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Exceeding Your Expectations

Lizardos

Mechanical & Electrical Engineering

200 Old Country Road, Suite 670
Mineola, NY 11501
Phone: (516) 484-1020
Fax: (516) 484-0926
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Notes

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RICHMOND UNIVERSITY MEDICAL CENTER
TRANSFORMATIONAL GRANT







669 CASTLETON AVENUE, STATEN ISLAND, NY
SECOND FLOOR PROPOSED RENOVATION

MECHANICAL LEGENDS, NOTES, AND ABBREVIATIONS

Project No.	Scale
7024.02	AS NOTED

Drawing No.	Sheet	Revision
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1 of 9

HVAC LEGEND	
SYMBOL	DESCRIPTION
 DR 	DRAIN LINE
 HHWR 	HEATING HOT WATER RETURN
 HHWS 	HEATING HOT WATER SUPPLY

<u>DUCTWORK CLASS</u>			
<u>SYSTEM</u>	<u>DUCT PRESSURE CLASS</u>	<u>DUCT SEAL CLASS</u>	<u>DUCT LEAK CLASS</u> <u>CFM/100SF</u>
SUPPLY	+4" W.G.	A	4
RETURN	-2" W.G.	A	4
EXHAUST	-2" W.G.	A	4

ABBREVIATIONS	
AB	ABOVE
AFF	ABOVE FINISHED FLOOR
BEL	BELOW
CLG	CEILING
CONN	CONNECT, CONNECTIONS
DIA	DIAMETER
DN	DOWN
DWG	DRAWING
EL	ELEVATION
FF	FINISHED FLOOR
FL	FLOOR
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
BHP	BRAKE HORSEPOWER
HP	HORSEPOWER
MFR	MANUFACTURER
OAI	OUTSIDE AIR INTAKE
AD	ACCESS DOOR
PSIG	POUNDS PER SQUARE INCH GAUGE
TYP	TYPICAL
ΔT	TEMPERATURE DIFFERENCE IN °F.
\square	SQUARE FEET
EA	EACH
MBH	THOUSANDS OF BTU PER HOUR
SP	STATIC PRESSURE
RPM	ROTATIONS PER MINUTE
NO.	NUMBER
V	VOLTS
PH	PHASE
KW	KILOWATTS
ENT	ENTERING
LVG	LEAVING
EFF	EFFICIENCY
DB	DRY BULB
WB	WET BULB
HZ	HERTZ (CYCLES PER SECOND)

EQUIPMENT TAGS	
TAGNO	DESCRIPTION
ACCU/1	AIR CONDENSING UNIT NO.1
EF/1	EXHAUST FAN NO. 1
CH/1	CHILLER NO. 1
VAV/1	VARIABLE AIR VOLUME BOX NO. 1

DEMOLITION NOTES:

1. PROVIDE ALL LABOR, MATERIAL, EQUIPMENT, STORAGE FACILITIES, SERVICES AND SUPERVISION NECESSARY FOR THE DEMOLITION WORK AS INDICATED ON DRAWINGS AND SPECIFIED HEREIN.
2. ALL EXISTING EQUIPMENT, MATERIALS AND WORK SHALL BE PROTECTED FROM DAMAGE DURING DEMOLITION. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL DAMAGE OCCURRING FROM HIS WORK.
3. ALL WORK SHALL BE EXECUTED IN AN ORDERLY AND CAREFUL MANNER WITH DUE CONSIDERATION FOR PUBLIC SAFETY AND IN CONFORMANCE WITH OSHA REGULATIONS.
4. CONTRACTOR SHALL PROVIDE BARRIERS TO PREVENT DUST, ODORS, DIRT AND DEBRIS FROM MIGRATING TO AREAS NOT AFFECTED BY THIS WORK.
5. REMOVAL OF ANY MATERIAL AND EQUIPMENT SHALL INCLUDE ALL ASSOCIATED ITEMS SUCH AS FASTENERS, SUPPORTS, CONDUIT, FLASHING, ADHESIVE, ETC.
6. REMOVE DEBRIS AS IT ACCUMULATES. DO NOT STORE OR PERMIT DEBRIS TO ACCUMULATE ON SITE. IF THE CONTRACTOR FAILS TO REMOVE DEBRIS PROMPTLY OR PROPERLY, THE OWNER SHALL REMOVE IT AT THE CONTRACTOR'S EXPENSE.
7. EXISTING EQUIPMENT OR MATERIALS NOT SHOWN TO BE RE-USED BY OWNER, OR NOT SHOWN ON THE DRAWINGS TO BE RETAINED BY THE OWNER SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE PREMISES.
8. PRIOR TO SUBMISSION OF BID, THE CONTRACTOR SHALL VISIT THE SITE AND EXAMINE THE EXISTING CONDITIONS AND SHALL INCLUDE ALL COSTS FOR REMOVALS IN THE CONTRACT. THESE COSTS SHALL INCLUDE WORK BEYOND THAT SHOWN ON THE DRAWINGS WITH ALLOWANCES FOR UNFORESEEN FIELD CONDITIONS. NO CLAIMS FOR ADDITIONAL WORK ASSOCIATED WITH DEMOLITION WILL BE ACCEPTED, EXCEPT IN SPECIFIC CASES CONSIDERED JUSTIFIABLE BY THE ENGINEER.
9. THE CONTRACTOR SHALL DISCONNECT AND REMOVE ALL ELECTRICAL OUTLETS, SWITCHES AND OTHER DEVICES, COMPLETE WITH ASSOCIATED WIRING AND CONDUITS, ETC. FROM PARTITIONS AND OTHER WORK THAT IS TO BE REMOVED. CONDUIT AND WIRING SHALL BE REMOVED BACK TO THE NEAREST ELECTRICAL JUNCTION BOX THAT IS TO REMAIN OR TO THE PANELBOARD.
10. TAKE POSSESSION AND REMOVE FROM THE PREMISES ALL ABANDONED MATERIALS AND EQUIPMENT UNLESS OTHERWISE REQUESTED BY THE OWNER, IN WHICH CASE REMOVE WITHOUT DAMAGE ALL SUCH EQUIPMENT AND DELIVER TO OWNER WITHIN BUILDING AT LOCATION DESIGNATED BY THE OWNER.
11. CONTRACTOR SHALL TRACE ALL CONDUITS AND WIRING BEFORE REMOVAL TO ENSURE THAT SERVICES AND CIRCUITS TO AREAS THAT WILL REMAIN ARE NOT INTERRUPTED.
12. ORDINANCES, ALL CHARGES ASSOCIATED WITH TESTING, FILING, DISPOSAL, PREPARATION AND SUBMISSION OF ALL REQUIRED DOCUMENTATION SHALL BE INCLUDED IN THE CONTRACTOR'S BID. ALL REQUIRED FORMS, RECORDS, TEST, DISPOSAL AND TRANSPORTATION COSTS AND THE LIKE SHALL BE INCLUDED IN THE CONTRACTOR'S PROPOSAL AND SUBMITTED TO OWNER. NO ADDITIONAL COSTS SHALL BE PAID TO THE CONTRACTOR BECAUSE OF THE CONTRACTOR'S FAILURE TO COMPLY WITH THE ABOVE.
13. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL DEMOLITION WORK.

DUCTWORK NOTES:

- | | | | |
|----|--|-----|---|
| 1. | THE MATERIALS, THICKNESS AND CONSTRUCTION OF SHEET METAL DUCTS SHALL PROVIDE STRUCTURAL STRENGTH AND DURABILITY. DUCTS SHALL BE CONSTRUCTED, BRACED AND REINFORCED IN ACCORDANCE WITH LOW PRESSURE AND HIGH PRESSURE DUCT STANDARDS OF THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA) LATEST EDITION IN PRINT OR IN ACCORDANCE WITH THE FUNDAMENTALS VOLUME BOOK OF THE AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING ENGINEERS (ASHRAE), LATEST EDITION IN PRINT. | 1. | PIPEING, ETC., AND/OR WHERE EXISTING FIREPROOFING HAS BEEN REMOVED AS A RESULT OF EXISTING OR NEW CONSTRUCTION WORK THE CONTRACTOR SHALL CLOSE AND/OR PATCH AS REQUIRED ALL OPENINGS TO MATCH IMMEDIATE ADJACENT AREAS IN MATERIAL, FINISH AND FIRE RATING. |
| 2. | DUCTS SHALL BE SUBSTANTIALLY SUPPORTED. HANGERS AND BRACKETS FOR SUPPORTING DUCTS SHALL BE OF METAL. HANGERS SHALL HAVE SUFFICIENT STRENGTH AND DURABILITY AND SUPPORT RESISTANCE TO THE CORROSIVE EFFECTS OF THE ATMOSPHERE TO WHICH THEY WILL BE EXPOSED, TO PROPERLY AND SAFELY SUPPORT THE DUCTWORK. HANGERS SHALL NOT BE USED IN DIRECT CONTACT WITH A DISSIMILAR METAL THAT WOULD CAUSE GALVANIC ACTION IN THE HANGER, DUCT, FASTENINGS OR STRUCTURE. | 2. | ONCE WORK HAS STARTED THE CONTRACTOR SHALL REMAIN ON SITE FOR THE DURATION UNTIL PROJECT COMPLETION. ANY ABSENCE FROM THE JOBSITE WITHOUT OWNER KNOWLEDGE SHALL BE CAUSE FOR DELAY AND THE CONTRACTOR SUBJECTED TO POSSIBLE BACK CHARGES. |
| 3. | HANGERS SHALL CONFORM TO THE FOLLOWING MINIMUM REQUIREMENTS: | 3. | ALL ACCEPTANCE TESTING SHALL BE WITNESSED BY THE OWNER OR THE OWNERS REPRESENTATIVE. |
| 4. | HANGERS SHALL BE FASTENED TO THE SIDES OF DUCT, FOR DUCTS OVER 48 INCHES WIDE, HANGERS SHALL TURN UNDER DUCT AT LEAST TWO INCHES AND SHALL BE FASTENED TO THE BOTTOM AS WELL AS TO THE SIDES. | 4. | THE CONTRACTOR SHALL MAINTAIN THE WORK AREA IN A STATE FREE FROM HAZARDS AND A NEAT AND CLEAN CONDITION AT THE END OF EACH WORKDAY. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS, FOLLOW SAFE WORKING PRACTICES, AND MAINTAIN THE SITE AND ADJACENT AREAS SAFE FOR WORKERS AND FACILITY EMPLOYEES. JOB BOX SAFETY MEETINGS SHALL BE HELD EVERY WEEK. |
| 5. | FOR DUCTS WITH A CROSS-SECTIONAL AREA OF TWO SQUARE FEET OR LESS, HANGERS SHALL BE CONSTRUCTED OF AT LEAST ONE INCH BY 1/16 INCH STEEL STRAP. | 5. | ALL MATERIALS, TOOLS, TRUCKS ETC. SHALL BE STORED IN AREAS DESIGNATED BY THE OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR PRODUCT STORAGE CONDITIONS AND SECURITY. THE OWNER SHALL NOT BE RESPONSIBLE FOR ANY OF THE CONTRACTORS SHIPPING, DELIVERY OR OFFLOADING. |
| 6. | FOR DUCTS WITH A CROSS SECTIONAL AREA OVER TWO SQUARE FEET, HANGERS SHALL BE CONSTRUCTED OF THREADED STEEL ROD (MINIMUM 1/2"-DIAMETER) WITH STEEL SINGLE TRAPEZE SUPPORTS. | 6. | ALL WORK BY THE CONTRACTOR SHALL BE GUARANTEED FOR A PERIOD OF NO LESS THAN ONE YEAR FROM THE DATE OF ACCEPTANCE. THIS GUARANTEE SHALL INCLUDE ALL WORK PERFORMED BY ANY AND ALL OF HIS SUBCONTRACTORS. THE PRIME CONTRACTOR SHALL MAKE GOOD ON ALL SUBCONTRACTOR WORK DURING THIS PERIOD. |
| 7. | DUCTS AND ALL PARTS OF THE DUCT SYSTEM SHALL BE SUBSTANTIALLY SUPPORTED AND SECURELY FASTENED TO THE STRUCTURAL MEMBERS OF THE BUILDING WITH APPROVED DEVICES OF NONCOMBUSTIBLE MATERIAL DESIGNED TO CARRY THE REQUIRED LOADS. THE USE OF EXPANSION BOLTS IN CINDER CONCRETE IS PROHIBITED. CONNECTIONS SHALL NOT IMPAIR THE EFFECTIVENESS OF THE FIRE PROTECTION OF STRUCTURAL MEMBERS. | 7. | PREPARE AND FURNISH TO THE OWNER "AS-BUILT" DRAWINGS. |
| 8. | DUCTS SHALL NOT BE HUNG FROM OR SUPPORTED BY SUSPENDED CEILINGS. | 8. | MAINTENANCE MANUALS SHALL BE PROVIDED TO THE OWNER FOR ALL EQUIPMENT AND SYSTEMS REQUIRING PREVENTATIVE MAINTENANCE. REGULAR MAINTENANCE ACTIONS SHALL BE CLEARLY STATED AND INCORPORATED ON A READY ACCESSIBLE LABEL. THE LABEL SHALL INCLUDE THE TITLE FOR THE OPERATION AND MAINTENANCE AND MAINTENANCE MANUAL FOR THAT PARTICULAR MODEL. |
| 9. | GALVANIZED SHEET STEEL: LOCK-FORMING QUALITY, ASTM A 527, COATING DESIGNATION G 90. | 9. | THREE BOUND MANUALS SHALL BE SUBMITTED UPON COMPLETION WITH MAINTENANCE INSTRUCTIONS, PARTS LIST AND MANUFACTURERS WARRANTIES. WARRANTED FROM THE INSTALLING CONTRACTOR SHALL ALSO BE PROVIDED AT THIS TIME. COPIES OF THE AS-BUILT AND TEST RESULTS SHALL BE SUBMITTED AT THIS TIME. |
| | | 10. | IT IS A VIOLATION OF STATE LAW TO FOR ANY PERSON OR PERSONS TO ALTER THESE PLANS. ANY MODIFICATIONS SHALL BE UNDER THE DIRECTION OF A LICENSED ENGINEER. |

GENERAL NOTES:

- ALL WORK SHALL BE PERFORMED BY PROFESSIONALS IN THE FIELD AND COMPLY WITH THE APPLICABLE REGULATIONS OF DECEDER, DECEDE, OSHA AND OWNER'S WORK RULES.
- ALL NOTES PROVIDED IN THESE DOCUMENTS ARE PART OF THE CONTRACT AND CARRY EQUAL VALUE.
- THE CONTRACTOR SHALL BE REQUIRED FOR ALL PERMITS AND BE RESPONSIBLE TO ARRANGE AND SECURE ALL NECESSARY INSPECTIONS. A FINAL INSPECTION CERTIFICATE SHALL BE REQUIRED TO BE SUBMITTED WITH THE FINAL PAYMENT APPLICATION.
- ONLY EXPERIENCED CONTRACTORS MAY BID OR PERFORM THE WORK INCLUDED IN THIS PROJECT. PROOF OF EXPERIENCE SHALL BE REQUIRED PRIOR TO ISSUANCE OF ANY CONTRACT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK, MATERIALS AND ITEMS PERFORMED BY ANY SUBCONTRACTORS. PLANNED LIST OF SUBCONTRACTORS SHALL BE SUBMITTED TO THE OWNER FOR REVIEW AND APPROVAL. NO SUBCONTRACTOR SHALL PERFORM WORK ON-SITE WITHOUT A REPRESENTATIVE OF THE PRIME CONTRACTOR HOLDER, OR HIS DESIGNATED REPRESENTATIVE ON-SITE.
- THE GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, STANDARD FORM OF THE AMERICAN INSTITUTE OF ARCHITECTS, CURRENT EDITION, SHALL APPLY TO ALL WORK ON THIS CONTRACT, EXCEPT AS SPECIFICALLY MODIFIED BY THESE NOTES OR ADDITIONAL CONDITIONS IN THE CONTRACT DOCUMENTS.
- PRIOR TO BEGINNING ANY WORK, THE CONTRACTOR SHALL FURNISH A CONSTRUCTION SCHEDULE SHOWING THE CHRONOLOGICAL PHASES OF HIS WORK, AND ALL RELATED WORK FOR THE COMPLETION OF THE PROJECT. THIS SCHEDULE SHALL INDICATE ALL ORDERING LEAD TIME, LENGTH OF TIME FOR EACH PHASE, ITS START AND COMPLETION, WITH A PROJECTED COMPLETION DATE. INITIAL SCHEDULE SHALL BE SUBMITTED WITHIN TWO WEEKS AFTER THE NOTICE OF AWARD, AND UPDATED EVERY TWO MONTHS THEREAFTER.
- ALL WORK PERFORMED BY THE CONTRACTOR/SUB-CONTRACTORS SHALL CONFORM TO THE REQUIREMENTS OF MUNICIPAL, LOCAL OR FEDERAL AND STATE LAWS, AS WELL AS ANY OTHER GOVERNING REQUIREMENTS, WHETHER OR NOT SPECIFIED ON THE DRAWINGS.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND JOBSITE CONDITIONS BEFORE SUBMISSION OF HIS PROPOSAL. UPON SUBMISSION OF THE PROPOSAL, THE CONTRACTOR ACCEPTS RESPONSIBILITY FOR ALL JOBSITE CONDITIONS AND ACCEPTS THAT NO CONSIDERATION WILL BE GRANTED FOR ANY MISUNDERSTANDING OF THE WORK REQUIRED MATERIALS TO BE SUPPLIED OR ACCESS TO WORK AREAS.
- THE CONTRACTOR SHALL NOTIFY THE OWNER OR OWNERS' REPRESENTATIVE OF ANY FIELD CONDITIONS THAT DO NOT AGREE WITH THE CONTRACT DOCUMENTS OR THAT MAY PRESENT PROBLEM WITH COMPLETING THE WORK AS REQUIRED.
- THE CONTRACTOR SHALL SOLELY RESPONSIBLE FOR JOBSITE SAFETY AND SHALL ARRANGE WORK IN SUCH A MANNER TO PROVIDE FOR SAFE ACCESS FOR OWNER INSPECTION OF ALL WORK.
- ANY FORCED STOPPAGE OF WORK BY THE OWNER OR AGENCY DUE TO NONCOMPLIANCE FOR SAFETY, ACCESS, MATERIAL OR WORK PRACTICE SHALL NOT BE CAUSE FOR CLAIM BY THE CONTRACTOR.
- THE CONTRACT DOCUMENTS GENERALLY SHOW THE WORK REQUIRED TO COMPLETE THE SCOPE OF WORK REQUIRED. IT SHALL NOT BE RESPONSIBLE TO NOTE EVERY DETAIL OR PRODUCT THAT CAN BE REASONABLY ASSUMED AS COMMON KNOWLEDGE TO EXPERT AND EXPERIENCED CONTRACTORS IN THE FIELD.
- THE TERMS "PROVIDE" OR "FURNISH AND INSTALL" SHALL INCLUDE ALL LABOR, MATERIALS, DEVICES, WIRING, RIGGING, SUPPORTS, DELIVERY ETC. THAT WOULD BE NECESSARY TO PROVIDE FOR A FULLY FUNCTIONAL DEVICE AS INDICATED.
- ALL MATERIAL SHALL BE NEW, REBUILT OR REFURBISHED MATERIALS SHALL BE REJECTED.
- ALL MATERIALS, TOOLS, TRUCKS ETC. SHALL BE STORED IN AREAS DESIGNATED BY THE OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR PRODUCT STORAGE CONDITIONS AND SECURITY.
- ALL WORK SHALL BE PERFORMED WITH MINIMAL INTERRUPTION TO THE OWNER. ANY WORK REQUIRING UTILITY SHUTDOWN, ROAD EXCAVATION, OR OTHER DISRUPTION SHALL NOT BE DONE WITHOUT OWNER APPROVAL. CONTRACTOR SHALL NOTIFY THE OWNER AT LEAST 72 HOURS IN ADVANCE OF ANY SUCH INTERRUPTION. ANY WORK REQUIRING A SHUTDOWN OR INTERRUPTION LASTING MORE THAN 8 HOURS SHALL BE SCHEDULED WITH THE FACILITY A MINIMUM OF 2 WEEKS PRIOR.
- THE CONTRACTOR SHALL FURNISH ALL EQUIPMENT, MATERIALS, SHOP DRAWINGS, AND PERFORMANCE INFORMATION ON ALL PRODUCTS FOR OWNER APPROVAL. ALL PRODUCTS INSTALLED WITHOUT APPROVAL SHALL BE AT RISK. OWNER APPROVAL SHALL BE LIMITED TO THAT THE PRODUCT COMPLES WITH THE SPECIFICATIONS OR EXPECTED PERFORMANCE. ACTUAL PERFORMANCE TO THE LIMITS DEFINED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR SHALL PROVIDE FOR INSTRUCTION TO THE OWNER FOR ALL EQUIPMENT SUPPLIED AND INSTALLED UNDER THIS CONTRACT, INCLUDING ANY WORK PERFORMED BY SUBCONTRACTORS.
- THE CONTRACTOR IS RESPONSIBLE TO CONFIRM AND COORDINATE JOBSITE DIMENSIONS THAT AFFECT THE ERECTION OR OPERATION OF SYSTEMS, AS INTENDED BY THESE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL ENSURE INSTALLED EQUIPMENT MAINTAINS ADEQUATE CLEARANCES FOR OPERATIONAL ACCESS AND SERVICE, AND HE SHALL MAINTAIN ANY CLEARANCES REQUIRED BY ALL APPLICABLE CODES.
- THE CONTRACTOR SHALL MAKE ALL REQUIRED ARRANGEMENTS FOR DELIVERY OF EQUIPMENT AND/OR MATERIALS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK THE RULES AND REGULATIONS GOVERNING WORK ON THE PREMISES.
- THE CONTRACTOR, HIS SUBCONTRACTORS, AND ANY OTHER CONTRACTOR INVOLVED IN THIS PROJECT SHALL TAKE NOT THAT ANY COST CAUSED BY DEFECTIVE OR ILL-TIMED WORK, AS A RESULT OF, BUT NOT LIMITED TO INFERIOR WORKMANSHIP OR MATERIALS, IMPROPER SCHEDULING OR DELINQUENT ORDERING SHALL BE BORNE BY THE PARTY RESPONSIBLE THEREFOR.
- ALL CONTRACTORS SHALL BE RESPONSIBLE TO REMOVE ALL RUBBISH AND WASTE MATERIALS, AT THE END OF EACH WORK DAY THE PROJECT SITE SHALL BE LEFT IN A SAFE AND GROOM CLEANED CONDITION.
- CONTRACTORS SHALL SUBMIT ALL FABRICATION SHOP DRAWINGS AND FIXTURE CUTS TO OWNER FOR APPROVAL. ALL SHOP DRAWINGS AND CUTS SIGNED "APPROVED" SHALL SUPERSEDE ORIGINATING DRAWINGS IN DESIGN APPEAL ONLY. CONTRACTORS SHALL ASSUME RESPONSIBILITY FOR ERRORS IN THEIR DRAWINGS. ALL STEEL REMOVALS OR MODIFICATIONS REQUIRED BY THE WORK SHALL BE REVIEWED AND CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER.
- CONTRACTOR SHALL PROPERLY PROTECT THE BUILDING AND ANY ADJOINING PROPERTY OR WORK AND ANY DAMAGE TO THE SAME CAUSED BY THE CONTRACTOR MUST BE MADE GOOD WITHOUT DELAY, PATCHING AND REPLACING OF DAMAGED WORK SHALL BE DONE BY THE CONTRACTOR WHO IS RESPONSIBLE FOR THE DAMAGE.
- DURING THE ENTIRE PERIOD OF DEMOLITION AND CONSTRUCTION, ALL EXISTING EXITS, EXIT LIGHTING, FIRE PROTECTIVE DEVICES AND ALARMS SHALL BE CONTINUOUSLY MAINTAINED.
- WHERE OPENINGS OCCUR IN EXISTING FIRE RATED AREAS OR PARTITIONS DUE TO EXISTING OR NEW CONDUIT RUNS, DUCTWORK, CABLES, PIPING ETC., AND/OR WHERE EXISTING FIREPROOFING HAS BEEN REMOVED AS A RESULT OF EXISTING OR NEW CONSTRUCTION WORK THE CONTRACTOR SHALL CLOSE AND/OR PATCH AS REQUIRED ALL OPENINGS TO MATCH IMMEDIATE ADJACENT AREAS IN MATERIAL, FINISH AND FIRE RATING.
- ONCE WORK HAS STARTED THE CONTRACTOR SHALL REMAIN ON-SITE FOR THE DURATION UNTIL PROJECT COMPLETION, ANY ABSENCE FROM THE JOBSITE WITHOUT OWNER KNOWLEDGE SHALL BE CAUSE FOR DELAY AND THE CONTRACTOR SUBJECTED TO POSSIBLE BACK CHARGES.
- ALL ACCEPTANCE TESTING SHALL BE WITNESSED BY THE OWNER OR THE OWNERS REPRESENTATIVE.
- THE CONTRACTOR SHALL MAINTAIN THE WORK AREA IN A STATE FREE FROM HAZARDS AND A NEAT AND CLEAN CONDITION AT THE END OF EACH WORKDAY. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS, FOLLOW SAFE WORKING PRACTICES, AND MAINTAIN THE SITE AND ADJACENT AREAS SAFE FOR WORKERS AND FACILITY EMPLOYEES. JOB BOX SAFETY MEETING SHALL BE HELD EVERY WEEK.
- ALL MATERIALS, TOOLS, TRUCKS ETC. SHALL BE STORED IN AREAS DESIGNATED BY THE OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR PRODUCT STORAGE CONDITIONS AND SECURITY. THE OWNER SHALL NOT BE RESPONSIBLE FOR ANY OF THE CONTRACTORS SHIPPING, DELIVERY OR OFFLOADING.
- ALL WORK BY THE CONTRACTOR SHALL BE GUARANTEED FOR A PERIOD OF NO LESS THAN ONE YEAR FROM THE DATE OF ACCEPTANCE. THIS GUARANTEE SHALL INCLUDE ALL WORK PERFORMED BY ANY AND ALL OF HIS SUBCONTRACTORS. THE PRIME CONTRACTOR SHALL MAKE GOOD ON ALL SUBCONTRACTOR WORK DURING THIS PERIOD.
- PREPARE AND FURNISH TO THE OWNER "AS-BUILT" DRAWINGS.
- MAINTENANCE MANUALS SHALL BE PROVIDED TO THE OWNER FOR ALL EQUIPMENT AND SYSTEMS REQUIRING PREVENTATIVE MAINTENANCE. REGULAR MAINTENANCE ACTIONS SHALL BE CLEARLY STATED AND INCORPORATED ON A READILY ACCESSIBLE LABEL. THE LABEL SHALL INCLUDE THE TITLE FOR THE OPERATION AND MAINTENANCE AND MAINTENANCE MANUAL FOR THAT PARTICULAR MODEL.
- THREE BOUND MANUALS SHALL BE SUBMITTED UPON COMPLETION WITH MAINTENANCE INSTRUCTIONS, PARTS LIST AND MANUFACTURERS WARRANTIES. WARRANTY FROM THE INSTALLING CONTRACTOR SHALL ALSO BE PROVIDED AT THIS TIME. COPIES OF THE AS-BUILT AND TEST RESULTS SHALL BE SUBMITTED AT THIS TIME.
- IT IS A VIOLATION OF STATE LAW TO FOR ANY PERSON OR PERSONS TO ALTER THESE PLANS, ANY MODIFICATIONS SHALL BE UNDER THE DIRECTION OF A LICENSED ENGINEER.

WORK DESCRIPTION:

1. DEMOLITION OF EXISTING CONSTANT VOLUME AIR DISTRIBUTION SYSTEM INCLUDING DUCTWORK, AIR DEVICES AND PERIMETER FAN COIL UNITS.
2. PROVISION OF NEW VARIABLE AIR VOLUME DISTRIBUTION SYSTEM INCLUDING NEW VAV BOXES WITH INTERNAL HOT WATER HEATING COILS.
3. PROVISION OF NEW ROOFTOP EXHAUST FAN TO SERVE NEW TOILET.

SPECIAL INSPECTION NOTES:

PROVIDE SPECIAL INSPECTIONS FOR THE FOLLOWING:

1. MECHANICAL SYSTEMS BC 1704.16
2. MECHANICAL DEMOLITION BC 1704.20.4
3. HEATING SYSTEMS BC 1704.25
4. VENTILATION AND AIR DISTRIBUTION SYSTEM (IB2)
5. SHUTOFF DAMPERS (IB2)
6. HVAC-R AND SERVICE WATER HEATING SYSTEM CONTROLS (IB3), (IB3)
7. HVAC-R AND SERVICE WATER HEATING SYSTEM CONTROLS (IB4), (IB4)
8. HVAC-R AND SERVICE WATER PIPING DESIGN AND INSULATION (IB5), (IB5)



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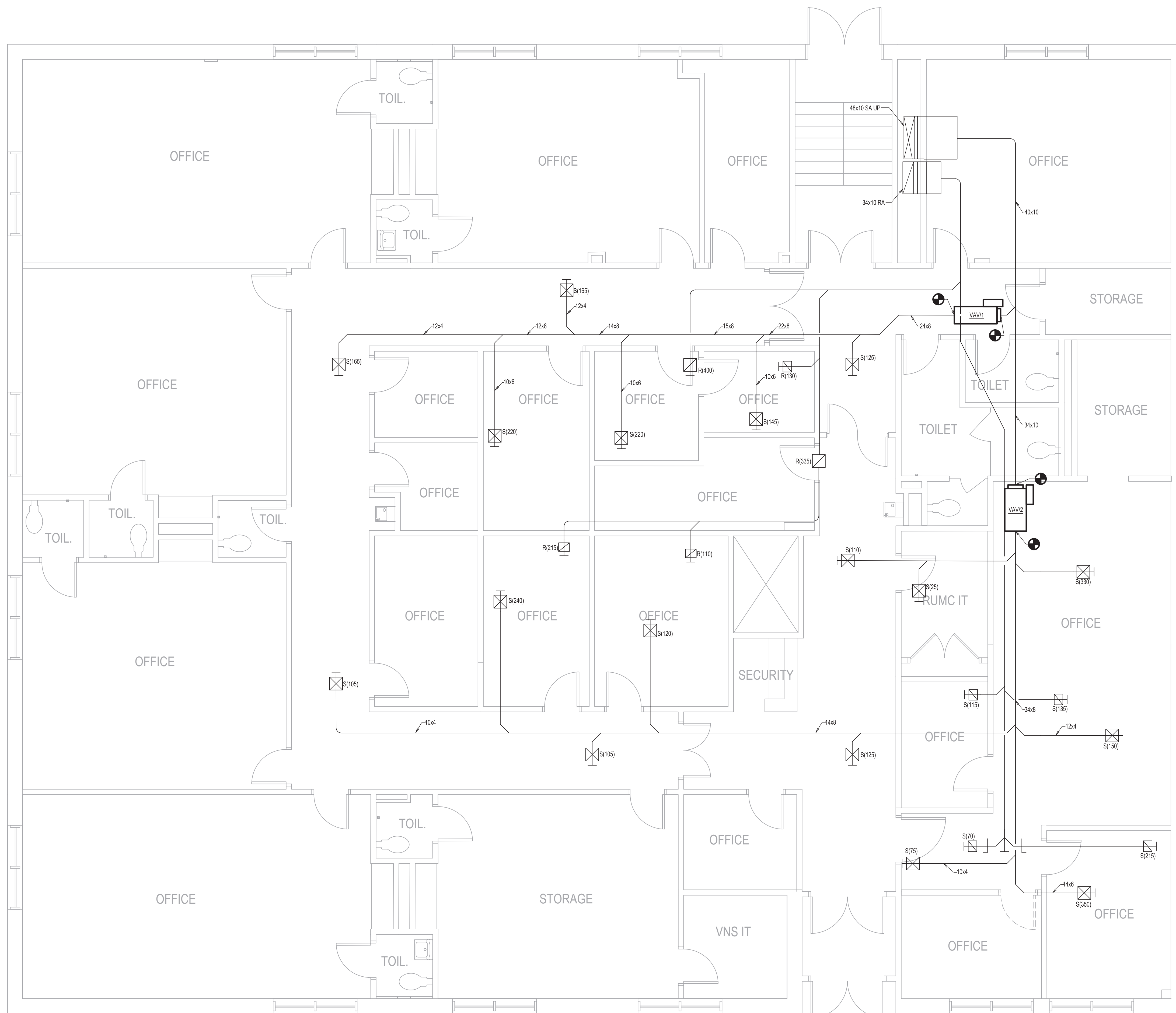
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Mineola, NY 11501
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Fax: (516) 484-0926
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SECOND FLOOR PROPOSED RENOVATION

Project No. 7024.02	Scale AS NOTED	
Drawing No.	Sheet	Revision

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1. CONTRACTOR TO PROVIDE PRE-CONSTRUCTION AIR FLOW READINGS OF SUPPLY AND RETURN AIR DEVICES. CONTRACTOR TO CONFIRM ALL RETURN AIR DEVICES IN EXISTING OFFICES AND PROVIDE REPORT TO ENGINEER OF RECORD.
2. "S" DENOTES EXISTING SUPPLY DIFFUSER TO BE RE-BALANCED TO GIVEN CFM VALUE. "R" DENOTES EXISTING RETURN AIR BRANCH TO BE RE-BALANCED TO GIVEN CFM VALUE.
3. EXISTING AIR DEVICES SHOWN FOR REFERENCE. COORDINATE EXACT LOCATION IN THE FIELD.

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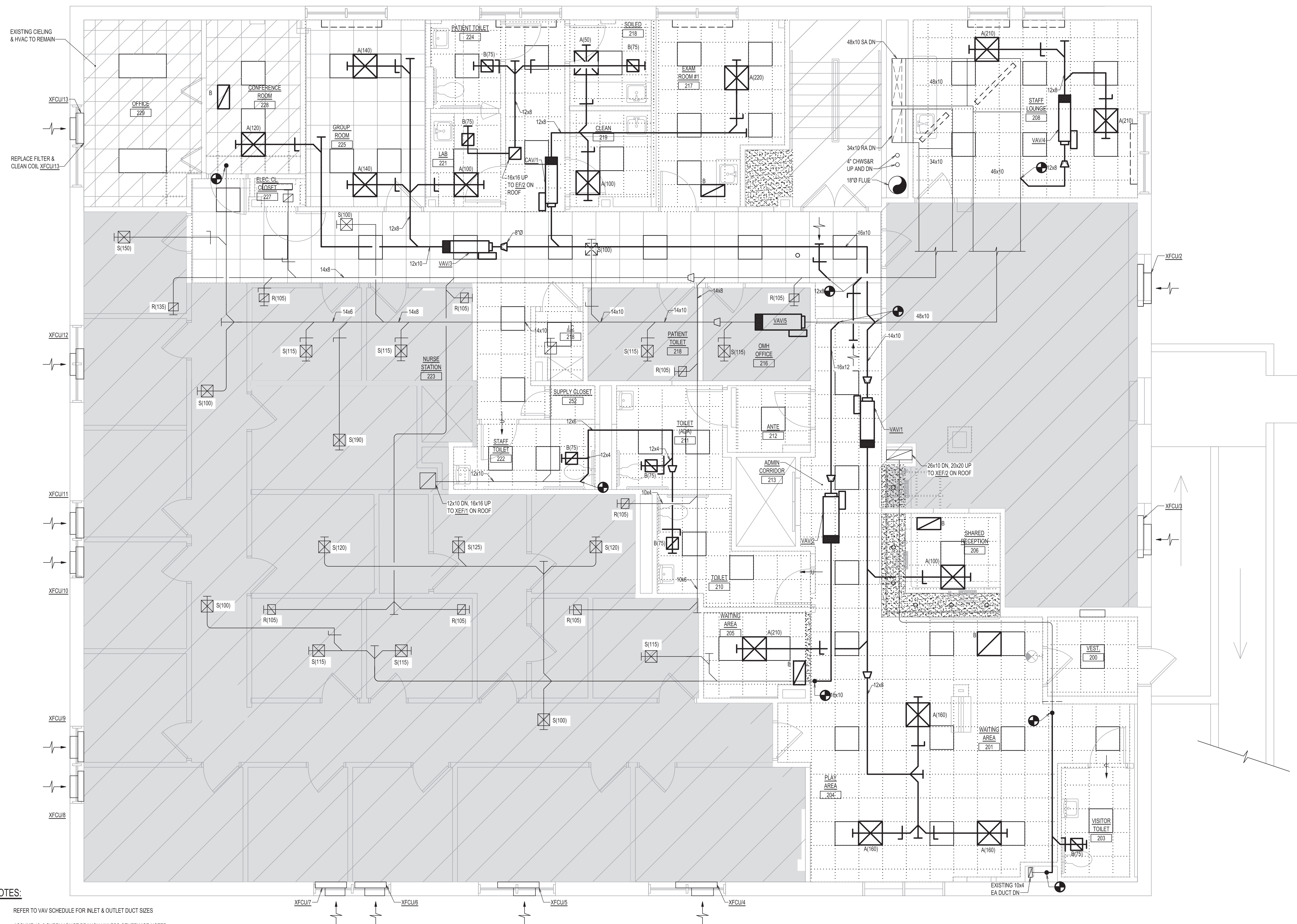
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669 CASTLETON AVENUE, STATEN ISLAND, NY
SECOND FLOOR PROPOSED RENOVATION

Title
MECHANICAL NEW WORK PLAN

Project No. 7024.02	Scale AS NOTED
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1. REFER TO VAV SCHEDULE FOR INLET & OUTLET DUCT SIZES
2. ASSUME 12" SUPPLY DUCT BRANCH UNLESS OTHERWISE NOTED
3. CONTRACTOR TO PROVIDE PRE-CONSTRUCTION AIR FLOW READINGS OF SUPPLY AND RETURN AIR DEVICES. CONTRACTOR TO CONFIRM ALL EXISTING AIR DEVICES AND REPORT TO ENGINEER OF RECORD.
4. "S" DENOTES SUPPLY DIFFUSERS TO BE BALANCED TO GIVEN CFM VALUE. "R" DENOTES EXISTING RETURN AIR BRANCH TO BE RE-BALANCED TO GIVEN CFM VALUE.
5. COORDINATE ANY WORK OUTSIDE OF PROJECT CONSTRUCTION AREA WITH OWNER
6. EXISTING SUPPLY GRILLES OUTSIDE OF SCOPE OF WORK SHOWN FOR REFERENCE. COORDINATE LOCATION IN THE FIELD

SCALE: 1/4" = 1'-0"

NEW YORK CITY BUILDING DEPARTMENT NOTE:

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Revision	By	Appd.	YY.MM.DD
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	Dwn.	Chkd.	Dsgn.
			YY.MM.DD

RICHMOND UNIVERSITY MEDICAL CENTER
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Title
MECHANICAL ROOF PLAN

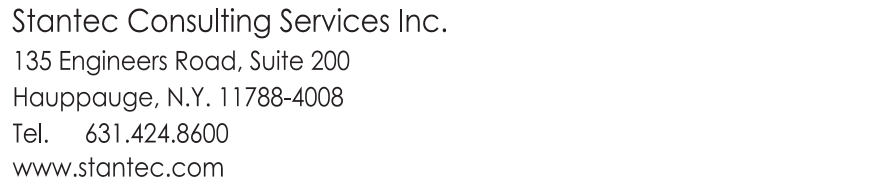
Drawing No.	Sheet	Revision
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ROOF NEW PLAN
SCALE: 1/4" = 1'-0"

1. REFER TO DRAWING M-001 FOR MECHANICAL SYMBOL LIST, ABBREVIATIONS AND GENERAL NOTES.
2. NEW EXHAUST FANS EF/3 TO BE INSTALLED WITH NEW DUCTWORK ROOF PENETRATIONS.

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Exceeding Expectations

Lizardos

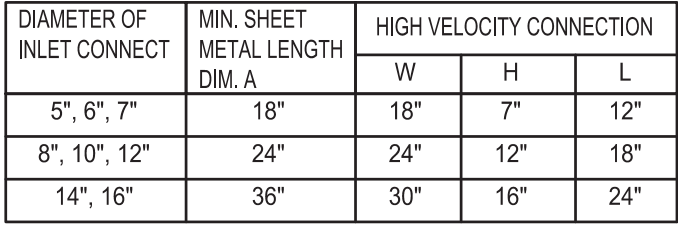
Mechanical & Electrical Engineering

200 Old Country Road, Suite 670
 Mineola, NY 11501
 Phone: (516) 484-1020
 Fax: (516) 484-0926
www.leapc.com

[illegible]

669 CASTLETON AVENUE, STATEN ISLAND, NY
SECOND FLOOR PROPOSED RENOVATION

Project No. 7024.02	Scale AS NOTED	
Drawing No.	Sheet	Revision



1. SEAL ALL DUCT JOINTS AIR TIGHT WITH SILICONE DUCT SEALANT.
2. PROVIDE PIPE HANGERS FOR HEATING COIL.
3. PROVIDE NON-CORROSIVE FITTINGS BETWEEN DISSIMILAR METALS.
4. PROVIDE STER-LOC FOIL FACE INSULATION LINER FOR EACH TERMINAL UNIT.

NOT TO SCALE



NOT TO SCALE



1. MOTOR & DISCONNECT TO BE FACTORY WIRED.

NOT TO SCALE



1. MANUAL VOLUME DAMPERS SHALL BE OPPOSED BLADE TYPE ON DUCTS 12" DEEP OR GREATER AND USED WHEN THE BRANCH TAKE-OFF IS AT THE END OF MAIN PLENUM OR WHEN BRANCH TAKE-OFFS ARE BACK TO BACK AND A MAIN DUCT WIDTH OF 2X BRANCH CANNOT BE ACCOMMODATED.



1. PROVIDE RECTANGULAR TO ROUND TRANSITION WHERE INDICATED ON THE DRAWINGS.

NOT TO SCALE



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Stantec Consulting Services Inc
135 Engineers Road, Suite 200
Hauppauge, N.Y. 11788-4008
Tel. 631.424.8600
www.stantec.com

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Consultants:



Lizardos

Mechanical & Electrical Engineering

200 Old Country Road, Suite 670

Mineola, NY 11501

Phone: (516) 484-1020

Fax: (516) 484-
www.leapc.com

Key Plan

2,715 SQ. FT.



Notes

[illegible]

Permit-Sea



Client/Project:

RICHMOND UNIVERSITY MEDICAL CENTER
TRANSFORMATIONAL GRANT

669 CASTLETON AVENUE, STATEN ISLAND, NY
SECOND FLOOR PROPOSED RENOVATION

Title

MECHANICAL SCHEDULES

Project No. 7024.02	Scale AS NOTED	
Drawing No.	Sheet	Revision

M-401.00

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SUPPLY VARIABLE AIR VOLUME BOX SCHEDULE																					
TAG	LOCATION	SERVICE	TERMINAL TYPE	MAX CFM	MIN CFM	SIZE		SOUND POWER DATA (NC)		ELECTRIC HEATING COIL								TERMINAL DIMENSIONS, LxWxH, IN.	MANUFACTURER	MODEL	REMARKS
						INLET DUCT SIZE, IN.	OUTLET DUCT SIZE, IN.	DISCH.	RAD.	CFM	EAT	LAT	KW	AMP	MCA	MOP	STEPS				
VAV1-1	1ST FLOOR	EXISTING SPACE	SINGLE DUCT	1040	320	12	14.75x13.25	17	16	NOT USED								39-1/2x16x15	ANEMOSTAT	EZTE-DDC	1 THRU 5
VAV1-2	1ST FLOOR	EXISTING SPACE	SINGLE DUCT	1825	550	14	18-3/4x16-1/4	19	19									39-1/2x20x17-1/2	ANEMOSTAT	EZTE-DDC	1 THRU 5
VAV2-1	2ND FLOOR	WAITING AREA / SHARED RECEPTION / WAITING AREA-205	SINGLE DUCT	790	240	10	12-3/4x11-1/4	20	16	240	55	90	2.7	7.5	9.5	15	SCR	39-1/2x14x12-1/2	ANEMOSTAT	EZTE-DDC	1 THRU 5
VAV2-2	2ND FLOOR	EXISTING SPACE	SINGLE DUCT	910	280	12	14-3/4x13-1/4	16	15	280	55	90	3.18	8.8	11	15	SCR	39-1/2x16x15	ANEMOSTAT	EZTE-DDC	1 THRU 5
VAV2-3	2ND FLOOR	CONFERENCE ROOM / LAB / GROUP ROOM/	SINGLE DUCT	500	150	8	10-3/4x6-3/4	19	15	150	55	90	1.71	4.8	5.9	15	SCR	39-1/2x12x10	ANEMOSTAT	EZTE-DDC	1 THRU 5
VAV2-4	2ND FLOOR	STAFF LOUNGE	SINGLE DUCT	420	130	8	10-3/4x6-3/4	19	15	130	55	90	1.5	4	5	15	SCR	39-1/2x12x10	ANEMOSTAT	EZTE-DDC	1 THRU 5
VAV2-5	2ND FLOOR	EXISTING SPACE	SINGLE DUCT	900	270	12	14-3/4x13-1/4	16	15	270	55	90	3	8.5	10.5	15	SCR	39-1/2x16x15	ANEMOSTAT	EZTE-DDC	1 THRU 5
CAV1	2ND FLOOR	CLEAN / SOILED / EXAM ROOM #1	SINGLE DUCT	370	120	8	10-3/4x8-3/4	18	15	120	55	90	1.36	3.8	4.7	15	SCR	39-1/2x12x10	ANEMOSTAT	EZTE-DDC	1 THRU 5

REMARKS:

1. SELECTIONS BASED ON AEMOSTAT AS MANUFACTURER. APPROVED ALTERNATE: NAILOR, TITUS
2. ALL PERFORMANCE BASED ON TESTS CONDUCTED IN ACCORDANCE WITH ASHRAE 130-2008 AND AHRI 880-2008.
3. PROVIDE SHOP DRAWINGS
4. FACTORY FURNISHED AND INSTALL MULTIPOINT CROSS FLOW VELOCITY SENSOR.
5. PROVIDE INTEGRAL SOUND ATTENUATOR, 24 CONTROL, TRANSFORMER AND BOTTOM ACCESS DOOR.

6. BOXES SHALL BE FURNISHED WITH INLET SENSOR, 208V/24V CONTROL TRANSFORMER, AND CONTROL ENCLOSURE

EXHAUST FAN SCHEDULE													
TAG	SERVICE	TYPE	AIR FLOW, CFM	ESP. IN. WG	FAN RPM	DRIVE TYPE				MANUFACTURER	MODEL NO.	WEIGHT, LBS	REMARKS
							HP	V/PH/Hz	FLA				
EF1	LAB.SOILED HOLDING PATIENT TOILET (224)	UPBLAST	300	0.3	-	DIRECT	1/4	208/1/60	-	PENNBARRY	FX13QGP	-	

REMARKS:

1. PROVIDE SHOP DRAWINGS.
2. FURNISHED WITH MANUFACTURER'S ROOF CURB, MODEL GP
3. MOTOR WITH DISCONNECT SWITCH
4. FURNISHED WITH HORIZONTAL EXHAUST DAMPER



ORIGINAL SHEET - ARCH D

