DATE: September 16, 2025

DEPARTMENT OF GENERAL SERVICES
BUREAU OF CAPITAL PROJECT DESIGN MANAGEMENT
1800 HERR STREET
HARRISBURG, PENNSYLVANIA

ADDENDUM NO. 3

on

PROJECT NO. DGS C-0948-0087 PHASE 001
PROJECT TITLE - PA State Museum - Paver Repair/Replacement
PROFESSIONAL:
Chris Dawson Architect LLC
210 North 3rd Street, Suite C
Harrisburg, PA, 17101

If you submitted a bid prior to this Addendum being issued, your bid has been discarded and you must re-submit your bid(s) prior to the bid opening date and time.

ADMINISTRATIVE CHANGES – ALL CONTRACTS

Item 1 – **CLARIFICATION** - All four prime contracts are out to Bid, HVAC is a Low Bid, all others are a best Value award model.

Item 2 – **CLARIFICATION** - Deadline for submitting questions is Saturday September 27, 2025 (09/27/2025).

Item 3 – **CLARIFICATION** - If the existing topping slab is removed, the allowable live load on the structural slab can locally be increased in-kind in proportion to the amount of topping removed. For reference, the existing pavers and topping slab are approximately 80 psf of dead load.

Item 4 – **CLARIFICATION** – Proposers shall include the unit price schedule in the Cost Submittal Envelope.

SPECIFICATION CHANGES – ALL CONTRACTS

Item 1 – Section 221423, 3.1, H: **CLARIFICATION** - all drains are to be provided by the .3 (Plumbing) Contractor and installed by the .1 (General) Contractor. Layout would be by the .1 contractor. All core drilling and final connections will be by the .3 (Plumbing) Contractor.

Item 2 – Section 221413, 3.1, A: **CLARIFICATION** - the .3 (Plumbing) Contractor is responsible to meet the requirements for excavating, trenching, and backfilling specified in the Earth Moving specification section.

Item 3 – Section 019100: Paragraph 1.5.G.15, Paragraph 1.5.P.6, Paragraph 1.5.P.13 and Paragraph 3.3.C: **REMOVE** references to spec section 080800

Item 4 – Section 019100 1.2: **CLARIFICATION** - Commissioning will be completed by the Department's commissioning agent, CxGBS. Contractors shall coordinate with the commissioning agent as required.

Item 5 – Appendix B: **ADD** C-0948-0087 Probe Report to provide additional insight for contractors

Item 6 – Section 078413 2.1,1: **CLARIFICATION** – Performance of penetration firestopping system tests by a qualified testing agency acceptable to authorities having jurisdiction, is the responsibility of the prime contractor who created the penetration.

Item 7 - Section 071413 2.1, A, 4: **REVISE** to "Carlisle Companies Inc., Henry a Carlisle Company; Henry 790-11"

DRAWING CHANGES – ALL CONTRACTS

Item 1 – Sheet C-102: **CLARIFICATION** – per sheet P-805, all existing plaza surface drains, including but not limited to trench drains, to be removed and replaced by .3 (Plumbing) Contractor.

Item 2 – Sheet C-104 Note: **REVISE** to remove the word “EXISTING”. The note will read “CONNECT UNDERDRAIN TO DRAINS WITH SOLID PVC PIPE (TYP. OF 8 LOCATIONS)”

Item 3 – **CLARIFICATION** - Existing topping slab thickness varies; Maximum known thickness of existing topping slab is ~8” and is sloped for drainage.

Item 4 – **CLARIFICATION** - Existing waterproofing membrane to be removed is documented as asphaltic based on the exploratory demolition.

Item 5 – Sheet CS2 Note 6: **DELETE** from documents. Per General Conditions to the Construction Contract, Prime Contractors shall not obtain building permits. Labor & Industry (L&I) has already reviewed and issued the building permit for the project.

Item 6 – Sheet CS2 Note 8: **DELETE** from documents.

Item 7 – Sheets C-107 & C-701: **REVISE**, Base Bid Callouts, refer to updated sheets C-107 & C-701

Item 8 – Sheet AD101: **REVISE** Elevation Tag in northeast corner from referencing 4 / AD204 & 6 / AD204 to reference 3 / AD202 & 4 / AD202

Item 9 – Sheet AD101 & following Demo Sheets Demo Note Key D2.4: **REVISE** 2nd sentence to read: “REMOVE RIGID INSULATION, AND SLOPED CONCRETE TOPPING SLAB”

Item 10 – Sheets ED101 & E101: **REVISE** to show 4 light fixtures that are also shown on 2 / AD 201, & 2 / A20. All 4 Existing light fixtures to be removed and reinstalled by .4 (Electrical) Contractor

Item 11 – A101: **CLARIFICATION** - .2 (HVAC) contractor to be responsible for Merv 8 filters referenced on sheet A101

Item 12 – A201, A202, & A203 Proposed Elevation Key: **REVISE** “Replaced Stone” to “Reinstalled Stone”

Item 13 – Sheets CS3 & CS4: **REVISE** 17-part construction sequence, into 4-part construction sequence.

Item 14 – Sheets CS3 & CS4: **REVISE** Sequencing Note 11, .1 (General) Contractor shall coordinate any closure of the Keystone Building egress pathways during construction with the BOC and Client Agency. A path from C to D, or B to A to be maintained at all times during construction. Disruptions to Keystone building egress pathways to be kept to a minimum. Area A is now located at North St. Stairs.

Item 15 – Sheet AD101 & following Demo Sheets Demo Note Key D12.1 & D12.2: **DELETE**, Items to be removed by Client Agency and not to be included in Bidding.

Item 16 – Sheet AD101 & following Demo Sheets Demo Note Key D4.3A: **ADD** sentence to note "IF BLOCK OR SUPPPORT IS UNSALVAGABLE, CONTACT ARCHITECT AND ENGINEER FOR REVIEW AND REPAIR SPECIFICATIONS."

Item 17 – Sheet A501: detail 1 Note: **REVISE** to remove the words "OR PROVIDE NEW"

Item 18 – Sheet AD101 & following Demo Sheets General Demo Notes: **REMOVE** Note 7, Note 7 is "NOT USED"

Item 19 – Sheet S002 Section IX Miscellaneous Note J: **CLARIFICATION** - is intended to remind the Owner that maintenance is required throughout the lifespan of the facility. It is not intended that the contractor bid this item.

Item 20 – Sheet A504 Detail 4: **REVISE** waterproofing membrane location

Item 21 – Sheet AD101 & following Demo Sheets General Demolition Note 2: **DELETE** from drawings

Item 22 – Sheet A115 Partition types: **ADD** new construction is to match existing, CMU sizes and stud wall constructions and finishes to be verified in field.

Item 23 – Sheets P-405 & P409: **REVISE** plan to show division of work between .1 (General) Contractor, and .3 (Plumbing) Contractor

SECTION 01 91 00 - COMMISSIONING REQUIREMENTS

PART 1 – GENERAL

1.1 RELATED SECTIONS

A. Section 07 08 00 – Commissioning of Thermal and Moisture Protection

B. Section 08 08 00 – Commissioning of Openings and Fenestration Systems

C. Section 22 08 00 – Commissioning of Plumbing Systems

D. Section 23 08 00 – Commissioning of HVAC Systems

E. Section 26 08 00 – Commissioning of Electrical Systems

1.2 DESCRIPTION

A. Commissioning: Commissioning is a systematic quality assurance process that checks and documents that commissioned systems are in accordance with the Owner's objectives, criteria, and high level goals.

B. The commissioning process does not take away from or reduce the responsibility of the designers or installing contractors to provide a finished and fully functioning product.

C. Abbreviations: The following are common abbreviations used in the CxP Specifications and in the Commissioning Plan. Selected definitions are found in 1.2 of this Section.

Note: The letter "C" at the end of any abbreviation denotes the word, "Contractor"

Abbreviation	**Subject**	**Abbreviation**	**Subject**
A/E	Architect/Engineer (Design Professional Team)	CxP	Commissioning Provider
948-87.1 GC	948-87.1 General Contractor	948-87.4 EC	948-87.4 Electrical Contractor
948-87.2 MC	948-87.2 Mechanical Contractor	948-87.3 PC	948-87.3 Plumbing Contractor
TABC	Testing and Balancing Contractor	C/IC	Controls and Instrumentation Contractor
CWC	Curtain Wall Contractor	D/WC	Door and Window Contractor
DPC	Dampproofing Contractor	FSMC	Flashing and Sheet Metal Contractor
GLC	Glazing Contractor	MDC	Metal Decking Contractor
RFC	Roofing Contractor	SC	Sealant Contractor
Const-CK	Construction Check List	CxP-PM	Commissioning Provider Project Manager
HVAC	Heating, Ventilation and Air Conditioning	O&M	Operations & Maintenance
O-REP	Owners Representative	TP	Test Procedure
948-87.1 GC-SUPER	948-87.1 General Contractor's Field Superintendent	948-87.1 GC-PM	948-87.1 General Contractors Project Manager
OPR	Owner's Project Requirements (and Performance Requirements)	ESSC	Electronic Safety and Security Contractor
COC	Communications Contractor		

D. Systems to be commissioned are listed in Section 019100, Part 1.06, Para. A.

E. Commissioning requires the participation of the project team as defined in this Section 019100, Part 1.3, Para. A, to ensure that the selected systems are operating in a manner consistent with the Contract Documents. The general commissioning requirements and coordination are detailed in this Section 019100. The project team shall be familiar with Section 019100 and the Commissioning Plan issued by the CxP and shall execute commissioning responsibilities assigned to them in the Contract Documents.

1.3 DEFINITIONS

Acceptance: A formal action, taken by a person with appropriate authority (which may or may not be contractually defined) to declare that some aspect of the project meets defined requirements, thus permitting subsequent activities to proceed.
Acceptance Phase: Phase of construction after startup and initial checkout when commissioning tests, O&M documentation review, and training occurs.
Approval: Acceptance that a piece of equipment or system has been properly installed and is functioning in the tested modes according to the contract documents.
Architect / Engineer (A/E): (Design Professional Team) One or a multiple of professional firms that provide the design disciplines required for the execution of this project.
Basis of Design (BOD): A document that records the concepts, calculations, decisions, and product selections used to meet the Owner's Project Requirements and to satisfy applicable regulatory requirements, standards, and guidelines. The document includes both narrative descriptions and lists of individual items that support the design process.
Building Enclosure: The building enclosure includes systems separating one defined environment from another, including walls, fenestration, roofing and roof openings, floors and or ceilings, below grade perimeter walls, crawlspaces and attics from the interior, slabs-on-grade and below grade perimeter walls and interior walls and floor/ceiling assemblies separating interior zones with differing performance criteria.
Building Project: a task with the objective of delivering a base building or a building shell that must be fitted-up before it is suitable for occupancy
Commissioning (Cx): See Commissioning Process.
Commissioning Provider (CxP): An entity identified by the Owner who leads, plans, schedules, and coordinates the commissioning team to implement the Commissioning Process.
Commissioning Construction Checklist (Const-CK): Verification checklists that are developed and used during all phases of the commissioning process to verify that the Owner's Project Requirements are being achieved. This includes checklists for general verification, plus testing, training, and other specific requirements.
Commissioning Plan (CxPlan): A document that outlines the organization, schedule, allocation of resources, and documentation requirements of the Commissioning Process.
Commissioning Process: A quality-focused process for enhancing the delivery of a project. The process focuses upon verifying and documenting that the facility and all of its systems and assemblies are planned, designed, installed, tested, operated, and maintained to meet the Owner's Project Requirements.
Commissioning Process Activities: Components of the Commissioning Process
Commissioning Process Progress Report: A written document that details activities completed as part of the Commissioning Process and significant findings from those activities, and is continuously updated during the course of a project. Usually incorporated into the Commissioning Plan as an ongoing appendix.
Commissioning Process Report: A document that records the activities and results of the Commissioning Process. Usually developed from the final Commissioning Plan with all of its attached appendices.
Commissioning Team: The individuals who through coordinated actions are responsible for implementing the Commissioning Process.
Commissioning Test – Active Test: Execution of an active test forces the system or assembly from one operating state to another through operator interaction. The test description includes the definition of a starting state and an expected response state. The test description also includes the operator interaction required to force the system into the expected state and the type of monitoring and data recording required.
Commissioning Test – Passive Test: Execution of a passive test records the starting state or if necessary, places the system or assembly into a pre-defined starting state and monitors the occurrence of response states over a passage of time without operator interaction. The test description includes the record of a starting state, expected response states and describes the amount of time required to elapse before test completion, as well as the type of monitoring and data recording required. During execution of the test, the actual response states are recorded.
Construction Checklist: A form used by the contractor to verify that appropriate components are on-site, ready for installation, correctly installed, and functional.
Construction Documents (CD): This includes a wide range of documents, which will vary from project to project and with the Owner's needs and with regulations, laws, and countries requirements. Construction documents usually include the project manual (specifications), plans (drawings) and General Terms and Conditions of the contract.
Construction Manager: A professional service firm hired by an Owner to proactively advise, assist and manage a construction project with an emphasis on meeting goals and objectives, contracts, schedule, budget, scope, quality and documentation. Use of a Construction Manager is an Owners option and is not required. A Construction Manager may be designated as the Owner's Representative. The scope of a Construction Manager's services and responsibilities shall be clearly defined within the contract documents.

Contract Documents: This includes a wide range of documents, which will vary from project to project and with the Owner's needs, regulations, laws, and countries requirements. Contract Documents frequently include price agreements, construction management process, subcontractor agreements or requirements, requirements and procedures for submittals, changes, and other construction requirements, timeline for completion, and the Construction Documents.
Contractor: see General Contractor
Coordination Drawings: Drawings showing the work of all trades to illustrate that equipment can be installed in the space allocated without compromising equipment function or access for maintenance and replacement. These drawings graphically illustrate and dimension manufacturers' recommended maintenance clearances.
Deficiency: A condition in the installation or function of a component, assembly, piece of equipment or system that is not in compliance with the Contract Documents (that is, does not perform properly or is not complying with the design intent).
Design Authority: a prime consultant, usually an architect, responsible for the quality of the design solution to the owner's requirements.
Design Professional Team: One or a multiple of professional firms that provide the design disciplines required for the execution of this project. Typically this team will consist of an Architectural Firm, Engineering Firm/s offering the required disciplines related to the building process, plus other professionals and consultants as required to satisfy the requirements of the project.
Designer: a member of the project team involved in the finding of design solutions to the owner's requirements and the preparation of construction and O&M documents during the conceptual design, construction documents (design), construction, commissioning, and operational stages of the project delivery.
Equipment: A manufactured component used in the project. (Equipment, Systems and Assemblies) Used throughout this document to indicate building components made up of multiple parts.
Facility Guide: A basic building systems description and operating plan with general procedures and confirmed facility operating conditions, set points, schedules, and operating procedures for use by facility operations to properly operate the facility.
Factory Testing: Testing of equipment on-site or at the factory by factory personnel with an O-REP present.
General Contractor (948-87.1 GC): The prime contractor for this project.
Indirect Indicators: Indicators of a response or condition, such as a reading from a control system screen reporting a damper to be 100% closed.
Issues Log: A formal and ongoing record of problems or concerns – and their resolution – that have been raised by members of the Commissioning Team during the course of the Commissioning Process.
Manual Test: Using hand-held instruments, immediate control system readouts or direct observation to observe and verify performance (contrasted to analyzing monitored data taken over time to make the "observation").
Monitoring: The recording of parameters (flow, current, status, pressure, etc.) of equipment operation using data-loggers or the trending capabilities of control systems.
Non-Compliance: See Deficiency.
Non-Conformance: See Deficiency.
On-Going Commissioning Process: A continuation of the Commissioning Process well into the Occupancy and Operations phase to continually improve the operation and performance of a facility to meet current and evolving Current Facility Requirements or Owner's Project Requirements. On-Going Commissioning Process activities occur throughout the life of the facility; some of these will be close to continuous in implementation, and others will be either scheduled or un-scheduled as needed.
Over-written Value: Writing over a sensor value in the control system to see the response of a system (e.g., changing the outside air temperature value from 01°F to 75°F to observe economizer operation). See also Simulated Signal.
Owner: a person or legal entity that will own the delivered facility or an agent representing the owner, who defines the project requirements.
Owner-Contracted Tests: Tests specified by the Architect and paid for by the Owner outside the Construction Contract, which the CxP does not oversee (e.g. Concrete Testing, Weld Testing). These tests will not be repeated during commissioning tests if properly documented.
Owners Project Requirements (OPR): A written document that details the functional requirements of a project and the expectations of how it will be used and operated. This includes project goals, measurable performance criteria, cost considerations, benchmarks, success criteria, and supporting information. (The term Project Intent or Design Intent is used by some owners for their Commissioning Process Owner's Project Requirements.)
Owners Representative (O-REP): Title assigned to the individual having the authorized responsibility for day to day management of the project. Use of an O-REP is an Owners option and is not required. An O-

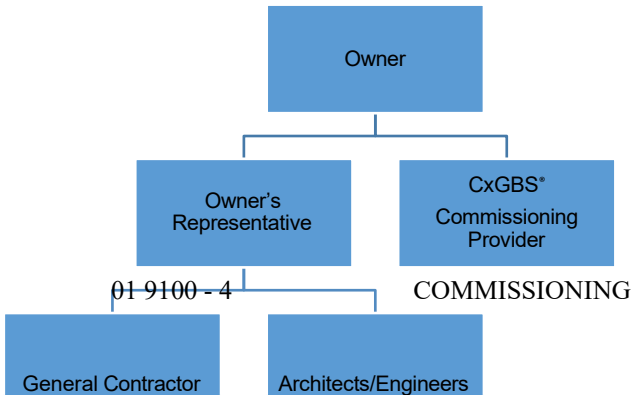
REP may be a trained individual assigned the task or the employee of the Owner. The scope of O-REPs services and responsibilities shall be clearly defined within the contract documents.
Performance Criteria: Indicators that allow verification that a specific Owner Requirement or element in the Design Narrative or Design Basis has been met.
Performance Test (PT or FPT): Performance Testing is the process of verifying that a material, product, assembly or system meets defined performance criteria. The methods and conditions under which performance is verified are described in one or more test protocols.
Performance Test Protocol: A Performance Test Protocol is a written collection of tests that, when executed in the test process, allow verification of the performance of a system or assembly.
Phased Commissioning: Commissioning that is completed in phases (by floors, for example) due to the size of the structure or other scheduling issues, in order minimize the total construction time.
Preliminary Operating Manual: an elaboration of the design intent that includes operating information developed during the construction documents (design) stage.
Project Delivery Stages: the following stages in the development of a project marking the delivery of a distinct product: planning, conceptual design, construction document preparation, construction, commissioning, operation, and evaluation.
Sampling: Commissioning testing only a fraction of the total number of identical or near identical pieces of equipment, systems and assemblies. Refer to Part 3.03 for details.
Specifications: The Contract Document that complement the Drawings and provide detailed written instructions and standards pertaining to procedures, materials, methods, equipment and construction of this project.
Static Elements: Systems or assemblies that are static in nature (not dynamic like mechanical or electrical systems such as windows, enclosure or roofs) may have very simplified construction checklists for installation and have no start-up requirements.
Systems: Building components and equipment (architectural, mechanical, plumbing, electric, etc.), when installed as designed, perform in unity to serve a unique function.
Systems Manual: A system-focused composite document that includes the operation manual, maintenance manual, and additional information of use to the Owner during the Occupancy and Operations Phase.
Test Procedures: A written protocol that defines methods, personnel, and expectations for tests conducted on components, equipment, assemblies, systems, and interfaces among systems.
Test Requirements: Requirements specifying what modes and functions, etc. shall be tested. The test requirements are not the detailed test procedures. The test requirements are specified in the Contract Documents (Sections 230800 and 260800).
Training Plan: A written document that details the expectations, schedule, budget, and deliverables of Commissioning Process activities related to training of project operating and maintenance personnel, users, and occupants.
Vendor: Supplier of equipment and/or products and materials.
Warranty Period: Warranty period for entire project, including equipment components. Warranty begins at Substantial Completion and extends for at least one year, unless specifically noted otherwise in the Contract Documents and accepted submittals.

1.3 COORDINATION

A. Commissioning Team: The members of the commissioning team consist of the CxP, the Owner and/or the Owners Representative, the 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors, the Design Professionals, the MECHC, the ELECC, the TABC, the Control Contractor, and any other installing subcontractors or suppliers of equipment, systems and assemblies. Also, if known, the Plant Operations building operators are members of the commissioning team.

B. Management: The CxP works for the Owner. The CxP directs and coordinates the project commissioning activities and reports to the Owner and/or the O-REP. Team members work together to fulfill their contracted responsibilities and meet the objectives of the contract documents.

The following organization chart clarifies the roles.



C. Scheduling: The 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors will work with the CxP, Owner and/or the O-REP, according to established protocols, to schedule the commissioning activities. The Contractor will provide sufficient notice to the Owner and/or O- REP and CxP for scheduling commissioning activities. The 1.1GC will integrate commissioning activities into the master schedule. Affected parties will address scheduling problems and make necessary notifications in a timely manner in order to expedite the commissioning process.

1.4 COMMISSIONING PROCESS

A. Commissioning Process: The following narrative provides a brief overview of the typical commissioning tasks during construction and the general order in which they occur.

1. Contractor and any applicable subs necessary to commission systems listed in Para. 1.6 of this document, shall attend a Commissioning Kickoff and Scoping meeting conducted by the CxP where the commissioning process is reviewed with the commissioning team members.
2. Additional Commissioning meetings, with necessary parties attending, will be required throughout construction, scheduled by Contractor as deemed necessary by CxP, to plan, scope, coordinate, schedule future activities and resolve identified issues. Typically these meetings will be either before or after the regular process meetings.
3. Equipment submittals shall include manufacturer or contractor developed start-up procedures, if there is no provided manufacturer start up procedure, to the CxP through the normal submittal process along with shop drawings, equipment cut sheets, and associated manufacturer technical specifications.
4. Const-CK's are updated at the end of each week by 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors for review by the CxP during site visits.
5. The Const-CKs and start-up procedures constitute a start-up plan which is submitted to the CxP one week prior to scheduled start-up for approval. 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors will not continue forward with equipment start-up without the approved start-up plan. 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors, under their own direction, shall fully document the equipment start-up procedure utilizing the start-up plan. The CxP may randomly witness the 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors execution of the start-up plan.
6. Completed Const-CKs (including signatures) and equipment start-up checklists shall be provided to CxP for review at least 72 hours prior to requesting CxP witnessing of tests.
7. Testing procedures developed by CxP are executed by the 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors, under the direction of and documented by the CxP.
8. Items of non-compliance in equipment and systems installation and operation are corrected at the contractors' expense and re-tested. The cost of retesting any item that fails to meet the specification requirements as demonstrated through commissioning testing may be withheld from the 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors by the Owner.
9. Deferred testing is conducted as specified or required.
10. The CxP reviews the O&M documentation for completeness after the designer has approved the submittal and prior to turnover to the owner.
11. The CxP reviews and approves the training agenda to be provided by the 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors and documents training.

1.5 RESPONSIBILITIES

A. The responsibilities of select parties in the commissioning process are summarized in the following articles of this Section 1.05 Responsibilities.

B. The 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors are not responsible for providing the services of the Engineer, Designer and CxP. Their responsibilities are listed here to clarify the commissioning process. Responsibilities of 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors have been broken up by discipline to increase clarity only and are not intended to specify the

manner which 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors shall follow to meet these requirements.

C. The responsibilities of the Designer, Engineer and CxP shown here are not intended to alter their contractual responsibilities to the Owner. These responsibilities have been established by separate contracts of the said parties with the Owner. Their responsibilities are listed here only to clarify the commissioning process.

D. All Participating Parties

1. Follow the Commissioning Plan.
2. Attend commissioning scoping meeting and additional meetings, as necessary.

E. Architect (of A/E)

Construction and Acceptance Phase

1. Does not manage the CxP's contract; said contract managed directly by owner.
2. Attend and participate in the Commissioning Kickoff and Scoping meetings and selected commissioning team meetings.
3. Perform normal submittal review, construction observation, as-built drawing preparation, O&M manual, etc., as contracted.
4. Coordinate resolution of issues identified during the (2) two Design Reviews (DD and CD phases of the drawings and specifications) in according with the contract documents.
5. Coordinate resolution of system deficiencies identified during commissioning, according to the contract documents.
6. Prepare and submit record drawings and documentation for inclusion in the O&M manuals. Review and accept the O&M manuals.

Warranty Period

1. Coordinate resolution of design non-conformance and design deficiencies identified during warranty-period commissioning.

F. Mechanical and Electrical Designers/Engineers (of the A/E)

Construction and Acceptance Phase

1. Perform normal submittal review, construction observation, as-built drawing preparation, etc., as contracted with Owner. Conduct one site observation just prior to system start-up.
2. Provide design narrative and sequence of operation documentation requested by the CxP. The designers shall assist (along with the contractors) in clarifying the operation and control of commissioned equipment in areas where the Specifications, control drawings or equipment documentation is not sufficient for writing detailed testing procedures.
3. Attend commissioning kickoff and scoping meetings and other selected commissioning team meetings as contracted with the Owner.
4. Participate in the resolution of system deficiencies identified during commissioning, according to the contract documents.
5. Coordinate resolution of issues identified during the (2) two Design Reviews (DD and CD phases of the drawings and specifications) in according with the contract documents.
6. Prepare and submit record drawings and documentation for inclusion in the O&M manuals. Review and accept the O&M manuals.
7. Provide a presentation in accordance with Section 017900 at the final training session for the Owner's personnel. The final training will discuss the overall/general functions of mechanical and electrical systems. The session will also be structured to address specific topics that trainees need to discuss and to answer questions concerning operation of system.
8. Review the Const-CK (equipment or system specific checklist's prepared by CxP) for major pieces of equipment for sufficiency prior to their use.
9. Review the test procedure forms for major pieces of equipment for sufficiency prior to their use.
10. Final single line drawings for the water and air side of the entire HVAC system. Drawings should contain location of all dampers, coils, fans, sensors, etc. Drawings should be provided to CxP for review at same time as O&M Manuals (thirty (30) days prior to initial training).

Warranty Period

1. Participate in the resolution of non-compliance, non-conformance and design deficiencies identified during construction on warranty-period through the commissioning process.

G. Commissioning Provider (CxP): The CxP is not responsible for design concept, design criteria, compliance with codes, design or general construction scheduling, cost estimating, or construction management. The CxP may assist with problem-solving, non-conformance or deficiencies, but ultimately that responsibility resides with the 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors, and the A/E. The primary role of the CxP is to develop and coordinate the execution of a commissioning testing plan, observe and document performance that systems are functioning in accordance with the documented Owner's Project Requirements and Performance Criteria and in accordance with the Contract Documents. The contractors will provide all tools or the use of tools to start, access equipment, check-out and performance test equipment and systems, except for specified testing with portable data-loggers, which shall be supplied and installed by the CxP.

Construction and Acceptance Phase

1. Coordinates and directs the commissioning activities in a logical, sequential and efficient manner using consistent protocols and forms, centralized documentation, clear and regular communications and consultations with the necessary parties, frequently updated timelines and schedules and technical expertise.
2. Coordinate the commissioning work and, with the 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors and Owner and/or O-REP, ensure that commissioning activities are being scheduled into the master schedule.
3. Revise, as necessary, Commissioning Plan – Construction Phase.
4. Plan and conduct a Commissioning Kickoff and Scoping meetings.
5. Request and review additional information required to perform commissioning tasks, including O&M materials, contractor start-up and checkout procedures. Before start-up review current control sequences and interlocks and work with contractors and design engineers until sufficient clarity has been obtained, in writing, to be able to write detailed testing procedures.
6. Develop the format for, and coordinate the completion of the emergency power and fire alarm response matrix as defined in this section.
7. Review normal contractor submittals applicable to equipment, systems and assemblies being commissioned concurrent with the A/E reviews for compliance with commissioning, O & M needs, and coordination issues.
8. Write and distribute construction checklists (Const-CK) for commissioned equipment and components of the building envelope.
9. Reviews the enhanced start-up and initial systems checkout plan developed for selected equipment by the contractors.
10. Perform site visits, as necessary, to observe equipment, component and systems and assembly installations. Attend selected planning and job-site meetings to obtain information on construction progress. Review construction meeting minutes for revisions/substitutions relating to the commissioning process. Assist in resolving discrepancies.
11. Document construction checklist completion by reviewing completed construction checklists and by selected site observation.
12. Witness the HVAC piping test and flushing procedure, sufficient to be confident that proper procedures were followed. Document this testing and include the documentation in O&M manuals. Notify Owner and/or the O-REP of any deficiencies in results or procedures.
13. Witness ductwork testing and cleaning procedures, sufficient to be confident that proper procedures were followed. Document this testing and include the documentation in O&M manuals. Notify Owner and/or the O-REP of any deficiencies in results or procedures.
14. Witness project specific building envelope testing. Document this testing and circulate the results. Notify Owner and/or the O-REP's project manager and the 948-87.1 GC of any deficiencies in results or procedures. Reference Sections 070800.
15. Document systems start-up by reviewing start-up reports and by selected site observation.
16. Write commissioning test procedures for equipment and systems. This will include manual testing, energy management control system trending and may include stand-alone data-logger monitoring. The CxP will write detailed test procedures for commissioned equipment, systems and assemblies, and submit to O-REP, contractors' and A/E for review and approval unless noted otherwise in the specifications.
17. Review TAB execution plan.
18. Witness sufficient commissioning testing of the control system to verify it may be used for TAB, before TAB is executed.
19. Verify air and water systems balancing by spot testing, by reviewing completed reports and by selected site observation.
20. Analyze performance trend logs and monitoring data to verify performance.

21. Coordinate through 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors, and Owner and/or the O-REP, witness and verify manual PTs performed by installing Contractors. Coordinate re-testing as necessary until satisfactory performances achieved.
22. Maintain a master deficiency and resolution log (Issues Log) and a separate testing record. Provide the O-REP and A/E with written progress reports and test results with recommended actions.
23. Review equipment warranties to ensure that the Owner's responsibilities are clearly defined.
24. Oversee and verify the training of the Owner's operating personnel.
25. Compile and maintain a Commissioning Record and Building Systems book(s).
26. Review and verify the preparation of the O&M manuals.
27. Provide a Final Commissioning Report.

Warranty Period

1. Coordinate and supervise required seasonal or deferred testing and deficiency corrections.
2. Return to the site at 10 months into the 12-month warranty period and review with facility staff the current building operation and the condition of outstanding issues related to the original and seasonal commissioning. Also interview facility staff and identify problems or concerns they have operating the building as originally intended. Make suggestions for improvements and for recording these changes in the O&M manuals. Identify areas that may come under warranty or under the original construction contract. Assist facility staff in developing reports, documents and requests for services to remedy outstanding problems.

H. Owner and/or the O-REP

Construction and Acceptance Phase

1. Facilitate the coordination of the commissioning work by the CxP, and with the 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors, and CxP, ensure that commissioning activities are being scheduled into the master schedule.
2. Review and Accept and/or Reject the final Commissioning Plan – Construction Phase.
3. Attend a Commissioning Kickoff and Scoping meetings and other commissioning team meetings.
4. Perform the normal review of contractor submittals.
5. Authorize the GC to furnish a copy of all construction documents, addenda, change orders, approved submittals, shop drawings, etc. related to the project to the CxP.
6. Review and accept and/or reject the test procedures submitted by the CxP, prior to commissioning testing.
7. When necessary, observe and witness Const-CK, start-up and Commissioning Testing of selected equipment.
8. Review commissioning progress and deficiency reports.
9. Coordinate the resolution of non-compliance and design deficiencies identified in all phases of commissioning.
10. Sign-off (final approval) on individual commissioning tests as completed and passing.
11. Assist the 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors in coordinating the training of Owner personnel.
12. Manage the contract of the A/E and of the 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors.

Warranty Period

1. Assist the CxP as necessary in the seasonal or deferred testing and deficiency corrections required by the Specifications.

I. Contractor – 948-87.1 General

Construction and Acceptance Phase

1. Facilitate the coordination of the commissioning work by the CxP with the Subs to ensure that commissioning activities are scheduled per project scheduling requirements and updated in the project specifications.
2. Include the cost of commissioning incurred by the Contractor in the contract price.
3. Forward completed Const-CKs to CxP weekly or monthly as specified.
4. In each purchase order or subcontract written, include requirements for submittal data, O&M data, commissioning tasks and training.
5. Ensure that Subcontractors and equipment or material suppliers execute their commissioning responsibilities according to the bidding documents and schedule.

6. Schedule and attend a Commissioning Kickoff and Scoping meeting and other necessary meetings requested by the CxP to facilitate the commissioning process.
7. Assemble and maintain a digital consolidated set of all project drawings and specifications in PDF form. The consolidated set shall be updated and kept current within 7 days of the contractor receiving revisions from the Architect/Engineer. The consolidated set shall include the original project construction documents as a reference, and the revised sections shall be crossed out and new information added to make the consolidated set. The 948-87.1 GC shall provide a copy of this consolidated set to the CxP within 72 hours of a request.
8. Address current punch list items before scheduling commissioning testing.
9. Verify completion of Const-CK and Coordinate test schedule with CxP and required contractors.
10. Provide skilled technicians to execute starting of equipment and execution of commissioning tests. Ensure that required personnel are available and present, during the agreed-upon schedule, and to complete test procedure adjustments and problem solving unidentified issues. Correct deficiencies (differences between specified and observed performance) as interpreted by the CxP, Designer and Engineer and retest the equipment as necessary.
11. Prepare red-line as-built drawings that properly identify field conditions from contractor-generated coordination drawings.
12. Provide and coordinate training of the Owner's operating personnel as specified and outlined in the Section 017900 and the Commissioning Plan.
13. Provide a complete summary of manufacturers to determine requirements to maintain the validity of the materials, equipment, system and warranty.
14. Prepare O&M manuals, according to the bidding documents, including clarifying and updating the original sequences of operation to as-built conditions and sent to CxP for review thirty (30) days prior to initial training.
15. Provide additional requested documentation, prior to normal O&M manual submittals, as outlined in Para. 1.07 of this section.
16. Contractor shall provide CxP with fall protection (safety harness) as necessary for CxP site observations. Each CxP on site shall receive fall protection.

Warranty Period

1. Ensure seasonal, post occupancy and deferred testing (if required) is executed and witnessed by the CxP, according to the Project Manual.
2. Ensure that deficiencies are corrected and necessary adjustments made to O&M manuals and as-built drawings for applicable issues identified in any seasonal or deferred testing.

J. Contractor – 948-87.2 Mechanical, 948-87.3 Plumbing, Controls, and HVAC Test & Balance

Construction and Acceptance Phases

1. Contractor shall assist (along with the Designer) in clarifying the operation and control of commissioned equipment in areas where the Specifications, control drawings or equipment documentation is not sufficient for writing detailed testing procedures.
2. Provide limited assistance to the CxP in preparing the Test Procedures as specified in Sections 230800 and 220800. Contractor shall review test procedures to ensure feasibility, safety and equipment protection and provide necessary written alarm limits to be used during the tests.
3. Develop a full start-up and initial checkout plan using manufacturer's start-up procedures and the Const-CK from the CxP for commissioned equipment. Submit to CxP for review and approval prior to start-up. Refer to Section 019100 3.02 for further details on start-up plan preparation.
4. Perform and clearly document the start-up and system operational checkout procedures, providing a completed copy to the CxP.
5. Air and water TAB shall be completed with discrepancies and problems remedied before commissioning testing of the respective air- or water-related systems.

K. Contractor – 948-87.2 Mechanical: The responsibilities of the Contractor, during construction and acceptance phases in addition to those listed in F. above are:

1. Assist and cooperate with Testing and Balancing and CxP by:
   a. Putting all HVAC equipment and systems into operation and continuing the operation during each working day of TAB and commissioning, as required.
   b. Including cost of sheaves and belts changes that may be required by TAB.
   c. Providing test holes in ducts and plenums where directed by TAB to allow air measurements and air balancing. Provide an approved plug.
   d. Providing temperature and pressure taps according to the Construction Documents for TAB and commissioning testing.

2. Install a Pressure/Temperature (P/T) plug within 12” of water sensors that are input points to the control system.
3. List and clearly identify on the as-built drawings and system manual drawings the locations of air-flow stations.
4. Prepare a preliminary schedule for Divisions 22 and 23 pipe and duct system testing, flushing and cleaning, equipment start-up for use by the CxP. Update the schedule as appropriate.
5. Notify the CxP when pipe and duct system testing, flushing, cleaning, start-up of each piece of equipment. Notify the CxP, ahead of time, when commissioning activities not yet performed or not yet scheduled will delay construction. Be proactive in seeing that commissioning processes are executed and that the CxP has the scheduling information needed to efficiently execute the commissioning process.

L. Contractor - 948-87.2 Controls and Instrumentation: The commissioning responsibilities of the Contractor, during construction and acceptance phases in addition to those listed in F above are:

1. Sequences of Operation Submittals: The Contractor’s submittals of control drawings shall include complete detailed sequences of operation for each piece of equipment, regardless of the completeness and clarity of the sequences in the Specifications. They shall include:

    a. An overview narrative of the system (1 or 2 paragraphs) generally describing its purpose, components and function.
    b. Interactions and interlocks with other systems.
    c. Written sequences of control for packaged controlled equipment. (Equipment manufacturers’ stock sequences may be included, but will generally require additional narrative).
    d. Start-up sequences.
    e. Warm-up mode sequences.
    f. Normal operating mode sequences.
    g. Unoccupied mode sequences.
    h. Shutdown sequences.
    i. Capacity control sequences and equipment staging.
    j. Temperature and pressure control: setbacks, setups, resets, etc.
    k. Detailed sequences for all control strategies, e.g., economizer control, optimum start/stop, staging, optimization, demand limiting, etc.
    l. Effects of power or equipment failure with standby component functions.
    m. Schedules of alarms and trigger setpoints.
    n. Emergency shutdown procedures.
    o. Schedule of original setpoints, parameters, and other control settings or fixed values, delays, etc. that will be useful during testing of equipment.
    p. Seasonal operational differences and recommendations.
    q. Schedule of final setpoints and parameters that are typically set or adjusted by operating staff; and any other control settings or fixed values, delays, etc. that will be useful during operation of the equipment.
    r. To facilitate referencing in testing procedures, sequences shall be written in small statements, each with a number for reference. For a given system, numbers will not repeat for different sequence sections, unless the sections are numbered or provide ladder logic diagrams illustrating the control programming.

2. Control Drawings Submittal

    a. The control drawings shall have a key to all abbreviations.
    b. The control drawings shall contain graphic schematic depictions of the systems and each component.
    c. The schematics will include the system and component layout of any equipment that the control system monitors, enables or controls, even if the equipment is primarily controlled by packaged or integral controls.
    d. Provide a full points list with at least the following included for each point:

        1) Controlled system
        2) Point abbreviation/label
        3) Point description - DB temp, airflow, etc.
        4) Display unit

5) Control or set point - point that controls equipment and can have its setpoint changed (OSA, SAT, etc.)
6) Monitoring point - Point that does not control or contribute to the control of equipment, but is used for operation, maintenance, or performance verification.
7) Intermediate point - point whose value is used to make a calculation which then controls equipment (space temperatures that are averaged to a virtual point to control reset).
8) Calculated point - virtual point generated from calculations of other point values. The Contractor shall keep the CxP informed of all changes to this list during programming and setup.

3. An updated as-built version of the control drawings and sequences of operation shall be included in the final controls O&M manual submittal and a copy furnished to the CxP.
4. Assist and cooperate with the CxP in the following manner:

   a. Using a skilled technician who is familiar with this building, execute the testing of the controls system as specified for Contractor in Sections 230800, 220800, and 260800. Assist in the testing of equipment specified in Sections 230800, 220800, and 260800.
   b. Execute control system trend logs specified in Sections 230800 and 220800.

5. Prior to functional testing of the controls system, furnish electronic copies of the controls programming language, completed floor plan graphics, and completed equipment graphic to the CxP and DP for review and approval.
6. The Contractor shall prepare a written plan, indicating in a step-by-step manner, the procedures that will be followed to verify the control system. At minimum, the plan shall include for each type of equipment controlled by the automatic controls:

   a. System name
   b. List of devices
   c. Step-by-step procedures for testing each controller after installation, including:

      1) Process of checking proper hardware and wiring installation.
      2) Process of downloading programs to local controllers and checking that they are addressed correctly.
      3) Process of performing operational checks of each controlled component.
      4) Plan and process for calibrating valve and damper actuators and all sensors.
      5) A description of the expected field adjustments for transmitters, controllers and control actuators which can be used in the event that control responses fall outside of expected values.

7. Provide a signed and dated certification to the CxP upon completion of the checkout of each controlled device, equipment and system prior to testing for each piece of equipment or system, that system programming is complete as to respects of the Bidding Documents, except testing requirements.
8. Beyond the control points necessary to execute documented control sequences, provide monitoring, control and virtual points as specified.
9. List and clearly identify on the as-built duct and piping drawings the locations of static and differential pressure sensors (air, water and building pressure).
10. Provide fittings, operations, and connections necessary for testing CO_2, CO, VOC, particulate, etc. sensors installed as part of the building automation system. CxP will provide test gas as appropriate for each sensor.

M. Contractor – 948-87.2 Testing, Adjusting & Balancing (TAB): The duties of the Contractor, in addition to those listed in F & G above are:

1. Submit the outline of the TAB plan and approach for each system and component to the CxP six (6) weeks prior to starting the TAB. This plan will be developed after the Contractor has some familiarity with the control system and general construction schedule.
2. The submitted plan will include:

   a. Certification that the Contractor has reviewed the construction documents and the systems with the design engineers and contractors to sufficiently understand the design intent for each system.

b. An explanation of the intended use of the building control system. The Contractor will comment on feasibility of the plan.
c. Field checkout sheets and logs to be used that list each piece of equipment to be tested, adjusted and balanced with the data cells to be gathered for each.
d. Discussion of what notations and markings will be made on the installed duct and piping and their associated drawings during the process.
e. Final test report forms to be used.
f. Detailed step-by-step procedures for TAB work for each system and issue: terminal flow calibration (for each terminal type), diffuser proportioning, branch / sub-main proportioning, total flow calculations, rechecking, diversity issues, expected problems and solutions, etc. Criteria for using air flow straighteners or relocating flow stations and sensors will be discussed. Provide the analogous explanations for the water side.
g. List of all air flow, water flow, sound level, electrical data, system capacity and efficiency measurements to be performed and a description of specific test procedures, parameters, formulas to be used.
h. Details of how *total* flow will be determined (Air: sum of terminal flows via BAS calibrated readings or via hood readings of terminals, supply (SA) and return air (RA) pitot traverse, SA or RA flow stations. Water: pump curves, circuit setter, flow station, ultrasonic, etc.).
i. The identification and types of measurement instruments to be used, their serial numbers and most recent calibration date.
j. Specific procedures that will ensure that both air and water side are operating at the lowest possible pressures and methods that will be used to check this.
k. Confirmation that TAB understands the outside air ventilation criteria under all conditions.
l. Details of how minimum outside air cfm will be verified and set and minimum/maximum setpoints with summation of the difference between exhaust and make-up air at minimum OSA setpoints(total building, zone, etc.).
m. Details of how building static and exhaust fan / relief damper capacity will be checked.
n. Proposed selection points for sound measurements and sound measurement methods.
o. Details of methods for making any specified coil or other system plant capacity measurements.
p. Details of any TAB work to be done in phases (by floor, etc.) or of areas to be built out later.
q. Details regarding specified deferred or seasonal TAB work.
r. Details of all exhaust fan balancing and capacity verifications, including any required room pressure differentials.

3. A running log of events and issues shall be kept by the Contractor. Submit hand-written reports of discrepancies, deficient or uncompleted work by others at completion of each week to the CxP.
4. Communicate, in writing to the Contractor and CxP, all set point and parameter changes made or problems and discrepancies identified during TAB which affect the control system setup and operation.
5. Provide a draft TAB report within two weeks of completion to CxP with a copy to the Engineer. The report will contain a full explanation of the methodology, assumptions and the results in a clear format with designations of uncommon abbreviations and column headings. The report should follow the latest and most rigorous reporting recommendations by AABC, NEBB or ASHRAE Standard 111.
6. Provide the CxP and Engineer with any requested data gathered, but not shown on the draft reports.
7. Provide a final TAB report to the CxP and the Engineer with details, as in the draft.
8. Conduct Tests and checks as necessary to demonstrate the accuracy of the report to the CxP as specified for TAB in Sections 230800 and 220800.

N. Contractor – 948-87.4 Electrical, Communications, Electronic Safety and Security: The commissioning responsibilities applicable to the Contractor for electrical systems are as follows *(all references apply to commissioned equipment only)*:

Construction and Acceptance Phases

1. Contractor shall assist (along with the design engineers) in clarifying the operation and control of commissioned equipment in areas where the Specifications, control drawings or equipment documentation are not sufficient for writing detailed testing procedures.
2. The contractor shall review test procedures to ensure feasibility, safety and equipment protection and provide necessary written alarm limits to be used during the tests.
3. Perform and clearly document completed start-up and system operational checkout procedures, providing a copy to the CxP for review.

O. Material Suppliers

1. Provide all requested submittal data, including detailed start-up procedures and specific responsibilities of the Owner to keep warranties in force.
2. Assist in equipment testing per agreements with Subcontractors.
3. Include all special tools and instruments (only available from vendor, specific to a piece of equipment) required for testing equipment according to these bidding documents in the base bid price to the contractor, except for stand-alone data-logging equipment that may be used by the CxP.
4. Provide information requested by CxP regarding equipment sequence of operation and testing procedures.
5. Review test procedures for equipment installed by factory representatives.
6. Provide and assist contractors in training of owner's operating personnel in accordance with Section 017900.

P. Contractors – 948-87.1 Building Envelope: The commissioning responsibilities applicable to the Contractor for building envelope systems are as follows:

Construction and Acceptance Phases

1. Attend a Commissioning Kickoff and Scoping meeting and other meetings necessary to facilitate the commissioning process.
2. Contractors shall provide the CxP with normal cut sheets and shop drawing submittals of commissioned components and composite assemblies.
3. Provide additional requested documentation, prior to completion of mock-up assemblies, to the CxP for finalizing commissioning testing procedures.

    a. Typically, this will include detailed manufacturer installation instructions, testing laboratory certifications/reports, maintenance procedures, full details of any Owner-contracted tests, full factory testing reports, and full warranty information, including responsibilities of the Owner to keep the warranty in force clearly identified. In addition, the installation materials that are actually shipped with the building envelope exterior wall components and the actual field checkout sheet forms to be used by the factory or field technicians shall be submitted to the CxP.
    b. The CxP may request further documentation necessary for the commissioning process.
    c. This data request may be made prior to normal submittals.

4. Provide a copy of the submittals of commissioned building envelope components, through normal channels, to the CxP for review and comment. Provide sufficient O&M data necessary to understand, operate, and maintain the system and/or assemblies and to inform those not involved in the design and construction process about the systems and assemblies. O&M data shall be provided in accordance with Section 017800.
5. Contractors shall assist (along with the design professionals) in clarifying the installation and operation of commissioned assemblies in areas where the Specifications or component/assembly documentation is not sufficient for writing detailed commissioning testing procedures.
6. Provide limited assistance to the CxP in preparing the specific performance test procedures required. Subs shall review test procedures to ensure feasibility, safety and material protection during tests. Reference Sections 070800.
7. Develop initial and full checkout plan using manufacturer's procedures and the Const-CK for commissioned assemblies. Submit to CxP for review and approval prior to proceeding with installation of building envelope.
8. During the initial checkout process, execute the Const-CKs as provided via the GC by the CxP for components of the exterior wall and roof assembly to be commissioned.
9. Perform and clearly document completed checkout procedures as required and/or listed on the Const-CK providing a signed and dated certification copy to the CxP.
10. At applicable wall locations, conduct performance testing before installation of insulation and interior closure of the wall. Address current A/E punch list items before performance testing. Exterior Wall Contractors will provide installation foreman to assist with execution of the TPs conducted on the mock-up assemblies to resolve installation issues and establish future installation practices necessary to correct deficiencies observed prior to commencing with installation of the exterior wall systems.
11. Exterior Wall Contractors will ensure that the installation foreman and sufficient labor assistance are available and present during the scheduled tests, adjustments and problem solving events.
12. At exterior wall, window, curtain wall, roof, roof drains, back-up drains, scuppers, skylights, etc., provide access to the test area for both the CxP representative and the contractor's work force, via ladders, scaffolding, man-lifts, etc. If the subcontractor does not have access equipment, the 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors are to provide the necessary equipment for access required for commissioning.

13. Provide labor necessary to execute test procedure under direction of CxP as specified in Sections 019100, 070800.
14. Correct deficiencies as interpreted by the CxP, 948-87.1 GC contractor, Owner and/or O-REP and A/E and retest as required.
15. Prepare redline as-built mark-ups for all applicable drawing sheets in accordance with Section 017800.
16. Provide training of the Owner's operating personnel as specified.
17. Coordinate with component and/or system manufacturers to determine specific requirements to maintain the validity of the warranty.
18. Prepare a preliminary schedule for exterior wall assemblies testing for use by the CxP. Update the schedule as appropriate.
19. Notify the 948-87.1 GC and CxP when exterior wall assembly testing is ready to occur. Be responsible to notify the 948-87.1 GC and CxP, ahead of time, when commissioning activities not yet performed or not yet scheduled will delay construction. Take an active role in seeing that commissioning processes are executed and that the CxP has the scheduling information needed to efficiently execute the commissioning process.

1.6 SYSTEMS TO BE COMMISSIONED

The following systems will be commissioned in this project:

1. Building Envelope
   (a) Plaza drainage systems
   a. Exterior Louvers and Vents
2. Mechanical and Related Systems
   a. Thermometers and Gauges
   b. Testing and Balancing
3. Plumbing and Related Systems
   a. Roof and plaza drainage systems
4. Electrical and Related Systems
   a. Service Switch Gear
   b. Switchboards
   c. Distribution Panelboards
   d. Transformers
   e. Grounding and Ground Fault Systems
   f. Overcurrent Protective Devices
   g. Lighting Control
   h. Emergency Power
   i. Emergency power system
   j. Dimming controls
   k. Power Monitoring and Metering
   l. Transient Voltage Surge suppressors
   m. Variable frequency and speed drives
   n. Automatic Transfer Switches
   o. Fire alarm and smoke detectors
   p. Emergency lighting
   q. Electrical primary voltage system

1.7 SUBMITTALS

A. The 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors shall provide the CxP with a list of required equipment/system submittals to the CxP within 30 days of award of the contract. The CxP will then identify submittals to be submitted to the CxP concurrent with submission to the A/E for review. At a minimum, information provided to the CxP shall include product data and shop drawings, the manufacturer's printed installation and detailed start-up procedures (where applicable), full sequences of operation, O&M data, performance data, any testing procedures, control drawings and details of owner contracted tests. In addition, the installation and checkout materials that are actually shipped inside the equipment and the actual field checkout sheet forms to be used by the factory or field technicians shall be submitted to the CxP. This documentation will be required prior to the normal O&M manual submittals. All documentation requested by the CxP shall be obtained and included by the 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors later in the O&M manuals. 9948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors shall also provide additional information required to facilitate the

commissioning process from a written request by the CxP. 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors are not required to provide product samples to CxP as part of submittal.

B. These submittals to the CxP do not constitute compliance for O&M manual documentation. The O&M manuals are the responsibility of the 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors, though the CxP will review and check their content.

1.8 QUALITY ASSURANCE

A. Test Equipment.

1. All standard testing equipment required for the Contractor to perform installation, start-up and initial checkout and required testing shall be provided by the Contractor.
2. Special equipment, tools and instruments, only available from vendor, specific to a piece of equipment, required for testing equipment according to the Contract Documents shall be included in the base bid price to the Contractor and left on site.
3. Datalogging equipment and software required to test the HVAC and mechanical equipment will be provided by the CxP, but shall not become the property of the Owner.
4. Datalogging and test equipment required to test the electrical systems shall be provided by the Contractor but shall not become the property of the Owner. Instruments must be calibrated in accordance with the following frequency:
    a. Field Instruments: Analog, 6 months maximum, Digital, 12 months maximum
    b. Laboratory Instruments: 12 months
    c. Leased specialty equipment: 12 months where accuracy is guaranteed by leaser.
5. Testing equipment shall be of sufficient quality and accuracy to test and/or measure system performance with the tolerances specified in the specifications. If not otherwise given, the following minimum requirements apply: Temperature sensors and digital thermometers shall have a certified calibration within the past year with an accuracy of 0.5°F and a resolution of + or - 0.1°F. Pressure sensors shall have an accuracy of + or - 2.0% of the value range being measured (not full range of meter) and have been calibrated within the last year. Equipment shall be calibrated according to the manufacturer's recommended intervals and when dropped or damaged. Calibration tags shall be affixed or certificates readily available.

PART 2 – PRODUCTS

2.1 MATERIALS

A. The 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors provides their own respective tools, instruments and consumables required to meet the requirements of Commissioning as described in this section and related sections.

PART 3 – EXECUTION

3.1 MEETINGS

A. Commissioning Kick-off Meeting and Scoping Meeting: Will be conducted within 60 days from start of construction. Contractor will schedule with CxP a commissioning kick-off meeting with the Engineer, Owner, Designer, 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors, and the facility operator (as necessary). One week prior to this meeting, the updated Commissioning Plan will be distributed to all members for their review. The Commissioning Plan, the overall commissioning process, general responsibilities of each team member, reporting and communication protocols and next steps will be discussed. Information gathered from this meeting will allow the CxP to revise the Commissioning Plan to its final version, which will also be distributed to all parties.

B. Miscellaneous Meetings: Other meetings will be planned and conducted by the CxP as construction progresses. These meetings will cover coordination, deficiency resolution and planning issues with the Contractor.

3.2 CONSTRUCTION CHECKLISTS, START-UP, AND INITIAL CHECKOUT

The following procedures apply to equipment and assemblies to be commissioned.

A. Start-up and Initial Checkout Plan. The Contractor develops installation, start-up and initial checkout plans for equipment, systems and assemblies with assistance from the CxP. The 948-87.1 GC, 948-87.2 MC,

948-87.3 PC, 948-87.4 EC contractors provide to the CxP written documentation that each of the manufacturer-recommended procedures have been completed and that the systems are ready for testing.

1. The start-up and initial checkout plan consists of:

    a. The manufacturer's installation instructions.
    b. The vendor's field checkout and start-up sheets.
    c. The construction checklists provided by the CxP.

2. Manufacturer's Installation Instructions consist of the manufacturer's detailed start-up and checkout procedures copied from the O&M manual or shipped with the equipment. Each individual instructional procedure in these documents will be initialed when completed.
3. Vendor field checkout sheets consist of the manufacturer's field checkout and start-up sheets normally used by the manufacturer for start-up.
4. Construction Checklists: The CxP notes which trade is responsible for executing and documenting each of the line item tasks in the checklists (suggestions are provided) and notes that trade on the checklist form.

    a. Calibrations: The construction checklists will contain requirements for calibrations. The 948-87.2 MC contractor is responsible to calibrate all field-installed temperature, relative humidity, CO, CO_2, and pressure sensors and gauges and actuators (dampers and valves) on equipment using methods approved by the CxP. Sensors installed *in* the unit at the factory with calibration certification provided need not be field calibrated.
    b. Valve leak-by tests shall be conducted by the 948-87.2 MC and 948-87.3 PC contractors when shown on a construction checklist. All procedures used shall be fully documented on the construction checklists or other suitable forms, clearly referencing the procedures followed and written documentation of initial, intermediate and final results.
    c. Point-to-point Checkout: Included in the checkout plan will be a point-to-point checkout of each control point tied to a central control system. Each point will be verified to be commanding, reporting and controlling according to its intended purpose. For each output, commands will be initiated and verified to be functioning by visually observing and documenting the status of the controlled device in the field (e.g., command lights or sound off, command cooling coil valve to full open, or command heating water pump off). For each input, the system or conditions will be perturbed to initiate the input response being tested and the response in the control system observed and recorded (e.g., high duct static pressure alarm).

5. The 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors compile the full installation, start-up and initial checkout plan and signs a signature block at the beginning of the plan verifying the completion of the plan.
6. At the CxP's request, for complex systems or assemblies, the 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors shall develop a custom narrative description of the proposed start-up or concealment process taking into account interactions and impacts on other systems, construction coordination and scheduling, indoor air quality, system cleanliness, equipment warranty, etc.
7. The 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors submit the full plan to the CxP for review and approval. The Owner and/or O-REP, Construction Manager or member of the design team may also review selected start-up plans.

B. Execution of Construction Checklists and Start-up.

1. Each piece of equipment or assembly being commissioned receives full construction checkout by the 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors following the approved plan and forms. No sampling strategies are used. Only individuals that have direct knowledge and witnessed that a line item task on the construction checklist was actually performed shall initial or check that item off. It is not acceptable for non-witnessing supervisors to fill out the forms. Construction Checklists shall be completed on a weekly or monthly basis and accurately represent the materials and equipment installed during the prescribed time period. Completed checklists shall be submitted at the end of the project to the 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors who will forward to the CxP for verification.
2. For dynamic mechanical or electrical equipment, the 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors shall complete the pre-start procedures in the plan prior to starting equipment. For static assemblies the 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors shall complete pre-concealment procedures before concealing any assembly. The 948-87.1 GC, 948-87.2

MC, 948-87.3 PC, 948-87.4 EC contractors shall notify the CxP at least five days in advance of any equipment start-up or assembly concealment and provide the CxP a copy of the pre-start/pre-concealment sections of the installation and start-up plan at start-up.

3. The CxP shall randomly observe installation, start-up and checkout of selected systems and assemblies. Procedures on the plans and construction checklists will be spot-checked by the CxP prior to testing. The CxP will indentify any incomplete areas. The Contractor shall correct areas that are deficient or incomplete in the checklists in a timely manner.
4. The 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors and vendors shall execute start-up or concealment and provide the CxP with a signed and dated copy of the completed construction checklists and installation and start-up documentation. The 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors shall clearly note any items that have not been completed and the plan for their completion.

3.3 COMMISSIONING TESTING

A. This sub-section applies to commissioning testing for all divisions.

B. The 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors shall be responsible to fully execute testing of equipment, systems and assemblies according to the specifications.

C. Testing Requirements: The commissioning testing requirements for Building Envelope are found in Sections 070800. The commissioning testing requirements for HVAC and plumibing systems and equipment are found in sections 230800 and 220800. Commissioning testing requirements for the electrical systems and equipment are found in 260800.

D. Objectives and Scope.
1. The objective of commissioning testing is to demonstrate that each system is operating according to the documented Owner's Project Requirements and Contract Documents. For dynamic systems, testing facilitates bringing the systems from a state of initial operation to full dynamic operation. For static elements, testing verifies the performance of the assembly in its installed state under conditions specified in the testing requirements. Additionally, during the testing process, areas of deficient performance are identified and corrected.
2. In general, commissioning testing shall include testing each sequence in the sequence of operations, other significant modes, and sequences and control strategies not mentioned in the written sequences; including, but not limited to startup, shutdown, unoccupied and manual modes, modulation up and down the unit's range of capacity, power failure, alarms, component staging and backup upon failure, and sensor and actuator calibrations. All interlocks and interactions between systems shall be tested. All larger equipment will be individually tested. Like units or assemblies that are numerous (many smaller rooftop packaged units, air terminal units, exhaust fans, windows, etc.) may have an appropriate sampling strategy applied. Heating equipment must be tested appropriately during winter and air conditioning equipment must be tested appropriately during summer to demonstrate performance under near-design conditions.

E. Development of Test Procedures: The Contractor provides documentation (equipment specifications, testing requirements, O&M manuals, start-up and initial start-up instructions, sequences of operation, and mechanical, electrical and control drawings) to the CxP to write detailed step-by-step testing procedures to comply with the testing requirements. Prior to execution, the CxP will provide a copy of the test procedures to the 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors who shall review the tests for feasibility, safety, equipment and warranty protection.

F. Test Procedure Format: A sample test form is provided in the Commissioning Plan. The test procedure forms developed by the CxP shall include, but not limited to) the following information:

1. System and equipment of component name(s)
2. Equipment location and ID number
3. Unique test ID number and reference to unique construction checklist and start-up documentation ID numbers for the piece of equipment.
4. Date
5. Project name
6. Participating parties
7. A copy of the specification section describing the test requirements
8. A copy of the specific sequence of operations or other specified parameters being verified
9. Formulas used in any calculations
10. Required pre-test field measurements

11. Instructions for setting up the tests
12. Special precautions, alarm limits, etc.
13. Specific step-by-step procedures to execute the test, in a clear, sequential and repeatable format
14. Acceptance criteria of proper performance with a Yes / No area to allow for clear marking of whether or not proper performance of each part of the test was achieved.
15. A section for comments
16. Signatures and date block for the CxP

G. Commissioning Test Methods.

1. Testing and verification for most dynamic equipment shall be achieved by an appropriate combination of manual testing (persons manipulate the equipment and observe its function) or by monitoring the performance and analyzing the results using the control system's trend log capabilities or by stand-alone dataloggers. The testing requirements sections of the specification describe which methods shall be used for each test. The CxP may substitute specified methods or require an additional method to be executed, other than what was specified, with the approval of the Owner and/or the Owner's Representative.
2. Simulated Conditions: Simulating conditions other than by overwriting a value shall be allowed, though timing the testing to experience actual conditions is encouraged whenever practical.
3. Overwritten Values: Overwriting sensor values to simulate a condition, such as overwriting the outside air temperature reading in a control system to be something other than it really is, shall be allowed, but shall be used with caution and avoided when possible. Such testing methods often can only test a part of a system, as the interactions and responses of other systems will be erroneous or not applicable. Simulating a condition is preferable. e.g., for the above case, by heating the outside air sensor with a hair blower rather than overwriting the value or by altering the appropriate setpoint to see the desired response. Before simulating conditions or overwriting values, sensors, transducers and devices shall have been calibrated.
5. Simulated Signals: Using a signal generator which creates a simulated signal to test and calibrate transducers and DDC constants is generally recommended over using the sensor to act as the signal generator via simulated conditions or overwritten values.
6. Altering Set points: Rather than overwriting sensor values, and when simulating conditions is difficult, altering setpoints to test a sequence is acceptable. For example, to see the AC compressor lockout work at an outside air temperature below 55°F, when the outside air temperature is above 55°F, temporarily change the lockout setpoint to be 2°F above the current outside air temperature.
7. Indirect Indicators: Relying on indirect indicators for responses or performance shall be allowed only after visually and directly checking and documenting, over the range of the tested parameters, that the indirect readings through the control system represent actual conditions and responses. Much of this verification is completed during construction checklists and calibrations.
8. Setup: Each function and test shall be performed under conditions that simulate actual conditions as close as is practically possible. The 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors shall provide necessary materials, system modifications, etc. to produce the necessary flows, pressures, temperatures, etc. necessary to execute the test according to the specified conditions. At completion of the test, the Contractor shall return affected building equipment and systems, due to these temporary modifications, to their pre-test condition.
9. Sampling: Multiple identical pieces of non-life-safety or otherwise non-critical equipment may be tested using a sampling strategy. Significant application differences and significant sequence of operation differences in otherwise identical equipment invalidates their common identity. A small size or capacity difference, alone, does not constitute a difference. The specific recommended sampling rates are specified with the testing requirements. It is noted that no sampling by the contractor is allowed in construction checklist execution.
10. Testing Order: In general, testing is conducted after construction checklists are complete and start-up has been satisfactorily completed. The control system is sufficiently tested and approved by the CxP before it is used for testing, adjusting and balancing or to check performance of other components or systems. The air balancing and water balancing is completed and debugged before testing of air-related or water-related equipment or systems. Testing generally proceeds from components to sub-systems to systems. When the proper performance of interacting individual systems has been achieved, the interface or coordinated responses between systems is verified.
11. Trend Logs and Monitoring: Trend logs required in the testing requirements will be set up and executed by the Contractor and provided to the CxP. Monitoring using dataloggers will be conducted by the CxP. Trend logs and monitoring are conducted after manual testing and subsequent trouble-shooting are complete and systems are in normal operation without frequent service shutdowns, etc.

H. Problem Solving: The burden of problem solving is on the Contractor and the Architect, though the CxP may recommend solutions to problems found.

3.4 NON-CONFORMANCE AND APPROVAL OF COMMISSIONING TESTS

A. Non-Conformance
   1. All deficiencies or non-conformance issues shall be documented within a CxP Field Report and circulated to all affected parties within (2) two working days of the test event. The 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC, in consultation with the Architect when necessary, will determine the responsible party and a suitable plan for resolution. The CxP is notified of the resolution and documents it in the Issues Log.
   2. If, after any scheduled test, deficiencies or non-conformance issues are observed, subsequent testing will be additional costs. See “Cost of Retesting”.
   3. The 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors notify the CxP when the issue has been resolved, reschedules the test and the test is repeated.
   4. Corrections of minor issues identified may be made during the tests at the discretion of the CxP and with the issue and resolution documented in the Issues Log.
   5. Every effort will be made to expedite the testing process and minimize unnecessary delays, while not compromising the integrity of the procedures. However, the CxP will not be pressured into overlooking deficient work or loosening acceptance criteria to satisfy scheduling or cost issues, unless there is an overriding reason to do so at the request of the Owner and/or the O-REP.
   6. Cost of Retesting.
      a. For a deficiency identified, not related to any construction checklist or start-up fault, the following shall apply: The CxP and 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors will direct the retesting of the equipment. The cost of retesting any item that fails to meet the requirements of these specifications as demonstrated through commissioning testing will be billed as an additional service to the Owner and may be held from the contractor by the Owner.
      b. The time for the CxP to witness any additional testing required because a specific construction checklist or start-up test item, reported to have been successfully completed, but determined during verification to be incomplete will be billed as an additional service to the Owner and may be held from the contractor by the Owner.
   7. The 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors shall respond in writing to the CxP and Owner and/or the O-REP at least as often as commissioning meetings are being scheduled concerning the status of each outstanding issue identified during commissioning. Discussion shall cover explanations of any disagreements and proposals for their resolution.
   8. Any required retesting by the 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors shall not be considered a justified reason for a claim of delay or for a time extension by the 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors.

B. Failure Due to Manufacturer Defect: For identical or near-identical components numbering more than ten (e.g., terminal units, diffusers, traps, valves, etc.): if 10%, or three, whichever is greater, of identical pieces (size alone does not constitute a difference) of equipment fail to perform to the Contract Documents (mechanically or substantively) due to manufacturing defect, not allowing it to meet its submitted performance specification, all identical units may be considered unacceptable by the CxP and Owner and/or the O-REP. In such case, the Contractor shall provide the CxP and the Owner and/or the O-REP with the following:
   1. Within one week of notification from the CxP and Owner and/or the O-REP, the 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors or manufacturer’s representative shall examine other identical units making a record of the findings. The findings shall be provided to the CxP and Owner and/or the O-REP and 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors within two weeks of the original notice.
   2. Within two weeks of the original notification, the Contractor or manufacturer shall provide a signed and dated, written explanation of the problem, cause of failures, etc. and proposed solutions which shall include full equipment submittals. The proposed solutions shall not significantly exceed the specification requirements of the original installation.
   3. The CxP and Owner and/or the O-REP will determine whether a replacement of identical units or a repair is acceptable.
   4. Two examples of the proposed solution will be installed by the 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors. The GC and CxP will be allowed to test the installations for up to one week, upon which the Owner and/or the O-REP will decide whether to accept the solution.
   5. Upon acceptance, the Contractor and/or manufacturer shall replace or repair identical items, at their expense and extend the warranty accordingly, if the original equipment warranty had begun. The

replacement/repair work shall proceed with reasonable speed beginning within one week from when parts can be obtained.

C. Approval and Acceptance: The CxP notes each satisfactorily demonstrated function on the test procedure form. However, formal approval of an entire test procedure form is not normally given. Approval or acceptance of a system is indicated only after testing and monitoring is complete and there are no outstanding issues for that equipment or assembly in the CxP's Issues Log.

3.5 DEFERRED COMMISSIONING TESTING

A. Unforeseen Deferred Tests: If any check or test cannot be completed due to the building structure, required occupancy condition or other deficiency, execution of checklists and testing may be delayed upon approval of the Owner and/or the O-REP.

B. Seasonal Testing: During the warranty period, seasonal testing (tests delayed until weather conditions are closer to the system's design) specified in the testing requirements shall be completed as part of this contract. The CxP shall coordinate this activity. Tests will be executed, documented and deficiencies corrected by the Contractor, with facilities staff and the CxP witnessing. The 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors shall make needed final adjustments to the O&M manuals and as-builts due to the testing results.

C. Scheduled Deferred Tests: Specific tests such as thermography of the electrical distribution system are less meaningful in an unoccupied or partially occupied building. All such tests requiring occupancy loads will be scheduled in accordance to meeting desired occupancy conditions.

3.6 TRAINING OF OWNER'S PERSONNEL

A. The 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors shall be responsible for training coordination and scheduling and for ensuring that training is completed.

B. The CxP shall be responsible for overseeing and approving the content and adequacy of the training of Owner's personnel for commissioned equipment.

1. The CxP shall interview the facility manager or lead engineer to determine the special needs and areas where training will be most valuable. The Owner and CxP shall decide how rigorous the training should be for each piece of commissioned equipment. The CxP shall communicate the results to the contractor and vendors who have training responsibilities.
2. In addition to these general requirements, the specific training requirements of the Owner's personnel by contractor and vendors are specified in Section 017900.
3. The CxP will develop training agendas for each piece of commissioned equipment which will include general areas which the Owner's personnel should be trained on. These training agendas are sent to the 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors to be completed by the 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors and vendors. Completed training agendas are to be sent back to the CxP to be reviewed and approved by CxP and Owner.
4. The CxP develops an overall training plan for the commissioned systems. The CxP develops criteria for determining that the training was satisfactorily completed, including attending some of the training, etc. The CxP recommends approval of the training to the Owner.
5. The 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors will provide videotaping of the training sessions, with DVDs cataloged by the GC and added to the O&M Manuals.

3.7 DOCUMENTATION

A. Commissioning Plan. The Commissioning Plan is defined in this section and follows the process outlined in the specifications. The CxP develops and updates the commissioning plan as construction progresses. The Specifications will take precedence over the Commissioning Plan.

B. Schedule. The 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors works with the CxP and the Owner and/or O-REP using established protocols to schedule the commissioning activities. The 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors shall integrate commissioning activities into the master schedule. All parties will address scheduling problems and make necessary notifications in a timely manner in order to expedite the commissioning process. As construction progresses, more detailed commissioning schedules shall be developed. The 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors shall provide a minimum of two weeks notice prior to the date of testing to the CxP. In addition, the CxP shall be notified 36 hours in advance when tests are canceled or rescheduled. The 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors shall reimburse the CxP for labor and travel costs for a test that has either been canceled or rescheduled without required

notice. The 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors shall also reimburse the Owner and CxP for costs when a scheduled test cannot be completed due to failure of the Contractor to properly prepare for the test, including but not limited to:

1. Failure to schedule the test with all parties required to perform the test or with regulatory authorities required to witness the test.
2. Failure to complete pre-start or start-up procedures or other work required as a prerequisite for execution of the test.
3. Failure to have in place test equipment, support equipment, instrumentation, permits, or other ancillary equipment or systems required for successful execution of the test.

C. Reporting and Documentation by the CxP

1. Commissioning Field Report: The CxP shall provide regular reports of issues and progress directly to the Owner and/or O-REP with increasing frequency as the construction and commissioning progresses. Issues that are in the schedule critical path or which significantly affect budget or building performance will be reported within 2 days of identification.
2. Issues Log: The CxP shall keep a running log of issues throughout the Commissioning Process and provide to Owner and 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors. The 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors shall be required to address all issues documented in issues log to satisfaction of the Owner. Completion of all issues log items shall be a prerequisite to Substantial Completion unless otherwise directed by Owner.
3. Systems Manual. The 948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors are responsible for delivering the following data organized and indexed by system. See details below 3.06 Para. D.

D. Systems Manual: The CxP will compile a Systems Manual and a copy will be supplied to the Owner and/or the O-REP. The following components of the manual are organized and indexed by document type into one compilation. The responsibility of the contractor and other parties in the Systems Manual development are given in brackets.

1. Design Record: The Design Record for each system or assembly included in the Systems Manual, consists of:

    a. Basis of Design (BOD) (see Definitions) [by Architect]
    b. Design Narrative (see Definitions) [by Architect]
    c. Performance Metrics (see Definitions) [by CxP]

2. Fire and life safety and emergency power criteria including general strategy narrative, detailed sequences and HVAC fire and emergency power response matrix [format by CxP and content by Architect]
3. Executive summary giving a brief description of the project and the major efforts accomplished through the commissioning process [by CxP]
4. List of project team member and their roles [by CxP]
5. Final design review document [by CxP]
6. Commissioning Field Reports [by CxP]
7. CxP Issues Log [by CxP]
8. Submittal review document [by CxP]
9. Completed training agendas and list of training participants [by CxP]
10. Completed commissioning testing procedure forms [by CxP]
11. Seasonal start-up and shutdown, manual and restart operation procedures [by 948-87.2 MC Contractor]
12. Complete as-built control drawings with points list, valve schedules, schematics, control system architecture and full sequences of operation [by 948-87.2 MC Contractor]
13. A description of and rationale for energy savings features and strategies with operating instructions and caveats about their function and maintenance relative to energy use [by Professional Design Team]
14. Single line for the water and air side of the complete HVAC system [by Professional Design Team]
15. Recommendations for recalibration frequency of sensors and actuators by type and use [by CxP]
16. Plans for continuous commissioning and recommended frequency for recommissioning by equipment type with reference to tests conducted during initial commissioning [by CxP]
17. Description of the primary recommended standard trend logs in the control system that will assist in maintaining comfort, energy efficiency and system control. This will include sample plots with explanations of what to look for in the plots [by CxP]

18. Specific recommendations regarding seasonal operational issues that affect energy use [by CxP]
19. A list of user adjustable set points and reset schedules with a discussion of the purpose of each and the range of reasonable adjustments with energy implications. Include a schedule frequency to review the various set points and reset schedules to ensure they are at current relevant and efficient values [by CxP]
20. A list of time of day schedules [by Contractor] and a schedule frequency to review them for relevance and efficiency [by CxP]
21. Guidelines for establishing and tracking benchmarks for whole building energy use and primary plant equipment efficiencies [by CxP]
22. Guidelines for ensuring that future renovations and equipment upgrades won't result in decreased energy efficiency and maintaining the final design intent [by CxP]
23. A list of diagnostic tools, with a description of their use that will assist facility staff in operating equipment more efficiently [by CxP]
24. Systems to be included in the Systems Manual are: all the systems listed in this section as being commissioned.
25. The units used in the manual will be English with parenthetical reference to metric according to details given in this section.

E. O&M Documentation Review: Prior to substantial completion, the 9948-87.1 GC, 948-87.2 MC, 948-87.3 PC, 948-87.4 EC contractors shall deliver to the CxP the O&M manuals, documentation and redline as-builts for systems that were commissioned to review compliance with the Specifications. The CxP will communicate deficiencies in the manuals to the Owner and the O-Rep, Contracting Officer or the Architect, as requested. Upon a successful review of the corrections, the CxP recommends approval and acceptance of these sections of the O&M manuals. The CxP also reviews each equipment warranty and verifies that requirements to keep the warranty valid are clearly stated. This work does not supersede the Architect's review of the O&M manuals according to their contract.

END OF SECTION 01 91 00

SECTION 071413 - HOT FLUID-APPLIED WATERPROOFING

PART 1 - GENERAL

1.1 STIPULATIONS

A. The specifications sections "General Conditions to the Construction Contract", "Special Conditions", and "Division 01 - General Requirements" form a part of this Section by this reference hereto, and shall have the same force and effect as if printed herewith in full.

1.2 SUMMARY

A. This Section includes the following:
   1. Reinforced waterproofing membrane.

B. Related Sections include the following:

   1. Section 070800 "Commissioning of Thermal and Moisture Protection"
   2. Section 079200 "Joint Sealants"
   3. Section 079513 "Expansion Joints"
   4. Section 321400 "Unit Pavers"
   5. Section 321416 "Cast Stone Masonry Pavers"

1.3 PERFORMANCE REQUIREMENTS

A. Provide waterproofing that prevents the passage of water and complies with physical requirements in CAN/CGSB-37.50, "Hot Applied, Rubberized Asphalt for Roofing and Waterproofing."

1.4 SUBMITTALS

A. Product Data: Include manufacturer's written instructions for evaluating, preparing, and treating substrate, technical data, and tested physical and performance properties.

B. Shop Drawings: Show locations and extent of waterproofing. Include details for substrate joints and cracks, sheet flashings, penetrations, inside and outside corners, tie- ins to adjoining waterproofing, and other termination conditions.

   1. Include Setting Drawings showing layout, sizes, sections, profiles, and joint details of concrete pavers with paver support assemblies.

C. Samples: For the following products:

   1. 12-by-12-inch (300-by-300-mm) square of flashing sheet.
   2. 12-by-12-inch (300-by-300-mm) square of insulation.
   3. 4-by-4-inch (100-by-100-mm) square of drainage panel.

D. Installer Certificates: Signed by manufacturers certifying that installers comply with requirements.

E. Product Test Reports: From a qualified independent testing agency indicating and interpreting test results of waterproofing for compliance with requirements, based on comprehensive testing of current waterproofing formulations.

F. Sample Warranty: Copy of special waterproofing manufacturer's and Installer's warranty stating obligations, remedies, limitations, and exclusions before starting waterproofing.

1.5 QUALITY CONTROL

A. Installer Qualifications: A qualified installer who is authorized, approved, or licensed to install waterproofing manufacturer's products; and who is eligible to receive waterproofing warranty specified.

B. Source Limitations: Obtain waterproofing materials, sheet flashings, protection course, and drainage panels through one source from a single manufacturer.

C. Mockups: Apply waterproofing to 100 sq. ft. (9.3 sq. m) of deck to demonstrate surface preparation, crack and joint treatment, corner treatment, thickness, texture, and execution quality.

1. If Architect determines mockups do not comply with requirements, reapply waterproofing until mockups are approved.
2. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

D. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Specification Section 010400 “Coordination and Control” Review requirements for waterproofing, including surface preparation specified under other Sections, substrate condition and pretreatment, minimum curing period, forecasted weather conditions, special details and sheet flashings, installation procedures, testing and inspection procedures, and protection and repairs.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver liquid materials to Project site in original containers with seals unbroken, labeled with manufacturer's name, product brand name and type, date of manufacture, and directions for storing and mixing with other components.

B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by waterproofing manufacturer.

C. Remove and replace liquid materials that cannot be applied within their stated shelf life.

D. Protect stored materials from direct sunlight.

1.7 PROJECT CONDITIONS

A. Environmental Limitations: Apply waterproofing within the range of ambient and substrate temperatures recommended by waterproofing manufacturer. Do not apply waterproofing to a damp or wet substrate, or when temperature is below 0 deg F (minus 18 deg C).

1. Do not apply waterproofing in snow, rain, fog, or mist.

B. Maintain adequate ventilation during application and curing of waterproofing materials.

1.8 WARRANTY

A. Special Manufacturer's Warranty: Written warranty, signed by waterproofing manufacturer agreeing to repair or replace waterproofing and sheet flashings that do not comply with requirements or that do not remain watertight within specified warranty period.

1. Warranty does not include failure of waterproofing due to failure of substrate prepared and treated according to requirements or formation of new joints and cracks in substrate that exceed 1/8 inch (3 mm) in width.
2. Warranty insulation will retain 80 percent of original published thermal value.
3. Warranty pavers will not dish or warp and will not crack, split, or disintegrate in freeze-thaw conditions.
4. Warranty includes removing and reinstalling protection board, drainage panels, insulation, pedestals, and pavers on plaza decks.
5. Warranty Period: 20 years after date of Substantial Completion.

B. Special Installer's Warranty: Written waterproofing Installer's warranty, signed by Installer, covering Work of this Section, for warranty period of two years.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Products: Subject to compliance with requirements, provide one of the following products:

1. American Hydrotech, Inc.; Monolithic Membrane 6125 - FR.
2. American Permaquik Inc.; Permaquik 6100.
3. Barrett Company; Ram-Tough 250.
4. Carlisle Companies Inc., Henry a Carlisle Company; Henry 790-11.
5. T. C. Miradri; Miraseal 9100.
6. Monsey Bakor; Elasto-Seal 790-11.
7. Protecto Wrap Co.; HM625B.
8. Tremco; Tremproof 150.

2.2 MEMBRANE

A. Single-component; 100 percent solids; hot fluid-applied, rubberized asphalt with the following properties measured per applicable test methods in CAN/CGSB-37.50:

1. Flash Point: Not less than 260 deg C or not less than 25 deg C above manufacturer's maximum recommended application temperature.
2. Cone Penetration: 110 maximum at 25 deg C, and 200 maximum at 50 deg C.
3. Flow: 3 mm maximum at 60 deg C.
4. Toughness: Not less than 5.5 J
5. Ratio of Toughness to Peak Load: Not less than 0.040.

6. Adhesion Rating: Pass.
7. Water-Vapor Permeance: 1.7 ng/Pa x s x sq. m.
8. Water Absorption: 0.35-g maximum mass gain, or 0.18-g maximum mass loss.
9. Pinholing: Not more than one pinhole.
10. Low-Temperature Flexibility: No cracking.
11. Crack Bridging Capability: No cracking, splitting, or loss of adhesion.
12. Heat Stability: Comply with requirements for penetration, flow, low-temperature flexibility, and viscosity when heated for five hours at manufacturer's recommended application temperature.
13. Viscosity Test: 2 to 15 seconds.

2.3 AUXILIARY MATERIALS

A. Primer: ASTM D 41, asphaltic primer.

B. Elastomeric Flashing Sheet: 50-mil- (1.3-mm) minimum, nonstaining, uncured sheet neoprene with manufacturer's recommended contact adhesives and predrilled metal termination bars and anchors, with the following physical properties as measured per standard test methods referenced:

1. Tensile Strength: 1400 psi (9.6 MPa) minimum; ASTM D 412, Die C.
2. Elongation: 300 percent minimum; ASTM D 412.
3. Tear Resistance: 125 psi (860 kPa) minimum; ASTM D 624, Die C.
4. Brittleness: Does not break at minus 30 deg F (34 deg C); ASTM D 2137.

C. Modified-Bituminous Flashing Sheet: SBS-modified bituminous sheet, 160-mil- (4-mm-) thick, woven or nonwoven polyester or glass-fiber reinforced; suitable for application method specified; granular surfaced.

D. Sealants and Accessories: Waterproofing manufacturer's recommended sealants and accessories.

E. Reinforcing Fabric: Manufacturer's recommended spun-bonded polyester fabric.

F. Separator Sheet: ASTM D 4397, polyethylene sheet, minimum 4 mils (0.10 mm) thick.

G. Protection Course: Semirigid sheets of fiberglass or mineral-reinforced-asphaltic core, pressure laminated between two asphalt-saturated fibrous liners and as follows:

1. Thickness: 1/8 inch (3 mm), nominal, for vertical applications; 1/4 inch (6 mm), nominal, elsewhere.
2. Adhesive: Rubber-based solvent type recommended by waterproofing manufacturer for type of protection course.

2.4 MOLDED-SHEET DRAINAGE PANELS

A. Molded-Sheet Drainage Panel: Prefabricated, composite drainage panels, manufactured with a permeable geotextile facing laminated to a molded-plastic-sheet drainage core.

1. Drainage Core: Three-dimensional, nonbiodegradable, molded-plastic-sheet material designed to effectively drain water under backfill pressure; complying with the following properties determined according to tests indicated:

a. Compressive Strength: 10,000 lbf/sf. ft. (479 kPa), minimum; ASTM D 1621.
b. Flow Rate: 2.8 gpm per ft. (35 L/min. per m), minimum, at hydraulic gradient of 1.0 and compressive stress of 25 psi (172 kPa); ASTM D 4716.

2. Geotextile: Nonwoven needle-punched geotextile, manufactured for subsurface drainage, made from polyolefins or polyesters; with elongation greater than 50 percent; complying with the following properties determined according to AASHTO M 288:
   a. Survivability: Class 2.
   b. Apparent Opening Size: No. 70 (0.21-mm) sieve, maximum.
   c. Permittivity: 0.1 per second, minimum.
3. Geotextile: Woven geotextile fabric, manufactured for subsurface drainage, made from polyolefins or polyesters; with elongation less than 50 percent; complying with the following properties determined according to AASHTO M 288:
   a. Survivability: Class 2.
   b. Apparent Opening Size: No. 70 (0.21-mm) sieve, maximum.
   c. Permittivity: 0.1 per second, minimum.

2.5 INSULATION

A. Refer to Specification Section 072100 “Thermal Insulation.”

B. Insulation Drainage Panels: Extruded-polystyrene board insulation complying with ASTM C 578; of type, density, and compressive strength indicated below; fabricated with rabbeted edges and with one side having ribbed drainage channels.
   1. Type VII, 2.2-lb/cu. ft. (35-kg/cu. m) minimum density and 60-psi (414-kPa) minimum compressive strength.

C. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

   1. Diversifoam Products.
   2. Dow Chemical Company (The).
   3. Owens Corning.
   4. T. Clear Corporation.
   5. Tenneco Building Products.

2.6 PLAZA DECK PAVERS

A. Plaza Deck Pavers: As specified in Specification Section 321400 “Unit Paving” and Section 321416 “Cast Stone Masonry Pavers”

B. Setting Bed: Provide mortar setting-bed materials specified in Specification Section 321400.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements and other conditions affecting performance.

1. Verify that concrete has cured and aged for minimum time period recommended by waterproofing manufacturer.
2. Verify that substrate is visibly dry and free of moisture. Test for capillary moisture by plastic sheet method according to ASTM D 4263.
3. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean and prepare substrate according to manufacturer's written instructions. Provide clean, dust-free, and dry substrate for waterproofing application.

B. Mask off adjoining surfaces not receiving waterproofing to prevent spillage and overspray affecting other construction.

C. Close off deck drains and other deck penetrations to prevent spillage and migration of waterproofing fluids.

D. Remove grease, oil, form-release agents, paints, curing compounds, and other penetrating contaminants or film-forming coatings from concrete.

1. Abrasive blast clean concrete surfaces uniformly to expose top surface of fine aggregate according to ASTM D 4259 with a self-contained, recirculating, blast-cleaning apparatus. Remove material to provide a sound surface free of laitance, glaze, efflorescence, curing compounds, concrete hardeners, or form- release agents. Remove remaining loose material and clean surfaces according to ASTM D 4258.

E. Remove fins, ridges, and other projections and fill honeycomb, aggregate pockets, and other voids.

3.3 JOINTS, CRACKS, AND TERMINATIONS

A. Prepare and treat substrates to receive waterproofing membrane, including joints and cracks, deck drains, corners, and penetrations according to CAN/CGSB-37.51, "Application of Rubberized Asphalt, Hot-Applied, for Roofing and Waterproofing," and waterproofing system manufacturer's written instructions.

1. Rout and fill joints and cracks in substrate. Before filling, remove dust and dirt according to ASTM D 4258.
2. Adhere elastomeric flashing sheet to substrate in a layer of hot, rubberized asphalt. Extend elastomeric flashing sheet a minimum of 6 inches (150 mm) on each side of joints and cracks and beyond deck drains, corners, and penetrations.

3. Embed reinforcing fabric into a layer of hot, rubberized asphalt. Extend reinforcing fabric a minimum of 6 inches (150 mm) on each side of joints and cracks and beyond deck drains, corners, and penetrations.

B. At expansion joints and discontinuous deck-to-wall or deck-to-deck joints, bridge joints with elastomeric flashing sheet extended a minimum of 6 inches (150 mm) on each side of joints and adhere to substrates in a layer of hot, rubberized asphalt.

3.4 FLASHING INSTALLATION

A. Install flashing sheets at terminations of waterproofing membrane according to CAN/CGSB-37.51, "Application of Rubberized Asphalt, Hot-Applied, for Roofing and Waterproofing," and waterproofing system manufacturer's written instructions.

B. Prime substrate with asphalt primer.

C. Install elastomeric flashing sheet and adhere to deck and wall substrates in a layer of hot, rubberized asphalt.

D. Extend flashing sheet up walls or parapets a minimum of 8 inches (200 mm) above plaza deck pavers and 6 inches (150 mm) onto deck to be waterproofed.

E. Install termination bars and mechanically fasten to top of flashing sheet at terminations and perimeter of waterproofing membrane.

3.5 MEMBRANE APPLICATION

A. Apply rubberized asphalt according to CAN/CGSB-37.51, "Application of Rubberized Asphalt, Hot-Applied, for Roofing and Waterproofing," and manufacturer's written instructions.

B. Heat rubberized asphalt in an oil- or air-jacketed melter with mechanical agitator specifically designed for heating rubberized-asphalt waterproofing.

C. Start application with manufacturer's technical representative present.

D. Apply primer, at manufacturer's recommended rate, over prepared substrate and allow to dry.

E. Reinforced Membrane: Apply waterproofing to substrates and adjoining surfaces indicated. Spread hot fluid-applied, rubberized asphalt to a thickness of 90 mils (2.3 mm); embed reinforcing fabric, overlapping sheets 2 inches (50 mm); and spread another 125-mil- (3.2-mm-) thick layer to provide a uniform, reinforced, seamless membrane 215 mils (5.5 mm) thick.

F. Apply waterproofing over prepared joints and up wall terminations and vertical surfaces to heights indicated or required by manufacturer.

G. Cover waterproofing with separator sheet with overlapped joints while rubberized asphalt is still hot and before membrane is subject to traffic.

1. Install protection course with overlapped joints over separator sheet..

3.6 MOLDED-SHEET DRAINAGE PANEL INSTALLATION

A. Place and secure molded-sheet drainage panels to substrate according to manufacturer's written instructions. Use adhesives that do not penetrate waterproofing. Lap edges and ends of geotextile to maintain continuity. Protect installed molded-sheet drainage panels during subsequent construction.

3.7 INSULATION INSTALLATION

A. Install insulation drainage panels over waterproofed surfaces. Cut and fit to within 3/4 inch (19 mm) of projections and penetrations.

B. On horizontal surfaces, loosely lay insulation units according to manufacturer's instructions. Stagger end joints and tightly abut insulation units.

3.8 PLAZA DECK PAVER INSTALLATION

A. Setting Bed: Install setting bed in locations and of thickness indicated to comply with requirements in Specification 321400 and 321416

3.9 FIELD QUALITY CONTROL

A. Flood Testing: Refer to Specification Section 070800

3.10 CURING, PROTECTING, AND CLEANING

A. Cure waterproofing according to manufacturer's written recommendations, taking care to prevent contamination and damage during application stages and curing.

1. Do not permit foot or vehicular traffic on unprotected membrane.

B. Protect waterproofing from damage and wear during remainder of construction period.

C. Protect installed insulation drainage panels from damage due to ultraviolet light, harmful weather exposures, physical abuse, and other causes. Provide temporary coverings where insulation will be subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

D. Clean spillage and soiling from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction

END OF SECTION 071413

APPENDIX B

C-0948-0087_PLAZA PROBE REPORT

212.602.1670 main

November 30th, 2023

Mr. Chris Dawson, AIA
Principal
Chris Dawson Architect
300 North 2nd Street, Suite 701
Harrisburg, PA 17101

RE: PA State Museum Plaza Paver Repair / Replacement Project
Harrisburg, PA
Walter P Moore Project No. D17.22018.00

Dear Chris:

We have completed a probe survey of the PA State Museum Plaza on August 2nd, 2023.

Included in our report are our visual observations at seven probe locations and three core locations to observe the existing waterproofing conditions and drainage issues at the plaza, and to understand the leaks observed at the office spaces underneath.

Sincerely,

WALTER P. MOORE AND ASSOCIATES, INC.

Christopher P. Pinto, P.E.
Principal & Managing Director
Diagnostics Group

DC Burney
Graduate Engineer
Diagnostics Group

Enclosure cc:
Chaitanya Patki, P.E.

Visual Assessment

Walter P Moore representatives were at the project site on August 2, 2023 to observe the probes performed at the plaza for the Pennsylvania State Museum. Investigative probes were performed as indicated in the probe drawings prepared by Walter P Moore (revised issued July 11, 2023).

Following summarizes our observations form each probe location:

Probe #1

- To investigate the waterproofing at the plaza trench drain, the paver and topping slab adjacent to the existing trench drain were removed (Photo 01).
- It was confirmed that the waterproofing membrane runs under the edge of the trench drain to correctly tie into the trench drain (Photo 02 and Photo 03).
- The trench drain is set in the topping slab.

Probe #2

- The column face stone was removed at the east courtyard to observe the connections to the underlying concrete column (Photo 04).
- It was observed that the face stone is connected to the underlying embedded steel slot/clip utilizing dowel at top and bottom of the panel (Photo 05).

Probe #5

- A coping stone around the perimeter of the west courtyard was removed to observe the underlying waterproofing details (Photo 06).
- It was confirmed that the railing is not connected to the structural slab, and instead is slotted into a pocket in the limestone coping panel (Photo 07) allowing water to accumulate in the pocket with missing outlet/drainage. Continuous exposure to elements and to constant freeze/thaw cycles have led to the deterioration of the coping stones. The connection also transfers all the forces from the railing to the coping stone rather than directly to the structural slab, which may have led to the cracking in the coping stone.
- Incorrect drainage for the coping stones (missing weep holes) was noted.

Probe #8

- The expansion joint cover was removed (Photo 08). The location of the existing expansion joint probe aligned with leaks experienced in space below.
- No expansion joint found underneath the cover (Photo 09).
- There may be an expansion joint below the insulation. This will be verified when the existing waterproofing system is removed.

Probe #10

- The expansion joint cover and adjacent pavers were removed to expose the termination of the plaza waterproofing system and the details associated with the intersection of expansion joints. The probe location aligned with leaks experienced in the office underneath (Photo 10).
- The termination of the plaza waterproofing was confirmed (Photo 11).
- Expansion joint waterproofing details were confirmed for the expansion joint perpendicular to the museum wall (Photo 12).

- No waterproofing membrane between the plaza and the museum wall was found. Walter P. Moore assumes that the original waterproofing membrane is directly on top of the structural deck (below the setting bed) and there has been no additional waterproofing installed since the original construction. This will be verified when the existing waterproofing system is removed.
- The L-shaped granite stone was unable to be removed without damaging it, and therefore the expansion joint details for the expansion joint running along the museum wall could not be observed (Photo 13).

Probe #13

- The pavers, setting bed and stone curb adjacent to the planter were removed to expose the underlying condition at the plaza roofing system (Photo 14).
- It was confirmed that the waterproofing runs under the facing stones and that the stones sit on top of the topping slab and are not anchored to the structural slab (Photo 14).

Probe #14

- A stone facing panel on the perimeter of the plaza at the south façade was removed to observe connection details (Photo 15).
- The stone facing panel is supported by a steel lintel (Photo 16) and anchored at the top with steel angles (Photo 17).

Cores

- Three concrete cores were taken at different locations on the plaza (Photo 18).
- The depth of the lightweight concrete topping slab and asphaltic setting bed were determined at these locations. The concrete cores were sent to CMC, Inc. for petrographic, chloride, and compressive strength testing.
- Testing of the cores was performed by CMC, Inc for all three core samples for compressive strength, chloride content and petrographic analysis. Signed and sealed results were forwarded for review. Based on our review of the report, the concrete core was observed to be indicating no water penetration through the top surface/waterproofing membrane.
- Compressive strength of concrete was observed to be 3,650 psi, which is greater than the 3,300 psi that was specified in the original structural drawings. However, only one sample was tested for compressive strength in lieu of minimum 3 samples for field testing as required by ACI.
- Though chloride contamination was observed in the core samples, it is within acceptable reach for concrete this age and construction and is not a major concern particularly since this is not exposed concrete with constant exposure to deicing chemicals or to elements.
- We also noted that the report indicated the concrete is exposed, which is true only for the underside of the slab above unconditioned space such as the garage and loading dock. The top surface of the concrete is never exposed. We have requested a supplementary letter from CMC clarifying this, but we believe that their concerns regarding air entrainment are not issues given the protection of the structure offered by the waterproofing membrane and paver system.

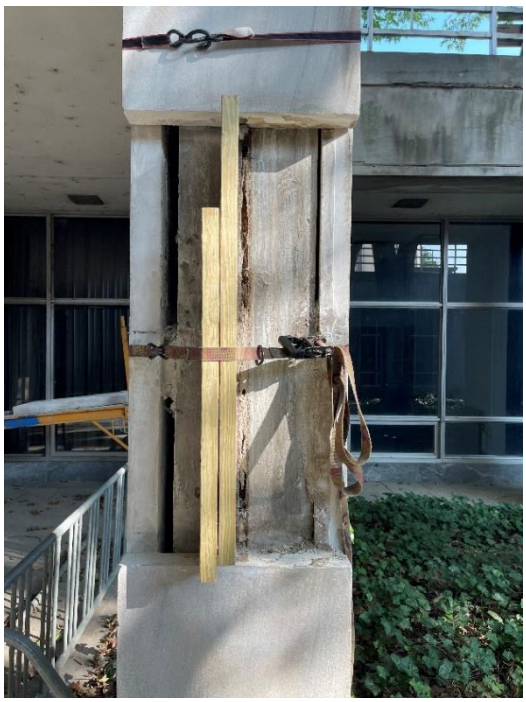
Appendix

01 Probe #1 – The paver and topping slab adjacent to the trench drain were removed.

02 Probe #1 – It was confirmed that the waterproofing membrane runs under the edge of the trench drain to tie into the trench drain.

03 Probe #1 – Close-up view of waterproofing membrane.

04 Probe #2 – The column facing stone was removed to observe the connection details.



05 Probe #2 – The facing stone is connected to the panels above and below with steel dowels. It is connected to the column with a slot and steel clip.

06 Probe #5 – A coping stone around the perimeter of the courtyard was removed.

07 Probe #5 – The railing is not connected to the structural slab.

08 Probe #8 – The expansion joint cover was removed.

09 Probe #8 – No expansion joint was found underneath the cover and pavers.

10 Probe #10 – The expansion joint cover and adjacent pavers were removed. The expansion joint cover and adjacent pavers were removed. Expansion joint waterproofing details were confirmed for the expansion joint perpendicular to museum wall.

11 Probe #10 –The termination of the plaza waterproofing installed during the 1990 renovations was confirmed.

12 Probe #10 – Expansion joint details were observed for the expansion joint perpendicular to the Museum wall.

13 Probe #10 – The L-shaped granite wall was unable to be removed without damaging it, therefore the expansion joint along the museum building wall was not observed.

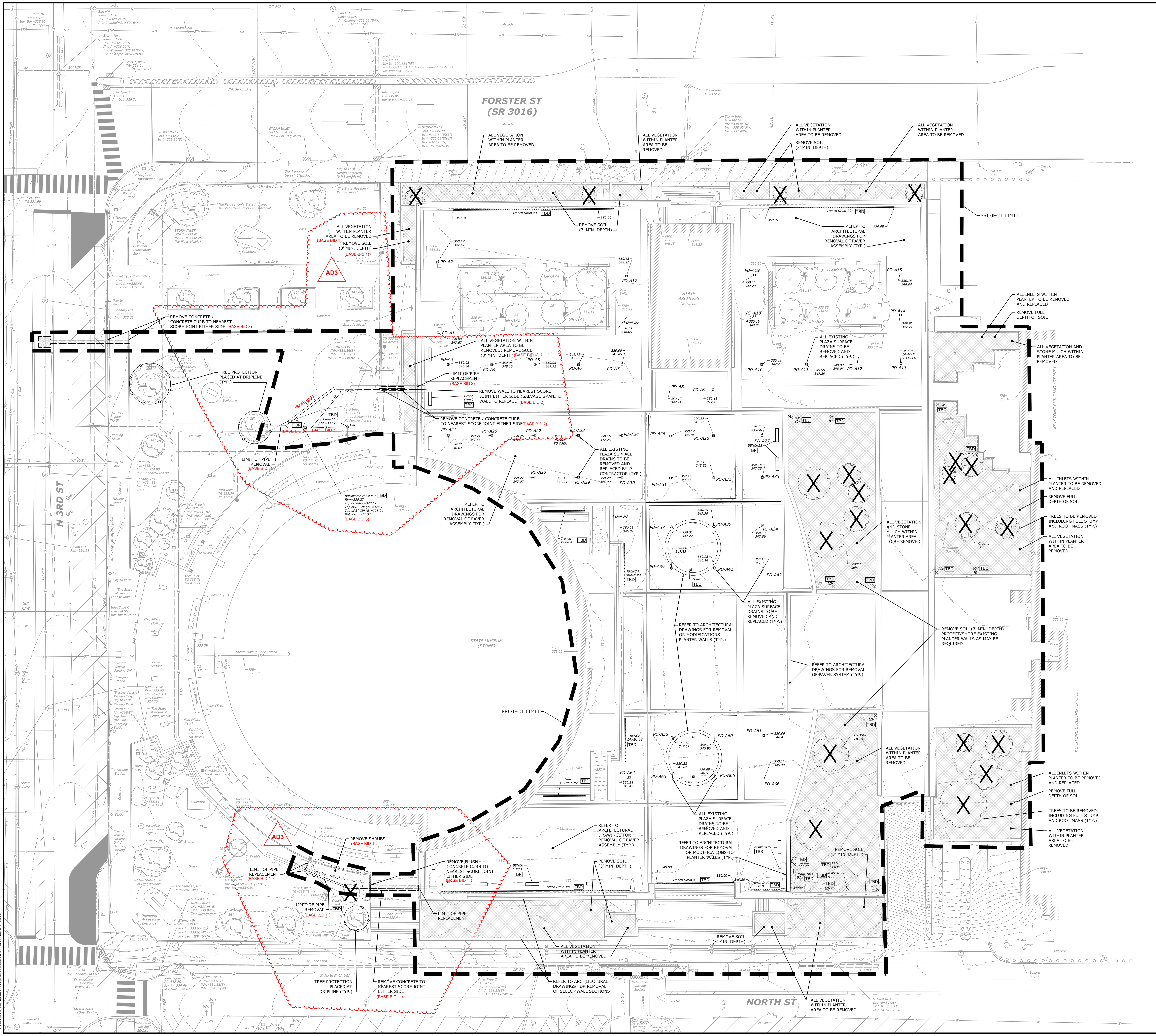
14 Probe #13 – The pavers, setting bed and stone curb were removed adjacent to the planter. It was confirmed that the waterproofing runs under the facing stones. The stones sit on top of the topping slab and are not anchored to the slab.

15 Probe #14 – A stone facing panel on the perimeter of the plaza was removed to observe connection details.

16 Probe #14 – The stone facing panel is supported below by a steel lintel.

17 Probe #14 – The panels are anchored at the top with steel angles.

18 Cores – Three concrete cores were taken at different locations on the plaza.


FORSTER ST
(SR 3016)
N 3RD ST
NORTH ST
STATE ARCHIVES (STONE)
STATE MUSEUM (STONE)
KEYSTONE BUILDING (STONE)
AD3
AD3
ALL VEGETATION WITHIN PLANTER AREA TO BE REMOVED
ALL VEGETATION WITHIN PLANTER AREA TO BE REMOVED
REMOVE SOIL (3' MIN. DEPTH)
ALL VEGETATION WITHIN PLANTER AREA TO BE REMOVED
REMOVE SOIL (3' MIN. DEPTH)
REFER TO ARCHITECTURAL DRAWINGS FOR REMOVAL OF PAVER ASSEMBLY (TYP.)
PROJECT LIMIT
ALL VEGETATION WITHIN PLANTER AREA TO BE REMOVED (BASE BID 1)
REMOVE SOIL (3' MIN. DEPTH) (BASE BID 1)
REMOVE CONCRETE / CONCRETE CURB TO NEAREST SCORE JOINT EITHER SIDE (BASE BID 3)
ALL VEGETATION WITHIN PLANTER AREA TO BE REMOVED; REMOVE SOIL (3' MIN. DEPTH) (BASE BID 3)
TREE PROTECTION PLACED AT DRIPLINE (TYP.)
LIMIT OF PIPE REPLACEMENT (BASE BID 2)
REMOVE WALL TO NEAREST SCORE JOINT EITHER SIDE (SALVAGE GRANITE WALL TO REPLACE) (BASE BID 2)
REMOVE CONCRETE / CONCRETE CURB TO NEAREST SCORE JOINT EITHER SIDE (BASE BID 2)
LIMIT OF PIPE REMOVAL (BASE BID 3)
ALL EXISTING PLAZA SURFACE DRAINS TO BE REMOVED AND REPLACED BY .3 CONTRACTOR (TYP.)
REFER TO ARCHITECTURAL DRAWINGS FOR REMOVAL OF PAVER ASSEMBLY (TYP.)
ALL EXISTING PLAZA SURFACE DRAINS TO BE REMOVED AND REPLACED (TYP.)
ALL INLETS WITHIN PLANTER TO BE REMOVED AND REPLACED
REMOVE FULL DEPTH OF SOIL
ALL VEGETATION AND STONE MULCH WITHIN PLANTER AREA TO BE REMOVED
ALL VEGETATION AND STONE MULCH WITHIN PLANTER AREA TO BE REMOVED
TREES TO BE REMOVED INCLUDING FULL STUMP AND ROOT MASS (TYP.)
ALL VEGETATION WITHIN PLANTER AREA TO BE REMOVED
REFER TO ARCHITECTURAL DRAWINGS FOR REMOVAL OR MODIFICATIONS TO PLANTER WALLS (TYP.)
ALL EXISTING PLAZA SURFACE DRAINS TO BE REMOVED AND REPLACED (TYP.)
REMOVE SOIL (3' MIN. DEPTH). PROTECT/SHORE EXISTING PLANTER WALLS AS MAY BE REQUIRED
REFER TO ARCHITECTURAL DRAWINGS FOR REMOVAL OF PAVER SYSTEM (TYP.)
PROJECT LIMIT
REMOVE SHRUBS (BASE BID 1)
LIMIT OF PIPE REPLACEMENT (BASE BID 1)
LIMIT OF PIPE REMOVAL (BASE BID 1)
REMOVE FLUSH CONCRETE CURB TO NEAREST SCORE JOINT EITHER SIDE (BASE BID 1)
LIMIT OF PIPE REPLACEMENT
TREE PROTECTION PLACED AT DRIPLINE (TYP.)
REMOVE CONCRETE TO NEAREST SCORE JOINT EITHER SIDE (BASE BID 1)
REFER TO ARCHITECTURAL DRAWINGS FOR REMOVAL OF PAVER ASSEMBLY (TYP.)
REMOVE SOIL (3' MIN. DEPTH)
ALL VEGETATION WITHIN PLANTER AREA TO BE REMOVED
REFER TO ARCHITECTURAL DRAWINGS FOR REMOVAL OF SELECT WALL SECTIONS
ALL EXISTING PLAZA SURFACE DRAINS TO BE REMOVED AND REPLACED (TYP.)
REFER TO ARCHITECTURAL DRAWINGS FOR REMOVAL OR MODIFICATIONS TO PLANTER WALLS (TYP.)
REMOVE SOIL (3' MIN. DEPTH)
REMOVE SOIL (3' MIN. DEPTH)
ALL VEGETATION WITHIN PLANTER AREA TO BE REMOVED
SCALE: 1" = 20'

LEGEND

DEMOLITION FEATURES

TBD	DENOTES A FEATURE TO BE DEMOLISHED
TBR	DENOTES A FEATURE TO BE REMOVED AND RELOCATED
	EX. VEGETATION AREAS TO BE REMOVED
	EX. CONCRETE PAVEMENT SURFACE TO BE REMOVED
	EX. BITUMINOUS PAVEMENT SURFACE TO BE REMOVED
	PROPOSED SAWCUT
	PROJECT LIMIT

DEMOLITION NOTES

1. ALL FEATURES IN BOLD PRINT AND SO LABELED SHALL BE DEMOLISHED, REMOVED, OR RELOCATED AS INDICATED.
2. ITEMS LABELED TO BE REMOVED BY OTHERS WILL BE RELOCATED AND/OR DEMOLISHED BY THE OWNER OR A CONTRACTOR HIRED BY THE OWNER. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL WORK TO BE PERFORMED BY OTHERS.
3. ALL EXISTING UTILITY LIDS (MANHOLE, CLEANOUTS, VALVE COVERS, ETC.) AND ASSOCIATED APPURTENANCES TO REMAIN SHALL BE BROUGHT TO FINAL FINISHED GRADE AS PART OF CONSTRUCTION.

PENNSYLVANIA ONE CALL SYSTEM, INC. 1-800-242-1776 STOP-CALL BEFORE YOU DIG

1	Addenda 3 09.15.2025		

AS-BUILT REVISIONS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL J. MARC KUROWSKI ENGINEER No. 052032-E

PROFESSIONAL'S SIGNATURE DATE

K&W DESIGNING ENVIRONMENTS
2201 North Front Street, Suite 200
Harrisburg, PA 17110
P: 717.635.2835
www.kandwengineers.com

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES
HARRISBURG, PENNSYLVANIA

D.G.S. PROJECT No. **DGS 948-87 PHASE 1**

VERIFY SCALE

BAR IS ONE (1) INCH LONG ON ORIGINAL DRAWING:

0 1

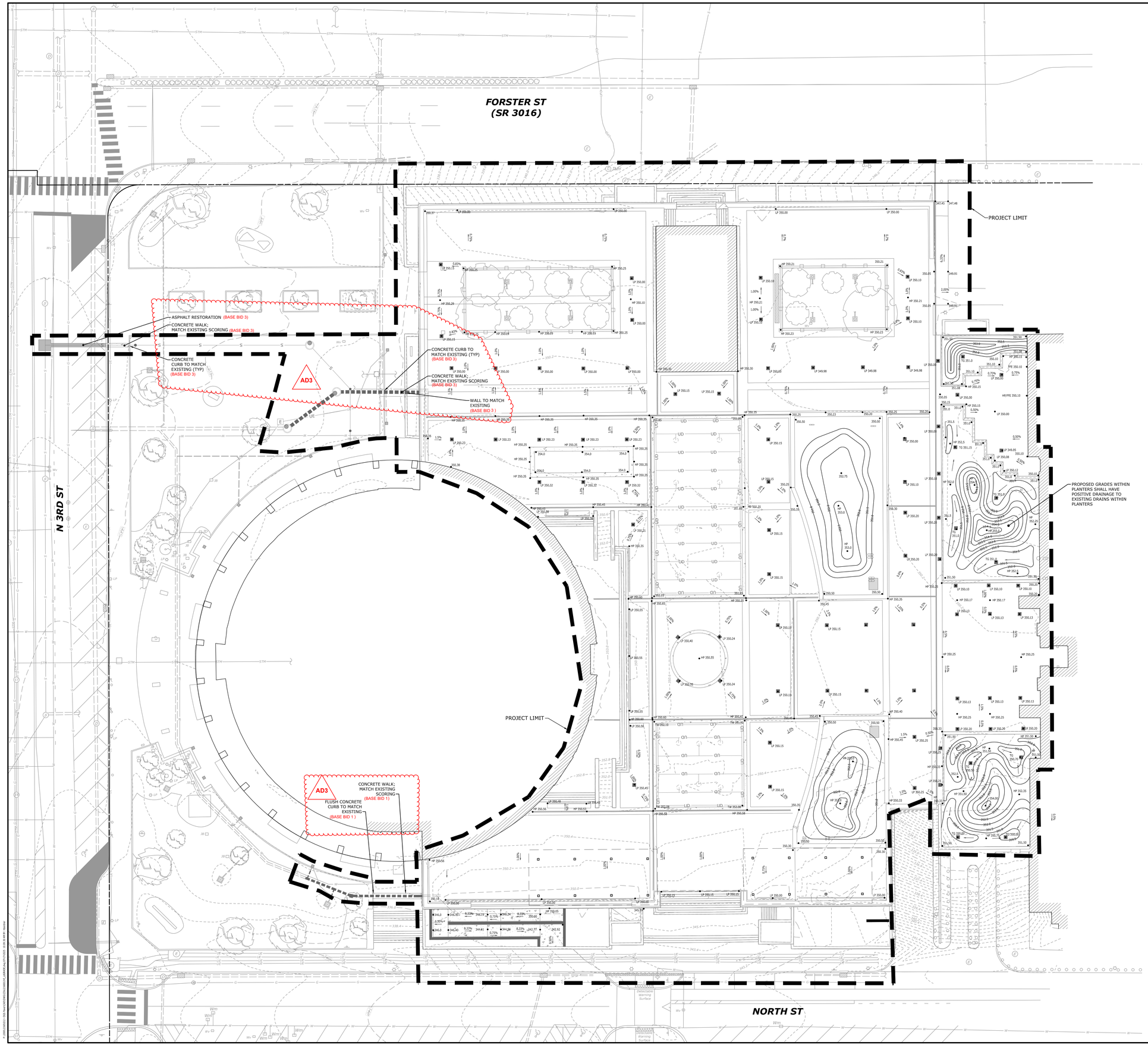
IF BAR IS NOT ONE (1) INCH LONG, ADJUST SCALE ACCORDINGLY

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS. VARIANCE FROM CONTRACT DOCUMENTS NOT PERMITTED WITHOUT PROFESSIONAL & BUREAU OF CONSTRUCTION APPROVAL

PLAZA PAVER REPAIR / REPLACMENT
PA STATE MUSEUM,
THE CAPITOL COMPLEX
HARRISBURG, DAUPHIN COUNTY, PA

DEMOLITION PLAN

DRAWN BY	DATE	DRAWING NO.
HAB	11/08/2024	C-102
CHECKED BY	SCALE	
JLL	PER DWG	



LEGEND

PROPOSED GRADING FEATURES

- 421 — INTERMEDIATE CONTOUR LINES
- 420 — INDEX CONTOUR LINES
- 422.53 — SPOT ELEVATIONS
- 2.00% — SLOPE OR GRADE LABEL
- PROJECT LIMIT

GRADING NOTES

1. REFER TO ARCHITECTURAL DRAWINGS FOR PAVER, PLANTER WALLS/BENCHES, AND SHADE STRUCTURE LAYOUT AND DETAILING.
2. POSITIVE DRAINAGE SHALL BE PROVIDED ACROSS THE ENTIRE PROJECT AREA AND DIRECTED TOWARDS EXISTING AND PROPOSED DRAINAGE FACILITIES.
3. ALL SOIL SHALL BE REMOVED WITHIN THE PLANTERS ADJACENT TO THE KEYSTONE BUILDING. IN ALL OTHER PLANTERS, THE TOP 3' SHALL BE REMOVED UNLESS FURTHER EXCAVATION IS NEEDED TO CREATE A FEASIBLE PLANTING ENVIRONMENT.

0 10 20 40
SCALE: 1" = 20'

VERIFY SCALE

BAR IS ONE (1) INCH LONG ON ORIGINAL DRAWING

0 1

IF BAR IS NOT ONE (1) INCH LONG, ADJUST SCALE ACCORDINGLY

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS. VARIANCE FROM CONTRACT DOCUMENTS NOT PERMITTED WITHOUT PROFESSIONAL & BUREAU OF CONSTRUCTION APPROVAL

1	Addenda 3 09.15.2025

AS-BUILT REVISIONS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
J. MARC KUROWSKI
ENGINEER
No. 052316-E
PROFESSIONAL'S SIGNATURE DATE

K&W DESIGNING ENVIRONMENTS
2201 North Front Street, Suite 200
Harrisburg, PA 17110
P. 717.635.2835
www.kandwengineers.com

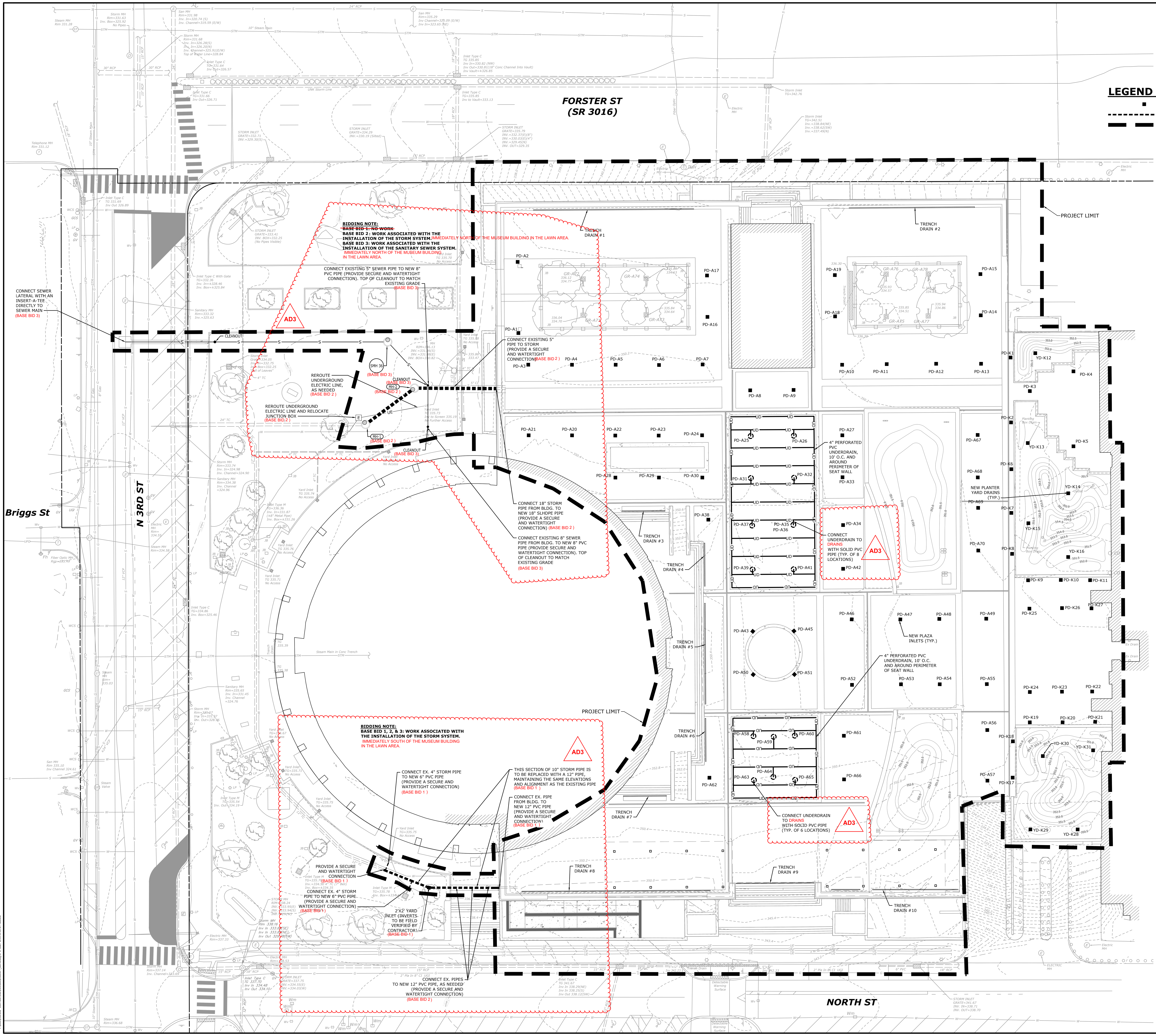
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES
HARRISBURG, PENNSYLVANIA

D.G.S. PROJECT No.
DGS 948-87 PHASE 1

PLAZA PAVER REPAIR / REPLACMENT
PA STATE MUSEUM,
THE CAPITOL COMPLEX
HARRISBURG, DAUPHIN COUNTY, PA

GRADING PLAN

DRAWN BY	DATE	DRAWING NO.
HAB	11/08/2024	C-103
CHECKED BY	SCALE	
JLL	PER DWG	


FORSTER ST
(SR 3016)
N 3RD ST
Briggs St
NORTH ST
PROJECT LIMIT
BIDDING NOTE:
BASE BID 1: NO WORK
BASE BID 2: WORK ASSOCIATED WITH THE INSTALLATION OF THE STORM SYSTEM. IMMEDIATELY NORTH OF THE MUSEUM BUILDING IN THE LAWN AREA.
BASE BID 3: WORK ASSOCIATED WITH THE INSTALLATION OF THE SANITARY SEWER SYSTEM. IMMEDIATELY NORTH OF THE MUSEUM BUILDING IN THE LAWN AREA.
CONNECT EXISTING 5" SEWER PIPE TO NEW 8" PVC PIPE (PROVIDE SECURE AND WATERTIGHT CONNECTION). TOP OF CLEANOUT TO MATCH EXISTING GRADE (BASE BID 3)
CONNECT SEWER LATERAL WITH AN INSERT-A-TEE DIRECTLY TO SEWER MAIN (BASE BID 3)
REROUTE UNDERGROUND ELECTRIC LINE, AS NEEDED (BASE BID 2)
REROUTE UNDERGROUND ELECTRIC LINE AND RELOCATE JUNCTION BOX (BASE BID 2)
CONNECT EXISTING 5" PIPE TO STORM (PROVIDE A SECURE AND WATERTIGHT CONNECTION) (BASE BID 2)
CONNECT 18" STORM PIPE FROM BLDG. TO NEW 18" SLHDPE PIPE (PROVIDE A SECURE AND WATERTIGHT CONNECTION) (BASE BID 2)
CONNECT EXISTING 8" SEWER PIPE FROM BLDG. TO NEW 8" PVC PIPE (PROVIDE SECURE AND WATERTIGHT CONNECTION). TOP OF CLEANOUT TO MATCH EXISTING GRADE (BASE BID 3)
AD3
TRENCH DRAIN #1
TRENCH DRAIN #2
TRENCH DRAIN #3
TRENCH DRAIN #4
TRENCH DRAIN #5
TRENCH DRAIN #6
TRENCH DRAIN #7
TRENCH DRAIN #8
TRENCH DRAIN #9
TRENCH DRAIN #10
4" PERFORATED PVC UNDERDRAIN, 10' O.C. AND AROUND PERIMETER OF SEAT WALL
CONNECT UNDERDRAIN TO DRAINS WITH SOLID PVC PIPE (TYP. OF 8 LOCATIONS)
NEW PLANTER YARD DRAINS (TYP.)
NEW PLAZA INLETS (TYP.)
CONNECT UNDERDRAIN TO DRAINS WITH SOLID PVC PIPE (TYP. OF 6 LOCATIONS)
BIDDING NOTE:
BASE BID 1, 2, & 3: WORK ASSOCIATED WITH THE INSTALLATION OF THE STORM SYSTEM. IMMEDIATELY SOUTH OF THE MUSEUM BUILDING IN THE LAWN AREA.
CONNECT EX. 4" STORM PIPE TO NEW 6" PVC PIPE (PROVIDE A SECURE AND WATERTIGHT CONNECTION) (BASE BID 1)
THIS SECTION OF 10" STORM PIPE IS TO BE REPLACED WITH A 12" PIPE, MAINTAINING THE SAME ELEVATIONS AND ALIGNMENT AS THE EXISTING PIPE (BASE BID 1)
CONNECT EX. PIPE FROM BLDG. TO NEW 12" PVC PIPE (PROVIDE A SECURE AND WATERTIGHT CONNECTION) (BASE BID 1)
PROVIDE A SECURE AND WATERTIGHT CONNECTION
CONNECT EX. 4" STORM PIPE TO NEW 6" PVC PIPE. (PROVIDE A SECURE AND WATERTIGHT CONNECTION) (BASE BID 1)
2'X2' YARD INLET (INVERTS TO BE FIELD VERIFIED BY CONTRACTOR) (BASE BID 1)
CONNECT EX. PIPES TO NEW 12" PVC PIPE, AS NEEDED (PROVIDE A SECURE AND WATERTIGHT CONNECTION) (BASE BID 2)

UTILITY NOTES

1. ALL STORMWATER PIPES, CULVERTS, MANHOLES, INLETS, ENDWALLS AND END SECTIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS SET FORTH IN PENNDOT PUBLICATION 408, AS AMENDED, AND SHALL CONFORM TO THE REQUIREMENTS OF THE PENNDOT, BUREAU OF DESIGN, STANDARDS FOR ROADWAY CONSTRUCTION (RC), PUBLICATION NO. 72, IN EFFECT AT THE TIME THE DESIGN IS SUBMITTED.
2. EXISTING STORMWATER PIPING IS APPROXIMATE AND HAS NOT BEEN SURVEYED OR FIELD VERIFIED.
3. ALL SANITARY SEWER CONSTRUCTION MATERIALS, METHOD AND APPURTENANCES SHALL BE IN ACCORDANCE WITH PADEP'S DOMESTIC WASTEWATER FACILITIES MANUAL AND CITY OF HARRISBURG/CRW'S STANDARD SPECIFICATIONS AND DETAILS AT THE TIME OF CONSTRUCTION.
4. ALL SANITARY SEWER LATERAL SECTIONS SHALL BE INSTALLED WITH A MINIMUM SLOPE OF 0.50%.

LEGEND

- STORM SEWER INLET
- DRAINAGE CULVERT OR PIPE
- PROJECT LIMIT

Structure Table

Structure Name	Structure Details
EX MH	TOP = 330.87
EX SMH	TOP = 331.98
MH-1	TOP = 335.88
MH-2	TOP = 336.02
PD-A1	TOP = 350.15
PD-A2	TOP = 350.15
PD-A3	TOP = 350.00
PD-A4	TOP = 350.00
PD-A5	TOP = 350.00
PD-A6	TOP = 350.00
PD-A7	TOP = 350.00
PD-A8	TOP = 350.15
PD-A9	TOP = 350.15
PD-A10	TOP = 350.00
PD-A11	TOP = 349.98
PD-A12	TOP = 349.98
PD-A13	TOP = 349.98
PD-A14	TOP = 350.10
PD-A15	TOP = 350.10
PD-A16	TOP = 350.15

Structure Table

Structure Name	Structure Details
PD-A17	TOP = 350.15
PD-A18	TOP = 350.10
PD-A19	TOP = 350.10
PD-A20	TOP = 350.18
PD-A21	TOP = 350.18
PD-A22	TOP = 350.18
PD-A23	TOP = 350.18
PD-A24	TOP = 350.18
PD-A25	TOP = 350.33
PD-A26	TOP = 350.32
PD-A27	TOP = 350.15
PD-A28	TOP = 350.18
PD-A29	TOP = 350.18
PD-A30	TOP = 350.18
PD-A31	TOP = 350.39
PD-A32	TOP = 350.37
PD-A33	TOP = 350.15
PD-A34	TOP = 350.15
PD-A35	TOP = 350.24
PD-A37	TOP = 350.35

Structure Table

Structure Name	Structure Details
PD-A38	TOP = 350.25
PD-A39	TOP = 350.40
PD-A41	TOP = 350.32
PD-A42	TOP = 350.15
PD-A43	TOP = 350.20
PD-A45	TOP = 350.16
PD-A46	TOP = 350.15
PD-A47	TOP = 350.10
PD-A48	TOP = 350.15
PD-A49	TOP = 350.10
PD-A50	TOP = 350.20
PD-A51	TOP = 350.10
PD-A52	TOP = 350.15
PD-A53	TOP = 350.10
PD-A54	TOP = 350.15
PD-A55	TOP = 350.20
PD-A56	TOP = 350.25
PD-A57	TOP = 350.25
PD-A58	TOP = 350.48
PD-A59	TOP = 351.56

Structure Table

Structure Name	Structure Details
PD-A60	TOP = 350.28
PD-A61	TOP = 350.15
PD-A62	TOP = 350.25
PD-A63	TOP = 350.42
PD-A64	TOP = 351.81
PD-A65	TOP = 350.34
PD-A66	TOP = 350.15
PD-A67	TOP = 350.00
PD-A68	TOP = 350.10
PD-A69	TOP = 350.20
PD-A70	TOP = 350.20
PD-K1	TOP = 350.00
PD-K2	TOP = 350.00
PD-K3	TOP = 350.00
PD-K4	TOP = 350.00
PD-K5	TOP = 349.95
PD-K6	TOP = 350.10
PD-K7	TOP = 350.20
PD-K8	TOP = 350.20
PD-K9	TOP = 350.10

Structure Table

Structure Name	Structure Details
PD-K10	TOP = 350.10
PD-K11	TOP = 350.10
PD-K17	TOP = 350.25
PD-K18	TOP = 350.25
PD-K19	TOP = 350.20
PD-K20	TOP = 350.20
PD-K21	TOP = 350.20
PD-K22	TOP = 350.13
PD-K23	TOP = 350.13
PD-K24	TOP = 350.13
PD-K25	TOP = 350.13
PD-K26	TOP = 350.13
PD-K27	TOP = 350.13
PLAZA	TOP = 330.20
YD-K12	TOP = 350.40
YD-K13	TOP = 350.55
YD-K14	TOP = 350.59
YD-K15	TOP = 350.65
YD-K16	TOP = 350.68
YD-K28	TOP = 350.57

Structure Table

Structure Name	Structure Details
YD-K29	TOP = 350.58
YD-K30	TOP = 350.94
YD-K31	TOP = 350.45

1	Addenda 3 09.15.2025		

AS-BUILT REVISIONS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL J. MARC KUROWSKI ENGINEER No. 052032-E

PROFESSIONAL'S SIGNATURE DATE

K&W DESIGNING ENVIRONMENTS

2201 North Front Street, Suite 200
Harrisburg, PA 17110
P: 717.635.2835
www.kandwengineers.com

0 10 20 40
SCALE: 1" = 20'

VERIFY SCALE

BAR IS ONE (1) INCH LONG ON ORIGINAL DRAWING:

0 1

IF BAR IS NOT ONE (1) INCH LONG, ADJUST SCALE ACCORDINGLY

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS. VARIANCE FROM CONTRACT DOCUMENTS NOT PERMITTED WITHOUT PROFESSIONAL & BUREAU OF CONSTRUCTION APPROVAL

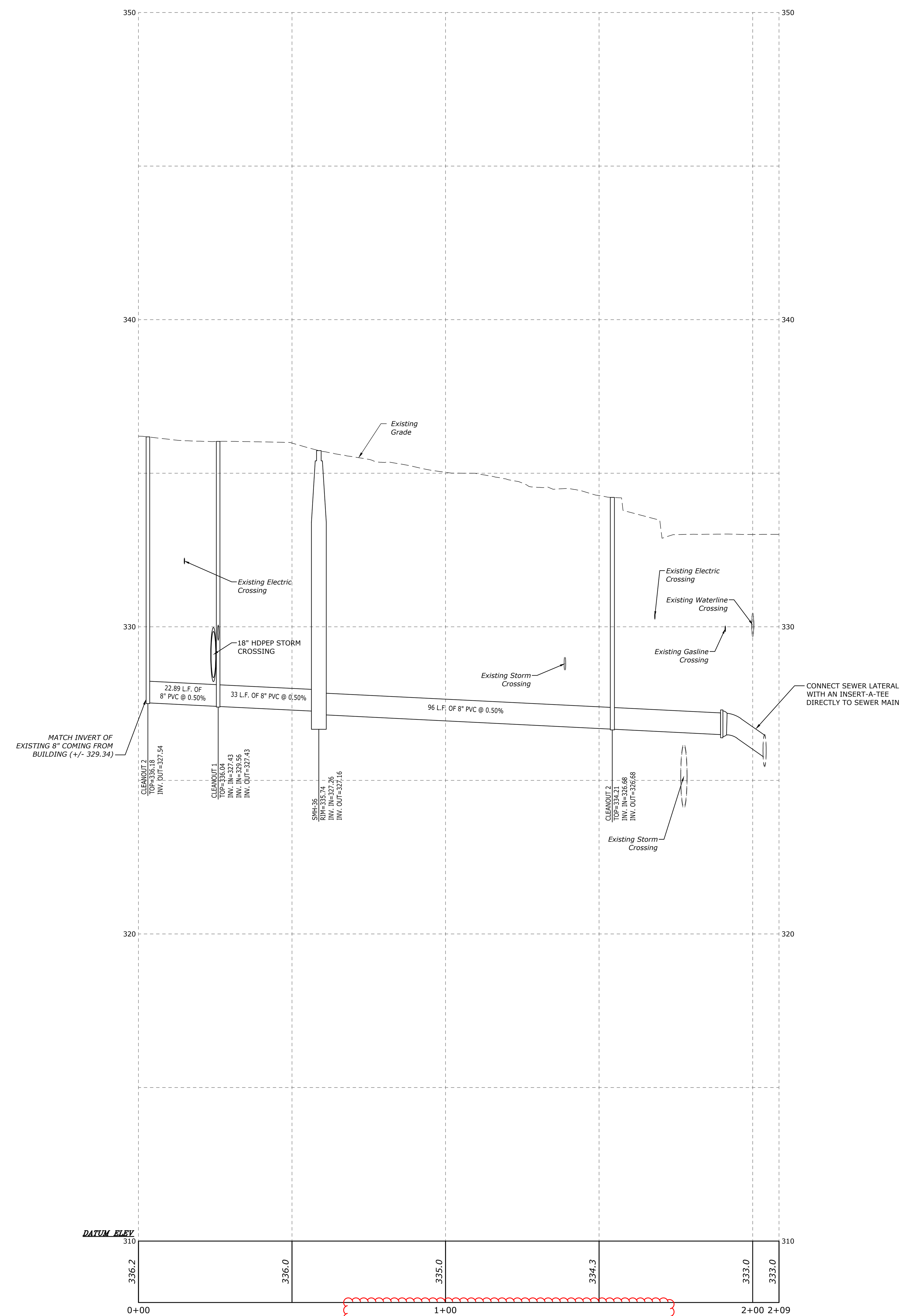
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES
HARRISBURG, PENNSYLVANIA

D.G.S. PROJECT No. **DGS 948-87 PHASE 1**

PLAZA PAVER REPAIR / REPLACMENT
PA STATE MUSEUM,
THE CAPITOL COMPLEX
HARRISBURG, DAUPHIN COUNTY, PA

UTILITY PLAN

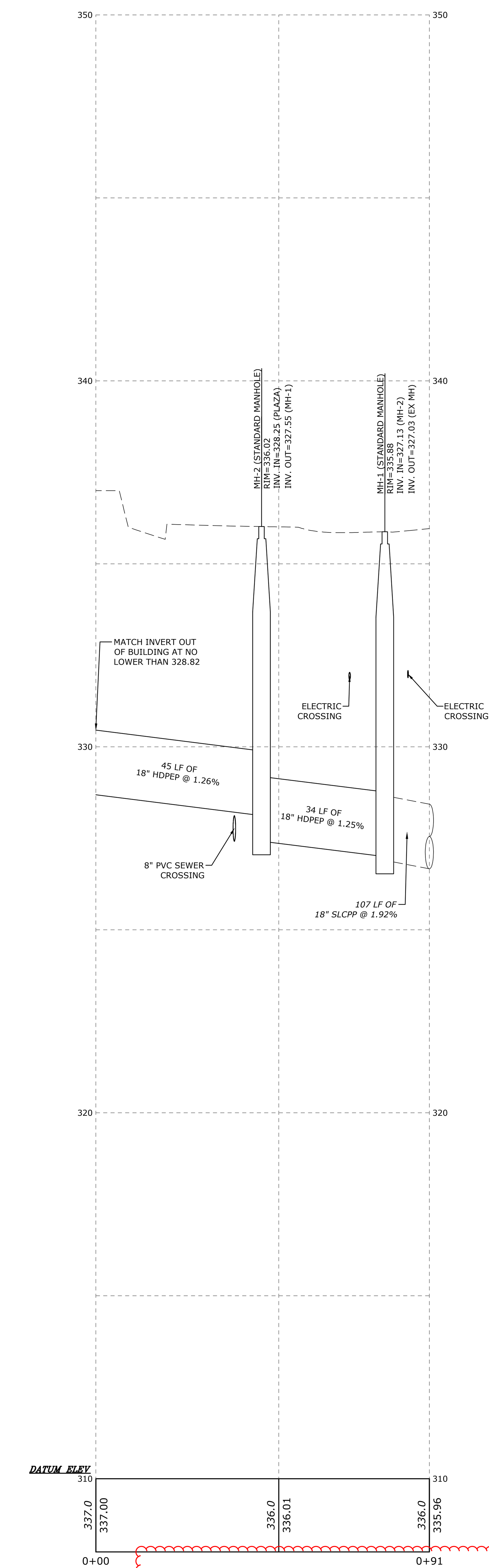
DRAWN BY	DATE	DRAWING NO.
HAB	11/08/2024	C-104
CHECKED BY	SCALE	
JLL	PER DWG	



SANITARY SEWER (BASE BID 3)

HORZ. SCALE: 1"=20'
VERT. SCALE: 1"= 2'

AD3



STORM SEWER (BASE BID 2)

HORZ. SCALE: 1"=20'
VERT. SCALE: 1"= 2'

AD3

GRAPHIC SCALE

HORIZONTAL

0 10 20 40

SCALE: 1" = 20'

VERTICAL

0 1 2 4

SCALE: 1" = 2'

VERIFY SCALE

BAR IS ONE (1) INCH LONG ON ORIGINAL DRAWING:

0 1

IF BAR IS NOT ONE (1) INCH LONG, ADJUST SCALE ACCORDINGLY

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS. VARIANCE FROM CONTRACT DOCUMENTS NOT PERMITTED WITHOUT PROFESSIONAL & BUREAU OF CONSTRUCTION APPROVAL

1	Addenda 3 09.15.2025		

AS-BUILT REVISIONS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL J. MARC KUROWSKI ENGINEER No. 052032-E

PROFESSIONAL'S SIGNATURE DATE

K&W
DESIGNING ENVIRONMENTS
2201 North Front Street, Suite 200
Harrisburg, PA 17110
P: 717.635.2835
www.kandwengineers.com

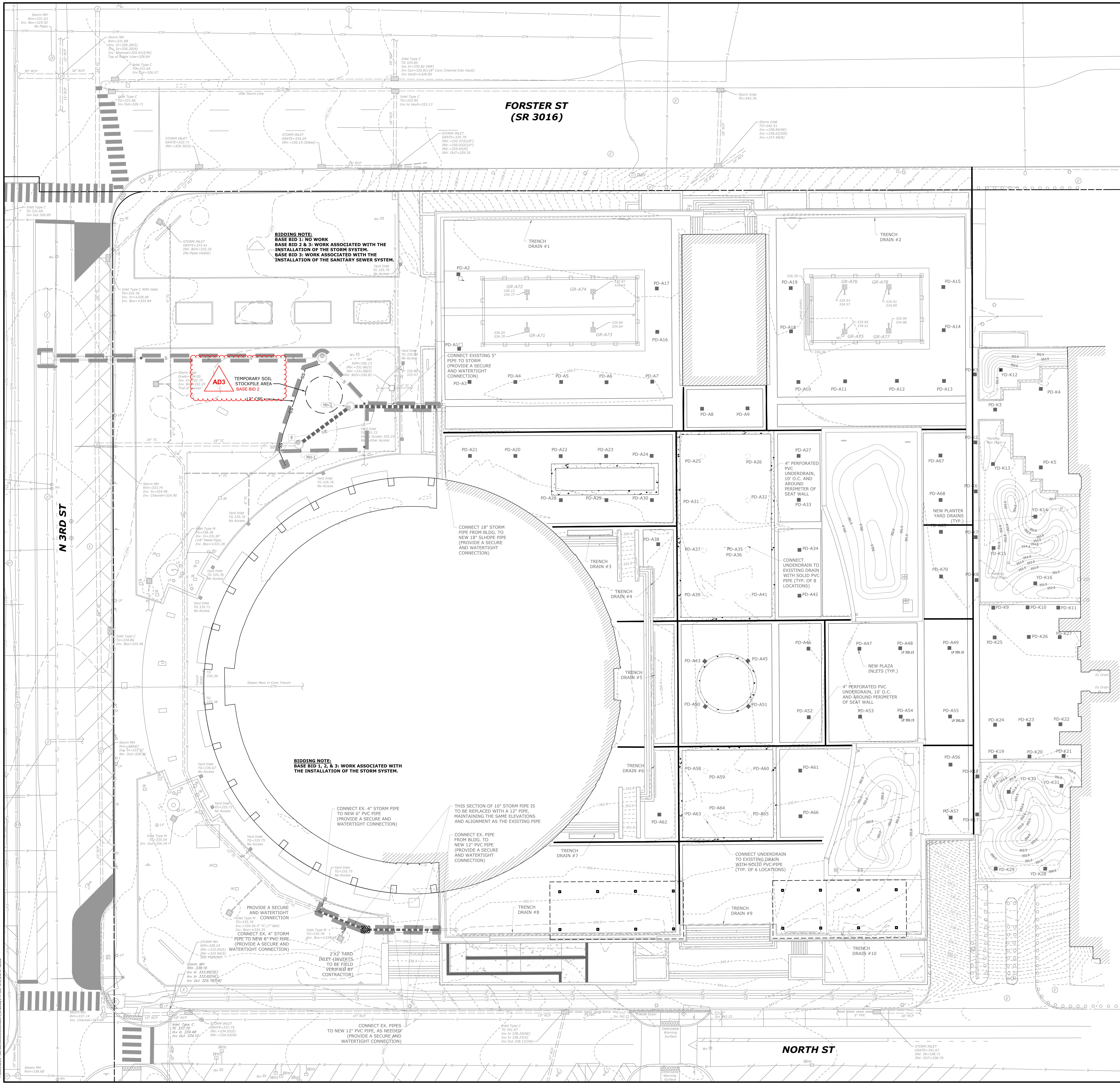
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES
HARRISBURG, PENNSYLVANIA

D.G.S. PROJECT No. **DGS 948-87 PHASE 1**

PLAZA PAVER REPAIR / REPLACMENT
PA STATE MUSEUM,
THE CAPITOL COMPLEX
HARRISBURG, DAUPHIN COUNTY, PA

PROFILES

DRAWN BY	DATE	DRAWING NO.
HAB	11/08/2024	C-301
CHECKED BY	SCALE	
JLL	PER DWG	



GENERAL E&S NOTES

1. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE DAUPHIN COUNTY CONSERVATION DISTRICT SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE DISTRICT MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.

2. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION AND NOTIFY THE DAUPHIN COUNTY CONSERVATION DISTRICT.

3. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG OR EQUIVALENT SEDIMENT REMOVAL FACILITY, OVER UNDISTURBED VEGETATED AREAS.

4. FAILURE TO CORRECTLY INSTALL E&S BMPS, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE EARTH DISTURBANCE ACTIVITY, OR FAILURE TO TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMPS MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE DEPARTMENT AS DEFINED IN SECTION 602 OF THE PENNSYLVANIA CLEAN STREAMS LAW. THE CLEAN STREAMS LAW PROVIDES FOR UP TO $10,000 PER DAY IN CIVIL PENALTIES, UP TO $10,000 IN SUMMARY CRIMINAL PENALTIES, AND UP TO $25,000 IN MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOLATION.

5. DURING CONSTRUCTION, THE CONTRACTOR IS TO MAKE CERTAIN ALL RUNOFF IS DIRECTED TO THE SEDIMENT CONTROL DEVICES. EROSION AND SEDIMENT BMPS MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMPS.

6. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPS MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE BMPS MUST BE STABILIZED IMMEDIATELY.

7. EROSION AND SEDIMENT BMPS MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMPS.

8. IN ALL CASES DURING CONSTRUCTION, THE AREA OF DISTURBANCE SHOULD BE MINIMIZED.

9. UPON GENERAL COMPLETION OF THE SITE IMPROVEMENTS, TOPSOIL SHALL BE REPLACED TO A MINIMUM DEPTH OF 6" AND FINAL GRADING PASSES SHALL BE MADE PERPENDICULAR TO THE DIRECTION OF RUNOFF.

10. RESEED AND REESTABLISH ANY BARREN AND DISTURBED AREAS NOT HAVING ESTABLISHED GROUND COVER.

11. ANY DISTURBED AREA MUST BE STABILIZED IMMEDIATELY. IF THE AREA IS EXPECTED TO BE DISTURBED AGAIN DURING THE CONSTRUCTION PROCESS, THE TEMPORARY SEED MIXTURE MAY BE UTILIZED. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE RECOMMENDED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN 1 YEAR MAY BE STABILIZED IN ACCORDANCE WITH TEMPORARY SEEDING SPECIFICATIONS. DISTURBED AREAS WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE REDISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH PERMANENT SEEDING SPECIFICATIONS.

12. THE CONTRACTOR MUST COMPLY WITH ALL REQUIREMENTS OF THE SITE'S NPDES PERMIT.

13. IN ALL CASES, CARE SHOULD BE TAKEN TO PREVENT THE ENTRY OF SOIL, STONE, OR OTHER MATERIALS AND REFUSE INTO EXISTING DRAINAGE PIPES AND SWALES, AS WELL AS WETLAND AREAS ON THE SITE.

14. THE CONTRACTOR SHALL BE COGNIZANT OF APPROPRIATE SEASONS FOR PLANTING GRASS SEED MIXTURES, AND PLAN HIS CONSTRUCTION SCHEDULE TO APPROPRIATELY UTILIZE THE BEST TIMES OF THE YEAR FOR GERMINATION OF THE SEED AND STABILIZATION OF THE SITE.

15. WHEREVER THE TERM "SEEDING" IS MENTIONED IN THE CONSTRUCTION SEQUENCE OR IN THE EROSION AND SEDIMENT POLLUTION CONTROL PLAN, THE TERM MEANS THE ENTIRE SOIL PREPARATION, SEEDING, AND MULCHING PROCESS.

16. SEDIMENT AND SOIL MATERIAL THAT IS REMOVED FROM CLOGGED OR FULL BMPS SHALL BE DISPOSED OF BY THOROUGHLY MIXING WITH OTHER SUITABLE FILL MATERIALS ON THE PROJECT SITE, AND INCORPORATED INTO FILL IN UPLAND AREAS OF THE PROJECT SITE. THE FILL AREA AND OTHER DISTURBED AREAS SHALL BE STABILIZED IN ACCORDANCE WITH THE EROSION AND SEDIMENT POLLUTION CONTROL PLAN. IN NO CASE SHALL THE SEDIMENT OR "WASTE" SOIL MATERIAL BE CARELESSLY DUMPED OR OTHERWISE PLACED IN A MANNER THAT CAUSES THE MATERIAL TO AGAIN BE ERODED AND TRANSPORTED BY RUNOFF, EITHER ON OR OFF THE PROJECT SITE.

24. ALL BUILDING MATERIALS AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1., AND 287.1 ET SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.

25. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REMOVAL OF ANY EXCESS MATERIAL AND MAKE SURE SITE(S) RECEIVING THE EXCESS HAS AN APPROVED EROSION AND SEDIMENT CONTROL PLAN THAT MEETS THE CONDITIONS OF CHAPTER 102 AND/OR OTHER STATE OR FEDERAL REGULATIONS.

26. CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE.).

27. ANY PLACEMENT OF CLEAN FILL THAT HAS BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE MUST USE FORM FP-001 TO CERTIFY THE ORIGIN OF THE FILL MATERIAL AND THE RESULTS OF THE ANALYTICAL TESTING TO QUALIFY THE MATERIAL AS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE OWNER OF THE PROPERTY RECEIVING THE FILL.

28. ENVIRONMENTAL DUE DILIGENCE MUST BE PERFORMED TO DETERMINE IF THE FILL MATERIALS ASSOCIATED WITH THE PROJECT QUALIFY AS CLEAN FILL. ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS: INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OR RELEASE OF A REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT'S POLICY "MANAGEMENT OF CLEAN FILL."

SEED MIXTURES

TEMPORARY SEED MIXTURE

TEMPORARY SEEDING SHALL CONSIST OF ANNUAL RYEGRASS (100% BY WEIGHT), OR EQUIVALENT, AND SHALL BE PLACED AT THE RATE OF 40 POUNDS PER ACRE; PURITY: 95%; GERMINATION: 85%. TEMPORARY SEEDING SHALL BE APPLIED TO DISTURBED AREAS THAT ARE TO BE REDISTURBED LATER IN THE CONSTRUCTION PROCESS.

PERMANENT SEED MIXTURE

TURF TYPE TALL FESCUE SHALL BE APPLIED AT A RATE OF 21.0 POUNDS PER 1,000 SY. 80% MIN. GERMINATION; MIN. PURITY 98%. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, PERMANENT STABILIZATION SHOULD BE CONDUCTED DURING THE GERMINATING SEASONS, WHICH TYPICALLY OCCUR IN THE SPRING (APRIL/MAY) AND FALL (MID-AUGUST/MID-OCTOBER).

MULCH SPECIFICATIONS

ON ALL DISTURBED AREAS WHICH DO NOT HAVE AN EROSION CONTROL BLANKET SPECIFIED FOR INSTALLATION, STRAW MULCH SHALL BE APPLIED AT THE RATE OF 3.0 TONS PER ACRE IMMEDIATELY AFTER SEEDING THE SURFACE. ON STEEP SLOPES OF 3:1 OR GREATER, MULCH SHALL BE ANCHORED THROUGH THE USE OF JUTE NETTING OR MIXING WITH ASPHALT AT THE RATE OF 100 GALLONS PER 3 TONS OF STRAW MULCH.
SOIL AMENDMENTS SPECIFICATIONS

APPLY THE FOLLOWING SOIL SUPPLEMENTS PRIOR TO TEMPORARY AND PERMANENT SEEDING:

A) PULVERIZED AGRICULTURAL LIMESTONE CONFORMING TO PENN D.O.T. FORM 408, SECTION 804, APPLIED AT A RATE OF 800 POUNDS PER 1,000 SQUARE YARDS.
B) 10-20-20 ANALYSIS COMMERCIAL FERTILIZER CONFORMING TO PENN D.O.T. FORM 408, SECTION 804, APPLIED AT A RATE OF 140 POUNDS PER 1,000 SQUARE YARDS.
C) 38-0-0 UREAFORM SLOW-RELEASE NITROGEN FERTILIZER CONFORMING TO PENN D.O.T. FORM 408, SECTION 804, APPLIED AT A RATE OF 50 POUNDS PER 1,000 SQUARE YARDS.

STABILIZATION SPECIFICATIONS

1. UPON TEMPORARY CESSATION OF AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OR PHASE OF AN ACTIVITY WHERE A CESSATION OF EARTH DISTURBANCE ACTIVITIES WILL EXCEED 4 DAYS, THE SITE SHALL BE IMMEDIATELY SEEDED, MULCHED, OR OTHERWISE PROTECTED FROM ACCELERATED EROSION AND SEDIMENTATION PENDING FUTURE EARTH DISTURBANCE ACTIVITIES.
2. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.
3. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN DRAWINGS IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. TOPSOIL STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SIDE SLOPES MUST BE 2:1 OR FLATTER.
4. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES - 6 TO 12 INCHES ON COMPACTED SOILS - PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 4 INCHES OF TOPSOIL.
5. TOPSOIL SHOULD NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET, OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION. COMPACTED SOILS SHOULD BE SCARIFIED 6 TO 12 INCHES ALONG CONTOUR WHENEVER POSSIBLE PRIOR TO SEEDING.
6. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE OPERATOR SHALL STABILIZE THE DISTURBED AREAS. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
7. AN EROSION CONTROL BLANKET WILL BE INSTALLED ON ALL DISTURBED SLOPES 3:1 OR STEEPER, ALL AREAS OF CONCENTRATED FLOWS, AND DISTURBED AREAS WITHIN 50' OF A SURFACE WATER.

LEGEND

PROPOSED E&S CONTROL PLAN FEATURES

- LIMIT OF DISTURBANCE
- SOIL MATERIAL STOCKPILE
- SS — SS SILT SOCKS
- INLET PROTECTION

MAINTENANCE PROGRAM

1. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT CONTROL BMPS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT CONTROL BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEANOUT, REPAIR, REPLACEMENT, RE-GRADING, RESEEDING, RE-MULCHING AND RE-NETTING MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
2. ANY SEDIMENT REMOVED FROM BMPS DURING CONSTRUCTION WILL BE RETURNED TO UPLAND AREAS ON SITE AND INCORPORATED INTO THE SITE GRADING.
3. A LOG SHOWING THE DATES THAT E&S BMPS WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THAT THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO THE YORK COUNTY CONSERVATION DISTRICT OR OTHER REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.

LONG TERM OPERATION & MAINTENANCE SCHEDULE

1. ALL WASTES AND MATERIALS DEPOSITED IN AND REMOVED FROM POST-CONSTRUCTION STORMWATER MANAGEMENT (PCSM) BMP FACILITIES AND FROM IMPERVIOUS AREAS (EX. SWEEPING OF STREETS & PARKING LOTS) DURING OPERATION AND MAINTENANCE SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE 260.1 ET. SEW., 271.1, AND 287.1 ET. SEQ. NO WASTE MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
2. ALL EROSION AND SEDIMENTATION POLLUTION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL THE SITE HAS BEEN STABILIZED. VEGETATED AREAS ARE CONSIDERED TO BE STABILIZED WHEN A UNIFORM 70 PERCENT VEGETATIVE COVER OF EROSION RESISTANT PERENNIAL SPECIES HAS BEEN ACHIEVED, OR THE DISTURBED AREA IS COVERED WITH AN ACCEPTABLE BMP WHICH PERMANENTLY MINIMIZES ACCELERATED EROSION AND SEDIMENTATION. UNTIL SUCH TIME AS THIS STANDARD IS ACHIEVED, INTERIM STABILIZATION MEASURES AND TEMPORARY EROSION AND SEDIMENT CONTROL BMPS THAT ARE USED TO TREAT PROJECT RUNOFF MAY NOT BE REMOVED. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT CONTROL BMPS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT CONTROL BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEANOUT, REPAIR, REPLACEMENT, RE-GRADING, RESEEDING, RE-MULCHING AND RE-NETTING MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.

SEQUENCE OF CONSTRUCTION

- THIS SEQUENCE IS INTENDED AS A GUIDELINE IN ORDER TO MINIMIZE EROSION DURING THE CONSTRUCTION PROCESS.
- ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED AND IMMEDIATELY STABILIZED BEFORE ANY FOLLOWING STAGE IS INITIATED, EXCEPT WHERE NOTED. CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE.
- IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES (BMPS) TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER NON-DISTURBED AREAS.
- THE CONTRACTOR IS RESPONSIBLE FOR KEEPING THE PUBLIC ROAD OR SIDEWALK FREE OF ALL MUD FROM CONSTRUCTION AND DELIVERY VEHICLES. AFTER EACH VEHICLE LEAVES THE SITE, ALL SEDIMENT DEPOSITED ON PUBLIC ROADWAYS MUST BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORKDAY. THE CONTRACTOR IS TO TAKE GREAT CARE TO PREVENT SEDIMENT TRACKING. STABILIZED ROCK CONSTRUCTION ENTRANCES SHALL BE INSTALLED WHEREVER IT IS KNOWN THAT CONSTRUCTION VEHICLES WILL BE EXITING ONTO A ROADWAY (PUBLIC OR PRIVATE). THE CONTRACTOR SHALL CONSTRUCT A STABILIZED ROCK CONSTRUCTION ENTRANCE WHEREVER NEEDED, EVEN IF NOT SPECIFICALLY IDENTIFIED ON THE PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED, OR SWEPT INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.
- AT LEAST SIXTY (60) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES, THE LANDOWNER, ALL APPROPRIATE CITY OFFICIALS, AND THE EROSION AND SEDIMENT CONTROL PLAN PREPARER, TO AN ON-SITE PRE-CONSTRUCTION MEETING. CONTACT MICAELA SWART AT (717) 216.5235 TO SCHEDULE A MEETING.
- AT LEAST THREE (3) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INCORPORATED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
  1. FIELD MARK LIMIT OF DISTURBANCE AS SHOWN ON THE PLAN.
  2. INSTALL SILT SOCK AS SHOWN ON THE PLANS.
  3. PERFORM CLEARING AND GRUBBING, AND DEMOLITION WORK, AS REQUIRED.
  4. STRIP TOPSOIL AND STOCKPILE AT THE TEMPORARY AREA PROVIDED, SURROUND WITH COMPOST FILTER SOCK AND SEED PER TEMPORARY SEEDING SPECIFICATIONS, FERTILIZE AND MULCH.
  5. INSTALL SITE UTILITIES (E.G., SANITARY, STORM, ETC.) BEGINNING AT THE DOWNSTREAM CONNECTIONS AND WORKING UPSTREAM. EXCAVATION OF TRENCHES SHALL BE LIMITED TO THE AMOUNT OF STRUCTURES AND PIPES THAT CAN BE INSTALLED DURING ONE DAYS WORK. PLACE ALL EXCAVATED MATERIAL ON THE UPSLOPE SIDE OF THE TRENCH. IMMEDIATELY BACKFILL AND STABILIZE TRENCHES. ALL UTILITY CONSTRUCTION INCLUDES TRENCHING, BACKFILLING, AND APPLYING FINAL STABILIZATION. DO NOT LEAVE ANY TRENCHES OPEN AT THE END OF THE WORK DAY. ALL AREAS SHALL BE IMMEDIATELY STABILIZED AND, IF NEEDED, TEMPORARY DIVERSION MEASURES UTILIZED TO MINIMIZE THE AMOUNT OF SEDIMENT REACHING THEM. INSTALL INLET PROTECTION WHERE NEEDED. REPAIR OR REPLACE THE SILT SOCK AS NEEDED IN THE AREAS WHERE THE PROPOSED STORM INSTALLATIONS WILL CROSS THE SILT SOCK.
  6. PERFORM FINAL GRADING, PAVING, LANDSCAPING, ETC.
  7. AS SOON AS AREAS OF THE SITE ARE AT FINISHED GRADE, APPLY TOPSOIL WITH PERMANENT SEEDING TO ALL AREAS DESIGNATED TO REMAIN AS LANDSCAPE OR GRASS. IF NEEDED, IMPORT TOPSOIL AND APPLY THE MINIMUM REQUIRED DEPTH TO ESTABLISH PERMANENT VEGETATION. SEED, FERTILIZE, AND MULCH EXPOSED OR DISTURBED AREAS.
- AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED AND APPROVED, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES FROM THE SITE. ALL AREAS DISTURBED DURING THE REMOVAL OR CONVERSION OF EROSION AND SEDIMENT CONTROL MEASURES MUST BE STABILIZED IMMEDIATELY.

1	Addenda 3 09.15.2025		

AS-BUILT REVISIONS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL J. MARC KUROWSKI ENGINEER No. 052032-E

PROFESSIONAL'S SIGNATURE DATE

K&W DESIGNING ENVIRONMENTS
2201 North Front Street, Suite 200
Harrisburg, PA 17110
P: 717.635.2835
www.kandwengineers.com

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES
HARRISBURG, PENNSYLVANIA

D.G.S. PROJECT No. **DGS 948-87 PHASE 1**

PLAZA PAVER REPAIR / REPLACMENT
PA STATE MUSEUM,
THE CAPITOL COMPLEX
HARRISBURG, DAUPHIN COUNTY, PA

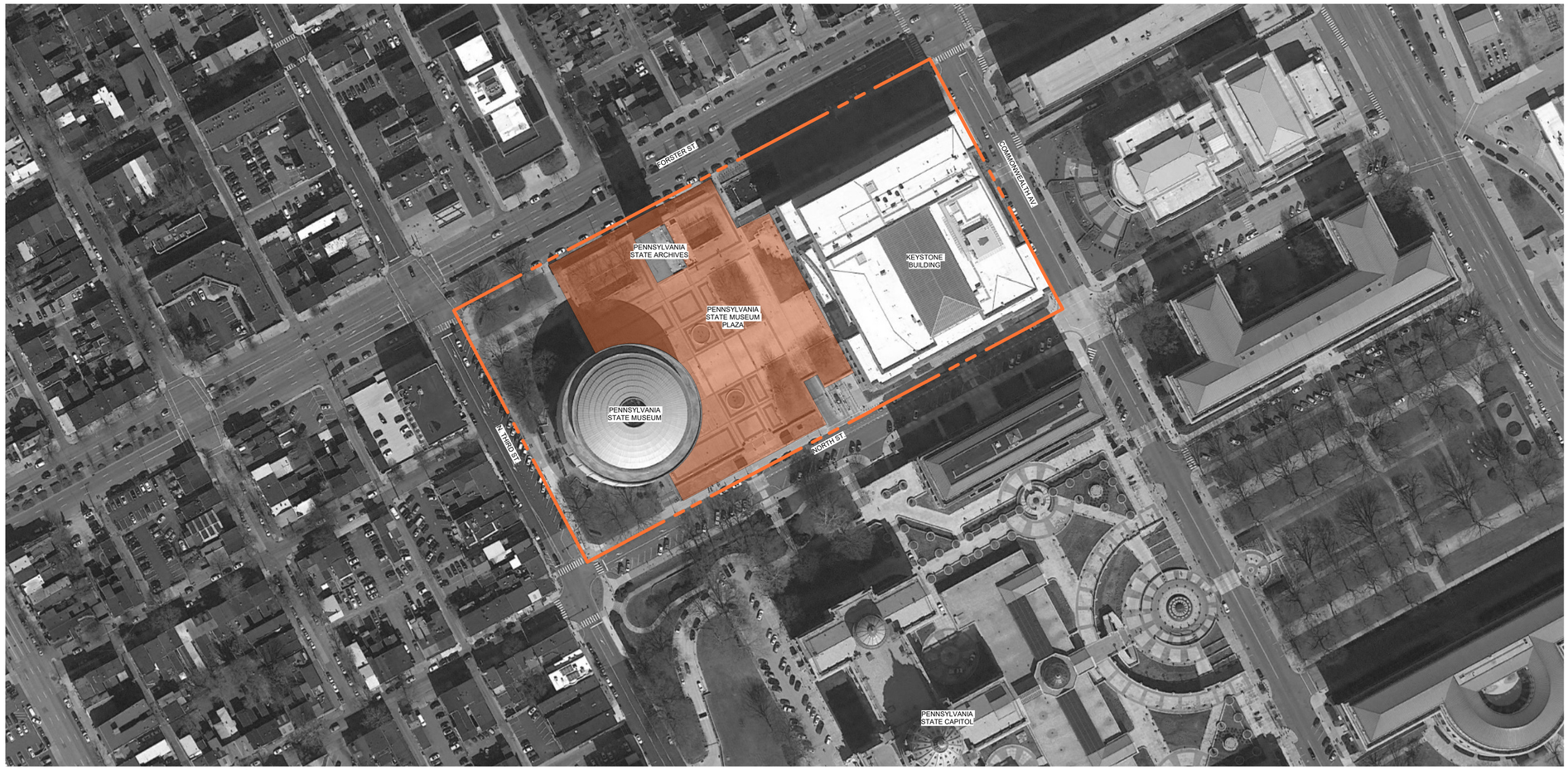
EROSION AND SEDIMENTATION CONTROL PLAN

VERIFY SCALE

BAR IS ONE (1) INCH LONG ON ORIGINAL DRAWING:
0 1
IF BAR IS NOT ONE (1) INCH LONG, ADJUST SCALE ACCORDINGLY

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS. VARIANCE FROM CONTRACT DOCUMENTS NOT PERMITTED WITHOUT PROFESSIONAL & BUREAU OF CONSTRUCTION APPROVAL

DRAWN BY	DATE	DRAWING NO.
HAB	11/08/2024	C-701
CHECKED BY: JLL	SCALE: PER DWG	



1 / CS2 LOCATION MAP
SCALE: 1" = 80'-0"

0 80' 0"

ABBREVIATIONS

A/C	AIR CONDITIONING
ACT	ACOUSTIC CEILING TILE
AHU	AIR HANDLING UNIT
ALUM	ALUMINUM
@	AT
BSMT	BASEMENT
BITUM	BITUMINOUS
BD	BOARD
BLDG	BUILDING
BOD	BASIS-OF-DESIGN
CLG	CEILING
CL	CENTER LINE
CMU	CONCRETE MASONRY UNIT
CONC	CONCRETE
CJ	CONTROL JOINT
CT	CERAMIC TILE
DIM	DIMENSION
DN	DOWN
DWG	DRAWING
DF	DRINKING FOUNTAIN
DS	DOWNSPOUT
EJ	EXPANSION JOINT
ELEC	ELECTRICAL
ELEV	ELEVATOR
EO	EDGE OF
EQUIP	EQUIPMENT
EXIST	EXISTING
ETR	EXISTING TO REMAIN
FIN	FINISH
FE	FIRE EXTINGUISHER
FD	FLOOR DRAIN
FFE	FINISH FLOOR ELEVATION
FL	FLOOR
FO	FACE OF
FRP	FIBERGLASS REINFORCED PANEL
FT	FOOT
GBC	GYPSUM BOARD CEILING
GWB	GYPSUM WALL BOARD
GYP	GYPSUM
HVAC	HEATING/VENTILATION, AIR CONDITIONING
HT	HEIGHT
HM	HOLLOW METAL
HORIZ	HORIZONTAL
INSUL	INSULATION
INT	INTERIOR
JC	JANITOR CLOSET
LAV	LAVATORY
LH	LEFT HAND
LVT	LUXURY VINYL TILE
MO	MASONRY OPENING
MTL	METAL
MAX	MAXIMUM
MECH	MECHANICAL
MDF	MEDIUM DENSITY FIBERBOARD
MIN	MINIMUM
MISC	MISCELLANEOUS
NIC	NOT IN CONTRACT
NO. OR #	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OPNG	OPENING
PLAM	PLASTIC LAMINATE
PMMA	POLYMETHYL METHACRYLATE
PTD	PAINTED
REFRIG	REFRIGERATOR
REINF	REINFORCED
RH	RIGHT HAND
RM	ROOM
RWB	RUBBER WALL BASE
SCHED	SCHEDULE
SGT	STRUCTURAL GLAZED TILE
SHT	SHEET
SIM	SIMILAR
SPEC	SPECIFICATION
STD	STANDARD
STL	STEEL
SS	STAINLESS STEEL
STOR	STORAGE
SUSP	SUSPENDED
TBD	TO BE DETERMINED
TOS	TOP OF SLAB/STEEL
THK	THICK
TYP	TYPICAL
TOJ	TOP OF JOIST
UNO	UNLESS NOTED OTHERWISE
VCT	VINYL COMPOSITE TILE
VIF	VERIFY IN FIELD
VWB	VINYL WALL BASE
W/	WITH
W/O	WITHOUT
WB	WOOD BASE
WC	WATER CLOSET
WD	WOOD
WIP	WORK IN PROGRESS

SYMBOL LEGEND

NORTH ARROW	WALLS	OR	EXISTING
1 / A101 ENLARGED PLAN / DETAIL	WALLS TO BE DEMOLISHED		
LEVEL 10' - 0" LEVEL	NEW DOOR		NEW
10' - 0" SPOT ELEVATION	EXISTING DOOR		COMPACT SUBGRADE
1 / A101 SECTION	DOOR TO BE DEMOLISHED		CONCRETE
A101 / 1 EXTERIOR ELEVATION	A COLUMN LINE / GRID INDICATOR		CMU
1 / A101 / 2 INTERIOR ELEVATION	1 WALL TYPE		BRICK
1 STATION POINT	1 WINDOW TYPE		RIGID INSULATION
ROOM NAME 101 150 SF ROOM NAME, NUMBER & AREA	1 ACCESSORY TAG		BATT INSULATION
D1.1 DEMOLITION KEY NOTE	101 DOOR NUMBER		ROUGH WOOD
1 REVISION	12 / 6 ROOF SLOPE		PLYWOOD
℄ CENTERLINE			FINISHED WOOD

GENERAL NOTES

1. THE WORK INCLUDES THE FURNISHING OF ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES NECESSARY FOR AND REASONABLY INCIDENTAL TO THE COMPLETION IN PLACE OF ALL WORK AS ILLUSTRATED AND DESCRIBED ON THE DRAWINGS AS PREPARED BY CHRIS DAWSON ARCHITECT.

2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS SHOWN ON THE DRAWINGS AT THE JOB SITE AND SHALL NOTIFY THE ARCHITECT OF ANY OMISSIONS, DISCREPANCIES, AND/OR CONFLICTS PRIOR TO CONSTRUCTION/INSTALLATION. INTERIOR DIMENSIONS ARE TO FACE OF GYPSUM WALLBOARD, FACE OF CMU OR FACE OF EXISTING FINISH WHERE APPLICABLE.

3. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLETE THIS PROJECT IN COMPLIANCE WITH AMERICANS WITH DISABILITIES ACT AND ALL CITY, STATE AND LOCAL CODES, INCLUDING THE PREPARATION AND APPROVAL BY LOCAL AUTHORITIES OF ALL MECHANICAL, ELECTRICAL, PLUMBING, FIRE ALARM SYSTEM, SPRINKLER PLANS AND SPECIFICATIONS.

4. CONTRACTOR SHALL OBTAIN FULL AND COMPLETE WARRANTIES FOR ALL HVAC, ELECTRICAL AND PLUMBING EQUIPMENT FROM THE CONTRACTOR PROVIDING SAID SERVICES. WARRANTIES WILL REMAIN IN EFFECT A MINIMUM OF ONE (1) YEAR FROM SUBSTANTIAL COMPLETION DATE.

5. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND REVIEWING ALL SHOP DRAWINGS AND/OR STRUCTURAL ERECTION DRAWINGS BEFORE SUBMISSION TO THE ARCHITECT/STRUCTURAL ENGINEER.

6. NOT USED 1

7. CONTRACTOR SHALL HAVE DIRECT CONTROL AND MANAGEMENT OF ALL CONSTRUCTION OPERATIONS AND BE RESPONSIBLE FOR THE SATISFACTORY OVERALL PERFORMANCE OF HIS SUPPLIERS AND SUBCONTRACTORS AS WELL AS ALL ASSIGNED CONTRACTORS.

8. NOT USED 1

9. ALL MATERIALS USED IN CONSTRUCTION SHALL BE NEW AND OF FIRST QUALITY UNLESS OTHERWISE NOTED

10. GYPSUM WALLBOARD SHALL BE INSTALLED WITH ALL CORNER BEADS, TRIM ACCESSORIES AND MOLDING, ETC. FOR A COMPLETE INSTALLATION. GYPSUM WALLBOARD TO BE TAPED AND SANDED (READY FOR PAINT). DRYWALL CONTRACTOR TO INSTALL CONTROL JOINTS ACCORDING TO INDUSTRY STANDARDS. ALL FULL HEIGHT STEEL STUD PARTITIONS MUST INCLUDE A TOP SLIP TRACK IF WALL IS SECURED TO ROOF STRUCTURE.

11. GENERAL CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

12. GENERAL CONTRACTOR SHALL COORDINATE THE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS AND REPORT TO THE ARCHITECT ANY UNFORESEEN CONFLICTS BETWEEN THE WORK OF THE OTHER PRIME CONTRACTS.

13. ITEMS AND CONDITIONS NOTED ON DETAILS ARE APPLICABLE AND BINDING TO SIMILAR CONDITIONS ON ALL THE DRAWINGS. FOR CONDITIONS NOT NOTED OR DETAILS, CONTRACTOR SHALL PROVIDE MATERIALS OF EQUAL QUALITY AND PERFORMANCES TO OTHER SIMILAR CONDITIONS ON THE JOB.

14. WALL AND CEILING FINISHES SHALL INCLUDE PROJECTIONS, BEAM ENCLOSURES, RECESSES, BULKHEADS, PILASTERS OR OTHER ENCLOSURES.

15. ALL APPURTENANCES BUILT INTO OR THROUGH WALLS, INCLUDING DOORS, DUCTS, WINDOWS, LOUVERS, GRILLES, MECHANICAL WORKS, ETC. SHALL FIT SNUGLY AND BE THOROUGHLY SEALED AROUND PERIMETERS. WORK AT EXTERIOR WALLS SHALL BE FLASHED OR OTHERWISE WATERPROOF SEALED.

16. FIELD CHECK ROUGH AND/OR FINISHED DIMENSIONS FOR ACCURATE FITTING OF CABINETS, COUNTERS,LOCKERS, DOORS, WINDOWS, FIXTURES, SHELVING, GATES AND OTHER INSTALLATIONS PRIOR TO SHOP OR FACTORY FABRICATIONS. PROVIDE AND INSTALL NECESSARY FILLER STRIPS, SCRIBE STRIPS, BASES, CLOSURES, FINISHES AND TRIM TO COMPLETE SUCH INSTALLATIONS. PROVIDE AND INSTALL ALL NECESSARY CONCEALED BLOCKING TO SECURELY ANCHOR WALL MOUNTED FIXTURES, CABINETS, EQUIPMENT, ETC.

17. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR CLOSING-IN, SEALING AND PROTECTION OF EXISTING OR PUBLIC SPACES FROM THE WORK AREA INCLUDING NOISE, DUST AND POLLUTION CONTROL. THE CONTRACTOR SHALL MAINTAIN AT ALL TIMES ADEQUATE SAFETY BARRIERS AND CLEAR ACCESS IN AND OUT OF THE SITE AND FACILITY SO AS TO FACILITATE DAILY TRAFFIC MOVEMENT, DELIVERIES AND PUBLIC SAFETY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE AREA CLEAN FROM DEBRIS DURING CONSTRUCTION.

18. CONTRACTOR SHALL CONSULT WITH THE CLIENT AGENCY TO VERIFY THE SCOPE OF WORK; TO VERIFY CLIENT AGENCY FURNISHED ITEMS AND COORDINATE THOSE ITEMS INTO THE WORK; TO VERIFY ANY ITEMS TO BE RELOCATED; TO VERIFY ANY WORK TO BE PROVIDED BY THE CLIENT AGENCY AND COORDINATE THAT WORK INTO THE PROGRESS OF THE SCHEDULED WORK.

19. GENERAL CONTRACTOR SHALL PROVIDE BLOCKING (FIRE RATED AS REQUIRED) WITHIN WALLS FOR ALL ACCESSORIES

20. SECTIONS SHOWN ARE INTENDED TO SHOW THE SPECIFIC CONSTRUCTION WHERE INDEXED AS WELL AS ESTABLISH THE GENERAL CONSTRUCTION DETAILS FOR SECTIONS THROUGHOUT THE PROJECT WHICH DO NOT HAVE SPECIFIC SECTIONS DRAWN. THE MOST SIMILAR SECTION SHALL BE ADAPTED TO ANY SECTION NOT DETAILED. ANY SPECIFIC QUESTION CONCERNING CONSTRUCTION NOT ADEQUATELY COVERED BY THE ABOVE SHOULD BE DIRECTED TO THE ARCHITECT.

21. DECKS WITH OPENING FOR PIPES, DUCTS, CONDUIT, SLEEVES, ETC. SHALL BE SEALED AROUND THE COMPONENTS FULL THICKNESS OF THE DECK. (FIRE RATED SEALANT WHERE REQUIRED.)

22. CONSULT PLUMBING, HVAC AND ELECTRICAL DRAWINGS FOR LOCATIONS AND DESCRIPTIONS OF ACCESS PANELS, LOUVER OPENINGS, VENTILATORS, GRILLES, VALVE CABINETS, FIRE DAMPERS OR OTHER APPURTENANCES AFFECTING WALLS, CEILING OR FLOORS AND PROVIDE NECESSARY LINTELS, SUPPORT OR ANCHORING. SEE STRUCTURAL NOTES FOR LINTEL REQUIREMENTS.

23. SEAL ALL SIDES OF FRAMES ABUTTING DISSIMILAR MATERIALS; TYPICAL, CONTINUOUSLY AT HEADS,JAMBS AND SILLS (EXCEPT AT DOOR SILLS UNLESS NOTED OTHERWISE).

24. ALL MASONRY WALL PENETRATIONS TO BE SLEEVED OR CORE DRILLED. CONTRACTORS ARE RESPONSIBLE FOR SEALING ALL OF THEIR PENETRATIONS IN MASONRY WALLS.

1	Addenda 3	09/15/2025	

AS-BUILT REVISIONS

REGISTERED ARCHITECT PENNSYLVANIA CHRISTOPHER D. DAWSON RA-013137-X

09/06/2024

PROFESSIONAL'S SIGNATURE DATE

CDA
CHRIS DAWSON ARCHITECT
300 NORTH 2ND STREET, SUITE 701, HARRISBURG, PA 17101

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES
HARRISBURG, PENNSYLVANIA

D.G.S. PROJECT No.
DGS 948-87 PHASE 1

PLAZA PAVER REPAIR / REPLACMENT
PA STATE MUSEUM,
THE CAPITOL COMPLEX
HARRISBURG, DAUPHIN COUNTY, PA

GENERAL NOTES, SYMBOL LEGEND, ABBREVIATIONS

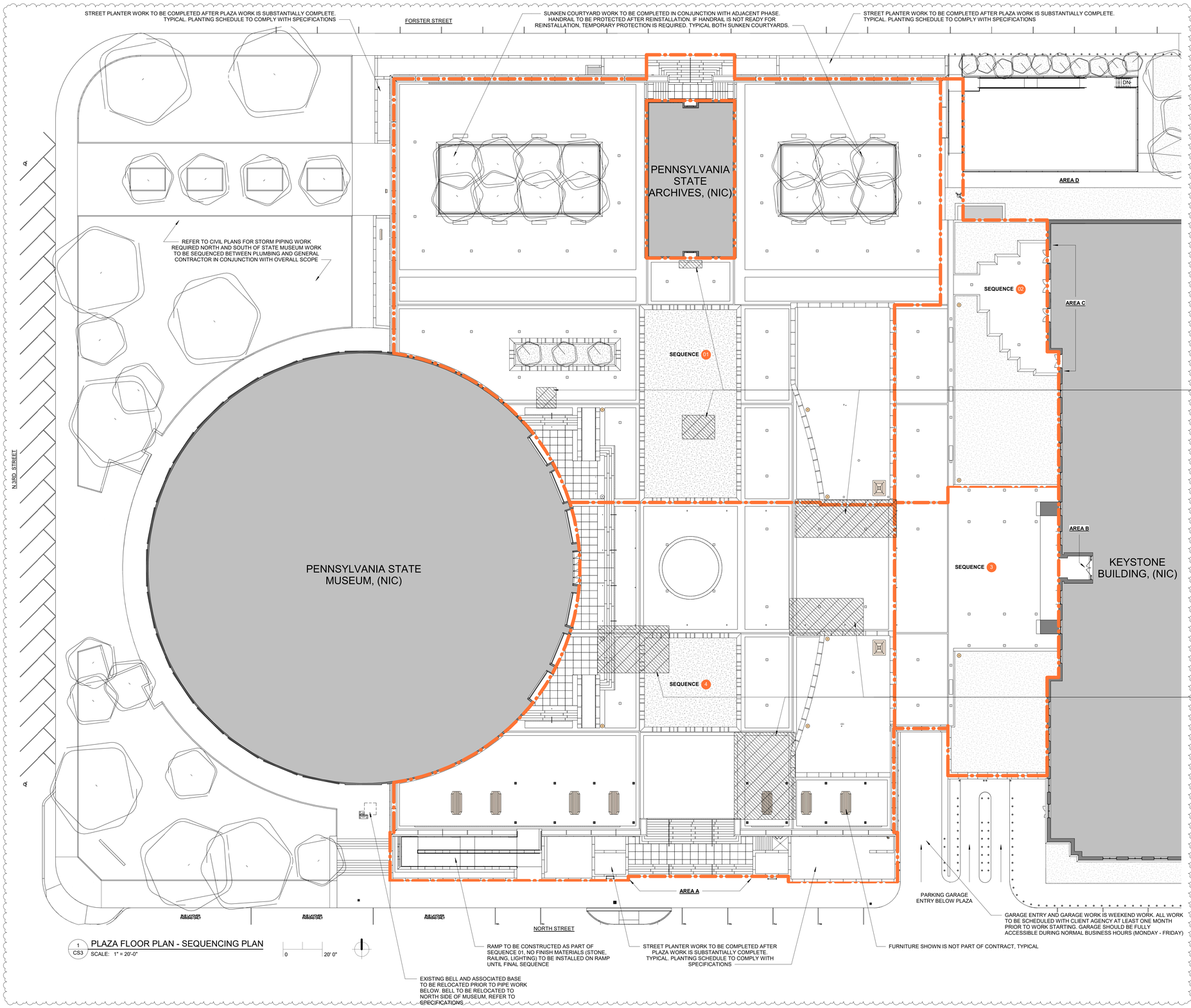
VERIFY SCALE

BAR IS ONE (1) INCH LONG ON ORIGINAL DRAWING:
0 1
IF BAR IS NOT ONE (1) INCH LONG, ADJUST SCALE ACCORDINGLY

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS. VARIANCE FROM CONTRACT DOCUMENTS NOT PERMITTED WITHOUT PROFESSIONAL & BUREAU OF CONSTRUCTION APPROVAL

DRAWN BY DS	DATE 07.29.25	DRAWING NO. CS2
CHECKED BY WE	SCALE PER DWG	

DRAWING SET IS INTENDED FOR COLOR PRINTING



1 CS3 PLAZA FLOOR PLAN - SEQUENCING PLAN
SCALE: 1" = 20'-0"

SEQUENCING NOTES

1. .1 CONTRACTOR TO COMPLETE ALL TEMPORARY PROTECTION PRIOR TO ANY WORK COMMENCING.

2. PRIOR TO WORK STARTING ON NEXT SEQUENCE, A FULL LEAK TEST SHOULD BE CONDUCTED FOR ENTIRETY OF FINISHED SEQUENCE AREA. SIGN OFF WILL BE REQUIRED FROM CLIENT AGENCY, ARCHITECT AND COMMISSIONING AGENT.

3. EXISTING GRANITE TO BE REMOVED AND STORED AS PART OF SEQUENCE 01. EXISTING HANDRAILS TO BE REMOVED. REFER TO DEMOLITION DRAWINGS.

4. WHERE SEQUENCE WORK IS ADJACENT TO EXTERIOR WALL, WATERPROOFING IS TO BE PROPERLY TURNED DOWN AND TERMINATED AS REQUIRED BY DETAILS. TEMPORARY PROTECTION REQUIRED FOR WATERPROOFING IF STONE IS NOT READY TO BE REINSTALLED. REFER TO SEQUENCES 01, 02, 03, 04, 05, 06, 09, 10, 13 AND 16.

5. BELOW PLAZA WORK SEQUENCE TO BE COMPLETED IN CONJUNCTION WITH PLAZA DRAIN REMOVAL AND REPLACEMENT. .1 AND .3 CONTRACTOR TO COORDINATE

6. STONE BENCH INSTALLATION TO BE COMPLETED WITH APPLICABLE SEQUENCE.

7. PLANTING TO BE DONE IN APPROPRIATE SEASON PER SPECIFICATIONS. PLANTING ALLOWED TO BE OUT OF SEQUENCE IF REQUIRED.

8. NO WORK ALLOWED ON FINISHED CONSTRUCTION UNLESS APPROVED BY ARCHITECT OR CLIENT AGENCY.

9. 1.1 AND 1.3 CONTRACTORS ARE RESPONSIBLE FOR DOCUMENTING ALL EXISTING LEAKS PRIOR TO ANY CONSTRUCTION STARTING.

10. 1.1 AND 1.3 CONTRACTORS SHOULD BOTH HAVE PERSONNEL AVAILABLE TO RESPOND TO LEAKS WITHIN ONE HOUR. RESPONSE SHOULD BE PROVIDED 24/7.

11. GC TO PROVIDE 8' WIDE MINIMUM FENCED EGRESS PATH FROM LOCATIONS A, B, & C TO AREA D THROUGHOUT CONSTRUCTION PHASE.

1	Addenda 3	09/15/2025	

AS-BUILT REVISIONS

REGISTERED ARCHITECT PENNSYLVANIA CHRISTOPHER D. DAWSON RA-017137-X

09/06/2024

PROFESSIONAL'S SIGNATURE DATE

CDA
CHRIS DAWSON ARCHITECT
300 NORTH 2ND STREET, SUITE 701, HARRISBURG, PA 17101

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES
HARRISBURG, PENNSYLVANIA

D.G.S. PROJECT No.
DGS 948-87 PHASE 1

PLAZA PAVER REPAIR / REPLACMENT
PA STATE MUSEUM,
THE CAPITOL COMPLEX
HARRISBURG, DAUPHIN COUNTY, PA

PLAZA SEQUENCING PLAN

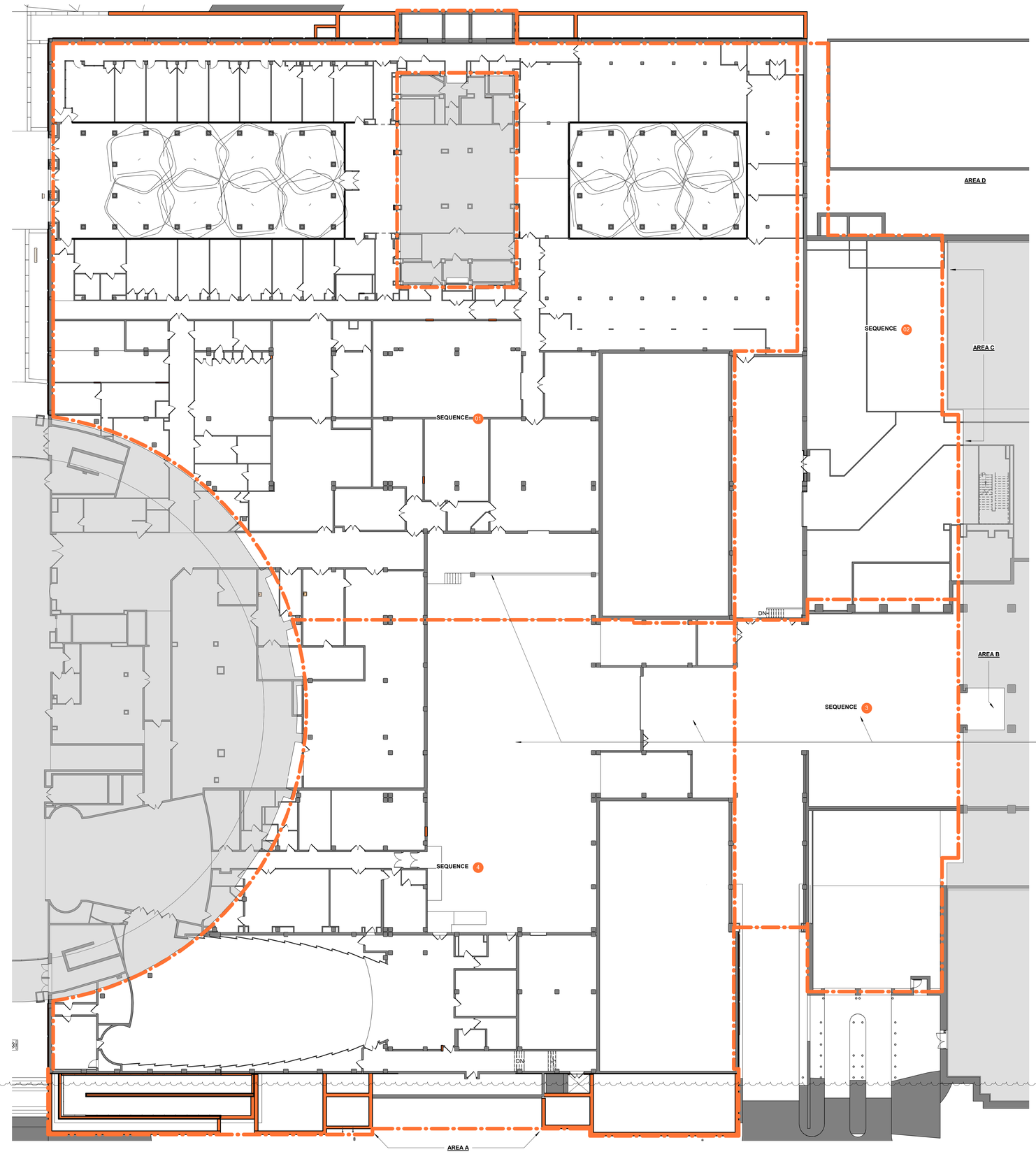
VERIFY SCALE

BAR IS ONE (1) INCH LONG ON ORIGINAL DRAWING:
0 1
IF BAR IS NOT ONE (1) INCH LONG, ADJUST SCALE ACCORDINGLY

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS. VARIANCE FROM CONTRACT DOCUMENTS NOT PERMITTED WITHOUT PROFESSIONAL & BUREAU OF CONSTRUCTION APPROVAL

DRAWN BY	DATE	DRAWING NO.
DS	07.29.25	CS3
CHECKED BY	SCALE	
WE	PER DWG	

DRAWING SET IS INTENDED FOR COLOR PRINTING



LOADING DOCKS, GARAGE ENTRY, AND GARAGE TO REMAIN OPERATIONAL DURING CONSTRUCTION. CONTRACTORS SHALL COORDINATE AND SCHEDULE ALL WORK IN SEQUENCE 8, 10, 11, AND 12 WITH CLIENT AGENCY AT LEAST ONE MONTH PRIOR TO WORK STARTING TO ENSURE CONTINUITY OF OPERATIONS. GARAGE SHOULD BE FULLY ACCESSIBLE DURING NORMAL BUSINESS HOURS (MONDAY - FRIDAY)

1 CS4 GROUND FLOOR PLAN - SEQUENCING PLAN
SCALE: 1/16" = 1'-0"

0 16' 0"

SEQUENCING NOTES

1. .1 CONTRACTOR TO COMPLETE ALL TEMPORARY PROTECTION PRIOR TO ANY WORK COMMENCING.

2. PRIOR TO WORK STARTING ON NEXT SEQUENCE, A FULL LEAK TEST SHOULD BE CONDUCTED FOR ENTIRETY OF FINISHED SEQUENCE AREA. SIGN OFF WILL BE REQUIRED FROM CLIENT AGENCY, ARCHITECT AND COMMISSIONING AGENT.

3. EXISTING GRANITE TO BE REMOVED AND STORED AS PART OF SEQUENCE 01. EXISTING HANDRAILS TO BE REMOVED. REFER TO DEMOLITION DRAWINGS.

4. WHERE SEQUENCE WORK IS ADJACENT TO EXTERIOR WALL, WATERPROOFING IS TO BE PROPERLY TURNED DOWN AND TERMINATED AS REQUIRED BY DETAILS. TEMPORARY PROTECTION REQUIRED FOR WATERPROOFING IF STONE IS NOT READY TO BE REINSTALLED. REFER TO SEQUENCES 01, 02, 03, 04, 05, 06, 09, 10, 13 AND 16.

5. BELOW PLAZA WORK SEQUENCE TO BE COMPLETED IN CONJUNCTION WITH PLAZA DRAIN REMOVAL AND REPLACEMENT. .1 AND .3 CONTRACTOR TO COORDINATE

6. STONE BENCH INSTALLATION TO BE COMPLETED WITH APPLICABLE SEQUENCE.

7. PLANTING TO BE DONE IN APPROPRIATE SEASON PER SPECIFICATIONS. PLANTING ALLOWED TO BE OUT OF SEQUENCE IF REQUIRED.

8. NO WORK ALLOWED ON FINISHED CONSTRUCTION UNLESS APPROVED BY ARCHITECT OR CLIENT AGENCY.

9. 1.1 AND 1.3 CONTRACTORS ARE RESPONSIBLE FOR DOCUMENTING ALL EXISTING LEAKS PRIOR TO ANY CONSTRUCTION STARTING.

10. 1.1 AND 1.3 CONTRACTORS SHOULD BOTH HAVE PERSONNEL AVAILABLE TO RESPOND TO LEAKS WITHIN ONE HOUR. RESPONSE SHOULD BE PROVIDED 24/7.

11. GC TO PROVIDE 8' WIDE MINIMUM FENCED EGRESS PATH FROM LOCATIONS A, B, & C TO AREA D THROUGHOUT CONSTRUCTION PHASE.

1	Addenda 3	09/15/2025	

AS-BUILT REVISIONS

REGISTERED ARCHITECT PENNSYLVANIA CHRISTOPHER J. DAWSON No. RA-013317-X

09/06/2024

PROFESSIONAL'S SIGNATURE DATE

CDA
CHRIS DAWSON ARCHITECT
300 NORTH 2ND STREET, SUITE 701, HARRISBURG, PA 17101

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES
HARRISBURG, PENNSYLVANIA

D.G.S. PROJECT No.
DGS 948-87 PHASE 1

PLAZA PAVER REPAIR / REPLACMENT
PA STATE MUSEUM,
THE CAPITOL COMPLEX
HARRISBURG, DAUPHIN COUNTY, PA

GROUND FLOOR SEQUENCING PLAN

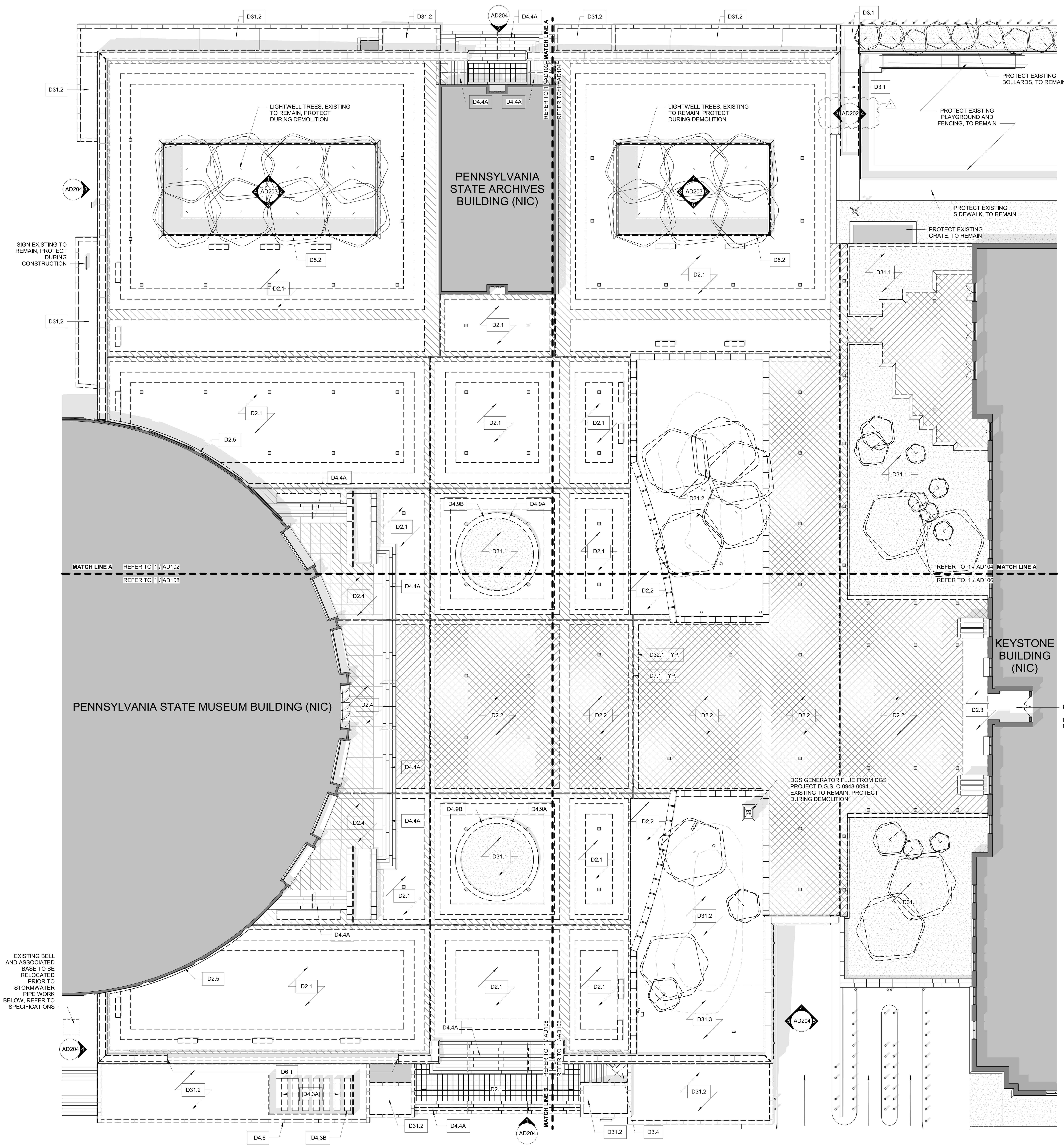
VERIFY SCALE

BAR IS ONE (1) INCH LONG ON ORIGINAL DRAWING:
0 1
IF BAR IS NOT ONE (1) INCH LONG, ADJUST SCALE ACCORDINGLY

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS. VARIANCE FROM CONTRACT DOCUMENTS NOT PERMITTED WITHOUT PROFESSIONAL & BUREAU OF CONSTRUCTION APPROVAL

DRAWN BY	DATE	DRAWING NO.
WA	07.29.25	CS4
CHECKED BY	SCALE	
WE	PER DWG	

DRAWING SET IS INTENDED FOR COLOR PRINTING



1 AD101 DEMOLITION PLAZA FLOOR PLAN
SCALE: 1/16" = 1'-0"

GENERAL DEMOLITION NOTES

1. SELECTIVE DEMOLITION WORK SHALL INCLUDE, BUT IS NOT LIMITED TO THE ITEMS LISTED ON THESE DRAWINGS. INCLUDE ALL THAT IS NECESSARY TO COMPLETE THE SCOPE OF WORK AS INDICATED ON THE CONSTRUCTION DRAWINGS AND SPECIFICATIONS. SEE ALL DRAWINGS TO COORDINATE ANY ADDITIONAL WALL OR FLOOR DEMOLITION.

2. NOT USED (1)

3. NOTES ARE ORGANIZED UNDER THE MOST APPLICABLE SPECIFICATION SECTION.

4. COORDINATE DEMOLITION WITH DIMENSIONS OF NEW CONSTRUCTION.

5. CONTRACTOR TO INFORM ARCHITECT OF CONDITIONS INCONSISTENT WITH WHAT IS SHOWN ON DRAWINGS.

6. ======= INDICATES CONCRETE, MASONRY, OR STUD WALLS WITH FINISHES TO BE DEMOLISHED. PATCH ADJACENT SURFACES WITH MATERIALS TO MATCH EXISTING AND MINIMIZE INCONSISTENCIES.

7. NOT USED (1)

8. PATCH AND REPAIR ALL AREAS AFFECTED BY DEMOLITION. PREPARE THESE AREAS FOR NEW FINISH - SEE FINISH SCHEDULE.

9. REFER TO MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR DEMOLITION ASSOCIATED WITH MECHANICAL, PLUMBING, AND ELECTRICAL WORK.

10. REMOVE ALL FASTENERS, SUPPORTS, ETC. ASSOCIATED WITH DEMOLISHED ITEMS.

11. DEMOLITION CALLOUTS REFLECT MAJOR DEMOLITION ACTIVITIES. REFER TO ARCHITECTURAL AND WATERPROOFING DETAILS FOR MISC. CUTS, SCORES, AND CHAMFERS REQUIRED AT EXISTING STRUCTURE.

12. INTERNAL GUTTER SYSTEM LOCATED UNDER PLAZA EXPANSION JOINTS IS EXISTING TO REMAIN. PROTECT INTERNAL GUTTER SYSTEM DURING DEMOLITION.

DEMO NOTE KEY

DIV 2: DEMOLITION - PHASE 1.1 CONTRACTOR

D2.1	REMOVE CONCRETE PAVER, SETTING BED, MEMBRANE, SLOPED LIGHT WEIGHT CONCRETE, AND MEMBRANE. AT COMPLETION OF DEMOLITION STRUCTURAL DECK SHOULD BE BARE AND READY TO RECEIVE NEW WORK. REFER TO WATERPROOFING DEMOLITION DETAILS ON 1A / DM1.00
D2.2	REMOVE WHITE GRANITE PAVERS. CATALOG, CLEAN, AND STORE UNTIL READY FOR REINSTALLATION. REMOVE PEDESTALS, RIGID INSULATION, AND SLOPED CONCRETE TOPPING SLAB. AT COMPLETION OF DEMOLITION, STRUCTURAL DECK SHOULD BE BARE AND READY TO RECEIVE NEW WORK (IDENTIFIED BY DIAGONAL CROSS HATCH). REFER TO WATERPROOFING DEMOLITION DETAILS ON 1B / DM1.00 AND 3 / DM1.00
D2.3	REMOVE DARK GRANITE PAVERS. CATALOG, CLEAN, AND STORE UNTIL READY FOR REINSTALLATION. REMOVE PEDESTALS, RIGID INSULATION, AND SLOPED CONCRETE TOPPING SLAB. AT COMPLETION OF DEMOLITION, STRUCTURAL DECK SHOULD BE BARE AND READY TO RECEIVE NEW WORK. REFER TO WATERPROOFING DEMOLITION DETAILS ON 1B / DM1.00 AND 3 / DM1.00
D2.4	REMOVE GRANITE PAVERS. CATALOG, CLEAN, AND STORE UNTIL READY FOR REINSTALLATION. REMOVE RIGID INSULATION, AND SLOPED CONCRETE TOPPING SLAB. AT COMPLETION OF DEMOLITION, STRUCTURAL DECK SHOULD BE BARE AND READY TO RECEIVE NEW WORK. REFER TO WATERPROOFING DEMOLITION DETAILS ON 1A / DM1.00 (1)
D2.5	REMOVE GRANITE STONE ANGLE AT WALL BASE, CATALOG, CLEAN, STORE, AND PREP FOR INSTALLATION, COORD. WITH WATERPROOFING DETAIL 7 / DM1.00.

DIV 3: CONCRETE - PHASE 1.1 CONTRACTOR

D3.1	REMOVE REINFORCED CONCRETE RAMP.
D3.2	NOT USED
D3.3	REMOVE FLOOR AND ASSOCIATED FINISHES AS NECESSARY TO ACCESS STORMWATER DRAIN BELOW, REPLACE TO MATCH EXISTING (BASE BID 1 IDENTIFIED BY HATCH) (BASE BID 2 IDENTIFIED BY HATCH) (BASE BID 3 IDENTIFIED BY HATCH)
D3.4	REMOVE CONCRETE SLAB, REFER TO WATERPROOFING DEMOLITION DETAILS ON 1 / DM3.00

DIV 4: MASONRY - PHASE 1.1 CONTRACTOR

D4.1A	REMOVE LIMESTONE PANEL. CATALOG, CLEAN, STORE AND PREP TO REINSTALL. REFER TO WATERPROOFING DEMOLITION DETAIL ON 5 / DM1.00, 2 / DM1.00, AND 27 / DM2.00.
D4.1B	REMOVE LIMESTONE PANEL. (IDENTIFIED BY HATCH)REFER TO WATERPROOFING DEMOLITION DETAIL ON 5 / DM1.00, 2 / DM1.00, AND 27 / DM2.00.
D4.2A	REMOVE GRANITE PLANTER WALLS. CATALOG, CLEAN, STORE AND PREP TO REINSTALL. REFER TO WATERPROOFING DEMOLITION DETAIL ON 1 / DM2.00 AND 5 / DM2.00
D4.2B	REMOVE GRANITE PLANTER WALLS (IDENTIFIED BY HATCH) REFER TO WATERPROOFING DEMOLITION DETAILS ON 1 / DM2.00 AND 5 / DM2.00
D4.2C	REMOVE GRANITE PLANTER WALLS, INCLUDING CONCRETE SUB WALLS. COORD. SUBWALL REMOVAL W/ EXTENT OF NEW WORK (IDENTIFIED BY HATCH) REFER TO WATERPROOFING DEMOLITION DETAILS ON 1 / DM2.00 AND 5 / DM2.00
D4.3A	REMOVE EXISTING LIMESTONE BLOCKS AND ASSOC. BASE STONE. CATALOG, CLEAN, STORE AND PREP TO REINSTALL REFER TO WATERPROOFING DEMOLITION DETAILS ON 2 / DM1.00. IF BLOCK OR SUPPPORT IS UNSALVAGABLE, CONTACT ARCHITECT AND ENGINEER FOR REVIEW AND REPAIR SPECIFICATIONS. (1)
D4.3B	STONE BLOCK TO BE SALVAGED AND RETURNED TO CLIENT AGENCY. WATERPROOFING DEMOLITION DETAILS ON 2 / DM1.00
D4.4A	REMOVE GRANITE STAIR PAVERS (RISERS & TREADS). CATALOG, CLEAN, STORE AND PREP FOR REINSTALLATION / RELOCATION. REFER TO /A113 FOR RELOCATION DETAILS. WATERPROOFING DEMOLITION DETAILS ON 7 / DM2.00.
D4.4B	REMOVE GRANITE STAIR PAVERS (RISERS & TREADS). (IDENTIFIED BY HATCH). WATERPROOFING DEMOLITION DETAILS ON 7 / DM2.00
D4.5A	REMOVE EXISTING LIMESTONE COPING. CATALOG, CLEAN, STORE AND PREP TO REINSTALL. WATERPROOFING DEMOLITION DETAILS ON 2 / DM1.00
D4.5B	REMOVE EXISTING LIMESTONE COPING (IDENTIFIED BY HATCH) WATERPROOFING DEMOLITION DETAILS ON 2 / DM1.00
D4.6	REMOVE LIMESTONE PLANTER WALLS, INCLUDING CONCRETE SUB WALLS. SALVAGE LIMESTONE FOR REUSE. COORD. EXTENT W/ NEW WORK
D4.7	CMU WALL CONSTRUCTION TO BE REMOVED AS REQ'D, TO ACCESS & REMOVE STORMWATER PIPING & CONNECTIONS OR TO INSTALL ACCESS PANEL
D4.8	BRICK INFILL WITHIN CMU WALL CONSTRUCTION TO BE REMOVED FROM FLOOR TO CEILING AS REQ'D TO ACCESS AND REMOVE STORMWATER PIPING AND CONNECTIONS
D4.9A	REMOVE GRANITE PLANTER COPING AND CLADDING. REFER TO WATERPROOFING DEMOLITION DETAILS ON 4 / DM2.00. RETURN TO CLIENT AGENCY.
D4.9B	REMOVE PLANTER CONCRETE SUB WALLS. REFER TO WATERPROOFING DEMOLITION DETAILS ON 4 / DM2.00
D4.10	REMOVE GRANITE PAVER, CATALOG, CLEAN, STORE, AND PREP TO REINSTALL. REFER TO WATERPROOFING DEMOLITION DETAIL 4 / DM1.00
D4.11	REMOVE GRANITE CURB, CATALOG, CLEAN, STORE, AND PREP TO REINSTALL. REFER TO DEMOLITION DETAIL ON 6 / DM1.00
D4.12	REMOVE CONCRETE MASONRY WALLS SURROUNDING THE PLANTER. REFER TO WATERPROOFING DEMOLITION DETAIL 5 / DM2.00

DIV 5: METALS - PHASE 1.1 CONTRACTOR

D5.1	REMOVE EXISTING HANDRAIL AND RELATED ACCESSORIES INCLUDING SLEEVES.
D5.2	REMOVE EXISTING METAL HANDRAIL. CATALOG, CLEAN, MODIFY (REFER TO DETAIL DWG 6 / A501). STORE. AND PREP TO REINSTALL

DIV 6: WOOD, PLASTICS, AND COMPOSITES - PHASE 1.1 CONTRACTOR

D6.1	REMOVE EXISTING TEMPORARY WD./MTL. RAILING
D6.2	REMOVE TEMPORARY WOOD WALLS
D6.3	REMOVE TEMPORARY WOOD BRACING. COORDINATE WITH REMOVAL OF STONE SOFFIT

DIV 7: THERMAL AND MOISTURE PROTECTION - PHASE 1.1 CONTRACTOR

D7.1	REMOVE EXISTING EXPANSION JOINT AND ASSOCIATED COMPONENTS (IDENTIFIED BY LINE ▬ ▬ ▬ ▬ ▬) REFER TO WATERPROOFING DEMOLITION DETAILS ON 10 / DM1.00, AND 3 / DM2.00

DIV 9: FINISHES - PHASE 1.1 CONTRACTOR

D9.1	REMOVE EXISTING HARD CEILING SYSTEM AS REQUIRED FOR NEW STORM WATER PIPING SCOPE.
D9.2	REMOVE EXISTING CEILING TILE AS REQUIRED FOR NEW STORM WATER PIPING SCOPE, STORE FOR LATER REINSTALLATION. GRID EXISTING TO REMAIN, PROTECT DURING CONSTRUCTION
D9.3	DRYWALL PARTITION CONSTRUCTION TO BE REMOVED FROM FLOOR TO CEILING AS REQ'D TO ACCESS AND REMOVE STORMWATER PIPING AND CONNECTIONS.
D9.4	REMOVE EXISTING EXTERIOR HARD CEILING SYSTEM AS REQUIRED FOR NEW STORM WATER PIPING SCOPE OR STRUCTURE.

DIV 10: SPECIALTIES - PHASE 1.1 CONTRACTOR

D10.1	REMOVE EXISTING PLAQUE. TURN OVER TO CLIENT AGENCY.

DIV 12: FURNISHINGS - PHASE 1.1 CONTRACTOR

D12.1	NOT USED (1)
D12.2	NOT USED
D12.3	REMOVE STONE BENCHES. CATALOG, CLEAN, AND STORE, UNTIL READY FOR REINSTALLATION.

DIV 22: PLUMBING - PHASE 1.3 CONTRACTOR

D22.1	REMOVE EXISTING DRAIN COVERS AND ASSEMBLY. COORD. DRAIN DEMO W/ PLUMBING DWGS. REFER TO WATERPROOFING DEMOLITION DETAILS ON 2 / DM1.00 AND 7 / DM2.00

DIV 31: EARTHWORK - PHASE 1.1 CONTRACTOR

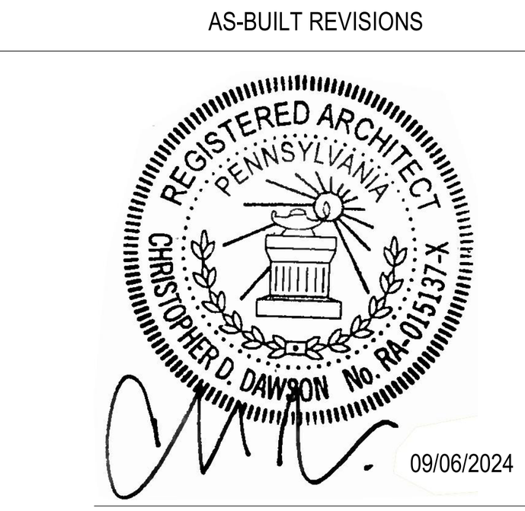
D31.1	REMOVE SOIL AND PLANTINGS. COORD. W/ CIVIL AND LANDSCAPE DWGS
D31.2	REMOVE SOIL AND PLANTINGS TO DEPTH COORD. W/ CIVIL DWGS.
D31.3	REMOVE SOIL AND PLANTINGS AS REQ'D. FOR INSTALLATION OF SLAB ON GRADE AND COLUMN FOUNDATIONS

DIV 32: EXTERIOR IMPROVEMENTS - PHASE 1.1 CONTRACTOR

D32.1	REMOVE GRANITE ACCENT PAVER. CLEAN. STORE. AND PREP TO REINSTALL / RELOCATION . REFER TO A113 FOR RELOCATION DETAILS. (IDENTIFIED BY DIAGONAL HATCH). WATERPROOFING DEMOLITION DETAILS ON 10 / DM1.00

1	Addenda 3	09/15/2025

AS-BUILT REVISIONS



09/06/2024
PROFESSIONAL'S SIGNATURE DATE

VERIFY SCALE

BAR IS ONE (1) INCH LONG ON ORIGINAL DRAWING: 0 ▬ 1

IF BAR IS NOT ONE (1) INCH LONG, ADJUST SCALE ACCORDINGLY

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS. VARIANCE FROM CONTRACT DOCUMENTS NOT PERMITTED WITHOUT PROFESSIONAL & BUREAU OF CONSTRUCTION APPROVAL

CDA
CHRIS DAWSON ARCHITECT
300 NORTH 2ND STREET, SUITE 701, HARRISBURG, PA 17101

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES
HARRISBURG, PENNSYLVANIA

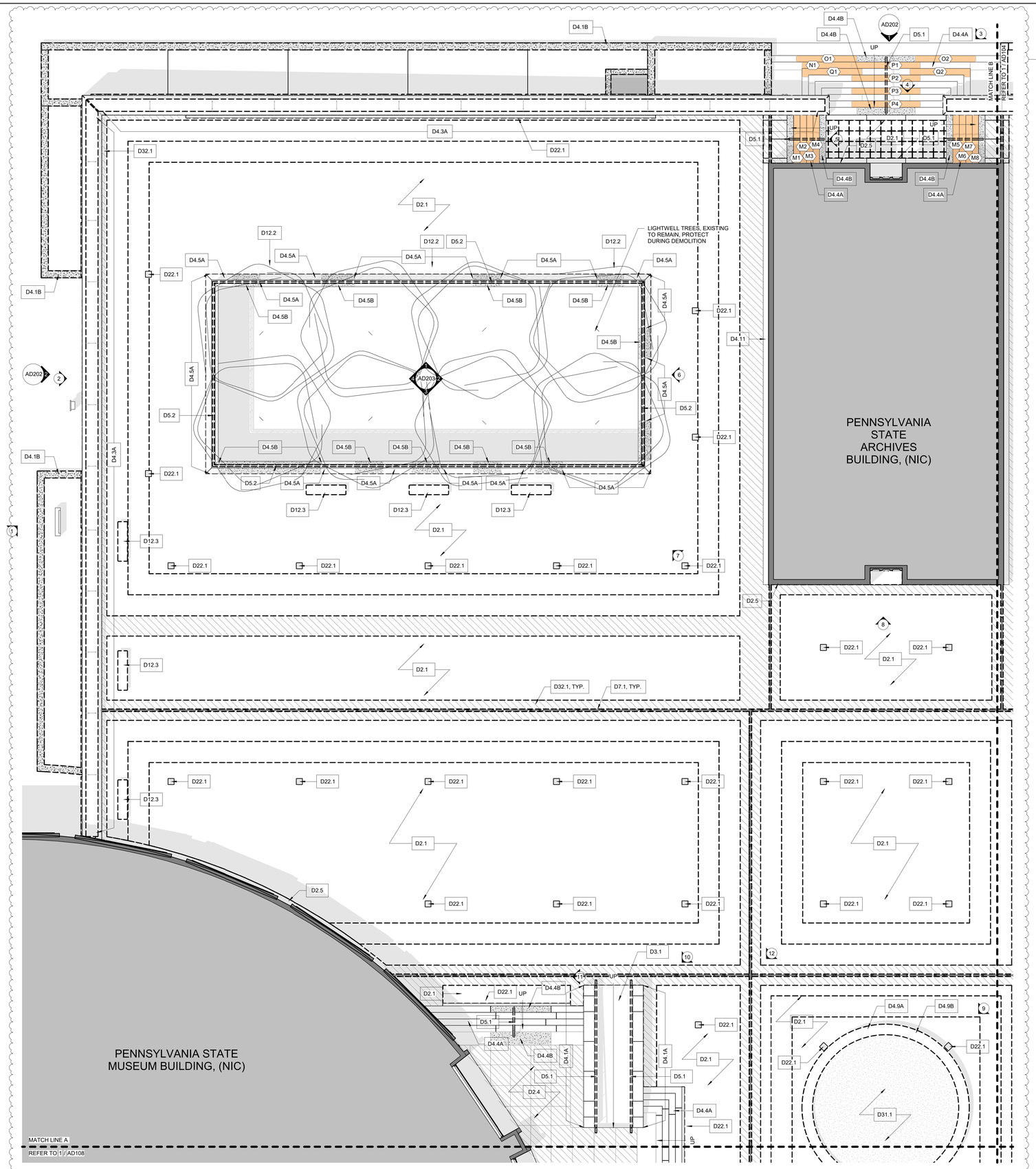
D.G.S. PROJECT No. **DGS 948-87 PHASE 1**

PLAZA PAVER REPAIR / REPLACMENT
PA STATE MUSEUM,
THE CAPITOL COMPLEX
HARRISBURG, DAUPHIN COUNTY, PA

DEMOLITION - PLAZA FLOOR PLAN

DRAWN BY	DATE	DRAWING NO.
DS	07.29.25	AD101
CHECKED BY	SCALE	
WE	PER DWG	

DRAWING SET IS INTENDED FOR COLOR PRINTING



1 AD102 DEMOLITION - PLAZA FLOOR PLAN - ENLARGED AREA A

SCALE: 1/8" = 1'-0"

0 8' 0"

GENERAL DEMOLITION NOTES

1. SELECTIVE DEMOLITION WORK SHALL INCLUDE, BUT IS NOT LIMITED TO THE ITEMS LISTED ON THESE DRAWINGS. INCLUDE ALL THAT IS NECESSARY TO COMPLETE THE SCOPE OF WORK AS INDICATED ON THE CONSTRUCTION DRAWINGS AND SPECIFICATIONS. SEE ALL DRAWINGS TO COORDINATE ANY ADDITIONAL WALL OR FLOOR DEMOLITION.

2. NOT USED

3. NOTES ARE ORGANIZED UNDER THE MOST APPLICABLE SPECIFICATION SECTION.

4. COORDINATE DEMOLITION WITH DIMENSIONS OF NEW CONSTRUCTION.

5. CONTRACTOR TO INFORM ARCHITECT OF CONDITIONS INCONSISTENT WITH WHAT IS SHOWN ON DRAWINGS.

6. ======= INDICATES CONCRETE, MASONRY, OR STUD WALLS WITH FINISHES TO BE DEMOLISHED. PATCH ADJACENT SURFACES WITH MATERIALS TO MATCH EXISTING AND MINIMIZE INCONSISTENCIES.

7. NOT USED

8. PATCH AND REPAIR ALL AREAS AFFECTED BY DEMOLITION. PREPARE THESE AREAS FOR NEW FINISH - SEE FINISH SCHEDULE.

9. REFER TO MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR DEMOLITION ASSOCIATED WITH MECHANICAL, PLUMBING, AND ELECTRICAL WORK.

10. REMOVE ALL FASTENERS, SUPPORTS, ETC. ASSOCIATED WITH DEMOLISHED ITEMS.

11. DEMOLITION CALLOUTS REFLECT MAJOR DEMOLITION ACTIVITIES. REFER TO ARCHITECTURAL AND WATERPROOFING DETAILS FOR MISC. CUTS, SCORES, AND CHAMFERS REQUIRED AT EXISTING STRUCTURE.

12. INTERNAL GUTTER SYSTEM LOCATED UNDER PLAZA EXPANSION JOINTS IS EXISTING TO REMAIN. PROTECT INTERNAL GUTTER SYSTEM DURING DEMOLITION.

DEMO NOTE KEY

DIV 2: DEMOLITION - PHASE 1.1 CONTRACTOR

- D2.1 REMOVE CONCRETE PAVER, SETTING BED, MEMBRANE, SLOPED LIGHT WEIGHT CONCRETE, AND MEMBRANE. AT COMPLETION OF DEMOLITION STRUCTURAL DECK SHOULD BE BARE AND READY TO RECEIVE NEW WORK. REFER TO WATERPROOFING DEMOLITION DETAILS ON 1A / DM1.00
- D2.2 REMOVE WHITE GRANITE PAVERS. CATALOG, CLEAN, AND STORE UNTIL READY FOR REINSTALLATION. REMOVE PEDESTALS, RIGID INSULATION, AND SLOPED CONCRETE TOPPING SLAB. AT COMPLETION OF DEMOLITION, STRUCTURAL DECK SHOULD BE BARE AND READY TO RECEIVE NEW WORK (IDENTIFIED BY DIAGONAL CROSS HATCH ( )). REFER TO WATERPROOFING DEMOLITION DETAILS ON 1B / DM1.00 AND 3 / DM1.00
- D2.3 REMOVE DARK GRANITE PAVERS. CATALOG, CLEAN, AND STORE UNTIL READY FOR REINSTALLATION. REMOVE PEDESTALS, RIGID INSULATION, AND SLOPED CONCRETE TOPPING SLAB. AT COMPLETION OF DEMOLITION, STRUCTURAL DECK SHOULD BE BARE AND READY TO RECEIVE NEW WORK. REFER TO WATERPROOFING DEMOLITION DETAILS ON 1B / DM1.00 AND 3 / DM1.00
- D2.4 REMOVE GRANITE PAVERS. CATALOG, CLEAN, AND STORE UNTIL READY FOR REINSTALLATION. REMOVE RIGID INSULATION, AND SLOPED CONCRETE TOPPING SLAB. AT COMPLETION OF DEMOLITION, STRUCTURAL DECK SHOULD BE BARE AND READY TO RECEIVE NEW WORK. REFER TO WATERPROOFING DEMOLITION DETAILS ON 1A / DM1.00
- D2.5 REMOVE GRANITE STONE ANGLE AT WALL BASE, CATALOG, CLEAN, STORE, AND PREP FOR INSTALLATION, COORD. WITH WATERPROOFING DETAIL 7 / DM1.00.

DIV 3: CONCRETE - PHASE 1.1 CONTRACTOR

- D3.1 REMOVE REINFORCED CONCRETE RAMP.
- D3.2 NOT USED
- D3.3 REMOVE FLOOR AND ASSOCIATED FINISHES AS NECESSARY TO ACCESS STORMWATER DRAIN BELOW. REPLACE TO MATCH EXISTING (BASE BID 1 IDENTIFIED BY HATCH ( )) (BASE BID 2 IDENTIFIED BY HATCH ( )) (BASE BID 3 IDENTIFIED BY HATCH ( ))
- D3.4 REMOVE CONCRETE SLAB, REFER TO WATERPROOFING DEMOLITION DETAILS ON 1 / DM3.00

DIV 4: MASONRY - PHASE 1.1 CONTRACTOR

- D4.1A REMOVE LIMESTONE PANEL. CATALOG, CLEAN, STORE AND PREP TO REINSTALL. REFER TO WATERPROOFING DEMOLITION DETAIL ON 5 / DM1.00, 2 / DM1.00, AND 27 / DM2.00.
- D4.1B REMOVE LIMESTONE PANEL. ((IDENTIFIED BY HATCH ( ))REFER TO WATERPROOFING DEMOLITION DETAIL ON 5 / DM1.00, 2 / DM1.00, AND 27 / DM2.00.
- D4.2A REMOVE GRANITE PLANTER WALLS. CATALOG, CLEAN, STORE AND PREP TO REINSTALL. REFER TO WATERPROOFING DEMOLITION DETAIL ON 1 / DM2.00 AND 5 / DM2.00
- D4.2B REMOVE GRANITE PLANTER WALLS ((IDENTIFIED BY HATCH ( ) REFER TO WATERPROOFING DEMOLITION DETAILS ON 1 / DM2.00 AND 5 / DM2.00
- D4.2C REMOVE GRANITE PLANTER WALLS, INCLUDING CONCRETE SUB WALLS. COORD. SUBWALL REMOVAL W/ EXTENT OF NEW WORK ((IDENTIFIED BY HATCH ( ) REFER TO WATERPROOFING DEMOLITION DETAILS ON 1 / DM2.00 AND 5 / DM2.00
- D4.3A REMOVE EXISTING LIMESTONE BLOCKS AND ASSOC. BASE STONE. CATALOG, CLEAN, STORE AND PREP TO REINSTALL REFER TO WATERPROOFING DEMOLITION DETAILS ON 2 / DM1.00. IF BLOCK OR SUPPPORT IS UNSALVAGABLE, CONTACT ARCHITECT AND ENGINEER FOR REVIEW AND REPAIR SPECIFICATIONS.
- D4.3B STONE BLOCK TO BE SALVAGED AND RETURNED TO CLIENT AGENCY. WATERPROOFING DEMOLITION DETAILS ON 2 / DM1.00
- D4.4A REMOVE GRANITE STAIR PAVERS (RISERS & TREADS). CATALOG, CLEAN, STORE AND PREP FOR REINSTALLATION / RELOCATION. REFER TO A113 FOR RELOCATION DETAILS. WATERPROOFING DEMOLITION DETAILS ON 7 / DM2.00.
- D4.4B REMOVE GRANITE STAIR PAVERS (RISERS & TREADS). ((IDENTIFIED BY HATCH ( )), WATERPROOFING DEMOLITION DETAILS ON 7 / DM2.00
- D4.5A REMOVE EXISTING LIMESTONE COPING. CATALOG, CLEAN, STORE AND PREP TO REINSTALL. WATERPROOFING DEMOLITION DETAILS ON 2 / DM1.00
- D4.5B REMOVE EXISTING LIMESTONE COPING ((IDENTIFIED BY HATCH ( ) WATERPROOFING DEMOLITION DETAILS ON 2 / DM1.00
- D4.6 REMOVE LIMESTONE PLANTER WALLS, INCLUDING CONCRETE SUB WALLS. SALVAGE LIMESTONE FOR REUSE. COORD. EXTENT W/ NEW WORK
- D4.7 CMU WALL CONSTRUCTION TO BE REMOVED AS REQ'D, TO ACCESS & REMOVE STORMWATER PIPING & CONNECTIONS OR TO INSTALL ACCESS PANEL
- D4.8 BRICK INFILL WITHIN CMU WALL CONSTRUCTION TO BE REMOVED FROM FLOOR TO CEILING AS REQ'D TO ACCESS AND REMOVE STORMWATER PIPING AND CONNECTIONS
- D4.9A REMOVE GRANITE PLANTER COPING AND CLADDING. REFER TO WATERPROOFING DEMOLITION DETAILS ON 4 / DM2.00. RETURN TO CLIENT AGENCY.
- D4.9B REMOVE PLANTER CONCRETE SUB WALLS. REFER TO WATERPROOFING DEMOLITION DETAILS ON 4 / DM2.00
- D4.10 REMOVE GRANITE PAVER, CATALOG, CLEAN, STORE, AND PREP TO REINSTALL. REFER TO WATERPROOFING DEMOLITION DETAIL 4 / DM1.00
- D4.11 REMOVE GRANITE CURB, CATALOG, CLEAN, STORE, AND PREP TO REINSTALL. REFER TO DEMOLITION DETAIL ON 6 / DM1.00
- D4.12 REMOVE CONCRETE MASONRY WALLS SURROUNDING THE PLANTER. REFER TO WATERPROOFING DEMOLITION DETAIL 5 / DM2.00

DIV 5: METALS - PHASE 1.1 CONTRACTOR

- D5.1 REMOVE EXISTING HANDRAIL AND RELATED ACCESSORIES INCLUDING SLEEVES.
- D5.2 REMOVE EXISTING METAL HANDRAIL. CATALOG, CLEAN, MODIFY (REFER TO DETAIL DWG 6 / A501). STORE. AND PREP TO REINSTALL

DIV 6: WOOD, PLASTICS, AND COMPOSITES - PHASE 1.1 CONTRACTOR

- D6.1 REMOVE EXISTING TEMPORARY WD./MTL. RAILING
- D6.2 REMOVE TEMPORARY WOOD WALLS
- D6.3 REMOVE TEMPORARY WOOD BRACING. COORDINATE WITH REMOVAL OF STONE SOFFIT

DIV 7: THERMAL AND MOISTURE PROTECTION - PHASE 1.1 CONTRACTOR

- D7.1 REMOVE EXISTING EXPANSION JOINT AND ASSOCIATED COMPONENTS ((IDENTIFIED BY LINE ( )) REFER TO WATERPROOFING DEMOLITION DETAILS ON 10 / DM1.00, AND 3 / DM2.00

DIV 9: FINISHES - PHASE 1.1 CONTRACTOR

- D9.1 REMOVE EXISTING HARD CEILING SYSTEM AS REQUIRED FOR NEW STORM WATER PIPING SCOPE.
- D9.2 REMOVE EXISTING CEILING TILE AS REQUIRED FOR NEW STORM WATER PIPING SCOPE, STORE FOR LATER REINSTALLATION. GRID EXISTING TO REMAIN, PROTECT DURING CONSTRUCTION
- D9.3 DRYWALL PARTITION CONSTRUCTION TO BE REMOVED FROM FLOOR TO CEILING AS REQ'D TO ACCESS AND REMOVE STORMWATER PIPING AND CONNECTIONS.
- D9.4 REMOVE EXISTING EXTERIOR HARD CEILING SYSTEM AS REQUIRED FOR NEW STORM WATER PIPING SCOPE OR STRUCTURE.

DIV 10: SPECIALTIES - PHASE 1.1 CONTRACTOR

- D10.1 REMOVE EXISTING PLAQUE. TURN OVER TO CLIENT AGENCY.

DIV 12: FURNISHINGS - PHASE 1.1 CONTRACTOR

- D12.1 NOT USED
- D12.2 NOT USED
- D12.3 REMOVE STONE BENCHES. CATALOG, CLEAN, AND STORE, UNTIL READY FOR REINSTALLATION.

DIV 22: PLUMBING - PHASE 1.3 CONTRACTOR

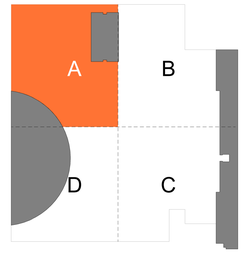
- D22.1 REMOVE EXISTING DRAIN COVERS AND ASSEMBLY. COORD. DRAIN DEMO W/ PLUMBING DWGS. REFER TO WATERPROOFING DEMOLITION DETAILS ON 2 / DM1.00 AND 7 / DM2.00

DIV 31: EARTHWORK - PHASE 1.1 CONTRACTOR

- D31.1 REMOVE SOIL AND PLANTINGS. COORD. W/ CIVIL AND LANDSCAPE DWGS
- D31.2 REMOVE SOIL AND PLANTINGS TO DEPTH COORD. W/ CIVIL DWGS.
- D31.3 REMOVE SOIL AND PLANTINGS AS REQ'D. FOR INSTALLATION OF SLAB ON GRADE AND COLUMN FOUNDATIONS

DIV 32: EXTERIOR IMPROVEMENTS - PHASE 1.1 CONTRACTOR

- D32.1 REMOVE GRANITE ACCENT PAVER. CLEAN. STORE. AND PREP TO REINSTALL / RELOCATION . REFER TO A113 FOR RELOCATION DETAILS. (IDENTIFIED BY DIAGONAL HATCH ( )). WATERPROOFING DEMOLITION DETAILS ON 10 / DM1.00



KEY PLAN

1	Addenda 3	09/15/2025	

AS-BUILT REVISIONS

REGISTERED ARCHITECT PENNSYLVANIA CHRISTOPHER D. DAWSON RA-015137-X

09/06/2024

PROFESSIONAL'S SIGNATURE DATE

CDA
CHRIS DAWSON ARCHITECT
300 NORTH 2ND STREET, SUITE 701, HARRISBURG, PA 17101

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES
HARRISBURG, PENNSYLVANIA

D.G.S. PROJECT No. DGS 948-87 PHASE 1

PLAZA PAVER REPAIR / REPLACMENT
PA STATE MUSEUM,
THE CAPITOL COMPLEX
HARRISBURG, DAUPHIN COUNTY, PA

DEMOLITION - PLAZA FLOOR PLAN - ENLARGED AREA A

VERIFY SCALE

BAR IS ONE (1) INCH LONG ON ORIGINAL DRAWING:

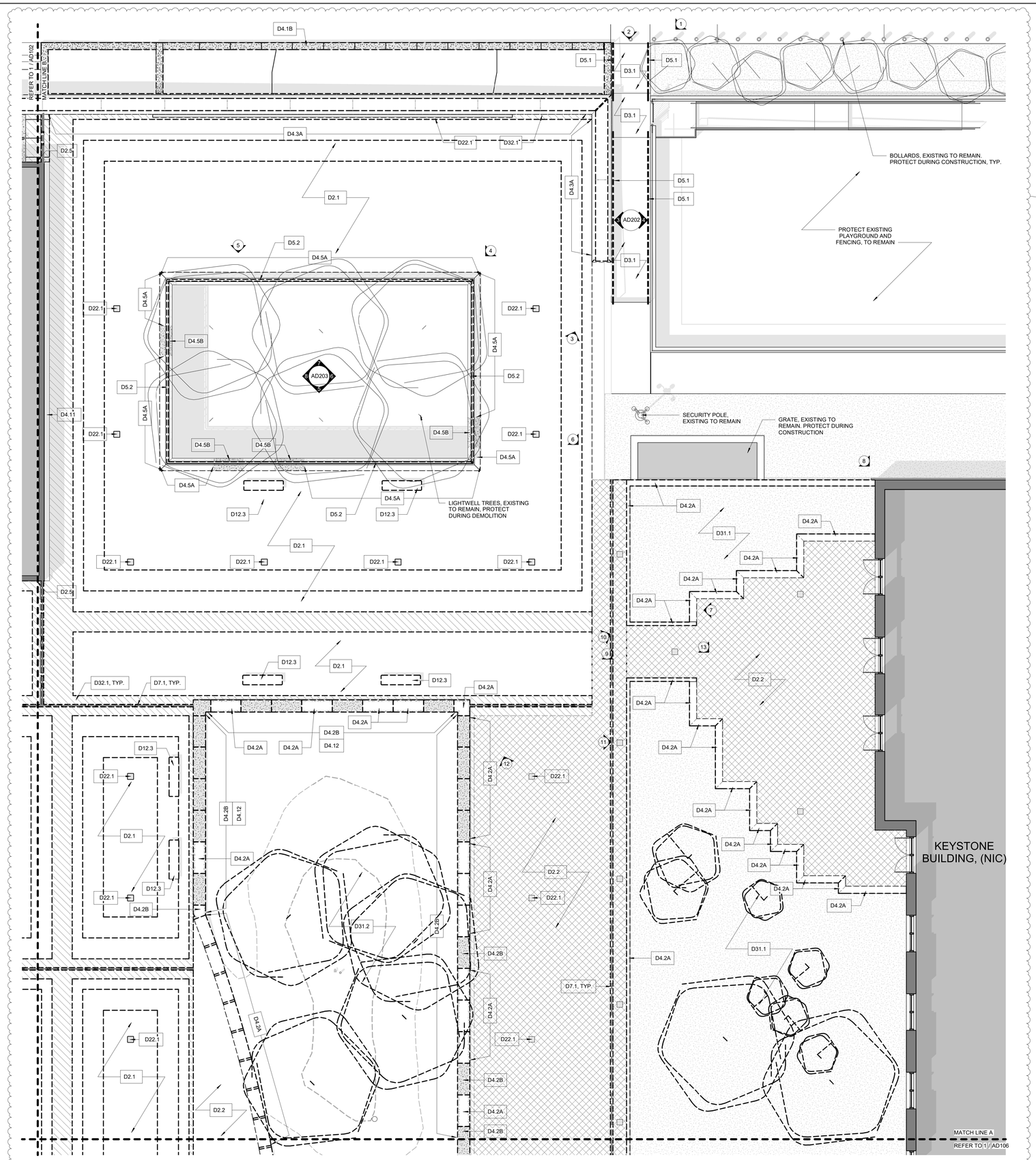
0 1

IF BAR IS NOT ONE (1) INCH LONG, ADJUST SCALE ACCORDINGLY

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS. VARIANCE FROM CONTRACT DOCUMENTS NOT PERMITTED WITHOUT PROFESSIONAL & BUREAU OF CONSTRUCTION APPROVAL

DRAWN BY	DATE	DRAWING NO.
DS	07.29.25	AD102
CHECKED BY	SCALE	
WE	PER DWG	

DRAWING SET IS INTENDED FOR COLOR PRINTING



1 AD104 DEMOLITION - PLAZA FLOOR PLAN - ENLARGED AREA B
SCALE: 1/8" = 1'-0"
0 8' 0"

GENERAL DEMOLITION NOTES

1. SELECTIVE DEMOLITION WORK SHALL INCLUDE, BUT IS NOT LIMITED TO THE ITEMS LISTED ON THESE DRAWINGS. INCLUDE ALL THAT IS NECESSARY TO COMPLETE THE SCOPE OF WORK AS INDICATED ON THE CONSTRUCTION DRAWINGS AND SPECIFICATIONS. SEE ALL DRAWINGS TO COORDINATE ANY ADDITIONAL WALL OR FLOOR DEMOLITION.

2. NOT USED

3. NOTES ARE ORGANIZED UNDER THE MOST APPLICABLE SPECIFICATION SECTION.

4. COORDINATE DEMOLITION WITH DIMENSIONS OF NEW CONSTRUCTION.

5. CONTRACTOR TO INFORM ARCHITECT OF CONDITIONS INCONSISTENT WITH WHAT IS SHOWN ON DRAWINGS.

6. ======= INDICATES CONCRETE, MASONRY, OR STUD WALLS WITH FINISHES TO BE DEMOLISHED. PATCH ADJACENT SURFACES WITH MATERIALS TO MATCH EXISTING AND MINIMIZE INCONSISTENCIES.

7. NOT USED

8. PATCH AND REPAIR ALL AREAS AFFECTED BY DEMOLITION. PREPARE THESE AREAS FOR NEW FINISH - SEE FINISH SCHEDULE.

9. REFER TO MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR DEMOLITION ASSOCIATED WITH MECHANICAL, PLUMBING, AND ELECTRICAL WORK.

10. REMOVE ALL FASTENERS, SUPPORTS, ETC. ASSOCIATED WITH DEMOLISHED ITEMS.

11. DEMOLITION CALLOUTS REFLECT MAJOR DEMOLITION ACTIVITIES. REFER TO ARCHITECTURAL AND WATERPROOFING DETAILS FOR MISC. CUTS, SCORES, AND CHAMFERS REQUIRED AT EXISTING STRUCTURE.

12. INTERNAL GUTTER SYSTEM LOCATED UNDER PLAZA EXPANSION JOINTS IS EXISTING TO REMAIN. PROTECT INTERNAL GUTTER SYSTEM DURING DEMOLITION.

DEMO NOTE KEY

DIV 2: DEMOLITION - PHASE 1.1 CONTRACTOR

- D2.1 REMOVE CONCRETE PAVER, SETTING BED, MEMBRANE, SLOPED LIGHT WEIGHT CONCRETE, AND MEMBRANE. AT COMPLETION OF DEMOLITION STRUCTURAL DECK SHOULD BE BARE AND READY TO RECEIVE NEW WORK. REFER TO WATERPROOFING DEMOLITION DETAILS ON 1A / DM1.00
- D2.2 REMOVE WHITE GRANITE PAVERS. CATALOG, CLEAN, AND STORE UNTIL READY FOR REINSTALLATION. REMOVE PEDESTALS, RIGID INSULATION, AND SLOPED CONCRETE TOPPING SLAB. AT COMPLETION OF DEMOLITION, STRUCTURAL DECK SHOULD BE BARE AND READY TO RECEIVE NEW WORK (IDENTIFIED BY DIAGONAL CROSS HATCH ( )). REFER TO WATERPROOFING DEMOLITION DETAILS ON 1B / DM1.00 AND 3 / DM1.00
- D2.3 REMOVE DARK GRANITE PAVERS. CATALOG, CLEAN, AND STORE UNTIL READY FOR REINSTALLATION. REMOVE PEDESTALS, RIGID INSULATION, AND SLOPED CONCRETE TOPPING SLAB. AT COMPLETION OF DEMOLITION, STRUCTURAL DECK SHOULD BE BARE AND READY TO RECEIVE NEW WORK. REFER TO WATERPROOFING DEMOLITION DETAILS ON 1B / DM1.00 AND 3 / DM1.00
- D2.4 REMOVE GRANITE PAVERS. CATALOG, CLEAN, AND STORE UNTIL READY FOR REINSTALLATION. REMOVE RIGID INSULATION, AND SLOPED CONCRETE TOPPING SLAB. AT COMPLETION OF DEMOLITION, STRUCTURAL DECK SHOULD BE BARE AND READY TO RECEIVE NEW WORK. REFER TO WATERPROOFING DEMOLITION DETAILS ON 1A / DM1.00
- D2.5 REMOVE GRANITE STONE ANGLE AT WALL BASE, CATALOG, CLEAN, STORE, AND PREP FOR INSTALLATION, COORD. WITH WATERPROOFING DETAIL 7 / DM1.00.

DIV 3: CONCRETE - PHASE 1.1 CONTRACTOR

- D3.1 REMOVE REINFORCED CONCRETE RAMP.
- D3.2 NOT USED
- D3.3 REMOVE FLOOR AND ASSOCIATED FINISHES AS NECESSARY TO ACCESS STORMWATER DRAIN BELOW, REPLACE TO MATCH EXISTING (BASE BID 1 IDENTIFIED BY HATCH ( ) (BASE BID 2 IDENTIFIED BY HATCH ( ) (BASE BID 3 IDENTIFIED BY HATCH ( )
- D3.4 REMOVE CONCRETE SLAB, REFER TO WATERPROOFING DEMOLITION DETAILS ON 1 / DM3.00

DIV 4: MASONRY - PHASE 1.1 CONTRACTOR

- D4.1A REMOVE LIMESTONE PANEL. CATALOG, CLEAN, STORE AND PREP TO REINSTALL. REFER TO WATERPROOFING DEMOLITION DETAIL ON 5 / DM1.00, 2 / DM1.00, AND 27 / DM2.00.
- D4.1B REMOVE LIMESTONE PANEL. ((IDENTIFIED BY HATCH ( )REFER TO WATERPROOFING DEMOLITION DETAIL ON 5 / DM1.00, 2 / DM1.00, AND 27 / DM2.00.
- D4.2A REMOVE GRANITE PLANTER WALLS. CATALOG, CLEAN, STORE AND PREP TO REINSTALL. REFER TO WATERPROOFING DEMOLITION DETAIL ON 1 / DM2.00 AND 5 / DM2.00
- D4.2B REMOVE GRANITE PLANTER WALLS (IDENTIFIED BY HATCH ( ) REFER TO WATERPROOFING DEMOLITION DETAILS ON 1 / DM2.00 AND 5 / DM2.00
- D4.2C REMOVE GRANITE PLANTER WALLS, INCLUDING CONCRETE SUB WALLS. COORD. SUBWALL REMOVAL W/ EXTENT OF NEW WORK (IDENTIFIED BY HATCH ( )) REFER TO WATERPROOFING DEMOLITION DETAILS ON 1 / DM2.00 AND 5 / DM2.00
- D4.3A REMOVE EXISTING LIMESTONE BLOCKS AND ASSOC. BASE STONE. CATALOG, CLEAN, STORE AND PREP TO REINSTALL REFER TO WATERPROOFING DEMOLITION DETAILS ON 2 / DM1.00. IF BLOCK OR SUPPPORT IS UNSALVAGABLE, CONTACT ARCHITECT AND ENGINEER FOR REVIEW AND REPAIR SPECIFICATIONS.
- D4.3B STONE BLOCK TO BE SALVAGED AND RETURNED TO CLIENT AGENCY. WATERPROOFING DEMOLITION DETAILS ON 2 / DM1.00
- D4.4A REMOVE GRANITE STAIR PAVERS (RISERS & TREADS). CATALOG, CLEAN, STORE AND PREP FOR REINSTALLATION / RELOCATION. REFER TO A113 FOR RELOCATION DETAILS. WATERPROOFING DEMOLITION DETAILS ON 7 / DM2.00.
- D4.4B REMOVE GRANITE STAIR PAVERS (RISERS & TREADS). (IDENTIFIED BY HATCH ( )). WATERPROOFING DEMOLITION DETAILS ON 7 / DM2.00
- D4.5A REMOVE EXISTING LIMESTONE COPING. CATALOG, CLEAN, STORE AND PREP TO REINSTALL. WATERPROOFING DEMOLITION DETAILS ON 2 / DM1.00
- D4.5B REMOVE EXISTING LIMESTONE COPING (IDENTIFIED BY HATCH ( ) WATERPROOFING DEMOLITION DETAILS ON 2 / DM1.00
- D4.6 REMOVE LIMESTONE PLANTER WALLS, INCLUDING CONCRETE SUB WALLS. SALVAGE LIMESTONE FOR REUSE. COORD. EXTENT W/ NEW WORK
- D4.7 CMU WALL CONSTRUCTION TO BE REMOVED AS REQ'D, TO ACCESS & REMOVE STORMWATER PIPING & CONNECTIONS OR TO INSTALL ACCESS PANEL
- D4.8 BRICK INFILL WITHIN CMU WALL CONSTRUCTION TO BE REMOVED FROM FLOOR TO CEILING AS REQ'D TO ACCESS AND REMOVE STORMWATER PIPING AND CONNECTIONS
- D4.9A REMOVE GRANITE PLANTER COPING AND CLADDING. REFER TO WATERPROOFING DEMOLITION DETAILS ON 4 / DM2.00. RETURN TO CLIENT AGENCY.
- D4.9B REMOVE PLANTER CONCRETE SUB WALLS. REFER TO WATERPROOFING DEMOLITION DETAILS ON 4 / DM2.00
- D4.10 REMOVE GRANITE PAVER, CATALOG, CLEAN, STORE, AND PREP TO REINSTALL. REFER TO WATERPROOFING DEMOLITION DETAIL 4 / DM1.00
- D4.11 REMOVE GRANITE CURB, CATALOG, CLEAN, STORE, AND PREP TO REINSTALL. REFER TO DEMOLITION DETAIL ON 6 / DM1.00
- D4.12 REMOVE CONCRETE MASONRY WALLS SURROUNDING THE PLANTER. REFER TO WATERPROOFING DEMOLITION DETAIL 5 / DM2.00

DIV 5: METALS - PHASE 1.1 CONTRACTOR

- D5.1 REMOVE EXISTING HANDRAIL AND RELATED ACCESSORIES INCLUDING SLEEVES.
- D5.2 REMOVE EXISTING METAL HANDRAIL. CATALOG, CLEAN, MODIFY (REFER TO DETAIL DWG 6 / A501). STORE. AND PREP TO REINSTALL

DIV 6: WOOD, PLASTICS, AND COMPOSITES - PHASE 1.1 CONTRACTOR

- D6.1 REMOVE EXISTING TEMPORARY WD./MTL. RAILING
- D6.2 REMOVE TEMPORARY WOOD WALLS
- D6.3 REMOVE TEMPORARY WOOD BRACING. COORDINATE WITH REMOVAL OF STONE SOFFIT

DIV 7: THERMAL AND MOISTURE PROTECTION - PHASE 1.1 CONTRACTOR

- D7.1 REMOVE EXISTING EXPANSION JOINT AND ASSOCIATED COMPONENTS (IDENTIFIED BY LINE ———) REFER TO WATERPROOFING DEMOLITION DETAILS ON 10 / DM1.00, AND 3 / DM2.00

DIV 9: FINISHES - PHASE 1.1 CONTRACTOR

- D9.1 REMOVE EXISTING HARD CEILING SYSTEM AS REQUIRED FOR NEW STORM WATER PIPING SCOPE.
- D9.2 REMOVE EXISTING CEILING TILE AS REQUIRED FOR NEW STORM WATER PIPING SCOPE, STORE FOR LATER REINSTALLATION. GRID EXISTING TO REMAIN, PROTECT DURING CONSTRUCTION
- D9.3 DRYWALL PARTITION CONSTRUCTION TO BE REMOVED FROM FLOOR TO CEILING AS REQ'D TO ACCESS AND REMOVE STORMWATER PIPING AND CONNECTIONS.
- D9.4 REMOVE EXISTING EXTERIOR HARD CEILING SYSTEM AS REQUIRED FOR NEW STORM WATER PIPING SCOPE OR STRUCTURE.

DIV 10: SPECIALTIES - PHASE 1.1 CONTRACTOR

- D10.1 REMOVE EXISTING PLAQUE. TURN OVER TO CLIENT AGENCY.

DIV 12: FURNISHINGS - PHASE 1.1 CONTRACTOR

- D12.1 NOT USED
- D12.2 NOT USED
- D12.3 REMOVE STONE BENCHES. CATALOG, CLEAN, AND STORE, UNTIL READY FOR REINSTALLATION.

DIV 22: PLUMBING - PHASE 1.3 CONTRACTOR

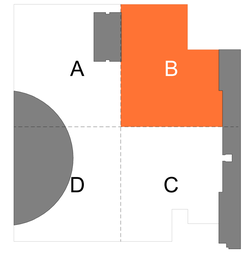
- D22.1 REMOVE EXISTING DRAIN COVERS AND ASSEMBLY. COORD. DRAIN DEMO W/ PLUMBING DWGS. REFER TO WATERPROOFING DEMOLITION DETAILS ON 2 / DM1.00 AND 7 / DM2.00

DIV 31: EARTHWORK - PHASE 1.1 CONTRACTOR

- D31.1 REMOVE SOIL AND PLANTINGS. COORD. W/ CIVIL AND LANDSCAPE DWGS
- D31.2 REMOVE SOIL AND PLANTINGS TO DEPTH COORD. W/ CIVIL DWGS.
- D31.3 REMOVE SOIL AND PLANTINGS AS REQ'D. FOR INSTALLATION OF SLAB ON GRADE AND COLUMN FOUNDATIONS

DIV 32: EXTERIOR IMPROVEMENTS - PHASE 1.1 CONTRACTOR

- D32.1 REMOVE GRANITE ACCENT PAVER. CLEAN. STORE. AND PREP TO REINSTALL / RELOCATION . REFER TO A113 FOR RELOCATION DETAILS. (IDENTIFIED BY DIAGONAL HATCH ( ). WATERPROOFING DEMOLITION DETAILS ON 10 / DM1.00



KEY PLAN

1	Addenda 3	09/15/2025	

AS-BUILT REVISIONS

REGISTERED ARCHITECT PENNSYLVANIA CHRISTOPHER D. DAWSON No. RA015137-X

09/06/2024

PROFESSIONAL'S SIGNATURE DATE

CDA
CHRIS DAWSON ARCHITECT
300 NORTH 2ND STREET, SUITE 701, HARRISBURG, PA 17101

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES
HARRISBURG, PENNSYLVANIA

D.G.S. PROJECT No.
DGS 948-87 PHASE 1

PLAZA PAVER REPAIR / REPLACMENT
PA STATE MUSEUM,
THE CAPITOL COMPLEX
HARRISBURG, DAUPHIN COUNTY, PA

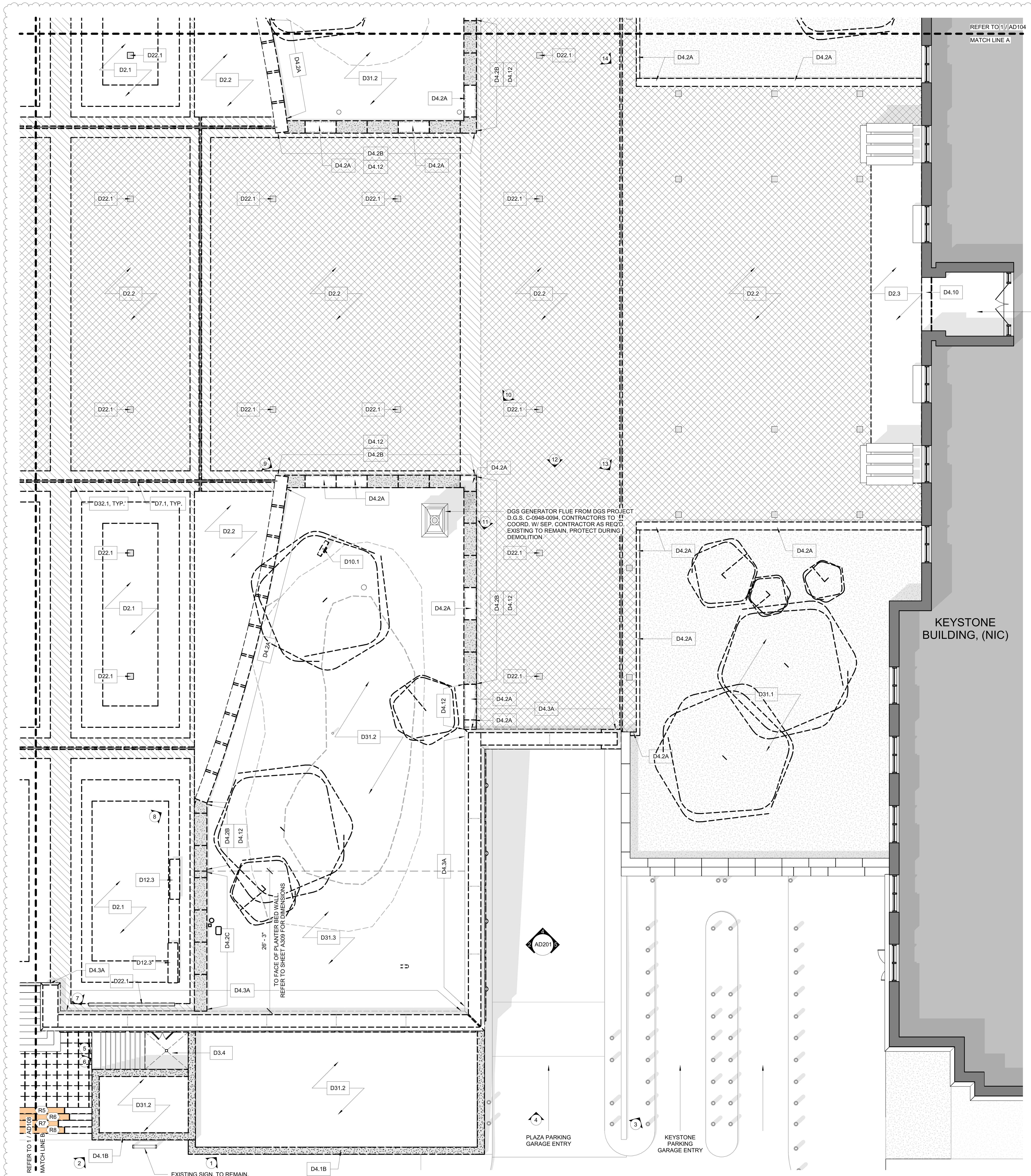
DEMOLITION - PLAZA FLOOR PLAN - ENLARGED AREA B

VERIFY SCALE
BAR IS ONE (1) INCH LONG ON ORIGINAL DRAWING:
0 1
IF BAR IS NOT ONE (1) INCH LONG, ADJUST SCALE ACCORDINGLY

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS. VARIANCE FROM CONTRACT DOCUMENTS NOT PERMITTED WITHOUT PROFESSIONAL & BUREAU OF CONSTRUCTION APPROVAL

DRAWN BY	DATE	DRAWING NO.
DS	07.29.25	AD104
CHECKED BY	SCALE	
WE	PER DWG	

DRAWING SET IS INTENDED FOR COLOR PRINTING



1 AD106 DEMOLITION - PLAZA FLOOR PLAN - ENLARGED AREA C

SCALE: 1/8" = 1'-0"

0 8' 0"

GENERAL DEMOLITION NOTES

1. SELECTIVE DEMOLITION WORK SHALL INCLUDE, BUT IS NOT LIMITED TO THE ITEMS LISTED ON THESE DRAWINGS. INCLUDE ALL THAT IS NECESSARY TO COMPLETE THE SCOPE OF WORK AS INDICATED ON THE CONSTRUCTION DRAWINGS AND SPECIFICATIONS. SEE ALL DRAWINGS TO COORDINATE ANY ADDITIONAL WALL OR FLOOR DEMOLITION.

2. NOT USED (1)

3. NOTES ARE ORGANIZED UNDER THE MOST APPLICABLE SPECIFICATION SECTION.

4. COORDINATE DEMOLITION WITH DIMENSIONS OF NEW CONSTRUCTION.

5. CONTRACTOR TO INFORM ARCHITECT OF CONDITIONS INCONSISTENT WITH WHAT IS SHOWN ON DRAWINGS.

6. ======= INDICATES CONCRETE, MASONRY, OR STUD WALLS WITH FINISHES TO BE DEMOLISHED. PATCH ADJACENT SURFACES WITH MATERIALS TO MATCH EXISTING AND MINIMIZE INCONSISTENCIES.

7. NOT USED (1)

8. PATCH AND REPAIR ALL AREAS AFFECTED BY DEMOLITION. PREPARE THESE AREAS FOR NEW FINISH - SEE FINISH SCHEDULE.

9. REFER TO MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR DEMOLITION ASSOCIATED WITH MECHANICAL, PLUMBING, AND ELECTRICAL WORK.

10. REMOVE ALL FASTENERS, SUPPORTS, ETC. ASSOCIATED WITH DEMOLISHED ITEMS.

11. DEMOLITION CALLOUTS REFLECT MAJOR DEMOLITION ACTIVITIES. REFER TO ARCHITECTURAL AND WATERPROOFING DETAILS FOR MISC. CUTS, SCORES, AND CHAMFERS REQUIRED AT EXISTING STRUCTURE.

12. INTERNAL GUTTER SYSTEM LOCATED UNDER PLAZA EXPANSION JOINTS IS EXISTING TO REMAIN. PROTECT INTERNAL GUTTER SYSTEM DURING DEMOLITION.

DEMO NOTE KEY

DIV 2: DEMOLITION - PHASE 1.1 CONTRACTOR

D2.1	REMOVE CONCRETE PAVER, SETTING BED, MEMBRANE, SLOPED LIGHT WEIGHT CONCRETE, AND MEMBRANE. AT COMPLETION OF DEMOLITION STRUCTURAL DECK SHOULD BE BARE AND READY TO RECEIVE NEW WORK. REFER TO WATERPROOFING DEMOLITION DETAILS ON 1A / DM1.00
D2.2	REMOVE WHITE GRANITE PAVERS. CATALOG, CLEAN, AND STORE UNTIL READY FOR REINSTALLATION. REMOVE PEDESTALS, RIGID INSULATION, AND SLOPED CONCRETE TOPPING SLAB. AT COMPLETION OF DEMOLITION, STRUCTURAL DECK SHOULD BE BARE AND READY TO RECEIVE NEW WORK (IDENTIFIED BY DIAGONAL CROSS HATCH). REFER TO WATERPROOFING DEMOLITION DETAILS ON 1B / DM1.00 AND 3 / DM1.00
D2.3	REMOVE DARK GRANITE PAVERS. CATALOG, CLEAN, AND STORE UNTIL READY FOR REINSTALLATION. REMOVE PEDESTALS, RIGID INSULATION, AND SLOPED CONCRETE TOPPING SLAB. AT COMPLETION OF DEMOLITION, STRUCTURAL DECK SHOULD BE BARE AND READY TO RECEIVE NEW WORK. REFER TO WATERPROOFING DEMOLITION DETAILS ON 1B / DM1.00 AND 3 / DM1.00
D2.4	REMOVE GRANITE PAVERS. CATALOG, CLEAN, AND STORE UNTIL READY FOR REINSTALLATION. REMOVE RIGID INSULATION, AND SLOPED CONCRETE TOPPING SLAB. AT COMPLETION OF DEMOLITION, STRUCTURAL DECK SHOULD BE BARE AND READY TO RECEIVE NEW WORK. REFER TO WATERPROOFING DEMOLITION DETAILS ON 1A / DM1.00 (1)
D2.5	REMOVE GRANITE STONE ANGLE AT WALL BASE, CATALOG, CLEAN, STORE, AND PREP FOR INSTALLATION, COORD. WITH WATERPROOFING DETAIL 7 / DM1.00.

DIV 3: CONCRETE - PHASE 1.1 CONTRACTOR

D3.1	REMOVE REINFORCED CONCRETE RAMP.
D3.2	NOT USED
D3.3	REMOVE FLOOR AND ASSOCIATED FINISHES AS NECESSARY TO ACCESS STORMWATER DRAIN BELOW, REPLACE TO MATCH EXISTING (BASE BID 1 IDENTIFIED BY HATCH) (BASE BID 2 IDENTIFIED BY HATCH) (BASE BID 3 IDENTIFIED BY HATCH)
D3.4	REMOVE CONCRETE SLAB, REFER TO WATERPROOFING DEMOLITION DETAILS ON 1 / DM3.00

DIV 4: MASONRY - PHASE 1.1 CONTRACTOR

D4.1A	REMOVE LIMESTONE PANEL. CATALOG, CLEAN, STORE AND PREP TO REINSTALL. REFER TO WATERPROOFING DEMOLITION DETAIL ON 5 / DM1.00, 2 / DM1.00, AND 27 / DM2.00.
D4.1B	REMOVE LIMESTONE PANEL. (IDENTIFIED BY HATCH)REFER TO WATERPROOFING DEMOLITION DETAIL ON 5 / DM1.00, 2 / DM1.00, AND 27 / DM2.00.
D4.2A	REMOVE GRANITE PLANTER WALLS. CATALOG, CLEAN, STORE AND PREP TO REINSTALL. REFER TO WATERPROOFING DEMOLITION DETAIL ON 1 / DM2.00 AND 5 / DM2.00
D4.2B	REMOVE GRANITE PLANTER WALLS (IDENTIFIED BY HATCH) REFER TO WATERPROOFING DEMOLITION DETAILS ON 1 / DM2.00 AND 5 / DM2.00
D4.2C	REMOVE GRANITE PLANTER WALLS, INCLUDING CONCRETE SUB WALLS. COORD. SUBWALL REMOVAL W/ EXTENT OF NEW WORK (IDENTIFIED BY HATCH) REFER TO WATERPROOFING DEMOLITION DETAILS ON 1 / DM2.00 AND 5 / DM2.00
D4.3A	REMOVE EXISTING LIMESTONE BLOCKS AND ASSOC. BASE STONE. CATALOG, CLEAN, STORE AND PREP TO REINSTALL REFER TO WATERPROOFING DEMOLITION DETAILS ON 2 / DM1.00. IF BLOCK OR SUPPPORT IS UNSALVAGABLE, CONTACT ARCHITECT AND ENGINEER FOR REVIEW AND REPAIR SPECIFICATIONS. (1)
D4.3B	STONE BLOCK TO BE SALVAGED AND RETURNED TO CLIENT AGENCY. WATERPROOFING DEMOLITION DETAILS ON 2 / DM1.00
D4.4A	REMOVE GRANITE STAIR PAVERS (RISERS & TREADS). CATALOG, CLEAN, STORE AND PREP FOR REINSTALLATION / RELOCATION. REFER TO /A113 FOR RELOCATION DETAILS. WATERPROOFING DEMOLITION DETAILS ON 7 / DM2.00.
D4.4B	REMOVE GRANITE STAIR PAVERS (RISERS & TREADS). (IDENTIFIED BY HATCH). WATERPROOFING DEMOLITION DETAILS ON 7 / DM2.00
D4.5A	REMOVE EXISTING LIMESTONE COPING. CATALOG, CLEAN, STORE AND PREP TO REINSTALL. WATERPROOFING DEMOLITION DETAILS ON 2 / DM1.00
D4.5B	REMOVE EXISTING LIMESTONE COPING (IDENTIFIED BY HATCH) WATERPROOFING DEMOLITION DETAILS ON 2 / DM1.00
D4.6	REMOVE LIMESTONE PLANTER WALLS, INCLUDING CONCRETE SUB WALLS. SALVAGE LIMESTONE FOR REUSE. COORD. EXTENT W/ NEW WORK
D4.7	CMU WALL CONSTRUCTION TO BE REMOVED AS REQ'D, TO ACCESS & REMOVE STORMWATER PIPING & CONNECTIONS OR TO INSTALL ACCESS PANEL
D4.8	BRICK INFILL WITHIN CMU WALL CONSTRUCTION TO BE REMOVED FROM FLOOR TO CEILING AS REQ'D TO ACCESS AND REMOVE STORMWATER PIPING AND CONNECTIONS
D4.9A	REMOVE GRANITE PLANTER COPING AND CLADDING. REFER TO WATERPROOFING DEMOLITION DETAILS ON 4 / DM2.00. RETURN TO CLIENT AGENCY.
D4.9B	REMOVE PLANTER CONCRETE SUB WALLS. REFER TO WATERPROOFING DEMOLITION DETAILS ON 4 / DM2.00
D4.10	REMOVE GRANITE PAVER, CATALOG, CLEAN, STORE, AND PREP TO REINSTALL. REFER TO WATERPROOFING DEMOLITION DETAIL 4 / DM1.00
D4.11	REMOVE GRANITE CURB, CATALOG, CLEAN, STORE, AND PREP TO REINSTALL. REFER TO DEMOLITION DETAIL ON 6 / DM1.00
D4.12	REMOVE CONCRETE MASONRY WALLS SURROUNDING THE PLANTER. REFER TO WATERPROOFING DEMOLITION DETAIL 5 / DM2.00

DIV 5: METALS - PHASE 1.1 CONTRACTOR

D5.1	REMOVE EXISTING HANDRAIL AND RELATED ACCESSORIES INCLUDING SLEEVES.
D5.2	REMOVE EXISTING METAL HANDRAIL. CATALOG, CLEAN, MODIFY (REFER TO DETAIL DWG 6 / A501). STORE. AND PREP TO REINSTALL

DIV 6: WOOD, PLASTICS, AND COMPOSITES - PHASE 1.1 CONTRACTOR

D6.1	REMOVE EXISTING TEMPORARY WD./MTL. RAILING
D6.2	REMOVE TEMPORARY WOOD WALLS
D6.3	REMOVE TEMPORARY WOOD BRACING. COORDINATE WITH REMOVAL OF STONE SOFFIT

DIV 7: THERMAL AND MOISTURE PROTECTION - PHASE 1.1 CONTRACTOR

D7.1	REMOVE EXISTING EXPANSION JOINT AND ASSOCIATED COMPONENTS (IDENTIFIED BY LINE ▬ ▬ ▬ ▬) REFER TO WATERPROOFING DEMOLITION DETAILS ON 10 / DM1.00, AND 3 / DM2.00

DIV 9: FINISHES - PHASE 1.1 CONTRACTOR

D9.1	REMOVE EXISTING HARD CEILING SYSTEM AS REQUIRED FOR NEW STORM WATER PIPING SCOPE.
D9.2	REMOVE EXISTING CEILING TILE AS REQUIRED FOR NEW STORM WATER PIPING SCOPE, STORE FOR LATER REINSTALLATION. GRID EXISTING TO REMAIN, PROTECT DURING CONSTRUCTION
D9.3	DRYWALL PARTITION CONSTRUCTION TO BE REMOVED FROM FLOOR TO CEILING AS REQ'D TO ACCESS AND REMOVE STORMWATER PIPING AND CONNECTIONS.
D9.4	REMOVE EXISTING EXTERIOR HARD CEILING SYSTEM AS REQUIRED FOR NEW STORM WATER PIPING SCOPE OR STRUCTURE.

DIV 10: SPECIALTIES - PHASE 1.1 CONTRACTOR

D10.1	REMOVE EXISTING PLAQUE. TURN OVER TO CLIENT AGENCY.

DIV 12: FURNISHINGS - PHASE 1.1 CONTRACTOR

D12.1	NOT USED (1)
D12.2	NOT USED
D12.3	REMOVE STONE BENCHES. CATALOG, CLEAN, AND STORE, UNTIL READY FOR REINSTALLATION.

DIV 22: PLUMBING - PHASE 1.3 CONTRACTOR

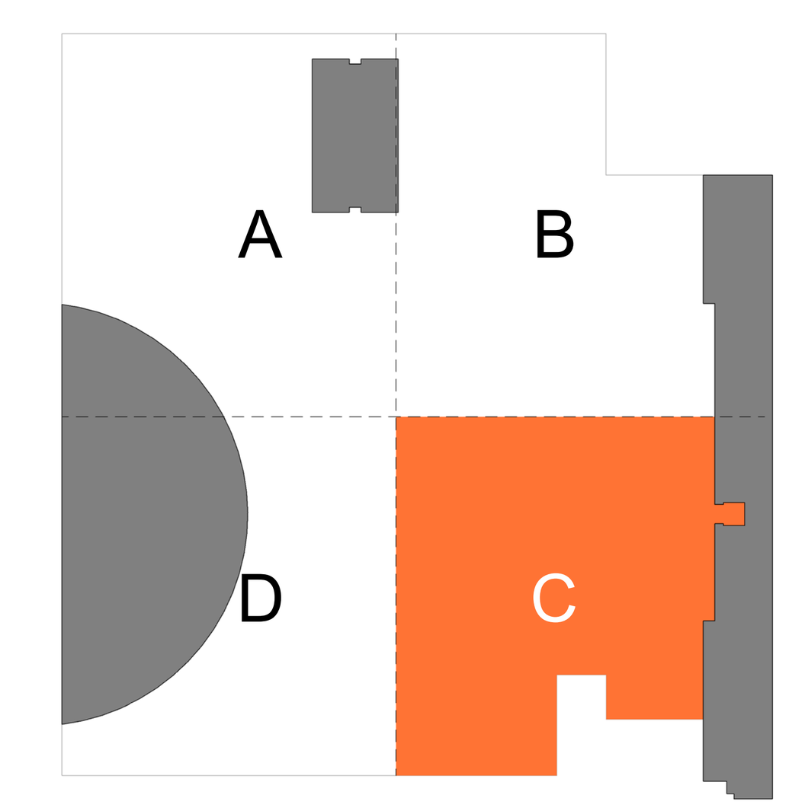
D22.1	REMOVE EXISTING DRAIN COVERS AND ASSEMBLY. COORD. DRAIN DEMO W/ PLUMBING DWGS. REFER TO WATERPROOFING DEMOLITION DETAILS ON 2 / DM1.00 AND 7 / DM2.00

DIV 31: EARTHWORK - PHASE 1.1 CONTRACTOR

D31.1	REMOVE SOIL AND PLANTINGS. COORD. W/ CIVIL AND LANDSCAPE DWGS
D31.2	REMOVE SOIL AND PLANTINGS TO DEPTH COORD. W/ CIVIL DWGS.
D31.3	REMOVE SOIL AND PLANTINGS AS REQ'D. FOR INSTALLATION OF SLAB ON GRADE AND COLUMN FOUNDATIONS

DIV 32: EXTERIOR IMPROVEMENTS - PHASE 1.1 CONTRACTOR

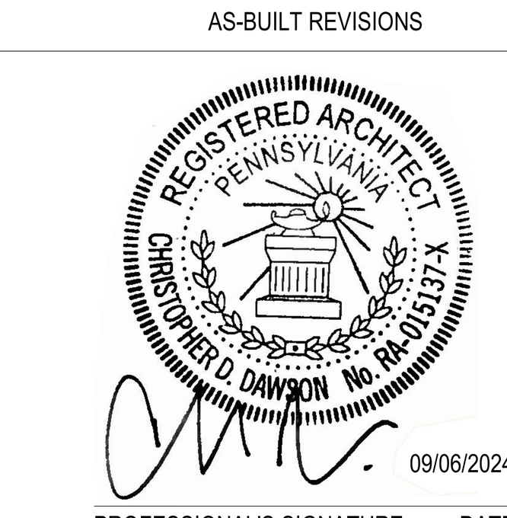
D32.1	REMOVE GRANITE ACCENT PAVER. CLEAN. STORE. AND PREP TO REINSTALL / RELOCATION . REFER TO A113 FOR RELOCATION DETAILS. (IDENTIFIED BY DIAGONAL HATCH). WATERPROOFING DEMOLITION DETAILS ON 10 / DM1.00



KEY PLAN

1	Addenda 3	09/15/2025	

AS-BUILT REVISIONS



09/06/2024

PROFESSIONAL'S SIGNATURE DATE

CDA
CHRIS DAWSON ARCHITECT
300 NORTH 2ND STREET, SUITE 701, HARRISBURG, PA 17101

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES
HARRISBURG, PENNSYLVANIA

D.G.S. PROJECT No. **DGS 948-87 PHASE 1**

VERIFY SCALE

BAR IS ONE (1) INCH LONG ON ORIGINAL DRAWING:

0 1

IF BAR IS NOT ONE (1) INCH LONG, ADJUST SCALE ACCORDINGLY

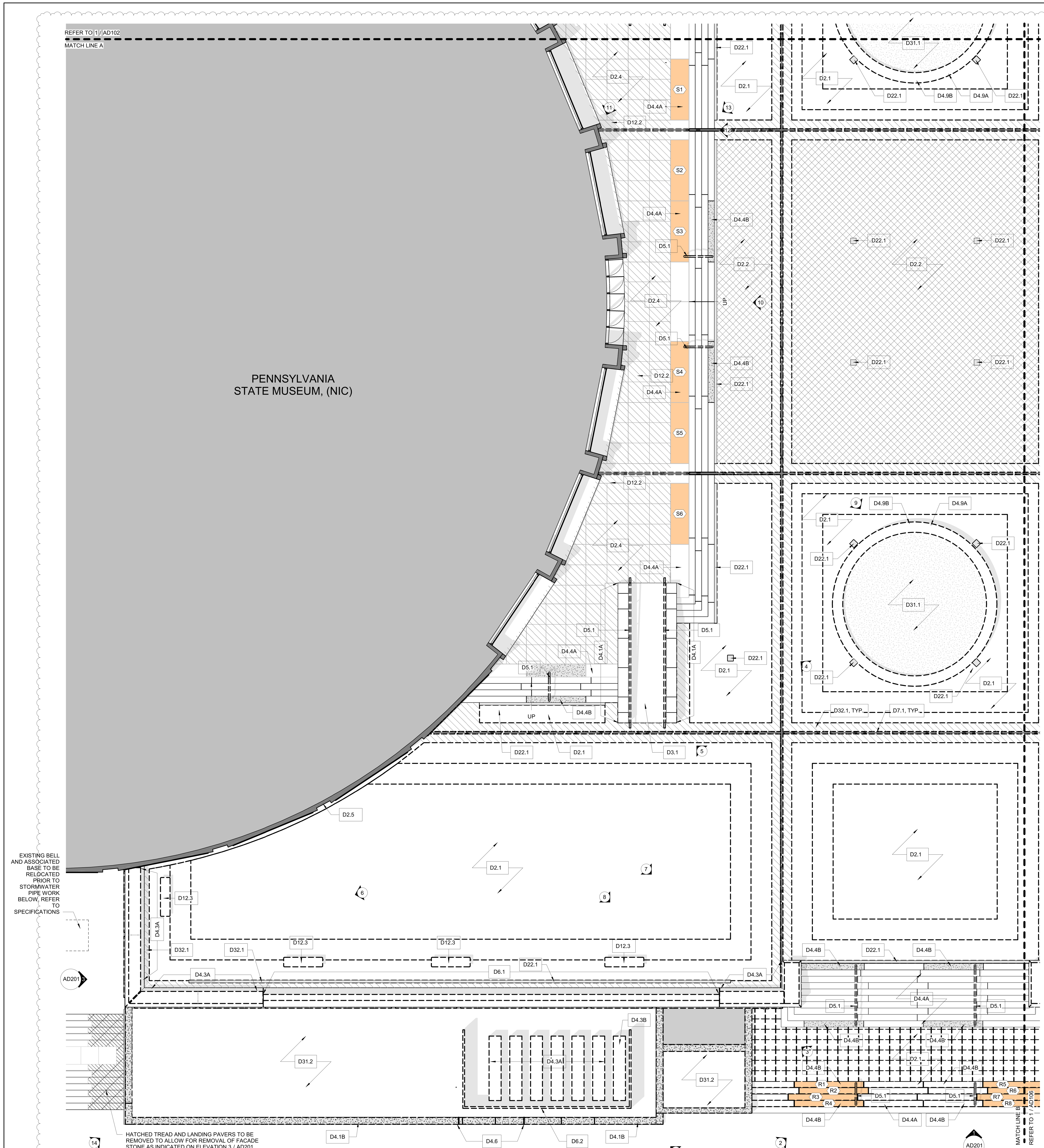
CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS. VARIANCE FROM CONTRACT DOCUMENTS NOT PERMITTED WITHOUT PROFESSIONAL & BUREAU OF CONSTRUCTION APPROVAL

PLAZA PAVER REPAIR / REPLACMENT
PA STATE MUSEUM,
THE CAPITOL COMPLEX
HARRISBURG, DAUPHIN COUNTY, PA

DEMOLITION - PLAZA FLOOR PLAN - ENLARGED AREA C

DRAWN BY	DATE	DRAWING NO.
DS	07.29.25	AD106
CHECKED BY	SCALE	
WE	PER DWG	

DRAWING SET IS INTENDED FOR COLOR PRINTING



1 AD108 DEMOLITION - PLAZA FLOOR PLAN - ENLARGED AREA D
SCALE: 1/8" = 1'-0"

GENERAL DEMOLITION NOTES

1. SELECTIVE DEMOLITION WORK SHALL INCLUDE, BUT IS NOT LIMITED TO THE ITEMS LISTED ON THESE DRAWINGS. INCLUDE ALL THAT IS NECESSARY TO COMPLETE THE SCOPE OF WORK AS INDICATED ON THE CONSTRUCTION DRAWINGS AND SPECIFICATIONS. SEE ALL DRAWINGS TO COORDINATE ANY ADDITIONAL WALL OR FLOOR DEMOLITION.

2. NOT USED (1)

3. NOTES ARE ORGANIZED UNDER THE MOST APPLICABLE SPECIFICATION SECTION.

4. COORDINATE DEMOLITION WITH DIMENSIONS OF NEW CONSTRUCTION.

5. CONTRACTOR TO INFORM ARCHITECT OF CONDITIONS INCONSISTENT WITH WHAT IS SHOWN ON DRAWINGS.

6. ======= INDICATES CONCRETE, MASONRY, OR STUD WALLS WITH FINISHES TO BE DEMOLISHED. PATCH ADJACENT SURFACES WITH MATERIALS TO MATCH EXISTING AND MINIMIZE INCONSISTENCIES.

7. NOT USED (1)

8. PATCH AND REPAIR ALL AREAS AFFECTED BY DEMOLITION. PREPARE THESE AREAS FOR NEW FINISH - SEE FINISH SCHEDULE.

9. REFER TO MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR DEMOLITION ASSOCIATED WITH MECHANICAL, PLUMBING, AND ELECTRICAL WORK.

10. REMOVE ALL FASTENERS, SUPPORTS, ETC. ASSOCIATED WITH DEMOLISHED ITEMS.

11. DEMOLITION CALLOUTS REFLECT MAJOR DEMOLITION ACTIVITIES. REFER TO ARCHITECTURAL AND WATERPROOFING DETAILS FOR MISC. CUTS, SCORES, AND CHAMFERS REQUIRED AT EXISTING STRUCTURE.

12. INTERNAL GUTTER SYSTEM LOCATED UNDER PLAZA EXPANSION JOINTS IS EXISTING TO REMAIN. PROTECT INTERNAL GUTTER SYSTEM DURING DEMOLITION.

DEMO NOTE KEY

DIV 2: DEMOLITION - PHASE 1.1 CONTRACTOR

- D2.1 REMOVE CONCRETE PAVER, SETTING BED, MEMBRANE, SLOPED LIGHT WEIGHT CONCRETE, AND MEMBRANE. AT COMPLETION OF DEMOLITION STRUCTURAL DECK SHOULD BE BARE AND READY TO RECEIVE NEW WORK. REFER TO WATERPROOFING DEMOLITION DETAILS ON 1A / DM1.00
- D2.2 REMOVE WHITE GRANITE PAVERS. CATALOG, CLEAN, AND STORE UNTIL READY FOR REINSTALLATION. REMOVE PEDESTALS, RIGID INSULATION, AND SLOPED CONCRETE TOPPING SLAB. AT COMPLETION OF DEMOLITION, STRUCTURAL DECK SHOULD BE BARE AND READY TO RECEIVE NEW WORK (IDENTIFIED BY DIAGONAL CROSS HATCH). REFER TO WATERPROOFING DEMOLITION DETAILS ON 1B / DM1.00 AND 3 / DM1.00
- D2.3 REMOVE DARK GRANITE PAVERS. CATALOG, CLEAN, AND STORE UNTIL READY FOR REINSTALLATION. REMOVE PEDESTALS, RIGID INSULATION, AND SLOPED CONCRETE TOPPING SLAB. AT COMPLETION OF DEMOLITION, STRUCTURAL DECK SHOULD BE BARE AND READY TO RECEIVE NEW WORK. REFER TO WATERPROOFING DEMOLITION DETAILS ON 1B / DM1.00 AND 3 / DM1.00
- D2.4 REMOVE GRANITE PAVERS. CATALOG, CLEAN, AND STORE UNTIL READY FOR REINSTALLATION. REMOVE RIGID INSULATION, AND SLOPED CONCRETE TOPPING SLAB. AT COMPLETION OF DEMOLITION, STRUCTURAL DECK SHOULD BE BARE AND READY TO RECEIVE NEW WORK. REFER TO WATERPROOFING DEMOLITION DETAILS ON 1A / DM1.00 (1)
- D2.5 REMOVE GRANITE STONE ANGLE AT WALL BASE, CATALOG, CLEAN, STORE, AND PREP FOR INSTALLATION, COORD. WITH WATERPROOFING DETAIL 7 / DM1.00.

DIV 3: CONCRETE - PHASE 1.1 CONTRACTOR

- D3.1 REMOVE REINFORCED CONCRETE RAMP.
- D3.2 NOT USED
- D3.3 REMOVE FLOOR AND ASSOCIATED FINISHES AS NECESSARY TO ACCESS STORMWATER DRAIN BELOW, REPLACE TO MATCH EXISTING (BASE BID 1 IDENTIFIED BY HATCH) (BASE BID 2 IDENTIFIED BY HATCH) (BASE BID 3 IDENTIFIED BY HATCH)
- D3.4 REMOVE CONCRETE SLAB, REFER TO WATERPROOFING DEMOLITION DETAILS ON 1 / DM3.00

DIV 4: MASONRY - PHASE 1.1 CONTRACTOR

- D4.1A REMOVE LIMESTONE PANEL. CATALOG, CLEAN, STORE AND PREP TO REINSTALL. REFER TO WATERPROOFING DEMOLITION DETAIL ON 5 / DM1.00, 2 / DM1.00, AND 27 / DM2.00.
- D4.1B REMOVE LIMESTONE PANEL. (IDENTIFIED BY HATCH)REFER TO WATERPROOFING DEMOLITION DETAIL ON 5 / DM1.00, 2 / DM1.00, AND 27 / DM2.00.
- D4.2A REMOVE GRANITE PLANTER WALLS. CATALOG, CLEAN, STORE AND PREP TO REINSTALL. REFER TO WATERPROOFING DEMOLITION DETAIL ON 1 / DM2.00 AND 5 / DM2.00
- D4.2B REMOVE GRANITE PLANTER WALLS (IDENTIFIED BY HATCH) REFER TO WATERPROOFING DEMOLITION DETAILS ON 1 / DM2.00 AND 5 / DM2.00
- D4.2C REMOVE GRANITE PLANTER WALLS, INCLUDING CONCRETE SUB WALLS. COORD. SUBWALL REMOVAL W/ EXTENT OF NEW WORK (IDENTIFIED BY HATCH) REFER TO WATERPROOFING DEMOLITION DETAILS ON 1 / DM2.00 AND 5 / DM2.00
- D4.3A REMOVE EXISTING LIMESTONE BLOCKS AND ASSOC. BASE STONE. CATALOG, CLEAN, STORE AND PREP TO REINSTALL REFER TO WATERPROOFING DEMOLITION DETAILS ON 2 / DM1.00. IF BLOCK OR SUPPPORT IS UNSALVAGABLE, CONTACT ARCHITECT AND ENGINEER FOR REVIEW AND REPAIR SPECIFICATIONS. (1)
- D4.3B STONE BLOCK TO BE SALVAGED AND RETURNED TO CLIENT AGENCY. WATERPROOFING DEMOLITION DETAILS ON 2 / DM1.00
- D4.4A REMOVE GRANITE STAIR PAVERS (RISERS & TREADS). CATALOG, CLEAN, STORE AND PREP FOR REINSTALLATION / RELOCATION. REFER TO /A113 FOR RELOCATION DETAILS. WATERPROOFING DEMOLITION DETAILS ON 7 / DM2.00.
- D4.4B REMOVE GRANITE STAIR PAVERS (RISERS & TREADS). (IDENTIFIED BY HATCH). WATERPROOFING DEMOLITION DETAILS ON 7 / DM2.00
- D4.5A REMOVE EXISTING LIMESTONE COPING. CATALOG, CLEAN, STORE AND PREP TO REINSTALL. WATERPROOFING DEMOLITION DETAILS ON 2 / DM1.00
- D4.5B REMOVE EXISTING LIMESTONE COPING (IDENTIFIED BY HATCH) WATERPROOFING DEMOLITION DETAILS ON 2 / DM1.00
- D4.6 REMOVE LIMESTONE PLANTER WALLS, INCLUDING CONCRETE SUB WALLS. SALVAGE LIMESTONE FOR REUSE. COORD. EXTENT W/ NEW WORK
- D4.7 CMU WALL CONSTRUCTION TO BE REMOVED AS REQ'D, TO ACCESS & REMOVE STORMWATER PIPING & CONNECTIONS OR TO INSTALL ACCESS PANEL
- D4.8 BRICK INFILL WITHIN CMU WALL CONSTRUCTION TO BE REMOVED FROM FLOOR TO CEILING AS REQ'D TO ACCESS AND REMOVE STORMWATER PIPING AND CONNECTIONS
- D4.9A REMOVE GRANITE PLANTER COPING AND CLADDING. REFER TO WATERPROOFING DEMOLITION DETAILS ON 4 / DM2.00. RETURN TO CLIENT AGENCY.
- D4.9B REMOVE PLANTER CONCRETE SUB WALLS. REFER TO WATERPROOFING DEMOLITION DETAILS ON 4 / DM2.00
- D4.10 REMOVE GRANITE PAVER, CATALOG, CLEAN, STORE, AND PREP TO REINSTALL. REFER TO WATERPROOFING DEMOLITION DETAIL 4 / DM1.00
- D4.11 REMOVE GRANITE CURB, CATALOG, CLEAN, STORE, AND PREP TO REINSTALL. REFER TO DEMOLITION DETAIL ON 6 / DM1.00
- D4.12 REMOVE CONCRETE MASONRY WALLS SURROUNDING THE PLANTER. REFER TO WATERPROOFING DEMOLITION DETAIL 5 / DM2.00

DIV 5: METALS - PHASE 1.1 CONTRACTOR

- D5.1 REMOVE EXISTING HANDRAIL AND RELATED ACCESSORIES INCLUDING SLEEVES.
- D5.2 REMOVE EXISTING METAL HANDRAIL. CATALOG, CLEAN, MODIFY (REFER TO DETAIL DWG 6 / A501). STORE. AND PREP TO REINSTALL

DIV 6: WOOD, PLASTICS, AND COMPOSITES - PHASE 1.1 CONTRACTOR

- D6.1 REMOVE EXISTING TEMPORARY WD./MTL. RAILING
- D6.2 REMOVE TEMPORARY WOOD WALLS
- D6.3 REMOVE TEMPORARY WOOD BRACING. COORDINATE WITH REMOVAL OF STONE SOFFIT

DIV 7: THERMAL AND MOISTURE PROTECTION - PHASE 1.1 CONTRACTOR

- D7.1 REMOVE EXISTING EXPANSION JOINT AND ASSOCIATED COMPONENTS (IDENTIFIED BY LINE) REFER TO WATERPROOFING DEMOLITION DETAILS ON 10 / DM1.00, AND 3 / DM2.00

DIV 9: FINISHES - PHASE 1.1 CONTRACTOR

- D9.1 REMOVE EXISTING HARD CEILING SYSTEM AS REQUIRED FOR NEW STORM WATER PIPING SCOPE.
- D9.2 REMOVE EXISTING CEILING TILE AS REQUIRED FOR NEW STORM WATER PIPING SCOPE, STORE FOR LATER REINSTALLATION. GRID EXISTING TO REMAIN, PROTECT DURING CONSTRUCTION
- D9.3 DRYWALL PARTITION CONSTRUCTION TO BE REMOVED FROM FLOOR TO CEILING AS REQ'D TO ACCESS AND REMOVE STORMWATER PIPING AND CONNECTIONS.
- D9.4 REMOVE EXISTING EXTERIOR HARD CEILING SYSTEM AS REQUIRED FOR NEW STORM WATER PIPING SCOPE OR STRUCTURE.

DIV 10: SPECIALTIES - PHASE 1.1 CONTRACTOR

- D10.1 REMOVE EXISTING PLAQUE. TURN OVER TO CLIENT AGENCY.

DIV 12: FURNISHINGS - PHASE 1.1 CONTRACTOR

- D12.1 NOT USED (1)
- D12.2 NOT USED
- D12.3 REMOVE STONE BENCHES. CATALOG, CLEAN, AND STORE, UNTIL READY FOR REINSTALLATION.

DIV 22: PLUMBING - PHASE 1.3 CONTRACTOR

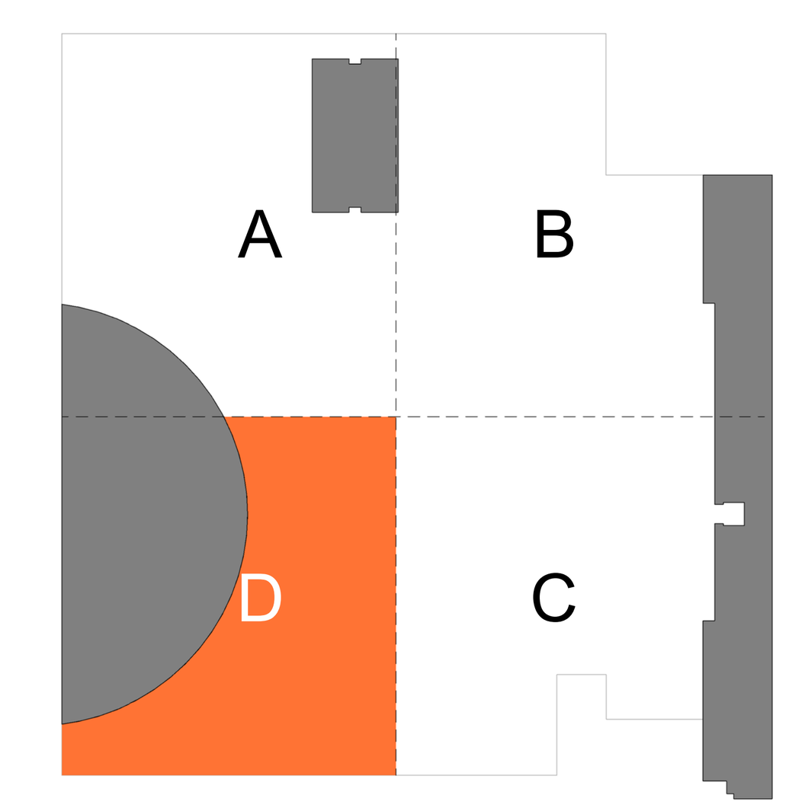
- D22.1 REMOVE EXISTING DRAIN COVERS AND ASSEMBLY. COORD. DRAIN DEMO W/ PLUMBING DWGS. REFER TO WATERPROOFING DEMOLITION DETAILS ON 2 / DM1.00 AND 7 / DM2.00

DIV 31: EARTHWORK - PHASE 1.1 CONTRACTOR

- D31.1 REMOVE SOIL AND PLANTINGS. COORD. W/ CIVIL AND LANDSCAPE DWGS
- D31.2 REMOVE SOIL AND PLANTINGS TO DEPTH COORD. W/ CIVIL DWGS.
- D31.3 REMOVE SOIL AND PLANTINGS AS REQ'D. FOR INSTALLATION OF SLAB ON GRADE AND COLUMN FOUNDATIONS

DIV 32: EXTERIOR IMPROVEMENTS - PHASE 1.1 CONTRACTOR

- D32.1 REMOVE GRANITE ACCENT PAVER. CLEAN. STORE. AND PREP TO REINSTALL / RELOCATION . REFER TO A113 FOR RELOCATION DETAILS. (IDENTIFIED BY DIAGONAL HATCH). WATERPROOFING DEMOLITION DETAILS ON 10 / DM1.00



KEY PLAN

1	Addenda 3 09/15/2025		

AS-BUILT REVISIONS

REGISTERED ARCHITECT PENNSYLVANIA CHRISTOPHER D. DAWSON No. RA-015137-X

09/06/2024

PROFESSIONAL'S SIGNATURE DATE

CDA
CHRIS DAWSON ARCHITECT
300 NORTH 2ND STREET, SUITE 701, HARRISBURG, PA 17101

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES
HARRISBURG, PENNSYLVANIA

D.G.S. PROJECT No. **DGS 948-87 PHASE 1**

PLAZA PAVER REPAIR / REPLACMENT
PA STATE MUSEUM,
THE CAPITOL COMPLEX
HARRISBURG, DAUPHIN COUNTY, PA

DEMOLITION - PLAZA FLOOR PLAN - ENLARGED AREA D

VERIFY SCALE

BAR IS ONE (1) INCH LONG ON ORIGINAL DRAWING:

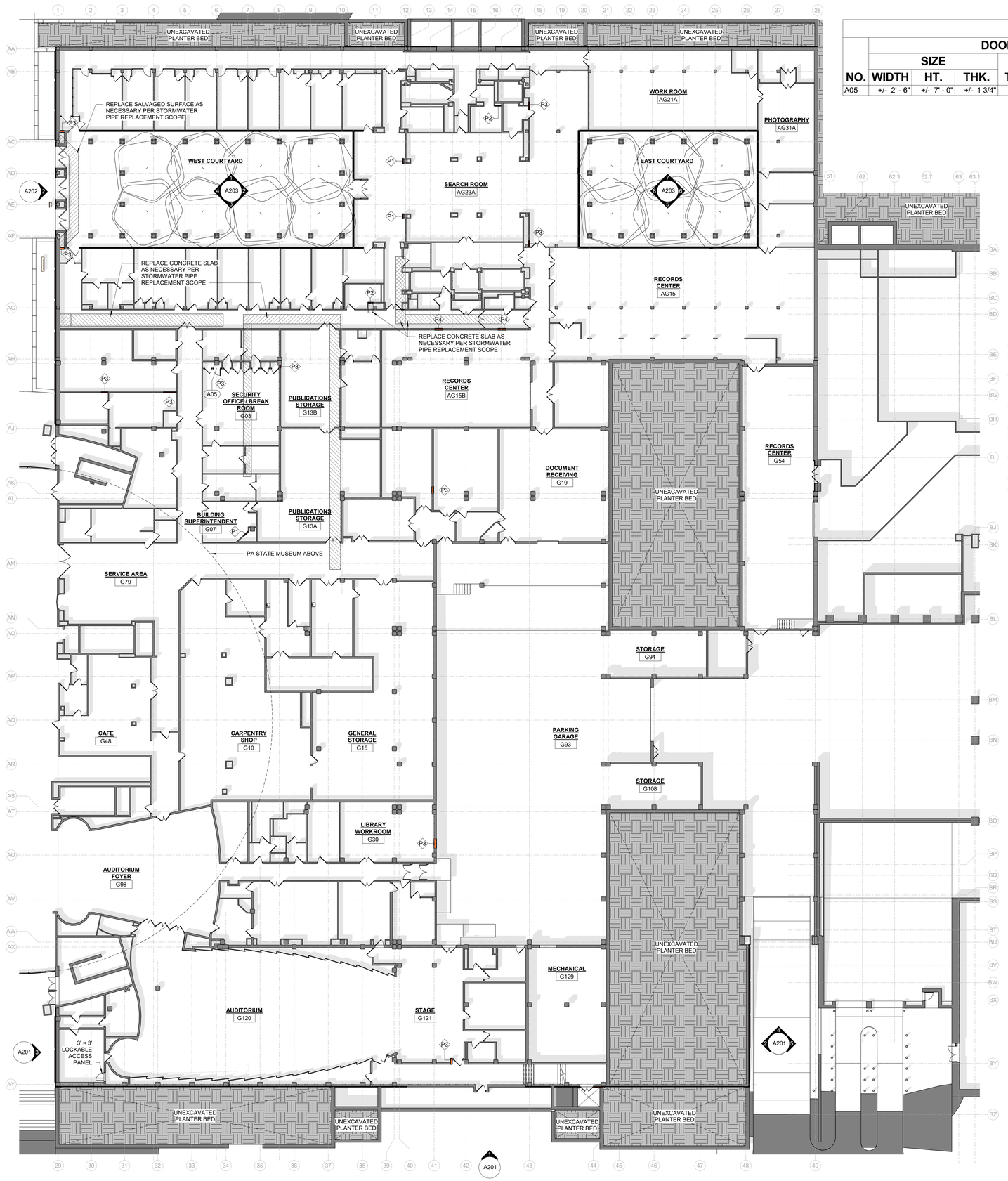
0 1

IF BAR IS NOT ONE (1) INCH LONG, ADJUST SCALE ACCORDINGLY

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS. VARIANCE FROM CONTRACT DOCUMENTS NOT PERMITTED WITHOUT PROFESSIONAL & BUREAU OF CONSTRUCTION APPROVAL

DRAWN BY	DATE	DRAWING NO.
DS	07.29.25	AD108
CHECKED BY WE	SCALE PER DWG	

DRAWING SET IS INTENDED FOR COLOR PRINTING



DOOR / FRAME / HARDWARE SCHEDULE

NO.	DOOR SIZE WIDTH	DOOR SIZE HT.	DOOR SIZE THK.	DOOR TYPE	DOOR MATL	DOOR FINISH	FRAME TYPE	FRAME MATL	FRAME FINISH	FRAME DETAIL HEAD	FRAME DETAIL JAMB	FRAME DETAIL SILL	HARD WARE SETS	REMARKS
A05	+/- 2' - 6"	+/- 7' - 0"	+/- 1 3/4"	ETR	ETR	ETR	ETR	ETR	ETR	-	-	-	ETR	REUSE EXISTING DOOR & FRAME

GENERAL PLAN NOTES

1. DIMENSIONS ARE FROM FACE OF FINISH, FACE OF MASONRY, OR CENTERLINE OF COLUMN

2. DIMENSIONS SHOWN ARE TO BE VERIFIED IN FIELD. PAVER DIMENSIONS ARE TO MATCH EXISTING. NOTIFY ARCHITECT IF DIMENSIONS VARY.

3. FLOOR REPLACEMENT SCOPE KEY:
(BASE BID 1 IDENTIFIED BY HATCH)
(BASE BID 2 IDENTIFIED BY HATCH)
(BASE BID 3 IDENTIFIED BY HATCH)

4. REFER TO DETAIL 9 / SS04 FOR TYP. FLOOR REPLACEMENT DETAIL.

PARTITION KEY

NEW WALL CONSTRUCTION

EXISTING WALL CONSTRUCTION

- P1 — PTD 5/8" DRYWALL W/ 2"x4" WD. STUD PARTITION CONSTRUCTION, MATERIALS & FINISHES TO MATCH EXISTING WALL. VERIFY EXISTING CONDITIONS IN FIELD
- P2 — 4" SQUARE CERAMIC TILED 4" CMU WALL CONSTRUCTION, MATERIALS & FINISHES TO MATCH EXISTING WALL. VERIFY EXISTING CONDITIONS IN FIELD
- P3 — PAINTED 4" CMU WALL CONSTRUCTION, MATERIALS & FINISHES TO MATCH EXISTING WALL. VERIFY EXISTING CONDITIONS IN FIELD
- P4 — FIRE RATED, PAINTED 8" CMU WALL CONSTRUCTION, MATERIALS & FINISHES TO MATCH EXISTING WALL. VERIFY EXISTING CONDITIONS IN FIELD
- P5 — NOT USED

1	Addenda 3	09/15/2025

AS-BUILT REVISIONS

REGISTERED ARCHITECT PENNSYLVANIA CHRISTOPHER D. DAWSON RA-015137X

09/06/2024

PROFESSIONAL'S SIGNATURE DATE

CDA
CHRIS DAWSON ARCHITECT
300 NORTH 2ND STREET, SUITE 701, HARRISBURG, PA 17101

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES
HARRISBURG, PENNSYLVANIA

D.G.S. PROJECT No.
DGS 948-87 PHASE 1

PLAZA PAVER REPAIR / REPLACMENT
PA STATE MUSEUM,
THE CAPITOL COMPLEX
HARRISBURG, DAUPHIN COUNTY, PA

GROUND FLOOR PLAN

VERIFY SCALE

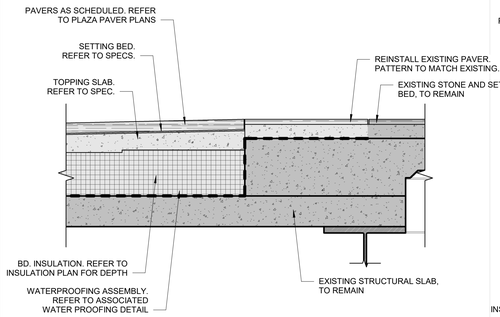
BAR IS ONE (1) INCH LONG ON ORIGINAL DRAWING:
0 — 1

IF BAR IS NOT ONE (1) INCH LONG, ADJUST SCALE ACCORDINGLY

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS. VARIANCE FROM CONTRACT DOCUMENTS NOT PERMITTED WITHOUT PROFESSIONAL & BUREAU OF CONSTRUCTION APPROVAL

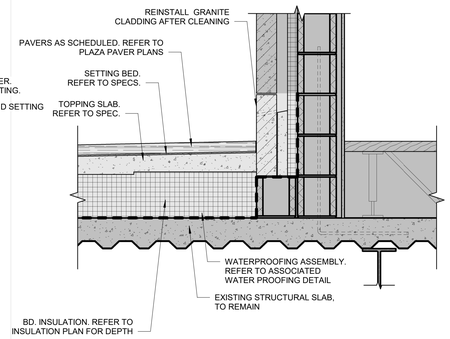
DRAWN BY	DATE	DRAWING NO.
WA	07.29.25	A115
CHECKED BY	SCALE	
WE	PER DWG	

DRAWING SET IS INTENDED FOR COLOR PRINTING



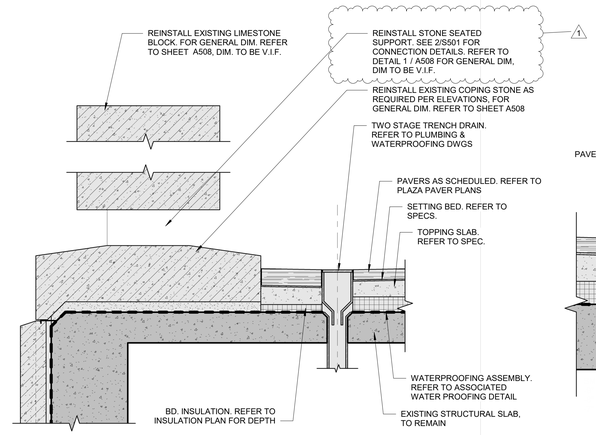
SEE DETAIL 4/S501 FOR ADDITIONAL INFORMATION ON WATERPROOFING AND RELATED ASSEMBLIES

4 A501 KEYSTONE BUILDING ENTRY DETAIL
SCALE: 1" = 1'-0"



SEE DETAIL 3/S501 FOR ADDITIONAL INFORMATION ON WATERPROOFING AND RELATED ASSEMBLIES

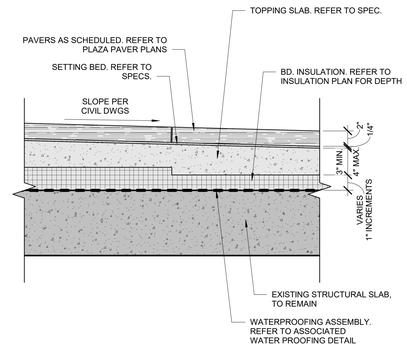
3 A501 KEYSTONE BUILDING TERMINATION DETAIL
SCALE: 1" = 1'-0"



SEE DETAIL 2/S501 FOR ADDITIONAL INFORMATION ON WATERPROOFING AND RELATED ASSEMBLIES

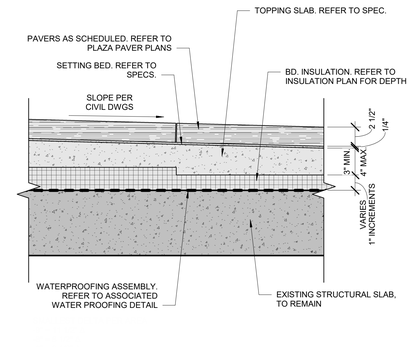
FOR NEW STONE ELEMENTS, SEE SHEET A508 FOR GENERAL STONE DIMENSIONS.

2 A501 PARAPET STONE DETAIL
SCALE: 1" = 1'-0"



SEE DETAIL 1/S501 FOR ADDITIONAL INFORMATION ON WATERPROOFING AND RELATED ASSEMBLIES

1A A501 TYPICAL GRANITE PAVER DETAIL
SCALE: 1 1/2" = 1'-0"



SEE DETAIL 1/S501 FOR ADDITIONAL INFORMATION ON WATERPROOFING AND RELATED ASSEMBLIES

1B A501 TYPICAL CAST STONE PAVER DETAIL
SCALE: 1 1/2" = 1'-0"

SEE DETAIL 8/S501 FOR ADDITIONAL INFORMATION ON WATERPROOFING AND RELATED ASSEMBLIES

8 A501 ARCHIVES BUILDING TERMINATION DETAIL B
SCALE: 1" = 1'-0"

SEE DETAIL 7/S501 FOR ADDITIONAL INFORMATION ON WATERPROOFING AND RELATED ASSEMBLIES

7 A501 ARCHIVES BUILDING TERMINATION DETAIL A
SCALE: 1" = 1'-0"

SEE DETAIL 6/S501 FOR ADDITIONAL INFORMATION ON WATERPROOFING AND RELATED ASSEMBLIES FOR NEW STONE ELEMENTS, SEE SHEET A508 FOR GENERAL STONE DIMENSIONS. REFER TO STRUCTURAL SHEETS FOR ATTACHING DETAILS

6 A501 SUNKEN COURTYARD COPING TYPICAL DETAIL
SCALE: 1" = 1'-0"

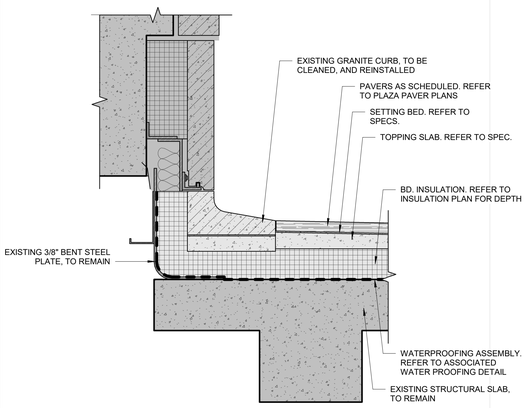
SEE DETAIL 5/S501 FOR ADDITIONAL INFORMATION ON WATERPROOFING AND RELATED ASSEMBLIES

5 A501 LIGHT POLE BASE DETAIL - PAVER
SCALE: 1 1/2" = 1'-0"

EXISTING VS PROPOSED KEY

AREAS OF WORK

EXISTING TO REMAIN, PROTECT DURING CONSTRUCTION

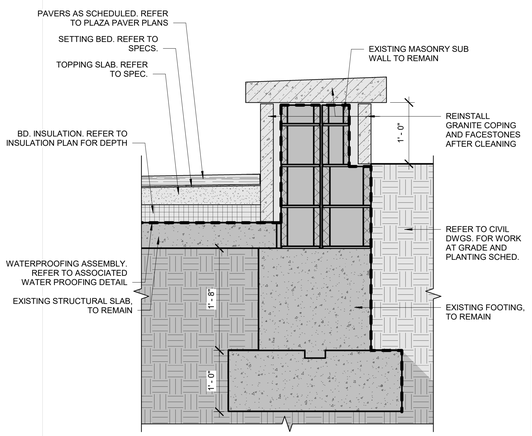


SEE DETAIL 11/S501 FOR ADDITIONAL INFORMATION ON WATERPROOFING AND RELATED ASSEMBLIES

11 A501 MUSEUM BUILDING TERMINATION DETAIL
SCALE: 1" = 1'-0"

SEE DETAIL 10/S501 FOR ADDITIONAL INFORMATION ON WATERPROOFING AND RELATED ASSEMBLIES

10 A501 EXPANSION JOINT TYPICAL DETAIL
SCALE: 1 1/2" = 1'-0"



SEE DETAIL 9/S501 FOR ADDITIONAL INFORMATION ON WATERPROOFING AND RELATED ASSEMBLIES

9 A501 CURVED PLANTER BENCH TERMINATION DETAIL
SCALE: 1" = 1'-0"

1	Addenda 3	09/15/2025	

AS-BUILT REVISIONS

REGISTERED ARCHITECT COMMONWEALTH OF PENNSYLVANIA CHRISTOPHER D. DAWSON RA-015137-X

09/06/2024

PROFESSIONAL'S SIGNATURE DATE

CDA
CHRIS DAWSON ARCHITECT
300 NORTH 2ND STREET, SUITE 701, HARRISBURG, PA 17101

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES
HARRISBURG, PENNSYLVANIA

D.G.S. PROJECT No.
DGS 948-87 PHASE 1

PLAZA PAVER REPAIR / REPLACMENT
PA STATE MUSEUM,
THE CAPITOL COMPLEX
HARRISBURG, DAUPHIN COUNTY, PA

PAVER DETAILS

VERIFY SCALE

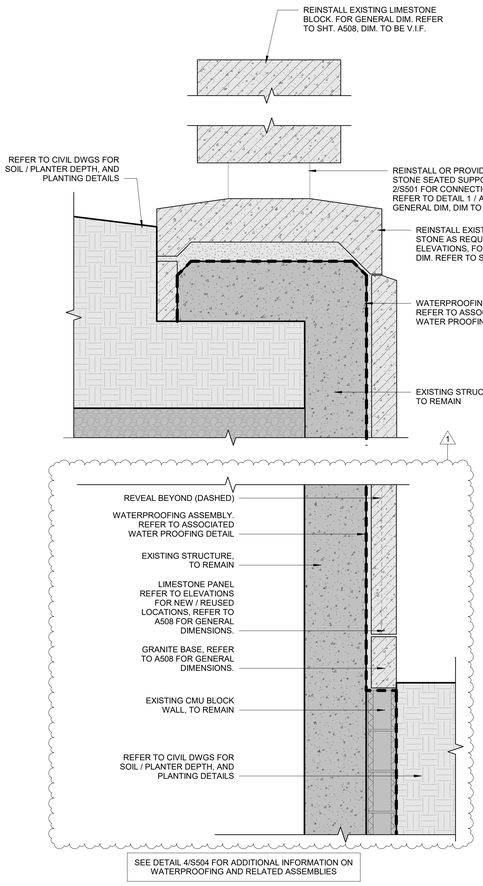
BAR IS ONE (1) INCH LONG ON ORIGINAL DRAWING:
0 1

IF BAR IS NOT ONE (1) INCH LONG, ADJUST SCALE ACCORDINGLY

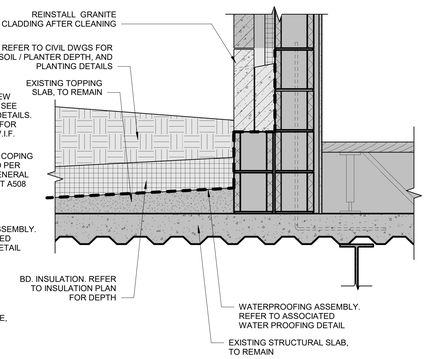
CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS. VARIANCE FROM CONTRACT DOCUMENTS NOT PERMITTED WITHOUT PROFESSIONAL & BUREAU OF CONSTRUCTION APPROVAL

DRAWN BY	DATE	DRAWING NO.
JW / DS	07.29.25	A501
CHECKED BY	SCALE	
WE	PER DWG	

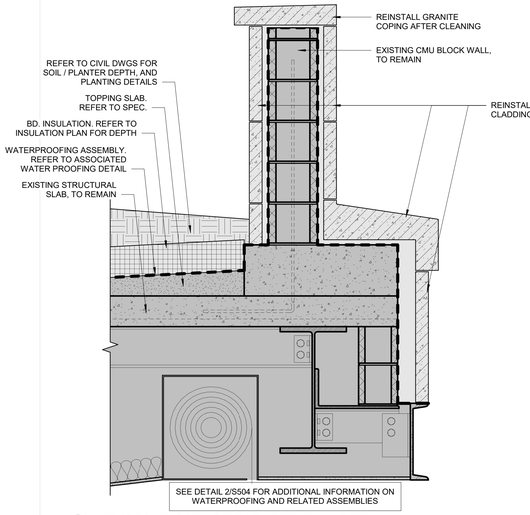
DRAWING SET IS INTENDED FOR COLOR PRINTING



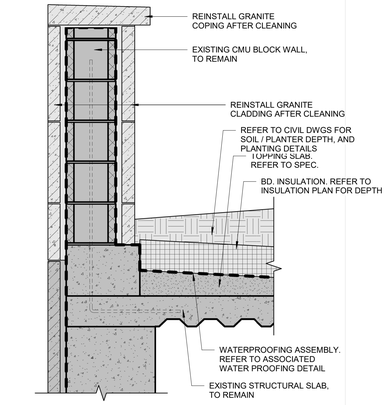
4 A504 PARAPET UNEXCAVATED PLANTER DETAIL
SCALE: 1" = 1'-0"



3 A504 KEYSTONE BLDG PLANTER TERMINATION DETAIL
SCALE: 1" = 1'-0"



2 A504 KEYSTONE GARAGE PARAPET WALL DETAIL
SCALE: 1" = 1'-0"



1 A504 KEYSTONE PARAPET WALL DETAIL
SCALE: 1" = 1'-0"

7 A504 LIGHT POLE BASE DETAIL - GRADE
SCALE: 1" = 1'-0"

6 A504 KEYSTONE EDGE CURD DETAIL
SCALE: 1" = 1'-0"

5 A504 STREET SIDE PLANTER WALL TYPICAL DETAIL
SCALE: 1" = 1'-0"

EXISTING VS PROPOSED KEY

AREAS OF WORK

EXISTING TO REMAIN, PROTECT DURING CONSTRUCTION

1	Addenda 3	09/15/2025	

AS-BUILT REVISIONS

REGISTERED ARCHITECT PENNSYLVANIA CHRISTOPHER D. DAWSON RA-005137-X

09/06/2024

PROFESSIONAL'S SIGNATURE DATE

CDA
CHRIS DAWSON ARCHITECT
300 NORTH 2ND STREET, SUITE 701, HARRISBURG, PA 17101

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES
HARRISBURG, PENNSYLVANIA

D.G.S. PROJECT No.
DGS 948-87 PHASE 1

PLAZA PAVER REPAIR / REPLACMENT
PA STATE MUSEUM,
THE CAPITOL COMPLEX
HARRISBURG, DAUPHIN COUNTY, PA

GRADE WATERPROOFING DETAILS

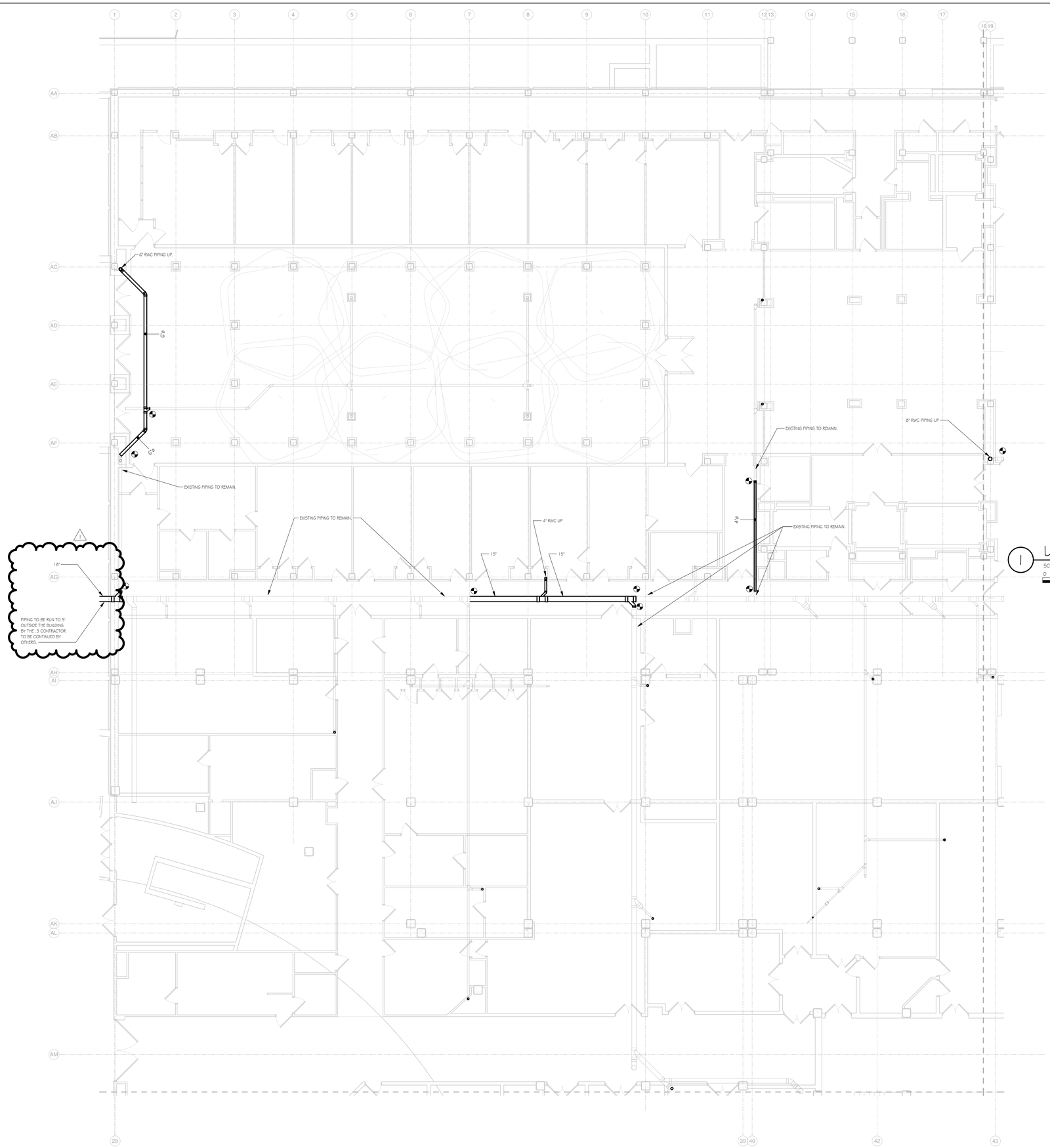
VERIFY SCALE

BAR IS ONE (1) INCH LONG ON ORIGINAL DRAWING:
0 1
IF BAR IS NOT ONE (1) INCH LONG, ADJUST SCALE ACCORDINGLY

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS. VARIANCE FROM CONTRACT DOCUMENTS NOT PERMITTED WITHOUT PROFESSIONAL & BUREAU OF CONSTRUCTION APPROVAL

DRAWN BY	DATE	DRAWING NO.
JW / DS	07.29.25	A504
CHECKED BY	SCALE	
WE	PER DWG	

DRAWING SET IS INTENDED FOR COLOR PRINTING



1 UNDERSLAB FLOOR PLAN - PLUMBING - BASE BID 002 - AREA A

SCALE: 1/8" = 1'-0"

0 4' 8' 16'

PLAN NORTH

1	ADDENDA 3 09.15.2025		

AS-BUILT REVISIONS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL A. STEVEN KRUG ENGINEER PENNSYLVANIA

11/08/2024

PROFESSIONAL'S SIGNATURE DATE

CDA
CHRIS DAWSON ARCHITECT
300 NORTH 2ND STREET, SUITE 701, HARRISBURG, PA 17101

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES
HARRISBURG, PENNSYLVANIA

D.G.S. PROJECT No.
DGS 948-87 PHASE 1

PLAZA PAVER REPAIR / REPLACMENT
PA STATE MUSEUM,
THE CAPITOL COMPLEX
HARRISBURG, DAUPHIN COUNTY, PA

UNDERSLAB LARGE SCALE - AREA A

VERIFY SCALE

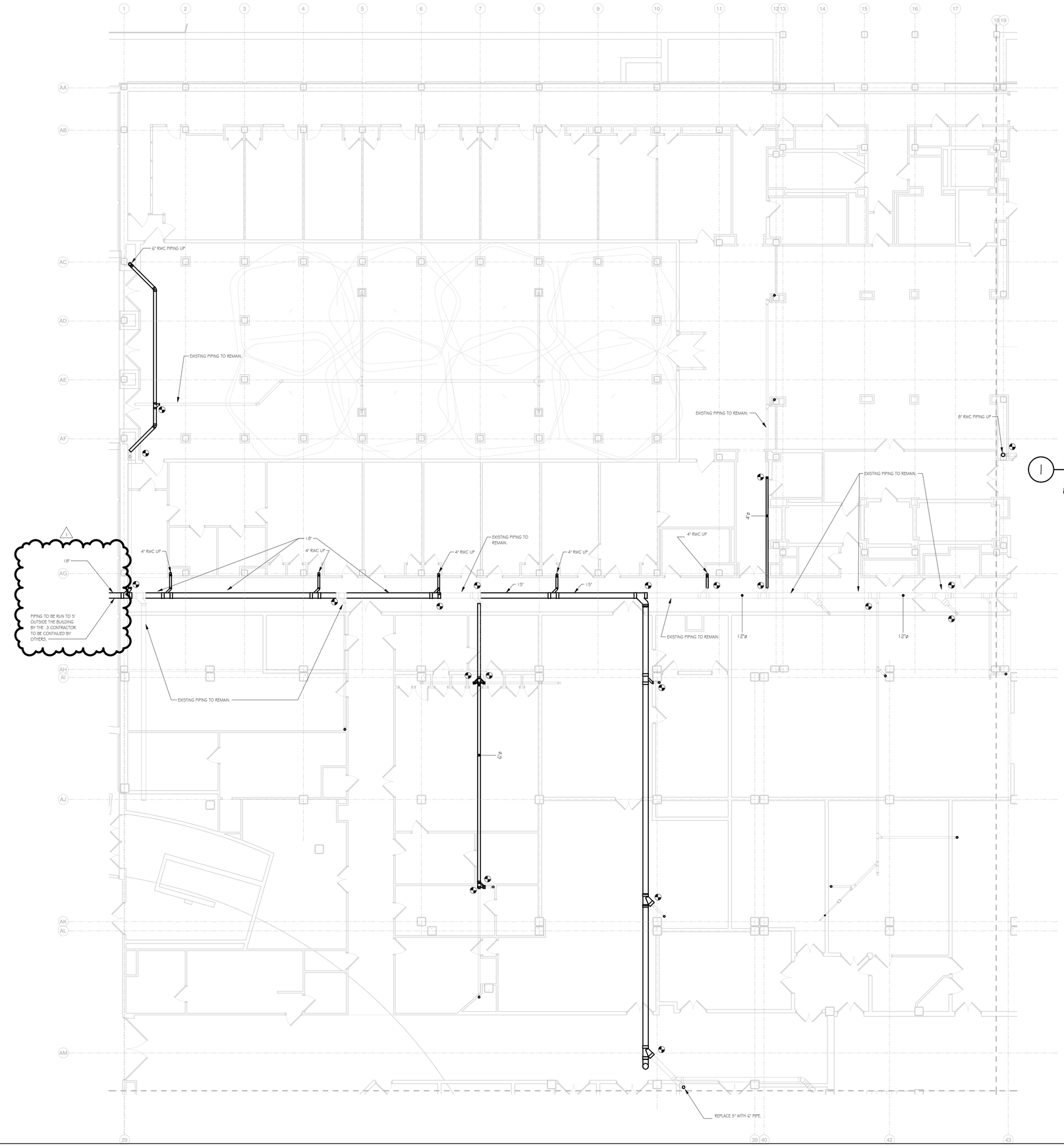
BAR IS ONE (1) INCH LONG ON ORIGINAL DRAWING:

0 1

IF BAR IS NOT ONE (1) INCH LONG, ADJUST SCALE ACCORDINGLY

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS. VARIANCE FROM CONTRACT DOCUMENTS NOT PERMITTED WITHOUT PROFESSIONAL & BUREAU OF CONSTRUCTION APPROVAL

DRAWN BY	DATE	DRAWING NO.
ETH	07.29.2025	P-405
CHECKED BY	SCALE	
SK	PER DWG	



1 UNDERSLAB FLOOR PLAN - PLUMBING - BASE BID 003 - AREA A

SCALE: 1/8" = 1'-0"

0 4' 8' 16' PLAN NORTH

1	ADDENDA 3 09.15.2025		

AS-BUILT REVISIONS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL A. STEVEN KRUG ENGINEER 038160-E

11/08/2024

PROFESSIONAL'S SIGNATURE DATE

CDA

CHRIS DAWSON ARCHITECT

300 NORTH 2ND STREET, SUITE 701, HARRISBURG, PA 17101

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES

HARRISBURG, PENNSYLVANIA

D.G.S. PROJECT No.

DGS 948-87 PHASE 1

PLAZA PAVER REPAIR / REPLACMENT
PA STATE MUSEUM,
THE CAPITOL COMPLEX

HARRISBURG, DAUPHIN COUNTY, PA

UNDERSLAB LARGE SCALE - AREA A

VERIFY SCALE

BAR IS ONE (1) INCH LONG ON ORIGINAL DRAWING:

0 1

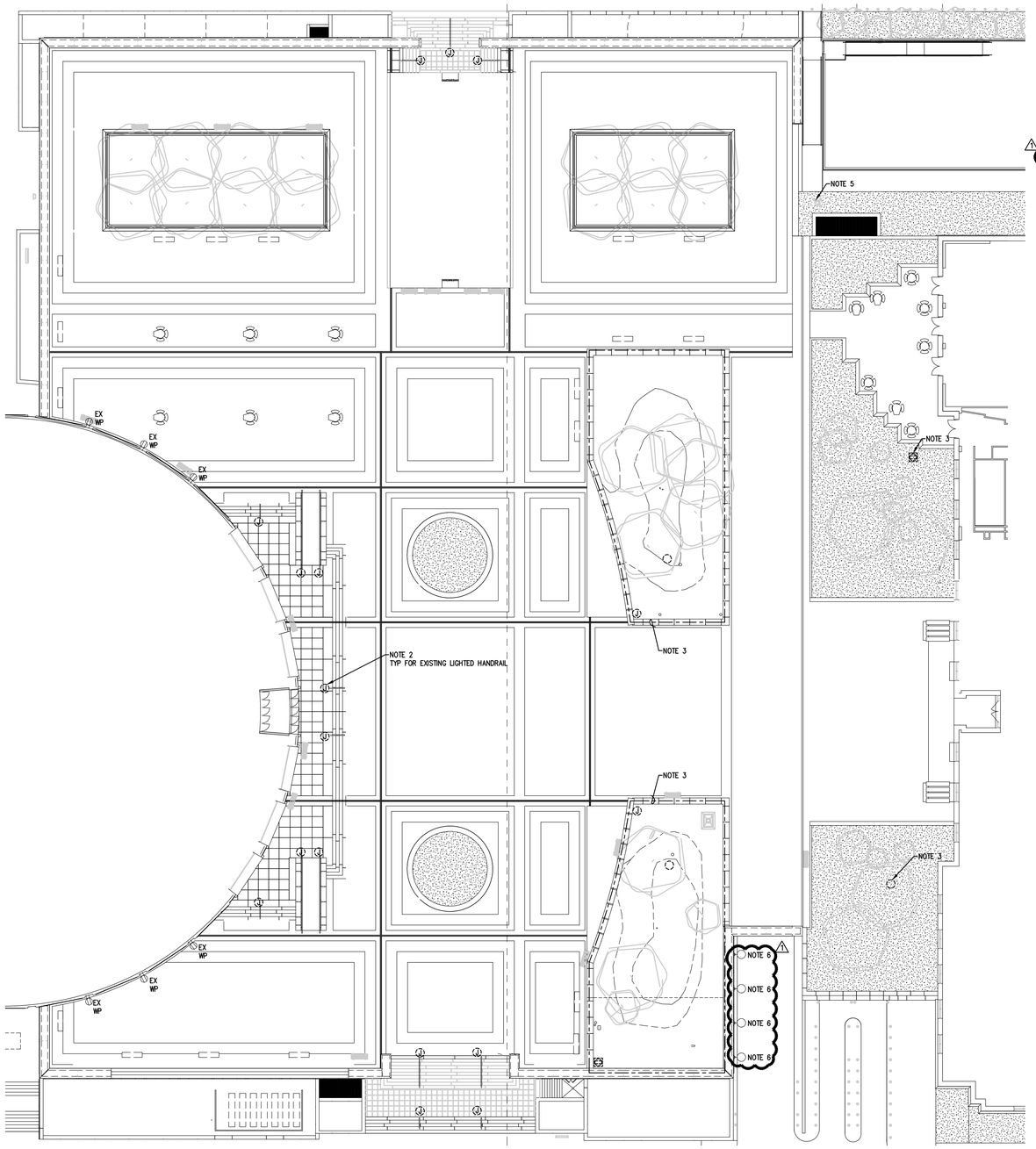
IF BAR IS NOT ONE (1) INCH LONG, ADJUST SCALE ACCORDINGLY

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS. VARIANCE FROM CONTRACT DOCUMENTS NOT PERMITTED WITHOUT PROFESSIONAL & BUREAU OF CONSTRUCTION APPROVAL

DRAWN BY ETH	DATE 07.29.2025	DRAWING NO. P-409
CHECKED BY SK	SCALE PER DWG	

NOTES:

1. ALL ELECTRICAL ITEMS TO REMAIN AND BE MAINTAINED IN SERVICE UNLESS NOTED OTHERWISE.
2. DISCONNECT EXISTING LIGHTING FIXTURES IN EXISTING LIGHTED HANDRAIL TO BE REMOVED. REMOVE EXISTING WIRING BACK TO SOURCE. MAINTAIN EXISTING CIRCUIT FOR DOWNSTREAM LIGHTING TO REMAIN. FILL AND WATERPROOF ABANDONED PENETRATIONS TO THE BUILDING INTERIOR CAUSED BY THE REMOVAL OF DEVICES AND THEIR ASSOCIATED CONDUITS. MAKE READY FOR OVERALL ADDITIONAL WATERPROOFING BY GENERAL CONTRACTOR.
3. REMOVE EXISTING LANDSCAPE LIGHTING AND RECEPTACLES LOCATED WITHIN PLANTER. REMOVE EXISTING WIRING BACK TO SOURCE. MAINTAIN EXISTING CIRCUIT FOR DOWNSTREAM LIGHTING TO REMAIN. FILL AND WATERPROOF ABANDONED PENETRATIONS TO THE BUILDING INTERIOR CAUSED BY THE REMOVAL OF DEVICES AND THEIR ASSOCIATED CONDUITS. MAKE READY FOR OVERALL ADDITIONAL WATERPROOFING BY GENERAL CONTRACTOR.
4. REFER TO DRAWING ED100 FOR INFORMATION ON EXISTING PLAZA SITE LIGHTING CONTROLS.
5. EXISTING POLE WITH THREE CAMERAS TO REMAIN AND BE MAINTAINED IN SERVICE.
6. REMOVE EXISTING LIGHT FIXTURE AND RETAIN FOR REINSTALLATION. REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION.



N

SITE PLAN – DEMOLITION – ELECTRICAL

SCALE: 1"=20'-0"

NOTES 1,4

		1	ADDENDA 3 09/15/2025

AS-BUILT REVISIONS

PROFESSIONAL'S SIGNATURE DATE

CHRIS DAWSON ARCHITECT
300 NORTH 2ND STREET, SUITE 701, HARRISBURG, PA 17101

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES
HARRISBURG, PENNSYLVANIA

D.G.S. PROJECT No.
DGS 948-87 PHASE 1

PLAZA PAVER REPAIR / REPLACMENT
PA STATE MUSEUM,
THE CAPITOL COMPLEX
HARRISBURG, DAUPHIN COUNTY, PA

SITE PLAN - DEMOLITION - ELECTRICAL

VERIFY SCALE

BAR IS ONE (1) INCH LONG ON ORIGINAL DRAWING:

0 1

IF BAR IS NOT ONE (1) INCH LONG, ADJUST SCALE ACCORDINGLY

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS. VARIANCE FROM CONTRACT DOCUMENTS NOT PERMITTED WITHOUT PROFESSIONAL & BUREAU OF CONSTRUCTION APPROVAL

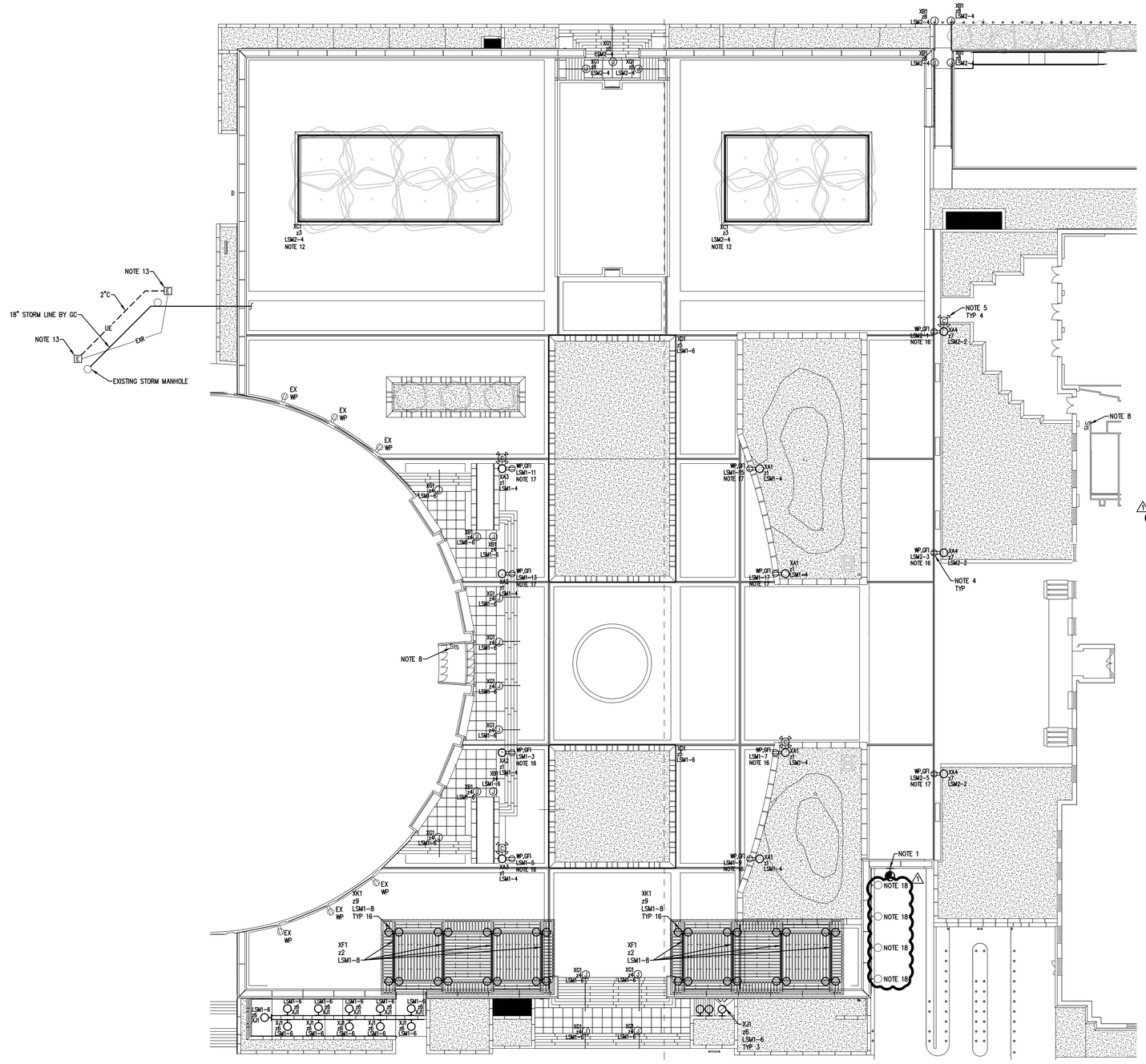
Barton Associates, Inc.
Consulting Engineers
Susquehanna Commerce Center
North Building
221 West Philadelphia Street
York, PA 17401
Tel.: (717) 845-7654
Web: www.ba-inc.com

We Make Buildings Work

YORK | STATE COLLEGE | PITTSBURGH

PROJECT No.	DRAWN BY:	DESIGNED BY:	CHECKED BY:
2022141.00	AMC	AMC/JLH	WLS

DRAWN BY	DATE	DRAWING NO.
AMC	07.29.2025	ED101
CHECKED BY	SCALE	
WLS	PER DWG	



SITE PLAN – ELECTRICAL

SCALE: 1"=20'-0"

NOTES 2,3,6,7,9,10,11,14,15

NOTES:

1. OUTDOOR PHOTOCELL NLIGHT 'NIO PC KIT' FOR CONTROL OF EXTERIOR LIGHTING. SURFACE MOUNT PHOTOCELL WITH WEATHERPROOF HOUSING. COORDINATE EXACT MOUNTING LOCATION OF PHOTOCELL IN FIELD WITH CLIENT AGENCY PRIOR TO ROUGH-IN.
2. ROUTE CONDUIT PATHWAYS ABOVE CEILING OF FLOOR BELOW. WHERE POSSIBLE, POP UP ONCE INTO SANDWICH SPACE TO MINIMIZE PENETRATIONS IN WATER BARRIER.
3. MOUNT REMOTE DRIVERS FOR FIXTURE TYPES (XB, XC, XD, XF, XG, AND XJ) IN ACCESSIBLE LOCATIONS ABOVE CEILING OF FLOOR BELOW WITHOUT EXCEEDING MANUFACTURER RECOMMENDED DISTANCES BETWEEN DRIVERS AND LUMINAIRES. COORDINATE FINAL LOCATION OF REMOTE DRIVERS WITH ARCHITECT PRIOR TO BEGINNING ROUGH-IN. LABEL DRIVER WITH CIRCUIT AND LIGHTING TYPE/LOCATION SERVED. WHERE REQUIRED TO AVOID UNWANTED VOLTAGE DROP, UPSIZE LOW VOLTAGE WIRE BETWEEN DRIVERS AND LUMINAIRES PER MANUFACTURER RECOMMENDATIONS.
4. PROVIDE IN-USE COVER WITH WEATHERPROOF GFI RECEPTACLE. MOUNT RECEPTACLE 18" AFG.
5. CONFIRM CAMERA PLACEMENT AND AIMING WITH CLIENT AGENCY PRIOR TO INSTALLATION.
6. REFER TO DETAIL 5/E002 FOR POLES LOCATED IN PLANTER BEDS. REFER TO DETAIL 3/E002 FOR POLES LOCATED ON PLAZA PAVERS. SEE ARCHITECTURAL/ STRUCTURAL DRAWINGS FOR MORE INFORMATION. HEIGHT OF ALL POLE MOUNTED FIXTURES TO BE EQUIVALENT ACROSS SITE. USE HEIGHT OF FIXTURE TYPE XA3 AS REFERENCE POINT FOR HEIGHT OF POLE LIGHTING ACROSS SITE.
7. NOT USED.
8. PROVIDE TOUCHSCREEN FOR MANUAL OVERRIDE OF PLAZA LIGHTING. COORDINATE FINAL LOCATION WITH CLIENT AGENCY AND ARCHITECT PRIOR TO ROUGH-IN. CONNECT TOUCHSCREEN POWER SUPPLY TO NEAREST NORMAL UNCONTROLLED RECEPTACLE CIRCUIT WITH AVAILABLE CAPACITY. PROVIDE EXTENDED DISTANCE CAT-6 CABLING BETWEEN TOUCHSCREEN AND ZONE CONTROLLERS LOCATED IN RECORDS CENTER G54.
9. PROVIDE EXTENDED DISTANCE CAT-6 CABLING FOR SECURITY CAMERA DATA FEED TO KEYSTONE BUILDING – SECURITY SYSTEM OFFICE NC-113. APPROXIMATELY 290-FT FROM RECORDS CENTER G54.
10. ROUTE CONDUIT WITHIN SOFTSCAPE AND HARD STRUCTURES TO MINIMIZE EXPOSED CONDUIT. WHERE EXPOSED CONDUIT IS NECESSARY, GC TO PAINT EXPOSED CONDUIT TO MATCH ADJACENT SURFACES.
11. NOT USED.
12. GENERAL CONTRACTOR TO DRILL HOLES (EVENLY SPACED AT 4' O.C.) IN EXISTING REFURBISHED HANDRAIL FOR MOUNTING LIGHT FIXTURES. PROVIDE COORDINATION PLAN INDICATING EXACT PLACEMENT OF HOLES FOR CONFIRMATION WITH ARCHITECT/ENGINEER PRIOR TO DRILLING.
13. INTERCEPT EXISTING UNDERGROUND ELECTRICAL LINE IN THIS AREA AND INSTALL GROUND MOUNTED JUNCTION BOX. RELOCATE EXISTING WIRING TO 2" UNDERGROUND CONDUIT SHOWN, TO ALLOW INSTALLATION OF STORM PIPING. REMOVE EXISTING UNDERGROUND CONDUIT AS REQUIRED FOR PIPING INSTALLATION, ABANDON REMAINDER BETWEEN INSERTION JUNCTION BOXES.
14. REFER TO DIVISION 26 – ELECTRICAL SPECIFICATIONS FOR LIGHTING FIXTURE SPECIFICATIONS.
15. NOT USED.
16. WIRING FOR THIS CIRCUIT SHALL BE 2#8, #8G, 1"C.
17. WIRING FOR THIS CIRCUIT SHALL BE 2#6, #8G, 1"C.
18. REINSTALL EXISTING LIGHT FIXTURE IN ORIGINAL LOCATION. REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION.

	1	ADDENDA 3 09/15/2025

AS-BUILT REVISIONS

PROFESSIONAL'S SIGNATURE DATE

CHRIS DAWSON ARCHITECT
300 NORTH 2ND STREET, SUITE 701, HARRISBURG, PA 17101

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES
HARRISBURG, PENNSYLVANIA

D.G.S. PROJECT No.
DGS 948-87 PHASE 1

PLAZA PAVER REPAIR / REPLACMENT
PA STATE MUSEUM,
THE CAPITOL COMPLEX
HARRISBURG, DAUPHIN COUNTY, PA

SITE PLAN - ELECTRICAL

VERIFY SCALE

BAR IS ONE (1) INCH LONG ON ORIGINAL DRAWING.
0 1
IF BAR IS NOT ONE (1) INCH LONG, ADJUST SCALE ACCORDINGLY

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS. VARIANCE FROM CONTRACT DOCUMENTS NOT PERMITTED WITHOUT PROFESSIONAL & BUREAU OF CONSTRUCTION APPROVAL

DRAWN BY	DATE	DRAWING NO.
AMC	07.29.2025	E101
CHECKED BY	SCALE	
WLS	PER DWG	

Barton Associates, Inc.
Consulting Engineers
Susquehanna Commerce Center
North Building
221 West Philadelphia Street
York, PA 17401
Tel.: (717) 845-7654
Web: www.ba-inc.com
We Make Buildings Work
YORK | STATE COLLEGE | PITTSBURGH

PROJECT No.	DRAWN BY	DESIGNED BY	CHECKED BY
2022141.00	AMC	AMC/JLH	WLS