CONTRA COSTA COMMUNITY COLLEGE DISTRICT
D-4005 Water Valve Replacement
Diablo Valley College

Date: 6/9/2016

NOTICE TO ALL CONTRACTORS

You are hereby notified of the following changes, clarifications and/or modifications to the original Contract Documents, Project Manual, Drawings, Specifications and/or previous Addenda. This Addendum shall supersede the original Contract Documents and previous Addenda wherein it contradicts the same, and shall take precedence over anything to the contrary therein. All other conditions remain unchanged.

This Addendum forms a part of the Contract Documents and modifies the original Contract Documents dated May 10, 2016. Acknowledge receipt of this Addendum in space provided on the Bid Proposal Form. Failure to acknowledge may subject Bidder to disqualification.

A. Deletions, Additions, Changes, Revisions

Item:

1. BID DATE – Bids are due prior to Tuesday, June 14th, 2016 at 2:00PM.
2. Add:
   a. Specification Section 01140 Work Restrictions in its entirety.
   b. Specification Section 02 82 33 Asbestos Removal in its entirety.
   c. Specification Section 33 11 66 Water Distribution System
      i. Revision: Section 1.5.A.1. Working Pressure: Water system post construction pressure shall equal water system preconstruction pressure.
      iii. Change: Section 3.17.A.8. Base test pressure shall be current operating pressure at nearest on campus fire hydrant.
ADDENDUM #1

3. Pre-Bid RFI Responses – see attached.

4. Sheet C-3.1
   a. Revision: Enlarged View – 08, expand note for finish surface requirements
   b. Add: Sheet Note 2

5. Sheet C-3.2
   a. Revision: Sheet Note 2
   b. Add: Sheet Notes 3 & 4
   c. Add: Key Note 2
   d. Add: The proposed 10” water line at valve number 9 was lengthened.
   e. Add: Valve 6A was added as well as a connection to the existing water system.
   f. Deletion: The 12” and 10” steel pipe is no longer to be abandoned allowing the existing fire hydrant and police station connections to remain as is.

6. Sheet C-3.3
   a. Add: Enlarged View – 51, existing utilities were added and identified.
   b. Add: Enlarged View – 55, approximate distances to the existing irrigation tee was added.
   c. Add: Enlarged View – 57, existing utilities were added and identified.
   d. Add: Sheet Note 2

7. Sheet C-4.0
   a. Revised: Detail 1, Note 7
   b. Add: Detail 7, Notes 2 & 3
   c. Add: Detail 7, reinforcement to the housekeeping pad.

8. Sheet C-5.0 & C-5.1
   a. Add: stamp and signature.

If you have any questions regarding this Addendum, please contact:

   Jovan Esprit – Contracts Manager
   Contra Costa Community College District
   500 Court St., Martinez, CA 94553
   Email: jesprit@4cd.edu

All other terms and conditions of BID are to remain the same.
ADDENDUM #1

Engineer of Record: Robert Stevens

END OF ADDENDUM #1
SECTION 01140
WORK RESTRICTIONS

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. All Contract Documents shall be reviewed for applicable provisions related to the provisions in this document, and provisions in the General Conditions and other Division 1 Specification Sections shall apply to this Section without limitation.

1.2 SUMMARY OF WORK RESTRICTION REQUIREMENTS

A. Prior to the start of Work, Contractor shall familiarize himself with the Work Restrictions as they relate to all Work required by the Contract Documents.

1. Upon receiving Notice of Award and prior to Notice to Proceed, the Contractor shall submit a preliminary baseline schedule to include times and durations of all Work Restricted Activities.

2. Prior to the Notice to Proceed, the Contractor shall submit and obtain approval of a Work Restricted Activity Plan indicating how the Work Restrictions will be implemented.

3. Prior to the Notice to Proceed, the Contractor shall submit and obtain approval of a schedule of temporary interruptions indicating the dates and durations of any interruption to the domestic/fire water line and irrigation line. Interruptions to domestic/fire water service may not impact occupied buildings and may only occur from Thursday 10 PM to Monday 7 AM, unless such interruption affects occupied buildings. See the included list of buildings holding classes on Friday.

4. Failure to include sufficient costs in the bid, or failure to sufficiently provide resources during Work Restricted Activities shall not relieve the Contractor from properly complying with all Work Restrictions.

B. Work Restricted Activity Plans shall include:

1. Full size drawings (36”x42”) of site plans showing the locations and dimensions of temporary facilities including but not limited to all site trailers, equipment and material storage area (onsite and offsite), access for pedestrians and vehicles and haul routes, avenues of ingress/egress to the campus and Project construction sites, all temporary signage, fenced area(s), and details of fencing and/or safety barricades per excavation location.

2. The Contractor shall provide a weekly updated Plan including updated look-ahead schedules until the Work is complete.

3. Contractor shall submit (3) sets of the initial submittal of the preliminary schedule and Work Restricted Activity Plan for District approval.
C. Contractor shall perform all Work during all Work Restricted Activities to ensure the following:

1. The continuous and uninterrupted use of all occupied areas, including but not limited to the applicable power, data, telephone, fire alarm system, mechanical, gas, storm, sewage, plumbing, and electrical systems serving these areas.

2. Protection of students, staff, faculty and personnel in occupied areas from the hazards and dust associated with construction.

3. The work areas, roads, parking lots, and streets are to be kept clear, clean, and free of loose debris, construction materials and partially installed work which would create a safety hazard or interfere with sub-contractor and personnel duties and traffic. The Contractor shall sweep the areas clean at the end of each work day and make every effort to keep dust and noise to a minimum at all times.

4. Prior to starting work, the Contractor shall provide a schedule of temporary interruptions as a part of the Work Restricted Activity Plan and preliminary baseline schedule. The Contractor shall also provide a 4-week look ahead schedule showing when temporary interruptions are anticipated to occur during the Work. The Contractor shall make every effort to prevent any interruptions to domestic water, fire water, or plumbing service during the College’s normal hours of operation.

1.3 SUMMARY OF WORK RESTRICTIONS

A. **General:** Work Restrictions are comprised of various Work Restricted Activities. The Contractor shall perform the Work in each Work Restricted Activity as described below. All Work must be completed within the timelines, work shift times, and the scheduled time period for each Work Restricted Activity. A detailed narrative description of each Work Restricted Activity is as follows:

B. **Time Essential Work Restrictions.** These Work Restricted Activities shall be completed at the outset of the project following the Notice of Award. The Activities that are essential to protect the campus community and minimize disruption to the College’s daily operations.

C. **Coordination and Time Sensitive Work Restrictions.** These Work Restricted Activities include activities related to replacing the domestic and irrigation water supply valves. Certain Activities related to these Work Restrictions which do not disrupt or impact other occupied areas of the facility may be completed during the daytime work shift hours of 7 AM – 5 PM Monday through Friday.

Activities of work that are noise generating, utility shutdowns and cutovers, or access to other occupied areas of the facility MUST be completed off-hours, defined as after 10 PM on Thursday and prior to 7 AM on Monday. Disruption of any utility/infrastructure services during the off-hour period must be scheduled a minimum of 3 (three) weeks in advance and must be coordinated with the Construction Manager.

1. **Excavation for abatement and removal of domestic/fire water lines:** the Contractor shall perform the Work so as not to avoid or mitigate disruptions to Campus faculty, student, or staff activities. Prior to performing any excavation, the Contractor shall have notified, in writing on the preliminary baseline schedule, Work Restricted Activity Plan, and 4-week look ahead schedule, the dates and durations by location, all
excavations. The Contractor shall delineate the public access areas affected by each excavation, showing barricade, and fencing locations relative to each excavation location.

2. **Shutdown of domestic/fire water lines:** The Contractor shall perform the Work so as not to avoid or mitigate any disruption to Campus faculty, student, or staff activities. Prior to shutting down any portion of the Campus domestic/fire water lines, the Contractor shall have notified, in writing on the preliminary baseline schedule, schedule of temporary interruptions, Work Restricted Activity Plan, and 4-week look ahead schedule, the dates and durations by location, all temporary shutdowns of domestic/fire water utilities. The Contractor shall determine and be aware of any Campus facilities that are affected by the shutdown, including hydrants and buildings, and include these areas on the Work Restricted Activity Plan. Any shutdown of domestic/fire water lines shall be coordinated so that the lines may be reactivated prior to the start of Campus operations at 7:00 AM Monday. The Contractor shall allow sufficient time between the shutdown of domestic/fire water lines and reactivation for: abatement, replacement of valves, disinfection, and verification of proper disinfection. The Contractor shall bag and mark out of service those hydrants that are affected by any shutdown during the shutdown.

3. **Occupied Buildings on Friday.** Off-hours for the Campus are typically from 10:00 PM Thursday to 7:00 AM Monday. During the two summer sessions from May 31 to July 28, however, several buildings are occupied on Friday and require water service. The following buildings are occupied on Friday and require water service from 7:00 AM Monday to 10:00 PM Friday (as shown on DVC Water System Map):
   a. LHS – Life Science
   b. ATC – Advanced Technology
   c. MA – Math
   d. PE – Physical Education
   e. PAC – Performing Arts Center
   f. PS-N – Physical Science (North)
   g. ET – Engineering Technology

4. **Valves Affecting Buildings Occupied on Friday.** The following valves (as shown and numbered on the provided drawings) affect the buildings listed above. The Contractor shall keep water service active from 7:00 AM Monday to 10:00 PM Friday for the above buildings:
   a. Valve 13 – affects LHS, ATC
   b. Valve 8A – affects MA
   c. Valves 2.5 and 3 – affect PE
   d. Valve 19 – affects PAC
   e. Valve 11 and 11A – affects PS-N, LHS
   f. Valve 9 – affects ET

5. **Shutdown of irrigation lines:** The Contractor shall perform the Work so as not to disrupt Campus faculty, student, or staff activities. Prior to shutting down any portion
of the Campus irrigation lines, the Contractor shall have notified, in writing on the preliminary baseline schedule, schedule of temporary interruptions, Work Restricted Activity Plan, and 4-week look ahead schedule, the dates and durations by location, all temporary shutdowns of irrigation lines. The Contractor shall determine and be aware of any Campus facilities that are affected by the shutdown, and include these areas on the Work Restricted Activity Plan.

PART 2 - PRODUCTS

2.1 MATERIALS

A. All labor, equipment, materials, and all other requirements shall be provided and will be the sole responsibility of the Contractor for execution of entire work including all Requirements of each Work Restricted Activity.

PART 3 - EXECUTION

3.1 MEANS AND METHODS OF CONSTRUCTION

A. Contractor to provide and shall be responsible for any and all means and methods that will be constructed, implemented and/or maintained on the site for all Work Restricted Activities.

END OF SECTION 01140
SECTION 02 82 33 ASBESTOS PIPE REMOVAL

PART 1 - GENERAL

1.1 SUMMARY

A. This item shall govern the removal, handling, disturbance, cutting, and disposal of asbestos cement (AC) pipe and other asbestos containing materials (ACM) related to the AC pipe work. AC pipe is also known as transite pipe. Any buried pipe typically containing approximately 15 to 20 percent chrysotile and crocidolite asbestos, is considered to be ACM. The material is classified as non-friable unless broken, at which time its classification changes to friable ACM. The removal and/or disturbance of this material is governed by the National Emissions Standards for Hazardous Air Pollutants (NESHAP) and the Occupational Safety and Health Administration (OSHA).

1.2 REGULATORY REQUIREMENTS:

A. The Contractor must be certified by the California State License Board for asbestos work and must be registered with to perform asbestos removal work with the California Division of Occupations Safety and Health.

This item shall consist of the removal, handling, cutting, disturbance, and disposal of AC water pipe, joints, wrappings, and other ACM. To comply with NESHAP and OSHA regulations, this project requires workers with specialized training using wet work procedures to cut and remove AC pipe, AC pipe joints, valves (any type) containing ACM, and surrounding soils containing ACM. A California State licensed Asbestos Consultant shall develop the asbestos work practices and the monitoring in the Contractor’s Health and Safety Plan to be reviewed by the District’s Representative. It is the Contractor’s responsibility to obtain the services of a licensed Asbestos Consultant authorized in the State of California; this work shall be considered subsidiary to this item.

To meet and/or exceed NESHAP and OSHA guidelines, the Contractor shall subcontract the AC water pipe handling to an Environmental Protection Agency (EPA) accredited and State licensed Asbestos Abatement Contractor.

B. Comply with the following California Code of Regulations:

1. California Code of Regulations, Title 8
2. Title 24: Part 2, California Building Code, Chapter 33, Protection of Pedestrian during Construction or Demolition.
3. Bay Area Air Quality Management District.
4. Occupational Safety and Health Administration Section 1910, “Asbestos”.
7. Title 29 Code of Federal Regulations Section 1926 - Construction Industry
8. Title 29 Code of Federal Regulations Section 1910.2 - Access to Employee Exposure and Medical Records
10. Environmental Protection Agency:
    a) Title 40 Code of Federal Regulations Part 61 Subpart M - National Emission Standard for Asbestos

1.3 DEFINITIONS

B. CAL-OSHA: California Occupational Safety and Health Administration.
E. EPA: Environmental Protection Agency.
F. Remove: Detach items from existing construction and legally dispose of them off-site unless they indicated to be removed and salvaged or recycled.
G. Air Monitoring: The process of measuring the fiber concentration of a known volume of air collected during a specific period of time. The analysis procedure utilized for asbestos is the NIOSH Standard Analytical Method for Asbestos in Air, Method 7400. Transmission electron microscopy (TEM) may be utilized for lower detection limits and/or specific fiber identification.
H. Air Monitoring Technician: The person licensed by STATE OF CALIFORNIA to conduct air monitoring for an asbestos abatement project or related activity. The air monitoring technician may only obtain air samples and may only perform analysis of air samples with an upgraded Air Monitoring Technician License, which includes completion of the NIOSH-582 equivalent course. The air-monitoring technician shall be an employee of a licensed asbestos laboratory or a licensed asbestos consultant agency.
I. Amended Water: Water to which a surfactant has been added
J. Asbestos: The asbestiform varieties of serpentines and amphiboles. Specifically: chrysotile, crocidolite, grunerite, amosite, anthophyllite, actinolite, and tremolite
K. Asbestos Containing Material (ACM): Material or products that contain more than 1.0 percent of
any kind of asbestos

L. Asbestos Containing Waste Material (ACWM): Asbestos containing material or asbestos contaminated objects requiring disposal

M. Authorized Personnel: Any person authorized by the Contractor and required by work duties to be present in the work area or other regulated areas

N. Authorized Visitor: District’s representatives and any representative of a regulatory or other agency having jurisdiction over the project

O. Abatement Contractor: The company, agency, or entity licensed by State of California that has been retained by the Contractor to perform asbestos abatement and other associated functions.

P. Class II Asbestos Work (OSHA Standard): Activities involving the removal of ACM that is not thermal system insulation or surfacing material. This includes, but is not limited to, the removal of AC pipe and appurtenances.

Q. Competent Person: One who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, and who has the authority to take prompt corrective measures to eliminate them.

R. Encapsulant: A specific adhesive designed to lock down and minimize the fiber release of ACM and asbestos-contaminated materials.

S. Friable Asbestos: ACM, which can be crumbled to dust, when dry, under hand pressure, and includes previously non-friable material after such previously non-friable material becomes damaged to the extent that, when dry, it may be crumbled, pulverized, or reduced to powder by hand pressure.

T. HEPA Filter: A high efficiency particulate air filter capable of removing particles >0.3 microns in diameter with 99.97 percent efficiency.


V. NIOSH: The National Institute for Occupational Safety and Health

W. PEL: Permissible exposure level

X. Regulated Area: An area established by the Contractor to demarcate areas where asbestos work is conducted, and any adjoining area where debris and waste from such asbestos work accumulate; and a work area within which airborne concentrations of asbestos exceed, or there is a reasonable possibility they may exceed, the PEL.

Y. Staging Area: A pre-selected area where containerized ACWM will be placed prior to removal from the project site.
Z. Surfactant: A chemical wetting agent added to water to improve penetration

AA. TWA: Time weighted average

1.4 SUBMITTALS

A. Follow Submittal procedure outlined in Division 1– General Requirements.
   1. The contractor shall submit their registration with the California Division of Occupations Safety and Health to perform asbestos removal work.
   2. An asbestos abatement work plan shall be provided to the District’s Representative by both the licensed Asbestos Consultant and the Asbestos Contractor. Upon completion of the AC pipe project, an air monitoring abatement report shall be prepared by the Contractor’s Asbestos Consultant. Copies of the final abatement report shall be provided to the District’s Representative by the Contractor’s consultant. OSHA requires that during any ACM disturbance, regardless of amount, the asbestos worker(s) shall be properly protected during potential asbestos exposure, 29 CFR, Subpart Z, 1910.1101.

1.5 PROJECT CONDITIONS

A. In all circumstances ensure that demolition work does not adversely affect adjacent water courses, groundwater and wildlife, or contribute to air and noise pollution.

B. Do not pump water containing suspended materials into watercourses, storm or sanitary sewers, or onto adjacent properties.

C. Dispose of all fluid within pipes as required by the State of California, the Contra Costa County, and the City of Pleasant Hill.

D. Dispose all pipe containing asbestos materials as required by the State of California.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. Backfill excavations resulting from demolition operations with on-site or import materials conforming to structural backfill defined in Section 31 23 33 Utility Trenching and Backfill.

PART 3 - EXECUTION

3.1 PREPARATION

A. Sample all pipe materials noted as containing asbestos in the Plans. Submit the results to the
B. Protect existing site improvements to remain during construction.

C. Provide the following temporary facilities to facilitate the demolition operations, as necessary:
   1. Temporary Traffic Controls
   2. Protection of Persons and Property
   3. Protection of Utilities
   4. Protection of Trees
   5. Noise and Dust Abatement
   6. Clear and restore area to their original condition
   7. Protect existing site improvements and adjacent structures from removal and damage.

3.2 CONSTRUCTION REQUIREMENTS

A. General
   1. The Contractor shall remove, seal, transport and dispose of all impacted ACM in compliance with all current Federal, State, and local regulations, laws, ordinances, rules, standards and regulatory agency requirements. Asbestos disturbance and/or removal activities shall be conducted by properly trained, accredited, and licensed personnel using proper personal protective equipment.
   2. The Contractor shall notify District’s Representative at least 72 hours in advance prior to beginning removal and/or disturbance of AC pipe.
   3. Time is of the essence in removing ACM from the project area. All work must be completed within the time period specified.
   4. The Contractor shall have an on-site supervisor, who is an OSHA Competent Person, present on the job site at all times the work is in progress. This supervisor shall be thoroughly familiar and experienced with asbestos disturbance and other related work, and shall be familiar with and shall enforce the use of all safety procedures and equipment. The supervisor shall be knowledgeable of all applicable EPA, OSHA, NIOSH and STATE OF CALIFORNIA requirements and guidelines.
   5. Prior to commencing any preparation of the work areas for asbestos disturbance, the Contractor shall post all required documents, warning signs, and as necessary, erect physical barriers to secure the work area.
   6. The Contractor has sole and primary responsibility for the “means and/or methods” of the work, for the inspection of the work at all stages, and for the supervision of the performance of the work.
   7. The Contractor shall be responsible for site safety and for taking all necessary precautions to protect the Contractor’s workers and the public from asbestos exposure and/or injury.
The Contractor shall be responsible for maintaining the integrity of the work area.

8. The Contractor shall confine operations at the site to the area requiring disturbance of AC pipe and the general site area associated with the proximity of the project. Portions of the site beyond areas, in which the indicated work is required, are not to be disturbed. The Contractor shall not unreasonably encumber the site with materials or equipment. If ACWM is required to be stored overnight, it shall be properly labeled, secured, and containerized to preclude unauthorized disturbance of the waste materials.

9. The Contractor shall be responsible for the transport and disposal of ACWM to a duly licensed landfill facility permitted to accept asbestos waste. The Contractor shall be responsible for obtaining and coordinating waste disposal authorization from a licensed landfill. Waste manifests shall be used to transport the AC pipe from the project site to the final landfill disposal site. The Contractor shall sign manifests as the generator of the AC pipe and shall provide copies to the District’s Representative for final payment.

B. Site Security:

1. The Contractor shall demarcate the area of AC pipe disturbance (“regulated area”) with barrier tape and warning signs, as per OSHA regulation 29 CFR 1926.1101. Access to the regulated area shall be limited only to authorized personnel. Authorized personnel shall have asbestos awareness training, respiratory training, etc.

2. Entry into the work area by unauthorized individuals shall be reported immediately to the District’s Representatives by the Contractor.

3. A logbook shall be maintained immediately outside the regulated area. Anyone who enters the regulated area must record name, affiliation, time in, and time out for each entry.

C. Personal Protective Equipment:

1. General:
   a) All work which will or may disturb ACM shall be accomplished utilizing, as a minimum, disposal suits with protective head cover, gloves, boots, eye protection, proper respiratory protection, decontamination by HEPA vacuuming and/or wet methods, and wet wiping all equipment. The Contractor shall provide hard hats and/or other protection as required for job conditions or by applicable safety regulations. Disposal suits consisting of material impenetrable by asbestos fibers shall be provided to all workers and authorized visitors in sizes adequate to accommodate movement without tearing. Workers shall be provided protective clothing from the time of first disturbance of ACM until final cleanup is completed.

2. Respiratory Protection:
   a) The Contractor shall use removal techniques, methods and equipment that will not permit the fiber count to exceed the OSHA Permissible Exposure Level (PEL) of 0.1 fibers per cubic centimeter
(f/cc) of air as detected by personal air sampling methods. Any remedial measures taken by the Contractor to meet this requirement shall be at the Contractor’s expense.

b) The Contractor’s Competent Person shall ensure use of the appropriate respiratory protection for the work being performed. For minimum legal respiratory requirements, see OSHA Standards 29 CFR 1910.134, 29 CFR 1910.1001, and 29 CFR 1926.1101. All respiratory equipment, such as respirators, filters, etc., shall be certified by NIOSH for use in asbestos contaminated atmospheres.

c) The Contractor’s Competent Person shall perform an Initial and/or Negative Exposure Assessment, which shall be performed on employees who have been trained in compliance with the OSHA regulations. Employee’s exposures shall be collected using objective data that is to demonstrate whether the materials specified for removal can release airborne fibers in concentration levels exceeding 0.1 f/cc during an 8-hour time weighted average (TWA) and the excursion limit of 1.0 f/cc. For the purpose of the assessment, the work conditions shall be those having the greatest potential for releasing asbestos fibers. Removal methods using conventional hand tools shall be performed in an area that requires a minimum of a 7-hour work shift with employees performing functions normally required for a total project. Removal, for the purposes of the assessment, shall be performed with methods most likely to release fibers and that do not render the ACM friable. Properly trained employees shall wear proper protective clothing and respirators during the assessment. Initial and/or Negative Exposure Assessments shall be performed in accordance with OSHA Standard 29 CFR 1926.1101.

d) The development of the Health and Safety Plan by the Contractor’s STATE OF CALIFORNIA licensed Asbestos Consultant shall include determining the adequacy of the Contractor’s air monitoring data (which must performed within the previous 12 months of the project start date) for the Initial and/or Negative Exposure Assessment, based in part on site-specific factors such as changes in personnel or work methods used during AC pipe removal. If the type of air monitoring data needs to be reviewed during the course of a project, the Contractor’s Asbestos Consultant shall review the data in order to determine adequacy. Any downgrade in personal protective equipment related to asbestos exposure shall be requested in writing to the District’s Representative, and approved by a STATE OF CALIFORNIA licensed Asbestos Consultant. This request may be granted only when all regulations and pertinent sections of this specification for respiratory protection are met.

e) The Contractor shall begin AC pipe removal operations (i.e., breaking, sawing, cutting, or repairing the pipe) in powered air purifying respirators (PAPRs) equipped with dual HEPA filters. PAPRs shall be
utilized until such time that air monitoring results indicate half-face respirators may be used. Any changes (downgrade or upgrade) in respiratory protection shall be based upon an 8-hour TWA of fiber concentrations in the regulated area. For personal samples, the 8-hour TWA’s shall be calculated daily by the Contractor’s OSHA monitoring firm. The highest calculated 8-hour TWA shall be used to determine the type of respirator to be worn. The type of respirators worn shall be selected in accordance with 29 CFR 1926.1101 (h)(3).

f) The Contractor may request a respiratory protection downgrade, approved by a STATE OF CALIFORNIA licensed Asbestos Consultant, in writing to the District’s Representative when all regulations and pertinent sections of this specification for respiratory protection are met.

g) Workers shall be provided with personally issued, individually identified respirators.

h) No one wearing a beard shall be permitted to wear a respirator.

D. Air Monitoring:

1. Personal Air Monitoring: The Contractor shall provide personal air sampling as required by OSHA regulations. The OSHA TWA PEL for asbestos (0.1 f/cc) shall not be exceeded. Personal air samples shall be obtained by a STATE OF CALIFORNIA licensed Asbestos Air Monitoring Technician and analyzed by an accredited, independent STATE OF CALIFORNIA licensed Phase Contrast Microscopy (PCM) laboratory. OSHA monitoring results shall be posted at the project site and made available to all affected Contractor personnel on a daily basis.

2. The Contractor shall provide, as a minimum, personal air monitoring on each worker who is cutting, (wet) sawing, breaking, or repairing AC pipe.

3. Area Air Monitoring: At any time that visible airborne fibers are generated or that wet work procedures are not used, all work shall immediately cease until air monitoring by a STATE OF CALIFORNIA licensed Asbestos Consultant Agency has started. The Contractor’s on-site Competent Person shall be responsible for making this determination; however, periodic, random site visits by the District’s representative will field-verify the objectivity of the Competent Person in these matters. Once initiated, the sampling and frequency of the area air monitoring shall be dependent upon on the specific work practices being used by the workers at that time. However, the area air monitoring shall include, as a minimum, samples collected inside the regulated area, and upwind and downwind of the regulated area. The STATE OF CALIFORNIA licensed Asbestos Consultant Agency hired by the Contractor shall determine the need for additional samples and shall amend the Health and Safety Plan to include sampling protocols. A copy shall be provided to the District’s Representative.

4. Area air monitoring shall be conducted in accordance with applicable Federal, State, and local requirements. The cost of area air monitoring due to failure to use adequate wet work procedures shall be borne by the Contractor. Copies of all results shall be provided...
to the District’s Representative.

5. Area air sampling shall be mandatory in high density areas such as schools, residential areas, and certain other locations as determined by the District’s Representative and dictated by the bid documents/plans.

E. Employee Training:

1. Training shall be provided by the Contractor to all employees or agents who may be required to disturb ACM for AC pipe handling and auxiliary purposes, and to all supervisory personnel who may be involved in the planning, execution or inspection of such projects. The training shall be in accordance with OSHA Standard 29 CFR 192.1101 for “Class II asbestos work”.

F. AC Pipe Handling:

1. General:
   a) The Contractor shall properly remove, handle, transport and dispose all AC pipe specified in the bid documents/plans for this project. All work involving AC pipe and other ACM products shall be addressed in the Health and Safety Plan documents submitted to the District’s Representative. The Contractor shall hire a STATE OF CALIFORNIA licensed Asbestos Consultant to provide detailed asbestos specific safety and work plans for ensuring worker and community protection. Health and Safety Plan documents are to include provisions for the discipline of any worker failing to use wet work procedures or failing to use designated personnel protective equipment.
   b) The Contractor shall remove ACM with wet methods or by other controlled techniques approved by the TDH, EPA and OSHA, and in accordance with these specifications and the Contractor-provided Health and Safety Plan. Alternative removal methods will be considered at the time of the Contractor’s submittals. The Contractor shall take special care to prevent damage to structures and materials not requiring demolition to access the ACM.
   c) The Contractor shall limit work to the area indicated. Access to the work area shall be controlled by the Contractor. All electrical equipment, etc., shall have ground limit circuit interrupter (GFCI) protection. The Contractor shall properly demarcate, barricade, and contain the work and/or regulated areas.
   d) The AC pipe work consists of providing GFCI protection, using approved equipment with engineering controls, sufficiently wetting the ACM using a surfactant or lock-down encapsulant, removing the ACM, HEPA vacuuming the work area, wet wiping the work area, double-bagging/double-wrapping the waste, and removing carefully as indicated herein and in accordance with the Contractor-provided Health and Safety Plan.
G.  Equipment:

1. Equipment used to cut, break, or otherwise disturb AC pipe and associated ACM may include, but are not limited to: wet-cutting saws, saws equipped with point of cut ventilator (saw equipped with a water mister) or enclosures with HEPA filtered exhaust air, snap cutters, manual field lathes, and pressure and non-pressure tapping devices.

2. Equipment used to control visible emissions of fibers, contain the work area, or facilitate the clean-up of debris may include, but are not limited to: airless spray equipment, pump-up sprayers, surfactant, lock-down encapsulant, HEPA vacuums, brushes, brooms, shovels, disposable rags, polyethylene sheeting of 6-mil thickness, moisture resistant duct tape, asbestos warning signs, notices, and barrier tape. Alternative dismantling equipment may be substituted for the materials indicated herein, but must be approved by the District’s Representative.

H.  Prohibited Work Practices and Engineering Controls:

1. The following work practices and engineering controls shall not be used for work related to asbestos or for work that disturbs ACM, regardless of asbestos exposure or the results of Initial Exposure Assessments:
   a) High-speed abrasive disc saws that are not equipped with point of cut ventilator or enclosures with HEPA filtered exhaust air
   b) Other high-speed abrasive tools, such as disk sander
   c) Carbide-tipped cutting blades
   d) Electrical drills, chisels, and rasps used to make field connections in AC pipe
   e) Shell cutters used to cut entry holes in AC pipe
   f) A hammer and chisel used to remove couplings or collars on AC pipe
   g) Compressed air used to remove asbestos or ACM, unless the compressed air is used in conjunction with an enclosed ventilation system designed to capture the dust cloud generated by the compressed air
   h) Dry sweeping, dry shoveling, or other dry clean-up of dust and debris containing ACM.
   i) Employee rotation as a means of reducing employee exposure to asbestos

I.  General Removal Work Practices:

1. AC pipe has been identified as a non-friable ACM with the potential to become friable ACM. The material is classified as non-friable unless broken, at which time its classification changes to friable.

2. All AC pipe projects require that NESHAP and OSHA guidelines be met and/or exceeded in areas where AC pipe is to be disturbed. Therefore, all AC pipe disturbances require a STATE OF CALIFORNIA licensed Asbestos Consultant and Asbestos Contractor on-site during AC pipe disturbance. An asbestos abatement work plan shall be provided to the
District’s Representative by the Asbestos Contractor. Upon completion of the AC pipe project, an air monitoring abatement report shall be prepared by the Contractor’s Asbestos Consultant. Copies of the final abatement report shall be submitted to the District’s Representative by the Contractor’s consultant. During any ACM disturbance, OSHA requires that, regardless of amount, the asbestos worker(s) be properly protected during potential asbestos exposure, 29 CFR, Subpart Z, 1910.1101.

3. The Contractor shall be responsible for developing and implementing an asbestos removal work plan in accordance with NESHAP, OSHA, and State requirements. As such, Contractors submitting bids for the project shall have a STATE OF CALIFORNIA licensed Asbestos Consultant provide detailed asbestos specific safety and work plans for ensuring worker and community protection. Health and Safety Plans for working with ACM shall address the requirements of these specifications.

4. A sufficient supply of disposable rags for work area decontamination shall be available.

5. Stick-on labels identifying the Generator’s name and address, and the project site location shall be applied to any asbestos waste bags that contain RACM, as per EPA or OSHA and Department of Transportation HM 181 requirements.

J. Work Area Preparation:

1. The Contractor shall post warning signs and barrier tape meeting the specification of OSHA 29 CFR 1910.1001 and 40 CFR 61 at any location and approaches to a location where airborne concentrations of asbestos may exceed the PEL. Signs shall be posted at a distance sufficiently far from the work area to permit an employee to read the sign and to take the necessary protective measures to avoid exposure. The Contractor shall maintain constant security against unauthorized entry past warning signs and barrier tape. Signs shall be post in both English and Spanish at the site.

K. Personnel Exit Procedures

1. Before leaving the work area, all personnel shall remove gross contamination from the outside of respirators and protective clothing by brushing and/or wet wiping procedures. Small HEPA vacuums with brush attachments may be utilized for this purpose. Adequate washing facilities shall be provided and utilized on-site.

2. Upon completion of the work, contaminated gloves shall be disposed as ACWM. Disposable cloth gloves may be substituted for leather gloves, at the Contractor’s discretion. Rubber boots shall be decontaminated at the completion of the project.

L. Specific Removal Work Practice Requirements

1. The Contractor has sole and primary responsibility for the “means and/or methods” of the work, for inspection of the work at all stages, and for supervision of the performance of the work.

2. The Contractor shall isolate the regulated area with barrier tape and asbestos warning signs.

3. The Contractor shall lay and secure 6-mil polyethylene sheeting on the ground on both sides of the AC pipe for the length of the work area.
4. Working within the regulated area and using wet removal methods, the Contractor shall thoroughly soak each section of AC pipe to be disturbed, prior to any removal activity, with a surfactant or lock-down encapsulant. The Contractor shall use equipment capable of producing a “mist” application to reduce the potential for release of fibers. The Contractor shall take care to use as much encapsulant or surfactant as needed to lock down possible fallout debris from edges and joints during removal. Continuous wetting of the materials throughout the entire removal process shall be provided. The Contractor shall take care to limit the breakage of ACM and to remove these materials as intact as possible.

5. Any AC pipe debris on adjacent surfaces shall be removed. The Contractor shall promptly clean up asbestos wastes and debris following AC pipe disturbance. All visible accumulations of ACM and asbestos contaminated debris shall be removed and containerized by hand. Asbestos debris mixed with soil shall be picked up with shovels. The contaminated soil shall be containerized as a regulated ACWM. Clean-up activities may also involve vacuum cleaners equipped with HEPA filtration or wet-wiping surfaces with disposable rags. Contaminated rags shall be containerized as regulated ACWM.

6. After disturbance and clean-up activities but prior to removal of the AC pipe from the regulated area, the Contractor shall encapsulate damaged and exposed areas and ends of the AC pipe with a lock-down encapsulant.

7. The Contractor shall then remove the Category II non-friable ACM “that is not in poor condition and is not friable,” as defined in NESHAP regulations. The Contractor shall remove all AC pipe “intact” and in whole complete sections by carefully lifting the AC pipe to the disposal container using approved equipment. The Category II non-friable AC pipe shall not be made “friable” (crumbled, pulverized, or reduced to a powder). The Contractor shall not drop, break and/or otherwise make the AC pipe susceptible to releasing asbestos fibers. If these procedures are followed and debris is cleaned up properly, then the Category II non-friable AC pipe shall be disposed as non-regulated ACM.

8. Pieces of AC pipe debris shall be handled as RACM waste. The debris shall be placed in two 6-mil asbestos bags or double wrapped, with proper labeling.

M. Abandonment of AC water mains/pipes: The Contractor shall be responsible for isolating the existing mains to remain in service by capping, plugging, and blocking as necessary. The opening of an abandoned AC water main and all other openings or holes shall be blocked off by manually forcing cement grout or concrete, into and around the openings, in sufficient quantity to provide a permanent watertight seal. Abandonment of old, existing AC water mains shall be considered subsidiary to the required work and no direct payment shall be made.

N. Abandonment of valves that contain ACM: Valves to be abandoned in the execution of the work shall have the valve box and extension packed with sand to within 8-inches of the street surface. The remaining 8-inches shall be filled with 2,500 psi concrete or an equivalent sand-cement mix, and finished flush with the adjacent pavement or ground surface. The valves covers shall be salvaged and return to DWU. The abandonment of valves containing ACM shall be considered subsidiary to the required work and no direct payment shall be made.
O. Verification of Removal & Clean-up Procedures: The Contractor’s on-site Competent Person shall inspect the work area and ensure that all surfaces are free of AC pipe dust and debris.

3.3 RESTORATION

A. Restore areas and existing works outside areas of demolition to match conditions to their original condition, as acceptable to the District.

B. Restore damaged improvements to their original condition, as acceptable to the District.

3.4 UTILITIES

A. Locate, identify, disconnect, and seal or cap off utilities indicated to be removed or abandoned.

B. Arrange to shut off indicated utilities with utility companies or verify that utilities have been shut off.

C. Existing Utilities: Do not interrupt utilities serving facilities occupied by District or others unless authorized in writing by the District and then only after arranging to provide temporary utility services according to requirements indicated.

D. Do not proceed with utility interruptions without the permission of the District and utility company affected. Notify the District and the utility company affected 14 working days prior to utility interruptions.

E. Excavate and remove underground utilities that are indicated to be removed.

F. Securely close ends of abandoned piping with tight fitting plug or wall of concrete minimum 6-inches thick.

G. Remove and dispose soil contaminated with asbestos materials.

3.5 DISPOSAL

A. Dispose all pipe containing asbestos materials as required by the State of California.

B. If a dumpster/trailer is used for temporary storage, it shall be secured and closed at all times except when loading. It shall be properly marked and critical barrier tape shall be in place.

C. After being removed from the regulated area, Category II non-friable AC pipe shall be transferred to a polyethylene-lined container. The Contractor shall remove all containers as soon as practical, but no later than the end of the work shift.

D. When a dumpsters/trailer is full, it shall be hauled away to the closest EPA approved landfill for proper disposal. The Contractor may dispose of Category II non-friable AC pipe waste material
as non-regulated waste in a municipal solid waste landfill, as defined in the NESHAP. Prior to disposal, written approval to transport and to accept the Category II non-friable material shall be obtained from a pre-approved transporter and landfill, and shall be submitted to the District’s Representative.

E. The Contractor shall submit copies of all transport manifests, trip tickets, and disposal receipts for all ACP removed from the work area during the project to the District’s Representative. The Contractor shall sign manifests as the generator of the AC pipe and provide copies to District’s Representative for final payment.

END OF SECTION
ADDENDUM #1 – Pre-Bid RFI Responses

1. The above ground pressure regulating valve assembly located at #51 is that a 6" or 4"? On the detail sheet (C-4.0) it shows a 4" assembly but on the enlarged view (C-3.3) it says 6".
   a. RESPONSE: 4"

2. We could not locate valves #9, #55. Please confirm their locations?
   a. RESPONSE: Both of these Valves are new valves.

3. Where will we be pumping the domestic water and irrigation water when we are draining the water lines to remove the valves? To the nearest storm drain? I did not see too many storm drains, especially in the middle of the campus.
   a. RESPONSE: To the nearest storm drain inlet. Contractor to assume longest run to nearest is 200 feet.

4. There are a couple of irrigation valves that are located in areas of the college landscaping that have no access for a small dump truck. In those instances can we pile up the dirt next to the trench/hole and backfil w/ existing spoils?
   a. RESPONSE: That is acceptable. Confirm proposed stockpile location with District prior to start of excavation.

5. On note #1 on (C-3.2) it calls for not trenching deeper than 5' deep, but the existing valve located on the south end of the new 10" pvc waterline install is approx 8' deep. Are we reconnecting the new 10" pipe near that existing gate valve or are we going to find another location no more than 5' deep?
   a. RESPONSE: Note #1 has been revised.

6. Specification section 33 11 16 Item 1.5 System Performance Requirements, A. Minimum Internal Pressures. This specification indicates of a working pressure of 150-psi and a test pressure of 200-psi for the system. How does contractor install new valves in an existing system and provide these pressure tests in that system? Will a visual inspection at operating pressure by the inspector of record acceptable? Please advise.
   a. RESPONSE: A visual inspection at each valve is acceptable. Also, the operating pressure on campus shall be tested prior to construction, ideally at each fire hydrant, and retested upon completion of construction to ensure adequate pressure was maintained.

7. Plans and specifications require that contractor hire an underground locating service to locate related piping and on-site utility services. How is a locating service going to locate existing ACP piping that does not have a locating conductor installed? Please clarify.
   a. RESPONSE: Contractor shall use record documents and potholing to locate existing ACP pipe.
8. Valve location #08. What restoration will be required at this location? The existing valves are covered by two trench plates. Will contractor replace the trench plates or bring area to grade and restore with asphalt? Please clarify.
   a. RESPONSE: Bring to grade and replace with asphalt.

9. Valve location #09. There is no existing valve at this location. Contractor assumes that a new valve will be installed and the existing concrete will be replaced. Please clarify.
   a. RESPONSE: Confirmed

10. Valve location #52. Does contractor restore area with a 2x3 site utility box or restore with new F8 valve boxes and asphalt? Please clarify.
    a. RESPONSE: Replace existing utility box with new F8 valve box and restore asphalt.

11. Valve location #55. Contractor could not locate this valve during site visit. Please advise.
    a. RESPONSE: This valve is a new isolation valve for the irrigation system.

12. Valve location #57. The plans show only one valve at this location. The site visit shows two existing valves at this location. Does contractor remove and replace existing valves and replace with one new valve or does contractor remove one valve and replace only that valve? Please clarify.
    a. RESPONSE: Remove both valves and replace with one valve, unless conditions underground require two valves.

13. Valve location #06. Sheet C-3.2 shows a new 10" C-900 water line installed. The drawing shows a 4' wide trench cut into the existing site concrete. Contractor assumes that only the portion of concrete removed will need to be replaced. Can owner confirm that only the removed concrete necessary for the trenching and new pipe work will need to be replaced? Or will district require contractor to remove and replace all concrete panels affected by the sawcutting and piping operations? Please advise.
    a. RESPONSE: Replace fully all concrete panels affected by installation of water line to nearest joint.

14. Valve location #06. Sheet C-3.2 indicates that the site be restored to existing conditions. Will contractor have to provide a 'tooled' edge to restored concrete or can contractor float flush the new concrete to the existing site concrete? Please advise.
    a. RESPONSE: Tooled edge, see response 7 above.
15. Valve location #06. Sheet C-3.2 indicates that the site be restored to existing conditions. When replacing removed concrete with new what reinforcing rebar spacing will be required for the restoration? #4 bars on 18” OC, #4 bars on 16” OC, #4 bars on 12” OC? Please advise.
   a. RESPONSE: Match reinforcement of existing concrete. Contractor to assume #4 bars @ 18” O.C.E.W

16. At the mandatory pre-bid project walk-thru owner indicated that some valve replacement work would need to be scheduled during 'off-hours' to accommodate the campus activities. Contractor has identified 8 valve replacements that may fall into this requirement. Can the district identify all the valve replacement locations that will require 'off-hour' or overtime work? Please advise.
   a. RESPONSE: See Specification Section 01140 Work Restrictions included in this Addendum.
ENLARGED VIEW 08 IS FOR REFERENCE ONLY. SEE SHEET C-3.2 FOR WORK ON VALVES IN THIS AREA.