SOUTH JERSEY TRANSPORTATION AUTHORITY



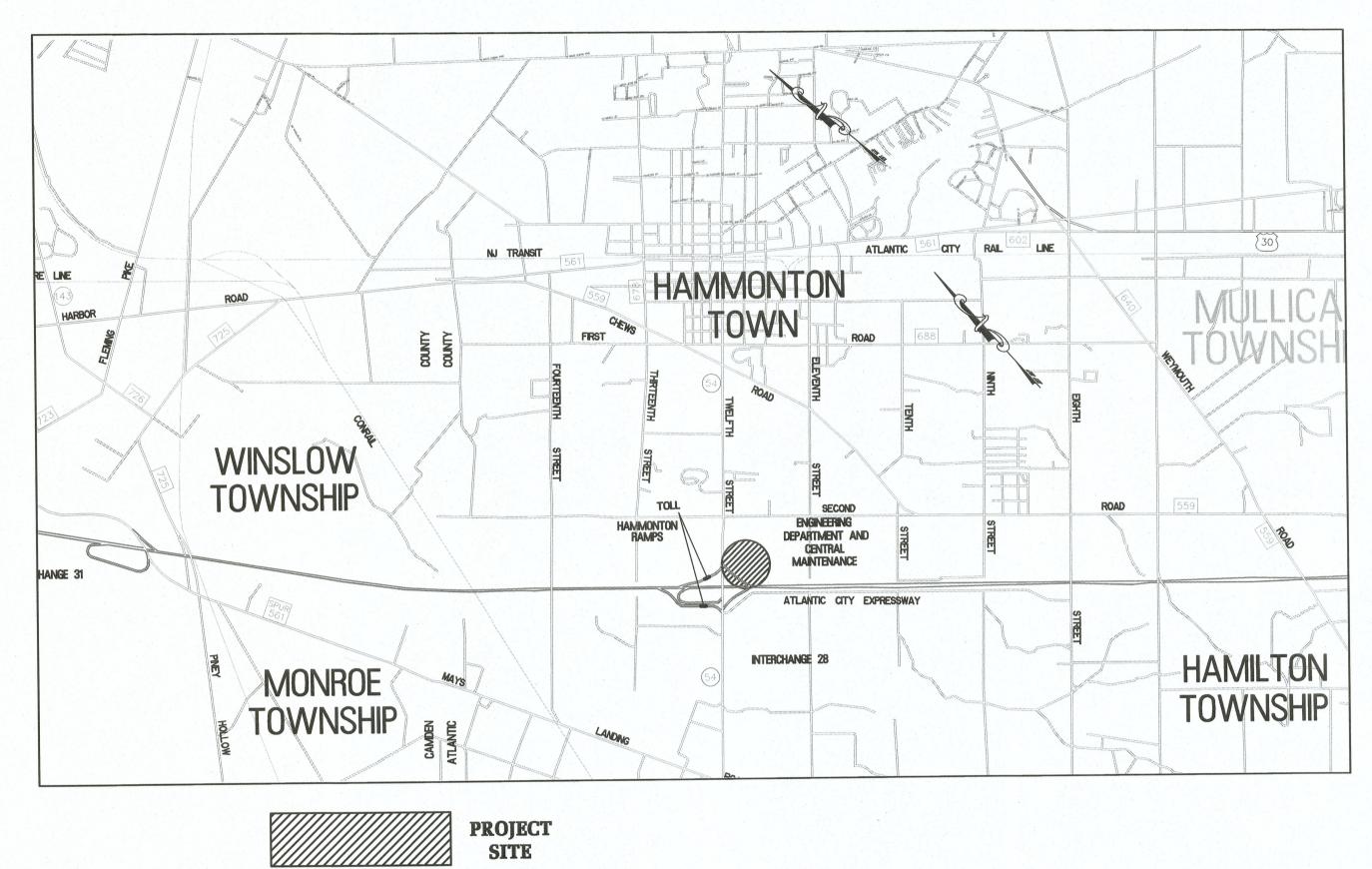
ATLANTIC CITY EXPRESSWAY 2022 SIGN SHOP REHABILITATION PROJECT



COMMISSIONER

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LOCATION MAP

NOT TO SCALE

	INDEX OF SHEETS
SHEET NO.	DESCRIPTION
T-1	TITLE SHEET
S-1	STRUCTURAL COVER SHEET
S-2	EXISTING/DEMOLITION FLOOR PLAN
S-3	FOUNDATION FLOOR PLAN
S-4	SLAB/LINTEL PLAN
S-5	ROOF FRAMING PLAN
S-6	SECTION AND ELEVATIONS
M-1.0	MECHANICAL COVER SHEET
M-1.1	MECHANICAL DEMOLITION FLOOR PLAN
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M-3.1	MECHANICAL DETAILS AND SCHEDULES
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E-4.1	ELECTRICAL SCHEDULES

PREPARED AND RECOMMENDED BY:

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APPROVED BY:

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F:\CADD PROJECTS\NJ\SJTA\ACEXX780-STORAGE BLDG ECM\T-1 REVISED.D

GENERAL NOTES

DESIGN CRITERIA

1. LIVE LOAD:

Α.	ROOF LIVE LOAD	30 PSF
В.	FLOOR LIVE LOAD	150 PSF
C.	PLATFORM LIVE LOAD	250 PSF

2. DEAD LOAD:

A. STRUCTURAL AND BUILDING COMPONENTS SELF WEIGHT

3. WIND LOADING PER IBC 2018 - NEW JERSEY EDITION:

A. BASIC WIND VELOCITY (V): 126 MPH
B. EXPOSURE CATEGORY: C
C. RISK CATEGORY: III

4. SEISMIC LOADING PER IBC 2018 - NEW JERSEY EDITION:

A. RESPONSE ACCELERATOR: $S_S = 0.151$ $S_{DS} = 0.161$ $S_I = 0.044$ $S_{DI} = 0.07$ B. SEISMIC DESIGN CATEGORY: B

C. SEISMIC SITE CLASSIFICATION: D
D. IMPORTANCE FACTOR I_E: 1.25

5. SNOW LOADING PER IBC 2018 - NEW JERSEY EDITION:

A. GROUND SNOW LOAD: 20 PSF
B. IMPORTANCE FACTOR: 1.10

6. SPECIAL LOADS:

A. HANDRAILS/GUARDRAILS: IN COMPLIANCE WITH THE PROVISIONS OF IBC 2018

- NEW JERSEY EDITION SEE PROJECT SPECIFICATIONS.

FOUNDATIONS

- 1. ALL EXISTING FILL MATERIALS, CONSISTING OF GRAVEL, BRICK FRAGMENTS, CONCRETE CHIPS, WOOD CHIPS, AND DEMOLITION DEBRIS SHALL BE REMOVED IN THE REGIONS OF ALL FOUNDATIONS AND UNDER AREAS OF SLAB—ON—GRADE.
- 2. THE SLAB ON GRADE SHALL REST ON A MINIMUM OF 6 INCHES OF COMPACTED GRANULAR FILL.
- 3. PROOF ROLL SLAB SUBGRADE UNDER THE DIRECTION OF THE INSPECTION AGENCY. REMOVE ALL UNSUITABLE AREAS AND REPLACE WITH COMPACTED STRUCTURAL FILL MATERIALS. COMPACT FILL TO AT LEAST 95 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY THE ASTM D 1557 MODIFIED PROCTOR TEST.
- 4. SHALLOW FOUNDATIONS SHALL BE FOOTINGS TO BEAR ON UNDISTURBED SOIL, HAVING A MINIMUM SAFE BEARING CAPACITY OF 1.5 KSF PER PRESUMPTIVE BEARING VALUE FROM TABLE 1806.2 IN NJ IBC 2018.
- 5. THE BOTTOMS OF ALL EXTERIOR FOOTINGS SHALL BE 2'-6" MINIMUM BELOW FINISHED GRADE
- 6. EDGES OF FOOTINGS SHALL NOT BE PLACED AT A GREATER THAN 1 (VERTICAL) TO 2 (HORIZONTAL) SLOPE WITH RESPECT TO ANY ADJACENT FOOTING OR EXCAVATION.
- 7. ALL ADJACENT COLUMN FOOTINGS THAT ABUT SHALL BE SEPARATED BY A PAPER
- 8. BACKFILLING AGAINST WALLS SHALL NOT BE DONE UNTIL CONCRETE HAS BEEN CURED TO ATTAIN SUFFICIENT STRENGTH (7 DAYS MINIMUM) AND WALLS ARE PROPERLY SHORED AND/OR BRACED. BACKFILL FOUNDATION WALLS WITH EARTH ON BOTH SIDES OF THE WALL BY ALTERNATELY PLACING BACKFILL ON EACH SIDE SO THAT HEIGHT OF BACKFILL DOES NOT DIFFER BY MORE THAN 1'-6" FROM OTHER SIDE.
- 9. THE CONTRACTOR SHALL SAFEGUARD AND PROTECT ALL EXCAVATIONS AND ALL EXCAVATIONS SHALL BE KEPT FREE OF WATER.
- 10. NO HORIZONTAL JOINTS SHALL BE PLACED IN WALLS EXCEPT AS SHOWN ON THE DRAWINGS WITHOUT APPROVAL OF THE ENGINEER.
- 11. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL, PLUMBING, MECHANICAL, AND ELECTRICAL DRAWINGS FOR ALL LOCATIONS OF TRENCHES, PITS, CONDUITS, ETC. NOT SHOWN ON THE STRUCTURAL DRAWINGS.

FOUNDATION CONCRETE

1. ALL CONCRETE SHALL BE NORMAL WEIGHT STRUCTURAL CONCRETE HAVING A DESIGN COMPRESSIVE STRENGTH AT 28 DAYS AS FOLLOWS:

A. FOOTINGS 4,000 PSI
B. WALLS AND PIERS 4,000 PSI
C. SLAB-ON-GRADE 4,000 PSI

- 2. NO CONCRETE SHALL BE PLACED UNTIL CONCRETE DESIGN MIXES HAVE BEEN SUBMITTED FOR EACH CLASS OF CONCRETE NOTED ABOVE AND HAVE BEEN APPROVED BY THE ENGINEER.
- 3. REINFORCING STEEL SHALL BE DEFORMED BARS OF INTERMEDIATE GRADE NEW BILLET STEEL CONFORMING TO CURRENT REQUIREMENTS OF ASTM A 615, GRADE 60. LAP BARS 40 DIAMETER UNLESS OTHERWISE SHOWN. ALL HOOKS SHALL BE STANDARD HOOKS, UNLESS OTHERWISE NOTED.
- 4. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185.
- 5. ALL MESH SHALL BE SPLICED SO THAT THE OVERLAP OF THE OUTERMOST CROSS WIRES OF EACH ADJOINING SHEET IS NOT LESS THAN THE SPACING OF THE CROSS WIRES PLUS 2 INCHES, UNLESS NOTED OTHERWISE.
- 6. FOR ALL SLABS ON GRADE WHERE NOT OTHERWISE SPECIFIED, USE 6x6-W2.9xW2.9
- 7. MINIMUM STEEL PROTECTION, UNLESS OTHERWISE SHOWN, SHALL BE 1—INCH FOR INTERIOR FACE OF WALLS, 2 INCHES FOR EXTERIOR FACE OF WALLS, 3 INCHES FOR FOOTINGS AND OTHER STRUCTURAL CONCRETE DEPOSITED AGAINST GROUND, 2 INCHES FOR CONCRETE PERMANENTLY EXPOSED TO EARTH OR WEATHER.
- 8. ALL STRUCTURAL MEMBERS SHALL BE POURED FOR THEIR FULL DEPTHS IN ONE OPERATION. CONSTRUCTION JOINTS, SUCH AS DAY'S POUR JOINTS, SHALL BE LOCATED IN THE MIDDLE THIRD OF THE SPAN, MAIN REINFORCING TO RUN THROUGH THE JOINT, KEY AND ROUGHEN JOINTS TO EXPOSE AGGREGATE. CONTRACTOR SHALL SUBMIT DRAWING INDICATING CONSTRUCTION JOINT LOCATIONS FOR APPROVAL.
- 9. NO CONCRETE SHALL BE PLACED IN WATER.
- 10. ALL SLABS ON GRADE SHALL HAVE THICKENINGS, DEPRESSIONS, OPENINGS, ETC. AS SHOWN ON OR AS REQUIRED BY VARIOUS TRADES.
- 11. REFER TO ARCHITECTURAL DRAWINGS AND/OR SPECIFICATIONS FOR CONCRETE FINISHES.
- 12. FOR ADDITIONAL CONCRETE WORK NOT SHOWN ON STRUCTURAL DRAWINGS, SEE ARCHITECTURAL DRAWINGS.

SUPERSTRUCTURE CONCRETE

1. ALL CONCRETE SHALL BE NORMAL WEIGHT STRUCTURAL CONCRETE HAVING A DESIGN COMPRESSIVE STRENGTH AS FOLLOWS:

A. COLUMNS 4,000 PSI
B. SLABS, BEAM 4,000 PSI
C. WALLS 4,000 PSI

- 2. NO CONCRETE SHALL BE PLACED UNTIL CONCRETE DESIGN MIXES HAVE BEEN SUBMITTED FOR EACH CLASS OF CONCRETE NOTED ABOVE AND HAVE BEEN APPROVED BY THE ENGINEER.
- 3. REINFORCING STEEL SHALL BE DEFORMED BARS OF INTERMEDIATE GRADE NEW BILLET STEEL CONFORMING TO CURRENT REQUIREMENTS OF ASTM A 615, GRADE 60. LAP BARS 40 DIAMETER UNLESS OTHERWISE SHOWN. ALL HOOKS SHALL BE STANDARD HOOKS, UNLESS OTHERWISE NOTED.
- 4. MINIMUM STEEL PROTECTION, UNLESS OTHERWISE SHOWN, SHALL BE 3/4-INCH FOR SLABS, 1-INCH FOR INTERIOR FACE OF WALLS, 2-INCH FOR EXTERIOR FACE OF WALLS, 1 1/2-INCH FOR BEAM STIRRUPS AND COLUMN TIES, 2-INCH FOR VERTICAL COLUMN REINFORCING.
- 5. ALL STRUCTURAL MEMBERS SHALL BE POURED FOR THEIR FULL DEPTHS IN ONE OPERATION. CONSTRUCTION JOINTS, SUCH AS DAY'S POUR JOINTS, SHALL BE LOCATED IN THE MIDDLE THIRD OF THE SPAN, MAIN REINFORCING TO RUN THROUGH THE JOINT, KEY AND ROUGHEN JOINTS TO EXPOSE AGGREGATE. CONTRACTOR SHALL SUBMIT DRAWING INDICATING CONSTRUCTION JOINT LOCATIONS FOR APPROVAL.
- 6. NO OPENINGS SHALL BE MADE IN ANY STRUCTURAL MEMBER, UNLESS SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS, WITHOUT APPROVAL FROM THE ENGINEER. NO SLEEVES SHALL BE PLACED HORIZONTALLY OR VERTICALLY IN BEAMS OR JOISTS, UNLESS SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS, WITHOUT APPROVAL FROM THE ENGINEER.
- 7. CONTRACTOR SHALL SUBMIT A COORDINATED DRAWING SHOWING ALL SLEEVES, OPENINGS, BLOCKOUTS, ETC., AS REQUIRED BY ALL TRADES, FOR APPROVAL, PRIOR TO PLACING CONCRETE IN THAT AREA.
- 8. ALL SLABS SHALL HAVE THICKENINGS, DEPRESSIONS, OPENINGS, ETC. AS SHOWN HEREIN OR ON ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.
- 9. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185.
- 10. ALL MESH SHALL BE SPLICED SO THAT THE OVERLAP BETWEEN OUTERMOST CROSS WIRES OF EACH SHEET IS NOT LESS THAN THE SPACING OF THE CROSS WIRES PLUS 2 INCHES, UNLESS OTHERWISE SHOWN ON DRAWINGS.
- 11. FOR ALL SLABS WHERE NOT OTHERWISE SPECIFIED USE STYLE 6x6-W2.9xW2.9 W.W.F.
- 12. FOR ADDITIONAL CONCRETE WORK NOT SHOWN ON STRUCTURAL DRAWINGS, SEE ARCHITECTURAL DRAWINGS.
- 13. REFER TO ARCHITECTURAL DRAWINGS AND/OR SPECIFICATIONS FOR CONCRETE

SUPERSTRUCTURE CONCRETE (SUPPORTED BY METAL DECK)

FINISHES.

- 1. ALL CONCRETE ON METAL DECK SHALL BE NORMAL WEIGHT CONCRETE HAVING A DESIGN COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS.
- 2. NO CONCRETE SHALL BE PLACED UNTIL CONCRETE DESIGN MIXES HAVE BEEN SUBMITTED FOR EACH CLASS OF CONCRETE AND HAVE BEEN APPROVED BY THE
- 3. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185.
- 4. PROVIDE 6x6-W2.9xW2.9 WELDED WIRE FABRIC IN ALL CONCRETE SLABS ON METAL DECK UNLESS NOTED OTHERWISE.
- 5. ALL WELDED WIRE FABRIC SHALL BE SPLICED SO THAT THE OVERLAP BETWEEN OUTERMOST CROSS WIRES OF EACH SHEET IS NOT LESS THAN THE SPACING OF THE CROSS WIRES PLUS 2 INCHES, UNLESS OTHERWISE SHOWN ON DRAWINGS.
- 6. THE CONTRACTOR SHALL CALCULATE AND INCLUDE ALL ADDITIONAL CONCRETE THAT MAY BE REQUIRED DURING PLACING DUE TO DEFLECTION OF STRUCTURE.
- 7. THE CONTRACTOR SHALL DEPOSIT ALL CONCRETE, DURING PLACING, IN SUCH A
- 7. THE CONTRACTOR SHALL DEPOSIT ALL CONCRETE, DURING PLACING, IN SUCH A MANNER AS NOT TO OVERLOAD THE METAL DECK.
- 8. CONCRETE THICKNESS INDICATED ARE MINIMUM THICKNESS OVER METAL DECK.

MASONRY

- 1. HOLLOW CONCRETE MASONRY UNITS ASTM C90, GRADE N, TYPE 1 NORMAL WEIGHT 1900 PSI NET AREA COMPRESSIVE.
- 2. MORTAR SHALL BE ASTM C270, TYPE S FOR ALL REINFORCED MASONRY, EXTERIOR WALLS AND WALLS BELOW GRADE.
- 3. GROUT SHALL BE ASTM C476, 28 DAY COMPRESSIVE STRENGTH OF 3,000 PSI.
- 4. REINFORCING STEEL GRADE 60 REINFORCING BARS.
- 5. HORIZONTAL JOINT REINFORCEMENT ASTM A951.
- 6. STRENGTH OF MASONRY ASSEMBLY f'm = 1,500 PSI.
- 7. CONSTRUCTION SHALL CONFORM TO SPECIFICATIONS FOR MASONRY STRUCTURES, ACI 5.30.1
- 8. REINFORCING METAL TIES AND ANCHORS SHALL BE PROTECTED FROM CONTACT WITH SOIL AND BEFORE BEING PLACED SHALL BE FREE FROM LOOSE RUST AND OTHER COATINGS THAT WILL DESTROY OR REDUCE THE BOND. MINIMUM LAP SHALL BE 48 BAR DIAMETERS FOR REBAR AND 6" FOR JOINT REINFORCEMENT.
- 9. SHOP DRAWINGS SHOWING ALL BAR REINFORCING IN ELEVATION (1/8" TO 1'-0" MINIMUM SCALE) SHALL BE SUBMITTED AND REVIEWED PRIOR TO CONSTRUCTION.
- 10. ALL MASONRY WALLS TO HAVE 9 GAGE TRUSS TYPE HORIZONTAL REINFORCEMENT AT 16 INCHES ON CENTER.
- 11. MASONRY UNITS SHALL BE STEAM CURED, A MINIMUM OF 28 DAYS AT THE TIME OF DELIVERY AND CONTINUOUSLY PROTECTED FROM EXPOSURE TO RAIN OR OTHER SOURCES OF WATER FROM TIME OF CASTING TO FINAL PLACEMENT IN WALL. MASONRY UNITS SHALL BE DRY, FREE FROM SOIL, ICE AND FROST WHEN LAID IN WALL. SEE ACI 530.1 FOR COLD AND HOT WEATHER CONSTRUCTION AND WALL PROTECTION REQUIREMENTS.

STRUCTURAL STEEL

- 1. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS, LATEST
- A. STRUCTURAL STEEL SHAPES ASTM A992 HAVING A MINIMUM YIELD STRENGTH OF
- B. MISC SHAPES, BARS, AND PLATES A 36 HAVING A MINIMUM YIELD STRENGTH
- OF 36 KS.

 C. ROUND PIPE A 53, GRADE B HAVING A MINIMUM YIELD STRENGTH OF 35 KS.
- D. SQUARE AND RECTANGULAR TUBING A 500, GRADE B HAVING A MINIMUM YIELD
- STRENGTH OF 46 KSI.
- 2. BOLTS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS: HIGH STRENGTH BOLTS—A 325 OR A 490; ANCHOR BOLTS—F1554; STANDARD FASTENERS—A 307.
- ALL WELDING ELECTRODES SHALL CONFORM TO THE E-70 SERIES OF THE SPECIFICATION FOR MILD STEEL ARC WELDING ELECTRODES ASTM A 233.
- 4. ALL BOLTS SHALL BE 3/4-INCH DIAMETER, OPEN HOLES 13/16-INCH DIAMETER, UNLESS OTHERWISE SHOWN OR NOTED.
- 5. ALL SHOP CONNECTIONS MAY BE HIGH STRENGTH BOLTED OR WELDED.
- 6. ALL FIELD CONNECTIONS MAY BE HIGH STRENGTH BOLTED EXCEPT WHERE DETAILS INDICATE WELDING.
- 7. ALL HIGH STRENGTH BOLTED CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A 325 OR A 490 BOLTS.
- 8. ALL HIGH STRENGTH BOLTED CONNECTIONS SHALL BE FULLY PRE—TENSIONED UNLESS NOTED OTHERWISE.
- 9. ALL HIGH STRENGTH BOLTS IN OVERSIZED HOLES SHALL BE SLIP CRITICAL.
- 10. ALL HIGH STRENGTH BOLTED CONNECTIONS USED FOR KICKERS AND BRACING MEMBERS WHICH ARE FABRICATED WITH SLOTTED HOLES SHALL USE SLIP—CRITICAL BOLTS. IF STANDARD HOLES ARE USED, BOLTS SHALL BE FULLY PRE—TENSIONED.
- 11. NO PENETRATIONS ARE PERMITTED THROUGH STRUCTURAL STEEL MEMBERS UNLESS INDICATED ON STRUCTURAL DRAWINGS OR APPROVED BY ENGINEER.
- 12. APPROVAL OF THE ENGINEER SHALL BE MANDATORY FOR THE USE OF CUTTING TORCH
- 13. DURING ERECTION, STRUCTURAL STEEL FRAME SHALL BE ADEQUATELY BRACED IN ALL LINES, TWO WAYS.
- 14. CONNECTIONS SHALL BE DESIGNED PER AISC TO CARRY FULL CAPACITY OF UNIFORMLY LOADED MEMBER, UNLESS NOTED OTHERWISE. REACTIONS GREATER THAN
- FULL MEMBER CAPACITY ARE INDICATED THUS (60K) ON PLAN.

 15. ALL GROUT UNDER STEEL PLATES SHALL BE NON-SHRINK "PRE-MIX" TYPE AND
- 16. FOR ALL MISCELLANEOUS STEEL CONSTRUCTION NOT SHOWN ON STRUCTURAL DRAWINGS, SEE ARCHITECTURAL DRAWINGS.

SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI.

- 17. EXPANSION BOLTS SHALL BE 3/4-INCH DIAMETER KWIK BOLT ANCHORS AS MANUFACTURED BY HILTI OR APPROVED EQUIVALENT AS APPROVED BY THE ENGINEER, AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- 18. ALL STEEL COLUMN BASE PLATES SHALL INCLUDE LEVELING PLATES AS REQUIRED FOR CONSTRUCTION.
- 19. ALL EXPOSED / EXTERIOR STEEL SHALL BE HOT DIPPED GALVANIZED OR STAINLESS STEEL, UNLESS OTHERWISE SHOWN ON THE DRAWINGS.

LIGHT GAGE METAL FRAMING

1. ALL GALVANIZED MATERIAL SHALL CONFORM TO THE FOLLOWING:

ASTM 446, GRADE A, FY=33,000 PSI MINIMUM.

4. ALL ROOF SHEATHING SHALL BE INSTALLED WITH PANEL CLIPS.

- A. STUDS AND JOISTS OF 12, 14, AND 16 GAGE: ASTM A 446, GRADE D, FY=50,000
- B. STUDS AND JOISTS OF 18 AND 20 GAGE, TRACKS, BRIDGING, AND ACCESSORIES:
- 2. ALL GALVANIZED MATERIAL SHALL BE FORMED FROM STEEL HAVING A MINIMUM G-60 GALVANIZED COATING CONFORMING TO ASTM A 525.

WOOD FRAMING

- PROVIDE ALL WOOD FRAMING MATERIALS AS SHOWN ON THE PLANS FOR COMPLETE CONSTRUCTION.
- 2. PROVIDE ALL MISCELLANEOUS WOOD FRAMING AND/OR BRACING AS REQUIRED FOR SUPPORT OF MECHANICAL, ELECTRICAL, PLUMBING OR MISCELLANEOUS APPURTENANCES.
- 3. ALL WOOD SHALL BE MINIMUM OF GRADE NO. 2 OR BETTER UNLESS OTHERWISE SHOWN.

- METAL DECKING
- 1. METAL DECKING SHALL BE MADE OF STEEL CONFORMING TO ASTM A 446 FOR GALVANIZED DECK HAVING A MINIMUM YIELD STRENGTH OF 33,000 PSI. CORRUGATED METAL DECK FOR PERMANENT FORMWORK SHALL BE MADE OF STEEL CONFORMING TO ASTM A 446, GRADE E WITH A MINIMUM YIELD STRENGTH OF 80,000 PSI.
- 2. METAL DECKING USED IN FLOOR CONSTRUCTION SHALL HAVE A PROTECTIVE ZINC COATING CONFORMING TO ASTM A 525, G-60. METAL DECKING USED IN ROOF CONSTRUCTION SHALL HAVE A PROTECTIVE ZINC COATING CONFORMING TO ASTM A 525, G-90.
- 3. ALL METAL DECK HAS BEEN DESIGNED TO BE CONTINUOUS OVER THREE SPANS MINIMUM, AND SHALL BEAR AT LEAST 2 INCHES ON STEEL SUPPORTS. FOR ONE OR TWO SPAN CONDITIONS, THE CONTRACTOR SHALL PROVIDE SHORING AS REQUIRED, OR FURNISH HIGHER GAGE DECK AS REQUIRED TO SUPPORT ALL THE APPLICABLE LOADS.
- 4. DECK SHALL BE WELDED TO SUPPORTING STEEL AT ENDS OF UNITS AND AT ALL INTERMEDIATE SUPPORTS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. SIDE LAPS SHALL BE WELDED OR SCREWED AT 3'-0" ON CENTER MAXIMUM FOR SPANS OF 5'-0". USE WELDING WASHERS FOR ATTACHING METAL DECK OF 23 GAGE
- 5. PROVIDE REINFORCING CHANNELS, STANDARD CLOSURES, CANT STRIPS, FINISH STRIPS, POUR STOPS AND OTHER ACCESSORIES AS SHOWN ON DRAWINGS OR AS REQUIRED.

 $S = 0.035 \text{ IN.}^3$

6. METAL DECK SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES PER FOOT WIDTH:

A. 1 1/2", TYPE B, WIDE RIB 20 $I = 0.212 \text{ IN.}^4$ GAGE (ROOF CONSTRUCTION) $S = 0.234 \text{ IN.}^3$ B. 9/16" CORRUGATED 28 GAGE $I = 0.012 \text{ IN.}^4$

DEMOLITION NOTES

REMOVE EXISTING CONSTRUCTION AS SHOWN ON PLANS. SEE SECTIONS AND DETAILS
FOR EXTENT OF STRUCTURE TO BE REMOVED.

(PERMANENT FORMWORK FOR FLOOR SLAB)

- 2. EXISTING STRUCTURAL STEEL FRAMING SHALL REMAIN UNLESS SPECIFICALLY NOTED ON PLAN TO BE REMOVED.
- 3. CONCRETE ENCASEMENT AROUND REMAINING STEEL WILL REMAIN, UNLESS NOTED
- 4. IF FIELD CONDITIONS DIFFER FROM THOSE SHOWN ON DRAWINGS, NOTIFY ENGINEER BEFORE PROCEEDING WITH DEMOLITION.

EXISTING CONSTRUCTION

OTHERWISE.

1. ALL DIMENSIONS AND ELEVATIONS OF EXISTING STRUCTURES SHOWN ON THE DRAWINGS ARE OBTAINED FROM AVAILABLE SOURCES AND ARE NOT GUARANTEED TO BE TRUE AND EXACT. THE CONTRACTOR SHALL VERIFY THESE DIMENSIONS AND ELEVATIONS BY ACTUAL FIELD MEASUREMENTS PRIOR TO FABRICATION OF ANY MATERIALS AND START OF WORK AND IMMEDIATELY REPORT ANY DISCREPANCIES TO THE ENGINEER.

MISCELLANEOUS

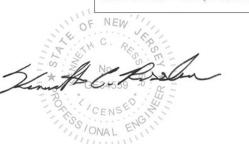
- 1. CONTRACTOR SHALL VERIFY CONDITIONS IN THE FIELD AND IMMEDIATELY NOTIFY ENGINEER OF ANY CONDITIONS NOT AS ASSUMED; HE SHALL TAKE FIELD MEASUREMENTS AS REQUIRED AND BE RESPONSIBLE FOR SAME.
- 2. CONTRACTOR SHALL COORDINATE WITH ALL RELATED TRADES FOR DETAILING, FABRICATION, AND ERECTION PRIOR TO SUBMITTING SHOP DRAWINGS FOR APPROVAL.
- 3. ALL STRUCTURAL WORK SHALL BE COORDINATED WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, ETC. REQUIREMENTS. DISCREPANCIES AND/OR INTERFERENCE SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
- 4. GENERAL CONTRACTOR TO PROVIDE APPROPRIATE NUMBER OF COPIES OF ONE COMPLETE COORDINATED DRAWING SHOWING ALL SLEEVES, CONDUIT BOXOUT, DUCT OPENINGS, ETC. AS REQUIRED FOR ALL TRADES FOR ENGINEER'S APPROVAL. THIS SHALL BE DONE A MINIMUM OF TWO WEEKS PRIOR TO POURING AFFECTED SLABS, COLUMNS, OR FOOTINGS.
- 5. NO OPENINGS SHALL BE MADE IN ANY STRUCTURAL MEMBER UNLESS SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS OR OTHER APPROVAL FROM THE ENGINEER.
- 6. SUPPORT DETAILS FOR ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING EQUIPMENT IS BASED UPON AVAILABLE INFORMATION OF MANUFACTURER. CONTRACTOR SHALL COORDINATE REQUIREMENTS OF ACTUAL EQUIPMENT AND SHALL PROVIDE ANY ADDITIONAL REQUIRED FRAMING.

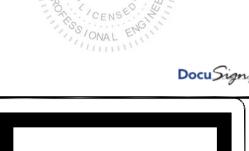
	ABBREVIATIONS
E.F.	EACH FACE
WF1	WALL FOOTING
CMU	CONCRETE MASONRY UNIT
V.I.F.	VERIFY IN THE FIELD
O.C.	ON CENTER
E.W.	EACH WAY
T&B	TOP & BOTTOM
AL	ALUMINUM
CS	CARBON STEEL
SS	STAINLESS STEEL
CL	CENTER LINE
GALV.	GALVANIZED

	GENERAL INFO:
SITE LOCATION	100 TROOPER LANE, HAMMONTON, NJ 08037 BLOCK 403, LOT 10&11
USE GROUP (PER NJ IBC 2018)	S-2 (LOW-HAZARD STORAGE) FACILITY WILL STORE MAINTENANCE VEHICLES, LIMITED FLAMMABLE LIQUIDS (MOTOR OIL) AND TOOLS.
EXISTING BLDG.= ADDITION=	46'x100' 20'x100'
CONSTRUCTION TYPE	II B

STRU	CTURAL DRAWING LIST
DRAWING #	DRAWING TITLE
S-1	STRUCTURAL COVER SHEET
S-2	EXISTING / DEMOLITION FLOOR PLAN
S-3	FOUNDATION FLOOR PLAN
S-4	SLAB FLOOR PLAN
S-5	ROOF FRAMING PLAN
S-6	SECTION AND ELEVATIONS







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~ENGINEERING EXCELLENCE~

DATE: 7-25-2022

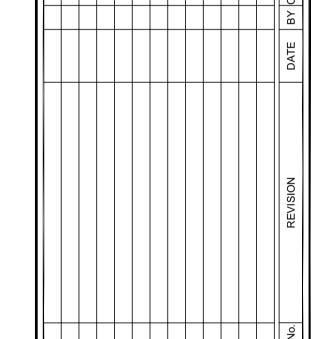
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RESULTING THEREFROM



TATION AUTHORITY

T ATLANTIC CITY

AL MAINTENANCE

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SOUTH JERSEY TRANSPORTAT

STORAGE BUILDING AT #

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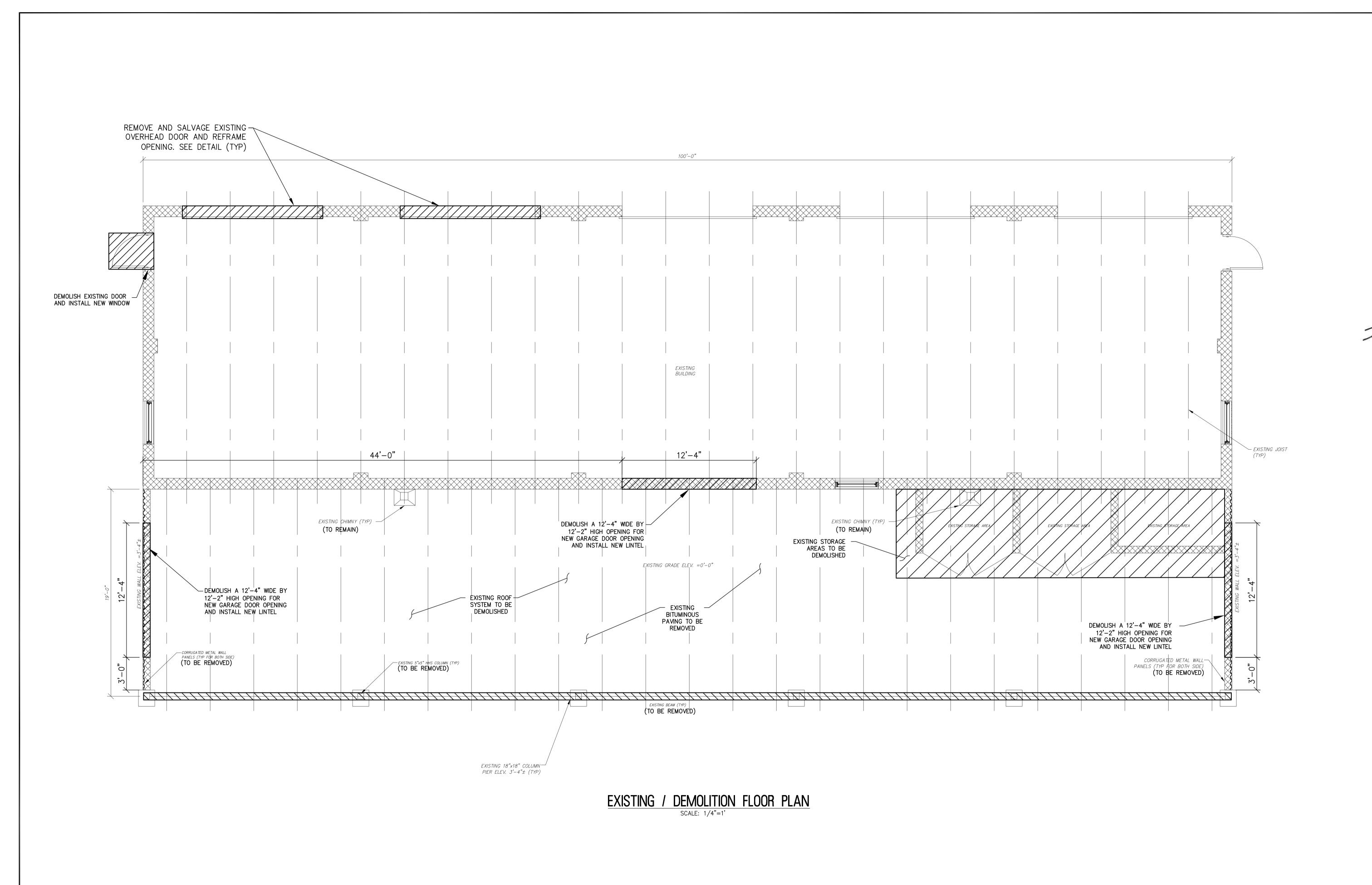
ATLANTIC COUNTY

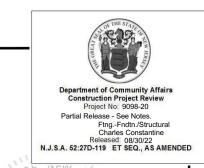
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 J.G.
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 SHEET No.:

 3.2020
 S-1





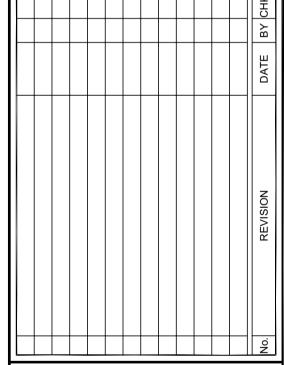
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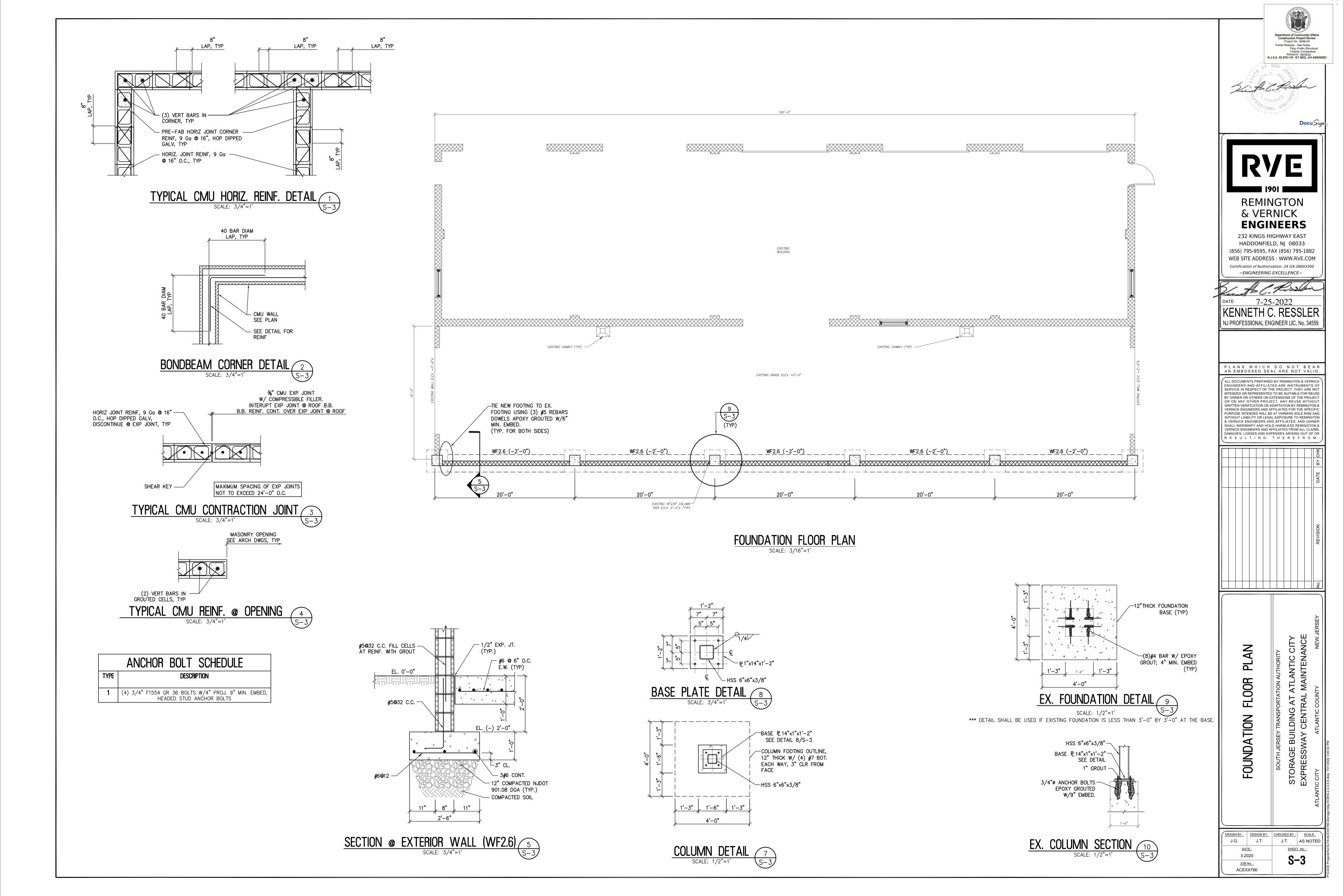
AN FLOOR **DEMOLITION**

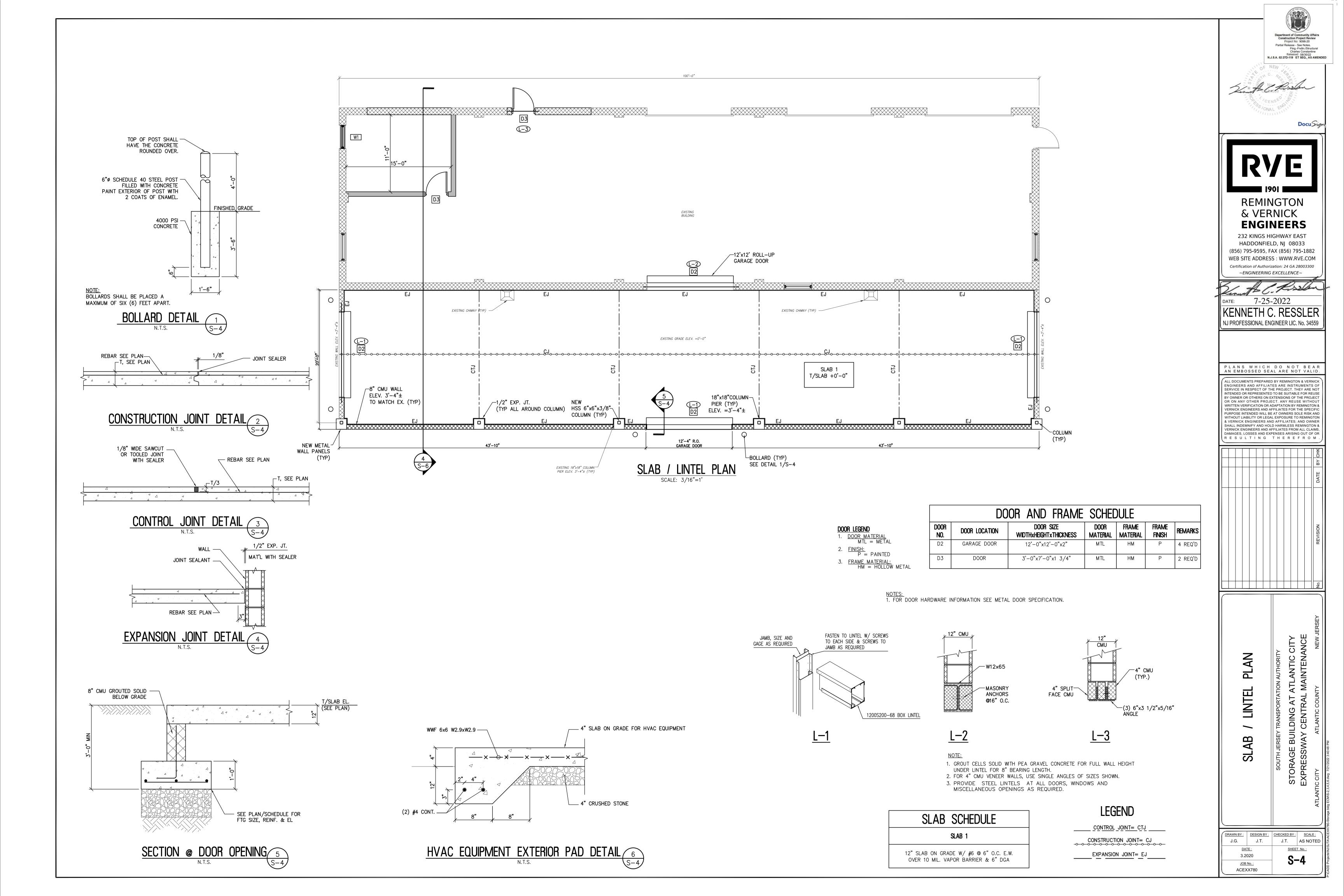
SOUTH JERSEY TRANSPORTATION AUTHORITY
STORAGE BUILDING AT ATLANTIC CITY
EXPRESSWAY CENTRAL MAINTENANCE

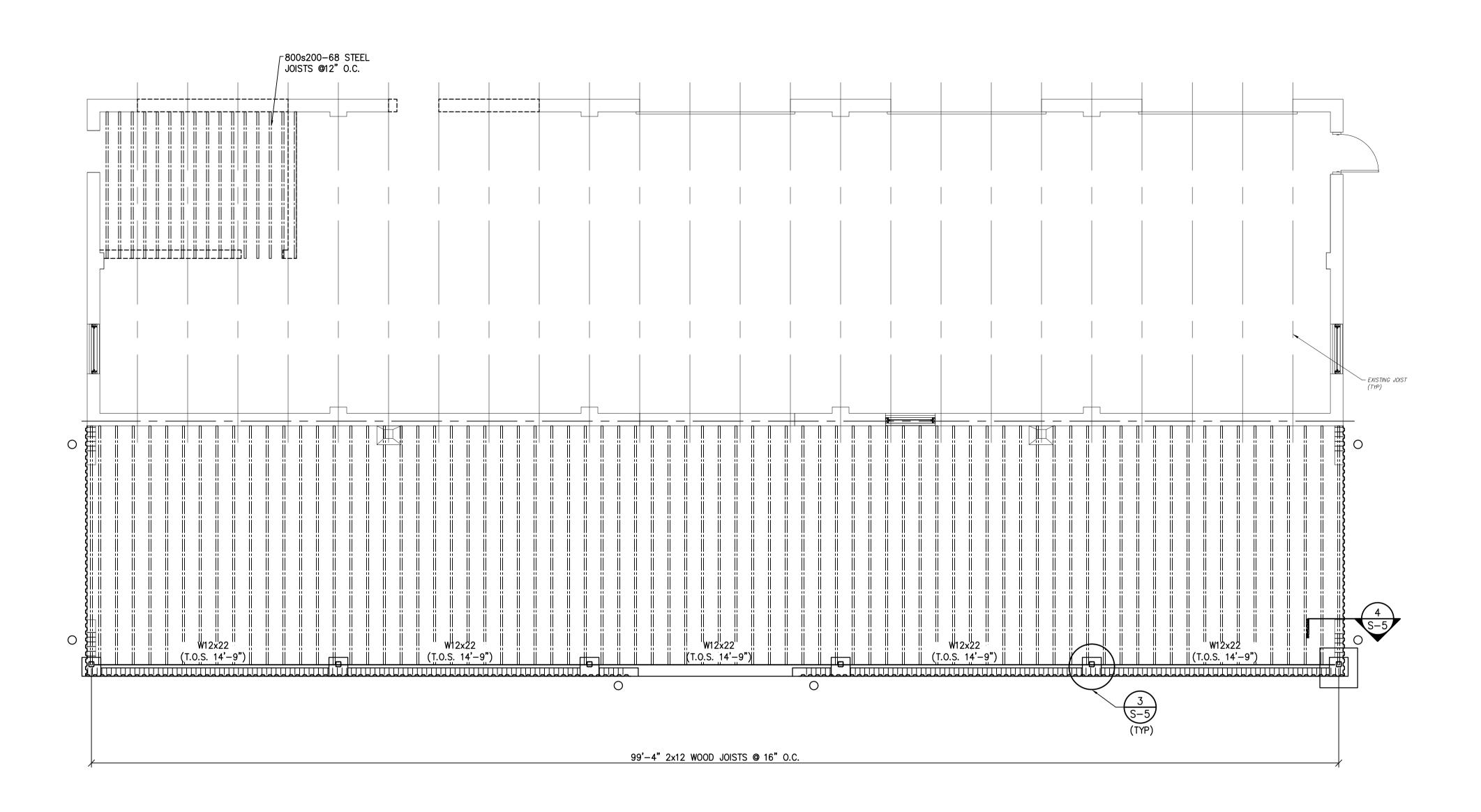
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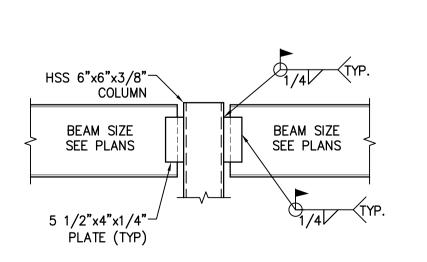
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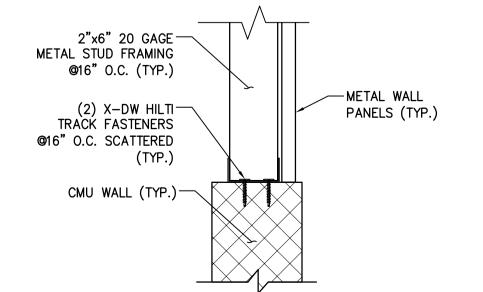


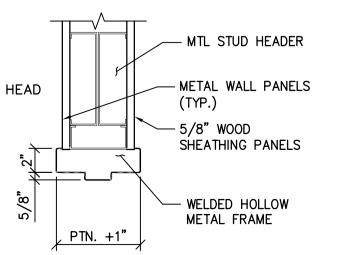




ROOF FRAMING PLAN SCALE: 3/16"=1'



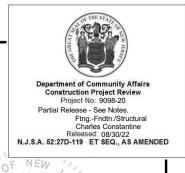




BEAM TO COLUMN CONNECTION DETAIL 3
N.T.S.









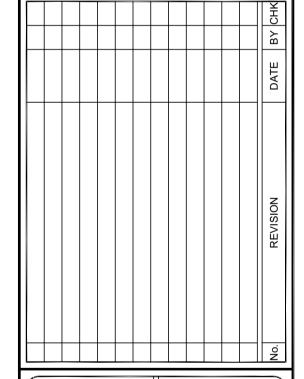
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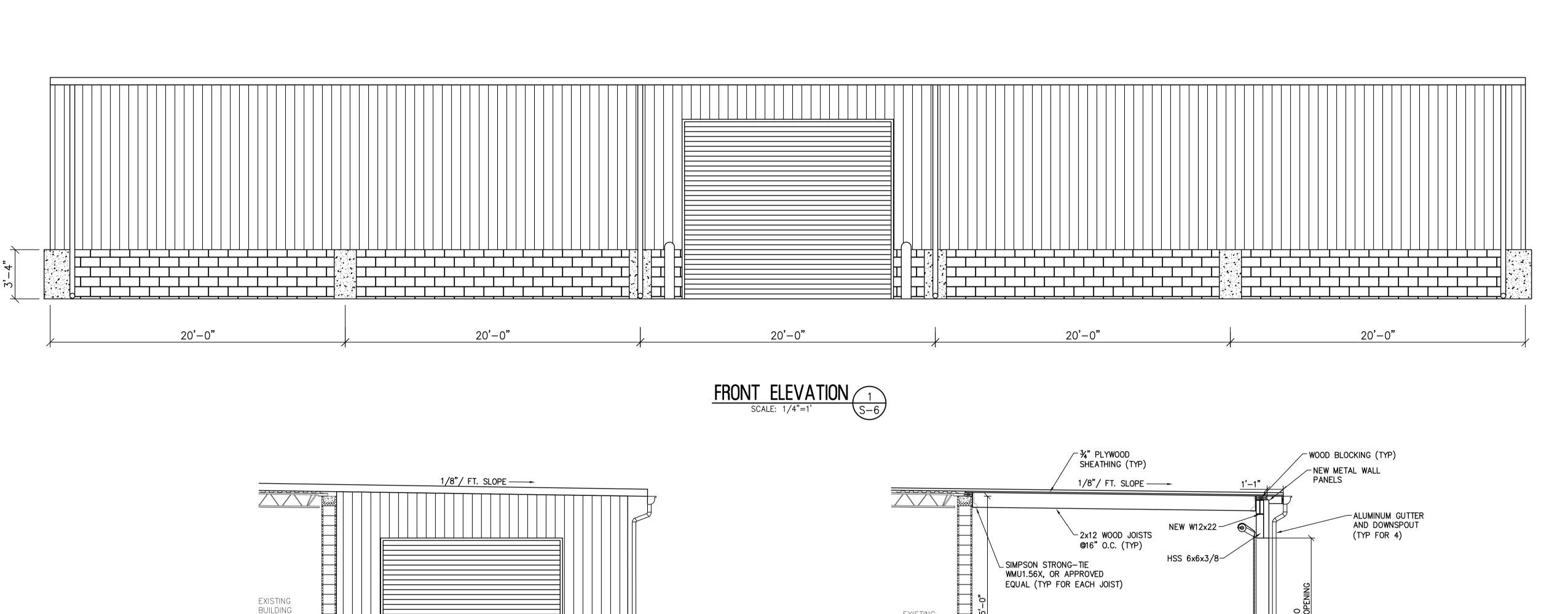
PLAN **FRAMING**

R00F

ACEXX780

STORAGE BUILDING AT ATLANTIC CITY EXPRESSWAY CENTRAL MAINTENANCE

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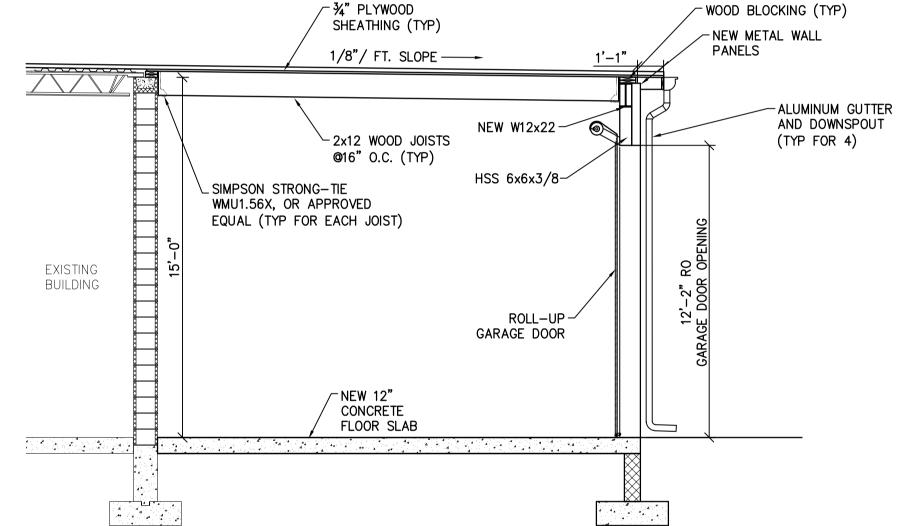


3'-0"

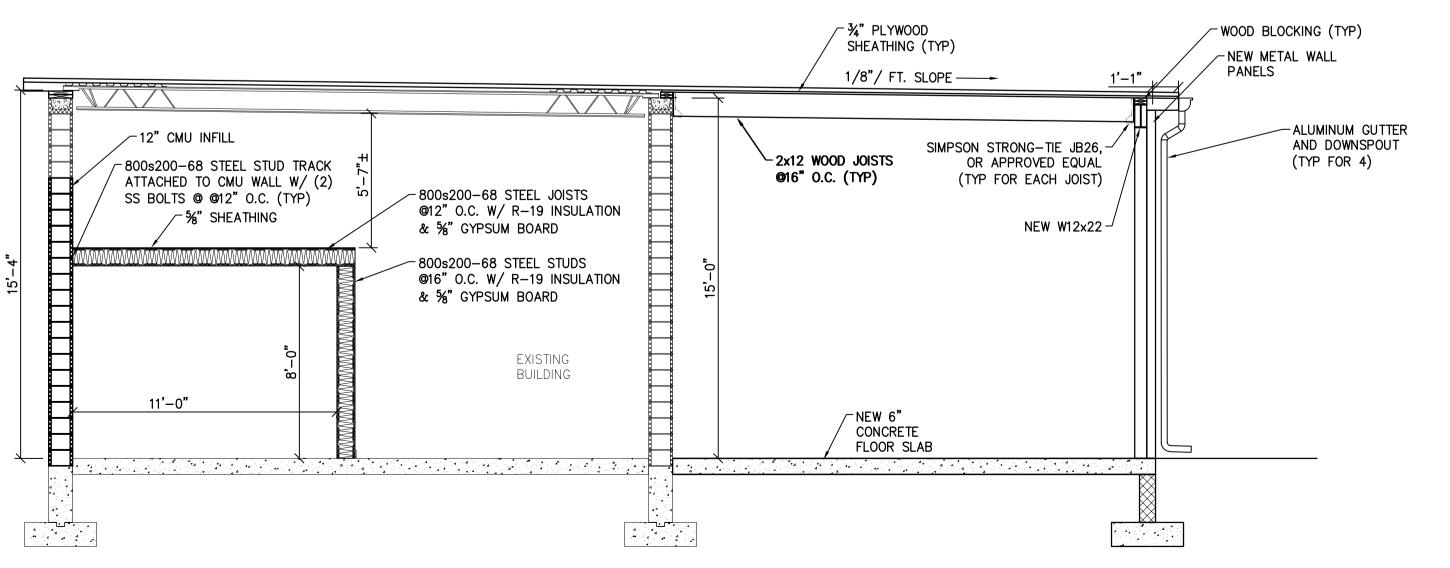
12'-4" RO

EXTERIOR ELEVATION (2)

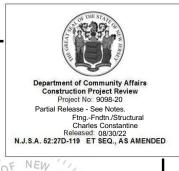
SCALE: 1/4"=1'













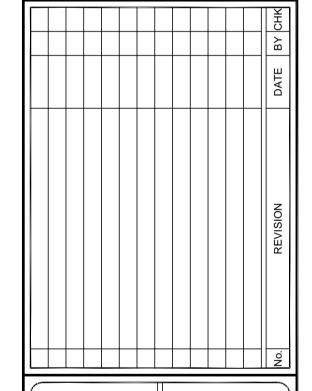
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7-25-2022 NJ PROFESSIONAL ENGINEER LIC. No. 34559

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ELEVATIONS

SECTION

STORAGE BUILDING AT ATLANTIC CITY EXPRESSWAY CENTRAL MAINTENANCE

DRAWN BY: DESIGN BY: CHECKED BY: SCALE: J.T. AS NOTED J.G. J.T. DATE: SHEET No.: 3.2020

JOB No.: ACEXX780

OTHERWISE INDICATED.

- (ALL GENERAL NOTES, SYMBOLS & ABBREVIATIONS MAY NOT BE USED ON THIS PROJECT)
- 1. EXAMINE JOB SITE AND VERIFY ALL SITE CONDITIONS PRIOR TO SIGNING CONTRACT. BRING ANY DISCREPANCY BETWEEN
- THE CONTRACT DOCUMENTS AND THE ACTUAL FIELD CONDITIONS TO THE ATTENTION OF THE ARCHITECT/ENGINEER 2. THE LOCATION OF EXISTING UTILITIES IS SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PAY FOR AND REPAIR ALL DAMAGES CAUSED BY FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES UNLESS
- 3. THE DRAWINGS ARE DIAGRAMMATIC. COORDINATE IN THE FIELD, WITH THE ARCHITECT AND WITH ALL TRADES, THE EXACT LOCATION OF EQUIPMENT, FIXTURES, VALVES, THERMOSTATS, ETC. AND ROUTING OF PIPING, DUCTWORK, CONDUIT,
- 4. PERFORM WORK IN ACCORDANCE WITH RULES, REGULATIONS, STANDARDS, CODES, ORDINANCES, AND LAWS OF LOCAL. STATE AND FEDERAL GOVERNMENTS AND OTHER AUTHORITIES HAVING JURISDICTION AND BE RESPONSIBLE FOR COMPLIANCE THEREWITH.
- 5. OBTAIN ALL NECESSARY APPROVALS, PERMITS AND INSPECTIONS. PAY ALL ASSOCIATED FEES.
- 6. GUARANTEE ALL SYSTEMS AND WORK FOR A PERIOD OF ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE. GUARANTEE REFRIGERATION COMPRESSORS FOR FIVE (5) YEARS
- 7. BEFORE STARTING FABRICATION/ WORK SUBMIT TO ARCHITECT/ENGINEER FOR APPROVAL SIX (6) COMPLETE SETS OF
- SHOP DRAWINGS AND PRODUCT DATA FROM MANUFACTURERS, SUPPLIERS, ETC. 8. ALL MATERIALS SHALL BE NEW AND OF COMMERCIAL GRADE AND BEAR THE UNDERWRITER'S LABEL WHERE APPLICABLE.
- 9. LOCATE ALL EXISTING UTILITIES AND MAKE SERVICEABLE CONNECTIONS TO SAME 10. OBTAIN APPROVAL FROM THE BUILDING OWNER'S REPRESENTATIVE PRIOR TO ANY INTERRUPTION OF BUILDING SYSTEMS.
- COORDINATE ACCEPTABLE WORKING HOURS WITH SAME. 11. REMOVE ALL ABANDONED EQUIPMENT, FIXTURES, DUCTWORK, PIPING, CONDUIT, ETC. CAP ALL PIPING ABANDONED IN
- 12. ALL CUTTING AND PATCHING IS BY RESPECTIVE CONTRACTORS. CORE DRILL OR SAW CUT ALL MASONRY AND RESTORE ALL SURFACES TO ORIGINAL CONDITION. PAINTING AND FINISHING ARE BY THE GENERAL CONTRACTOR.
- 13. PIPING AND SPECIALTIES
- a. ALL PIPING SHALL CONFORM TO THE REQUIREMENTS OF THE ANSI SAFETY CODE AND BE FREE FROM ALL DEFECTS. b. PROVIDE SLEEVES FOR PIPING THROUGH MASONRY, FIRE RATED WALLS AND SMOKE PARTITIONS. SLEEVES SHALL BE 22 GAUGE OR HEAVIER STEEL, SCHEDULE 40 IN BEARING WALLS. SIZE SLEEVES TO ACCOMMODATE PIPE INSULATION
- c. PROVIDE PIPE HANGERS TO SUPPORT PIPING FROM BUILDING STRUCTURE TO MAINTAIN REQUIRED SLOPE, PROVIDE FOR EXPANSION AND CONTRACTION, ISOLATE VIBRATION AND RELIEVE EQUIPMENT AND SPECIALTIES FROM STRAIN. SPACE HANGERS ACCORDING TO APPLICABLE CODES AND MANUFACTURER'S RECOMMENDATIONS.
- d. IDENTIFY ALL PIPING WITH SEMIRIGID OR ADHESIVE PLASTIC INDICATION MARKERS, EXCEPT WITHIN INACCESSIBLE CHASES. MARKERS SHALL SHOW DIRECTION OF FLOW. MARKERS SHALL BE LOCATED NEXT TO EACH VALVE, AT EACH BRANCH, ON BOTH SIDES OF PIPE PASSAGE THROUGH WALLS AND ON ALL HORIZONTAL PIPING AT 20'
- e. ROUTE ALL PIPING CONCEALED IN WALLS, ABOVE CEILING AND BELOW FLOOR UNLESS OTHERWISE NOTED. RUN PARALLEL WITH BUILDING LINES.
- f. PROVIDE DRAIN VALVES & PLUGS AT ALL LOW POINTS SUCH THAT PIPING SYSTEMS CAN BE DRAINED. PROVIDE MANUAL AIR VENT VALVES AT ALL HIGH POINTS IN THE SYSTEM.
- q. PROVIDE BACKFLOW PREVENTION DEVICES AT ALL EQUIPMENT AS REQUIRED BY CODE. UNLESS STATED OTHERWISE PROVIDE CHECK VALVE AND SHUT-OFF VALVE BOTH RATED FOR 250°F DOWN STREAM OF BACKFLOW PREVENTER ON MAKE UP WATER LINE FOR HYDRONIC HEATING HOT WATER SYSTEMS.
- h. PROVIDE DIELECTRIC UNIONS AT ALL JUNCTIONS OF DISSIMILAR METALS.

WHERE APPLICABLE. PROVIDE UL LISTINGS FOR SLEEVE PACKING.

- i. ALL SHUTOFF VALVES, CONTROL VALVES, ETC. ARE FULL LINE SIZE UNLESS OTHERWISE NOTED.
- j. INSTALL PIPING ON WARM SIDE OF BUILDING INSULATION. DO NOT INSTALL PIPING WHERE SUBJECT TO FREEZING. k. ALL PIPING INSULATION SHALL BE CONTINUOUS THROUGH WALLS AND CEILING OPENINGS, SLEEVES AND PIPE
- I. TEST ALL PIPING IN ACCORDANCE WITH APPLICABLE CODES, STANDARDS, AND INSPECTOR'S REQUIREMENTS PRIOR TO INSULATION OR ENCLOSING.
- m. BALANCE ALL HYDRONIC DEVICES FOR FLOW RATES NOTED ON DRAWINGS. PROVIDE BALANCING REPORT TO
- n. UNLESS STATED OTHERWISE IN THE CONTRACT SPECIFICATIONS, PROVIDE A MINIMUM OF ONE (1) ONE AND A HALF (1-1/2)INCH THICK LAYER OF PREFORMED MINERAL FIBER PIPE INSULATION WITH PREFORMED MINERAL FIBER FITTINGS ON ALL
- DOMESTIC HOT AND COLD WATER PIPING, HYDRONIC HEATING AND CHILLED WATER SUPPLY AND RETURN PIPING, REFRIGERANT PIPING AND CONDENSATE DRAIN PIPING. INCLUDE A FIELD APPLIED FOIL AND PVC JACKET WITH VAPOR RETARDER AS PART OF THE INSULATION ASSEMBLY. O. UNLESS STATED OTHERWISE ALL UNDERGROUND PIPING SHALL BE INSTALLED WITH POLYETHYLENE ENCASEMENT (PE)
- FOR CORROSION RESISTANCE p. UNLESS STATED OTHERWISE ALL FUEL GAS VENT PIPING TO BE SA-53GrB CARBON STEEL. ALL VENT PIPING TO BE PRIMED AND FINISH PAINTED IN A COLOR ACCEPTABLE TO THE OWNER.
- 14. DUCTWORK AND SPECIALTIES a. ALL DUCTWORK TO BE IN ACCORDANCE WITH S.M.A.C.N.A. "H.V.A.C. DUCT CONSTRUCTION STANDARDS", LATEST
- EDITION. PRESSURE CLASS "B".
- b. ALL DUCTWORK TO BE CONSTRUCTED OF GALVANIZED SHEETMETAL. c. PROVIDE 45 DEGREE COLLARS TO ALL BRANCH CONNECTIONS. PROVIDE TURNING VANES AT ALL ELBOWS 12"x6" OR
- LARGER. PROVIDE STANDARD RADIUS ELBOWS AT ALL ELBOWS SMALLER THAN 12"x6".
- d. PROVIDE ALL VOLUME DAMPERS REQUIRED TO BALANCE THE SYSTEMS. INSTALL VOLUME DAMPERS AT BRANCH TAKE-OFFS FROM TRUNK.
- e. PROVIDE CURTAIN TYPE FIRE DAMPERS WHEREVER DUCT PENETRATES FIRE RATED PARTITIONS. UNITS SHALL PROVIDE NOT LESS THAN 90% FREE AREA. PROVIDE ACCESS DOORS AT ALL FIRE DAMPERS.
- f. TEST DUCT SYSTEMS FOR AIR TIGHTNESS AND ABSENCE OF AUDIBLE LEAKS BEFORE ENCLOSURE.
- g. BALANCE ALL AIR DEVICES FOR AIR QUANTITIES NOTED ON DRAWINGS. PROVIDE BALANCING REPORT TO
- ARCHITECT/ENGINEER. h. FLEXIBLE DUCTS: ALL FLEXIBLE DUCTS SHALL BE IN COMPLIANCE WITH THE LATEST EDITION OF THE INTERNATIONAL
- MECHANICAL CODE. I. COORDINATE ALL EQUIPMENT CONNECTIONS WITH MANUFACTURER'S CERTIFIED DRAWINGS. COORDINATE AND PROVIDE ALL PIPING TRANSITIONS REQUIRED FOR FINAL EQUIPMENT CONNECTIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL DUCT AND PIPING DIMENSIONS BEFORE FABRICATION.
- i. PROVIDE FIRE DAMPERS IN THE DUCTWORK IN ACCORDANCE WITH ALL APPLICABLE CODES AND THE CONTRACT DOCUMENTS.
- k. UNLESS STATED OTHERWISE IN THE CONTRACT SPECIFICATIONS, PROVIDE A MINIMUM OF ONE (1) TWO AND ONE HALF (2-1/2)INCH THICK LAYER OF MINERAL FIBER BLANKET INSULATION ON ALL NEW INDOOR ROUND AND RECTANGULAR SUPPLY AIR. EXHAUST AIR, RETURN AIR AND OUTDOOR AIR DUCTWORK. INCLUDE A FIELD APPLIED PAPER AND FOIL JACKET WITH VAPOR RETARDER AS PART OF THE INSULATION ASSEMBLY.
- I. UNLESS STATED OTHERWISE IN THE CONTRACT SPECIFICATIONS, PROVIDE A MINIMUM OF ONE (1) TWO (2") INCH THICK LAYER OF MINERAL FIBER BOARD INSULATION ON ALL NEW OUTDOOR ROUND AND RECTANGULAR SUPPLY AIR. EXHAUST AIR. RETURN AIR AND OUTDOOR AIR DUCTWORK. INCLUDE A WEATHERPROOF FIELD APPLIED 22 GAUGE ALUMINUM JACKET WITH VAPOR RETARDER AS PART OF THE INSULATION ASSEMBLY. COORDINATE FINISH COLOR OF EXTERIOR JACKET WITH THE OWNER.
- m. UNLESS OTHERWISE NOTED ALL EXPOSED SUPPLY, RETURN AND EXHAUST AIR DUCTWORK SHALL BE PRIMED AND PAINTED. COLOR TO BE DETERMINED BY THE ENGINEER / OWNER.
- 15. EQUIPMENT
- VERIFY ALL ELECTRICAL CHARACTERISTICS WITH ELECTRICAL CONTRACTOR BEFORE ORDERING EQUIPMENT. b. ALL MECHANICAL EQUIPMENT AND APPLIANCE INSTALLATIONS SHALL BE IN COMPLIANCE WITH THE LATEST EDITION
- OF THE INTERNATIONAL MECHANICAL CODE, AS WELL AS WITH MANUFACTURER'S RECOMMENDATIONS, c. ALL ELECTRICAL POWER WIRING IS BY ELECTRICAL CONTRACTOR. ALL CONTROL WIRING IS BY RESPECTIVE
- d. PROVIDE OWNER WITH OPERATION AND MAINTENANCE MANUALS FOR INSTALLED EQUIPMENT. INCLUDE CONTRACTOR'S, SUPPLIER'S AND MANUFACTURER'S NAMES, ADDRESS AND TELEPHONE NUMBERS.
- e. SUPPLY STARTERS AND DISCONNECTS WITH EQUIPMENT.
- f. PROVIDE CONCRETE PADS FOR FLOOR MOUNTED EQUIPMENT. PADS SHALL BE A MINIMUM 4" HIGH AND SHALL EXTEND 6" BEYOND EQUIPMENT ON ALL SIDES.
- g. LABELING: ALL MECHANICAL EQUIPMENT AND APPLIANCES SHALL BEAR LABELING IN COMPLIANCE WITH THE LATEST VERSION OF THE INTERNATIONAL MECHANICAL CODE.
- h. UNLESS NOTED OTHERWISE, ALL HYDRONIC SYSTEMS BOILER/ CHILLED WATER SHALL BE PROVIDED WITH A NEW BLADDER TYPE EXPANSION TANK AS REQUIRED. TANK TO BE SIZED FOR EACH SYSTEM BASED UPON TANK MANUFACTURER'S RECOMMENDATIONS.
- i. UNLESS OTHERWISE NOTED CONTRACTOR IS RESPONSIBLE TO FURNISH AND INSTALL PROPYLENE GLYCOL ANTI-FREEZE FOR ALL HYDRONIC HEATING AND COOLING SYSTEMS. THE CONTRACTOR SHALL SUPPLY A 35% CONCENTRATION OF PROPYLENE GLYCOL IN SOLUTION FOR CHILLED WATER COOLING SYSTEMS AND A 25% CONCENTRATION OF PROPYLENE GLYCOL IN SOLUTION FOR HOT WATER HEATING SYSTEMS. PROPYLENE GLYCOL ANTI FREEZE SHALL BE COMPATIBLE WITH ALL MATERIALS OF THE HYDRONIC SYSTEM (PIPING, VALVES, PUMPS, CHILLER, BOILER, ETC.) AS WELL AS ALL TERMINAL EQUIPMENT.

16. AUTOMATIC TEMPERATURE AND SAFETY CONTROLS

ALSO BE INCLUDED IN THIS WORK.

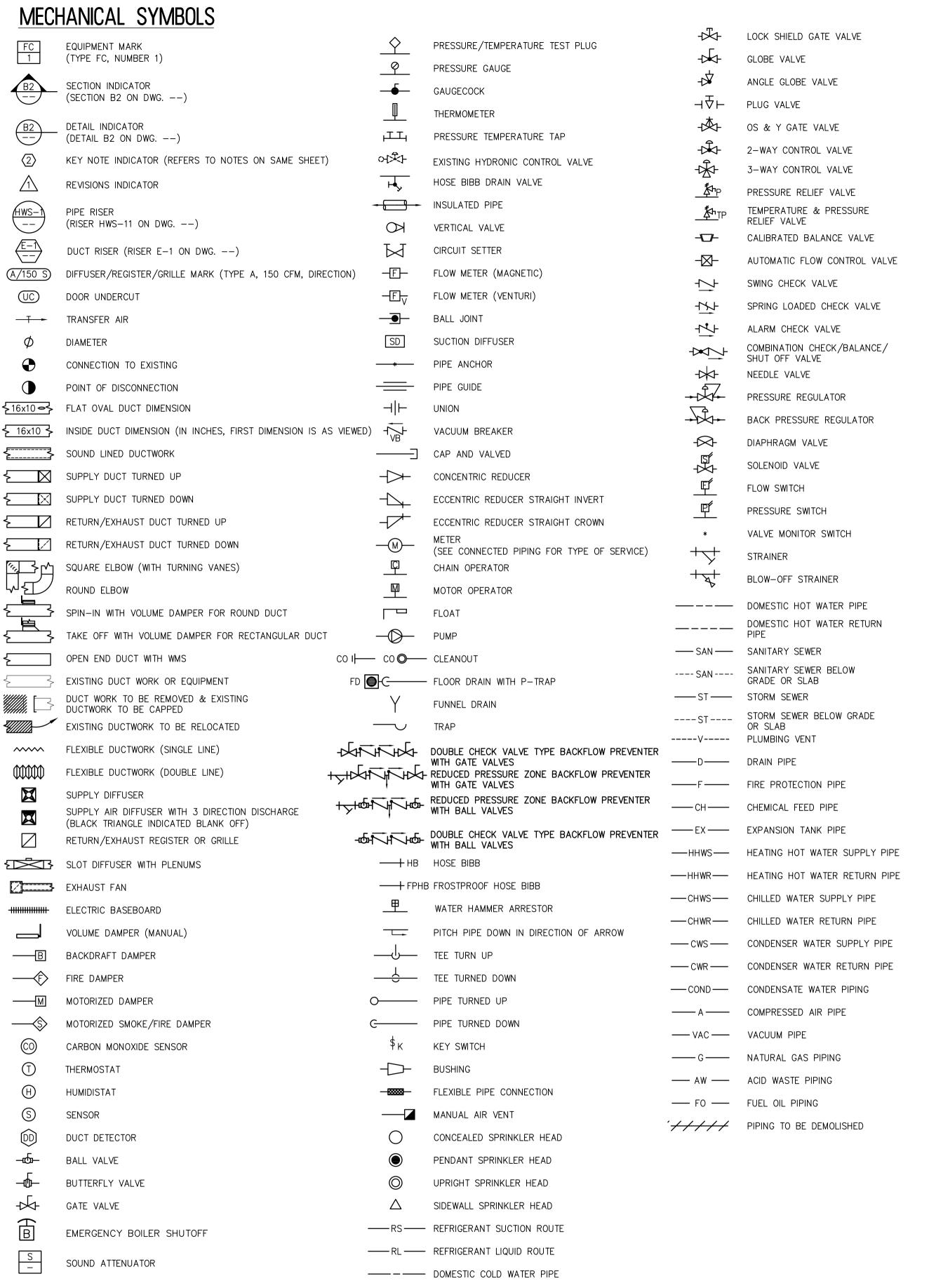
17. FIRE PROTECTION

- a. PROVIDE ALL WIRING, RELAYS, CONTACTS, TRANSFORMERS, ETC. REQUIRED TO DELIVER A COMPLETE OPERABLE
- b. THERMOSTATS SHALL BE 24 HOUR/7 DAY PROGRAMMABLE WITH FAN "OFF/ON/AUTO" AND SYSTEM "HEAT/COOL/AUTO/OFF" SWITCHES. VERIFY OPERATION OF ALL FUNCTIONS.
- a. THE QUANTITY AND LOCATION OF SPRINKLERS SHOWN ON THE DRAWINGS ARE APPROXIMATE AND INTENDED FOR SCHEMATIC PURPOSES ONLY. THE FIRE PROTECTION CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, INSTALLING AND COMMISSIONING ALL NECESSARY SPRINKLERS, PIPE, EQUIPMENT AND APPURTENANCES NECESSARY, IN FULL ACCORDANCE WITH THE NFPA AND APPROVED BY THE ENGINEER AND ALL AUTHORITIES HAVING JURISDICTION.
- b. THE FIRE PROTECTION CONTRACTOR SHALL PROVIDE DETAILED DESIGN DRAWINGS, HYDRAULIC CALCULATIONS, PIPING, FITTINGS, SPRINKLERS, ALARM AND MONITORING DEVICES, SIGNAGE AND APPURTENANCES COMPLETE AND IN FULL ACCORDANCE WITH ALL APPLICABLE BUILDING CODES AND NFPA 13 & 14. ALL WIRING OF DEVICES SHALL BE DONE BY ELECTRICAL CONTRACTOR.
- c. ALL SPRINKLER HEADS SHALL BE LOCATED AT THE CENTER POINT OF ALL ACOUSTICAL CEILING TILES. 18. ALL EXISTING PLUMBING, HVAC AND ELECTRICAL EQUIPMENT AND MATERIALS THAT ARE EITHER EXPOSED OR CONCEALED AND THAT INTERFERE WITH ALTERED EXISTING BUILDING ARRANGEMENTS AND NEW SYSTEMS SHALL BE REMOVED, RELOCATED, REROUTED, OR ABANDONED. DRAWINGS GENERALLY INDICATE MAJOR ITEMS OF EXISTING MATERIALS AND EQUIPMENT THAT ARE AFFECTED. IT IS NOT POSSIBLE TO INDICATE ALL RELATED ACCESSORIES, SPECIALTIES AND OTHER MINOR ITEMS; HOWEVER, THEIR REMOVAL, RELOCATION, REROUTING AND ABANDONMENT SHALL
- 19. EXISTING CONCEALED PLUMBING, HVAC AND ELECTRICAL EQUIPMENT AND MATERIALS THAT ARE TO REMAIN BUT BECOME EXPOSED DUE TO RENOVATION WORK, SHALL BE RELOCATED AND RECONNECTED AS PART OF THIS WORK.
- 20. PLUMBING DRAWINGS ARE DIAGRAMMATIC. ALL DEVICES & FITTINGS MAY NOT BE SHOWN ON THE DRAWINGS FOR CLARITY. PROVIDE CLEANOUTS NEAR THE BASE OF ALL VERTICAL WASTE & STORM WATER STACKS IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL STANDARD PLUMBING CODE
- 21. GUARDS SHALL BE PROVIDED WHERE APPLIANCES, EQUIPMENT, FANS OR OTHER COMPONENTS THAT REQUIRE SERVICE AND ROOF HATCH OPENINGS ARE LOCATED WITHIN 12 FEET OF A ROOF EDGE OR OPEN SIDE OF A WALKING SURFACE AND SUCH EDGE OR OPEN SIDE IS LOCATED MORE THEN 30 INCHES ABOVE THE FLOOR, ROOF OR GRADE BELOW. THE GUARD SHALL EXTEND NOT LESS THEN 30 INCHES BEYOND EACH END OF SUCH APPLIANCES, EQUIPMENT, FANS, COMPONENTS AND ROOF HATCH OPENINGS AND THE TOP OF THE GUARD SHALL BE LOCATED NOT LESS THEN 42 INCHES ABOVE THE ELEVATED SURFACE ADJACENT TO THE GUARD. THE GUARD SHALL BE CONSTRUCTED SO AS TO PREVENT THE PASSAGE OF A 21 INCH-DIAMETER SPHERE AND SHALL COMPLY WITH THE LOADING REQUIREMENTS FOR GUARDS SPECIFIED IN THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE.
- 22. PROVIDE FOR ALL MECHANICAL EQUIPMENT FAN AND MOTOR PULLEYS, SHEAVES, BELTS AND LABOR REQUIRED TO BALANCE THE NEW AND EXISTING MECHANICAL EQUIPMENT TO THE SPECIFIED SUPPLY. RETURN, EXHAUST AND OUTSIDE AIR FLOWS SHOWN ON THE CONTRACT DOCUMENTS AT NO ADDITIONAL COST TO THE OWNER. THE TESTING, ADJUSTING AND BALANCING CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL REQUIRED PULLEYS, SHEAVES AND BELTS EVEN IF THEY ARE NOT PROVIDED WITH THE EQUIPMENT BY THE MANUFACTURER
- 23. UNLESS OTHERWISE NOTED CONTRACTOR IS RESPONSIBLE TO FURNISH AND INSTALL ALL CONNECTION / TRANSITION DUCTS BETWEEN NEW HVAC EQUIPMENT (UNIT VENTILATORS, BLOWER COILS, FAN COILS, AIR HANDLERS, ETC.) AND NEW OR EXISTING OUTSIDE AIR LOUVERS. CONTRACTOR IS ALSO RESPONSIBLE FOR REINFORCING ANY OUTSIDE AIR LOUVER OPENING THAT IS CREATED OR ENLARGED TO ACCOMMODATE THE NEW INSTALLATION

MECHANICAL ABBREVIATIONS

ADJ. AFFUAPBFPDDLCIDGRHMOCONTGRVCTR	AIR HANDLER UNIT ACCESS PANEL BOILER BELOW FINISHED FLOOR BACKFLOW PREVENTOR BOTTOM OF DUCT BOTTOM OF LOUVER CONDENSATE CAST IRON CEILING DIFFUSER CEILING EXHAUST GRILLE CEILING EXHAUST REGISTER CUBIC FEET PER HOUR CUBIC FEET PER MINUTE CLEANOUT CLEANOUT ON GRADE CONDENSATE PIPING CONTINUED CEILING RETURN GRILLE CEILING RETURN REGISTER CIRCUIT SETTER VALVE COOLING TOWER COOLING TOWER	RPBP RWC S S=02' SA SD SH SP SS ST	LINEAR SUPPLY REGISTER MOTORIZED DAMPER MANHOLE MOP SERVICE BASIN MAKE—UP AIR UNIT MIXING VALVE (THERMOSTATIC) NORMALLY CLOSED NORMALLY OPEN NOT TO SCALE OUTSIDE AIR PUMP RETURN AIR ROOF DRAIN RADIANT HEATER REDUCED PRESSURE BACKFLOW PREVENTOR RAIN WATER CONDUCTOR SINK/SANITARY PIPING SLOPE SUPPLY AIR SPLITTER DAMPER SHOWER SPRINKLER PIPING SOIL STACK STORM PIPING
C C C C C D D D E B E E E E E F F F F F G G H H H H H H H H H H H H H	CONDENSING UNIT CABINET UNIT HEATER COLD WATER SUPPLY CONDENSER WATER SUPPLY/RETURN DRINKING FOUNTAIN DRAINAGE FIXTURE UNITS DOWN EXHAUST AIR ELECTRIC BASEBOARD HEATER EXHAUST FAN	TOD TP TR TWR TWS TYP	TRAP PRIMER TRANSITION TEMPERED WATER RETURN TEMPERED WATER SUPPLY

`	MECHANICAL SHEET INDEX
SHEET#	DESCRIPTION
M-1.0	MECHANICAL COVER SHEET
M-1.1	MECHANICAL DEMOLITION FLOOR PLAN
M-2.1	MECHANICAL FLOOR PLAN
M-3.1	MECHANICAL DETAILS AND SCHEDULES
P-3.1	PLUMBING UTILITY PIPING FLOOR PLAN
P-4.1	PLUMBING DETAILS



BLIND FLANGE END CONNECTION



REMINGTON & VERNICK **ENGINEERS** 232 KINGS HIGHWAY EAST

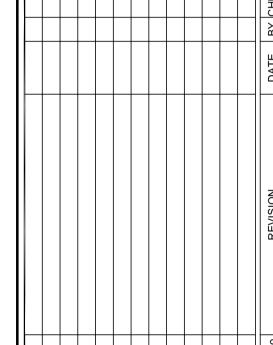
HADDONFIELD, NJ 08033 (856) 795-9595, FAX (856) 795-1882 WEB SITE ADDRESS: WWW.RVE.COM Certification of Authorization: 24 GA 28003300 ~ENGINEERING EXCELLENCE~

DATE: 08-27-2020 CHRISTOPHER A. SAPONAR NJ PROFESSIONAL ENGINEER LIC. No. 40059

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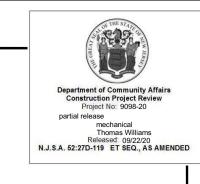
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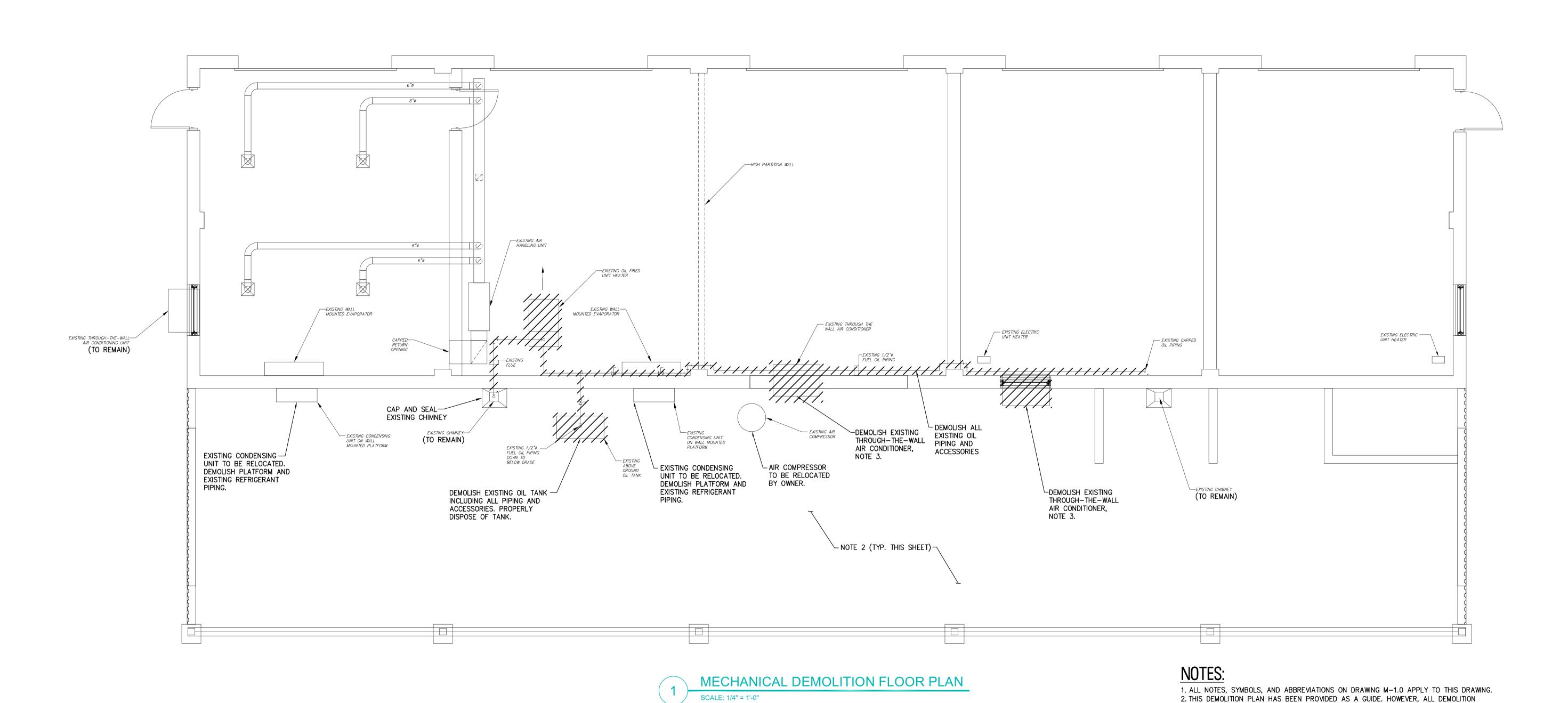


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T.K. DATE SHEET No.: 04-22-2020

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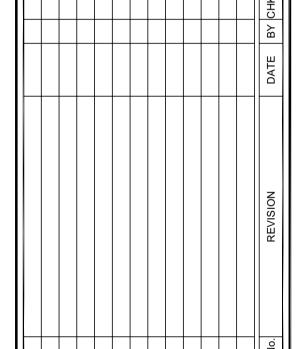
232 KINGS HIGHWAY EAST
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(856) 795-9595, FAX (856) 795-1882
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Certification of Authorization: 24 GA 28003300
~ENGINEERING EXCELLENCE~

CHRISTOPHER A. SAPONARO

NJ PROFESSIONAL ENGINEER LIC. No. 40059

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ECHANICAL DEMOLITION FLOOR PLAN

REQUIRED TO SUCCESSFULLY COMPLETE THIS PROJECT SHALL BE INCLUDED IN THE SCOPE OF WORK. IT IS THE INTENT OF THE PLANS AND SPECIFICATIONS TO SECURE A COMPLETELY INTERCONNECTED AND FUNCTIONING SYSTEM AND IF ANY WORKMANSHIP OR MATERIALS BE REQUIRED WHICH ARE OBVIOUSLY NECESSARY TO CARRY OUT THE FULL INTENT AND

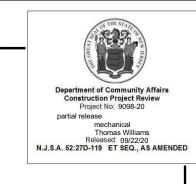
MEANING OF THE PLANS AND SPECIFICATIONS OR TO BE REASONABLY INFERRED THEREFROM, THE COST OF SUCH WORKMANSHIP OR MATERIALS SHALL BE INCLUDED IN THE SCOPE OF

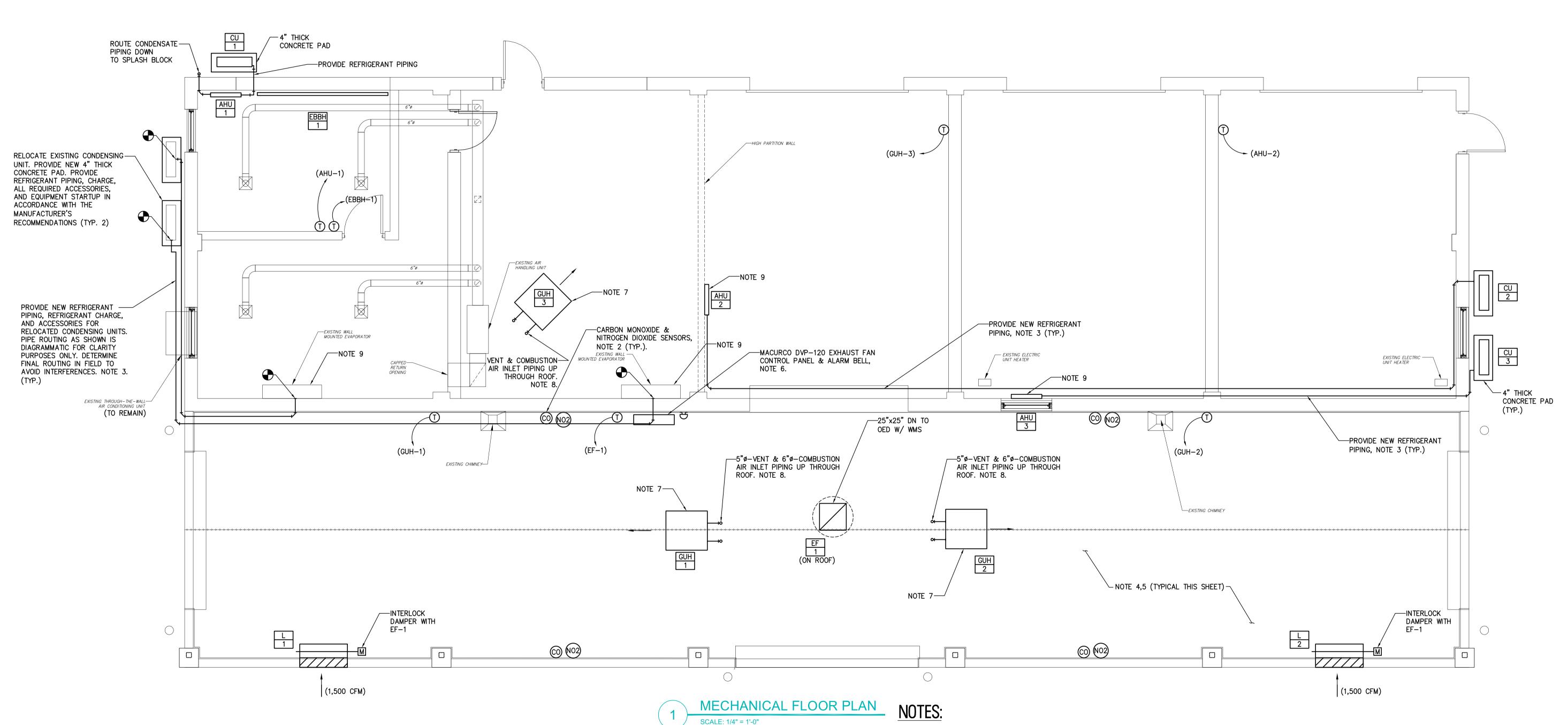
3. CONTRACTOR SHALL PATCH AND REPAIR EXISTING OPENING AS A RESULT OF THE

DEMOLITION OF THE EXISTING AIR CONDITIONING UNIT.

SOUTH JERSEY TRANSPORTATION AUTHORITY
STORAGE BUILDING AT ATLANTIC CITY
EXPRESSWAY CENTRAL MAINTENANCE

SOUTI STORAC EXPRES





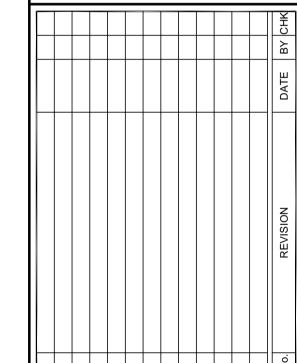
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DATE: 08-27-2020 NJ PROFESSIONAL ENGINEER LIC. No. 40059

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Δ OR 0

B.Z. T.K.

DATE:

04-22-2020

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STORAGE BUILDING AT ATLANTIC CITY EXPRESSWAY CENTRAL MAINTENANCE

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M-2.1

NITROGEN DIOXIDE. CARBON MONOXIDE DETECTION AND/OR NITROGEN DIOXIDE LEVELS SHALL BE AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER. PROVIDE SYSTEM WITH A MANUAL OVERRIDE SWITCH SUCH THAT THE FANS CAN RUN CONTINUOUSLY. QUANTITY AND LOCATION OF SENSORS SHALL BE AS RECOMMENDED BY THE MANUFACTURER. INTERLOCK THERMOSTAT WITH MACURCO PANEL FOR THERMOSTATIC CONTROL OF EXHAUST FAN.

6. THE MACURCO DVP-120 AUTOMATIC EXHAUST FAN CONTROLLER SHALL ACTIVATE THE

EXHAUST FAN AND ALARM BELL ON A DETECTION OF CARBON MONOXIDE AND/OR

1. ALL NOTES, SYMBOLS, AND ABBREVIATIONS ON DRAWING M-1.0 APPLY TO THIS DRAWING.

NITROGEN DIOXIDE DETECTOR MODEL TX-6 BY MACURCO OR EQUAL. INSTALL SENSORS

APPROXIMATELY 5'-0" A.F.F. MINIMUM QUANTITY OF DETECTORS SHOWN, PROVIDE FINAL

WITH THE MANUFACTURER'S RECOMMENDATIONS. CONNECT DETECTORS TO THE DVP-120

OVERRIDE FOR CONTINUOUS OPERATION. CO AND NO2 DETECTION LEVELS SHALL BE AS

3. PROVIDE REFRIGERATION PIPING IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

DETERMINE FINAL ROUTING IN FIELD. THE PIPE ROUTING AS SHOWN IS FOR SCHEMATIC/

4. EQUIPMENT LOCATIONS AS SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL DETERMINE

FINAL LOCATIONS IN THE FIELD TO AVOID INTERFERENCES AND MAINTAIN ALL OF THE

MANUFACTURER'S RECOMMENDED CLEARANCES. CONTRACTOR SHALL COORDINATE WITH

EXISTING & PROPOSED STRUCTURAL STEEL. ELECTRICAL CONDUIT, PIPING, FIRE ALARM.

5. NOT ALL INLINE DEVICES (VALVES, DAMPERS, REDUCERS, ETC.) HAVE BEEN SHOWN ON

THE PLANS FOR CLARITY, SEE PIPING DETAILS ON MECHANICAL DETAIL DRAWINGS FOR

ADDITIONAL INFORMATION. PROVIDE ALL INLINE DEVICES (VALVES, DAMPERS, REDUCERS,

GAUGES, ETC.) AS REQUIRED TO COMPLETE THE INSTALLATION EVEN IF NOT SPECIFICALLY

PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

ETC. ALL MODIFICATIONS MADE TO THE EQUIPMENT TO RESOLVE INTERFERENCES SHALL BE

RECOMMENDED BY THE MANUFACTURER.

DIAGRAMMATIC PURPOSES ONLY.

SHOWN ON THE PLANS OR DETAILS.

CONTROL PANEL THAT CONTROLS FAN IN ASSOCIATED DETECTION AREA. PROVIDE MANUAL

QUANTITY AND LOCATION FOR DETECTION OVER ENTIRE MECHANICAL AREA IN ACCORDANCE

2. PROVIDE CARBON MONOXIDE DETECTOR MODEL CM-6 BY MACURCO OR EQUAL. PROVIDE

7. INSTALL UNIT HEATER AS HIGH TO THE BOTTOM OF ROOF AS POSSIBLE WHILE MAINTAINING ALL OF THE MANUFACTURER'S REQUIRED CLEARANCES. BOTTOM OF HEATER SHALL BE APPROXIMATELY 11'-6" A.F.F.. PROVIDE HANGERS AND SUPPORTS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

8. PROVIDE COMBUSTION AIR INTAKE AND VENT PIPING IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND ALL APPLICABLE CODES AND STANDARDS. PROVIDE APPROVED END CAPS AND ROOF TERMINATIONS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

9. PROVIDE CONDENSATE PUMP FOR DUCTLESS EVAPORATOR. PROVIDE CONDENSATE PIPING AND ROUTE TO APPROVED EXTERIOR AREA. COORDINATE FINAL ROUTING IN FIELD.

																				_
VENTILATION SCHEDUL	LE																			
			OCCUPANT				VENTILAT	TON AIR REQUIREM	MENTS (ASHRAE 62, INTE	RNATIONAL MECH CC	DE 2018)					OUTDOOR AIR	EXHAUST AIR	RETURN AIR	SUPPLY AIR	
ROOM NAME	EQUIPMENT	APPROX.	DENSITY	NUMBER OF	PEOPLE OUTDOOR	TOTAL PEOPLE	AREA OUTDOOR	TOTAL AREA	BREATHING ZONE	ZONE AIR	ZONE AIR	ZONE OUTDOOR	PRIMARY	EXHAUST	TOTAL	ADJUSTED	DESIGN	DESIGN	DESIGN	
	TAG	AREA	# PEOPLE/	PEOPLE & /	AIRFLOW RATE	OUTDOOR	AIRFLOW RATE	OUTDOOR	OUTDOOR AIRFLOW	DISTRIBUTION	DISTRIBUTION	AIRFLOW	OUTDOOR	AIRFLOW RATE	EXHAUST	DESIGN TOTAL	TOTAL	TOTAL	TOTAL	
	NUMBER	(SF)	1000 SF	OR FIXTURES	Rp	AIRFLOW	Ra	AIRFLOW	(CFM) Vbz	EFFECTIVENESS	EFFECTIVENESS	(CFM) Voz	AIR FRACTION		AIRFLOW	(CFM) Vot	(CFM)	(CFM)	MAX/MIN	
						(CFM)		(CFM)		(COOLING) Ez	(HEATING) Ez		Zp		(CFM)	(NOTE 2)			(CFM)	_
	.	_	_			•			.		_			1		1				_
ENCLOSED GARAGE	EF−1	1,900	N/A	N/A	N/A	0	N/A	0	0	1.0	0.8	0	N/A	0.75 CFM/SQ.FT.	1425	3000	3000	0	0	_
	.		_																	_
OFFICE/STORAGE	AHU-1	165	5	1 PERSON					(NOTE 1)					N/A	N/A	0	0	170	170	_
NOTE:				_	_	·	·			·	·	·				•		·	•	

AND ALL OTHER CONTROL DEVICES AND ACCESSORIES REQUIRED TO INSTALL AND OPERATE THE UNIT HEATERS.

2. PROVIDE UNIT HEATERS WITH VENTING AS SHOWN ON THE CONTRACT DRAWINGS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND ALL APPLICABLE CODES AND STANDARDS.

INTERIOR CURB

OPENING

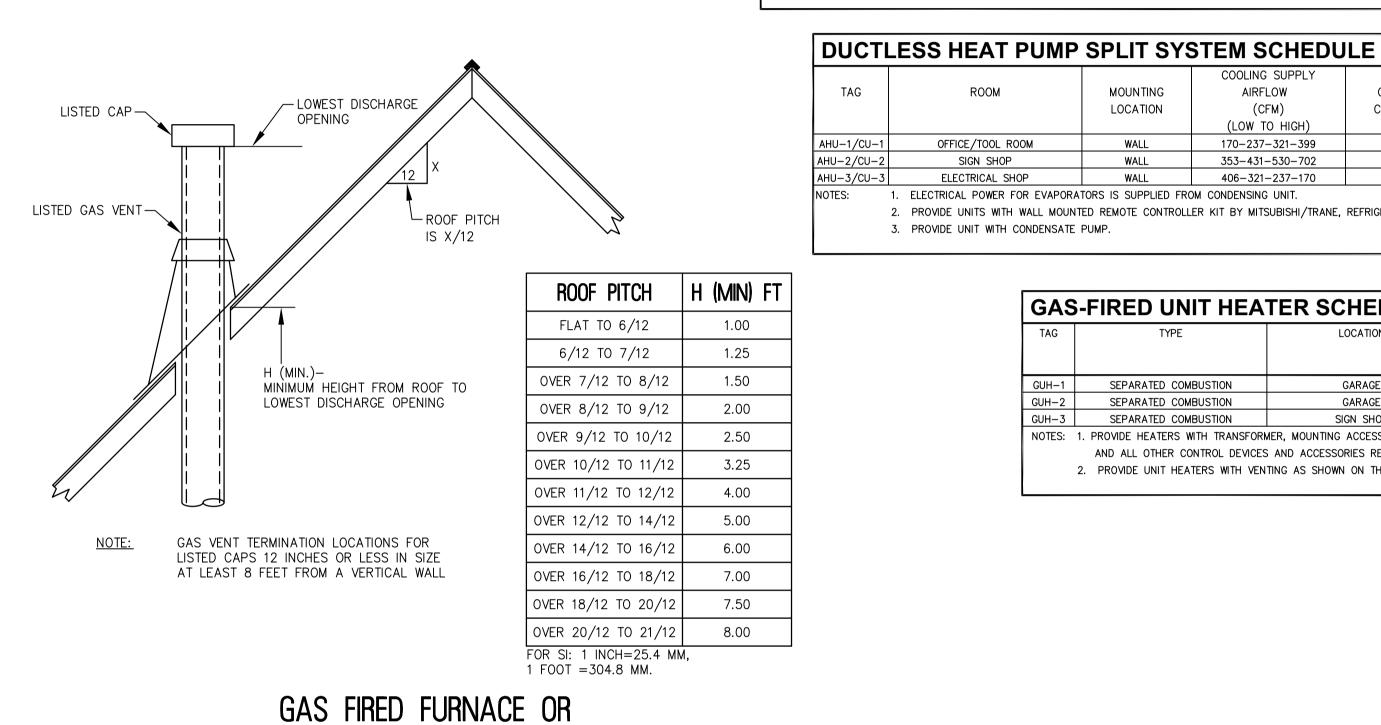
COUNTER FLASH

AS PER ROOF

MANUFACTURER

VENTILATION SHALL BE THROUGH NATURAL MEANS IN ACCORDANCE WITH SECTION 402 OF THE 2018 INTERNATIONAL MECHANICAL CODE.

EXHAUST	EXHAUST FAN SCHEDULE												
TAG	ROOMS SERVED/SERVICE	FAN TYPE	CFM	TOTAL S.P. (in. w.c.)	MOTOR HP OR WATTS	DRIVE TYPE	ELECTRICAL V/PH/HZ	SONES	ROOF / WALL OPENING SIZE	APPROXIMATE WEIGHT (LBS)	BASIS OF DESIGN	NOTES	
EF-1	GARAGE	DOWNBLAST	3,000	0.25	0.5	BELT	115/1/60	11.4	25.5" X 25.5"	125	LOREN COOK 180-ACEB	3	
NOTES: 1. P													



APPLIANCE ROOF VENT

		OI LII OI	OILW COILD														
			COOLING SUPPLY	RATED	RATED			INDOOR UNIT		OUTDOOR UNIT		ELECTRICAL					П
TAG	ROOM	MOUNTING	AIRFLOW	COOLING	HEATING	SEER	EER	APPROXIMATE	APPROX.	APPROXIMATE	APPROX.	VOLTAGE	МОР	BASIS OF DESIGN			1
		LOCATION	(CFM)	CAPACITY	CAPACITY			DIMENSIONS	WEIGHT	DIMENSIONS	WEIGHT	V/PH/HZ	(A)				
			(LOW TO HIGH)	(BTUH)	(BTUH)			(H x W x Depth)	(LBS)	(H x W x Depth)	(LBS)				INDOOR	OUTDOOR	1
AHU-1/CU-1	OFFICE/TOOL ROOM	WALL	170-237-321-399	9,000	11,800	17	12	11 X31 X 9	22	21 X 31 X 11	75	115/1/60	15	MITSUBISHI/TRANE	NTXWMT09A111A	NTXSMT09A111A	
AHU-2/CU-2	SIGN SHOP	WALL	353-431-530-702	22,500	26,000	16	8	12 X 36X 9	30	33 X 13 X 34	121	208/230/1/60	15	MITSUBISHI/TRANE	NTXWMT12A111A	NTXSMT12A111A	
AHU-3/CU-3	ELECTRICAL SHOP	WALL	406-321-237-170	12,200	14,500	17	9.9	11 X31 X 9	22	21 X 31 X 11	80	115/1/60	15	MITSUBISHI/TRANE	NTXWEL24A112A	NTXSEL24A112A	
NOTES: 1.	ELECTRICAL POWER FOR EVAPORA	TORS IS SUPPLIED FR	OM CONDENSING UNIT.														
2.	PROVIDE UNITS WITH WALL MOUNT	TED REMOTE CONTROL	LER KIT BY MITSUBISHI/TRANE,	REFRIGERANT PIPING	AND CHARGE, MOUNTIN	NG EQUIPMENT, AND	ALL OTHER ACCESSOR	IES REQUIRED TO OPE	RATE AND IN	STALL UNIT.							
3.	PROVIDE UNIT WITH CONDENSATE	PUMP.															

GAS-FIRED UNIT HEATER SCHEDULE LOCATION FAN(S) NOMINAL NOMINAL MIN GAS BASIS NOTES OUTPUT INPUT **EFFICIENCY** INLET OF DESIGN APPROX. DIM WEIGHT AIRFLOW MOTOR MOP V/Ph/Hz SEPARATED COMBUSTION 200 1921 1/6 124.5 150 REZNOR UDAS-150 15 1/6 1, 2 1921 83% SEPARATED COMBUSTION 200 REZNOR UDAS-150 70 769 0.03 15 2.4 115/1/60 83% REZNOR UDAS-60 SIGN SHOP NOTES: 1. PROVIDE HEATERS WITH TRANSFORMER, MOUNTING ACCESSORIES, THERMOSTAT, COMBUSTION AIR VENT KIT,

INTERLOCK LOUVER DAMPERS WITH ASSOCIATED EXHAUST FANS.

-DIRECT DRIVE

ROOF CURB

1. PROVIDE LOCAL DISCONNECT SWITCH
2. PROVIDE MOTORIZED OR BACKDRAFT DAMPER AS REQD

3. CURB AND FAN FROM SAME MANUFACTURER

CENTRIFUGAL V-BELT

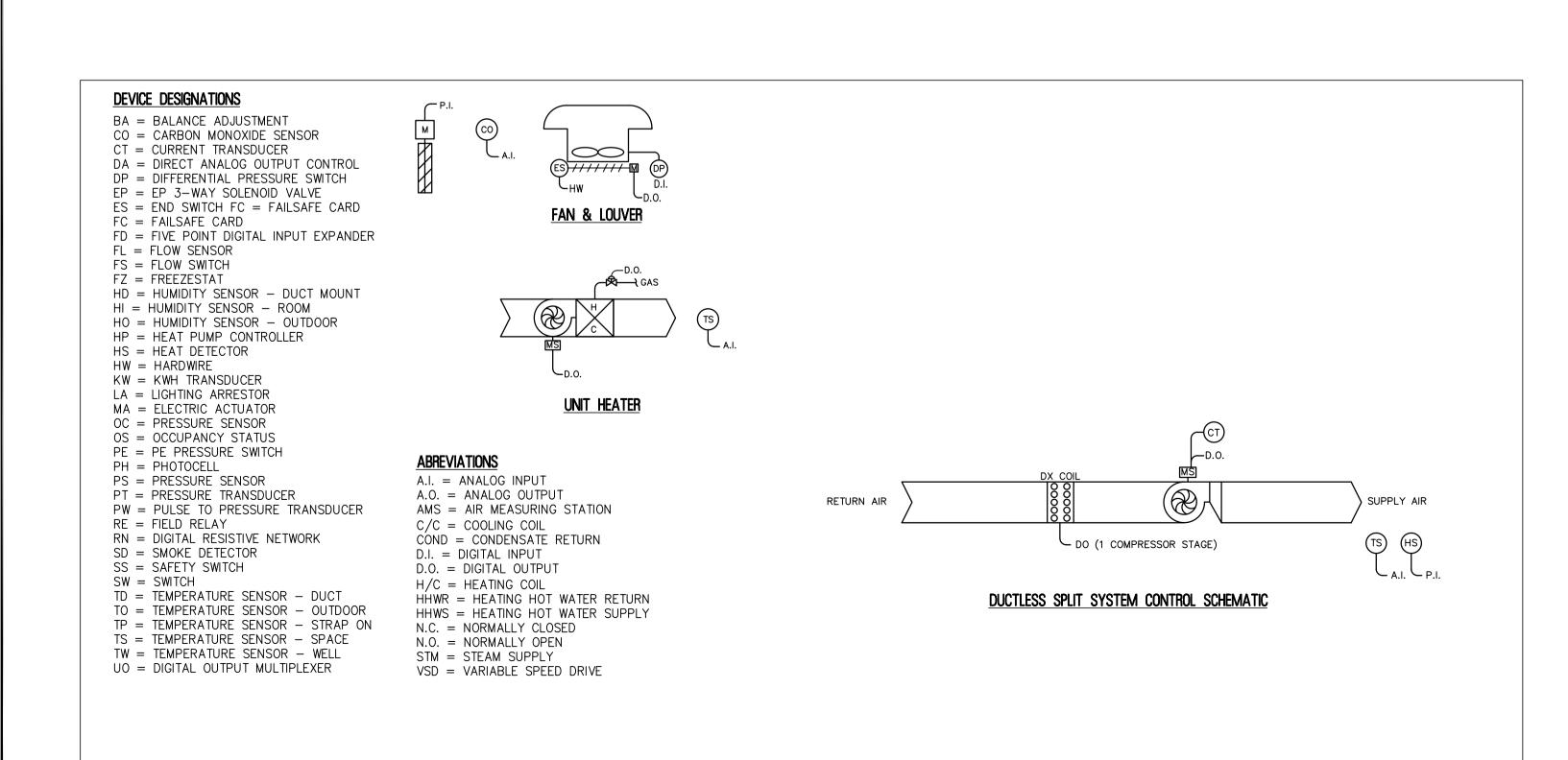
DRIVEN SLOPED ROOF EXHAUSTER

-18" HIGH CONDUIT

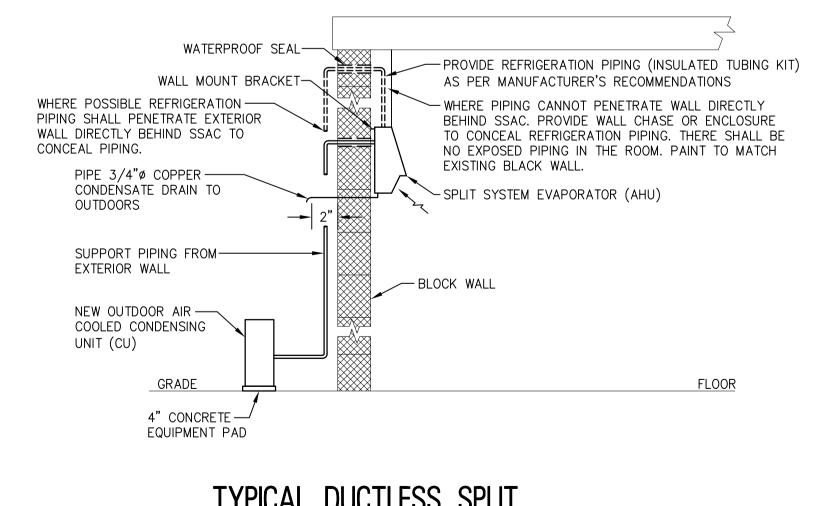
2. COORDINATE FINISH TYPE WITH OWNER.

LOUV	ER SCHEDULE								
TAG	SERVICE	SYSTEM	AIRFLOW (CFM)	SIZE (W x H)	FREE AREA (FT2)	MATERIAL	FINISH	BASIS OF DESIGN	NOTES
L-1	INTAKE	EF-1	1,500	42" x 24"	3.73	ALUMINUM	MILL.	RUSKIN ELF6375DXH	1, 2, 3
L-2	INTAKE	EF-1	1,500	42" x 24"	3.73	ALUMINUM	MILL.	RUSKIN ELF6375DXH	1, 2, 3
NOTES:	 PROVIDE WITH BIRD SCREEN A PROVIDE LOUVER WITH CD36 I 		•	DINATE COLOR W	ITH OWNER).				

ELEC.	ELECTRIC BASEBOARD HEATER SCHEDULE													
		LENGTH	OUTPUT	OUTPUT	AMPS	ELECTRICAL								
TAG	LOCATION	(IN)	(BTUH)	(WATTS)		(VOLTS)	BASIS OF DESIGN	NOTES						
EBBH-1	OFFICE/STORAGE	72	5100	1500	12.5	120	MARKEL MODEL E2915-072C	1,2						
NOTES:	1. HEATERS SHALL BE PROVIDED V			STATS, OVER	TEMPERATUR	RE								
	THERMAL LIMIT PROTECTION, AI	ND WIREWAY	COVERS.											



HVAC CONTROL SYSTEM SCHEMATICS



TYPICAL DUCTLESS SPLIT SYSTEM INSTALLATION DETAIL N.T.S.

- 1. CONTRACTOR TO COORDINATE & VERIFY IN FIELD ALL MOUNTING
- LOCATIONS AND TYPES. 2. MOUNT AND ANCHOR CONDENSING UNIT ON EQUIPMENT PAD. CONDENSATE FROM INDOOR UNIT TO BE PIPED TO OUTDOORS. PROVIDE CONDENSATE PUMP, IF REQUIRED.
- 3. REFER TO DIVISION 15 SPECIFICATIONS FOR ADDITIONAL INFORMATION.

Department of Community Affairs
Construction Project Review
Project No: 9098-20
partial release
mechanical
Thomas Williams
Released: 00(20/20)

Released: 09/22/20 N.J.S.A. 52:27D-119 ET SEQ., AS AMENDED

REMINGTON & VERNICK **ENGINEERS**

232 KINGS HIGHWAY EAST HADDONFIELD, NJ 08033 (856) 795-9595, FAX (856) 795-1882 WEB SITE ADDRESS: WWW.RVE.COM Certification of Authorization: 24 GA 28003300 ~ENGINEERING EXCELLENCE~

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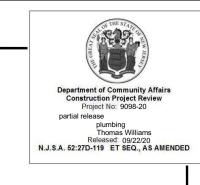
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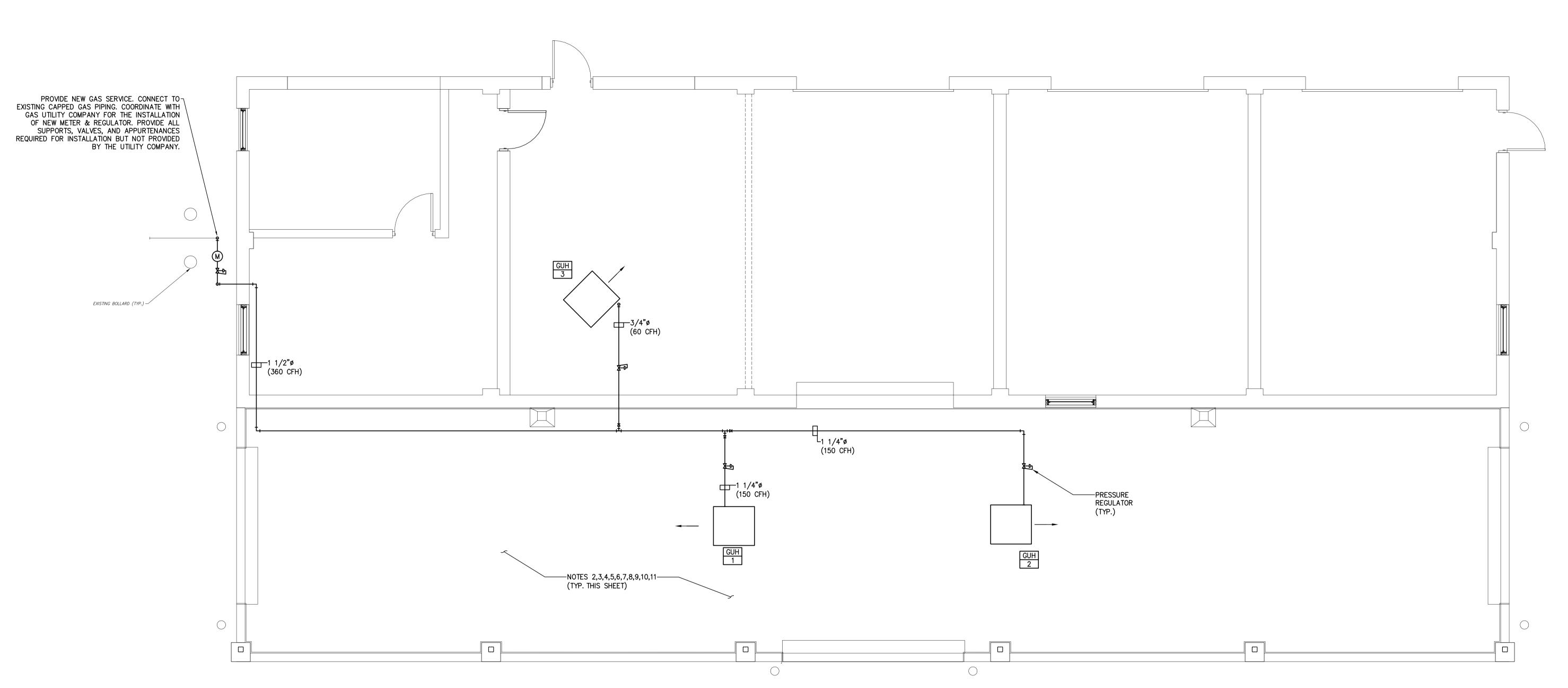
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STORAGE BUILDING AT EXPRESSWAY CENTRAL

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REMINGTON

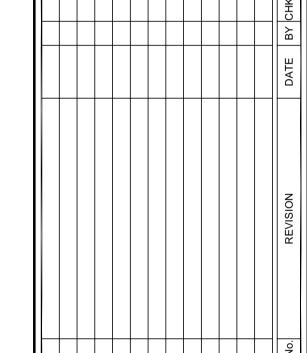
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UTILITY PIPING OR PLAN

LUMBING UTILITY PIP FLOOR PLAN

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NOTES

PLUMBING UTILITY PIPING FLOOR PLAN

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

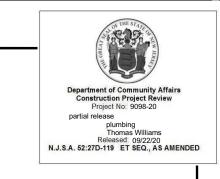
- ALL NOTES, SYMBOLS, AND ABBREVIATIONS ON DRAWING M-1.0 APPLY TO THIS DRAWING.
 COORDINATE PIPING LAYOUTS IN ALL AREAS WITH OTHER TRADES PRIOR TO INSTALLATION TO AVOID INTERFERENCES.
- 3. NOT ALL PIPE SIZES AND IN—LINE DEVICES ARE SHOWN ON THE PLAN FOR CLARITY, SEE THE PLUMBING RISER DIAGRAMS AND DETAIL SHEET(S) FOR ADDITIONAL INFORMATION. THE CONTRACTOR SHALL PROVIDE ALL REDUCERS, VALVES, ETC. AS REQUIRED TO COMPLETE THE
- THE PLUMBING RISER DIAGRAMS AND DETAIL SHEET(S) FOR ADDITIONAL INFORMATION. THE CONTRACTOR SHALL PROVIDE ALL REDUCERS, VALVES, ETC. AS REQUIRED TO COMPLETE THE NEW WORK EVEN IF NOT SPECIFICALLY SHOWN ON THE PLAN, RISER, OR DETAIL DRAWINGS.

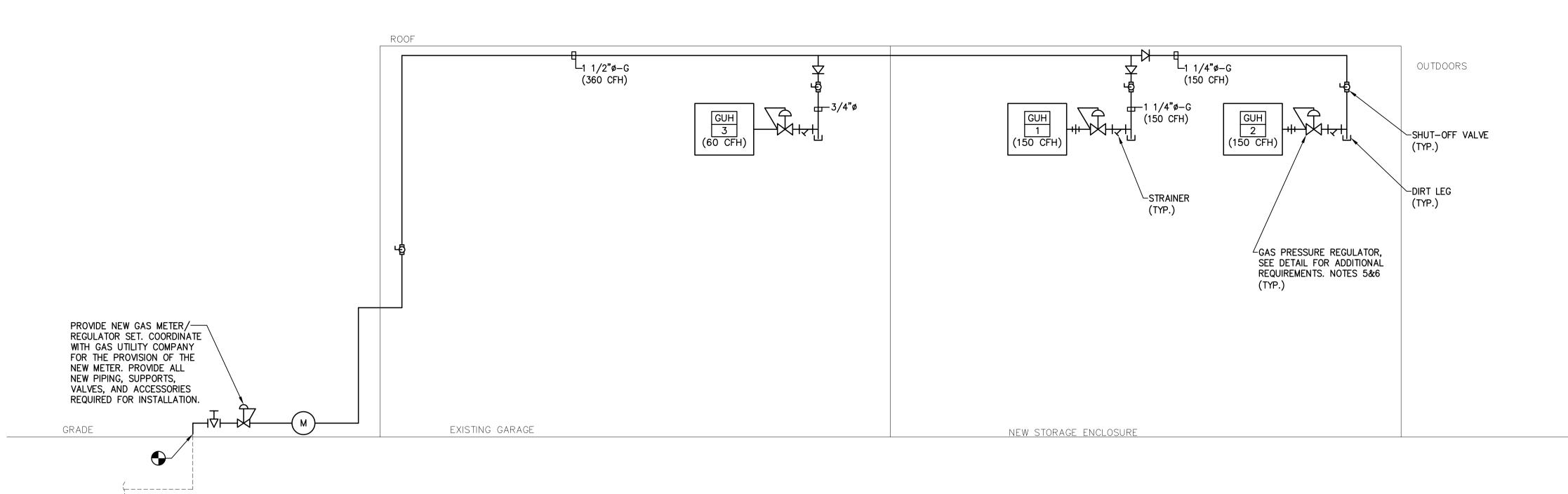
 4. PROVIDE LINE SIZE SHUT—OFF VALVES IN BRANCH LINES WHERE BRANCH LINES
- CONNECT TO MAINS.

 5. PIPING SHOWN IN AREAS WITH OPEN/EXPOSED CEILING SHALL BE INSTALLED AT CEILING
- 6. GAS PIPING LAYOUT AND EQUIPMENT CONNECTION LOCATIONS AS SHOWN ARE APPROXIMATE AND SHOWN FOR CLARITY PURPOSES ONLY. CONTRACTOR TO VERIFY ALL EQUIPMENT GAS CONNECTION LOCATIONS AND PROVIDE GAS CONNECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND ALL APPLICABLE CODES AND STANDARDS. GAS PIPING IN AREAS WITH EXPOSED CEILINGS SHALL BE INSTALLED AS HIGH AS POSSIBLE TO AVOID INTERFERENCE IN THE SPACE BELOW.
- 7. FUEL GAS PIPING SHALL BE STEEL PIPE. SEE CONTRACT SPECIFICATION SECTION 231123.

 8. PIPE ROUTING IS FOR SCHEMATIC AND DIAGRAMMATIC PURPOSES ONLY. ROUTE NEW PIPING
- IN WALLS AND ABOVE CEILINGS AS NECESSARY.

 9. PIPING IS SHOWN FOR CLARITY AND DIAGRAMMATICAL PURPOSES. CONTRACTOR SHALL COORDINATE FINAL LAYOUT AND INSTALLATION OF PIPING IN FIELD AND COORDINATE WITH OTHER TRADES AS REQUIRED. ALL PIPING INSTALLATIONS SHALL BE IN ACCORDANCE WITH APPLICABLE PLUMBING CODES AND STANDARDS.
- 10. PROVIDE VENT TO OUTDOORS FOR GAS PRESSURE REGULATOR. SIZE VENT PIPING IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND ALL APPLICABLE CODES AND STANDARDS
- 11. PROVIDE SUPPORTS FOR ALL EXTERIOR PIPING IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS.

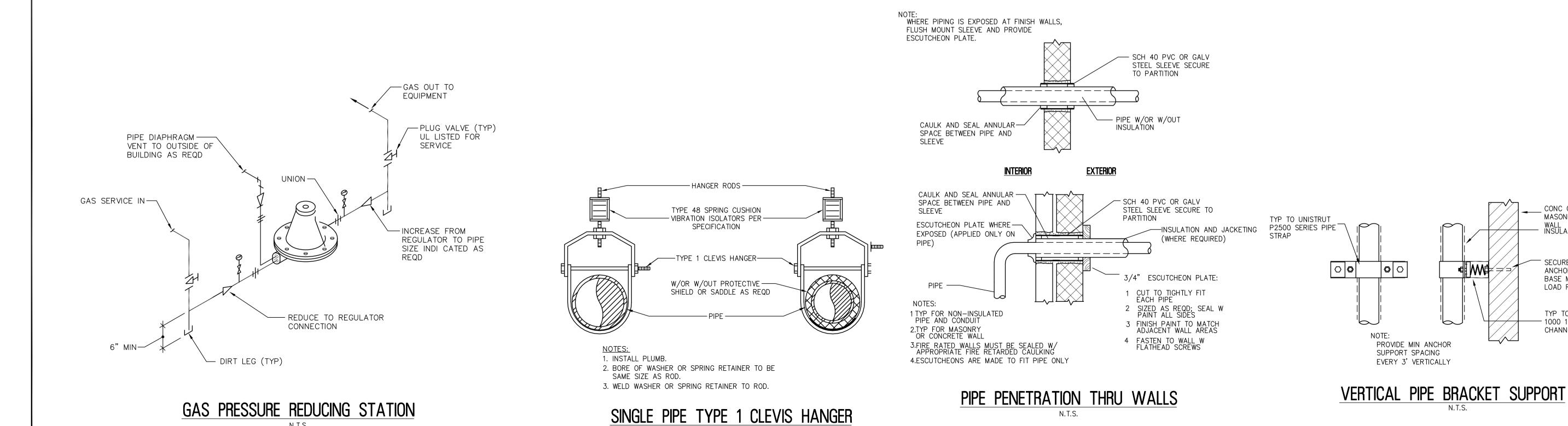




PLUMBING FUEL GAS PIPING RISER DIAGRAM SCALE: N.T.S

1. LENGTH OF FURTHEST FIXTURE = 110'.

- 2. ALL NATURAL GAS PIPING DOWNSTREAM OF METER SIZED FOR AN INLET PRESSURE OF 2 PSI OR LESS WITH A 0.3 W.C. IN. PRESSURE DROP IN ACCORDANCE WITH THE 2018
- INTERNATIONAL FUEL GAS CODE. 3. PROVIDE GAS CONNECTIONS TO ALL EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL VALVES AND OTHER ACCESSORIES REQUIRED FOR INSTALLATION.
- 4. THE PIPING LAYOUT AS SHOWN IS SCHEMATIC AND FOR DIAGRAMMATIC PURPOSES ONLY. THE CONTRACTOR SHALL DETERMINE THE FINAL PIPING LAYOUT IN THE FIELD AND SHALL PROVIDE ALL VALVES, REDUCERS, SUPPORTS, ETC. REQUIRED FOR INSTALLATION.
- 5. ALL GAS REGULATORS SHALL BE FULL LOCK UP SERVICE CLASS REGULATORS. THE LOCK UP PRESSURE AND DROOP/OFFSET OF THE REGULATOR AT DESIGN CONDITIONS CANNOT EXCEED 2" W.C. GAS PRESSURE REGULATORS SHALL BE RATED AT THE MAXIMUM EMERGENCY PRESSURE OF 5 PSI.
- 6. ROUTE REGULATOR VENTS TO APPROVED EXTERIOR LOCATIONS. PROVIDE VENT PIPING IN ACCORDANCE WITH THE 2018 INTERNATIONAL FUEL GAS CODE AND THE REGULATOR MANUFACTURER'S RECOMMENDATIONS.



REMINGTON & VERNICK **ENGINEERS**

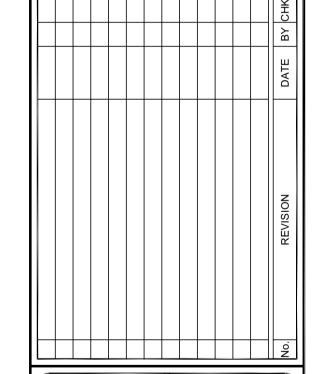
232 KINGS HIGHWAY EAST HADDONFIELD, NJ 08033 (856) 795-9595, FAX (856) 795-1882 WEB SITE ADDRESS: WWW.RVE.COM Certification of Authorization: 24 GA 28003300 ~ENGINEERING EXCELLENCE~

DATE: 08-27-2020

NJ PROFESSIONAL ENGINEER LIC. No. 40059

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_ CONC OR MASONRY

- WALL - INSULATE AS REQD

SECURE W/APPROVED

ANCHOR TO MATCH BASE MATERIAL AND

LOAD REQUIREMENTS

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— 1000 12 GA

CHANNEL

SOUTH JERSEY TRANSPORTATION AUTHORITY
STORAGE BUILDING AT ATLANTIC CITY
EXPRESSWAY CENTRAL MAINTENANCE

DRAWN BY: DESIGN BY: CHECKED BY: SCALE: B.Z. T.K. AS NOTED DATE: SHEET No.: 04-22-2020 P-4.1 JOB No.:



T	IONS					
	PERCENT	EMERG.	EMERGENCY	MTD.	MOUNTED	МС
	AND	EQUIP.	EQUIPMENT	MTG.	MOUNTING	SF
	PHASE CENTIGRADE DEGREES	EST. EX.	ESTIMATE EXISTING	N NC	NEUTRAL NORMAL CLOSED	CE
	FAHRENHEIT DEGREES	EXT.	EXTERNAL/EXTERIOR	NEC	NATIONAL ELECTRICAL CODE	SW
	SINGLE CONDUCTOR	F.A.	FIRE ALARM	NEMA	NATIONAL ELECTRICAL MANUF. ASSOC.	TEI
	AIR CIRCUIT BREAKER AMPERES INTERRUPTING CAPACITY	FACP F.E.	FIRE ALARM CONTROL PANEL FIRE EXTINGUISHER	NIC NO	NOT IN CONTRACT NORMALLY OPEN	_
	AUTOMATIC TEMPERATURE CONTROL		FIBER OPTIC	NO., #	NUMBER	TEI
	AUTOMATIC TRANSFER SWITCH	FDN.	FOUNDATION	NTS	NOT TO SCALE	RE
	AIR CONDITION ALTERNATING CURRENT	FIG. FIN.	FIGURE FINISH/FINISHED	NL N.F.	NIGHT LIGHT CIRCUT NON FUSED	RE
	ADDITIONAL	FIXT.	FIXTURE	P	POLE	FIR
	AMPERE FRAME	<u>F</u> L.	FLOOR	PC	PHOTO CELL	
	AMPERE FUSE ABOVE FINISHED FLOOR	FLA FLEX.	FULL LOAD AMPERES FLEXIBLE	P.I.L.C. PB, P	PAPER INSULATED LEAD COVERED PULL BOX, BREAKER OR SWITCH POLE	FIR
	ABOVE FINISHED GRADE	F.L.M.C.	FLEXIBLE LIQUIDTIGHT METALLIC CONDUIT	PNL.	PANELBOARD	FIR
	AIR HANDLING UNIT	FLUOR.	FLUORESCENT	PORC.	PORCELAIN	мо
	ALUMINUM AMPERE	FC FT.	FOOTCANDLE FEET	PRI. PS	PRIMARY PAYSTATION TELEPHONE	PA
	APPROXIMATE	FT. FU.	FUSE/FUSED	PTD.	PAINTED	_
	ARCHITECTURAL	G.C.	GENERAL CONTRACTOR	PVC	POLYVINYLCHLORIDE	EXI
	AMPERE TRIP	GA.	GAGE/GAUGE	R RAP	RADIUS REMOTE ANNUNCIATOR PANEL	KE
	ASYMMETRICAL AUXILIARY	GALV. GEN.	GALVANIZED GENERATOR	R.C.SW.	REMOTE CONTROL SWITCH	DA
	BELOW FINISHED CEILING	GFCI	GROUND FAULT CIRCUIT INTERRUPTER	REBAR.	REINFORCING BAR	vo
	BREAKER	GFI	GROUND FAULT INTERRUPTER	REC.	RECESSED, RECEPTACLE	
	BUILDING BASEMENT	GND., G H.I.D.	GROUND HIGH INTENSITY DISCHARGE	RCPT. REQ'D	RECEPTACLES REQUIRED	TIM
	CONDUIT	H.O.A.	HAND OFF AUTO	REV.	REVISE/REVISION	
	COEFFICIENT OF UTILIZATION	H.P.S.	HIGH PRESSURE SODIUM	RF	RADIO FREQUENCY	
Β	CURRENT TRANSFORMER CIRCUIT BREAKER	HEX.	HEXAGON HANDHOLE	RGA RGS	REMOTE GENERATOR ANNUNCIATOR RIGID GALVANIZED STEEL CONDUIT	
_	CLOSED CIRCUIT TELEVISION	HH HORIZ.	HORIZONTAL	RM	ROOM	
	CIRCUIT	HP.	HORSEPOWER	RT	ROOFTOP	
	CLOSET CEILING	HPF HT., H	HIGH POWER FACTOR HEIGHT	S.F. S.S.	SQUARE FEET STAINLESS STEEL	
	COMPANY	HWH	HOT WATER HEATER	SEC.	SECONDARY	
	COAXIAL CABLE	HZ.	HERTZ	SECT.	SECTION	
	COLUMN COMPLETE	IMC INC.	INTERMEDIATE CONDUIT INCANDESCENT	SEP. SERV.	SEPARATE SERVICE	
	CONCRETE	INSUL.	INSULATION/INSULATED	SHT.	SHEET	
	CONDUCTOR	ISOL.	ISOLATED	SIG.	SIGNAL	
	CONNECTED, CONNECTOR CONSTRUCTION		INTRUSION ALARM PANEL INTRUSION ALARM KEYPAD	SK. SN	SKETCH SOLID NEUTRAL	
	CONTINUATION	JB, J	JUNCTION BOX	SPECS.	SPECIFICATIONS	
	CONTRACTOR	KAIC	THOUSAND AMPERES INTERRUPTING CAPACITY	SQ.	SQUARE	
	COORDINATE CORRIDOR	KVAR KO	KNOCKOLIT	STA. SURF.	STATION SURFACE	
	CENTRAL PROCESSING UNIT	ŔŴ	KILOVAR KNOCKOUT KILOWATT THOUSAND CIRCULAR MILS KILOWATT HOUR KILOHERTZ KILOVOLT KILOVOLT—AMPERE LENGTH LINEAR FEET LONG	SUSP.	SUSPENDED	
	CLIDDENT TRANSFORMED	KCMIL	THOUSAND CIRCULAR MILS	SW.	SWITCH	
	COPPER, CONDENSING UNIT	KWH KHZ	KILOHERTZ	SWBD SYM.	SWITCHBOARD	
	CORRENT TRANSFORMER COPPER, CONDENSING UNIT CONDENSING UNIT CUBIC FEET CLOCKWISE, COOL WHITE DEPTH DEMAND DIAMETER	KV	KILOVOLT	TC	SYMMETRICAL TIME CLOCK	
	CLOCKWISE, COOL WHITE	KVA LG.	KILOVOLT-AMPERE	TEL.	TELEPHONE	
	DEPTH	LG. LF	LINEAR FEET	THRU RANS./XFMR	THROUGH	
	DIAMETER	_0.	20110	TVSS	TRANSFORMER TRANSIENT VOLTAGE SURGE SUPPRESSO	R
	DISCONNECT SWITCH	LRA LT.	LOCKED ROTOR AMPERES LIGHT	SD	SUPPRESSION DEVICE	• •
	DIVISION	LTG.	LIGHTING	SPD SSRV	SURGE PROTECTION DEVICE	-D
	DOWN DOUBLE POLE SINGLE THROW	M.L.O.	MAIN LUGS ONLY	TYP.	SOLID STATE REDUCED VOLTAGE STARTE TYPICAL	-17
	DRAWING	M/C	MULTI-CONDUCTOR	U.O.N.	UNLESS OTHERWISE NOTED	
	ELECTRICAL CONTRACTOR	MANUF., MFR. MAX.	MANUFACTURER MAXIMUM	UH	UNIT HEATER	
	EXHAUST FAN ELECTRIC HEATER	MB	MAIN BREAKER	UL UPS	UNDERWRITING LABORATORIES UNINTERRUPTIBLE POWER SOURCE	
	ETHYLENE PROPYLENE RUBBER	MCB	MAIN CIRCUIT BREAKER	V	VOLTAGE, VOLTS	
	EACH WAY	MCC MCM	MOTOR CONTROL CENTER THOUSAND CIRCULAR MILLS	VD	VOLTAGE DROP	
	EACH ELECTRICAL HEAT TRACING CABLE	MDS	MAIN DISTRIBUTION SWITCHBOARD	VERT. VS.	VERTICAL VERSUS	
	ELECTRICAL CLOSET	MDP	MAIN DISTRIBUTION PANEL	ν3. W	WIRE	
	ELECTRIC	MECH.	MECHANICAL	W.I.	WROUGHT IRON	
	ELEVATION/ELEVATOR	MET. - MF	METALLIC MAINTENANCE FACTOR	W/ W/O	WITH	
	EMERGENCY POWER PACK COMPLETE ELECTRICAL METALLIC TUBING	MG	MOTOR GENERATOR	W/O WD.	WITHOUT WIDE	
	ENCLOSURE	MIN. MISC	MINIMUM MISCELL ANEOLIS	WP	WEATHER PROOF	
		IVII 🥆 C.	IVILOGELL ANEUUS	VLD	COACCUMIZED DAI VETUVI ENE	

GENERAL NOTES

- 1. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED AND GROUNDED IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE, THE SPECIFICATIONS FOR GROUNDING, THE CONTRACT DRAWINGS, FEDERAL, STATE AND LOCAL CODES AND TO THE SATISFACTION OF THE ENGINEER. ALL GROUNDING
- CONNECTIONS TO BE MADE BY THE CADWELD PROCESS OR EQUAL 2. ALL CONDUITS AND ELECTRICAL EQUIPMENT ARE SHOWN DIAGRAMMATICALLY AND MAY BE ALTERED TO SUIT FIELD CONDITIONS PENDING ENGINEER'S APPROVAL

MISCELLANEOUS

- 3. ALL PLANS ELEVATIONS AND CLEARANCES SHALL BE CHECKED IN THE FIELD PRIOR TO INSTALLATION TO AVOID ALL OBSTRUCTIONS. 4. ALL JUNCTION BOXES SHALL BE OF SUFFICIENT SIZE TO PROVIDE FREE SPACE FOR ALL CONDUCTORS ENCLOSED
- IN THE BOX AND SHALL BE SIZED WITH THE LATEST N.E.C. ARTICLE 314. 5. ALL DIMENSIONS ARE APPROXIMATE AND MUST BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
- 6. CONTRACTOR SHALL CHECK FOR OBSTRUCTIONS AND CLEAN OUT ALL CONDUITS PRIOR TO PULLING IN CABLES. 7. PHASING OF ALL ELECTRICAL CONNECTIONS SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR AND SHALL BE MADE IN ACCORDANCE WITH THE LOCAL UTILITY COMPANY REQUIREMENTS
- 8. ALL HOLES THROUGH STRUCTURE TO ACCOMMODATE ELECTRICAL CONDUITS SHALL BE CORE DRILLED AND SEALED WITH NON-SHRINK GROUTING COMPOUND. WHERE RACEWAYS PASS THROUGH FLOORS AND FIRE RATED WALLS AND/OR PARTITIONS, CONTRACTOR SHALL FURNISH UL RATED FIREPROOFING MATERIAL TO BE INSTALLED IN STRICT COMPLIANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND RESTORE ORIGINAL FIRE RATING.
- 9. THE CONTRACTOR SHALL FURNISH STRUCTURAL SUPPORT FOR ALL EQUIPMENT. FOR SURFACE MOUNTED EQUIPMENT, SUCH AS PANELBOARDS, STARTERS, SAFETY SWITCHES AND THE LIKE, PROVIDE "UNISTRUT" WITH CORROSION RESISTANT MOUNTING HARDWARE.
- 10. NO CONDUIT SMALLER THAN 3/4" SHALL BE USED UNLESS OTHERWISE SPECIFIED.
- 11. ALL JOINTS BETWEEN DISSIMILAR METALS SHALL BE COATED WITH A LITHIUM BASED THREAD LUBRICANT.
- 12. RACEWAYS SHALL BE PROVIDED WITH AN APPROVED EXPANSION-DEFLECTION FITTINGS WHERE CROSSING BUILDING CONSTRUCTION EXPANSION JOINTS AND WHERE NECESSARY TO COMPENSATE FOR THERMAL EXPANSION AND CONTRACTION. 13. FURNISH AND INSTALL CONCRETE PADS FOR ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT
- 14. PRIOR TO SUBMITTING PROPOSALS, BIDDERS ARE INSTRUCTED TO REVIEW PLANS AND SPECIFICATIONS OF ALL CONCURRENT WORK TO DETERMINE QUANTITIES OF LABOR AND MATERIAL NECESSARY TO INSTALL, CONNECT, AND TEST MATERIAL FURNISHED UNDER THESE SPECIFICATIONS. ANY ADDITIONAL LABOR AND MATERIAL REQUIRED DUE TO FAILURE OF THE CONTRACTOR TO FOLLOW THESE INSTRUCTIONS, SHALL BE FURNISHED AT NO ADDITIONAL
- COST TO THE OWNER. 15. THE ELECTRICAL CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF ALL OTHER CONTRACTORS EMPLOYED ON THIS PROJECT PRIOR TO ROUGHING IN. THE CONTRACTOR SHALL OBTAIN AND REVIEW APPROVED SHOP DRAWINGS OF ALL OTHER TRADES AFFECTING ALL ELECTRICAL WORK
- 16. THE CONTRACTOR SHALL CHECK AND TORQUE TIGHTEN ALL CONNECTIONS, WHETHER FACTORY MADE OR MADE UNDER THIS CONTRACT, USING ACCURATELY CALIBRATED TOOLS. TORQUE SETTINGS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFIC RECOMMENDATIONS. IN THE ABSENCE OF THE MANUFACTURER'S RECOMMENDATIONS, THE CONTRACTOR SHALL USE THE VALUES LISTED IN TABLES 110-2, 110-3, 110-4, AND 110-5 OF THE NATIONAL ELECTRICAL CODE HANDBOOK.
- 17. INSTALL AN 1/8" INCH POLY PROPYLENE (PULL-IN-ROPE) IN ALL SPARE CONDUITS.

SURVEILLANCE, COMMUNICATIONS, AND CONTROL OF THE FACILITY WITH THE OWNER.

- 18. INSULATED COPPER CONDUCTORS FOR EQUIPMENT GROUNDING SHALL BE ROUTED WITH ALL POWER CONDUCTORS. 19. CONDUCTORS USED FOR CONTROL WIRING SHALL BE AT LEAST NO. 14 AWG AND ALL POWER CONDUCTORS SHALL BE AT LEAST NO. 12 AWG UNLESS OTHERWISE SPECIFIED.
- 20. CONTRACTOR SHALL PROVIDE ALL NECESSARY SAFETY EQUIPMENT AND EXERCISE PRECAUTIONARY PROCEDURES
- WHEN WORKING WITH OR NEAR ENERGIZED EQUIPMENT 21. CONTRACTOR SHALL REMOVE ALL OBSOLETE EQUIPMENT, CONDUITS AND WIRING, EXCEPT WHERE OTHERWISE
- NOTED.
- 22. INTERRUPTION OF SERVICE SHALL BE SCHEDULED AND COORDINATED WITH THE OWNER AND HELD TO MINIMUM IN ORDER TO MAINTAIN THE PROPER OPERATION OF THE FACILITY. 23. WHEN CONDUIT OR CABLE RUNS FOR POWER AND LIGHTING EXCEED 60 FT. FOR 120 VOLT OR 120 FT. FOR 277
- VOLT TO CENTER OF LOAD, NO. 10 AWG WIRE OR LARGER SHALL BE USED AS REQUIRED FOR A MAXIMUM 2% VOLTAGE DROP AT FULL CIRCUIT CAPACITY. 24. HEAVIER LINE WEIGHT SYMBOLS AND TEXT INDICATE NEW WORK UNLESS OTHERWISE NOTED. LIGHT LINE WEIGHT
- SYMBOLS AND ITALICIZED TEXT INDICATE EXISTING CONDITIONS TO REMAIN UNLESS OTHERWISE NOTED. 25. CONTRACTOR SHALL SALVAGE ALL DEMOLISHED EQUIPMENT AND VERIFY WITH OWNER PRIOR TO DISPOSING OF THE DEMOLISHED EQUIPMENT. 26. CONTRACTOR SHALL COORDINATE THE REMOVAL AND INSTALLATION OF ALL DEVICES ASSOCIATED WITH

STANDARD MOUNTING HEIGHTS

CROSSLINKED POLYETHYLENE

MOUNTING HEIGHTS FOR EQUIPMENT SHALL BE AS LISTED BELOW UNLESS OTHERWI SPECIFICALLY LABELED. (UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TO THE CENTERLINE OF BOXES.) SWITCHES 3'-8" AFF

SWITCHES	3 - 6 A.F.F.
TELEPHONE - WALL TYPE	3'-8" A.F.F.
TELEPHONE - DESK TYPE	1'-6" A.F.F.
RECEPTACLE - GENERAL OFFICE	1'-6" A.F.F.
RECEPTACLE - MECHANICAL ROOMS	3'-0" A.F.F.
FIRE ALARM GONG OR HORN	6'-8" TO BOTTOM OF GONG OR HORN
FIRE ALARM PULL STATION	3'-8" A.F.F. TO CENTER OF PULL
FIRE ALARM STROBE LIGHT	6'-8" A.F.F. TO BOTTOM OF STROBE
MOTION DETECTORS	6'-5" A.F.F.
PANELBOARDS	6'-0" TO TOP OF CIRCUIT BREAKER MAX.
EXIT LIGHTS - WALL OR END MOUNTED	ABOVE DOORS (MIN. 7'-6" A.F.F. CLEAR)
KEY PAD	3'-8" A.F.F.
DATA	1'-6" A.F.F.
VOLUME CONTROL	3'-8" A.F.F.
TIMERS (NON-ADA)	4'-6" A.F.F.

WIRE & CONDUIT SIZING SCHEDULE

WIRE SIZE (AWG/KCMIL) NO. OF WIRES & CONDUIT SIZE IN INCHES

٧	WIRE SIZE (AWG/K	CMIL)	NO. OF WIRES	& CONDOLL S	IZE IN INCHES
CKT. TYPE	CONDUCTOR & NEUTRAL	GROUND	A 2W+G	B 3W+G	C 4W+G
1	14	14	3/4	3/4	3/4
2	12	12	3/4	3/4	3/4
3	10	10	3/4	3/4	3/4
4	8	10	3/4	3/4	3/4
5	6	10	3/4	1	1
6	4	10	1	1-1/4	1-1/4
7	4	8	1	1-1/4	1-1/4
8	3	8	1-1/4	1-1/4	1-1/4
9	2	8	1-1/4	1-1/4	1-1/2
10	1	6	1-1/4	1-1/2	2
11	1	6	1-1/4	1-1/2	2
12	1/0	6	1-1/2	2	2
13	2/0	6	2	2	2
14	3/0	6	2	2	2-1/2
15	4/0	2	2	2-1/2	2-1/2
16	250 KCMIL	2	2	2-1/2	2-1/2
17	300 KCMIL	2	2	2-1/2	2-1/2
18	350 KCMIL	2	2	2-1/2	3
19	400 KCMIL	1/0	2	2-1/2	3
20	500 KCMIL	1/0	2-1/2	3	3-1/2
21	(2) 4/0	(2) 2		(2) 2	(2) 2-1/2
22	(2) 250 KCMIL	(2) 2		(2) 2	(2) 2-1/2
23	(2) 350 KCMIL	(2) 1		(2) 2-1/2	(2) 3
24	(2) 500 KCMIL	(2) 1/0		(2) 3	$(2) \ 3-1/2$
25	(3) 300 KCMIL	(3) 1/0		(3) 2-1/2	(3) 3
26	(3) 400 KCMIL	(3) 2/0		(3) 3	(3) 3
27	(3) 500 KCMIL	$(3) \ 3/0$		(3) 3	(3) 3-1/2
28	(4) 350 KCMIL	(4) 3/0		(4) 2-1/2	(4) 3
29	(4) 500 KCMIL	(4) 4/0		(4) 3	(4) 3-1/2
30	(5) 400 KCMIL	(5) 4/0		(5) 3	(5) 3
31	(5) 500 KCMIL	(5) 250		(5) 3	(5) 3-1/2
32	(6) 400 KCMIL	(6) 250		(6) 3	(6) 3-1/2
33	(7) 500 KCMIL	(7) 350		(7) 3	(7) 3-1/2
34	(8) 500 KCMIL	(8) 400		(8) 3	(8) 3-1/2
THE	ABOVE SCHEDU	LE IS BA	SED ON 600	VOLT WIRE T	YPE 90°C

THHN/THWN/XHHW. THE FOLLOWING IS A SAMPLE OF WIRE AND

(2A) = (2)#12AWG, (1)#12GRD IN 3/4" (2A)

ELECTRICAL SHEET INDEX SHEET# DESCRIPTION ELECTRICAL COVER SHEET E-1.1 ELECTRICAL DEMOLITION FLOOR PLAN E-2.1 ELECTRICAL LIGHTING FLOOR PLAN ELECTRICAL POWER AND SYSTEMS FLOOR PLAN E-3.1

ELECTRICAL SCHEDULES

CONDUIT READOUT FROM ABOVE SCHEDULE:

Department of Community Affairs Construction Project Review Project No: 9098-20 Partial Release Electrical **David Godbolt** Released: 10/01/20 N.J.S.A. 52:27D-119 ET SEQ., AS AMENDED



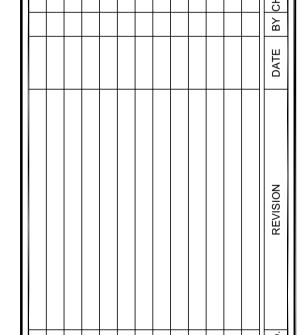
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DATE: 08-27-2020 **BRIAN B. GREGG** NJ PROFESSIONAL ENGINEER LIC. No. 4657

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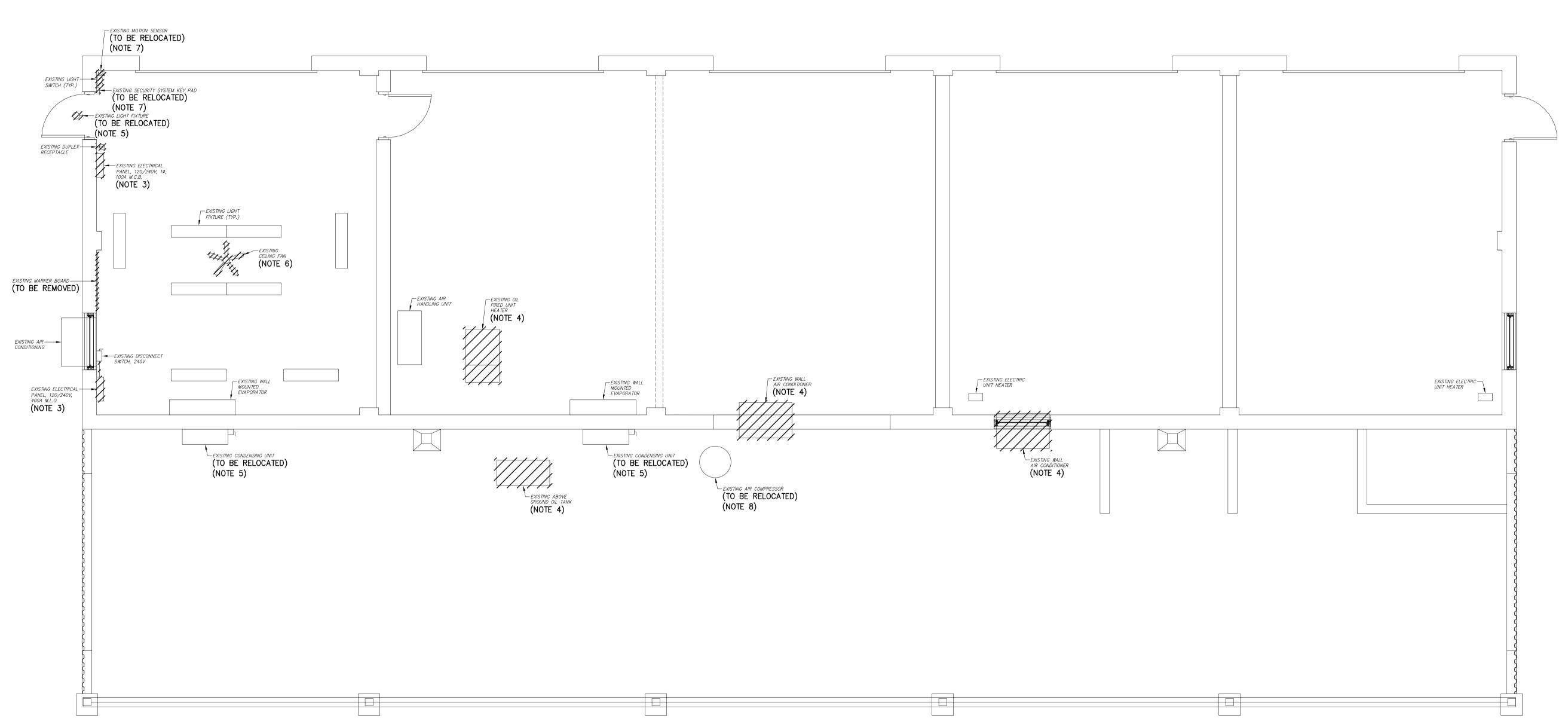
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DRAWN BY: DESIGN BY: CHECKED BY: SCALE S.M. AS NOTED DATE: SHEET No.: 04-22-2020 E-1.0 JOB No.:



ELECTRICAL DEMOLITION FLOOR PLAN

DEMOLITION NOTES:

- 1. ALL NOTES, SYMBOLS, AND ABBREVIATIONS ON DRAWING E-1.0 APPLY TO THIS DRAWING. 2. THIS DEMOLITION PLAN HAS BEEN PROVIDED AS A GUIDE. HOWEVER, ALL DEMOLITION REQUIRED TO SUCCESSFULLY COMPLETE THIS PROJECT SHALL BE INCLUDED IN THE SCOPE OF WORK. IT IS THE INTENT OF THE PLANS AND SPECIFICATIONS TO SECURE A COMPLETELY INTERCONNECTED AND FUNCTIONING SYSTEM AND IF ANY WORKMANSHIP OR MATERIALS ARE REQUIRED WHICH ARE OBVIOUSLY NECESSARY TO CARRY OUT THE FULL INTENT AND MEANING OF THE PLANS AND SPECIFICATIONS OR TO BE REASONABLY INFERRED THEREFROM, THE COST OF SUCH WORKMANSHIP OR MATERIALS SHALL BE INCLUDED IN THE SCOPE OF WORK.
- 3. CONTRACTOR SHALL DEMOLISH EXISTING ELECTRICAL PANEL. CONTRACTOR SHALL RELOCATE THE EXISTING ELECTRICAL CIRCUITS FROM THE EXISTING ELECTRICAL PANEL TO THE NEW ELECTRICAL PANEL 'PP1' LOCATED IN THE GARAGE AREA. PROVIDE AND EXTEND ALL NECESSARY CONDUCTORS, CABLES, RACEWAYS, AND ELECTRICAL DEVICES TO CONNECT TO THE NEW ELECTRICAL PANEL 'PP1'. EXTEND THE 400A FEEDER CIRCUIT FROM THE EXISTING DISCONNECT TO THE NEW ELECTRICAL PANEL 'PP1'.
- 4. DEMOLISH EXISTING RACEWAY, CONDUCTORS, AND DEVICES BACK TO SOURCE PANEL.
- 5. EXISTING BRANCH CIRCUIT TO BE REUSED FOR RELOCATED DEVICE.
- 6. DEMOLISH EXISTING CEILING FAN. DEMOLISH EXISTING RACEWAY, CONDUCTORS, AND DEVICES BACK TO SOURCE PANEL. ANY DEVICES POWERED FROM EXISTING CIRCUIT NOT MARKED FOR
- DEMOLITION ARE TO REMAIN POWERED. 7. EXISTING CONDUCTORS TO BE REUSED FOR RELOCATED DEVICE.
- 8. EXISTING BRANCH CIRCUIT TO BE REUSED FOR RELOCATED AIR COMPRESSOR. CONTRACTOR SHALL VERIFY WITH THE OWNER FOR THE EXACT LOCATION OF THE EXISTING AIR COMPRESSOR. CONTRACTOR SHALL EXTEND, REROUTE, OR REPLACE CONDUCTORS, RACEWAYS, AND DEVICES TO THE NEW LOCATION OF THE EXISTING AIR COMPRESSOR, ONCE THE LOCATION HAS BEEN DETERMINED BY THE OWNER.



Electrical

David Godbolt
Released: 10/01/20
N.J.S.A. 52:27D-119 ET SEQ., AS AMENDED

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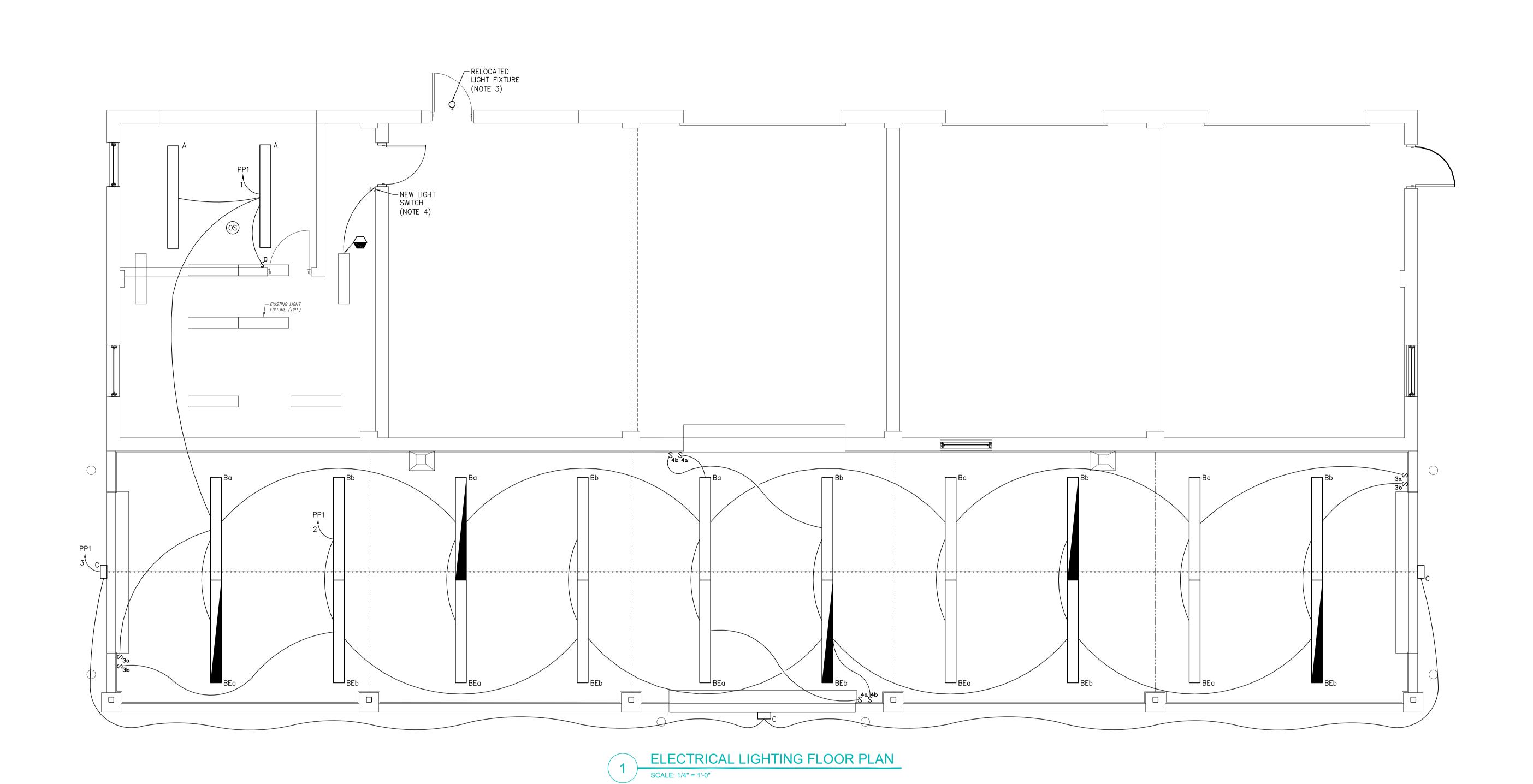
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DEMOLITION PLAN

DRAWN BY: DESIGN BY: CHECKED BY: SCALE: S.M. AS NOTED DATE: SHEET No.: 04-22-2020

JOB No.: ACEXX780



Department of Community Affairs
Construction Project Review
Project No: 9098-20
Partial Release
Electrical
David Godbolt
Released: 10/01/20
N.J.S.A. 52:27D-119 ET SEQ., AS AMENDED

RVE 1901

REMINGTON & VERNICK ENGINEERS

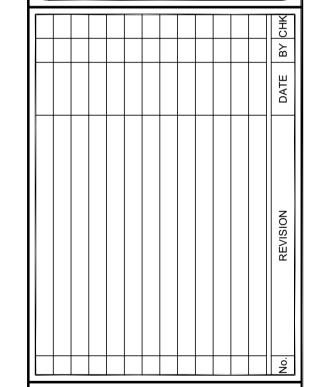
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BRIAN B. GREGG
NJ PROFESSIONAL ENGINEER LIC. No. 46577

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PLAN

ECTRICAL LIGHTING FLOOR PLAN

SOUTH JERSEY TRANSPORTATION
STORAGE BUILDING AT ATI

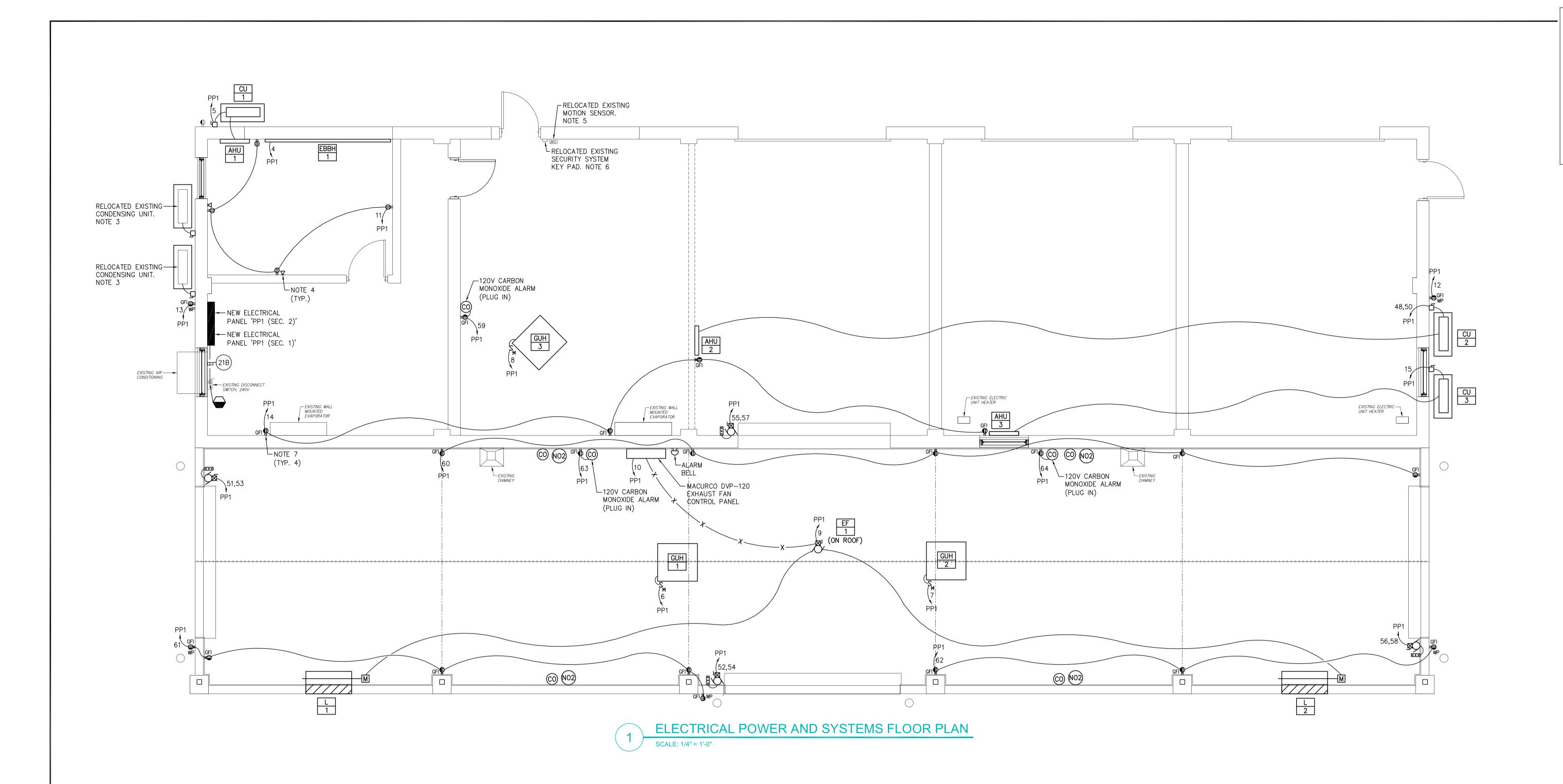
CCKED BY: SCALE:

ACEXX780

NOTES

- ALL NOTES, SYMBOLS, AND ABBREVIATIONS ON DRAWING E-1.0 APPLY TO THIS DRAWING.
 THIS DRAWING IS DIAGRAMMATIC, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM EXISTING SITE CONDITIONS AND INSTALLATION CLEARANCES PRIOR TO SHOP DRAWING SUBMISSIONS AND INSTALLATION. SHOULD THE CONTRACTOR DETERMINE THAT THE INSTALLATION OF ANY ELECTRICAL COMPONENT IS RESTRICTED OR NOT ABLE TO BE INSTALLED IN THE SUGGESTED LOCATION THE CONTRACTOR SHALL READDRESS THE INSTALLATION ACCORDINGLY AND IN COMPLIANCE WITH NEC2017, AT NO ADDITIONAL COST.
- INSTALLATION ACCORDINGLY AND IN COMPLIANCE WITH NEC2017, AT NO ADDITIONAL COST.

 3. REROUTE, EXTEND, OR REPLACE EXISTING LIGHT FIXTURE CONDUCTORS AND RACEWAY TO NEW FIXTURE LOCATION.
- 4. CONTRACTOR SHALL PROVIDE AND INSTALL NEW LIGHT SWITCH. CONNECT NEW LIGHT SWITCH TO EXISTING LIGHT FIXTURES USING (2)#12AWG, (1)#12AWG GROUND IN 3/4" CONDUIT IN SAME ROOM.





RVE

REMINGTON & VERNICK ENGINEERS

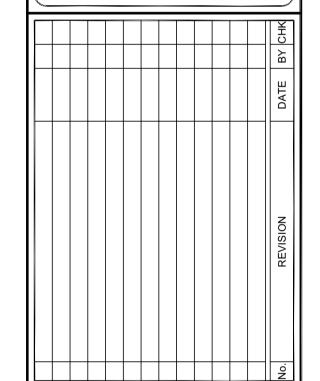
232 KINGS HIGHWAY EAST
HADDONFIELD, NJ 08033
(856) 795-9595, FAX (856) 795-1882
WEB SITE ADDRESS: WWW.RVE.COM
Certification of Authorization: 24 GA 28003300
~ENGINEERING EXCELLENCE~

BRIAN B. GREGG

NJ PROFESSIONAL ENGINEER LIC. No. 4657

PLANS WHICH DO NOT BEAR AN EMBOSSED SEAL ARE NOT VALID.

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FLOOR PLAN NSPORTATION AUTHORITY

CTRICAL POW

SOUTH JERSEY TRANSPORTATION
STORAGE BUILDING AT ATL

ACEXX780

NOTES

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 3. REROUTE, EXTEND, OR REPLACE EXISTING CONDENSING UNIT CIRCUIT CONDUCTORS AND RACEWAY TO NEW UNIT LOCATION.
- 4. CONTRACTOR SHALL PROVIDE AND INSTALL NEW CAT6 CABLE IN 3/4" CONDUIT FROM DATA OUTLET TO NEAREST MDF OF IDF.

 5. REPOLITE EXTEND OR REPLACE EXISTING MOTION SENSOR CONDUITORS AND RACEWAY TO
- 5. REROUTE, EXTEND, OR REPLACE EXISTING MOTION SENSOR CONDUCTORS AND RACEWAY TO NEW LOCATION.6. REROUTE, EXTEND, OR REPLACE EXISTING SECURITY SYSTEM KEY PAD CONDUCTORS AND
- 6. REROUTE, EXTEND, OR REPLACE EXISTING SECURITY SYSTEM KEY PAD CONDUCTORS AND RACEWAY TO NEW LOCATION.7. CONTRACTOR SHALL PROVIDE AND INSTALL NEW DUPLEX RECEPTACLE FOR CONDENSATE

PUMP. COORDINATE WITH MECHANICAL CONTRACTOR FOR MOUNTING HEIGHT OF CONDENSATE

LIGHT	FIXTURE SCHEDULE							
TYPE	DESCRIPTION	MOUNTING	MOUNTING HEIGHT	MANUFACTURER	CATALOG NO.	LAMPS	VOLTS	REMARKS
Α	3" LED SURFACE MOUNTED LINEAR SLOT	SURFACE	8'-0" A.F.F.	COLUMBIA	MPS8-35VW-CW-EDU	LED	UNV	
	8' LONG			LIGHTING		54 WATTS		
В	7" LED SURFACE MOUNTED LINEAR SLOT	SURFACE	13'-0" A.F.F.	COLUMBIA	LXEM4-35VW-DFA-EDU	LED	UNV	
	8' LONG			LIGHTING		98 WATTS		
BE	7" LED SURFACE MOUNTED LINEAR SLOT	SURFACE	13'-0" A.F.F.	COLUMBIA	LXEM4-35VW-DFA-EDU-ELL14	LED	UNV	PROVIDE FIXTURE WITH 90MIN. EMERGENCY BATTERY PA(
	8' LONG			LIGHTING		98 WATTS		
С	LED WALL PACK	WALL	12'-3" A.F.G.	HUBBELL	TRP2-24L-50-4K7-4-UNV-PC	LED	UNV	PROVIDE FIXTURE WITH PHOTOCELL.
				OUTDOOR		49 WATTS		



Project No: 9098-20 Partial Release Electrical David Godbolt Released: 10/01/20 N.J.S.A. 52:27D-119 ET SEQ., AS AMENDED

REMINGTON & VERNICK **ENGINEERS** 232 KINGS HIGHWAY EAST HADDONFIELD, NJ 08033 (856) 795-9595, FAX (856) 795-1882 WEB SITE ADDRESS: WWW.RVE.COM Certification of Authorization: 24 GA 28003300 ~ENGINEERING EXCELLENCE~

DATE: 08-27-2020

BRIAN B. GREGG NJ PROFESSIONAL ENGINEER LIC. No. 46577

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SCHEDULE

SOUTH JERSEY TRANSPORTATION AUTHORITY
STORAGE BUILDING AT ATLANTIC CITY
EXPRESSWAY CENTRAL MAINTENANCE

AS NOTED SHEET No.:

DRAWN BY: DESIGN BY: CHECKED BY: SCALE: DATE: 04-22-2020 E-4.1 JOB No.: ACEXX780

OLIZ	NGE:	120/240V, 1	ø, 3W+G		X MCB			POLES:	42		AIC RATING:	22,000		.
IAIN	BUS:	400A			MLO		_	MTG:	SURFACE		LOCATION:	GARAGE AREA	A	<u></u>
CKT			BREAKER BRANCH	DESCRIPTION	kVA PER PHASE	REMARKS	REMARKS	kVA PER	PHASE	DESCRIPTION	BRANCH	CIRCUIT	BREAKER	_
#	TRIP	POLE	CIRCUIT		A B			A	В		CIRCUIT	POLE	TRIP	\bot
1	20	1	2A	INTERIOR LIGHTING	1.14			1.00		INTERIOR LIGHTING	2A	1	20	\Box
3	20	1	2A	EXTERIOR LIGHTING	0.20				1.50	EBBH-1	2A	1	20	\Box
5	15	1	2A	AHU-1 / CU-1	1.80			0.50		GUH-1	2A	1	15	\perp
7	15	1	2A	GUH-2	0.50				0.30	GUH-3	2A	1	15	
9	20	1	2A	EF-1	0.50			0.12		EXH. FAN CONTROL PANEL	2A	1	20	
11	15	1	2A	(4) DUPLEX RECEPTACLES	0.72				0.18	(1) GFI DUPLEX RECEPTACLE	2A	1	20	
13	20	1	2A	(1) GFI DUPLEX RECEPTACLE	0.18			0.72		(4) DUPLEX RECEPTACLES	2A	1	20	\Box
15	15	1	2A	AHU-3 / CU-3	1.80				EXISTING	OUTSIDE LIGHTS	EXISTING	1	20	
17	20	1	EXISTING	WALL RECEPT.	EXISTING			EXISTING		OUTSIDE LIGHTS	EXISTING	1	20	
19	20	1	EXISTING	WALL RECEPT.	EXISTING				EXISTING	INSIDE LIGHTS	EXISTING	1	20	
21	20	1	EXISTING	OUTSIDE RECEPT.	EXISTING			EXISTING		INSIDE LIGHTS	EXISTING	1	20	
23	20	1	EXISTING	EXISTING	EXISTING				EXISTING	EXISTING	EXISTING	1	20	
25	20	1	EXISTING	EXISTING	EXISTING			EXISTING		EXISTING	EXISTING	1	20	
27	20	1	EXISTING	EXISTING	EXISTING				EXISTING	PRINT RECEPT.	EXISTING	1	20	
29	20	1	EXISTING	OUTLET #3	EXISTING			EXISTING		EXISTING	EXISTING	1	20	
31	EXISTING	2	EXISTING	CARPT	EXISTING	NOTE 2			EXISTING	220	EXISTING	2	20	
33				SHOP	EXISTING			EXISTING		EXISTING AC				
35	15	2	EXISTING	AC#1	EXISTING				EXISTING	AC#2	EXISTING	2	20	
37					EXISTING			EXISTING						
39	20	2	EXISTING	EXISTING	EXISTING				EXISTING	EXISTING	EXISTING	2	30	
41					EXISTING			EXISTING						
					3.62 3.22			2.34	1.98					

PANEL: PP1 (SEC. 2) VOLTAGE: 120/240V, 1ø, 3W+G POLES: 42 мсв AIC RATING: 22,000 MAIN BUS: 400A X MLO MTG: SURFACE LOCATION: GARAGE AREA kVA PER PHASE

A B CKT CIRCUIT BREAKER BRANCH DESCRIPTION kVA PER PHASE REMARKS REMARKS DESCRIPTION BRANCH CIRCUIT BREAKER CH # TRIP POLE CIRCUIT CIRCUIT POLE TRIP 43 20 2 EXISTING EXISTING 2 100 EXISTING EXISTING 47 20 2 EXISTING 3B 2 AIR EXISTING AHU-2 / CU-2 SGN-SHP 0.96 OVERHEAD 51 20 2 2B 0.96 OVERHEAD 2B 2 DOOR DOOR 55 20 2 2B OVERHEAD 0.96 0.96 OVERHEAD 59 20 1 2A (1) GFI DUPLEX RECEPTACLE 0.18 (5) GFI DUPLEX RECEPTACLES 2A 1 61 20 1 2A (5) GFI DUPLEX RECEPTACLES 0.54 (3) GFI DUPLEX RECEPTACLES 2A 1 20 SPARE 63 20 2 2 20 2 20 67 20 2 SPARE SPARE SPARE 1 20 82 1 20 84 SPARE SPARE SPARE SPARE 2.82 2.46

TOTAL CONNECTED LOAD (kVA) 10.20

43 TOTAL CONNECTED LOAD (AMPS)

NOTES: 1. PROVIDE A HACR TYPE BRANCH CIRCUIT BREAKER FOR ALL MECHANICAL EQUIPMENT.