, which do not pose a risk to visitors, should be shored wherever possible until stabilization work is performed.
- Prioritization of areas to be made accessible to visitors is based on several factors, including the desire of the park to make the battery accessible to visitors and remove the existing perimeter fence, while

³ During review of the initial scenarios, park representatives indicated that they were also interested in considering reconstruction of missing portions of the walkways or areas that are too severely deteriorated for repair, noting that this repair approach would likely be an expensive component of the work. Reconstruction of the walkways was included in Scenario 3, which was not selected by NPS for further development at this time; however, reconstruction based on existing archival documentation and physical evidence could be considered in the future.

also retaining the historic fabric of the battery to the greatest extent feasible. With regard to these factors, phasing and prioritization of repairs has been developed to allow for increased public access and retention of historic fabric, as follows:

- o As the general condition of the elevated walkways to be stabilized is consistent across the north side of the battery, the proposed repairs have been phased to allow for the gradual extension of areas accessible to visitors, with work generally progressing from east to west.
- o Work in Phase 1 includes the removal of collapsed portions of the structure and the perimeter fence and the stabilization of a small portion of elevated walkways, which allows for the east end of Battery Cullum as well as the upper level of Battery Sevier, among other areas, to be opened to visitors. This allows portions of the structure to be interpreted while also providing visitors views of the landscape and historic structures on the west end of Santa Rosa Island from the upper level of the battery. Additionally, a temporary fence erected closer to the structure will be less visually intrusive than the existing, more extensive fence located outboard of the battery.
- o The remainder of the elevated walkways are stabilized in Phases 2a through 2c, allowing for increased visitor access and gradual removal of the fence. The temporary fencing installed in Phase 1 is removed by the end of Phase 2.
- o Phase 3 work allows for the interior at the far west end of the battery to be opened to visitors, and also includes work to repair/restore steel doors and windows throughout the structure. The steel hoist in the interior spaces associated with the west gun emplacement of Battery Sevier can remain in place.

As part of all phases of Scenario 2, all work undertaken for stabilization/repairs should take into consideration historic natural resources on site.

Scenario 2 – Phase 1

Phase 1 generally includes removal of vegetation from the structure, removal of severely deteriorated and collapsed concrete, stabilization of elevated walkways at selected locations, installation of barriers at selected locations, and removal of the exterior fence and installation of a new fence closer to the structure. The purpose of these initial efforts is to remove the visual obstruction caused by the existing fence, make a portion of the battery that is readily visible from the approach from Fort Pickens accessible to visitors, and eliminate collapsed materials. Additionally, as a result of the work to be completed as part of Phase 1, visitors could be provided access to the battery, allowing for increased interpretation of the structure. Access could also be provided to the upper level of the Battery Sevier, allowing visitors another way to experience the natural landscape and historic structures at the west end of Santa Rosa Island.

Work included under Phase 1 would include the following:

1. Remove all vegetation throughout concrete structure.
2. Remove incipient spalls and conduct isolated concrete repairs in areas to be opened to visitor access, including but not limited to the multi-level harbor defense signal station, the power station, and the observation room at the west end of the battery.
3. Remove severely deteriorated/collapsed concrete at elevated walkways throughout the battery and storm hoods. Prior to removal of collapsed or significantly deteriorated elements, existing conditions should be documented with photography and/or drawings.
4. Stabilize elevated walkways at the far eastern end of the battery.
5. Stabilize the foundation of the observation room at the west end of Battery Sevier.

6. Install barriers at selected locations and at entry points to the interior structure to prevent visitor access/egress beyond the intended accessible area.
7. Remove existing fence at the perimeter of site.
8. Install new fence closer to the structure. (This fence would restrict visitors to only those areas of the battery determined to be safely accessible after stabilization measures and initial repairs are completed. It should be visually unobtrusive and sufficiently transparent to allow views of the battery, as well as views from the battery into the surrounding landscape. New fencing should also be compatible with the historic setting and cultural landscape.)

Upon completion of Phase 1, accessible areas would include the following:

- The east gun emplacements at Battery Cullum and Battery Trueman
- The power station located north of the main battery structure at the interface of Battery Cullum and Battery Sevier
- The west gun emplacement at Battery Sevier
- The roof level at the west end of Battery Sevier, including the observation room at the west end of the battery
- The multi-level harbor defense signal station

Scenario 2 – Phases 2a, 2b, and 2c

Phases 2a, 2b, and 2c generally include stabilization of elevated walkways that remain, installation of barriers at selected locations, and phased removal of the temporary fence installed as part of Phase 1. The purpose of this effort is address general stabilization, repairs/removals to address safety issues, and repairs at most areas of the battery to address deterioration. This additional work would allow visitors to access much of the battery, and, upon completion of Phase 2c, permit removal of all portion of the fence installed in Phase 1. The scope of work for each portion of Phase 2 is similar, while the areas and extent of work included in the sub-phases has been prioritized to gradually extend the areas of the battery that are repaired and safely accessible to visitors. The work has generally been phased to allow for visitor access to be increased from east to west as the work progresses. By the end of Phase 2c, all of the gun emplacements, with the exception of the east gun emplacement at Battery Sevier, would be available for visitor access.

Work included under Phases 2a, 2b, and 2c would include the following, for the areas noted above:

1. Stabilize elevated walkways.
2. Install barriers at selected locations and at entry points to the interior structure to prevent visitor access/egress beyond the intended accessible area.
3. Phased removal of the fence installed in Phase 1.

Upon completion of Phase 2a, accessible areas would include the following:

- The gun emplacements at Battery Cullum and Battery Trueman
- The western gun emplacement at Battery Sevier
- The power station located north of the main battery structure at the interface of Battery Cullum and Battery Sevier
- The entire roof level, including the observation rooms at the east and west ends of the battery
- The multi-level harbor defense signal station
- The first level of the battery commander's station located north of Battery Cullum

Upon completion of Phase 2b, accessible areas would include the following:

- The gun emplacements at Battery Cullum and Battery Trueman
- The western gun emplacement at Battery Sevier
- The power station located north of the main battery structure at the interface of Battery Cullum and Battery Sevier
- The entire roof level, including the observation rooms at the east and west ends of the battery
- The multi-level harbor defense signal station
- The first level of the battery commander's station located north of Battery Cullum

Upon completion of Phase 2c, accessible areas would include the following:

- The gun emplacements at Battery Cullum and Battery Trueman
- The western gun emplacement at Battery Sevier
- The power station located north of the main battery structure at the interface of Battery Cullum and Battery Sevier
- The entire roof level, including the observation rooms at the east and west ends of the battery
- The multi-level harbor defense signal station
- The first level of the battery commander's station located north of Battery Cullum
- The entire area north of the battery, following the removal of the temporary fence

Scenario 2 – Phase 3

Phase 3 includes repair of steel window and doors, as well as repairs at interior spaces at the west end of Battery Sevier. The purpose of this effort is address repair/restoration of character defining features, repairs/removals to address safety issues and deterioration at an interior portion of the battery. This work also allows for an interior portion of the battery to be opened for visitor access and expanded interpretation.

Work included under Phase 3 would include the following:

1. Clean, prime, and paint exposed bottom flange of structural steel at the ceiling of interior spaces on the west end of Battery Sevier.
2. Replace severely deteriorated fully exposed lintels at doors and perform concrete repairs.
3. Repair steel window and door elements.
4. Install barriers at selected locations to prevent visitor access/egress beyond intended accessible area.
5. Remove graffiti in interior spaces to be open to the public.

Upon completion of Phase 3, visitors would have access to all exterior portions of the battery, with the exception of the east gun emplacement at Battery Sevier. The interior spaces associated with the west gun emplacement at Battery Sevier would be open to visitors. (Although the walkways leading to the east gun emplacement will be stabilized as part of the work of Phase 2, visitor access to the walkways is not anticipated. In addition, should visitor access to the east gun emplacement be desired, interior work similar to that included for the west gun emplacement would also be needed in this area. This could be considered for a future phase of work.)

Cost Estimate

The conceptual cost estimate for the work included in Scenario 2 is provided in Appendix B. As requested, we have developed estimates for implementation of the work in phases, with costs not to exceed \$500,000 per phase.

A summary of total estimated construction budget per phase is provided below. Refer to Appendix B for further information.

Phase 1	\$494,863
Phase 2a	\$436,808
Phase 2b	\$481,525
Phase 2c	\$296,993
Phase 3	\$423,166

Note that this cost estimate is an opinion of probable costs based on the conceptual repair scenario illustrated in the attached drawings. Once the repair approach is confirmed and repairs further developed through design development, a more refined cost estimate can be developed.

Sincerely,

WISS, JANNEY, ELSTNER ASSOCIATES, INC.



Tim Penich
Historical Architect

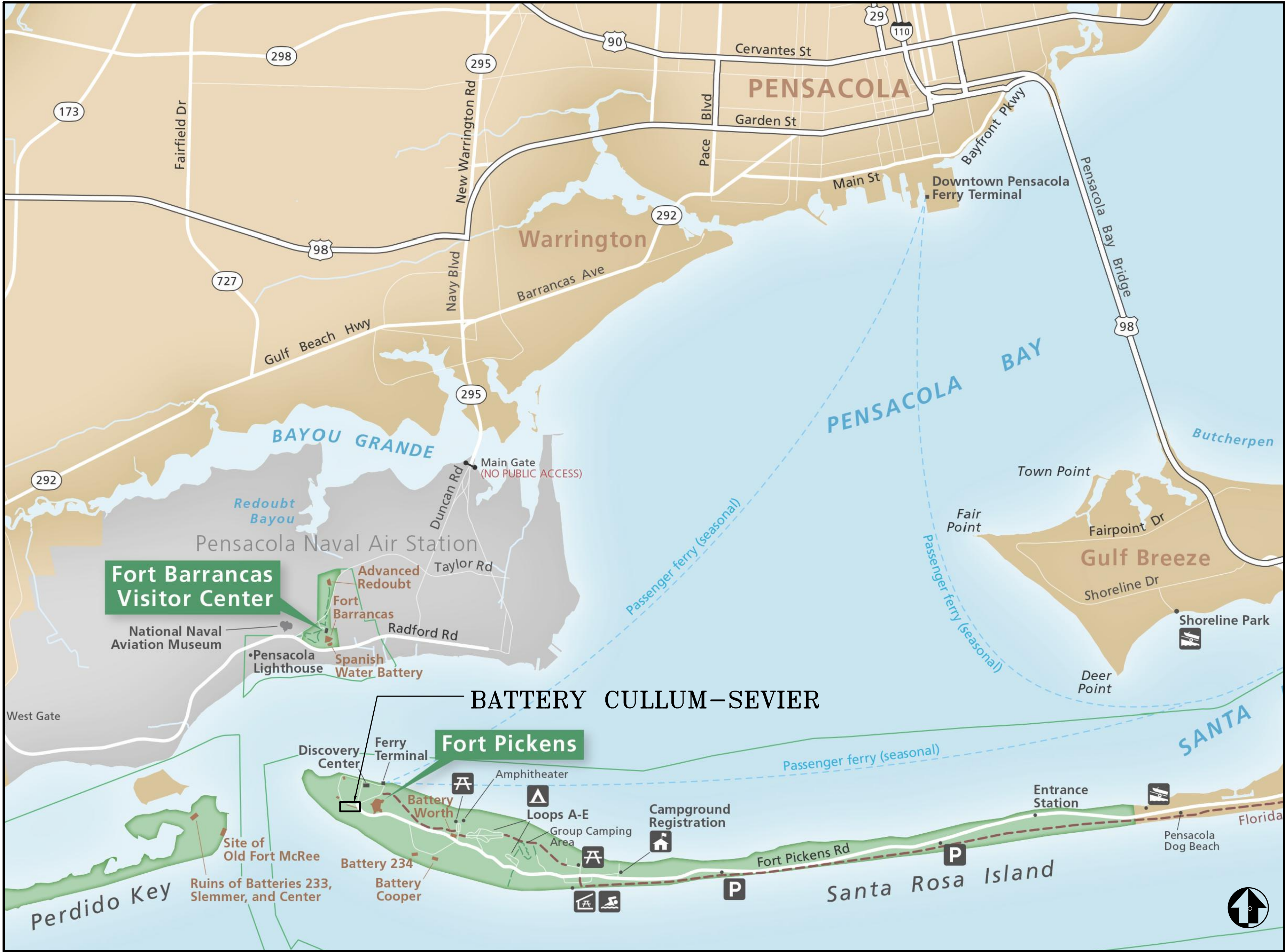


Deborah Slaton
Principal

cc: Dan Brown, NPS Gulf Islands National Seashore
Kate Everett, NPS Gulf Islands National Seashore
Gary Stansberry, NPS Gulf Islands National Seashore
Leandro Etcheverry, WJE
Kurt Tyler, WJE
Mark Steinback, Panamerican Consultants, Inc.
Don Smith, Panamerican Consultants, Inc.

APPENDIX A: CONCEPTUAL REPAIR DRAWINGS

7/19/2019 - AUTOCAD 2014 - GO GISCOV.DWG



INDEX

SHEET	SUB SHEET	TITLE OF SHEET
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4	A1	PHASING PLANS
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8	A5	PHASE 1 - THIRD FLOOR PLAN
9	A6	PHASE 2A - FIRST FLOOR PLAN
10	A7	PHASE 2A - SECOND FLOOR PLAN
11	A8	PHASE 2A - THIRD FLOOR PLAN
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13	A10	PHASE 2B - SECOND FLOOR PLAN
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15	A12	PHASE 2C - FIRST FLOOR PLAN
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17	A14	PHASE 2C - THIRD FLOOR PLAN
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19	A16	PHASE 3 - SECOND FLOOR PLAN
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21	A18	REPAIR DETAILS
22	A19	CRACK AND JOINT REPAIR DETAILS

GULF ISLANDS NATIONAL SEASHORE
BATTERY CULLUM-SEVIER CONCEPTUAL REPAIR SCENARIOS
JULY 15, 2019

BASIC DATA: UNIGRID MAP

A/E FIRM - A/E CONTRACT NUMBER		Mark	Sheet	REVISION	Date	Initial	QUALITY DESIGN CERTIFICATION			NOT FOR CONSTRUCTION	TITLE OF DRAWING		DRAWING NO.	
PRIME: PANAMERICAN CONSULTANTS, LTD. MEMPHIS, TENNESSEE							☐ Prepared in Accordance with Design Development (Title I) Drawing No. _____ OR ☐ Variance from Design Development (Title I) Approved by Superintendent on _____ Date _____ OR ☐ Construction Drawing Not Preceded by Design Development (Title I)				UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE EAST MAJOR ACQUISITION BUYING OFFICE	REPAIR SCENARIOS		
ARCHITECT/STRUCTURAL ENGINEER: WISS, JANNEY, ELSTNER ASSOCIATES, INC. NORTHBROOK, ILLINOIS												LOCATION WITHIN PARK BATTERY CULLUM-SEVIER		
CONTRACT NO. P16PC00097												NAME OF PARK GULF ISLANDS NATIONAL SEASHORE		
												REGION SOUTHEAST		
									COUNTY ESCAMBIA		STATE FLORIDA			

4/24/2019 - AUTOCAD 2014 - G1 SITEPLAN.dwg



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G1

AERIAL VIEW



TRUE
NORTH

NOT FOR CONSTRUCTION

DESIGNED: DS/TMP	SUB SHEET NO. G1	TITLE OF SHEET SITE PLAN AND OVERVIEW Battery Cullum-Sevier Gulf Islands National Seashore Escambia County, Florida	DRAWING NO. _____
DRAWN: TC			PMIS/PKG NO. _____
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DATE: 15 JULY 2019			2 OF 22

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GENERAL NOTES

1. COMPLY WITH ALL CODES, ORDINANCES, RULES, STANDARDS, REGULATIONS, ORDERS, AND LEGAL REQUIREMENTS OF THE NATIONAL PARK SERVICE AND AUTHORITIES HAVING JURISDICTION WHICH BEAR ON THE PERFORMANCE OF THE WORK. ALL WORK SHALL BE CONDUCTED IN ACCORDANCE WITH OSHA REQUIREMENTS.
2. PROVIDE PROTECTION PLAN FOR ALL NATURAL AND CULTURAL RESOURCES POTENTIALLY AFFECTED BY THE WORK OF THIS PROJECT FOR REVIEW BY THE NATIONAL PARK SERVICE PRIOR TO BEGINNING WORK.
3. VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD. DO NOT SCALE DRAWINGS.
4. PROVIDE ACCESS FOR INSPECTION BY THE CONTRACTING OFFICER’S REPRESENTATIVE OF THE WORK IN PROGRESS.
5. PROTECT ALL HISTORIC MATERIALS THROUGHOUT THE WORK.

SUMMARY OF WORK

SCENARIO 2 – PHASE 1

- 1.REMOVE VEGETATION ON CONCRETE STRUCTURE.
- 1.REMOVE INCIPIENT SPALLS AND CONDUCT ISOLATED CONCRETE REPAIRS IN AREAS TO BE OPENED TO VISITOR ACCESS.
- 2.REMOVE SEVERELY DETERIORATED/COLLAPSED CONCRETE AT ELEVATED WALKWAYS AND STORM HOODS.
- 3.STABILIZE REMAINING ELEVATED WALKWAYS.
- 4.STABILIZE THE FOUNDATION OF THE OBSERVATION ROOM AT THE WEST END OF BATTERY SEVIER.
- 5.INSTALL BARRIERS AT ELEVATED LOCATIONS TO PREVENT VISITOR ACCESS/EGRESS BEYOND INTENDED ACCESSIBLE AREA.
- 6.REMOVE EXISTING FENCE AT THE PERIMETER OF SITE.
- 7.INSTALL NEW FENCE CLOSER TO THE STRUCTURE.

SCENARIO 2 – PHASE 2A

- 1.STABILIZE ELEVATED WALKWAYS.
- 2.INSTALL BARRIERS AT ELEVATED LOCATIONS TO PREVENT VISITOR ACCESS/EGRESS BEYOND INTENDED ACCESSIBLE AREA.
- 3.REMOVE PORTION OF FENCE INSTALLED IN PHASE 1.

SCENARIO 2 – PHASE 2B

- 1.STABILIZE ELEVATED WALKWAYS.
- 2.INSTALL BARRIERS AT ELEVATED LOCATIONS TO PREVENT VISITOR ACCESS/EGRESS BEYOND INTENDED ACCESSIBLE AREA.
- 3.REMOVE PORTION OF FENCE INSTALLED IN PHASE 1.

SCENARIO 2 – PHASE 2C

- 1.STABILIZE ELEVATED WALKWAYS.
- 2.INSTALL BARRIERS AT ELEVATED LOCATIONS TO PREVENT VISITOR ACCESS/EGRESS BEYOND INTENDED ACCESSIBLE AREA.
- 3.REMOVE PORTION OF FENCE INSTALLED IN PHASE 1.

SCENARIO 2 – PHASE 3

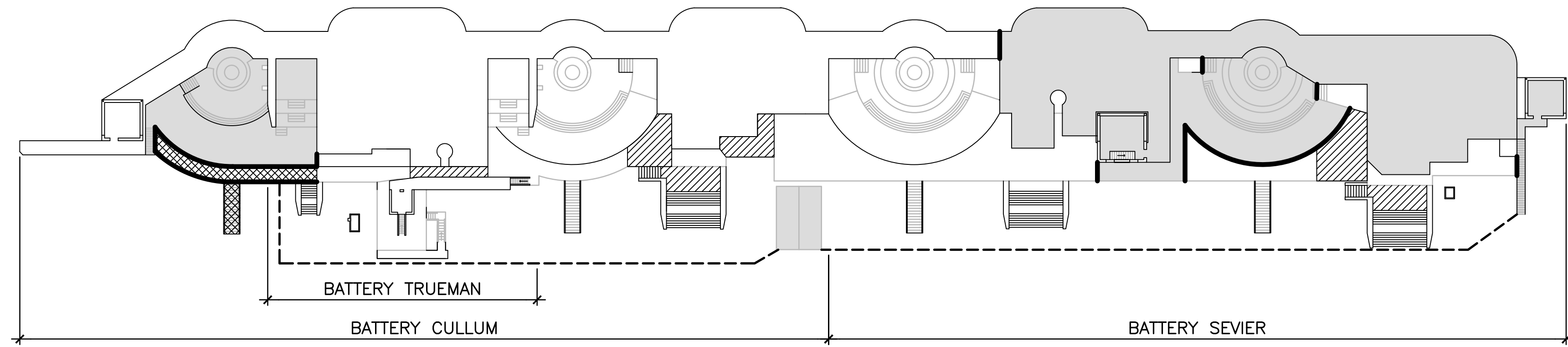
- 1.CLEAN, PRIME, AND PAINT EXPOSED BOTTOM FLANGE OF STRUCTURAL STEEL AT THE CEILING OF INTERIOR SPACES AT THE WEST END OF BATTERY SEVIER.
- 2.REPLACE SEVERELY DETERIORATED FULLY EXPOSED LINTELS AT DOORS AND PERFORM CONCRETE REPAIRS.
- 3.REPAIR STEEL WINDOW AND DOOR ELEMENTS.
- 4.INSTALL BARRIERS AT ELEVATED LOCATIONS TO PREVENT VISITOR ACCESS/EGRESS BEYOND INTENDED ACCESSIBLE AREA.

NOTE: ALL REPAIRS ARE CONCEPTUAL. REFER TO ACCOMPANYING MEMO DATED 15 JULY 2019 FOR ADDITIONAL INFORMATION ON SCOPE OF REPAIRS.

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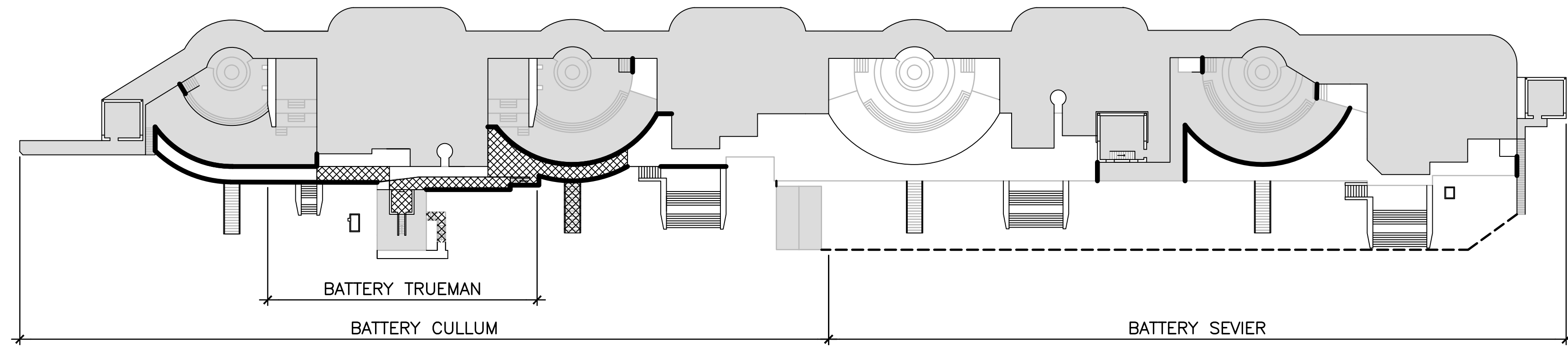
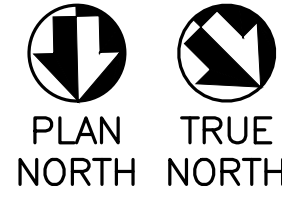
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DATE: 15 JULY 2019			3 OF 22

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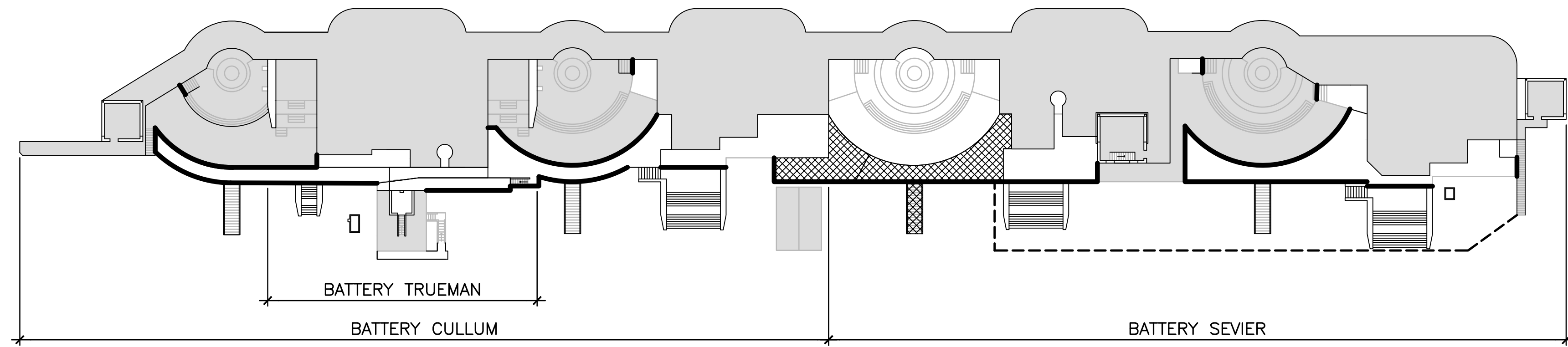
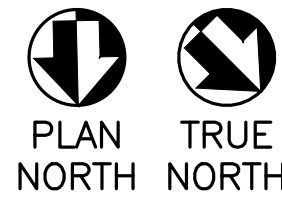
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SCENARIO 2 - PHASE 1 STABILIZATION AND ACCESS



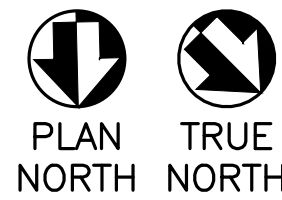
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SCENARIO 2 - PHASE 2A STABILIZATION AND ACCESS



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SCENARIO 2 - PHASE 2B STABILIZATION AND ACCESS



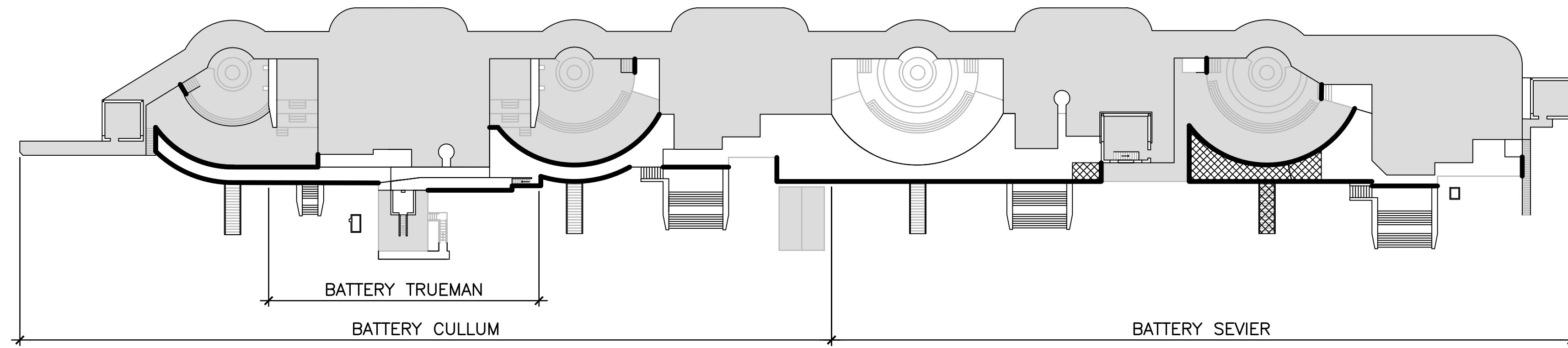
KEY

- AREAS POTENTIALLY APPROPRIATE FOR VISITOR ACCESS
- AREAS TO BE STABILIZED
- REMOVE SEVERELY DETERIORATED/COLLAPSED CONCRETE AT ELEVATED WALKWAYS AND STORM HOODS
- LOCATION OF NEW FENCE TO LIMIT VISITOR ACCESS
- LOCATION OF RAILINGS OR OTHER BARRIERS TO LIMIT VISITOR ACCESS

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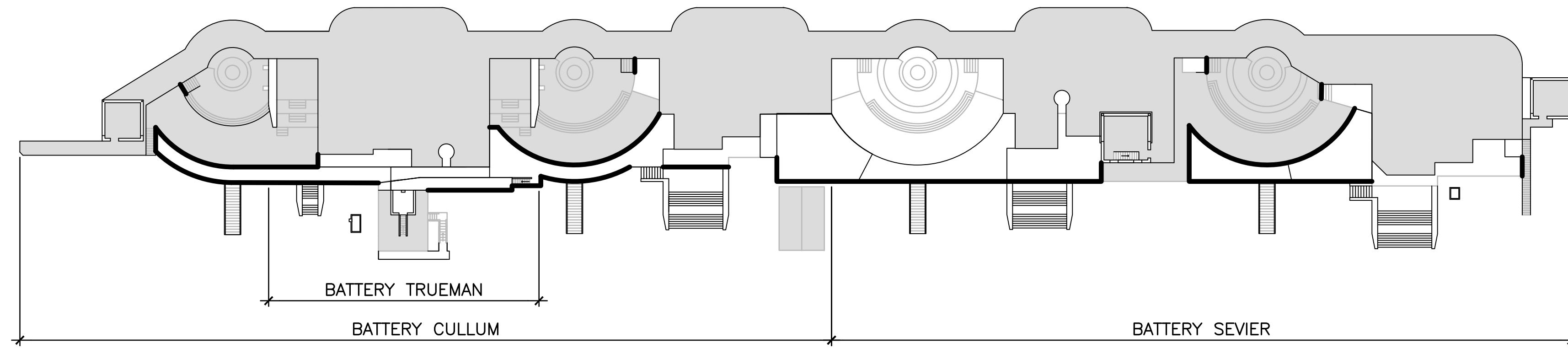
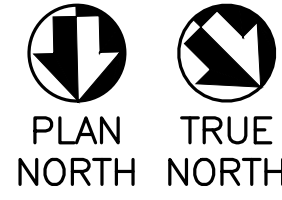
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DRAWN: TC	A1	PHASING PLANS	
TECH. REVIEW: LE		Battery Cullum-Sevier Gulf Islands National Seashore Escambia County, Florida	PMIS/PKG NO.
DATE: 15 JULY 2019			SHEET 4 OF 22

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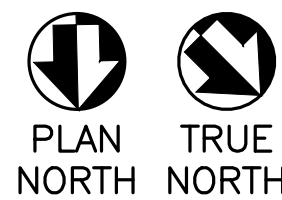
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A2

SCENARIO 2 - PHASE 2C STABILIZATION AND ACCESS



2
A2

SCENARIO 2 - PHASE 3 STABILIZATION AND ACCESS



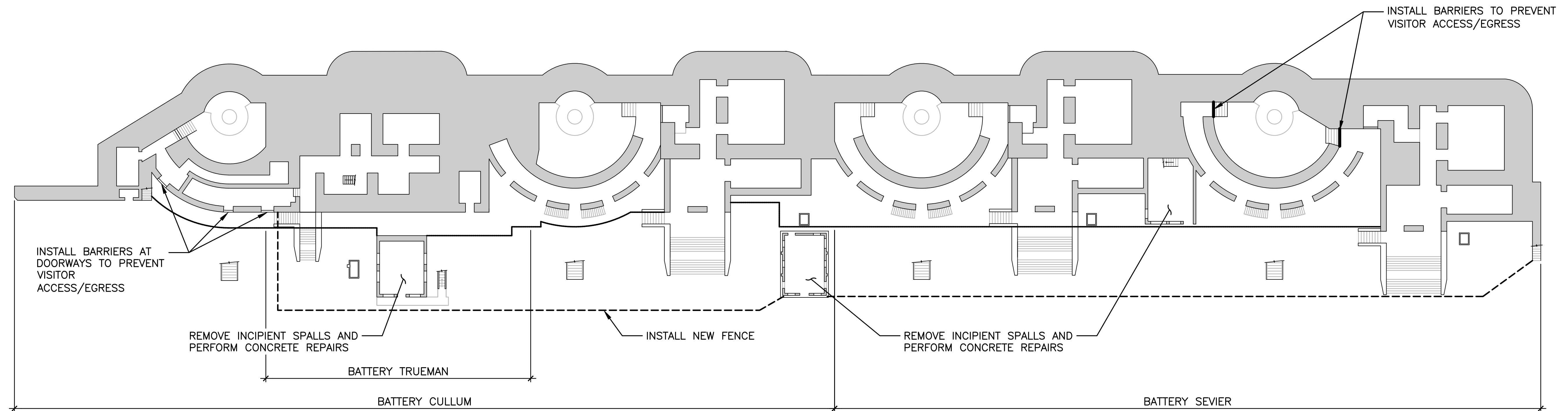
KEY

- AREAS POTENTIALLY APPROPRIATE FOR VISITOR ACCESS
- AREAS TO BE STABILIZED
- REMOVE SEVERELY DETERIORATED/COLLAPSED CONCRETE AT ELEVATED WALKWAYS AND STORM HOODS
- LOCATION OF NEW FENCE TO LIMIT VISITOR ACCESS
- LOCATION OF RAILINGS OR OTHER BARRIERS TO LIMIT VISITOR ACCESS

NOT FOR CONSTRUCTION

DESIGNED: DS/TMP	SUB SHEET NO. A2	TITLE OF SHEET PHASING PLANS Battery Cullum-Sevier Gulf Islands National Seashore Escambia County, Florida	DRAWING NO. _____
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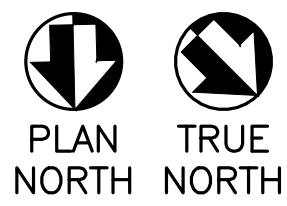
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NOTE: REMOVE EXISTING FENCE
AT PERIMETER OF SITE

1
A3

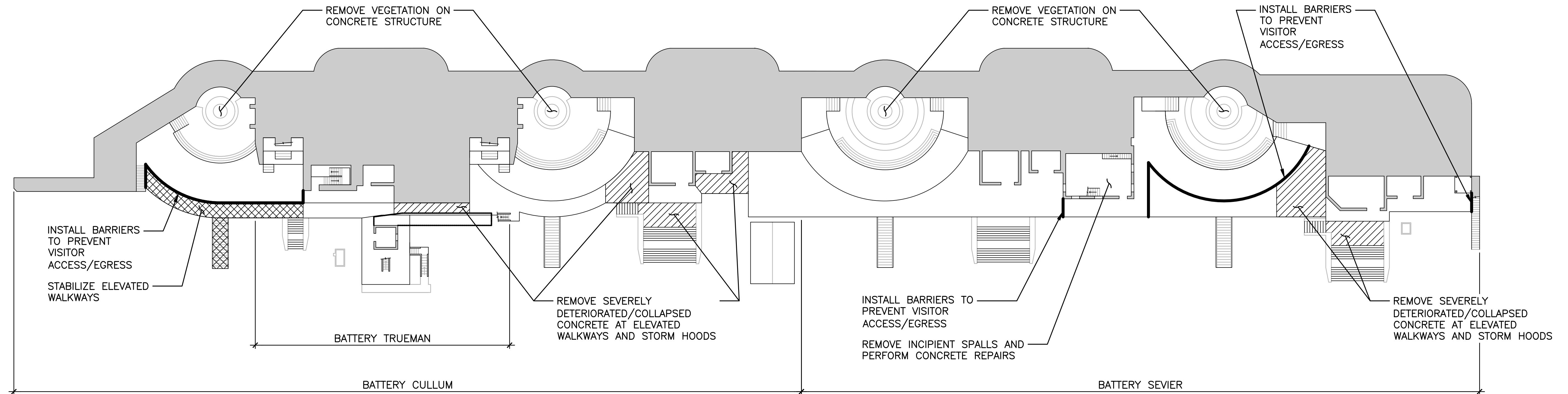
PHASE 1 - FIRST FLOOR PLAN



NOT FOR CONSTRUCTION

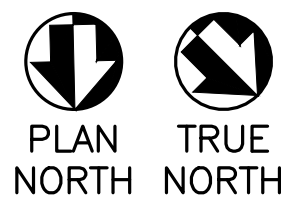
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DRAWN: TC		Battery Cullum-Sevier Gulf Islands National Seashore Escambia County, Florida	PMIS/PKG NO. _____
TECH. REVIEW: LE			SHEET 6 OF 22
DATE: 15 JULY 2019			

4/24/2019 - AUTOCAD 2014 - A4 Phase 1 - 2nd Floor Plan.dwg



1
A4

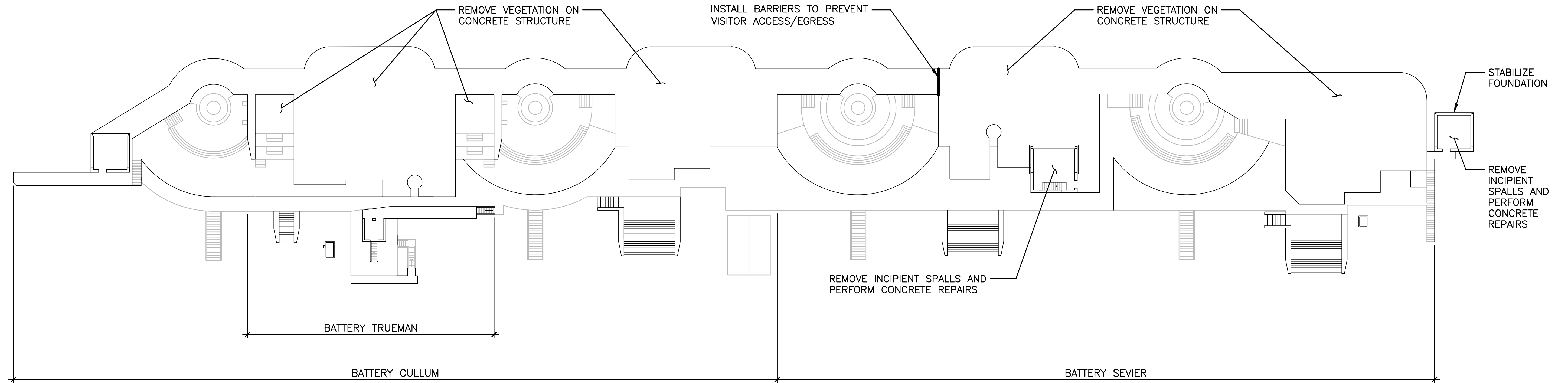
PHASE 1 - SECOND FLOOR PLAN



NOT FOR CONSTRUCTION

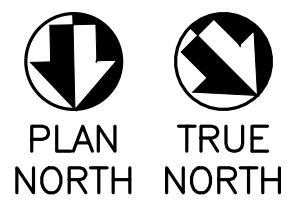
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DRAWN: TC		Battery Cullum-Sevier Gulf Islands National Seashore Escambia County, Florida	PMIS/PKG NO. _____
TECH. REVIEW: LE			SHEET 7 OF 22
DATE: 15 JULY 2019			

4/24/2019 - AUTOCAD 2014 - A5 Phase 1 - 3rd Floor Plan.dwg



1
A5

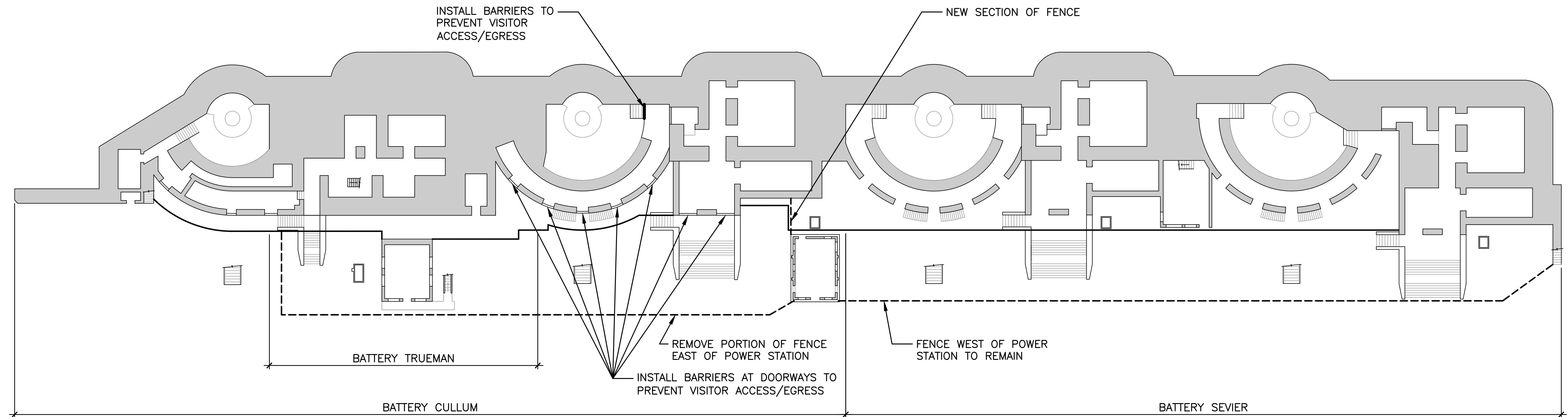
PHASE 1 - THIRD FLOOR PLAN



NOT FOR CONSTRUCTION

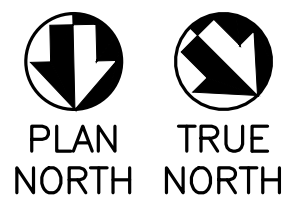
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DRAWN: TC			PMIS/PKG NO. _____
TECH. REVIEW: LE			SHEET 8 OF 22
DATE: 15 JULY 2019			

4/24/2019 - AUTOCAD 2014 - A6 Phase 2A- 1st Floor Plan.dwg



1
A6

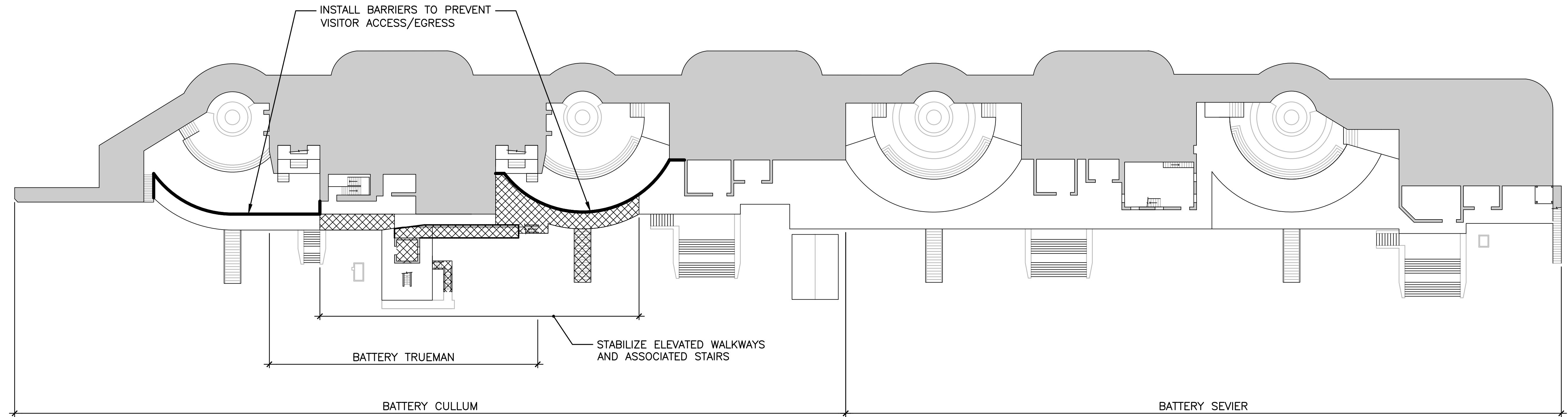
PHASE 2A - FIRST FLOOR PLAN



NOT FOR CONSTRUCTION

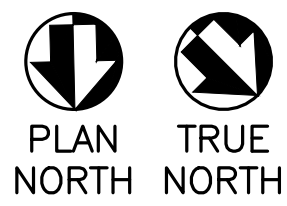
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DRAWN: TC			PMIS/PKG NO. _____
TECH. REVIEW: LE			SHEET 9 OF 22
DATE: 15 JULY 2019			

4/24/2019 - AUTOCAD 2014 - A7 Phase 2A- 2nd Floor Plan.dwg



1
A7

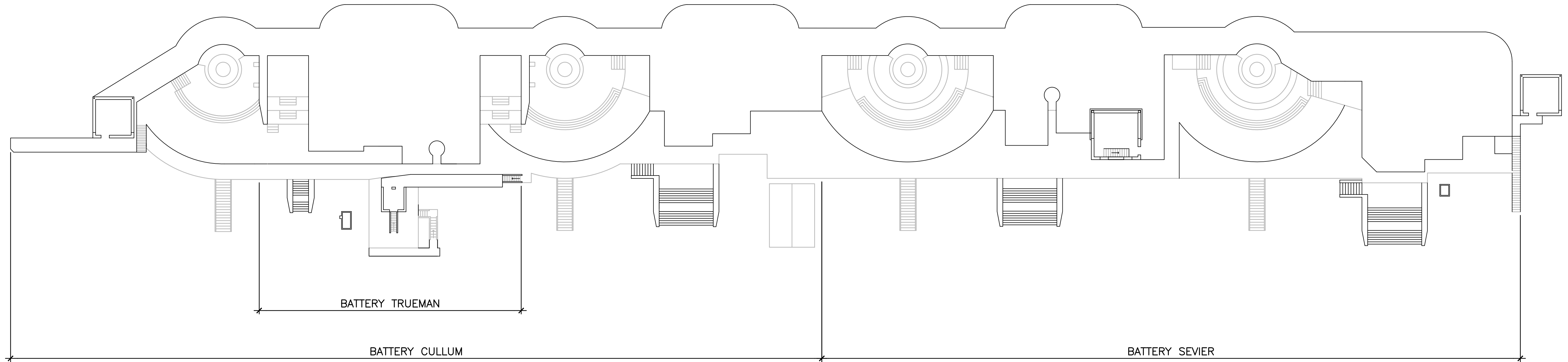
PHASE 2A - SECOND FLOOR PLAN



NOT FOR CONSTRUCTION

DESIGNED: DS/TMP	SUB SHEET NO. A7	TITLE OF SHEET PHASE 2A SECOND FLOOR PLAN Battery Cullum-Sevier Gulf Islands National Seashore Escambia County, Florida	DRAWING NO. _____
DRAWN: TC			PMIS/PKG NO. _____
TECH. REVIEW: LE			SHEET 10 OF 22
DATE: 15 JULY 2019			

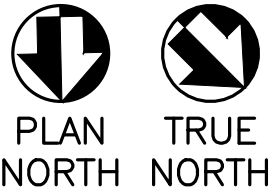
4/24/2019 - AUTOCAD 2014 - A8 Phase 2A- 3rd Floor Plan.dwg



NOTE: NO WORK ON THIRD
FLOOR AS PART OF PHASE 2A.

1
A8

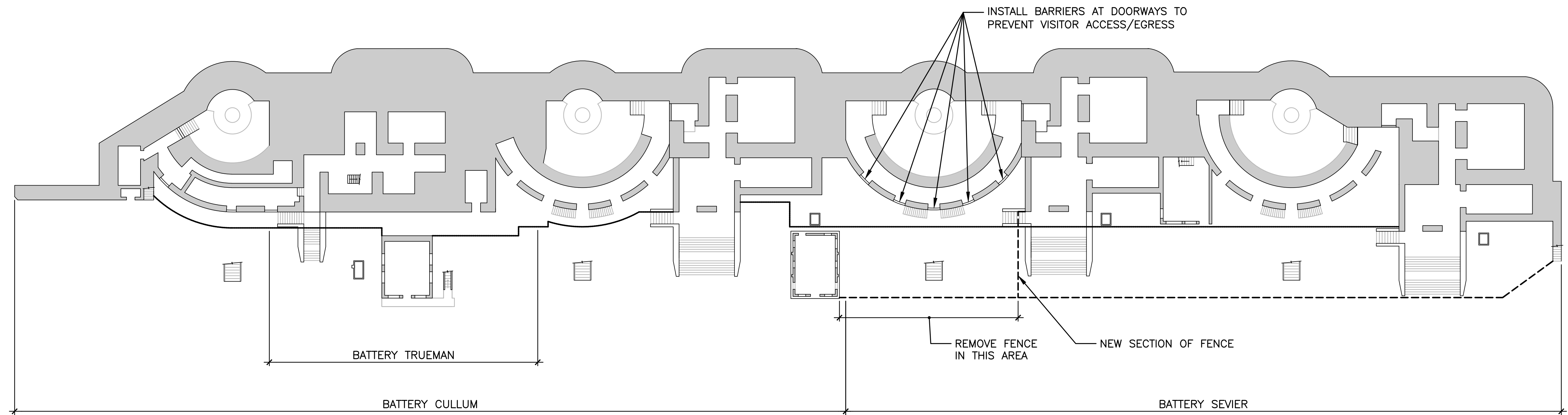
PHASE 2A - THIRD FLOOR PLAN



NOT FOR CONSTRUCTION

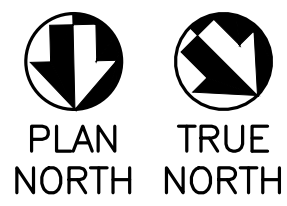
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DRAWN: TC			PMIS/PKG NO. _____
TECH. REVIEW: LE			SHEET
DATE: 15 JULY 2019			11 OF 22

4/24/2019 - AUTOCAD 2014 - A9 Phase 2B- 1st Floor Plan.dwg



1
A9

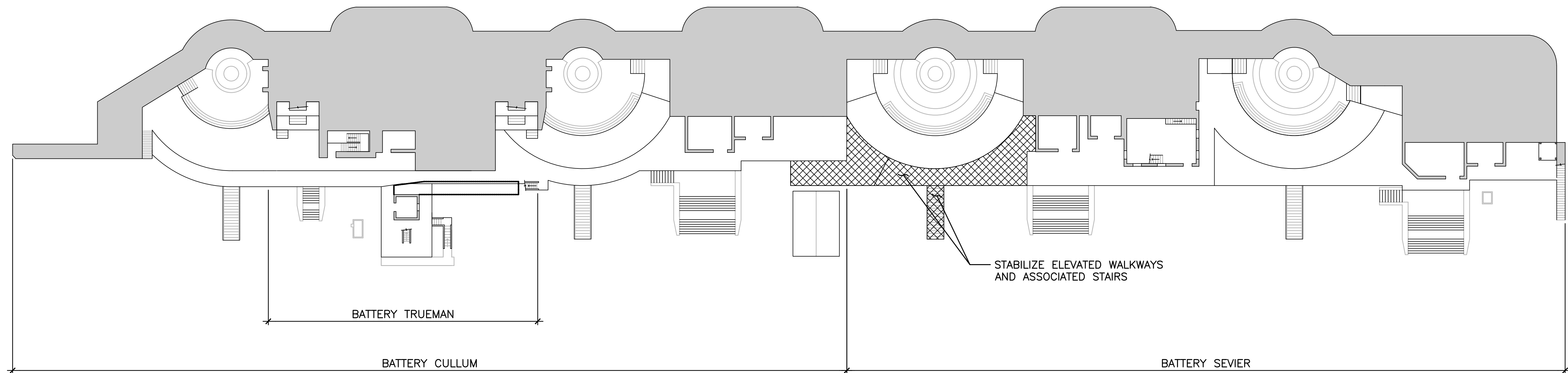
PHASE 2B - FIRST FLOOR PLAN



NOT FOR CONSTRUCTION

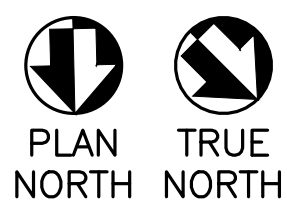
DESIGNED: DS/TMP	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
DRAWN: TC	A9	PHASE 2B	_____
TECH. REVIEW: LE		FIRST FLOOR PLAN	PMIS/PKG NO.
DATE: 15 JULY 2019		Battery Cullum-Sevier Gulf Islands National Seashore Escambia County, Florida	SHEET
			12 OF 22

4/24/2019 - AUTOCAD 2014 - A10- Phase 2B- 2nd Floor Plan.dwg



1
A10

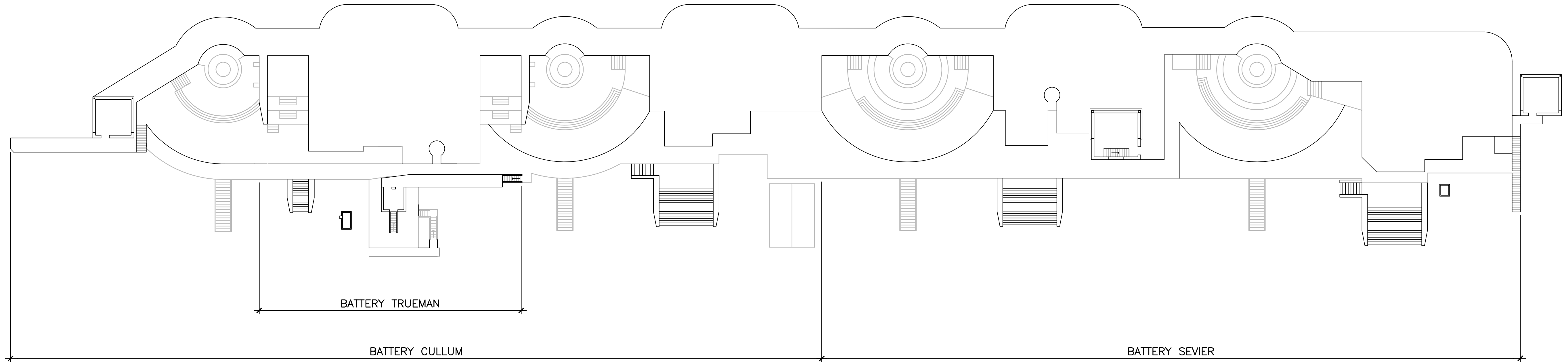
PHASE 2B - SECOND FLOOR PLAN



NOT FOR CONSTRUCTION

DESIGNED: DS/TMP	SUB SHEET NO. A10	TITLE OF SHEET PHASE 2B SECOND FLOOR PLAN Battery Cullum-Sevier Gulf Islands National Seashore Escambia County, Florida	DRAWING NO. _____
DRAWN: TC			PMIS/PKG NO. _____
TECH. REVIEW: LE			SHEET 13 OF 22
DATE: 15 JULY 2019			

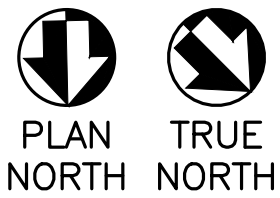
4/24/2019 - AUTOCAD 2014 - A11 - Phase 2B - 3rd Floor Plan.dwg



NOTE: NO WORK ON THIRD
FLOOR AS PART OF PHASE 2B.

1
A11

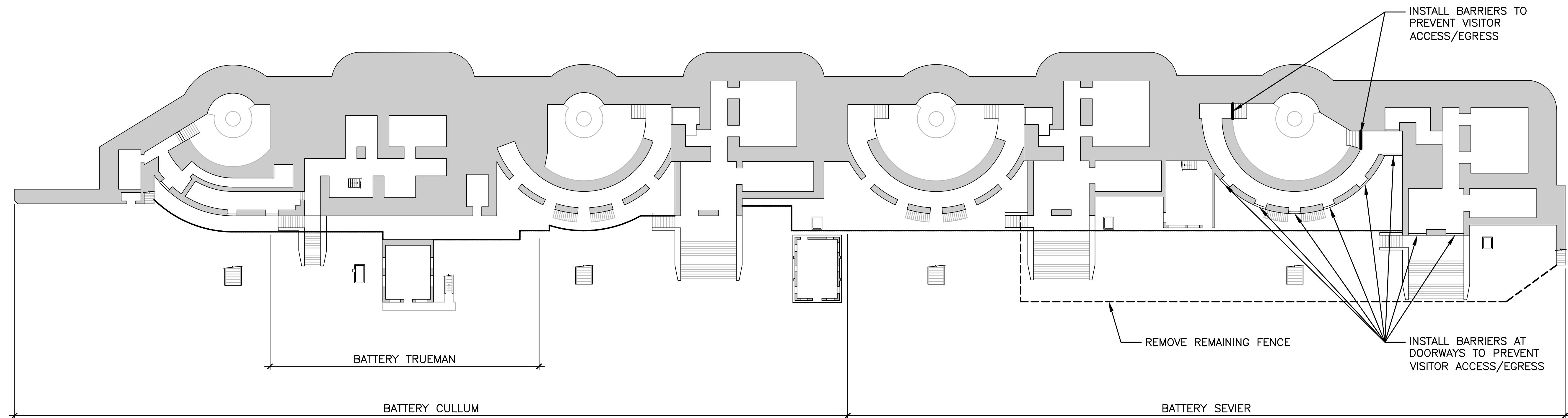
PHASE 2B - THIRD FLOOR PLAN



NOT FOR CONSTRUCTION

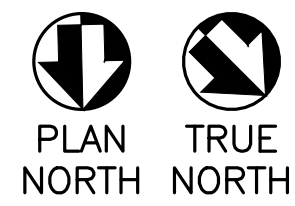
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DRAWN: TC			PMIS/PKG NO. _____
TECH. REVIEW: LE			SHEET
DATE: 15 JULY 2019			14 OF 22

4/24/2019 - AUTOCAD 2014 - A12 Phase 2C- 1st Floor Plan.dwg



1
A12

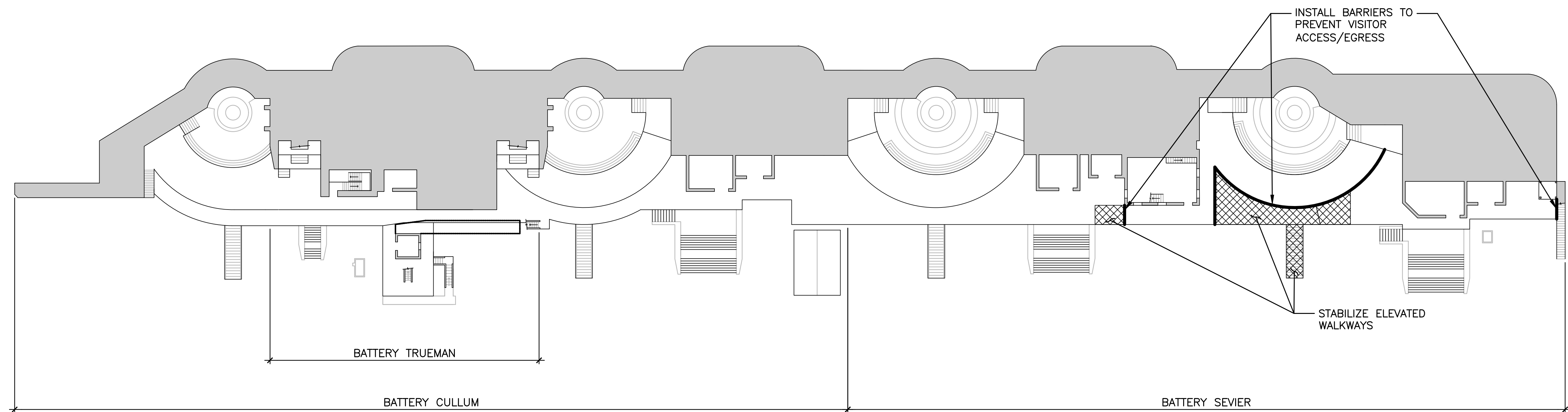
PHASE 2C - FIRST FLOOR PLAN



NOT FOR CONSTRUCTION

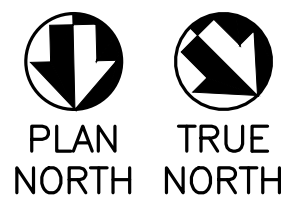
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DRAWN: TC			PMIS/PKG NO. _____
TECH. REVIEW: LE			SHEET 15 OF 22
DATE: 15 JULY 2019			

4/24/2019 - AUTOCAD 2014 - A13 Phase 2C- 2nd Floor Plan.dwg



1
A13

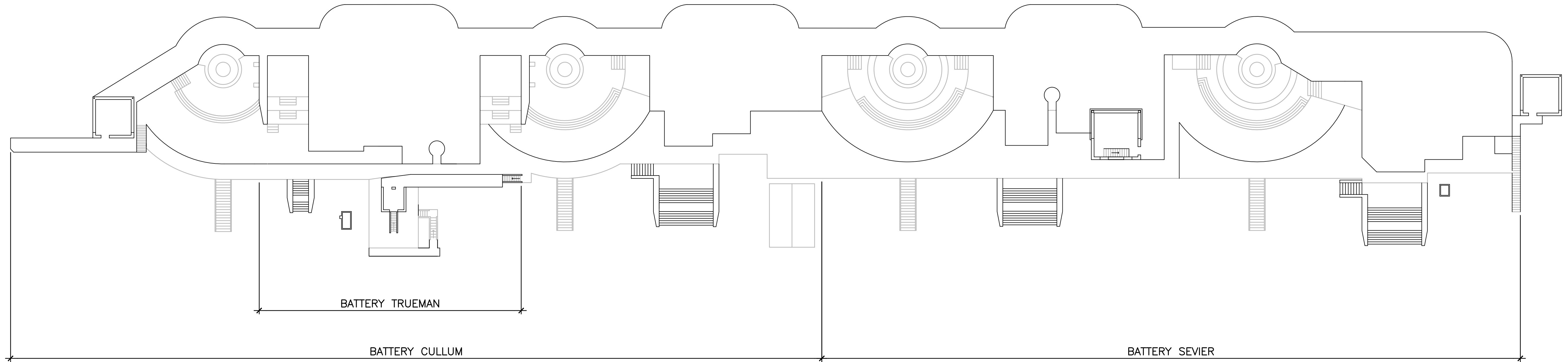
PHASE 2C - SECOND FLOOR PLAN



NOT FOR CONSTRUCTION

DESIGNED: DS/TMP	SUB SHEET NO. A13	TITLE OF SHEET PHASE 2C SECOND FLOOR PLAN Battery Cullum-Sevier Gulf Islands National Seashore Escambia County, Florida	DRAWING NO. _____
DRAWN: TC			PMIS/PKG NO. _____
TECH. REVIEW: LE			SHEET
DATE: 15 JULY 2019			16 OF 22

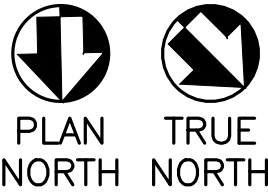
4/24/2019 - AUTOCAD 2014 - A14 Phase 2C- 3rd Floor Plan.dwg



NOTE: NO WORK ON THIRD
FLOOR AS PART OF PHASE 2C.

1
A14

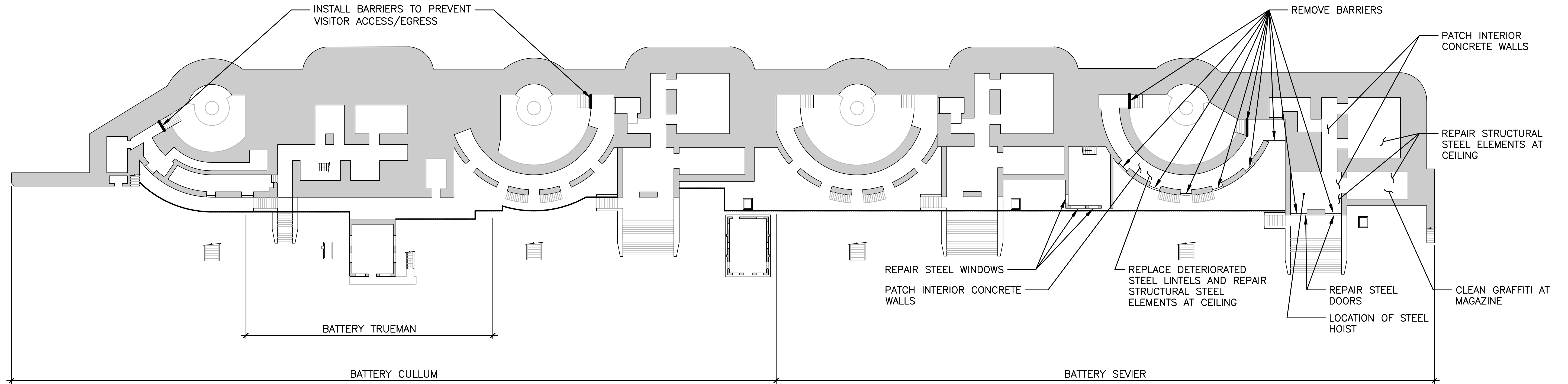
PHASE 2C - THIRD FLOOR PLAN



NOT FOR CONSTRUCTION

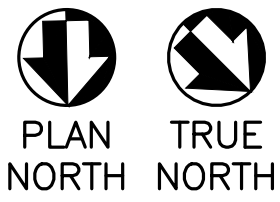
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DRAWN: TC			PMIS/PKG NO. _____
TECH. REVIEW: LE			SHEET 17 OF 22
DATE: 15 JULY 2019			

4/24/2019 - AUTOCAD 2014 - A15 Phase 3 - 1st Floor Plan.dwg



1
A15

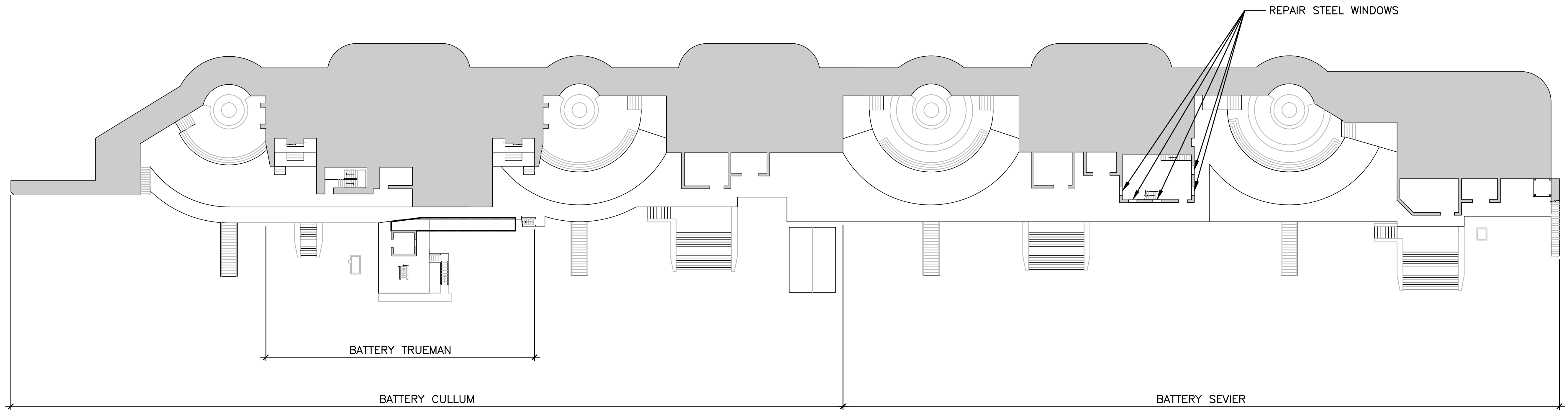
PHASE 3 - FIRST FLOOR PLAN



NOT FOR CONSTRUCTION

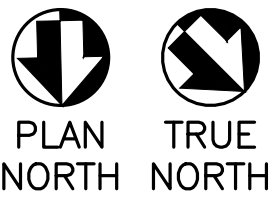
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TECH. REVIEW: LE			SHEET 18 OF 22
DATE: 15 JULY 2019			

4/24/2019 - AUTOCAD 2014 - A16 Phase 3- 2nd Floor Plan.dwg



1
A16

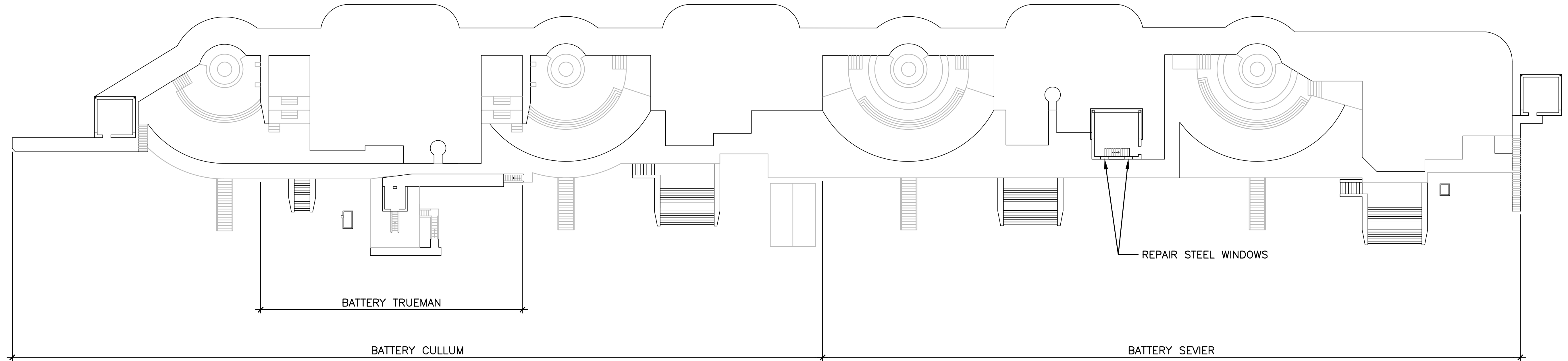
PHASE 3 - SECOND FLOOR PLAN



NOT FOR CONSTRUCTION

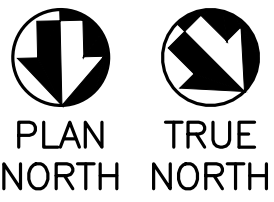
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DRAWN: TC			PMIS/PKG NO. _____
TECH. REVIEW: LE			SHEET 19 OF 22
DATE: 15 JULY 2019			

4/24/2019 - AUTOCAD 2014 - A17 Phase 3 - 3rd Floor Plan.dwg



1
A17

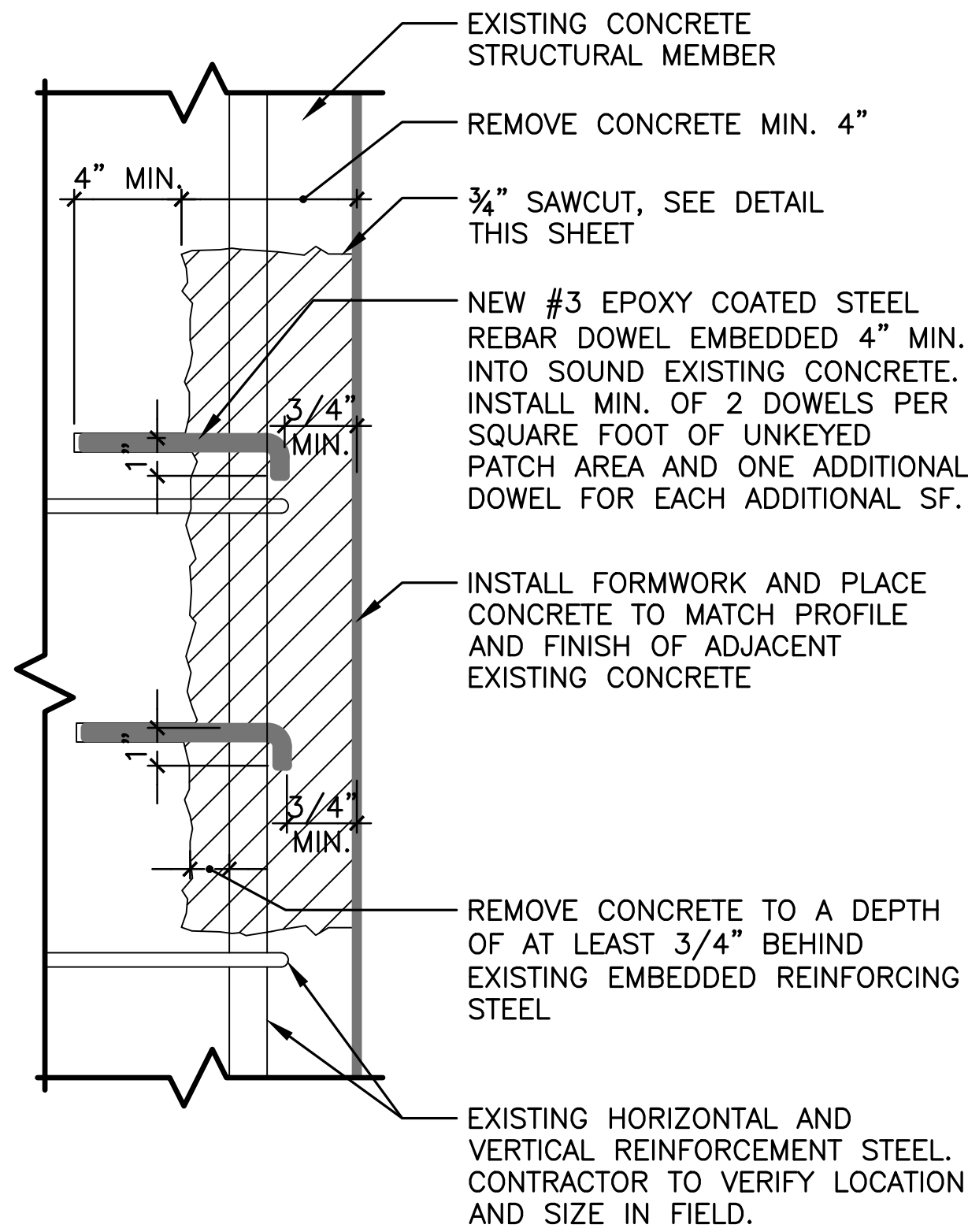
PHASE 3 - THIRD FLOOR PLAN



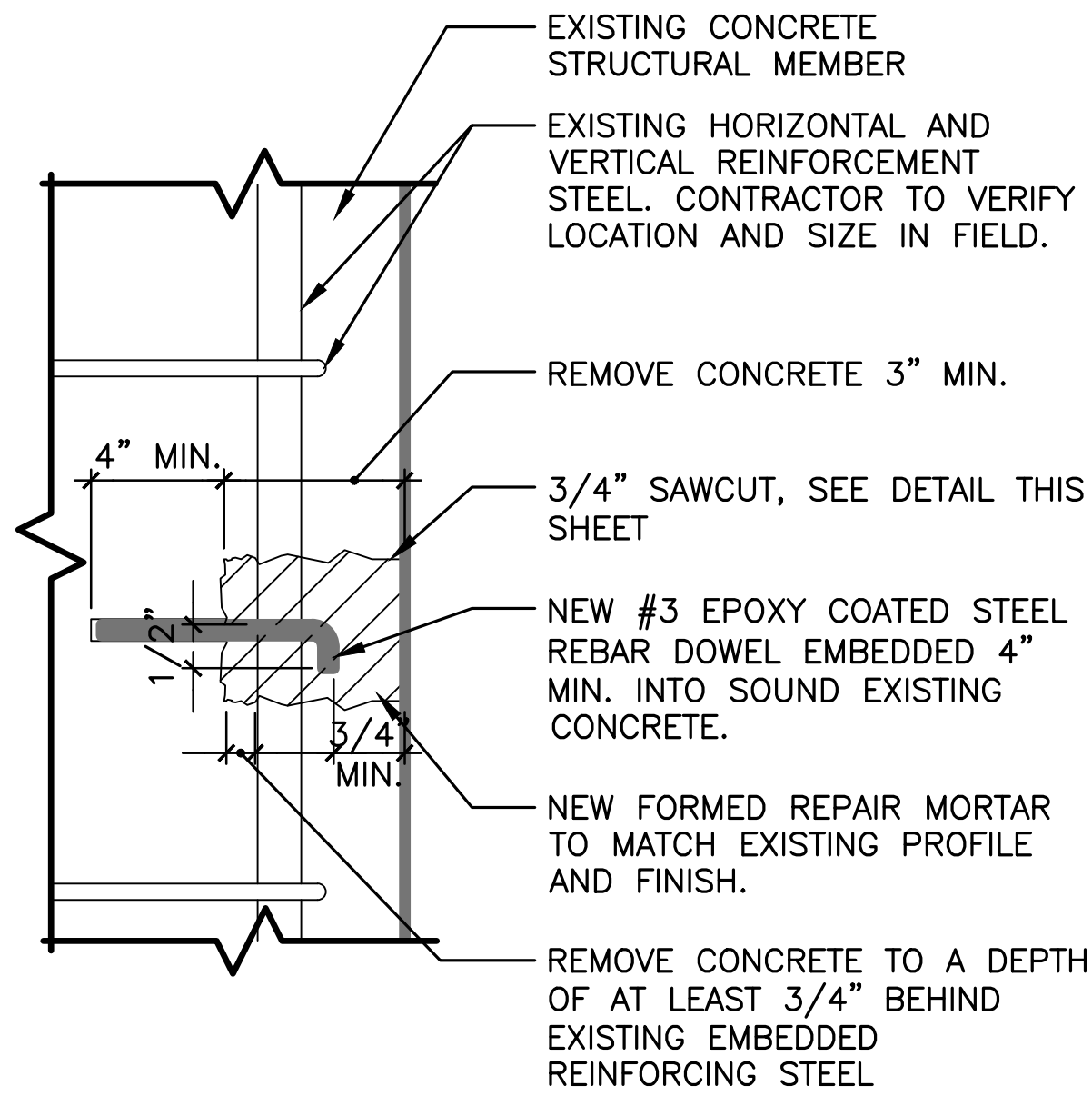
NOT FOR CONSTRUCTION

DESIGNED: DS/TMP	SUB SHEET NO. A17	TITLE OF SHEET PHASE 3 THIRD FLOOR PLAN Battery Cullum-Sevier Gulf Islands National Seashore Escambia County, Florida	DRAWING NO. _____
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TECH. REVIEW: LE			SHEET
DATE: 15 JULY 2019			20 OF 22

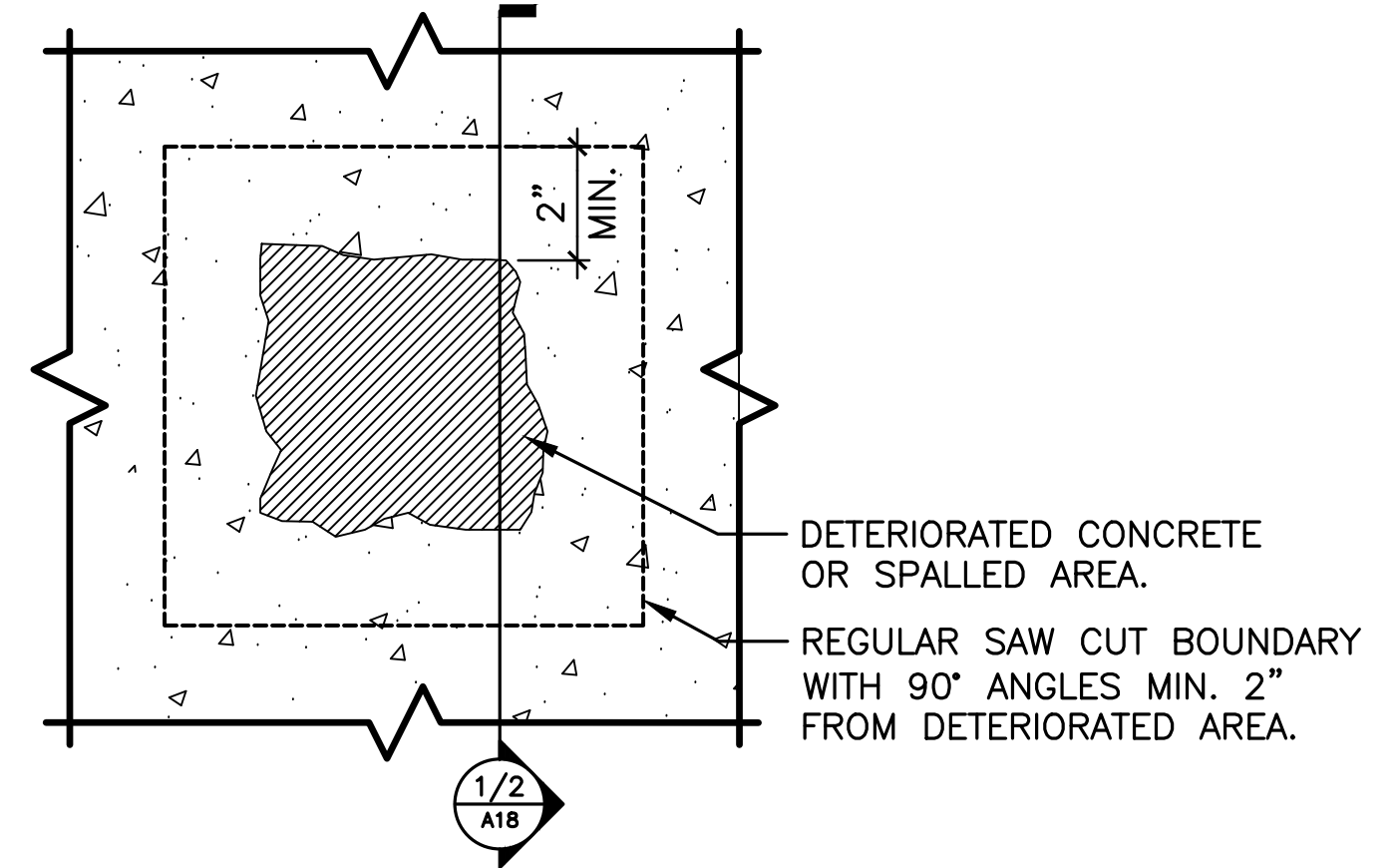
4/24/2019 - AUTOCAD 2014 - A18 Repair Details.dwg



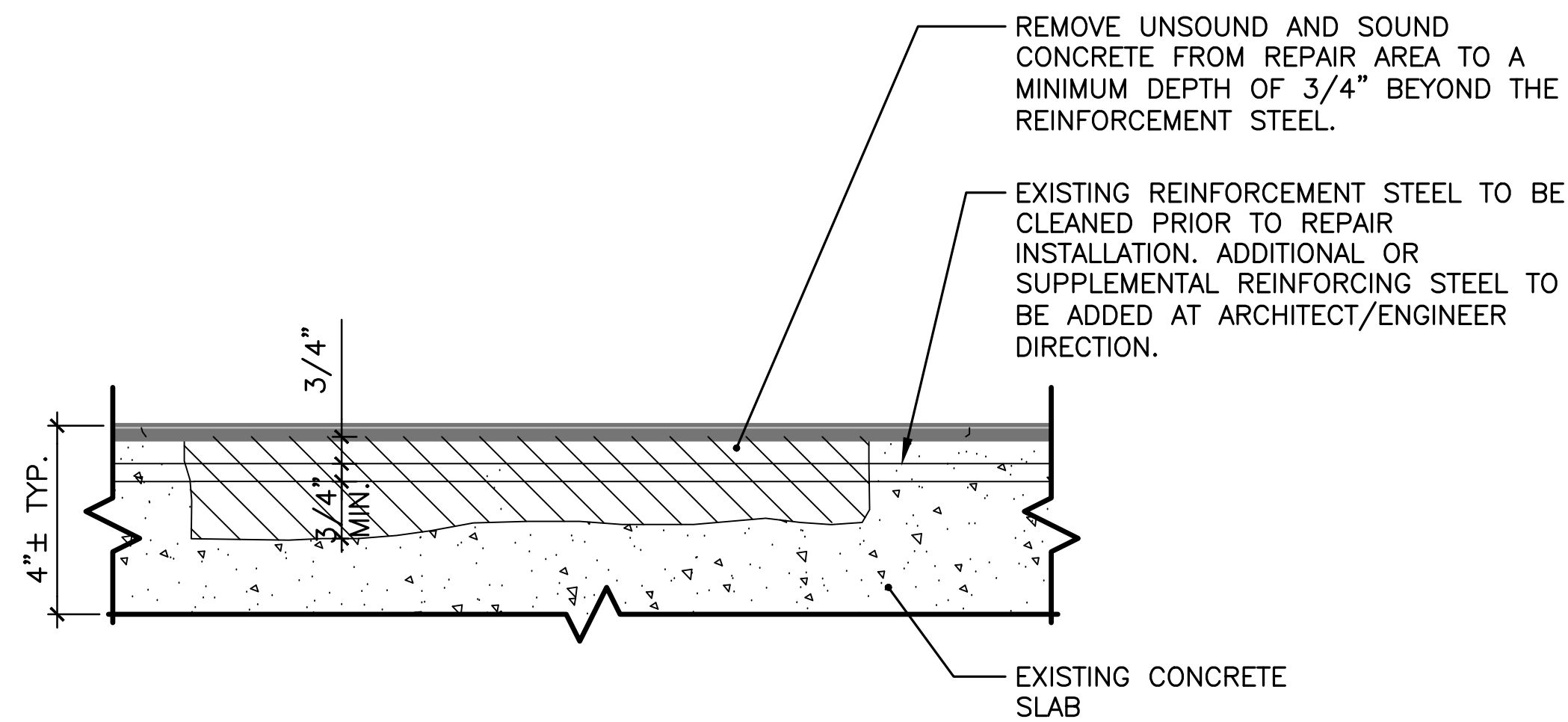
1 CONCRETE LARGE SPALL REPAIR
A18



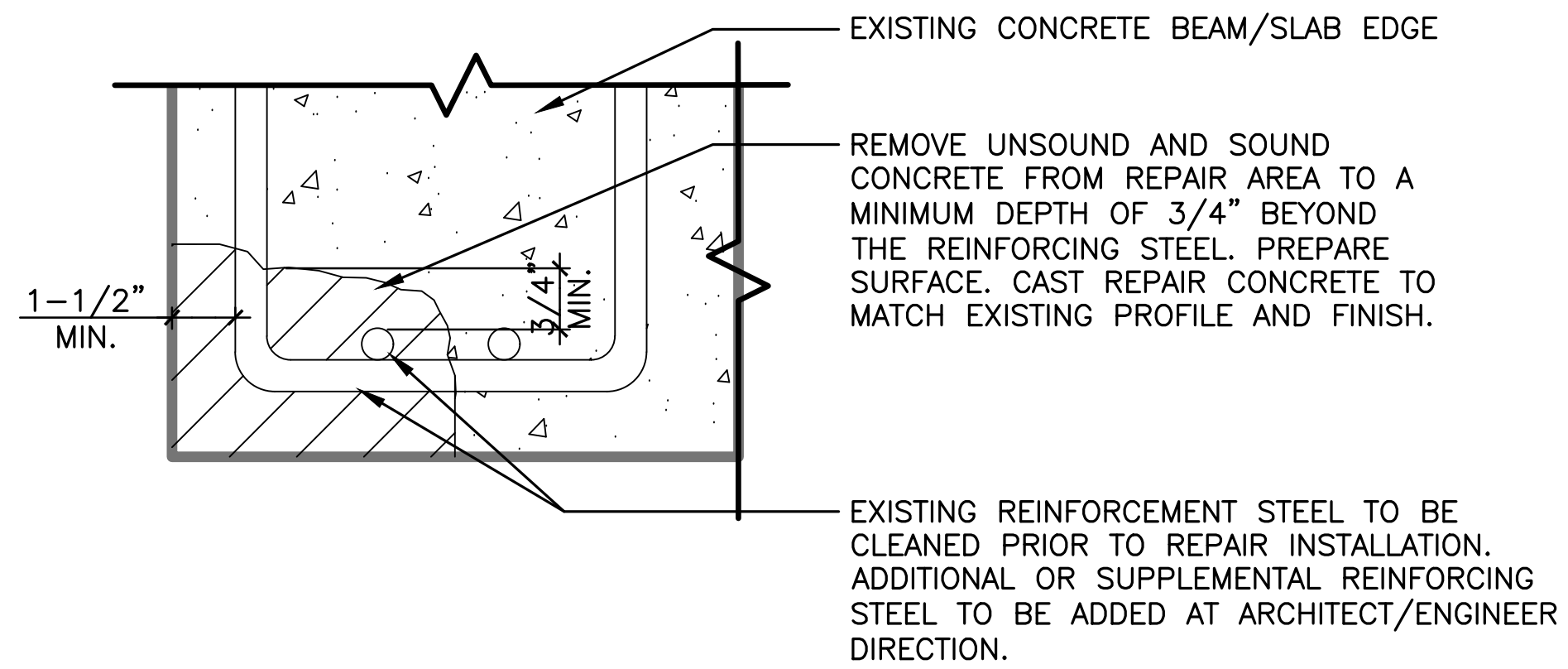
2 CONCRETE SMALL SPALL REPAIR
A18



3 TYPICAL SAWCUT PLAN
A18



4 STAIR AND RAMP SLAB REPAIR
A18

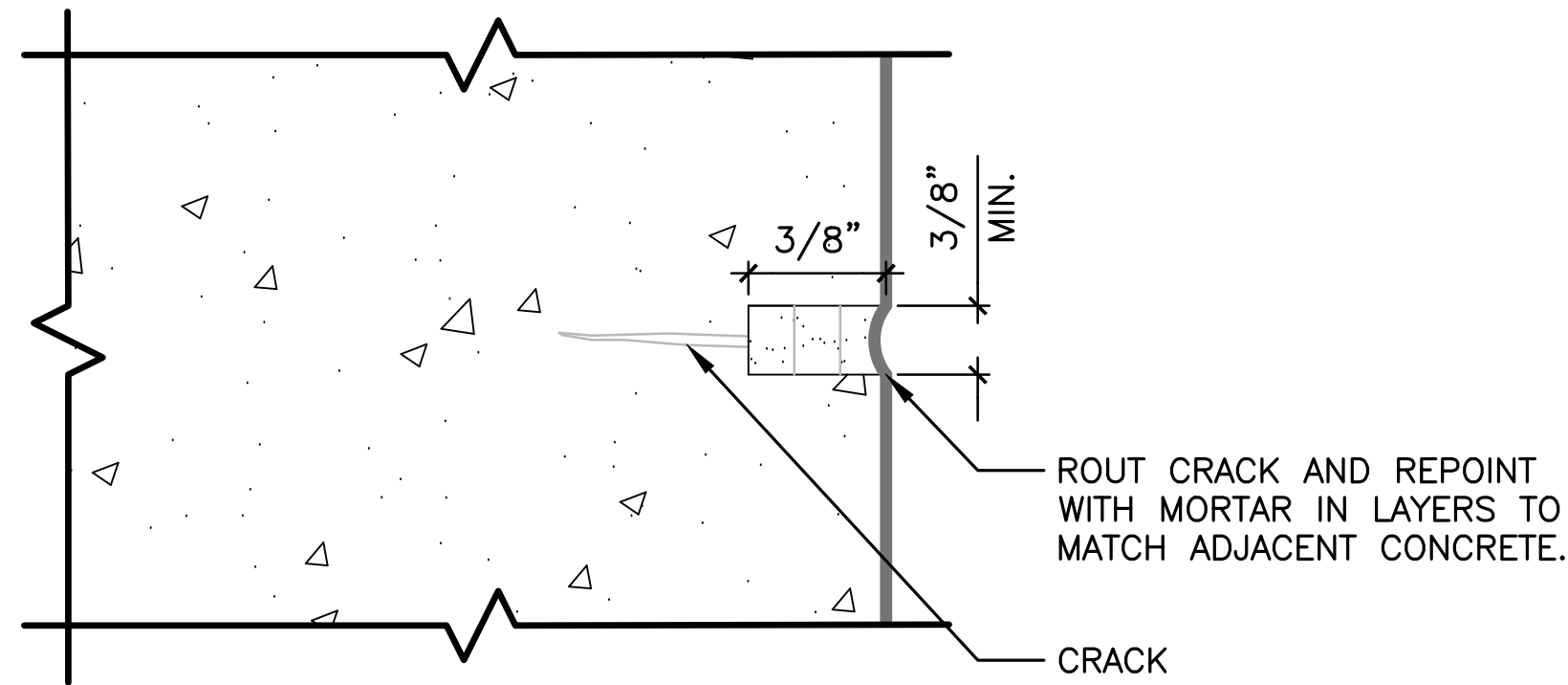


5 BEAM / SLAB EDGE REPAIR
A18

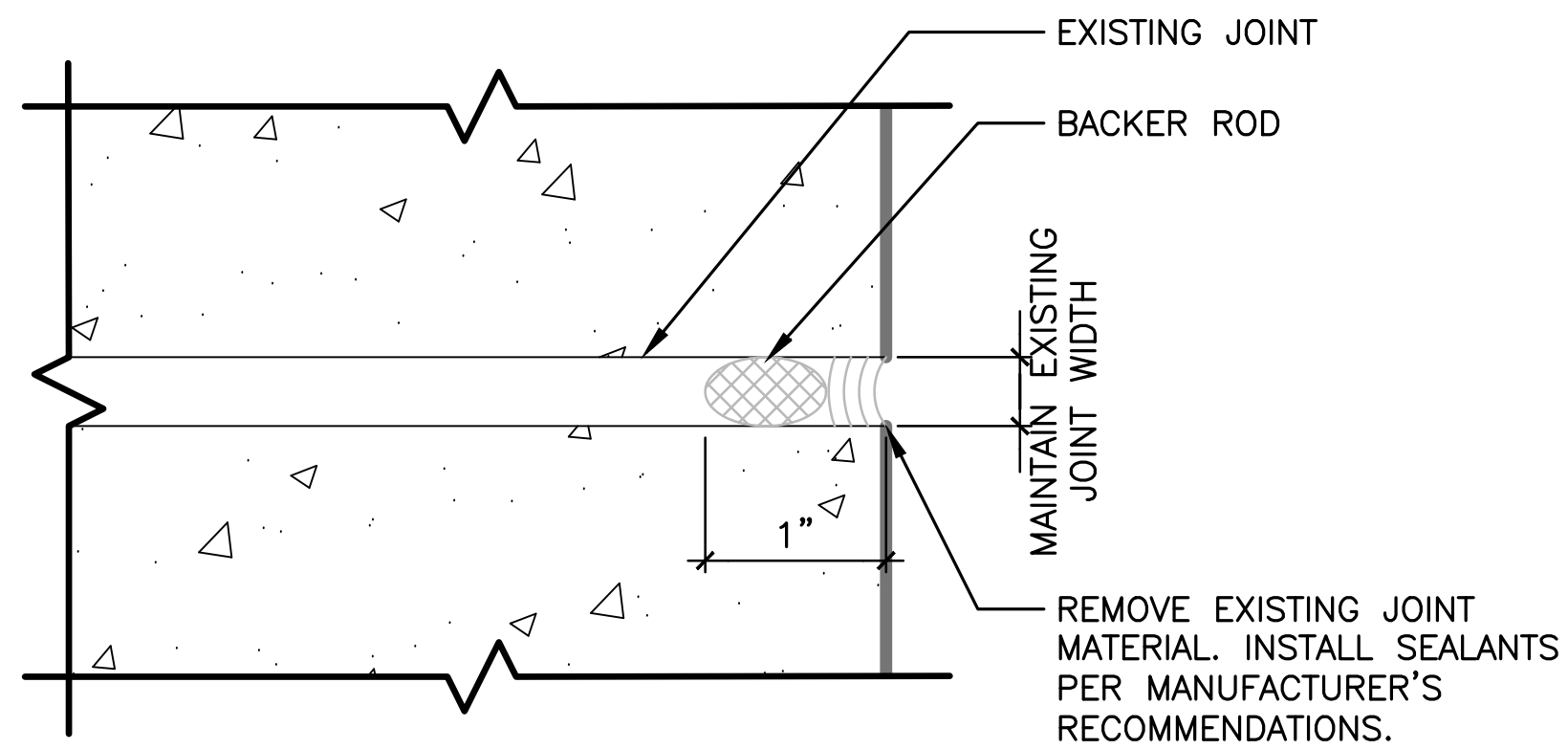
NOT FOR CONSTRUCTION

DESIGNED: DS/TMP	SUB SHEET NO. A18	TITLE OF SHEET REPAIR DETAILS	DRAWING NO. _____
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TECH. REVIEW: LE			SHEET 21 OF 22
DATE: 15 JULY 2019			

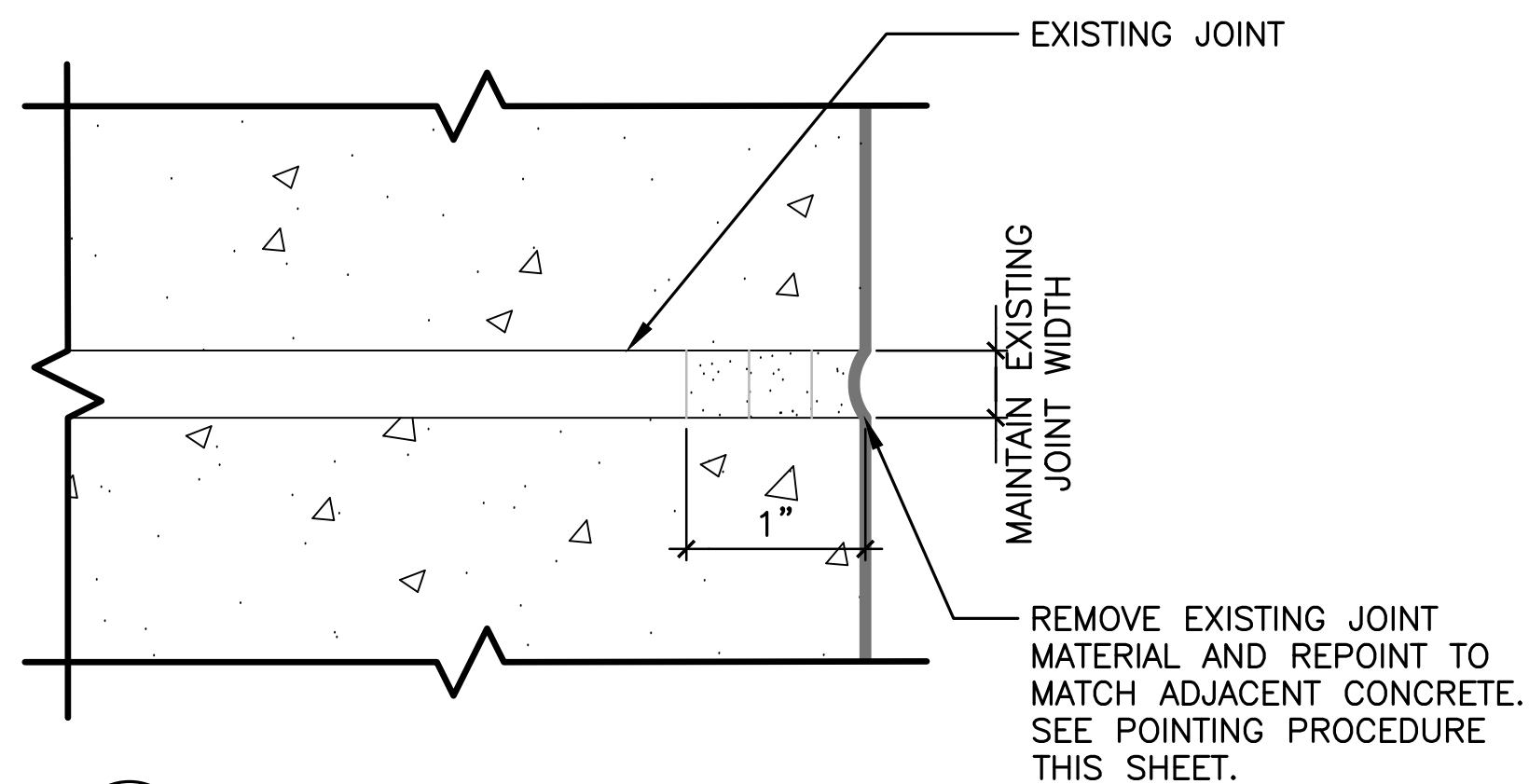
4/24/2019 - AUTOCAD 2014 - A19 Joint Repair Details.dwg



1
A19
CRACK REPAIR



2
A19
CONSTRUCTION JOINT REPAIR



3
A19
JOINT REPAIR

NOTE: CRACK AND JOINT REPAIRS TO BE IMPLEMENTED ONLY AT LOCATIONS DESIGNATED BY CONTRACTING OFFICER'S REPRESENTATIVE.

NOT FOR CONSTRUCTION

DESIGNED: DS/TMP	SUB SHEET NO. A19	TITLE OF SHEET CRACK AND JOINT REPAIR DETAILS Battery Cullum-Sevier Gulf Islands National Seashore Escambia County, Florida	DRAWING NO. _____
DRAWN: TC			PMIS/PKG NO. _____
TECH. REVIEW: LE			SHEET 22 OF 22
DATE: 15 JULY 2019			

APPENDIX B: CONCEPTUAL COST ESTIMATE

Battery Cullum-Sevier, Gulf Islands National Seashore
July 15, 2019

	DESCRIPTION	UNIT PRICE	UNIT OF MEASURE	QUANTITY	COST	COMMENTS
Scenario 2 - Phase 1						
	Remove vegetation on concrete structure	\$8.00	SF	3200	\$25,600.00	
	Remove incipient spalls and conduct isolated concrete repairs in areas to be opened to visitor access	\$200.00	SF	150	\$30,000.00	Assume 6 inch slab depth and typically areas of multiple SF
	Remove severely deteriorated/collapsed concrete at elevated walkways and storm hoods	\$50.00	SF	1300	\$65,000.00	
	Stabilize elevated walkways	\$250.00	SF	400	\$100,000.00	Assume stabilization with steel posts and beams under the elevated walks spaced 10 feet on center. The sidewalk would likely need to have the posts and beams on either side as opposed to down the center. 62 posts and 60 beams are anticipated. Note: extent of stabilization possible to be confirmed during schematic design.
	Stabilize the foundation of the observation room at the west end of Battery Sevier	\$100.00	LF	35	\$3,500.00	Assume concrete retaining wall at base of one side of the building measuring 5 feet tall and 20 feet wide by 7 feet long on return sides. The area under the structure would be filled with packed earth.
	Install barriers at selected locations to prevent visitor access beyond intended accessible area	\$70.00	LF	225	\$15,750.00	This would be a simple welded pipe and tube railing. An aluminum railing would be \$80 per LF and a wrought iron railing would be about \$100 per LF. A safety railing may be an option, as well as a stanchion with chain, depending on the level of barricade and whether it needs to meet codes as a guard.
	Remove existing fence at the perimeter of site	\$10.00	LF	1700	\$17,000.00	
	Install new fence closer to the structure	\$15.00	LF	500	\$7,500.00	This fence would be needed until Phase 2 is completed.
	Construction mobilization and general conditions (Approx 20%)	\$52,870.00	Per Project	1	\$52,870.00	
	Estimated Construction Cost			SUBTOTAL	\$317,220.00	
	Design and Development Fees (10%)				\$31,722.00	

	DESCRIPTION	UNIT PRICE	UNIT OF MEASURE	QUANTITY	COST	COMMENTS
	Profit and Overhead (10%)				\$31,722.00	
	Project Management Fees (10%)				\$31,722.00	
	Total Construction Cost				\$412,386.00	
	Construction Contingency (20%)				\$82,477.20	
	Total Phase 1 Budget				\$494,863.20	
Scenario 2 - Phase 2a						
	Stabilize elevated walkways	\$250.00	SF	900	\$225,000.00	Assume stabilization with steel posts and beams under the elevated walks and platforms spaced 10 feet on center. The sidewalk would likely need to have the posts and beams on either side as opposed to down the center. Platforms would have a grid of support columns. Note: extent of stabilization possible to be confirmed during schematic design.
	Install barriers at selected locations to prevent visitor access beyond intended accessible area	\$70.00	LF	85	\$5,950.00	
	Remove portion of fence installed in Phase 1	\$10.00	LF	220	\$2,200.00	
	Install new section of fence	\$15.00	LF	15	\$225.00	
	Construction mobilization and general conditions (Approx 20%)	\$46,630.00	Per Project	1	\$46,630.00	
	Estimated Construction Cost			SUBTOTAL	\$280,005.00	
	Design and Development Fees (10%)				\$28,000.50	
	Profit and Overhead (10%)				\$28,000.50	
	Project Management Fees (10%)				\$28,000.50	
	Total Construction Cost				\$364,006.50	
	Construction Contingency (20%)				\$72,801.30	
	Total Phase 2a Budget				\$436,807.80	
Scenario 2 - Phase 2b						
	Stabilize elevated walkways	\$250.00	SF	1000	\$250,000.00	Assume stabilization with steel posts and beams under the elevated walks and platforms spaced 10 feet on center. The sidewalk would likely need to have the posts and beams on either side as opposed to down the center. Platforms would have a grid of support columns. Note: extent of stabilization possible to be confirmed during schematic design.

	DESCRIPTION	UNIT PRICE	UNIT OF MEASURE	QUANTITY	COST	COMMENTS
	Install barriers at selected locations to prevent visitor access beyond intended accessible area	\$70.00	LF	85	\$5,950.00	
	Remove portion of fence installed in Phase 1 and Phase 2a	\$10.00	LF	90	\$900.00	
	Install new section of fence	\$15.00	LF	30	\$450.00	
	Construction mobilization and general conditions (Approx 20%)	\$51,370.00	Per Project	1	\$51,370.00	
	Estimated Construction Cost			SUBTOTAL	\$308,670.00	
	Design and Development Fees (10%)				\$30,867.00	
	Profit and Overhead (10%)				\$30,867.00	
	Project Management Fees (10%)				\$30,867.00	
	Total Construction Cost				\$401,271.00	
	Construction Contingency (20%)				\$80,254.20	
	Total Phase 2b Budget				\$481,525.20	
Scenario 2 - Phase 2c						
	Stabilize elevated walkways	\$250.00	SF	600	\$150,000.00	Assume stabilization with steel posts and beams under the elevated walks and platforms spaced 10 feet on center. The sidewalk would likely need to have the posts and beams on either side as opposed to down the center. Platforms would have a grid of support columns. Note: extent of stabilization possible to be confirmed during schematic design.
	Install barriers at selected locations to prevent visitor access beyond intended accessible area	\$70.00	LF	90	\$6,300.00	
	Remove remaing portion of fence installed in Phase 1 and Phase 2b	\$10.00	LF	235	\$2,350.00	
	Construction mobilization and general conditions (Approx 20%)	\$31,730.00	Per Project	1	\$31,730.00	
	Estimated Construction Cost			SUBTOTAL	\$190,380.00	
	Design and Development Fees (10%)				\$19,038.00	
	Profit and Overhead (10%)				\$19,038.00	
	Project Management Fees (10%)				\$19,038.00	
	Total Construction Cost				\$247,494.00	
	Construction Contingency (20%)				\$49,498.80	
	Total Phase 2c Budget				\$296,992.80	

	DESCRIPTION	UNIT PRICE	UNIT OF MEASURE	QUANTITY	COST	COMMENTS
Scenario 2 - Phase 3						
	Clean, prime, and paint exposed bottom flange of structural steel at the ceiling of interior spaces on the west end of Battery Sevier	\$35.00	SF	250	\$8,750.00	No repairs assumed
	Replace severely deteriorated fully exposed lintels at doors and perform concrete repairs	\$1,000.00	Units	5	\$5,000.00	
	Repair/restore steel window and door elements in areas to be made accessible	\$5,000.00	Door	18	\$90,000.00	
		\$6,500.00	Door with upper panels	4	\$26,000.00	
		\$8,500.00	Window	10	\$85,000.00	Assume each window is a set of six-light casements with lower panel of four fixed lights. Currently not operable. Cost is dependent upon level of restoration (e.g., are glass and hardware included, is window to be operable).
	Clean graffiti from interior spaces on the west end of Battery Sevier	\$5,000.00		1	\$5,000.00	
	Install barriers at elevated locations to prevent visitor access beyond intended accessible area	\$70.00	LF	90	\$6,300.00	
	Construction mobilization and general conditions (Approx 20%)	\$45,210.00	Per Project	1	\$45,210.00	
	Estimated Construction Cost			SUBTOTAL	\$271,260.00	
	Design and Development Fees (10%)				\$27,126.00	
	Profit and Overhead (10%)				\$27,126.00	
	Project Management Fees (10%)				\$27,126.00	
	Total Construction Cost				\$352,638.00	
	Construction Contingency (20%)				\$70,527.60	
	Total Phase 3 Budget				\$423,165.60	