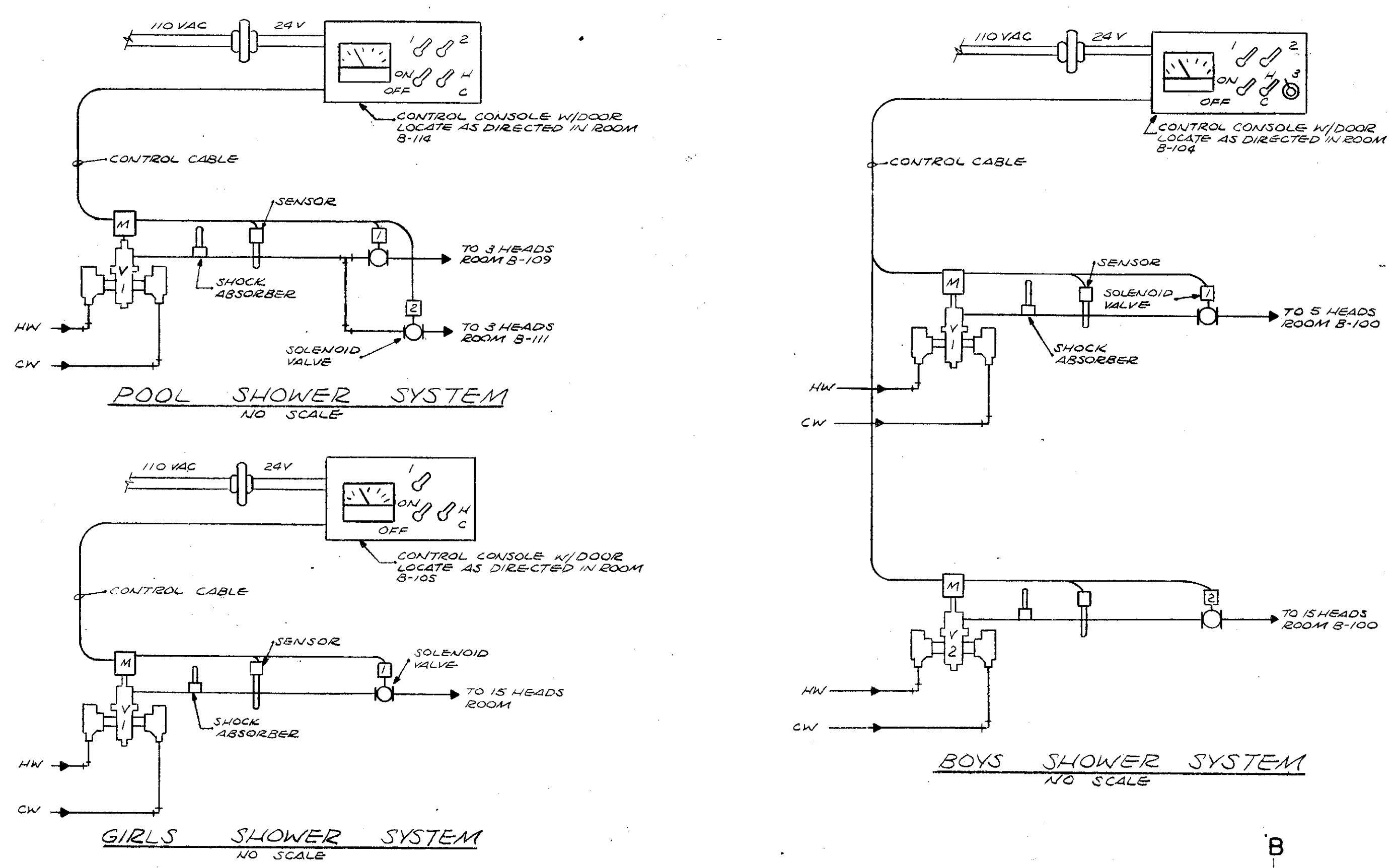
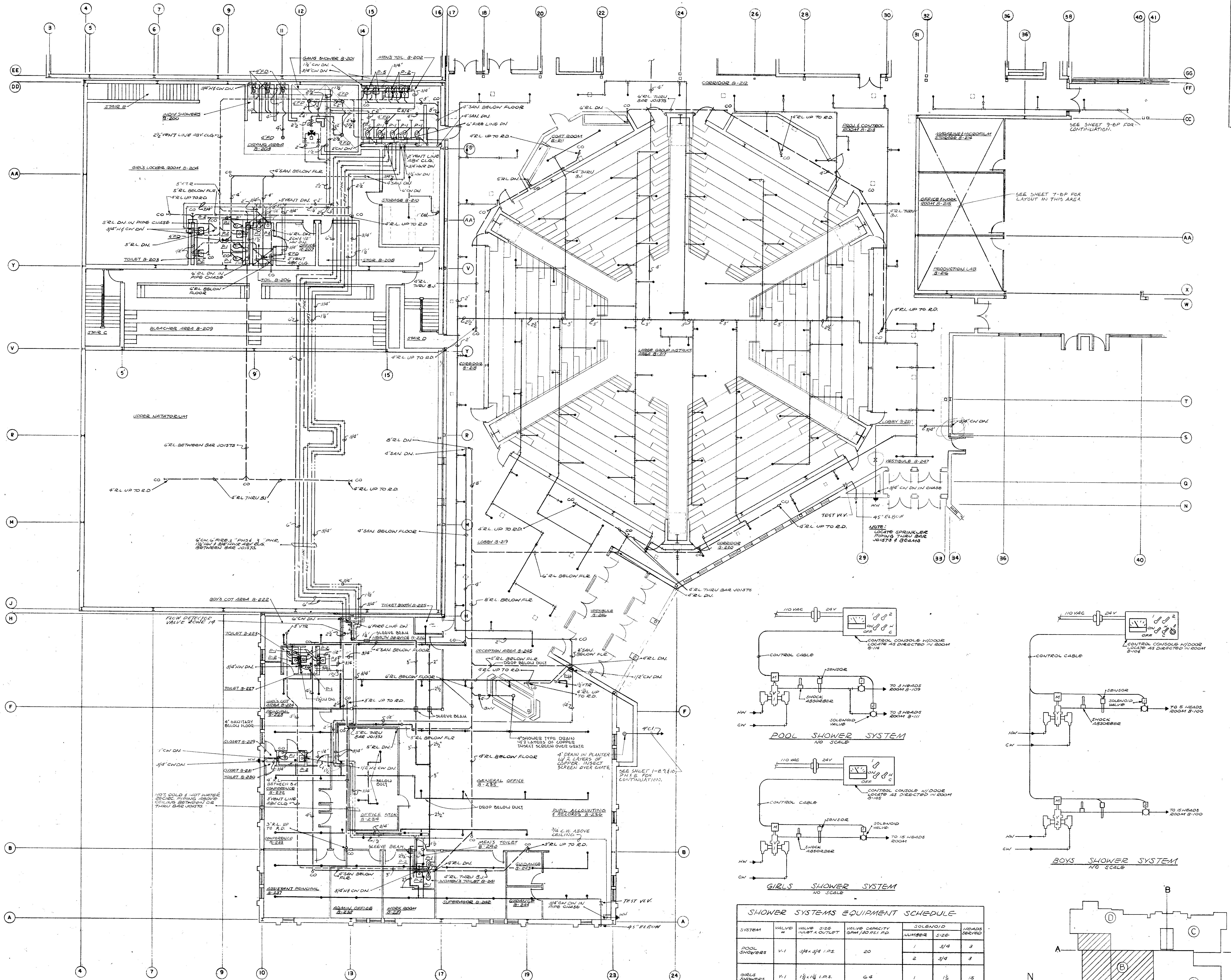


BURDETTE, KOCHMER, MURPHY  
AND ASSOCIATES  
ELECTRICAL ENGINEERS

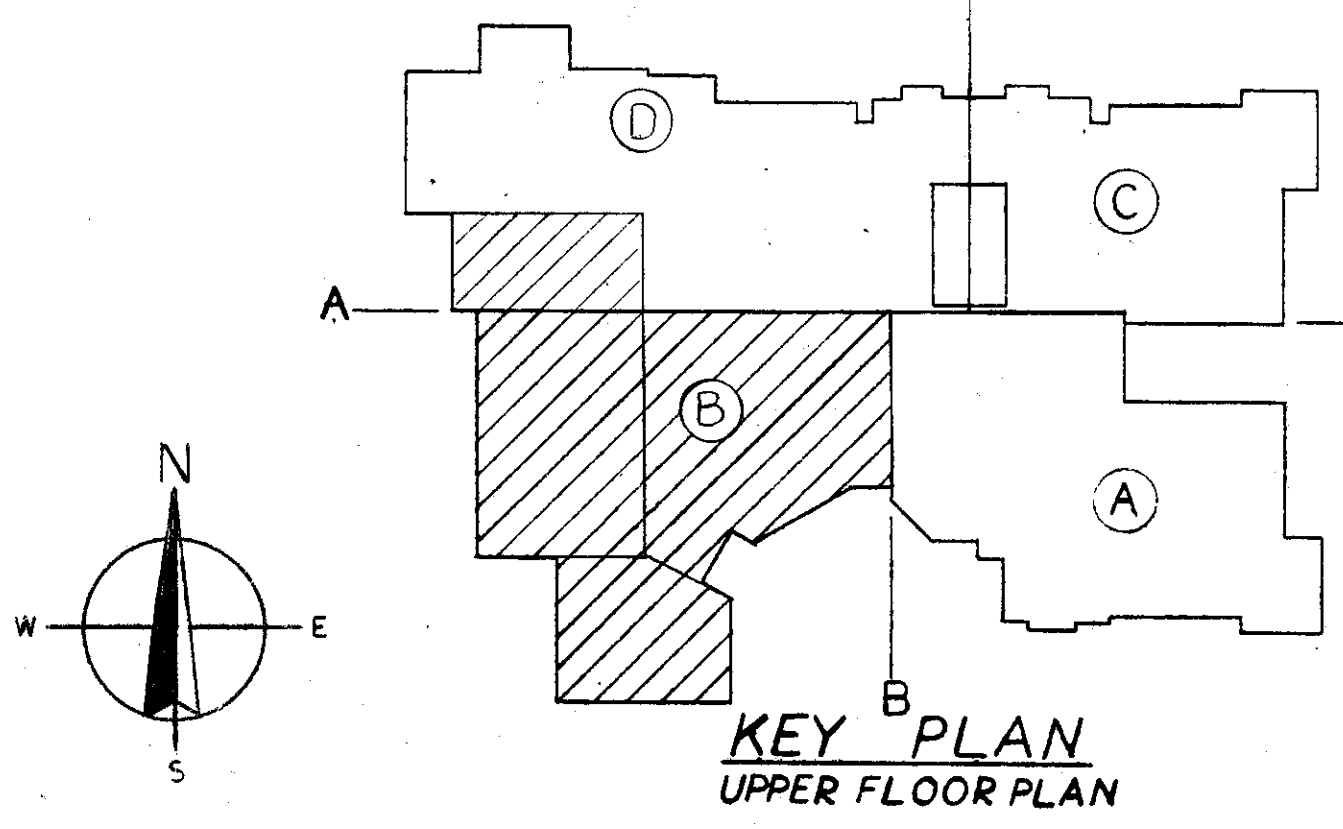
UPPER FLOOR PLAN - SECTION B - PLUMBING  
NEW NORTH HARFORD MIDDLE SCHOOL  
FOR HARFORD COUNTY BOARD OF EDUCATION  
BEL AIR, HARFORD CO., MARYLAND

P.S.C. NO. 12-COT-73P



SHOWER SYSTEMS EQUIPMENT SCHEDULE

SYSTEM	VALVE #	VALVE SIZE INLET x OUTLET	VALVE CAPACITY GPM/50 PSI/HD	SOLENOID NUMBER	SOLENOID SIZE	HEADS SERVED
POOL SHOWERS	V-1	3/4 x 3/4 I.P.S.	20	1	3/4	3
GIRLS SHOWERS	V-1	1/2 x 1/2 I.P.S.	64	1	1/2	15
BOYS SHOWERS	V-1	3/4 x 3/4 I.P.S.	20	2	3/4	5
	V-2	1/2 x 1/2 I.P.S.	64	2	1/2	15



UPPER FLOOR PLAN - SECTION B - PLUMBING  
SCALE: 1/8" = 1'-0"

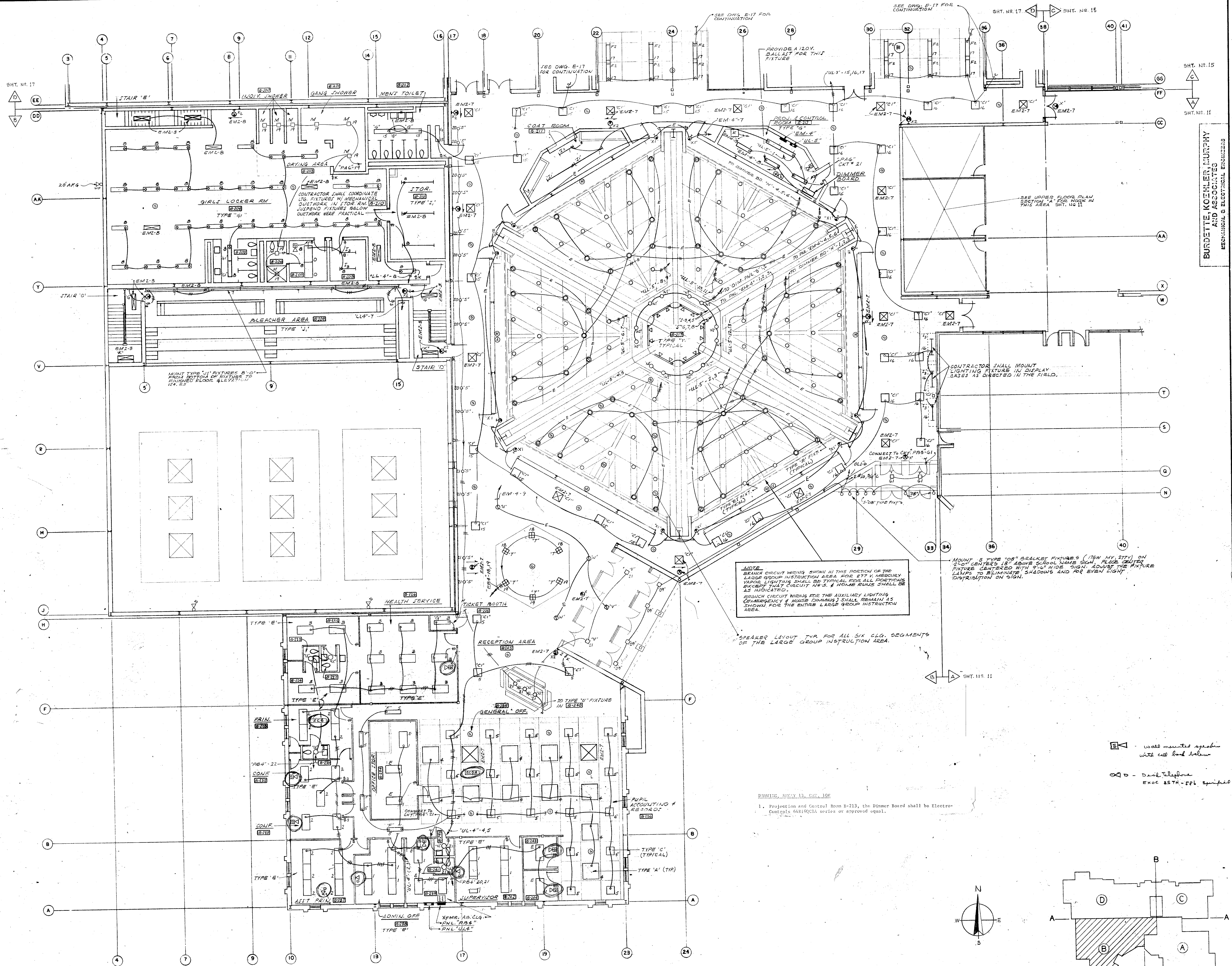
BUCHART ASSOCIATES  
ARCHITECTS & ENGINEERS  
BALTIMORE, MD. JOHNSTOWN, PA. LANCASTER, PA.  
PITTSBURGH, PA. YORK, PA.  
BUCHART - HORN, CONSULTING ENGINEERS

CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF DIMENSIONS

SCALE: AS NOTED  
DATE: Nov. 29, 1973  
DRAWN BY: B.T.V.  
CHECKED BY: L.A.K.

SHEET 8  
DETAIL NOS.

CATEGORY NO. 8 P  
PROJECT NO. 5229



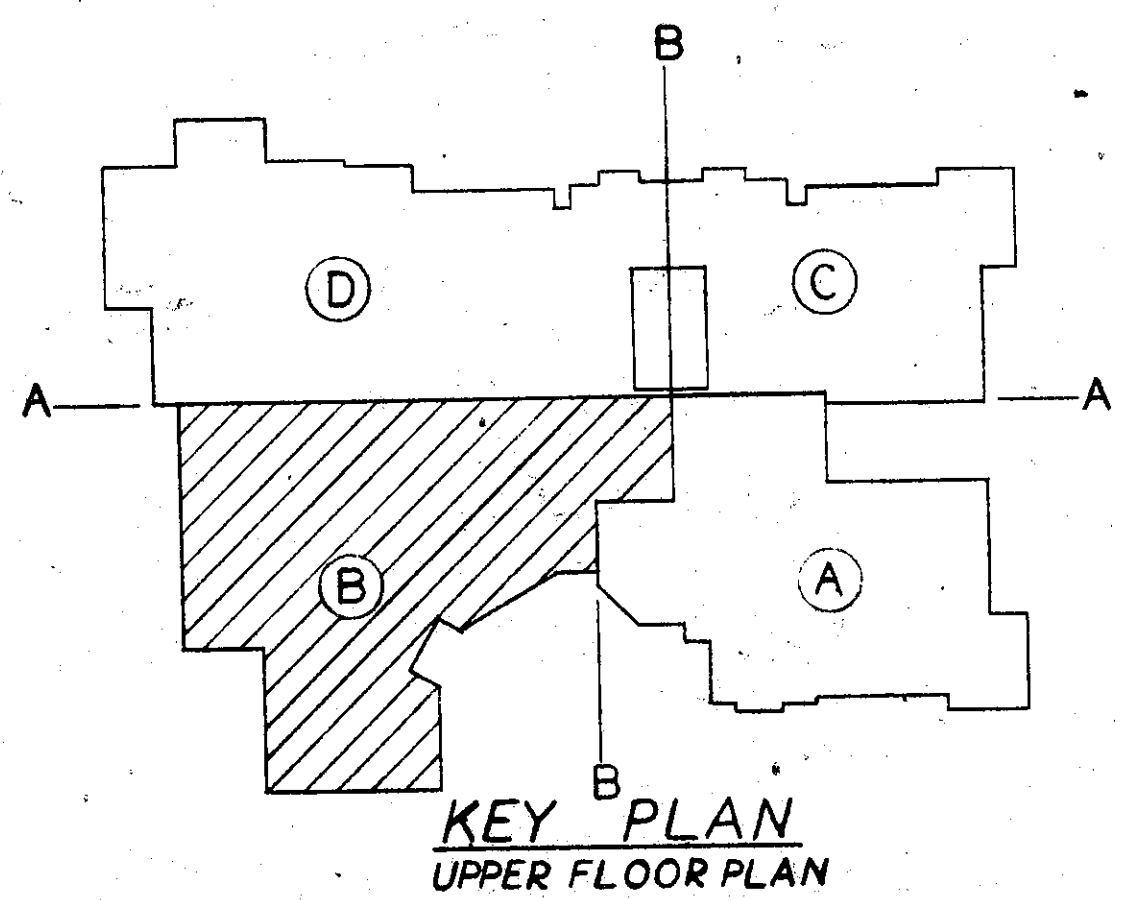
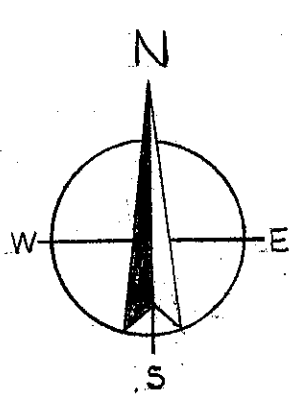
**NOTE**  
 BRANCH CIRCUIT WIRING SHOWN IN THIS SECTION OF THE  
 LARGE GROUP INSTRUCTION AREA FOR 277 V. MERCURY  
 VAPOR LIGHTING SHALL BE TYPICAL FOR ALL PORTIONS  
 EXCEPT THAT CIRCUIT WIRING & HANGERS SHALL BE  
 AS INDICATED.  
 BRANCH CIRCUIT WIRING FOR THE AUXILIARY LIGHTING  
 (EMERGENCY & HOUSE DIMMING) SHALL REMAIN AS  
 SHOWN FOR THE ENTIRE LARGE GROUP INSTRUCTION  
 AREA.

SPEAKER LAYOUT TYP FOR ALL SIX CLG. SEGMENTS  
 OF THE LARGE GROUP INSTRUCTION AREA.

CONTRACTOR SHALL MOUNT  
 LIGHTING FIXTURE IN DISPLAY  
 CASES AS DIRECTED IN THE FIELD.

DRAWING SHEET 13, CAT. 100  
 1. Projection and Control Room B-213, the Dimmer Board shall be Electro-  
 Controls 6481901A series or approved equal.

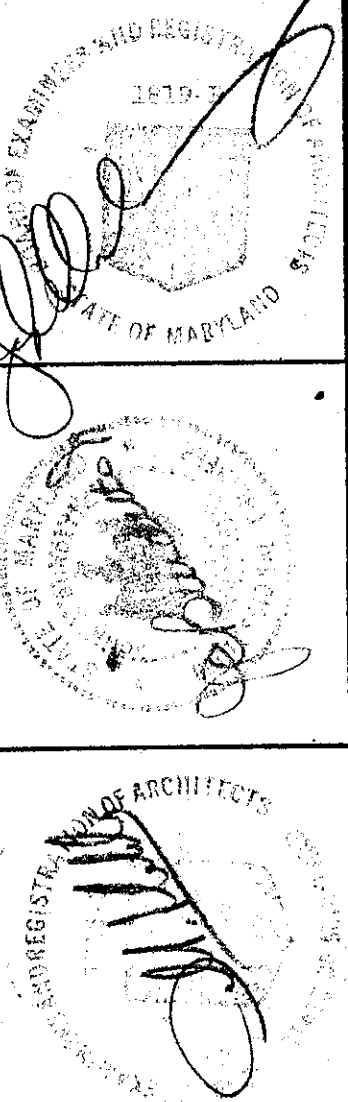
□ = wall mounted speaker  
 with call book holder  
 ⊗ = Desk Telephone  
 EXC 65TH-SPB equipped



UPPER FLOOR PLAN-SECTION B  
 SCALE: 1/8"=1'-0"

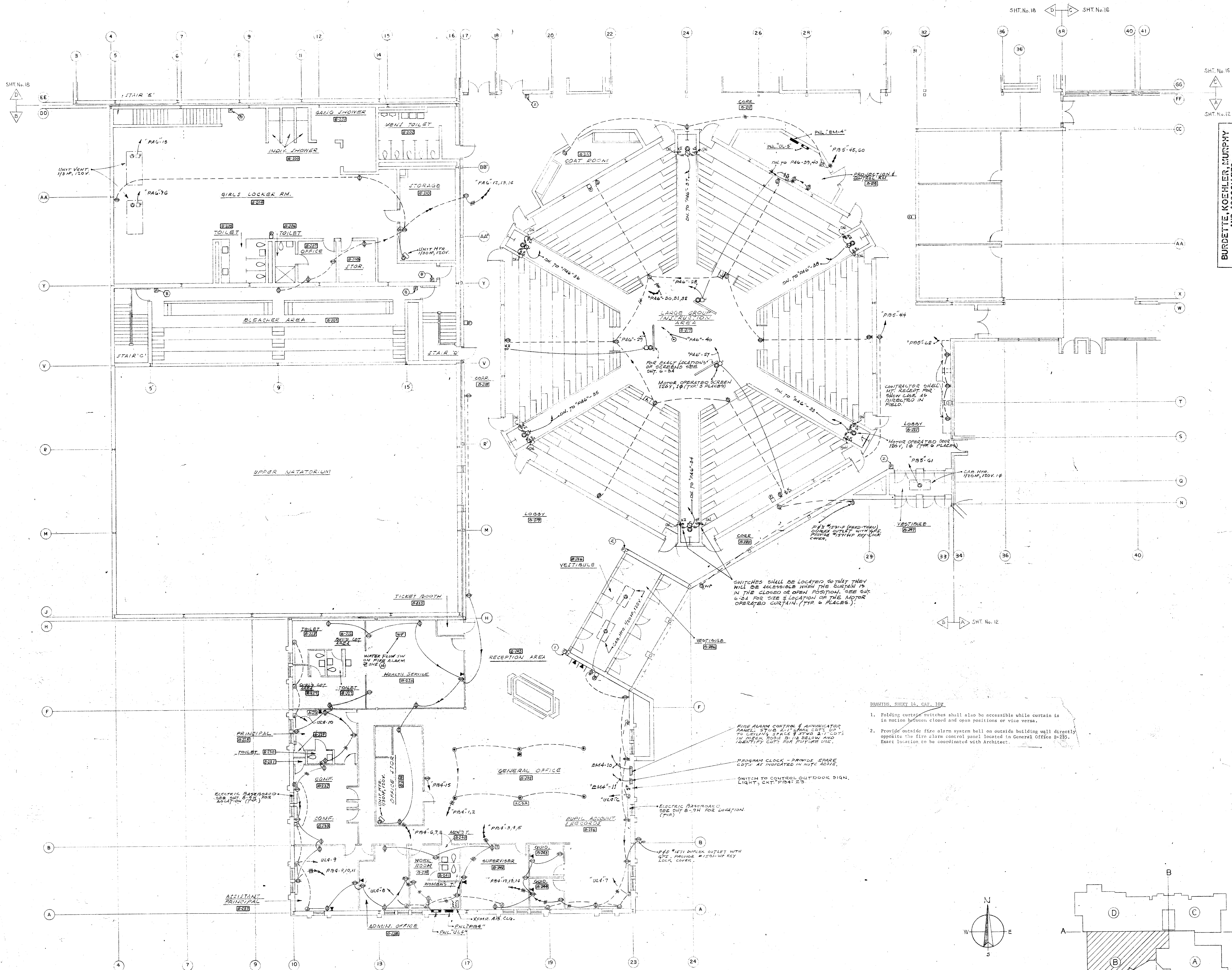
BURDETTE, KOEHLER, MURPHY  
 AND ASSOCIATES  
 MECHANICAL & ELECTRICAL ENGINEERS

UPPER FLOOR PLAN-SECTION B-LIGHTING  
 NEW NORTH HARFORD MIDDLE SCHOOL  
 FOR HARFORD COUNTY BOARD OF EDUCATION  
 BEL AIR, HARFORD CO., MARYLAND

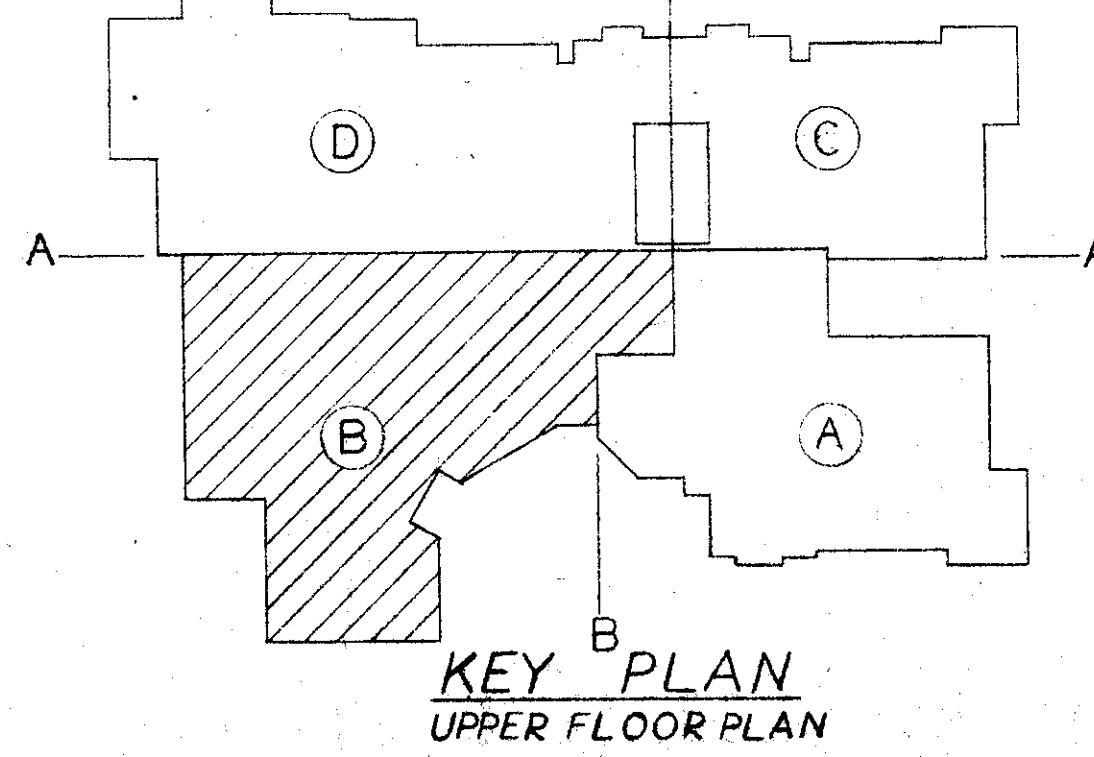


**BUCHART ASSOCIATES**  
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 BALTIMORE, MD. JOHNSOWN, PA. LANCASTER, PA.  
 PITTSBURGH, PA. YORK, PA.  
 BUCHART - HORN, CONSULTING ENGINEERS

CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF DIMENSIONS	
SCALE: AS SHOWN	DATE: Nov. 28, 1973
DRAWN BY: JG	CHECKED BY: JG
SHEET 13	DETAIL NOS. 13
CATEGORY NO. 10	E
PROJECT NO. 5229	



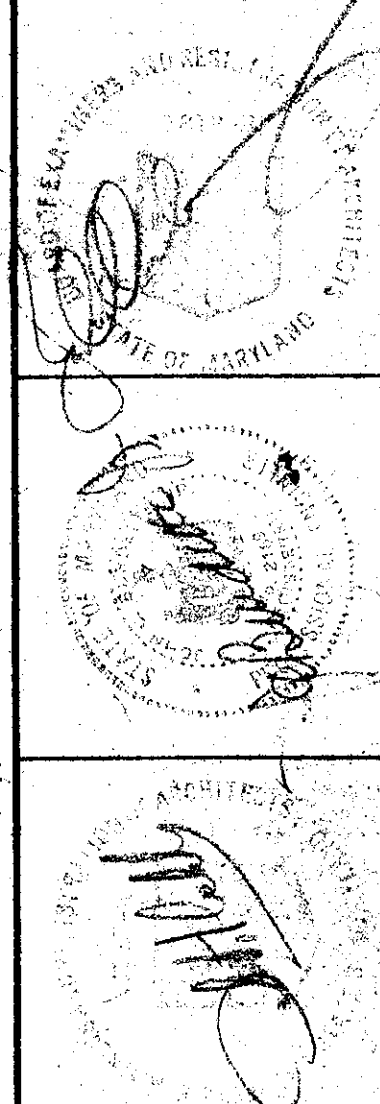
UPPER FLOOR PLAN - SECTION B  
SCALE: 1/8" = 1'-0"



KEY PLAN  
UPPER FLOOR PLAN

BURDETTE KOEHLER MURPHY  
AND ASSOCIATES  
MECHANICAL & ELECTRICAL ENGINEERS

UPPER FLOOR PLAN - SECTION B - POWER  
NEW NORTH HARBOR MIDDLE SCHOOL  
FOR HARFORD COUNTY BOARD OF EDUCATION  
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PITTSBURGH, PA. YORK, PA.

CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF DIMENSIONS  
SCALE: AS SHOWN  
DATE: Nov. 29, 1973  
DRAWN BY: J.L.T.  
CHECKED BY: J.L.T.  
SHEET 14  
CATEGORY NO. 10 E  
PROJECT NO. 5229

P.S.C. NO. 12, 007, 73P



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ROCKVILLE, MD 20850  
301-770-0177(P) 301-330-3224(F)

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COMPREHENSIVE  
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GERMANTOWN, MD 20876  
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2	PERMIT SUBMISSION	12/4/17
3	100% SUBMISSION	1/25/18
4	BID SUBMISSION	2/5/18

NORTH HARFORD  
MIDDLE SCHOOL  
POOL REPAIR

112 PYLESVILLE ROAD  
PYLESVILLE, MD

SHEET TITLE  
ORIGINAL ARCHITECTURAL  
CONSTR. DOCS FOR  
REFERENCE: OVERALL  
NATATORIUM LAYOUT

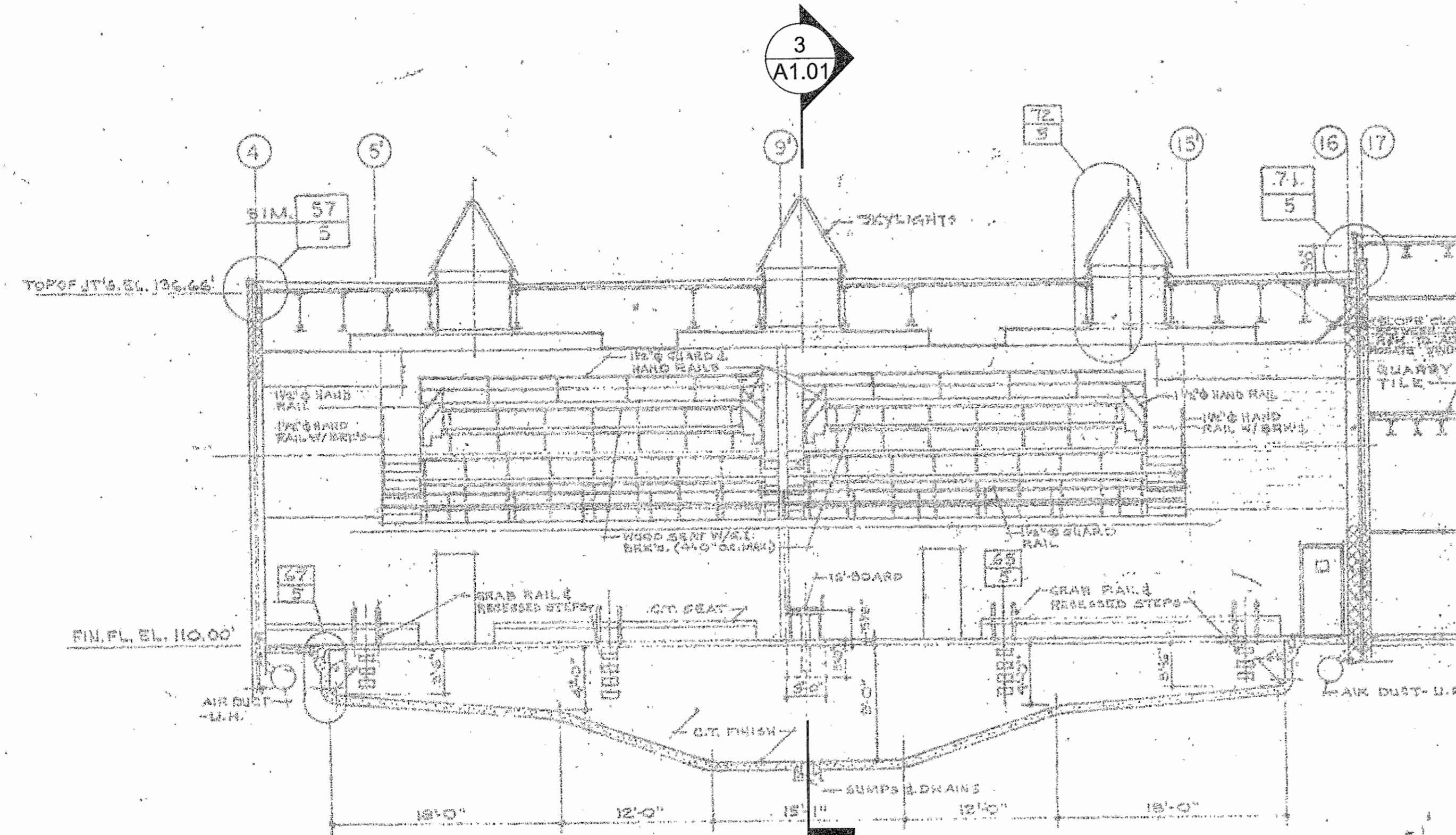
PROJECT NO.  
17013

DATE  
2/5/18

SCALE  
AS NOTED

SHEET NO.

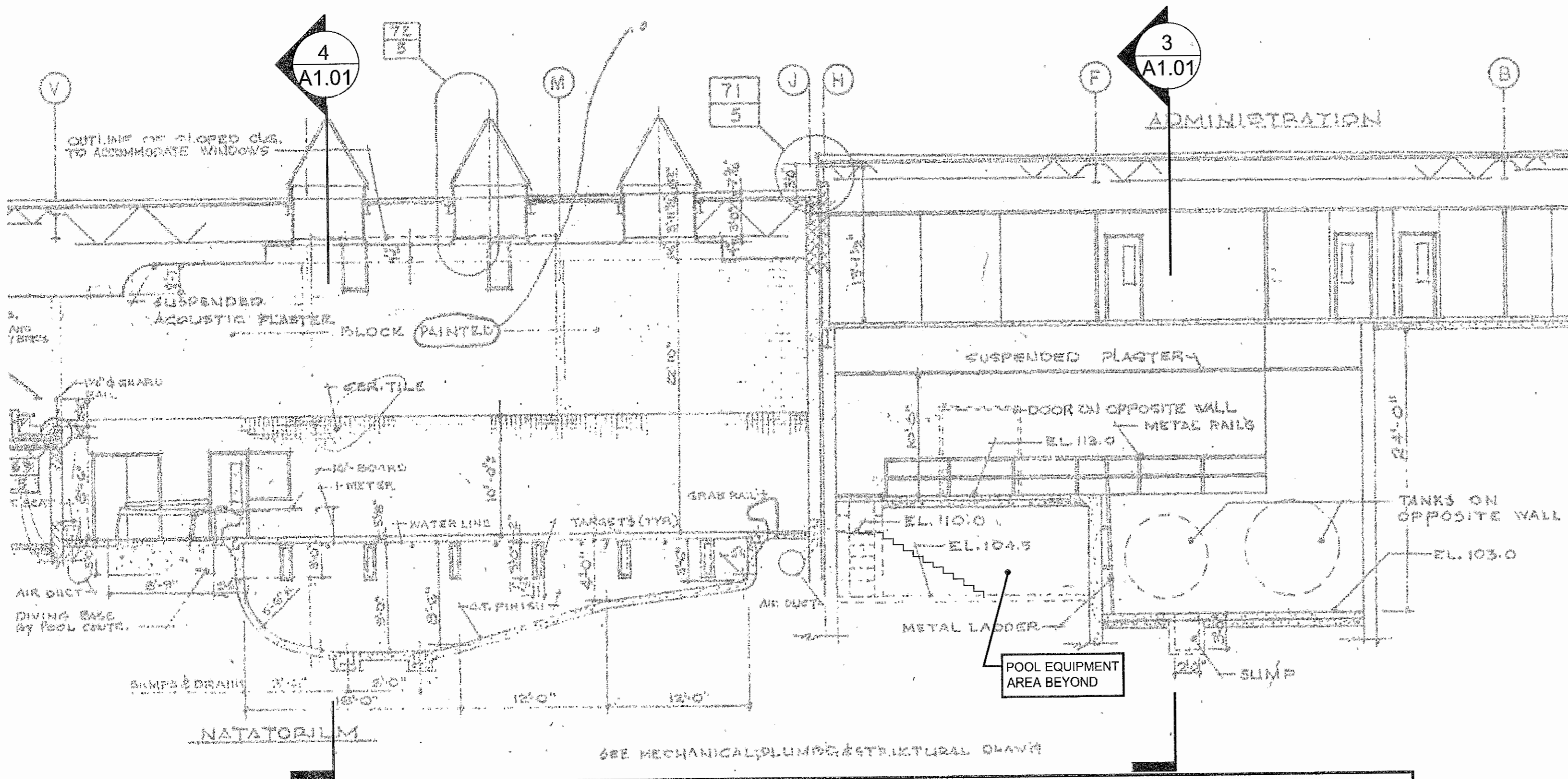
A1.01



**4** ORIGINAL SECTION @ NATATORIUM  
A1.01 SCALE: 1/8" = 1'

ORIGINAL

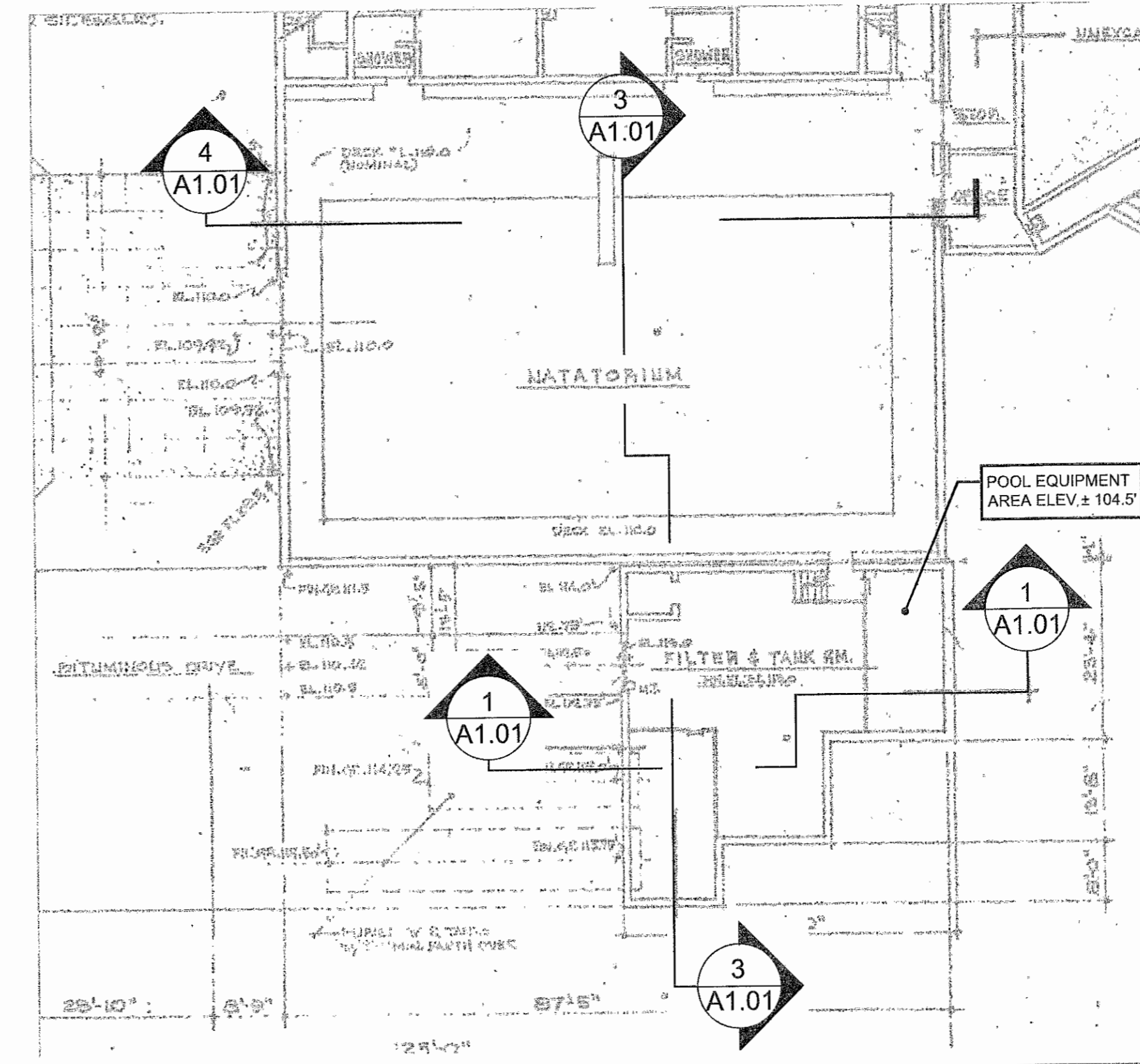
PURPOSE FOR ORIGINAL DRAWING INCLUSION: TO SHOW ORIGINAL CONDITIONS AND RELATIONSHIPS.  
NOTE 1: ORIGINAL DRAWINGS INCLUDED HEREIN ARE FOR REFERENCE AND SHALL NOT SUBSTITUTE FOR FIELD VERIFICATION IN AREAS OF PROPOSED WORK.



**3** SECTION @ NATATORIUM, FILTER TANK ROOM  
A1.01 SCALE: 1/8" = 1'

ORIGINAL

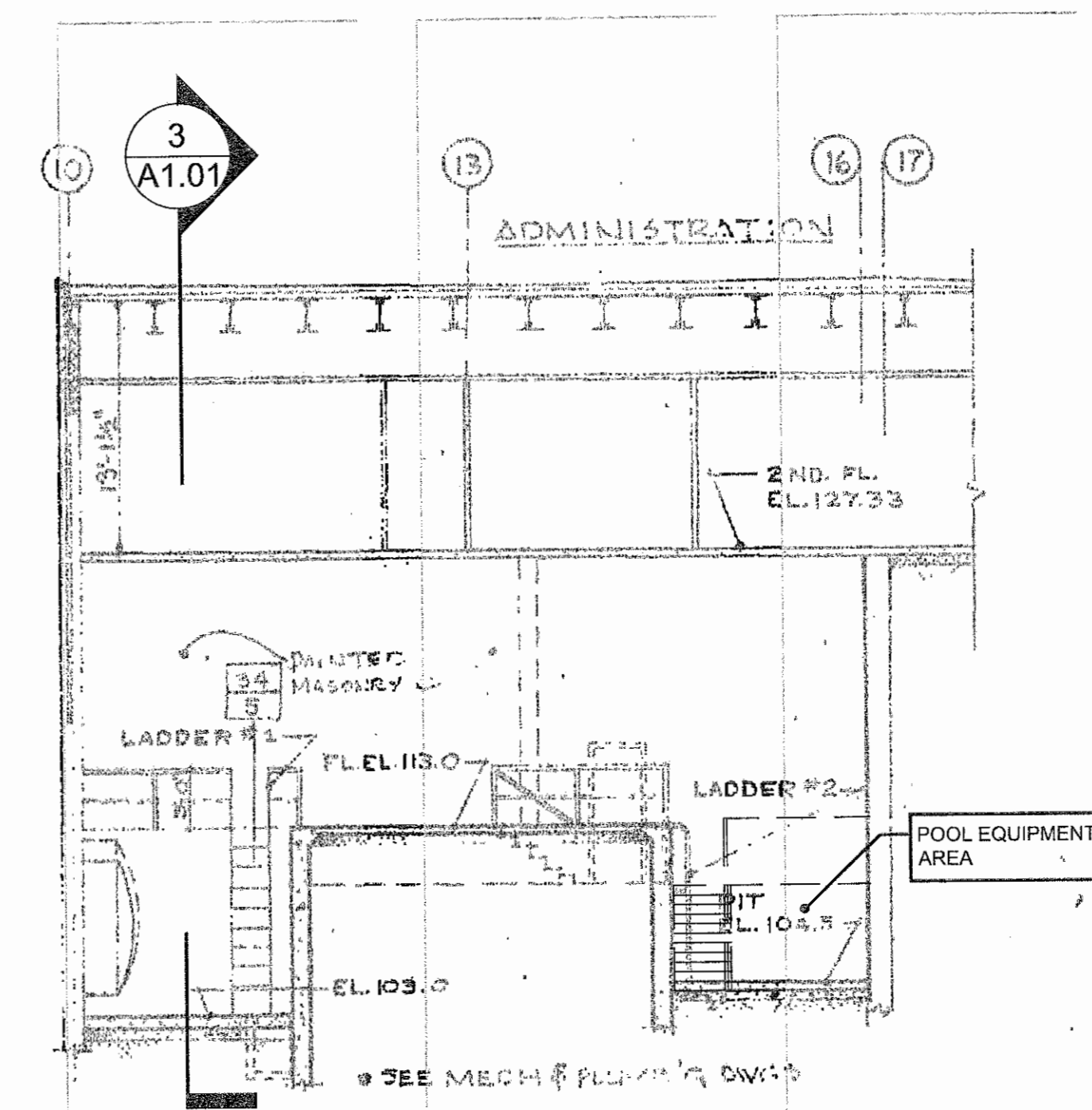
PURPOSE FOR ORIGINAL DRAWING INCLUSION: TO SHOW ORIGINAL CONDITIONS AND RELATIONSHIPS.  
NOTE 1: ORIGINAL DRAWINGS INCLUDED HEREIN ARE FOR REFERENCE AND SHALL NOT SUBSTITUTE FOR FIELD VERIFICATION IN AREAS OF PROPOSED WORK.



**2** PLAN @ NATATORIUM, FILTER & TANK ROOM  
A1.01 SCALE: 1/8" = 1'

ORIGINAL

PURPOSE FOR ORIGINAL DRAWING INCLUSION: TO SHOW ORIGINAL CONDITIONS AND RELATIONSHIPS.  
NOTE 1: ORIGINAL DRAWINGS INCLUDED HEREIN ARE FOR REFERENCE AND SHALL NOT SUBSTITUTE FOR FIELD VERIFICATION IN AREAS OF PROPOSED WORK.

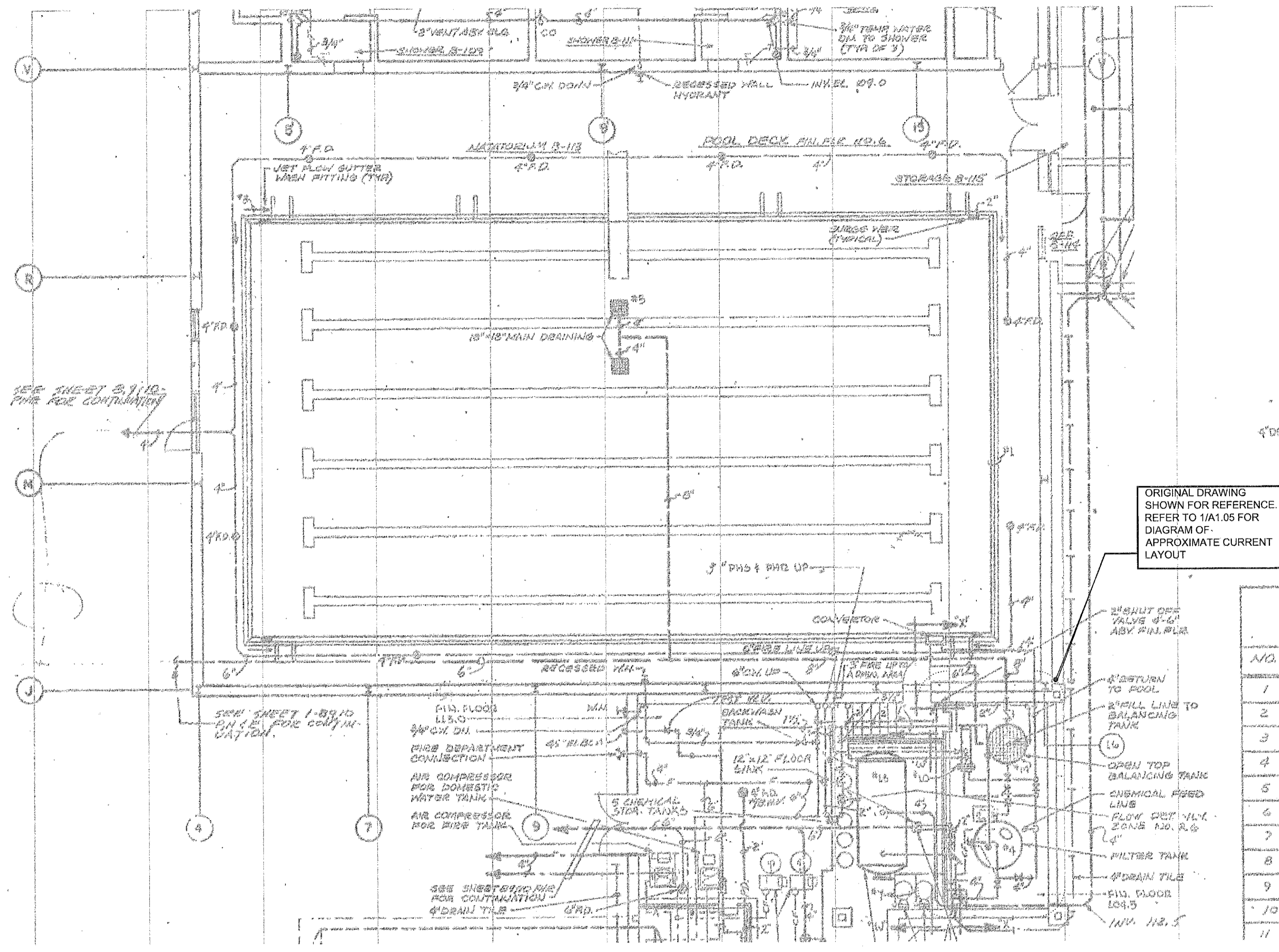


**1** SECTION @ FILTER & TANK ROOM  
A1.01 SCALE: 1/8" = 1'

ORIGINAL

PURPOSE FOR ORIGINAL DRAWING INCLUSION: TO SHOW ORIGINAL CONDITIONS AND RELATIONSHIPS.  
NOTE 1: ORIGINAL DRAWINGS INCLUDED HEREIN ARE FOR REFERENCE AND SHALL NOT SUBSTITUTE FOR FIELD VERIFICATION IN AREAS OF PROPOSED WORK.

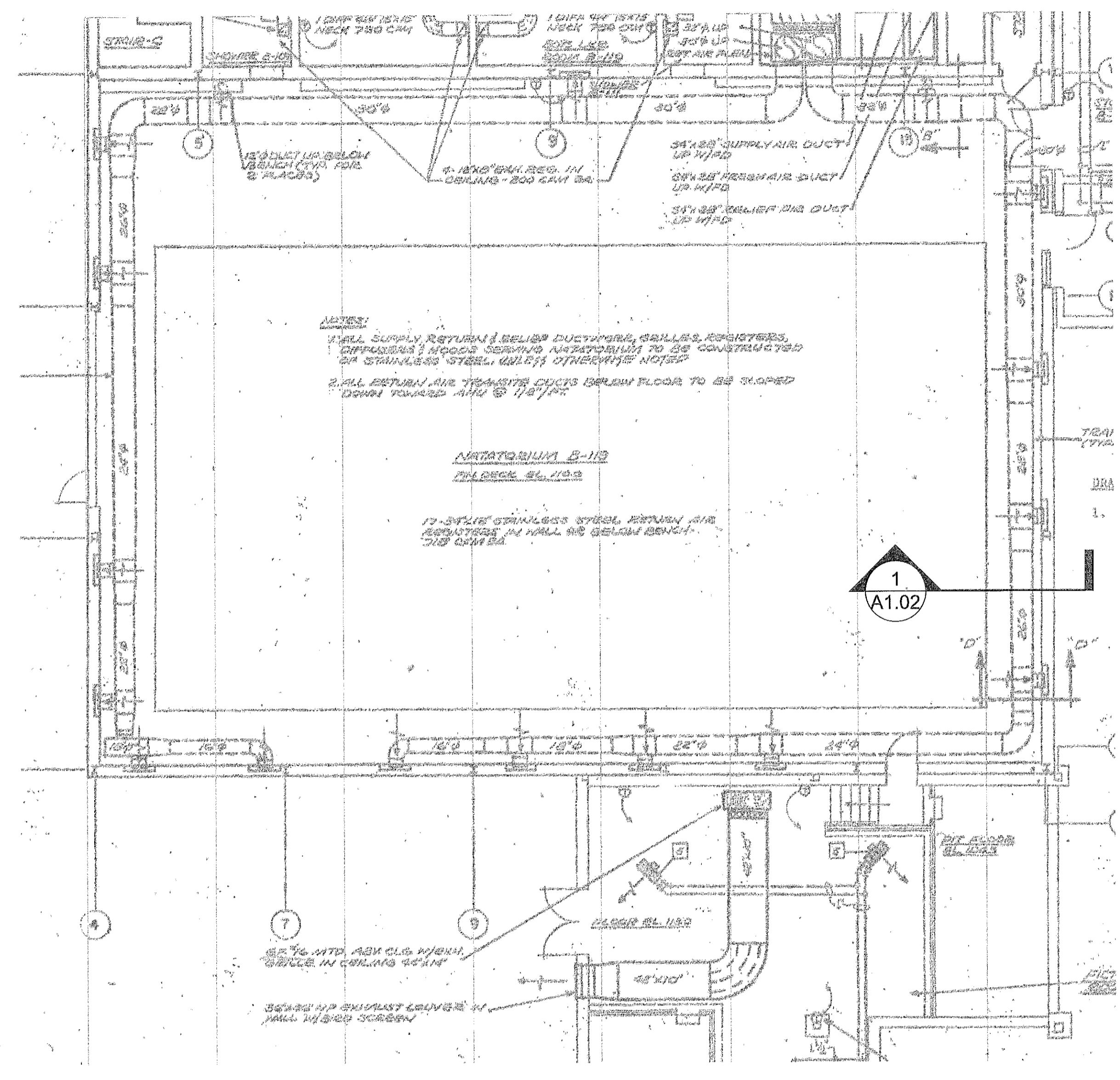
2018 Repair



**3** PLUMBING PLAN  
A1.02 SCALE: 1/8" = 1'

PURPOSE FOR ORIGINAL DRAWING INCLUSION: TO SHOW COMPLETE SYSTEM OF DECK DRAINS INCLUDING LOCATIONS AND RELATED PIPING.  
NOTE 1: ORIGINAL DRAWINGS INCLUDED HEREIN ARE FOR REFERENCE AND SHALL NOT SUBSTITUTE FOR FIELD VERIFICATION IN AREAS OF PROPOSED WORK.  
NOTE 2: IF DECK DRAIN SYSTEM IS DISTURBED, IT SHALL BE REPAIRED AND/OR PORTIONS REPLACED TO RETURN SYSTEM TO FULLY FUNCTIONAL CONDITION.

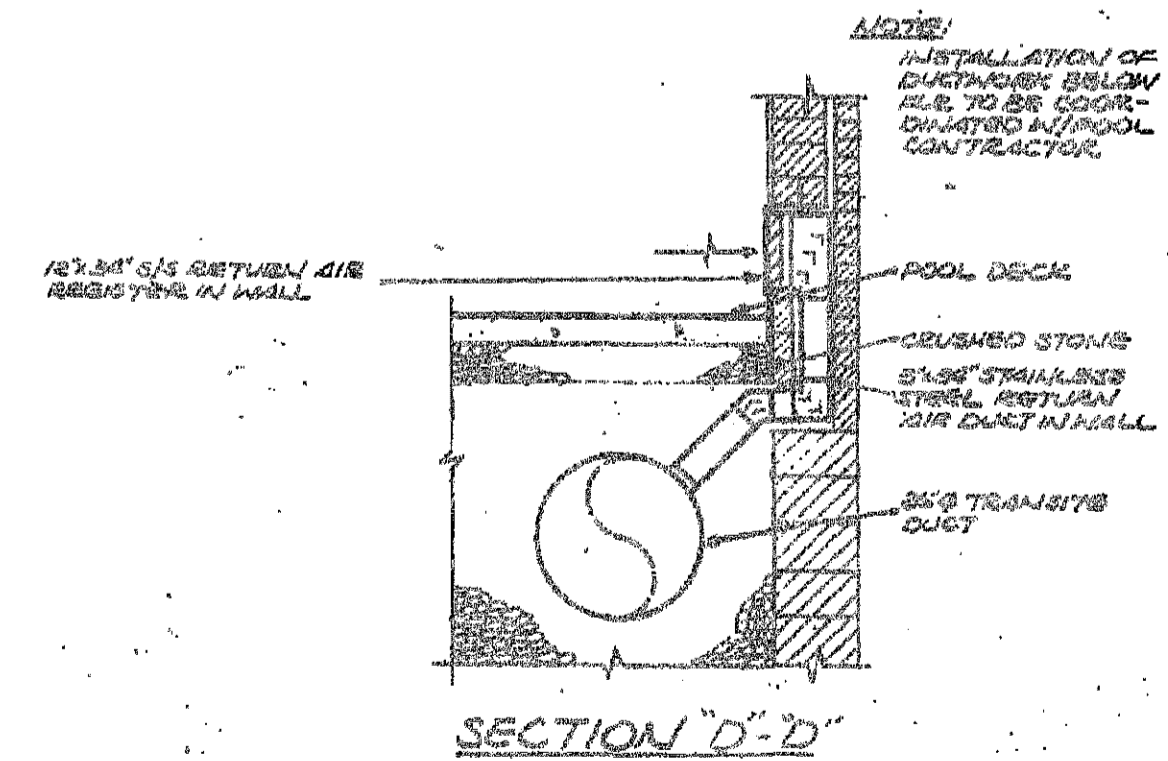
ORIGINAL



**2** MECHANICAL PLAN  
A1.02 SCALE: 1/8" = 1'

PURPOSE FOR ORIGINAL DRAWING INCLUSION: TO SHOW LOCATION OF BELOW DECK TRANSITE DUCT AIR SYSTEM.  
NOTE 1: ORIGINAL DRAWINGS INCLUDED HEREIN ARE FOR REFERENCE AND SHALL NOT SUBSTITUTE FOR FIELD VERIFICATION IN AREAS OF PROPOSED WORK.

ORIGINAL



**1** DUCT SECTION  
A1.02 SCALE: 3/8" = 1'

PURPOSE FOR ORIGINAL DRAWING INCLUSION: TO SHOW APPROPRIATE LOCATION & CONFIGURATION OF ORIGINAL TRANSITE DUCT AIR SYSTEM.  
NOTE 1: ORIGINAL DRAWINGS INCLUDED HEREIN ARE FOR REFERENCE AND SHALL NOT SUBSTITUTE FOR FIELD VERIFICATION IN AREAS OF PROPOSED WORK.  
NOTE 2: REPLACEMENT OF POOL PIPING IS INTENDED TO BE COMPLETED WITHOUT DISTURBING THE TRANSITE RETURN AIR DUCT. IF TRANSITE DUCT IS DISTURBED, CONTRACTOR SHALL NOTIFY HARFORD COUNTY SCHOOL SYSTEM TO DETERMINE IF CONTAINMENT OR MITIGATION MEASURES ARE REQUIRED.

ORIGINAL

ARCHITECT  
**SCS** ARCHITECTS  
9211 CORPORATE BLVD, SUITE 340  
ROCKVILLE, MD 20850  
301-770-0177(P) 301-330-3224(F)

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COMPREHENSIVE  
STRUCTURAL SOLUTIONS  
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3	100% SUBMISSION	1/25/18
4	BID SUBMISSION	2/5/18

NORTH HARFORD  
MIDDLE SCHOOL  
POOL REPAIR

112 PYLESVILLE ROAD  
PYLESVILLE, MD

SHEET TITLE  
ORIGINAL  
MECHANICAL & PLUMBING  
CONSTRUCTION DOCS  
FOR REFERENCE

PROJECT NO.  
17013  
DATE  
2/5/18  
SCALE  
AS NOTED

SHEET NO.  
**A1.02**



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4	BID SUBMISSION	2/5/18

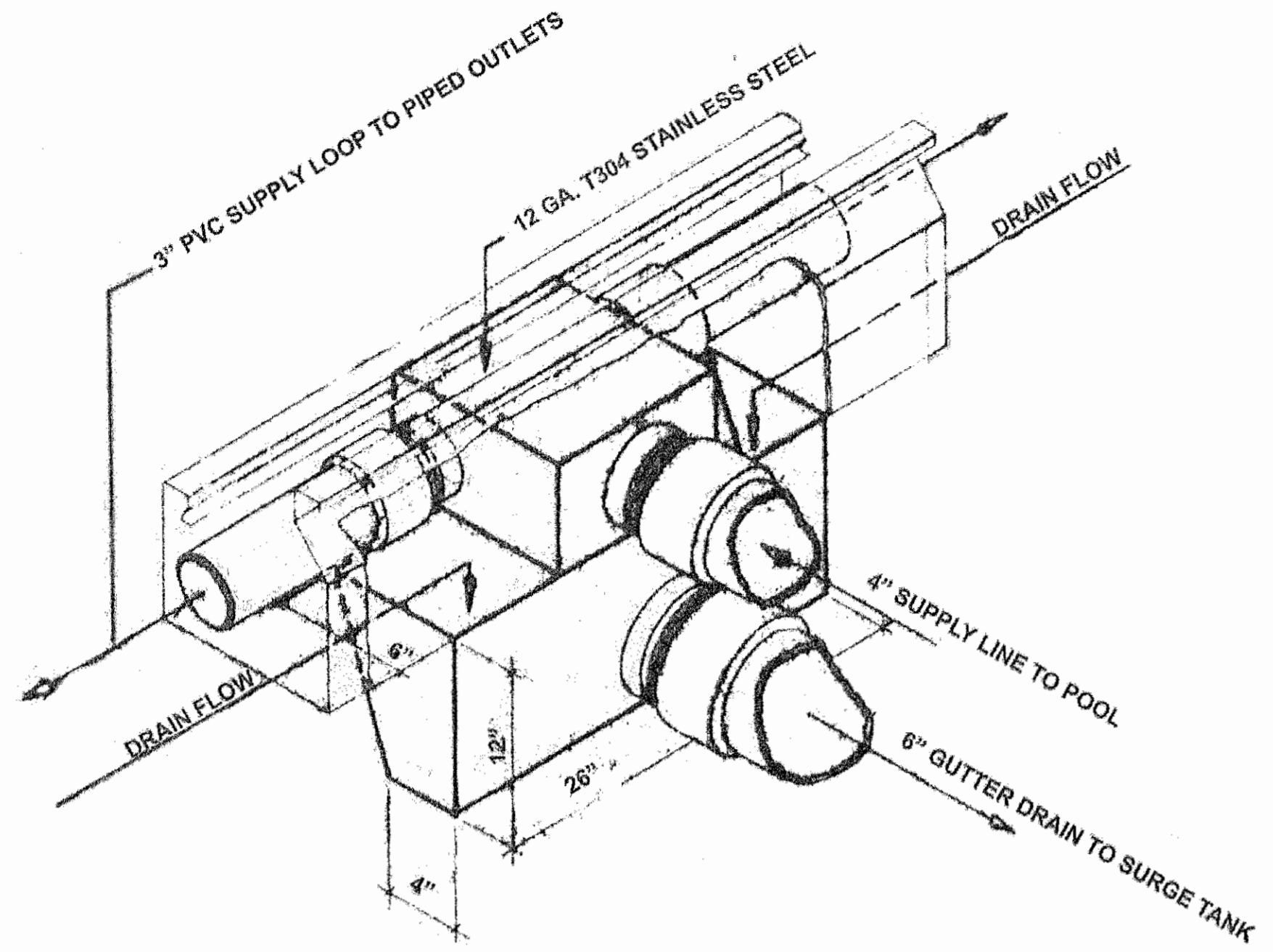
NORTH HARFORD  
MIDDLE SCHOOL  
POOL REPAIR

112 PYLESVILLE ROAD  
PYLESVILLE, MD

SHEET TITLE  
ORIGINAL  
POOL MECHANICAL  
FOR REFERENCE

PROJECT NO.  
17013  
DATE  
2/5/18  
SCALE  
AS NOTED  
SHEET NO.

A1.04

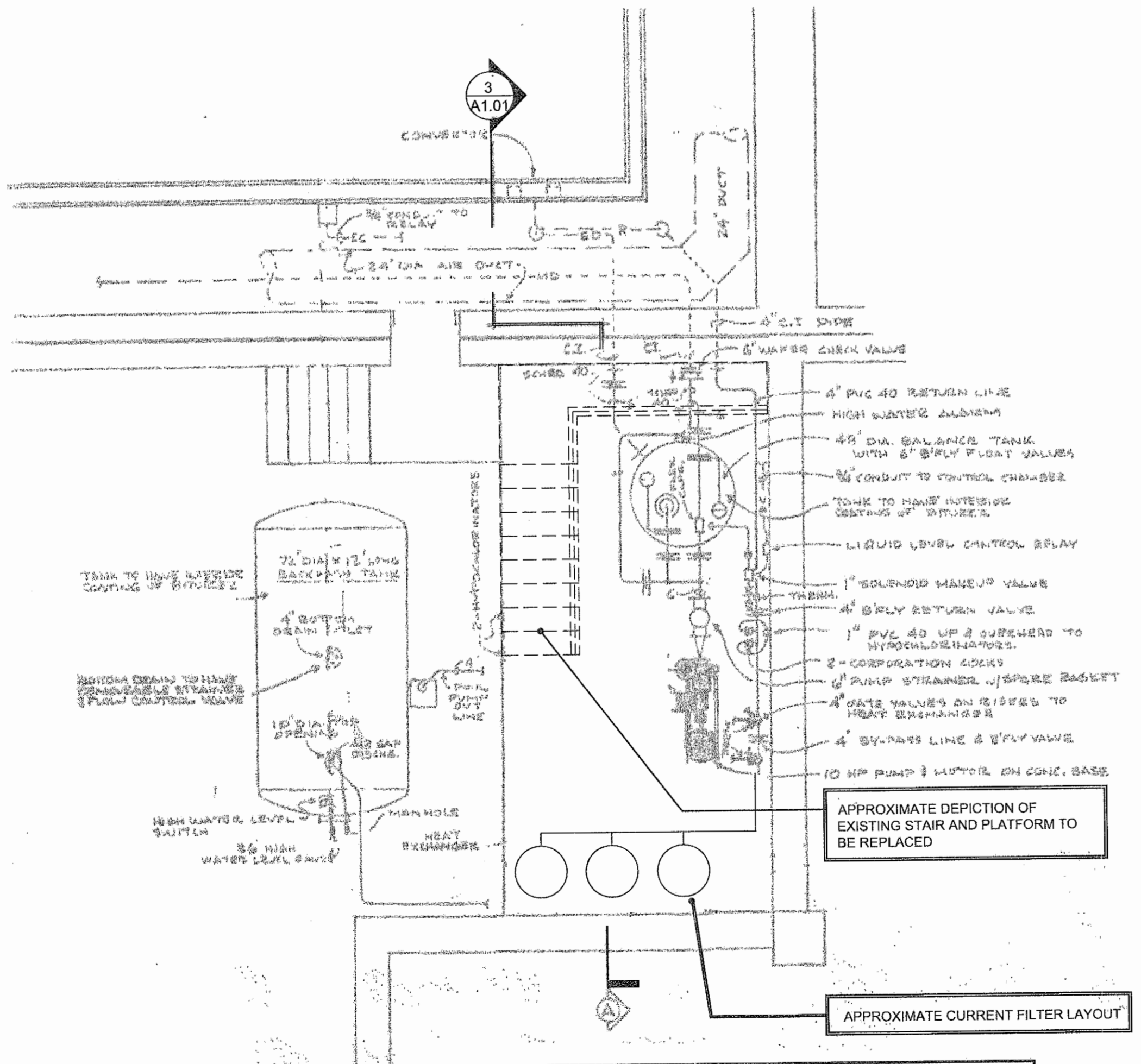


**4 ORIGINAL CONVERTER CONNECTIONS**  
A1.04 SCALE: 1-1/2" = 1'  
**ORIGINAL**

PURPOSE FOR ORIGINAL DRAWING INCLUSION: TO SHOW ORIGINAL CONDITIONS AND RELATIONSHIPS.  
NOTE 1: ORIGINAL DRAWINGS INCLUDED HEREIN ARE FOR REFERENCE AND SHALL NOT SUBSTITUTE FOR FIELD VERIFICATION IN AREAS OF PROPOSED WORK.

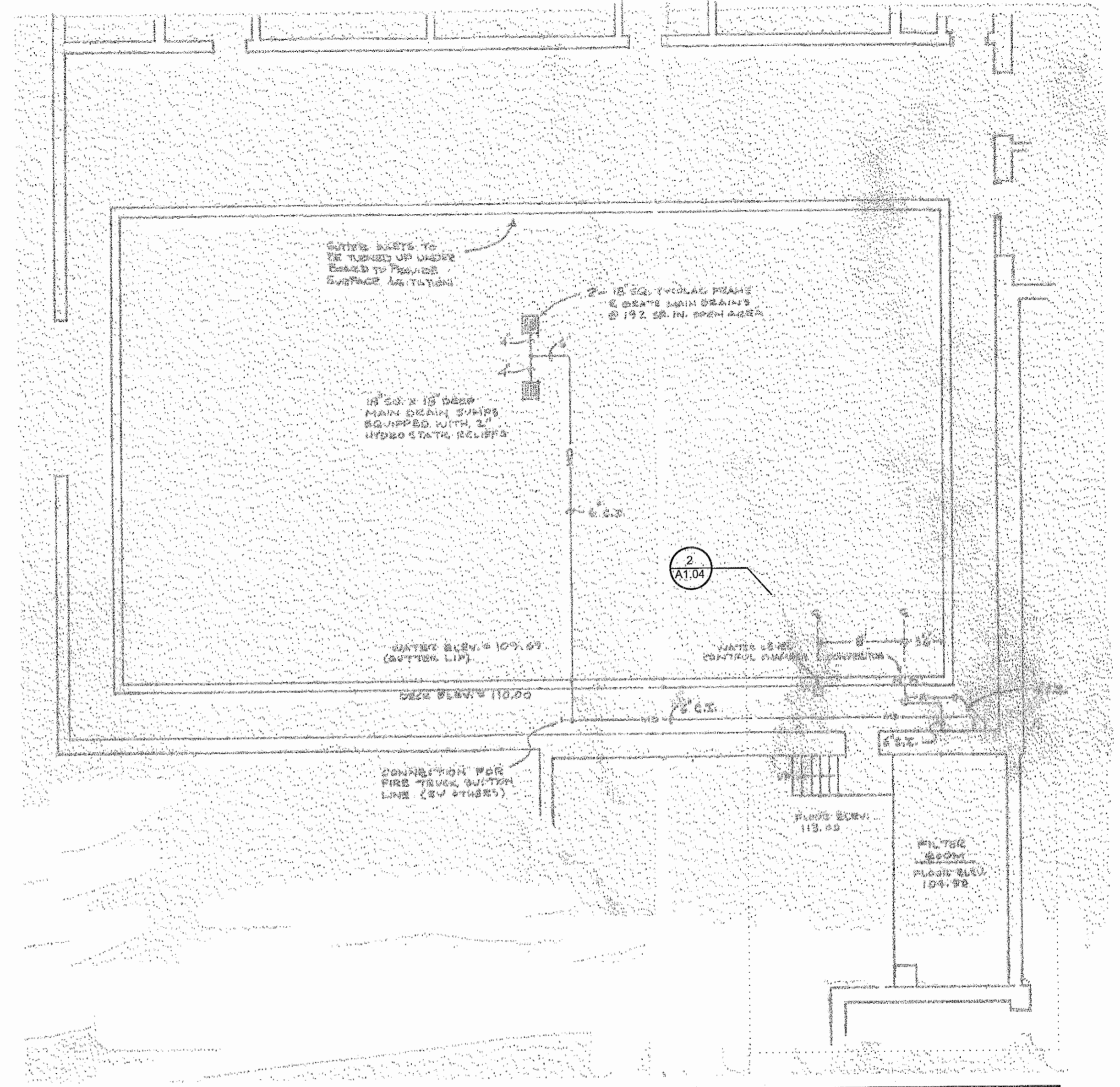
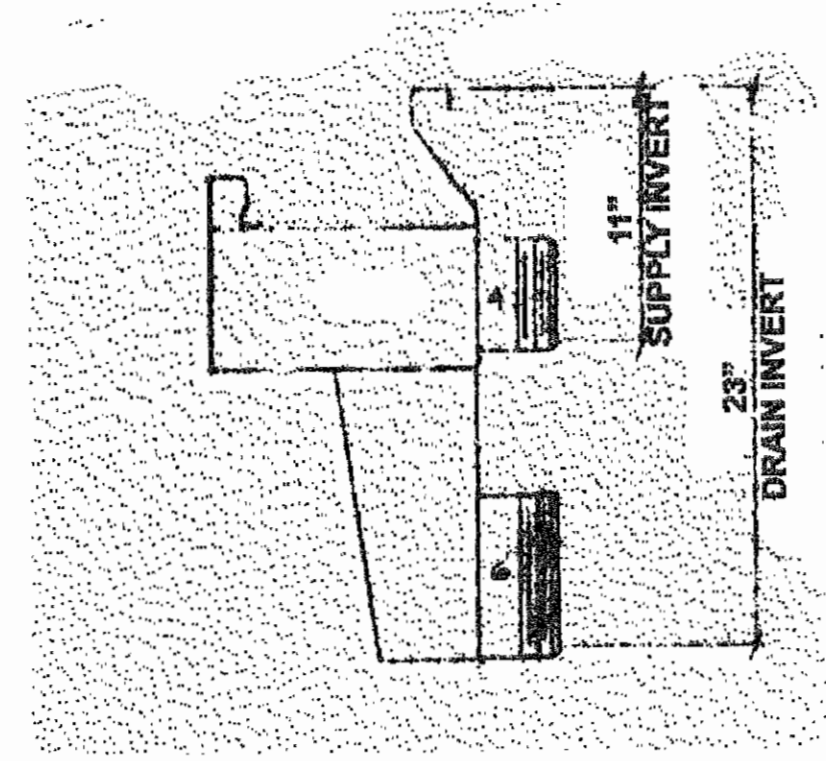
**5 ORIGINAL CONVERTER ISOMETRIC**  
A1.04 SCALE: 1" = 1'  
**ORIGINAL**

PURPOSE FOR ORIGINAL DRAWING INCLUSION: TO SHOW ORIGINAL CONDITIONS AND RELATIONSHIPS.  
NOTE 1: ORIGINAL DRAWINGS INCLUDED HEREIN ARE FOR REFERENCE AND SHALL NOT SUBSTITUTE FOR FIELD VERIFICATION IN AREAS OF PROPOSED WORK.



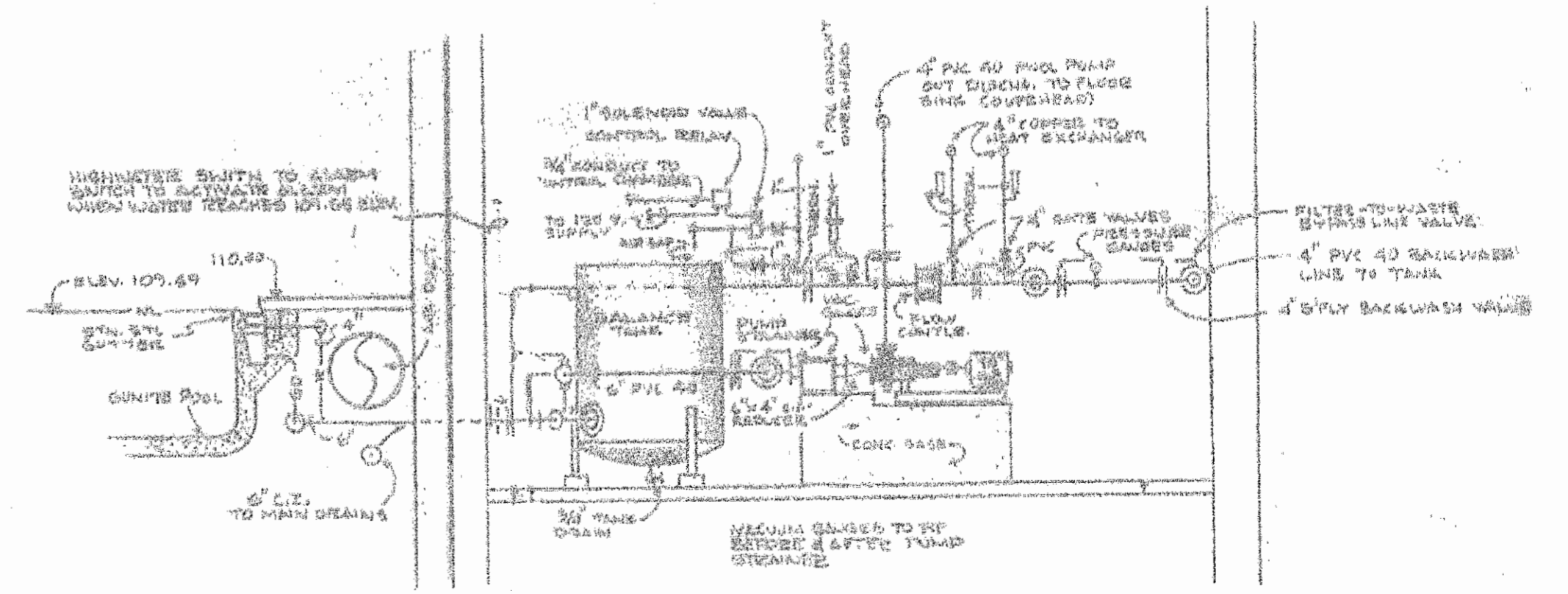
**2 EXISTING FILTER ROOM PLAN**  
A1.04 SCALE: 1/4" = 1'  
**ORIGINAL**

PURPOSE FOR ORIGINAL DRAWING INCLUSION: TO SHOW ORIGINAL CONDITIONS AND RELATIONSHIPS.  
NOTE 1: ORIGINAL DRAWINGS INCLUDED HEREIN ARE FOR REFERENCE AND SHALL NOT SUBSTITUTE FOR FIELD VERIFICATION IN AREAS OF PROPOSED WORK.



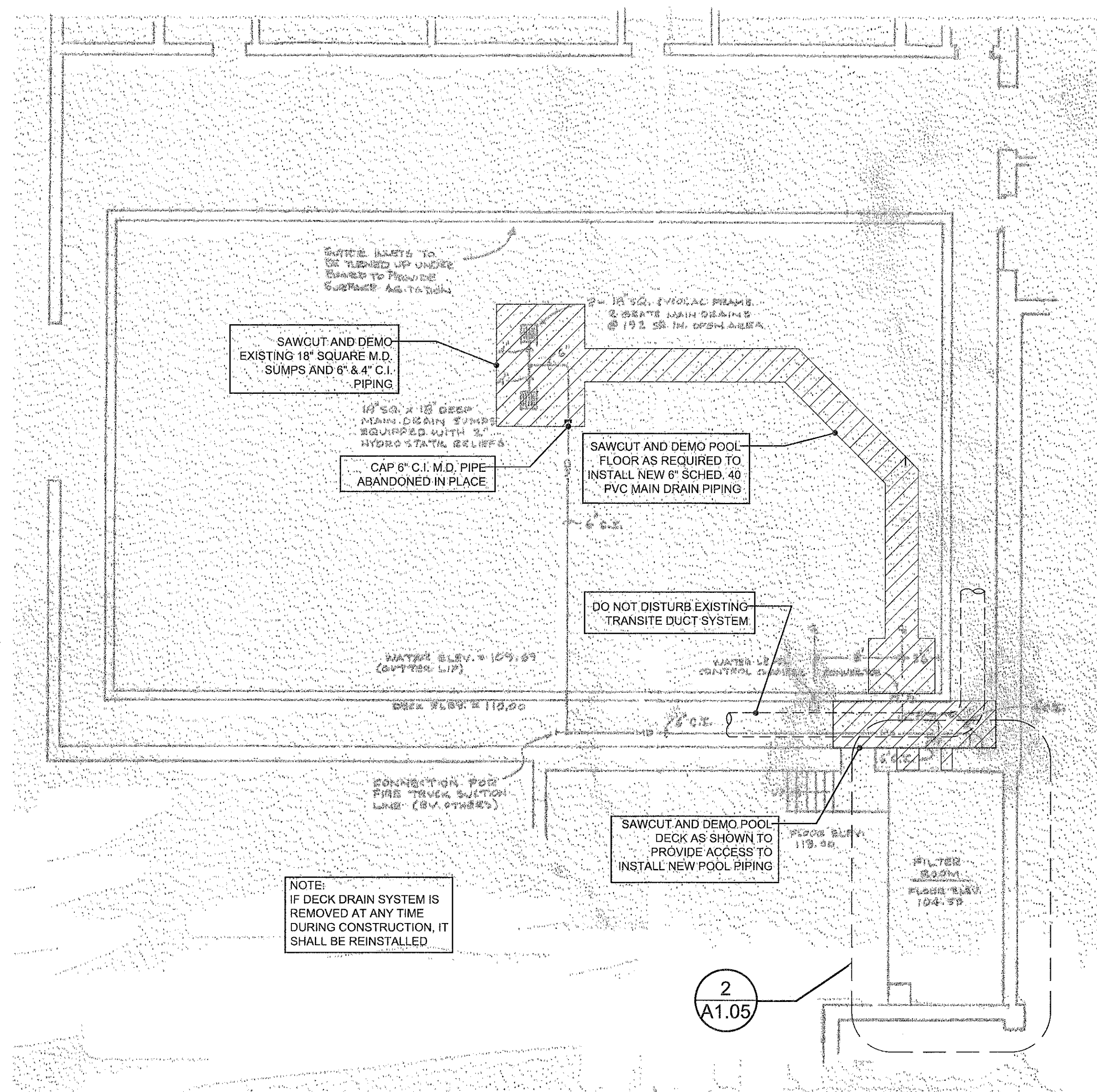
**3 EXISTING POOL PIPING PLAN**  
A1.04 SCALE: 1/8" = 1'  
**ORIGINAL**

PURPOSE FOR ORIGINAL DRAWING INCLUSION: TO SHOW ORIGINAL CONDITIONS AND RELATIONSHIPS.  
NOTE 1: ORIGINAL DRAWINGS INCLUDED HEREIN ARE FOR REFERENCE AND SHALL NOT SUBSTITUTE FOR FIELD VERIFICATION IN AREAS OF PROPOSED WORK.



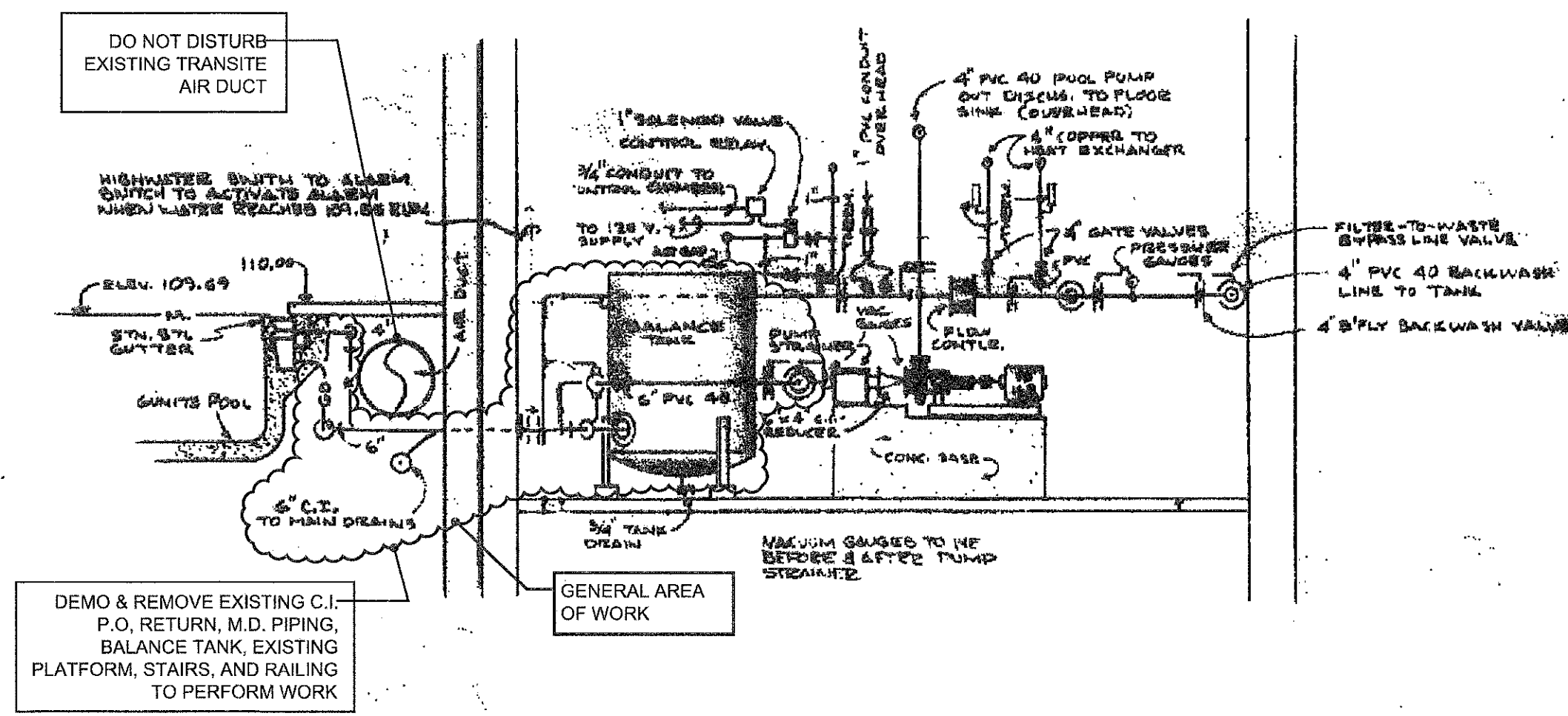
**1 EXISTING MECHANICAL SECTION**  
A1.04 SCALE: 1/4" = 1'  
**ORIGINAL**

PURPOSE FOR ORIGINAL DRAWING INCLUSION: TO SHOW ORIGINAL CONDITIONS AND RELATIONSHIPS.  
NOTE 1: ORIGINAL DRAWINGS INCLUDED HEREIN ARE FOR REFERENCE AND SHALL NOT SUBSTITUTE FOR FIELD VERIFICATION IN AREAS OF PROPOSED WORK.



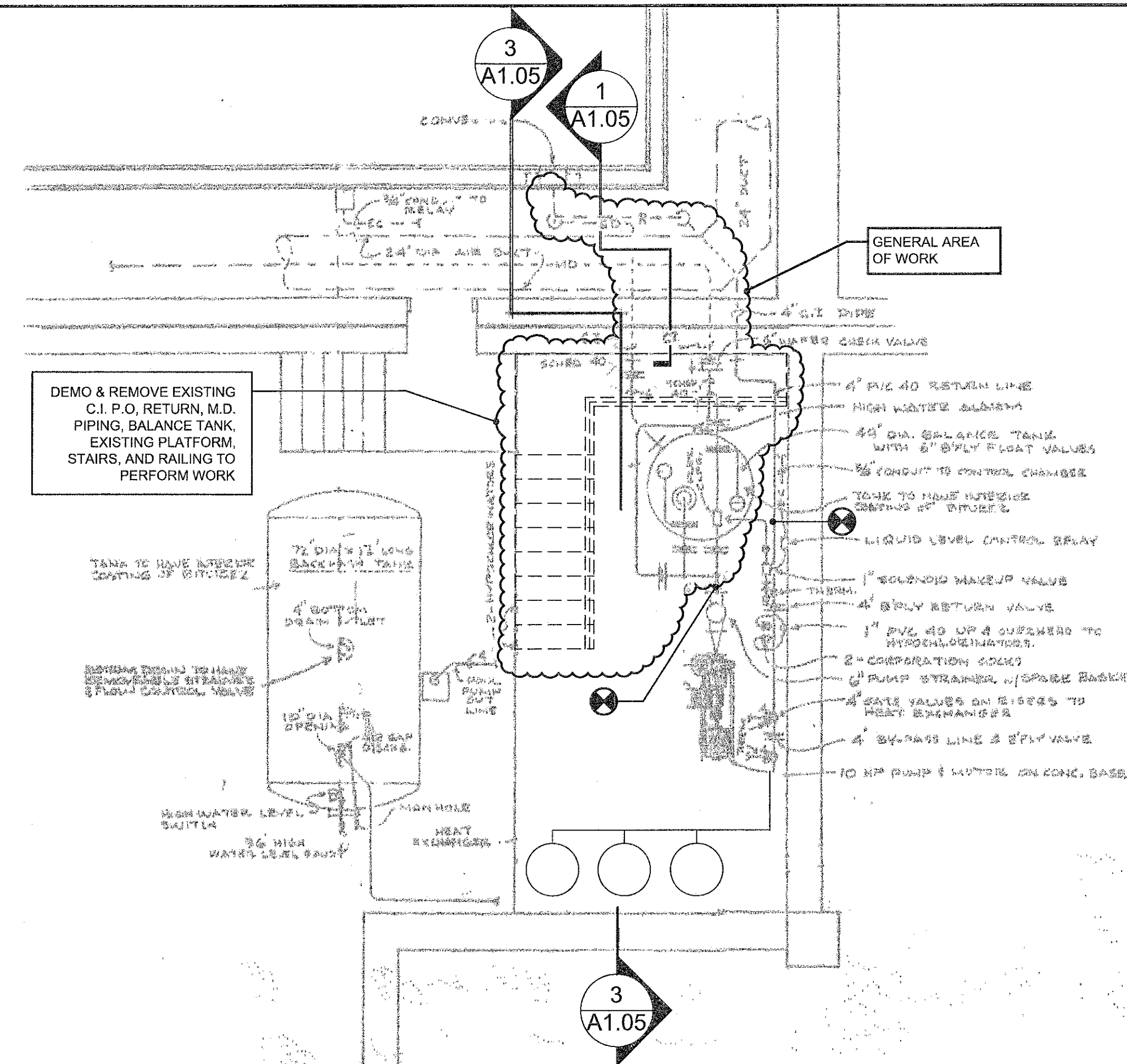
**4 EXISTING POOL PIPING PLAN - DEMOLITION**  
 SCALE: 1/8" = 1'  
**ORIGINAL**

PURPOSE FOR ORIGINAL DRAWING INCLUSION: TO SHOW ORIGINAL CONDITIONS AND RELATIONSHIPS.  
 NOTE 1: ORIGINAL DRAWINGS INCLUDED HEREIN ARE FOR REFERENCE AND SHALL NOT SUBSTITUTE FOR FIELD VERIFICATION IN AREAS OF PROPOSED WORK.



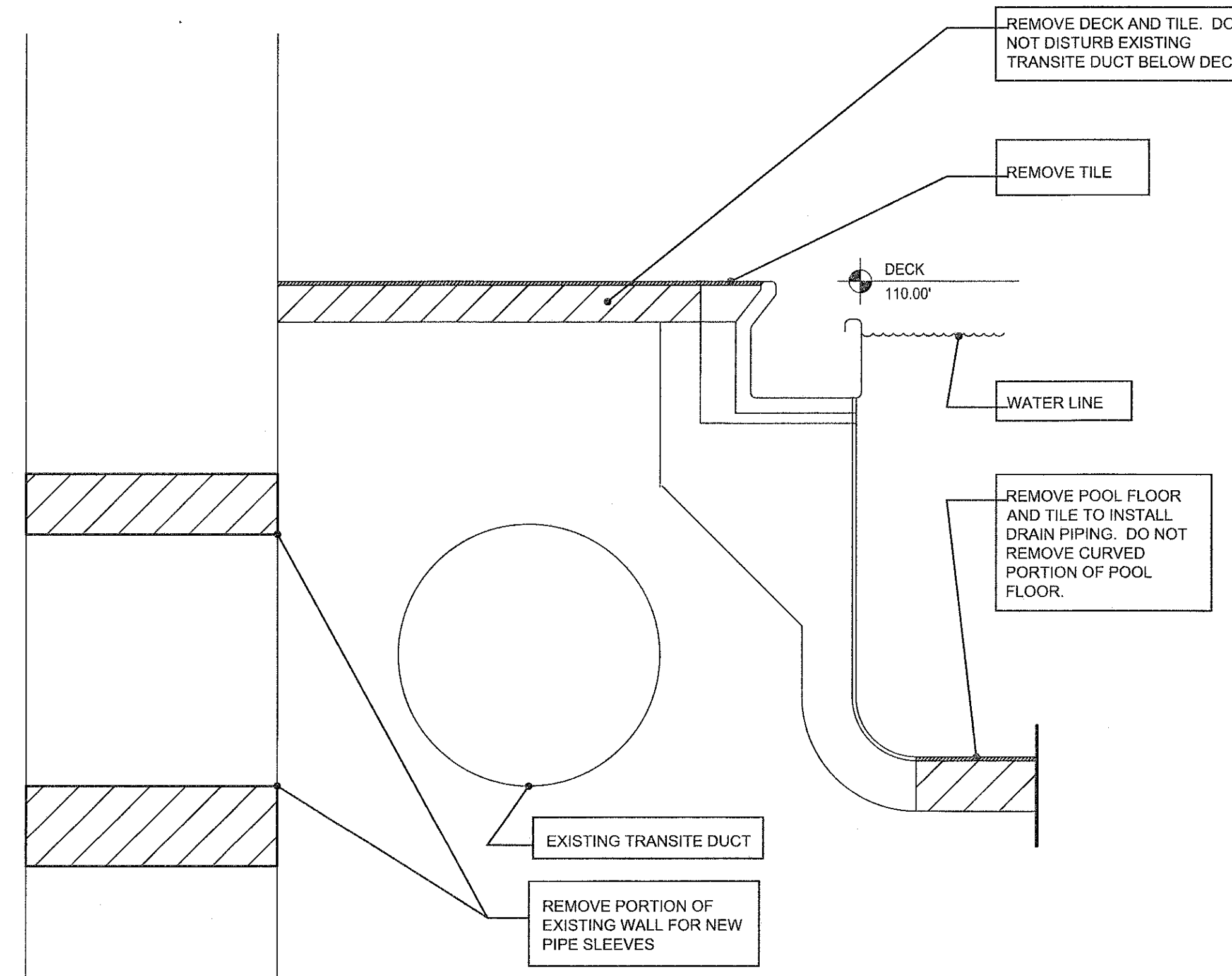
**3 EXISTING MECHANICAL SECTION - DEMOLITION**  
 SCALE: 1/4" = 1'  
**ORIGINAL**

PURPOSE FOR ORIGINAL DRAWING INCLUSION: TO SHOW ORIGINAL CONDITIONS AND RELATIONSHIPS.  
 NOTE 1: ORIGINAL DRAWINGS INCLUDED HEREIN ARE FOR REFERENCE AND SHALL NOT SUBSTITUTE FOR FIELD VERIFICATION IN AREAS OF PROPOSED WORK.



**2 EXISTING FILTER ROOM PLAN- DEMOLITION**  
 SCALE: 1/4" = 1'  
**ORIGINAL**

PURPOSE FOR ORIGINAL DRAWING INCLUSION: TO SHOW ORIGINAL CONDITIONS AND RELATIONSHIPS.  
 NOTE 1: ORIGINAL DRAWINGS INCLUDED HEREIN ARE FOR REFERENCE AND SHALL NOT SUBSTITUTE FOR FIELD VERIFICATION IN AREAS OF PROPOSED WORK.



**1 WALL & DECK DEMOLITION SECTION**  
 SCALE: 1" = 1'  
**ORIGINAL**

PURPOSE FOR ORIGINAL DRAWING INCLUSION: TO SHOW ORIGINAL CONDITIONS AND RELATIONSHIPS.  
 NOTE 1: ORIGINAL DRAWINGS INCLUDED HEREIN ARE FOR REFERENCE AND SHALL NOT SUBSTITUTE FOR FIELD VERIFICATION IN AREAS OF PROPOSED WORK.

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**SEI** BRIDLEN + BHR  
 STRUCTURAL ARCHITECTS  
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 ROCKVILLE, MD 20850  
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NORTH HARFORD  
 MIDDLE SCHOOL  
 POOL REPAIR

112 PYLESVILLE ROAD  
 PYLESVILLE, MD

SHEET TITLE  
 DEMOLITION PLAN

PROJECT NO.	17013
DATE	2/5/18
SCALE	AS NOTED
SHEET NO.	A1.05

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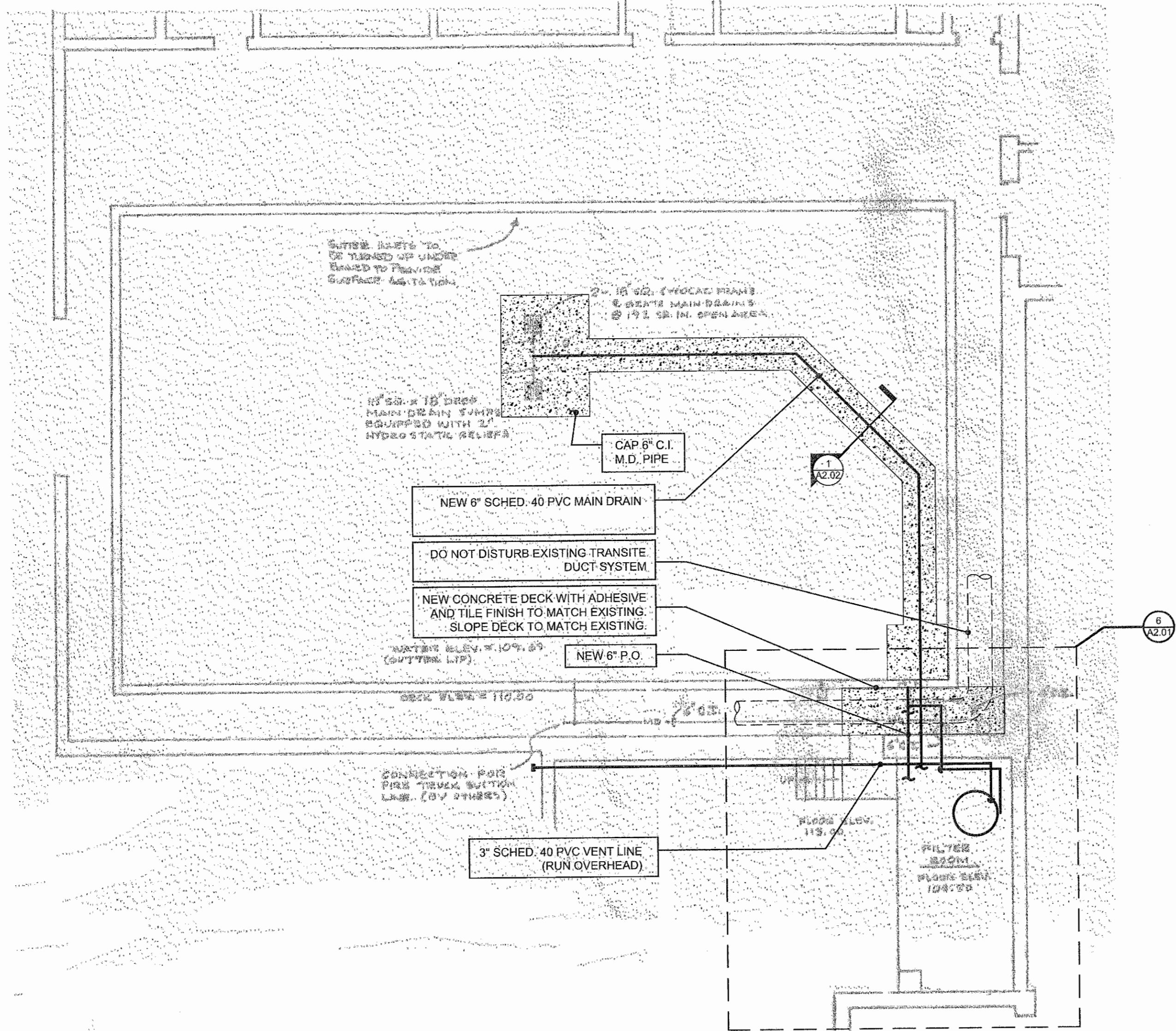
NO.	DESCRIPTION	DATE
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NORTH HARFORD  
 MIDDLE SCHOOL  
 POOL REPAIR

112 PYLESVILLE ROAD  
 PYLESVILLE, MD

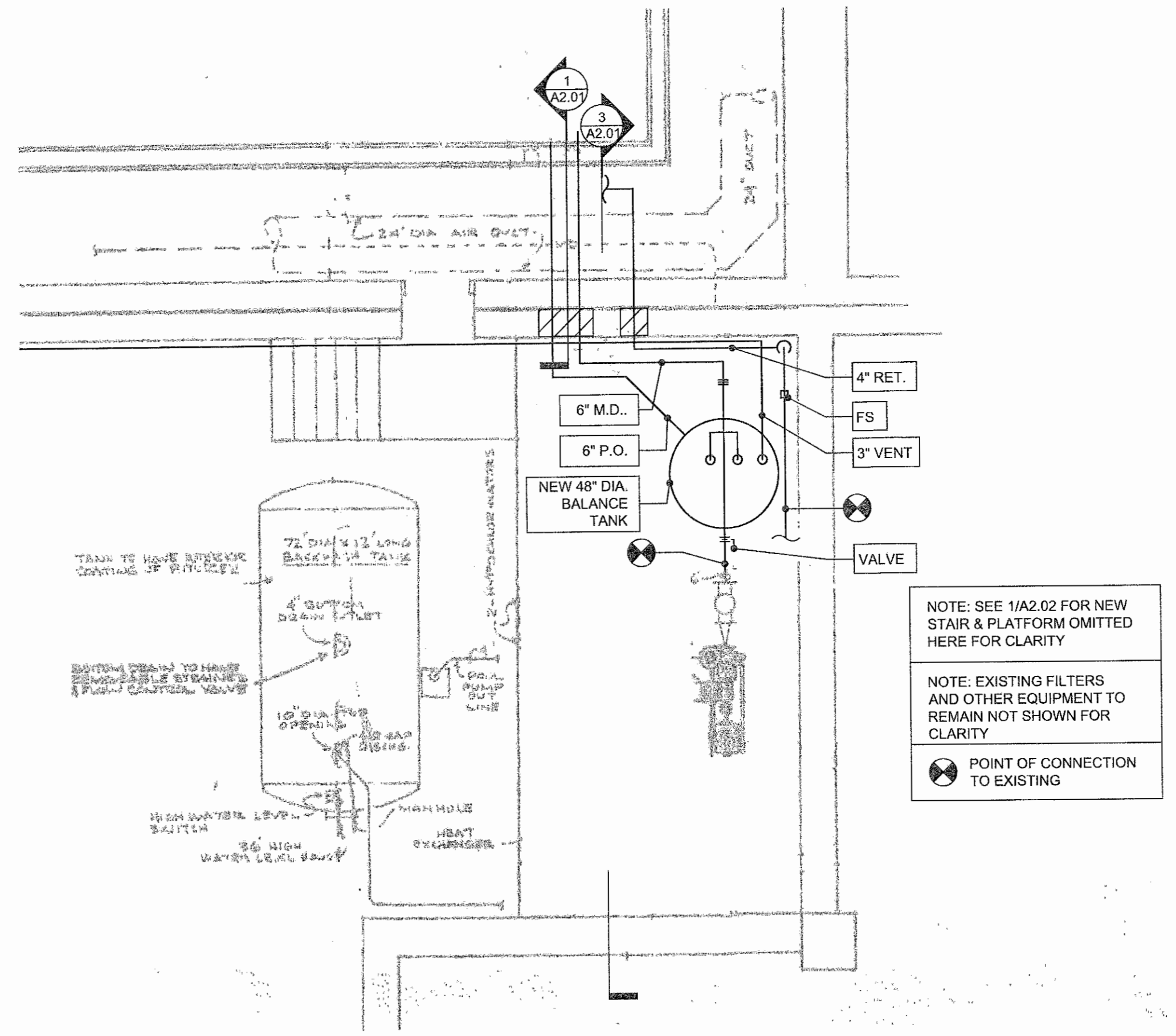
PROPOSED  
 PLANS & SECTIONS

PROJECT NO.	17013
DATE	2/5/18
SCALE	AS NOTED
SHEET NO.	A2.01



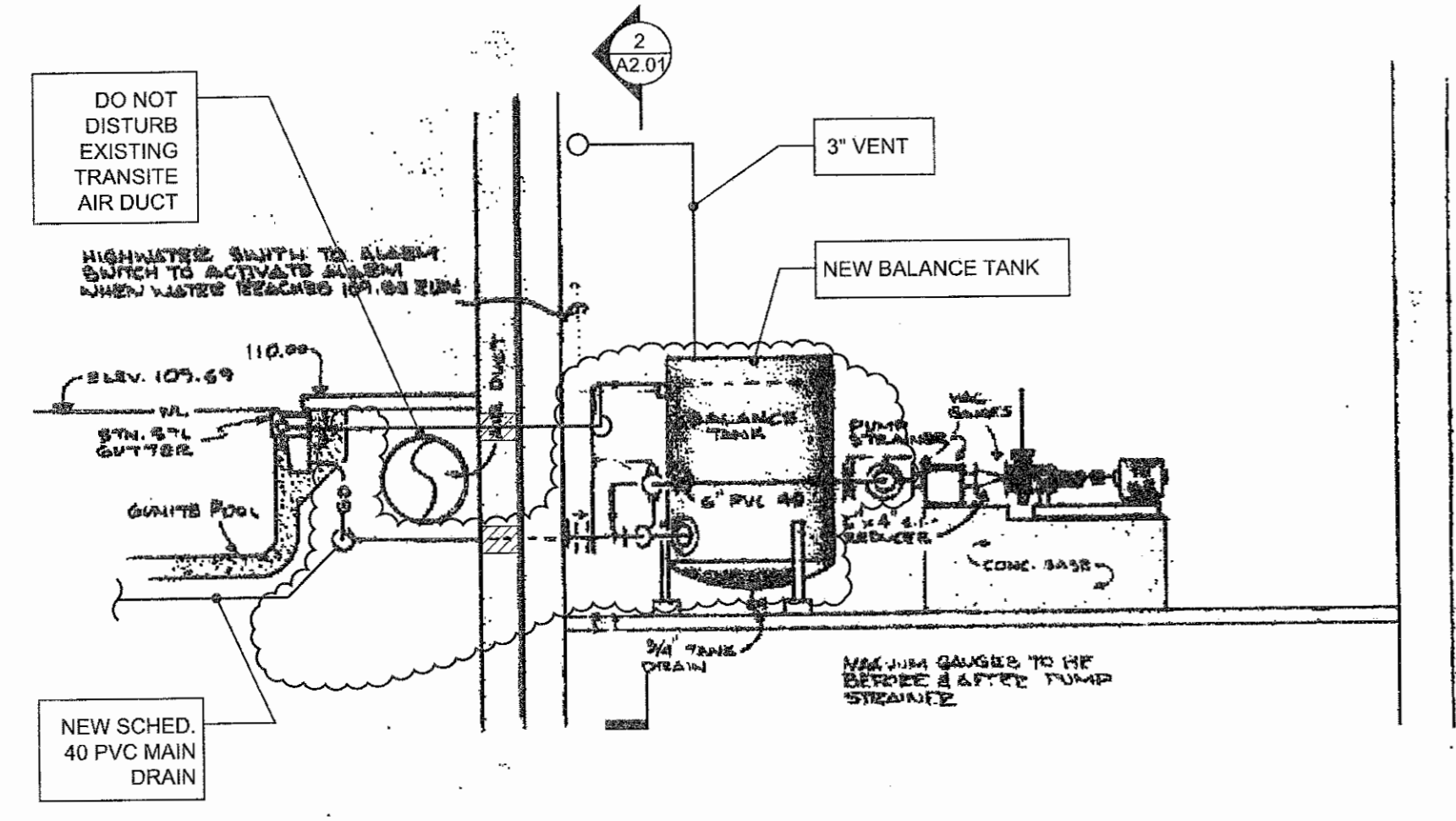
**5** PROPOSED POOL PIPING PLAN  
 A2.01 SCALE: 1/8" = 1'  
**PROPOSED WORK**

PURPOSE FOR ORIGINAL DRAWING INCLUSION: TO SHOW ORIGINAL CONDITIONS AND RELATIONSHIPS.  
 NOTE 1: ORIGINAL DRAWINGS INCLUDED HEREIN ARE FOR REFERENCE AND SHALL NOT SUBSTITUTE FOR FIELD VERIFICATION IN AREAS OF PROPOSED WORK.



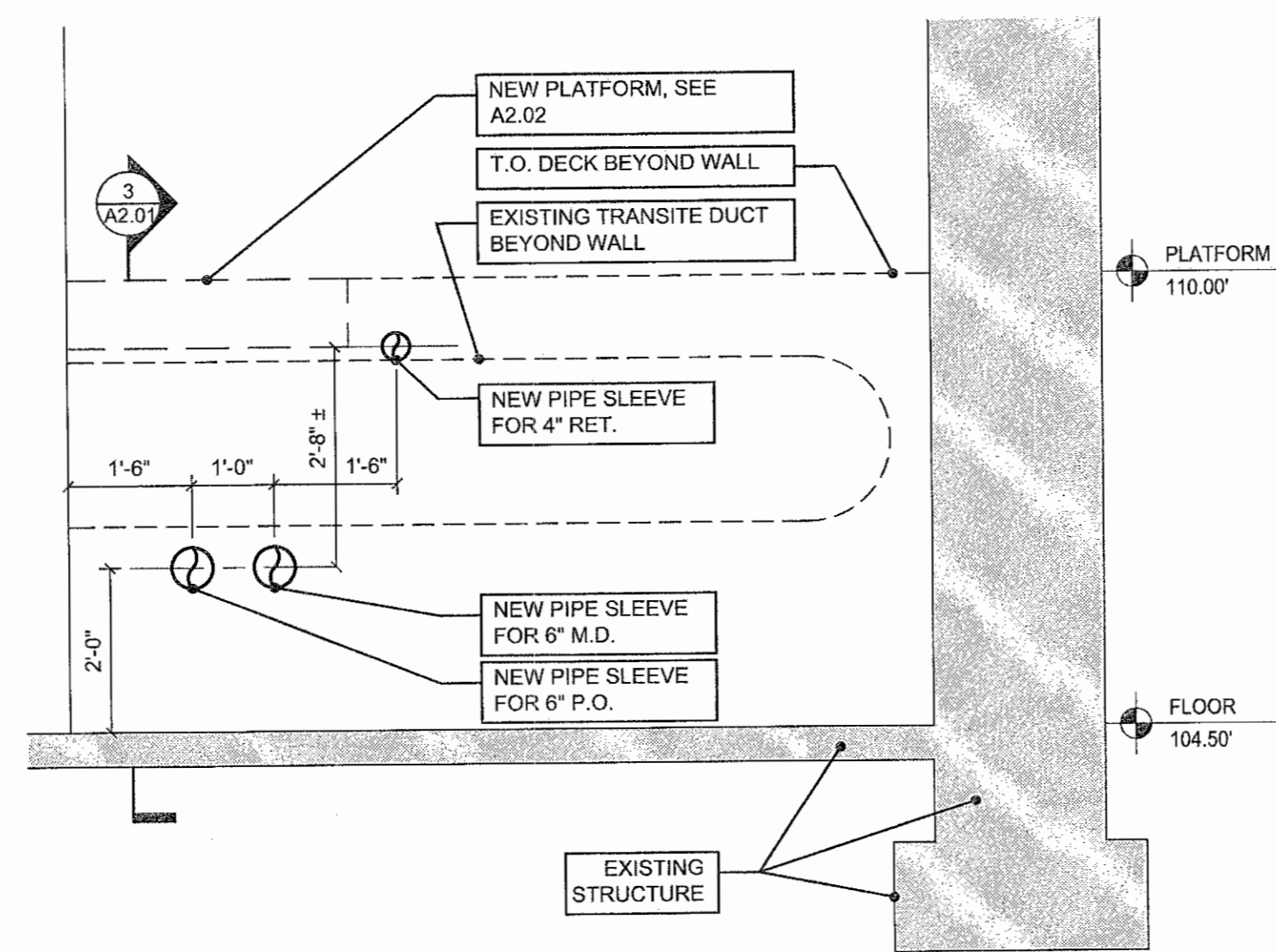
**6** PROPOSED FILTER RM. PIPING PLAN  
 A2.01 SCALE: 1/4" = 1'  
**PROPOSED WORK**

PURPOSE FOR ORIGINAL DRAWING INCLUSION: TO SHOW ORIGINAL CONDITIONS AND RELATIONSHIPS.  
 NOTE 1: ORIGINAL DRAWINGS INCLUDED HEREIN ARE FOR REFERENCE AND SHALL NOT SUBSTITUTE FOR FIELD VERIFICATION IN AREAS OF PROPOSED WORK.

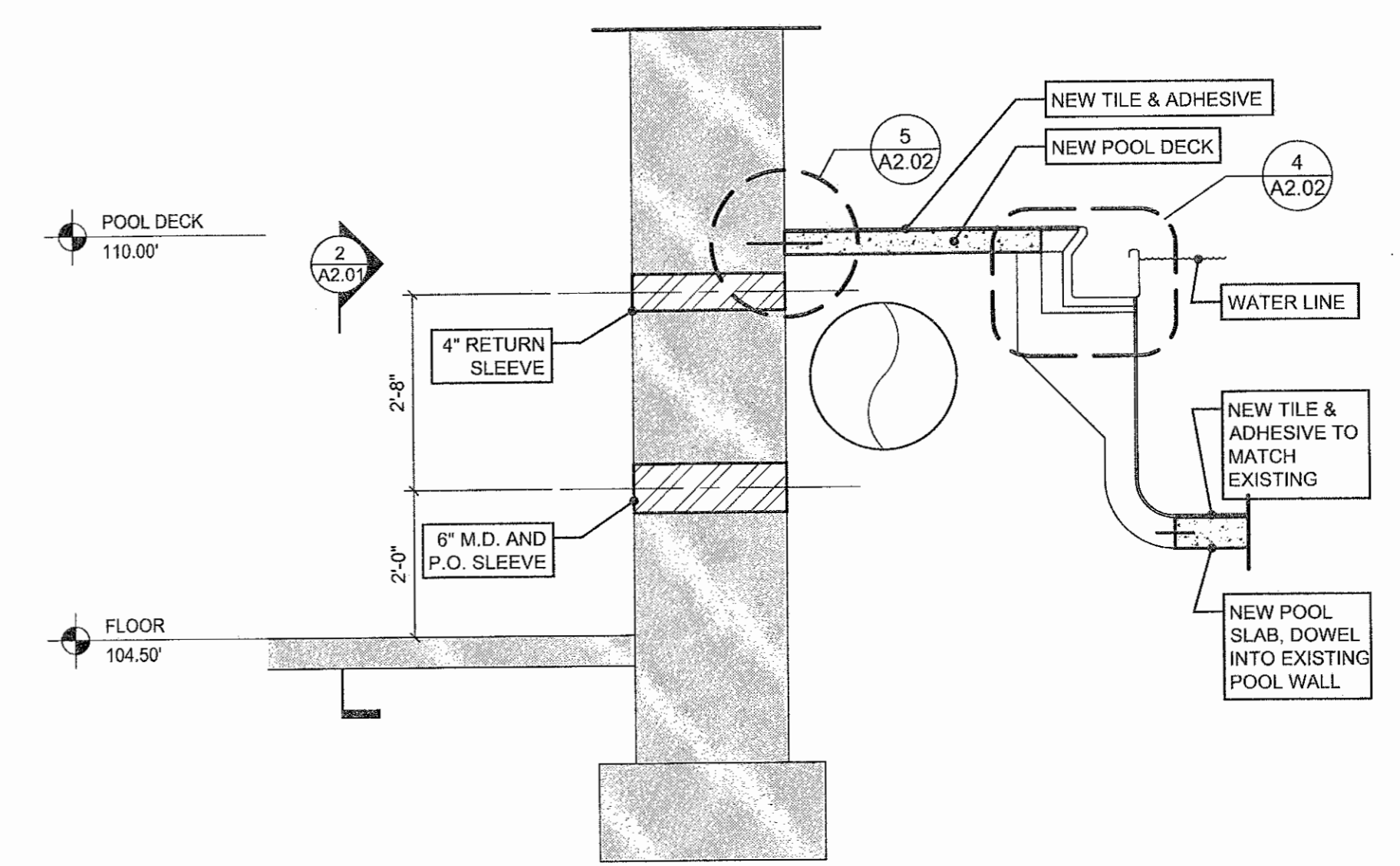


**3** PROPOSED PIPING SECTION  
 A2.01 SCALE: 1/4" = 1'  
**PROPOSED WORK**

PURPOSE FOR ORIGINAL DRAWING INCLUSION: TO SHOW ORIGINAL CONDITIONS AND RELATIONSHIPS.  
 NOTE 1: ORIGINAL DRAWINGS INCLUDED HEREIN ARE FOR REFERENCE AND SHALL NOT SUBSTITUTE FOR FIELD VERIFICATION IN AREAS OF PROPOSED WORK.



**2** PROP. SLEEVE LOCATION  
 A2.01 SCALE: 1/2" = 1'  
**PROP. WK.**



**1** PROPOSED WALL SECTION  
 A2.01 SCALE: 1/2" = 1'  
**PROPOSED WORK**



# 2018 Repair

ARCHITECT  
**SEI** MODEL ENGINEERING ARCHITECTS  
 9211 CORPORATE BLVD, SUITE 340  
 ROCKVILLE, MD 20850  
 301-770-0177(P) 301-330-3224(F)

STRUCTURAL  
**COMPREHENSIVE STRUCTURAL SOLUTIONS**  
 12410 MILESTONE CENTER DRIVE #600  
 GERMANTOWN, MD 20876  
 240-200-5599 (P)

PROFESSIONAL CERTIFICATION  
 I CERTIFY THAT THESE DOCUMENTS  
 WERE PREPARED BY OR APPROVED BY  
 ME AND THAT I AM A DULY LICENSED  
 ARCHITECT UNDER THE LAWS OF THE  
 STATE OF MARYLAND. LICENSE # 9893.  
 EXPIRATION DATE 03/27/18.

PROFESSIONAL SEAL:

### PRINTS ISSUED

NO.	DESCRIPTION	DATE
1	50% SUBMISSION	10/25/17
2	PERMIT SUBMISSION	12/4/17
3	100% SUBMISSION	1/25/18
4	BID SUBMISSION	2/5/18

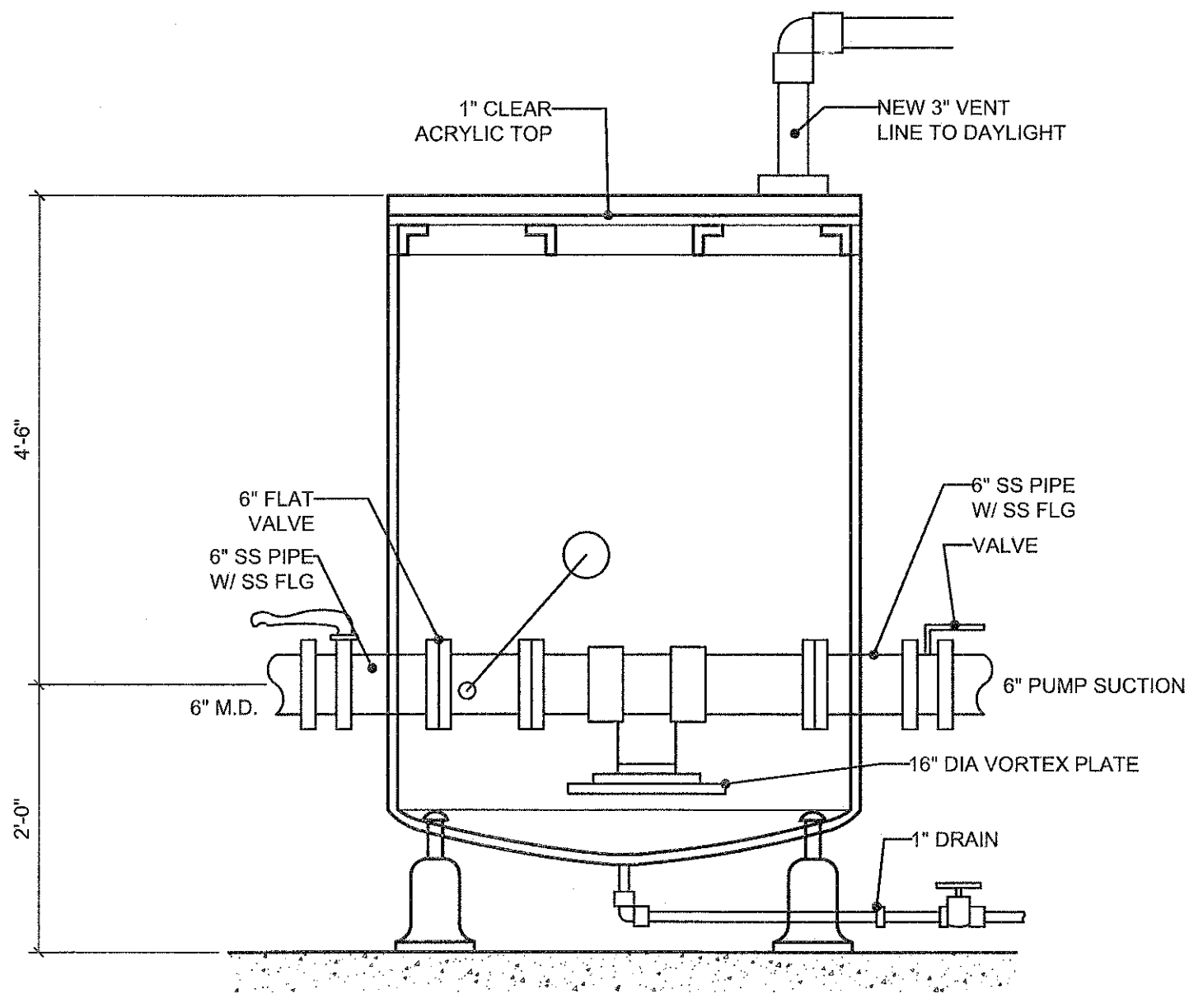
NORTH HARFORD  
 MIDDLE SCHOOL  
 POOL REPAIR

112 PYLESVILLE ROAD  
 PYLESVILLE, MD

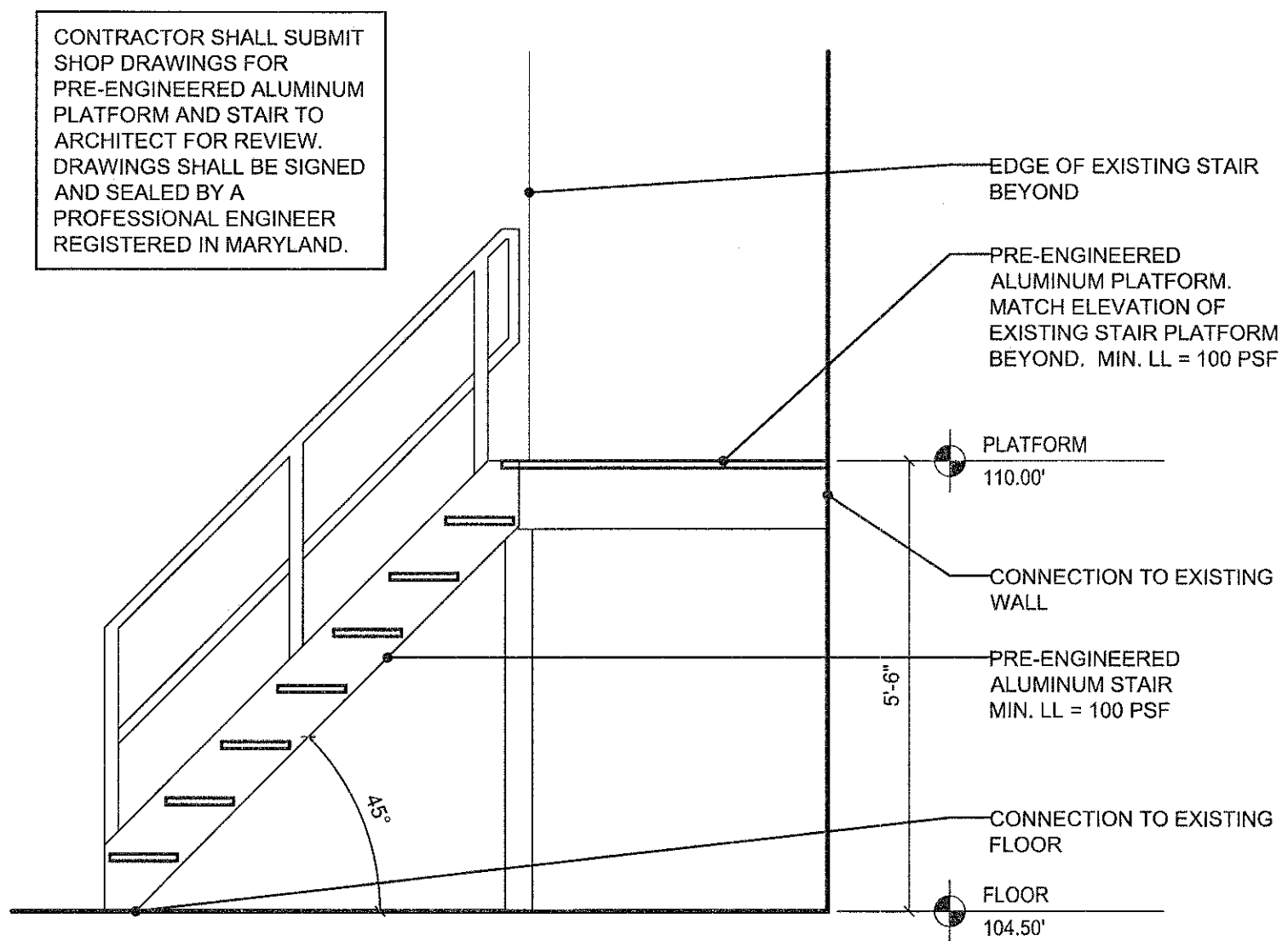
SHEET TITLE  
**DETAILS**

PROJECT NO.	17013
DATE	2/5/18
SCALE	AS NOTED
SHEET NO.	

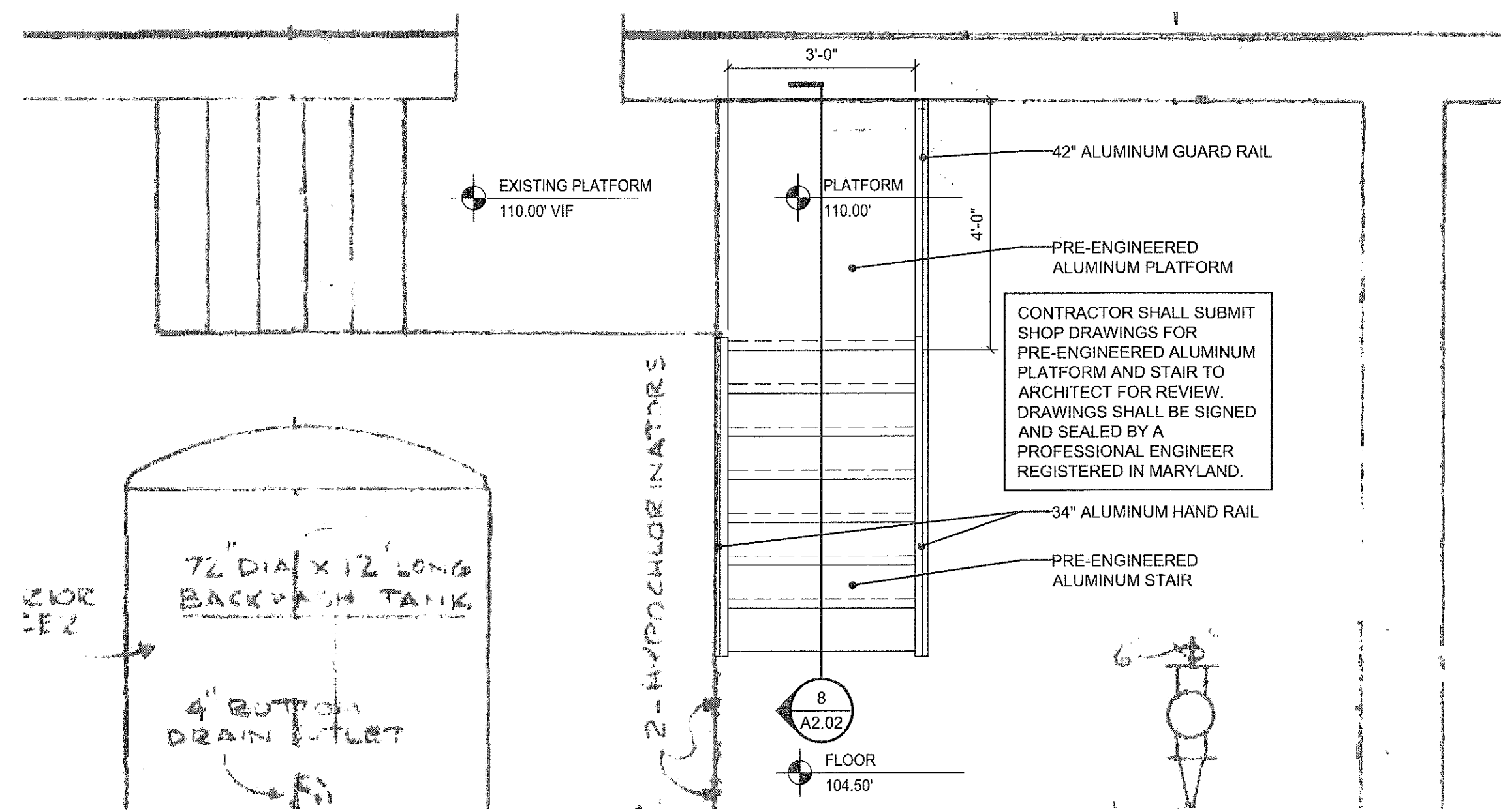
**A2.02**



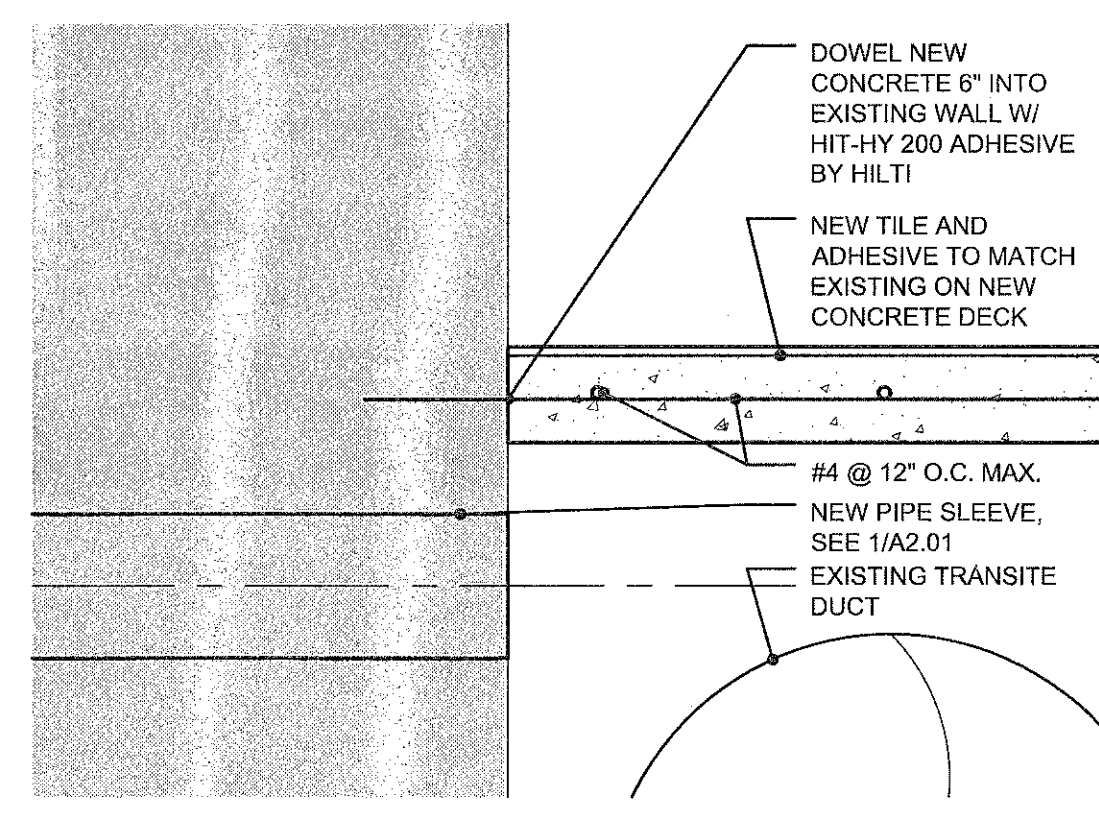
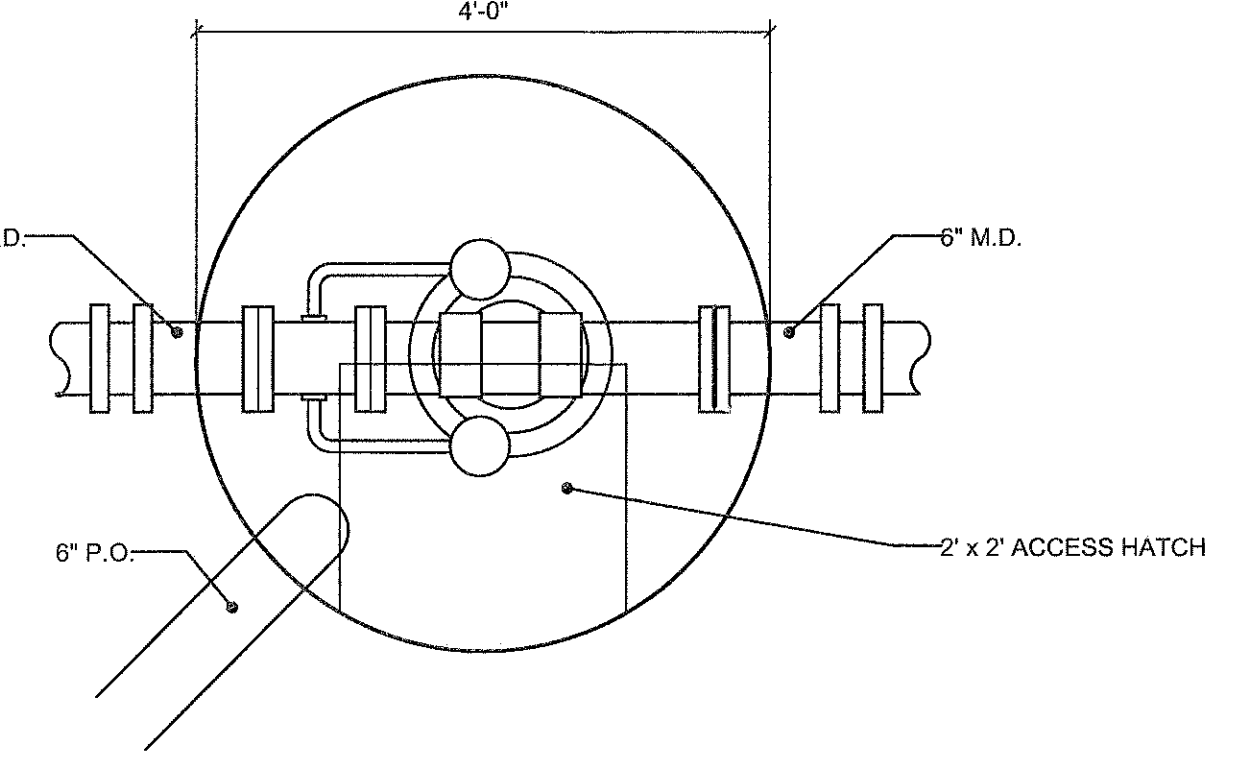
**6** PROPOSED STAINLESS STEEL BALANCE TANK  
 SCALE: 3/4"=1'-0"



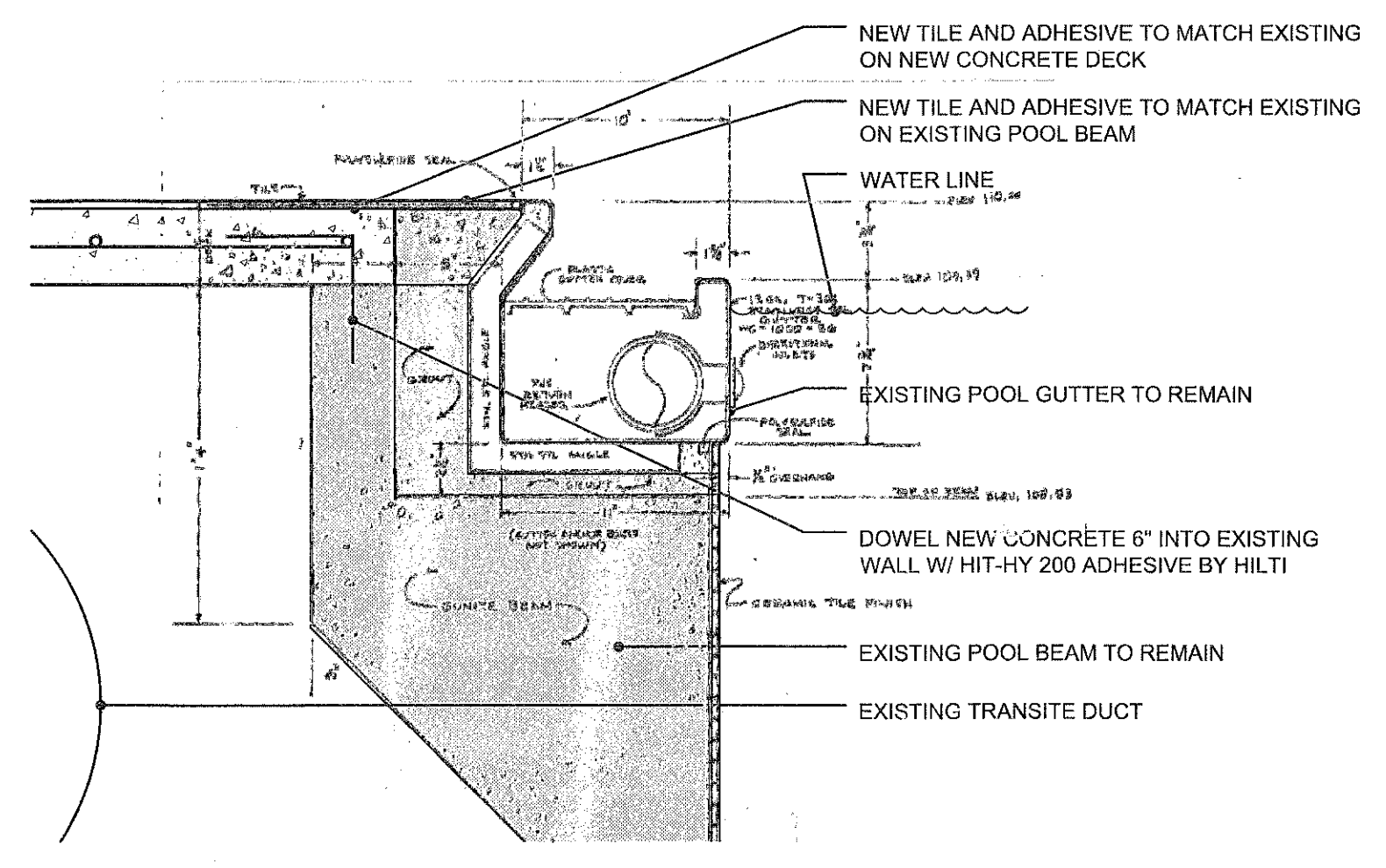
**8** PROPOSED PLATFORM & STAIR SECTION  
 SCALE: 1/2"=1'-0"



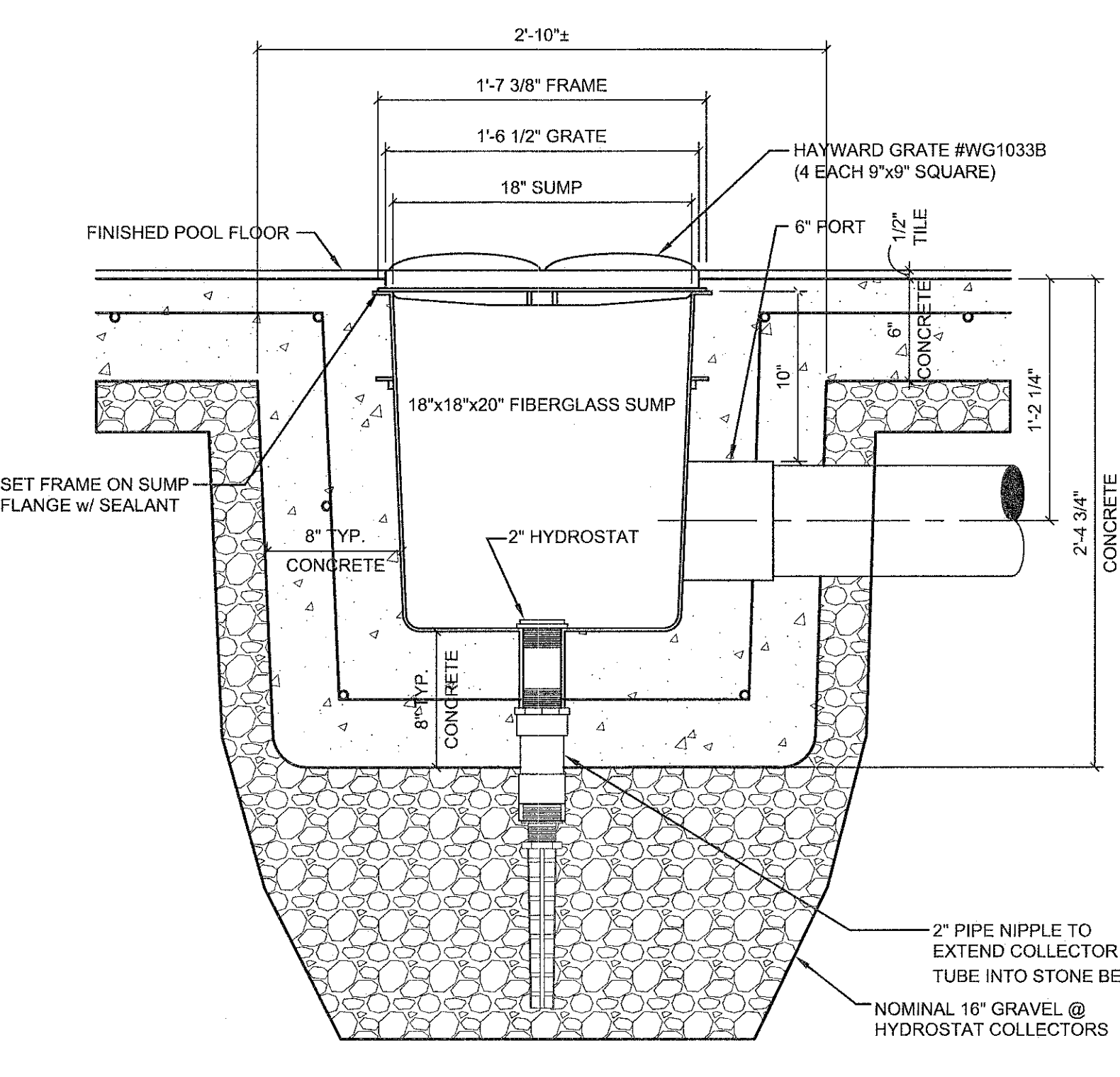
**7** PROPOSED PLATFORM & STAIR PLAN  
 SCALE: 1/2"=1'-0"



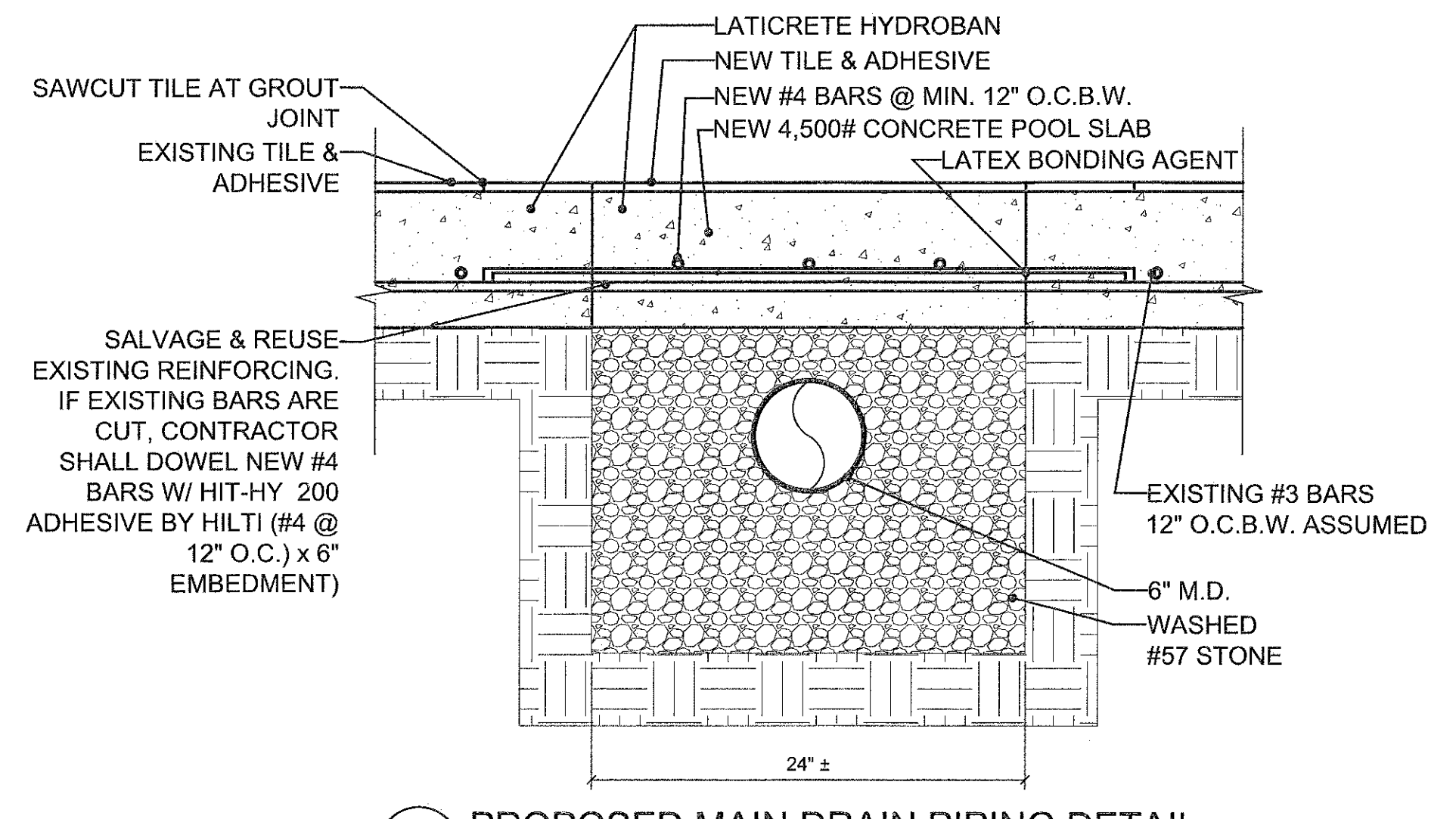
**5** ENLARGED SLAB DETAIL AT WALL  
 SCALE: 1-1/2"=1'-0"



**4** ENLARGED DETAIL AT GUTTER  
 SCALE: 1-1/2"=1'-0"



**2** PROPOSED MAIN DRAIN DETAIL  
 SCALE: 1-1/2"=1'-0"



**1** PROPOSED MAIN DRAIN PIPING DETAIL  
 SCALE: 1-1/2"=1'-0"

### CONCRETE NOTES

- ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE UNLESS OTHERWISE SPECIFIED.
- FOR ALL CONCRETE: FC=4500 PSI MINIMUM AT 28 DAYS UNLESS NOTED OTHERWISE.
- THE CONTRACTOR MUST SUBMIT A CONCRETE MIX DESIGN IN ACCORDANCE WITH ACI-318 (LATEST LOCAL APPROVED EDITION). THE ADDITION OF WATER AT THE PLANT OR IN THE FIELD GREATER THAN 1% IS STRICTLY PROHIBITED.
- REINFORCING STEEL, INCLUDING TIES AND STIRRUPS, SHALL BE DEFORMED HIGH STRENGTH BILLET STEEL AND SHALL CONFORM TO ASTM A-615 (LATEST LOCAL APPROVED EDITION) GRADE 60. ALL REINFORCING SHALL BE DETAILED, FABRICATED, AND CONSTRUCTED IN ACCORDANCE WITH THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES" (ACI-315, LATEST LOCAL APPROVED EDITION).
- ALL REINFORCING SPLICES SHALL BE CLASS "B" SPLICES IN ACCORDANCE WITH ACI-318 (LATEST LOCAL APPROVED EDITION) UNLESS OTHERWISE NOTED. UNLESS NOTED OTHERWISE, HORIZONTAL WALL REINFORCING SHALL BE BENT AROUND CORNERS AND EXTEND 1'-0" MINIMUM INTO ADJACENT CONSTRUCTION. PROVIDE 4'-0" LONG CORNER BARS TO MATCH HORIZONTAL REINFORCING.
- UNLESS OTHERWISE SPECIFIED, PROVIDE THE FOLLOWING MINIMUM CONCRETE PROTECTION:
  - CAST AGAINST EARTH 3"
  - EXPOSED TO EARTH OR WEATHER
    - #5 AND SMALLER BARS 1-1/2"
    - #6 AND LARGER BARS 2"
  - NOT EXPOSED TO EARTH OR WEATHER
    - SLABS, WALLS, JOISTS 3/4"
    - BEAMS, GIRDERS, COLUMNS 1-1/2" TO TIES, STIRRUPS, OR SPIRALS
- ALL CONCRETE WORK SHALL CONFORM TO THE LATEST CODE APPROVED EDITIONS OF THE ACI AND ASTM SPECIFICATIONS.

ASA MODEL #FPK-50-818-6 (SUMP)

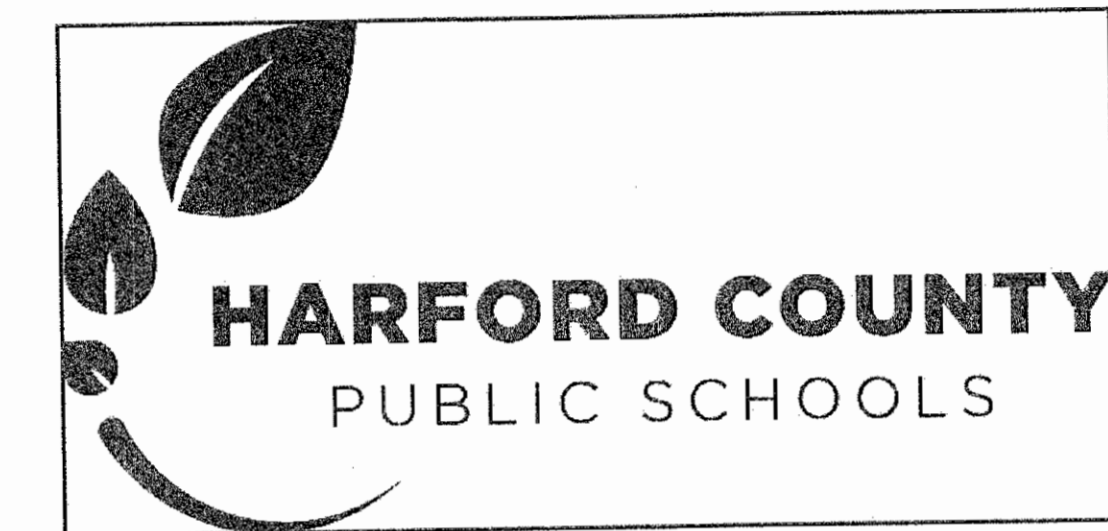
# NORTH HARFORD MIDDLE SCHOOL

## POOL REPAIR

### HARFORD COUNTY PUBLIC SCHOOLS

112 PYLESVILLE ROAD  
PYLESVILLE, MARYLAND 21132

BID SUBMISSION BID # HRM 18-1  
FEBRUARY 5, 2018



ARCHITECT  
  
 9211 CORPORATE BLVD, SUITE 340  
 ROCKVILLE, MD 20850  
 301-770-0177(P) 301-330-3224(F)

STRUCTURAL  
 COMPREHENSIVE  
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NORTH HARFORD  
MIDDLE SCHOOL  
POOL REPAIR

112 PYLESVILLE ROAD  
PYLESVILLE, MD

SHEET TITLE  
COVER SHEET

PROJECT NO.  
17013  
DATE  
2/5/18  
SCALE  
AS NOTED

SHEET NO.  
**CS**

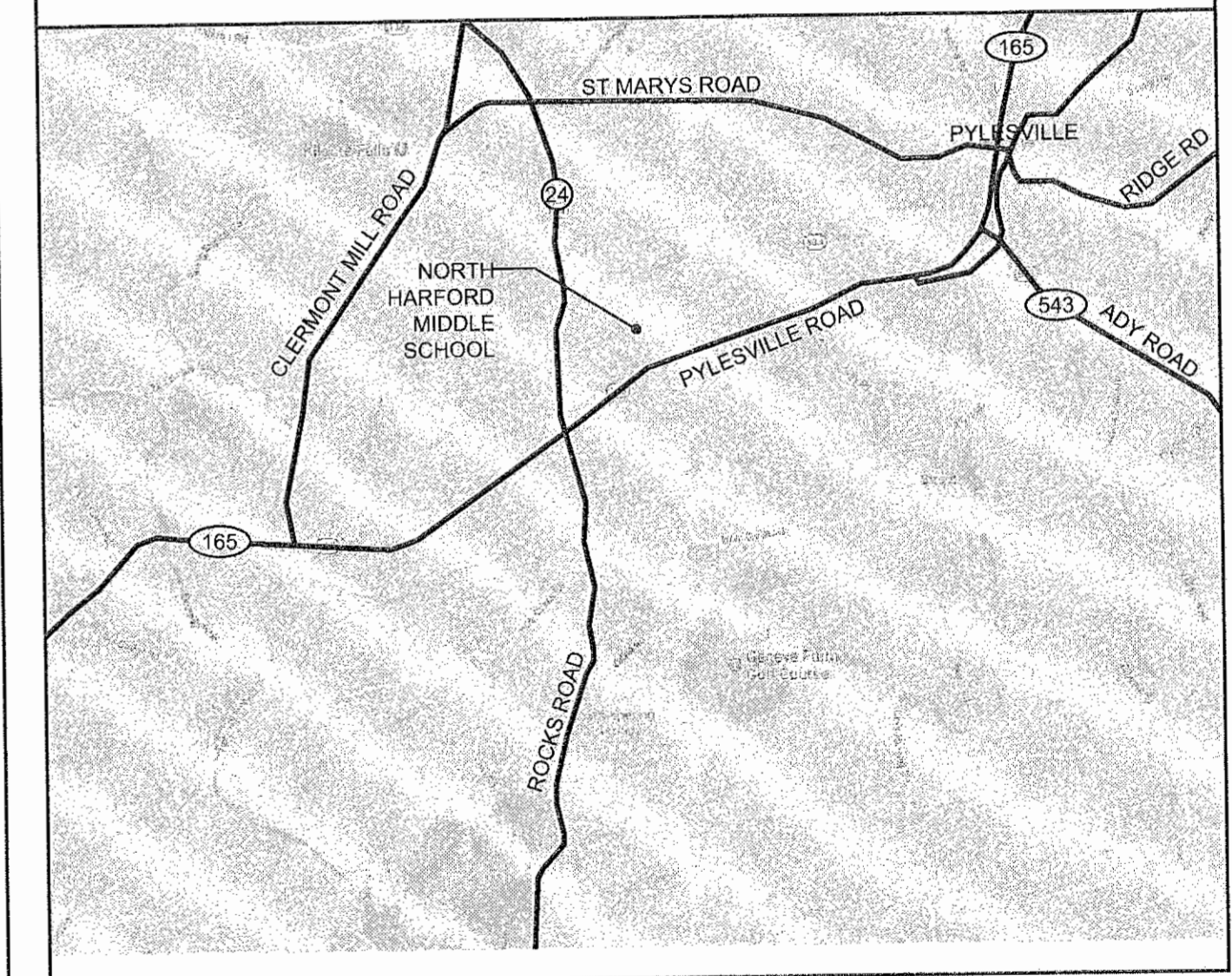
### INDEX OF DRAWINGS

CS	COVER SHEET
<b>ARCHITECTURAL</b>	
A1.01	ORIGINAL ARCHITECTURAL CONSTR. DOCS FOR REFERENCE: OVERALL NATATORIUM LAYOUT
A1.02	ORIGINAL MECHANICAL & PLUMBING CONSTRUCTION DOCS FOR REFERENCE
A1.03	ORIGINAL POOL PLANS & SECTIONS CONSTRUCTION DOCS FOR REFERENCE
A1.04	ORIGINAL POOL MECHANICAL FOR REFERENCE
A1.05	DEMOLITION PLAN
A2.01	PROPOSED PLANS & SECTIONS
A2.02	DETAILS

### GENERAL NOTES AND CONDITIONS

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES, ORDINANCES, REGULATIONS AND REQUIREMENTS OF ALL AGENCIES HAVING JURISDICTION OVER THE PROJECT.
2. THE CONTRACTOR IS CAUTIONED THAT HIS OR HER WORK INCLUDES ALTERATIONS TO AN EXISTING FACILITY. THE GENERAL CONTRACTOR AND/OR SUBCONTRACTORS (HEREAFTER REFERRED TO AS "CONTRACTOR") SHALL VISIT THE SITE TO DETERMINE ACTUAL FIELD CONDITIONS, AND CHECK THE ACCURACY OF THE GIVEN FAILURE TO DO SO WILL NOT RELIEVE THEM OF THE RESPONSIBILITY FOR CARRYING OUT ANY AND ALL WORK SHOWN, NOTED OR SPECIFIED.
3. THE INTENT OF THESE DRAWINGS IS FOR THE CONTRACTOR TO PROVIDE ALL LABOR, MATERIAL, FINISHES, EQUIPMENT, INSTALLATION AND SERVICES NECESSARY FOR AND INCIDENTAL WITH THE WORK, TO PROVIDE THE OWNER WITH A "TURN KEY" COMPLETE PROJECT.
4. ACTUAL FIELD CONDITIONS MAY VARY FROM THOSE INDICATED. SHOULD ACTUAL CONDITIONS DIFFER MATERIALLY FROM THOSE ORDINARILY ENCOUNTERED AND GENERALLY RECOGNIZED AS INHERENT IN WORK OF THE CONTRACTOR PROVIDED FOR IN THE CONTRACT, THE CONTRACTOR SHALL PROMPTLY, BEFORE CONDITIONS ARE DISTURBED, NOTIFY THE ARCHITECT. FAILURE TO DO SO MAY WAIVE THE CONTRACTOR'S RIGHT TO RECEIVE ADDITIONAL TIME OR CONSIDERATION DUE TO SUCH CONDITIONS.
5. PRIOR TO INITIATING ANY PORTION OF THE WORK, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS INCLUDING CEILING HEIGHT AVAILABILITY AND COORDINATE ALL PORTIONS OF THE CONTRACT DOCUMENTS RELATING TO THAT PORTION OF THE WORK AND AFFECTING ADJOINING PORTIONS. IF DISCREPANCIES EXIST, THEY SHALL BE REPORTED TO THE ARCHITECT FOR CLARIFICATION AND/OR RESOLUTION BEFORE COMMENCING SUCH WORK.
6. THE CONTRACTOR SHALL PREPARE A CONSTRUCTION SCHEDULE. THE CONTRACTOR IS ALSO TO INDICATE EVENTS IN THE SCHEDULE THAT MAY CAUSE INTERRUPTIONS TO THE NORMAL DAILY ACTIVITIES OF THE BUILDING. THESE EVENTS ARE TO BE COORDINATED TO THE SATISFACTION OF THE BUILDING REPRESENTATIVES AND THE ARCHITECT.
7. DEFINITIONS: "PROVIDE" MEANS "FURNISH AND INSTALL". "VERIFY" MEANS "VERIFY IN THE FIELD AND COORDINATE DIMENSIONS AND DISCREPANCIES".
8. THESE NOTES AND OTHER NOTES ON THE DRAWINGS ARE DIRECTIONS FOR THE CONTRACTOR'S PERFORMANCE, UNLESS NOTED OTHERWISE (U.N.O.). FOR EXAMPLE, "INSTALL" MEANS "CONTRACTOR SHALL INSTALL", "RELOCATE" MEANS "CONTRACTOR SHALL RELOCATE", ETC.
9. DIMENSIONS SHOWN ARE TO FACE OF STUD. U.N.O. NUMBERED DIMENSIONS SHOWN ON THE DRAWINGS TAKE PRECEDENCE OVER SCALED DRAWINGS. DETAIL DRAWINGS TAKE PRECEDENCE OVER GENERAL DRAWINGS. IF CONFLICT EXISTS ON THE DRAWINGS, THEN THE MORE STRINGENT REQUIREMENT SHALL APPLY.
10. SAMPLES AND SUBMITTALS MUST BE SUBMITTED BY THE CONTRACTOR TO THE ARCHITECT BEFORE THE PURCHASE OR FABRICATION OF ANY MATERIALS.
11. DIMENSIONS OF EXISTING OPENINGS SHALL BE VERIFIED PRIOR TO PREPARATION OF SHOP DRAWINGS. SHOP DRAWINGS SHALL INCLUDE A SCHEDULE OF ACTUAL OPENING DIMENSIONS AS VERIFIED IN FIELD.
12. DURING THE WORK, ANY CONDITION UNCOVERED THAT CAUSES CONFLICT WITH THE INTENDED DESIGN MUST BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT.
13. CONTRACTOR SHALL STAGE WORK IN SUCH A WAY AS TO ENSURE SAFE EMERGENCY EGRESS AT ALL TIMES.
14. EXCEPT FOR PREFINISHED SURFACES, ALL ITEMS DISTURBED OR DAMAGED BY WORK SHALL BE REFINISHED TO MATCH SURROUNDING AREA OR FINISHED AS INDICATED.
15. REPAIRED AND NEW AREAS OF WALLS OR CEILINGS SHALL BE BLENDED AND FEATHERED INTO THE SURROUNDING AREA. THERE SHALL NOT BE ANY VISIBLE SEAMS OR CHANGE IN APPEARANCE BETWEEN THE REPAIRED OR NEW AREA AND THE SURROUNDING AREA WHEN VIEWED FROM A DISTANCE OF 3 FEET.
16. ALL NEW AND EXISTING HOLES AND PENETRATIONS IN WALLS AND CEILING SURFACES SHALL BE PATCHED AND FIRE STOPPED.
17. THE FLOOR SPACE WILL BE UNOCCUPIED AT THE TIME OF WORK & SHALL BE SECURED AT THE END OF EACH WORK DAY.
18. BEFORE COMMENCING ANY DEMOLITION, THE CONTRACTOR MUST COORDINATE DEMOLITION WITH OTHER DISCIPLINES.
19. IF APPLICABLE, REMOVE OBVIOUS ABANDONED EXPOSED WIRING, CONDUITS, PIPING IN THE SPACE, WHICH IS NOT PART OF WORK PRIOR TO REMOVAL. COORDINATE WITH THE OWNER THESE ITEMS THAT MAY BE PLANNED TO BE REUSED/READAPTED FOR OWNER OR TENANT FUTURE USE.
20. LICENSED MECHANICAL, PLUMBING, & ELECTRICAL CONTRACTORS TO PULL SEPARATE TRADE PERMITS FOR ALL NEW WORK AS REQUIRED BY THE LOCAL JURISDICTION.
21. PROVIDE SHOP DRAWINGS TO THE ARCHITECT FOR APPROVAL FOR PRE-ENGINEERED, CUSTOM, OR SPECIALTY WORK. THE OWNER RESERVES THE RIGHT TO WAIVE THIS REQUIREMENT.
22. CONTRACTOR TO GUARANTEE ALL WORK FOR A PERIOD OF TWO YEARS FROM THE DATE OF SUBSTANTIAL COMPLETION.
23. THE ARCHITECT SHALL HAVE NO RESPONSIBILITY FOR THE DISCOVERY, PRESENCE, HANDLING, REMOVAL OR DISPOSAL OF, OR EXPOSURE OF PERSONS TO HAZARDOUS MATERIALS IN ANY FORM AT THE PROJECT SITE, INCLUDING BUT NOT LIMITED TO ASBESTOS, ASBESTOS PRODUCTS, POLYCHLORINATED BIPHENYL (PCB) OR OTHER TOXIC SUBSTANCES. CONTRACTOR TO CONTACT OWNER IF THESE ITEMS ARE APPARENT.
24. ANY ALTERATION TO THE STRUCTURE (I.E., CORE BUILDING CONCRETE FOR PLUMBING, ETC.) SHALL BE COORDINATED AND APPROVED BY THE BUILDING OWNER'S REPRESENTATIVE.
25. IF THERE ARE OPERATIONS WHICH INVOLVE EXCESSIVE NOISE (I.E., SAW CUTTING CONCRETE, ETC.) IT SHALL BE COORDINATED WITH THE OWNER TO BE PERFORMED IN THE LEAST OBTRUSIVE HOURS.
26. VERIFY ALL EXISTING WIRING AND MATERIALS IN THE CEILING IS RATED FOR PLENUM. IF NOT, COORDINATE WITH THE BUILDING OWNER'S REPRESENTATIVE FOR THE REMOVAL OF WIRING OR MATERIALS NOT RATED FOR PLENUM USE, MAKING SURE THIS WILL NOT INTERRUPT OR DISCONTINUE SERVICES TO OTHER AREAS OF THE BUILDING.
27. WHENEVER EXISTING CEILINGS AND WALLS ARE INDICATED TO REMAIN WITHIN THE LIMITED AREA OF DISTURBANCE, THEY SHALL BE PREPARED FOR REFINISHING. ABANDONED ATTACHMENTS, FASTENERS, FIXTURES, ETC. SHALL BE TEMPORARILY REMOVED AND BE REINSTALLED AS REQUIRED AFTER FINISHING OPERATIONS ARE COMPLETE. SURFACE SHALL BE CLEANED FREE OF DUST, DIRT, LOOSE MATERIALS AND ANY OTHER MATERIALS WHICH MIGHT ADVERSELY AFFECT THE PROPER INSTALLATION OF NEW FINISHES. NEW AND EXISTING HOLES, CRACKS, ETC. SHALL BE PATCHED, FILLED AND SANDED FLUSH AND SMOOTH WITH ADJACENT SURFACES. LOOSE PAINT SHALL BE SCRAPED BACK TO SOLID MATERIAL AND EDGES SHALL BE FEATHERED TO BLEND WITH ADJACENT SURFACES. EXISTING PANELING, WALL COVERING, ETC. SHALL BE COMPLETELY REMOVED AND SURFACE PREPARED FOR NEW FINISH AS INDICATED ABOVE. INK MARKS, STAINS, SPECIAL PAINTS AND OTHER MATERIALS WHICH MIGHT BLEED THROUGH NEW FINISHES SHALL BE SEALED PRIOR TO APPLICATION OF FINISH.
28. ALL PREVIOUSLY PAINTED SURFACES INDICATED TO REMAIN WITHIN THE LIMITED AREA OF DISTURBANCE INCLUDING DOORS, FRAMES WINDOWS, TRIM, ETC. SHALL BE PREPARED AND REPAINTED. DOORS AND WINDOW SASH SHALL BE TEMPORARILY REMOVED AND REINSTALLED AFTER PAINT HAS CURED. HARDWARE AND FASTENERS TO REMAIN IN SERVICE SHALL BE TEMPORARILY REMOVED AND REINSTALLED AFTER PAINTING IS COMPLETE. ABANDONED HARDWARE AND FASTENERS SHALL BE REMOVED. HOLES SHALL BE FILLED AND SANDED SMOOTH EXCEPT MOUNTING HOLES FOR HARDWARE TO BE REINSTALLED. SURFACES SHALL BE CLEANED FREE OF DIRT, DUST, OIL AND OTHER MATERIALS WHICH WOULD ADVERSELY AFFECT INSTALLATION OF NEW FINISH. LOOSE PAINT AND RUST SHALL BE SANDED OR SCRAPED BACK TO SOLID MATERIAL AND EDGES FEATHERED TO BLEND. INK MARKS, STAINS, RUST SPECIAL PAINTS AND OTHER MATERIALS WHICH MIGHT BLEED THROUGH NEW PAINT SHALL BE SEALED PRIOR TO APPLICATION OF FINISH.
29. UNLESS OTHERWISE INDICATED ALL PIPING, CONDUIT, DUCTWORK AND SIMILAR SERVICES SHALL BE CONCEALED.
30. GENERAL NOTES, THOSE FOUND ON THIS SHEET, APPLY TO ALL DRAWINGS RELATED TO THIS PROJECT.
31. CONSTRUCTION NOTES SPECIFICALLY REFER TO ITEMS NOTED WITH NUMBER OR LETTER DESIGNATIONS ON THE RESPECTIVE DRAWING WHERE THE DESIGNATIONS ARE SHOWN.

### LOCATION MAP



### CERTIFICATION

THESE PLANS FOR THE POOL REPAIR AT NORTH HARFORD MIDDLE SCHOOL WERE PREPARED UNDER MY SUPERVISION AND, TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, COMPLY WITH THE REQUIREMENTS OF THE BUILDING CODE OF HARFORD COUNTY AND THE STATE OF MARYLAND FIRE PREVENTION CODE.

ARCHITECT, MARYLAND REGISTRATION NO. 9893 DATE  
EXPIRATION DATE: 3/27/18

# NORTH HARFORD MIDDLE SCHOOL

## POOL REPAIR - PHASE 2 & 3 HARFORD COUNTY PUBLIC SCHOOLS

SOLICITATION #: HM19-1

112 PYLESVILLE ROAD  
PYLESVILLE, MARYLAND 21132

CONFORMING SET  
APRIL 25, 2019



### INDEX OF DRAWINGS

CS	COVER SHEET
<b>ARCHITECTURAL</b>	
A-1	EXISTING FLOOR PLAN & INTERIOR ELEVATIONS
A-2	PROPOSED DECK DRAINS & TILE LAYOUT
A-3	PROPOSED INTERIOR ELEVATIONS
A-4	DETAILS
<b>POOL</b>	
PL-1.00	EXISTING POOL & FILTER ROOM PLAN
PL-2.00	PROPOSED FLOOR PLAN & ENLARGED PLANS
PL-2.01	POOL DETAILS
<b>PLUMBING</b>	
P-1.00	PLUMBING PLANS
P-1.01	PLUMBING LEGEND & SPECIFICATIONS
<b>ELECTRICAL</b>	
E-1.00	ELECTRICAL LEGEND, CONVENTIONS, AND ABBREVIATIONS
E-1.01	PROPOSED FLOOR PLAN - DEMO & POWER

### SCOPE OF WORK

INCLUDING BUT NOT LIMITED TO:

**PHASE II: FILTERS AND PUMPS**

1. REMOVAL OF EXISTING FILTER SYSTEM, PUMP, STRAINER, AND GAUGES
2. REMOVAL OF EXISTING FILTER PIPING AND VALVES
3. INSTALLATION OF NEW FILTER SYSTEM COMPONENTS
4. INSTALLATION OF NEW UV WATER TREATMENT SYSTEM
5. RE-INSTALLATION OF EXISTING CHEMICAL TREATMENT SYSTEM
6. REPLACEMENT OF DHU BOOSTER PUMP & RECONNECTION TO EXISTING HEATING SYSTEM
7. INSTALLATION OF NEW GAUGES, THERMOMETERS, AND FLOW METERS
8. INSTALLATION OF VFD FILTER MOTOR CONTROLLER
9. REWIRING OF ALL COMPONENTS
10. INSTALLATION OF COLOR CODING, VALVE TAGS, CHARTS, AND OPERATIONAL INSTRUCTIONS
11. TESTING AND BALANCING

**PHASE III: ADD ALTERNATIVES 1, 2, OR 3**

1. REMOVAL OF EXISTING DECK TILE AND EXISTING BENCH TILE
2. REMOVAL OF EXISTING SPOT DRAINS
3. REMOVAL OF EXISTING BASE BOARD
4. CUTTING OF EXISTING DECK SLAB FOR INSTALLATION OF NEW DECK LINEAR TRENCH DRAINS
5. CHIPPING OF EXISTING DECK SLAB FOR NEW DECK SLOPES
6. INSTALLATION OF ADA COMPLIANT DECK SLOPES
7. INSTALLATION OF CEMENTITIOUS OVERLAY ON DECKS AND MUDSET & TILE ON BENCHES
8. REINSTALLATION OF BASEBOARD
9. REFILLING OF POOL
10. SYSTEM MAINTENANCE UNTIL SCHOOL COMMENCEMENT

**PHASE III ADD ALTERNATES**

- ADD ALTERNATE #1: NEW DECK DRAINS AND DECK TILE
- ADD ALTERNATE #2: NEW DECK DRAINS AND EPOXY COATED DECK
- ADD ALTERNATE #3: NEW DECK DRAINS AND FOAM RUBBER DECK TILE
- ADD ALTERNATE #4: NEW GUTTER HDPE GRATE
- ADD ALTERNATE #5: PROVIDE FULLY FUNCTIONAL METAL GATE SYSTEM ON INTERIOR SIDE OF NATATORIUM EXTERIOR DOUBLE DOORS.

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17. THE FLOOR SPACE WILL BE UNOCCUPIED AT THE TIME OF WORK & SHALL BE SECURED AT THE END OF EACH WORK DAY.
18. BEFORE COMMENCING ANY DEMOLITION, THE CONTRACTOR MUST COORDINATE DEMOLITION WITH OTHER DISCIPLINES.
19. IF APPLICABLE, REMOVE OBVIOUS ABANDONED EXPOSED WIRING, CONDUITS, PIPING IN THE SPACE, WHICH IS NOT PART OF WORK PRIOR TO REMOVAL. COORDINATE WITH THE OWNER THESE ITEMS THAT MAY BE PLANNED TO BE REUSED/READAPTED FOR OWNER OR TENANT FUTURE USE.
20. LICENSED MECHANICAL, PLUMBING, & ELECTRICAL CONTRACTORS TO PULL SEPARATE TRADE PERMITS FOR ALL NEW WORK AS REQUIRED BY THE LOCAL JURISDICTION.
21. PROVIDE SHOP DRAWINGS TO THE ARCHITECT FOR APPROVAL FOR PRE-ENGINEERED, CUSTOM, OR SPECIALTY WORK. THE OWNER RESERVES THE RIGHT TO WAIVE THIS REQUIREMENT.
22. CONTRACTOR TO GUARANTEE ALL WORK FOR A PERIOD OF TWO YEARS FROM THE DATE OF SUBSTANTIAL COMPLETION.
23. THE ARCHITECT SHALL HAVE NO RESPONSIBILITY FOR THE DISCOVERY, PRESENCE, HANDLING, REMOVAL OR DISPOSAL OF, OR EXPOSURE OF PERSONS TO HAZARDOUS MATERIALS IN ANY FORM AT THE PROJECT SITE, INCLUDING BUT NOT LIMITED TO ASBESTOS, ASBESTOS PRODUCTS, POLYCHLORINATED BIPHENYL (PCB) OR OTHER TOXIC SUBSTANCES. CONTRACTOR TO CONTACT OWNER IF THESE ITEMS ARE APPARENT.
24. ANY ALTERATION TO THE STRUCTURE (I.E., CORE BUILDING CONCRETE FOR PLUMBING, ETC.) SHALL BE COORDINATED AND APPROVED BY THE ARCHITECT.
25. IF THERE ARE OPERATIONS WHICH INVOLVE EXCESSIVE NOISE (I.E., SAW CUTTING CONCRETE, ETC.) IT SHALL BE COORDINATED WITH THE OWNER TO BE PERFORMED IN THE LEAST OBTRUSIVE HOURS.
26. WHENEVER EXISTING CEILINGS AND WALLS ARE INDICATED TO REMAIN WITHIN THE LIMITED AREA OF DISTURBANCE, THEY SHALL BE PREPARED FOR REFINISHING. ABANDONED ATTACHMENTS, FASTENERS, FIXTURES, ETC. SHALL BE TEMPORARILY REMOVED AND BE REINSTALLED AS REQUIRED AFTER FINISHING OPERATIONS ARE COMPLETE. SURFACE SHALL BE CLEANED FREE OF DUST, DIRT, LOOSE MATERIALS AND ANY OTHER MATERIALS WHICH MIGHT ADVERSELY AFFECT THE PROPER INSTALLATION OF NEW FINISHES. NEW AND EXISTING HOLES, CRACKS, ETC. SHALL BE PATCHED, FILLED AND SANDED FLUSH AND SMOOTH WITH ADJACENT SURFACES. LOOSE PAINT SHALL BE SCRAPED BACK TO SOLID MATERIAL AND EDGES SHALL BE FEATHERED TO BLEND WITH ADJACENT SURFACES. EXISTING PANELING, WALL COVERING, ETC. SHALL BE COMPLETELY REMOVED AND SURFACE PREPARED FOR NEW FINISH AS INDICATED ABOVE. INK MARKS, STAINS, SPECIAL PAINTS AND OTHER MATERIALS WHICH MIGHT BLEED THROUGH NEW FINISHES SHALL BE SEALED PRIOR TO APPLICATION OF FINISH.
27. ALL PREVIOUSLY PAINTED SURFACES INDICATED TO REMAIN WITHIN THE LIMITED AREA OF DISTURBANCE INCLUDING DOORS, WINDOW FRAMES, TRIM, ETC. SHALL BE PREPARED AND REPAINTED. SURFACES SHALL BE CLEANED FREE OF DIRT, DUST, OIL AND OTHER MATERIALS WHICH WOULD ADVERSELY AFFECT INSTALLATION OF NEW FINISH. LOOSE PAINT AND RUST SHALL BE SANDED OR SCRAPED BACK TO SOLID MATERIAL AND EDGES FEATHERED TO BLEND. INK MARKS, STAINS, RUST SPECIAL PAINTS AND OTHER MATERIALS WHICH MIGHT BLEED THROUGH NEW PAINT SHALL BE SEALED PRIOR TO APPLICATION OF FINISH.
28. UNLESS OTHERWISE INDICATED ALL PIPING, CONDUIT, DUCTWORK AND SIMILAR SERVICES SHALL BE CONCEALED.
29. GENERAL NOTES, THOSE FOUND ON THIS SHEET, APPLY TO ALL DRAWINGS RELATED TO THIS PROJECT.
30. CONSTRUCTION NOTES SPECIFICALLY REFER TO ITEMS NOTED WITH NUMBER OR LETTER DESIGNATIONS ON THE RESPECTIVE DRAWING WHERE THE DESIGNATIONS ARE SHOWN.
31. REMOVE AND REPLACE MARBLE THRESHOLDS, PROVIDE ADA COMPLIANCE.

### LOCATION MAP



### CERTIFICATION

THESE PLANS FOR THE POOL REPAIR PHASES 2 & 3 AT NORTH HARFORD MIDDLE SCHOOL WERE PREPARED UNDER MY SUPERVISION AND, TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, COMPLY WITH THE REQUIREMENTS OF THE BUILDING CODE OF HARFORD COUNTY AND THE STATE OF MARYLAND FIRE PREVENTION CODE.

ARCHITECT, MARYLAND REGISTRATION NO. 16066  
EXPIRATION DATE: 01/06/20

DATE

ARCHITECT



9211 CORPORATE BLVD., SUITE 340  
ROCKVILLE, MD 20850  
301-770-0177

MEP ENGINEER

ALBAN ENGINEERING  
303 INTERNATIONAL CIRCLE  
SUITE 450  
HUNT VALLEY, MD 21030  
410.842.6411

PROFESSIONAL CERTIFICATION  
I CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY OR APPROVED BY ME AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE # 16066, EXPIRATION DATE 01/06/20.

PROFESSIONAL SEAL:

PRINTS ISSUED

NO.	DESCRIPTION	DATE
	50% CDs	11/1/18
	95% CDs	12/5/18
	BID SET	12/19/18
1	ADDENDUM #1	1/24/19
2	ADDENDUM #2	2/13/19
	PERMIT SET	3/27/19
	CONFORM. SET	4/25/19

### NORTH HARFORD MIDDLE SCHOOL POOL REPAIRS PHASES 2 & 3

112 PYLESVILLE ROAD  
PYLESVILLE, MD 21132  
HARFORD COUNTY PUBLIC SCHOOLS

SHEET TITLE

COVER SHEET

PROJECT NO.

17013.0100

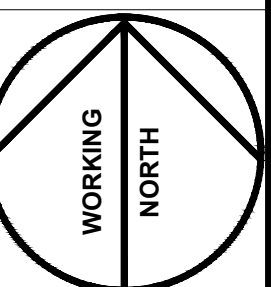
DATE

APR 25 2019

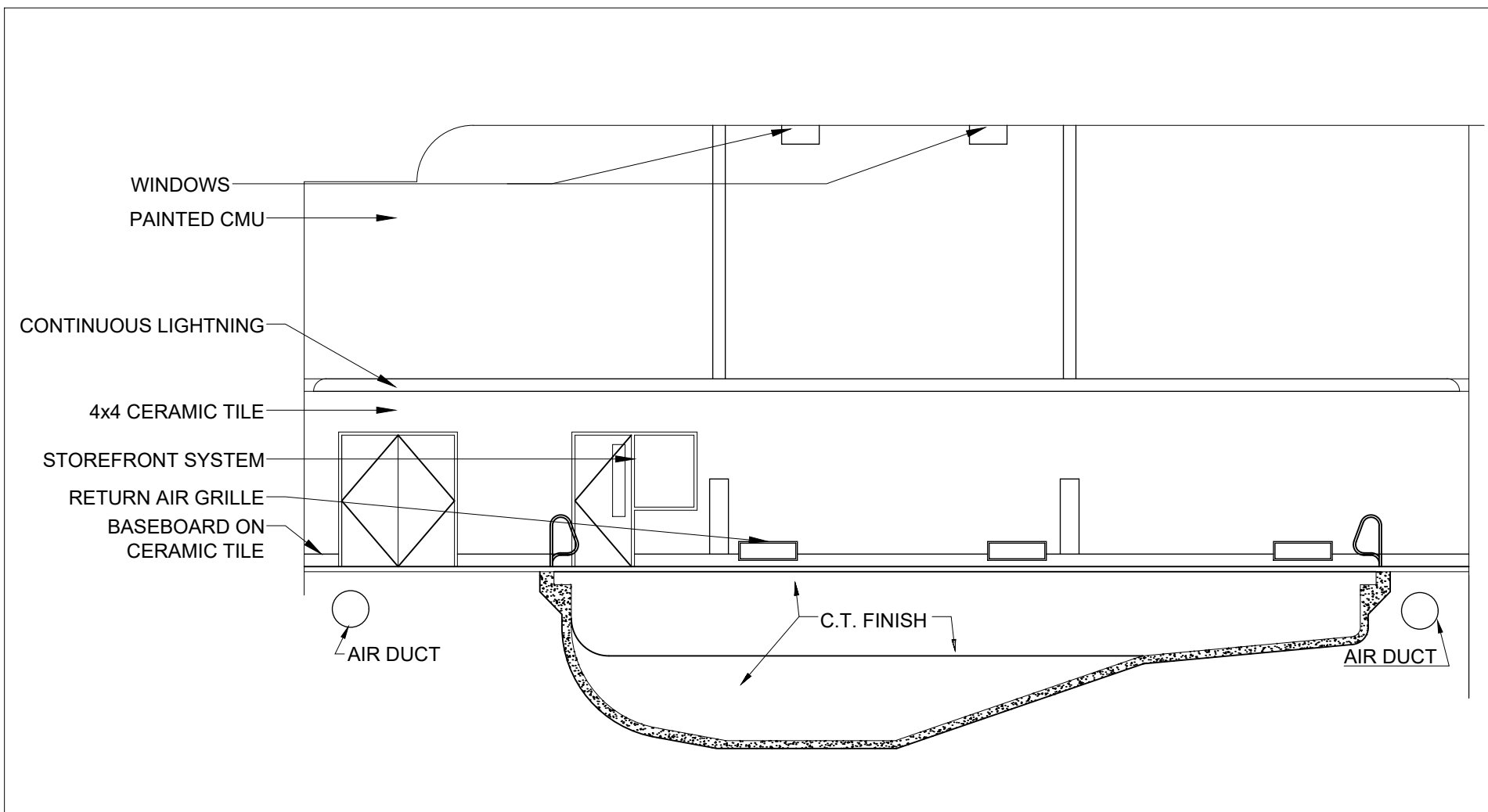
SCALE

AS NOTED

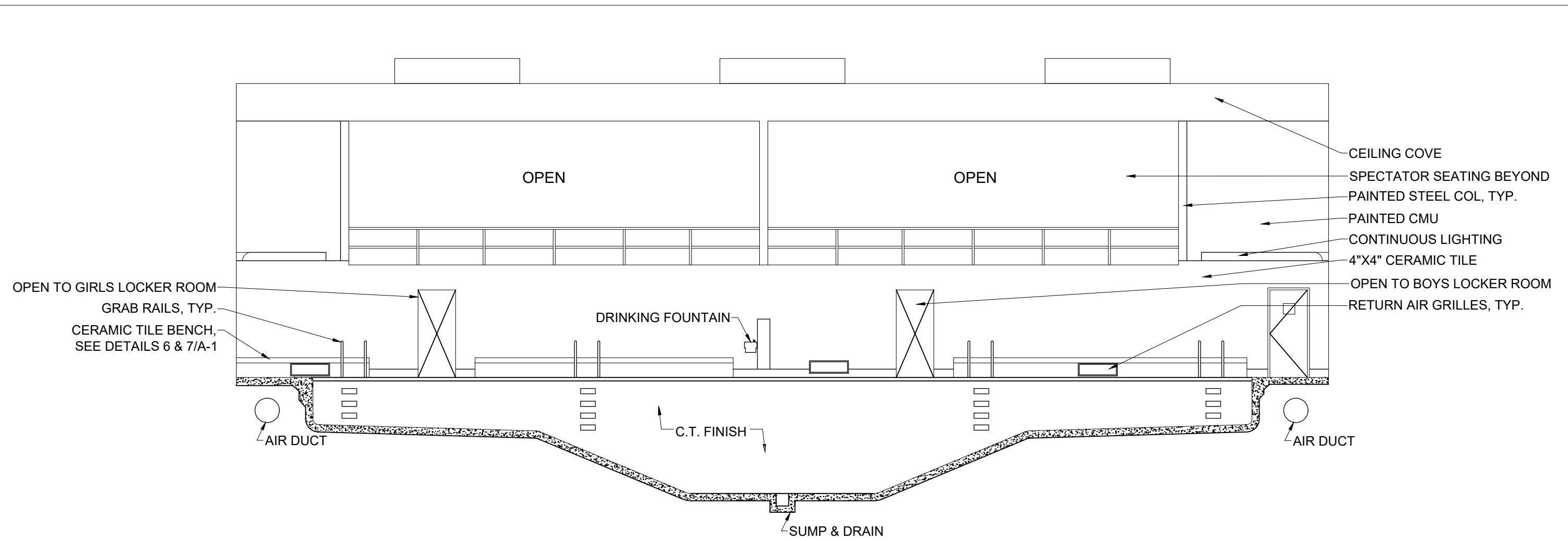
SHEET NO.



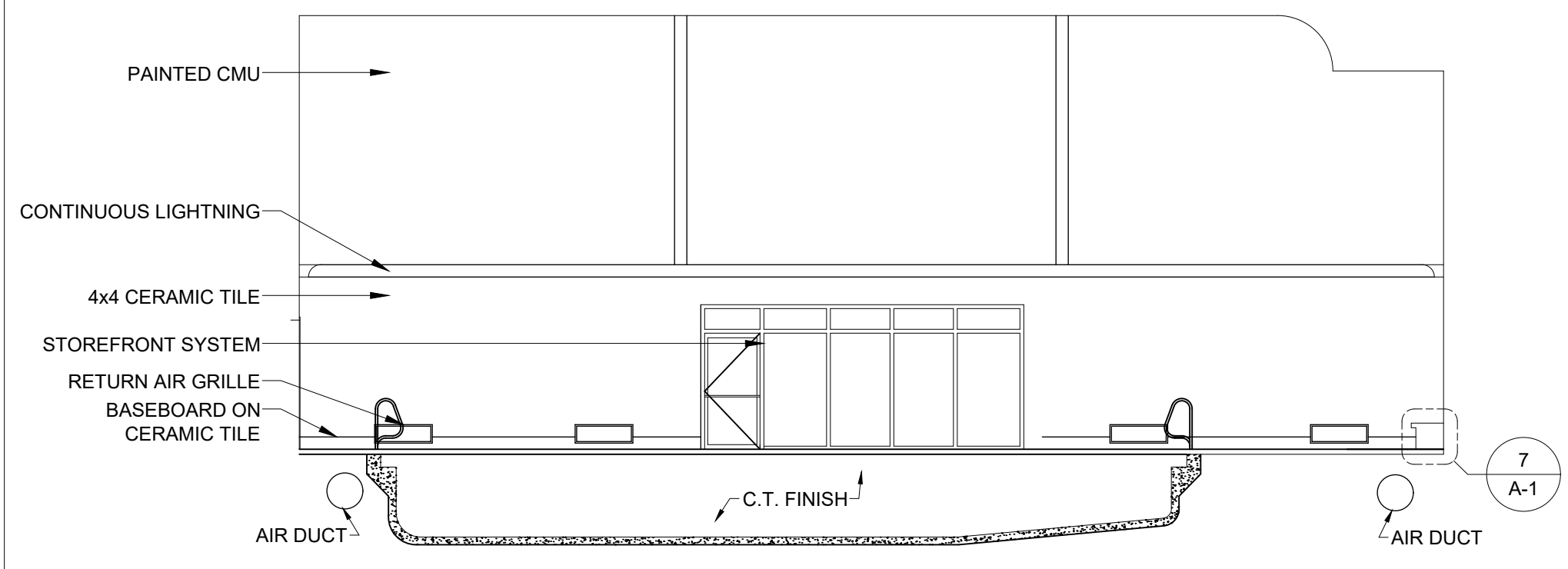
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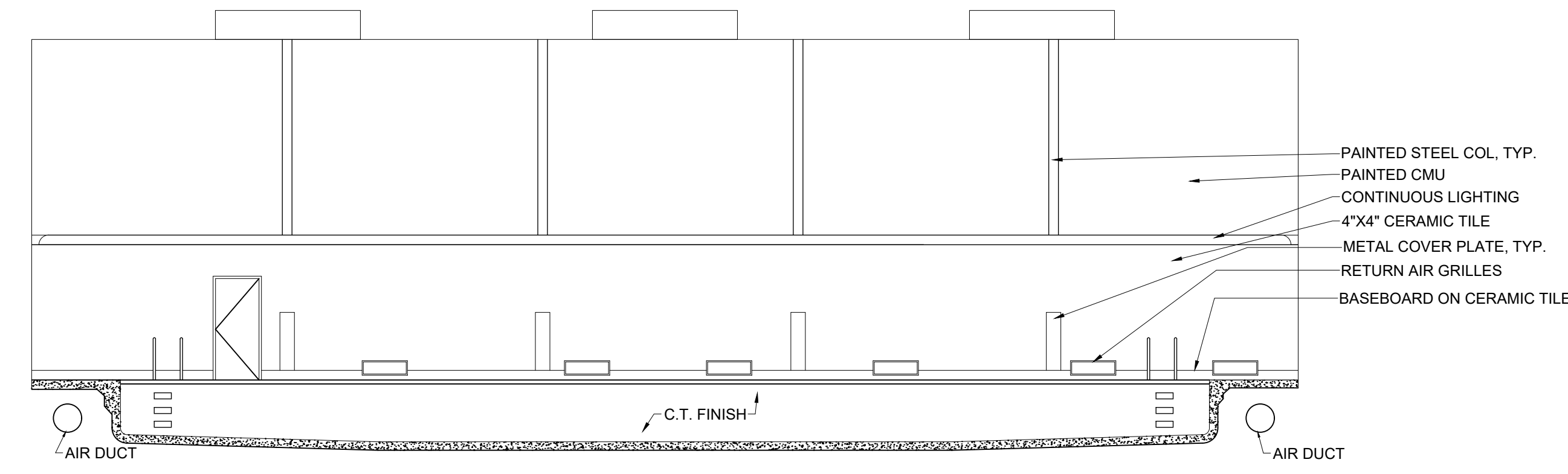
2 EXISTING EAST ELEVATION  
A-1 SCALE: 1/8" = 1'-0"



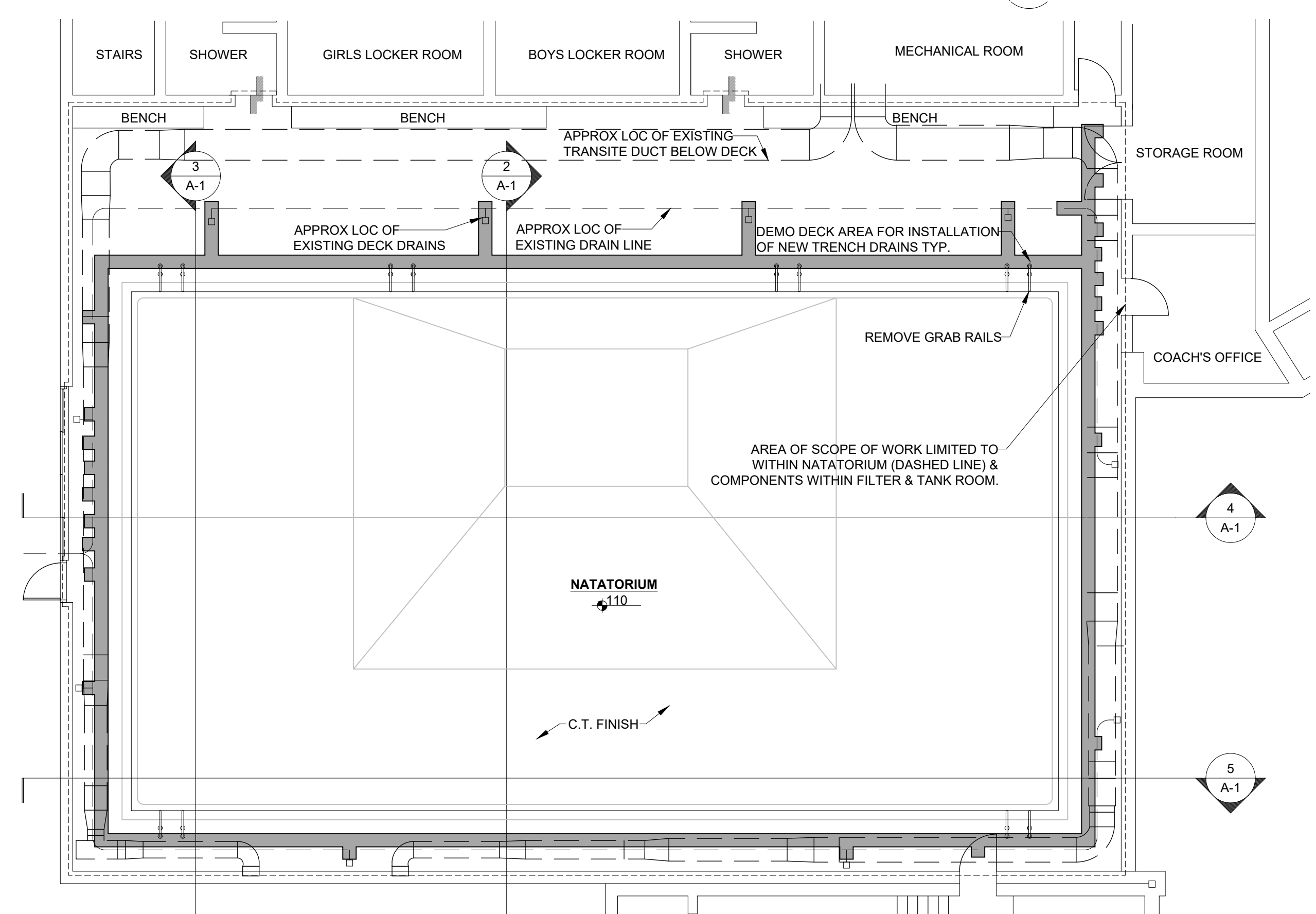
4 EXISTING NORTH ELEVATION  
A-1 SCALE: 1/8" = 1'-0"



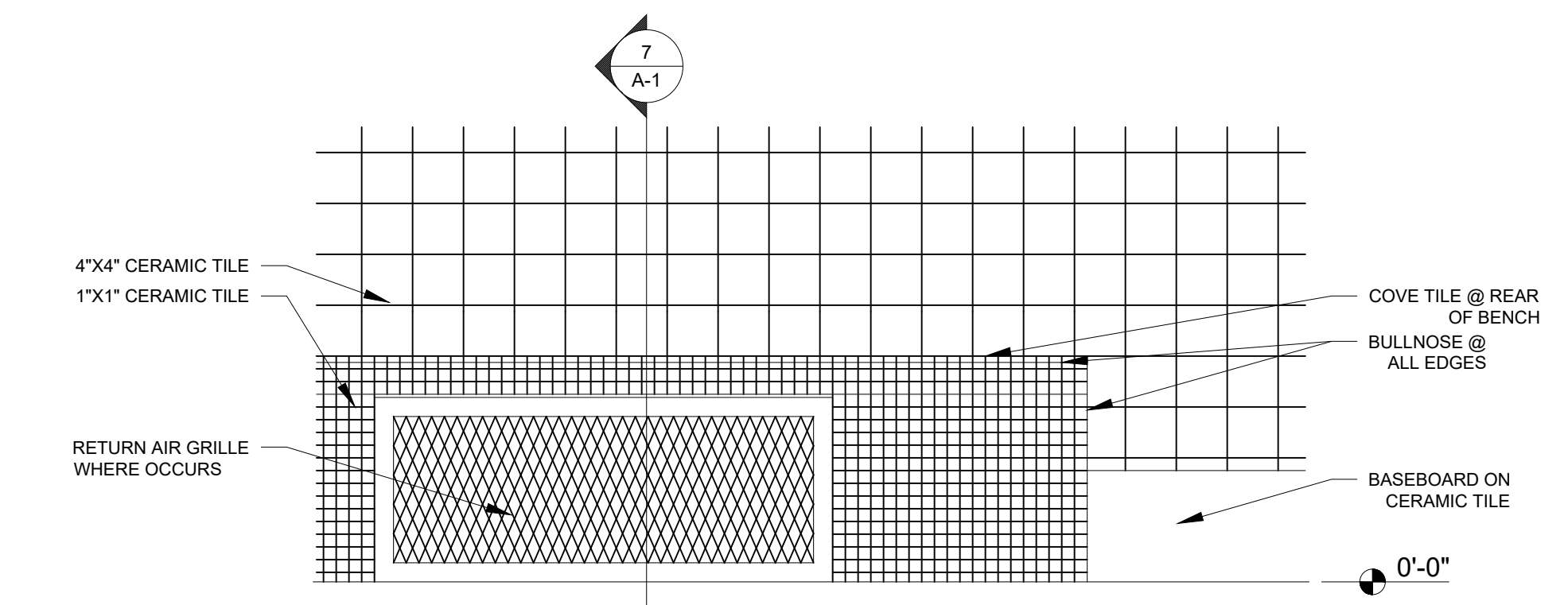
3 EXISTING WEST ELEVATION  
A-1 SCALE: 1/8" = 1'-0"



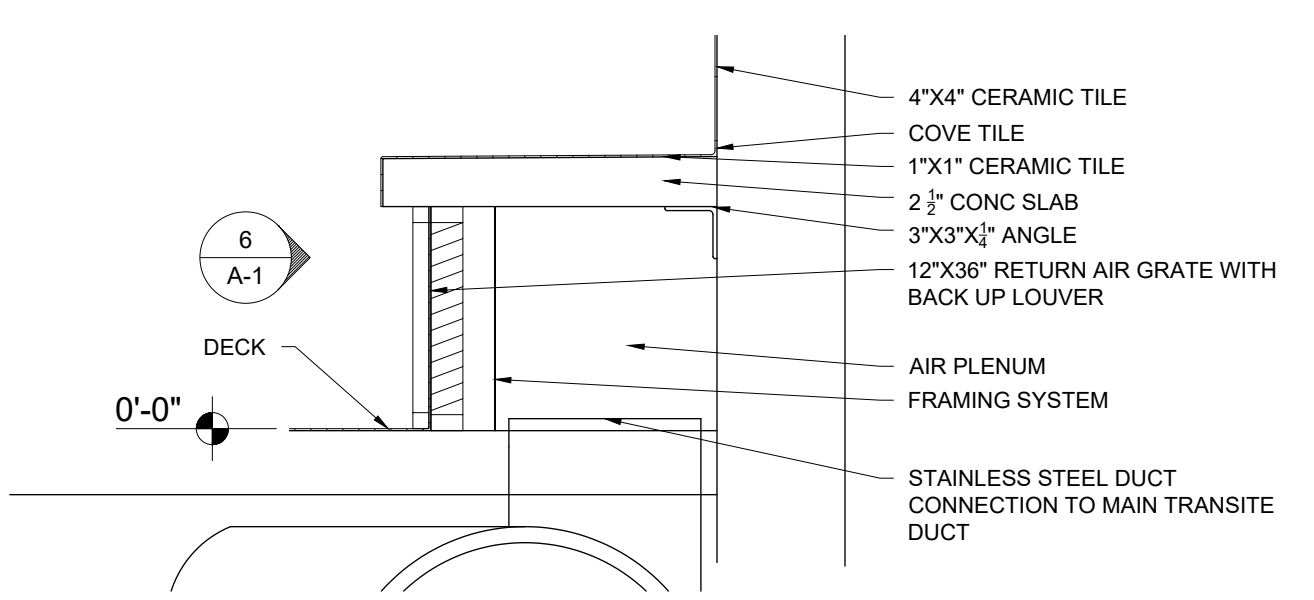
5 EXISTING SOUTH ELEVATION  
A-1 SCALE: 1/8" = 1'-0"



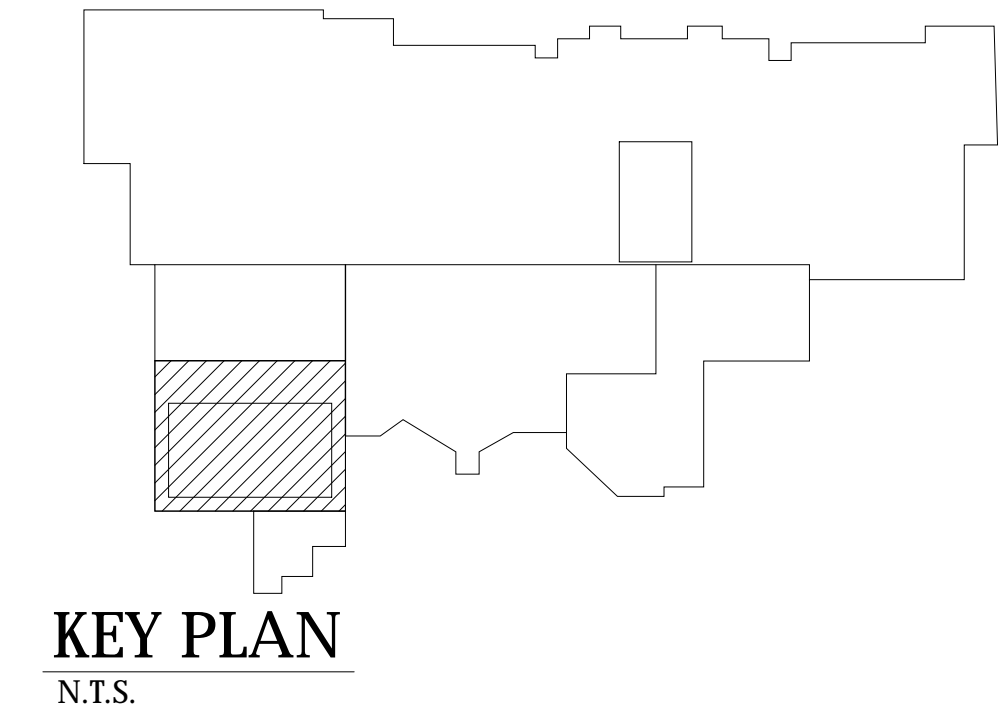
1 EXISTING FLOOR PLAN  
A-1 SCALE: 1/8" = 1'-0"



6 EXISTING TILED BENCH ELEVATION  
A-1 SCALE: 1" = 1'-0"



7 EXISTING TILED BENCH SECTION  
A-1 SCALE: 1" = 1'-0"



KEY PLAN  
N.T.S.

- GENERAL NOTES:
1. GENERAL CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS.
  2. CERAMIC TILE WALL PATTERN OMITTED FOR CLARITY.
  3. ELECTRICAL, PLUMBING, COMMUNICATIONS, POOL EQUIPMENT, & SIGNAGE DEVICES ON WALL ARE EXISTING TO REMAIN AND ARE OMITTED FOR CLARITY.
  4. GENERAL CONTRACTOR TO SEAL OFF AREAS NOT PART OF SCOPE OF AREA TO MITIGATE DUST CONVEYANCE & CONTROL SPREAD. ENSURE EGRESS IS MAINTAINED.

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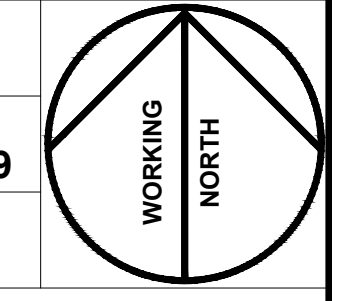
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	95% CDs	12/5/18
	BID SET	12/19/18
▲	ADDENDUM #1	1/24/19
▲	ADDENDUM #2	2/13/19
	PERMIT SET	3/27/19
	CONFORM. SET	4/25/19

**NORTH HARFORD  
MIDDLE SCHOOL  
POOL REPAIRS  
PHASES 2 & 3**

112 PYLESVILLE ROAD  
PYLESVILLE, MD 21132  
HARFORD COUNTY PUBLIC  
SCHOOLS

SHEET TITLE  
**EXISTING FLOOR PLAN &  
INTERIOR ELEVATIONS**

PROJECT NO.  
**17013.0100**  
DATE  
**APR 25 2019**  
SCALE  
**AS NOTED**  
SHEET NO.



**A-1**

# 2018 Repair

TILE SCHEDULE			
BASE BID			
Designation	Color	Size	Pricing Group
NOT USED			
NOT USED			
NOT USED			
CT-5	DAL TILE KEYSTONE WATERFALL D169	1"X1"	GROUP 2
			BENCH TILE (VERTICAL)
CT-6	DAL TILE KEYSTONE BISCUIT D317	1"X1"	GROUP 1
			BENCH TILE SEAT & SEAT EDGES
ADD ALTERNATE #1			
NOT USED			
NOT USED			
ADD ALTERNATE #2			
NOT USED			
NOT USED			
NOT USED			
NOT USED			
NOT USED			
NOT USED			

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PRINTS ISSUED

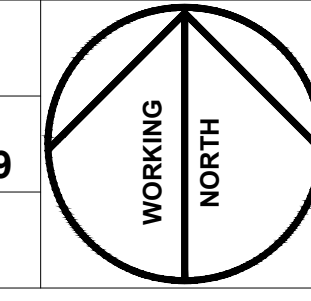
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	BID SET	12/19/18
1	ADDENDUM #1	1/24/19
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	PERMIT SET	3/27/19
	CONFORM. SET	4/25/19

## NORTH HARFORD MIDDLE SCHOOL POOL REPAIRS PHASES 2 & 3

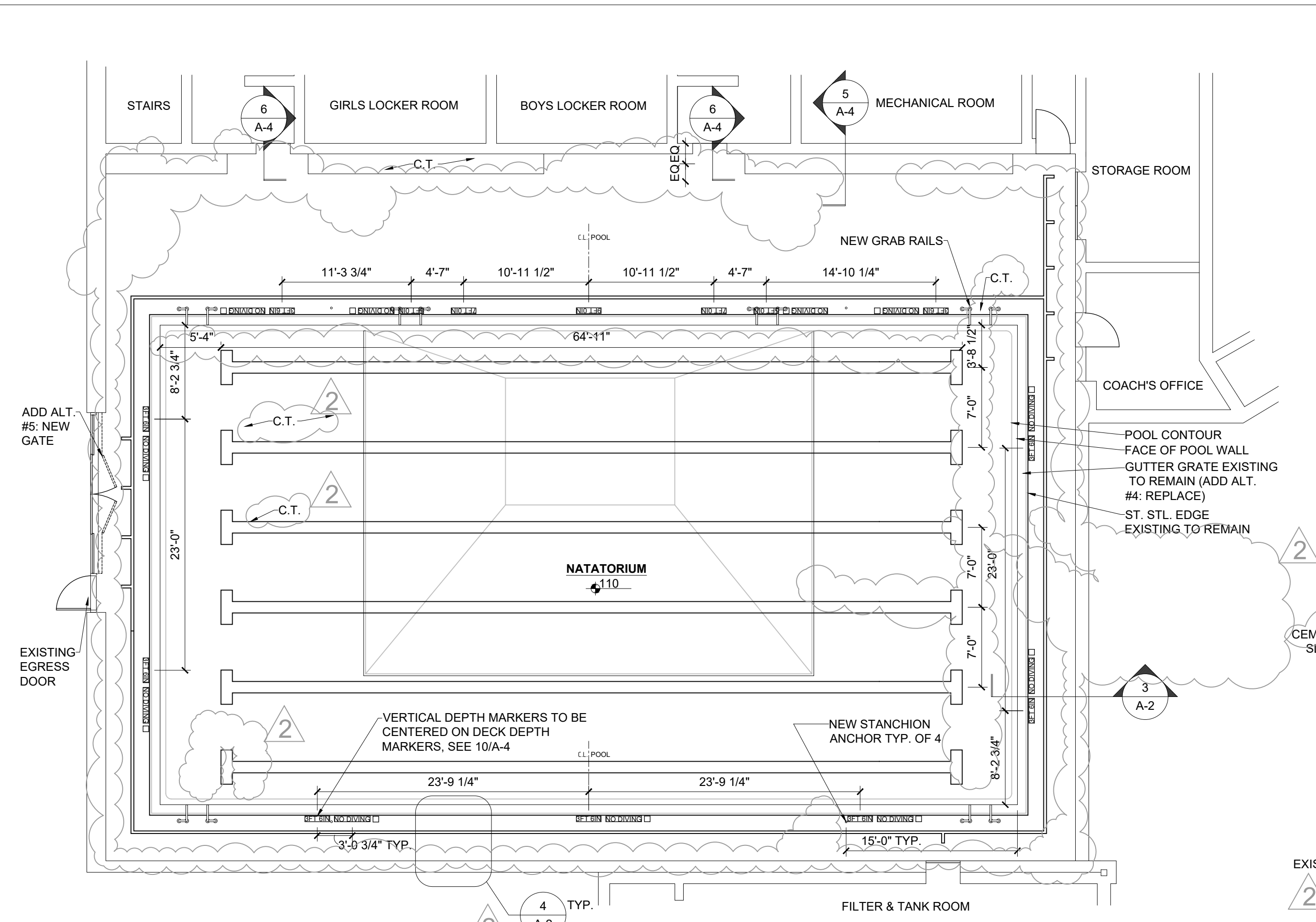
112 PYLESVILLE ROAD  
 PYLESVILLE, MD 21132  
 HARFORD COUNTY PUBLIC SCHOOLS

SHEET TITLE  
 PROPOSED DECK DRAINS & TILE LAYOUT

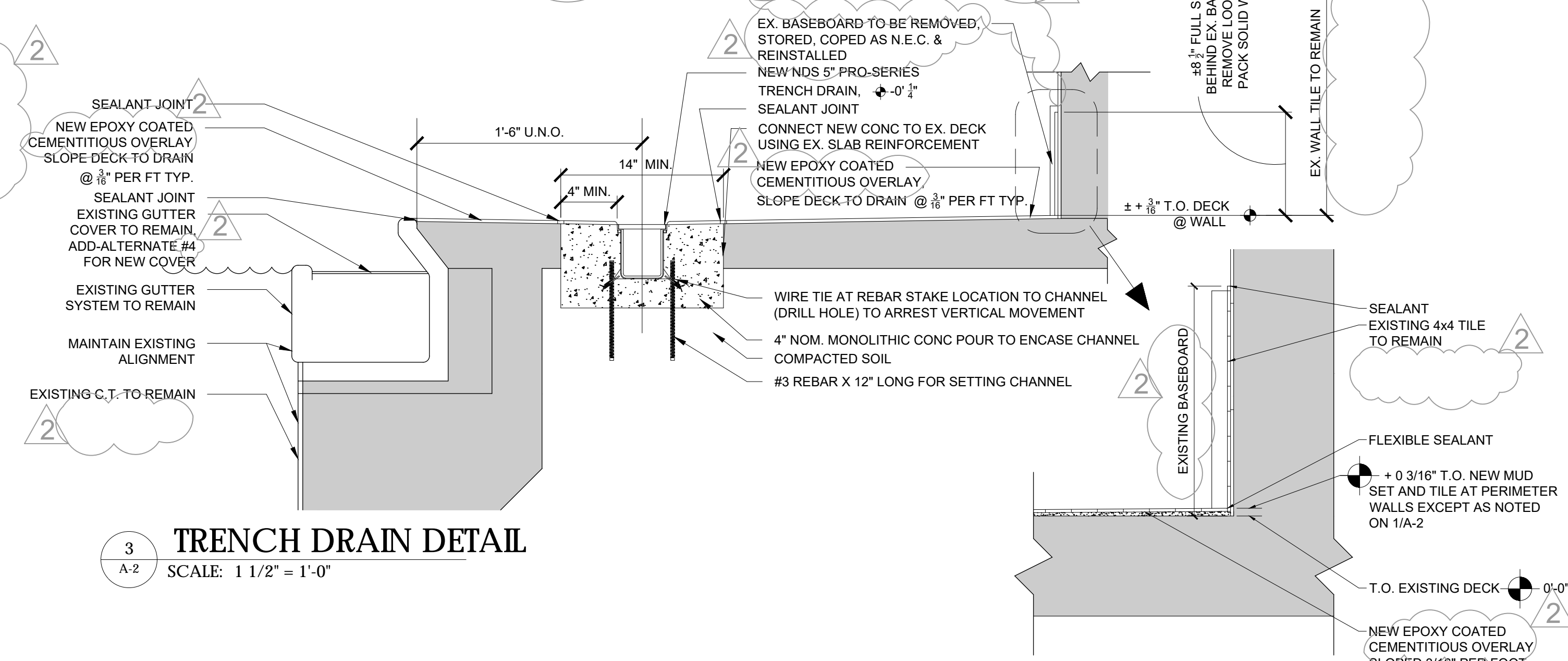
PROJECT NO.  
**17013.0100**  
 DATE  
**APR 25 2019**  
 SCALE  
**AS NOTED**  
 SHEET NO.



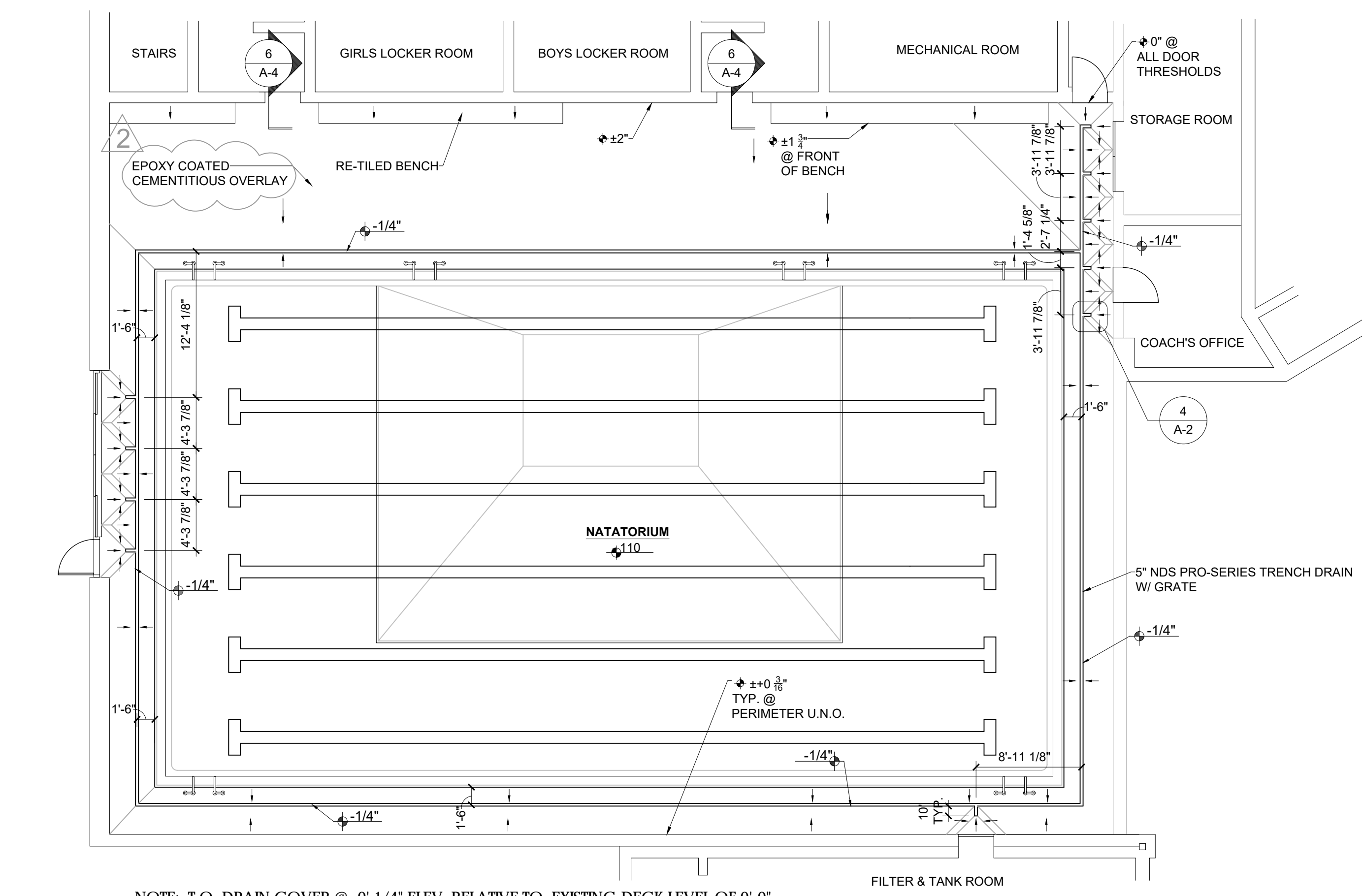
A-2



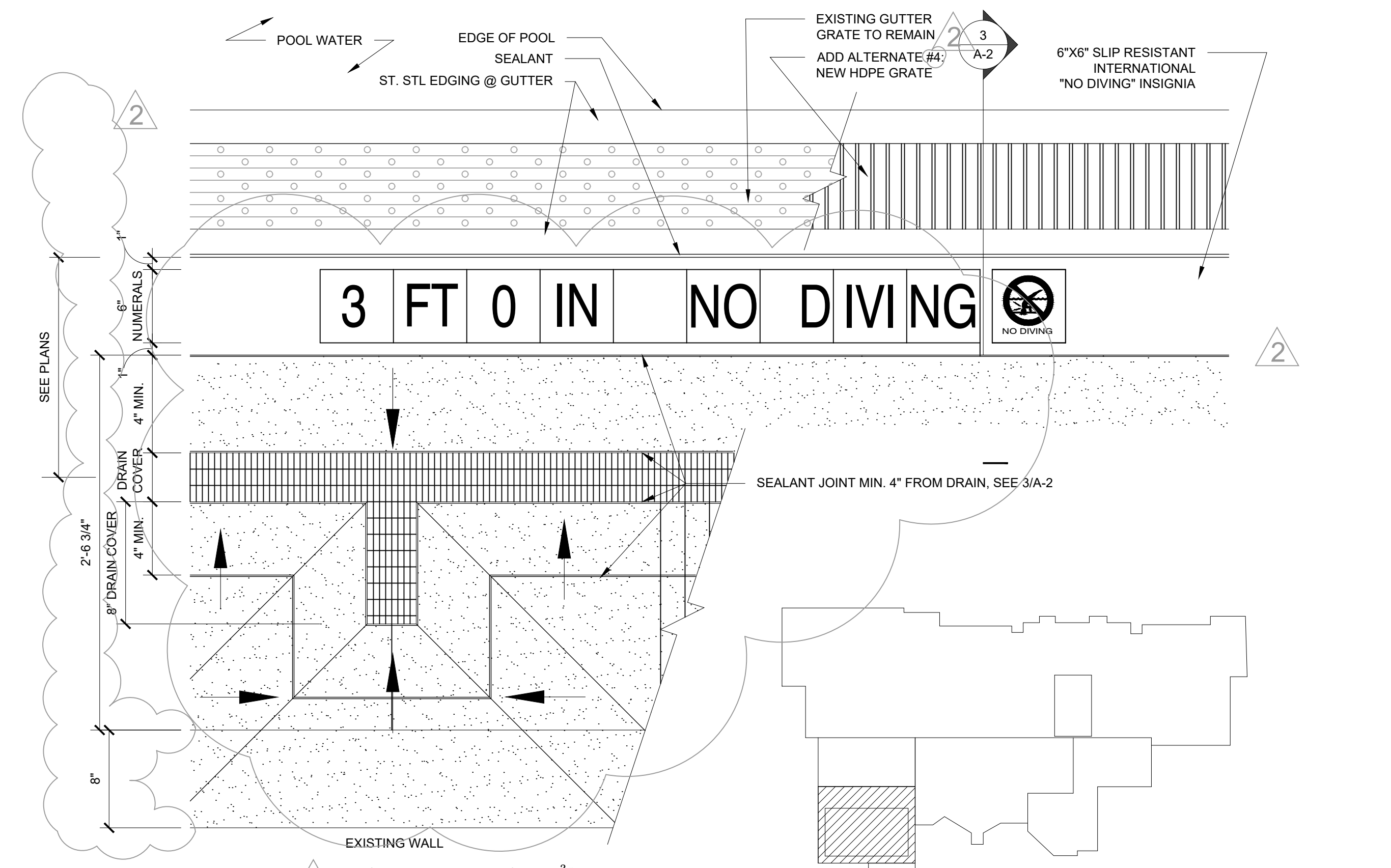
**2**  
 A-2  
**PROPOSED DECK PLAN**  
 SCALE: 1/8" = 1'-0"



**3**  
 A-2  
**TRENCH DRAIN DETAIL**  
 SCALE: 1 1/2" = 1'-0"



**1**  
 A-2  
**PROPOSED DECK DRAINS LAYOUT**  
 SCALE: 1/8" = 1'-0"



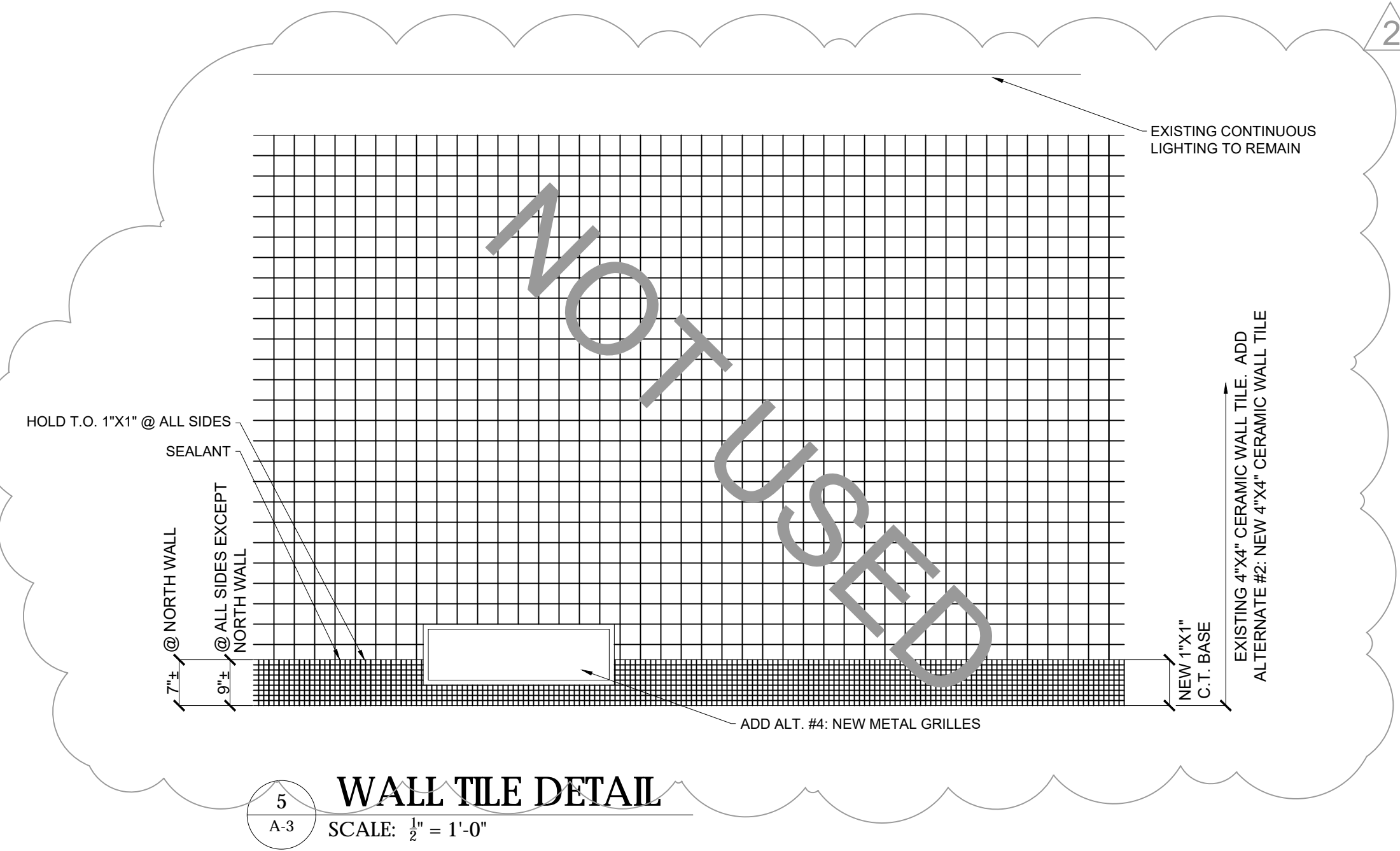
**4**  
 A-2  
**DECK DETAIL**  
 SCALE: 1 1/2" = 1'-0"

**KEY PLAN**  
 N.T.S.

NOTE: T.O. DRAIN COVER @ -0' 1/4" ELEV. RELATIVE TO EXISTING DECK LEVEL OF 0'-0".

NOTE: INDICATES SLOPE TO DRAIN @ 1/16" PER FOOT.

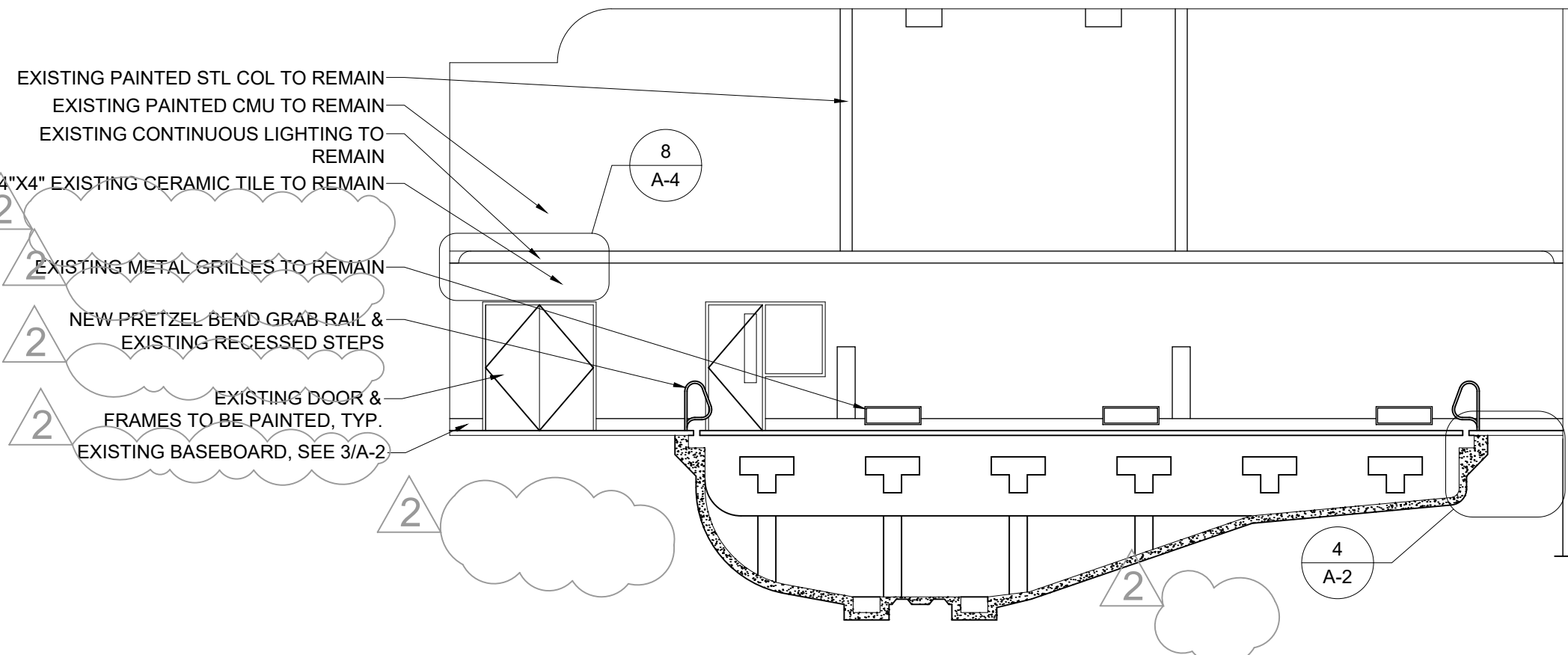
# 2018 Repair



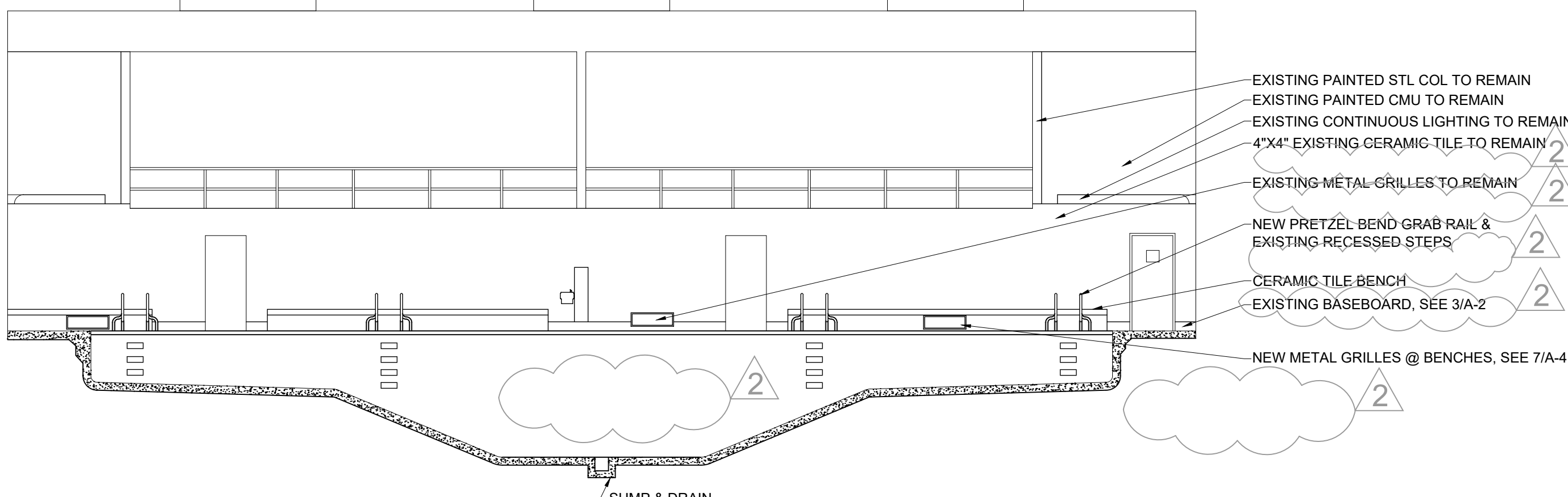
**WALL TILE DETAIL**  
SCALE: 1/2" = 1'-0"

TILE SCHEDULE				
BASE BID				
Designation	Color	Size	Pricing Group	Description
NOT USED				
NOT USED				
CT-5	DAL TILE KEYSTONE WATERFALL D169	1"X1"	GROUP 2	BENCH TILE (VERTICAL)
CT-6	DAL TILE KEYSTONE BISCUIT D317	1"X1"	GROUP 1	BENCH TILE SEAT & SEAT EDGES
ADD ALTERNATE #1				
NOT USED				
NOT USED				
ADD ALTERNATE #2				
NOT USED				
NOT USED				
NOT USED				
NOT USED				
NOT USED				

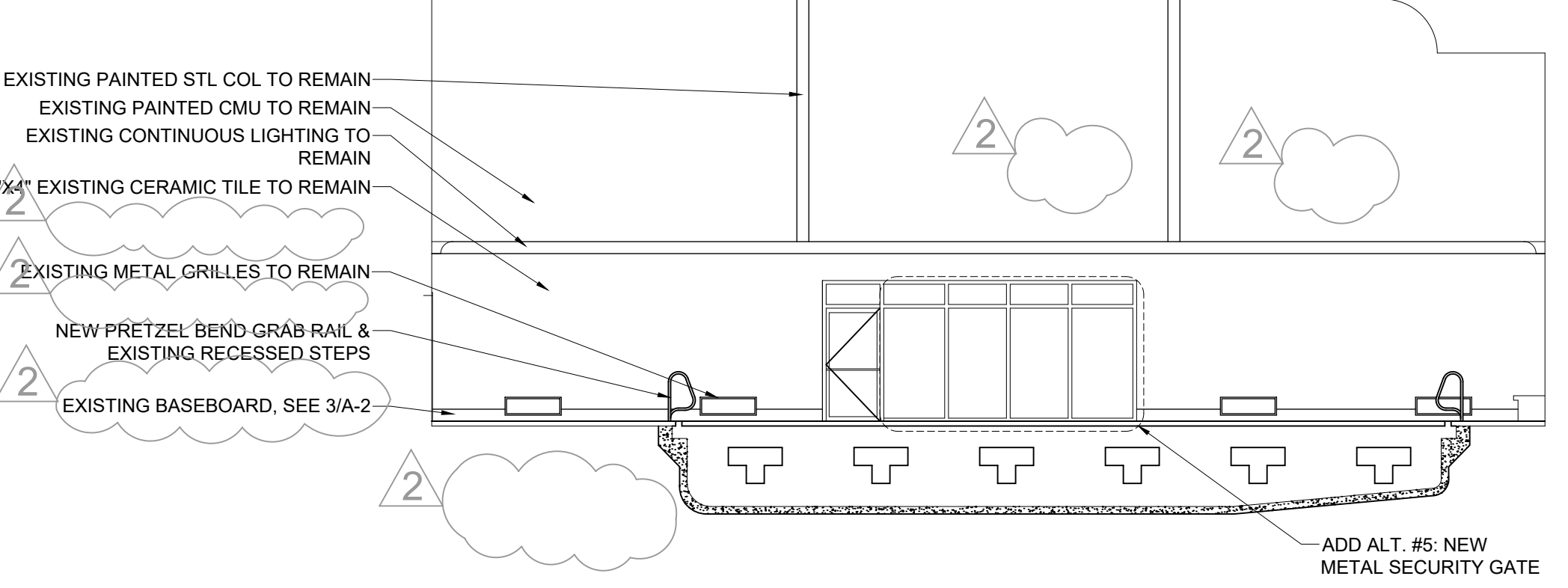
- GENERAL NOTES:
- CERAMIC TILE WALL PATTERN AT ELEVATIONS OMITTED FOR CLARITY.
  - ELECTRICAL AND COMMUNICATIONS DEVICES ON WALL OMITTED FOR CLARITY
  - PROVIDE SEALANT AT ALL CORNERS, TRANSITIONS, & CHANGES OF MATERIAL. PROVIDE MATCHING COLOR SELECTED BY ARCHITECT.



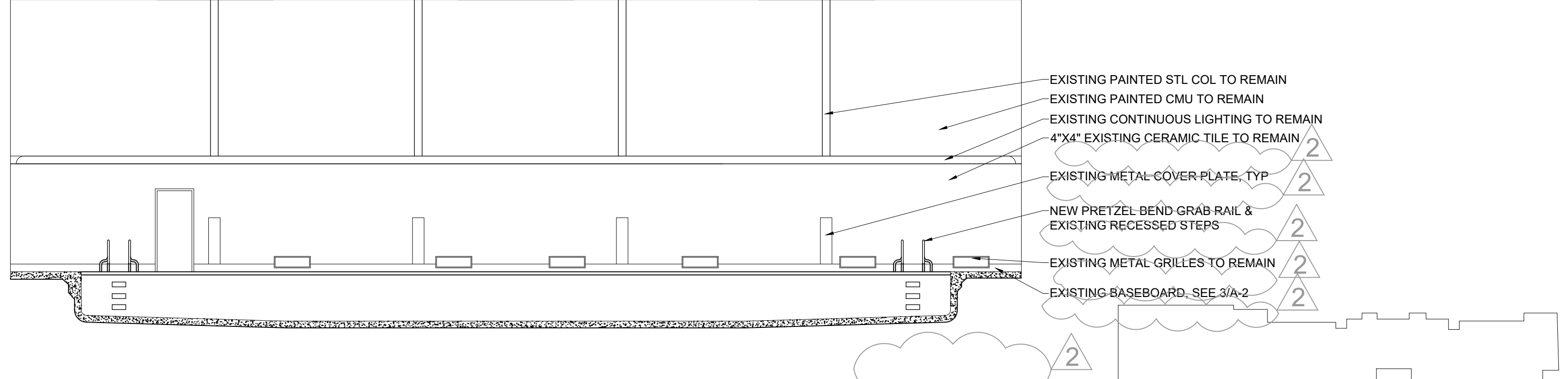
**WEST ELEVATION**  
SCALE: 1/8" = 1'-0"



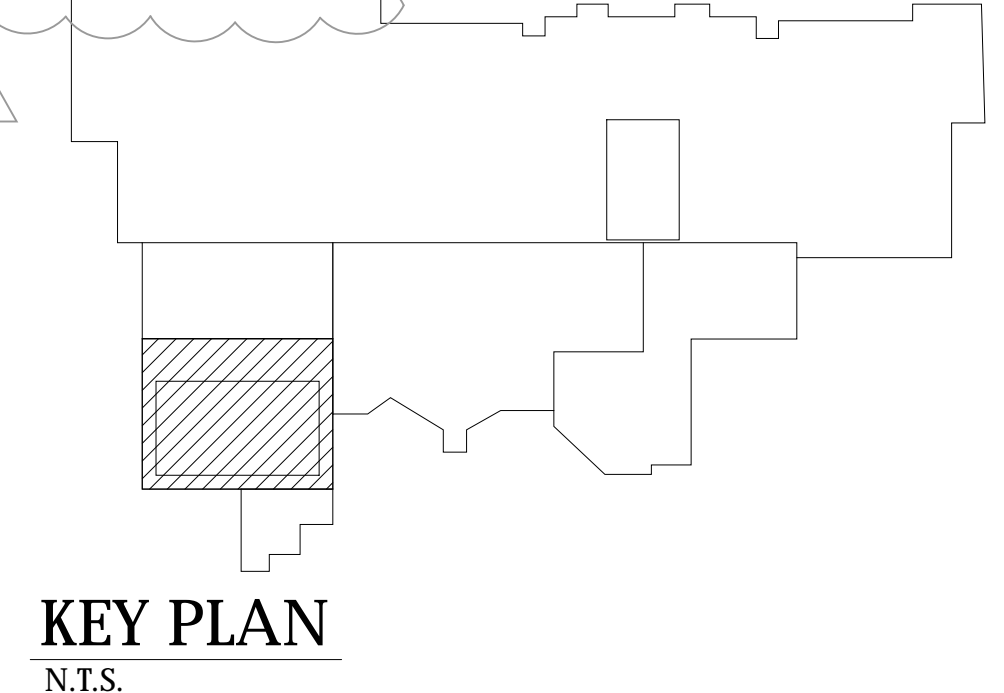
**SOUTH ELEVATION**  
SCALE: 1/8" = 1'-0"



**EAST ELEVATION**  
SCALE: 1/8" = 1'-0"



**NORTH ELEVATION**  
SCALE: 1/8" = 1'-0"



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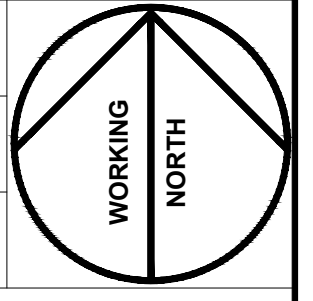
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1	ADDENDUM #1	1/24/19
2	ADDENDUM #2	2/13/19
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	CONFORM. SET	4/25/19

**NORTH HARFORD MIDDLE SCHOOL POOL REPAIRS PHASES 2 & 3**

112 PYLESVILLE ROAD  
PYLESVILLE, MD 21132  
HARFORD COUNTY PUBLIC SCHOOLS

SHEET TITLE  
PROPOSED INTERIOR ELEVATIONS

PROJECT NO.  
**17013.0100**  
DATE  
**APR 25 2019**  
SCALE  
**AS NOTED**  
SHEET NO.



**A-3**

# 2018 Repair

- GENERAL NOTES:
- ELECTRICAL AND COMMUNICATIONS DEVICES ON WALL OMITTED FOR CLARITY
  - PROVIDE SEALANT AT ALL CORNERS, TRANSITIONS, & CHANGES OF MATERIAL. PROVIDE MATCHING COLOR SELECTED BY ARCHITECT.

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PROFESSIONAL SEAL:

PRINTS ISSUED

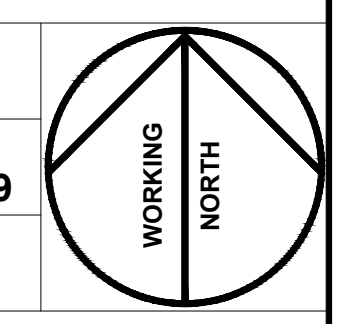
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1	ADDENDUM #1	1/24/19
2	ADDENDUM #2	2/13/19
	PERMIT SET	3/27/19
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**NORTH HARFORD  
 MIDDLE SCHOOL  
 POOL REPAIRS  
 PHASES 2 & 3**

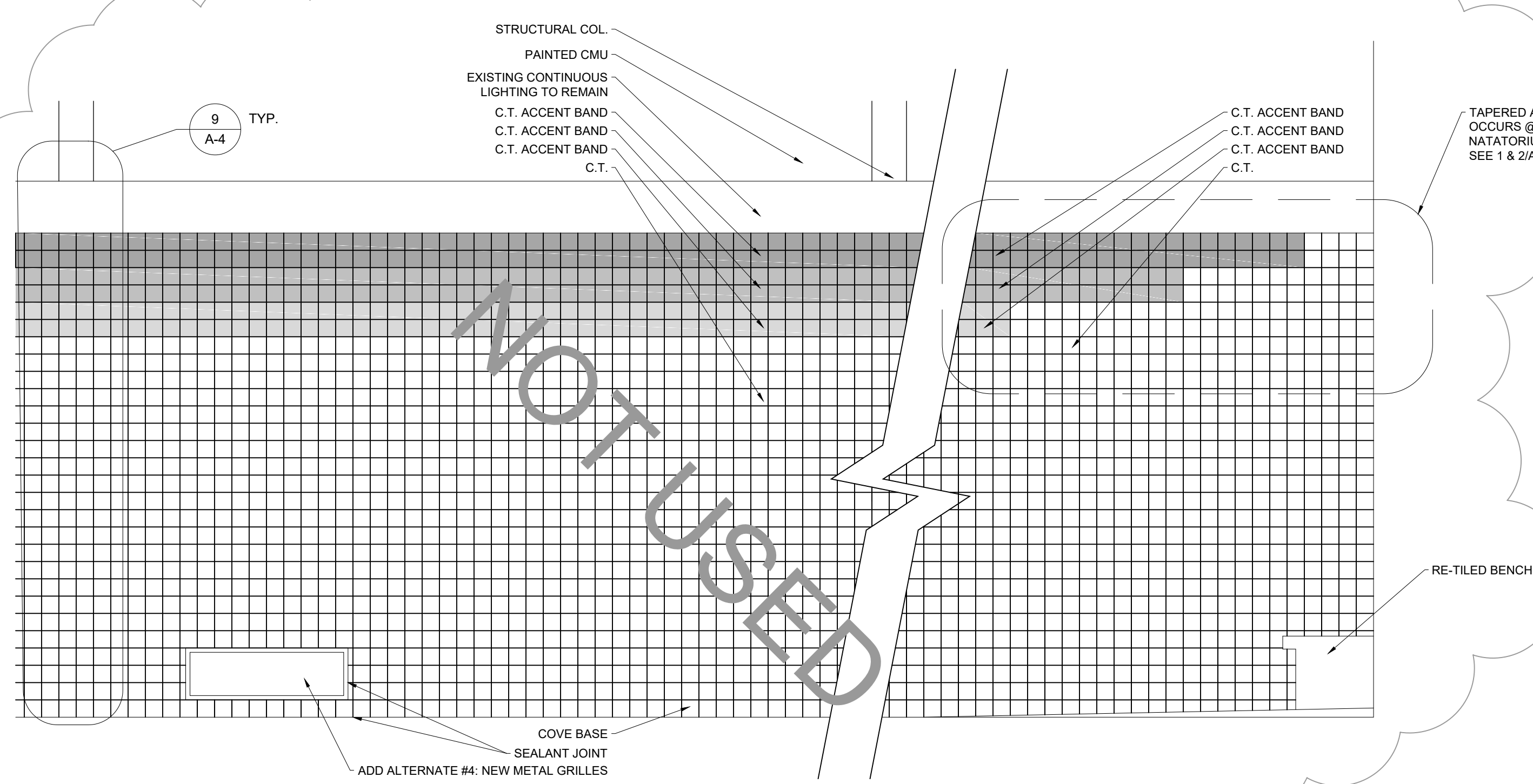
112 PYLESVILLE ROAD  
 PYLESVILLE, MD 21132  
 HARFORD COUNTY PUBLIC  
 SCHOOLS

SHEET TITLE  
**DETAILS**

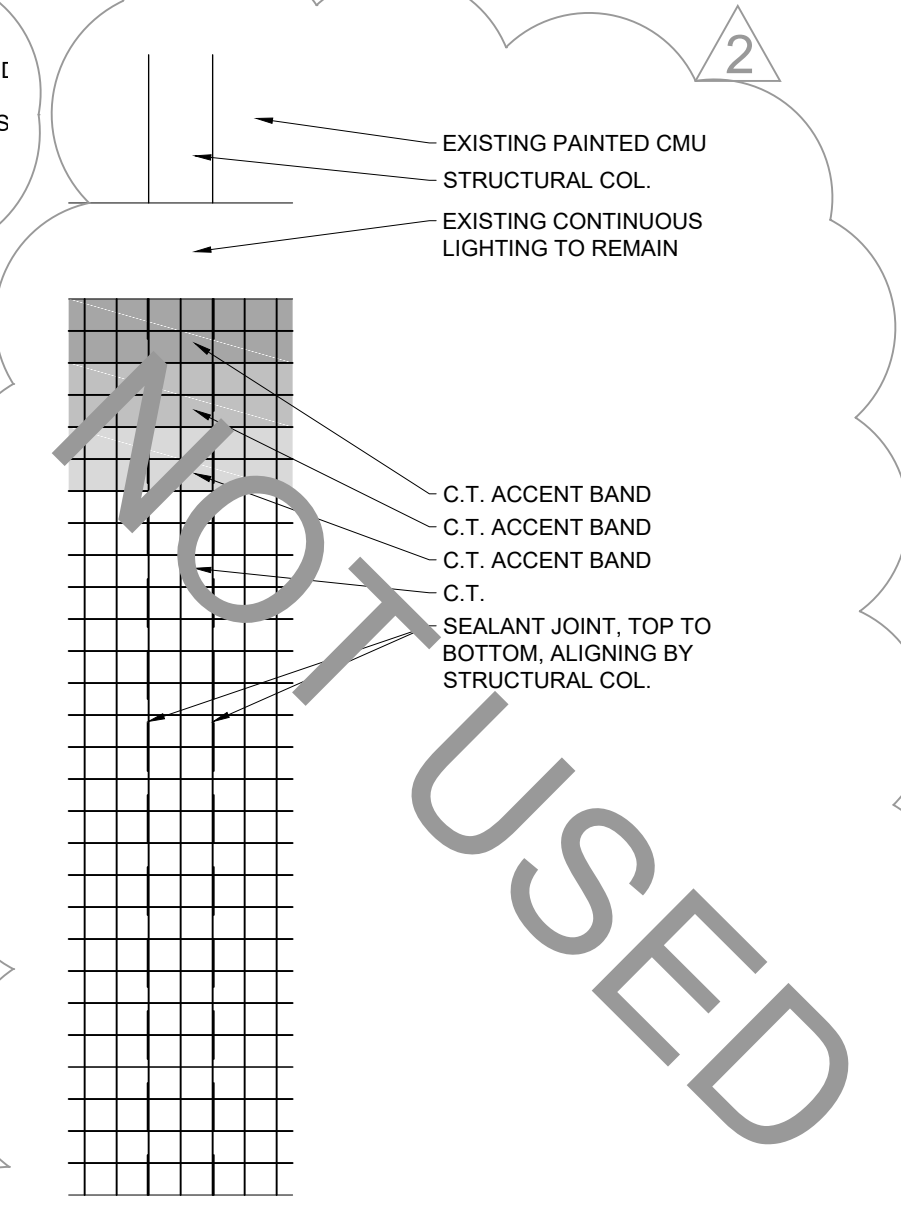
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**17013.0100**  
 DATE  
**APR 25 2019**  
 SCALE  
**AS NOTED**  
 SHEET NO.



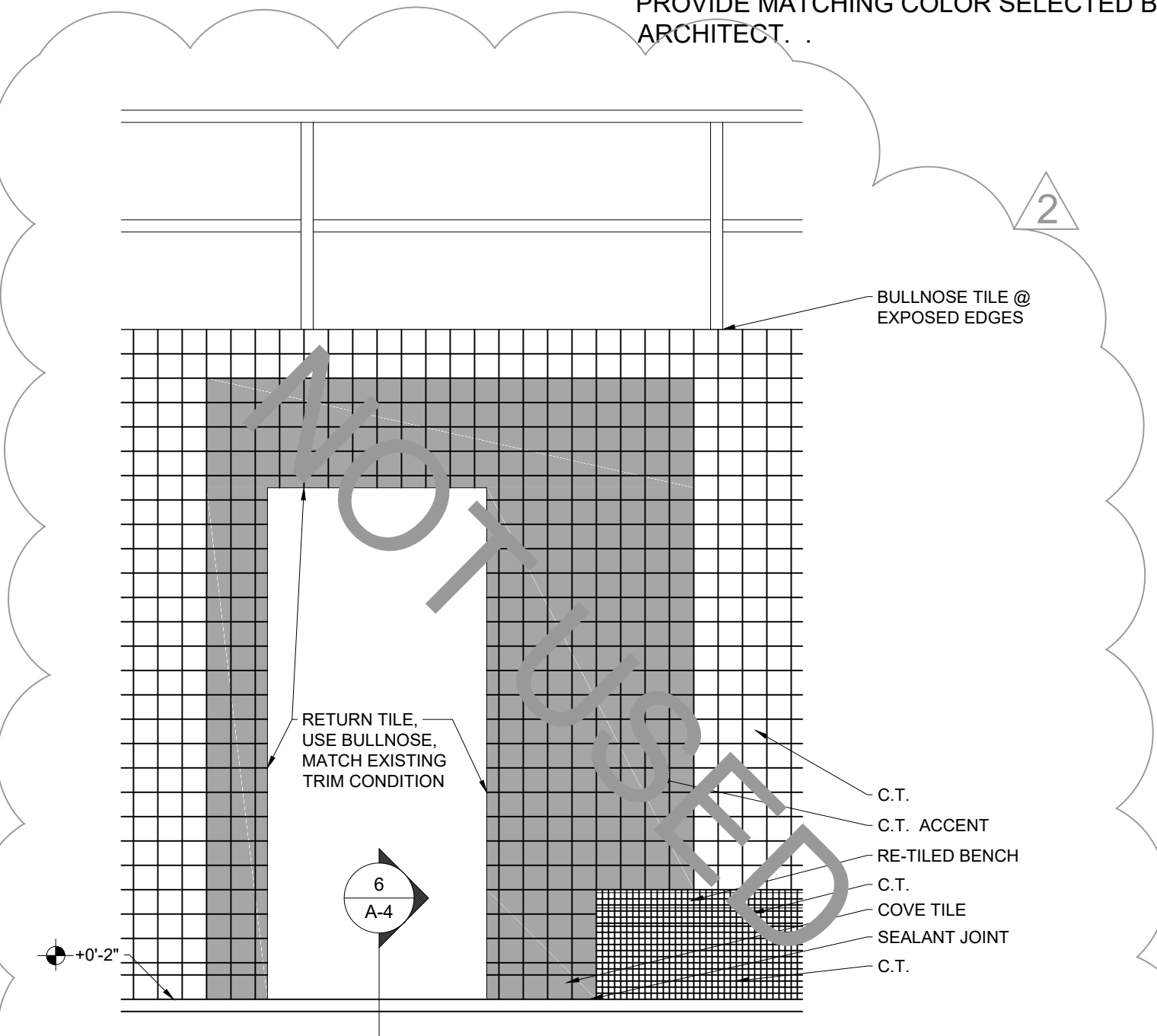
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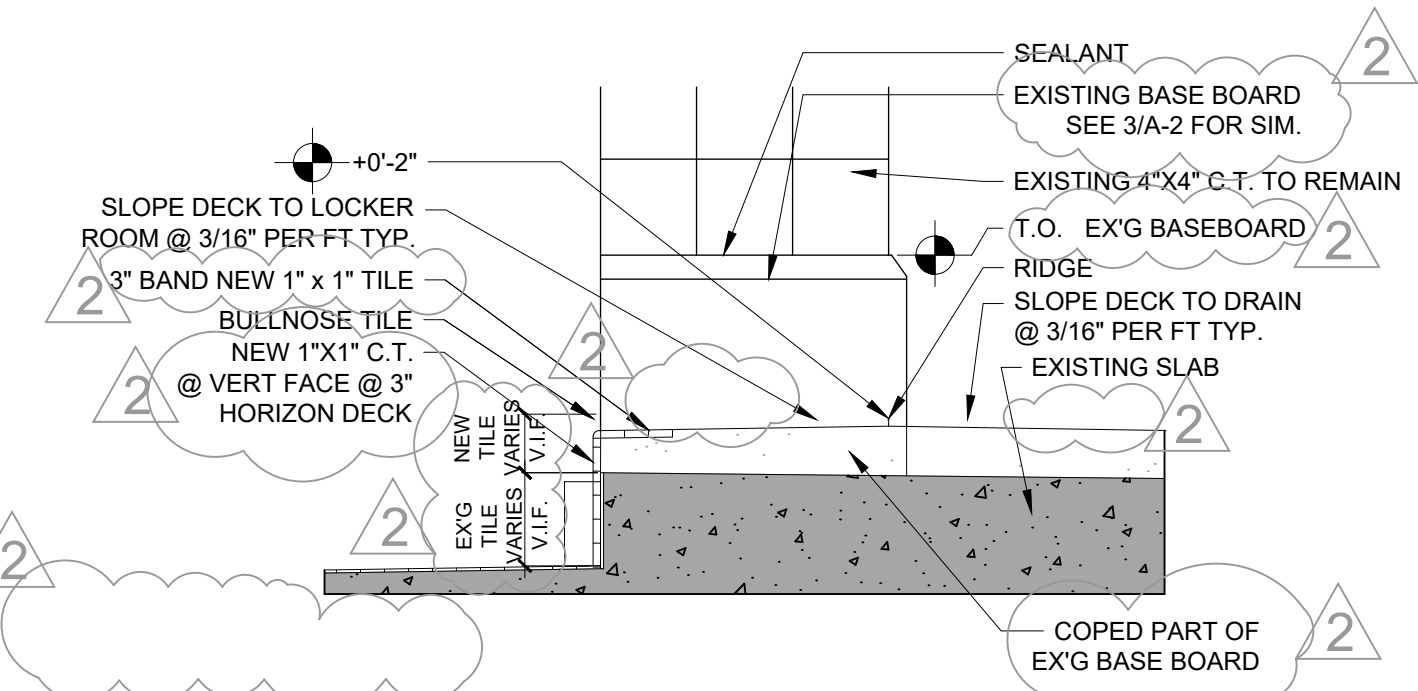
NOTE: TYPICAL CONDITION @ EAST, WEST, & SOUTH NATATORIUM WALLS.  
**WALL TILE DETAIL (ADD. ALT. #2)**  
 SCALE: 1/2" = 1'-0"



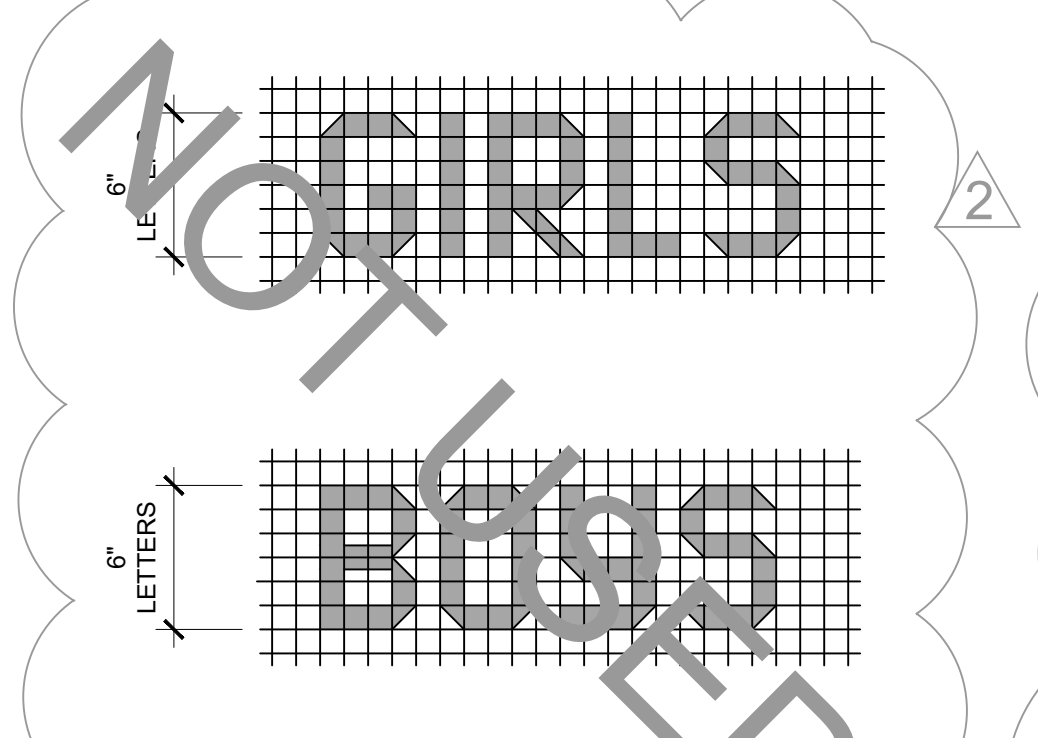
**TYP. DETAIL @ ALL STRUCTURAL COL. (ADD. ALT. #2)**  
 SCALE: 1/2" = 1'-0"



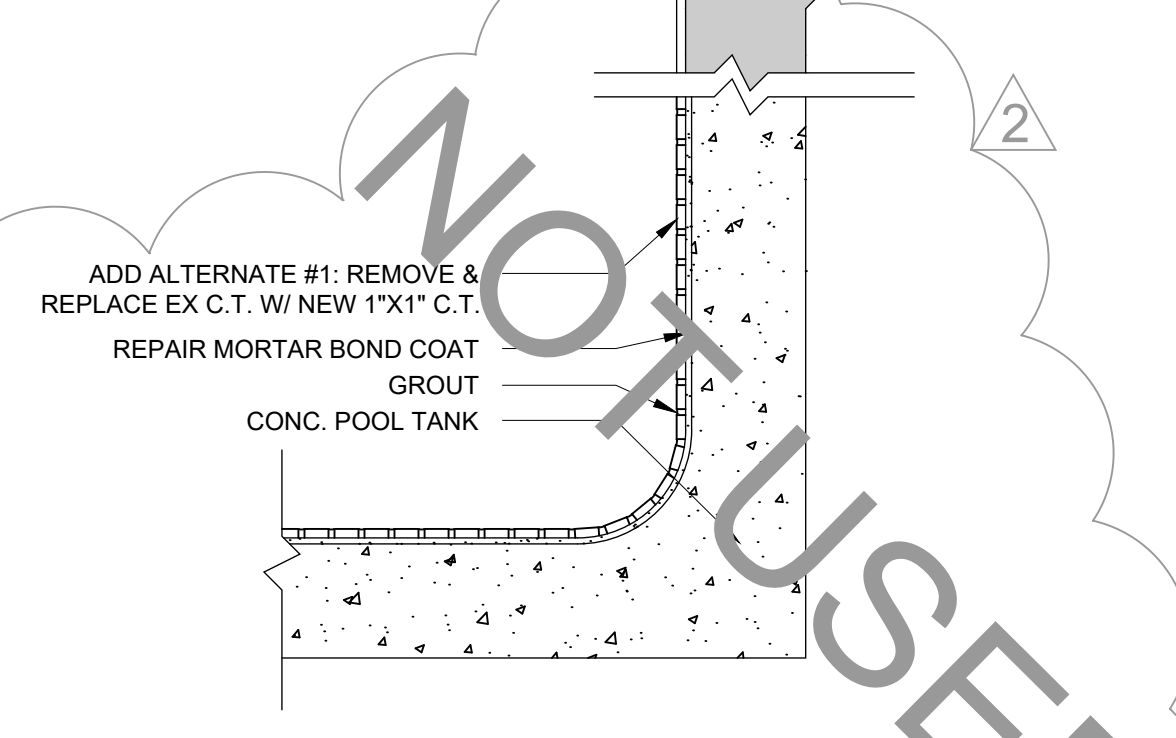
NOTE: MIRRORED TILE PATTERN @ GIRLS SHOWER DOORWAY.  
**WALL TILE DETAIL @ BOYS SHOWER DOORWAY (ADD. ALT. #2)**  
 SCALE: 1/2" = 1'-0"



**CURB DETAIL @ SHOWERS**  
 SCALE: 1-1/2" = 1'-0"

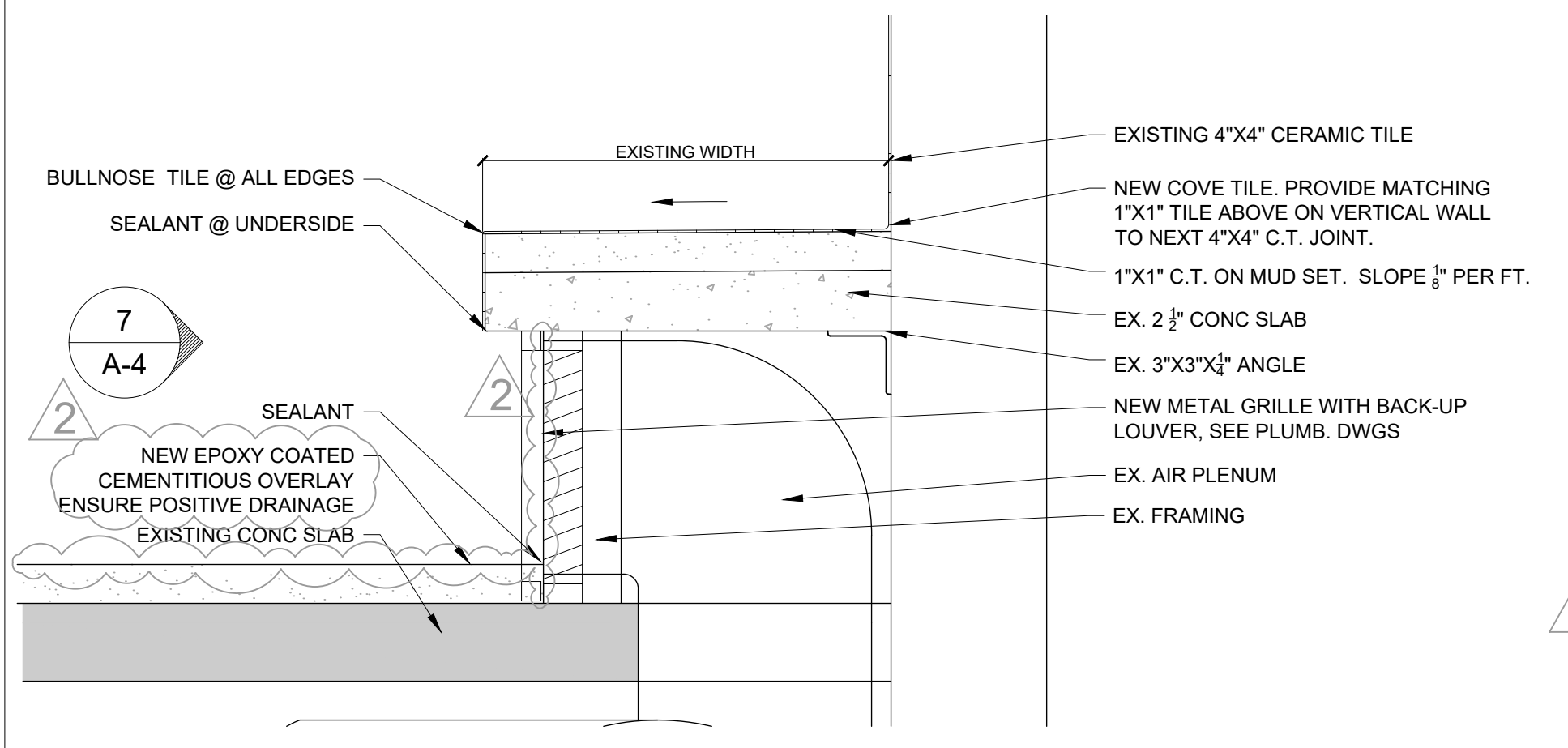


**DECK TILE DETAIL**  
 SCALE: 1-1/2" = 1'-0"

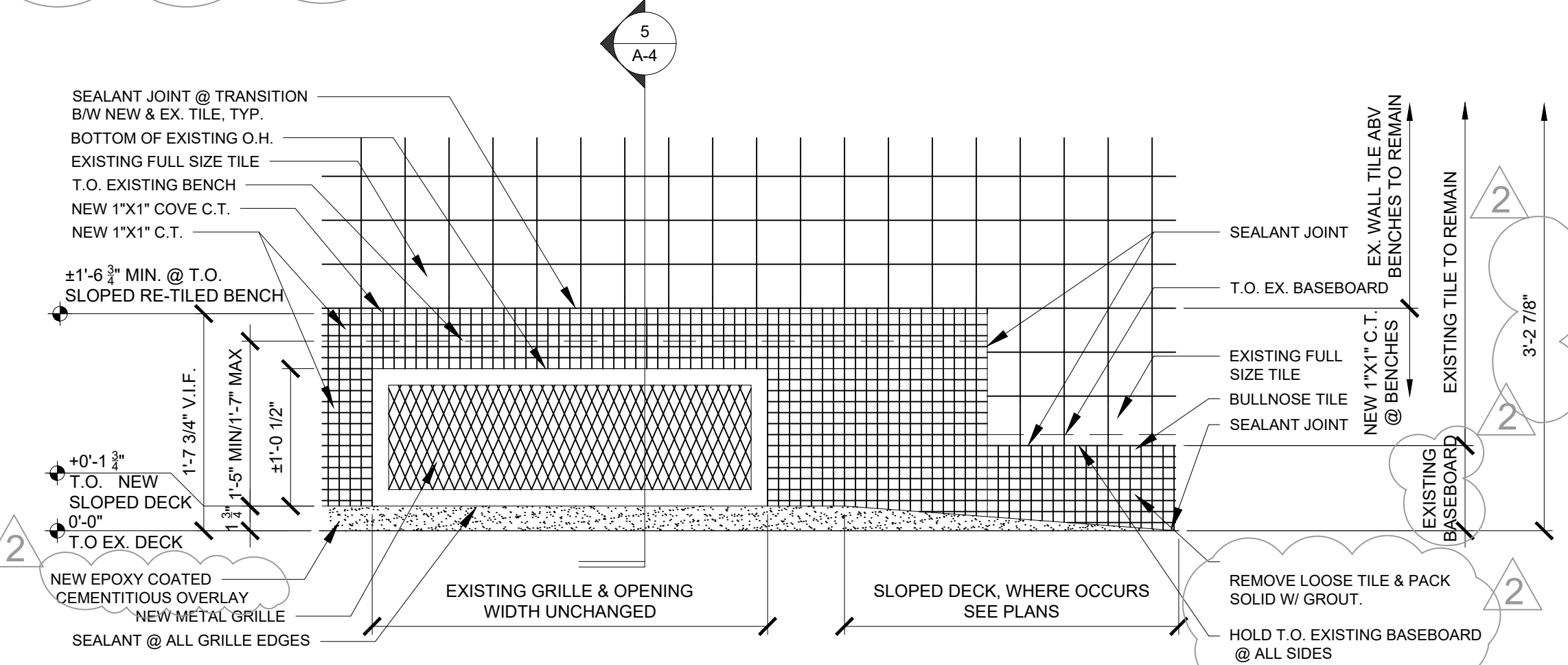


**POOL WALL DETAIL (ADD. ALT. #1)**  
 SCALE: 1-1/2" = 1'-0"

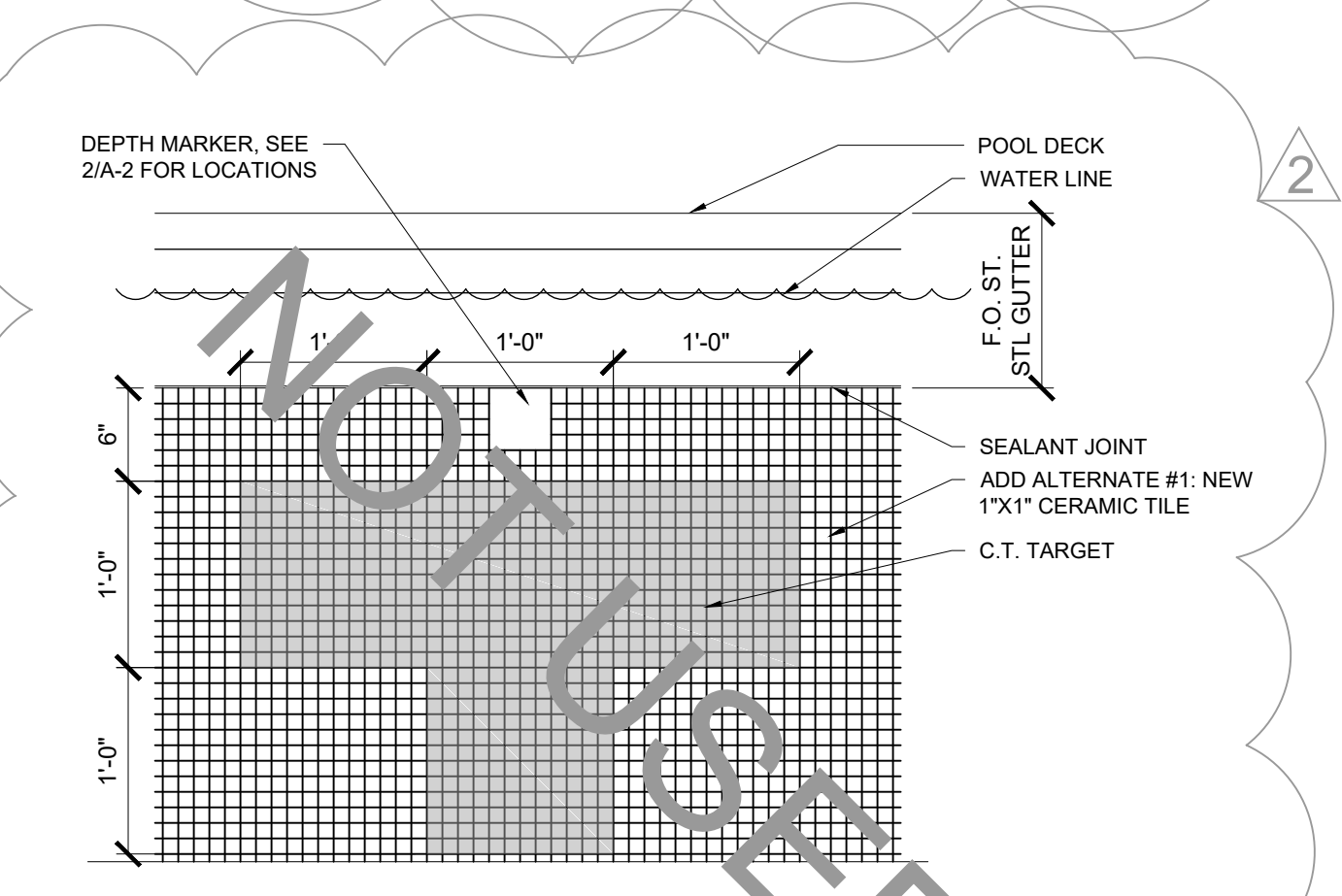
TILE SCHEDULE				
BASE BID				
Designation	Color	Size	Pricing Group	Description
NOT USED				
NOT USED				
CT-5		1"x1"	GROUP 2	BENCH TILE (VERTICAL)
CT-6		1"x1"	GROUP 1	BENCH TILE SEAT & SEAT EDGES
ADD ALTERNATE #1				
NOT USED				
NOT USED				
ADD ALTERNATE #2				
NOT USED				
NOT USED				
NOT USED				
NOT USED				
NOT USED				



**TILED BENCH SECTION**  
 SCALE: 1-1/2" = 1'-0"

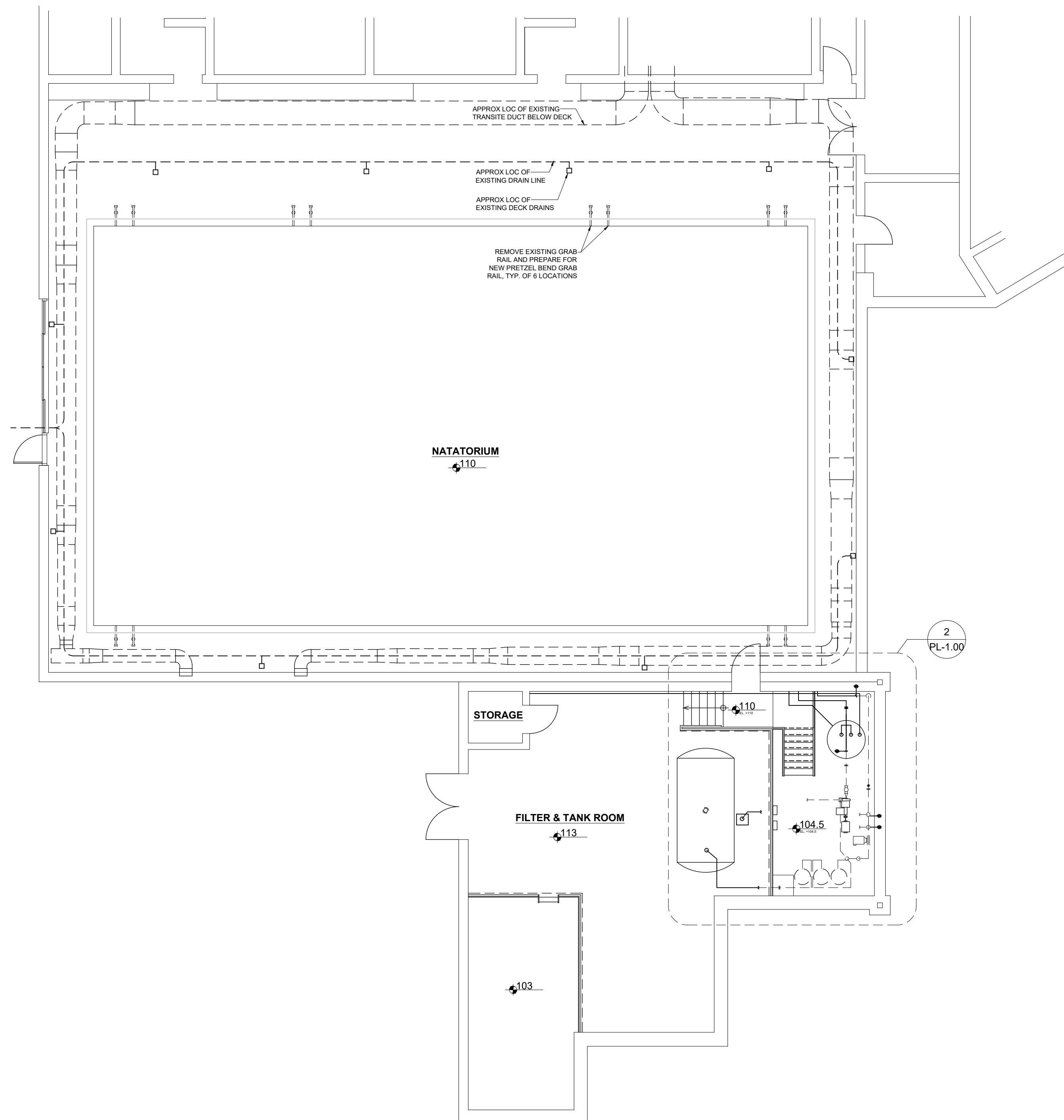


**TILED BENCH ELEVATION**  
 SCALE: 1" = 1'-0"

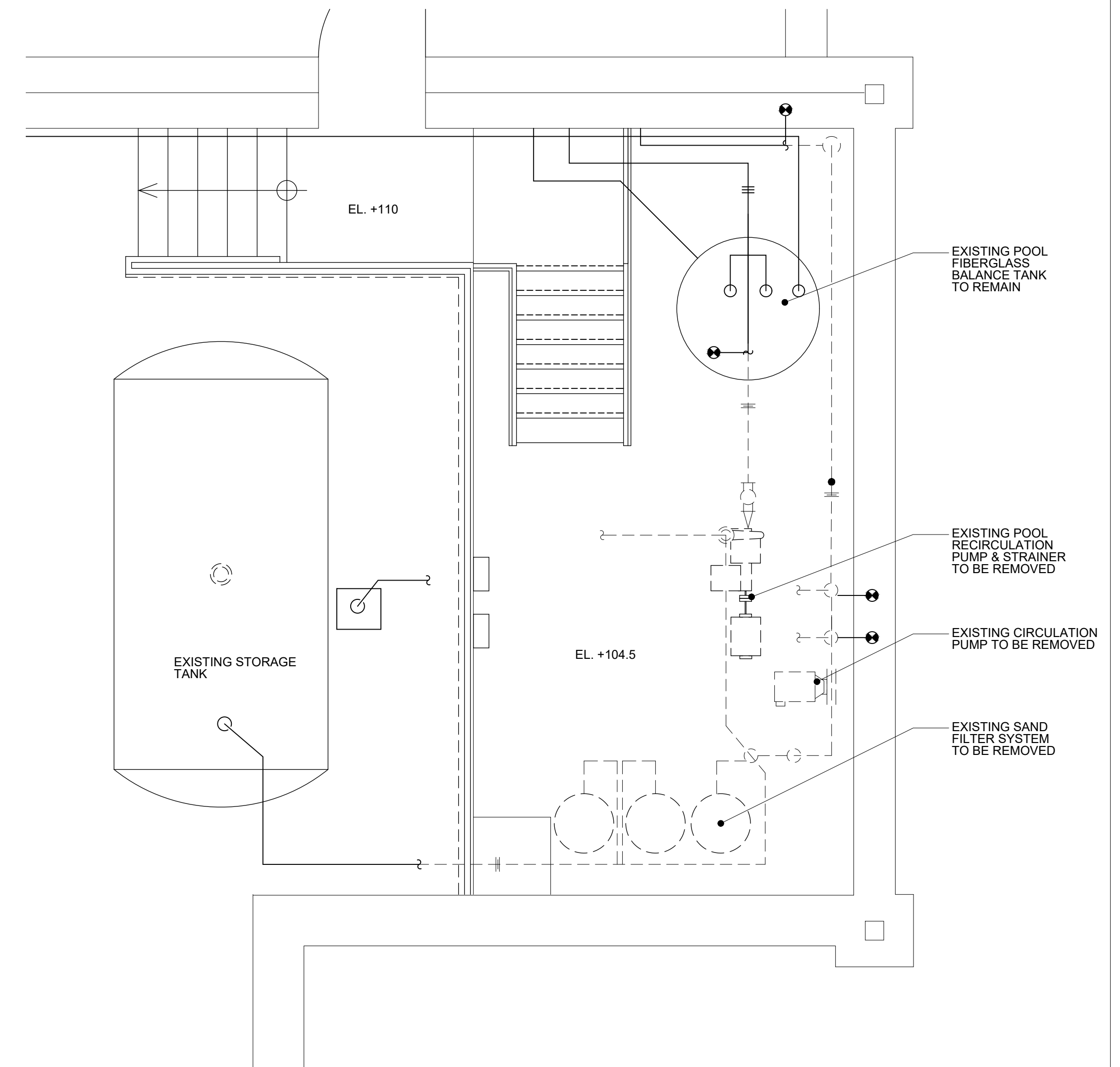


**TARGET TILE DETAIL (ADD. ALT. #1)**  
 SCALE: 1" = 1'-0"

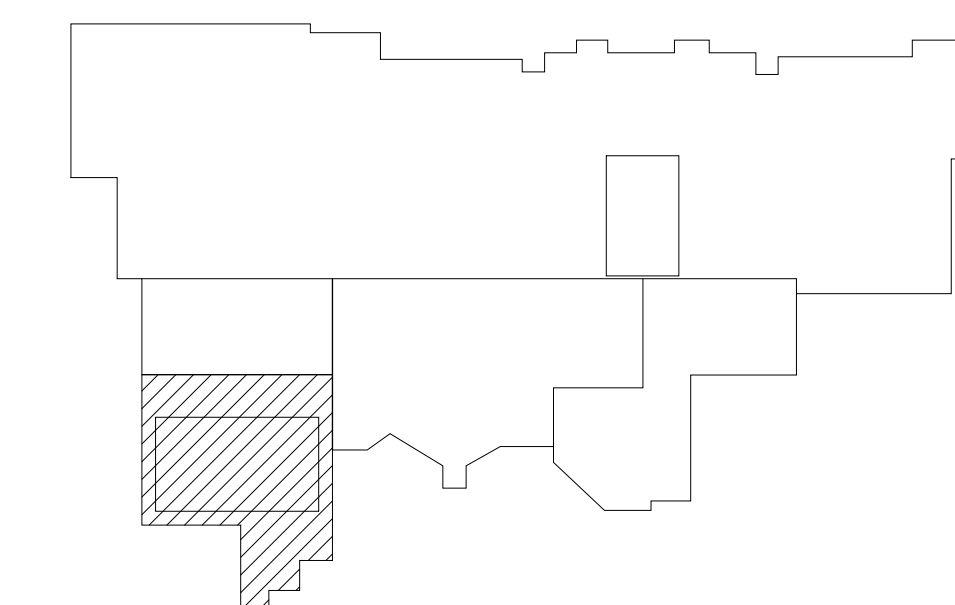
# 2018 Repair



**1**  
EXISTING FLOOR PLAN  
PL-1.00 SCALE: 1/8" = 1'-0"



**2**  
EXISTING DEMO ENLARGED FLOOR PLAN  
PL-1.00 SCALE: 3/8" = 1'-0"



**KEY PLAN**  
N.T.S.

ARCHITECT



9211 CORPORATE BLVD., SUITE 340  
ROCKVILLE, MD 20850  
301-770-0177

MEP ENGINEER

ALBAN ENGINEERING  
303 INTERNATIONAL CIRCLE  
SUITE 450  
HUNT VALLEY, MD 21030  
410.842.6411

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EXPIRATION DATE 01/06/20.

PROFESSIONAL SEAL:

PRINTS ISSUED

NO.	DESCRIPTION	DATE
	50% CDs	11/1/18
	95% CDs	12/5/18
	BID SET	12/19/18
▲	ADDENDUM #1	1/24/19
▲	ADDENDUM #2	2/13/19
	PERMIT SET	3/27/19
	CONFORM. SET	4/25/19

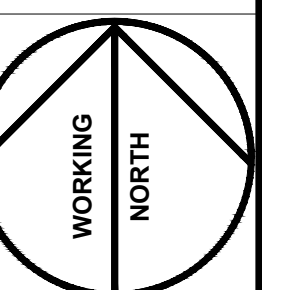
**NORTH HARFORD  
MIDDLE SCHOOL  
POOL REPAIRS  
PHASES 2 & 3**

112 PYLESVILLE ROAD  
PYLESVILLE, MD 21132  
HARFORD COUNTY PUBLIC  
SCHOOLS

SHEET TITLE

EXISTING POOL & FILTER  
ROOM PLAN

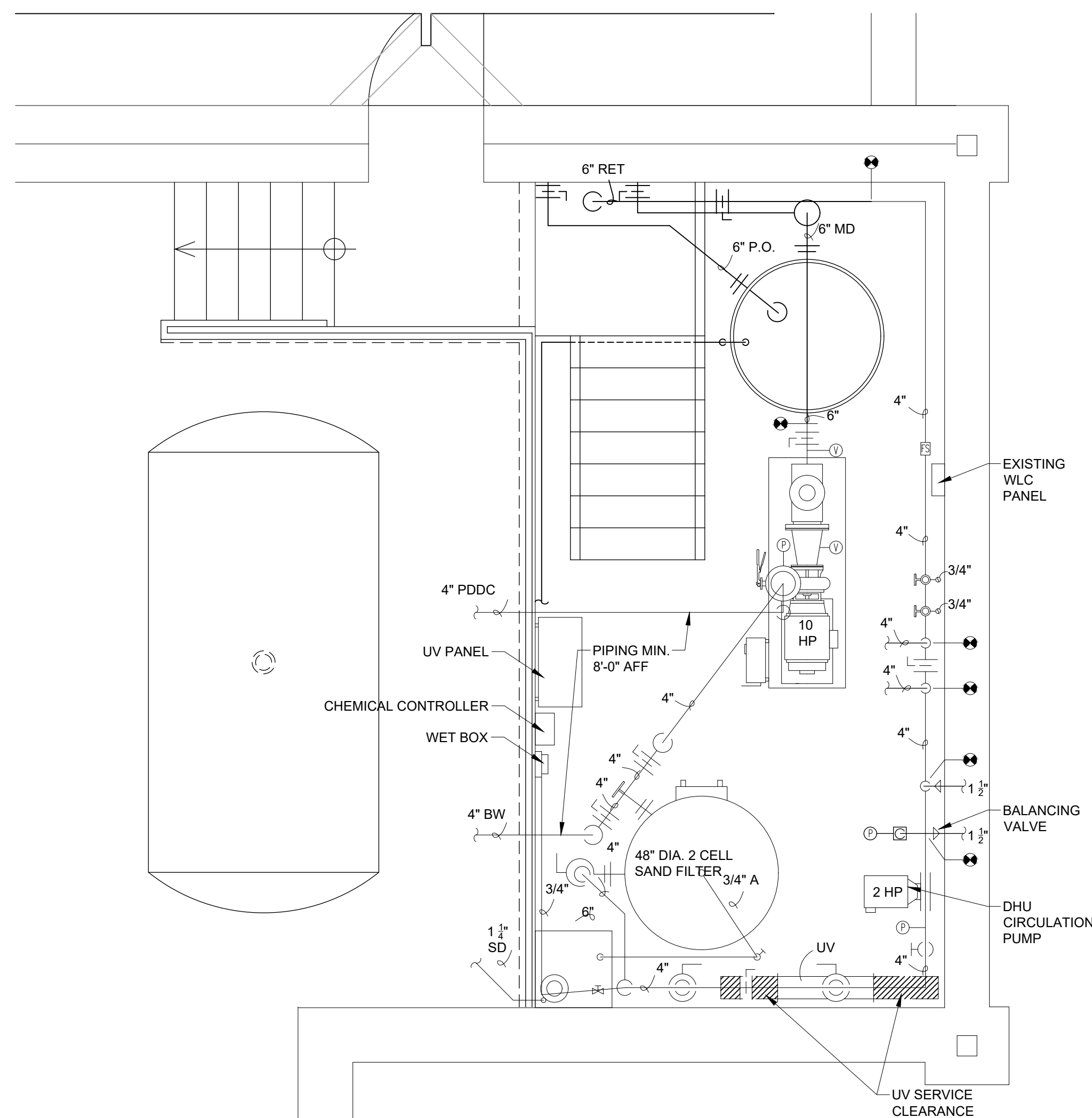
PROJECT NO.  
**17013.0100**  
DATE  
**APR 25 2019**  
SCALE  
**AS NOTED**  
SHEET NO.



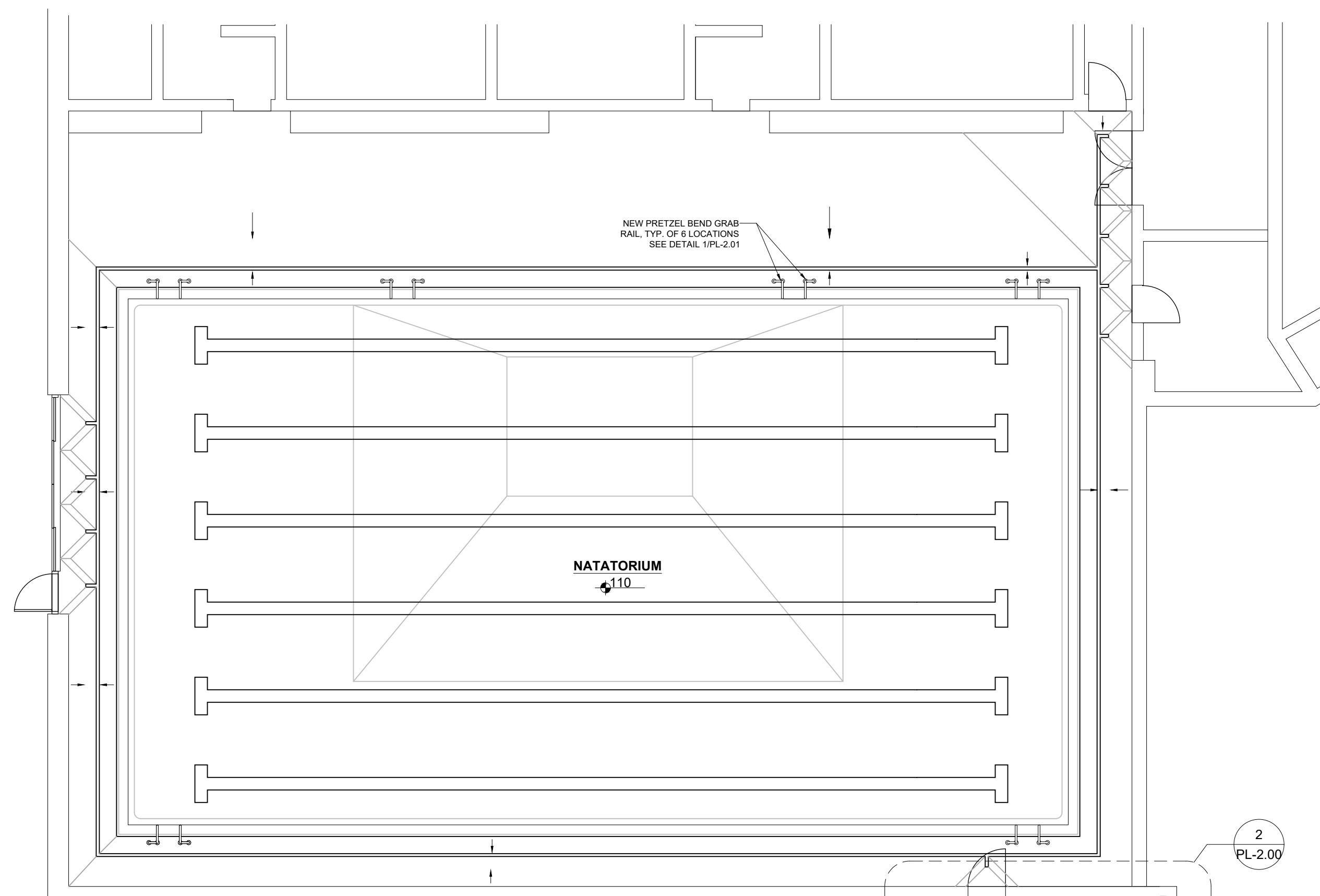
**PL-1.00**



# 2018 Repair

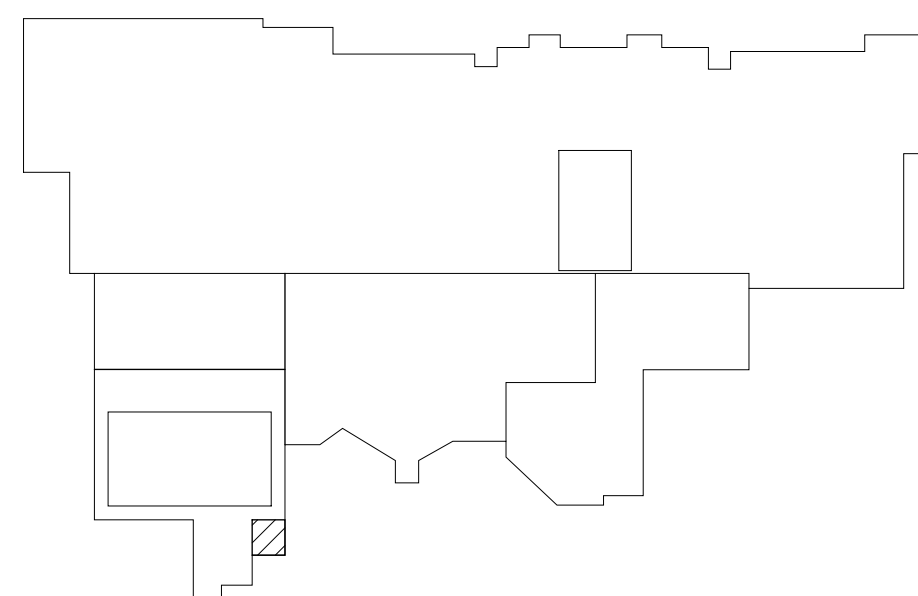


**2 ENLARGED FLOOR PLAN**  
SCALE: 3/8" = 1'-0"



**1 FLOOR PLAN**  
SCALE: 1/8" = 1'-0"

NEW MECHANICAL EQUIPMENT LIST	
NORTH HARFORD MIDDLE SCHOOL - PHASE II	
FILTERS	1 Paddock #67-25-2C STAINLESS STEEL TWO CELL VERTICAL SAND FILTER, 12.57 SQ. FT. FILTER MEDIA PER CELL, TOTAL 25.14 SQ. FT. FILTER MEDIA PER TANK, MAX. FILTER RATE 502 GPM PER FILTER, DESIGN FILTER RATE 305 GPM PER FILTER AT 12.1 GALLONS PER SQ. FT. FILTER AREA, BACKWASH RATE AT 188.55 GPM PER FILTER CELL, TOTAL BACK WASH FOR BOTH CELLS 1,886 GALLONS.
PUMP	1 PACO 2595-7, C.I. END SUCTION, BRONZE FITTED, 1775 RPM, 10 HP, 208 VOLTS, 305 GPM @75' TDH, MAXIMUM 9.26 NPSH REQUIRED
VFD FOR FILTER PUMP	1 H2FLOW CONTROLS - VFD FOR 208 VOLT, 10 HP PUMP
STRAINER	1 MERMADE F.G. 6" x 3" ECCENTRIC, WITH ONE SPARE BASKET
REDUCER	1 SCH. 80 2.5" X 4" CONCENTRIC WITH FLANGES
FLOW SENSOR	1 SIGNET 8" SENSOR 2551 WITH TRANSMITTER 8550
FLOW METER	1 BLUE-WHITE 4" #F30400P (FOR BACKWASH)
GAUGE PANEL	1 PADDOCK POOL EQUIPMENT COMPANY ALUMINUM PANEL WITH TWO GAUGES
GAUGES - PRESSURE	3 ASHCROFT 4" ST. STL. PRESSURE, LIQUID FILLED
GAUGES - COMPOUND	2 ASHCROFT 4" ST. STL. COMPOUND, LIQUID FILLED
THERMOMETERS	5 ASHCROFT 3" THERMOMETER #2A606-9
CHLORINE FEEDER	1 REUSE EXISTING FEEDER
ACID PUMP	1 REUSE EXISTING FEEDER
ACID SYSTEM	1 (1) 55 GAL ACID VAT WITH LID AND QUICK DISCONNECT ACID VENTING KIT, VENTED TO EXTERIOR OF BUILDING
U.V. SYSTEM	1 HANOVIA MODEL UV SWIM I-200- PROVIDING A 60mj AVERAGE DOSE @ 413 GPM (VOLTAGE TO BE CONFIRMED)
CHECK VALVE	1 TITAN CV 41-DI 4" CHECK VALVE (PUMP DISCHARGE)
DHU CIRCULATION PUMP	1 TBD
DHU CIRCUIT SETTER	1 TBD
SUMP PUMP GRATING	1 12" SQ. DURADECK I-4000 1" THICK
SIGHT GLASS	1 SR SMITH 1.5" SIGHT GLASS
EXISTING MECHANICAL EQUIPMENT LIST	
NORTH HARFORD MIDDLE SCHOOL - PHASE II	
CHEMICAL CONTROLLER	1 REUSE EXISTING CONTROLLER
WATER LEVEL CONTROLLER	1 REUSE EXISTING - AQUATICONTROL #ELC-810-DS-ST, DUAL SENSORS (HIGH LEVEL & AUTO FILL) FOR SURGE TANK APPLICATION
SOLENOID VALVE - AUTO FILL	1 REUSE EXISTING - GRANZOW #W6000 (SERIES W, NORMALLY CLOSED), 1" SLOW-CLOSING, NBR SEAL, 24V-AC - FURNISH LOOSE
BALANCE TANK	1 EXISTING TO REMAIN



**KEY PLAN**  
N.T.S.

**POOL SYMBOLS LEGEND: (NOT ALL USED)**

- MD - MAIN DRAIN
- RT - RETURN
- VAC - VACUUM
- PO - PERIMETER OVERFLOW
- FW - FRESH WATER
- FITTINGS**
- V - VACUUM GAUGE
- P - PRESSURE GAUGE
- T - TEMPERATURE GAUGE
- FS - FLOW SWITCH
- SG - SIGHT GLASS
- FM - FLOWMETER - PLAN VIEW
- FME - FLOWMETER - ELEVATION VIEW
- PC - POINT OF CONNECTION

DESIGN DATA	
DIMENSIONS	42' X 75'-1"
DEPTHS	3'-6" TO 4'-6" TO 9'-0" MAX
PERIMETER	234 FT
WATER SURFACE AREA	
DEEP	855 SF
SHALLOW	2,289 SF
TOTAL WATER SURFACE AREA	3,144 SF
CAPACITY	109,339 GALLONS
FILTER RATE	304 GPM
TURNOVER TIME	6 HR
MAXIMUM BATHER LOAD	251 BATHERS

**KEY PLAN**  
N.T.S.

ARCHITECT  
**SEI** SMOLEN • EMR  
ILKOVITCH  
ARCHITECTS  
9211 CORPORATE BLVD., SUITE 340  
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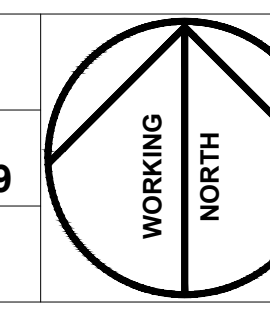
**NORTH HARFORD MIDDLE SCHOOL POOL REPAIRS PHASES 2 & 3**

112 PYLESVILLE ROAD  
PYLESVILLE, MD 21132  
HARFORD COUNTY PUBLIC SCHOOLS

SHEET TITLE

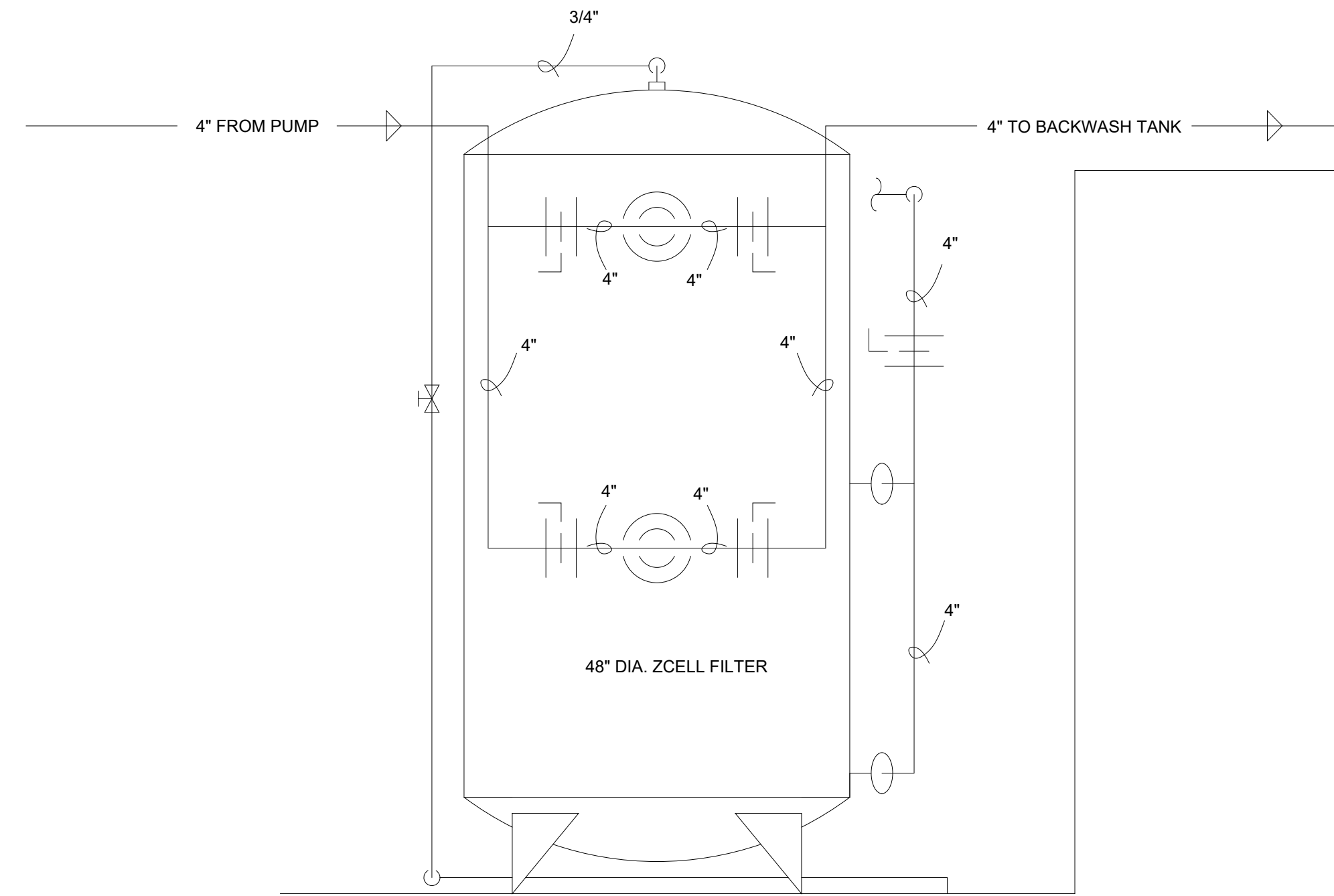
PROPOSED FLOOR PLAN & ENLARGED PLANS

PROJECT NO.	17013.0100
DATE	APR 25 2019
SCALE	AS NOTED
SHEET NO.	

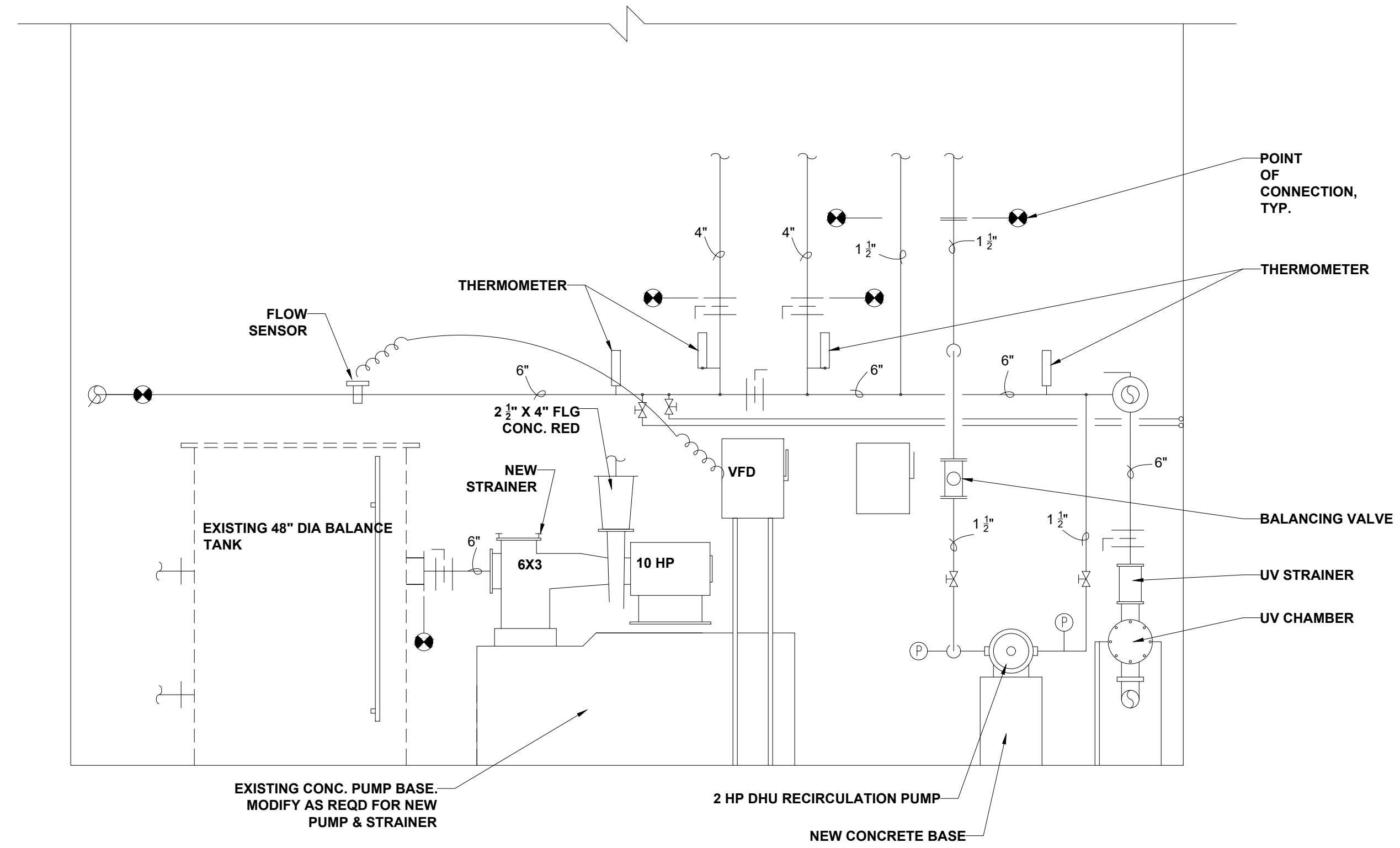


**PL-2.00**

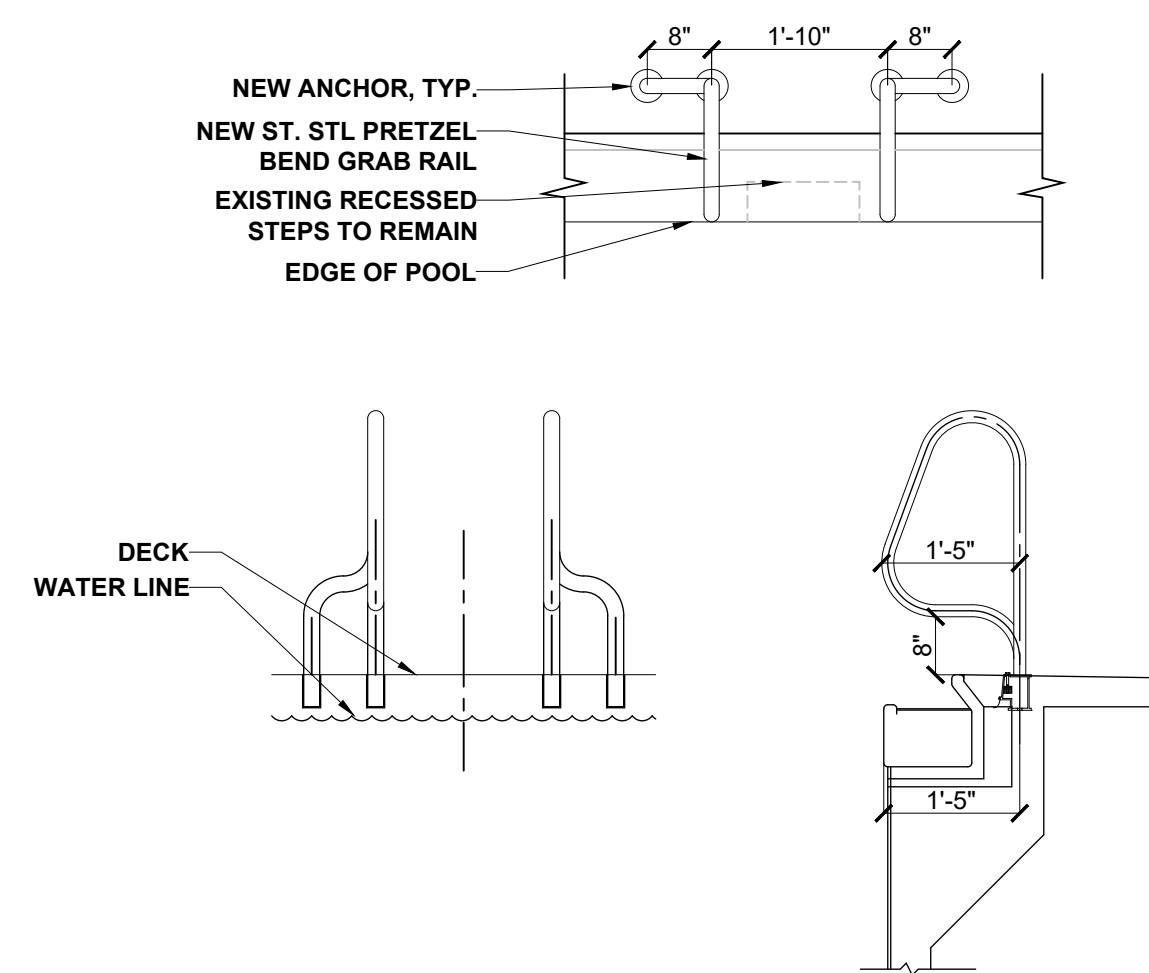
# 2018 Repair



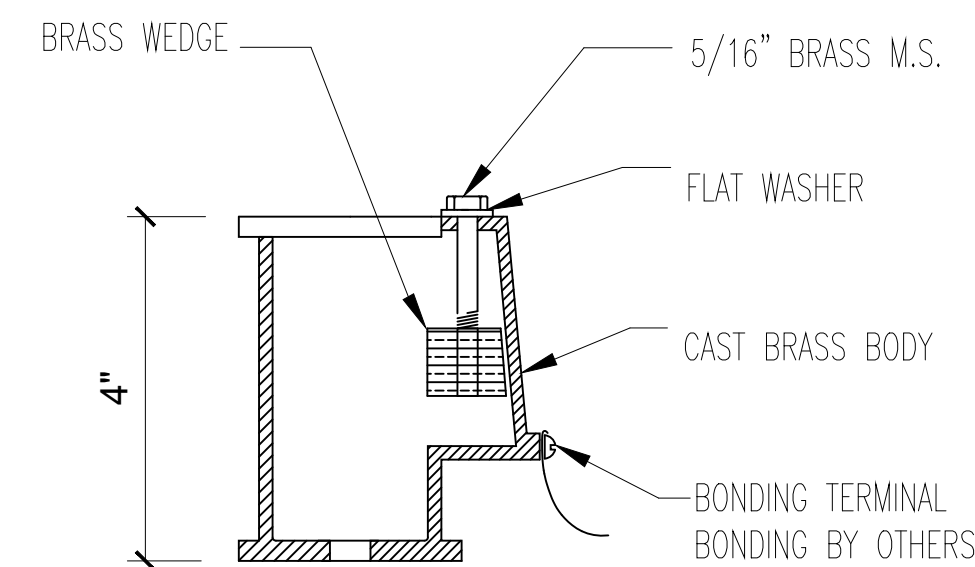
**3 POOL FILTER ELEVATION**  
 PL-2.01 SCALE: 3/4" = 1'-0"



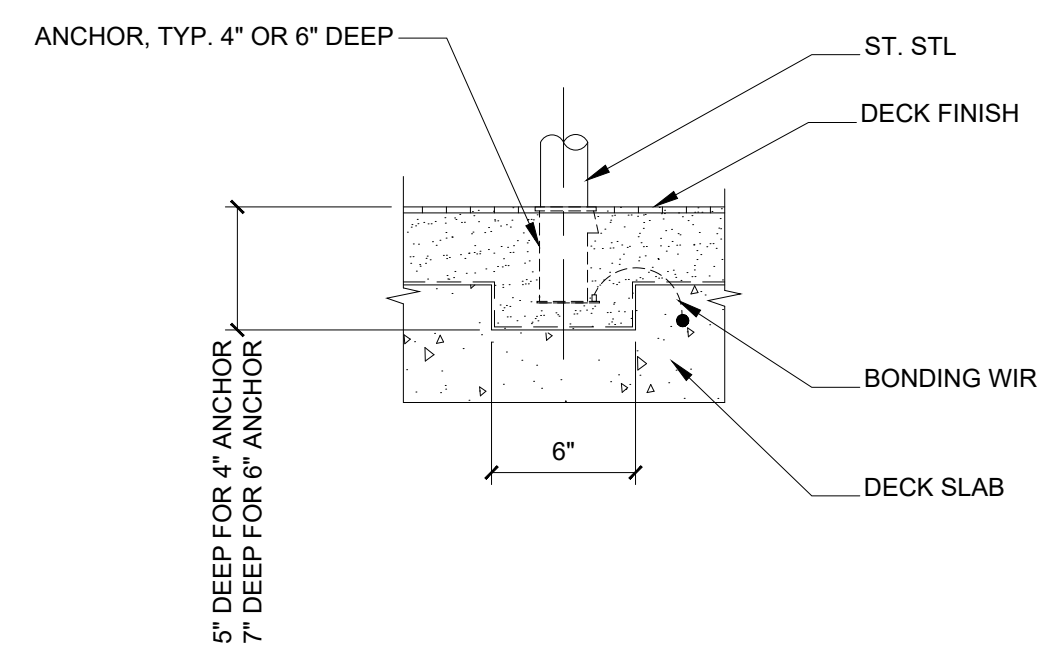
**2 POOL FILTER ROOM ELEVATION**  
 PL-2.01 SCALE: 1/2" = 1'-0"



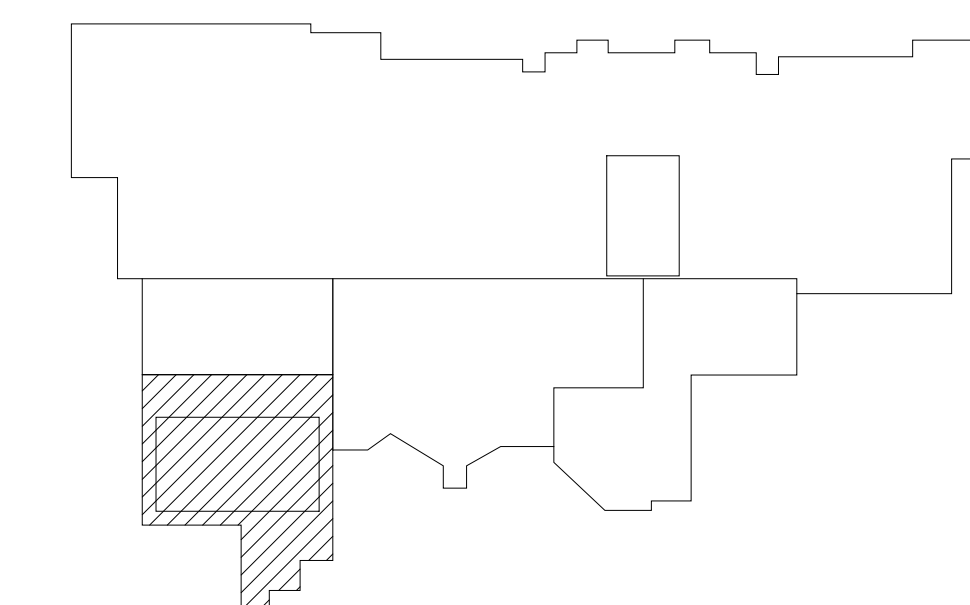
**1 PRETZEL BEND GRAB RAIL DETAIL**  
 PL-2.01 SCALE: 1/2" = 1'-0"



**4 WEDGE ANCHOR DETAIL FOR HANDRAILS**  
 PL-2.01 SCALE: 1-1/2" = 1'-0"



**5 TYP. DECK ANCHOR DETAIL**  
 PL-2.01 SCALE: 1-1/2" = 1'-0"



**KEY PLAN**  
 N.T.S.

ARCHITECT



9211 CORPORATE BLVD., SUITE 340  
 ROCKVILLE, MD 20850  
 301-770-0177

MEP ENGINEER

ALBAN ENGINEERING  
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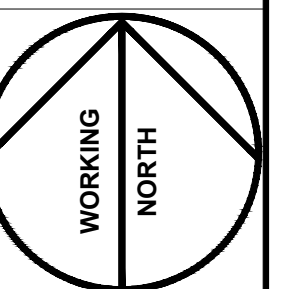
## NORTH HARFORD MIDDLE SCHOOL POOL REPAIRS PHASES 2 & 3

112 PYLESVILLE ROAD  
 PYLESVILLE, MD 21132  
 HARFORD COUNTY PUBLIC SCHOOLS

SHEET TITLE

POOL DETAILS

PROJECT NO.  
**17013.0100**  
 DATE  
**APR 25 2019**  
 SCALE  
**AS NOTED**  
 SHEET NO.



**PL-2.01**



PRINTS ISSUED

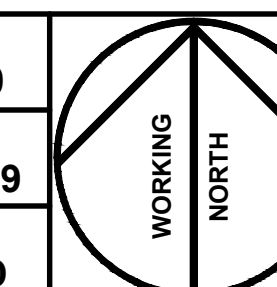
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	95% CDs	12/5/18
	BID SET	12/19/18
▲	ADDENDUM #1	1/24/19
▲	ADDENDUM #2	2/13/19
	PERMIT SET	3/27/19
	CONFORM. SET	4/25/19

**NORTH HARFORD  
MIDDLE SCHOOL  
POOL REPAIRS  
PHASES 2 & 3**

112 PYLESVILLE ROAD  
PYLESVILLE, MD 21132  
HARFORD COUNTY PUBLIC  
SCHOOLS

SHEET TITLE  
**PLUMBING PLANS**

PROJECT NO.  
**17013.0100**  
DATE  
**APR 25 2019**  
SCALE  
**AS NOTED**  
SHEET NO.

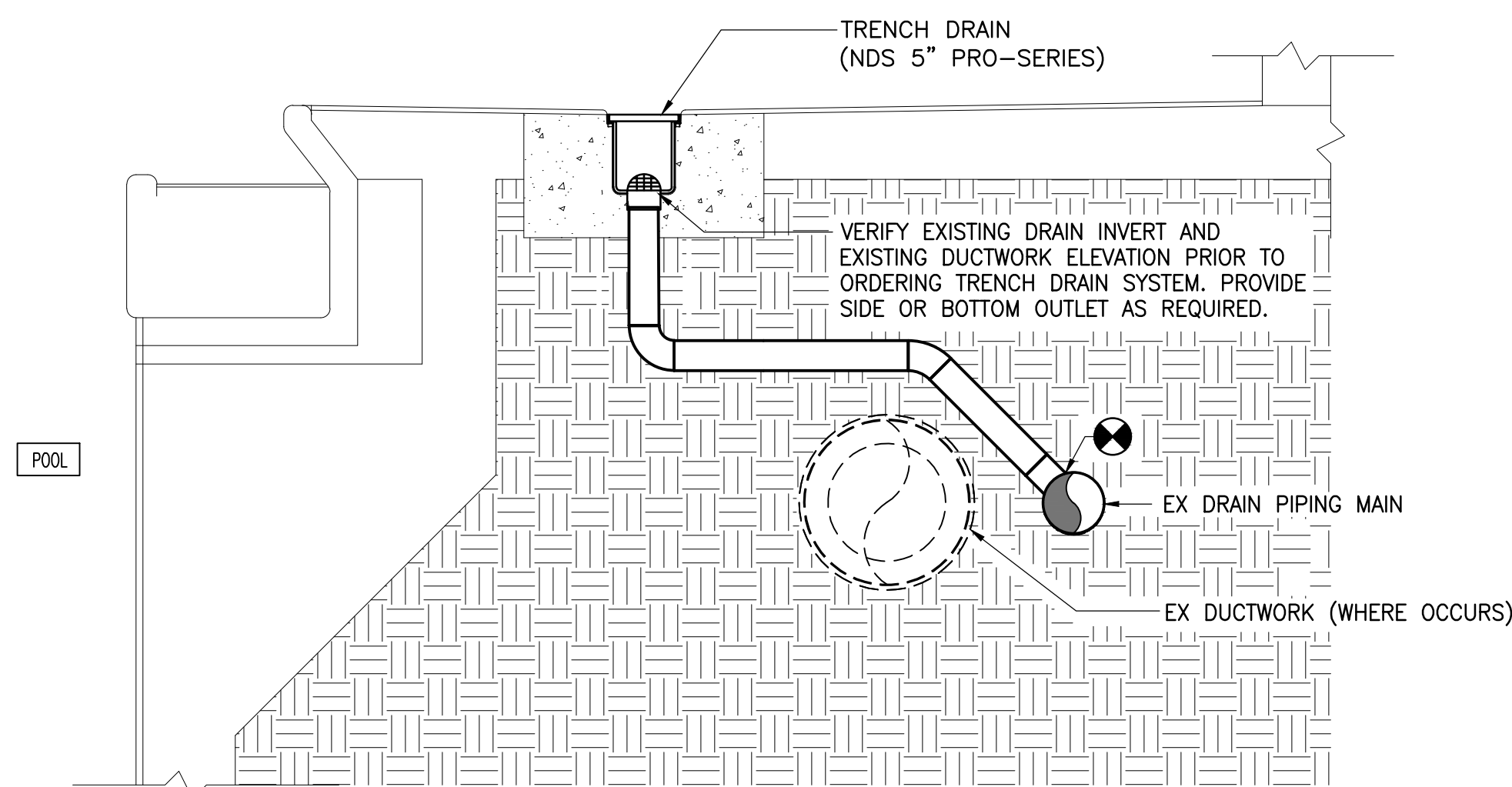


**P-1.00**

**2018 Repair**

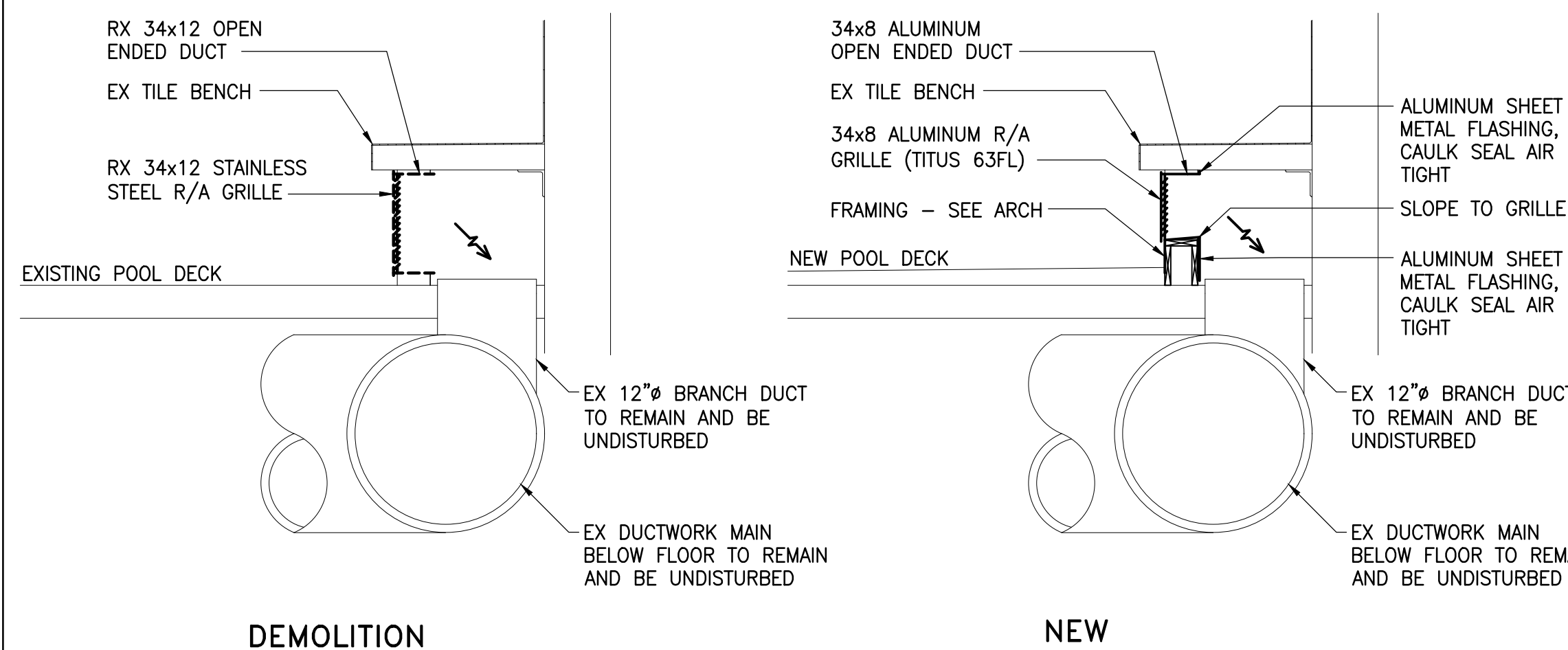
**DRAWING NOTES:**

- ① EXISTING DUCTWORK BELOW FLOOR TO REMAIN.
- ② EXISTING DRAIN PIPING BELOW FLOOR.
- ③ REMOVE EXISTING FLOOR DRAIN.
- ④ TRENCH DRAIN: 5" WIDE MODULAR POLYPROPYLENE TRENCH DRAIN W/ ADA POLYPROPYLENE LIGHT DUTY GRATE. INSTALL PER MANUFACTURERS RECOMMENDATIONS. VERIFY EXISTING PIPING INVERT AND EXISTING DUCTWORK ELEVATION PRIOR TO ORDERING TRENCH DRAIN SYSTEM. PROVIDE SIDE OR BOTTOM OUTLET AS REQUIRED. (BASED ON NDS MODEL 5" PRO-SERIES CHANNEL DRAIN)
- ⑤ CONNECT TRENCH DRAIN TO EXISTING DRAIN PIPING BELOW FLOOR. EXISTING DUCTWORK BELOW FLOOR TO REMAIN UNDISTURBED. FIELD VERIFY EXACT LOCATION OF EXISTING DRAIN PIPING PRIOR TO INSTALLATION. REFER TO TYPICAL TRENCH DRAIN DETAIL FOR ADDITIONAL INFORMATION.
- ⑥ REMOVE EXISTING 34x12 STAINLESS STEEL R/A GRILLE AND ALL ASSOCIATED APPURTENANCES. REFER TO TYPICAL TILE BENCH GRILLE DETAIL FOR ADDITIONAL INFORMATION.
- ⑦ PROVIDE 34x8 ALUMINUM R/A GRILLE (TITUS 63FL). EXTEND 34x8 ALUMINUM SHEET METAL DUCTWORK INTO TILE BENCH PLENUM SPACE AND UTILIZE SHEET METAL AS FLASHING AGAINST GRILLE FRAME WORK. CAULK SEAL ALL JOINTS AND SEAMS AIR TIGHT. ALL FASTENERS SHALL BE STAINLESS STEEL. REFER TO TYPICAL TILE BENCH GRILLE DETAIL FOR ADDITIONAL INFORMATION.
- ⑧ **ADD ALTERNATE #4:** REMOVE EXISTING 34x12 STAINLESS STEEL R/A GRILLE. EXISTING DUCTWORK TO REMAIN.
- ⑨ **ADD ALTERNATE #4:** PROVIDE 34x12 ALUMINUM R/A GRILLE (TITUS 63FL). CONNECT TO EXISTING DUCTWORK.



TYPICAL TRENCH DRAIN DETAIL

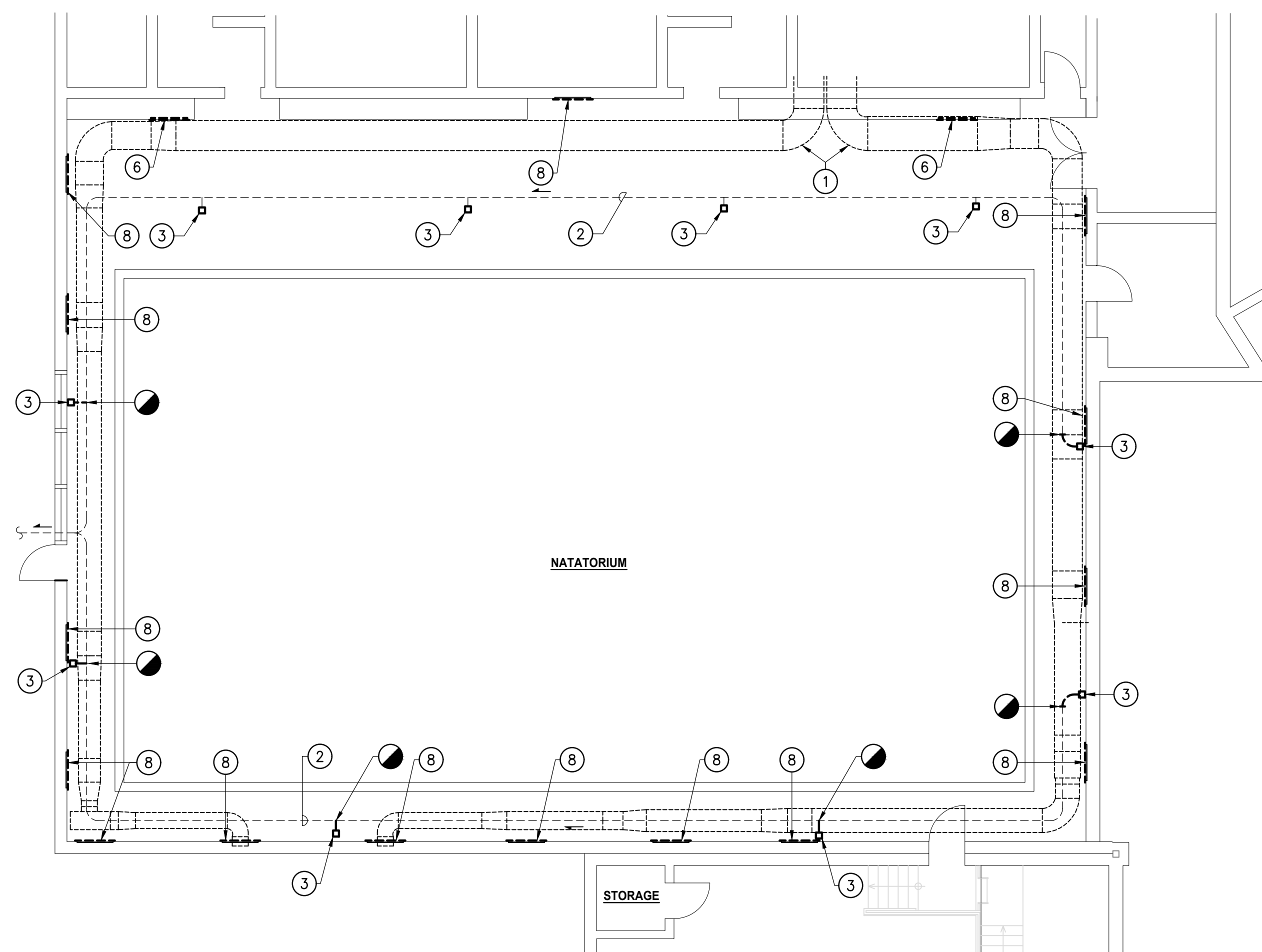
SCALE: NONE



NOTE: ALL FASTENERS SHALL BE STAINLESS STEEL.

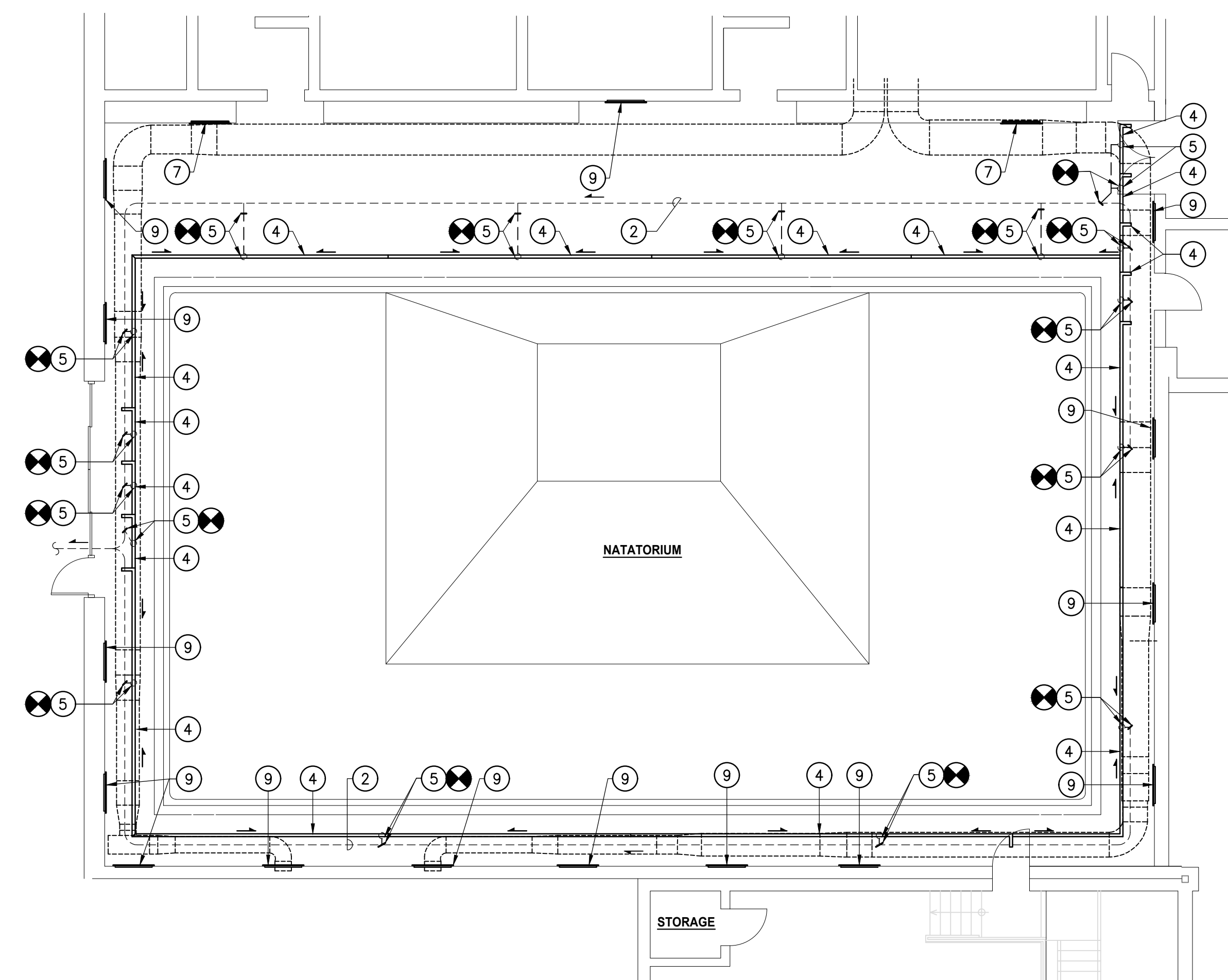
TYPICAL TILE BENCH GRILLE DETAIL

SCALE: NONE



DEMOLITION FLOOR PLAN

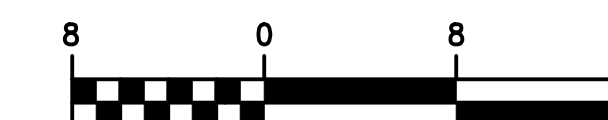
SCALE: 1/8" = 1'-0"



PROPOSED FLOOR PLAN

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

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







# 2018 Repair

## GENERAL NOTES:

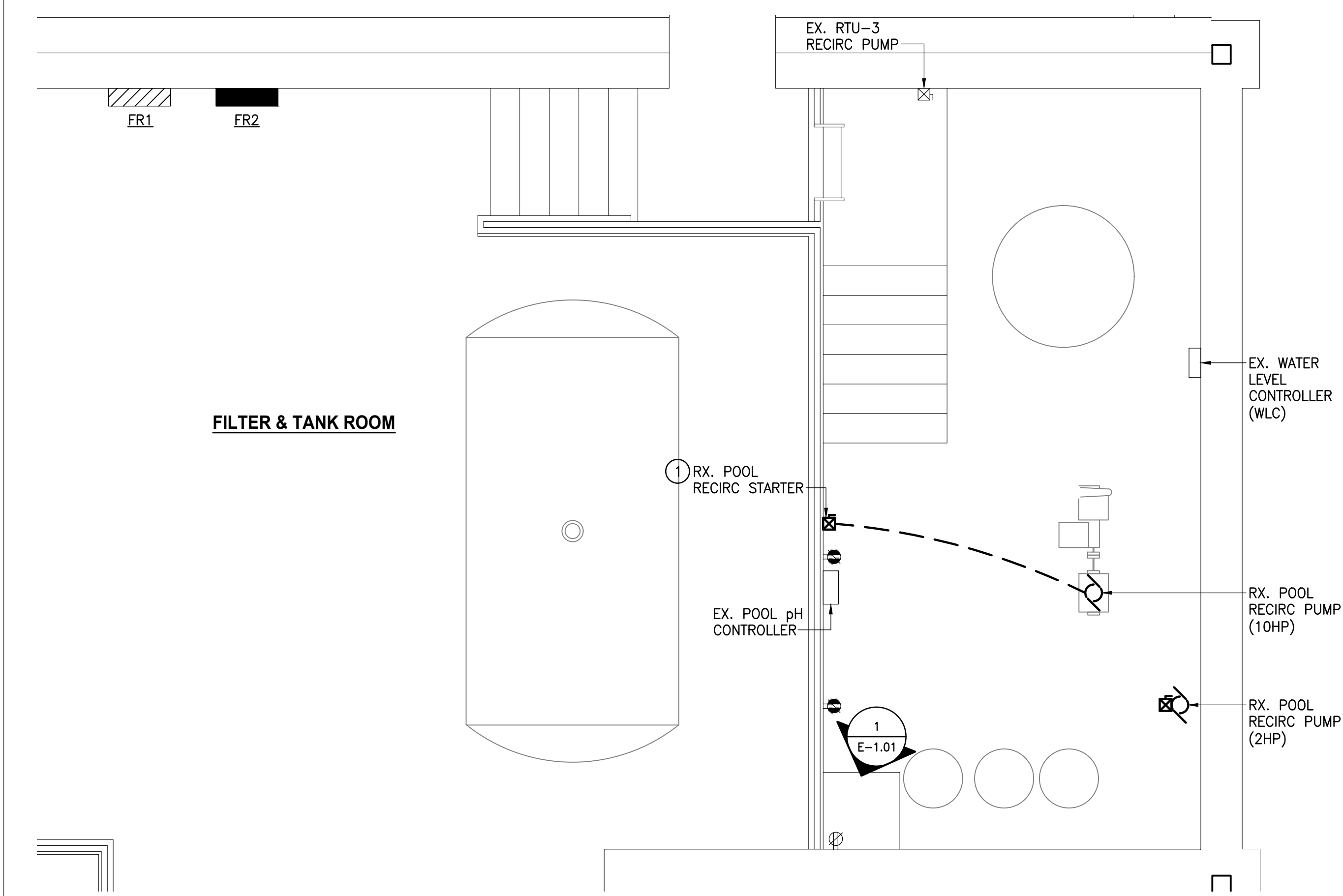
- ELECTRICAL CONTRACTOR SHALL REMOVE ABANDONED CONDUIT LOCATED IN PIT.
- COORDINATE LOCATIONS OF STARTERS/DISCONNECTS WITH INSTALLATION OF PIPING AND OTHER TRADES TO MAINTAIN NEC CLEARANCES.

## DRAWING NOTES:

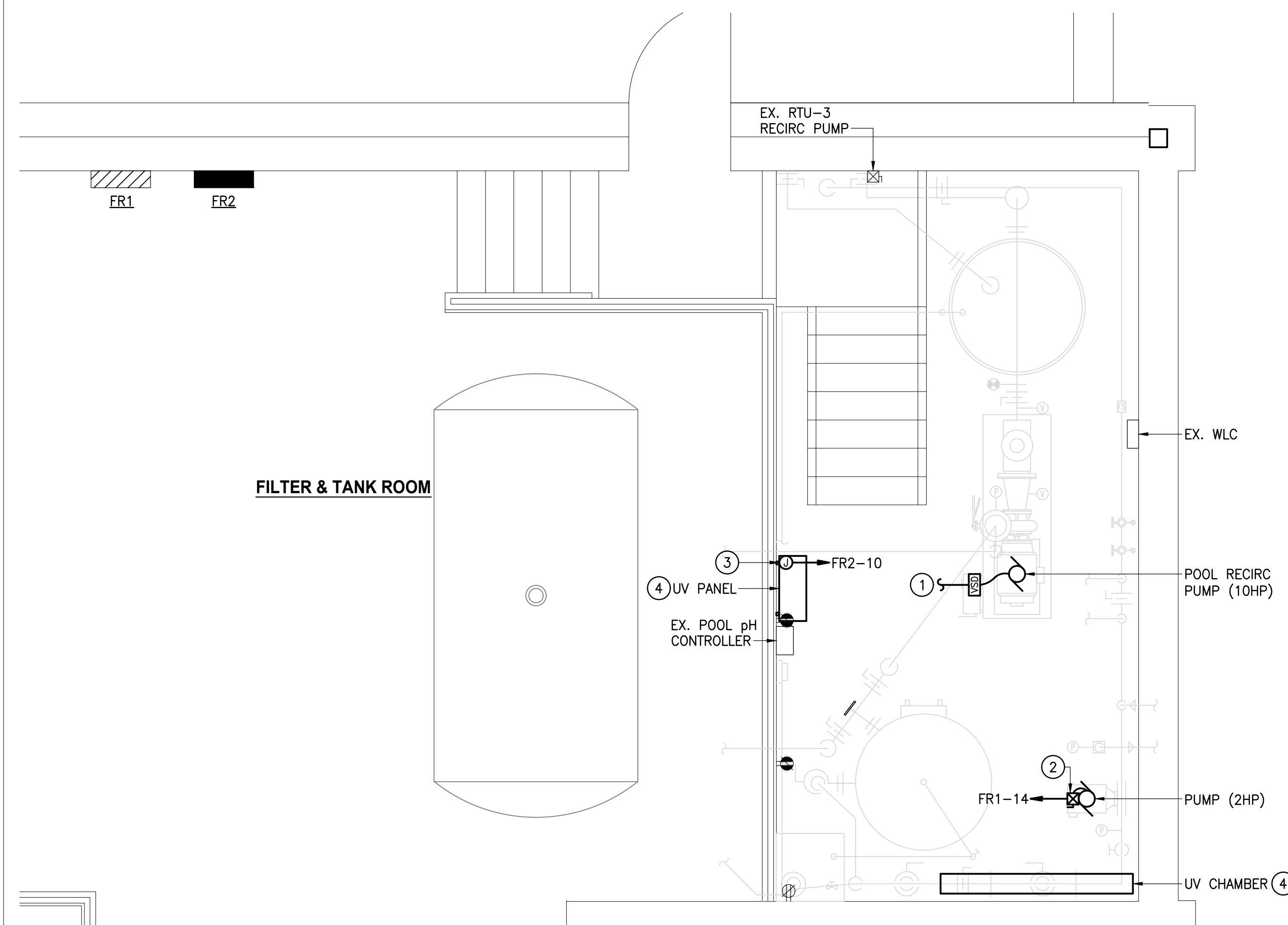
- MAINTAIN EXISTING CONNECTION TO DEMOLISHED STARTER. PROVIDE JUNCTION BOX AND EXTEND TO VSD, MATCH EXISTING WIRE SIZE. INSTALL VSD FURNISHED BY OTHERS.
- NEMA SIZE 0 COMBINATION STARTER WITH 3P-30A-NF/SS AND HOA IN NEMA 4X STAINLESS STEEL ENCLOSURE.
- MAKE CONNECTION TO UV CONTROL PANEL WITH INTEGRAL DISCONNECT.
- INSTALL INTERCONNECTING CABLES FURNISHED WITH UV SYSTEM, RACK ALONG WALL AND MAKE ALL CONNECTIONS.
- ELECTRICAL CONTRACTOR SHALL TRACE/DETECT PRESENCE OF ELECTRICAL CONDUIT EMBEDDED IN POOL DECK TO ASSIST IN IDENTIFYING EXISTING OBSTRUCTIONS IN DECK. DETECTION IS INCLUDED BUT IS NOT LIMITED TO THE USE OF X-RAY.



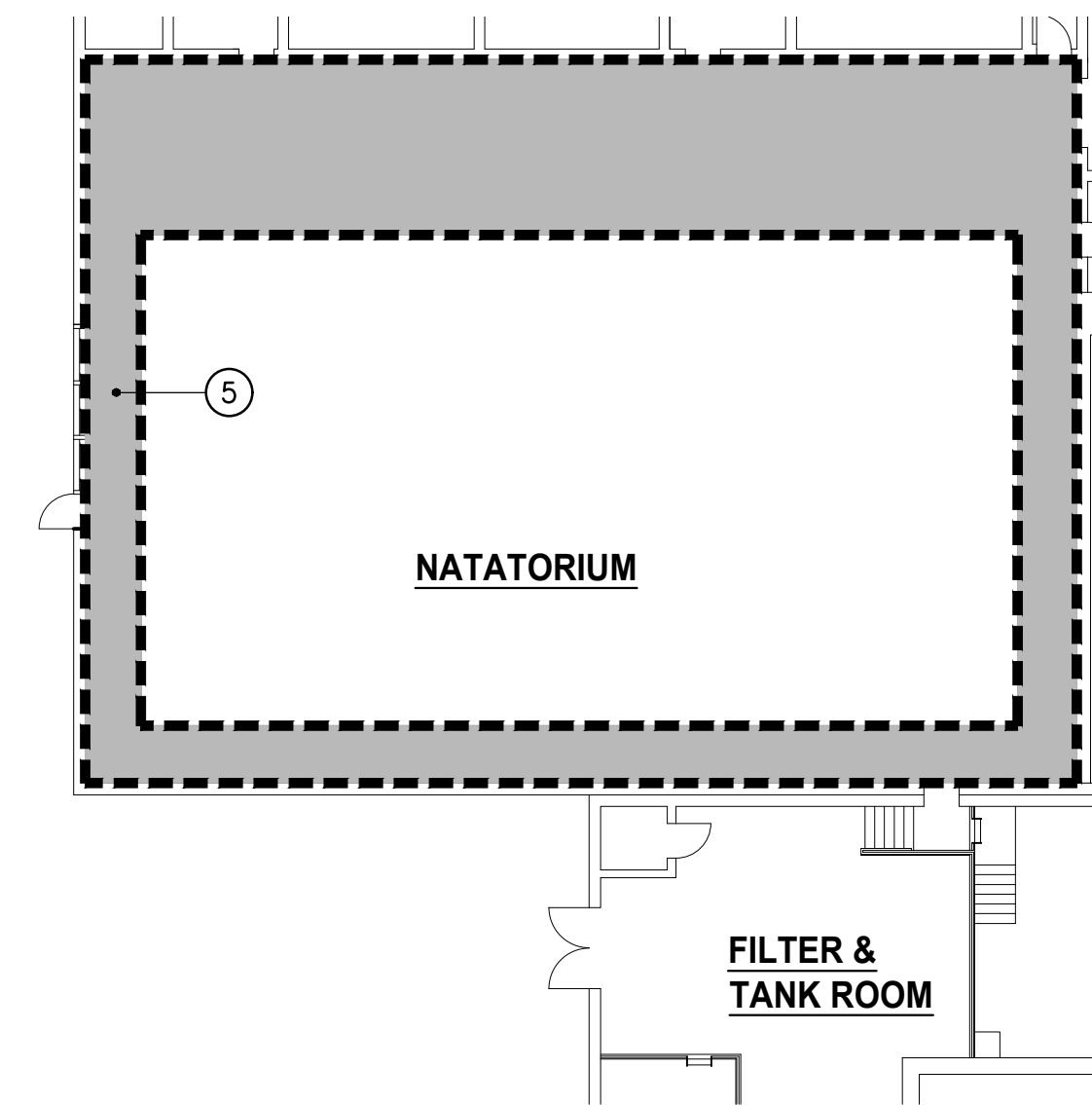
**1**  
E-1.01  
**EXAMPLE OF ABANDONED PIPE TO BE DEMOLISHED**  
SCALE: NONE



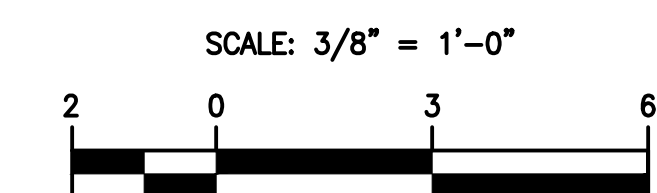
**PARTIAL FLOOR PLAN - DEMOLITION**  
SCALE: 3/8" = 1'-0"



**PARTIAL FLOOR PLAN - POWER**  
SCALE: 3/8" = 1'-0"



**PART PLAN - POOL DECK**  
SCALE: 1/16" = 1'-0"



ARCHITECT  
**SEI** SMOLEN + EMR  
ILKOVITCH ARCHITECTS  
9211 CORPORATE BLVD., SUITE 340  
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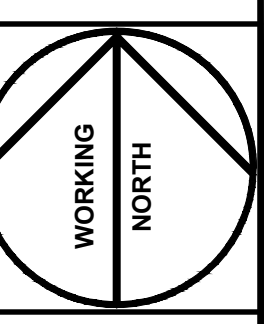
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**NORTH HARFORD MIDDLE SCHOOL  
POOL REPAIRS  
PHASES 2 & 3**

112 PYLESVILLE ROAD  
PYLESVILLE, MD 21132  
HARFORD COUNTY PUBLIC SCHOOLS

SHEET TITLE  
**PROPOSED FLOOR PLAN - DEMO & POWER**

PROJECT NO.  
**17013.0100**  
DATE  
**APR 25 2019**  
SCALE  
**AS NOTED**



SHEET NO.  
**E-1.01**

Magnolia Middle School:





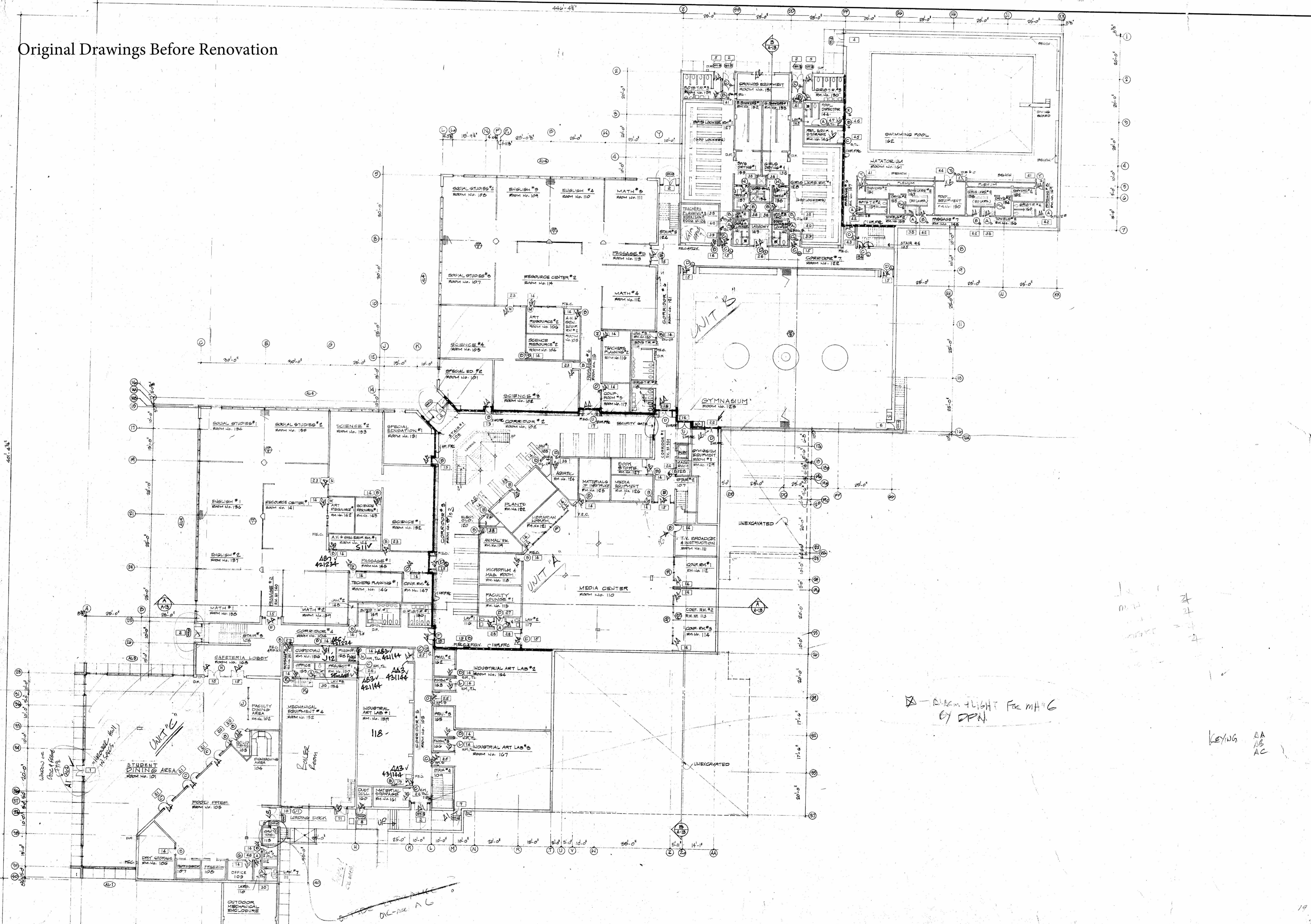






Drawings include Original and After 2013 Renovation

Original Drawings Before Renovation

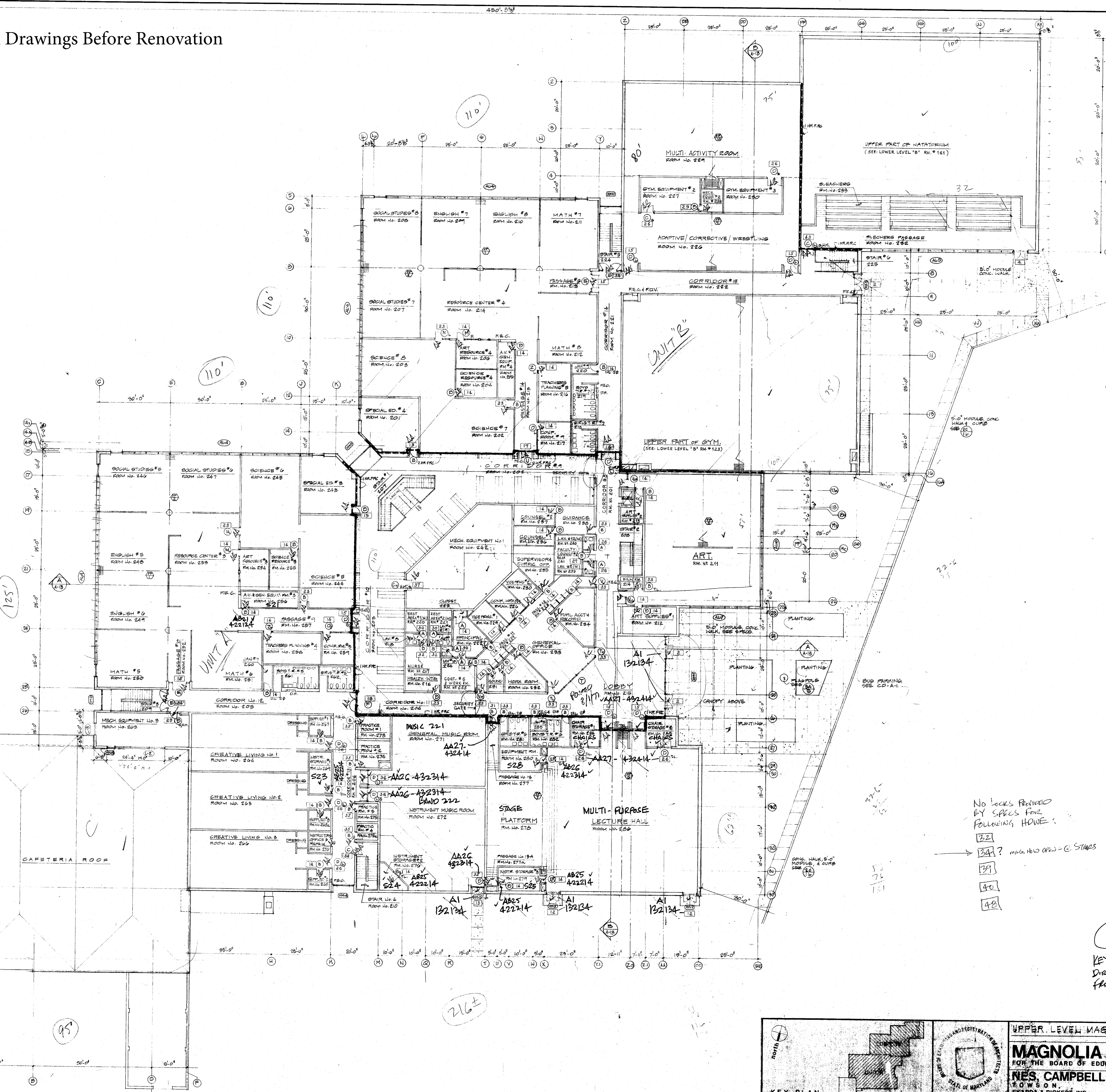


⊗ - A/C in flight for MH#6  
by DPN

KEYING  
2A  
1B  
AC

		LOWER LEVEL MASTER PLAN - UNIT 'A', UNIT 'B' and UNIT 'C'		SCALE
		<b>MAGNOLIA MIDDLE SCHOOL</b> FOR THE BOARD OF EDUCATION - HARFORD COUNTY, MARYLAND		DRAWN BY
NES, CAMPBELL & PARTNERS • ARCHITECTS 1307 W. 13th St. SKARDY, BREKERT, INC. HENRY / IDA, INC.		MARYLAND STRUCTURAL ENGINEER MECHANICAL ENGINEER		PROJECT NUMBER DRAWING <b>CD</b> DATE

Original Drawings Before Renovation



Approx. Roof Area = 88,963 sq.  
= 890 sq.  
Net Multi Area = 15,000 sq.

Art — 2  
Adoption/Found. — 2  
27

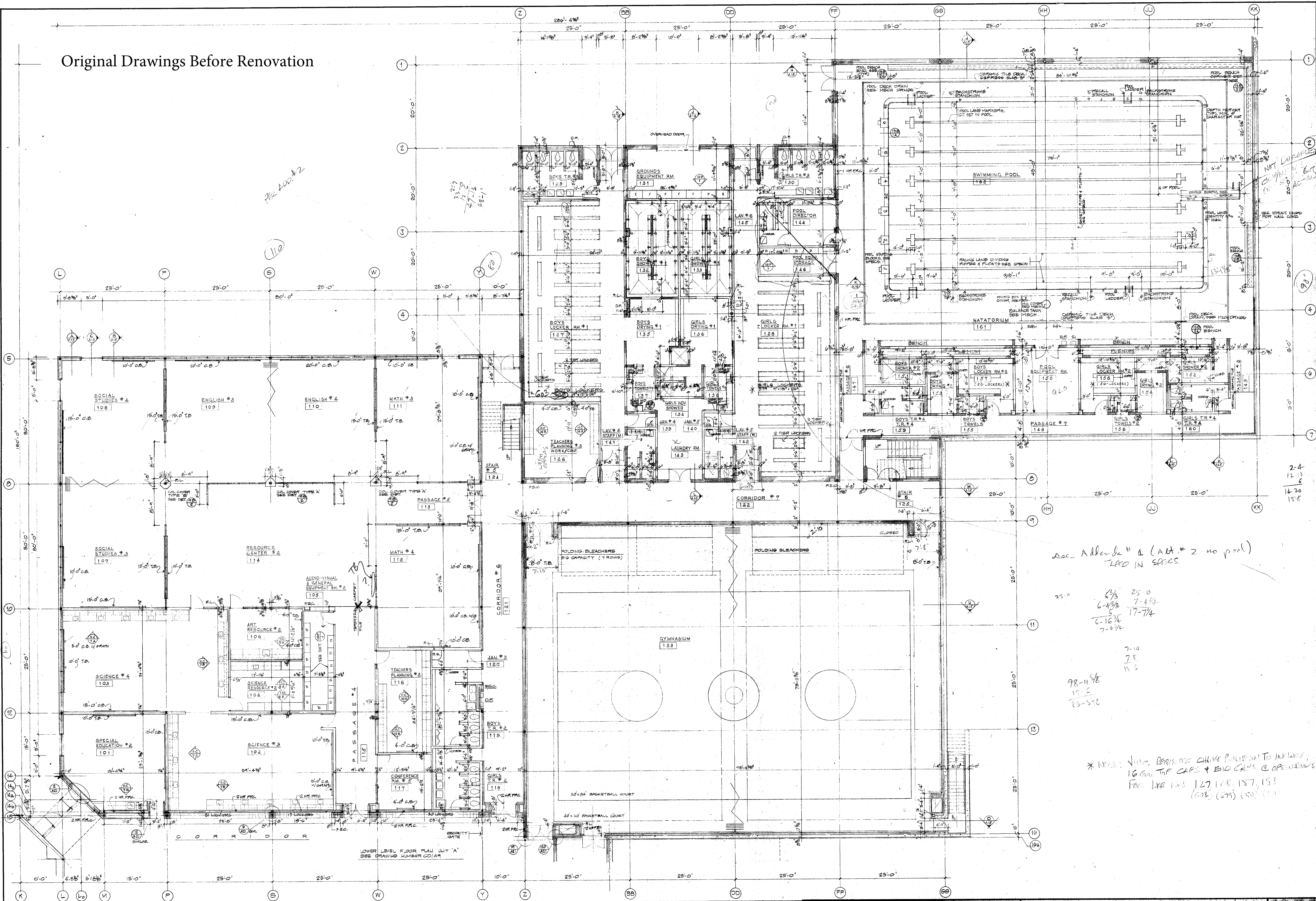
○ — Door of frame type  
□ — HDUE

No Locks Provided  
BY SPEC'S FOR  
FOLLOWING HOWE:  
32  
34? mfg. how open - C. STAIRS  
39  
40  
42

AB25-422214  
KEYING  
DIRECTIONS  
FROM OWNER

<p>KEY PLAN</p>		UPPER LEVEL MASTER PLAN - UNIT 'A' and UNIT 'B' <b>MAGNOLIA MIDDLE SCHOOL</b> FOR THE BOARD OF EDUCATION HARFORD COUNTY, MARYLAND <b>NES, CAMPBELL &amp; PARTNERS ARCHITECTS</b> TOWSON, MARYLAND SKARDA & RICKERT, INC. STRUCTURAL ENGINEER HENRY ADAMS, INC. MECHANICAL ENGINEER	SCALE DRAWN BY PROJECT NUMBER 74 DRAWING NUMBER DATE JUL
		CD	

Original Drawings Before Renovation



See Add #2

110

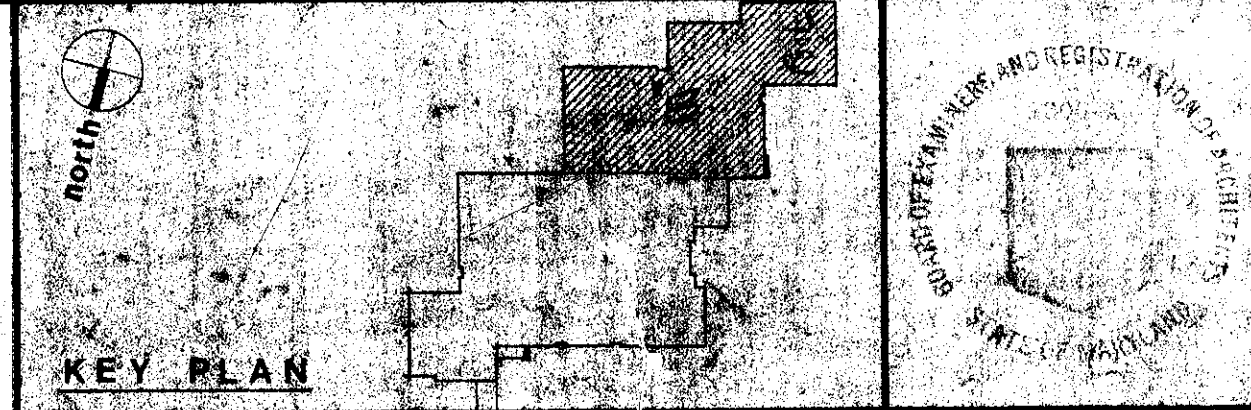
327  
130  
27-13  
48-11

See Addenda # 4 (Add # 2 - no pool)  
LAPD IN SPACES

25'-0"  
6-4 3/8  
6-16 3/4  
7-4 3/4

98-11 5/8  
15-5  
23-5 1/2

\* NOTE: VERIFY PROPOSED CHANGE POLICE WANT TO INCLUDE  
16' DIA. TOP CAPS & END CAPS @ OPENINGS  
FOR LIFT RIMS 127, 128, 157, 158  
(128) (579) (150) (151)



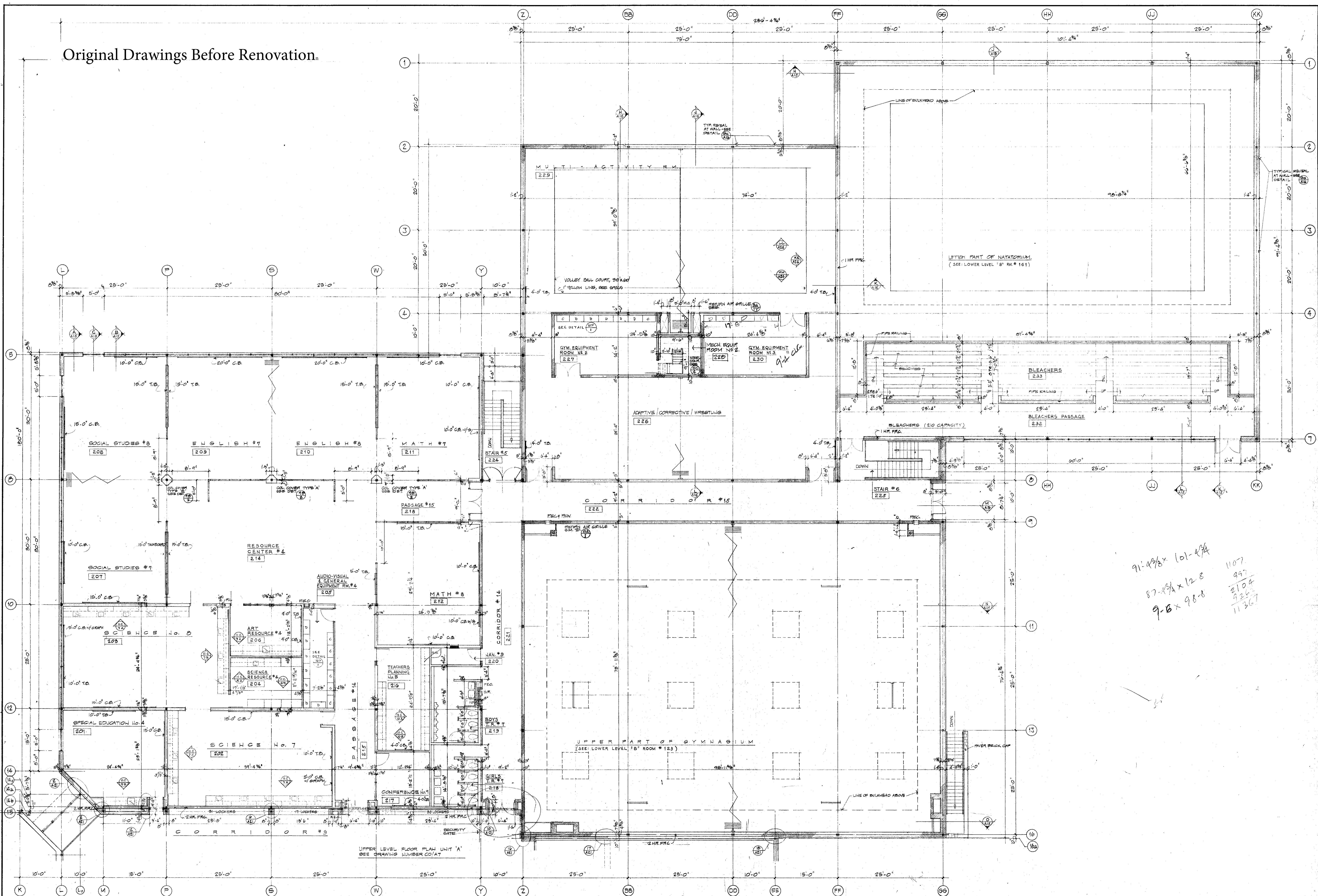
LOWER LEVEL FLOOR PLAN - UNIT 5

**MAGNOLIA MIDDLE SCHOOL**  
FOR THE BOARD OF EDUCATION HARFORD COUNTY, MARYLAND

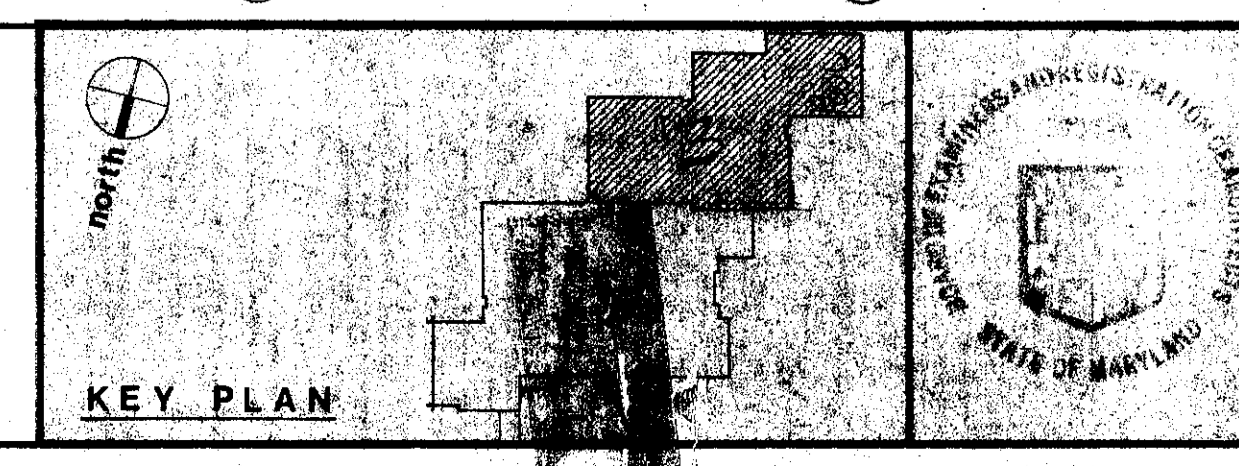
**NES, CAMPBELL & PARTNERS ARCHITECTS**  
TOWSON, MARYLAND  
SKARDA & RICKERT, INC. STRUCTURAL ENGINEER  
HENRY ADAMS, INC. MECHANICAL ENGINEER

SCALE: AS SHOWN  
DRAWN BY: JPK  
PROJECT NUMBER: 74-7  
DRAWING NUMBER: CD-45  
DATE: JULY 80

Original Drawings Before Renovation



91'-4 3/8" x 101'-4 3/4"  
 87'-4 3/4" x 128'  
 9-B x 98-B  
 1107  
 997  
 2104  
 925  
 11367



UPPER LEVEL FLOOR PLAN - UNIT 'A'

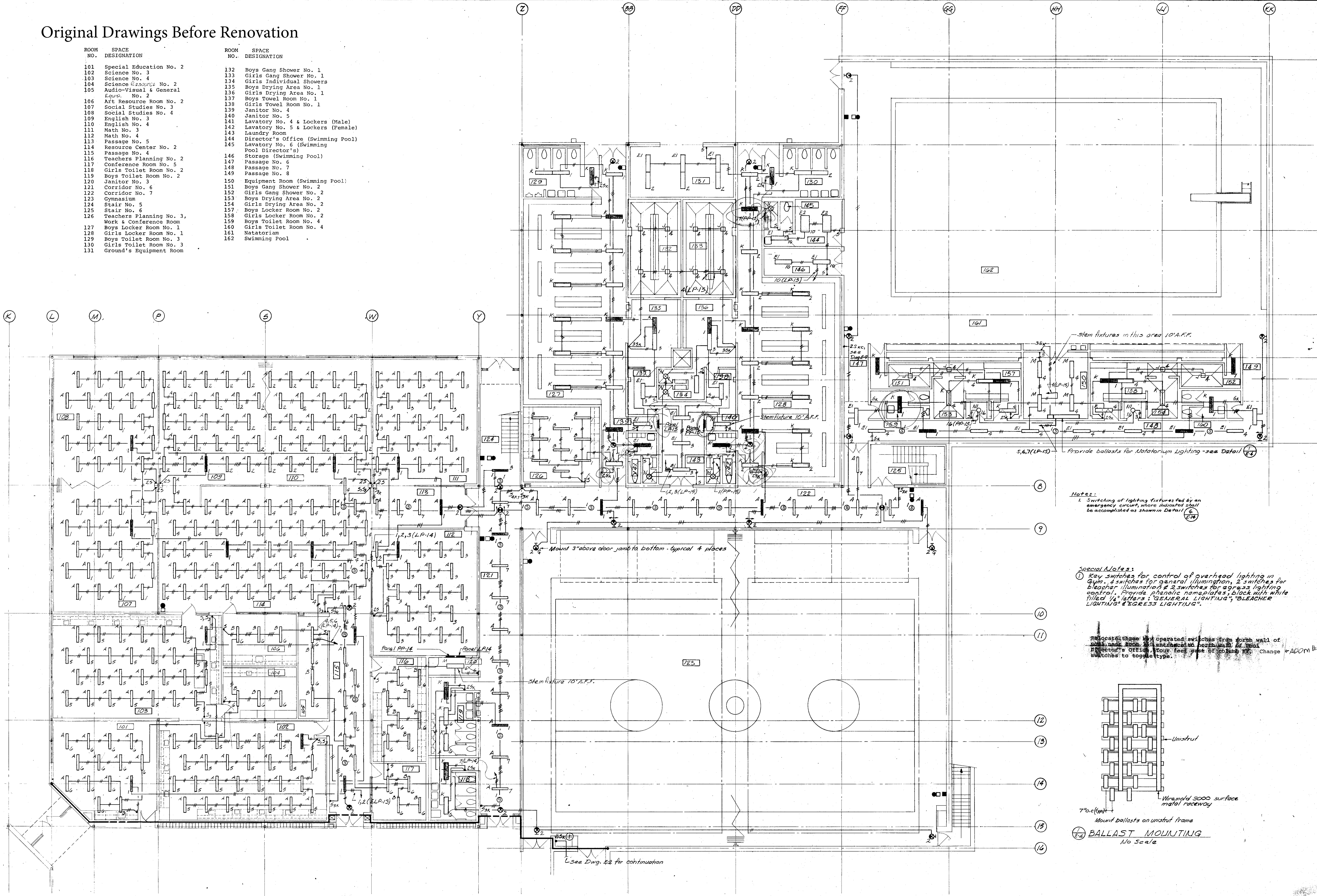
**MAGNOLIA MIDDLE SCHOOL**  
 FOR THE BOARD OF EDUCATION  
 HARFORD COUNTY, MARYLAND

**NES, CAMPBELL & PARTNERS ARCHITECTS**  
 MARYLAND  
 SKARDA RICKERT, INC. STRUCTURAL ENGINEER  
 HENRY ADAMS, INC. MECHANICAL ENGINEER

SCALE: 1/8" = 1'-0"  
 DRAWN BY: PWH  
 PROJECT NUMBER: 74  
 DRAWING NUMBER: CD A  
 DATE: JULY 26, 1994

# Original Drawings Before Renovation

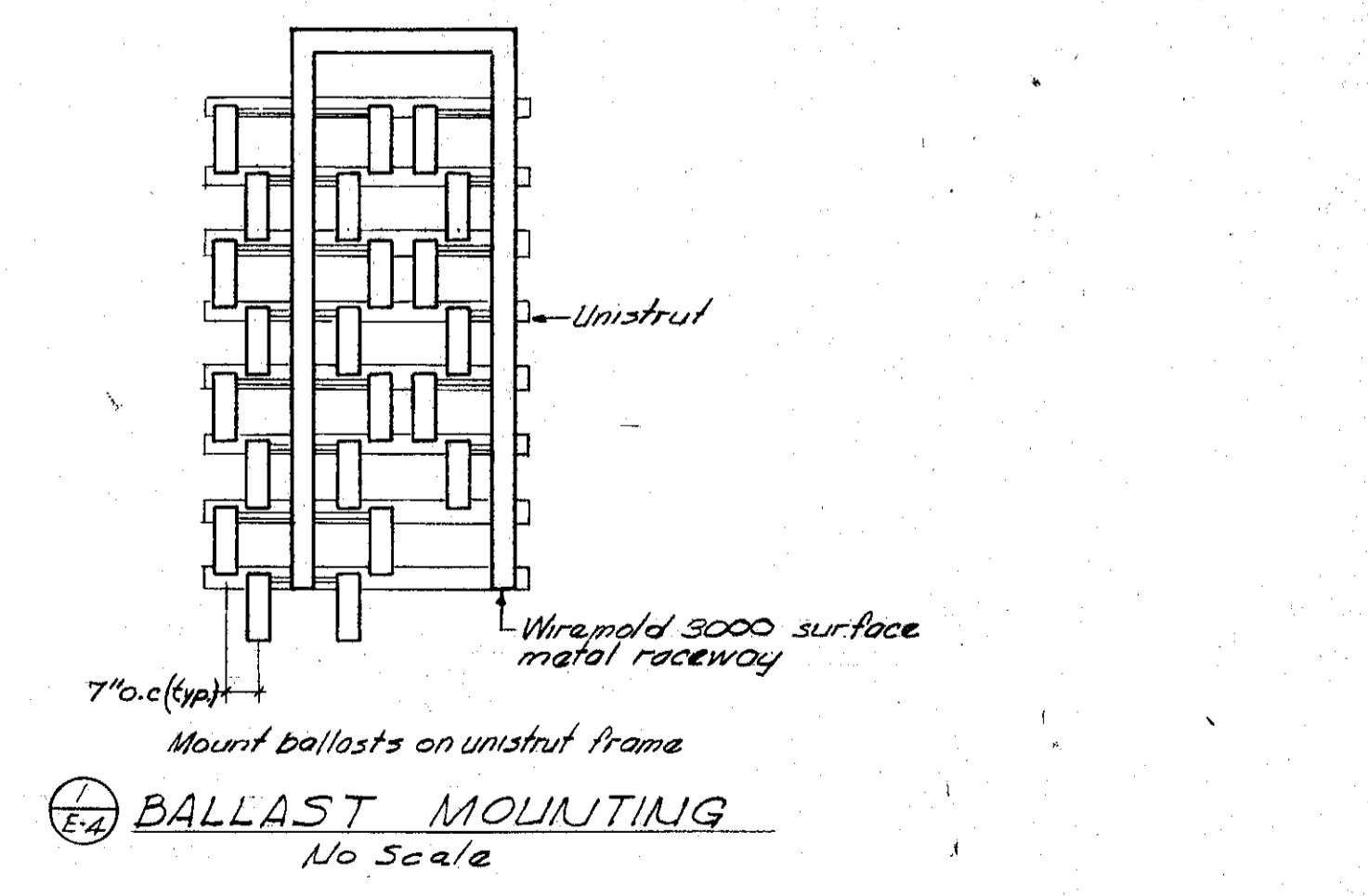
ROOM NO.	SPACE DESIGNATION	ROOM NO.	SPACE DESIGNATION
101	Special Education No. 2	132	Boys Gang Shower No. 1
102	Science No. 3	133	Girls Gang Shower No. 1
103	Science No. 4	134	Girls Individual Showers
104	Science Equipment No. 2	135	Boys Drying Area No. 1
105	Audio-Visual & General Equip. No. 2	136	Girls Drying Area No. 1
106	Art Resource Room No. 2	137	Boys Towel Room No. 1
107	Social Studies No. 3	138	Girls Towel Room No. 1
108	Social Studies No. 4	139	Janitor No. 4
109	English No. 3	140	Janitor No. 5
110	English No. 4	141	Lavatory No. 4 & Lockers (Male)
111	Math No. 3	142	Lavatory No. 5 & Lockers (Female)
112	Math No. 4	143	Laundry Room
113	Passage No. 5	144	Director's Office (Swimming Pool)
114	Resource Center No. 2	145	Lavatory No. 6 (Swimming Pool Director's)
115	Passage No. 4	146	Storage (Swimming Pool)
116	Teachers Planning No. 2	147	Passage No. 6
117	Conference Room No. 5	148	Passage No. 7
118	Girls Toilet Room No. 2	149	Passage No. 8
119	Boys Toilet Room No. 2	150	Equipment Room (Swimming Pool)
120	Janitor No. 3	151	Boys Gang Shower No. 2
121	Corridor No. 6	152	Girls Gang Shower No. 2
122	Corridor No. 7	153	Boys Drying Area No. 2
123	Gymnasium	154	Girls Drying Area No. 2
124	Stair No. 5	155	Boys Locker Room No. 2
125	Stair No. 6	156	Girls Locker Room No. 2
126	Teachers Planning No. 3	157	Boys Locker Room No. 2
127	Work & Conference Room	158	Girls Locker Room No. 2
128	Boys Locker Room No. 1	159	Boys Toilet Room No. 4
129	Girls Locker Room No. 1	160	Girls Toilet Room No. 4
130	Boys Toilet Room No. 3	161	Natorium
131	Ground's Equipment Room	162	Swimming Pool



Notes:  
 1. Switching of lighting fixtures fed by an emergency circuit, where indicated shall be accomplished as shown in Detail (E-2)

Special Notes:  
 1. Key switches for control of overhead lighting in Gym. 4 switches for general illumination, 2 switches for bleacher illumination & 2 switches for access lighting control. Provide plastic nameplates, 2" x 2" with white filled 1/2" letters: "GENERAL LIGHTING", "BLEACHER LIGHTING" & "EGRESS LIGHTING".

Relocate these key operated switches from south wall of room near room 160 entrance to north wall of room 160 Director's Office, four feet east of column #2. Change to toggle type.



KEY PLAN

LOWER LEVEL FLOOR PLAN UNIT 'B'-LIGHTING

**MAGNOLIA MIDDLE SCHOOL**

FOR THE BOARD OF EDUCATION

**NES, CAMPBELL & PARTNERS** ARCHITECTS

TOWSON, MARYLAND

SKARDA & RICKERT, INC. STRUCTURAL ENGINEER

HENRY ADAMS, INC. MECHANICAL ENGINEER

SCALE 1/8" = 1'-0"

PROJECT NUMBER 74

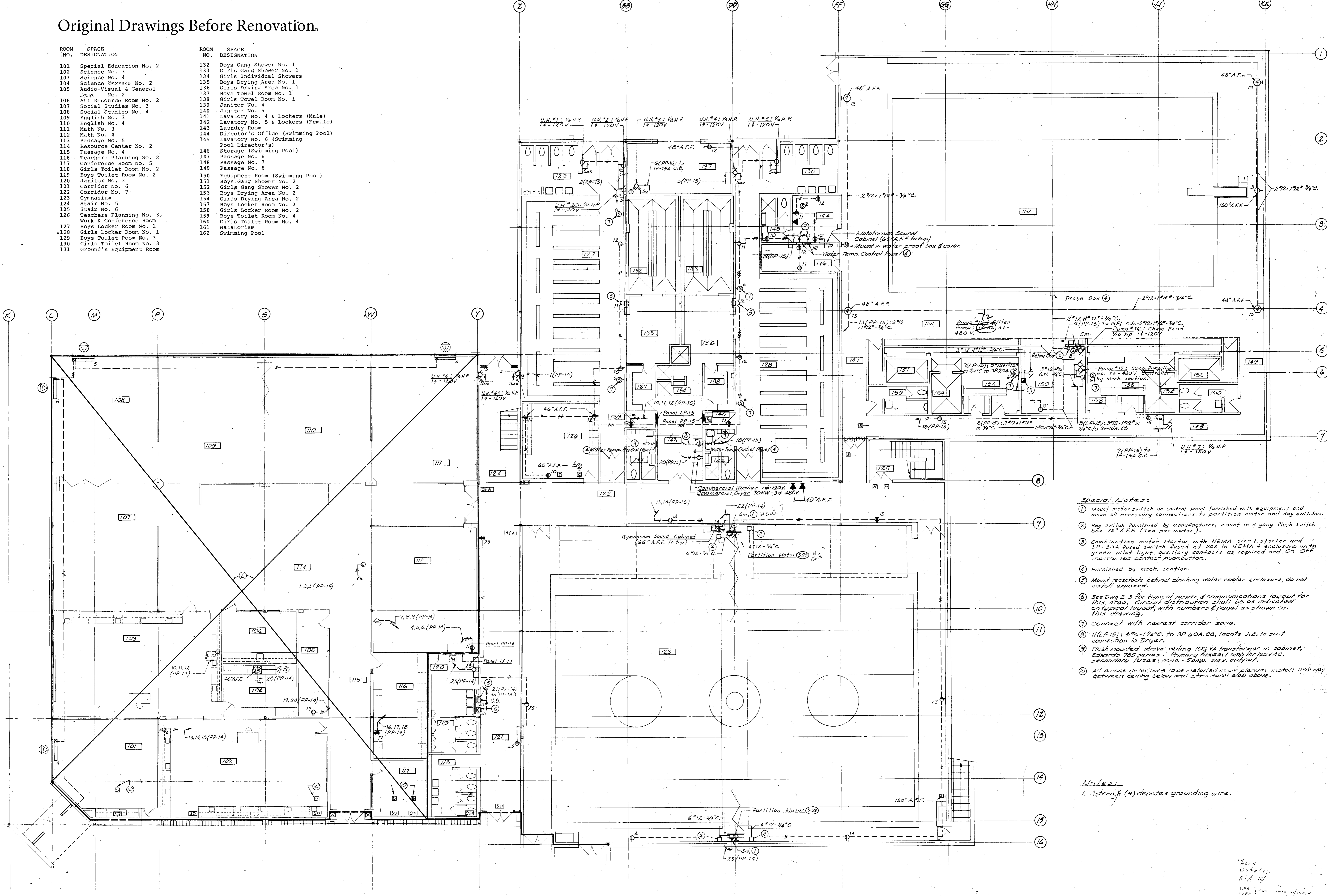
DRAWING NUMBER CD 4

DATE 11/20/57

H. A. JOB NO. J-106

# Original Drawings Before Renovation.

ROOM NO.	SPACE DESIGNATION	ROOM NO.	SPACE DESIGNATION
101	Special Education No. 2	132	Boys Gang Shower No. 1
102	Science No. 3	133	Girls Gang Shower No. 1
103	Science No. 4	134	Girls Individual Showers
104	Science Resources No. 2	135	Boys Drying Area No. 1
105	Audio-Visual & General Equip. No. 2	136	Girls Drying Area No. 1
106	Art Resource Room No. 2	137	Boys Towel Room No. 1
107	Social Studies No. 3	138	Girls Towel Room No. 1
108	Social Studies No. 4	139	Janitor No. 4
109	English No. 3	140	Janitor No. 5
110	English No. 4	141	Lavatory No. 4 & Lockers (Male)
111	Math No. 3	142	Lavatory No. 5 & Lockers (Female)
112	Math No. 4	143	Laundry Room
113	Passage No. 5	144	Director's Office (Swimming Pool)
114	Resource Center No. 2	145	Lavatory No. 6 (Swimming Pool)
115	Passage No. 4	146	Pool Director's Office
116	Teachers Planning No. 2	147	Storage (Swimming Pool)
117	Conference Room No. 5	148	Passage No. 6
118	Girls Toilet Room No. 2	149	Passage No. 7
119	Boys Toilet Room No. 2	150	Passage No. 8
120	Janitor No. 3	151	Equipment Room (Swimming Pool)
121	Corridor No. 6	152	Boys Gang Shower No. 2
122	Corridor No. 7	153	Girls Gang Shower No. 2
123	Gymnasium	154	Boys Drying Area No. 2
124	Stair No. 5	155	Girls Drying Area No. 2
125	Stair No. 6	156	Boys Locker Room No. 2
126	Teachers Planning No. 3, Work & Conference Room	157	Girls Locker Room No. 2
127	Boys Locker Room No. 1	158	Boys Toilet Room No. 4
128	Girls Locker Room No. 1	159	Girls Toilet Room No. 4
129	Boys Toilet Room No. 3	160	Girls Toilet Room No. 4
130	Girls Toilet Room No. 3	161	Natatorium
131	Ground's Equipment Room	162	Swimming Pool



- Special Notes:**
- Mount motor switch on control panel furnished with equipment and make all necessary connections to partition motor and key switches.
  - Key switch furnished by manufacturer, mount in 3 gang flush switch box 72" A.F.F. (Two per motor).
  - Combination motor starter with NEMA size 1 starter and 3P-30A fused switch fused at 20A in NEMA enclosure with green pilot light, auxiliary contacts as required and On-Off main to red contact per outbox.
  - Furnished by mech. section.
  - Mount receptacle behind drinking water cooler enclosure, do not install exposed.
  - See Dwg E-3 for typical power & communications layout for this area. Circuit distribution shall be as indicated on typical layout, with numbers & panel as shown on this drawing.
  - Connect with nearest corridor zone.
  - 11(L.P.15): 4#6-1/4" C. to 3P-60A C.B. locate J.B. to suit connection to Dryer.
  - Flush mounted above ceiling 100 VA transformer in cabinet, Edwards T85 series. Primary fuses: 1 amp for 120V AC, secondary fuses: none. Sump max. output.
  - All smoke detectors to be installed in air plenums, install mid-way between ceiling below and structural slab above.

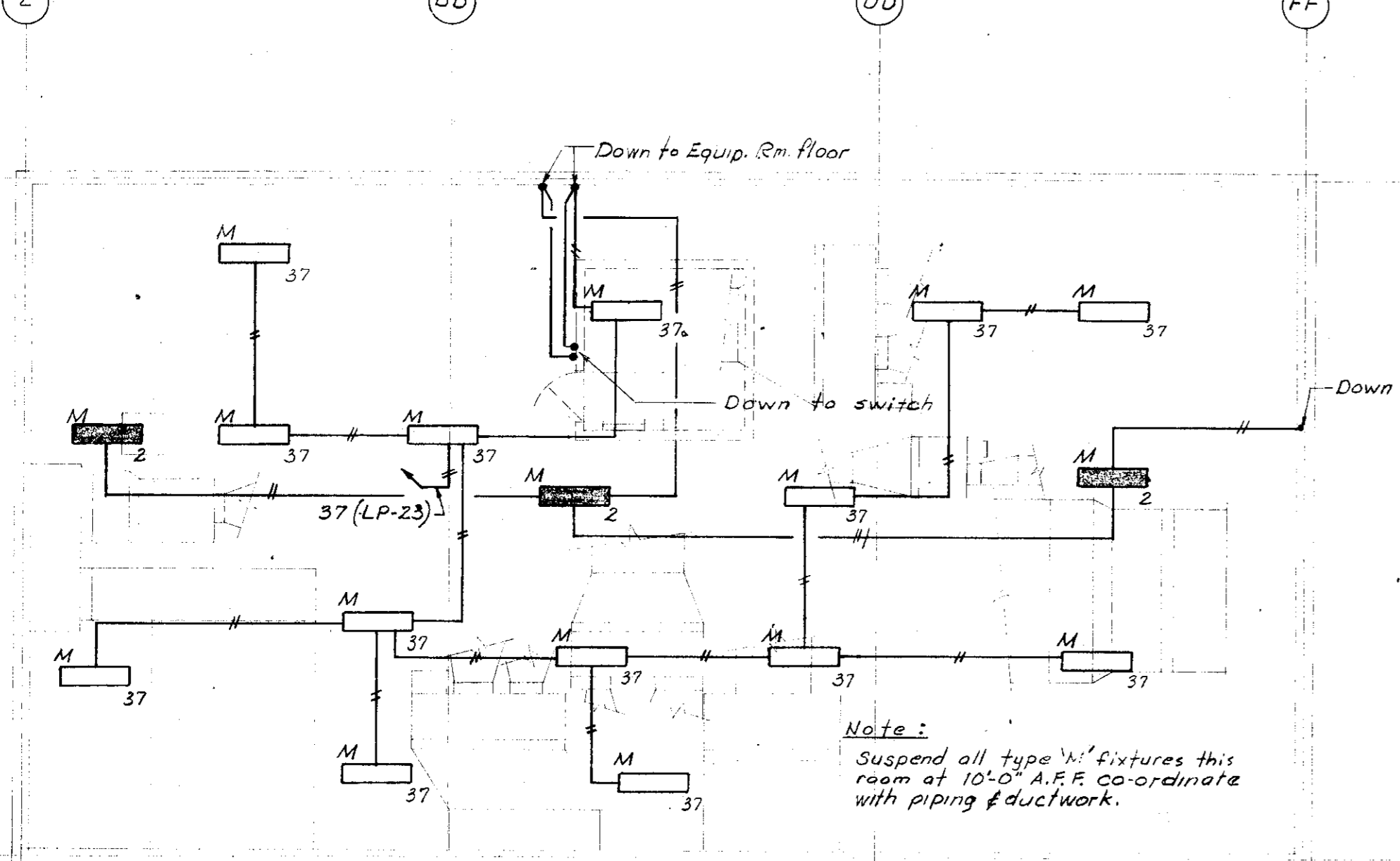
**Notes:**  
1. Asterisk (\*) denotes grounding wire.

Arch  
Data  
A.S. 1/2  
SMA  
SMA 3 can make w/1/2 in

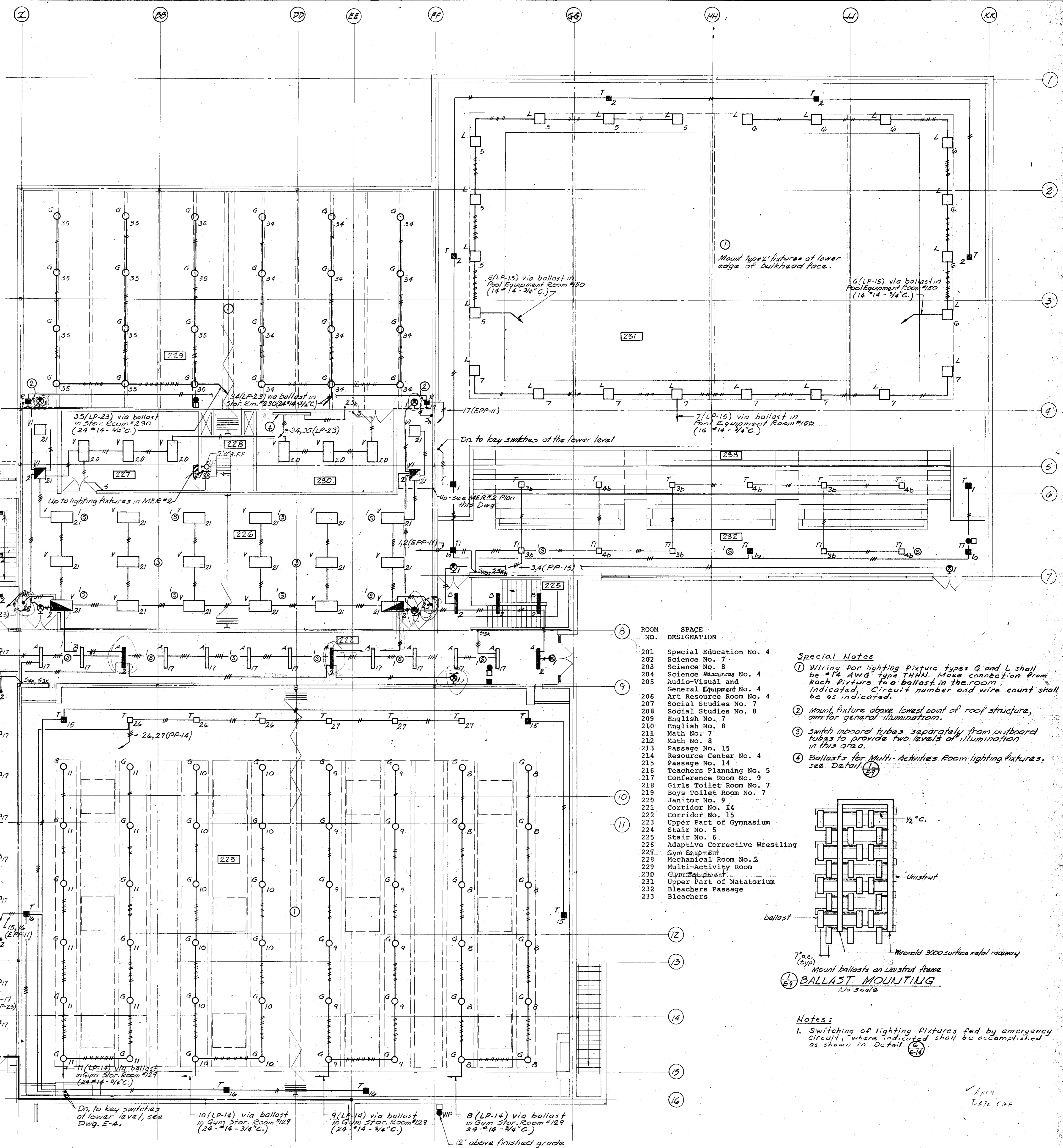
<p>KEY PLAN</p>	<p>LOWER LEVEL FLOOR PLAN UNIT B - POWER</p> <p><b>MAGNOLIA MIDDLE SCHOOL</b> FOR THE BOARD OF EDUCATION HARFORD COUNTY, MARYLAND</p> <p><b>NES, CAMPBELL &amp; PARTNERS</b> * ARCHITECTS TOWSON, MARYLAND SKARDA &amp; RICKERT, INC. STRUCTURAL ENGINEER HENRY ADAMS, INC. MECHANICAL ENGINEER</p>	<p>SCALE 1/8" = 1'-0"</p> <p>DRAWN BY M.W.H.</p> <p>PROJECT NUMBER 74-7</p> <p>DRAWING NUMBER</p> <p><b>CD</b></p> <p>DATE 1/17/59</p> <p>H.A. JOB NO. 37-106</p>
	<p>Walter F. Severy, Jr.</p>	



Original Drawings Before Renovation

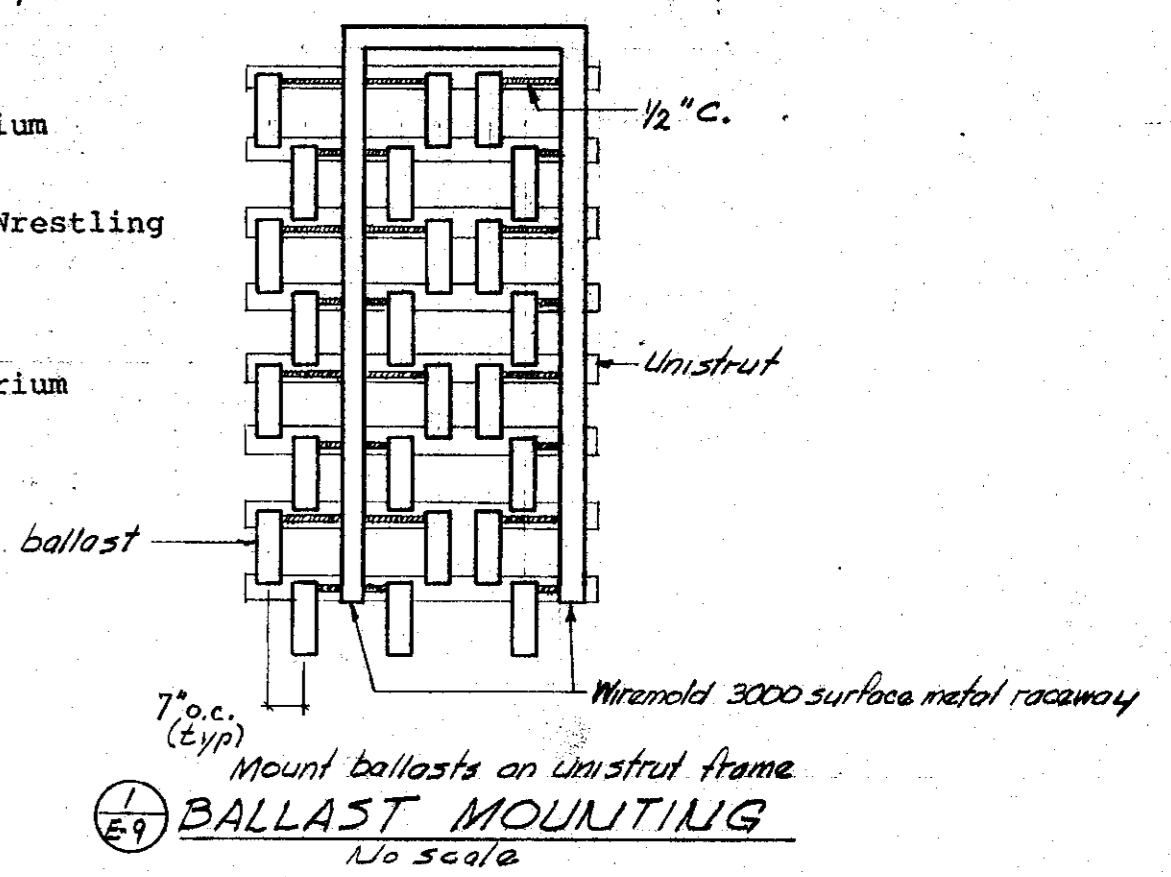


MECHANICAL EQUIPMENT SPACE #2  
Scale: 1/8" = 1'-0"

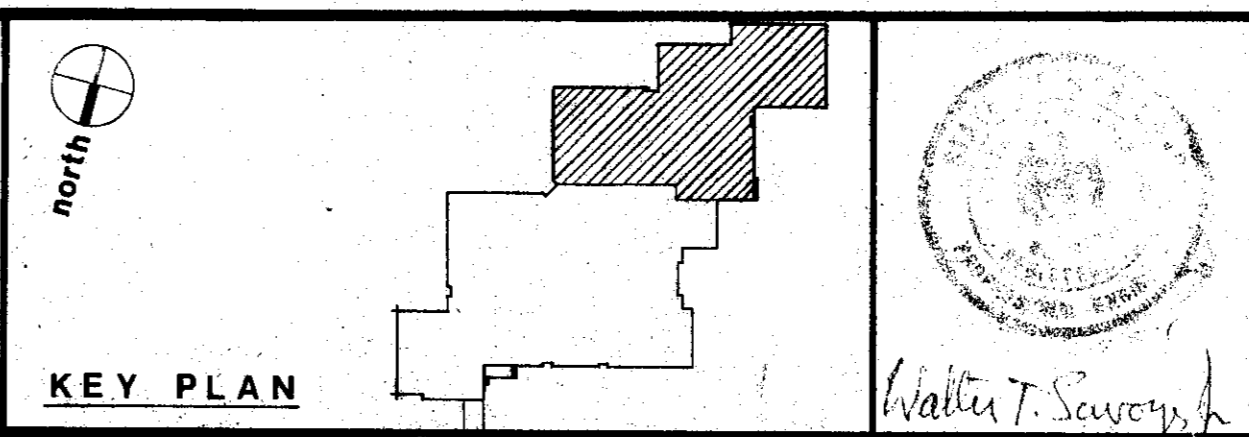


ROOM NO.	SPACE DESIGNATION
201	Special Education No. 4
202	Science No. 7
203	Science No. 8
204	Science Resources No. 4
205	Audio-Visual and General Equipment No. 4
206	Art Resource Room No. 4
207	Social Studies No. 7
208	Social Studies No. 8
209	English No. 7
210	English No. 8
211	Math No. 7
212	Math No. 8
213	Passage No. 15
214	Resource Center No. 4
215	Passage No. 14
216	Teachers Planning No. 5
217	Conference Room No. 9
218	Girls Toilet Room No. 9
219	Boys Toilet Room No. 7
220	Janitor No. 9
221	Corridor No. 14
222	Corridor No. 15
223	Upper Part of Gymnasium
224	Stair No. 5
225	Stair No. 6
226	Adaptive Corrective Wrestling
227	Gym Equipment
228	Mechanical Room No. 2
229	Multi-Activity Room
230	Gym Equipment
231	Upper Part of Natatorium
232	Bleachers Passage
233	Bleachers

- Special Notes**
- Wiring for lighting fixture types G and L shall be #14 AWG type THHN. Make connection from each fixture to a ballast in the room. Indicate circuit number and wire count shall be as indicated.
  - Mount fixture above lowest point of roof structure, aim for general illumination.
  - Switch inboard tubes separately from outboard tubes to provide two levels of illumination in this area.
  - Ballasts for Multi-Activities Room lighting fixtures, see Detail E7.

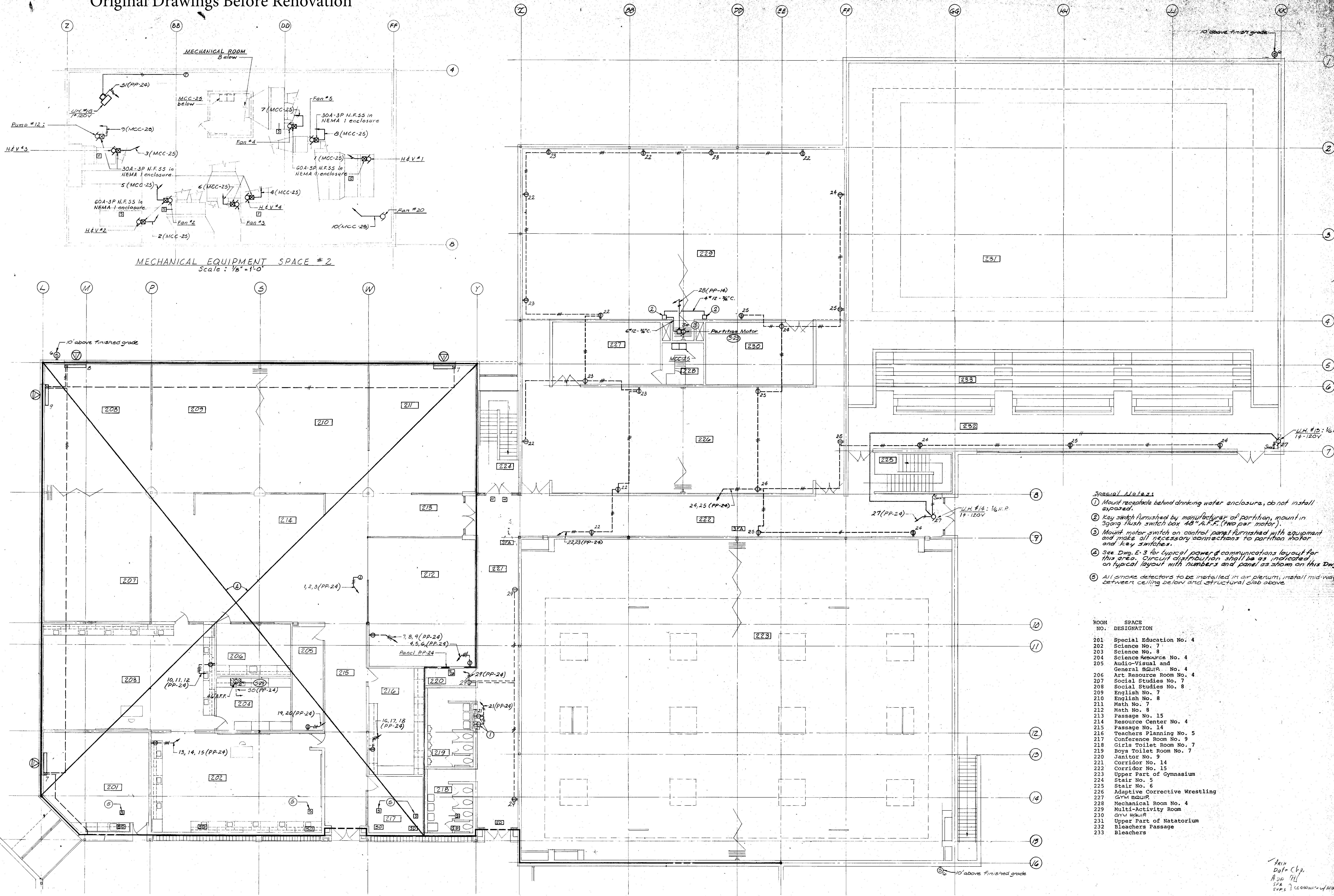


- Notes:**
- Switching of lighting fixtures fed by emergency circuit, where indicated shall be accomplished as shown in Detail E14.



UPPER LEVEL FLOOR PLAN UNIT 'B'-LIGHTING  
**MAGNOLIA MIDDLE SCHOOL**  
 FOR THE BOARD OF EDUCATION HARFORD COUNTY, MARYLAND  
**NES, CAMPBELL & PARTNERS \* ARCHITECTS**  
 TOWNSON, SKARDA & RICKERT, INC. STRUCTURAL ENGINEER  
 HENRY ADAMS, INC. MECHANICAL ENGINEER  
 SCALE 1/8" = 1'-0"  
 DRAWN BY MWH  
 PROJECT NUMBER 74-7  
 DRAWING NUMBER  
 DATE 11/15/74  
 H.A. JOB NO. J-106

Original Drawings Before Renovation



- Special Notes**
- Mount receptacle behind drinking water enclosure, do not install exposed.
  - Key switch furnished by manufacturer of partition, mount in 3gang flush switch box 48" A.F.F. (two per motor).
  - Mount motor switch on control panel furnished with equipment and make all necessary connections to partition motor and key switches.
  - See Dwg. E-3 for typical power & communications layout for this area. Circuit distribution shall be as indicated on typical layout with numbers and panel as shown on this Dwg.
  - All smoke detectors to be installed in air plenum, install mid-way between ceiling below and structural slab above.

ROOM NO.	SPACE DESIGNATION
201	Special Education No. 4
202	Science No. 7
203	Science No. 8
204	Science Resource No. 4
205	Audio-Visual and General Equip. No. 4
206	Art Resource Room No. 4
207	Social Studies No. 7
208	Social Studies No. 8
209	English No. 7
210	English No. 8
211	Math No. 7
212	Math No. 8
213	Passage No. 15
214	Resource Center No. 4
215	Passage No. 14
216	Teachers Planning No. 5
217	Conference Room No. 9
218	Girls Toilet Room No. 7
219	Boys Toilet Room No. 7
220	Janitor No. 9
221	Corridor No. 14
222	Corridor No. 15
223	Upper Part of Gymnasium
224	Stair No. 5
225	Stair No. 6
226	Adaptive Corrective Wrestling
227	GYM EQUIP.
228	Mechanical Room No. 4
229	Multi-Activity Room
230	GYM EQUIP.
231	Upper Part of Natatorium
232	Bleachers Passage
233	Bleachers

Arch. Dwg. Chg.  
 App. 7/11  
 S.P.A.  
 S.P.S. ? (CONV. - W/ H.P.R.)

KEY PLAN

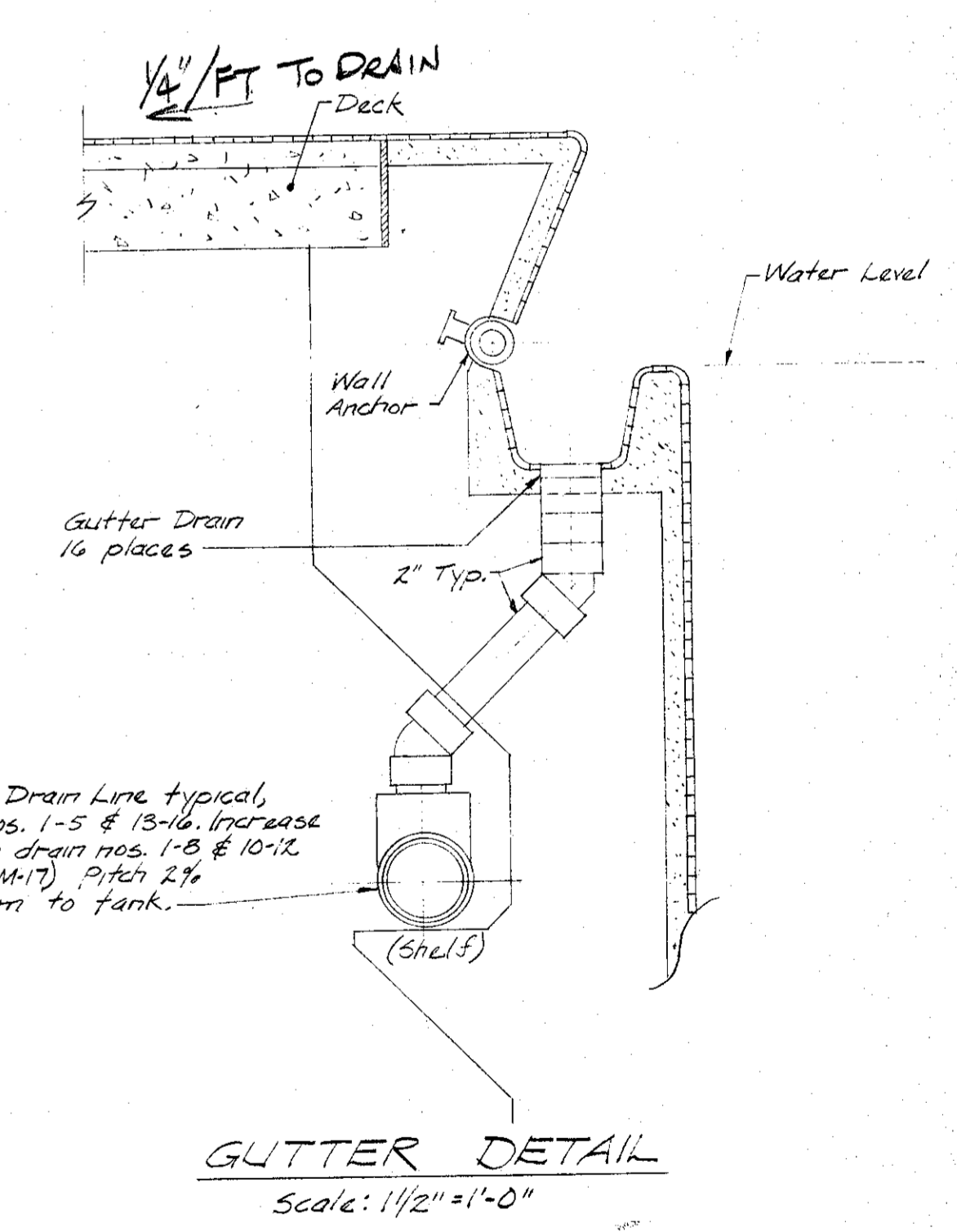
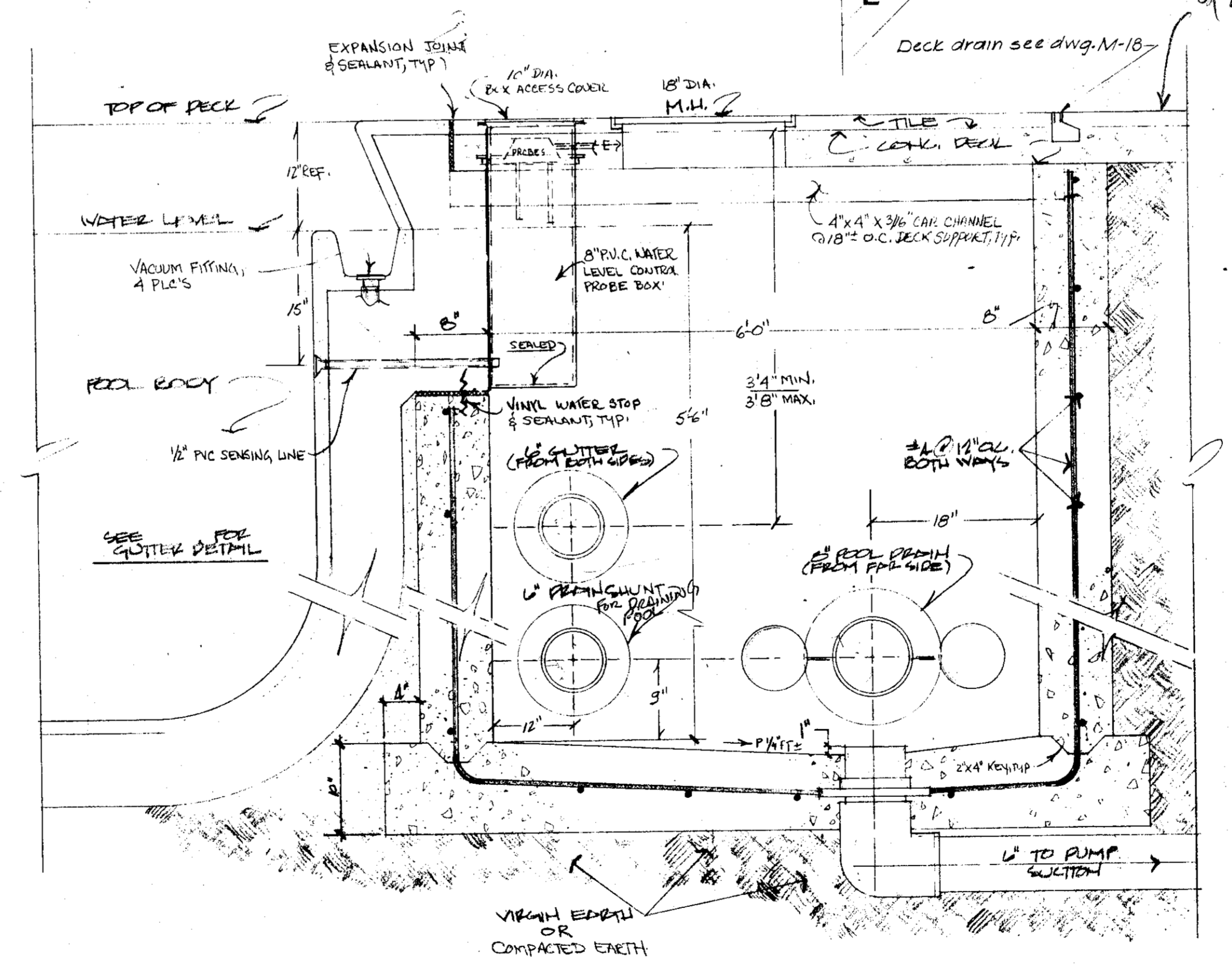
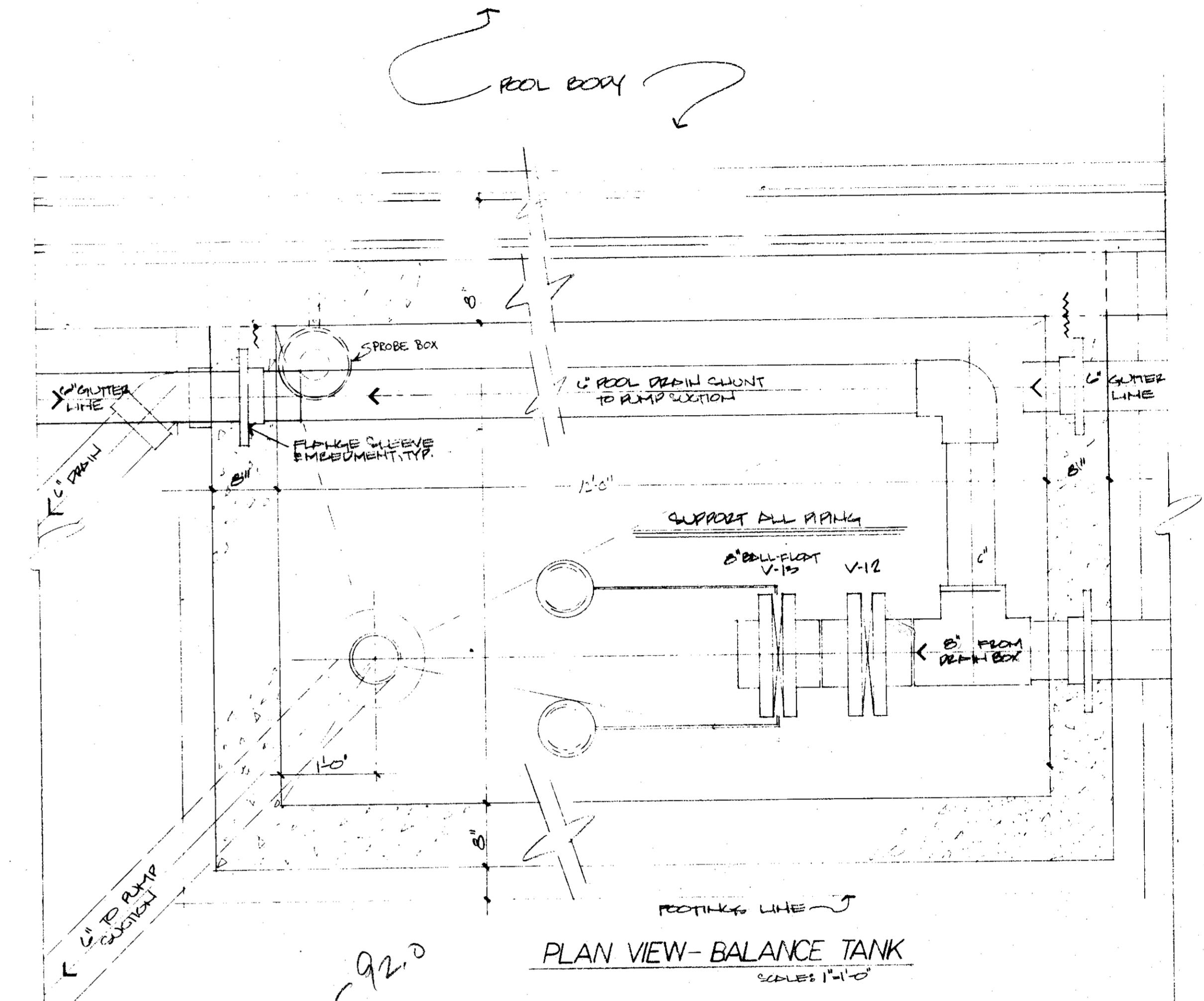
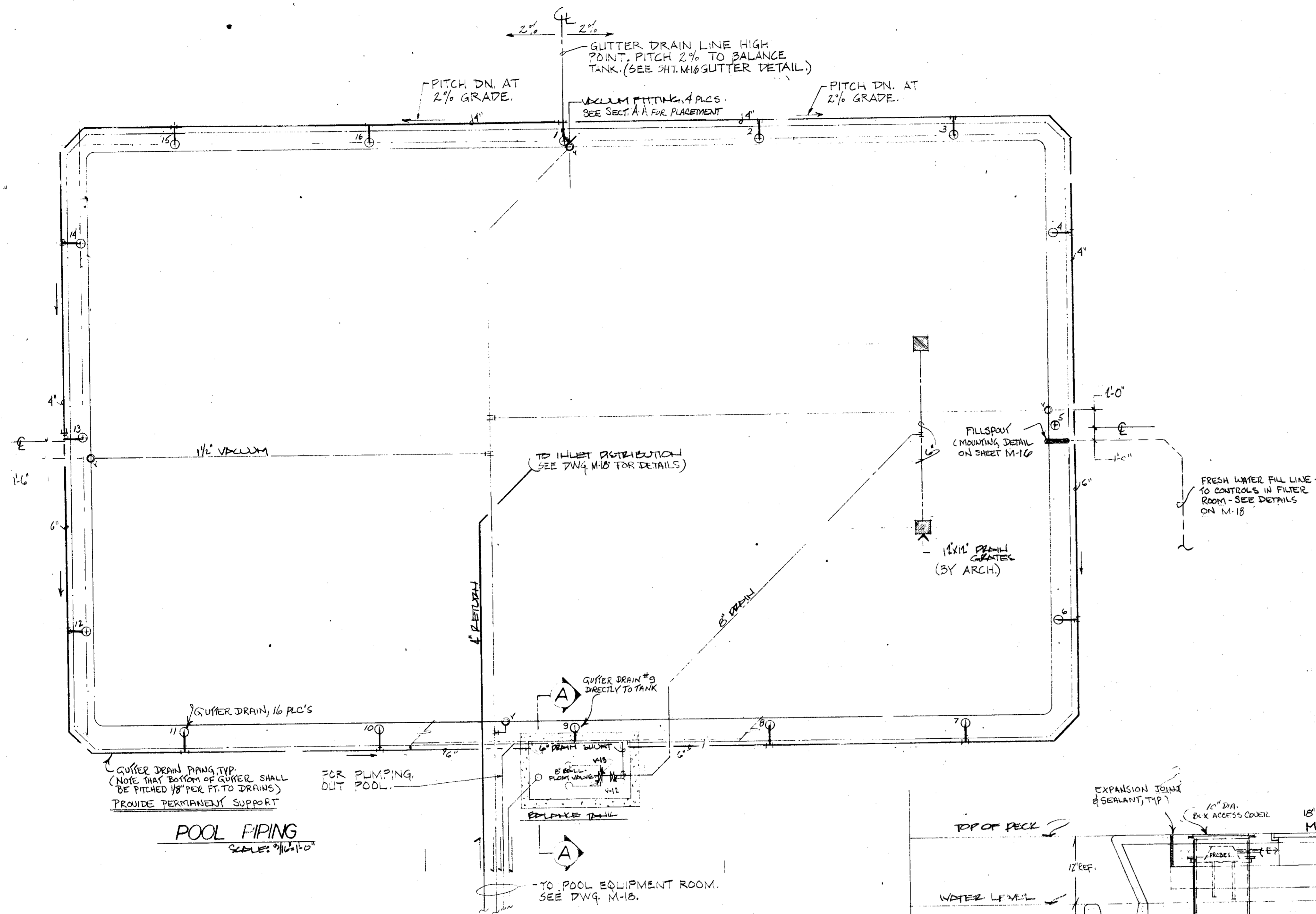
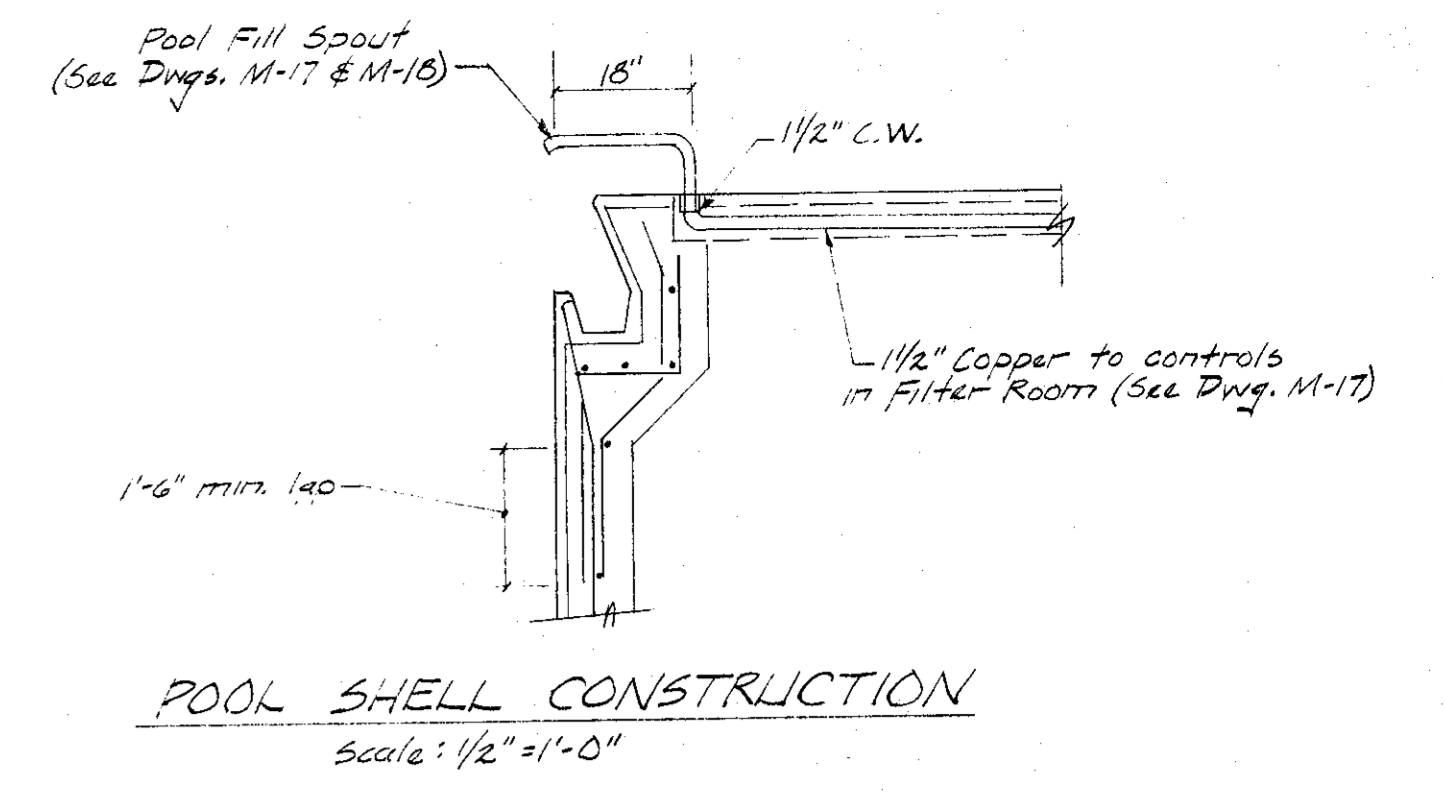
UPPER LEVEL FLOOR PLAN UNIT 'B' - POWER

**MAGNOLIA MIDDLE SCHOOL**  
 FOR THE BOARD OF EDUCATION HARFORD COUNTY, MARYLAND

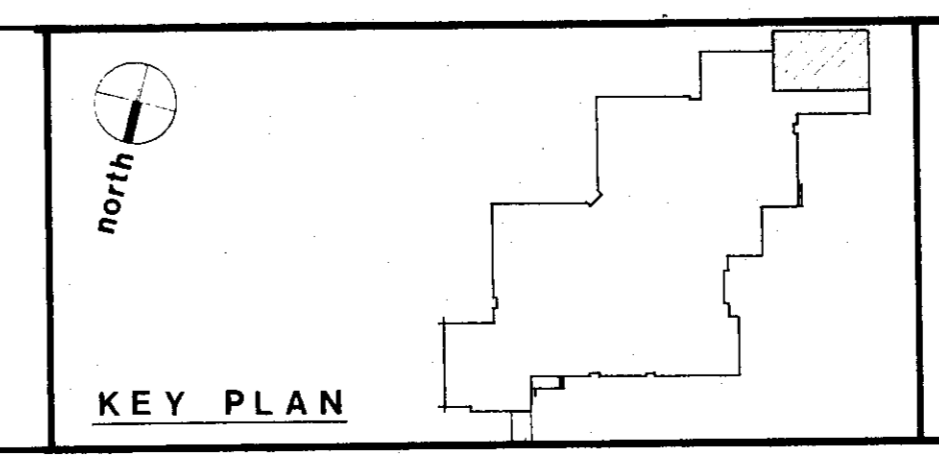
**NES, CAMPBELL & PARTNERS ARCHITECTS**  
 T O W S O N M A R Y L A N D  
 SKARDA & RICKERT, INC. HENRY ADAMS, INC.  
 STRUCTURAL ENGINEER MECHANICAL ENGINEER

SCALE 1/8" = 1'-0"  
 DRAWN BY M.W.B.  
 PROJECT NUMBER 74  
 DRAWING NUMBER  
**CD**  
 DATE 12/15/77  
 H. A. JOB NO. 3-106

Original Drawings Before Renovation



1. ALL PIPE PASSING THROUGH TANK TO BE SLEAVED W/ ROUTED PVC FLANGES AND SOLVENT WELDED TO PIPE PRIOR TO EMBEDMENT IN TANK.

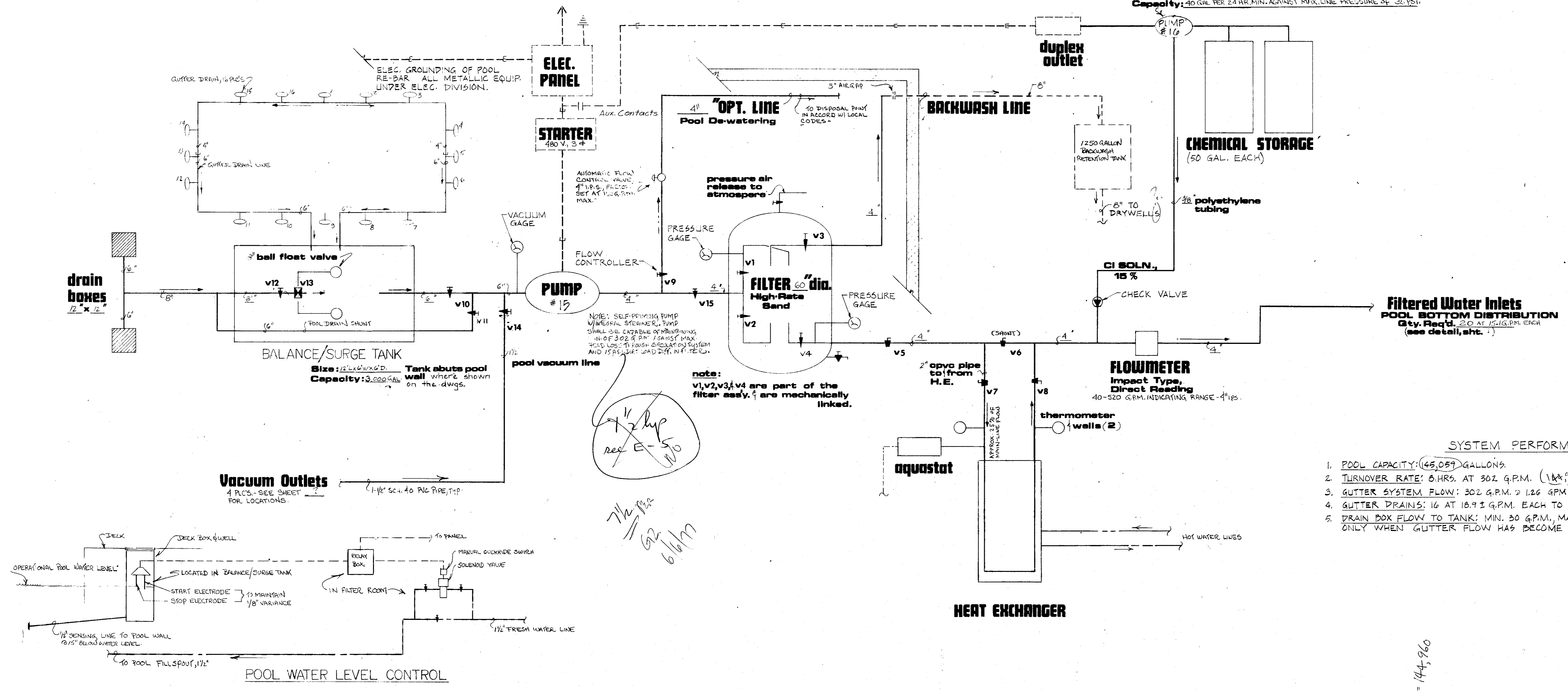


POOL PIPING PLAN AND DETAILS		SCALE AS NOTED
MAGNOLIA MIDDLE SCHOOL		DRAWN BY PPL
FOR THE BOARD OF EDUCATION		PROJECT NUMBER 74-7
NES, CAMPBELL & PARTNERS * ARCHITECTS		DRAWING NUMBER
T O W S O N		CD M-16
SKARDA & RICKERT, INC.		DATE JULY 30, 1976
HENRY ADAMS, INC.		HA-202 No. J-106

Original Drawings Before Renovation

Note: Electrically interlock chemical feed pump service w/ main pump starter

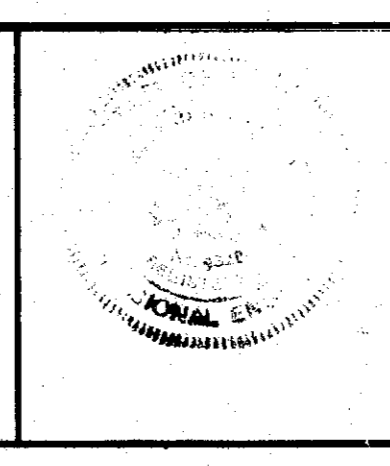
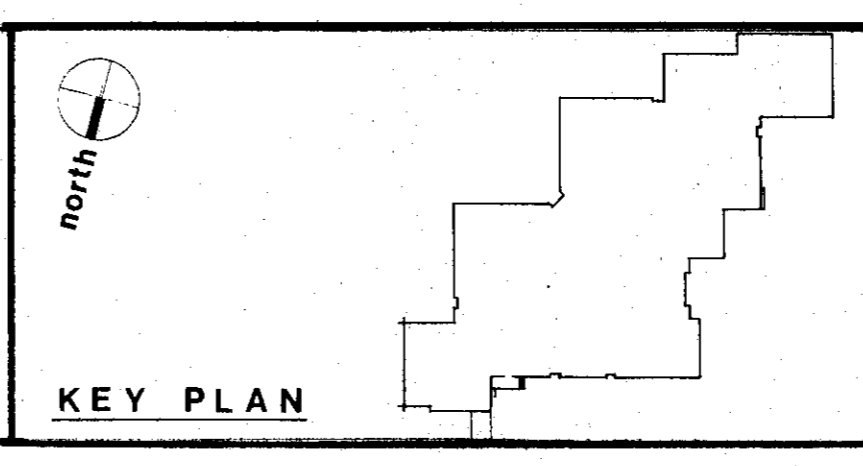
**CHEMICAL FEED PUMP (PUMP #16)**  
Capacity: 40 GAL PER 24 HR. MIN. AGAINST MAX. LINE PRESSURE OF 20 PSI.



Handwritten note:  $1\frac{1}{2}$  hp req @ 50 GPM

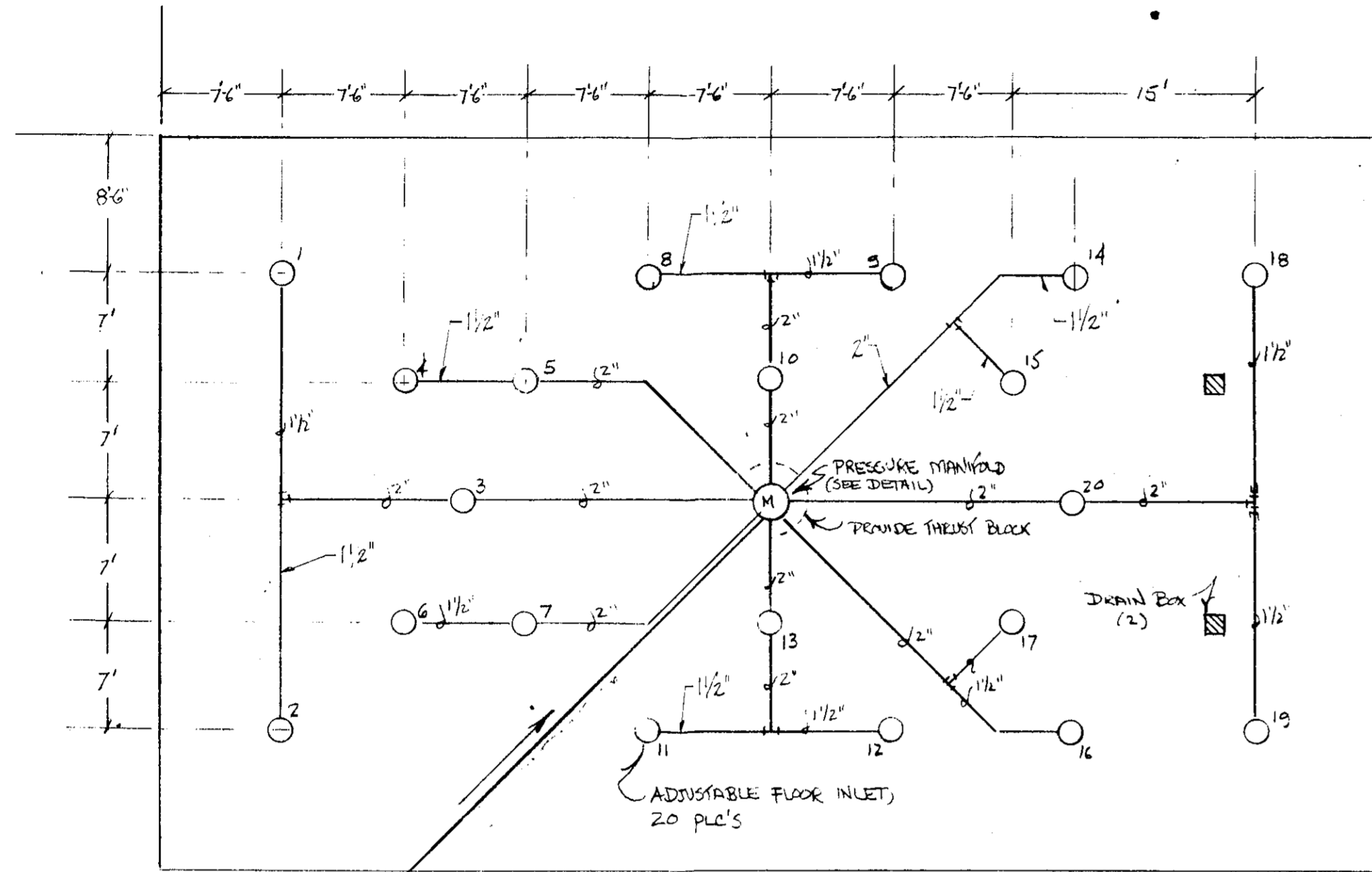
- SYSTEM PERFORMANCE REQUIREMENTS**
1. POOL CAPACITY: 145,059 GALLONS
  2. TURNOVER RATE: 6 HRS. AT 302 G.P.M. (1.8 x 100 G.P.M.)
  3. GUTTER SYSTEM FLOW: 302 G.P.M. @ 1.26 G.P.M. PER FT. OF RIM (100% OF RIM FLOW)
  4. GUTTER DRAINS: 16 AT 18.9 G.P.M. EACH TO GRAVITY.
  5. DRAIN BOX FLOW TO TANK: MIN. 30 G.P.M., MAX. 302+ G.P.M. MAXIMUM IS PERMISSIBLE ONLY WHEN GUTTER FLOW HAS BECOME NEGLIGIBLE.

Handwritten note: 8 x 60 x 302 = 144,960



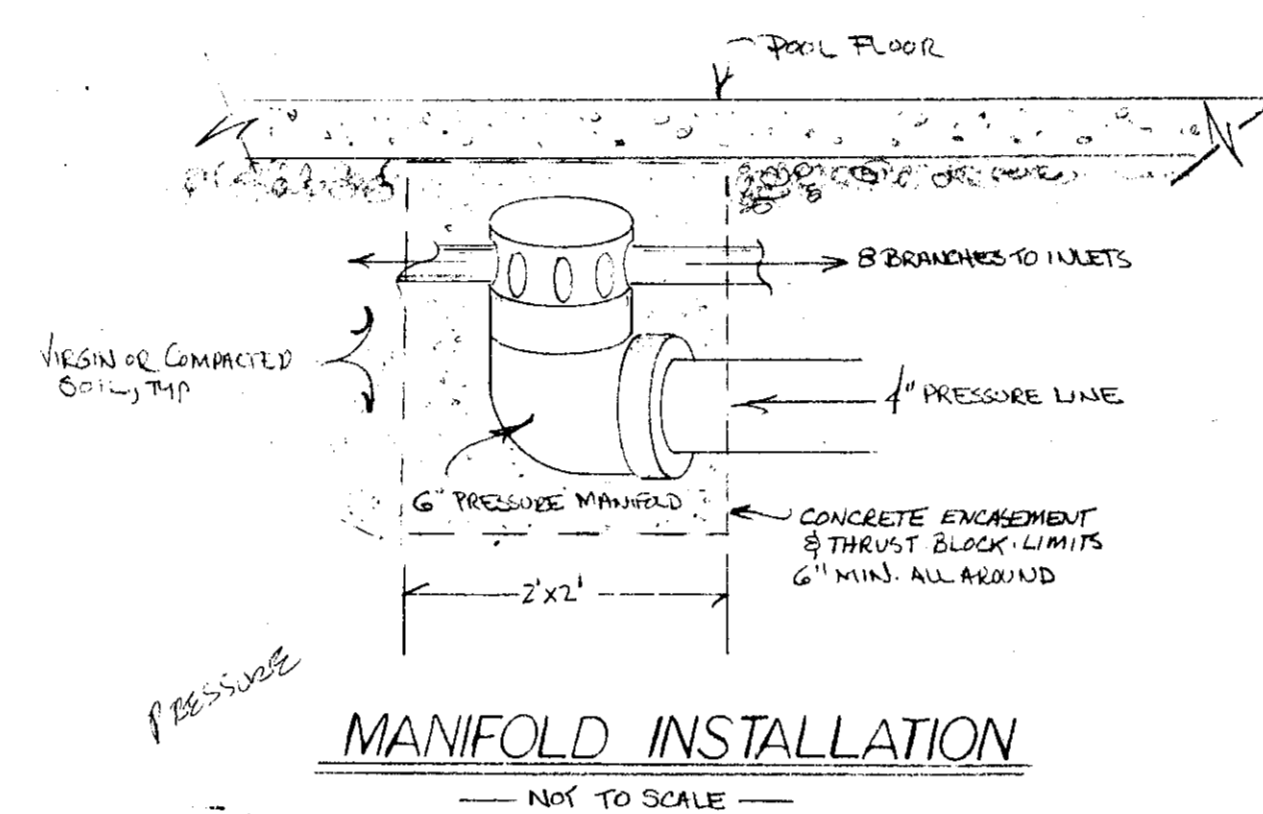
POOL PIPING FLOW DIAGRAM		SCALE NONE
DRAWN BY PPL		PROJECT NUMBER 74-7
<b>MAGNOLIA MIDDLE SCHOOL</b>		DRAWING NUMBER
FOR THE BOARD OF EDUCATION HARFORD COUNTY, MARYLAND		
<b>NES, CAMPBELL &amp; PARTNERS * ARCHITECTS</b>		<b>CD M-17</b>
TOWSON, MARYLAND		DATE JULY 30, 1978
SKARDA & RICKERT, INC. STRUCTURAL ENGINEER		
HENRY ADAMS, INC. MECHANICAL ENGINEER		

# Original Drawings Before Renovation



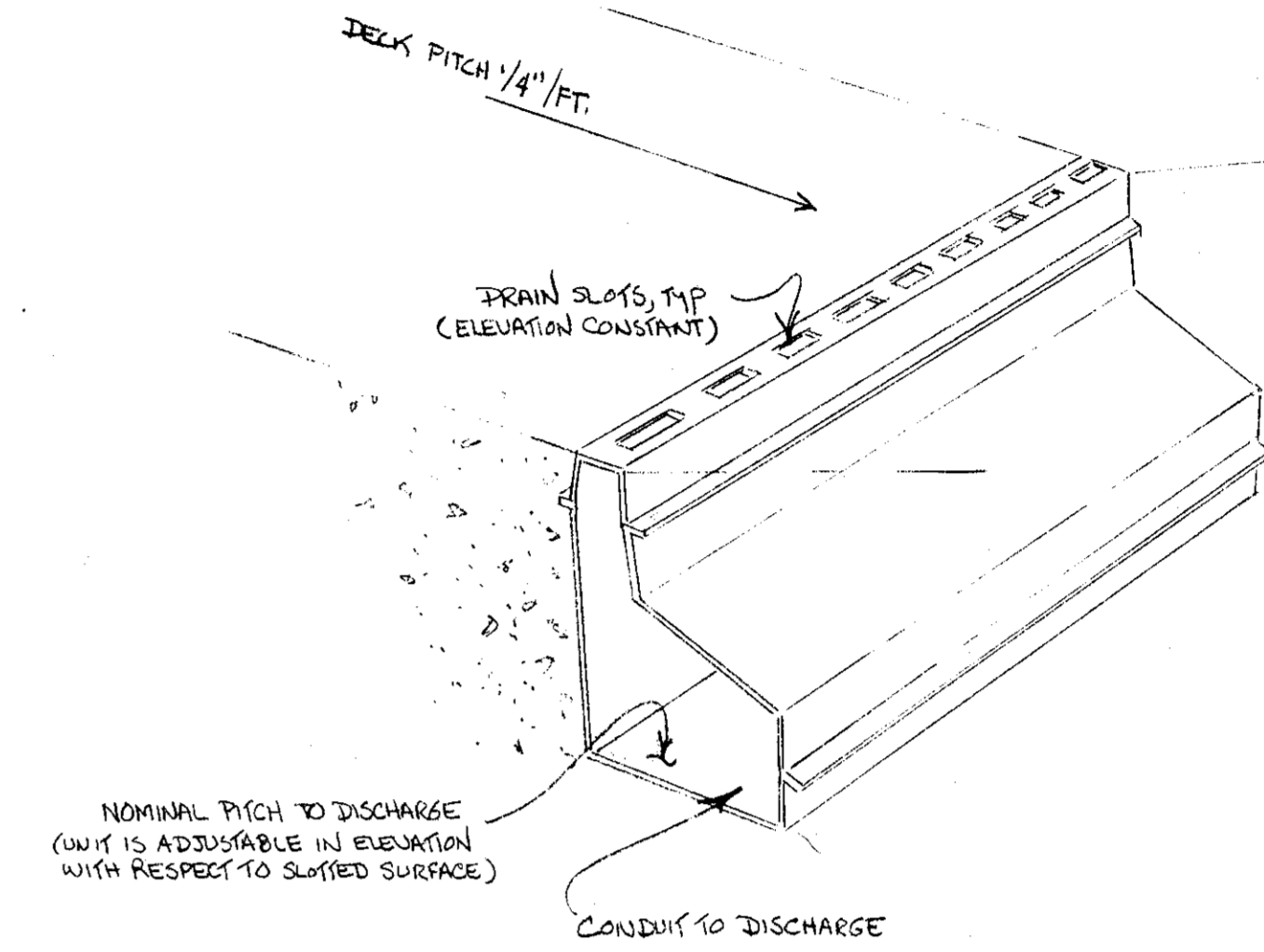
## INLET DISTRIBUTION

1. ALL POOL BOTTOM PIPING SHALL BE PLACED IN SAND BED, BACKFILL CAREFULLY WITH MATERIAL FREE OF SHARP/HARD OBJECTS.
2. ENCASE PRESSURE MANIFOLD IN CONCRETE AFTER ALL CONNECTIONS HAVE BEEN MADE AND PRESSURE TEST INDICATE'S LEAK-TIGHT CONNECTIONS.
3. ALL POOL SYSTEM PRESSURE PIPING SHALL BE TESTED AT 50 P.S.I. AND MAINTAINED AT THIS PRESSURE THROUGHOUT CONSTRUCTION & CONCRETING.
4. PUMP SUCTION PIPING (I.E.: LINES TO V-10 & V-11) FROM SURGE/BALANCE TANK SHALL BE MAINTAINED AT 50 P.S.I. THROUGHOUT CONSTRUCTION & CONCRETING.
5. PRESSURE TESTS TO BE MAINTAINED CLEAR BACK TO POINTS WHERE PIPING ENTERS FILTER ROOM THROUGH SLAB.
6. GUYER PICKUP PIPING TO SURGE/BALANCE TANK SHALL BE TESTED TO 10 FT HEAD DURING CONSTRUCTION.



## MANIFOLD INSTALLATION

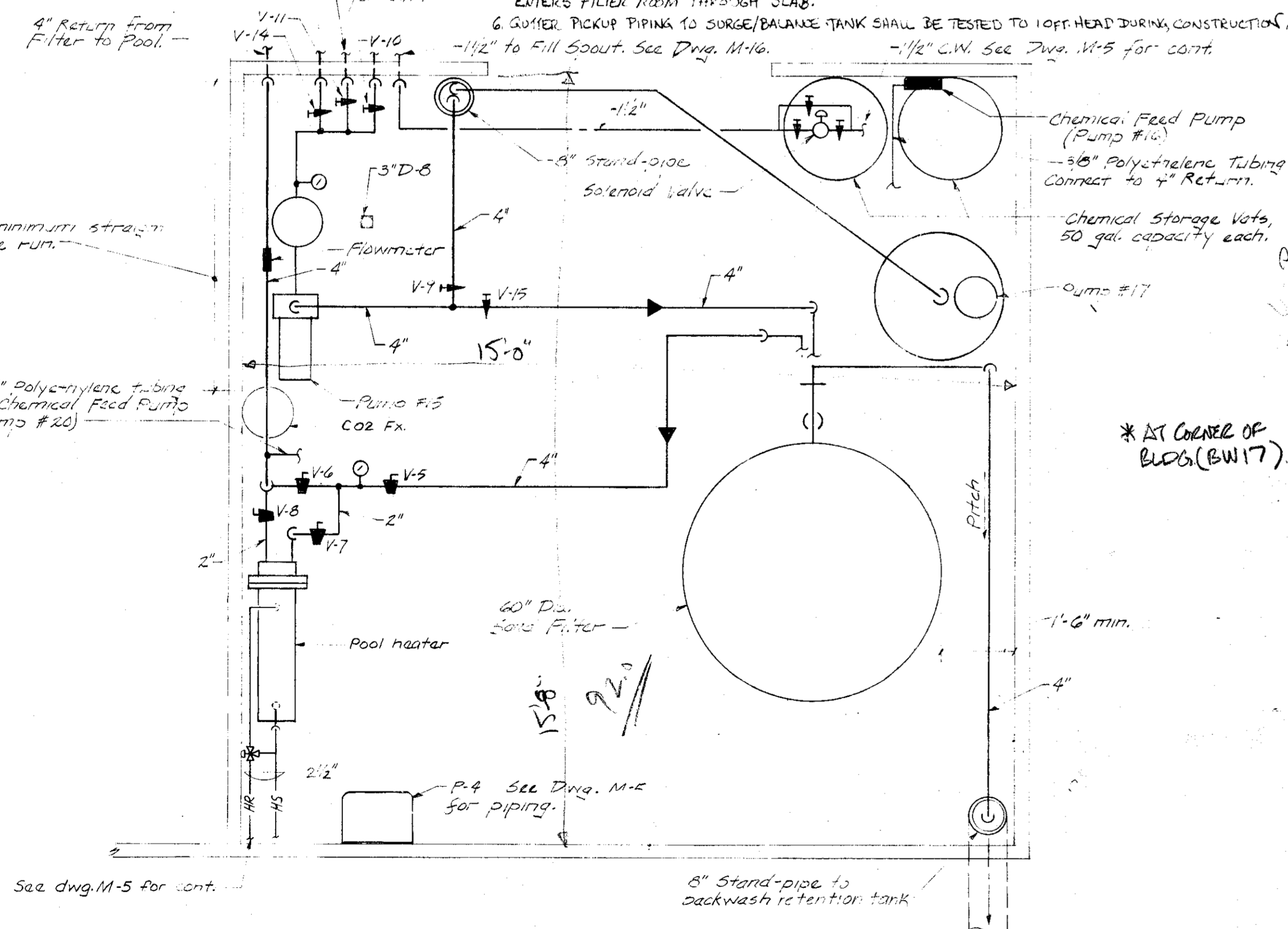
NOT TO SCALE



## DECK DRAIN SYSTEM DETAIL

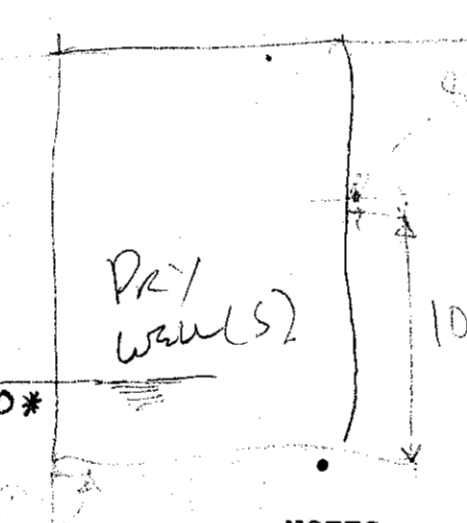
NOT TO SCALE

1. VINYL EXTRUSION-COMBINATION DRAIN CHANNEL, EXPANSION & CONTRACTION JOINT
2. See Dwg. M-5 for extent of deck drain.
3. Deck drain shall be equal to D.R.C. Co. Deck-O-Drain with expansion and contraction joint system & with water stop feature, color shall be selected by the architect.



## POOL EQUIPMENT ROOM PLAN

Scale: 1/2" = 1'-0"



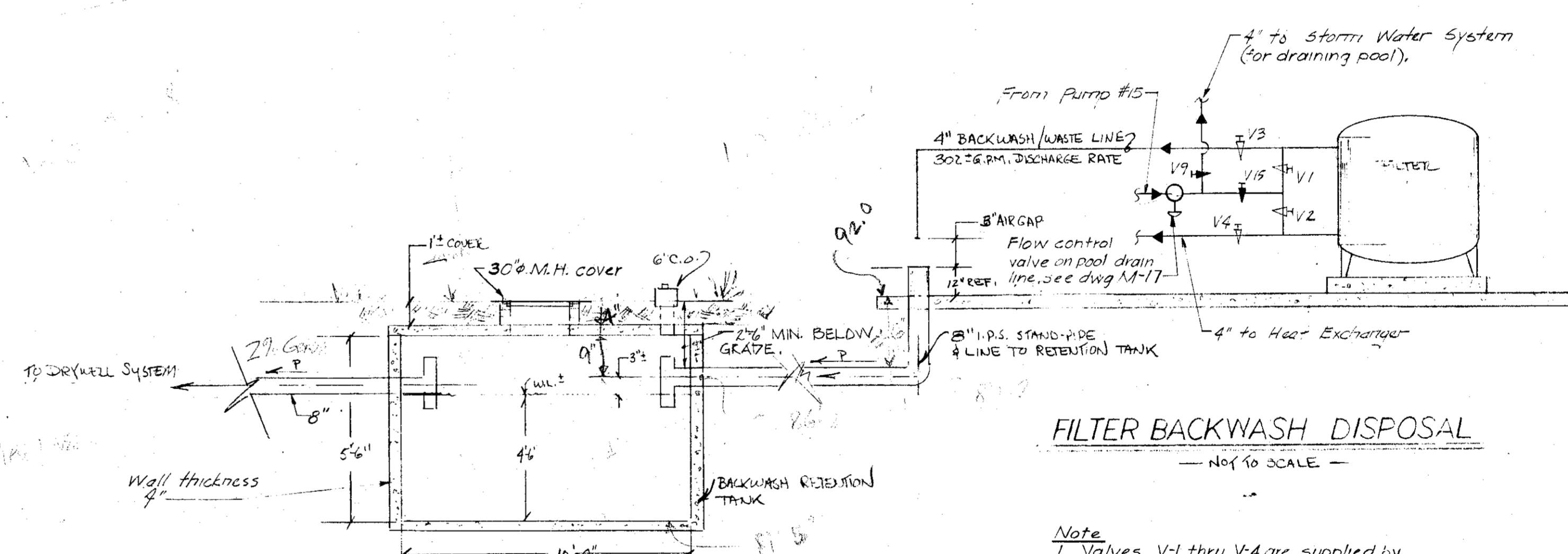
## RETENTION TANK DATA

1. CAPACITY (1250) GALLONS.
2. CAPACITY SUFFICIENT TO ALLOW THE SETTLING OF SOME COMPLETE FILTER BACKWASH VALVES.
3. TANK CAPACITY IS BASED ON MAX. BACKWASH DURATION OF 4 MINUTES (3 MIN. IS AVERAGE) AT A RATE NOMINALLY OF 300 G.P.M.

1. The base bid shall include piping the swimming pool filter back wash indirectly (3" above 8" stand-pipe) to the 8" storm water stand-pipe at the south east corner of the Pool Equipment Room in lieu of to the 8" back wash retention tank stand-pipe at the north west corner of the Pool Equipment Room.

## Alternate #1

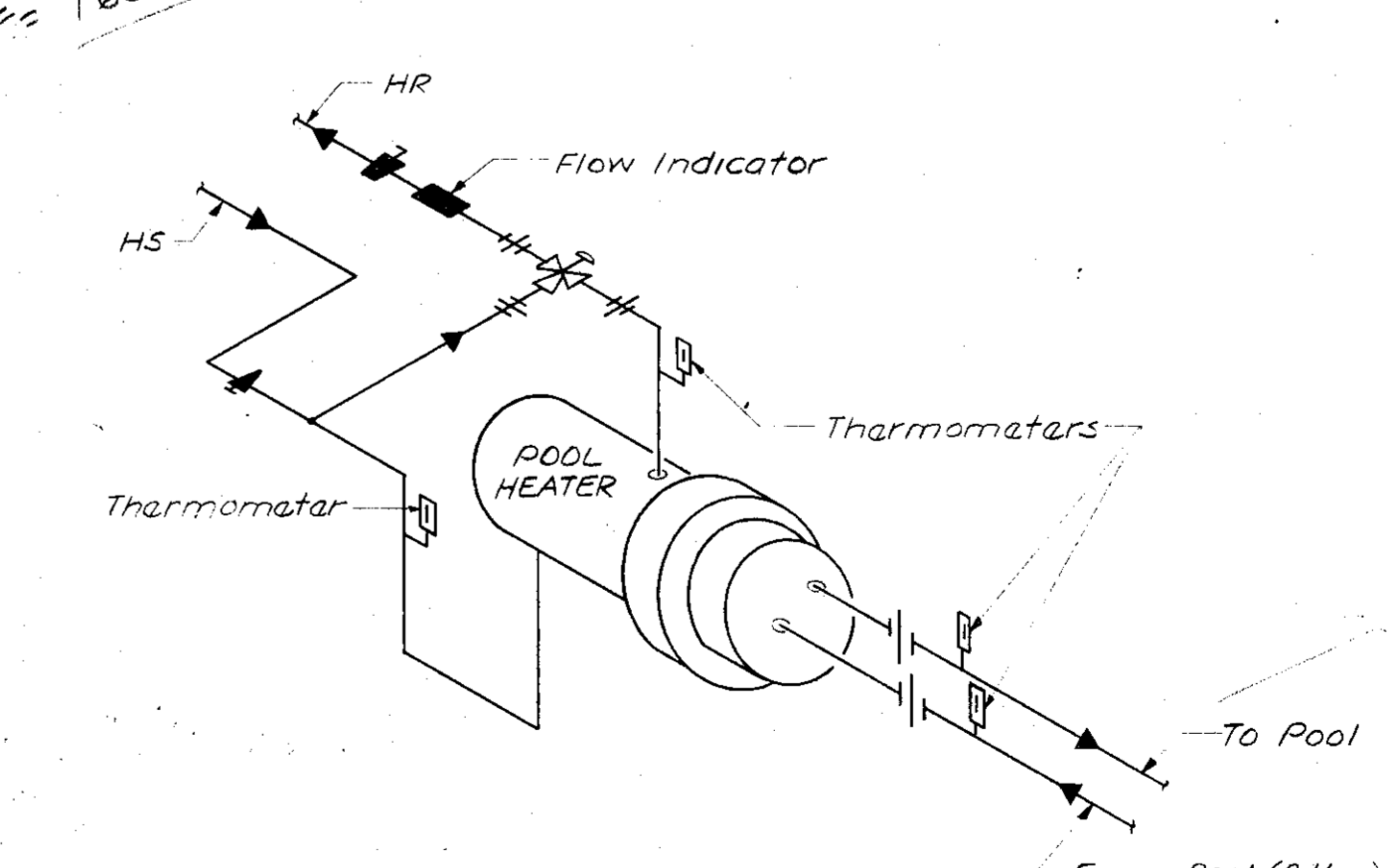
1. Provide an add alternate price for piping the swimming pool filter back wash to the 8" back wash retention tank stand-pipe at the north west corner of the Pool Equipment Room. Provide a retention tank, dry well and the filter back wash piping to the retention tank and dry well as indicated on the drawings.



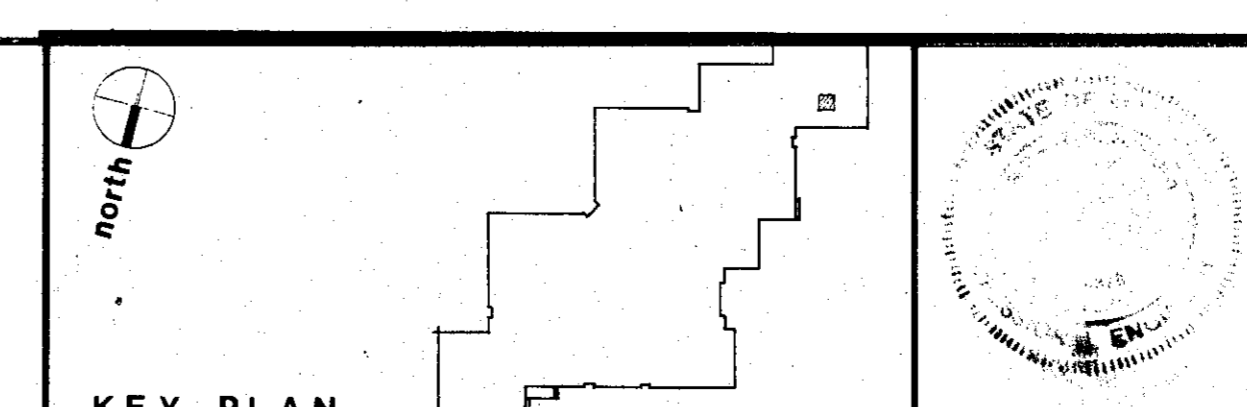
## FILTER BACKWASH DISPOSAL

NOT TO SCALE

1. Valves V-1 thru V-4 are supplied by Filter manufacturer.



## POOL HEATER



POOL EQUIPMENT ROOM PLAN AND DETAILS

**MAGNOLIA MIDDLE SCHOOL**  
FOR THE BOARD OF EDUCATION HARFORD COUNTY, MARYLAND

**NES, CAMPBELL & PARTNERS \* ARCHITECTS**  
TOWSON, MARYLAND  
SKARDA & RICKERT, INC. STRUCTURAL ENGINEER  
HENRY ADAMS, INC. MECHANICAL ENGINEER

SCALE AS NOTED  
DRAWN BY PPL  
PROJECT NUMBER 74-7  
DRAWING NUMBER  
DATE

ISSUED FOR:

DATE	DESCRIPTION
11/02/12	DD SUBMISSION
12/14/12	50% SUBMISSION
01/31/13	100% IAC SUBMISSION
02/28/13	CONSTRUCTION DOCUMENTS

PROJECT NO:  
SCALE: **AS NOTED**

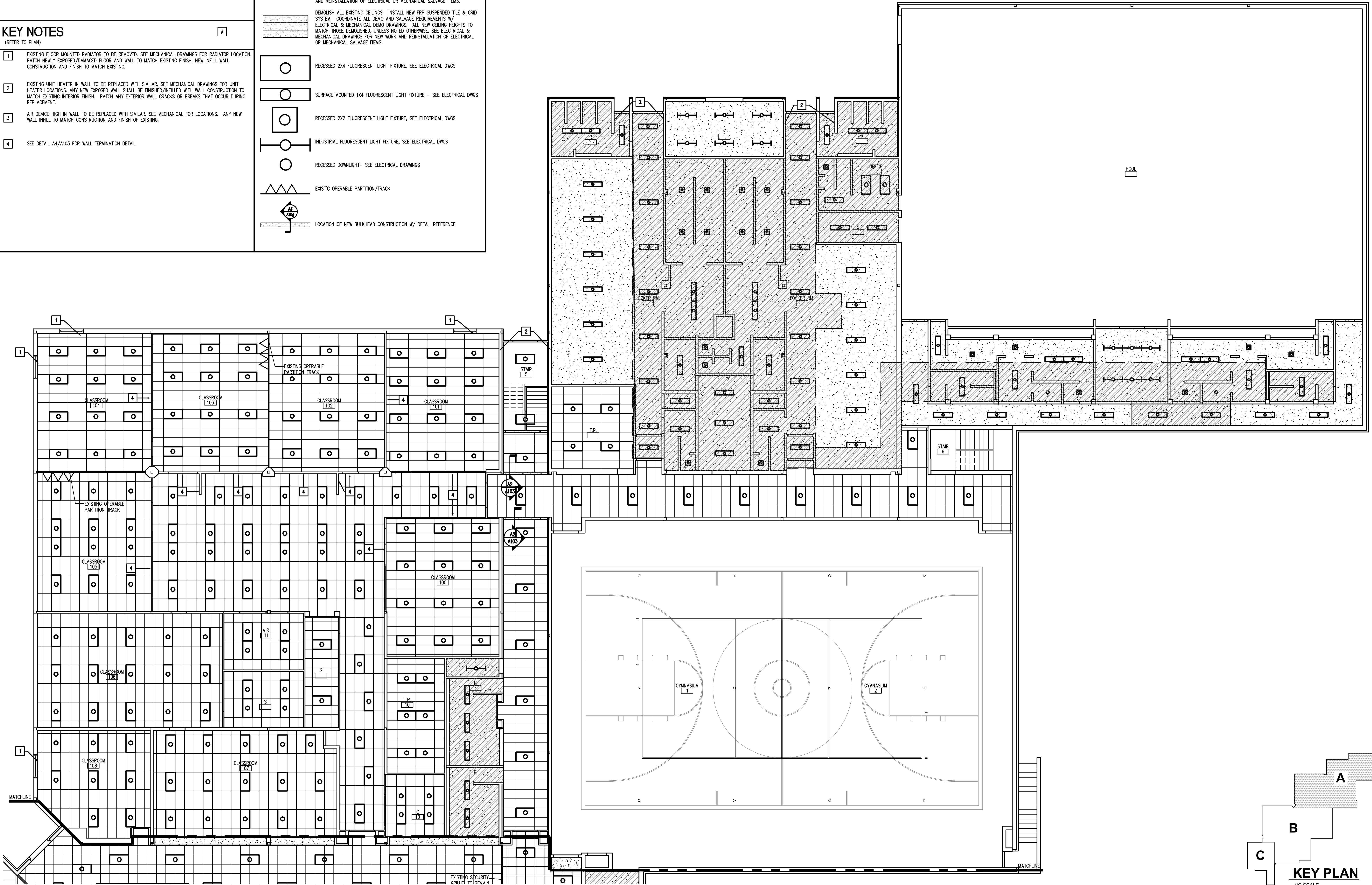
DRAWN BY:  
CHECKED BY:

DATE: **02/28/2013**

SHEET TITLE:  
**LOWER LEVEL AREA 'A' REFLECTED CEILING PLAN- DEMOLITION & NEW WORK**

DRAWING NO:  
**A101**

GENERAL NOTES	SYMBOLS KEY
<p>GENERAL NOTE APPLICABLE TO ALL DRAWINGS - ITEMS AND CONDITIONS DETAILED NOTED OR OTHERWISE IDENTIFIED ON ONE OF THE SECTIONS OR DETAILS ARE APPLICABLE AND BINDING TO ALL OTHER SECTIONS AND DETAILS FOR IDENTICAL OR SIMILAR CONDITIONS.</p> <ol style="list-style-type: none"> <li>REFER TO ELECTRICAL DRAWINGS FOR LIGHT PATTERN AND EXIT LIGHT LOCATIONS.</li> <li>REFER TO MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ITEMS NOT SHOWN ON CEILING PLAN. GRILLES, SPEAKERS, HEAT &amp; SMOKE DETECTORS.</li> <li>PROVIDE 1/2" REVEALS BETWEEN DISSIMILAR MATERIALS ON THE SAME PLANE AT THE CEILINGS.</li> </ol>	<p>EXISTING DRYWALL OR GYPSUM BULKHEAD CEILING TO REMAIN. SEE ELECTRICAL &amp; MECHANICAL DRAWINGS REQUIRING SPOT DEMOLITION FOR DEVICES, CONTROLS, ETC.. PATCH AND REFINISH TO MATCH ADJACENT EXISTING</p> <p>REPLACE GYPSUM BOARD CEILING OR BULKHEAD TO MATCH EXISTING WHERE REMOVED TO ACCESS ELECTRICAL &amp; MECHANICAL WORK. SEE MECHANICAL &amp; ELECTRICAL DEMO AND NEW WORK DRAWINGS. CONTRACTOR IS TO DEMOLISH MINIMUM AMOUNT REQUIRED TO COMPLETE ELECTRICAL AND MECHANICAL WORK. REPLACE ALL DEMOLISHED WORK UPON COMPLETION OF RENOVATION TO MATCH FINISH OF ADJACENT CEILINGS/BULKHEADS. ALL NEW CEILING HEIGHTS TO MATCH THOSE DEMOLISHED.</p> <p>DEMOLISH ALL EXISTING CEILINGS. INSTALL NEW 2X4 (OR 2X2 WHERE INDICATED) SUSPENDED ACOUSTICAL TILE &amp; GRID SYSTEM. COORDINATE ALL DEMO AND SALVAGE REQUIREMENTS W/ ELECTRICAL &amp; MECHANICAL DEMO DRAWINGS. ALL NEW CEILING HEIGHTS TO MATCH THOSE DEMOLISHED, UNLESS NOTED OTHERWISE. SEE ELECTRICAL &amp; MECHANICAL DRAWINGS FOR NEW WORK AND REINSTALLATION OF ELECTRICAL OR MECHANICAL SALVAGE ITEMS.</p> <p>DEMOLISH ALL EXISTING CEILINGS. INSTALL NEW FRP SUSPENDED TILE &amp; GRID SYSTEM. COORDINATE ALL DEMO AND SALVAGE REQUIREMENTS W/ ELECTRICAL &amp; MECHANICAL DEMO DRAWINGS. ALL NEW CEILING HEIGHTS TO MATCH THOSE DEMOLISHED, UNLESS NOTED OTHERWISE. SEE ELECTRICAL &amp; MECHANICAL DRAWINGS FOR NEW WORK AND REINSTALLATION OF ELECTRICAL OR MECHANICAL SALVAGE ITEMS.</p> <p>RECESSED 2X4 FLUORESCENT LIGHT FIXTURE, SEE ELECTRICAL DWGS</p> <p>SURFACE MOUNTED 1X4 FLUORESCENT LIGHT FIXTURE - SEE ELECTRICAL DWGS</p> <p>RECESSED 2X2 FLUORESCENT LIGHT FIXTURE, SEE ELECTRICAL DWGS</p> <p>INDUSTRIAL FLUORESCENT LIGHT FIXTURE, SEE ELECTRICAL DWGS</p> <p>RECESSED DOWNLIGHT- SEE ELECTRICAL DRAWINGS</p> <p>EXISTG OPERABLE PARTITION/TRACK</p> <p>LOCATION OF NEW BULKHEAD CONSTRUCTION W/ DETAIL REFERENCE</p>
KEY NOTES	
<p>(REFER TO PLAN)</p> <ol style="list-style-type: none"> <li>EXISTING FLOOR MOUNTED RADIATOR TO BE REMOVED. SEE MECHANICAL DRAWINGS FOR RADIATOR LOCATION. PATCH NEWLY EXPOSED/DAMAGED FLOOR AND WALL TO MATCH EXISTING FINISH. NEW INFILL WALL CONSTRUCTION AND FINISH TO MATCH EXISTING.</li> <li>EXISTING UNIT HEATER IN WALL TO BE REPLACED WITH SIMILAR. SEE MECHANICAL DRAWINGS FOR UNIT HEATER LOCATIONS. ANY NEW EXPOSED WALL SHALL BE FINISHED/INFILLED WITH WALL CONSTRUCTION TO MATCH EXISTING INTERIOR FINISH. PATCH ANY EXTERIOR WALL CRACKS OR BREAKS THAT OCCUR DURING REPLACEMENT.</li> <li>AIR DEVICE HIGH IN WALL TO BE REPLACED WITH SIMILAR. SEE MECHANICAL FOR LOCATIONS. ANY NEW WALL INFILL TO MATCH CONSTRUCTION AND FINISH OF EXISTING.</li> <li>SEE DETAIL A4/A103 FOR WALL TERMINATION DETAIL.</li> </ol>	



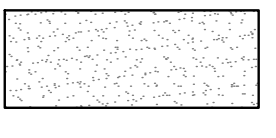
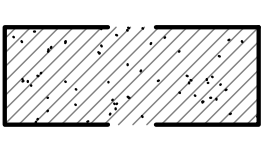
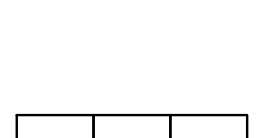
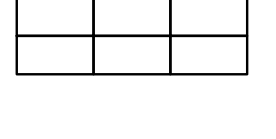
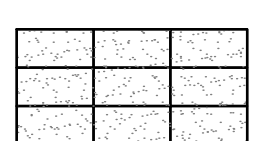
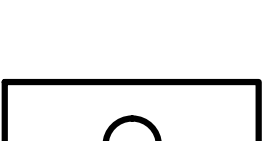
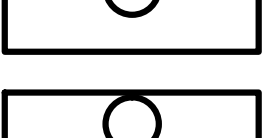
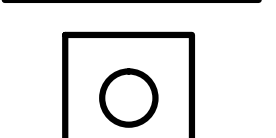
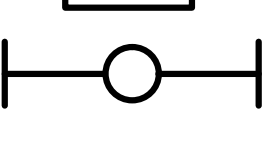
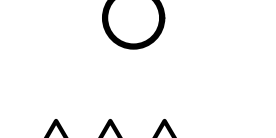
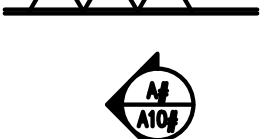
LOWER LEVEL PLAN 'A' REFLECTED CEILING PLAN- DEMOLITION & NEW WORK  
1/8" = 1'-0" (A1)

**GENERAL NOTES**

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- REFER TO ELECTRICAL DRAWINGS FOR LIGHT PATTERN AND EXIT LIGHT LOCATIONS.
- REFER TO MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ITEMS NOT SHOWN ON CEILING PLAN. GRILLES, SPEAKERS, HEAT & SMOKE DETECTORS.
- PROVIDE 1/2" REVEALS BETWEEN DISSIMILAR MATERIALS ON THE SAME PLANE AT THE CEILINGS.

**SYMBOLS KEY**

-  EXISTING DRYWALL OR GYPSUM BULKHEAD CEILING TO REMAIN. SEE ELECTRICAL & MECHANICAL DRAWINGS REQUIRING SPOT DEMOLITION FOR DEVICES, CONTROLS, ETC.. PATCH AND REFINISH TO MATCH ADJACENT EXISTING.
-  REPLACE GYPSUM BOARD CEILING OR BULKHEAD TO MATCH EXISTING WHERE REMOVED TO ACCESS ELECTRICAL & MECHANICAL WORK. SEE MECHANICAL & ELECTRICAL DEMO AND NEW WORK DRAWINGS. CONTRACTOR IS TO DEMOLISH MINIMUM AMOUNT REQUIRED TO COMPLETE ELECTRICAL AND MECHANICAL WORK. REPLACE ALL DEMOLISHED WORK UPON COMPLETION OF RENOVATION TO MATCH FINISH OF ADJACENT CEILINGS/BULKHEADS. ALL NEW CEILING HEIGHTS TO MATCH THOSE DEMOLISHED.
-  DEMOLISH ALL EXISTING CEILINGS. INSTALL NEW 2'x4' (OR 2'x2' WHERE INDICATED) SUSPENDED ACOUSTICAL TILE & GRID SYSTEM. COORDINATE ALL DEMO AND SALVAGE REQUIREMENTS W/ ELECTRICAL & MECHANICAL DEMO DRAWINGS. ALL NEW CEILING HEIGHTS TO MATCH THOSE DEMOLISHED, UNLESS NOTED OTHERWISE. SEE ELECTRICAL & MECHANICAL DRAWINGS FOR NEW WORK AND REINSTALLATION OF ELECTRICAL OR MECHANICAL SALVAGE ITEMS.
-  DEMOLISH ALL EXISTING CEILINGS. INSTALL NEW FRP SUSPENDED TILE & GRID SYSTEM. COORDINATE ALL DEMO AND SALVAGE REQUIREMENTS W/ ELECTRICAL & MECHANICAL DEMO DRAWINGS. ALL NEW CEILING HEIGHTS TO MATCH THOSE DEMOLISHED, UNLESS NOTED OTHERWISE. SEE ELECTRICAL & MECHANICAL DRAWINGS FOR NEW WORK AND REINSTALLATION OF ELECTRICAL OR MECHANICAL SALVAGE ITEMS.
-  RECESSED 2'x4' FLUORESCENT LIGHT FIXTURE, SEE ELECTRICAL DWGS
-  SURFACE MOUNTED 1'x4' FLUORESCENT LIGHT FIXTURE - SEE ELECTRICAL DWGS
-  RECESSED 2'x2' FLUORESCENT LIGHT FIXTURE, SEE ELECTRICAL DWGS
-  INDUSTRIAL FLUORESCENT LIGHT FIXTURE, SEE ELECTRICAL DWGS
-  RECESSED DOWNLIGHT- SEE ELECTRICAL DRAWINGS
-  EXIST'G OPERABLE PARTITION/TRACK
-  LOCATION OF NEW BULKHEAD CONSTRUCTION W/ DETAIL REFERENCE

**KEY NOTES**

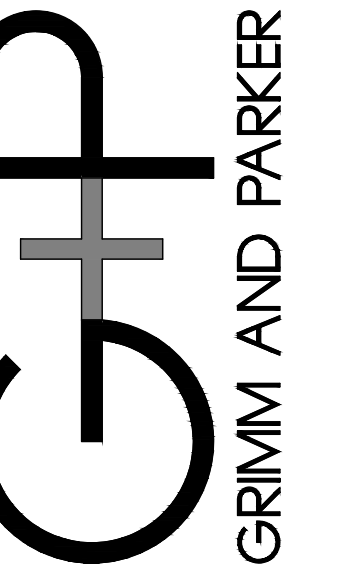
(REFER TO PLAN)

- EXISTING FLOOR MOUNTED RADIATOR TO BE REMOVED. SEE MECHANICAL DRAWINGS FOR RADIATOR LOCATION. PATCH NEWLY EXPOSED/DAMAGED FLOOR AND WALL TO MATCH EXISTING FINISH. NEW INFILL WALL CONSTRUCTION AND FINISH TO MATCH EXISTING.
- EXISTING UNIT HEATER IN WALL TO BE REPLACED WITH SIMILAR. SEE MECHANICAL DRAWINGS FOR UNIT HEATER LOCATIONS. ANY NEW EXPOSED WALL SHALL BE FINISHED/INFILLED WITH WALL CONSTRUCTION TO MATCH EXISTING INTERIOR FINISH. PATCH ANY EXTERIOR WALL CRACKS OR BREAKS THAT OCCUR DURING REPLACEMENT.
- AIR DEVICE HIGH IN WALL TO BE REPLACED WITH SIMILAR. SEE MECHANICAL FOR LOCATIONS. ANY NEW WALL INFILL TO MATCH CONSTRUCTION AND FINISH OF EXISTING.
- SEE DETAIL A4/A103 FOR WALL TERMINATION DETAIL.

**Renovation 2013**



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PROJECT NAME:

**Harford County Public Schools**



HVAC RENOVATIONS  
MAGNOLIA MIDDLE SCHOOL

299 FORT HOYLE ROAD  
JOPPA, MARYLAND 21085

SCALE:

PROFESSIONAL CERTIFICATION:

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 3321-LA. EXPIRATION DATE: 08/07/2013.

ISSUED FOR:

DATE	DESCRIPTION
11/02/12	DD SUBMISSION
12/14/12	50% SUBMISSION
01/31/13	100% IAC SUBMISSION
02/28/13	CONSTRUCTION DOCUMENTS

PROJECT NO.:

SCALE: AS NOTED

DRAWN BY:

CHECKED BY:

DATE: 02/28/2013

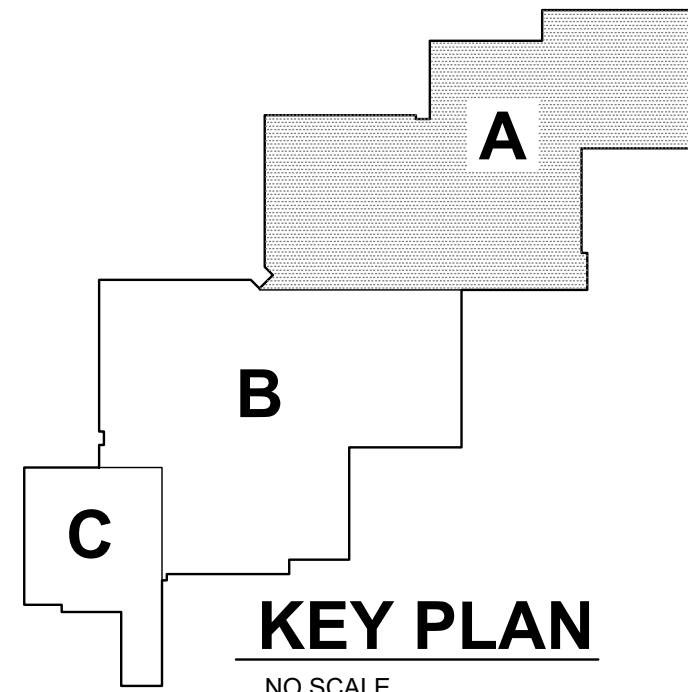
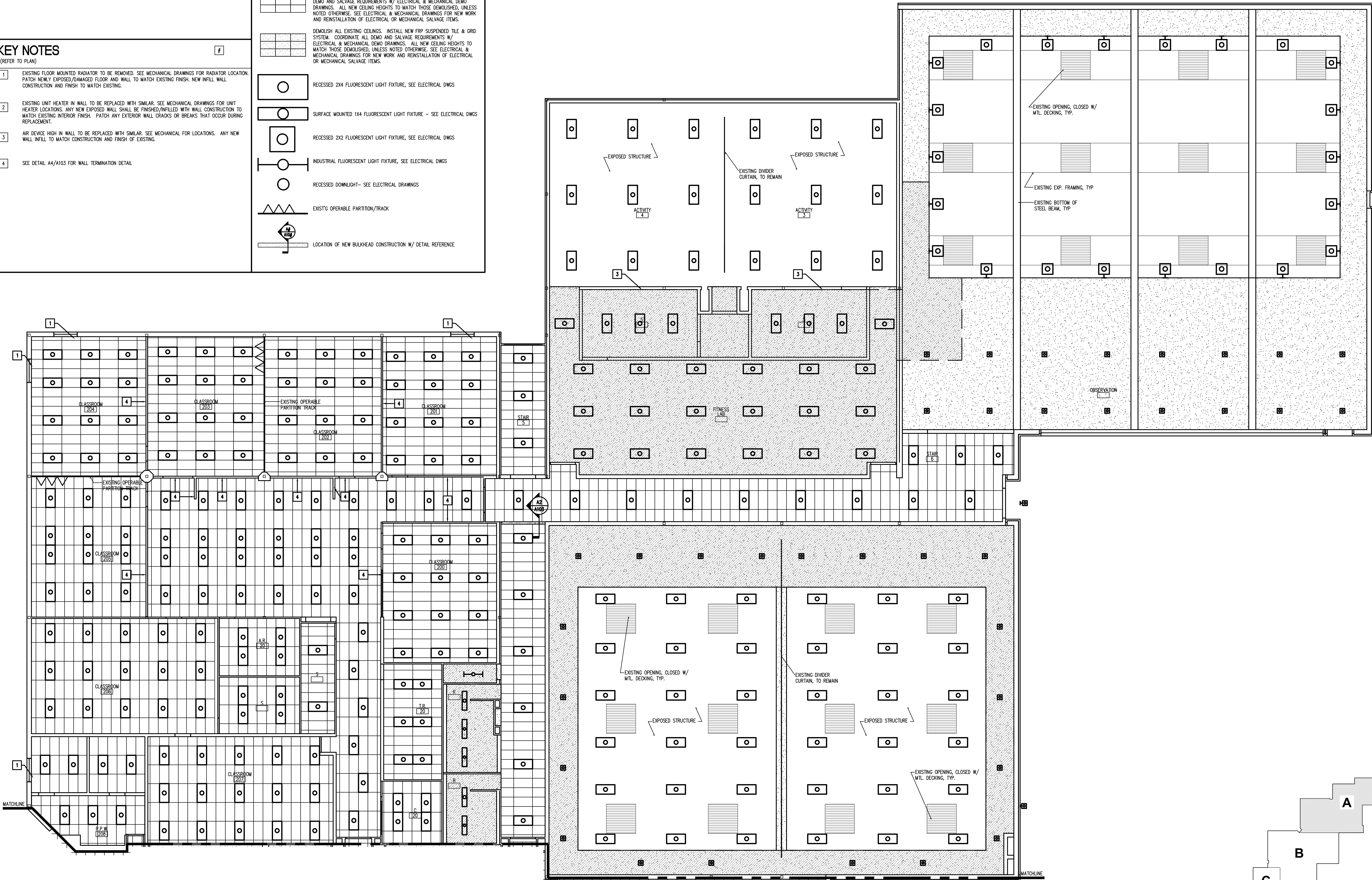
SHEET TITLE:

UPPER LEVEL AREA 'A' REFLECTED CEILING PLAN- DEMOLITION & NEW WORK

DRAWING NO.:

**A104**

BKM# 120520.010



UPPER LEVEL AREA 'A' REFLECTED CEILING PLAN- DEMOLITION & NEW WORK  
1/8" = 1'-0"

(A1)

PROJECT NAME:

**Harford County Public Schools**



HVAC RENOVATIONS  
 MAGNOLIA MIDDLE SCHOOL

299 FORT HOYLE ROAD  
 JOPPA, MARYLAND 21085

SEAL:

PROFESSIONAL CERTIFICATION:

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 20513 EXPIRATION DATE: 07/17/14

ISSUED FOR:

DATE	DESCRIPTION
11/02/12	DD SUBMISSION
12/14/12	50% SUBMISSION
01/31/13	100% IAC SUBMISSION
02/28/13	CONSTRUCTION DOCUMENTS

PROJECT NO: -

SCALE: AS NOTED

DRAWN BY: MB

CHECKED BY: LSF / RAM

DATE: 02/28/2013

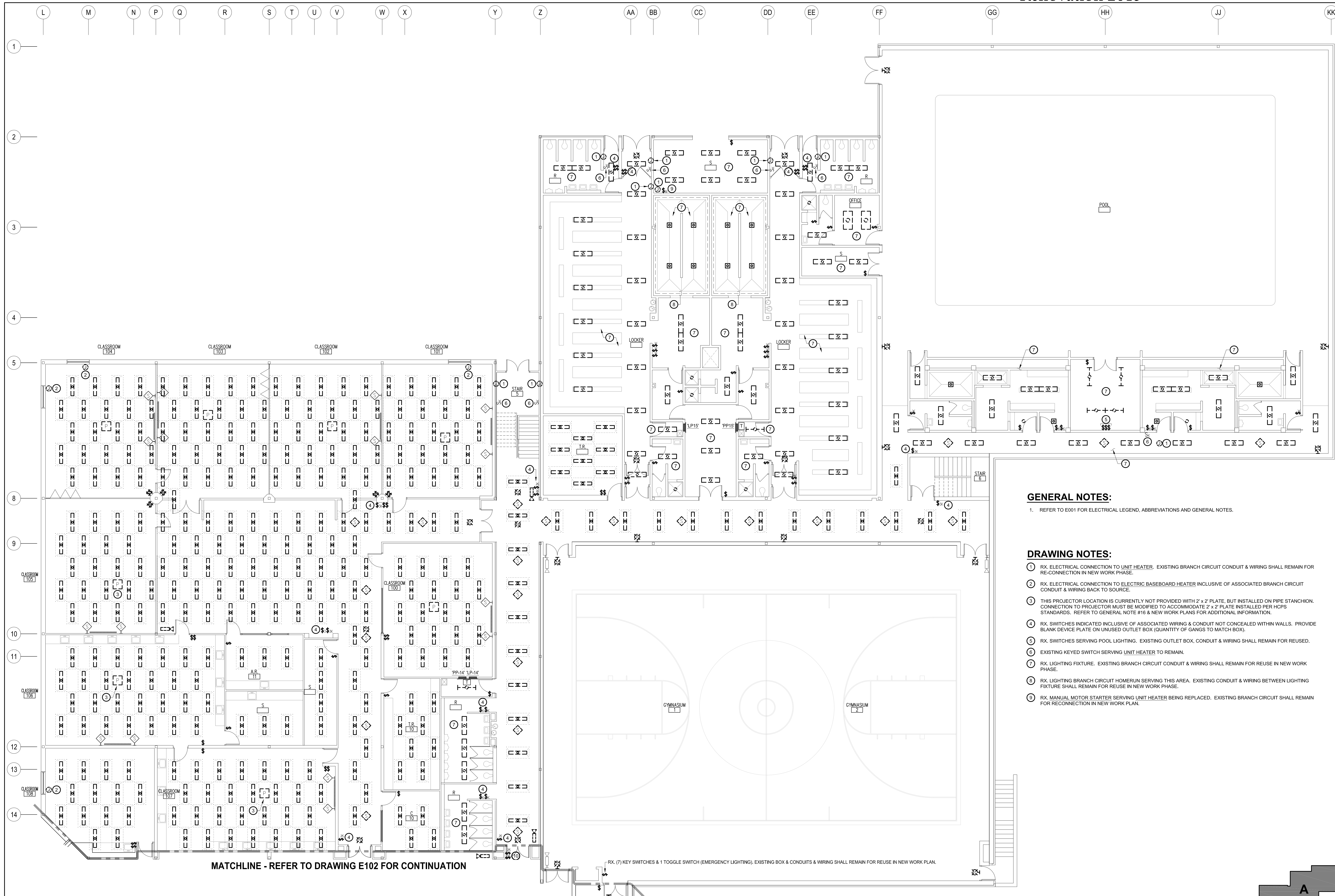
SHEET TITLE:

**LOWER LEVEL PLAN 'A'  
 ELECTRICAL  
 DEMOLITION**

DRAWING NO:

**E101**

BKM# 120520.010



**GENERAL NOTES:**

1. REFER TO E001 FOR ELECTRICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES.

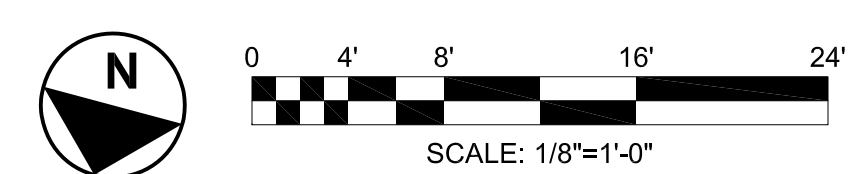
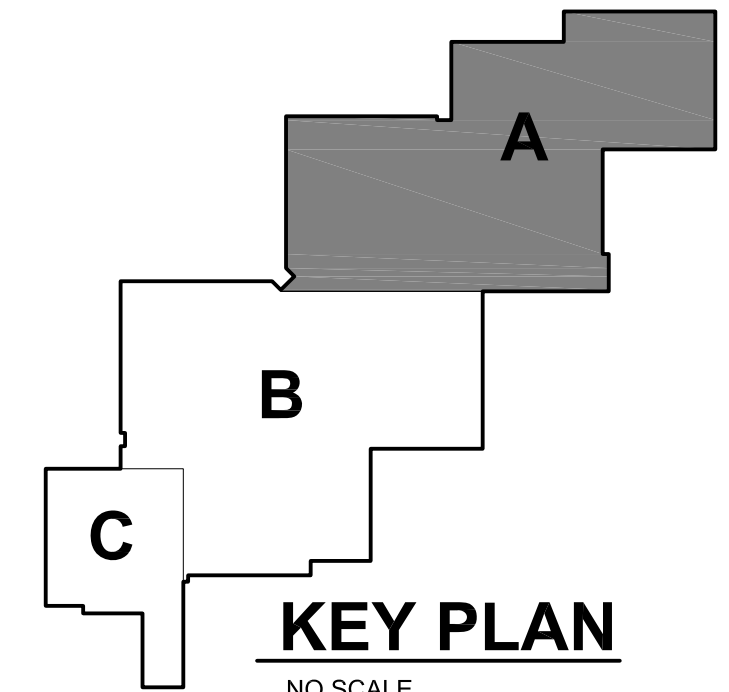
**DRAWING NOTES:**

1. RX. ELECTRICAL CONNECTION TO UNIT HEATER. EXISTING BRANCH CIRCUIT CONDUIT & WIRING SHALL REMAIN FOR RE-CONNECTION IN NEW WORK PHASE.
2. RX. ELECTRICAL CONNECTION TO ELECTRIC BASEBOARD HEATER INCLUSIVE OF ASSOCIATED BRANCH CIRCUIT CONDUIT & WIRING BACK TO SOURCE.
3. THIS PROJECTOR LOCATION IS CURRENTLY NOT PROVIDED WITH 2' x 2' PLATE, BUT INSTALLED ON PIPE STANCHION. CONNECTION TO PROJECTOR MUST BE MODIFIED TO ACCOMMODATE 2' x 2' PLATE INSTALLED PER HCPS STANDARDS. REFER TO GENERAL NOTE #16 & NEW WORK PLANS FOR ADDITIONAL INFORMATION.
4. RX. SWITCHES INDICATED INCLUSIVE OF ASSOCIATED WIRING & CONDUIT NOT CONCEALED WITHIN WALLS. PROVIDE BLANK DEVICE PLATE ON UNUSED OUTLET BOX (QUANTITY OF GANGS TO MATCH BOX).
5. RX. SWITCHES SERVING POOL LIGHTING. EXISTING OUTLET BOX, CONDUIT & WIRING SHALL REMAIN FOR REUSED.
6. EXISTING KEYED SWITCH SERVING UNIT HEATER TO REMAIN.
7. RX. LIGHTING FIXTURE. EXISTING BRANCH CIRCUIT CONDUIT & WIRING SHALL REMAIN FOR REUSE IN NEW WORK PHASE.
8. RX. LIGHTING BRANCH CIRCUIT HOMERUN SERVING THIS AREA. EXISTING CONDUIT & WIRING BETWEEN LIGHTING FIXTURE SHALL REMAIN FOR REUSE IN NEW WORK PHASE.
9. RX. MANUAL MOTOR STARTER SERVING UNIT HEATER BEING REPLACED. EXISTING BRANCH CIRCUIT SHALL REMAIN FOR RECONNECTION IN NEW WORK PLAN.

MATCHLINE - REFER TO DRAWING E102 FOR CONTINUATION

RX. (7) KEY SWITCHES & 1 TOGGLE SWITCH (EMERGENCY LIGHTING), EXISTING BOX & CONDUITS & WIRING SHALL REMAIN FOR REUSE IN NEW WORK PLAN.

**1 LOWER LEVEL PLAN 'A' - ELECTRICAL - DEMOLITION**  
 SCALE: 1/8" = 1'-0"





PROJECT NAME:

**Harford County Public Schools**



HVAC RENOVATIONS  
 MAGNOLIA MIDDLE SCHOOL

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ISSUED FOR:

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01/31/13	100% IAC SUBMISSION
02/28/13	CONSTRUCTION DOCUMENTS

PROJECT NO. -

SCALE: AS NOTED

DRAWN BY: MB

CHECKED BY: LSF / RAM

DATE: 02/28/2013

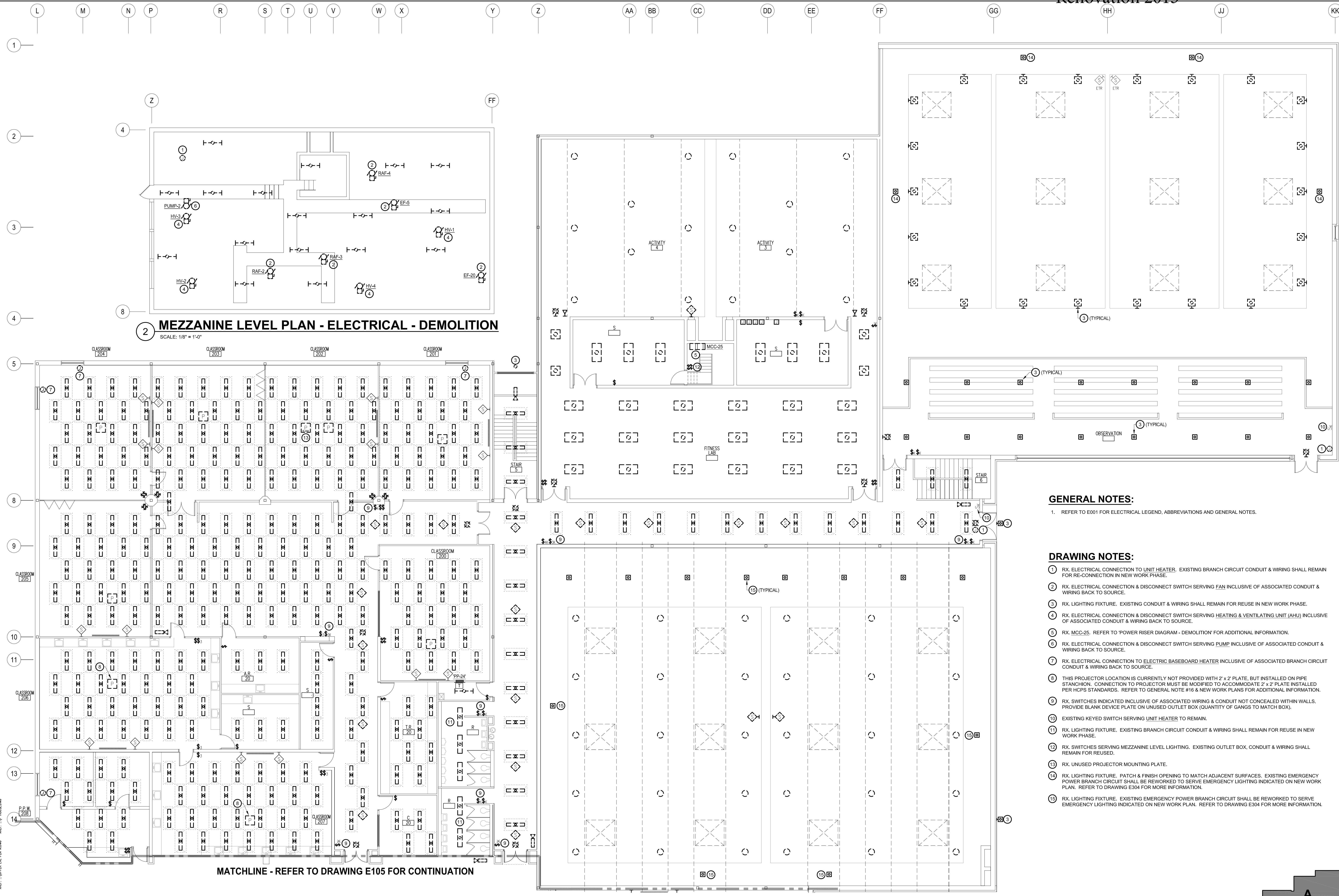
SHEET TITLE:

**UPPER LEVEL PLAN 'A'  
 ELECTRICAL  
 DEMOLITION**

DRAWING NO:

**E104**

BKM# 120520.010

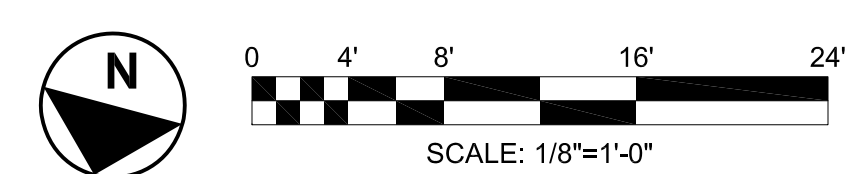
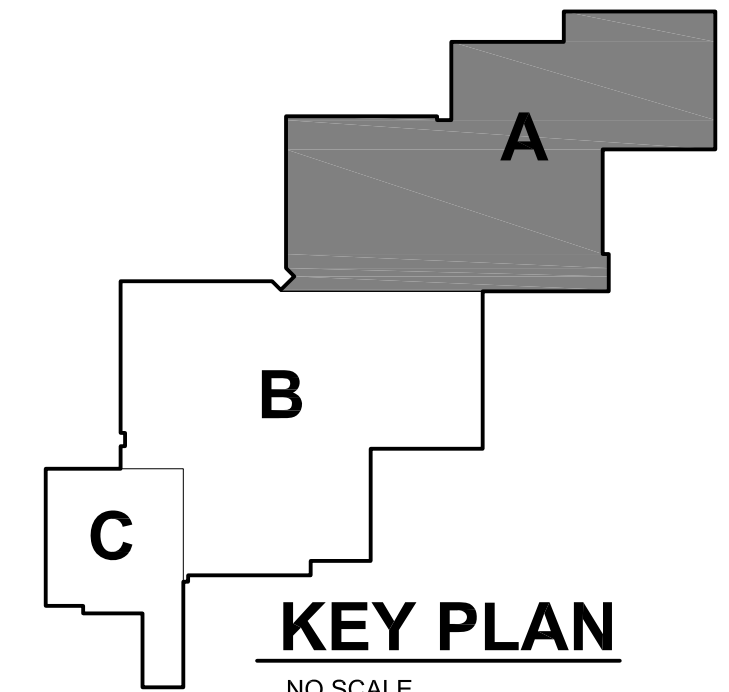


**GENERAL NOTES:**

1. REFER TO E001 FOR ELECTRICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES.

**DRAWING NOTES:**

1. RX. ELECTRICAL CONNECTION TO UNIT HEATER. EXISTING BRANCH CIRCUIT CONDUIT & WIRING SHALL REMAIN FOR RE-CONNECTION IN NEW WORK PHASE.
2. RX. ELECTRICAL CONNECTION & DISCONNECT SWITCH SERVING FAN INCLUSIVE OF ASSOCIATED CONDUIT & WIRING BACK TO SOURCE.
3. RX. LIGHTING FIXTURE. EXISTING CONDUIT & WIRING SHALL REMAIN FOR REUSE IN NEW WORK PHASE.
4. RX. ELECTRICAL CONNECTION & DISCONNECT SWITCH SERVING HEATING & VENTILATING UNIT (AHU) INCLUSIVE OF ASSOCIATED CONDUIT & WIRING BACK TO SOURCE.
5. RX. MCC-25. REFER TO 'POWER RISER DIAGRAM - DEMOLITION' FOR ADDITIONAL INFORMATION.
6. RX. ELECTRICAL CONNECTION & DISCONNECT SWITCH SERVING PUMP INCLUSIVE OF ASSOCIATED CONDUIT & WIRING BACK TO SOURCE.
7. RX. ELECTRICAL CONNECTION TO ELECTRIC BASEBOARD HEATER INCLUSIVE OF ASSOCIATED BRANCH CIRCUIT CONDUIT & WIRING BACK TO SOURCE.
8. THIS PROJECTOR LOCATION IS CURRENTLY NOT PROVIDED WITH 2' x 2' PLATE, BUT INSTALLED ON PIPE STANCHION. CONNECTION TO PROJECTOR MUST BE MODIFIED TO ACCOMMODATE 2' x 2' PLATE INSTALLED PER HCPS STANDARDS. REFER TO GENERAL NOTE #16 & NEW WORK PLANS FOR ADDITIONAL INFORMATION.
9. RX. SWITCHES INDICATED INCLUSIVE OF ASSOCIATED WIRING & CONDUIT NOT CONCEALED WITHIN WALLS. PROVIDE BLANK DEVICE PLATE ON UNUSED OUTLET BOX (QUANTITY OF GANGS TO MATCH BOX).
10. EXISTING KEYSWITCH SERVING UNIT HEATER TO REMAIN.
11. RX. LIGHTING FIXTURE. EXISTING BRANCH CIRCUIT CONDUIT & WIRING SHALL REMAIN FOR REUSE IN NEW WORK PHASE.
12. RX. SWITCHES SERVING MEZZANINE LEVEL LIGHTING. EXISTING OUTLET BOX, CONDUIT & WIRING SHALL REMAIN FOR REUSED.
13. RX. UNUSED PROJECTOR MOUNTING PLATE.
14. RX. LIGHTING FIXTURE. PATCH & FINISH OPENING TO MATCH ADJACENT SURFACES. EXISTING EMERGENCY POWER BRANCH CIRCUIT SHALL BE REWORKED TO SERVE EMERGENCY LIGHTING INDICATED ON NEW WORK PLAN. REFER TO DRAWING E304 FOR MORE INFORMATION.
15. RX. LIGHTING FIXTURE. EXISTING EMERGENCY POWER BRANCH CIRCUIT SHALL BE REWORKED TO SERVE EMERGENCY LIGHTING INDICATED ON NEW WORK PLAN. REFER TO DRAWING E304 FOR MORE INFORMATION.

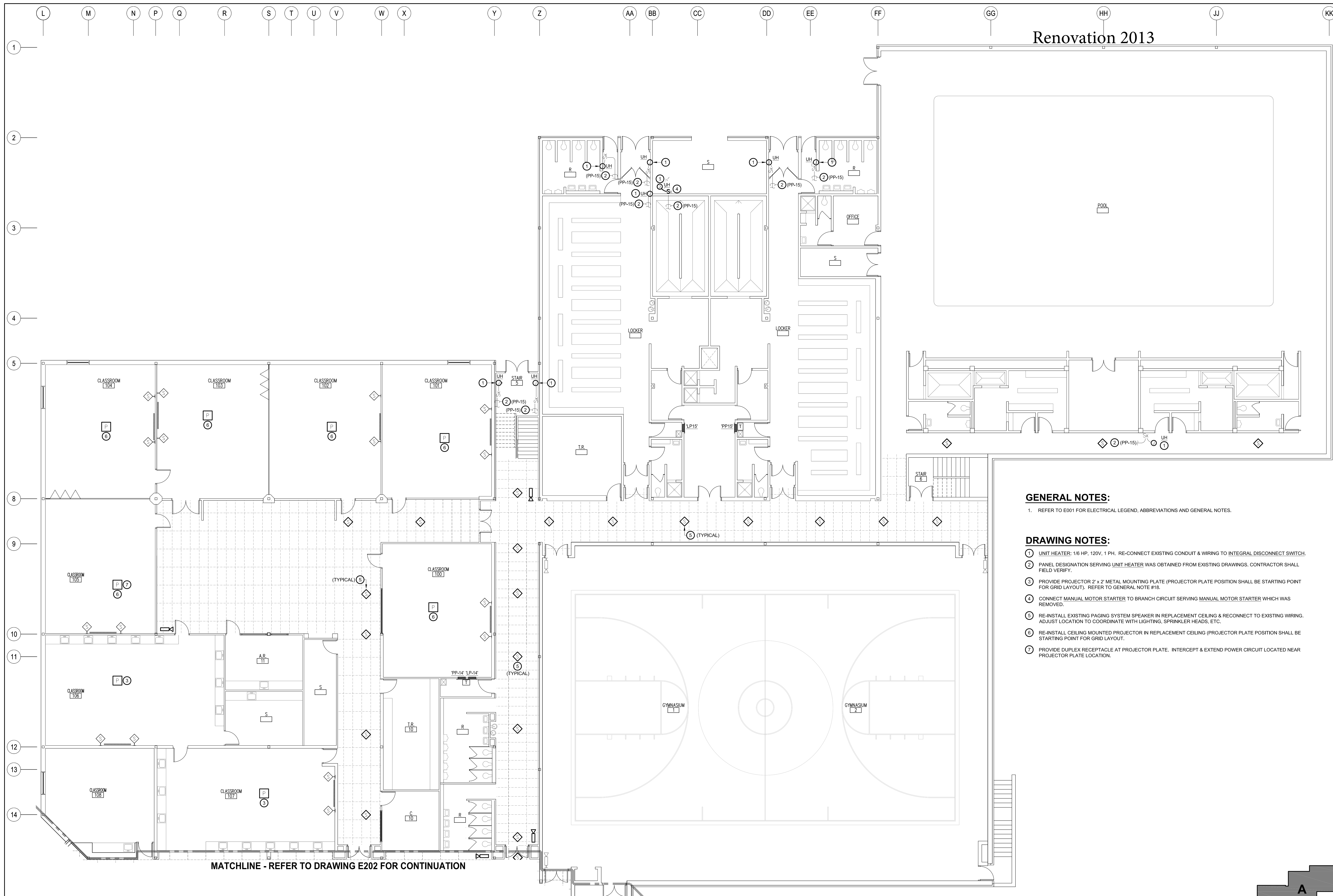


**2 MEZZANINE LEVEL PLAN - ELECTRICAL - DEMOLITION**  
 SCALE: 1/8" = 1'-0"

**1 UPPER LEVEL PLAN 'A' - ELECTRICAL - DEMOLITION**  
 SCALE: 1/8" = 1'-0"

MATCHLINE - REFER TO DRAWING E105 FOR CONTINUATION

11/15/12 10:55 AM - E104 - ELEC'S SUPPORT REMOVING CONDUITS FROM MEZZANINE LEVEL - REFER TO DRAWING E105 FOR CONTINUATION



MATCHLINE - REFER TO DRAWING E202 FOR CONTINUATION

**1 LOWER LEVEL PLAN 'A' - POWER & SPECIAL SYSTEMS - NEW WORK**  
 SCALE: 1/8" = 1'-0"

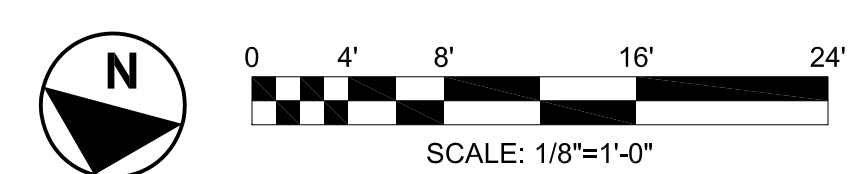
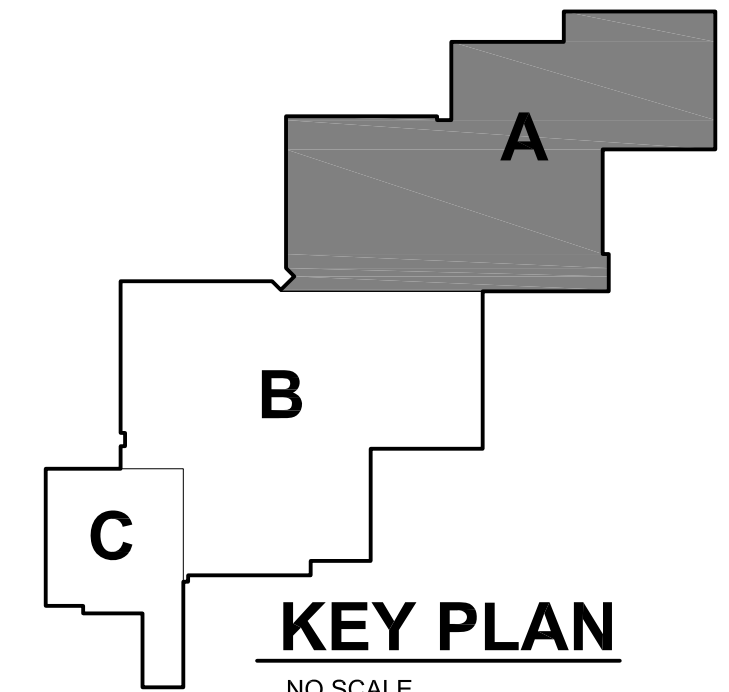
Renovation 2013

**GENERAL NOTES:**

- 1. REFER TO E001 FOR ELECTRICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES.

**DRAWING NOTES:**

- 1 UNIT HEATER: 1/6 HP, 120V, 1 PH. RE-CONNECT EXISTING CONDUIT & WIRING TO INTEGRAL DISCONNECT SWITCH.
- 2 PANEL DESIGNATION SERVING UNIT HEATER WAS OBTAINED FROM EXISTING DRAWINGS. CONTRACTOR SHALL FIELD VERIFY.
- 3 PROVIDE PROJECTOR 2' x 2' METAL MOUNTING PLATE (PROJECTOR PLATE POSITION SHALL BE STARTING POINT FOR GRID LAYOUT). REFER TO GENERAL NOTE #18.
- 4 CONNECT MANUAL MOTOR STARTER TO BRANCH CIRCUIT SERVING MANUAL MOTOR STARTER WHICH WAS REMOVED.
- 5 RE-INSTALL EXISTING PAGING SYSTEM SPEAKER IN REPLACEMENT CEILING & RECONNECT TO EXISTING WIRING. ADJUST LOCATION TO COORDINATE WITH LIGHTING, SPRINKLER HEADS, ETC.
- 6 RE-INSTALL CEILING MOUNTED PROJECTOR IN REPLACEMENT CEILING (PROJECTOR PLATE POSITION SHALL BE STARTING POINT FOR GRID LAYOUT).
- 7 PROVIDE DUPLEX RECEPTACLE AT PROJECTOR PLATE. INTERCEPT & EXTEND POWER CIRCUIT LOCATED NEAR PROJECTOR PLATE LOCATION.



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 www.bkma.com

PROJECT NAME:

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 JOPPA, MARYLAND 21085

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01/31/13	100% IAC SUBMISSION
02/28/13	CONSTRUCTION DOCUMENTS

PROJECT NO: -

SCALE: AS NOTED

DRAWN BY: MB

CHECKED BY: LSF / RAM

DATE: 02/28/2013

SHEET TITLE:

**LOWER LEVEL PLAN 'A' POWER & SPECIAL SYSTEMS - NEW WORK**

DRAWING NO:

**E201**

BKM# 120520.010

PROJECT NAME:

**Harford County Public Schools**



HVAC RENOVATIONS  
 MAGNOLIA MIDDLE SCHOOL

299 FORT HOYLE ROAD  
 JOPPA, MARYLAND 21085

SEAL:

PROFESSIONAL CERTIFICATION:

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 20513 EXPIRATION DATE: 07/17/14

ISSUED FOR:

DATE	DESCRIPTION
11/02/12	DD SUBMISSION
12/14/12	50% SUBMISSION
01/31/13	100% IAC SUBMISSION
02/28/13	CONSTRUCTION DOCUMENTS

PROJECT NO: -

SCALE: AS NOTED

DRAWN BY: MB

CHECKED BY: LSF / RAM

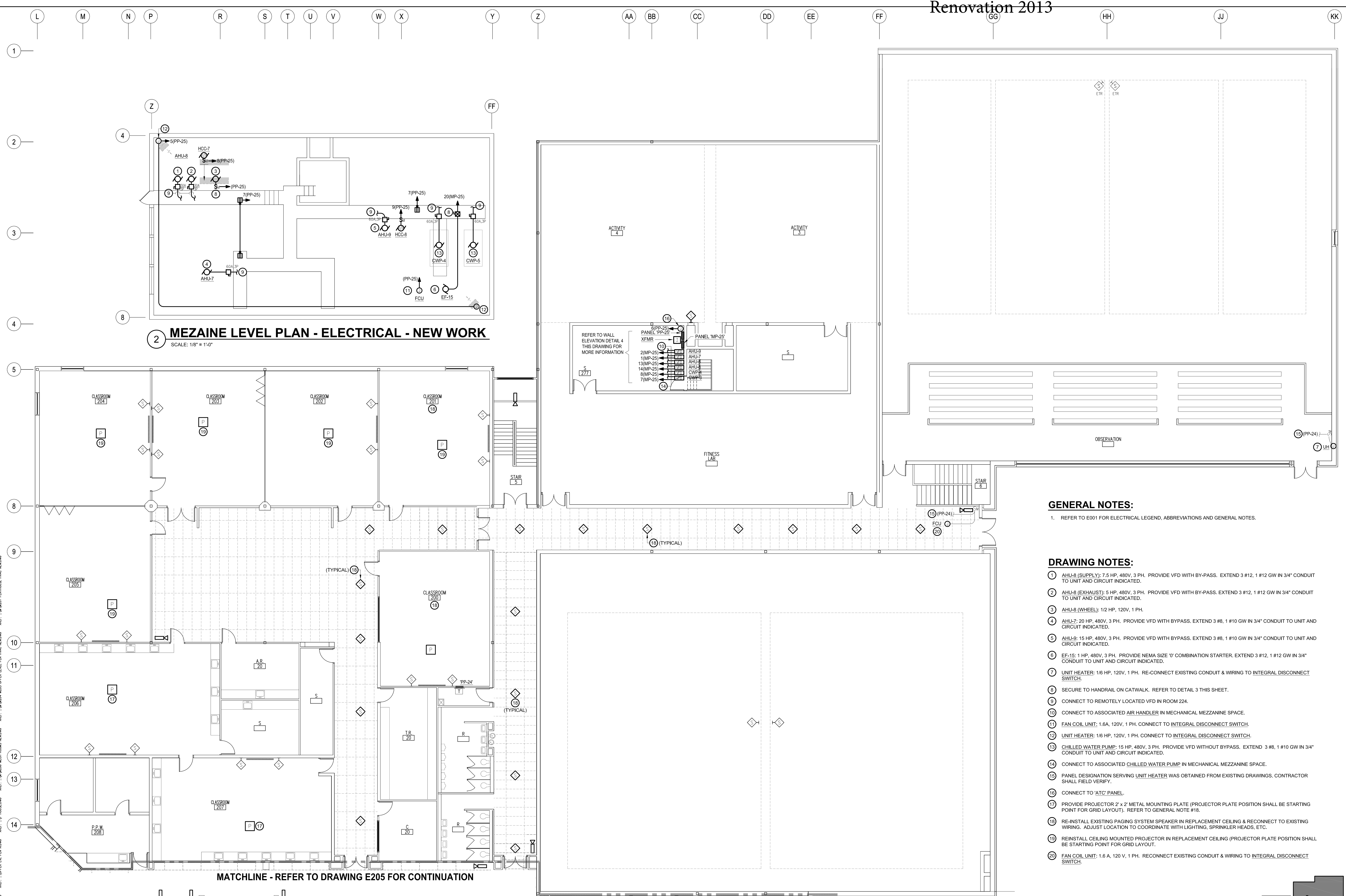
DATE: 02/28/2013

SHEET TITLE:

**UPPER LEVEL PLAN 'A' POWER & SPECIAL SYSTEMS - NEW WORK**

DRAWING NO:

**E204**



**2 MEZANINE LEVEL PLAN - ELECTRICAL - NEW WORK**  
 SCALE: 1/8" = 1'-0"

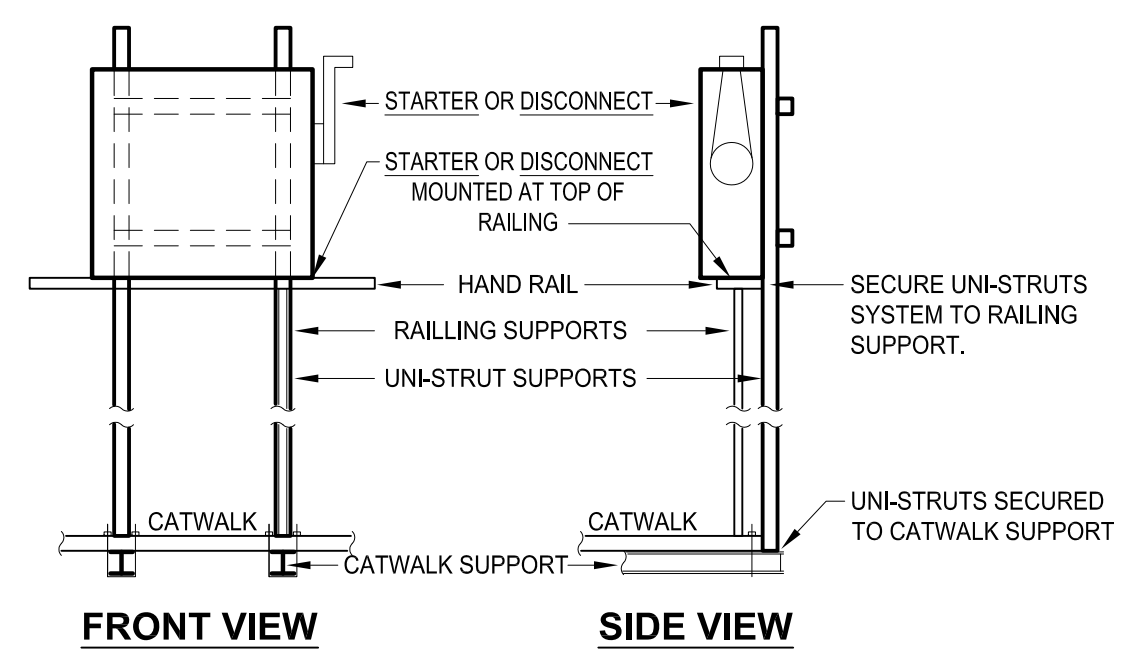
**1 UPPER LEVEL PLAN 'A' - POWER & SPECIAL SYSTEMS - NEW WORK**  
 SCALE: 1/8" = 1'-0"

**GENERAL NOTES:**

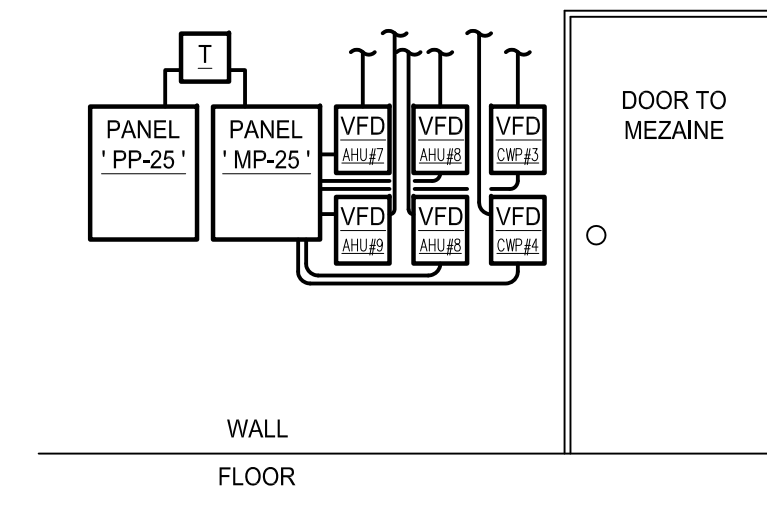
- REFER TO E001 FOR ELECTRICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES.

**DRAWING NOTES:**

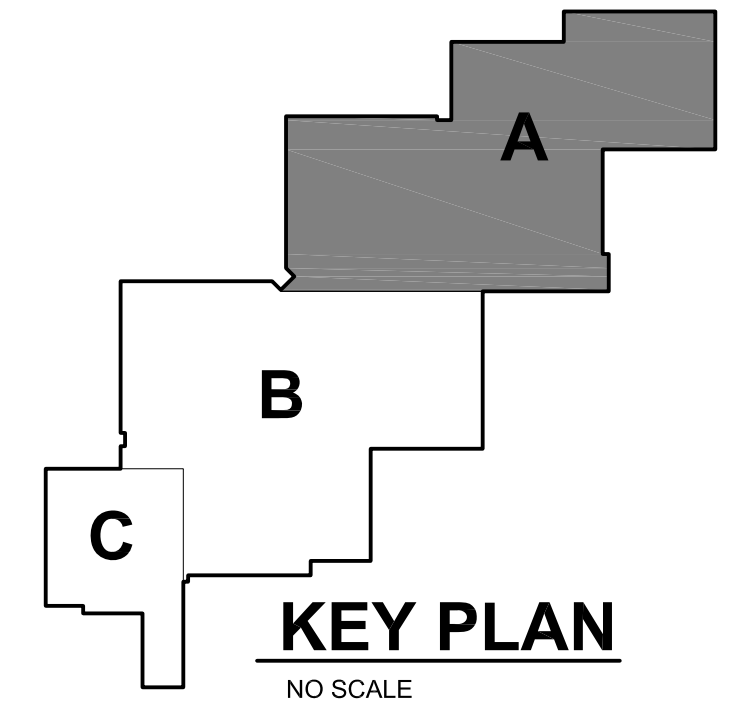
- AHU-8 (SUPPLY): 7.5 HP, 480V, 3 PH. PROVIDE VFD WITH BY-PASS. EXTEND 3 #12, 1 #12 GW IN 3/4" CONDUIT TO UNIT AND CIRCUIT INDICATED.
- AHU-8 (EXHAUST): 5 HP, 480V, 3 PH. PROVIDE VFD WITH BY-PASS. EXTEND 3 #12, 1 #12 GW IN 3/4" CONDUIT TO UNIT AND CIRCUIT INDICATED.
- AHU-8 (WHEEL): 1/2 HP, 120V, 1 PH.
- AHU-7: 20 HP, 480V, 3 PH. PROVIDE VFD WITH BY-PASS. EXTEND 3 #8, 1 #10 GW IN 3/4" CONDUIT TO UNIT AND CIRCUIT INDICATED.
- AHU-9: 15 HP, 480V, 3 PH. PROVIDE VFD WITH BY-PASS. EXTEND 3 #8, 1 #10 GW IN 3/4" CONDUIT TO UNIT AND CIRCUIT INDICATED.
- EF-15: 1 HP, 480V, 3 PH. PROVIDE NEMA SIZE 1" COMBINATION STARTER. EXTEND 3 #12, 1 #12 GW IN 3/4" CONDUIT TO UNIT AND CIRCUIT INDICATED.
- UNIT HEATER: 1/6 HP, 120V, 1 PH. RE-CONNECT EXISTING CONDUIT & WIRING TO INTEGRAL DISCONNECT SWITCH.
- SECURE TO HANDRAIL ON CATWALK. REFER TO DETAIL 3 THIS SHEET.
- CONNECT TO REMOTELY LOCATED VFD IN ROOM 224.
- CONNECT TO ASSOCIATED AIR HANDLER IN MECHANICAL MEZZANINE SPACE.
- FAN COIL UNIT: 1.6A, 120V, 1 PH. CONNECT TO INTEGRAL DISCONNECT SWITCH.
- UNIT HEATER: 1/6 HP, 120V, 1 PH. CONNECT TO INTEGRAL DISCONNECT SWITCH.
- CHILLED WATER PUMP: 15 HP, 480V, 3 PH. PROVIDE VFD WITHOUT BY-PASS. EXTEND 3 #8, 1 #10 GW IN 3/4" CONDUIT TO UNIT AND CIRCUIT INDICATED.
- CONNECT TO ASSOCIATED CHILLED WATER PUMP IN MECHANICAL MEZZANINE SPACE.
- PANEL DESIGNATION SERVING UNIT HEATER WAS OBTAINED FROM EXISTING DRAWINGS, CONTRACTOR SHALL VERIFY.
- CONNECT TO 'ATC' PANEL.
- PROVIDE PROJECTOR 2' x 2' METAL MOUNTING PLATE (PROJECTOR PLATE POSITION SHALL BE STARTING POINT FOR GRID LAYOUT). REFER TO GENERAL NOTE #18.
- RE-INSTALL EXISTING PAGING SYSTEM SPEAKER IN REPLACEMENT CEILING & RECONNECT TO EXISTING WIRING. ADJUST LOCATION TO COORDINATE WITH LIGHTING, SPRINKLER HEADS, ETC.
- REINSTALL CEILING MOUNTED PROJECTOR IN REPLACEMENT CEILING (PROJECTOR PLATE POSITION SHALL BE STARTING POINT FOR GRID LAYOUT).
- FAN COIL UNIT: 1.6 A, 120 V, 1 PH. RECONNECT EXISTING CONDUIT & WIRING TO INTEGRAL DISCONNECT SWITCH.



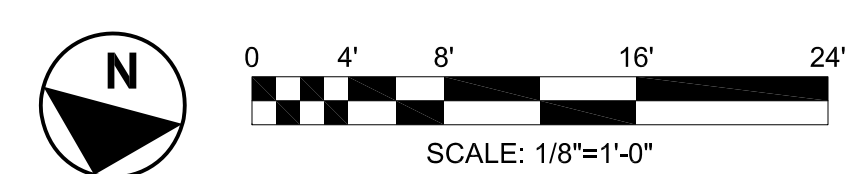
**3 DISCONNECT & STARTER MOUNTING DETAILS**  
 SCALE: NONE



**4 WALL ELEVATION**  
 SCALE: NONE



**KEY PLAN**  
 NO SCALE



PROJECT NAME:

**Harford County  
Public Schools**



HVAC RENOVATIONS  
MAGNOLIA MIDDLE SCHOOL

299 FORT HOYLE ROAD  
JOPPA, MARYLAND 21085

SEAL:

PROFESSIONAL CERTIFICATION:

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02/28/13	CONSTRUCTION DOCUMENTS

PROJECT NO. -

SCALE: AS NOTED

DRAWN BY: MB

CHECKED BY: LSF / RAM

DATE: 02/28/2013

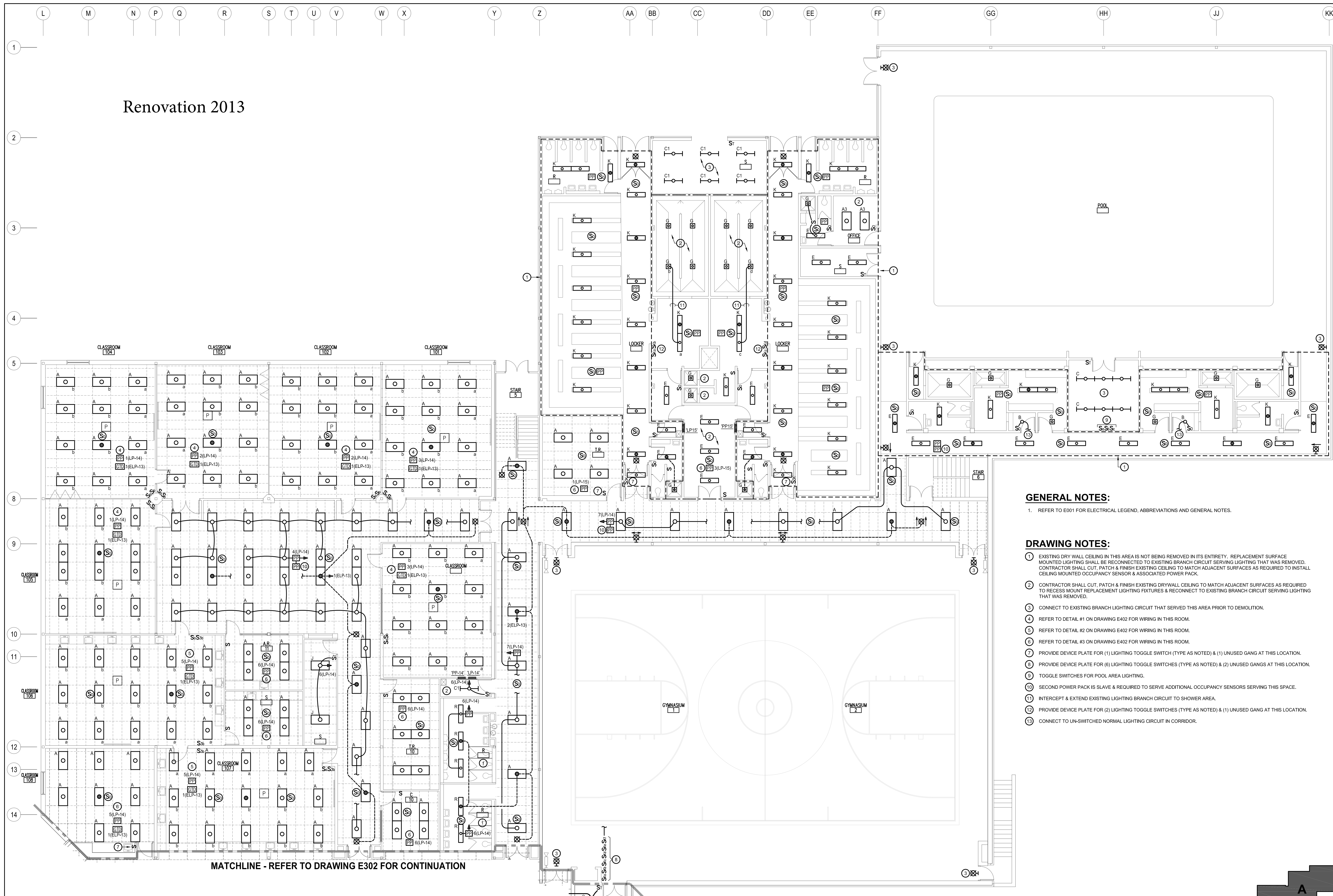
SHEET TITLE:  
**LOWER LEVEL PLAN 'A'  
LIGHTING - NEW WORK**

DRAWING NO:

**E301**

BKM# 120520.010

# Renovation 2013



### GENERAL NOTES:

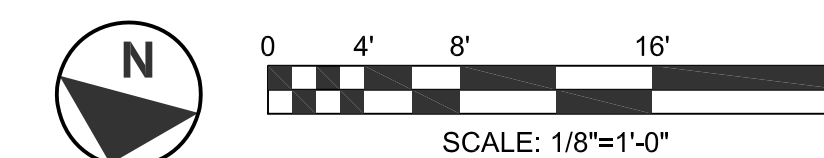
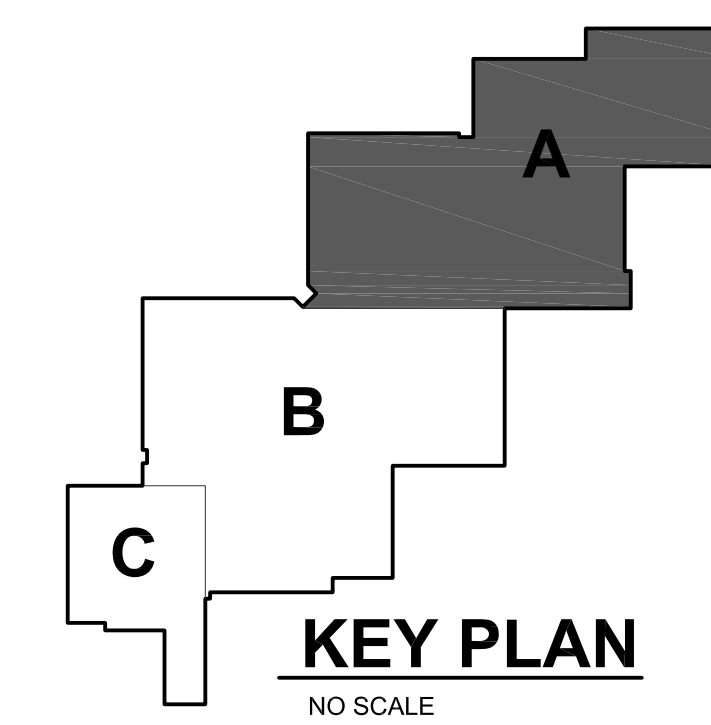
- REFER TO E001 FOR ELECTRICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES.

### DRAWING NOTES:

- EXISTING DRY WALL CEILING IN THIS AREA IS NOT BEING REMOVED IN ITS ENTIRETY. REPLACEMENT SURFACE MOUNTED LIGHTING SHALL BE RECONNECTED TO EXISTING BRANCH CIRCUIT SERVING LIGHTING THAT WAS REMOVED. CONTRACTOR SHALL CUT, PATCH & FINISH EXISTING CEILING TO MATCH ADJACENT SURFACES AS REQUIRED TO INSTALL CEILING MOUNTED OCCUPANCY SENSOR & ASSOCIATED POWER PACK.
- CONTRACTOR SHALL CUT, PATCH & FINISH EXISTING DRYWALL CEILING TO MATCH ADJACENT SURFACES AS REQUIRED TO RECESS MOUNT REPLACEMENT LIGHTING FIXTURES & RECONNECT TO EXISTING BRANCH CIRCUIT SERVING LIGHTING THAT WAS REMOVED.
- CONNECT TO EXISTING BRANCH LIGHTING CIRCUIT THAT SERVED THIS AREA PRIOR TO DEMOLITION.
- REFER TO DETAIL #1 ON DRAWING E402 FOR WIRING IN THIS ROOM.
- REFER TO DETAIL #2 ON DRAWING E402 FOR WIRING IN THIS ROOM.
- REFER TO DETAIL #3 ON DRAWING E402 FOR WIRING IN THIS ROOM.
- PROVIDE DEVICE PLATE FOR (1) LIGHTING TOGGLE SWITCH (TYPE AS NOTED) & (1) UNUSED GANG AT THIS LOCATION.
- PROVIDE DEVICE PLATE FOR (6) LIGHTING TOGGLE SWITCHES (TYPE AS NOTED) & (2) UNUSED GANGS AT THIS LOCATION.
- TOGGLE SWITCHES FOR POOL AREA LIGHTING.
- SECOND POWER PACK IS SLAVE & REQUIRED TO SERVE ADDITIONAL OCCUPANCY SENSORS SERVING THIS SPACE.
- INTERCEPT & EXTEND EXISTING LIGHTING BRANCH CIRCUIT TO SHOWER AREA.
- PROVIDE DEVICE PLATE FOR (2) LIGHTING TOGGLE SWITCHES (TYPE AS NOTED) & (1) UNUSED GANG AT THIS LOCATION.
- CONNECT TO UN-SWITCHED NORMAL LIGHTING CIRCUIT IN CORRIDOR.

MATCHLINE - REFER TO DRAWING E302 FOR CONTINUATION

**1 LOWER LEVEL PLAN 'A' - LIGHTING - NEW WORK**  
SCALE: 1/8" = 1'-0"



PROJECT NAME:

**Harford County  
Public Schools**



HVAC RENOVATIONS  
MAGNOLIA MIDDLE SCHOOL

299 FORT HOYLE ROAD  
JOPPA, MARYLAND 21085

SEAL:

PROFESSIONAL CERTIFICATION:

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ISSUED FOR:

DATE	DESCRIPTION
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01/31/13	100% IAC SUBMISSION
02/28/13	CONSTRUCTION DOCUMENTS

PROJECT NO.:

SCALE: AS NOTED

DRAWN BY: MB

CHECKED BY: LSF / RAM

DATE: 02/28/2013

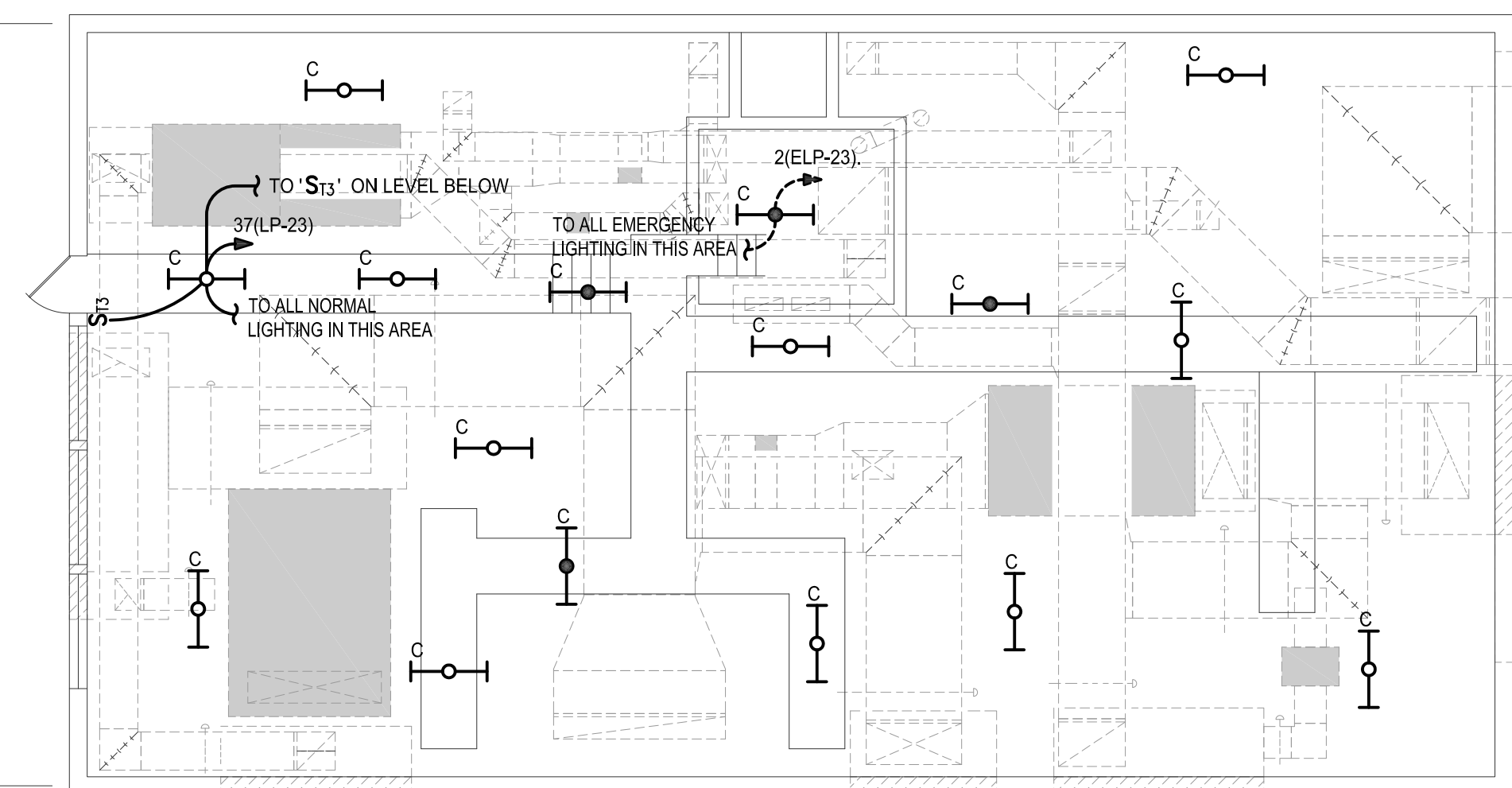
SHEET TITLE:  
**UPPER LEVEL PLAN 'A'  
LIGHTING - NEW WORK**

DRAWING NO:

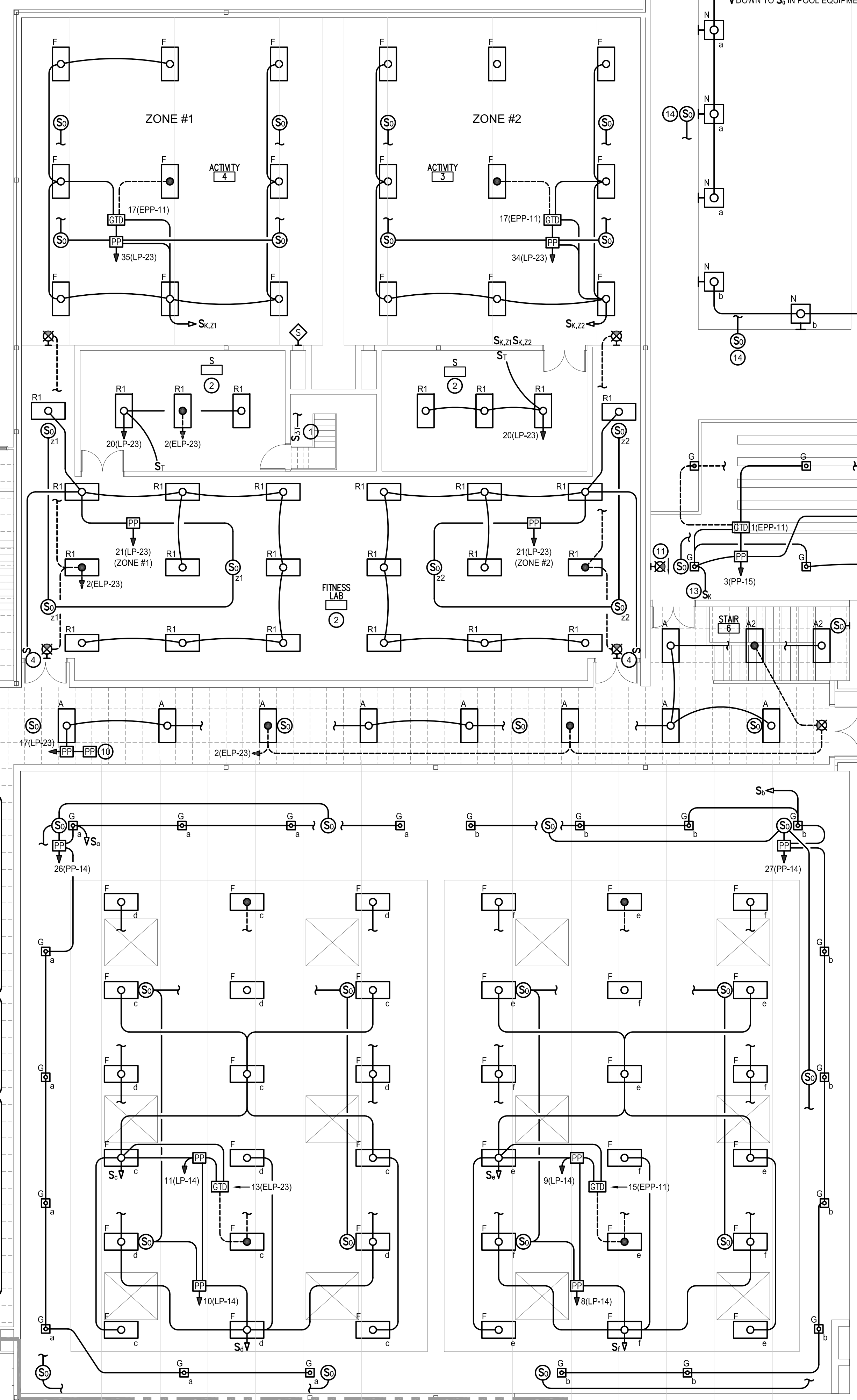
**E304**

BKM# 120520.010

**Renovation 2013**



**2 MEZANINE LEVEL PLAN - LIGHTING - NEW WORK**  
SCALE: 1/8" = 1'-0"



**1 UPPER LEVEL PLAN - LIGHTING - NEW WORK**  
SCALE: 1/8" = 1'-0"

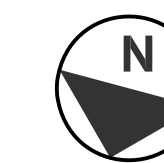
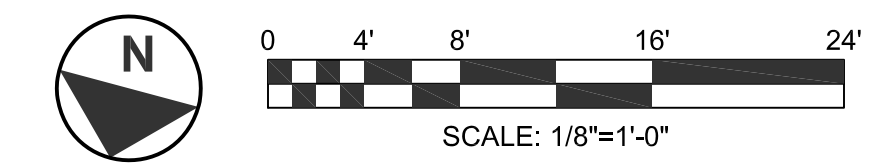
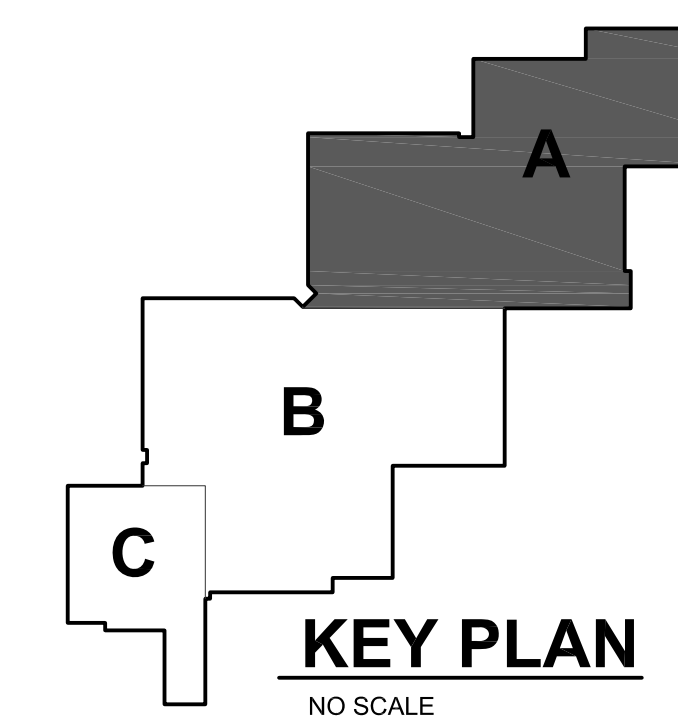
**GENERAL NOTES:**

- REFER TO E001 FOR ELECTRICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES.

**DRAWING NOTES:**

- SWITCH SHALL CONTROL ALL MEZZANINE AREA LIGHTING.
- EXISTING DRY WALL CEILING IN THIS AREA IS NOT BEING REMOVED IN ITS ENTIRETY. REPLACEMENT SURFACE MOUNTED LIGHTING SHALL BE RECONNECTED TO EXISTING BRANCH CIRCUIT SERVING LIGHTING THAT WAS REMOVED. CONTRACTOR SHALL CUT, PATCH & FINISH EXISTING CEILING TO MATCH ADJACENT SURFACES AS REQUIRED TO INSTALL CEILING MOUNTED OCCUPANCY SENSOR & ASSOCIATED POWER PACK.
- CONTRACTOR SHALL CUT, PATCH & FINISH EXISTING DRYWALL CEILING TO MATCH ADJACENT SURFACES AS REQUIRED TO RECESS MOUNT REPLACEMENT LIGHTING FIXTURES & RECONNECT TO EXISTING BRANCH CIRCUIT SERVING LIGHTING THAT WAS REMOVED.
- PROVIDE DEVICE PLATE FOR (1) LIGHTING TOGGLE SWITCH (TYPE AS NOTED) & (1) UNUSED GANG AT THIS LOCATION.
- REFER TO DETAIL #1 ON DRAWING E402 FOR WIRING IN THIS ROOM.
- REFER TO DETAIL #2 ON DRAWING E402 FOR WIRING IN THIS ROOM.
- REFER TO DETAIL #3 ON DRAWING E402 FOR WIRING IN THIS ROOM.
- REFER TO DETAIL #4 ON DRAWING E402 FOR WIRING IN THIS ROOM.
- REFER TO DETAIL #5 ON DRAWING E402 FOR WIRING IN THIS ROOM.
- SECOND POWER PACK IS SLAVE & REQUIRED TO SERVE ADDITIONAL OCCUPANCY SENSOR SERVING THIS SPACE.
- CONNECT REPLACEMENT LIGHTING TO EXISTING LIGHTING BRANCH CIRCUIT WHICH SERVED LIGHTING THAT WAS REMOVED DURING DEMOLITION PHASE.
- CONNECT EXTERIOR LIGHTING TO CIRCUIT INDICATED THRU REMOTE PHOTOCELL. EXTEND CIRCUIT THRU PHOTOCELL AS MANUFACTURED BY TORQ SERIES #2100 OR APPROVED EQUAL. LOCATE PHOTOCELL TO PROVIDE MAXIMUM EXPOSURE TO NATURAL LIGHT & MINIMAL EXPOSURE TO ARTIFICIAL LIGHT. COORDINATE FINAL LOCATION WITH OWNER & ARCHITECT.
- PROVIDE DEVICE PLATE FOR (1) LIGHTING TOGGLE SWITCH (TYPE AS NOTED) & (1) UNUSED GANG AT THIS LOCATION.
- WATTSTOPPER OCCUPANCY SENSOR MODEL HB300W-HBL3W
- WATTSTOPPER OCCUPANCY SENSOR MODEL HB300W-HBL4W

MATCHLINE - REFER TO DRAWING E305 FOR CONTINUATION



PROFESSIONAL CERTIFICATION:  
I, THE UNDERSIGNED, BEING A LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND I AM A MEMBER OF THE PROFESSIONAL ENGINEERS SOCIETY OF MARYLAND.  
EXPIRATION DATE: 07/27/14

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02/28/13	CONSTRUCTION DOCUMENTS

PROJECT NO.:

SCALE: **AS NOTED**

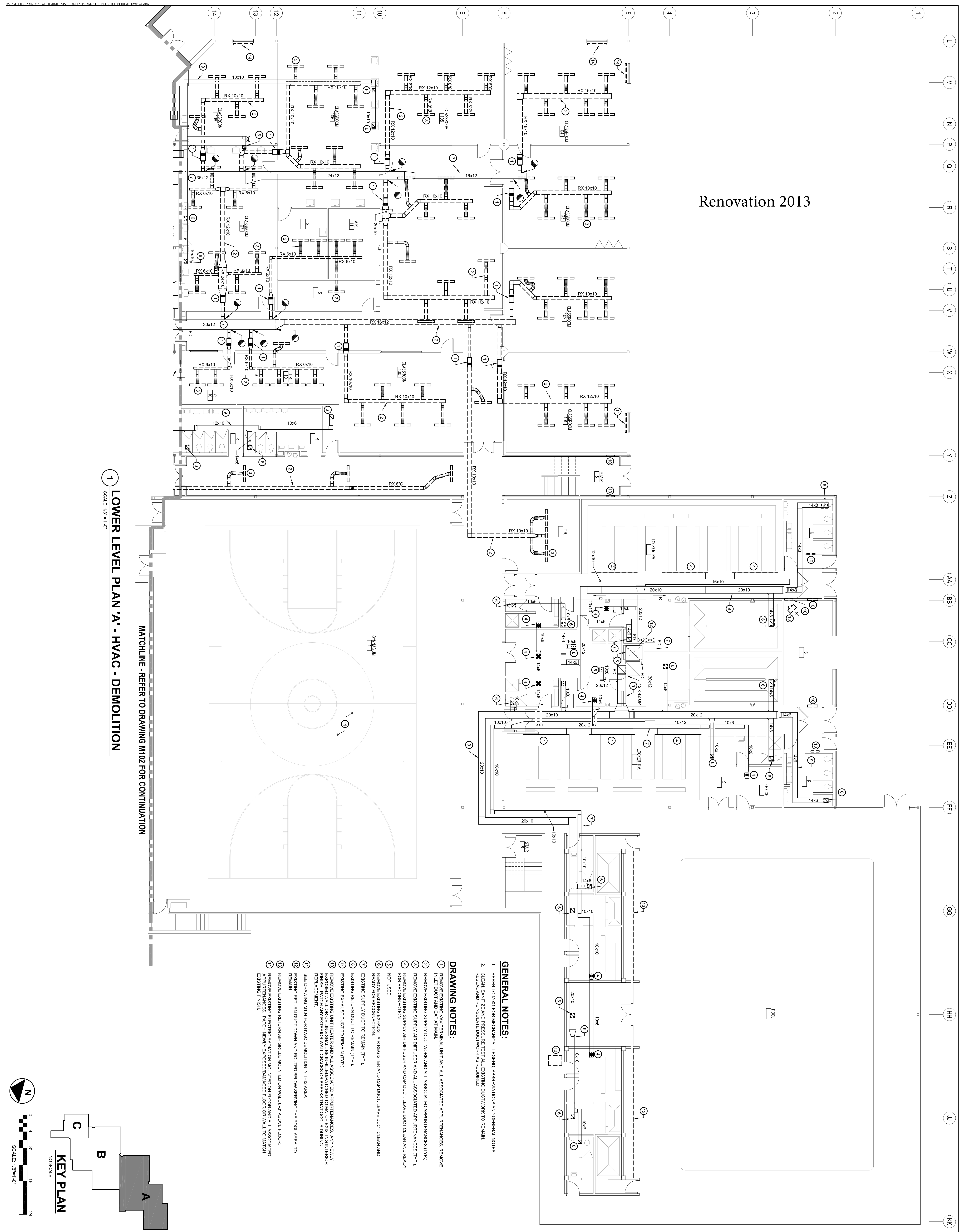
DRAWN BY: **MDS**

CHECKED BY: **ACE**

DATE: **02/28/2013**

SHEET TITLE:  
**LOWER LEVEL PLAN 'A' -  
HVAC  
DEMOLITION**

DRAWING NO.:  
**M101**



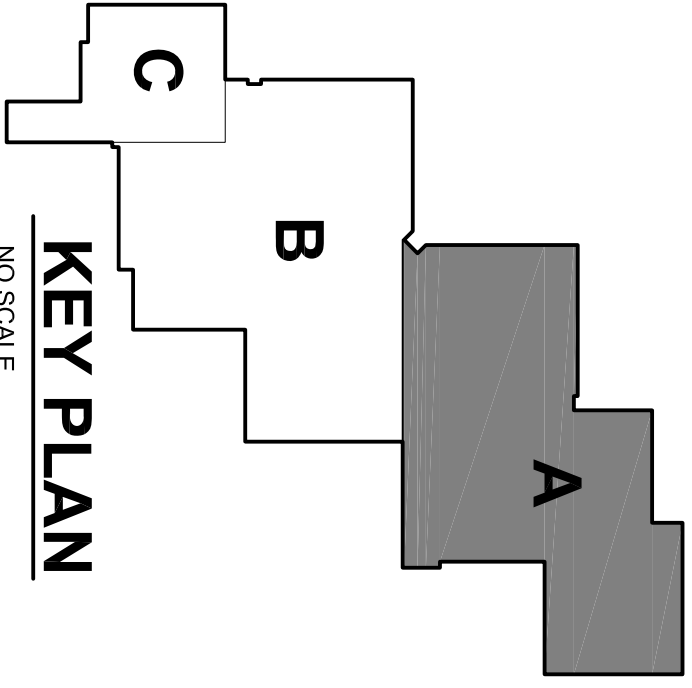
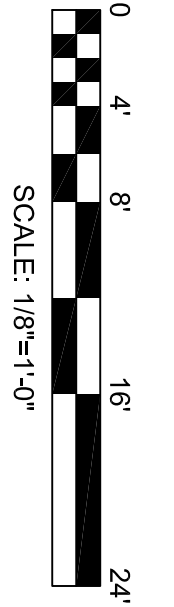
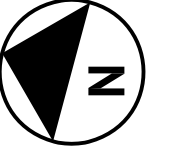
Renovation 2013

**1 LOWER LEVEL PLAN 'A' - HVAC - DEMOLITION**  
SCALE: 1/8" = 1'-0"

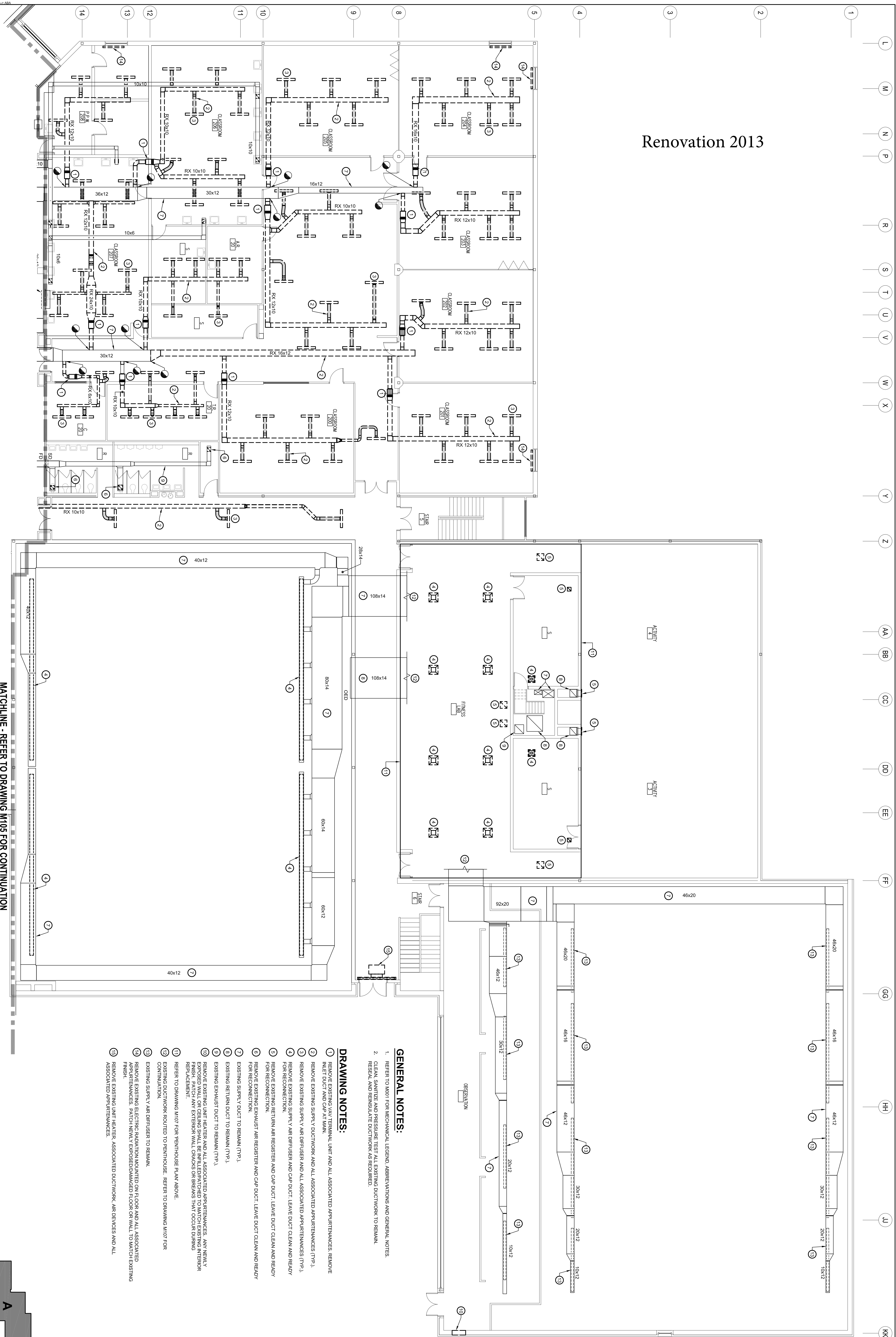
MATCHLINE - REFER TO DRAWING M102 FOR CONTINUATION

- GENERAL NOTES:**
- REFER TO M001 FOR MECHANICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
  - CLEAN, SANITIZE AND PRESSURE TEST ALL EXISTING DUCTWORK TO REMAIN. RESEAL AND REINSULATE DUCTWORK AS REQUIRED.

- DRAWING NOTES:**
- REMOVE EXISTING VAV TERMINAL UNIT AND ALL ASSOCIATED APPURTENANCES. REMOVE INLET DUCT AND CAP AT MAIN.
  - REMOVE EXISTING SUPPLY DUCTWORK AND ALL ASSOCIATED APPURTENANCES (TYP.).
  - REMOVE EXISTING SUPPLY AIR DIFFUSER AND ALL ASSOCIATED APPURTENANCES (TYP.).
  - REMOVE EXISTING SUPPLY AIR DIFFUSER AND CAP DUCT. LEAVE DUCT CLEAN AND READY FOR RECONNECTION.
  - NOT USED.
  - REMOVE EXISTING EXHAUST AIR REGISTER AND CAP DUCT. LEAVE DUCT CLEAN AND READY FOR RECONNECTION.
  - EXISTING SUPPLY DUCT TO REMAIN (TYP.).
  - EXISTING RETURN DUCT TO REMAIN (TYP.).
  - EXISTING RETURN DUCT TO REMAIN (TYP.).
  - REMOVE EXISTING UNIT HEATER AND ALL ASSOCIATED APPURTENANCES. ANY NEW FINISH WALL OR CEILING SHALL BE INFILLED/PATCHED TO MATCH EXISTING INTERIOR REPLACEMENT.
  - SEE DRAWING M104 FOR HVAC DEMOLITION IN THIS AREA.
  - EXISTING RETURN DUCT DOWN AND ROUTED BELOW SERVING THE POOL AREA. TO REMAIN.
  - REMOVE EXISTING RETURN AIR GRILLE MOUNTED ON WALL 6'-0" ABOVE FLOOR.
  - REMOVE EXISTING RETURN AIR GRILLE MOUNTED ON FLOOR AND ALL ASSOCIATED EXISTING FINISH.



# Renovation 2013

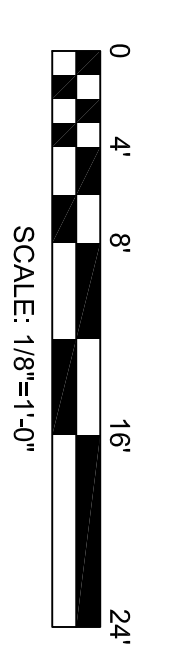
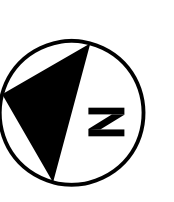
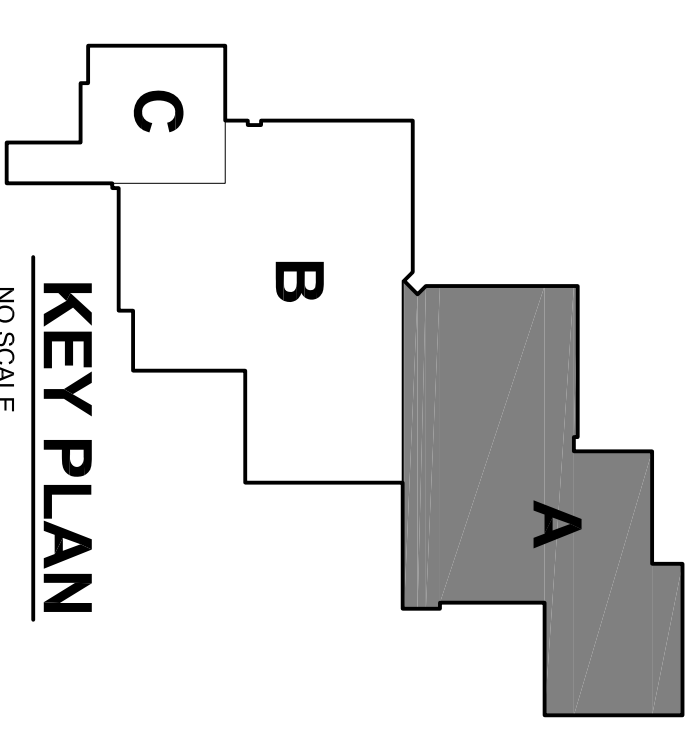


**1 UPPER LEVEL PLAN 'A' - HVAC - DEMOLITION**  
SCALE: 1/8" = 1'-0"

MATCHLINE - REFER TO DRAWING M105 FOR CONTINUATION

- GENERAL NOTES:**
1. REFER TO M101 FOR MECHANICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
  2. CLEAN, SANITIZE AND PRESSURE TEST ALL EXISTING DUCTWORK TO REMAIN. RESEAL AND REINSULATE DUCTWORK AS REQUIRED.

- DRAWING NOTES:**
- 1 REMOVE EXISTING VAV TERMINAL UNIT AND ALL ASSOCIATED APPURTENANCES. REMOVE INLET DUCT AND CAP AT MAIN.
  - 2 REMOVE EXISTING SUPPLY DUCTWORK AND ALL ASSOCIATED APPURTENANCES (TYP.).
  - 3 REMOVE EXISTING SUPPLY AIR DIFFUSER AND ALL ASSOCIATED APPURTENANCES (TYP.).
  - 4 REMOVE EXISTING SUPPLY AIR DIFFUSER AND CAP DUCT. LEAVE DUCT CLEAN AND READY FOR RECONNECTION.
  - 5 REMOVE EXISTING RETURN AIR REGISTER AND CAP DUCT. LEAVE DUCT CLEAN AND READY FOR RECONNECTION.
  - 6 REMOVE EXISTING EXHAUST AIR REGISTER AND CAP DUCT. LEAVE DUCT CLEAN AND READY FOR RECONNECTION.
  - 7 EXISTING SUPPLY DUCT TO REMAIN (TYP.).
  - 8 EXISTING RETURN DUCT TO REMAIN (TYP.).
  - 9 EXISTING EXHAUST DUCT TO REMAIN (TYP.).
  - 10 REMOVE EXISTING UNIT HEATER AND ALL ASSOCIATED APPURTENANCES. ANY NEWLY EXPOSED WALL OR CEILING SHALL BE INFILLED/PATCHED TO MATCH EXISTING INTERIOR FINISH. REFER TO DRAWING M105 FOR PENTHOUSE PLAN ABOVE.
  - 11 REFER TO DRAWING M105 FOR PENTHOUSE PLAN ABOVE.
  - 12 EXISTING DUCTWORK ROUTED TO PENTHOUSE. REFER TO DRAWING M105 FOR CONTINUATION.
  - 13 EXISTING SUPPLY AIR DIFFUSER TO REMAIN.
  - 14 REMOVE EXISTING ELECTRIC RADIATION MOUNTED ON FLOOR AND ALL ASSOCIATED APPURTENANCES. PATCH NEWLY EXPOSED/DAMAGED FLOOR OR WALL TO MATCH EXISTING FINISH.
  - 15 REMOVE EXISTING UNIT HEATER, ASSOCIATED DUCTWORK, AIR DEVICES AND ALL ASSOCIATED APPURTENANCES.



PROJECT NAME: \_\_\_\_\_

ISSUED FOR: \_\_\_\_\_

DATE	DESCRIPTION
11/02/12	DD SUBMISSION
12/14/12	50% SUBMISSION
01/31/13	100% IAC SUBMISSION
02/28/13	CONSTRUCTION DOCUMENTS

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I, THE UNDERSIGNED, A LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND I AM A MEMBER IN GOOD STANDING UNDER THE LAWS OF THE STATE OF MARYLAND.  
EXPIRATION DATE: 07/27/14

DRAWN BY:	MDS
CHECKED BY:	ACE
DATE:	02/28/2013
SHEET TITLE:	UPPER LEVEL PLAN 'A' HVAC DEMOLITION
DRAWING NO.:	<b>M104</b>

PROJECT NO.: -  
SCALE: AS NOTED

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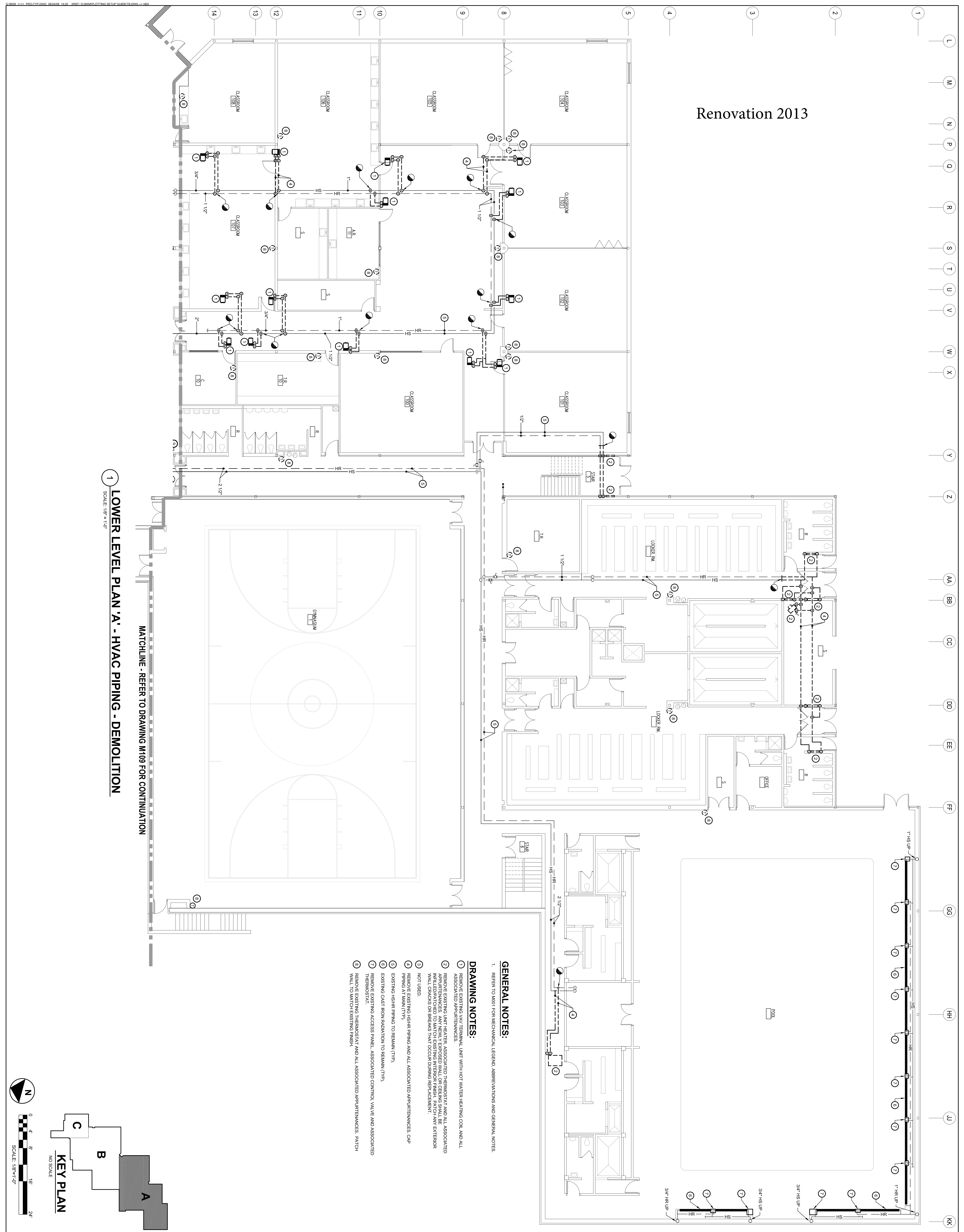
CHECKED BY: MDS  
DATE: 02/28/2013

DRAWN BY: SY  
SCALE: AS NOTED

PROJECT NO.: -  
SHEET TITLE: LOWER LEVEL PLAN 'A' - HVAC PIPING DEMOLITION

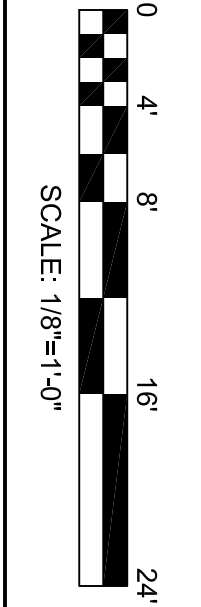
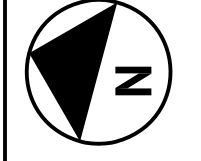
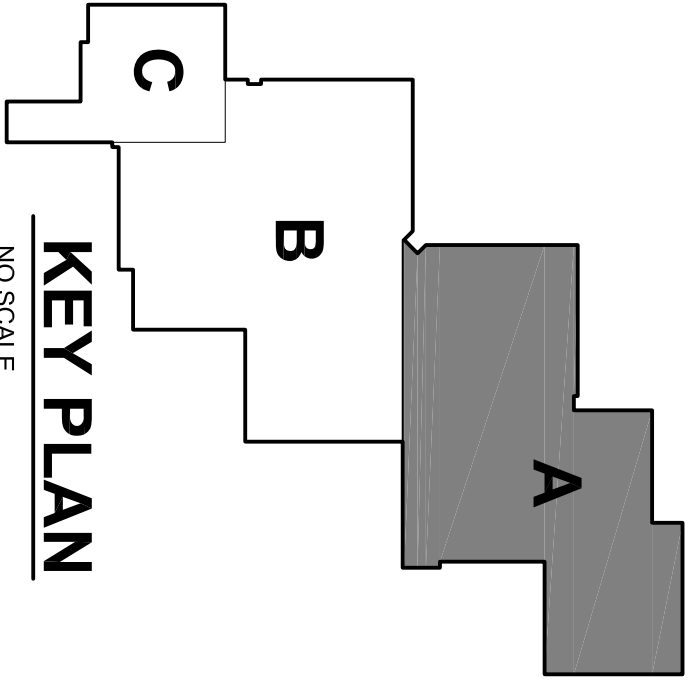
DRAWING NO. **M108**

BKM# 20520.010



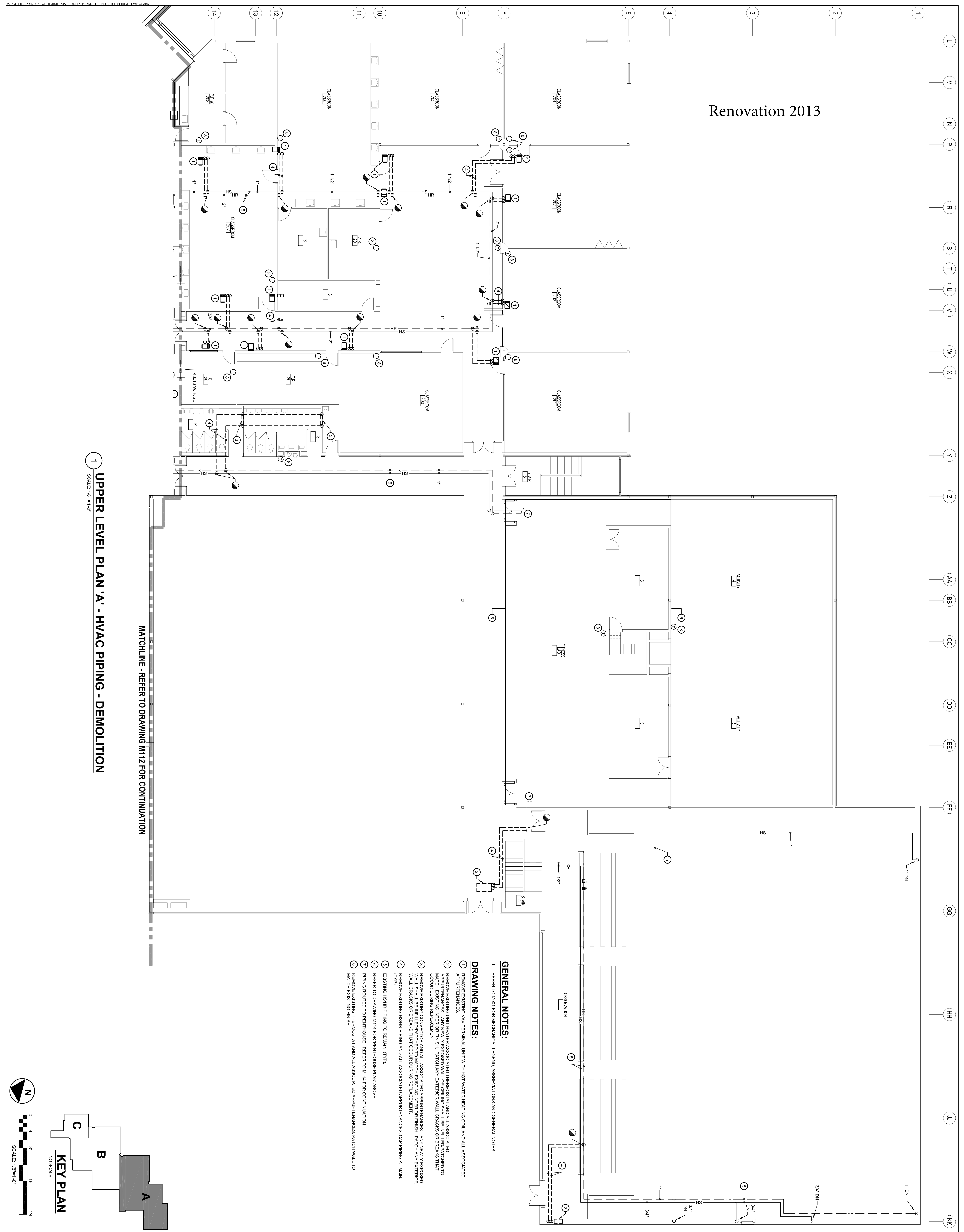
Renovation 2013

**1 LOWER LEVEL PLAN 'A' - HVAC PIPING - DEMOLITION**  
SCALE: 1/8" = 1'-0"





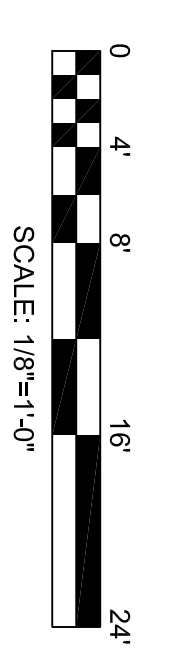
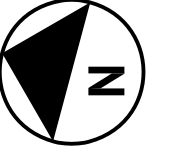
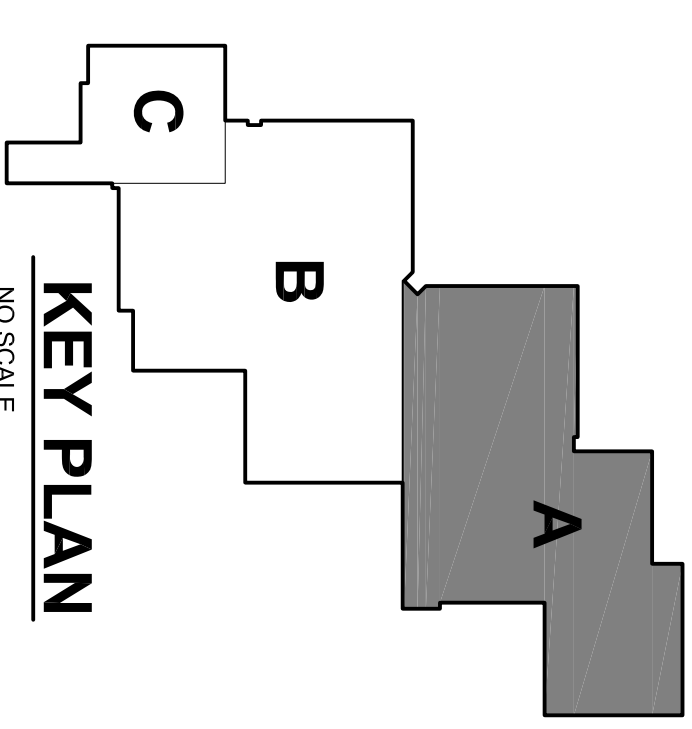
# Renovation 2013



**1 UPPER LEVEL PLAN 'A' - HVAC PIPING - DEMOLITION**  
SCALE: 1/8" = 1'-0"

MATCHLINE - REFER TO DRAWING M112 FOR CONTINUATION

- GENERAL NOTES:**  
1. REFER TO M001 FOR MECHANICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
- DRAWING NOTES:**
- REMOVE EXISTING VAV TERMINAL UNIT WITH HOT WATER HEATING COIL AND ALL ASSOCIATED APPURTENANCES.
  - REMOVE EXISTING UNIT HEATER ASSOCIATED THERMOSTAT AND ALL ASSOCIATED APPURTENANCES. ANY NEWLY EXPOSED WALL OR CEILING SHALL BE INFLU PATCHED TO OCCUR DURING REPAIR/REPLACEMENT.
  - REMOVE EXISTING CONNECTORS AND ALL ASSOCIATED APPURTENANCES. ANY NEWLY EXPOSED WALL SHALL BE INFLU PATCHED TO MATCH EXISTING INTERIOR FINISH. PATCH ANY EXTERIOR WALL CRACKS OR BREAKS THAT OCCUR DURING REPAIR/REPLACEMENT.
  - REMOVE EXISTING HIGH-PRESSURE PIPING AND ALL ASSOCIATED APPURTENANCES, CAP PIPING AT W/M (TYP).
  - EXISTING HIGH-PRESSURE PIPING TO REMAIN (TYP).
  - REFER TO DRAWING M114 FOR PENTHOUSE PLAN ABOVE.
  - PIPING ROUTED TO PENTHOUSE. REFER TO M114 FOR CONTINUATION.
  - REMOVE EXISTING THERMOSTAT AND ALL ASSOCIATED APPURTENANCES, PATCH WALL TO MATCH EXISTING FINISH.



PROJECT NAME:

**Harford County  
Public Schools**



HVAC RENOVATIONS  
MAGNOLIA MIDDLE SCHOOL

299 FORT TOWLE ROAD  
JOPPA, MARYLAND 21085

SCALE:

ISSUED FOR:

DATE	DESCRIPTION
11/02/12	DD SUBMISSION
12/14/12	50% SUBMISSION
01/31/13	100% IAC SUBMISSION
02/28/13	CONSTRUCTION DOCUMENTS

DATE	DESCRIPTION
11/02/12	DD SUBMISSION
12/14/12	50% SUBMISSION
01/31/13	100% IAC SUBMISSION
02/28/13	CONSTRUCTION DOCUMENTS

PROJECT NO.: -

SCALE: AS NOTED

DRAWN BY: SY

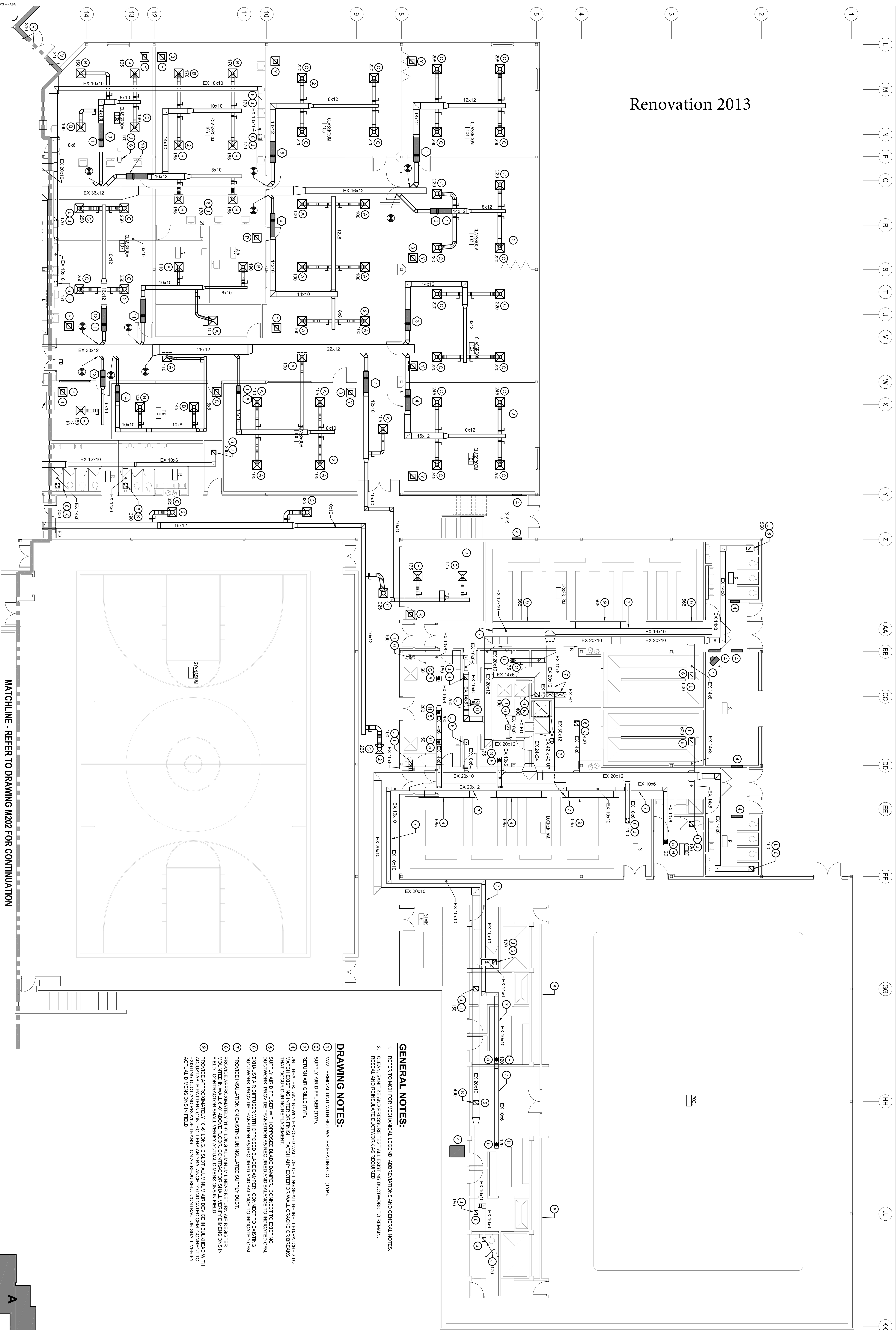
CHECKED BY: MDS

DATE: 02/28/2013

SHEET TITLE:  
**UPPER LEVEL PLAN 'A'  
HVAC PIPING  
DEMOLITION**

DRAWING NO.:  
**M111**

# Renovation 2013

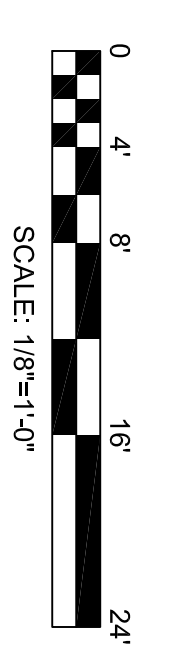
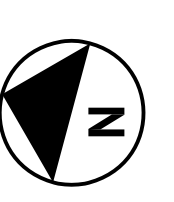
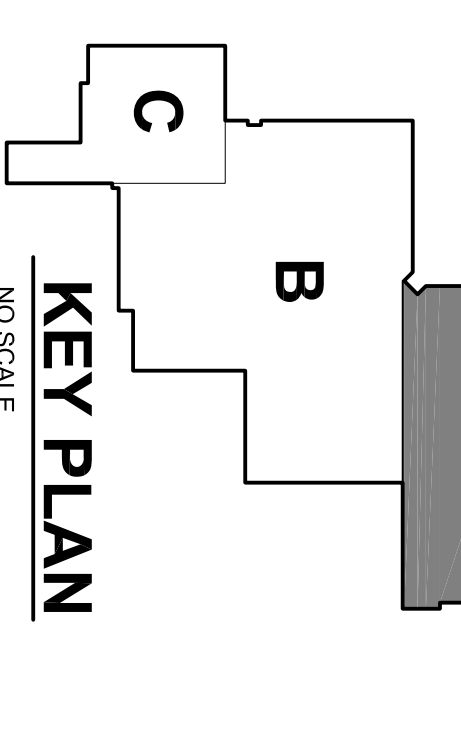


**1 LOWER LEVEL PLAN 'A' - HVAC - NEW WORK**  
SCALE: 1/8" = 1'-0"

MATCHLINE - REFER TO DRAWING M202 FOR CONTINUATION

- GENERAL NOTES:**
1. REFER TO M201 FOR MECHANICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
  2. CLEAN, SANITIZE AND PRESSURE TEST ALL EXISTING DUCTWORK TO REMAIN.
  3. RESEAL AND REINSULATE DUCTWORK AS REQUIRED.

- DRAWING NOTES:**
1. VAV TERMINAL UNIT WITH HOT WATER HEATING COIL (TYP)
  2. SUPPLY AIR DIFFUSER (TYP)
  3. RETURN AIR GRILLE (TYP)
  4. UNIT HEATER. ANY NEWLY EXPOSED WALL OR CEILING SHALL BE UNPLEATED/TOUGHED TO MATCH EXISTING FINISH. PROVIDE TRANSITION AS REQUIRED AND BALANCE TO MAINTAIN AIR FLOW.
  5. SUPPLY AIR DIFFUSER WITH GROSSED BLADE DAMPER. CONNECT TO EXISTING DUCTWORK. PROVIDE TRANSITION AS REQUIRED AND BALANCE TO INDICATED CFM.
  6. EXHAUST FAN BRPUSHER WITH GROSSED BLADE DAMPER. CONNECT TO EXISTING DUCTWORK. PROVIDE TRANSITION AS REQUIRED AND BALANCE TO INDICATED CFM.
  7. PROVIDE INSULATION ON EXISTING UNINSULATED SUPPLY DUCT.
  8. MOUNTED IN WALL 6" ABOVE FLOOR. CONTRACTOR SHALL VERIFY DIMENSIONS IN FIELD. CONTRACTOR SHALL VERIFY ACTUAL DIMENSIONS IN FIELD.
  9. PROVIDE APPROXIMATELY 1'-0" LONG 2 SLOT ALUMINUM AIR DEVICE IN BULKHEAD WITH EXISTING DUCT AND PROVIDE TRANSITION AS REQUIRED. CONTRACTOR SHALL VERIFY ACTUAL DIMENSIONS IN FIELD.



PROJECT NAME:  
**Harford County  
Public Schools**

299 FORT HOYLE ROAD  
JOPPA, MARYLAND 21085

SEAL:

HARFORD COUNTY  
PUBLIC SCHOOLS

HVAC RENOVATIONS  
MAGNOLIA MIDDLE SCHOOL

PROFESSIONAL CERTIFICATION:  
I, THE UNDERSIGNED, A LICENSED PROFESSIONAL ENGINEER, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
EXPIRATION DATE: 07/27/14

DATE	DESCRIPTION
11/02/12	DD SUBMISSION
12/14/12	50% SUBMISSION
01/31/13	100% IAC SUBMISSION
02/28/13	CONSTRUCTION DOCUMENTS

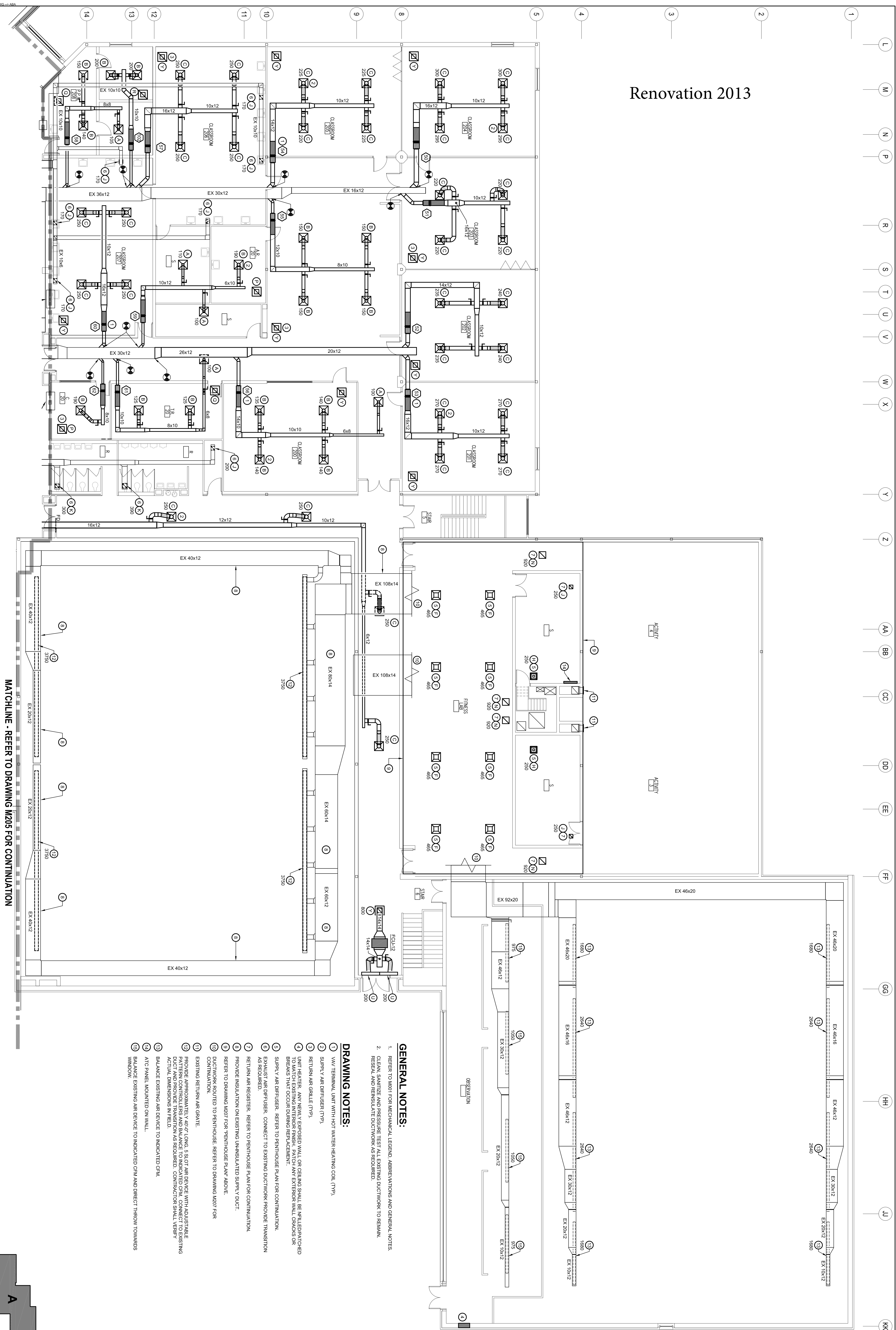
PROJECT NO.: -  
SCALE: AS NOTED  
DRAWN BY: REF  
CHECKED BY: MDS  
DATE: 02/28/2013

SHEET TITLE:  
**LOWER LEVEL PLAN 'A'  
HVAC  
NEW WORK**

DRAWING NO.:  
**M201**

BKM# 20520.010

# Renovation 2013

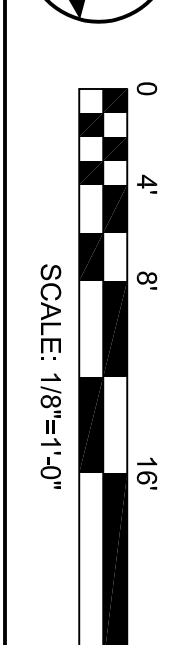
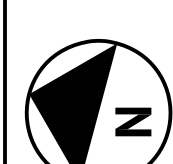
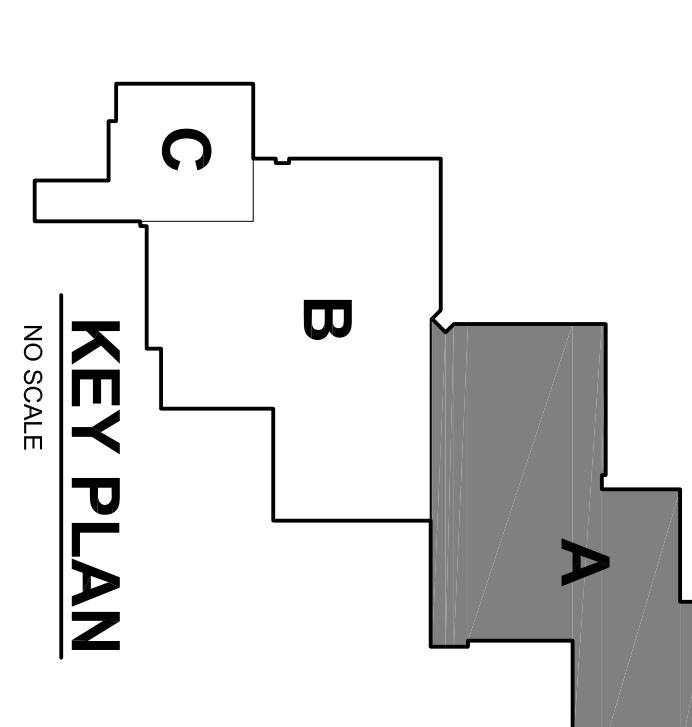


**1 UPPER LEVEL PLAN 'A' - HVAC - NEW WORK**  
SCALE: 1/8" = 1'-0"

MATCHLINE - REFER TO DRAWING M205 FOR CONTINUATION

- GENERAL NOTES:**
1. REFER TO M207 FOR MECHANICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
  2. CLEAN, SANITIZE AND PRESSURE TEST ALL EXISTING DUCTWORK TO BE RE-WORKED. RESEAL AND REINSULATE DUCTWORK AS REQUIRED.

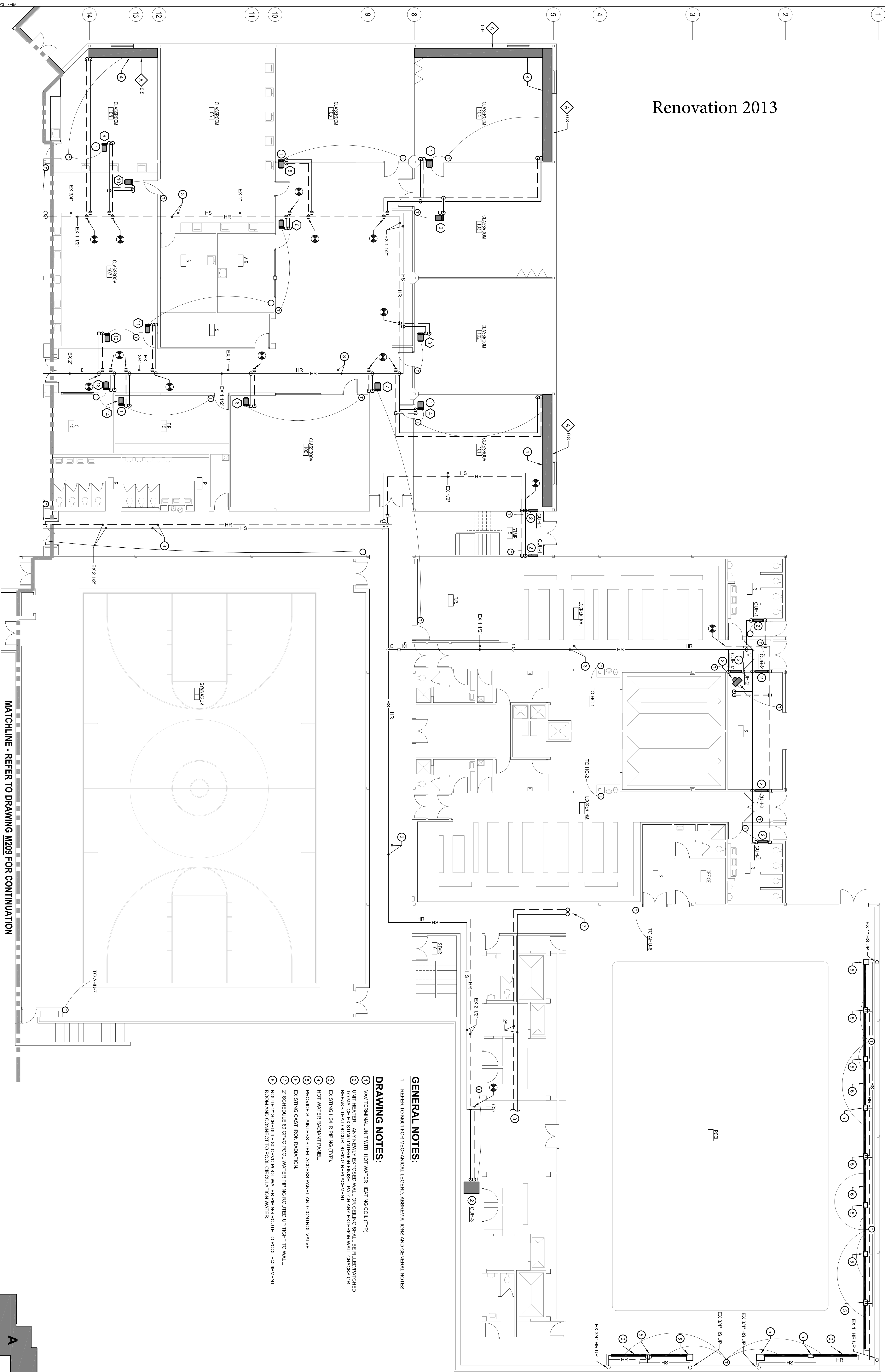
- DRAWING NOTES:**
1. VAV TERMINAL UNIT WITH HOT WATER HEATING COIL (TYP)
  2. SUPPLY AIR DIFFUSER (TYP)
  3. RETURN AIR GRILLE (TYP)
  4. RETURN HEATER. ANY NEWLY EXPOSED WALL OR CEILING SHALL BE NIPLE/PATCHED TO MATCH EXISTING INTERIOR FINISH. PATCH ANY EXTERIOR WALL CRACKS OR BREKS THAT OCCUR DURING RE-PACKMENT.
  5. SUPPLY AIR DIFFUSER. REFER TO PENTHOUSE PLAN FOR CONTINUATION.
  6. EXHAUST AIR DIFFUSER. CONNECT TO EXISTING DUCTWORK PROVIDE TRANSITION AS REQUIRED.
  7. RETURN AIR REGISTER. REFER TO PENTHOUSE PLAN FOR CONTINUATION.
  8. PROVIDE INSULATION ON EXISTING UNINSULATED SUPPLY DUCT.
  9. REFER TO DRAWING M207 FOR "PENTHOUSE PLAN" ABOVE.
  10. DUCTWORK ROUTED TO PENTHOUSE. REFER TO DRAWING M207 FOR CONTINUATION.
  11. EXISTING RETURN AIR GRATE.
  12. PROVIDE APPROXIMATELY 4'-0" LONG, 5 SLOT AIR DEVICE WITH ADJUSTABLE DAMPER. THIS DEVICE IS TO BE INSTALLED ON THE CEILING OF EXISTING PENTHOUSE. THE DEVICE SHALL BE RE-INSULATED AS SHOWN. CONNECTION SHALL BE IN ACCORDANCE WITH ACTUAL DIMENSIONS IN FIELD.
  13. BALANCE EXISTING AIR DEVICE TO INDICATED CFM.
  14. ATC PANEL MOUNTED ON WALL.
  15. BALANCE EXISTING AIR DEVICE TO INDICATED CFM AND DIRECT THROW TOWARDS WINDOW.



<p>PROJECT NAME: <b>Hartford County Public Schools</b></p> <p>299 FORT HOYLE ROAD JOPPA, MARYLAND 21885</p> <p>HARFORD COUNTY PUBLIC SCHOOLS</p> <p>HVAC RENOVATIONS MAGNOLIA MIDDLE SCHOOL</p> <p>SCALE: AS NOTED</p> <p>ISSUED FOR: PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. EXPIRATION DATE: 07/27/14</p>	
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02/28/13	CONSTRUCTION DOCUMENTS
<p>DRAWN BY: REF</p> <p>CHECKED BY: MDS</p> <p>DATE: 02/28/2013</p> <p>SHEET TITLE: UPPER LEVEL PLAN 'A' HVAC NEW WORK</p> <p>DRAWING NO: M204</p>	

L M N O P Q R S T U V W X Y Z AA BB CC DD EE FF GG HH JJ KK

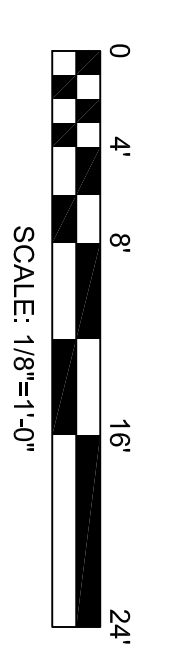
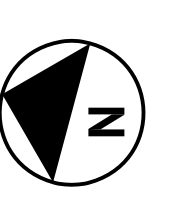
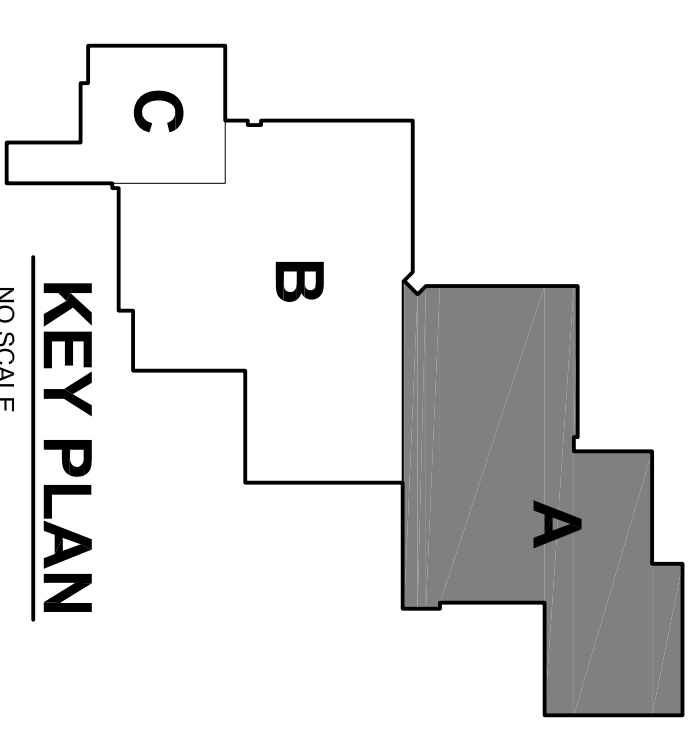
# Renovation 2013



**1 LOWER LEVEL PLAN 'A' - HVAC PIPING - NEW WORK**  
SCALE: 1/8" = 1'-0"

MATCHLINE - REFER TO DRAWING M209 FOR CONTINUATION

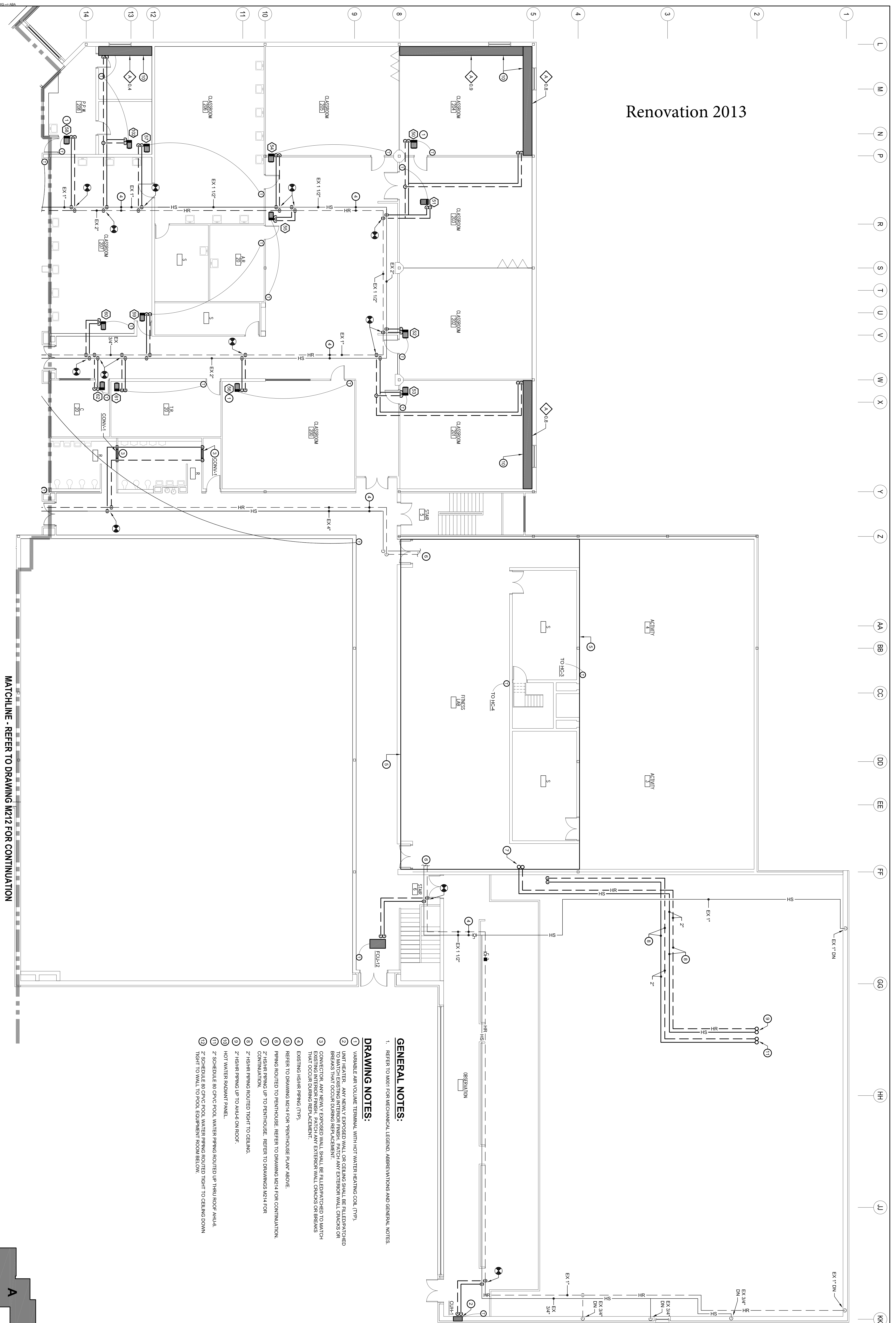
- GENERAL NOTES:**
- REFER TO M201 FOR MECHANICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
- DRAWING NOTES:**
- WATER TERMINAL UNIT WITH HOT WATER HEATING COIL (TYP)
  - UNIT HEATER - ANY NEWLY EXPOSED WALL OR CEILING SHALL BE TUBEPACKED TO PREVENT CONDENSATE FROM CAUSING WATER DAMAGE. ANY EXISTING WALL CONDENSATE BREAKS THAT OCCUR DURING REPAIR/REPLACE.
  - EXISTING (HS/R) PIPING (TYP)
  - HOT WATER RADIANT PANEL.
  - PROVIDE STAINLESS STEEL ACCESS PANEL AND CONTROL VALVE.
  - EXISTING CAST IRON RADIATION.
  - SCHEDULE 80 CPVC POOL WATER PIPING ROUTED UP TIGHT TO WALL.
  - ROUTE CPVC SCHEDULE 80 CPVC POOL WATER PIPING ROUTE TO POOL EQUIPMENT ROOM AND CONNECT TO POOL CIRCULATION WATER.



ISSUED FOR:

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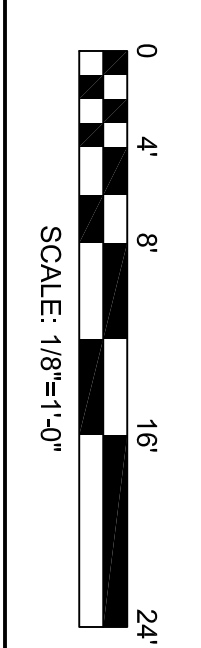
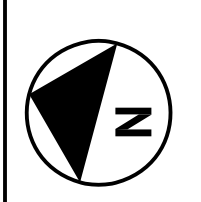
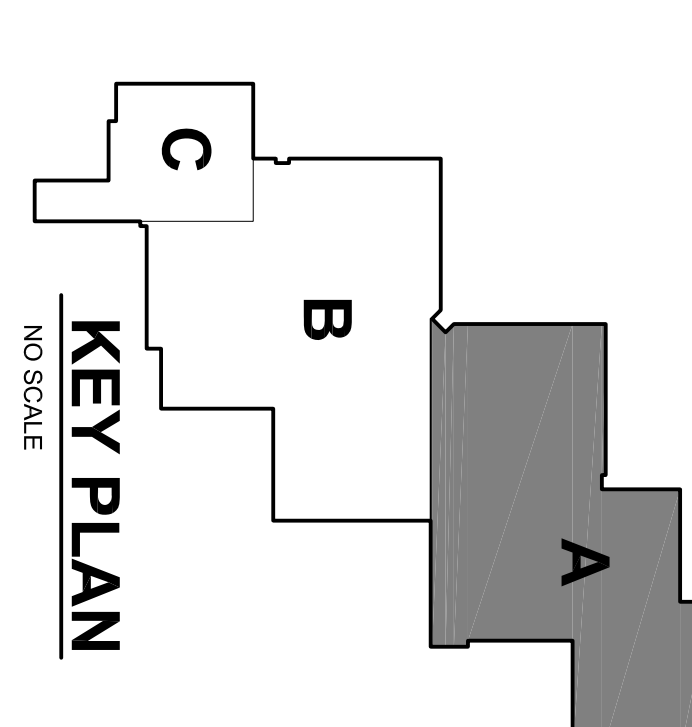
# Renovation 2013



**1 UPPER LEVEL PLAN 'A' - HVAC PIPING - NEW WORK**  
SCALE: 1/8" = 1'-0"

MATCHLINE - REFER TO DRAWING M212 FOR CONTINUATION

- GENERAL NOTES:**
- REFER TO M201 FOR MECHANICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
- DRAWING NOTES:**
- VARIABLE AIR VOLUME TERMINAL WITH HOT WATER HEATING COIL (TYP).
  - UNIT HEATER - ANY NEWLY EXPOSED WALL OR CEILING SHALL BE FILED/PATCHED TO MATCH EXISTING INTERIOR FINISH. PATCH ANY EXTERIOR WALL CRACKS OR BREAKS THAT OCCUR DURING REPLACEMENT.
  - CONNECTOR, ANY NEWLY EXPOSED WALL SHALL BE FILED/PATCHED TO MATCH EXISTING INTERIOR FINISH. PATCH ANY EXTERIOR WALL CRACKS OR BREAKS THAT OCCUR DURING REPLACEMENT.
  - EXISTING HSHR PIPING (TYP).
  - REFER TO DRAWING M214 FOR "PENTHOUSE PLUMB" ABOVE.
  - PIPING ROUTED TO PENTHOUSE, REFER TO DRAWING M214 FOR CONTINUATION.
  - HSHR PIPING UP TO PENTHOUSE, REFER TO DRAWINGS M214 FOR CONTINUATION.
  - HSHR PIPING ROUTED TIGHT TO CEILING.
  - HSHR PIPING UP TO AHU/4 ON ROOF.
  - HOT WATER RADIANT PANEL.
  - SCHEDULE 80 CPVC POOL WATER PIPING ROUTED UP THRU ROOF AHU/4.
  - SCHEDULE 80 CPVC POOL WATER PIPING ROUTED TIGHT TO CEILING DOWN TIGHT TO WALL TO POOL EQUIPMENT ROOM BELOW.



PROJECT NAME:  
**Harford County Public Schools**

299 FORT HOYLE ROAD  
JOPPA, MARYLAND 21085

SEAL:

DATE DESCRIPTION  
11/02/12 DD SUBMISSION  
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02/28/13 CONSTRUCTION DOCUMENTS

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ISSUED FOR:

PROJECT NO.: -

SCALE: AS NOTED

DRAWN BY: SY

CHECKED BY: MDS

DATE: 02/28/2013

SHEET TITLE:  
**UPPER LEVEL PLAN 'A' HVAC PIPING NEW WORK**

DRAWING NO.:  
**M211**