



## **COVER PAGE**

# **NOTICE**

**For Specifications: The following Project Specifications are for a Three (3) Phase Project. This Job is ONLY for Phase one (1) and two (2) noted under section 1.5-A (Page 37):**

### **1.5 PHASED CONSTRUCTION**

#### **A. The Total Work shall be conducted in three phases:**

**Phase 1 – New site electrical service from Building 6 to Building 54.**

**Phase 2 – Switchover of electrical power from new duct bank to Building 54. Intent is minimize power interruption to Building 54.**

**For Statement of Work (SOW) / Drawings: The following Project Drawings are for a Three (3) Phase Project. This Job is ONLY for Phase one (1) and two (2):**


**Only these sheets apply to this Phase one (1) and Phase two (2) job.**

- **G001**
- **C1.0**
- **E001**
- **ES101**
- **ES102**

USDA AGRICULTURAL RESEARCH TECHNOLOGY CENTER  
TASK ORDER #12805B22F0158  
DESIGN UNDERGROUND UTILITY PLAN AND DEMOLITION OF BUILDING #7  
2000 18TH STREET, WOODWARD, OK, 73801

DRAWING LIST					
PHASE 1	PHASE 2	PHASE 3	SHEET	DRAWING	TITLE
✓	✓	✓	1	G001	GENERAL COVER SHEET
REF	REF	✓	2	C1.0	ENGINEERING NOTES
REF	REF	✓	3	C2.0	ENGINEERING SITE PLAN
REF	REF	✓	4	P3001	PLUMBING SITE PLAN - DEMOLITION
REF	REF	✓	5	M001	GENERAL NOTES, SYMBOLS & ABBREVIATIONS
REF	REF	✓	6	MB101	MECHANICAL BASEMENT PLAN - DEMOLITION
REF	REF	✓	7	MB102	MECHANICAL FIRST AND SECOND FLOOR PLAN - DEMOLITION
✓	✓	✓	8	E001	GENERAL NOTES, SYMBOLS & ABBREVIATIONS
✓	REF	REF	9	ES101	ELECTRICAL SITE PLAN - PHASE 1
REF	✓	REF	10	ES102	ELECTRICAL SITE PLAN - PHASE 2
REF	REF	✓	11	ES103	ELECTRICAL SITE PLAN - PHASE 3



<div><b>SETTY</b><sup>INC.</sup></div> <div>2001 MILLARD DRIVE, SUITE 100 TAMPA, FLORIDA 33613 813.948.1122 <b>www.setty.com</b> REGISTERED PROFESSIONAL ENGINEER</div>					
		2	12-15-2022	MK	ISSUE FOR BID
		1	10-26-2022	MK	100% CONSTRUCTION DOCUMENTS FOR REVIEW
		NO.	DATE	BY	DESCRIPTION
		REVISIONS			
		U S D A		Agricultural Research Service	
				AGRICULTURAL RESEARCH TECHNOLOGY CENTER	
SETTY	USDA				
PROJECT MANAGER	EPW				
MK	JP				
DESIGNER	PPM				
SS	BD				
CHECKED BY	SAFETY & HEALTH	SOLICITATION NO.	PROJECT COVER SHEET	DWG. NO.	
MK	DC	DATE		G001	
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GRADING NOTES:

1. NEW CONTOURS DENOTE TOP OF FINISHED PAVING OR GRADED AREA AS INDICATED. ALL SPOT ELEVATIONS ARE TO FINISHED GRADE, UNLESS NOTED OTHERWISE.
2. NOTIFY ENGINEER IF EXISTING GROUND CONDITIONS VARY FROM THOSE SHOWN ON PLANS.
3. PROVIDE POSITIVE DRAINAGE AT ALL TIMES WITHIN THE CONSTRUCTION AREAS. NO PONDING OF WATER SHALL BE ALLOWED. THE CONTRACTOR SHALL GRADE ALL AREAS TO POSITIVELY DRAIN AWAY FROM BUILDINGS.
4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DEWATER AND STABILIZE ANY SOFT SOILS AS NEEDED TO REACH OPTIMUM SOIL CONDITIONS.
5. ALL DISTURBED AREAS SHALL BE SODDED. CONTRACTOR SHALL BE RESPONSIBLE FOR SODDED AREAS UNTIL GROWTH IS ESTABLISHED.
6. TOPSOIL SHALL BE STRIPPED, STOCKPILED ON-SITE AND SPREAD AFTER GRADING OPERATIONS. TOPSOIL SHALL BE SPREAD TO A DEPTH NOT EXCEEDING 6 INCHES AND COORDINATED WITH THE LANDSCAPE PLANS AND SPECIFICATIONS.
7. CONTRACTOR SHALL PROVIDE WATER AS REQUIRED TO OBTAIN STANDARD COMPACTION.
8. THE EARTHWORK CONTRACTOR IS ULTIMATELY RESPONSIBLE TO IMPORT OR EXPORT MATERIAL AS NECESSARY TO ACHIEVE THE GRADES SHOWN ON THE CIVIL ENGINEER'S DOCUMENTS.
9. OFF-SITE BORROW SOILS SHALL BE EVALUATED AND APPROVED BY THE OWNER PRIOR TO USE ON THE SITE. ALL PROPOSED FILL SOILS SHALL BE TESTED AND APPROVED PRIOR TO PLACEMENT.
10. ALL DIMENSIONS OR ELEVATIONS MARKED TO MATCH EXISTING SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS WITH THE DRAWINGS PRIOR TO CONSTRUCTION.
11. GENERAL FILL MATERIAL MAY BE ANY NATIVE SOIL FREE OF DEBRIS, TRASH, ROCKS OVER 2 INCHES IN DIAMETER AND OTHER OBJECTIONABLE MATERIAL. GENERAL FILL SHALL BE PLACED AND COMPACTED IN LIFTS NOT EXCEEDING 8" IN THICKNESS TO 95 PERCENT STANDARD DENSITY AS DEFINED BY ASTM D 698. IF FINE GRAINED SILT OR CLAY SOIL IS USED FOR FILL, CLOSE MOISTURE CONTROL WILL BE REQUIRED TO ACHIEVE THE RECOMMENDED COMPACTION.
12. WHEN RUBBLE IS ENCOUNTERED, IT SHALL BE OVER-EXCAVATED AND REMOVED, AND LAWFULLY DISPOSED OF. THE OVER-EXCAVATED AREAS SHALL BE RE-FILLED WITH GENERAL FILL.
13. THE CONTRACTOR IS RESPONSIBLE TO ENSURE ALL EXCAVATIONS ARE MADE IN ACCORDANCE WITH CURRENT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) CONSTRUCTION STANDARDS. IN ADDITION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BE FAMILIAR WITH OSHA STANDARDS AND REGULATIONS PERTAINING TO ALL ASPECTS OF THE WORK INCLUDING ENTERING CONFINED SPACES.

SEDIMENTATION & EROSION CONTROL NOTES:

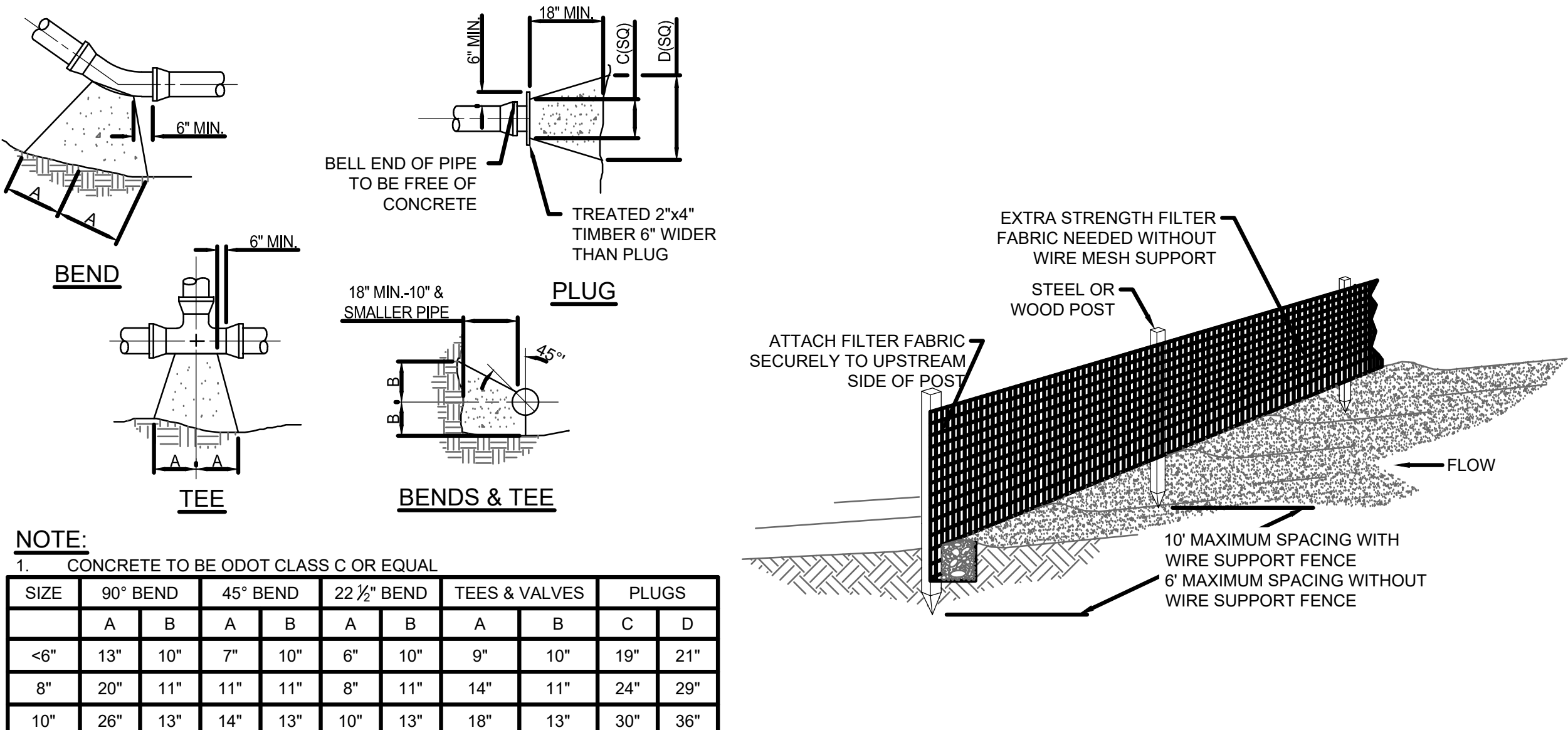
1. ALL PERIMETER EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE EXECUTION OF ANY DEMOLITION OR GRADING WORK AND SHALL BE MAINTAINED BY THE GRADING CONTRACTOR FOR THE DURATION OF THE PROJECT.
2. SEDIMENT FILTER, SILT FENCE AND STABILIZED CONSTRUCTION ENTRANCES SHALL BE CONSTRUCTED PER LOCAL JURISDICTIONAL REQUIREMENTS.
3. SEDIMENT COLLECTED BEHIND THE SEDIMENT FILTERS AND SILT FENCES SHALL BE REMOVED WHEN SEDIMENT REACHES ONE THIRD THE HEIGHT OF THE BARRIER.
4. SEDIMENT FILTERS AND SEDIMENT FENCES SHALL BE INSPECTED AND MAINTAINED NO LESS THAN WEEKLY OR WITHIN 24 HOURS OF A RAINFALL EVENT OF 0.5 INCHES OR MORE. MAINTENANCE SHALL INCLUDE BUT NOT LIMITED TO SEDIMENT REMOVAL, BARRIER REPAIR AND/OR REPLACEMENT.
5. THE CONTRACTOR SHALL CONSTRUCT AS A MINIMUM ONE STABILIZED CONSTRUCTION ENTRANCE. IF ADDITIONAL INGRESS OR EGRESS TO THE CONSTRUCTION SITE IS REQUIRED, THE CONTRACTOR SHALL COORDINATE THE LOCATION OF THESE ADDITIONAL STABILIZED CONSTRUCTION ENTRANCES WITH THE CONSTRUCTION MANAGER. USAGE OF NON-STABILIZED POINTS FOR INGRESS AND EGRESS WILL NOT BE PERMITTED. THE STABILIZED ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY AND PAVED DRIVING LANES. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS WARRANT. REPAIR OF THE ENTRANCE(S) OR CLEANING OF THE RIGHT-OF-WAY AND PAVED DRIVING LANES THAT HAVE BEEN SOILED SHALL BE PERFORMED BY THE CONTRACTOR AT HIS OWN EXPENSE, SATISFACTORY TO THE CONSTRUCTION MANAGER. WHEN NECESSARY, VEHICLE WHEELS AND TIRES SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTERING ONTO PUBLIC RIGHT-OF-WAY AND PUBLIC STREETS. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE.
6. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, PERIODICALLY WATER THE SITE TO CONTROL DUST.
7. SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE REMOVED FOLLOWING CONSTRUCTION OR UPON PERMANENT STABILIZATION OF THE DISTURBED AND GRADED AREAS, WHICHEVER OCCURS LAST.
8. CONSTRUCTION ENTRANCE SHALL BE THE FIRST CONSTRUCTION WORK ON THE PROJECT.
9. INSTALL SEDIMENT BARRIERS DOWN SLOPE FROM CONSTRUCTION ACTIVITIES THAT DISTURB SITE SOIL.
10. CONSTRUCT ROCK SURFACE FOR TEMPORARY PARKING, IF NEEDED.
11. FINAL GRADING - SEDIMENT BARRIERS WILL BE MAINTAINED DOWN SLOPE FROM DISTURBED SOIL DURING THIS OPERATION AND REMOVED UPON COMPLETION OF ON-SITE STABILIZATION.
12. THE ACTUAL SCHEDULE FOR IMPLEMENTING POLLUTANT CONTROL MEASURES WILL BE DETERMINED BY PROJECT CONSTRUCTION PROGRESS. DOWN SLOPE PROTECTIVE MEASURES MUST ALWAYS BE IN PLACE BEFORE SOIL IS DISTURBED.

GENERAL NOTES:

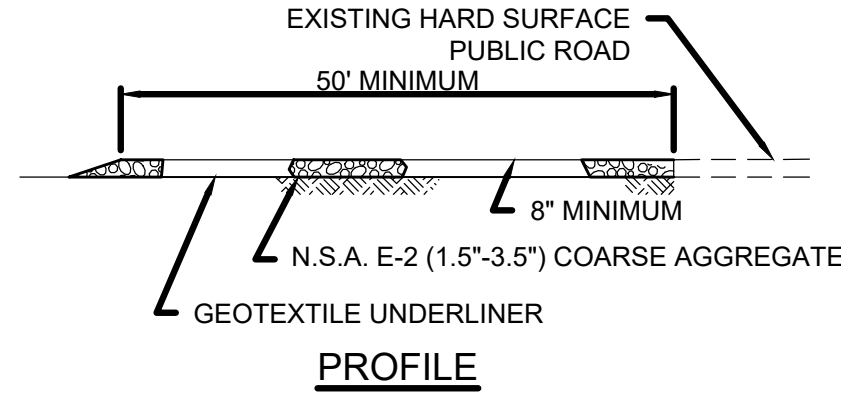
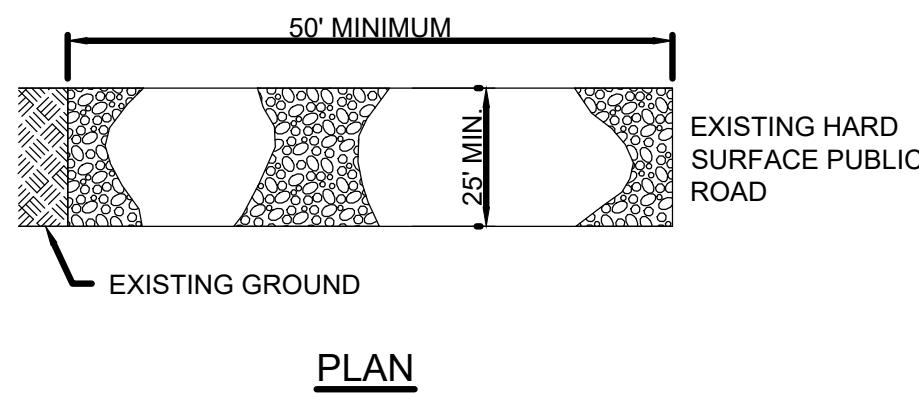
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY WORK ORDERS AND PERMITS FROM THE PERMITTING AGENCY, INCLUDING PROVISIONS OF BONDS AND INSURANCE AS REQUIRED. THE CONTRACTOR SHALL PAY ALL PERMIT FEES, DUMP FEES AND OTHER ASSOCIATED FEES REQUIRED TO SUCCESSFULLY COMPLETE THE PROJECT AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL NOT START THE WORK UNTIL ALL PERMITS HAVE BEEN OBTAINED FROM THE JURISDICTIONAL AUTHORITIES.
2. ALL WASTE OR SPOIL SHALL BE TAKEN TO A STATE APPROVED OR SPREAD ON SITE AS DIRECTED BY THE OWNER AND ENGINEER.
3. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGE TO EXISTING PROPERTY, UTILITIES AND STRUCTURES OUTSIDE THE SCOPE OF WORK AND REPAIR SAME AT HIS OWN EXPENSE.
4. CIVIL ENGINEER WILL NOT INTERPRET SOILS REPORTS OR ACCEPT RESPONSIBILITY FOR ALTERNATIVE METHODS PROPOSED BY THE CONTRACTOR.
5. CORRECTIVE MEASURES DIRECTED BY THE ENGINEER MAY INCLUDE COMPLETE REMOVAL AND REPLACEMENT AT NO COST TO OWNER IN CASES OF POOR WORKMANSHIP OR UNSATISFACTORY IN-PLACE CONDITIONS.
6. CONTRACTOR AND ALL RELATED CONSTRUCTION ACTIVITIES ARE REQUIRED TO MAINTAIN NORMAL NOISE LEVELS AND ALL EQUIPMENT AND VEHICLES ARE REQUIRED TO BE PROPERLY MUFFLED.
7. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SURFACE AND UNDERGROUND FACILITIES DURING ALL PHASES OF WORK. LOCATION OF ALL UNDERGROUND FACILITIES ARE APPROXIMATE AND FOR THE CONTRACTOR'S GUIDANCE ONLY.
8. UNDERGROUND FACILITIES, WHETHER INDICATED OR NOT, SHALL BE LOCATED AND FLAGGED BY THE UTILITIES AT THE REQUEST OF THE CONTRACTOR. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES OR THE NOTIFICATION CENTER OF OKLAHOMA ONE CALL "CALL OKIE" TO MARK OR FLAG THE LOCATION OF THEIR FACILITIES IN THE FIELD (1-800-522-6543 OR 811) NO SOONER THAN TEN DAYS NOR LATER THAN 48 HOURS, (EXCLUDING SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS), PRIOR TO EXCAVATION.
9. THE CONTRACTOR SHALL REPAIR, AT HIS EXPENSE, ANY DAMAGES TO EXISTING LOCATED FACILITIES CAUSED DIRECTLY OR INDIRECTLY BY HIS OPERATIONS.
10. SURVEY INFORMATION PROVIDED BY OWNER. BEFORE PROCEEDING, THE CONTRACTOR SHALL SATISFY HIMSELF THAT A CONFLICT DOES NOT EXIST AND THAT THE UNDERGROUND WORK CAN BE PERFORMED AS SHOWN ON THE PLANS. IF, IN THE OPINION OF THE CONTRACTOR, A CONFLICT DOES EXIST, HE SHALL IMMEDIATELY NOTIFY THE ENGINEER WHO WILL MAKE THE FINAL DETERMINATION FOR RESOLVING THE CONFLICT.
11. THE CONTRACTOR SHALL SATISFACTORILY CLEAN THE AREA OF ALL RUBBISH, EXCESS MATERIAL, MUD AND DEBRIS AND ALL PARTS OF THE WORK AREA SHALL BE LEFT IN A NEAT AND PRESENTABLE CONDITION. ALL DISTURBED AREAS SHALL BE RESTORED TO A LEVEL AND SMOOTH SURFACE PRIOR TO ACCEPTANCE OF THE WORK. DEBRIS, ETC. SHALL BE DISPOSED OF AT AN APPROVED FACILITY IN A LEGAL MANNER.
12. THE CONTRACTOR SHALL FURNISH AND MAINTAIN ALL NECESSARY BARRICADES, WORKING SIGNS, LIGHTS, FLASHERS AND FLAG PERSONS AS REQUIRED BY THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES", TO PROVIDE FOR THE SAFETY OF WORKERS AND THE PUBLIC AT LARGE. TEMPORARY FENCING SHALL BE INSTALLED AROUND ANY OPEN AREAS OF THE SITE.
13. THE CONTRACTOR SHALL NOT ENCROACH ON PRIVATE PROPERTY OUTSIDE THE WORK AREAS WITHOUT WRITTEN PERMISSION FROM THE AFFECTED PROPERTY OWNER.

DEMOLITION NOTES:

1. CONTRACTOR SHALL CONFORM WITH ALL APPLICABLE CODES (LOCAL, STATE AND FEDERAL) FOR DEMOLITION, DUST CONTROL, EROSION CONTROL AND DISPOSAL OF DEMOLITION MATERIAL AND DEBRIS.
2. EXISTING UNDERGROUND LINES HAVE BEEN SHOWN TO THE EXTENT KNOWN. THE EXACT LOCATIONS AND NOTIFICATIONS OF THE PROPER AGENCY IS THE RESPONSIBILITY OF THE CONTRACTOR PRIOR TO ANY EXCAVATION.
3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL EXISTING UTILITIES, PAVEMENT AND OTHER IMPROVEMENTS NOT SCHEDULED FOR REMOVAL. ANY DAMAGE TO EXISTING UTILITIES AND/OR PAVED STREETS CAUSED BY CONSTRUCTION OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
4. THE CONTRACTOR SHALL PROPERLY DISPOSE OF ALL UNSUITABLE MATERIALS AND DEBRIS ENCOUNTERED OR GENERATED BY THE REMOVAL OPERATIONS, INCLUDING CONCRETE, ASPHALT, OIL, BRICK, ROCK PIPES, ETC. NO UNSUITABLE MATERIAL, SUCH AS DETERMINED BY THE OWNER'S REPRESENTATIVE, SHALL BE USED FOR BACKFILLING OR EMBANKMENT CONSTRUCTION. THE COST FOR DISPOSAL OF THE UNSUITABLE MATERIAL SHALL BE SUBSIDIARY TO THE PROJECT.
5. STORM WATER POLLUTION PREVENTION PLAN BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED PRIOR TO ANY REMOVALS.
6. ALL DEBRIS RESULTING FROM CONSTRUCTION OPERATIONS SHALL BE HAULED OFF-SITE AND PROPERLY DISPOSED OF. THE OWNER SHALL HAVE FIRST RIGHTS TO ANY MATERIALS THAT HE DEEMS SALVAGEABLE. MISCELLANEOUS STRUCTURES, CONCRETE, RUBBLE AND OTHER ITEMS SHALL BE REMOVED COMPLETELY OR DEMOLISHED TO 3' BELOW EXISTING GRADE.
7. REFER TO ARCHITECTURAL PLANS FOR SPECIFIC BUILDING REMOVAL ITEMS
8. SAW CUT FULL DEPTH ALL PAVEMENT AT JOINT LINES
9. THE CONTRACTOR SHALL KEEP THE SITE CLEAN DURING CONSTRUCTION AND SUPPLY CONSTRUCTION CONTAINERS OR DUMPSTERS TO MAINTAIN ALL TRASH AND DEBRIS.
10. ENSURE UTILITIES TO BE CUT AND CAPPED ARE CUT STRAIGHT AND NEAT. CAP SHALL UTILIZE A MECHANICALLY RESTRAINED JOINT AND A CONCRETE THRUST BLOCK SHALL BE PLACED ON SYSTEMS UNDER PRESSURE.



3 THRUST BLOCKING  
SCALE: NTS



DETAILS NOTES:

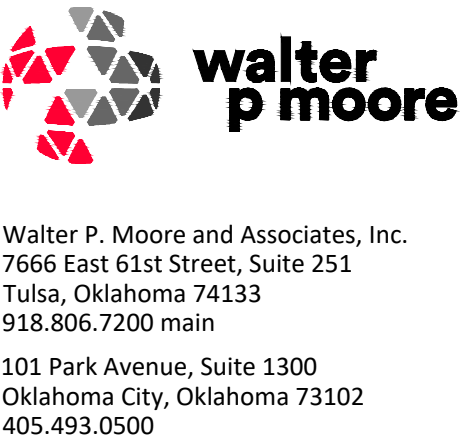
1. STONE SIZE SHALL BE N.S.A. R-2 (1.5\"/>
2. LENGTH-AS EFFECTIVE, BUT NO LESS THAN 50 FEET.
3. THICKNESS NOT LESS THAN EIGHT (8) INCHES.
4. WIDTH NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS, OR AS INDICATED ON THE PLAN.
5. WASHING WHEN NECESSARY. WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATER-COURSE THROUGH USE OF SAND BAGS, GRAVEL, BOARDS OR OTHER APPROVED METHODS.
6. MAINTENANCE-THE ENTRANCE/EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY BY THE CONTRACTOR AT CONTRACTOR'S EXPENSE.
7. GEOTEXTILE SHALL MEET AASHTO M288 "SEPARATION GEOTEXTILE PROPERTY REQUIREMENTS"

2 CONSTRUCTION ENTRANCE  
SCALE: NTS

NOTES:

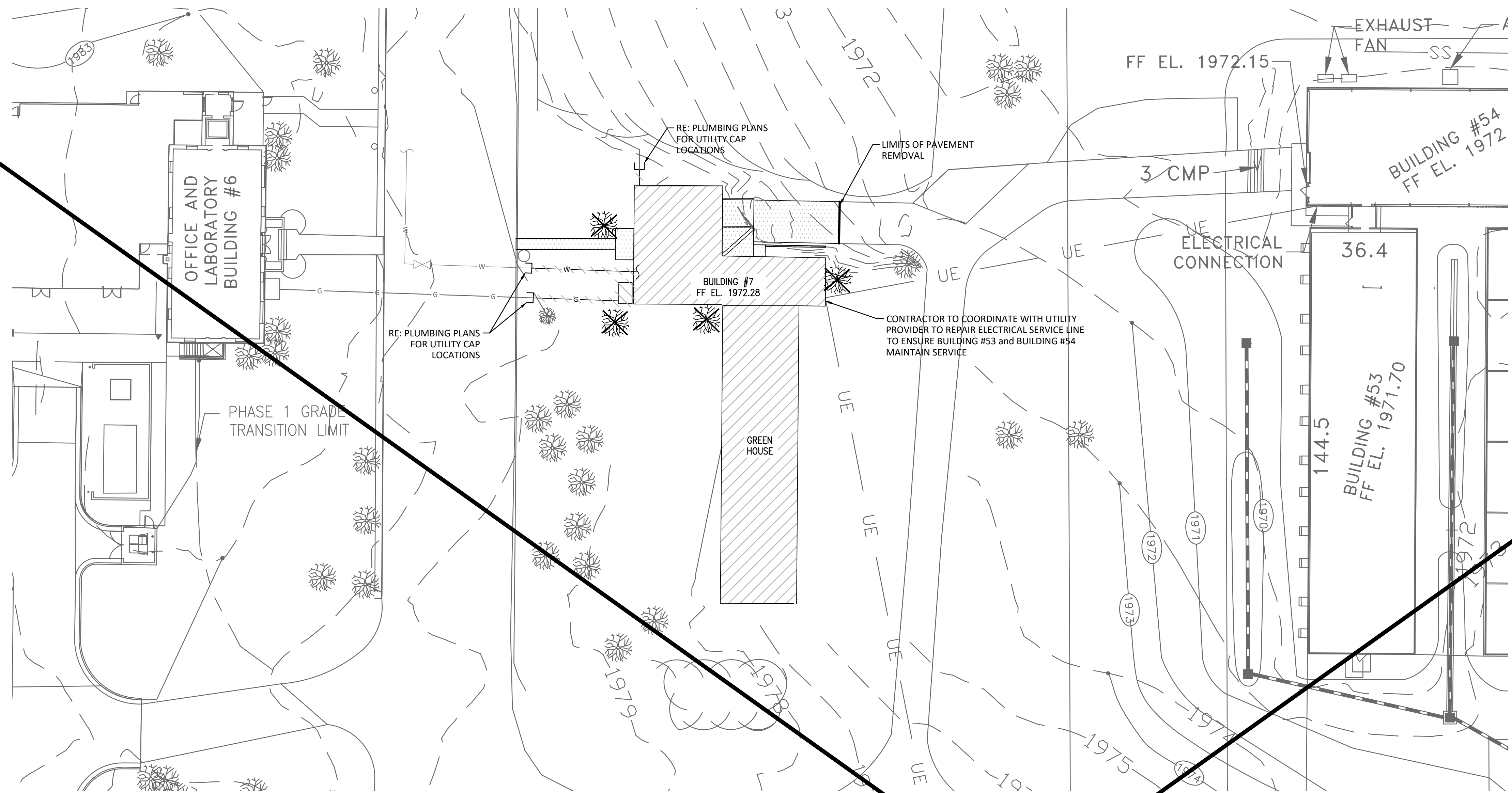
1. MUST BE INSTALLED PROPERLY TO AVOID NOTICE OF VIOLATION.
2. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE POUNDING EFFICIENCY.
3. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY. 9\"/>
4. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE TO SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
5. FABRIC SHALL MEET AASHTO M288 TEMPORARY SILT FENCE PROPERTY REQUIREMENTS

1 FABRIC FILTER SILT FENCE  
SCALE: NTS



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WPM			USDA		
PROJECT MANAGER	DLA		EPH	JF	
DESIGNER	DCC		PPH	BD	
CHECKED BY	JDD	SAFETY & HEALTH		DC	
DRAWN BY	DCC	REAL PROPERTY		WR	
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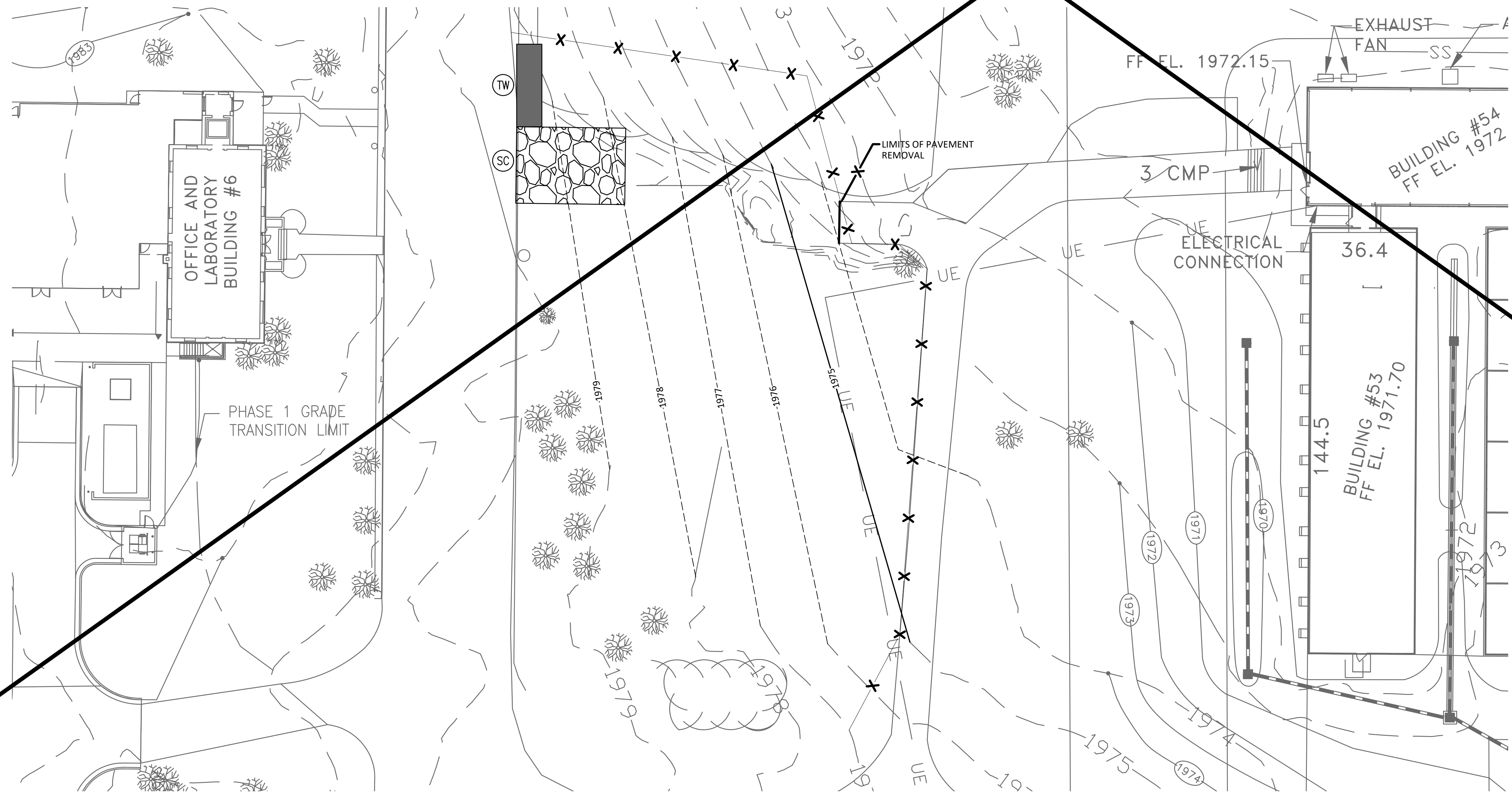




DEMOLITION LEGEND:

- EX. PAVEMENT TO BE REMOVED
- EX. BUILDING TO BE REMOVED
- EX. UTILITIES TO BE REMOVED
- EX. TREE TO BE REMOVED

1 DEMOLITION PLAN  
1" = 10'




EROSION CONTROL LEGEND:

- SILT FENCE
- PROP. CONTOUR
- ROCK STABILIZED CONSTRUCTION ENTRANCE/EXIT
- TRUCK WASHOUT

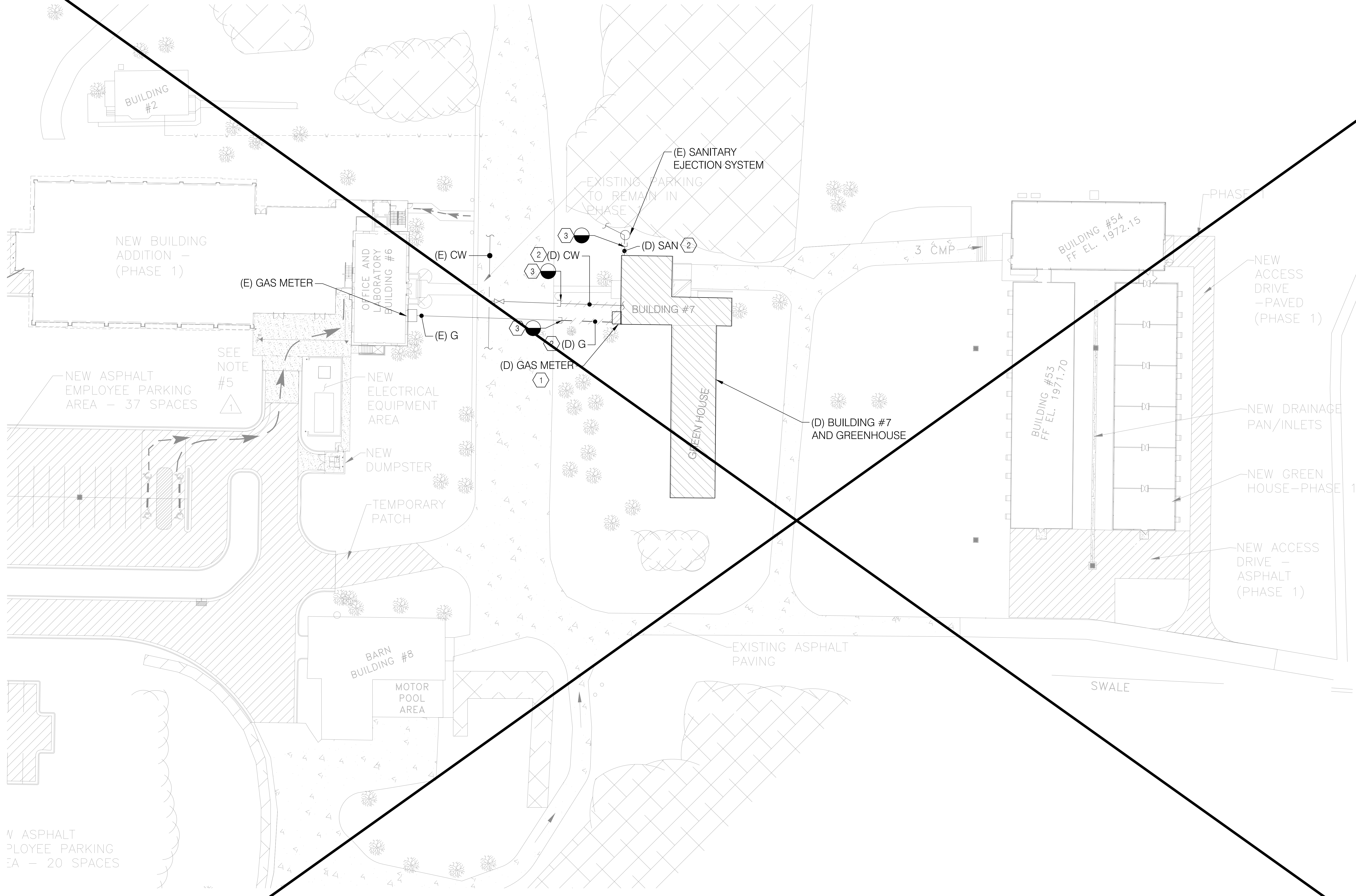
2 EROSION CONTROL PLAN  
1" = 10'



Walter P. Moore and Associates, Inc.  
7666 East 61st Street, Suite 251  
Tulsa, Oklahoma 74133  
918.806.7200 main  
101 Park Avenue, Suite 1300  
Oklahoma City, Oklahoma 73102  
405.493.0500

<b>SETTY</b> <small>2016 BUILDING DESIGN, CONSTRUCTION, AND MAINTENANCE FABRICATION, GENERAL CONTRACTING, AND CONSTRUCTION MANAGEMENT SETTY LLC 1000 N. WILSON AVE., SUITE 100 TULSA, OKLAHOMA 74103</small>		2	12-15-2022	—	—	ISSUE FOR BID
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		 <b>Agricultural Research Service</b>				
		<b>AGRICULTURAL RESEARCH TECHNOLOGY CENTER</b>				
		ENGINEERING SITE PLAN				
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**GENERAL NOTES**

A. FOR PROJECT GENERAL PLUMBING NOTES, DEMOLITION NOTES, SYMBOLS AND ABBREVIATIONS, REFER TO DRAWING M-001.

B. CONTRACTOR SHALL FIELD VERIFY ALL FIXTURES, EQUIPMENT AND PIPING PRIOR TO START OF DEMOLITION WORK.

C. CONTRACTOR SHALL COORDINATE WITH CIVIL CONSULTANT PRIOR TO START OF DEMOLITION WORK.

**SHEET KEY NOTES**

1. REMOVE EXISTING GAS METER AND ASSOCIATED PIPING. CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR STORAGE OR DISPOSAL OF EXISTING PLUMBING FIXTURES THAT ARE BEING REMOVED.

2. EXISTING UNDERGROUND GAS, COLD WATER AND SANITARY PIPING SHALL BE ABANDONED IN PLACE.

3. CUT AND CAP EXISTING GAS, COLD WATER AND SANITARY PIPING AS SHOWN ON THE PLAN.

1 PLUMBING SITE PLAN - DEMOLITION  
SCALE: 1/32" = 1'-0"



<div><div>SETTY</div><div>ONE BELLEVILLE DRIVE, SUITE 100 HARRISBURG, VIRGINIA 22181 P. 703.438.1100 F. 703.438.1101 WWW.SETTY.COM</div></div>		12-15-2022				ISSUE FOR BID
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MK		JP				
DESIGNER		PPH				
WSP		BD				
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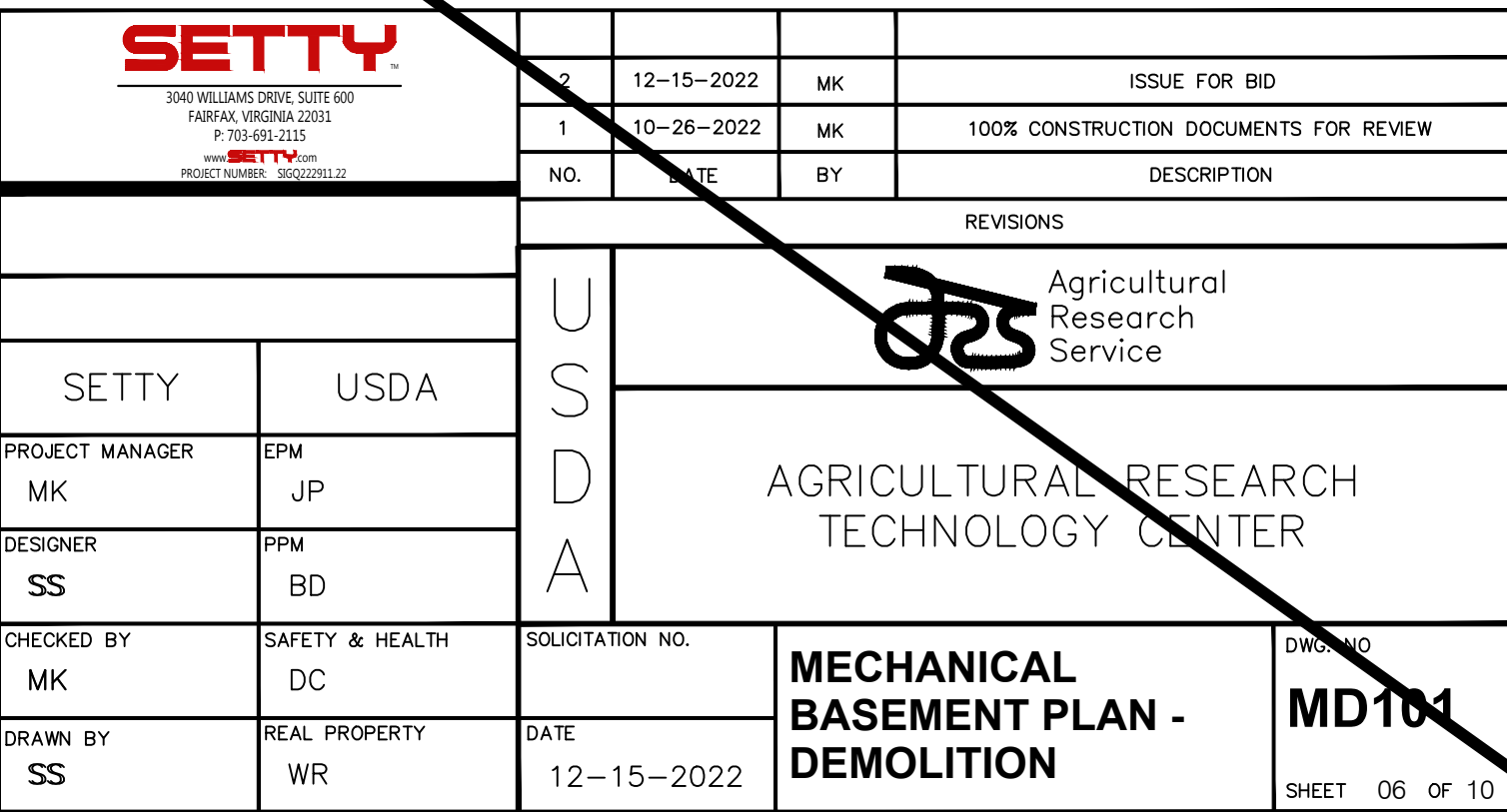
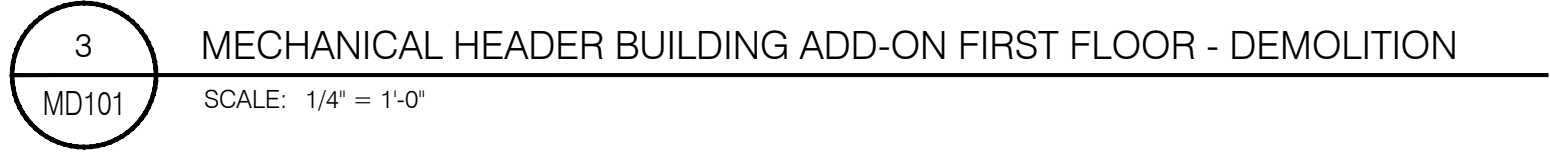


		GENERAL NOTES		SYMBOLS		ABBREVIATIONS	
		<p><u>COORDINATION AND SCHEDULING</u></p> <p>1. COMPLETELY COORDINATE AND SCHEDULE WORK OF ALL TRADES. CONTRACTOR SHALL COMPENSATE FOR EXISTING CONDITIONS SO THAT CONFLICTS IN SCHEDULING AND LOCATION WILL NOT OCCUR.</p> <p>2. CONTRACTOR IS RESPONSIBLE FOR COMPLETE COORDINATION BETWEEN ALL SUB-CONTRACTORS, SUPPLIERS, GOVERNMENT AUTHORITIES HAVING JURISDICTION, BUILDING PERSONNEL, CODE ENFORCEMENT OFFICIALS, ARCHITECT/ENGINEER AND BUILDING OWNER.</p> <p>3. CONTRACTORS WORK SCHEDULE SHALL BE SUBMITTED TO AND APPROVED BY THE OWNER.</p> <p>4. NOTIFY THE OWNER, IN WRITING, AT LEAST SEVEN DAYS IN ADVANCE OF ANY REQUIRED SHUTDOWN OF ANY UTILITY. OBTAIN OWNERS WRITTEN APPROVAL PRIOR TO SHUTDOWN.</p> <p>5. CONTRACTOR SHALL THOROUGHLY EXAMINE PREMISES AND OBSERVE ALL CONDITIONS AND CIRCUMSTANCES UNDER WHICH THE WORK SHALL BE PERFORMED. NO ALLOWANCES WILL BE MADE FOR ERRORS OR NEGLIGENCE IN THIS RESPECT.</p> <p>6. CONTRACTOR SHALL COMPLY WITH RULES AND REGULATIONS OF THE BUILDING LANDLORD AND PROPERTY MANAGER.</p> <p><u>GENERAL NOTES</u></p> <p>1. DEMOLITION SHALL INCLUDE REMOVAL OF EXISTING BUILDING CONSTRUCTION TO EXTENT REQUIRED.</p> <p>2. THE DEMOLITION PROCEDURES SHALL PROVIDE FOR SAFE CONDUCT OF THE WORK, PROTECTION OF PERSONNEL, CAREFUL REMOVAL AND DISPOSITION OF MATERIALS SPECIFIED TO BE SALVAGED, PROTECTION OF PROPERTY TO REMAIN UNDISTURBED, COORDINATION WITH OTHER IN PROGRESS, AND TIMELY DISCONNECTION OF UTILITY SERVICES.</p> <p>3. EXISTING WORK TO REMAIN SHALL BE PROTECTED FROM DAMAGE. WORK DAMAGED BY THE CONTRACTOR SHALL BE REPLACED TO MATCH EXISTING WORK.</p> <p>4. EXISTING CONDITIONS (I.E., PRESENCE AND LOCATION OF DUCTWORK, EQUIPMENT, PIPING AND MATERIALS, AS WELL AS EXISTING DUCT, PIPE AND EQUIPMENT SIZES) ARE BASED ON INFORMATION OBTAINED FROM AVAILABLE RECORD DRAWINGS AND FIELD SURVEYS AND ARE NOT WARRANTED TO BE COMPLETE. CONTRACTOR SHALL FIELD VERIFY EXACT SIZES, LOCATIONS, AND DATA PRIOR TO STARTING ALL WORK. MAJOR DISCREPANCIES DISCOVERED DURING THE DEMOLITION PHASE OF THE WORK SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION TO THE ENGINEER. PRIOR TO COMMENCING OF DEMOLITION.</p> <p>5. WHERE DEMOLITION WOULD AFFECT THE STRUCTURAL INTEGRITY OF THE BUILDING, THE CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR PRIOR TO PROCEEDING WITH DEMOLITION.</p>		<p><u>SYMBOLS</u></p> <p>EXISTING DUCTWORK TO BE REMOVED</p> <p>EXISTING PIPING TO BE REMOVED</p> <p>CEILING SUPPLY AIR DIFFUSER</p> <p>EXHAUST AIR GRILLE OPEN TO CEILING</p> <p>RETURN AIR GRILLE OPEN TO CEILING</p> <p>EXISTING PIPING TO BE REMOVED</p> <p>CAPPED CONNECTION</p> <p>SHUT OFF VALVE</p> <p>DETAIL NUMBER</p> <p>WHERE THE DETAIL IS DRAWN</p> <p>WHERE THE DETAIL IS REFERENCED</p> <p>KEYED DRAWING NOTE</p> <p>EQUIPMENT DESIGNATION TAG</p> <p>AIR DEVICE TAG</p> <p>DIFFUSER TYPE</p> <p>AIR VOLUME IN CFM</p> <p>POINT OF DISCONNECT</p> <p>POINT OF CONNECTION</p> <p>FAN COIL UNIT DESIGNATION TAG</p> <p>CONDENSING UNIT DESIGNATION TAG</p> <p>NOTE: ALL SYMBOLS MAY NOT APPEAR ON THE DRAWINGS.</p>		<p>CD CEILING DIFFUSER</p> <p>CW COLD WATER</p> <p>(D) DEMOLISH EXISTING</p> <p>EF EXHAUST FAN</p> <p>FAN FAN COIL UNIT</p> <p>G GAS</p> <p>P PUMP</p> <p>RTU ROOF TOP UNIT</p> <p>SAN SANITARY</p> <p>UH UNIT HEATER</p> <p>NOTE: ALL SYMBOLS/ABBREVIATIONS MAY NOT APPEAR ON THE DRAWINGS.</p>	
		SPECIFICATIONS					
		<p><u>DIVISION 01 - SUMMARY OF WORK</u></p> <p>A. PROVIDE ALL WORK INCLUDED IN THIS DIVISION AND INDICATED ON CONTRACT DOCUMENTS.</p> <p>B. UNLESS SPECIFICALLY DIMENSIONED, WORK INDICATED ON DRAWINGS IS DIAGRAMMATIC ONLY TO INDICATE GENERAL ARRANGEMENT.</p> <p>C. BECOME FAMILIAR WITH ALL PROJECT SITE CONDITIONS PRIOR TO SUBMITTING BID. NO ALLOWANCES SHALL BE MADE FOR ITEMS DISCOVERED AFTER SUBMITTING BID.</p> <p><u>SECTION 023116 - MECHANICAL DEMOLITION, RELOCATION AND ALTERATION</u></p> <p>A. PROVIDE REMOVAL OF EXISTING MECHANICAL SYSTEMS AS REQUIRED.</p> <p>B. ALL MATERIAL AND/OR EQUIPMENT INDICATED FOR SALVAGE SHALL BE DELIVERED TO LOCATION DIRECTED BY OWNER. ALL OTHER DEMOLITION MATERIAL SHALL BE PROMPTLY REMOVED FROM THE PROJECT SITE.</p> <p>C. ALL PIPE, DUCT AND SHAFT CUTOUTS AND OPENINGS NOT USED SHALL BE CAPPED AND SEALED WHERE SHOWN.</p> <p>D. EXISTING CONDITIONS WERE OBTAINED FROM AVAILABLE DRAWINGS AND ARE NOT GUARANTEED TO BE COMPLETE OR CORRECT. CONTRACTOR SHALL SURVEY AND VERIFY EXISTING CONDITIONS PRIOR TO STARTING WORK.</p> <p><u>SECTION 230000 - MECHANICAL GENERAL REQUIREMENTS</u></p> <p>A. GENERAL REQUIREMENTS IN DIVISION 1 APPLY TO OR AFFECT MECHANICAL WORK.</p> <p>B. ALL WORK SHALL CONFORM TO ALL APPLICABLE CODES, REGULATIONS AND STANDARDS. COORDINATE WORK WITH ALL OTHER TRADES AND THE DESIGN PROFESSIONAL. ANY DISCREPANCIES BETWEEN THESE DOCUMENTS AND THE EXISTING CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH WORK.</p>					

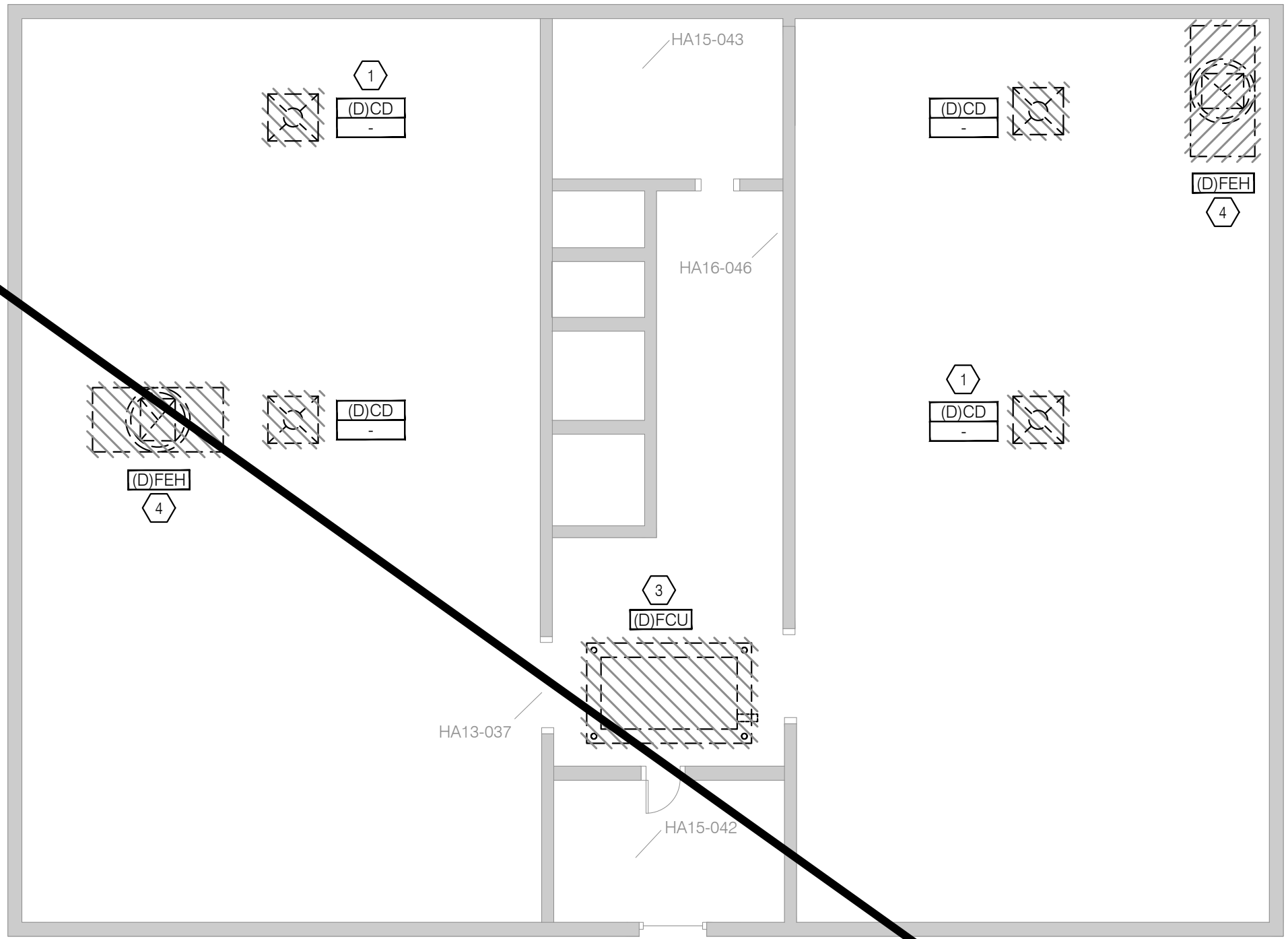
## GENERAL NOTES

- A. EXISTING WORK SHOWN IS BASED ON AVAILABLE DOCUMENTATION AND SPOT CHECKS ON SURVEY. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS AND COORDINATE WITH ENGINEER PRIOR TO PROCEEDING WITH WORK.
- B. THE DEMOLITION PLAN IS NOT INCLUSIVE OF ALL HVAC DEVICES WITHIN THE PROJECT AREA. IT IS INTENDED TO PROVIDE THE CONTRACTOR WITH A GENERAL KNOWLEDGE OF THE EXISTING CONDITIONS WITH IN THE PROJECT AREA. ANY DISCREPANCIES OR CONDITIONS NOT SHOWN ON THIS PLAN SHALL BE COORDINATED.
- C. CONTRACTOR TO FIELD COORDINATE ALL REMOVAL OF EXISTING EQUIPMENT WITH THE OWNER AND EQUIPMENT INTENDED FOR REMOVAL PRIOR TO GENERAL DEMOLITION.
- D. ALL WORK SHALL BE IN ACCORDANCE WITH ALL APPLICABLE CODES, SAFETY REGULATIONS AND OWNER'S REQUIREMENTS.

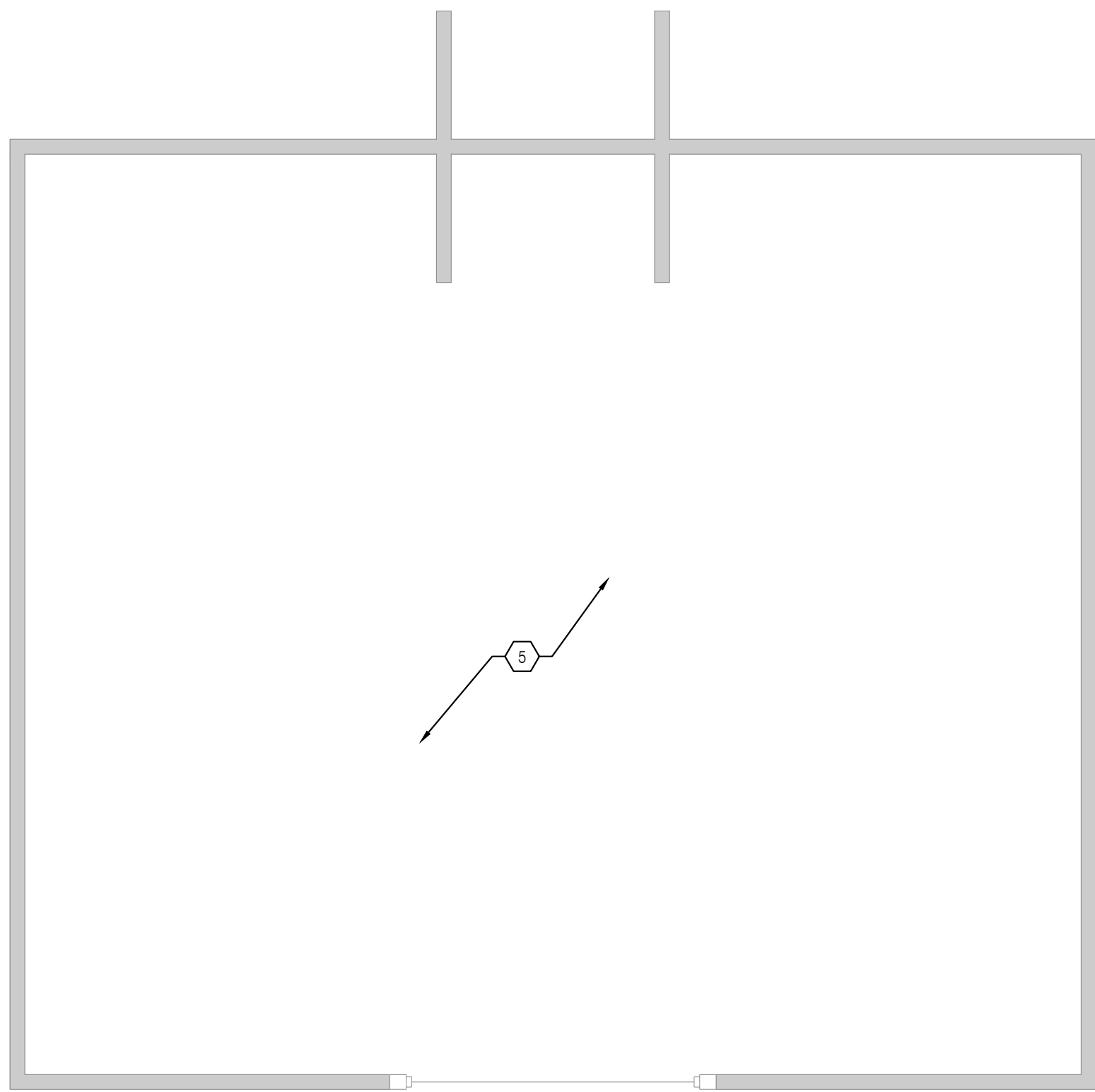
SHEET KEY NOTES	
1.	REMOVE ALL EXISTING DUCTWORK, RISERS, AIR DEVICES, HANGERS, PIPING AND SUPPORT.
2.	REMOVE EXISTING PUMP, ASSOCIATED ACCESSORIES, PIPING CONNECTIONS, CONTROLS, WIRING AND SUPPORTS.
3.	REMOVE ALL THE EQUIPMENT IN THIS PART OF THE BUILDING.



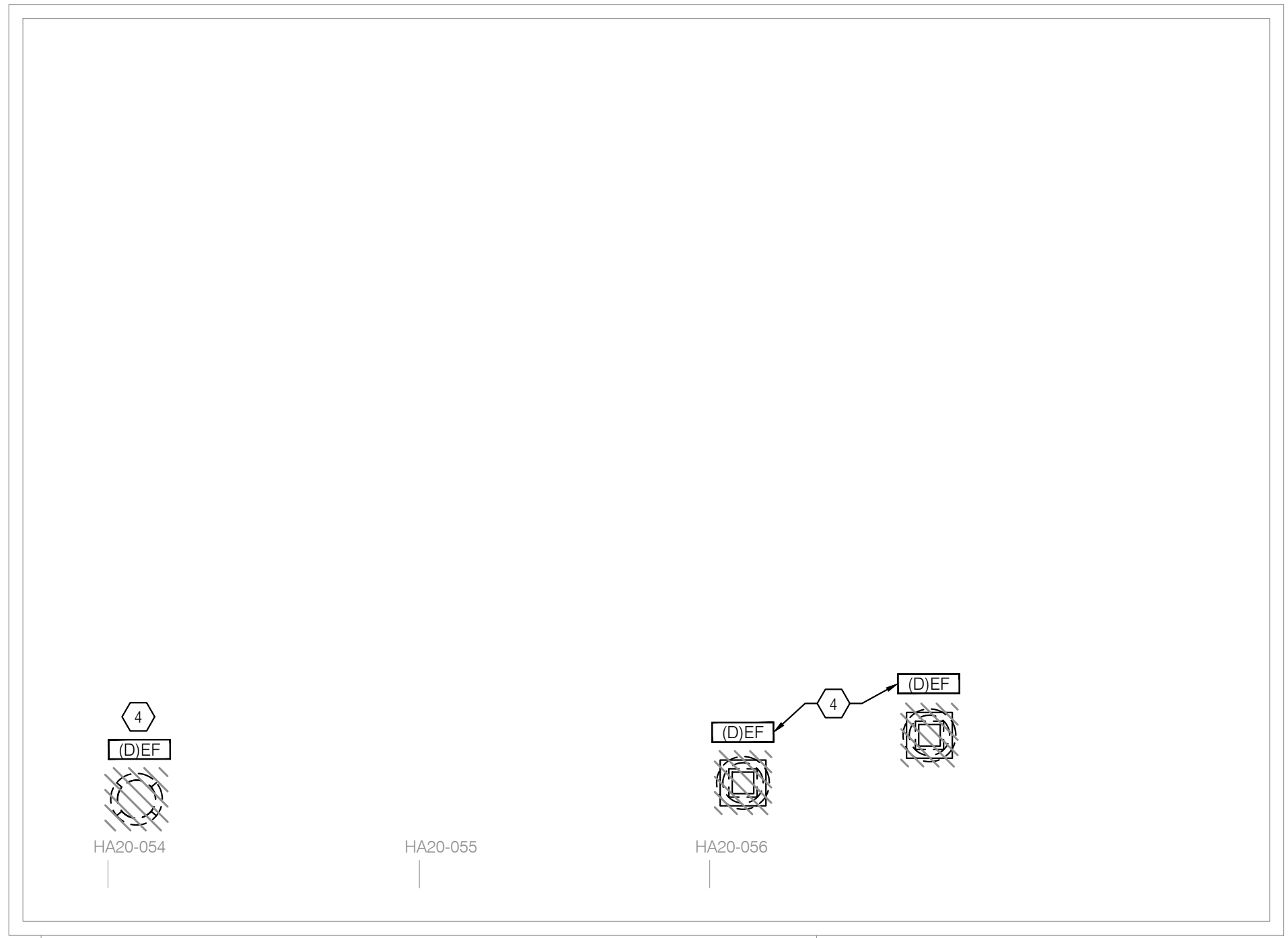




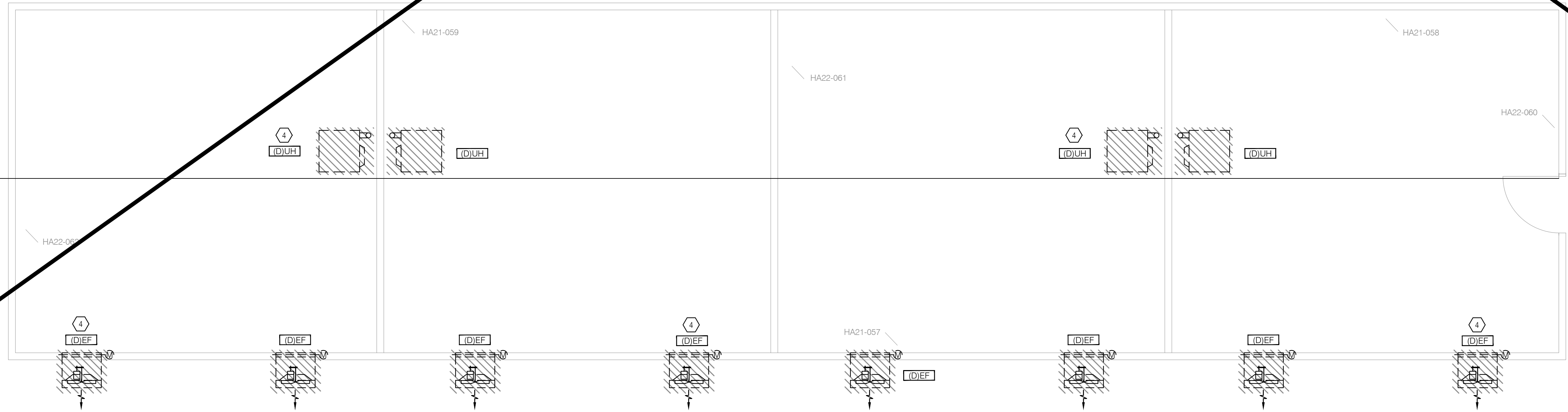
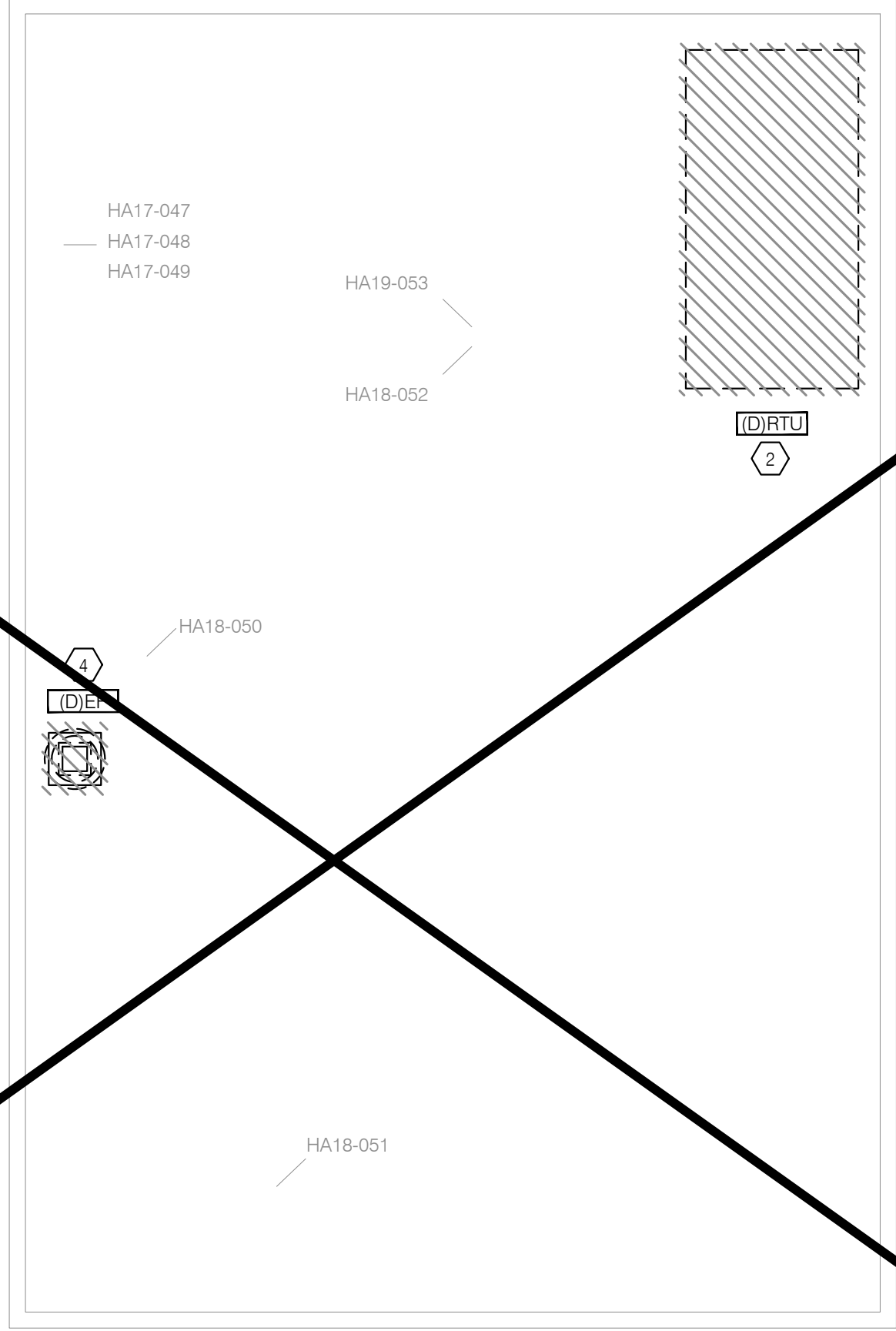
1 MECHANICAL MAIN BUILDING SECOND FLOOR - DEMOLITION  
MD102 SCALE: 1/4" = 1'-0"



2 MECHANICAL HEADER BUILDING ADD-ON SECOND FLOOR - DEMOLITION  
MD102 SCALE: 1/4" = 1'-0"



3 MECHANICAL ROOF PLAN - DEMOLITION  
MD102 SCALE: 1/4" = 1'-0"



4 MECHANICAL GREENHOUSE PLAN - DEMOLITION  
MD102 SCALE: 1/4" = 1'-0"

**GENERAL NOTES**

A. EXISTING WORK SHOWN IS BASED ON AVAILABLE DOCUMENTATION AND SPOT CHECKS ON SURVEY. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS AND COORDINATE WITH ENGINEER PRIOR TO PROCEEDING WITH WORK.

B. THE DEMOLITION PLAN IS NOT INCLUSIVE OF ALL HVAC DEVICES WITHIN THE PROJECT AREA. IT IS INTENDED TO PROVIDE THE CONTRACTOR WITH A GENERAL KNOWLEDGE OF THE EXISTING CONDITIONS WITHIN THE PROJECT AREA. ANY DISCREPANCIES OR CONDITIONS NOT SHOWN ON THIS PLAN SHALL BE COORDINATED.

C. CONTRACTOR TO FIELD COORDINATE ALL REMOVAL OF EXISTING EQUIPMENT WITH THE OWNER AND EQUIPMENT INTENDED FOR REMOVAL PRIOR TO GENERAL DEMOLITION.

D. ALL WORK SHALL BE IN ACCORDANCE WITH ALL APPLICABLE CODES, SAFETY REGULATIONS AND OWNER'S REQUIREMENTS.

**SHEET KEY NOTES**

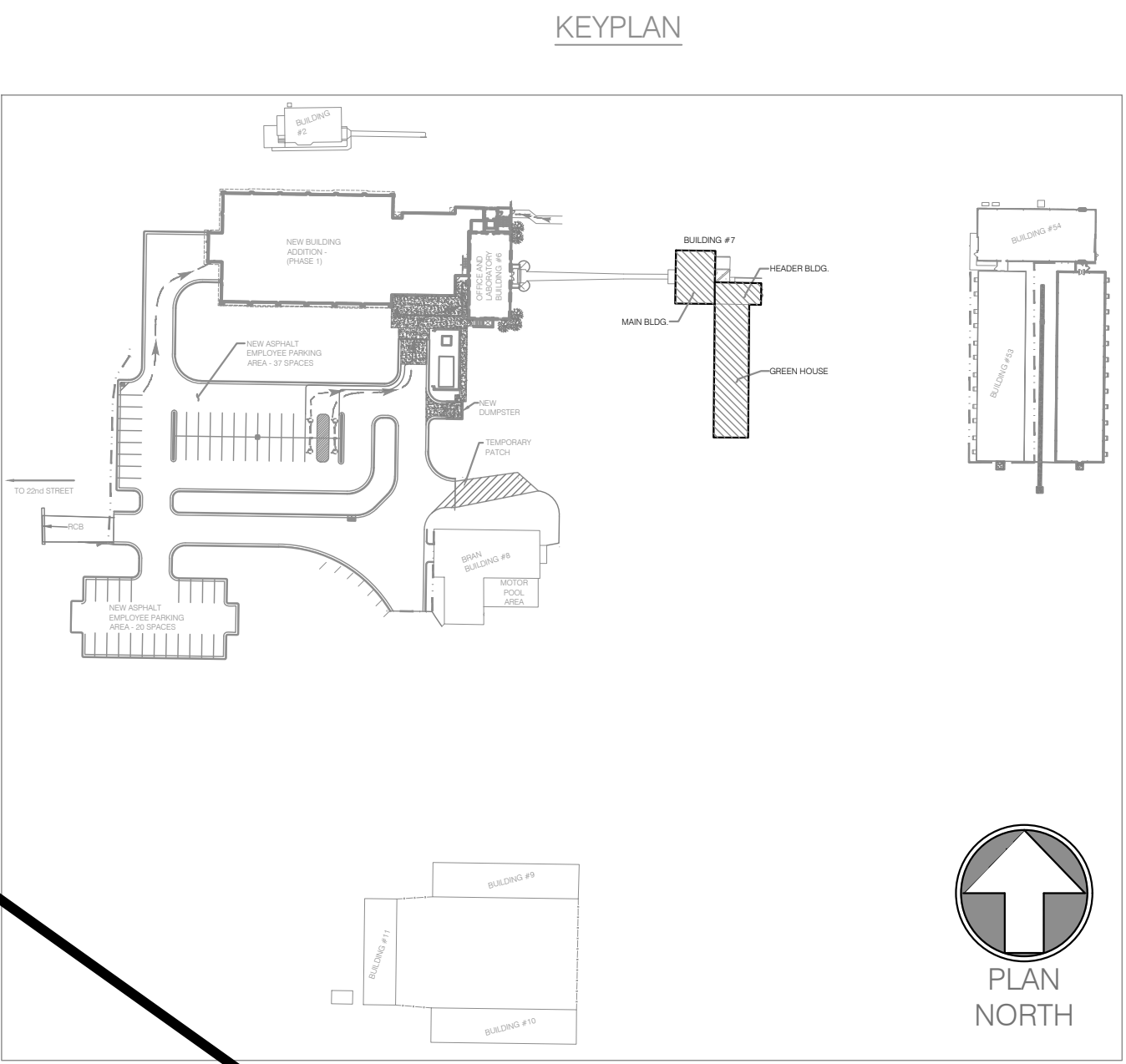
1. REMOVE ALL EXISTING DUCTWORK, RISERS, AIR DEVICES, HANGERS, PIPING AND SUPPORT.

2. REMOVE EXISTING ROOF TOP UNIT, ASSOCIATED ACCESSORIES, DUCTWORK CONNECTIONS, PIPING CONNECTIONS, CONTROLS, WIRING AND SUPPORTS.

3. REMOVE EXISTING FAN COIL UNIT, ASSOCIATED ACCESSORIES, DUCTWORK CONNECTIONS, PIPING CONNECTIONS, CONTROLS, WIRING AND SUPPORTS.

4. REMOVE EXISTING FUME HOOD, UNIT HEATER AND EXHAUST FAN, ASSOCIATED ACCESSORIES, CONNECTIONS, CONTROLS, WIRING AND SUPPORTS (TYPICAL).

5. REMOVE ALL THE EQUIPMENT IN THIS PART OF THE BUILDING.

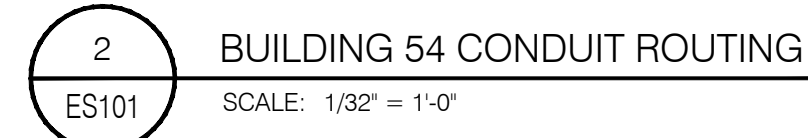


<b>SETTY</b> <small>2016 RELEASE UNDER E.O. 13526 BARBARA VIRGINIA 2016 P. 10/10/16/17/18 REDACTED - 10/10/16/17/18</small>		2	12-15-2022	MK		ISSUE FOR BID
		1	10-26-2022	MK		100% CONSTRUCTION DOCUMENTS FOR REVIEW
		NO.	DATE	BY		DESCRIPTION
		REVISIONS				
		USDA Agricultural Research Service				
		AGRICULTURAL RESEARCH TECHNOLOGY CENTER				
PROJECT MANAGER MK	EPH JP					
DESIGNER SS	PPH BD					
CHECKED BY MK	SAFETY & HEALTH DC					
DRAWN BY SS	REAL PROPERTY WR					
		SOLUTIONATION NO.				
		DATE				
		12-15-2022				
		MECHANICAL FIRST AND SECOND FLOOR PLAN - DEMOLITION				DRAWING MD102 SHEET 07 OF 10



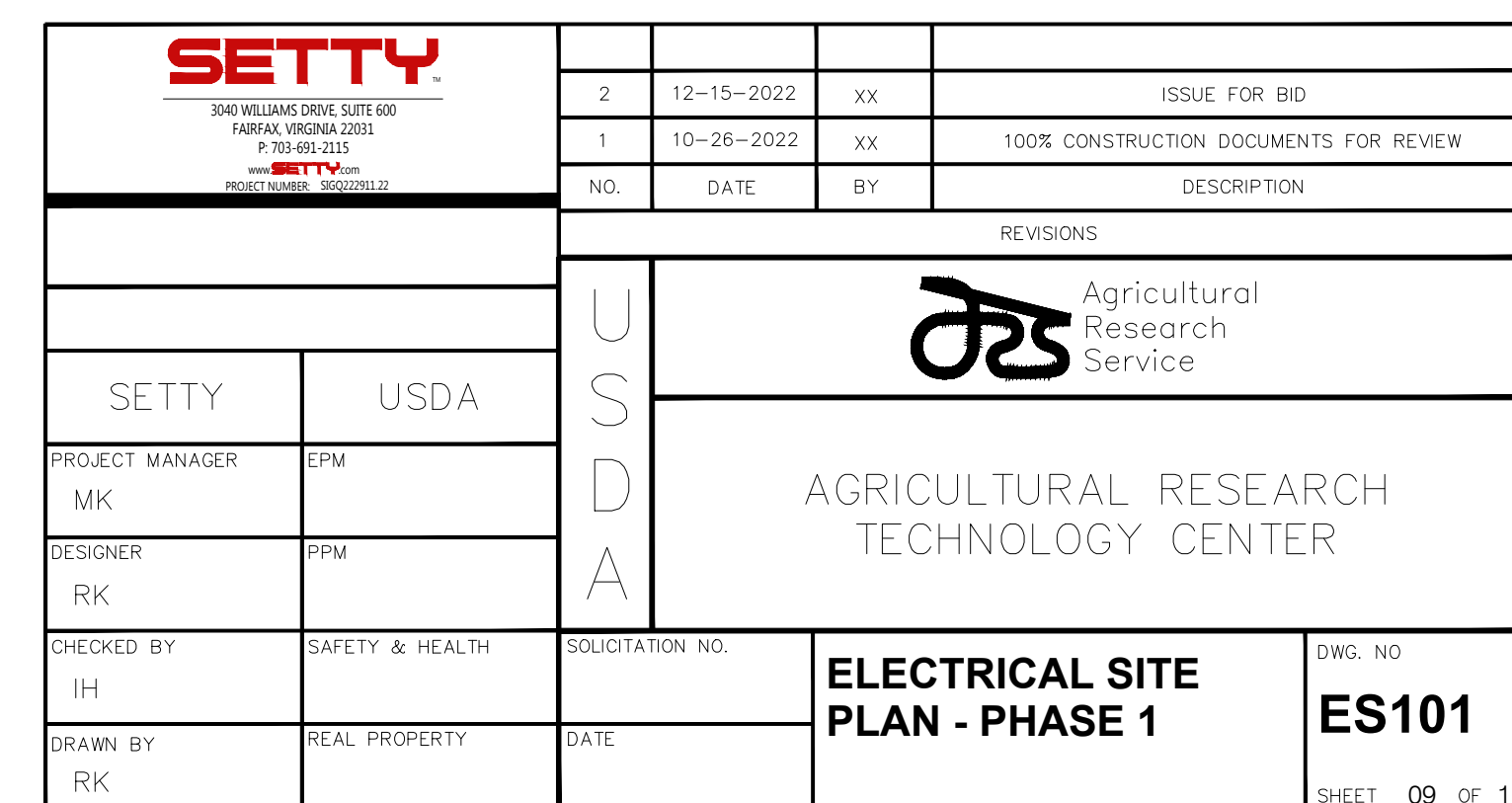
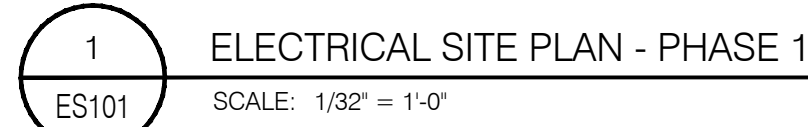
ELECTRICAL GENERAL NOTES				ELECTRICAL GENERAL DEMOLITION NOTES				ELECTRICAL SYMBOL LIST (STANDARD SYMBOLS; ALL SYMBOLS MAY NOT APPEAR ON THE DRAWINGS)				ABBREVIATIONS (STANDARD ABBREVIATIONS; ALL ABBREVIATIONS MAY NOT APPEAR ON THE DRAWINGS)																																																																																																																																																																																							
<p>1. INSTALLATION OF ALL WORK SHALL BE IN ACCORDANCE WITH THE FOLLOWING REGULATIONS, CODES, ETC.:</p> <p>A. LOCAL CODES AND ORDINANCES.</p> <p>B. PRACTICES AND PROCEDURES FOLLOWING OSHA STANDARDS.</p> <p>C. THE EDITION OF THE NATIONAL ELECTRICAL CODE NFPA 70 (NEC) IN EFFECT.</p> <p>D. THE EDITION OF THE INTERNATIONAL BUILDING CODE IN EFFECT.</p> <p>2. BEFORE SUBMITTING BIDS, THE CONTRACTOR SHALL VISIT THE SITE AND EXAMINE ALL ADJOINING EXISTING BUILDINGS, EQUIPMENT, AND SPACE CONDITIONS ON WHICH HIS WORK IS IN ANY WAY DEPENDENT FOR THE BEST WORKMANSHIP AND OPERATION ACCORDING TO THE INTENT OF THE SPECIFICATIONS AND DRAWINGS. CONTRACTOR SHALL REPORT TO THE ARCHITECT/ENGINEER ANY CONDITION WHICH MIGHT PREVENT HIM FROM INSTALLING HIS EQUIPMENT IN THE MANNER SPECIFIED OR AS SHOWN IN CONTRACT DOCUMENTS TEN BUSINESS DAYS PRIOR TO SUBMISSION OF BIDS. NO CONSIDERATION OR ALLOWANCE WILL BE GRANTED FOR FAILURE TO VISIT THE SITE, NOR FOR ANY ALLEGED MISUNDERSTANDING OF MATERIALS TO BE FURNISHED OR WORK TO BE PERFORMED. THE CONTRACTOR SHALL INCLUDE IN HIS BID PRICE ALL LABOR AND MATERIAL THAT MAY AFFECT HIS WORK.</p> <p>3. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCOVERED CONFLICTS BETWEEN EXISTING INSTALLATIONS WHICH ARE NOT SCHEDULED FOR DEMOLITION AND THE NEW WORK INDICATED WITHIN THE CONTRACT DOCUMENTS. SUCH NOTIFICATION SHALL BE ACCOMPANIED BY A DRAWING DELINEATING THE PROPOSED SOLUTION PRIOR TO STARTING ANY WORK IN THE AFFECTED AREA.</p> <p>4. PRIOR TO BEGINNING ANY WORK, SECURE NECESSARY PERMITS OR CLEARANCES FROM THE AUTHORITIES HAVING JURISDICTION. PROVIDE ALL LABOR AND MATERIALS FOR A COMPLETE INSTALLATION. WORK SHALL BE EXECUTED BY EXPERIENCED ELECTRICIANS WHO ARE LICENSED IN THE JURISDICTION WHERE THE PROJECT IS LOCATED.</p> <p>5. CONTRACTOR TO PROVIDE SUFFICIENT NOTICE TO THE OWNERS REPRESENTATIVE PRIOR TO ANY WORK TO ALLOW ADEQUATE TIME FOR COORDINATION OF EXISTING BUILDING ACTIVITIES WITH THE CONSTRUCTION WORK.</p> <p>6. CONTRACTOR TO INCLUDE IN THEIR SCOPE ALL LABOR, MATERIALS, SERVICES, APPARATUS AND SHOP DRAWINGS IN ADDITION TO THE CONTRACT DOCUMENTS AS REQUIRED TO COMPLY WITH ALL APPLICABLE GOVERNING LAWS, CODES AND JURISDICTION REQUIREMENTS. PROVIDE ELECTRICAL EQUIPMENT WITH ALL ASSOCIATED ACCESSORIES, BRANCH CIRCUIT WIRING AND CONDUIT INFRASTRUCTURE AS REQUIRED TO ENSURE A COMPLETE AND OPERATIONAL SYSTEM.</p> <p>7. CONTRACTOR SHALL PROVIDE WRITTEN CERTIFICATION THAT ALL PRODUCTS, MATERIALS AND PROCESSES INSTALLED IN THE SPACE CONTAINS NO ASBESTOS OR PCB.</p> <p>8. DELIVER PRODUCTS TO PROJECT SITE IDENTIFIED WITH NAMES, MODEL, NUMBERS, TYPES, GRADES, COMPLIANCE LABELS, AND OTHER INFORMATION NEEDED FOR DISTINCT IDENTIFICATION; ADEQUATELY PACKAGED AND PROTECTED TO PREVENT DAMAGE DURING SHIPMENT, STORAGE, AND HANDLING. PROTECT STORED EQUIPMENT AND MATERIALS FROM DAMAGE. COMPLY WITH MANUFACTURERS RIGGING AND MOVING INSTRUCTIONS FOR UNLOADING EQUIPMENT AND MOVING INTO FINAL LOCATION.</p> <p>9. ELECTRICAL PLANS ARE DIAGRAMMATIC ONLY. COORDINATE WITH EQUIPMENT VENDOR TO VERIFY EXACT LOCATION AND CONNECTION REQUIREMENTS PRIOR TO INSTALLATION.</p> <p>10. ALL EQUIPMENT SUCH AS RELAYS, SWITCHES, PANELS, AND OTHER APPURTENANCES SHALL HAVE IDENTIFICATION PLATES OF WHITE LAMINATED PLASTIC WITH 1/2" BLACK LETTERS. ALL JUNCTION BOXES IN CEILING CAN BE MARKED WITH BLACK PERMANENT MARKER ON COVER PLATES AS PANEL DESIGNATION AND CIRCUIT NUMBER FROM WHICH THEY ARE FED.</p> <p>11. ALL CONDUCTORS SHALL BE IDENTIFIED. ALL WIRING DEVICES SHALL BE USED WITH TYPED LABEL ON THE COVER PLATE IDENTIFYING THE PANEL DESIGNATION AND CIRCUIT NUMBER FROM WHICH THEY ARE FED.</p> <p>12. CONTROL WIRING SHALL BE TAGGED AT EACH END AND TERMINATED WHERE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH EQUIPMENT MANUFACTURES SPECIFICATIONS.</p> <p>13. ALL CONNECTIONS TO DEVICES SHALL BE TAPED WITH SCOTCH 33 ELECTRICAL TAPE.</p> <p>14. ALL EQUIPMENT SHALL BE "UL" LISTED.</p> <p>15. ALL DEVICES, FIXTURES AND MATERIALS INSTALLED IN A PLENUM RATED ENVIRONMENT SHALL BE LISTED FOR THE APPLICATION.</p> <p>16. ALL MATERIALS AND WORK SHALL BE ACCORDING TO BASE BUILDING SPECIFICATIONS UNLESS OTHERWISE NOTED.</p> <p>17. ALL CONDUITS AND JUNCTION BOXES SHALL BE CONCEALED IN FINISHED AREAS. PRIOR TO CONCEALMENT OF NEW CONSTRUCTION, ALL WORK BEHIND FINISHED SURFACES SHALL BE INSPECTED BY THE OWNERS REPRESENTATIVE.</p> <p>18. IF MATERIAL OR EQUIPMENT IS INSTALLED BEFORE IT IS APPROVED, THE CONTRACTOR SHALL BE LIABLE FOR ITS REMOVAL AND REPLACEMENT AT NO ADDITIONAL CHARGE OR IF IN THE OPINION OF THE ARCHITECT OR ENGINEER, THE MATERIAL OR EQUIPMENT DOES NOT MEET THE INTENT OF THE DRAWINGS AND SPECIFICATIONS.</p> <p>19. ALL SLAB PENETRATIONS MUST BE X-RAYED OR SCANNED WITH A RADAR PRIOR TO CORE DRILLING. OBTAIN APPROVAL FROM OWNERS REPRESENTATIVE PRIOR TO ANY CORE DRILLING.</p> <p>20. PROVIDE FIRESTOPPING MATERIALS TO MAINTAIN INTEGRITY OF THE FIRE RATED CONSTRUCTION WHERE CONDUITS PASS THROUGH WALLS AND FLOORS.</p> <p>21. INSTALLATION OF EQUIPMENT, COMPONENTS AND WIRING FOR ELECTRICAL SYSTEMS SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF EQUIPMENT MANUFACTURER.</p> <p>22. ALL EXISTING PANELS IMPACTED BY THIS PROJECT SHALL BE PROVIDED WITH NEW UPDATED TYPEWRITTEN PANEL SCHEDULES INDICATING THE FINAL ROOM NUMBER AND THE EQUIPMENT OR DEVICES SERVED BY THE CIRCUIT. CONTRACTOR TO BALANCE THE NEW LOADS ON ALL THREE PHASES FOR EACH PANELBOARD WHERE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH EQUIPMENT MANUFACTURERS SPECIFICATIONS.</p> <p>23. CONTRACTOR'S SCOPE OF WORK INCLUDES TRACING ALL EXISTING CIRCUITS IN THE CONSTRUCTION AREA BACK TO SOURCE. IF REMOVAL OF EXISTING ELECTRICAL EQUIPMENT AFFECTS ANY EXISTING CIRCUITS, CONTRACTOR SHALL PROVIDE CIRCUIT BREAKERS, WIRING, CONDUIT, ETC. REQUIRED TO RECONNECT EXISTING-TO-REMAIN ELECTRICAL EQUIPMENT BACK TO SOURCE.</p> <p>24. THE CONTINUITY OF ALL EXISTING CIRCUITS TO REMAIN SHALL BE MAINTAINED.</p> <p>25. ELECTRICAL SYSTEMS SHALL BE GROUNDED PER ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE.</p> <p>26. PROVIDE AN INSULATED EQUIPMENT GROUNDING CONDUCTOR IN ALL BRANCH CIRCUITS AND FEEDERS INSTALLED IN RACEWAYS. THE DEDICATED EQUIPMENT GROUNDING CONDUCTOR SHALL BE SIZED PER NEC SECTION 250.122. SOLE USE OF METAL RACEWAY AS A GROUNDING CONDUCTOR SHALL NOT BE ACCEPTABLE. WIRING METHODS SHALL BE IN ACCORDANCE WITH NEC SECTION 514.4 FOR ALL ASSEMBLY AREAS.</p> <p>27. ALL CONDUCTORS SHALL BE COPPER. MINIMUM SIZE SHALL BE #12 AWG. CONDUCTOR #10 AWG AND SMALLER SHALL BE SOLID. CONDUCTORS #8 AWG AND LARGER SHALL BE STRANDED. CONDUCTOR SHALL HAVE THINW-2 INSULATION OR AS NOTED.</p> <p>28. PROVIDE MINIMUM 3/4" CONDUIT FOR POWER CIRCUITS.</p> <p>29. TYPE MC CABLE MAY BE USED IN LIEU OF EMT FOR BRANCH CIRCUITS, IN DRYWALL PARTITION AND IN CEILING PLENUM WHERE ALLOWED BY NEC AND THE BUILDING OWNER. MC CABLE FOR ISOLATED CIRCUIT SHALL HAVE TWO (2) SEPARATE GROUNDING CONDUCTORS.</p> <p>30. NUMBER OF WIRES MAY NOT BE INDICATED FOR ALL CIRCUITS. ONLY THOSE WHERE CLARIFICATION IS NECESSARY. PROVIDE ALL WIRE NECESSARY FOR THE PROPER FUNCTION OF THE SYSTEM WHETHER INDICATED ON PLAN OR NOT.</p> <p>31. PROVIDE EACH CIRCUIT HOMERUN WITH A DEDICATED NEUTRAL CONDUCTOR AND INSULATED EQUIPMENT GROUNDING CONDUCTOR.</p> <p>32. ALL BACK BOXES INSTALLED IN PARTITION WALLS SHALL BE STAGGERED. BACK-TO-BACK INSTALLATION IS NOT PERMITTED.</p> <p>33. PROVIDE ACCESS PANELS FOR ALL INACCESSIBLE JUNCTION BOXES AS REQUIRED BY THE N.E.C.</p> <p>30. ELECTRICAL CONTRACTOR TO COORDINATE WITH MECHANICAL, PLUMBING AND OTHER TRADES TO PROVIDE ALL EQUIPMENT ASSOCIATED WITH THEIR RESPECTIVE TRADES WITH NECESSARY WIRING AND CONDUIT INFRASTRUCTURE FOR ALL SENSORS, CONTROL SYSTEMS AND REMOTE MOUNTED CONTROL PANELS AS REQUIRED.</p> <p>51. ALL ELECTRICAL WORK, INCLUDING BUT NOT LIMITED TO DEVICES, EQUIPMENT, CONDUITS AND BOXES IN PARKING SPACES AND DRIVE AISLES OF COVERED GARAGE AREAS MUST BE INSTALLED TO MAINTAIN A MINIMUM HEIGHT CLEARANCE OF 96 INCHES FOR HANDICAP SPACES AND 84 INCHES FOR ALL OTHER SPACES.</p> <p>52. CONTRACTOR TO COORDINATE ELECTRICAL WORK TO AVOID INTERFERENCE BETWEEN ALL OTHER TRADES.</p> <p>A. DETERMINE INTERFERENCE BEFORE WORK IS FABRICATED OR INSTALLED. THE CONTRACTOR SHALL BE THOROUGHLY FAMILIAR WITH ALL DETAILS OF WORK AND WORKING CONDITIONS AND COORDINATE WORK DURING PRELIMINARY STAGES TO ENSURE ACTUAL ERECTION WILL PROCEED WITHOUT INTERFERENCE. COORDINATION IS OF PARAMOUNT IMPORTANCE AND NO REQUESTS FOR ADDITIONAL PAYMENT WILL BE CONSIDERED WHERE REQUEST IS BASED ON INTERFERENCE.</p> <p>B. WHERE JOB CONDITIONS REQUIRE REASONABLE DEVIATIONS FROM CONTRACT DOCUMENTS, MAKE DEVIATIONS WITHOUT ADDITIONAL COST TO OWNER, AFTER OBTAINING APPROVAL OF ARCHITECT.</p> <p>C. PROVIDE MAXIMUM PRACTICAL SPACE FOR OPERATION, REPAIR, REMOVAL, AND TESTING OF ELECTRICAL EQUIPMENT. APPROVED DEVIATIONS MAY BE MADE TO PROVIDE REQUIRED ACCESSIBILITY.</p> <p>D. KEEP CONDUITS, WIREWAYS AND SIMILAR ITEMS AS CLOSE AS POSSIBLE TO CEILING, WALLS AND COLUMNS IN ORDER TO TAKE UP MINIMUM AMOUNT OF SPACE. ALL WORK TO BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER.</p> <p>E. PROVIDE OFFSETS, FITTINGS AND SIMILAR ITEMS NECESSARY TO ACCOMPLISH REQUIREMENTS OF COORDINATION WITHOUT ADDITIONAL EXPENSE TO OWNER.</p> <p>F. PROVIDE ACCESS TO AND CLEARANCES AROUND EQUIPMENT AS REQUIRED BY THE N.E.C.</p> <p>54. TESTING:</p> <p>A. TEST AND ADJUST EQUIPMENT AND SYSTEMS INSTALLED AND DEMONSTRATE PROPER OPERATION TO OWNERS REPRESENTATIVE. NO EQUIPMENT SHALL BE TESTED OR OPERATED FOR ANY PURPOSE UNTIL IT HAS BEEN FULLY PREPARED FOR OPERATION IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.</p> <p>B. SHOW, BY DEMONSTRATION IN SERVICE, THAT ALL CIRCUITS AND DEVICES ARE IN GOOD OPERATING CONDITION. EACH PIECE OF EQUIPMENT AND COMPONENT OF THE ELECTRICAL SYSTEM SHALL FUNCTION NOT LESS THAN FIVE TIMES IN COURSE OF THE ACCEPTANCE TESTS.</p> <p>C. FUNCTIONAL TESTING FOR LIGHTING CONTROL SYSTEM SHALL BE IN ACCORDANCE WITH IECC. THE ELECTRICAL CONTRACTOR SHALL ENSURE THAT CONTROL HARDWARE AND SOFTWARE ARE CALIBRATED, ADJUSTED, PROGRAMMED, AND IN PROPER WORKING CONDITION, PER CONSTRUCTION DOCUMENTS AND FACTORY INSTRUCTIONS.</p> <p>120V BRANCH CIRCUIT WIRING CONDUCTOR SIZE</p> <p>DEPENDING ON BRANCH CIRCUIT RUN LENGTH FROM PANELBOARD TO THE LAST DEVICE ON THE BRANCH CIRCUIT, THE CONTRACTOR SHALL INCREASE THE BRANCH CIRCUIT WIRE SIZE AS PER THE TABLE BELOW.</p> <p>MAXIMUM #10 WIRE SHALL BE USED FOR GENERAL RECEPTACLE CIRCUIT WIRING.</p> <table><thead><tr><th>LENGTH (FEET)</th><th>VOLTAGE (V)</th><th>AMPACITY (A)</th><th>WIRE SIZE (AWG TYP.)</th></tr></thead><tbody><tr><td>0-66</td><td>120</td><td>20</td><td>#12</td></tr><tr><td>0-102</td><td>120</td><td>20</td><td>#10</td></tr></tbody></table>				LENGTH (FEET)	VOLTAGE (V)	AMPACITY (A)	WIRE SIZE (AWG TYP.)	0-66	120	20	#12	0-102	120	20	#10	<p>1. GENERAL:</p> <p>A. BEFORE SUBMITTING THEIR BID, THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE TO VERIFY THE EXISTING CONDITIONS AND SCOPE OF WORK AREA. NO CONSIDERATION OR ALLOWANCE WILL BE GRANTED FOR FAILURE TO VISIT THE SITE, NOR FOR ANY ALLEGED MISUNDERSTANDING OF WORK TO BE PERFORMED. THE CONTRACTOR SHALL INCLUDE IN HIS BID PRICE ALL LABOR AND MATERIAL THAT MAY AFFECT HIS WORK.</p> <p>B. THE GENERAL EXTENT OF EXISTING ELECTRICAL WORK TO BE DISMANTLED AND REMOVED OR RELOCATED IS INDICATED ON THE DRAWINGS.</p> <p>C. ALL COMPONENTS ASSOCIATED WITH SYSTEMS AND EQUIPMENT TO BE REMOVED OR RELOCATED MAY NOT BE SPECIFICALLY INDICATED. REMOVE ALL ASSOCIATED ELECTRICAL ACCESSORIES AND COMPONENTS INCLUDING BUT NOT LIMITED TO HANGERS, WIRING, CONDUIT, BOXES AND ALL ADDITIONAL MISCELLANEOUS ITEMS RELATED TO THE EXISTING EQUIPMENT INDICATED TO BE REMOVED OR RELOCATED. REMOVE ALL ASSOCIATED WIRING AND CONDUIT BACK TO THE SOURCE OF SUPPLY IN EXISTING CIRCUITS WHICH ARE TO BE DEMOLISHED. UNLESS SPECIFICALLY INDICATED, NO EQUIPMENT, MATERIALS OR ASSOCIATED COMPONENTS SHALL BE ABANDONED IN PLACE.</p> <p>D. ABANDON ALL CONDUITS CONCEALED IN CONCRETE WALLS OR SLABS. REMOVE ALL WIRING FROM ABANDONED CONDUITS BACK TO SOURCE OF SUPPLY.</p> <p>2. DISPOSAL OF DEMOLITION:</p> <p>A. CONTRACTOR SHALL CLEAN THE PROJECT SITE AT THE END OF EACH WORKING DAY. NOTIFY THE BUILDING OWNER PRIOR TO DISPOSAL OF DEMOLISHED MATERIALS TO ALLOW SALVAGE OF ANY USABLE MATERIALS. AFTER INSPECTION FROM THE OWNERS REPRESENTATIVE, ALL UNUSED MATERIALS SHALL BE REMOVED FROM THE JOB SITE WITH DISPOSAL IN ACCORDANCE WITH APPLICABLE SPECIFICATIONS AND REGULATIONS.</p> <p>3. PROTECTION:</p> <p>A. PROTECT FROM DAMAGE ALL EXISTING EQUIPMENT, DEVICES AND MATERIALS TO REMAIN. ANY EXISTING MATERIALS AND EQUIPMENT DAMAGED DURING THE COURSE OF THE CONSTRUCTION PROCESS SHALL BE REPLACED WITH MATERIALS AND EQUIPMENT CONFORMING TO EXISTING SPECIFICATIONS AT NO ADDITIONAL COST TO THE OWNER.</p> <p>4. TERMINATION AND PATCHING:</p> <p>A. DISCONNECT EXISTING EQUIPMENT AND DEVICES WITH ASSOCIATED ACCESSORIES, CONDUIT AND WIRING BACK TO SOURCE OF SUPPLY.</p> <p>B. WHERE EXISTING FLOORS, WALLS AND ROOFS MUST BE CUT OR ARE DAMAGED DURING THE CONSTRUCTION PROCESS, PATCH THE CUT OR DAMAGED AREAS TO MATCH THE ADJACENT CONSTRUCTION.</p> <p>C. THE CONTINUITY OF ALL EXISTING CONDUITS AND FEEDERS SERVICING AREAS AND EQUIPMENT TO REMAIN SHALL BE MAINTAINED. MODIFY THE EXISTING CIRCUITS IF REQUIRED IN ORDER TO MAINTAIN THE EXISTING CIRCUITRY.</p>				<div><div><div><div></div><div>FULL BOX</div></div><div><div>-----</div><div>CONDUIT ROUTING</div></div><div><div><div>DUCT BANK ROUTING</div></div></div><div><div><div>CONTINUATION CIRCUIT</div></div></div><div><div><div>FUSIBLE DISCONNECT SWITCH</div></div></div><div><div><div>ELECTRICAL PANEL</div></div></div><div><div><div>DRY TYPE TRANSFORMER</div></div></div><div><div><div>KEYED DRAWING NOTE</div></div></div></div></div>				<table><tr><td>A</td><td>AMPERE</td><td>MCA</td><td>MINIMUM CIRCUIT AMPS</td></tr><tr><td>ADA</td><td>AMERICANS WITH DISABILITIES ACT</td><td>MCB</td><td>MAIN CIRCUIT BREAKER</td></tr><tr><td>AF</td><td>FUSE RATING IN AMPS</td><td>MDP</td><td>MAIN DISTRIBUTION PANEL</td></tr><tr><td>AFB</td><td>ABOVE FINISHED FLOOR</td><td>MISC</td><td>MISCELLANEOUS</td></tr><tr><td>AHJ</td><td>AUTHORITY HAVING JURISDICTION</td><td>MLO</td><td>MAIN LUGS ONLY</td></tr><tr><td>AL</td><td>ALUMINUM</td><td>MOC</td><td>MAXIMUM OVERCURRENT PROTECTION</td></tr><tr><td>ANSI</td><td>AMERICAN NATIONAL STANDARDS INSTITUTE</td><td>N</td><td>NEW</td></tr><tr><td>ASHRAE</td><td>AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS</td><td>NEC</td><td>NATIONAL ELECTRICAL CODE</td></tr><tr><td>AT</td><td>TRIP RATING IN AMPS</td><td>NEMA</td><td>NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION</td></tr><tr><td>ATS</td><td>AUTOMATIC TRANSFER SWITCH</td><td>NFPA</td><td>NATIONAL FIRE PROTECTION ASSOCIATION</td></tr><tr><td>AWG</td><td>AMERICAN WIRE GAUGE</td><td>NFSS</td><td>NON FUSED SAFETY SWITCH</td></tr><tr><td>CB</td><td>CONDUIT CIRCUIT BREAKER</td><td>NL</td><td>NIGHT LIGHT FIXTURE</td></tr><tr><td>CU</td><td>COPPER</td><td>NTS</td><td>NOT TO SCALE</td></tr><tr><td>D</td><td>EXISTING TO BE DEMOLISHED</td><td>OSHA</td><td>OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION</td></tr><tr><td>DISC. 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1. REFER TO DRAWING E001 FOR ELECTRICAL GENERAL NOTES, LEGEND AND ABBREVIATIONS.
2. COORDINATE WITH CIVIL AND LANDSCAPE PLANS FOR EXACT LOCATION, DETAILS AND ADDITIONAL INFORMATION. PRIOR TO ROUGH-IN WORK.
3. UTILIZE HAND DIGGING WHERE WORK IS REQUIRED IN THE VICINITY OF KNOWN UNDERGROUND UTILITIES. TAKE ALL NECESSARY PRE-CAUTIONS SO NO EXISTING UTILITIES GET ACCIDENTALLY DAMAGED.
4. FIELD COORDINATE THE EXACT LOCATION OF UNDERGROUND CONDUITS WITH ALL OTHER UNDERGROUND UTILITIES AND THE SITE CONDITIONS.
5. FIELD COORDINATE ALL UNDERGROUND CONDUITS AND DUCT BANK LOCATION/ROUTING WITH THE SITE CONDITIONS AS WELL AS STREET, SIDEWALK, FOOTWALKS, AND ONLY AFTER APPROVAL BY STRUCTURAL AND CIVIL ENGINEERS.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGES TO ALL CONCRETE & STRUCTURE. EXISTING DAMAGES WILL BE MARKED ON A PRE-CONSTRUCTION WALK THROUGH.
7. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. FOLLOW DRAWINGS IN LAYING OUT, VERIFY FIELD CONDITIONS AND COORDINATE WITH EXISTING CONDITION.
8. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES, INCLUDING REQUIREMENTS OF LOCAL AUTHORITIES.
9. ASPHALT PAVEMENT, CONCRETE, FENCES, VEGETATION, GRASS AND GRAVEL AREAS WHICH HAVE BEEN DISTURBED SHALL BE RESTORED AND REPAINTED TO MATCH EXISTING.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL CONSTRUCTION PERMITS AND SCHEDULING ALL INSPECTION. ALL FINAL INSPECTIONS SHALL BE COMPLETED BEFORE ACCEPTANCE BY THE OWNER.
11. WHERE UNDERGROUND WIRING CROSSES EXISTING SIDEWALK OR ROADWAY, BORE SLEEVE BELOW WITHOUT DISTURBING OR DAMAGING SURFACE ABOVE. PROVIDE SCHEDULE 40 PVC SLEEVE IN BORED HOLE FOR CONDUIT TO ROUTE THROUGH.

1. PROPOSED 2004, 2008/2012, 3 PHASE UTILITY SERVICE. COORDINATE WITH UTILITY COMPANY FOR EXACT ROUTING AND ADDITIONAL INFORMATION.
2. PROVIDE NEW CONDUIT (4 #30AWG + 1 #6 AWG IN 2" C) TO EXISTING DISCONNECT SWITCH.
3. ROUTE (4") CONDUITS FOR POWER CONDUCTORS INTO PULL BOX OR PULLING ELBOWS ON EXTERIOR WALL AT 8'-0" AFG. REFER TO DETAIL 3 ON SHEET ES102 FOR MORE INFORMATION.
4. ROUTE (2") CONDUITS FOR LOW VOLTAGE CABLING INTO PULL BOX OR PULLING ELBOWS ON EXTERIOR WALL AT 8'-0" AFG. REFER TO DETAIL 3 ON SHEET ES102 FOR MORE INFORMATION.
5. ROUTE 3/4" CONDUIT FOR POWER CONDUCTORS INTO PULL BOX OR PULLING ELBOW ON EXTERIOR WALL AT 8'-0" AFG. REFER TO DETAIL 3 ON SHEET ES102 FOR MORE INFORMATION.
6. ROUTE NEW CONDUITS IN PREPARATION FOR EXTENDING CONDUITS TO EXISTING PULL BOXES.










## GENERAL NOTES

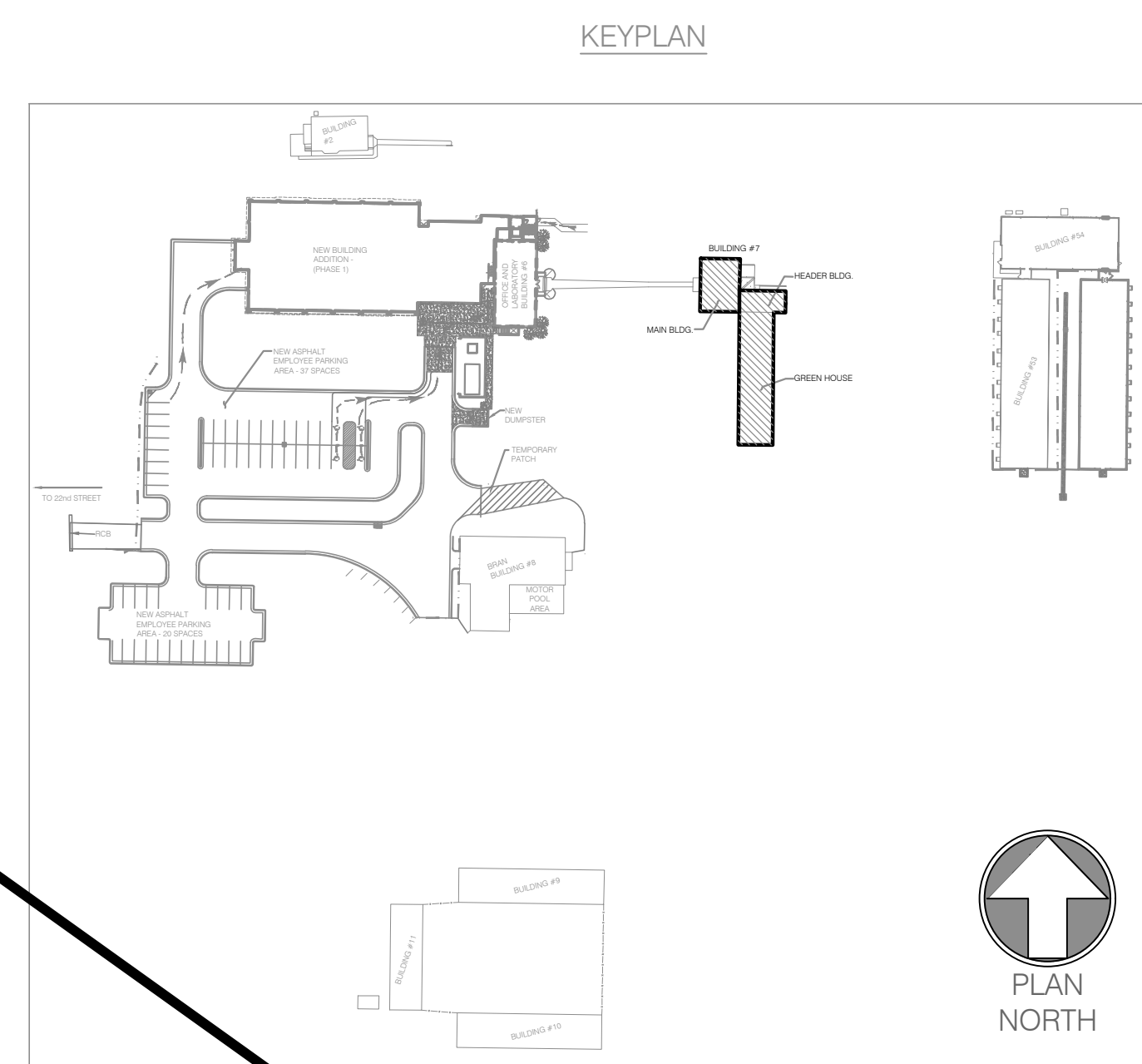
1. COORDINATE WITH OWNER PRIOR TO DISCONNECTING PREVIOUS FEEDERS. ALL POSSIBLE PREPARATION WORK FOR NEW FEEDERS MUST BE COMPLETE PRIOR TO DISCONNECTING PREVIOUS FEEDERS TO MINIMIZE DOWNTIME.
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11. WHERE UNDERGROUND WIRING CROSSES EXISTING SIDEWALK OR ROADWAY, BOREHOLE SHALL CROSS WITHOUT DISTURBING OR DAMAGING SURFACE. SEE PROJECT SCHEDULE 4 PVC SLEEVE IN BORED HOLE FOR CONDUIT TO ROUTE THROUGH.
12. UNDERGROUND CONDUIT SHOWN AS REMOVED MAY REMAIN ABANDONED UNDERGROUND IF APPROVED BY OWNER.

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# SHEET KEY NOTES

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1. CUT AND ABANDON DUCT BANK AT EXCAVATION LIMIT FOR BUILDING  
7 DEMOLITION.



Original drawing size is 30"x42"; Scale entities accordingly if reduced/enlarged