

Penn State University
Harrisburg Campus
Stadium and Restroom Building
PSU Project # 00-08713.00

WMF project No.: 2022.138.00

ADDENDUM NO. 1

April 03, 2024

TO ALL BIDDERS

The Contents of this Addendum alter and amend the original drawings and specifications and take precedence over the related items therein.

GENERAL

- Prebid Conference Report and attendance sheet is attached to this Addendum 01.
- Revised Div 00 Section A listing revised dates for Bid RFIs and Substitution Requests is attached to this Addendum 01.

SPECIFICATIONS

Revised Table of Contents is attached to this Addendum 01.
Revised Division 00 Section A is attached to this Addendum 01.
Division 01 56 39 Specifications are attached to this Addendum 01.

DRAWINGS

The following revised drawings are attached to this addendum 01.
C502

SUBSTITUTIONS

BID RFI RESPONSES

All Bid RFIs and their responses will be listed below, only the RFI question and response will be listed without the sender's identity being disclosed.

Question: Please provide profiles / inverts / top of structure for the proposed storm drain.
Response: Revised drawing C502 is attached to this Addendum 01.

Question: Section 01 21 00 Allowances is provided in the Spec Book but does not show up in the table of contents. Please confirm if this spec section is applicable to this project. Response: Section 01 21 00 Allowances is applicable to this project and will be added to the Table of Contents, see revised Table of Contents attached to this Addendum 01.

Question: Section 01 56 39 Temporary Tree & Plant Protection is listed in the Table of Contents but not in the spec sections. Response: Section 01 56 39 Temporary Tree & Plant Protection is included in this Addendum 01.

Question: Spec section 23 81 10 Unitary Equipment and 26 43 13 Surge Protection for Low Voltage Electrical Power Circuits are listed in the table of contents but not included in the specification sections. Response: 23 81 10 Unitary Equipment and 26 43 13 Surge Protection for Low Voltage Electrical Power Circuits are not applicable to this project and should be removed from the Table of Contents. Revised Table of Contents is attached to this Addendum 01.

The inclusion of this Addendum shall be acknowledged upon submission of the Contractor's Bid via eBuilder. By submission of a Bid, Bidder agrees to full acceptance of the provisions herein. All other provisions of these Specifications, Drawings, and Contract Documents shall remain unchanged and in full effect.

This Addendum shall be attached to and become part of the Specifications for the above Contract.

Attachments:

- General items as listed above.
- Specifications as listed above.
- Revised Drawings as listed. Total of 1

END OF ADDENDUM NO. 1

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GEOTHECHNICAL REPORT

WMF

WEBER MURPHY FOX
ARCHITECTURE INTERIORS CONSTRUCTION

PROJECT: The Pennsylvania State University – Harrisburg Campus
Stadium Seating & Restroom Building
777 W. Harrisburg Pike
Middletown, PA 17057
PSU Building No.: HB 0985-113 Restroom Building
HB 0985-114 Press Box
HB 0985-115 Spectator Seating
PSU Project No.: 00-08713.00
WMF Project No.: 2022.138.00

DATE: 2024-03-28
Project Start Date: TBD
Substantial Completion Date: 2024/11/01
Final Completion Date: 2024/11/22

SUBJECT: Pre Bid Conference Report
*Non-Mandatory

MEETING CALLED TO ORDER AT 10:00 AM

WELCOME: Anthony Grace, Project Manager Weber Murphy Fox, Inc.

ATTENDEES (* indicates not in attendance)

Owner PSU

Douglas Wenger	814.863.9622	jdw132@psu.edu
* Daniel Barlup	717.948.6236	deb39@psu.edu
John Krause	814.826.8381	jjk25@psu.edu
* Todd Camp	717.948.6235	thc102@psu.edu
Mike Roth	717.948.6235	mjr11@psu.edu

Architect Weber Murphy Fox, Inc.

* Anna Childe	814.206.0981	achilde@wmf-inc.com
* Dennis Wilkins	814.920.1926	dwilkins@wmf-inc.com
* Lina Abdul-Nabi	814.206.0982	labdul@wmf-inc.com
* Theodore Thwing	814.206.0984	tthwing@wmf-inc.com

Construction Administrator

Anthony Grace	814.208.0983	agrace@wmf-inc.com
	cell 814.528.2617	

Structural Engineer Diviney & Associates

* Randy Diviney	814.317.5037	rdiviney@dastructures.com
* Darin Decker	814.317.5035	ddecker@dastructures.com

Civil Engineer K and W Engineers

* Marc Singlet	717.635.2835	msinglet@kandwengineers.com
* Marc Kurowski	717.635.2835	mkurowski@kandwengineers.com

MEP Engineer Barton Associates, Inc.

* Robert Sells	717.845.7654	ras@ba-inc.com
* Aaron Cunningham	717.845.7654	acs@ba-inc.com

Trade Contractors See attached attendance sheet

DESCRIPTION OF PROJECT:

The Work of Project: New bleachers and press box in addition to a restroom building are proposed to be built on the site of an existing soccer field. The bleachers will accommodate 500 spectators. The press box will be accessed through the bleachers. The new restroom one-story building will include public restrooms, storage for athletic items, and covered storage for a gator and field maintenance equipment. A new paved road will connect the existing parking in front of the EAB building to the Restroom building. Accessible parking will be added to the existing parking lot. Site work will also include a concrete public plaza in front of the Restroom building and a path to the bleachers., and new utilities extension as indicated on drawings. Removal of excess spoils shall be in compliance with the PA DEP Management Fill Policy, see regulations in specifications.

Digital Proposals for the following contracts as per the bid documents will be accepted via the PSU eBuilder System only.

Contract No. 1: General Construction

Bids Due: Wednesday May 1 2024 @ 3:00pm Prevailing Time

The bids are due electronically via the PSU eBuilder System (see bid information).

1 ADMINISTRATIVE REQUIREMENTS:

Contracts: PSU will accept bids for the contracts as listed. Construction Contract 1-C will be executed between the Owner and the Trade Contractors.

- 1.0 All provisions of the Construction 1-C Contract will apply. NOTE: All GC bidders must be pre-qualified by PSU. Other contractor pre-qualifications include: Plumbing, Access Control - Intel, Telecom.
- 1.1 Insurance: Insurance certificates from the trade contractors as specified must be submitted to PSU before their work is begun. Via eBuilder.
- 1.2 Bonds: Note: Bid Bond, Performance and Payment Bonds will be required for this project.
- 1.3 Government Wage Requirements: PA Department of Labor and Industry Rates, see Notice to Bidders.
- 1.4 Bids Due: Bids are due: Wednesday, May 1, 2024 @ 3:00pm electronically via the PSU eBuilder System. See Notice to Bidders.
- 1.5 BIM Project Execution Plan: A BIM Project Execution Plan will not be required for this project.
- 1.6 PSU Review of Requirements:
There are no Liquidated Damages for this project.

All future site visits must be coordinated with PSU Dan Barlup, 717.805.5891, deb39@psu.edu.

The Soccer Field will be in use during construction, GC will be required to coordinate construction fencing to accommodate field activities.

Temporary construction fence: chain link fencing, driven posts not in concrete is preferred, blue privacy fabric is not required.

Excavation: Rock is considered as unclassified; all soils must stay on campus - coordinate with PSUH for location; there is a Geo-Tech report from previous construction, see special soils requirements in specifications..

The last day to submit substitution requests is Noon 12:00pm on Monday, April 15, 2024.

The last day to submit bid RFIs is: Noon 12:00pm on Monday April 15, 2024. All Bid RFIs submitted after this day and time will be ignored.

Hazardous Material Removal: The Owner is responsible for the removal of all hazardous materials.

Building Permit. The Owner will secure the building permit. NPDES permit process is underway, Contractor will need to be a co-permittee.

2 STATUS OF PROJECT:

2.1 Schedule:

Bids due: Wednesday, May 1, 2024 @ 3:00PM

Substantial Completion date: 2024/11/01

Final Completion date (completion of all punch list items): 2024/11/22

Interim Substantial Completion date for new parking lot: 2024/08/02

3 SAFETY:

- 3.1 Safety: The trade contractors are responsible for maintaining their safety program in full compliance with all applicable OSHA procedures. Contractor is required to submit their site specific safety plan via eBuilder,

4 JOB CONFERENCES:

4.1 Job Conferences: Job Conferences will be held

It is important that the Owner, Architect, and Contractors have a representative in attendance at all meetings with the authority to speak for their representative company. WMF will complete Job Conference Minutes and distribute to all parties.

Coordination Meetings: Coordination Meetings will be every week at a time convenient to the Project Foremen on the site.

5 LIST OF SUBCONTRACTORS, DETAILED COST BREAKDOWNS, SCHEDULE OF WORK:

- 5.1 Subcontractors, Suppliers: The Contractors should submit to the Architect within 10 days after signing Contracts, a complete list of names/addresses/phone numbers of each Subcontractor and major supplier. Contractor shall submit electronic copies via eBuilder for approval and distribution.

The Architect will review each source and forward copies to appropriate parties. This list may be amended as work progresses; however, submission of initial list or amendments must be made in advance of ordering materials or authorizing Subcontractors to proceed.

- 5.2 Detailed Cost Breakdown: The Contractors shall submit to the Architect, prior to submitting any invoices, a detailed contract cost breakdown (schedule of values) for approval. Follow the eBuilder requirements.

Project Schedule: The Contractors shall submit to the Architect within ten (10) days after signing contracts a complete project schedule showing all aspects of the project. Submitted via eBuilder.

Coordination: The Contractors are bound by the Contract Documents to coordinate their work with the work of their subcontractors and any other contractor on site.

6 PAYMENTS/CHANGE ORDERS:

General: All items discussed in Sections #1 and #5 above must be submitted and approved prior to request for first payment. Application for Payment forms are to correspond with the Cost Breakdown and be submitted on the required PSU forms and format as per the PSU eBuilder requirements.

Applications for Payment will be accepted up to the fifth of the month for work completed by the end of the past month. Contractor shall submit electronic copies to the Architect for approval (pencil copy), upon approval the signed and notarized AFP will be submitted. Late Applications for Payment will be held until the next month. AFP to be submitted as per the PSU eBuilder requirements.

Retainage: Retainage will be withheld at the rate of 6% of the total work completed and stored, to the date of Application for Payment. Reduction of retainage to 3% may be permitted at 50% completion of Contract. At date of Substantial Completion, retainage may be released with an amount equal to 1.5 times the value of punch list items and major uncompleted work held in escrow, until final completion.

Stored Materials: Stored materials may be included in the Contractors' Applications for Payment. Materials may be stored at the site or in Contractor's Warehouse. Evidence of existence and insurance for materials stored off site must be provided to the Architect before payment can be approved for same. The Owner and Architect encourage early purchase of materials to ensure schedule performance.

Change Orders: No changes from the Contract Documents will be allowed without a written Change Order, prepared and executed in advance, including cost breakdowns or materials justification as may be requested by the Architect.

Architect will prepare Change Orders. Contractor shall not include Change Order on payment request until same has been approved.

Field Orders: Due to the nature of this project, it is anticipated that there will not be cost-affecting changes required due to on-site conditions. Any such changes that may arise will be authorized as Field Orders. No payment will be made for any work not agreed to in advance and covered by a change order.

7 CORRESPONDENCE/SUBMITTALS/PROJECT RECORDS:

Correspondence: All correspondence during the bid period shall be via the PSU eBuilder system - no exceptions. All correspondence from the Contractors regarding the project during construction shall be directed to Anthony Grace at the State College office of Weber Murphy Fox, 403 South Allen Street, Suite 115, State College Pa 16801. (814) 206.0983, cell (814) 528.2617 email agrace@wmf-inc.com A letter of transmittal must accompany items for approval, such as Shop Drawings, etc. Transmittal must show clearly the Contractor name, project title, WMF project number, date item and action requested.

Shop Drawings, Submittals: Shop Drawings, Spec. Sheets, Catalogue Cuts, Schedules, Test Reports and Certifications should be submitted with Contractor approval stamp electronically. Samples of items indicated on Schedule (two sets) should be tagged, showing project name, contractor name, WMF project number and specification section. Samples shall be stored at the project site so referral may be made if needed, for duration of construction. All submittals - RFIs must be submitted via the PSU eBuilder system.

The Trade Contractor is responsible for providing a minimum of three (3) copies of installation instructions, parts lists or maintenance instructions which come packaged with equipment. These items should be maintained by the Trade Contractor at time of material installation for inclusion in Operation and Maintenance Manuals. Final payment will not be made until this information is complete. Follow Div 01 specifications.

As-Built Drawings: All Trade Contractors are responsible for maintaining accurate records of changes or alterations to the work. Throughout the project, the Trade Contractor will maintain one clean set of drawings. Prior to each trade contractor leaving the project, all changes must be compiled and transposed to this set. At the completion of the project the trade contractor will submit the as-built drawings to the Architect for inclusion in the final documents for the Owner. One hard copy (red lined) and one digital color copy (CD or flash drive) are required. Follow Div 01 specifications and the PSU eBuilder requirements.

Plans and Specifications: Plans and specifications are available as described in the notice to bidders.

8 TEMPORARY FACILITIES:

8.1 Water: Available from existing service – Coordinate with PSU. The owner has committed to cover the cost of the temporary water.

8.2 Electrical: Available from existing service – Coordinate with PSU, The owner has committed to cover the cost of the temporary electric. Contractors required to provide their own power above normal line voltage.

8.3 Temporary Heat: Trade Contractors to provide temporary heat as necessary.

8.4 Toilets: The General Contractor will be required to provide temporary restrooms for their workers.

8.5 Dumpsters: The General Contractor will provide dumpsters.

8.6 Field Office: The Contractors will be responsible for their own field office and storage .

8.7 Clean Up: Each Trade Contractor is required to pick up his own mess daily and dispose of it. This site is within an occupied campus and must be maintained neat and clean at all times.

8.8 Damages: Each Trade Contractor is responsible for damages done to his work or work of others by their employees or agents. Note: all necessary measures must be taken to protect sidewalks, stairways, lawn and landscape areas surrounding the building, contractor is responsible for repairing all damages and restoration to original condition. Contractor is required to provide the necessary fencing to protect the surrounding areas from falling debris throughout the length of this project.

8.9 Staging Area: PSU will make available a small area in the adjacent grass area. Contractor required for all restoration at completion of the project. Note: the adjacent paved parking lot is not to be used for any construction related activities.

9 NEW BUSINESS:

9.1 Bidding questions: All Bid Questions must be submitted via eBuilder as a Bid RFI.

9.2 Addendum No. 1 will be issued and include the prebid meeting report along with any bid RFIs., revised specs, drawings, etc.

9.3 Site Visits: Contractors are encouraged to become familiar with the site. Additional site visits must be coordinated with PSU. PSU Harrisburg contact: Daniel Barlup 717.805.5891 deb39@psu.edu

9.4 Work Hours: All work shall be performed during normal daylight hours: 7am to 5pm.

10 QUESTIONS AND COMMENTS:

The Pre Bid Conference adjourned at approximately 10:45 am followed by a tour of the project site by the Bidders.

Attachments: Pre Bid Conference Attendance Sheet

Any persons who take exception to any statements in this report shall notify the author, in writing, within five (5) days from the date of receipt of this report, stating in detail the correction or omission. Otherwise, this report shall be considered correct and final.

c: Owner – PSU
Architects – WMF
Engineering Consultants

S:\Cloud Projects\2022.138.00 - PSUH Stadium Seating and Restroom
Bldg\001 General\10 Buyout\PREBID

WMF, Inc.
403 SOUTH ALLEN STREET SUITE 115 STATE COLLEGE, PENNSYLVANIA 16801
www.wmf-inc.com
ERIE CLEVELAND STATE COLLEGE

Project: **PSU Harrisburg Stadium Seating & Restroom Building**

PSU# 00-08713.00

WMF # 2022.138.00

Date: 2024-03-28 PrebidConference

Please Print Legibly

Subject: **PREBID CONFERENCE ATTENDANCE RECORD**

NAME:	REPRESENTING:	EMAIL ADDRESS	PHONE No.
1 Tony Grace	WMF	agrace@wmf-inc.com	814.528.2617
2 John Krause	PSU/CWS	jjk25@psu.edu	814-826-8381
3 Doug Wenger	PSU/CWS	jdwl32@psu.edu	814-863-9622
4 John Kostelec	ECC	JKOSTELAC@ECCCONSTRUCTION.NET	717-774-5550
5 Bret Lawrence	Kinsley	blawrence@kinsleyconstruction.com	717-324-2021
6 Nathan Weidman	Pooler Andersen	thaines@pooleranderson.com	(814)272-4561
7 BRIAN KAUFFMANN	WAGMAN	bekauffman@wagman.com	717.916.3854
8 Mike Roth	PSH	mjr11@psu.edu	
9 Cory Hummert	Wagman	cmummet@wagman.com	717-356-1953
10 ANDREW NORRIS	SEM	ANDREW.NORRIS@SEMCONCRETE.COM	704-928-3101
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SECTION A

NOTICE TO BIDDERS - ELECTRONIC BIDDING USING e-BUILDER

1. THE PENNSYLVANIA STATE UNIVERSITY, otherwise known as the University or Owner, invites bids for the following contract:

Contract No. 1 General Construction

PSU PROJECT: HB Athletic Fields Bleachers, Press Box and Restroom Building

PSU PROJECT NUMBER: 00-08713.00

LOCATED AT: The Pennsylvania State University
 Harrisburg Campus
 Middletown, Pennsylvania

2. BID DATE: Wednesday, May First, Two Thousand Twenty-Four (05/01/2024) at **3:00 p.m.** Prevailing Time.

INTERIM SUBSTANTIAL COMPLETION DATE: Parking Lot shall be complete for owner occupancy Friday August Second, Two Thousand Twenty-Four (8/02/2024)

OVERALL SUBSTANTIAL COMPLETION DATE: Friday, November First, Two Thousand Twenty-Four (11/01/2024).

FINAL COMPLETION DATE (completion of all punch list items): Friday, November 22, Two Thousand Twenty-Four (11/22/2024).

3. PREBID CONFERENCE: A Non-Mandatory Prebid Conference will be held at 10:00 AM Prevailing Time, Thursday, March Twenty-Eight, Two Thousand Twenty-Four (03/28/2024), in Room 130 of the Engineering Laboratory Building, Penn State Harrisburg, Middletown, Pennsylvania.
4. BIDDING DOCUMENTS: Bidding documents must be obtained through the e-Builder Bid Portal. The potential bidder must have, or create, an Account in the Bid Portal. The User Name for your Account is usually your email address.

Access to the Bid Documents is intended for use by the bidder, their company, and entities involved in formulating the bid response. Distribution of information or documents to plan rooms or websites for the sole purpose of advertising this project is prohibited.

5. Proposals will be received electronically through the e-Builder Bid Portal. **Proposals in any other format will not be accepted.**

For e-Builder technical support or questions about your user log-in, contact e-Builder directly at 888-288-5717 or email support@e-builder.net

Non DGS bids will be opened privately. If this is a DGS project, public bid openings must be viewed using a Windows PC due to technical limitations. Use of mobile devices is not supported at this time.

The online public bid opening can be viewed by web conference at the link located within the project web advertisement.

6. PREQUALIFICATION

Contractors bidding directly to the University for this contract [Prime Contractors] are required to be prequalified in the following prequalification trade category:

- **General Construction**

The following trade Categories of work require University prequalification, whether performed by Subcontractors bidding directly to the Prime Contractor, or if self-performed by the Prime Contractor,:

- Plumbing
- Access Control and Surveillance
- Telecommunications
- Electrical (Med/High Voltage)

Contractors/Sub-Contractors requiring prequalification must be on the *Prequalified Bidders List* as issued by the University at the time of bid. Contractor must submit in writing the names and addresses of all subcontractors requiring prequalification before processing of the first certificate of payment.

Requirements for Prequalification can be found on the Office of the Physical Plant website.

7. BID GUARANTY

A Bid Guaranty in the form of a Certified Check or a Surety Company's Bid Bond shall be submitted as a separate PDF, per instructions with the electronic Proposal, in an amount of not less than five percent (5%) of the total Bid amount.

In the event that any Bidders shall, upon the award of a contract, fail to comply with terms of the Proposal and/or Contract Documents, the amount of the Bid Guaranty shall be forfeited to the Owner.

8. PERFORMANCE AND PAYMENT BONDS

The Contractor, at the time of execution of the Agreement, shall furnish, at its own cost and expense, Performance and Payment Bonds covering the faithful performance of the Contract and the payment of all obligations arising therefrom, each in the full Contract amount and in such form as the Owner may prescribe.

9. BID SUBMITTAL, MODIFICATION, AND REJECTION

By submitting a Bid/Proposal, the Bidder understands and acknowledges that:

The Bid is submitted by a properly authorized officer of the Bidder or their designee who is authorized to sign for the firm, corporation, or individual Bidder.

The Bid amount and price(s) have been arrived at independently and without consultation, communication, or agreement with any other contractor, Bidder, or prospective Bidder.

The Bid as submitted shall hold good through the sixtieth (60th) calendar day following the bid date.

The Bidder, intending to be legally bound hereby, offers and agrees, if its Bid is accepted, to begin work at the site within ten (10) calendar days after the Notice to Proceed, and to complete the work in a thoroughly good and workmanlike manner under the direction of the Professional and to the satisfaction of the Owner, on or before the Completion Dates as stated in the Contract Documents. Furthermore, the Bidder agrees to provide all labor, materials, services, tools, and equipment, and perform all of the required work to complete the contract.

It is the bidder's responsibility to ensure that their bid is received through the Bid Portal on or before the published due date and time.

Your online bid will be assigned a date and time stamp from the eBuilder system which indicates the time of final acceptance. The e-Builder system will not allow submission of an online bid response after the published bid due date and time.

Any bid submitted may be Modified or Withdrawn online, prior to the scheduled time for opening or authorized postponement thereof, using the RECALL BID feature within the e-Builder Bid Package. A Modified bid must be Resubmitted, otherwise, the previous bid remains valid.

Bidders are responsible for ensuring the completeness and scale of documents downloaded and printed from eBuilder before relying on them for as the basis for their bid submission. The bidder is responsible for ensuring that the bid submitted is complete. The bidder is responsible for ensuring that contact information contains a valid email address and that their email settings are set to receive notifications from e-Builder and from the University.

Addenda – Bidders who have created a User Profile in e-Builder will be notified as addenda are issued. When the addendum is issued prior to the bid opening, but AFTER the Bidder submitted their bid, the Bidder will need to resubmit their bid through e-Builder. The Bidder will be required to acknowledge all addenda prior to submitting a bid. All Addenda become part of the Contract Documents.

Substitution Requests – **The Bidder shall submit all substitution requests, including those for alternate bleacher and press box manufactures, in writing per document requirements not later than Noon, Sixteen (16) calendar days prior to the Bid Date – Monday April 15, 2024.**

Bid RFIs – **The Bidder shall submit all Bid RFIs in writing per the document requirements no later than Noon, Sixteen (16) calendar days prior to the Bid Date – Monday April 15, 2024. Any Bid RFIs submitted after this cutoff date will be ignored.**

Questions – The Bidder shall submit all questions, clarifications, bid document discrepancies or omissions via the eBuilder Q&A Board within the Bid Package. Inquiries shall be answered in the form of an Addendum. To receive attention, inquiries must be submitted not later than Noon, Ten (10) days prior to the Bid Date.

The University does not warrant that the e-Builder website or its contents will be uninterrupted or error free and is not responsible for failed receipt and/or delivery of electronic notifications. The University is not responsible for computer download or printing errors.

BEFORE SUBMITTING A PROPOSAL, the Bidder should CAREFULLY EXAMINE the Drawings, Schedules, and Specifications, VISIT THE SITE, fully inform itself as to all laws, ordinances, regulations, wage rates, and labor conditions in the area of operation affecting the Contract or the

work, and shall include in his proposal a sum to cover the cost of all items, implied or required, to attain the completed conditions contemplated by the Contract Documents.

THE OWNER DOES NOT OBLIGATE ITSELF to accept the lowest proposal or any proposal, and reserves the right to waive any informalities in any or all bids, and to reject or accept any proposal. Proposals which do not conform to requirements, or which contain additions, conditional bids, or irregularities of any kind, may be rejected.

Bid results will be available at the Owner's convenience.

10. BIDDERS SHALL AGREE, if awarded the Contract for the work, to execute a separate agreement for the work proposed. The Agreement, as a Lump Sum Contract, shall be executed on the standard Form of Agreement 1-C bound with the Contract Documents.
11. TIME OF COMPLETION--LIQUIDATED DAMAGES. Contractor must agree to begin work contemplated by this contract within ten (10) days after the date specified in the Notice to Proceed as the starting date and to complete the work on or before **Friday, August two, two thousand twenty-four (8/02/2024) and** Friday, November one, two thousand twenty-four (11/01/2024) subject to extension of Contract time as provided in Article 10 of the General Conditions. Contractor must agree to pay to the Owner as liquidated damages and not as a penalty, the sum of **zero** Dollars \$0.00 per calendar day for each calendar day of delay. The Contractor and its surety shall be liable for the amount thereof.
12. Local Building Permit costs shall not be included in the Contract Amount.
13. TO VISIT THE SITE, contact Dan Barlup

TELEPHONE: (717) 948-6235
14. EQUAL EMPLOYMENT OPPORTUNITY AND REFERRAL TO NON-DISCRIMINATION CLAUSE

Contractor shall not discriminate against any employee, applicant for employment, any independent Contractor or any other person because of race, color, religious creed, ancestry, national origin, service in the uniformed services (as defined in state and federal law), veteran status, age, sex, sexual orientation, marital or family status, pregnancy, pregnancy-related conditions, physical or mental disability, gender, perceived gender, gender identity, genetic information or political ideas, or any other basis prohibited by law.

In performing the work or making or furnishing any article required by this Contract, the Contractor shall comply with all provisions of Executive Order No. 11246 of September 24, 1965, as amended by Executive Order No. 11375 of October 13, 1967, and all subsequent rules, regulations, and relevant orders of the Secretary of Labor. The Contractor will comply with all provisions of Executive Order 1972-1 or any regulations issued by the Pennsylvania Human Relations Commission, 16 Pa. Code, Chapter 49. The Non-Discrimination Clause as issued by the Pennsylvania Human Relations Commission is attached as Article 13 of the General Conditions of the Contract.
15. PREVAILING WAGE ACT

This project is subject to the Pennsylvania Prevailing Wage Act, Act No. 442, August 15, 1961

(P.L. 987), as amended August 9, 1963, Act No. 342. All Contractors and Subcontractors shall comply with all requirements of this Act. Refer to Sections D and D1 of this specification for additional information.

16. STEEL PRODUCTS PROCUREMENT ACT

- A. This project is subject to the provisions of the Steel Products Procurement Act of 1978 (P.L. 6, No. 3) as amended by the Act of July 9, 1984 (P.L. 674, No. 144). All Contractors, Subcontractors, and Material Suppliers shall be required to comply with all provisions of this Act.
- B. The Contractor shall be required to provide with each Application-Certificate of Payment form an executed copy of the Certification of Compliance with the Steel Products Procurement Act form **and additional documentation**, including but not limited to, invoices, bills of lading, mill certifications, or other acceptable evidence that the steel products represented on the payment application comply with one or more of the following categories:
- (1) That the steel utilized on this project was melted and manufactured in the United States; and/or
 - (2) The product contains both foreign and United States steel, and at least seventy-five percent (75%) of the cost of all of the articles, materials, and supplies incorporated in the product have been mined, produced, or manufactured, as the case may be, in the United States; and/or
 - (3) The steel product is not produced in the United States in sufficient quantities to meet the requirements of the contract, and prior written approval to use foreign steel has been obtained from The Pennsylvania State University.
- C. Any nonconforming steel products incorporated into the work shall be removed and replaced by the Contractor, at its own expense, with products meeting the requirements of the Act.
- D. Willful violation of this Act can result in penalties, including (but not necessarily limited to) prohibition from submitting any bids, or performing any work, or supplying any materials to a public agency for a period five (5) years from the date of the determination that a violation has occurred.

17. All work relating to this project shall be subject to all federal, state and local codes, ordinances and regulations regarding occupational safety and health, environmental protection and construction standards. Nothing contained in the specifications or the drawings shall be construed to conflict with such laws, codes, ordinances or regulations, and in the event of such conflict any requirement imposed by law, ordinance or regulation shall be deemed controlling.

18. Intentionally left blank.

19. LEAD-FREE PLUMBING CERTIFICATION

The Contractor shall provide a certification that all plumbing materials are lead-free and meet the requirements of the Pennsylvania Plumbing and Lead Ban Notification Act. This certification shall be signed by the Contractor, notarized and submitted to the University before the water service turn-on.

20. DIVERSE BUSINESS ENTERPRISES

- A. The University recognizes the following groups as Diverse Business Enterprises:

- Minority Business Enterprises (MBE)
 - Women Business Enterprises (WBE)
 - Lesbian, Gay, Bisexual, & Transgender (LGBT)
 - Veteran & Service Disabled Veteran Owned Businesses (VOB/SDVOB)
- B. The Owner's goal is for 10% combined utilization of Diverse Business Enterprise (DBE) contractors and suppliers on all projects unless otherwise noted. For Construction Manager or Design-Build projects, the DBE combined utilization goal is 15% minimum.
- C. The University recognizes DBE contractor and supplier certifications granted to firms by any of the following agencies:
- Department of General Services Bureau of Small Business Opportunities (BSBO)
 - Federal Department of Transportation
 - National Minority Development Council (NMSDC) or its affiliates
 - Southeastern PA Transportation Authority (SEPTA)
 - Women Business Enterprise National Counsel (WBENC)
 - Pennsylvania Unified Certification Program (PA UCP)
 - Pennsylvania Department of Transportation (Penn DOT)
 - National Women Business Owners Corporation (NWBOC)
 - Minority Business Enterprise Council (MBEC)
 - National Gay and Lesbian Chamber of Commerce (NGLCC)
 - U.S. Department of Veteran Affairs (VOB/SDVOB)

The University reserves the right to revise this list at its own discretion.

- D. DBE utilization will be scored as part of the project Contractor Evaluation. Failure to meet the Owner's expected goal will result in a below-average score in the DBE utilization section. Repeated failure to meet DBE goals may result in removal from the University's Prequalified Bidder's List.
- E. The Contractor is responsible to submit DBE utilization reports to the OPP Contractor Liaison upon request, identifying all DBE contractors and suppliers associated with the project including their original contract amount and change orders.
- F. **The DBE Contractor/Supplier Utilization Bid Form (EXHIBIT A) is REQUIRED AT TIME OF BID.**
- G. The University's Diverse Business Utilization Report is required to be submitted with each payment application, identifying all DBE contractors and suppliers associated with the project, including their original Contract amount and change orders. The Bidder understands that Payment on this contract will not be processed until DBE Utilization data is submitted to University.
- H. If there is no anticipated participation of DBE's on this project, a justification letter must be submitted prior to the execution of the contract for University review.
21. BACKGROUND CHECK POLICY(HR99)

The awarded Contractor will be required to confirm through the execution of the contract that all employees (including the employees of any subconsultants/subcontractors) assigned to this project and who conduct their work on University premises have had background checks that meet or exceed the University's standards for the type of work being performed per the

background check process for third-party employees outlined in the University's Policy HR99 Background Check.

22. SMOKING AND TOBACCO POLICY

Smoking and the use of tobacco are prohibited in and on all University owned or leased properties, facilities, and vehicles, per University Policy AD 32.

23. PUBLIC WORKS EMPLOYMENT VERIFICATION ACT

The Commonwealth of PA enacted Act 127 of 2012, requiring all public works contractors and subcontractors to utilize the Federal Government's E-Verify system, operated by the United States Department of Homeland Security, to ensure that all employees of firms performing work on public work projects are authorized to work in the United States.

The Contractor, as a pre-condition of award, will be required to comply with this Act. The Contractor will submit, to the Owner, the Commonwealth of PA 'Public Works Employment Verification Form' found on the Pennsylvania Department of General Services web site: <https://www.dgs.pa.gov/Design-and-Construction/Bidding/Documents/Public%20Works%20Employment%20Verification%20Form.pdf>

The Contractor shall also confirm current compliance with the Act; Ensure that all subcontractors are in compliance and submit the appropriate E-Verification Forms prior to starting work; And confirm continuation of compliance by verifying the employment of all new employees of the Contractor and Subcontractors within five(5) days of their respective start dates.

24. SOCIAL RESPONSIBILITY/ CONTRACTOR CONDUCT

A. Fulfilling the mission of The Pennsylvania State University for those we serve requires the highest standards of integrity, responsibility, and respect, and we encourage our contractors/suppliers to aspire to those same standards, particularly when on campus or engaging with members of the University community. The University has adopted the Global Sullivan Principles of Social Responsibility. We also encourage our contractors/suppliers to adopt and follow these principles.

B. The University is committed to equal access to programs, facilities, admission and employment for all persons, in an environment free of harassment and free of discrimination. Conduct constituting harassment or discrimination in the University environment, as prohibited in University Policy AD85, is subject to corrective action.

25. ELECTRONIC PROJECT MANAGEMENT INFORMATION SYSTEM (PMIS)

The Owner has implemented an electronic PMIS, "e-Builder", an internet-based information and project communication system that will allow the entire project team to collaborate in a centralized and secured repository for all projects.

The Contractor shall utilize the PMIS during all phases of the project, unless directed otherwise by the Owner. All project specific correspondence, workflow processes, and documentation will be stored and routed within the PMIS. The Contractor and the Owner shall agree on file name convention of submissions in advance.

The Contractor, or those direct-employee(s) responsible, on each project will be expected to participate in the necessary training to use the PMIS effectively. Periodic training sessions on the PMIS will be provided by the Owner. Registration will be through the University's Learning Resource Network (LRN). It is the responsibility of the Contractor to coordinate with the Owner regarding the training schedule and to register via the LRN. All costs for personnel time, travel, meals, and lodging to attend the training shall be borne by the Contractor and, as such, will not be reimbursed by the Owner.

The Contractor shall obtain, at their own cost, the necessary equipment and web connections to access and utilize the PMIS. The Contractor will not incur any registration fees or licensing costs to utilize the PMIS.

The Owner will not entertain or acknowledge any amendment requests by the Contractor for claimed inefficiencies or other costs related to the implementation and subsequent use of the PMIS.

SECTION 01 5639

TEMPORARY TREE AND PLANT PROTECTION

PART 1 GENERAL

1.00 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.01 WORK INCLUDED

- A. Protection of existing trees and plants from damage as a result of the Contractor's operations including, but not limited to:
 - 1. Protection of existing natural woodlands.
 - 2. Tree protection fencing and barricades.
 - 3. Root pruning.
- B. Tree trunks and branches shall not be damaged by equipment and/or workers and tree root protection zones shall be protected from soil compaction, damage by trenching or excessive grade changes, and hazardous materials or waste products.

1.02 RELATED REQUIREMENTS

- A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:
 - 1. Section 02 41 10, SITE PREPARATION: Clearing and grubbing.
 - 2. Section 31 13 00, SELECTIVE TREE REMOVAL AND TRIMMING; Selective clearing within tree protection areas.
 - 3. Section 31 25 00, EROSION AND SEDIMENT CONTROL: Silt fencing.
 - 4. Section 31 23 00, SITE EXCAVATING, BACKFILLING AND COMPACTING; Establishment of subgrade elevation.
 - 5. Section 32 93 00, TREES, PLANTS, AND GROUND COVERS: New plant material.
- B. Protection of Existing Utilities: Prior to any work being performed the Contractor shall insure that all existing utilities within and surrounding the project site have been clearly marked in accordance with the Pennsylvania Underground Utility Line Protection Act, Act 287 as amended by Act 199

1.03 REFERENCED STANDARDS

- A. Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.
 - 1. American National Standards Institute (ANSI):
 - Z133.1 Safety Requirements for Pruning, Trimming, Repairing, Maintaining and Removing Trees, and for Cutting Brush.

A300 Tree Care Operations - Tree, Shrub And Other Woody Plant Maintenance - Standard Practices Part 1 - Pruning

2. International Society of Arboriculture (ISA):

Guide Guide for Establishing Values of Trees and Other Plants

3. Tree Care Industry Association, 3537 Stratford Rd., Wantagh, NY 11793 (TCIA):

Ref. 1 Pruning Standards for Shade Trees

1.04 SUBMITTALS

- A. Prior to the start of any construction work the Contractor shall submit a Tree Canopy/Tree Root Zone Protection Plan. Development of this plan shall include input from the University Arborist and Project Manager or Assigned Construction Quality Representative. This plan shall be of the entire site showing accurate trunk locations and drip-line dimensions of all trees on the project site, limits of construction, locations of tree canopy/tree root protection zones, and indicating all appropriate protective measures.
- B. The Contractor shall submit a written guarantee that he/she shall not enter the tree protection zones at any time during construction without first getting approval from the University Representative.
- C. The Contractor shall verify in writing that all tree protection measures have been met as per the Protection Plan. Compliance with this plan shall be field verified by the University Representative.

1.05 LIABILITY / DAMAGE PENALTIES

- A. The Contractor shall be held liable for any damage to protected trees. A dollar value shall be determined by the University Arborist or certified tree appraiser following criteria outlined in the "Guide of Plant Appraisal" (Council of Tree and Landscape Appraisal, Latest Edition).
- B. The Contractor shall be held liable for all remedial measures required to treat broken limbs, or damaged trees and roots, or for the unauthorized removal of existing trees or plant material. All remedial treatments will be accomplished by the University Arborist and/or their designee. The Contractor shall not be liable for any loss or damage which occurs while the Contractor is complying with instructions given by the Owner, Architect, or arborist working on the Project.

1.06 QUALITY ASSURANCE

- A. Tree Service Firm Qualifications: An experienced tree service firm that has successfully completed tree protection and trimming work similar to that required for this Project and that will assign an experienced, qualified arborist to Project site during execution of tree protection and trimming.
- B. Selective pruning methods shall conform to the applicable requirements of ANSI Z133.1.

- C. Work of this section shall be completed by a professional ISA Certified Arborist with a minimum five years experience, who has successfully completed an exam and education program equal to the International Society of Arboriculture (ISA) Certification Program, sponsored by the International Society of Arboriculture 2009, P.O. Box 3129, Champaign, IL 61826 (217) 355-9411; Email: isa@isa-arbor.com.
- D. Arborist shall have the following minimum qualifications:
1. Membership in:
 - a. TCIA -- Tree Care Industry Association, Inc.
 - b. ISA – International Society of Arborists
 2. Meet state requirements for insurance.
 3. Licenses for application and use of pesticides.

PART 2 PRODUCTS

2.01 TREE PROTECTION FENCING

- A. Tree protection fencing shall be the following:
1. Galvanized chain link fencing, 6 ft. high. (OR SNOW FENCE VERIFY WITH OWNER)
 - a. Fabric shall be a good commercial quality of steel wire of 2 in. mesh and 11 gage.
 - b. Fittings shall be malleable iron casting, wrought iron forgings, or pressed steel and provided with pin connections. Equipment shall be designed to carry 100% overload.
 - c. Stakes for fencing shall be galvanized steel pipe, driven a minimum of 2 ft. into the ground. Piping shall be steel conforming to ASTM A 120 except that pipe shall be unthreaded and untested for water pressure. Posts shall be spaced 10 ft. o.c. maximum.
 - d. A 3 feet wide gate shall be provided at each tree protection area to allow maintenance access to the protection zone.
 - e. Movable fence panels may only be used upon approval from the University Representative.
 - f. For fencing within the drip line of trees, surface mounted post anchors may be acceptable. Review with Architect and arborist and obtain written approval prior to installing. Post installation shall not damage tree root systems.
 - g. An 8 ½" x 11" sign indicating the area as a tree protection zone shall be prominently displayed on each fence panel. Signs may be obtained by contacting the University Representative.
- B. Temporary protection measures shall be strictly enforced at the conclusion of the project, up until final acceptance. These methods may include, but are not limited to the use of signs, post and wire, or other methods approved by the University Representative.

2.02 TREE PROTECTION ACCESSORIES

- B. Mulch: Pine bark mulch
- C. Tree Wound Paint: Bituminous based paint of standard manufacturer specifically formulated for protection of tree wounds from moisture and insect invasion.
- D. Tree Armor:
1. Wood: SPFA utility grade, 2x4.
 2. Wire: Annealed steel wire, 16 gage minimum.

- E. Critical Root Zone Protection: Critical root zones shall be protected with AlturnaMats, 1/2" thick recycled polyethylene mats capable of supporting vehicles and equipment weighing up to 60 tons, manufactured by AlturnaMats, Inc., 701 E. Spring Street, Mailbox #9, Titusville, PA 16354 • Phone: 888.544.6287 • Fax: 866-723-2903 , or approved equal.

2.03 ROOT PRUNING

- A. Mulch materials shall be as specified under Section 329300, TREES PLANTS, AND GROUND COVERS.
- B. Liquid fertilizer to be applied to root pruned and construction pruned trees shall be Peters 20-20-20 General Purpose Soluble Fertilizer, manufactured by The Scotts Company, LLC 14111 Scottslawn Rd. Marysville, OH 43041; RoMax7 Low Salt Liquid Starter Fertilizer, manufactured by Nutra-Flo Company, 1919 Grand Ave, Sioux City, IA 51106-5708; Phone: 712-277-2011; 800-831-4815; Fax: 712-279-1946; Agro- Culture Liquid Fertilizer, mircoLink, manufactured by Agro-Culture Liquid Fertilizers, 3055 W. M-21, P.O. Box 150, St. Johns, Michigan 48879; 1-800-678-9029 , or approved equal. Liquid fertilizer shall be approved by Certified Arborist.
- C. Dormant oil spray shall be a dormant miscible spray equal to Sunspray, Scalecide or Volck Oil.
- D. Insecticide shall be Isotox manufactured by Ortho; Tempo, manufactured by Mobay; Orthene, manufactured by Chevron Chemical Co., or approved equal. Insecticide shall be EPA approved for the intended use and the names should be provided to, and approved by the Arborist prior to use.

PART 3 EXECUTION

3.01 SCOPE OF WORK WITHIN OR AROUND TREE CANOPY PROTECTION ZONE

- A. Trees to be removed that have branches extending into the canopy of trees to be preserved shall be removed under the continuous supervision of an arborist certified through the International Society of Arboriculture and not by a demolition or construction contractor. The Arborist shall remove the tree in a manner that causes no damage to the protected trees and landscape to remain after the construction period.
- B. Trees to be removed shall be felled so as to fall away from protection zones and to avoid pulling and breaking of roots or branches of trees indicated on remain on the Tree Canopy/Tree Root Protection Zone Plan.
- C. Any brush clearing required within or around the tree canopy/tree root protection zone shall be accomplished with hand operated equipment.
- D. The Contractor shall be held liable for damages incurred to any tree branches that extend over protective fencing and to any trees or other plant material located on the site and indicated on the plan to remain. The Contractor shall notify the University Representative when any overhanging branches or other plant material interferes with the construction activity or post potential risks to workers or bystanders.
- E. If plans and field situations do not match and work must occur closer to any existing tree (s) than planned, the Contractor shall notify the University Representative to evaluate and to determine future viability of the existing tree (s) located within the area of proposed construction or excavation. Final evaluations shall be coordinated with the University

Landscape Architect and Arborist to determine if the tree (s) should remain, be relocated, or be removed.

3.02 SCOPE OF WORK WITHIN OR AROUND TREE ROOT PROTECTION ZONE

- A. Any grading, construction, demolition, or other work that is expected to encounter tree roots shall be made in consultation with the University Arborist.
 - 1. Any digging that must occur within the Tree Root Protection Zone must be done with the University Arborist present and must utilize alternative excavation methods including, but not limited to air spading, hand excavation, metal plating or other method approved by the University Arborist.
- B. Any roots 2 inches in diameter or less that sustain damage during construction shall be exposed to sound tissue and cleanly pruned close to the tree side of the excavation. Clean cuts shall be made at all times. The cutting of tree roots greater than 2 inches in diameter must be approved and supervised by the University Arborist.
- C. Trees to be removed adjacent to the tree root protection zones shall be cut near ground level and the stump ground out to avoid damaging existing roots by pulling and breaking.
- D. For those construction projects requiring temporary access or haul roads through the protection zone, a roadbed shall be installed using road plates, Altarnamat, or a PADOT Class IV Geotextile base covered with 6 inches (minimum) of mulch, wood chips or gravel to protect soil and minimize soil compaction. In those cases approval shall be given by the University Representative prior to the start of any construction activities. The roadbed material shall be maintained as necessary to maintain its original state.
- E. No material shall be stored or piled within the tree root protection zone unless otherwise approved by the University Representative. No gasoline, fuel oil, harmful chemicals or other deleterious materials shall be stored, spilled or deposited on the ground within the tree root protection zone.
- F. There shall be no vehicular traffic or parking permitted within the tree root protection zone.
- G. Foot traffic shall be kept to a minimum within the tree root protection zone. If temporary foot traffic must be directed over the tree root protection zone a pathway shall be installed using Altarnamat or a PADOT Class IV Geotextile base covered with 3 inches (minimum) of mulch, wood chips or gravel to protect soil and minimize soil compaction. In those cases approval shall be given by the University Representative prior to the start of any construction activities. The pathway material shall be maintained as necessary to maintain its original state.
- H. Installation of curbs and sidewalks shall be completed in a manner least damaging to trees and tree root systems. PADOT Class IV Geotextile shall be considered a viable alternative to the specified sub-base in sensitive root zones. When unique site conditions not addressed in the contract documents result in the opportunity for an alternative solution or a potential modification to the plan, the Contractor may present a proposal to the University Representative.

3.03 INSTALLATION OF FENCING

- A. Prior to start of demolition work and clearing and grubbing operations, tree protection fencing shall be installed in accordance with the following:
 - 1. Fencing shall be installed at the tree protection areas indicated on the Drawings.

2. Fencing shall be installed a minimum of 15 ft. beyond the drip line of trees to be protected, unless otherwise approved by the Architect.

B. Post installation must avoid underground utilities. Tree protection fencing located within the drip line shall be installed using surface anchors. No poles or stakes shall be driven into the ground at these locations.

3.04 EXCAVATING AROUND TREES

A. Excavate within the dripline of trees only where required and when absolutely necessary.

1. Any excavation within the RPZ of trees shall be under the direction of the Arborist.
2. Arborist shall be at site at all times while excavation is occurring within the RPZ.
3. Air spade all removals within the RPZ.
4. Refer to ROOT PROTECTION ZONE (RPZ).

B. When excavating for new construction is required within the RPZ, air spade and hand excavate to minimize damage to root systems.

1. Use narrow tine spading forks and comb soil to expose roots.
2. Relocate roots back into backfill areas wherever possible.
3. If large main lateral roots are encountered, expose beyond excavation limits as required to bend and relocate without breaking.
4. If root relocation is not practical, clean cut roots using sharp ax approximately three (3) inches back from new construction.

C. Where existing grade is above new finish grade, carefully excavate within the dripline to the new finish grade.

1. Carefully hand excavate an additional six (6) inches below the finish grade.
2. Use narrow tine spading forks to comb the soil to expose the roots, and prune the exposed root structure as recommended by the Arborist.
3. Keep the exposed roots damp.
4. Treat the cut roots as specified and as recommended by the Arborist.
5. After pruning and treatment of the root structure is complete, backfill to finish grade with eight (8) inches of approved plant mix, or structural soil.

D. Where noted on plan, use airspade to expose roots for required cutting to accommodate hardscape elements. Architect to verify all cuts prior to proceeding.

E. Temporarily support and protect roots against damage until permanently relocated and covered with recommended landscape material.

3.05 ROOT PRUNING

A. Where construction will be in close proximity to existing trees designated to remain, [within drip line of existing trees designated to remain] roots shall be pruned in accordance with ANSI A300 prior to trenching and tunneling operations. Root pruning shall be performed as early as possible before trenching or tunneling operations. Proximity shall be as determined in the field by the Architect.

B. Root pruning is the physical cutting of tree roots to minimize root damage and promote healing. Suitable means for root pruning include hand methods which result in a sharp

clean cut. Any method which tears roots or disturbs the soil beyond the grading limit is unacceptable.

- C. Unless otherwise directed by Architect, tree to be root pruned shall be root pruned to a depth of 24 in.
- D. Backfill root pruning trench with existing soil mixed with peat moss or well-rotted sawdust to a mixture of approximately 75% soil and 25% humus. Tamp lightly to set soil
- E. Apply mulch to a depth of 4 in. to 6 in. at minimum 10 ft. to 15 ft. radius around tree to reduce compaction and increase moisture retention.
- F. Dormant oil spray shall be applied in early spring before buds begin to swell at a rate recommended by the manufacturer.
- G. Insecticide spray shall be applied twice to root pruned trees following application of dormant oil spray. Spray insecticide at rates recommended by spray manufacturer at intervals appropriate for effective insect control.

3.06 GOVERNING STANDARDS - PRUNING

- A. Work procedures will be guided by the current provisions of the American National Standard Institute. Complete detail of the provisions are to be found in the references listed. The two basic objectives of the pruning operation shall include:
 - 1. Hazard Reduction Pruning: Hazard reduction pruning shall be completed to remove visible hazards in a tree. Hazard pruning shall consist of one or more of the maintenance pruning types.
 - 2. Maintenance Pruning: Maintenance pruning shall be completed to maintain and improve tree health and structure and includes hazard reduction pruning.

3.07 MAINTENANCE PRUNING TYPES

- A. Both hazard reduction pruning and maintenance pruning shall consist of one or more of the following pruning types in accordance with ANSI A300:
 - 1. Crown Cleaning: Crown cleaning shall consist of the selective removal of one or more of the following items: dead, dying, or diseased branches, weak branches, water sprouts and stubbed branches.
 - 2. Crown Thinning: Crown thinning shall consist of the selective removal of branches to increase light penetration, air movement, and reduce weight.
 - 3. Crown Raising: Crown raising shall consist of the removal of the lower branches of a tree to provide clearance.
 - 4. Crown Reduction, or Crown Shaping: Crown reduction shall consist of decreasing the height and/or spread of a tree.
 - 5. Vista Pruning: Vista pruning shall consist of selective thinning of framework limbs or specific areas of the crown.
 - 6. Crown Restoration: Crown restoration pruning shall improve the structure, form and appearance of a tree which has been severely headed, vandalized, storm damaged or improperly pruned.

3.08 APPROVAL

- A. No major limbs or structure will be cut or removed without prior approval of the Architect and Owner's Representative.

3.09 STERILIZATION

- A. All tools used will be sterilized with Clorox Bleach, or approved equal, prior to use and between each tree.
- B. Residue from sterilization operation shall be diluted so as not to damage any vegetation.
- C. At trees known to be diseased and where there is danger of transmitting that disease, tools are to be disinfected after each cut.

3.10 PAINT CUTS:

- A. Paint cuts more than 1 inch in diameter with an approved tree wound paint on trees.
 - 1. Paint cuts within 30 minutes after cutting.

3.11 FERTILIZATION OF PRESERVED TREES:

- A. All existing trees to be reserved impacted by construction activities taking place within the dripline, including but not limited to trenching and grading, shall be fertilized.
- B. Feeding of existing trees to be impacted by construction shall be accomplished in accordance with the following specifications:
 - 1. Feeding shall be completed prior to construction of permanent improvements adjacent to all trees including site fill or paving including trenching operations.
 - 2. Liquid tree fertilizer applied with a standard hydrant sprayer at a pressure of 100 to 200 psi shall be injected in slightly slanted holes approximately twelve (12) inches in depth.
 - 3. Concentration of suspension to be forty (40) pounds of fertilizer for trees in each 100 gallons of water. Application rate: six (6) pounds of actual nitrogen per 1,000 square feet of area under drip-line.
 - 4. Holes are to be made in concentric circles and 3' on center around the tree with the last ring located at the dripline of the foliage of the trees.
 - 5. Area beneath the dripline of the trees is to be well watered after the fertilization is placed.

3.12 INSECT SPRAYING OF PRESERVED TREES:

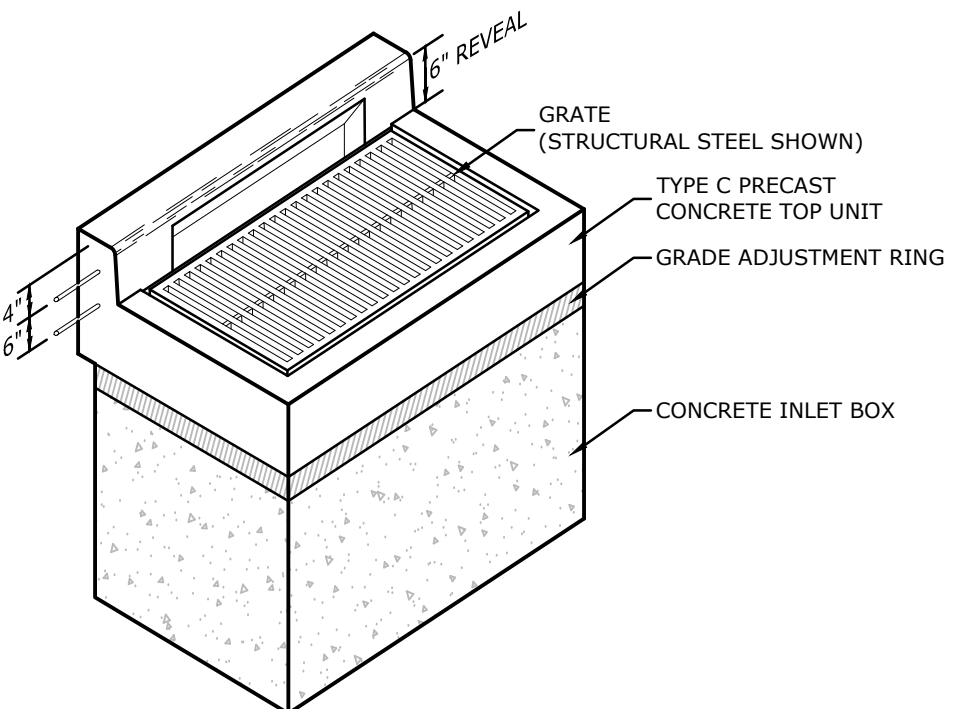
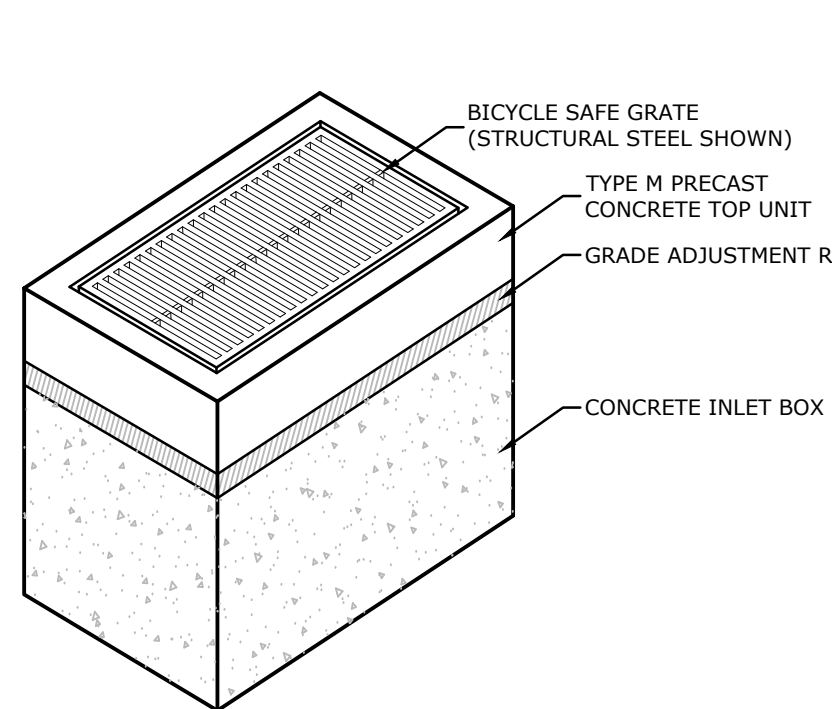
- A. All existing trees to be preserved and impacted by root pruning and construction pruning, and construction activities taking place within the dripline, including but not limited to trenching and grading, shall be treated with liquid fertilizer, dormant oil spray, and insecticide as prescribed by Certified Arborist. Unless otherwise indicated, the minimum shall apply:
 - 1. Liquid fertilizer shall be applied at a rate recommended by the manufacturer and as required by ANSI A300 Part 2 Soil Management standards.
 - 2. Dormant oil spray shall be applied in early spring before buds begin to swell at a rate recommended by the manufacturer.
 - 3. Insecticide spray shall be applied twice to root pruned trees following application of dormant oil spray. Spray insecticide at rates recommended by spray manufacturer at intervals appropriate for effective insect control.

3.13 MULCH:

- A. Mulch base of all existing trees four (4') feet radius with 3 " deep mulch layer.

1. If existing trees are grouped, the entire area is to be mulched in between the trees.
 - B. Mulch base of all existing trees impacted by construction activities within RPZ with 3" deep mulch layer.
 1. If existing trees are grouped, the entire area is to be mulched in between the trees.
- 3.14 CLEANUP:
- A. Wood and debris shall become property of the Contractor and shall be removed from the site. Cost of disposal to be paid by Contractor.
 - B. If acceptable to Owner, wood from tree removal and pruning activities can be double shredded/grinded and used on site as mulch at locations as approved by Architect and Owner.
- 3.15 REMOVAL OF PROTECTION
- A. All protection shall remain in place throughout the construction period. Temporary protection devices and facilities installed during course of the work shall be removed only after all work which may injure or damage trees and plants is completed, and written permission has been granted by the Architect.
- 3.16 WASTE MANAGEMENT
- A. Separate and dispose of waste in accordance with the Project's Waste Management Plan

END OF SECTION

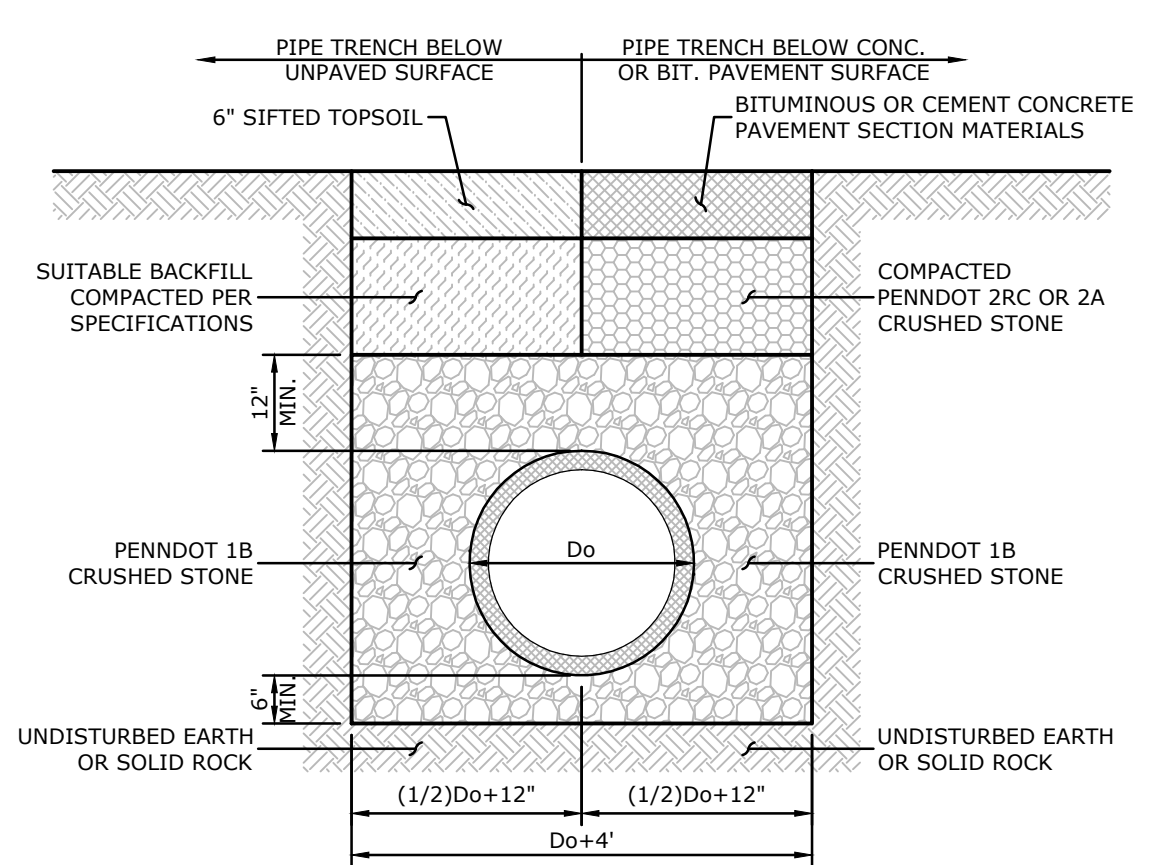
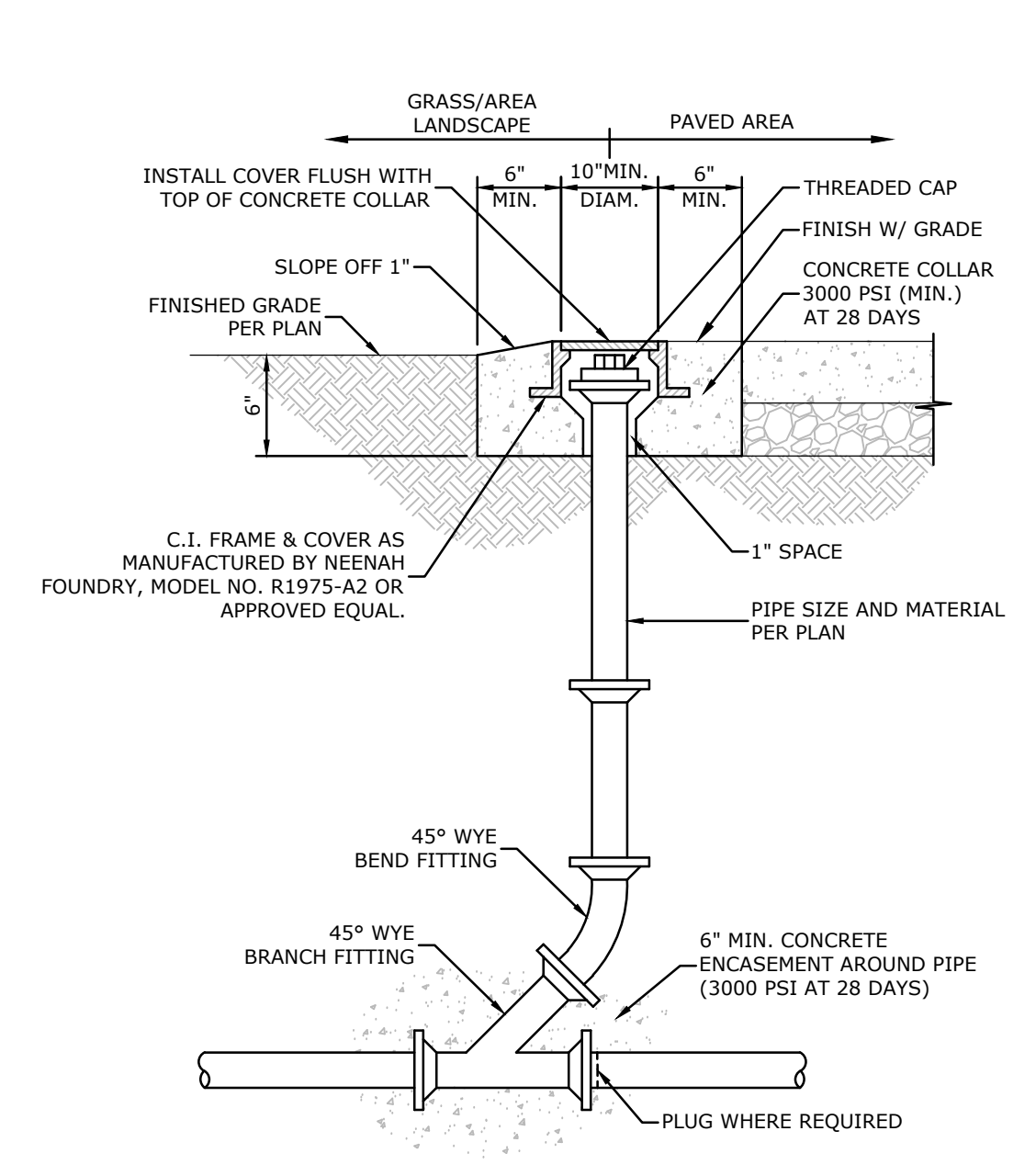
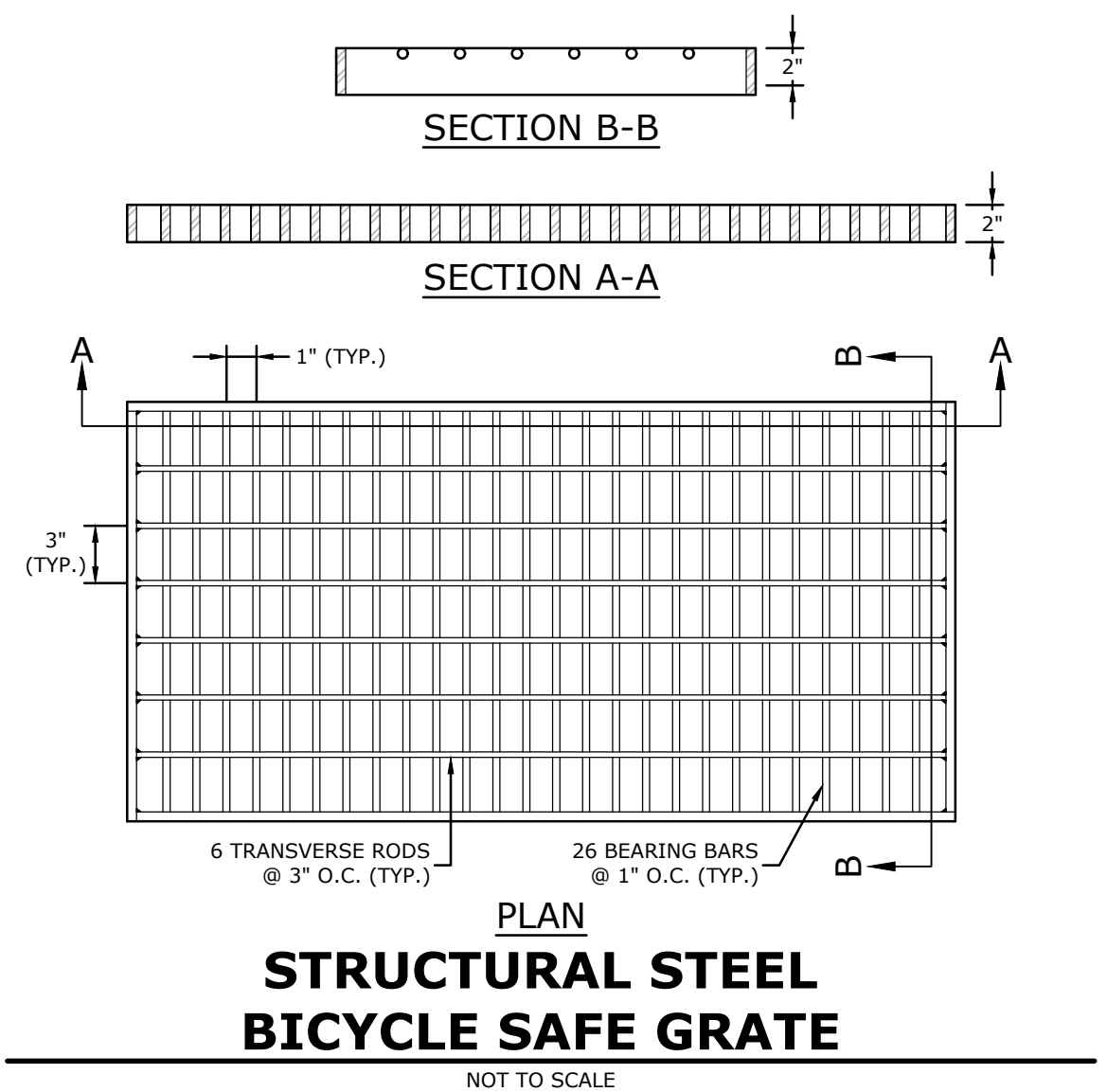


- NOTES:**
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH PENN DOT PUBLICATION 408, SECTION 605 AND STANDARDS FOR ROADWAY CONSTRUCTION, RC-46M. CONTRACTOR SHALL VERIFY INLET BOX SIZING BASED ON PIPE SIZES AND ALIGNMENT PRIOR TO ORDERING PRECAST STRUCTURES. STRUCTURE SHALL BE CERTIFIED FOR H20 LOADING.
 2. ALL DRAINAGE STRUCTURES SHALL HAVE POURED-IN-PLACE CONCRETE CHANNEL BOTTOMS.
 3. USE PRECAST CONCRETE OR STEEL GRADE ADJUSTMENT RINGS WHEN REQUIRED.
 4. ALL INLETS IN PARKED AREAS SHALL HAVE HEAVY-DUTY BICYCLE SAFE GRATING.
 5. ALL INLETS IN PEDESTRIAN/PLAYGROUND AREAS SHALL HAVE ADA COMPLIANT GRATING.
 6. ALL INLETS SHALL BE SUMPED BELOW GRADE (2 INCHES) TO AID IN THE RUNOFF FLOW TO THE INLETS.
 7. ALL FRAMES, CONCRETE TOP UNITS, AND GRADE ADJUSTMENTS RINGS SHALL BE SET IN A BED OF FULL MORTAR IN ACCORDANCE WITH PENNDOT PUBLICATION 408.
 8. ALL INLETS DEEPER THAN FIVE FEET SHALL BE PROVIDED WITH MANHOLE-TYPE STEPS FOR ACCESS.

- NOTES:**
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH PENN DOT PUBLICATION 408, SECTION 605 AND STANDARDS FOR ROADWAY CONSTRUCTION, RC-45M. CONTRACTOR SHALL VERIFY INLET BOX SIZING BASED ON PIPE SIZES AND ALIGNMENT PRIOR TO ORDERING PRECAST STRUCTURES. STRUCTURE SHALL BE CERTIFIED FOR H20 LOADING.
 2. ALL DRAINAGE STRUCTURES SHALL HAVE POURED-IN-PLACE CONCRETE CHANNEL BOTTOMS.
 3. USE PRECAST CONCRETE OR STEEL GRADE ADJUSTMENT RINGS WHEN REQUIRED.
 4. ALL INLETS SHALL BE SUMPED BELOW GRADE (2 INCHES) TO AID IN THE RUNOFF FLOW TO THE INLETS.
 5. ALL FRAMES, CONCRETE TOP UNITS, AND GRADE ADJUSTMENTS RINGS SHALL BE SET IN A BED OF FULL MORTAR IN ACCORDANCE WITH PENNDOT PUBLICATION 408.
 7. ALL INLETS OVER FOUR FEET IN DEPTH, AS DETERMINED FROM FINISHED GRADE TO THE BOTTOM OF THE INLET, SHALL BE PROVIDED WITH STEPS FOR ACCESSIBILITY.

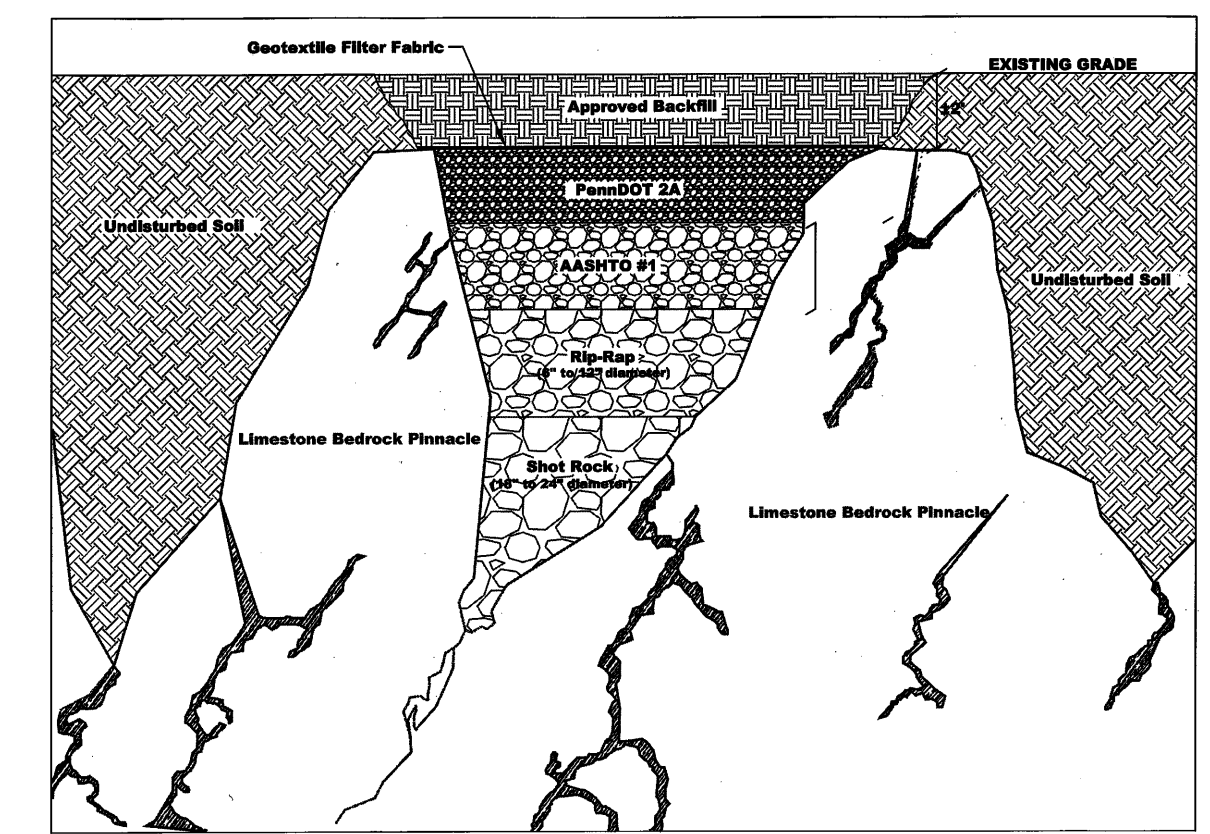
TYPE 'M' INLET
NOT TO SCALE

TYPE 'C' INLET
NOT TO SCALE



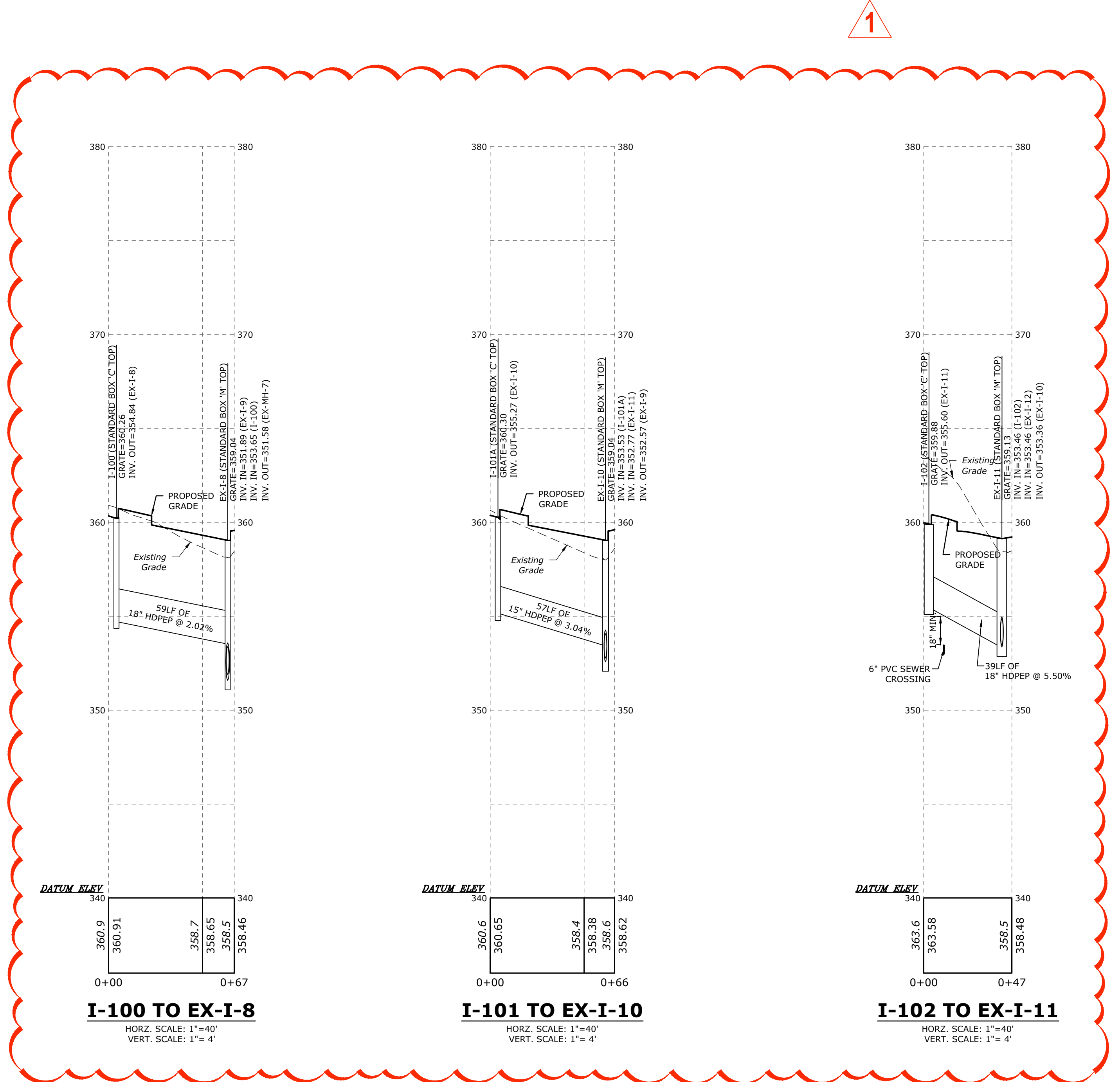
STORM SEWER CLEANOUT
NOT TO SCALE

STORM PIPE TRENCH SECTION
NOT TO SCALE



- NOTES:**
1. THE REPAIRS OUTLINED BELOW ARE GENERAL GUIDELINES AND EACH SINKHOLE OCCURRENCE SHOULD BE THOROUGHLY REVIEWED BY THE GEOTECHNICAL ENGINEER OF RECORD FOR AN APPROPRIATE REMEDIATION PLAN:
- STRUCTURAL AREAS (AREAS WITHIN THE BUILDING FOOTPRINT OR BENEATH PAVEMENT)**
- ANY AND ALL LOOSE AND/OR SATURATED SOILS WITHIN THE SINKHOLE SHOULD BE EXCAVATED AND CONTINUE UNTIL STABLE SOILS, A "THROAT" IS IDENTIFIED, OR UNTIL THE EXTENT OF THE EXCAVATION EQUIPMENT IS REACHED.
 - UPON REMOVAL OF THE UNSTABLE SOILS, THE EXCAVATION SHOULD BE BACKFILLED USING HIGH MOBILITY, LOW STRENGTH FLOWABLE FILL (500 PSI) TO FINAL SUBGRADE ELEVATION.
- NON-STRUCTURAL AREAS (NON-BUILDING/LANDSCAPED AREAS)**
- ANY AND ALL LOOSE AND/OR SATURATED SOILS SHOULD BE EXCAVATED FROM THE SINKHOLE. EXCAVATION SHOULD CONTINUE UNTIL STABLE SOILS, A "THROAT" IS IDENTIFIED, OR UNTIL THE EXTENT OF THE EXCAVATION EQUIPMENT IS REACHED.
 - THE EXCAVATION SHOULD BE BACKFILLED WITH AGGREGATE OF DECREASING SIZE AS DEPICTED ON THE INVERTED FILTER DETAIL.

SINKHOLE REPAIR DETAIL
NOT TO SCALE



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MARK	DATE	DESCRIPTION
	04-05-2024	ADDENDUM NO. 1
	01-22-2024	BID SET
	12-06-2023	REVISED DRAWINGS
	10-04-2023	BID SET
	09-27-2023	PERMIT SET
	09-06-2023	CD SUBMISSION

KEY PLAN:

PROJECT TITLE:

PENN STATE
Harrisburg

STADIUM SEATING & RESTROOMS BLDG
PENN STATE UNIVERSITY HARRISBURG CAMPUS
777 W Harrisburg Pike, Middletown, PA 17057

PSU BUILDING NUMBER: 0985095
PSU PROJECT NUMBER: 00-08713.00

PROJECT NUMBER: 2022-138.00

PROJECT PHASE: CONSTRUCTION DOCUMENTS

**STORMWATER
MANAGEMENT DETAILS**

DRAWN BY: MRS

CHECKED BY: MRS

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DRAWING NO.