

DOCUMENT 00201 - ADDENDUM NUMBER 1

Date: 02 October 2017

OWNER: Peoria Park District
1314 N. Park Road
Peoria, IL 61603

ARCHITECT & MECHANICAL: apaceDesign Architects + Engineers
2112 E. War Memorial Drive
Peoria, IL. 61614-8002

To: PROSPECTIVE BIDDERS

Subject: ADDENDUM NO. 1 TO THE BIDDING DOCUMENTS FOR:

Lakeview Gymnasium Renovation
Lakeview Recreational Center
Peoria Park District
2218 N. Prospect Road
Peoria, IL 61603

This addendum forms a part of the bidding and contract documents and modifies the original bidding documents, dated 22 August 2017. Acknowledge receipt of this addendum in space provided on Bid Form. FAILURE TO DO SO MAY SUBJECT BIDDER TO DISQUALIFICATION.

GENERAL NOTES:

- A. To Clarify, F.F.E. 681.17 (Civil) = 276'-0" (Struct.) = 100'-0". Utilize each designation when referring to each discipline.
- B. Attached soil boring report for informational purposes.

SPECIFICATIONS:

- A. Section 02082
 1. Add Section 02082 - Asbestos Abatement to the Project Manual. This section includes 17 pages.
- B. Section 033000
 1. Reference Paragraph 1.2.B.1: Change to read, "Section 312010 "Earth Moving for Structures'" for drainage fill under slab-on-grade.
 2. Reference Paragraph 2.5.C.1: Add the following:
"C. Concrete Earth LLC. Impervious Admixture and Impervious Cure."
- C. Section 075423
 1. Reference Paragraph 2.2.A.1: Delete manufacturers a., b., c., d., and replace with the following:
 - a. **Carlisle Syntec, Inc.**
 - b. **Firestone Building Products**
 - c. **Versico Roofing Systems**
 2. Reference Paragraph 1.2.1 - Delete in its entirety.
 3. Reference Paragraph 1.3.D.1 - Delete in its entirety.

4. Reference Paragraph 1.5.A - Delete in its entirety.
5. Reference Paragraph 2.1.D - Delete in its entirety.
6. Reference Paragraph 1.1.A - Delete paragraphs 2, 3, and 4 in their entirety.
7. Reference Paragraph 2.4 - Delete in its entirety.
8. Reference Paragraph 2.6.C.1 - Delete paragraph and replace with the following:
 "1. Manufacturers: Subject to the compliance with requirements, provide products by one of the following:
 - a. **Georgia-Pacific Building Products.**
 - b. **United State Gypsum Company."**
9. Reference Paragraph 3.1.A - Delete Paragraph 1, 2, 3, and 4 in their entirety.
10. Reference Paragraph 3.2 - Delete in its entirety.
11. Reference Paragraph 3.4 - Delete in its entirety.
12. Reference Paragraph 3.5.C.2.h - Delete Paragraph 1. in its entirety.
13. Reference Paragraph 3.5.D - Delete in its entirety.
14. Reference Paragraph 3.6.B - Delete in its entirety.
15. Reference Paragraph 3.9.A.1.a - Delete in its entirety.
16. Reference Paragraph 2.3 - Add the following paragraph:
 " I. Air and Vapor Barrier: A 40-mil thick composite consisting of 35-mil self-adhering rubberized asphalt membrane laminated to a 50mil UV resistant poly film with an anti-skid surface which is fully compatible with manufacturers adhesive.
 1. **A low VOC contact adhesive used to prime surfaces for the application of vapor barrier.**

D. Section 087100

1. Reference paragraph 3.7.A: Door Hardware Set 10: Add Door 17.
2. Reference paragraph 3.7.A: Add Door Hardware Set 11:

Hardware Set 11

Door 18

Each Door to Have:

Hinged BB1279

- 1 Storeroom Lock L9080**
- 1 Closer 4111**
- 1 Kickplate**
- 1 Wall Stop 232W "**

E. Section 096000

1. Reference Paragraph 2.01.A: Add the following approved manufacturers:
 - a. Action Floor System, Herculan MF 9+2.
 - b. Rubber Flooring Systems, Inc. (RFS), Polysport 9+2.
 - c. MooseSports Surfaces, LTD, Gamecourt 9+2.
2. Reference Paragraph 2.01.B.4.a: Wear coat must match top coat color.
3. Reference Paragraph 2.01: Owner reserves the right to choose up to (1) court color for field; up to (2) game line colors for basketball and pickleball.

F. Section 096519

1. Reference Paragraph 2.3.A.: Add the following:
 "11. Regupol American Aktiv."

G. Section 096600

1. Stonehard Stonshield SL7 shall be an approved manufacturer and product.

H. Section 233423

1. Change paragraph 2.04.A.6.c to read "**Aerovent SCDD.**"
2. Change paragraph 2.04.B.6.c to read "**Broan L Series.**"
3. Change paragraph 2.03.B subparagraph numbers from "3", "4", and "5" to "1", "2", and "3".
4. Change new subparagraph 2.03.B.3 to read "**Aerovent ACXD Series**".

DRAWINGS

A. Sheet E001 - Site Plan - Electrical

1. Keyed Electrical Notes:

- a. Revise Keyed Note #1 to indicate the fiber optic cable shall be furnished and installed (provided) by the Contractor under Add Alternate Bid #3. Under Alternate Bid #3, the Contractor shall include an additional 100' of 1-1/2" inner duct raceway routed to above main floor ceiling of Noble Center Building and to main network equipment room. Exact route shall be confirmed and approved by Owner.
- b. Revise Keyed Note #4 to allow underground fiber optic cable raceway underground route to rise at Noble Center Building at concrete retaining wall. Route would continue with surface mounted IMC or RMC galvanized conduit secured with stainless steel hardware and anchor bolts. Surface mounted conduit and pull box(es) must be prepped and painted to match wall finish. Provide pull boxes as required to maintain less than 360° total bends between pull points.

B. Sheet E100 - Electrical Demolition - Main Floor Plan - West

1. Detail 1 - Electrical Demolition - Main Floor Plan - West:

- a. In the existing building to be demolished, change upper most keyed note #6 to #8.
- b. Indicate all equipment associated with keyed notes #6, #7, and #8 are in lower level of building being removed.
- c. In existing storage room, change keyed note for existing panel (E)C to #9.

2. Keyed Electrical Notes:

- a. Delete Keyed Note #1.
- b. Revise Keyed Note #2 to indicate former feeder for existing transformer T1 shall only be shortened to allow modification to feed new transformer T1 adjacent to existing panel C.
- c. Change Keyed Note #3 to a general note.
- d. Revise Keyed Note #7 to replace word "demotion" to "demolition".
- e. Add Keyed Note #9 as follows: "Existing panel C to remain with revised feeder. Reference Revised Main Floor Power Plan - East on sheet E121, diagrams on sheet E200, and panel schedules on

sheets E201 and E202."

C. Sheet E131 - Revised Main Floor Systems Plan - East

1. Detail 1 - Revised Main Floor Systems Plan - East:

- a. Change detail title to Revised Main Floor Systems Plan - East.
- b. Add general note as follows: "Contractor provide (furnish and install) 6-strand, single-mode fiber optic cable under Add Alternate Bid #3."

D. Sheet E132 - Revised Mezzanine Systems Plan

1. Detail 1 - Revised Mezzanine Systems Plan:

- a. Add general note as follows: "Contractor provide (furnish and install) 6-strand, single-mode fiber optic cable under Add Alternate Bid #3."

E. Sheet E200 - Partial Riser Diagram & Equipment Connection Schedule

1. Detail 1 - Partial Revised Power Riser Diagram:

- a. Existing conduit, as noted with keyed note #6 is connected to existing panel C, to be reused.
- b. Delete keyed note #4 symbol at pull box (keyed note #7).

2. Equipment Connection Schedule:

- a. For motorized baskets and motorized curtain; switch shall have "K" identifier to indicate keyed switch being furnished with the equipment shall act as the equipment safety disconnect.

F. Sheet E202 - Revised Electrical Panel Schedules

1. Schedule PP2:

- a. Show load for RTU-1 in spaces 2(4,6) is a modified load. Provide new 80A/3P breaker.

2. Schedule C:

- a. Change breaker for refeed to existing panel D from 150A/3P to 100A/3P.

G. Sheet E301 -Telecomm. Details, Specifications

1. Telecommunications Riser Diagram:

- a. Revise Keyed Note #6 to indicate raceway shall extend, with minimum 6-strand, single-mode, indoor/outdoor fiber optic cable, to Noble Building main network equipment under Add Alternate Bid #3. Cable shall have oil resistant jacket, non-armored, CommScope #8108058/DB or other as approved by Owner's IT department. Cable submittal shall be reviewed and approved by Owner.

H. Sheet H101

1. Reference Fan Schedule:

- a. Under manufacturers, add "**Aerovent SCDD-090A**" for TF-1 and EF-

1; "SCDD080A" for TF-2 and TF-3; "095ACXD" for EF-2. Add a fourth manufacturer "Broan L400" for EF-3.

b. Under EF-1 change coincident maximum sones from "8.1" to "9.4".

This Addendum consists of five (5) typed pages, Section 02082 Asbestos Abatement (17 pages), and Soil Boring Reports (20 pages), for a total of 42 pages.

SECTION 02082 – ASBESTOS ABATEMENT:

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Base Bid:

1. **General:** Asbestos Abatement (proper removal and disposal) of all Regulated Asbestos Containing Materials (RACM) and Category I Non Friable ACM in the Lakeview Rec. Center Building located at 1013 W. Lake, Peoria, Illinois. This work may be performed in 2 Phases and includes glovebag removal of asbestos-containing hard fitting insulation in the West demolition portion; Full containment/Gross removal of carpet mastic and non-friable floor tile & mastic removal in the East renovation portion by the Gym as indicated on the attached drawings and notes.
 - a. The Asbestos abatement work may be performed in two (2) phases. Refer to Division 0 and coordinate with the General Contractor (GC) for Asbestos Abatement and future work. The Asbestos Abatement Contractor (AC) will have 20 work days for work in the building, including clearance air monitoring. Anticipated start date for the work is pending, but anticipated at the end of 2017 or beginning of 2018.
 - b. Asbestos Inspection and sample analysis results are available from OWNER.
 - c. This specification was written expressly for use on this limited Asbestos Abatement Project only. Any form of reproduction of this specification section in part or its entirety for use on other projects, without McKee Environmental, Inc. (MEI) written permission is strictly forbidden. MEI shall in no way be held liable if this asbestos abatement specification section or portions of this specification section is reproduced without their expressed written consent.
2. Asbestos Abatement Contractor (AC) shall provide the following:
 - a. The AC shall furnish all labor, materials and equipment necessary for and reasonably incidental to the completion of all abatement work, including transportation and proper disposal of all items of asbestos abatement services, insurance and facilities. All work is to be performed in accordance with this document, all applicable Illinois Department of Public Health (IDPH) Rules and Regulations for Asbestos Abatement for Public and Private Schools and Commercial and Public Buildings; EPA regulations, Asbestos- National Emission Standards for Hazardous Air Pollutants (NESHAP); and the Asbestos OSHA regulations, and other applicable Federal, State and Local Government Regulations. Several of the regulations are incorporated by reference in Section 1.3 in order to conduct adequate precautions against asbestos contaminant exposure to any person(s) or the environment. The AC shall complete proper removal and disposal of all Category I or materials that may become Regulated Asbestos Containing Materials (RACM) as described by the following:
 - b. AC shall field verify locations, quantity and extent of ACM prior to bidding.
 - c. AC shall coordinate with Owner and/or Owner's designated agent to verify shutdown of electrical and HVAC systems in the abatement areas.
 - d. AC shall develop and submit a work schedule to be coordinated with Owner and General Contractor, (GC) prior to commencement of work.
 - e. AC shall coordinate with Owner and/or Owner's designated agent to determine the location of the dumpsters to be used to dispose of the asbestos waste.
 - f. AC shall establish Regulated Area(s) for the work and place critical barriers and seals at all exterior openings (windows, doors, vent openings, etc.) and interior doorways (as necessary and applicable).

- g. AC shall use clear removal bags to allow visual inspection of waste.
- h. AC shall use proper Fall Protection per OSHA. AC shall establish Regulated Area(s) for the work. AC shall seal off (isolate) the interior of the building from the work area where any of the floor tile/mastic may become damaged during non-friable (intact) removal methods. If intact methods are not feasible, the AC shall use full containment methods for ACM removal with required Clearance Air Monitoring.
- i. AC shall coordinate with GC for removal/replacement of any items that may interfere with the asbestos-containing material (ACM) removal (e.g., conduit, ductwork, pipes, etc.). AC shall assist with removal of any fasteners that may penetrate into the ACM. AC shall use a combination of amended water, HEPA vacuums and shaving cream, etc. during screw, nail or mechanical fastener removal.
- j. AC shall provide and utilize a three-chambered decontamination unit, with adjustable hot & cold running water and cascaded filtered units on drain lines from showers or any other water source carrying asbestos-contaminated water from the work area. Final filter water to remove all particles 5 microns and larger at the site.
- k. The AC shall employ Gross Removal (full containment) Methods for the following materials and situations: all Vinyl Sheet goods (resilient sheet flooring); TSI (where proper glovebag techniques are not feasible); Interior transite materials [where proper non-friable (intact) removal techniques are not possible] and exterior transite where breakage occurs; "Wrap & Cut" of whole components or sections of TSI components removal techniques; and floor tile/mastics or other non-friable materials where the materials has or will become RACM.
- l. AC shall ensure all clearance air testing meets IDPH requirements prior to containment tear down activities.
- m. AC shall remove all ACM using appropriate respiratory protection, according to all OSHA Requirements, wearing a minimum half-face APR w/ p100 cartridges, minimum, during all ACM removal or ACM disturbance activities.
- n. AC shall provide the following:
 - 1) Cleanup & disposal of asbestos containing materials & disposable equipment.
 - 2) Regulatory notices as required and sign Waste Shipment Records.
 - 3) Protection of persons and property.
 - 4) Submit to Owner and Architect prior to commencement of work documentation from manufacturers' that any mastic remover and lock down encapsulant to be used are compatible with all replacement materials.
 - 5) Signs and barrier tape necessary to demarcate Regulated Areas.
 - 6) Work area preparation.
 - 7) Temporary utilities (electricity & water) for asbestos abatement and workers.
 - 8) Reestablish work areas.
- o. AC shall submit copies of all licenses and certifications applicable to the abatement work to Owner prior to commencement of work.
- p. AC shall maintain insurance requirements described by the Architect in other Specification Divisions, including at least \$1,000,000.00 Pollution Liability with Asbestos Abatement Liability Coverage. The policy must be "occurrence - based" and be contracted with a firm licensed to sell insurance in Illinois. The liability coverage must be underwritten by a corporation with home office in the U.S. and incorporated under the statutes of one of the fifty states of the U.S. **The AC shall provide a copy of its Certificate of Insurance naming Peoria Park District, Apace Design Inc. & McKee Environmental, Inc. as additional insured.**

B. By Others:

1. By Industrial Hygienist (McKee Environmental, Inc.):
 - a. Perform required clearance air sampling and analysis where agreed to in writing with OWNER.
 - b. OWNER may elect to provide full time asbestos project management/air sampling professional (APM/ASP) services during all AC on site activities.
2. By General Contractor:
 - a. Perform removal of any fixed items (e.g., interior walls to base plate, counters, toilets, sinks, benches, fixtures, furniture, and equipment, etc.) in the work area as necessary prior to AC beginning.
3. By Owner:
 - a. Perform its responsibilities in accord with referenced Parts of the Rules and Regulations. Arrange for independent Clearance Air Monitoring, where applicable following AC work.
 - b. Provide for the removal of office equipment & supplies, etc., and any salvageable materials prior to abatement activities.

1.2 RELATED WORK

- A. Specified elsewhere in Division 2 through 16.

1.3 REGULATORY REQUIREMENTS / REFERENCES

The CONTRACTOR shall comply, at a minimum, with the latest requirements of the following regulations governing proper asbestos removal and disposal.

A. Federal Requirements:

1. U.S. Environmental Protection Agency (USEPA) Asbestos National Emissions Standards for Hazardous Air Pollutants (NESHAP). 40 CFR 61, Subpart M.
2. U.S. Department of Labor – Occupational Safety and Health Administration (OSHA) Asbestos Regulations (Code of Federal Regulations Title 29, Part 1926, Section 1926.1101) and respiratory protection (29CFR 1910.134).
4. USEPA – Code of Federal Regulations Title 40, Part 763 Subpart G.
5. U.S. Department of Transportation, “Hazardous Substance Final Rule”, 49 CFR 171 and 172.

B. State Requirements:

1. IEPA – Illinois Environmental Protection Agency (NESHAP Administration & Coordination).
2. Illinois Department of Public Health Rules and Regulations for Asbestos Abatement for Public and Private Schools and Commercial and Public Buildings.

C. Other References and Requirements

1. Resilient Floor Covering Institute; RFCI, “Recommended Work Practices for Removal of Resilient Floor Coverings”.

2. ASTM, American Society for Testing and Materials; ANSI, American National Standards Institute (ANSI Z 9.2 Fundamental Governing the Design and Operations of Local Exhaust Systems); ULI, Underwriters Laboratories, Inc.; OSHA Regulations including OSHA 300 Log.

1.4 FIELD QUALITY CONTROL

A. AC shall provide OWNER:

1. OSHA Required Air monitoring results of own personnel. Provide a copy of all results within 24 hours after sampling.
3. Documentation that AC is licensed by IDPH for asbestos abatement activities.
4. Documented evidence that all workers are licensed as Abatement Workers by IDPH.
5. Documentation that at least one employee to be on-site at all times while abatement is being performed is licensed as an Asbestos Supervisor as required by IDPH.
6. **Respirators:** Submit a written standard operating procedure governing the selection, fit testing, cleaning, use and storage of respirators in accordance with 29 CFR 1926.1101 and as outlined in 29 CFR 1910.134.
7. **Medical Examination:** Submit proof that personnel that will be entering contaminated areas have received a medical examination by a licensed and qualified physician and furnish the results of physician's written authorization to wear respiratory protection. Comply with all Federal and State Regulations, including 29 CFR 1910.20 for access to employee exposure and medical records and their confidentiality.

1.5 SUBMITTALS AND NOTICES

A. Prior to Commencement of Work, AC shall:

1. Notify in writing of proposed asbestos work using appropriate form with copy to OWNER, The USEPA regional office, IEPA Division of Air Pollution Control and, if required, IDPH and OSHA regional office with jurisdiction over the State in which this project is located, not fewer than ten (10) working days before work commences on this project.
 - a. USEPA Region V
Regulation Development Branch
Mail Code 5 ARD 26
230 S. Dearborn St.
Chicago, IL 60604
(312) 353-2088
 - b. IEPA – Illinois Environmental Protection Agency
Division of Air Pollution
P.O. Box 19276
Springfield, IL 62794-9276
(217) 785-1743
2. Submit proof satisfactory to the OWNER that all required permits, site location and arrangements for transport and disposal of asbestos-containing or contaminated materials, supplies, and the like have been obtained.
3. Submit documentation to OWNER indicating that all employees have had instruction on the hazards of asbestos exposures, on proper selection, use, fitting and cleaning of respirators, on protective clothing, on use of showers, on entry and exit from work areas, and on all aspects of work procedures and protective measures.

4. Submit documentation to OWNER showing that all employees engaged in asbestos activities have received appropriate medical examinations and Pulmonary Function Tests (PFT) to authorize wearing of respiratory protection that is signed by a licensed and qualified physician within the last 12 months immediately proceeding the project startup. No worker will be allowed in the work area with expired documentation.
5. Public Warnings and Safety Information to be Posted and on site:
 - a. Post all signs as required by 29 CFR 1926.1101 and 29 CFR 1910.145 and any Local, State, or Federal regulations
 - b. A copy of the USEPA Regulations for Asbestos (Code of Federal Regulations Title 40, Part 61, Subpart A and M) and a copy of USDOL – OSHA Asbestos Regulations (29 CFR 1926.1101 and 1910.1001) and respiratory protection (29CFR 1910.134).
 - c. A list of phone numbers for the local hospital and/or emergency squad, local fire department, the institution's security office (if applicable), a representative of the building owner who may be reached 24 hours a day, the AC's Supervisor and Office phone numbers, and any other professional Consultants directly involved in the project.
6. Submit manufacturer's certification that vacuums, ventilation equipment, and other equipment required to contain asbestos fibers conform to ANSI Z 9.2.

1.6 PROTECTION

- A. Provide appropriate protection for personnel, building, and environment in accordance with the Section 1.3 Regulatory Requirements / References and all other applicable Rules and Regulations.

1.7 PROJECT/SITE CONDITIONS

- A. Refer to OWNER for Asbestos Inspection Summary Report of asbestos containing materials.
- B. Lockout/tagout of existing electrical will be supplied by the CONTRACTOR.
- C. CONTRACTOR shall be required to provide Temporary power and establish Ground Fault Circuit Interrupter Devices (i.e. GFCI protected circuits) for all lighting and equipment.
- D. Provisions for water shall be the responsibility of the CONTRACTOR.

1.8 SEQUENCING/SCHEDULING

- A. Coordinate with GC and submit a Construction Schedule. Perform all work in accord with approved schedule.

1.9 WARRANTY

- A. Warrant all work in accord with General Conditions for a time period of one year.

PART 2 - PRODUCTS/EQUIPMENT

2.1 ASBESTOS ABATEMENT EQUIPMENT

- A. Use only materials and equipment complying with State and Federal Rules and Regulations.
- B. Contractor shall not infringe on any patents or copyrights for the equipment and materials used on this project.

2.2 ACCEPTABLE MANUFACTURER/PRODUCTS

A. Wetting Agent:

- | | | |
|----|-----------------------------|--------------|
| 1. | Better Working Environments | Super Wet |
| 2. | Certified Technologies | Certane 2075 |
| 3. | Eppert Oil Co. | Speedi-Wet |
| 4. | Foster Products Corp. | 32-90 |

B. Combination Wetting Agent – Encapsulant:

- | | | |
|----|-----------------------------|-------------|
| 1. | Better Working Environments | 5100 |
| 2. | Certified Technologies | Certane 707 |
| 3. | Eppert Oil Co. | Fiber Seal |
| 4. | Foster Products Corp. | 32-60 |

C. Lockdown Encapsulant:

- | | | |
|----|-----------------------------|--------------|
| 1. | Better Working Environments | 3100 |
| 2. | Certified Technologies | Certane 1050 |
| 3. | Eppert Oil Co. | Fiber-Seal |
| 4. | Foster Products corp. | 32-60 |

- D. Mastic Removal (**NOTE:** Mastic removers must have a flash point greater than 200 F and lower explosive limit greater than 5%).

AC shall:

- 1. Submit product information and Safety Data Sheets for proposed mastic removers for review. Product data submitted must be for the material used on project site.
- 2. Use mastic remover manufacturer’s recommended procedures and materials to thoroughly clean floor surfaces after mastic removal. Coordinate with Architect & Flooring Contractor.

PART 3 - EXECUTION

3.1 INTACT FLOOR TILE/MASTIC REMOVAL (via Non-Friable Methods)

- A. Perform all asbestos work in accord with referenced Parts of the Abatement Act:
1. Intact (non-friable) Floor Tile and Mastic Removal - AC Shall:
 - a. Regulate the work area and as a precaution, seal work area using polyethylene sheeting (critical seals, isolate work area from other areas of the building) and provide "air lock chamber" to work area.
 - b. Coordinate with Owner to shut down all HVAC and Energized sources to work area and utilize only ground-fault circuit interrupters (GFCI) at the source for any temporary electrical power used on the project.
 - c. Install HEPA-filtered negative pressure air machine(s) to the work area and exhaust to the building exterior. Coordinate exhaust locations and security with Owner/CM.
 - d. Perform Intact (non-friable) floor tile & mastic removal following all the latest work practices and procedures provided by the Resilient Floor Covering Institute, IDPH & OSHA Regulations to maintain the materials in a non-friable state at all times. AC shall operate a HEPA-filtered vacuum at all times during flooring removal activities.
 - e. AC shall employ skillful carpet removal methods as necessary to prevent breaking floor tile. For example; Cut carpet (only) in 4-6 inch strips; Use continuous counter-pressure on the floor tile behind the carpet contact point on the floor (e.g., have someone continuously step on the floor tile directly behind the carpet "lift point"); Use a suitable chemical to release the carpet adhesive from the floor tile. Spray the chemical at the lift point. Ensure the chemical will not cause damage to the floor tile, building materials and is safe for all workers and building occupants.
 - f. At any locations where whole floor tile removal may be restricted by the walls or other obstructions covering the next whole floor tile, AC may use per IDPH's suggested method and at the AC's sole discretion, an electric wood working hot iron, heat scribing tool or equivalent to heat and separate the floor tile next to the wall. Do NOT use open flame burning and follow industry accepted and OSHA's fire watch procedures at all times.
 - g. Should any material become friable during the carpet or intact floor tile removal process, then the Asbestos Contractor shall immediately stop work. AC shall immediately notify the Owner and McKee Environmental, Inc., to arrange for the project design, IEPA Notification and utilization of full containment gross removal methods in accord with the Abatement Act following IDPH Rules and Regulations and Sections 3.3 and 3.4 of this specification at NO additional cost to Owner.
 - h. Disposal:
 1. Label all bags or containers containing asbestos debris with a label as follows:

Peoria Park District
Lakeview Recreation Center
1013 W. Lake
Peoria, IL 61604
 2. Whenever trucks or dumpsters are being loaded or unloaded with asbestos waste, post signs in accord with the 1990 NESHAP STANDARD-DANGER, ASBESTOS DUST HAZARD, CANCER AND LUNG DISEASE HAZARD, AUTHORIZED PERSONNEL ONLY.
 3. Transport all waste to an IEPA approved landfill. Complete a waste shipment record for each load of waste in accord with the 1990 NESHAP STANDARD. Return the record, signed by waste disposal site owner/operator to OWNER.

3.2 GLOVEBAG REMOVAL

- A. Perform all asbestos glovebag removal work in accord with applicable referenced Parts of the Rules and Regulations.
- B. Install critical barriers and demarcate a regulated area. Critical barriers may be established around the abatement area in the form of a mini enclosure.
- C. Thoroughly pre-clean the entire regulated area including movable and immovable objects using HEPA filtered vacuums and wet methods.
- D. Place asbestos warning signs at all approaches to the regulated area.
- E. Shut down and lock out all electrical and air handling systems that supply such to, from, or through the regulated area.
- F. Isolate from the regulated area all air handling equipment.
- G. Seal with plastic sheeting and tape all penetrations to the regulated area, including, but not limited to, corridors, doorways, windows, ducts, grills, diffusers, etc. When covering and sealing machinery or other immovable items that may be damaged by being covered with plastic sheeting, humidity, or other adverse conditions, the contractor must take whatever action is necessary to preserve their original condition.
- H. Place one layer of 6-mil thick plastic sheeting on the floor of the work area.
- I. Limit access to the regulated area to authorized personnel only.
- J. Workers entering the regulated work area must be provided with and wear protective equipment and negative pressure respirators (as a minimum), before commencing any abatement activities.
- K. Perform glove bag procedure in accordance with manufacturer's written instructions.
- L. Install glove bag onto piping or other thermal system components. Completely seal all penetrations and seams with adhesive tape.
- M. Smoke-test each glove bag prior to performing removal. Reseal any leaks indicated by the testing.
- N. Utilize one glove bag per removal location. Do not move or slide glove bag once installed.
- O. Remove and dispose of all asbestos-containing materials (ACM) in accordance with applicable OSHA, IDPH and EPA regulations.
- P. Spray ACM until saturated with amended water using an airless sprayer. Apply water throughout removal process to maintain wet conditions.
- Q. Wet clean and HEPA vacuum all surfaces until pipe or other thermal system components are free of all visible debris.
- R. Spray all surfaces inside glove bag with sealant and collapse glove bag using HEPA vacuum. Seal bag with tape and remove from pipe. Place glove bag in a 6-mil disposable bag.
- S. Disposal:
 - 1. Label all bags or containers containing asbestos debris with a label as follows:

Peoria Park District
Lakeview Recreation Center
1013 W. Lake
Peoria, IL 61604
 - 2. Whenever trucks or dumpsters are being loaded or unloaded with asbestos waste, post signs in accord with the 1990 NESHAP STANDARD-DANGER, ASBESTOS DUST HAZARD, CANCER AND LUNG DISEASE HAZARD, AUTHORIZED PERSONNEL ONLY.
 - 3. Transport all waste to an IEPA approved landfill. Complete a waste shipment record for each load of waste in accord with the 1990 NESHAP STANDARD. Return the record, signed by waste disposal site owner/operator to OWNER.

3.3 PREPARATION FOR GROSS REMOVAL

- A. Perform all preparation work in accord with applicable referenced parts of the IDPH, OSHA and IEPA Rules and Regulations.
- B. Establish a Regulated Area
 - 1. Thoroughly pre-clean the entire regulated area including movable and immovable objects using HEPA filtered vacuums and wet methods.
 - 2. Shut down ventilation to work areas where required and seal vents with two layers of 6-mil plastic sheeting and tape.
 - 3. Seal all openings including windows and doorways between work area and other areas not necessary for entry with a minimum of one layer of 6-mil plastic sheeting and duct tape.
 - 4. Cover walls with a minimum of one layer of 4-mil plastic sheeting and cover floors not being abated with a minimum of one layer of 6-mil plastic sheeting.
 - 5. Cover immovable objects within the work area with a minimum of one layer of 6-mil plastic sheeting.
 - 6. Deactivate electrical circuits in the enclosure and bring power into the work area from outside sources protected by ground fault circuit interrupters at the source.
 - 7. Establish adequate HEPA filtered exhaust system in the area of work.
 - 8. Install appropriate warning signs.
 - 9. Install a decontamination unit attached to the work area. The decontamination unit to contain:
 - a. An equipment room with two curtained doorways, one to the work area and one to the shower room
 - b. A shower room with two curtained doorways, one to the equipment room and one to the clean room. Shower room shall contain at least one shower with hot and cold running water. Careful attention shall be paid to the shower enclosure to ensure against leaking of any kind. Ensure a supply of soap at all time in the shower room. Shower water shall be filtered to remove asbestos prior to being discharged to sanitary sewer drain or barrel.
 - c. A Clean room with one curtained doorway into the shower and one entrance or exit to non-contaminated areas of the building. Clean room shall have sufficient space for proper storage of worker's street clothes, towels, and other non-contaminated items. Clean room shall also store fresh, non-contaminated protective clothing, respirators, and any other accessory to be used by workers in the work area.
 - d. Provide cascaded filtered units on drain lines from showers or any other water source carrying asbestos-contaminated water from the work area. Final filter to filter all particles 5 microns and larger.
 - e. A portable decontamination unit may be used.
 - 10. Asbestos abatement shall not commence until:
 - a. Arrangements have been made for disposal of waste at an approved landfill.
 - b. Arrangements have been made for containing and disposal of wastewater resulting from wet stripping.
 - c. Work areas and decontamination enclosure systems and parts of the building required to remain in use or not abated are effectively segregated.
 - d. Tools, equipment and material waste receptors are on site.
 - e. Arrangements have been made for building security.

- f. Preparatory steps have been taken and applicable notices posted and permits obtained.
- g. Negative air systems are installed and operating according to regulation.

3.4 PERFORMANCE OF GROSS REMOVAL

- A. Perform all asbestos gross removal work in accord with applicable referenced Parts of the Rules and Regulations.
- B. Utilize drop-cloths and spray asbestos material with amended water, using spray equipment capable of providing a "mist" application to reduce the release of fibers. Saturate the material sufficiently to wet it to the substrate without causing excess dripping or delamination of the material. Spray the asbestos material repeatedly during the work process to maintain wet condition and minimize asbestos fiber dispersion.
- C. Remove the saturated asbestos material in a manner judged to be most efficient. Removal shall be thorough and complete to the base surface. The saturated asbestos materials shall be packed in sealable plastic bags or barrels and placed in labeled containers for transport. Materials shall not be allowed to dry out prior to insertion into the containers.
- D. Seal filled containers. Clean external surfaces of containers thoroughly by wet wiping methods in the designated area of the work area, which is part of the equipment decontamination enclosure system. Move containers to washroom, wet clean each container thoroughly, and move to holding area pending removal to uncontaminated areas. Ensure that containers are removed from the holding area by workers who have entered from uncontaminated areas dressed in clean coveralls. Ensure that workers do not enter from uncontaminated areas into the washroom or the work area; ensure that contaminated workers do not exit the work area through the equipment decontamination enclosure system.
- E. After completion of stripping work, all exposed and accessible surfaces shall be HEPA filtered vacuumed to remove residual asbestos materials. In areas where stripping of asbestos materials from a hard substrate is performed, all surfaces from which asbestos has been removed shall be brushed (wire or nylon), or wet wiped to remove all visible material. During all phases of this work, the surfaces being cleaned shall be kept wet. Repeated cleaning by HEPA vacuuming and wet wiping will be completed until all surfaces are free of ACM. All standing water, dropcloths and removed and containerized ACM shall be removed from the work area by the end of the work day and transported to appropriate truck or dumpster for disposal.
- F. Disposal:
 - 1. Label all bags or containers containing asbestos debris with a label as follows:
Peoria Park District
Lakeview Recreation Center
1013 W. Lake
Peoria, IL 61604
 - 2. Whenever trucks or dumpsters are being loaded or unloaded with asbestos waste, post signs in accord with the 1990 NESHAP STANDARD-DANGER, ASBESTOS DUST HAZARD, CANCER AND LUNG DISEASE HAZARD, AUTHORIZED PERSONNEL ONLY.
 - 3. Transport all waste to an IEPA approved landfill. Complete a waste shipment record for each load of waste in accord with the 1990 NESHAP STANDARD. Return the record, signed by waste disposal site owner/operator to OWNER.

3.5 Cleanup:

- A. Perform all cleanup operations in accord with referenced parts of the Abatement Act, Subpart D.
 - 1. Cleanup Procedures
 - 2. Equipment and Waste Container Removal Procedures
 - 3. Clearance Air Monitoring and Analysis
 - 4. Disposal Procedures

3.6 Field Quality Control

- A. The Contractor shall provide air monitoring as necessary to comply with OSHA.
- B. When applicable, the Consultant will employ and pay for an approved Testing Laboratory to perform air testing of inside containment areas in accord with the Abatement Act, Part 855.170. The Asbestos Abatement Contractor shall pay any additional costs, which arise from failure of air testing results (or inconclusive results from particulate overloading, etc.) and may include costs for services of APM, ASP, laboratory, for Consultant.
- C. The OWNER will retain full-time IDPH Licensed Asbestos Project Manager (APM) services on the site at all times during the performance of all asbestos contractor activities.
- D. The OWNER will retain an Air Sampling Professional on the site to perform air sampling during the performance of all asbestos contractor activities. Subject to the APM's approval, the person may be IDPH licensed as both an APM and ASP and perform the combined duties.

3.7 Clearance Air Monitoring

- A. After removal of any wall and ceiling poly to critical containment barriers and completing final thorough cleaning of the Regulated Area, the Contractor shall coordinate with OWNER to conduct a visual inspection prior to clearance air sampling in accordance with 855.220.d.1.
- B. Following the completion of required visual inspection and completion of the AC required response actions, the OWNER shall retain McKee Environmental, Inc., qualified, independent and IDPH licensed air sampling professional (ASP) to perform Phase Contrast Microscopy (PCM) clearance air monitoring to satisfy IDPH requirements. The PCM clearance air samples must be collected aggressively, while the HEPA filtered negative air machines remain operational. The PCM air sample result, as determined by an AIHA PAT approved laboratory, must be less than 0.01 fiber per cubic centimeters (F/cc) for the regulated area (containment) to be acceptable for tear down activities (removal of the containment / regulated area) and re-occupancy by the general public, other contractors and trades or unauthorized individuals.
- C. The ASP (Consultant) will employ and pay for an approved Testing Laboratory to perform clearance air analysis in accord with the Abatement Act, Part 855.170. The Asbestos Abatement Contractor shall pay any additional costs, which arise from failure of air clearance testing results (or inconclusive results from particulate overloading) and may include costs for services of APM, ASP, additional PCM analysis by an AIHA PAT approved lab, and Consultant.

3.8 Re-establishment of Work Area & HVAC Systems

- A. Perform the work in accordance with Abatement Act, Subpart D (855.240).

3.9 ATTACHMENTS

- A. IEPA / IDPH Notification of Renovation and Demolition Form.
- B. Available from OWNER: Asbestos Inspection Summary Report & Analytical Results prepared by McKee Environmental Inc.

02082 Specification (12 pages) Prepared -

For:

**Peoria Park District:
Commercial Building Renovation & Demolition
Lakeview Recreation Center Building
1013 W. Lake, Peoria, IL 61604**

By:

**McKee Environmental, Inc.
430 Grimm Road
Congerville, Illinois 61729
309-275-1900**

Brad L. M^cKee, CIH, LIH
CP 7664 (CIH); # 00194 (LIH)
IDPH #: 100-1758;
Expires 5/15/18 (License); 3/2/18 (Refresher)
September 12, 2017

END OF SECTION 02082

Drawings

ASBESTOS ABATEMENT DRAWING NOTES

Peoria Park District: Lakeview Rec. Center Building, Peoria, Illinois

September 12, 2017

Asbestos Removal Notes: ALL WORK TO BE DONE IN ACCORDANCE WITH IDPH, OSHA & IEPA RULES & REGULATIONS.

- ① Properly Remove & Dispose of asbestos-containing floor tile and mastics via intact/non-friable methods at building Renovation locations by Gymnasium as indicated on the drawings.
- ② Properly Remove & Dispose of asbestos-containing hard fittings via glovebag methods at West Building Demolition locations as indicated on the drawings.
- ③ Properly Remove & Dispose of asbestos-containing carpet mastics via full containment/gross removal methods at building Renovation locations by Gymnasium as indicated on the drawings.

General Notes:

Tentative Schedule: It is anticipated AC will start work tentatively near the end of 2017 or beginning of 2018 and shall be completed 20 working days after starting, including clearance air and tear down activities. AC will have 10 working days to complete each Phase of work once the building becomes available. AC to coordinate all work with Construction Manager (CM) / General Contractor (GC)

Floor Plans are Diagrammatic & Are Intended to Indicate General Proximity & Extent of ACM throughout the Work Areas. AC shall verify all field conditions, locations and quantities prior to bidding Work. Any changes in this asbestos abatement design may only be made by the Asbestos Project Designer (Brad McKee, CIH).

AC is to provide a fully functional Decontamination Unit and Waste Load Out. AC to maintain security to the Work Area/Building at all times. AC is to provide and utilize adequate water during asbestos removal and disposal activities (wet methods).

AC shall coordinate with Owner & GC to determine the transportation of waste out of the building, storage & the location of the Dumpsters for use of proper dispose of asbestos waste materials.

AC to coordinate the necessary removal of furnishes and fixtures with GC.

AC shall coordinate with Owner and GC to verify appropriate shut down the HVAC systems and de-energize all power & gas to Work Areas. AC shall use Lock-out/Tagout methods, shall establish Ground Fault Circuitry for Lighting/Equipment, etc., and comply with all OSHA, EPA & IDPH Requirements, including controlling access to work areas / waste load-out pathways limited to authorized personnel only & securing the Work Areas at all times.

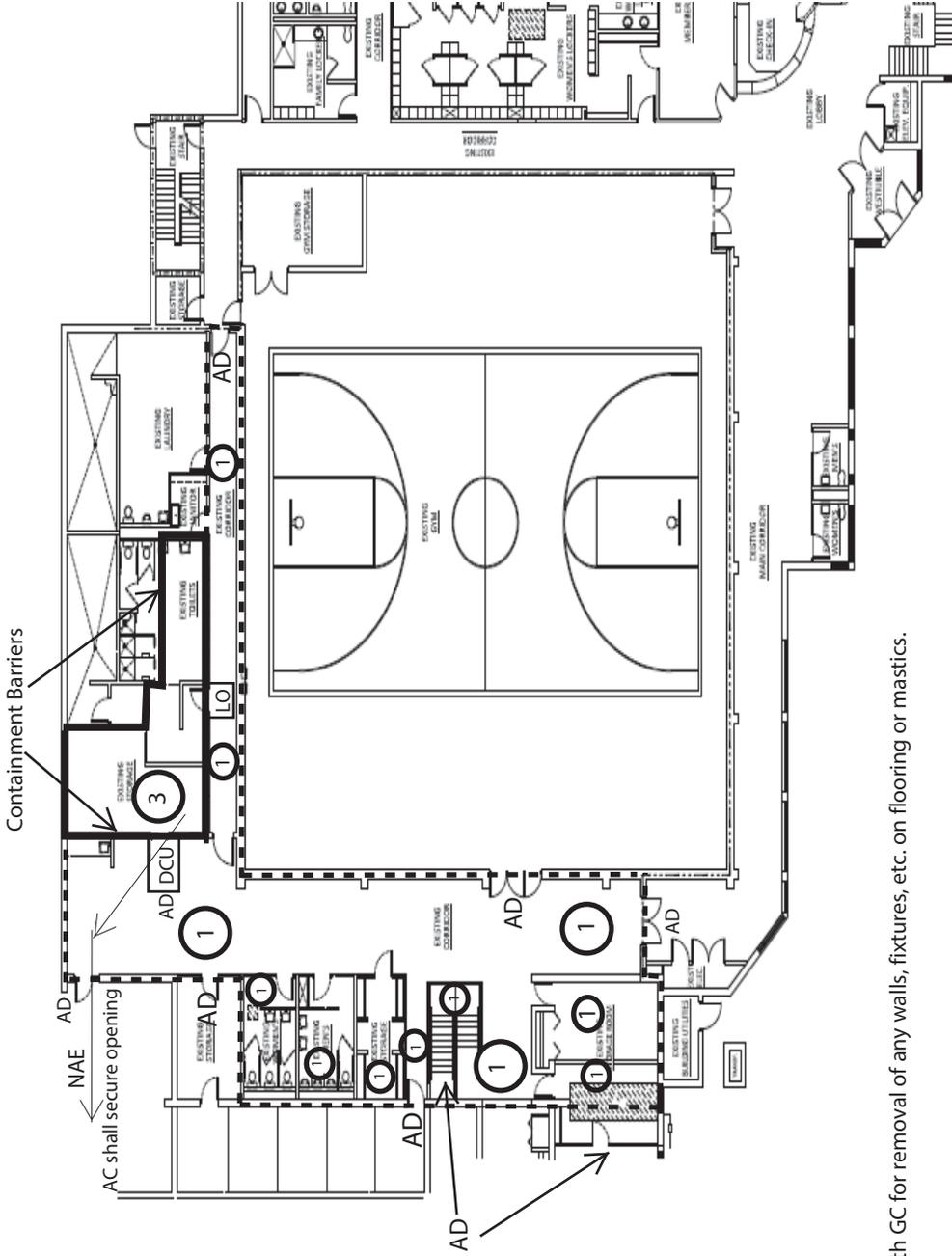
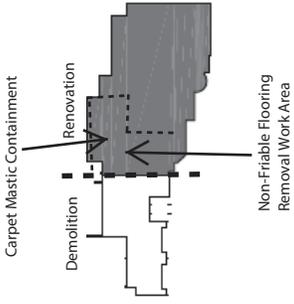
ABBREVIATIONS:

- NAE = HEPA Filtered Negative Air Exhaust possible location
- DCU = Decontamination Unit Location
- LO = Waste Load Out Location
- SB = Separation Barrier location per IDPH Requirements Section 855.430(b)
- AC = Asbestos Abatement Contractor (a.k.a., "Contractor")
- AD = AC Secured & Controlled Access Door to Work Area per IDPH Section 855.430(b)

Brad A. McKee
100-1758

M^cKEE ENVIRONMENTAL, INC. 430 Grimm Road Congerville, Illinois 61729 309-965-2934	ASBESTOS ABATEMENT Peoria Park Dist. – Lakeview Rec. Center 1013 W. Lake Ave. Peoria, Illinois	Date: 9/12/17 Sheet <u>1</u> of <u>4</u>
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**Peoria Park Dist. – Lakeview Recreation Center
Renovation by Gym:
Carpet Mastic Removal & Non-Friable Flooring Removal**



Note: AC to coordinate with GC for removal of any walls, fixtures, etc. on flooring or mastics.

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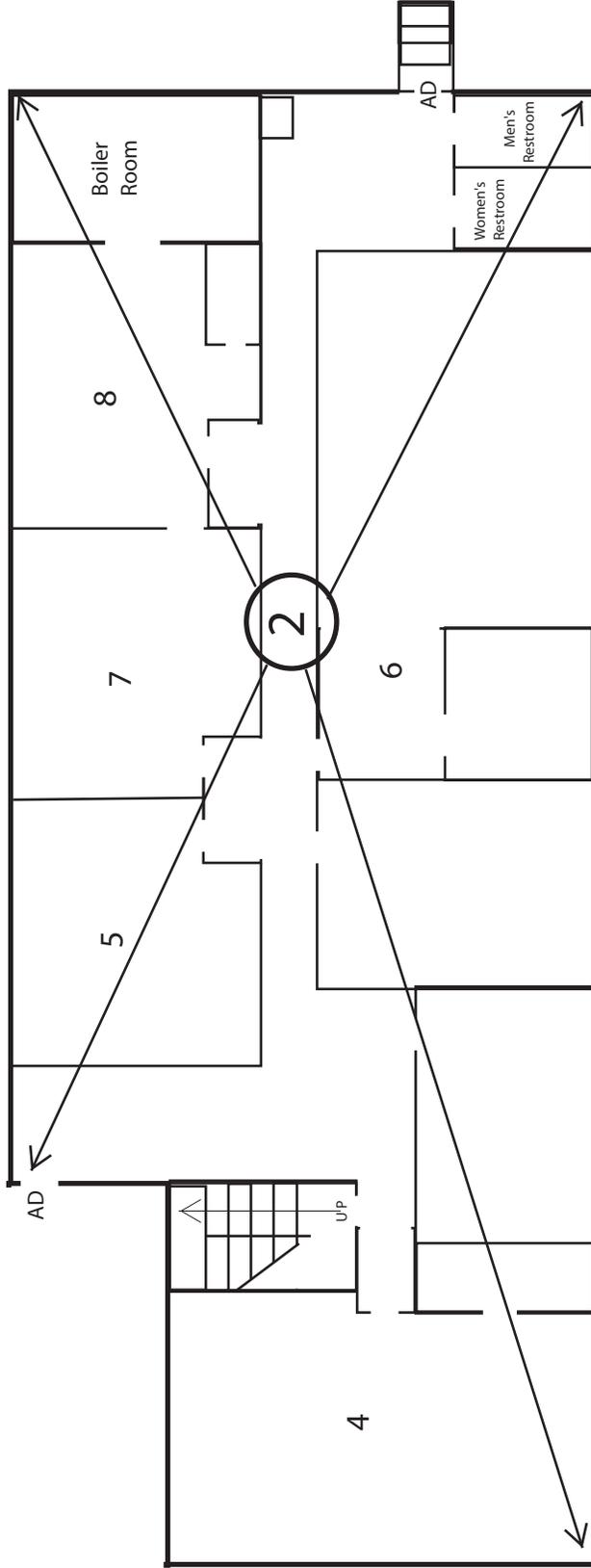
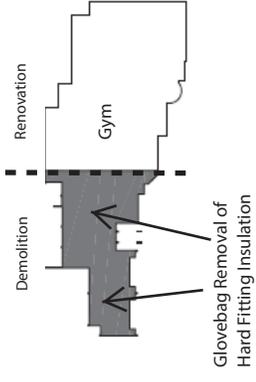
Bruce M. McKe
100-1758

M'KEE ENVIRONMENTAL, INC.
430 Grimm Road
Congerville, Illinois 61729
309-965-2934

ASBESTOS ABATEMENT
Peoria Park Dist. – Lakeview Rec. Center
1013 W. Lake Ave.
Peoria, Illinois

Date: 9/12/17
Sheet 2 of 4

**Peoria Park Dist. – Lakeview Recreation Center
Demolition of West Portion:
BASEMENT - Glovebag Removal**



N ↑
Not to Scale

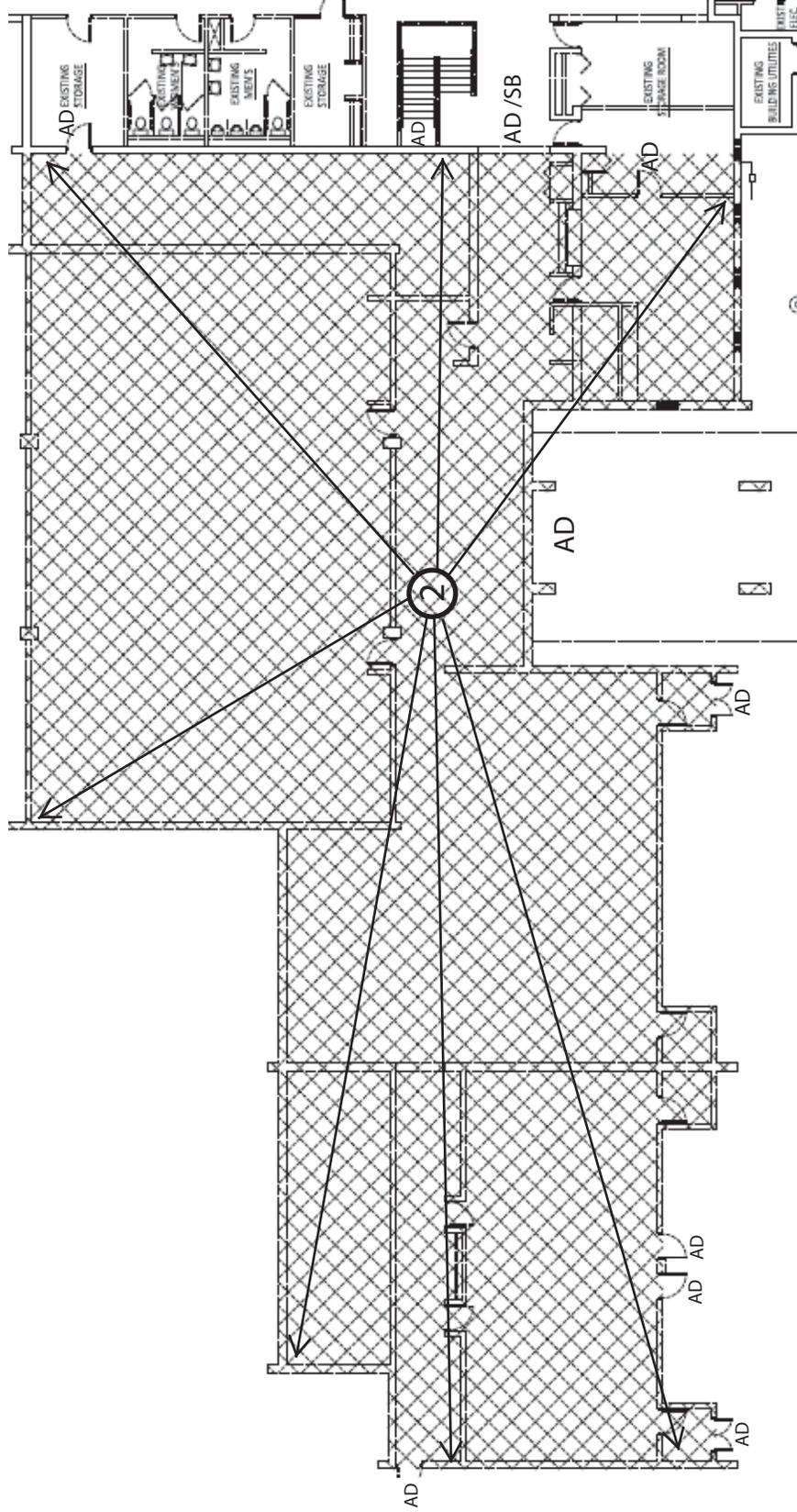
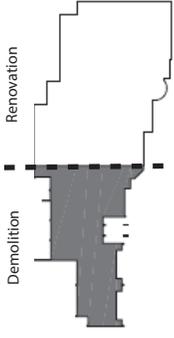
Brandt, 10/17/17
100-1758

M'KEE ENVIRONMENTAL, INC.
430 Grimm Road
Congerville, Illinois 61729
309-965-2934

ASBESTOS ABATEMENT
Peoria Park Dist. – Lakeview Rec. Center
1013 W. Lake Ave.
Peoria, Illinois

Date: 9/12/17
Sheet 3 of 4

**Peoria Park Dist. – Lakeview Recreation Center
 Demolition of West Portion:
 FIRST FLOOR - Glovebag Removal**



N ↑
 Not to Scale

Brandt, McKee
 100-1758

MCKEE ENVIRONMENTAL, INC.
 430 Grimm Road
 Congerville, Illinois 61729
 309-965-2934

ASBESTOS ABATEMENT
Peoria Park Dist. – Lakeview Rec. Center
 1013 W. Lake Ave.
 Peoria, Illinois

Date: 9/12/17
 Sheet 4 of 4

**REPORT OF SUBSURFACE EXPLORATION
AND
FOUNDATION RECOMMENDATIONS
YWCA LAKEVIEW
BUILDING ADDITION
PEORIA, ILLINOIS
BY
WHITNEY & ASSOCIATES
PEORIA, ILLINOIS**

**PREPARED
FOR**

Mr. Michael Friberg
Pleasure Driveway And
Park District of Peoria
1314 North Park Road
Peoria, Illinois 61604

DATE

March 5, 2015

TELEPHONE

309-673-2131

TESTS * INVESTIGATIONS
ANALYSIS * DESIGN * EVALUATIONS
CONSULTATION * REPORTS * INSPECTIONS
ARBITRATION * EXPERT WITNESS TESTIMONY

SOILS * PORTLAND CEMENT CONCRETE
BITUMINOUS CONCRETE * STEEL
ASPHALT * AGGREGATES * EMULSIONS
POZZOLANIC MATERIALS * LIME



WHITNEY & ASSOCIATES

INCORPORATED
2406 West Nebraska Avenue
PEORIA, ILLINOIS 61604-3193

TELEFAX

309-673-3050

GEOTECHNICAL ENGINEERING
CONSTRUCTION QUALITY CONTROL
SUBSURFACE EXPLORATIONS
ENVIRONMENTAL INVESTIGATIONS

MONITORING WELL INSTALLATIONS
BUILT-UP ROOF INVESTIGATIONS
WELDER CERTIFICATIONS
INSURANCE INVESTIGATIONS

March 5, 2014

Mr. Michael Friberg
Pleasure Driveway and
Park District of Peoria
314 North Park Road
Peoria, Illinois 61604

Re: Subsurface Exploration and
Foundation Recommendations
YWCA Lakeview Building Addition
Peoria, Illinois

Dear Mr. Friberg:

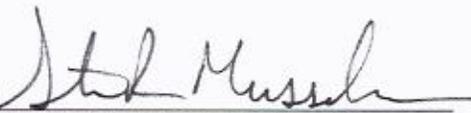
Pursuant to your request, our geotechnical engineering firm has performed a subsurface soils and ground water investigation in conjunction with an evaluation of these subsurface conditions for the above referenced site.

The results of our investigation and evaluation indicate that a conventional, reinforced concrete spread foundation system is appropriate for the proposed building addition. Few, if any, excavation or construction problems are anticipated at the proposed site as a result of the subsurface soil and ground water conditions, provided all of the recommendations outlined in this report are satisfied.

If any questions or comments arise in regard to this geotechnical engineering report, or if any additional information is desired, please do not hesitate to contact us at your convenience.



Respectfully submitted,
WHITNEY & ASSOCIATES

(By) 
Steven R. Musselman, P. E.



(By) 
James R. Krusemark, P. E.

SRM/JRK:rma
Enclosures

**REPORT OF SUBSURFACE EXPLORATION
AND
FOUNDATION RECOMMENDATIONS
YWCA LAKEVIEW BUILDING ADDITION
PEORIA, ILLINOIS
BY
WHITNEY & ASSOCIATES
PEORIA, ILLINOIS**

INTRODUCTION

This geotechnical engineering report presents a summary of the results of a subsurface soils and ground water investigation at the site for the proposed YWCA Lakeview Building Addition in Peoria, Illinois. Included in this report are the results of our field and laboratory tests as well as a summary of the data that was obtained during the investigation. In addition, this engineering report includes our recommendations relevant to the proposed site development and foundation construction as well as potential construction problems which may exist as a result of either adverse soil and/or ground water conditions present at the proposed site.

SCOPE OF THE INVESTIGATION

This subsurface soils and ground water investigation included the drilling of two (2) exploratory soil borings for the proposed building addition on February 26, 2015, which extended to a depth of twenty-one (21) feet below the existing ground surface. During the drilling and sampling phase of the investigation,

tests, visual classifications and analyses of the various soil types encountered were performed by our personnel and their results were recorded on the enclosed Soil Boring Logs.

The soil samples obtained in the field were returned to our materials testing laboratory where they were further subjected to engineering tests and evaluation. An analysis of the field and laboratory tests was conducted by our geotechnical engineer and this engineering report was prepared which presents our recommendations and our substantiating data regarding the earthwork operations and foundation construction.

EXISTING SITE AND SUBSURFACE CONDITIONS

At the present time, the site for the proposed building addition exists within the limits of the west portion of the existing building complex located at 1013 West Lake Avenue in Peoria, Illinois. In the area of the exploratory borings, five (5) inches of Portland cement concrete underlain by approximately four (4) inches of fine- to medium-grained Sand was penetrated at the surface of Boring B-1 whereas approximately eight (8) inches of brown, silty clay organic topsoil was noted at the existing surface grades of Boring B-2.

Active underground gas, electrical, water and telecommunications lines are known to exist within the vicinity of the proposed building addition which will require relocation or abandonment. On the other hand, no active overhead utility lines were noted at the site which would require relocation or removal. These observations by our drill crew personnel must be verified by others prior to the preparation of the final plans and specification documents.

SUBSURFACE SOIL CONDITIONS

Beneath the existing surface cover, normally consolidated Lean Clay (Silty Clay Loam) soils were noted to a depth of approximately four (4) feet below the existing surface grades at Boring B-2. Preconsolidated glacial till soils were encountered near the surface grades of Boring B-1, as well as below the normally consolidated soils discussed above, which extended in depth until the exploratory borings were discontinued by our drill crew personnel. The glacial till soils were classified as Lean Clay With Sand to Sandy Lean Clay soil types. A seam of sand was however penetrated between the approximate depths of seventeen (17) to nineteen (19) feet in Boring B-1.

The consistency of the normally consolidated soils was classified as stiff whereas the glacial till soils were classified as stiff to very stiff. Standard penetration tests, designated as "N" values, ranged from 8 to 32 blows per foot within the soils encountered during the scope of this investigation.

An acceptable range of natural moisture contents prevail within the soils encountered at this site. The natural moisture content of the normally consolidated soils was recorded at 21 percent and would be considered slightly above an estimated optimum moisture content range of approximately 17 to 18 percent for the typical soil type encountered. Upon encountering the glacial till soils, natural moisture contents ranging from 12 to 15 percent were recorded and these soils would be considered near to slightly above their respective optimum moisture content range of approximately 11 to 13 percent.

GROUND WATER CONDITIONS

It may also be observed from the Soil Boring Logs that ground water was encountered at the site. The ground water levels in the open bore holes were

checked after the completion of the drilling operations and after a brief time lapse. The bore holes were subsequently backfilled and capped which prevented long-term ground water monitoring. These readings and site observations indicate that the ground water levels at the site currently appear to exist at a depth of approximately seventeen (17) to eighteen (18) feet below the existing surface grades. Some variation in the ground water levels may be anticipated however due to typical seasonal fluctuations. Few, if any, excavation or construction problems are anticipated as a result of the ground water conditions due to the fact that construction of a shallow spread foundation system will most likely take place above the ground water levels.

DISCUSSIONS

FIELD DRILLING PROCEDURES

The exploratory soil borings were conducted with an ATV-mounted, rotary auger drill rig using eight-inch diameter, hollow-stem, continuous-flight auger attachments. By using these hollow-stem augers, our drill crew was able to retrieve relatively undisturbed soil samples in advance of the auger cutting head as well as determine the approximate depth at which ground water was encountered. Also by using the hollow stem augers, the depth of water could be obtained upon removal of the augers from the bore holes after a time lapse of preferably 24+ hours.

FIELD SAMPLING PROCEDURES

Representative soil samples were obtained at approximately two and one-half (2.5) foot intervals throughout the soil borings to a depth of fifteen (15) feet whereupon a five (5) foot interval was utilized until the borings were discontinued by our drill crew personnel. Standard split-barrel soil samplers (ASTM D-1586) were

used in the investigation to obtain the soil samples. In addition, the split-barrel samplers were used to determine the number of blows "N" of standard penetration into the subsoils, using a 140-pound, automatic hammer dropping freely 30 inches per stroke. The results of these standard penetration tests indicate a comparative consistency of the soils and thereby provide a basis for estimating the relative shear strength and compressibility characteristics of the soil profile components.

TESTING PROCEDURES

The representative cohesive soil samples obtained during the field investigation were tested in unconfined compression with the aid of a calibrated, compression testing machine to determine their relative shear strength characteristics. A hand penetrometer was also used to assist our soil mechanics engineer in determining the relative consistency of the soils encountered at the various soil strata. Natural moisture content and dry density tests were also conducted on the representative soil samples obtained. The results of all of the field and laboratory tests are shown on the Soil Boring Logs included in the Appendix of this report. All tests were conducted in accordance with current ASTM specifications and procedures.

SOIL CLASSIFICATION

The Unified Soil Classification System in conjunction with the United States Bureau of Soils and Chemistry classification system were used to describe the soils encountered in the exploratory soil borings. The soils were identified in the field and further verification or refinement of these classifications were made in the laboratory. The soils encountered in the borings have been described in accordance with the textural classification charts included in the Appendix. Also included in the Appendix of this report is a Soil Mechanics Classification System

sheet which will aid in clarifying the descriptions of the various soils. All of the soils were classified visually.

The enclosed Soil Boring Logs provide descriptions of the subsurface conditions at the exploratory boring locations and variations from these conditions may be encountered throughout the site. The lines of stratification indicated on the Soil Boring Logs represent the approximate boundaries of the soil types although the transition between the materials may be gradual.

SOIL BORING LOCATIONS AND ELEVATIONS

The locations of the exploratory soil borings with respect to the proposed building addition were established by Whitney & Associates personnel from project information provided by personnel at Hanson Professional Services and Apace Design. A Plot Plan sheet illustrating the locations of the exploratory soil borings has been included in the Appendix of this report. The approximate ground surface elevations of the borings as indicated on the Soil Boring Logs have been referenced to an assumed benchmark elevation on the finished floor of the existing building complex. Corresponding depths below the existing ground surface have also been depicted on the Soil Boring Logs.

DESIGN CONSIDERATIONS

A few preliminary design parameters relating to the type of structure were known at the time of this engineering report preparation. It is our understanding that the proposed building addition will consist of a new gymnasium which will be constructed within the limits of the western portion of the existing building complex. After demolition of the portion of the structure, approximately eleven (11) feet of engineered structural fills will be required to establish the

proposed subgrade elevation(s) for the proposed addition. Conventional masonry and pre-cast concrete construction as well as concrete floor slabs-on-grade established near the existing finished floor elevation for the eastern portion of the building are also anticipated for the proposed addition.

RECOMMENDATIONS

The following recommendations are made in regard to the proposed site development and foundation construction. These recommendations are based on the data which was obtained in the subsurface investigation and the laboratory tests which were conducted on select, representative soil samples.

EARTHWORK OPERATIONS

Upon demolition of the existing structure and complete removal of all debris, it is recommended that the lower level area be backfilled with compacted structural fills to provide adequate support for the proposed addition. Removal of the existing foundation walls to a minimum depth of two (2) feet below the proposed construction is also recommended during the demolition. It is further recommended that these structural fills consist of unprocessed pit-run sands and gravels placed in eight (8) inch thick lifts and compacted to 98 percent of standard Proctor maximum dry density (ASTM D-698).

Within the existing lawn areas, it is recommended that the organic topsoil be removed to a depth of approximately eight (8) inches. Exact depths of organic topsoil stripping should however be determined by a representative of the soils engineer during initial site development. It is further recommended that the subgrade soils be scarified, moisture conditioned and recompactd to at least 95 percent of standard Proctor maximum dry density prior to placement of the

engineered structural fills. Should any soft or unstable soils be observed during the subgrade preparation, it is recommended that these soils be reprocessed and recompacted or removed and replaced with the engineered structural fills as discussed below.

Where engineered structural fills will be required to satisfy the proposed subgrade elevations, it is recommended that the fills consist of select cohesive soils or pit-run sands and gravels placed in eight (8)-inch thick layers near their respective optimum moisture content range. It is also recommended that the structural fill materials, as well as the finished subgrade in those areas requiring excavation cuts, be compacted near optimum moisture content to 98 percent of standard Proctor maximum dry density (ASTM D-698).

Around all foundation excavations within the confines of the structure, it is recommended that pit-run sands and gravels compacted to 98 percent of standard Proctor maximum dry density (ASTM D-698) be used to insure that all voids are filled and adequate bearing for the slab-on-grade construction is achieved. Any loose debris or water must be removed prior to placement of the backfill materials. Where excavations are made for pipes, conduits, etc. beneath the concrete slabs-on-grade, care must be exercised to insure these trenches are likewise backfilled with cohesionless sands and gravels and adequately compacted. It is also recommended that a four (4)-inch minimum blanket of free-draining sands exist beneath all slab-on-grade floors and again are compacted to 98 percent of standard Proctor maximum dry density (ASTM D-698).

It is recommended that the exterior foundation walls in non-loadbearing areas be backfilled with compacted cohesive soils after the walls have

achieved adequate strength. All downspouts which collect runoff water from the roof areas must be directed away from the foundation walls at all times.

Positive surface water management practices must be established at this building site which includes, but is not limited to, the diversion of all surface waters away from the structure at all times in the future. It is imperative that no waters be allowed to impound adjacent to any foundation walls or systems. This requirement of design must be satisfied at all times both during construction as well as upon completion of the project.

FOUNDATION DESIGN INFORMATION

It is recommended that the proposed YWCA Lakeview Building Addition in Peoria, Illinois, be supported on a system of conventional, reinforced concrete spread foundations established on the existing soils or the engineered structural fills as discussed previously. It is further recommended that the spread foundations founded on the preconsolidated glacial till soils or engineered structural fills be proportioned to utilize a NET Allowable Soil Bearing Pressure of 3000 pounds per square foot whereas a NET Allowable Soil Bearing Pressure of 1500 pounds per square foot may be utilized for the spread foundations founded on the normally consolidated cohesive soils along the north side of the proposed building addition. Bank-poured foundations in lieu of formed and poured construction techniques are recommended to aid in generating the recommended soil bearing pressures. Removal or recompaction of all materials disturbed during the foundation excavation is also considered essential prior to placement of the reinforcing steel and foundation concrete.

It is further recommended that the bases of all exterior concrete spread foundations throughout the proposed building addition be established at a

minimum depth of forty-two (42) inches below the final, exterior ground surface elevations to satisfy normal frost penetration requirements. The bases of all interior spread foundations may be established directly beneath the concrete slabs-on-grade as no frost requirements need be satisfied, except during potential winter construction months.

The weight of the concrete in the foundations and the depth of surcharge below the existing ground surface have been taken into consideration and compensated for in the bearing values specified. The bearing pressures recommended are net pressures in that they reflect the bearing capacities of the soils at the depths specified with the approximate factors of safety included.

Due to some variation in the composition and bearing capacity of the soils encountered at the site, it is recommended that personnel from our geotechnical engineering firm be retained during construction of the spread foundation system to perform in-situ soil bearing tests to confirm the proposed foundation design in conjunction with compaction testing of the engineered structural fills.

Based on the results of this subsurface investigation, in conjunction with our working knowledge of the general area, it is our opinion that an International Building Code (IBC) Site Class "D" - Stiff Soil Profile is appropriate for this site. It should be noted however that this area is not considered a high risk seismic zone and the general area has experienced minimal seismic events.

A preliminary evaluation of the potential settlements has been made by our geotechnical engineer and it has been estimated that total settlement should not exceed one (1.0) inch; differential settlements of less than one-half (0.5) of an inch may possibly be anticipated for the shallow spread foundations, assuming that all requirements as set forth in this report are satisfied. It should be reiterated

however that the compaction requirements and site development recommendations as specified must be satisfied and are important from the standpoint of curtailing settlement of not only the proposed concrete floor slabs-on-grade, but also the recommended, shallow spread foundation system.

SUMMARY

A subsurface investigation and evaluation of the soil and ground water conditions has been conducted at the site for the proposed YWCA Lakeview Building Addition in Peoria, Illinois.

Site development and foundation design criteria has been recommended and potential design and construction problems have been discussed in some detail. The exploration and analyses of the foundation conditions presented in this engineering report are considered of sufficient detail and scope to form a reasonable basis for design evaluation. The observations and comments submitted within this geotechnical engineering report are based upon the subsurface soil and ground water information which was obtained as well as the preliminary design details which have been furnished by the Owner's representative.

Any revisions in the plans for the proposed building addition from those enumerated in this engineering report should be brought to the attention of our geotechnical engineer so that it can be determined if changes or alterations in the recommendations will be required and additional evaluations reviewed or proposed. Should deviations from the noted subsurface conditions be encountered during construction, it is mandatory that they be brought to the attention of our

personnel for further evaluation. On-site observation and testing by personnel from our geotechnical engineering firm is also considered essential to verify and substantiate the design criteria set forth in this geotechnical engineering report.

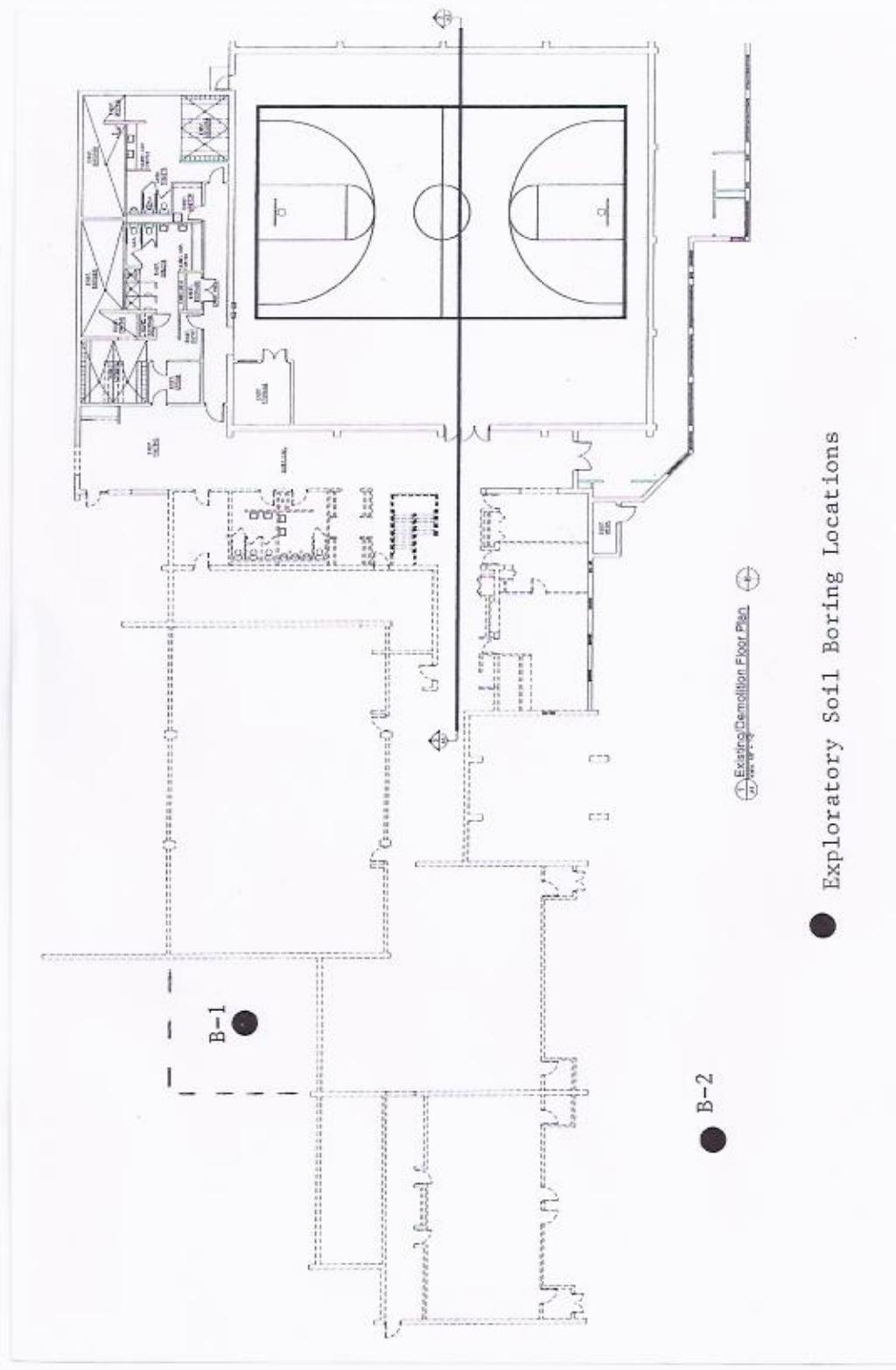
* * * * *

PROJECT
 YWCA Lakeview Building Addition
 Peoria, Illinois



DATE March 4, 2015
W. & A. FILE NO. 6979
SCALE None

PLOT PLAN





WHITNEY & ASSOCIATES

INCORPORATED

2406 West Nebraska Avenue
PEORIA, ILLINOIS 61604

BORING LOG

BORING NO. B-01
DATE 02-26-15
W. & A. FILE NO. 6979
SHEET 1 OF 2

PROJECT YWCA LAKEVIEW BUILDING ADDITION **LOCATION** Peoria, Illinois
BORING LOCATION See Plot Plan Sheet **DRILLED BY** Fehl
BORING TYPE Hollow Stem Augers **WEATHER CONDITIONS** Partly Cloudy & Mild
SOIL CLASSIFICATION SYSTEM USCS / USBSC **SEEPAGE WATER ENCOUNTERED AT ELEVATION** (-)20.5 Ft.
GROUND SURFACE ELEVATION 89+ **GROUND WATER ELEVATION AT** - **HRS.** -
BORING DISCONTINUED AT ELEVATION 68+ **GROUND WATER ELEVATION AT COMPLETION** (-)18.5 Ft.

DESCRIPTION	DEPTH IN FEET	SAMPLE TYPE	N	Q _p	Q _u	D _d	M _c
PORTLAND CEMENT CONCRETE	5"						
Brown, Fine- To Medium-Grained SAND	9"						
Stiff, Brown LEAN CLAY WITH SAND - CL (Glacial Till)		SS	11	1.8	1.6	114	15
Very Stiff, Gray-Brown LEAN CLAY WITH SAND - CL (Glacial Till)	4						
		SS	13	2.8	2.6	117	14
	8	SS	14	3.3	3.1	119	13
Very Stiff, Gray LEAN CLAY WITH SAND - CL (Glacial Till)		SS	17	3.6	3.4	119	13
	12						
		SS	25	3.5	3.2	118	13
Very Stiff, Gray SANDY LEAN CLAY - CL (Glacial Till)							
	16	SS	32	2.4	2.2	116	15
SAND SEAM							
Very Stiff, Gray SANDY LEAN CLAY - CL (Glacial Till)							
	20	SS	17	2.3	2.1	115	15
EXPLORATORY BORING DISCONTINUED							
	24						

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER
 FALLING 30 INCHES
 SS - SPLIT SPOON SAMPLE
 ST - SHELBY TUBE SAMPLE

Q_p - CALIBRATED PENETROMETER READING - T.S.F.
 Q_u - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
 D_d - NATURAL DRY DENSITY - P.C.F.
 M_c - NATURAL MOISTURE CONTENT - %



WHITNEY & ASSOCIATES

INCORPORATED

2406 West Nebraska Avenue
PEORIA, ILLINOIS 61604

BORING LOG

BORING NO. B-02
DATE 02-26-15
W. & A. FILE NO. 6979
SHEET 2 **OF** 2

PROJECT YWCA LAKEVIEW BUILDING ADDITION **LOCATION** Peoria, Illinois
BORING LOCATION See Plot Plan Sheet **DRILLED BY** Fehl
BORING TYPE Hollow Stem Augers **WEATHER CONDITIONS** Partly Cloudy & Mild
SOIL CLASSIFICATION SYSTEM USCS / USBSC **SEEPAGE WATER ENCOUNTERED AT ELEVATION** None
GROUND SURFACE ELEVATION 98+ **GROUND WATER ELEVATION AT** - **HRS.** -
BORING DISCONTINUED AT ELEVATION 77+ **GROUND WATER ELEVATION AT COMPLETION** None

DESCRIPTION	DEPTH IN FEET	SAMPLE TYPE	N	Q _p	Q _u	D _d	M _c
Brown SILTY CLAY Organic Topsoil	8"						
Stiff, Brown And Gray LEAN CLAY - CL (Silty Clay Loam)		SS	8	1.1	1.0	98	21
	4						
Very Stiff, Brown And Gray LEAN CLAY WITH SAND - CL (Glacial Till)		SS	9	2.6	2.4	116	14
	8	SS	14	3.2	3.0	117	14
Very Stiff, Gray LEAN CLAY WITH SAND - CL (Glacial Till)		SS	13	2.3	2.1	118	13
	12						
Stiff, Gray SANDY LEAN CLAY - CL (Glacial Till)		SS	22	2.1	1.9	117	12
	16	SS	17	2.4	2.2	116	14
Very Stiff, Gray SANDY LEAN CLAY - CL (Glacial Till)	20	SS	16	3.1	2.9	121	12
	24						
EXPLORATORY BORING DISCONTINUED							

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
 SS - SPLIT SPOON SAMPLE
 ST - SHELBY TUBE SAMPLE

Q_p - CALIBRATED PENETROMETER READING - T.S.F.
 Q_u - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
 D_d - NATURAL DRY DENSITY - P.C.F.
 M_c - NATURAL MOISTURE CONTENT - %

TELEPHONE
309 673-2131

TESTS
DESIGN
REPORTS
ANALYSIS
INSPECTION
CONSULTATION
INVESTIGATIONS



WHITNEY & ASSOCIATES
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2406 West Nebraska Avenue
PEORIA, ILLINOIS 61604

SPECIALISTS IN
SOILS - PORTLAND CEMENT CONCRETE
STEEL - BITUMINOUS CONCRETE
CONSTRUCTION MATERIALS
AGGREGATES - ASPHALT - POZ-O-PAC
SOILS AND GRAVEL SURVEYS
MATERIALS QUALITY CONTROL
SOIL MECHANICS AND
FOUNDATION ENGINEERING
DRILLING - CORING - TESTING

MAJOR DIVISIONS	GROUP SYMBOLS	DESCRIPTIONS		
COARSE - GRAINED SOILS (MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE)	GRAVELS (MORE THAN 50% RETAINED NO. 4 SIEVE SIZE)	GW	WELL - GRADED GRAVELS, GRAVEL - SAND MIXTURES	
		GP	POORLY - GRADED GRAVELS, GRAVEL - SAND MIXTURES	
		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES	
		GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES	
	SANDS (MORE THAN 50% PASSING NO. 4 SIEVE SIZE)	CLEAN SANDS (LITTLE OR NO FINES)	SW	WELL - GRADED SANDS, GRAVELLY SANDS
			SP	POORLY - GRADED SANDS, GRAVELLY SANDS
			SM	SILTY - SANDS, SAND - SILT MIXTURES
		GRAVELS WITH FINES (CONSIDERABLE FINES)	SC	CLAYEY - SANDS, SAND - CLAY MIXTURES
			OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS
			ML	INORGANIC SILTS AND FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS
FINE - GRAINED SOILS (MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE)	SILTS AND CLAYS (LIQUID LIMIT LESS THAN 50)	CL	INORGANIC CLAYS, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS	
		MH	INORGANIC SILTS, MICEOUS OR DIATOMACEOUS FINE SILTY SOILS, ELASTIC SILTS	
		CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS	
	SILTS AND CLAYS (LIQUID LIMIT GREATER THAN 50)	OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, SILTS	
		Pt	PEAT AND OTHER HIGHLY ORGANIC SOILS	

COARSE - GRAINED SOILS CLASSIFICATION

FRACTION SMALLER THAN NO. 200 SIEVE SIZE

LESS THAN 5% GW, GP, SW, SP

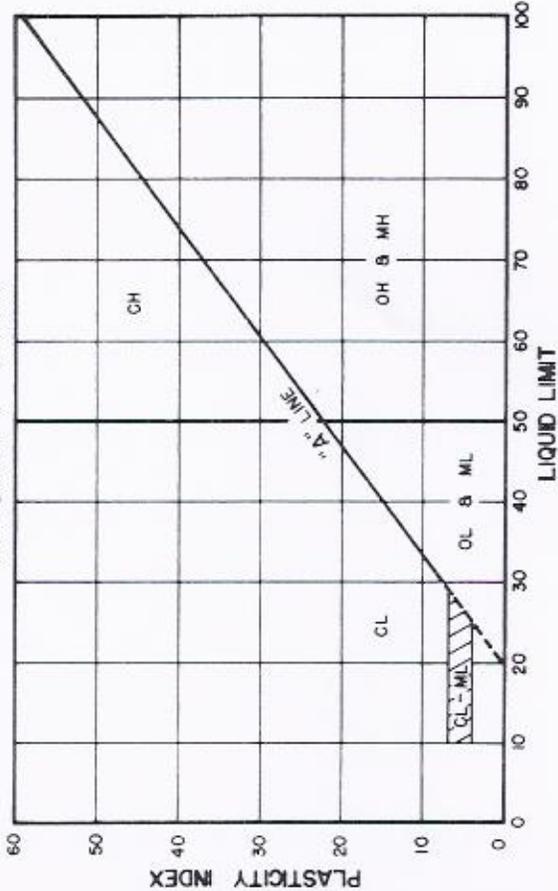
MORE THAN 12% GM, GC, SM, SC

BETWEEN 5% & 12% BORDERLINE CASES REQUIRING DUAL SYMBOLS

$GW-Cu = \frac{D_{60}}{D_{10}}$ GREATER THAN 4 ; $Cc = \frac{(D_{30})^2}{D_{60}D_{10}}$ BETWEEN 1 & 3

$SW-Cu = \frac{D_{60}}{D_{10}}$ GREATER THAN 6 ; $Cc = \frac{(D_{30})^2}{D_{60}D_{10}}$ BETWEEN 1 & 3

PLASTICITY CHART



**UNIFIED
SOIL CLASSIFICATION SYSTEM**
DEVELOPED BY
DR. ARTHUR CASAGRANDE

TELEPHONE
309 673-2131

TESTS
DESIGN
REPORTS
ANALYSIS
INSPECTION
CONSULTATION
INVESTIGATIONS



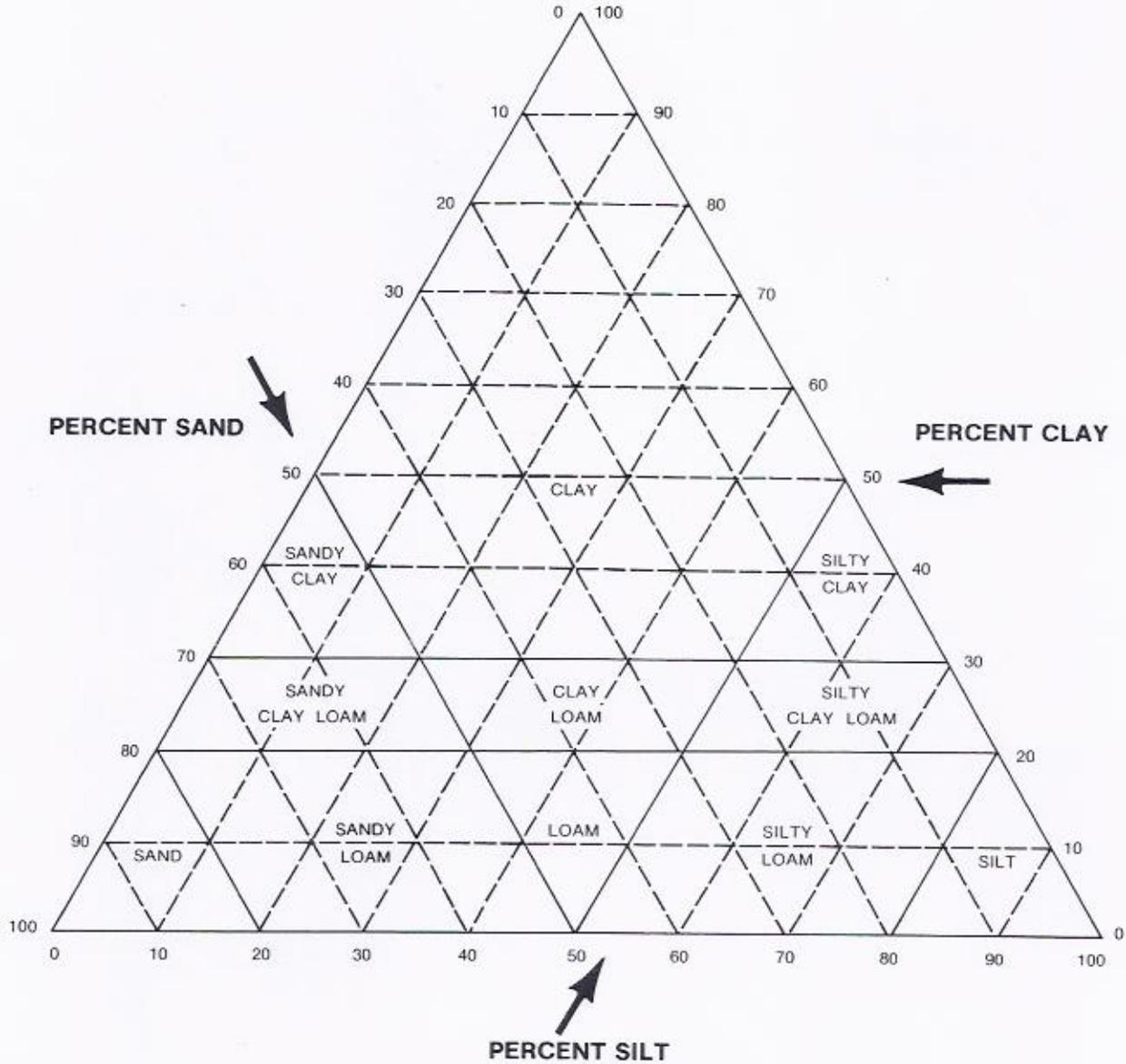
WHITNEY & ASSOCIATES INCORPORATED

2406 West Nebraska Avenue
PEORIA, ILLINOIS 61604

SPECIALISTS IN

SOILS - PORTLAND CEMENT CONCRETE
STEEL - BITUMINOUS CONCRETE
CONSTRUCTION MATERIALS
AGGREGATES - ASPHALT - POZ-O-PAC

SOILS AND GRAVEL SURVEYS
MATERIALS QUALITY CONTROL
SOIL MECHANICS AND
FOUNDATION ENGINEERING
DRILLING - CORING - TESTING



TRIANGULAR TEXTURAL CLASSIFICATION CHART

DEVELOPED BY
UNITED STATES BUREAU OF SOILS AND CHEMISTRY
(U.S.B.S.C.)

TELEPHONE

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TESTS * INVESTIGATIONS
 ANALYSIS * DESIGN * EVALUATIONS
 CONSULTATION * REPORTS * INSPECTIONS
 ARBITRATION * EXPERT WITNESS TESTIMONY

SOILS * PORTLAND CEMENT CONCRETE
 BITUMINOUS CONCRETE * STEEL
 ASPHALT * AGGREGATES * EMULSIONS
 POZZOLANIC MATERIALS * LIME

**WHITNEY & ASSOCIATES**

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 PEORIA, ILLINOIS 61604-3193

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GEOTECHNICAL ENGINEERING
 CONSTRUCTION QUALITY CONTROL
 SUBSURFACE EXPLORATIONS
 ENVIRONMENTAL INVESTIGATIONS

MONITORING WELL INSTALLATIONS
 BUILT UP ROOF INVESTIGATIONS
 WELDER CERTIFICATIONS
 INSURANCE INVESTIGATIONS

SOIL MECHANICS CLASSIFICATION SYSTEMS**TEXTURAL CLASSIFICATION**

DESCRIPTION	SIZE
BOULDERS	LARGER THAN 3.0 IN.
COARSE GRAVEL	0.75 IN. — 3.0 IN.
FINE GRAVEL	NO. 4 SIEVE — 0.75 IN.
COARSE SAND	NO. 10 SIEVE — NO. 4 SIEVE
MEDIUM SAND	NO. 40 SIEVE — NO. 10 SIEVE
FINE SAND	NO. 200 SIEVE — NO. 40 SIEVE
SILT	LESS THAN NO. 200 SIEVE — NONPLASTIC
CLAY	LESS THAN NO. 200 SIEVE — PLASTIC

QUANTITY CLASSIFICATION

DESCRIPTION	PERCENT
TRACE	0 - 5
SMALL AMOUNT	5 - 10
SOME	10 - 15
CONSIDERABLE	15 - 20
SUBORDINATE TEXTURAL CLASSIFICATION	OVER 20

RELATIVE DENSITY CLASSIFICATION — COHESIONLESS SOILS

N. BLOWS / FT.	RELATIVE DENSITY
0 - 4	VERY LOOSE
4 - 10	LOOSE
10 - 30	MEDIUM
30 - 50	DENSE
OVER 50	VERY DENSE

*** CONSISTENCY CLASSIFICATION — COHESIVE SOILS**

N. BLOWS / FT.	CONSISTENCY	Q _u , TONS / SQ. FT.
0 - 2	VERY SOFT	0.00 - 0.25
2 - 4	SOFT	0.25 - 0.50
4 - 8	MEDIUM	0.50 - 1.00
8 - 15	STIFF	1.00 - 2.00
15 - 30	VERY STIFF	2.00 - 4.00
OVER 30	HARD	OVER - 4.00

*** NOTE:**

THIS CLASSIFICATION SYSTEM IS TO BE USED SOLELY AS A GUIDE AND IS NOT ADEQUATE FOR PURPOSES OF DESIGN.