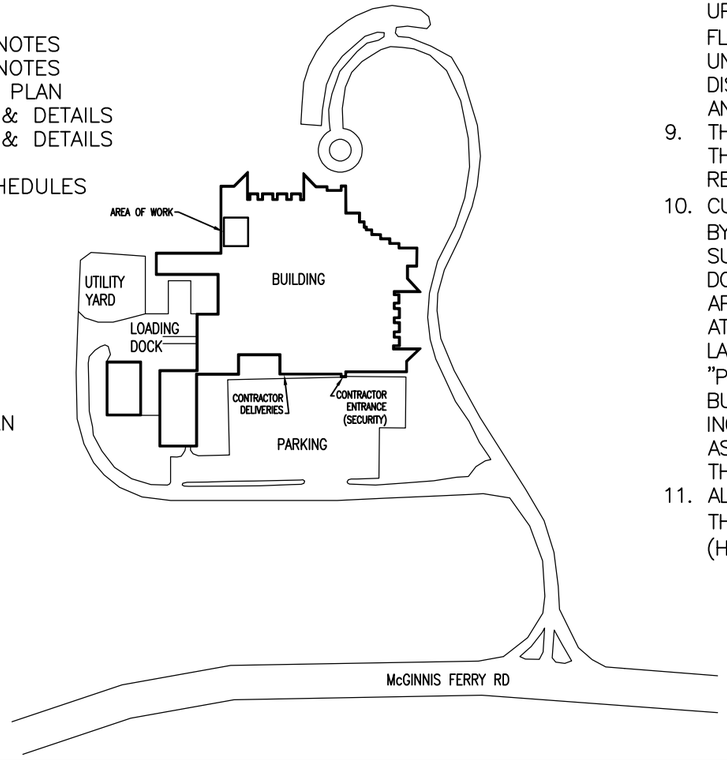
SOLVAY COMPACT MATERIALS
4500 McGINNIS FERRY ROAD
ALPHARETTA, GA 30005

PROJECT: N2004 EXHAUST FAN ADDITION
DESIGNED BY: DIVERSIFIED LABORATORY SCIENCES, INC.
CONTACT: CRAIG M. FREE, P.E.
770-262-8432
CFREE@DLSCONSULTANTS.COM

DRAWING INDEX



PROJECT DESCRIPTION:

THIS PROJECT CONSISTS OF THE FOLLOWNG:

- INSTALLING A NEW ROOF-MOUNTED EXHAUST FAN THAT WILL SERVE TWO ACID FUME HOODS IN N2004.
- MAKING MODIFICATIONS TO THE EXISTING FAN STRUCTURAL SUPPORT SYSTEM ON THE ROOF TO SUPPORT THE NEW FAN.
- INSTALLING A NEW FUME HOOD VAV VALVE AND RELOCATING AN EXISTING FUME HOOD VAV VALVE.
- INSTALLING NEW ACID RESISTANT DUCTWORK.
- INSTALLING THE NEW EXHAUST FAN CONTROLS, VERIFYING PROPER OPERATION OF THE NEW SYSTEM AND CONDUCTING TESTING AND BALANCING AS SPECIFIED.

PROJECT NOTES (ALL SHEETS AS APPLICABLE):

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE PROJECT DOCUMENTS, APPLICABLE REQUIREMENTS OF THE BUILDINGS CODES AND ALL APPLICABLE LOCAL ORDINANCES AND COMPLY WITH ALL SOLVAY SITE CONSTRUCTION AND SAFETY REQUIREMENTS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ALL CONDITIONS IN THE FIELD. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES AFFECTING THE INSTALLATION AND/OR PERFORMACE OF NEW WORK.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES, SHALL CHECK ALL DIMENSIONS AND COORDINATE THE DOCUMENTS WITH CONDITIONS AT THE JOB SITE. DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER FOR RESOLUTION PRIOR TO PROCEEDING WITH THE WORK.
4. MAINTAIN UNOBSTRUCTED PATH OF EGRESS WHEN WORKING WITHIN OCCUPIED SPACES.
5. MAINTAIN TRAFFIC AND PEDESTRIAN BARRIERS WHERE WORK OBSTRUCTS DRIVES, SIDEWALKS OR OTHER PUBLIC WAYS.
6. THE CONTRACT DOCUMENTS HAVE MADE NO INTENT TO GIVE SPECIFIC INSTRUCTIONS CONCERNING THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES, AND ASSIGNMENT OF WORK. IT IS THE CONTRACTOR WHO SHALL SUPERVISE AND DIRECT THE WORK.
7. FIELD VERIFY/REPORT ASBESTOS CONTAINING MATERIAL TO ENGINEER UPON DISCOVERY.
8. DAMAGE: THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIRS OF ANY ACCIDENTAL DAMAGE INFLICTED UPON THE EXISTING TO REMAIN SYSTEMS OR BUILDING ENVELOPE (INCLUDING THE ROOF, CEILING, WALLS, FLOORS, BUILDING STRUCTURE, ROADWAY AND/OR LANDSCAPING). IF DAMAGE IS CONSIDERED TO BE UNAVOIDABLE, SUBMIT A WRITTEN NOTIFICATION OF THE PERCEIVED ISSUE AS SOON AS THE ISSUE IS DISCOVERED. IN THE ABSENCE OF SUCH NOTIFICATION, THE CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR ANY DAMAGE THAT MAY OCCUR.
9. THE CONTRACTOR SHALL COORDINATE THE EXTENTS OF THE STAINLESS STEEL BAR GRATING PLATFORMS WITH THE FAN UNIT PURCHASED TO ENSURE ADEQUATE ACCESS TO ALL FAN COMPONENTS AND APPURTENANCES. REFER TO STRUCTURAL FOR DETAILS.
10. CUSTOMER'S KNOWLEDGE OF ITS ACTIVITIES THAT WILL BE CONDUCTED WITHIN THE FACILITY TO BE DESIGNED BY DIVERSIFIED LABORATORY SCIENCES, INC. (DLS) AND THE MATERIALS INVOLVED IN THOSE ACTIVITIES IS SUPERIOR TO THE KNOWLEDGE OF DLS. ACCORDINGLY, AND ANYTHING CONTAINED IN THE CONTRACT DOCUMENTS TO THE CONTRARY NOTWITHSTANDING, ANY DUTY OR WARRANTY BY DLS HEREIN SHALL NOT APPLY TO THE DISCHARGE, DISPERSAL, ESCAPE, RLEASE OR SATURATION OF ANY POLLUTANT INTO THE ATMOSPHERE OR ANY BODY OF WATER, OR ON, ONTO, UPON, IN OR INTO THE SURFACE, SUBSURFACE OF LAND, OR MUNICIPAL OR PRIVATE DRAINAGE SYSTEM. FOR THE PURPOSES OF THIS DOCUMENT, THE WORD "POLLUTANT" SHALL MEAN ANY SOLID, LIQUID, GASEOUS, OR THERMAL IRRITANT OR CONTAMINANT, INCLUDING BUT NOT LIMITED TO SMOKE, VAPOR, SOOT, FUMES, ACIDS, ALKALIS, CHEMICALS, AND WASTE AND SHALL INCLUDE ANY HAZARDOUS SUBSTANCE. THE CAPACITY OF THE FACILITY AND THE DESIGN OF ITS PARTS, SO AS TO PREVENT THE ESCAPE, RELEASE, DISCHARGE, DISPERSAL OR SATURATION OF POLLUTANTS SHALL BE THE SOLE RESPONSIBILITY OF THE CUSTOMER.
11. ALL COMPONENTS EXPOSED TO THE EXHAUST AIRFLOW STREAM SERVED BY PEF-70 SHALL BE RESISTANT TO THE FOLLOWING VAPORIZED CHEMICALS: HYDROCHLORIC ACID (HCL), NITRIC ACID (HNO3), SULFURIC ACID (H2SO4), AND HYDROFLUORIC ACID (HF).

DLS LABORATORY CONSULTANTS

SEAL: 5/05/21

GEORGIA REGISTERED No. 27447 PROFESSIONAL ENGINEER CRAIG M. FREE

SOLVAY SPECIALTY POLYMERS
N2004 EXHAUST FAN ADDITION

ISSUE	DESC.	DATE
0	IFBC	5/05/21

DATE: 05 MAY 2021
REVISION:
DRAWN BY: CMF
PROJ. NO: 21005

ISSUE FOR BID AND CONSTRUCTION

G001

DESIGN:

BUILDING CODE: INTERNATIONAL BUILDING CODE 2018 (IBC) W/ GEORGIA STATE AMENDMENTS

WIND DESIGN:

RISK CATEGORY: II
Ie = 1.00
105 MPH (VUL - 3-SECOND GUST)
82 MPH (VASD - NOMINAL)
EXPOSURE CATEGORY: B

SEISMIC DESIGN:

NO MODIFICATIONS MADE TO EXISTING SEISMIC SYSTEM

SNOW:

GROUND SNOW LOAD (Pg) < 5 PSF

MISCELLANEOUS:

1. THE FOLLOWING NOTES APPLY TO ALL PROJECT RELATED STRUCTURAL DRAWINGS. THIS INCLUDES THESE DRAWINGS, FIELD SKETCHES AND RESPONSES TO REQUESTS FOR INFORMATION (RFI'S), UNLESS OTHERWISE INDICATED.

2. THESE GENERAL NOTES SUPPLEMENT THE PROJECT SPECIFICATIONS.REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

3. STRUCTURAL DRAWINGS SHALL BE COORDINATED WITH ARCHITECTURAL AND MECHANICAL DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR COORDINATING PERTINENT ASPECTS OF ALL DISCIPLINES INTO THEIR SHOP DRAWINGS AND WORK, AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR OMISSIONS.

4. NO OPENINGS OR MODIFICATIONS SHALL BE MADE IN ANY STRUCTURAL MEMBER WITHOUT THE PRIOR WRITTEN APPROVAL OF THE ARCHITECT.

5. NO CHANGE IN SIZE OR DIMENSION OF STRUCTURAL MEMBERS SHALL BE MADE WITHOUT THE PRIOR WRITTEN APPROVAL OF THE ARCHITECT.

6. THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL DESIGN, ADEQUACY, SAFETY AND STABILITY OF TEMPORARY BRACING AND SHORING THAT MAY BE REQUIRED AS A RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES. THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED ON THE STRUCTURAL FRAMING. APPLIED CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN CAPACITY OF ANY STRUCTURAL BUILDING ELEMENT.

7. THE CONTRACTOR'S CONSTRUCTION AND/OR ERECTION SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION LIFECYCLE.

8. DO NOT SCALE THESE DRAWINGS; USE DIMENSIONS. FOR DIMENSIONS NOT SHOWN ON THE STRUCTURAL CONTRACT DOCUMENTS, SEE ARCHITECTURAL DRAWINGS.

9. THE CONTRACTOR SHALL INFORM THE PROFESSIONAL OF RECORD IN WRITING OF ANY DEVIATION FROM THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOT BE RELIEVED OF THE RESPONSIBILITY OF SUCH DEVIATION BY THE PROFESSIONAL OF RECORD, REVIEW OF SHOP DRAWINGS, PRODUCT DATA, ETC. UNLESS THE CONTRACTOR HAS SPECIFICALLY INFORMED THE PROFESSIONAL OF RECORD OF SUCH DEVIATION AT THE TIME OF SUBMISSION AND THE ARCHITECT HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION.

10. WHERE A SECTION OR DETAIL IS CUT ON THE PLAN, IT IS UNDERSTOOD TO BE REPRESENTATIVE OF ALL LIKE OR SIMILAR CONDITIONS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING SUCH REQUIREMENTS INTO THEIR SHOP DRAWINGS AND WORK.

11. AT ALL TIMES THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONDITIONS OF THE JOBSITE INCLUDING SAFETY OF PERSONS AND PROPERTY. THE ARCHITECT'S OR ENGINEER'S PRESENCE AT THE JOB SITE OR REVIEW OF WORK DOES NOT IMPLY CONFIRMATION OF THE ADEQUACY OF THE CONTRACTOR'S MEANS OR METHODS OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR THE COMPLIANCE WITH OSHA REGULATIONS.

12. CONSULT ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR LOCATION, SIZES, AND EXTENT OF CHASES, INSERTS, RECESSES, RIDGES, FINISHES, DEPRESSIONS, ETC., NOT SHOWN ON THE STRUCTURAL DRAWINGS.

13. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS BEFORE STARTING WORK. THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER OF RECORD IN WRITING OF ALL CONDITIONS ENCOUNTERED IN THE FIELD THAT ARE CONTRADICTORY TO THOSE SHOWN ON THE STRUCTURAL DRAWINGS.

14. STRUCTURAL CONTRACT DOCUMENTS SHALL NOT INCLUDE SHOP DRAWINGS, VENDOR DRAWINGS, OR ANY MATERIAL PREPARED AND SUBMITTED BY THE CONTRACTOR OR SUBCONTRACTOR.

15. REFERENCE TO STANDARD SPECIFICATIONS OF ANY TECHNICAL SOCIETY, ORGANIZATION OR ASSOCIATION OR TO CODES OF LOCAL OR STATE AUTHORITIES, SHALL MEAN THE LATEST STANDARD, CODE, SPECIFICATION OR TENTATIVE SPECIFICATION ADOPTED AND PUBLISHED AT THE DATE OF TAKING BIDS, UNLESS SPECIFICALLY STATED OTHERWISE.

16. PRINCIPAL OPENINGS THROUGH THE FRAMING ARE SHOWN ON THESE DRAWINGS. OPENINGS 1'-4" IN WIDTH OR LENGTH (AND LESS) ARE GENERALLY NOT SHOWN ON THE STRUCTURAL DRAWINGS. THE GENERAL CONTRACTOR SHALL EXAMINE THE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR ALL REQUIRED OPENINGS. ALL MECHANICAL OPENING LOCATIONS, UNIT OPERATING WEIGHTS, AND SIZES SHALL BE VERIFIED WITH THE MECHANICAL CONTRACTOR PRIOR TO FABRICATION. ANY DEVIATION FROM THE OPENINGS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR APPROVAL.

17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES IN ORDER TO COMPLY WITH THE CONTRACT DRAWINGS AND SPECIFICATIONS.

ISSUE FOR BID AND CONSTRUCTION

DLS LABORATORY CONSULTANTS

SEAL:

GEORGIA REGISTERED No. SE000054 STRUCTURAL ENGINEER WILLIAM JOHN PEIFER 5/5/21

SOLVAY SPECIALTY POLYMERS
LAB N2004 RENOVATION

ISSUE	DESC.	DATE
0	IFBC	05/05/21

GENERAL NOTES
DATE: APRIL 5, 2021
REVISION:
DRAWN BY: STS
PROJ. NO: 21005

S001

SUBMITTALS:

1. STRUCTURAL DRAWINGS GIVE REPRESENTATIVE DETAILS AND ARE NOT INTENDED TO SHOW ALL CONDITIONS THAT MAY BE PRESENT. SHOP DRAWINGS SHALL DETAIL ALL CONDITIONS IN ACCORDANCE WITH THE SPECIFIC REQUIREMENTS AS INDICATED IN THE PROJECT DOCUMENTS.

2. CONTRACTOR SHALL SUBMIT A SCHEDULE OF SHOP DRAWING SUBMITTAL DATES TO ARCHITECT AT LEAST 30 DAYS PRIOR TO FIRST SUBMITTAL. FAILURE TO SUBMIT DRAWINGS ON DESIGNATED DATE MAY IMPACT REVIEW SCHEDULE.

3. ANY MATERIALS OR PRODUCTS SUBMITTED FOR APPROVAL THAT ARE DIFFERENT FROM THE MATERIALS OR PRODUCTS SPECIFIED IN THE STRUCTURAL CONTRACT DOCUMENTS WILL BE CONSIDERED ONLY IF THE FOLLOWING CRITERIA ARE SATISFIED:
   A. A COST SAVINGS TO THE OWNER IS DOCUMENTED AND SUBMITTED WITH THE REQUEST.
   B. THE MATERIAL OR PRODUCT HAS BEEN APPROVED BY THE INTERNATIONAL CODE COUNCIL (ICC) AND THE ICC-ES REPORT IS SUBMITTED WITH THE REQUEST. SUBMITTALS NOT SATISFYING THE ABOVE CRITERIA WILL NOT BE CONSIDERED.

4. REVIEW OF SUBMITTALS OR SHOP DRAWINGS BY THE STRUCTURAL ENGINEER OF RECORD DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY TO REVIEW AND CHECK SHOP DRAWINGS BEFORE SUBMITTAL TO THE STRUCTURAL ENGINEER OF RECORD. THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS AND DIMENSIONS SPECIFIED IN THE CONTRACT DOCUMENTS.

5. COMPLETE SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL FABRICATED AND SPECIALTY BUILDING COMPONENTS INCLUDING (BUT NOT LIMITED TO) WINDOW SYSTEMS, CANOPY SYSTEMS, AND METAL STAIRS. SHOP DRAWINGS SHALL BE SEALED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF GEORGIA.

6. ALL APPROVED SUBMITTALS, INCLUDING BUT NOT LIMITED TO SHOP DRAWINGS, SHALL BE MADE AVAILABLE ON THE JOBSITE FOR REVIEW BY THE INSPECTOR.

7. REPRODUCTION OF CONTRACT DOCUMENTS FOR USE AS SHOP DRAWINGS IS NOT PERMITTED.

STRUCTURAL STEEL:

DESIGN CODE:
AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS - AISC 360-16

1. STEEL SHALL CONFORM TO THE FOLLOWING GRADES:

STRUCTURAL W-SHAPES	ASTM A992 (Fy=50ksi)
ALL CHANNELS, ANGLES, PLATES, ETC. (UNO)	ASTM A36 (Fy=36ksi)
STRUCTURAL TUBES	ASTM A500 GRADE C (Fy=50ksi)
HIGH STRENGTH BOLTS	ASTM A325
HEX NUTS - GRADE A	ASTM A563
WELDING ELECTRODES	E70xx HARDENED STEEL
WASHERS - TYPE I	ASTM F436

2. ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE (AISC 2016) EXCEPT AS MODIFIED IN THESE NOTES AND THE PROJECT SPECIFICATIONS.

3. THE FABRICATOR IS RESPONSIBLE FOR THE DESIGN OF ALL CONNECTIONS SHOWN ON THE STRUCTURAL DRAWINGS. CONNECTIONS SHOWN ARE SCHEMATIC AND ARE ONLY INTENDED TO SHOW THE RELATIONSHIP OF MEMBERS CONNECTED. CONNECTION DETAILS INDICATED ON THE DRAWINGS SHALL BE INCORPORATED INTO FABRICATOR'S CONNECTION DESIGN ONLY AS THEY ARE DEEMED APPROPRIATE AND ADEQUATE. BOLTED CONNECTIONS SHALL BE ASSEMBLED AND INSPECTED IN ACCORDANCE WITH AISC 14TH EDITION "SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR ASTM A490 BOLTS".

4. SPLICING OF STEEL MEMBERS UNLESS SHOWN ON THE DRAWINGS IS PROHIBITED WITHOUT WRITTEN APPROVAL OF THE ARCHITECT.

5. NO HOLES SHALL BE CUT IN ANY STEEL ELEMENT UNLESS THEY ARE DETAILED ON THE DRAWINGS.

6. CONNECTIONS FOR NON-COMPOSITE BEAMS WHICH CANNOT CONFORM TO AISC TYPICAL CONNECTION DETAILS SHALL BE DETAILED IN ACCORDANCE WITH THE FOLLOWING:
   A. WHERE BEAM REACTIONS ARE NOT SHOWN ON THE DRAWINGS, CONNECTIONS SHALL BE DESIGNED FOR ONE-HALF THE MAXIMUM UNIFORM LOAD WHICH THE BEAM WILL SUPPORT (AS SIMPLE SPAN) FOR THE SPAN SHOWN ON THE DRAWINGS. (TABLE 3-6, AISC 15TH EDITION)
   B. WHERE CONNECTIONS ARE SUBJECT TO ECCENTRICITY, SUCH ECCENTRICITY SHALL BE TAKEN INTO ACCOUNT WHEN DESIGNING THE CONNECTION.
   C. WHERE CONNECTIONS SUPPORT BEAMS WHICH ARE SUBJECT TO CONCENTRATED LOADS, SUCH CONCENTRATED LOADS SHALL BE TAKEN INTO ACCOUNT WHEN DESIGNING THE CONNECTION.
   D. BOLTED CONNECTIONS SHALL BE BEARING TYPE WITH A325 BOLTS. MINIMUM DIAMETER OF ALL BOLTS SHALL BE 3/4", MAX. DIA. 1 1/8". PROVIDE AT LEAST 2 BOLTS PER CONN. TIGHTENED "SNUG TIGHT".
   E. END CONNECTIONS OF FLOOR MEMBERS SHALL ACCOMMODATE END ROTATIONS OF SIMPLE, UNRESTRAINED BEAMS. FOR THIS PURPOSE, INELASTIC ACTION IN THE CONNECTION IS PERMITTED.
   F. COPED OR CUT ENDS OF MEMBERS SHALL BE REINFORCED WHERE REQUIRED TO SUSTAIN THE SPECIFIED REACTIONS.
   G. TENSILE CONNECTIONS SHALL BE DESIGNED FOR A FORCE RESULTING FROM MULTIPLYING THE GROSS AREA BY 20 KSI.

7. UNLESS OTHERWISE SHOWN ON DRAWINGS, SIZE OF WELDS SHALL NOT BE SMALLER THAN 3/16". ALL WELDED JOINTS SHALL CONFORM TO THE PROVISIONS OF AWS D1.1, STRUCTURAL WELDING CODE BY AMERICAN WELDING SOCIETY. PROOF OF WELDER CERTIFICATION SHALL BE AVAILABLE AT THE JOB SITE DURING TIMES OF INSPECTION.

8. THE CONTRACTOR SHALL PROVIDE, AT NO ADDITIONAL COST, ALL ADDITIONAL STEEL CONNECTIONS, GUYING, ETC. REQUIRED FOR ERECTION.

9. OBTAIN ALL FIELD MEASUREMENTS REQUIRED FOR PROPER FABRICATION AND INSTALLATION OF WORK PRIOR TO DETAILING. PRECISE MEASUREMENTS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

10. PROVIDE STIFFENERS FINISHED TO BEAR UNDER ALL LOAD CONCENTRATIONS ON SUPPORTING MEMBERS, AT BEAM COLUMN JOINTS (AS REQUIRED BY THE AISC SPECIFICATIONS), AND WHERE SHOWN ON THE DRAWINGS.

11. THE FABRICATOR SHALL BE RESPONSIBLE FOR ALL ERRORS OF DETAILING ON THE SHOP DRAWINGS, ERRORS IN FABRICATION, AND FOR THE CORRECT FITTING OF STRUCTURAL STEEL MEMBERS.

12. ALL STRUCTURAL STEEL NOT RECEIVING FIRE PROOFING SHALL RECEIVE ONE SHOP COAT OF RUST INHIBITIVE PRIMER.

ISSUE FOR BID AND CONSTRUCTION

DLS LABORATORY CONSULTANTS

SEAL:

GEORGIA REGISTERED No. SE000054 STRUCTURAL ENGINEER WILLIAM JOHN FISHER 5/5/21

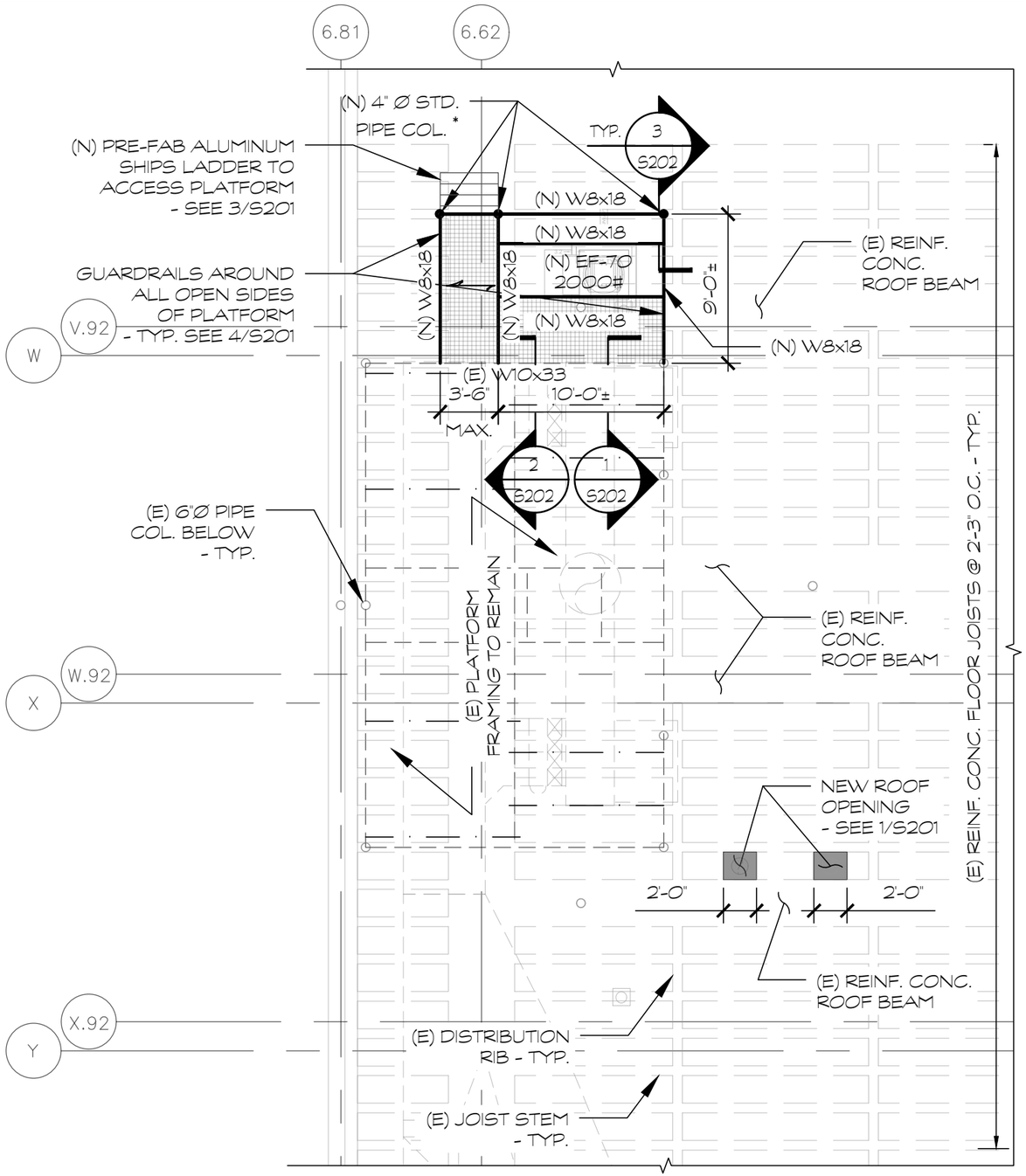
SOLVAY SPECIALTY POLYMERS
LAB N2004 RENOVATION

ISSUE	DESC.	DATE
0	IFBC	05/05/21

GENERAL NOTES

DATE: APRIL 5, 2021
REVISION:
DRAWN BY: STS
PROJ. NO: 21005

S002



1 S101 PARTIAL ROOF FRAMING PLAN

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

PLAN NOTES:

1. (E) INDICATES EXISTING FRAMING.
   (N) INDICATES NEW FRAMING.
2. ALL DIMENSIONS SHALL BE COORDINATED WITH MECHANICAL DRAWINGS. DIMENSIONS REFERENCING EXISTING FRAMING SHALL BE VERIFIED IN FIELD PRIOR TO ANY CONSTRUCTION OR FABRICATION. POSTS SHALL BEAR ABOVE ROOF JOISTS & BEAMS ONLY. COORDINATE IN FIELD PRIOR TO FABRICATION.
3. ALL EXPOSED STEEL SHALL BE GALVANIZED, OR SHALL BE SHOP COATED WITH A RUST INHIBITING PRIMER AND PAINTED, U.N.O.
4. EXISTING STEEL SHALL CLEANED OF ANY RUST OR CORROSION AND BE RE-PAINTED TO PREVENT RUST AND DETERIORATION.
5. INDICATES EXTENTS OF (N) OPENING. WIDTH SHALL BE LIMITED TO CONCRETE SLAB BETWEEN JOIST STEMS. JOIST STEMS SHALL NOT BE CUT OR ALTERED IN ANY WAY. WHERE OPENING EXPOSES (E) REINFORCMENT, REINFORCEMENT SHALL BE TREATED WITH A CORROSION INHIBITING COATING.
6. SUPPORT OF NEW AIR PLENUM BY DESIGNER.
7. EQUIPMENT WEIGHTS SHOWN INDICATE MAXIMUM OPERATING WEIGHT OF EQUIPMENT, INCLUDING ALL CURBS AND ACCESSORIES.
8. WHERE (N) BEAMS ARE SUPPORTING EQUIPMENT, G.C. TO COORD. LOCATION WITH MFR. REQUIREMENTS AND EQUIPMENT DIMENSIONS.
9. INDICATES EXTENTS OF 1 1/2" NON-SLIP, STAINLESS STEEL BAR GRATING. ATTACH TO SUPPORTING MEMBERS W/ STAINLESS STEEL SADDLE CLIPS. COPE AROUND (E) ELEMENTS AS NEEDED.

EXISTING CONDITIONS DISCLAIMER:

1. ASSUMPTIONS AND FRAMING REGARDING THE EXISTING STRUCTURE MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO EXECUTING WORK INCLUDED IN THIS SCOPE OF STRUCTURAL CONTRACT DOCUMENTS. THESE VERIFICATIONS MAY REQUIRE THE ALTERATION, DAMAGE, OR DESTRUCTION OF DESIRABLE OR OTHERWISE SERVICEABLE BUILDING COMPONENTS. ALTERATION, DAMAGE, OR DESTRUCTION OF SAID COMPONENTS SHALL NOT CONSTITUTE A BASIS OF CLAIMS AGAINST WILLIAM J. PELTIER AND ASSOCIATES. THE OWNER AND CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS WILLIAM J. PELTIER AND ASSOCIATES FROM ALL SUCH CLAIMS. DISCOVERY OF VARIATIONS FROM THESE ASSUMPTIONS MAY REQUIRE ADDITIONAL DESIGN SERVICES BY WILLIAM J. PELTIER AND ASSOCIATES WHICH WILL BE BILLED AT THE HOURLY RATE PER RATE SCHEDULE INCLUDED IN THE CONTRACT.
2. THE CONTRACTOR SHALL REPORT ALL DISCREPANCIES BETWEEN ASSUMPTIONS AND ACTUAL FIELD CONDITIONS TO THE ENGINEER.

NOTES TO CONTRACTOR:
THE CONTRACTOR SHALL REFER TO THE MANUFACTURER INFORMATION, MECHANICAL, & ELECTRICAL DRAWINGS AND NOTE THE LOCATION OF ALL PIPING, DUCTWORK, & CONDUITS TO IDENTIFY ANY CONFLICTS WITH EXISTING COMPONENTS. REPORT ANY DISCREPANCIES TO THE ENGINEER OF RECORD

ISSUE FOR BID AND CONSTRUCTION

DLS LABORATORY CONSULTANTS

SEAL:

GEORGIA REGISTERED No. SE000054 STRUCTURAL ENGINEER WILLIAM JOHN PELTIER 4/5/21

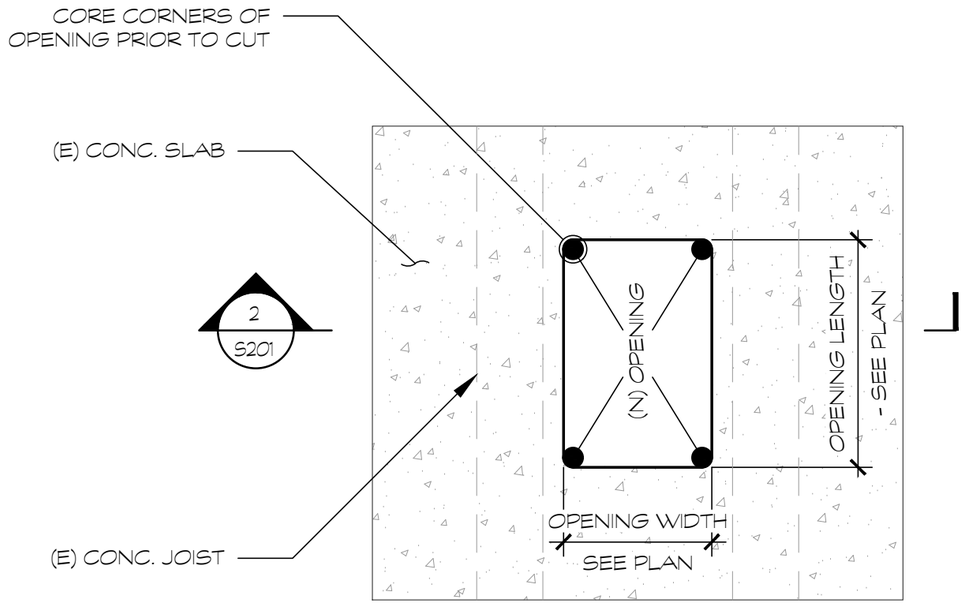
SOLVAY SPECIALTY POLYMERS
LAB N2004 RENOVATION

ISSUE	DESC.	DATE
0	IFBC	05/05/21

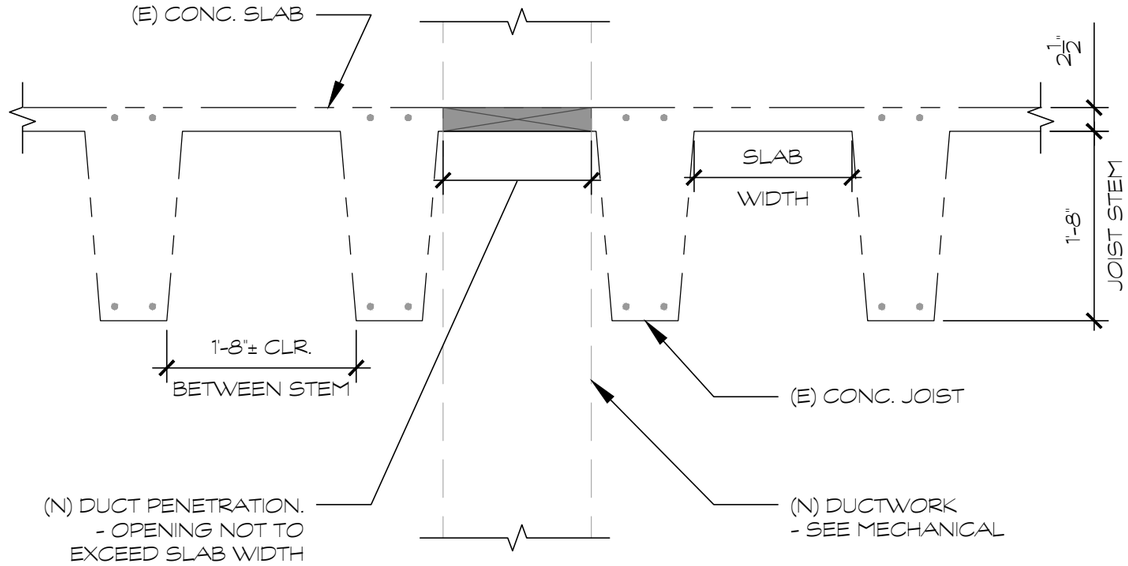
PARTIAL ROOF FRAMING PLAN

DATE: APRIL 5, 2021
REVISION:
DRAWN BY: STS
PROJ. NO: 21005

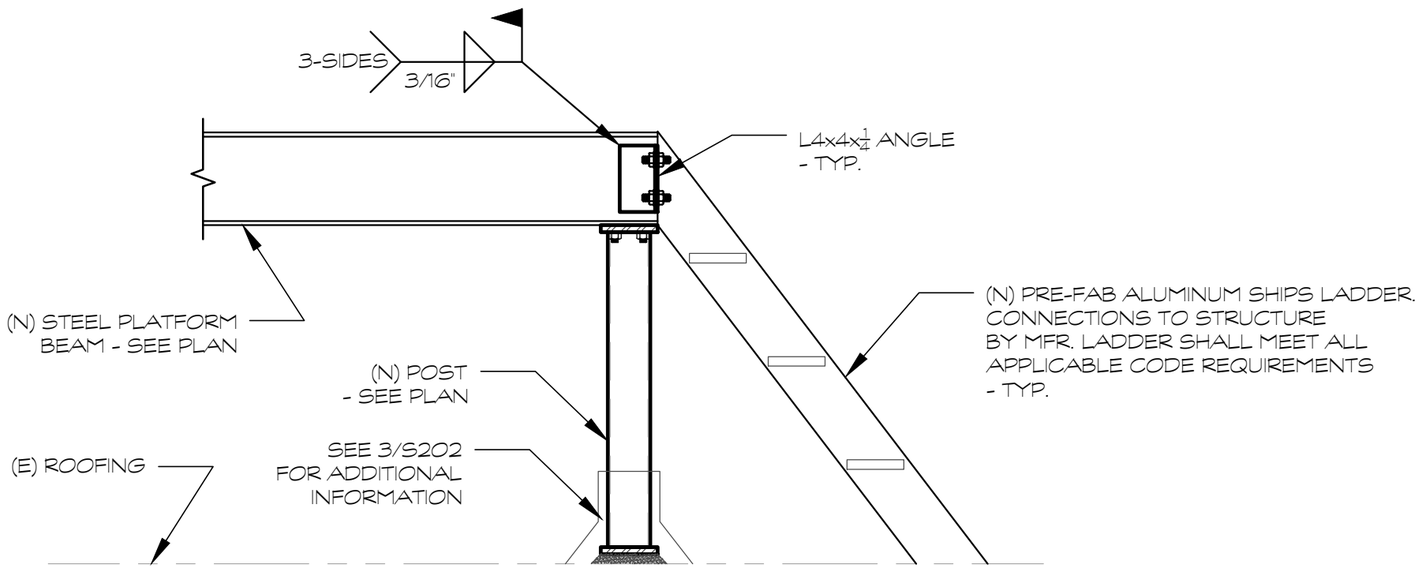
S101



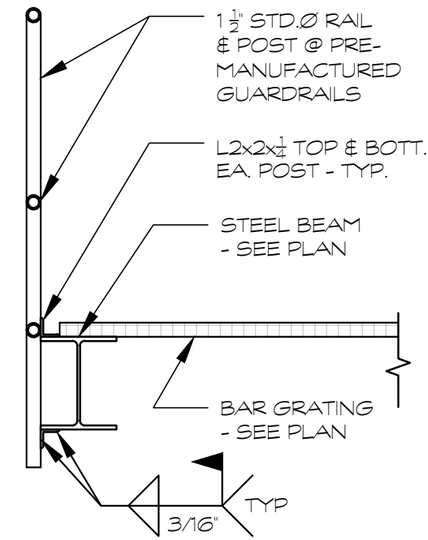
1 S201 ROOF OPENING PLAN
SCALE: 3/4" = 1'-0"



2 S201 ROOF OPENING DETAIL
SCALE: 3/4" = 1'-0"



3 S201 SECTION
SCALE: 3/4" = 1'-0"



4 S201 SECTION
SCALE: 3/4" = 1'-0"

ISSUE FOR BID AND CONSTRUCTION

DLS LABORATORY CONSULTANTS

SEAL:

GEORGIA REGISTERED No. SE000054 STRUCTURAL ENGINEER WILLIAM JOHN PEIFER 5/3/21

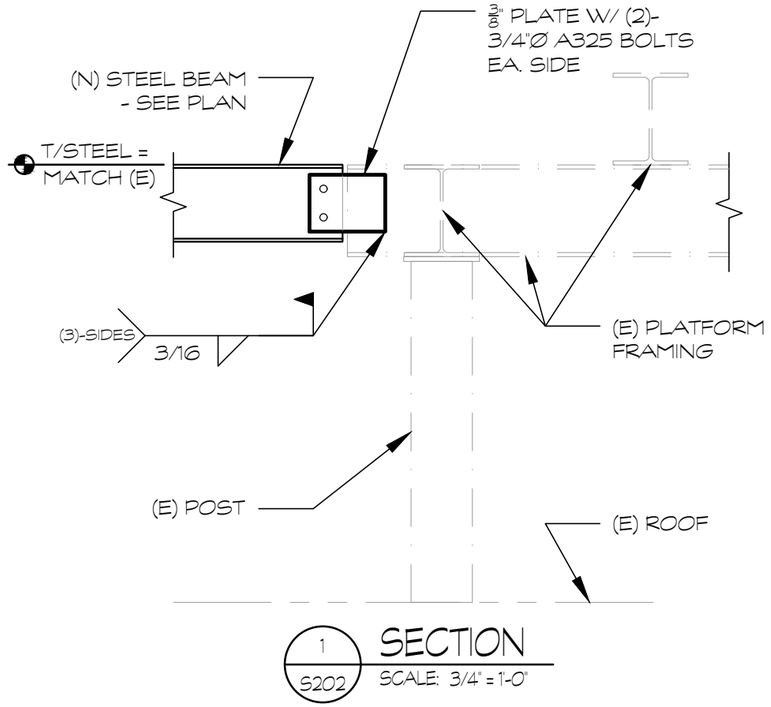
SOLVAY SPECIALTY POLYMERS
LAB N2004 RENOVATION

ISSUE	DESC.	DATE
0	IFBC	05/05/21

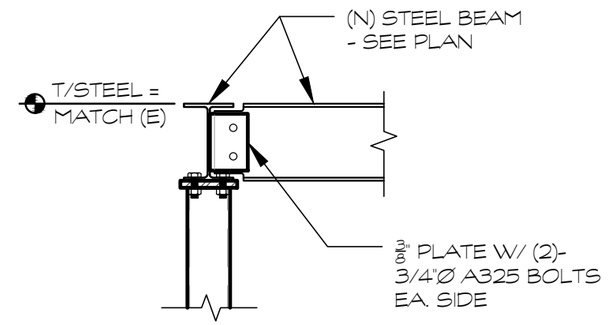
SECTIONS & DETAILS

DATE: APRIL 5, 2021
REVISION:
DRAWN BY: STS
PROJ. NO: 21005

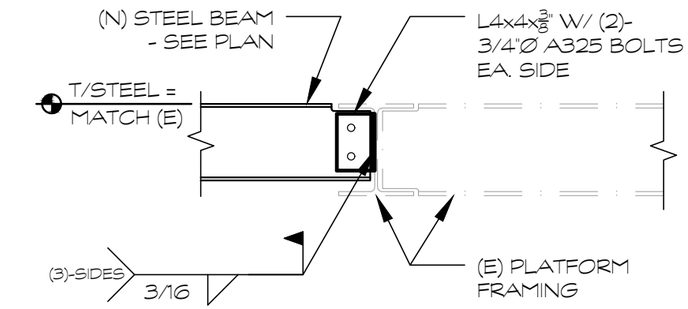
S201

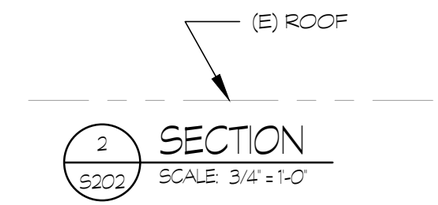


1 S202 SECTION
SCALE: 3/4" = 1-0"

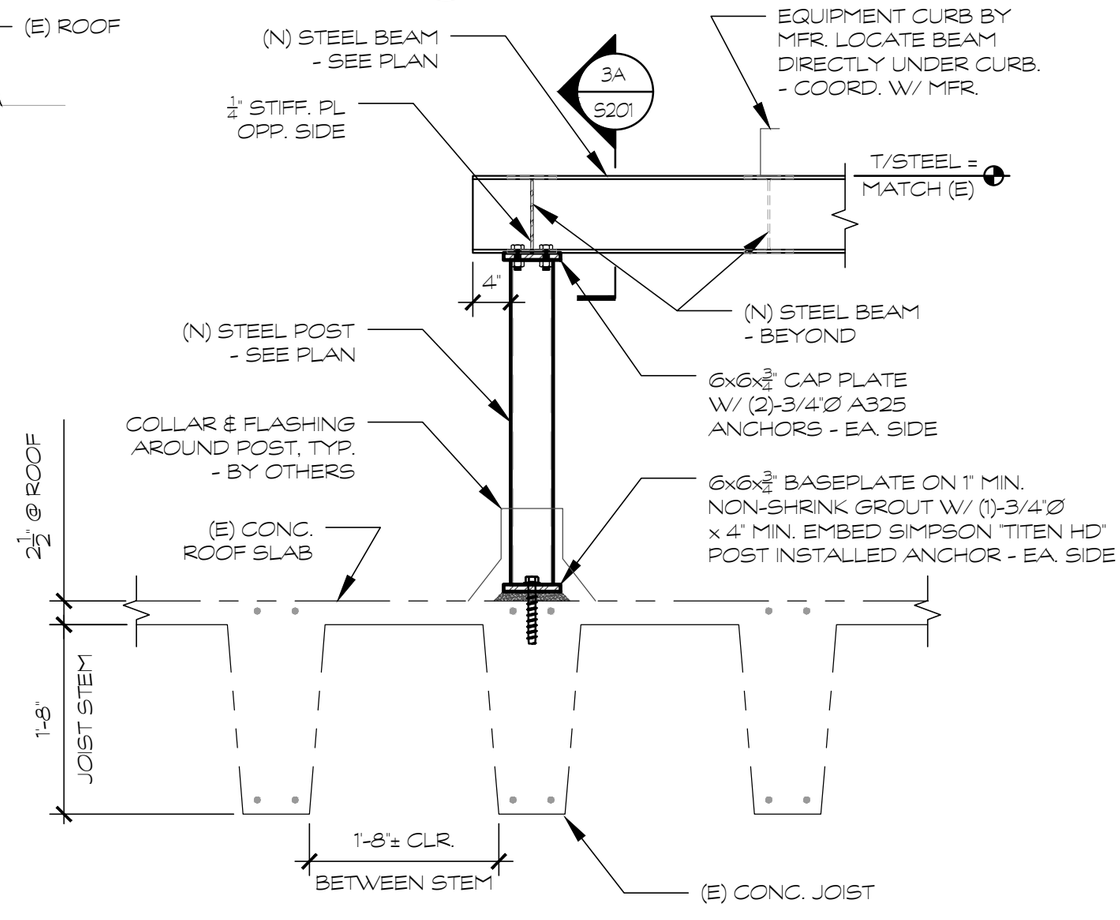


3A S202 SECTION
SCALE: 3/4" = 1-0"





2 S202 SECTION
SCALE: 3/4" = 1-0"



3 S202 SECTION
SCALE: 3/4" = 1-0"

ISSUE FOR BID AND CONSTRUCTION

DLS LABORATORY CONSULTANTS

SEAL:

GEORGIA REGISTERED No. SE000054 STRUCTURAL ENGINEER WILLIAM JOHN [illegible]
5/5/21

SOLVAY SPECIALTY POLYMERS
LAB N2004 RENOVATION

ISSUE	DESC.	DATE
0	IFBC	05/05/21

SECTIONS & DETAILS
DATE: APRIL 5, 2021
REVISION:
DRAWN BY: STS
PROJ. NO: 21005

S202

APPLICABLE CODES:

INTERNATIONAL BUILDING CODE, 2012 EDITION, WITH GEORGIA AMENDMENTS
INTERNATIONAL MECHANICAL CODE, 2012 EDITION, WITH GEORGIA AMENDMENTS
INTERNATIONAL ENERGY CONSERVATION CODE, 2009 EDITION, WITH GEORGIA SUPPLEMENTS AND AMENDMENTS
2012 NFPA 101 LIFE SAFETY CODE
2011 NFPA 45 STANDARD ON FIRE PROTECTION FOR LABORATORIES USING CHEMICALS
2012 NFPA 90 STANDARD FOR THE INSTALLATION OF AIR CONDITIONS AND VENTILATING SYSTEMS
2012 ANSI/ASSE 29.5 AMERICAN NATIONAL STANDARD FOR LABORATORY VENTILATION
2016 ACGIH INDUSTRIAL VENTILATION: A MANUAL FOR RECOMMENDED PRACTICE FOR DESIGN

LEGEND:

- DUCT BREAK
- EXHAUST GRILLE
- SUPPLY DIFFUSER
- PRESSURE INDEPENDENT VAV VALVE (SUPPLY WITH RE-HEAT COIL)
- PRESSURE INDEPENDENT VAV VALVE (EXHAUST)
- NEW WORK
- EXISTING TO REMAIN
- EXISTING TO BE REMOVED
- CONNECT TO EXISTING
- MANUAL VOLUME DAMPER
- CHANGE IN DUCT SIZE
- XX/YY — XX DUCT SIZE PARALLEL TO PAGE, YY DUCT SIZE PERPENDICULAR TO PAGE

TERMINAL UNIT SCHEDULE										
ID	SIEMENS MODEL	DUCT RUNOUT	VALVE SIZE	MAX CFM	MIN CFM	MAX APD	TYPE	MATERIAL (1)	END CONNECTION	SERVICE (2)
PEF70 EV-2	LGE	12"	12"	1200	250	0.3	VAV	CA	FLANGE	CFH

Notes:
(1) CA: TEFLON COATED STEEL CASING WITH ORIFICE SENSOR
(2) CFH: CHEMICAL FUME HOOD

ISSUE FOR BID AND CONSTRUCTION

DLS LABORATORY CONSULTANTS

SEAL: 5/05/21

GEORGIA REGISTERED No. 27447 PROFESSIONAL ENGINEER CRAIG M. FREE

SOLVAY SPECIALTY POLYMERS
N2004 EXHAUST FAN ADDITION

ISSUE	DESC.	DATE
0	IFBC	5/05/21

DATE: 05 MAY 2021
REVISION:
DRAWN BY: CMF
PROJ. NO: 21005

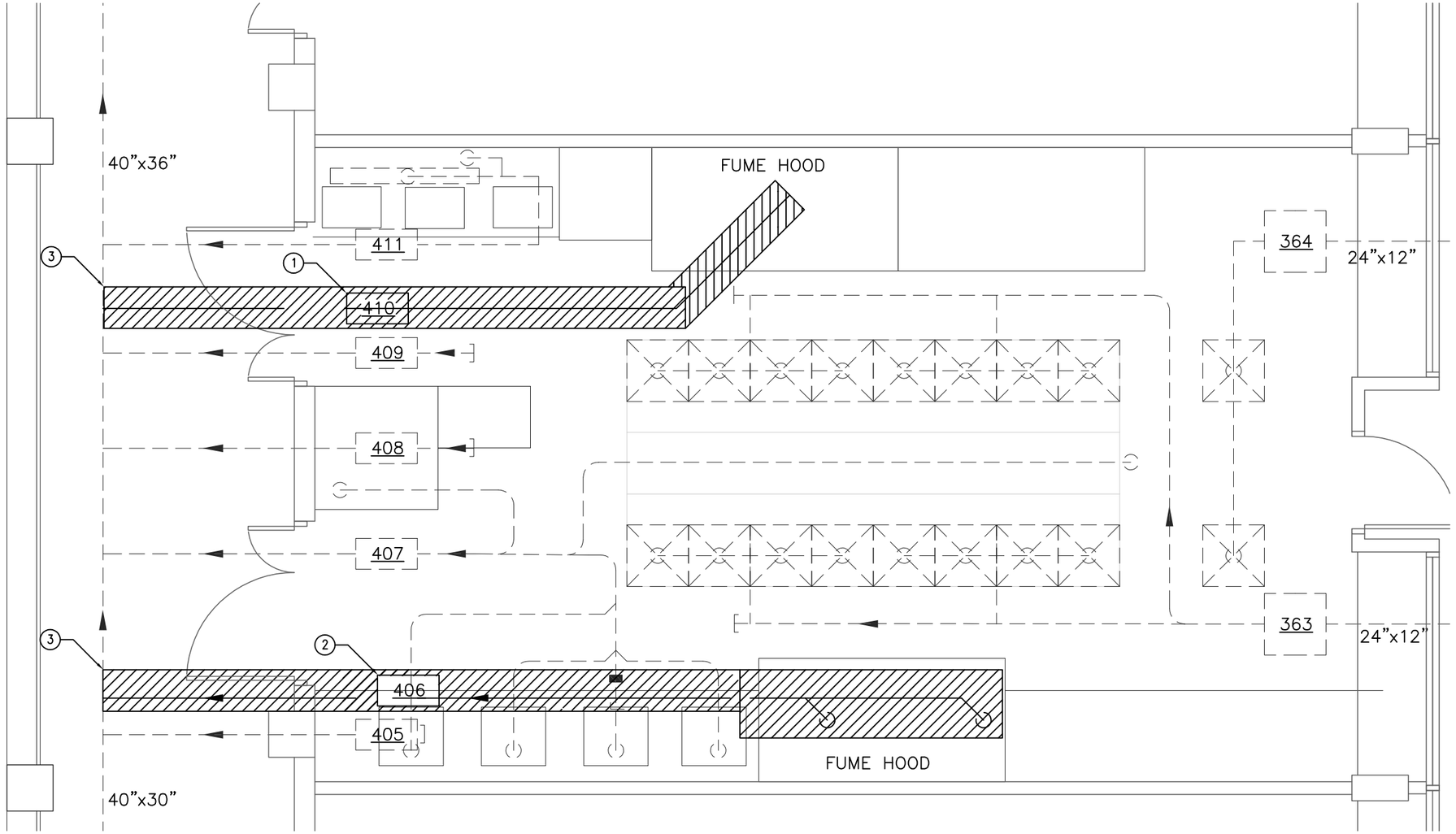
M001

NOTES: THIS SHEET ONLY

1. REMOVE AND RETAIN EXISTING EXHAUST VALVE AND ALL ASSOCIATED APPURTENANCES. RE-INSTALL AS SHOWN ON M201.
2. REMOVE AND DISPOSE OF EXISTING EXHAUST VALVE AND ALL ASSOCIATED APPURTENANCES.
3. REMOVE EXISTING DUCT AS SHOWN. PROVIDE PATCH FOR TRUNK DUCT WITH MATERIAL TO MATCH EXISTING. MECHANICALLY SECURE PATCH TO TRUNK WITH SCREWS 6" O.C. AND SEAL DUCT AIRTIGHT AND VITON TYPE B GASKET

GENERAL NOTES: THIS SHEET ONLY

A. COMPLY WITH SOLVAY SAFETY STANDARDS WHEN REMOVING AND HANDLING CHEMICAL EXHAUST DUCT.



DLS LABORATORY CONSULTANTS

SEAL: 5/05/21

GEORGIA REGISTERED No. 27447 PROFESSIONAL ENGINEER CRAIG M. FREE

SOLVAY SPECIALTY POLYMERS
N2004 EXHAUST FAN ADDITION

ISSUE	DESC.	DATE
0	IFBC	5/05/21

DATE:	05 MAY 2021
REVISION:	
DRAWN BY:	CMF
PROJ. NO:	21005

ISSUE FOR BID AND CONSTRUCTION

M101

NOTES: THIS SHEET ONLY

1. 14"ø DUCT DOWN TO FUME HOOD.
2. 8"ø DUCT DOWN TO FUME HOOD. PROVIDE MVD IN VERTICAL.
3. RE-ROUTE EXISTING EXHAUST DUCT AS NECESSARY FOR FUME DUCT INSTALLATION.
4. 14 X 12 REDUCER.
5. 14 X 8 REDUCING BULL HEAD TEE.
6. RE-INSTALL EXISTING EXHAUST VALVE. REFER TO M101.
7. INSTALL NEW EXHAUST VALVE.
8. 12"ø DUCT UP TO ROOF ABOVE. REFER TO M202.

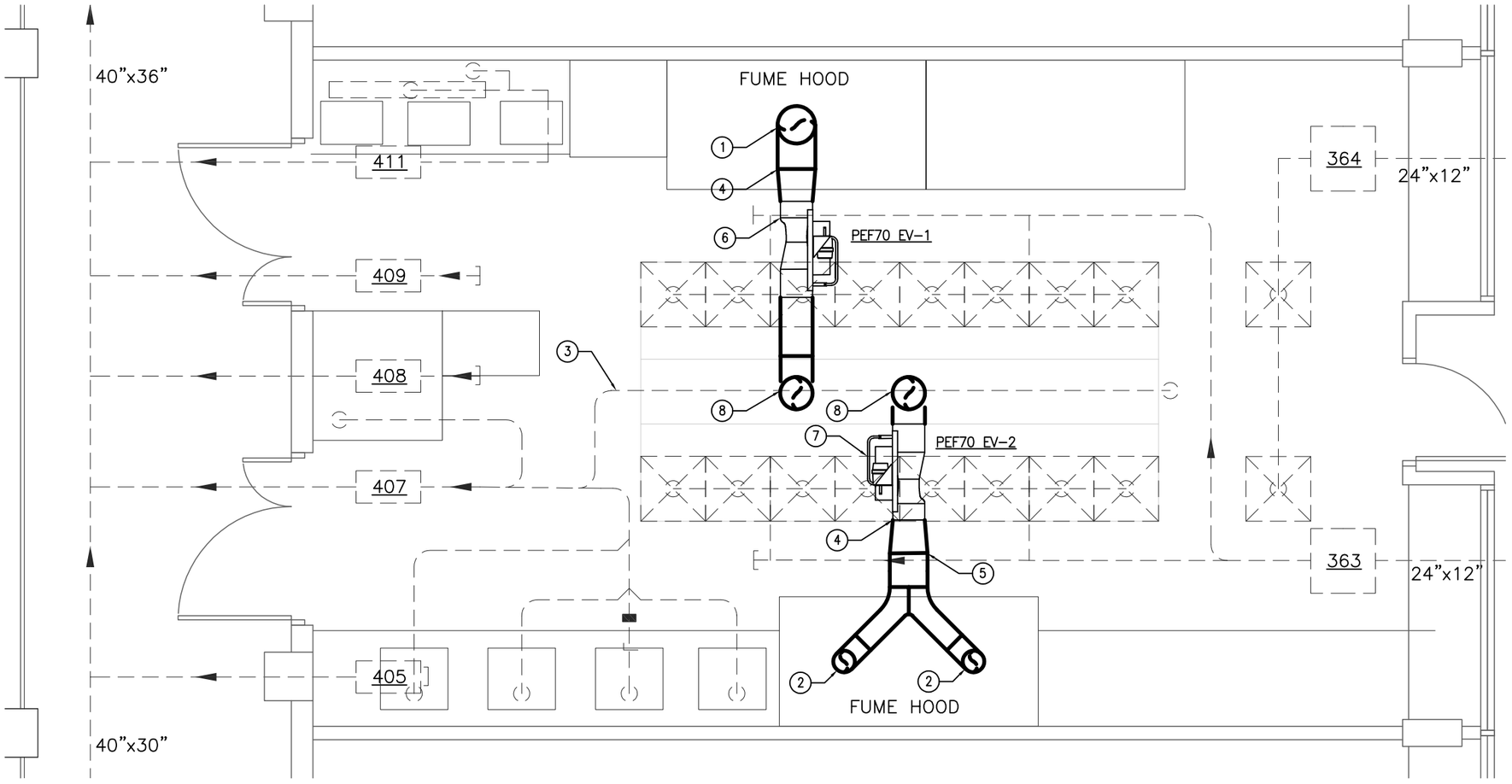
GENERAL NOTES: THIS SHEET ONLY

A. SLOPE EXHAUST DUCT BACK TO HOOD.

B. BALANCE FUME HOODS TO 100 FPM SASH FACE VELOCITY AT 12", 18" AND 28".

C. BALANCE ROOM TO ENSURE N2004 REMAINS NEGATIVELY PRESSURIZED (0.05" W.C.) ACROSS ALL THREE (3) DOORS AT ALL FUME HOOD SASH POSITIONS AS DESCRIBED ABOVE.

D. THERE ARE THREE (3) EXISTING EXHAUST TAKE-OFF CONNECTIONS THAT WERE INSTALLED 180° OUT OF LINE. THE CONTRACTOR SHALL REMOVE THESE CONNECTIONS AND ROTATE THE TAKE-OFF IN THE CORRECT ORIENTATION. COORDINATE WITH WORK WITH OWNER.



1 FLOOR PLAN – NEW WORK
SCALE: 1/4" = 1'-0"

ISSUE FOR BID AND CONSTRUCTION

DLS LABORATORY CONSULTANTS

SEAL: 5/05/21

GEORGIA REGISTERED No. 27447 PROFESSIONAL ENGINEER CRAIG M. FREE

SOLVAY SPECIALTY POLYMERS
N2004 EXHAUST FAN ADDITION

ISSUE	DESC.	DATE
0	IFBC	5/05/21

DATE:	05 MAY 2021
REVISION:	
DRAWN BY:	CMF
PROJ. NO:	21005

M201

NOTES: (THIS SHEET ONLY)

1. 12"ø FUME EXHAUST DUCT UP FROM FLOOR BELOW. REFER TO M201 FOR CONTINUATION. REFER TO 2/M601 FOR ROOF PENETRATION DETAILS.
2. PEF–70 MOUNTED ON NEW STRUCTURAL FRAME. REFER TO STRUCTURAL.
3. EXHAUST FAN SHALL BE EQUIPPED WITH A BOTTOM DUCT CONNECTION ARRANGEMENT TO FAN PLENUM. REFER TO 1/M601 FOR DETAILS.

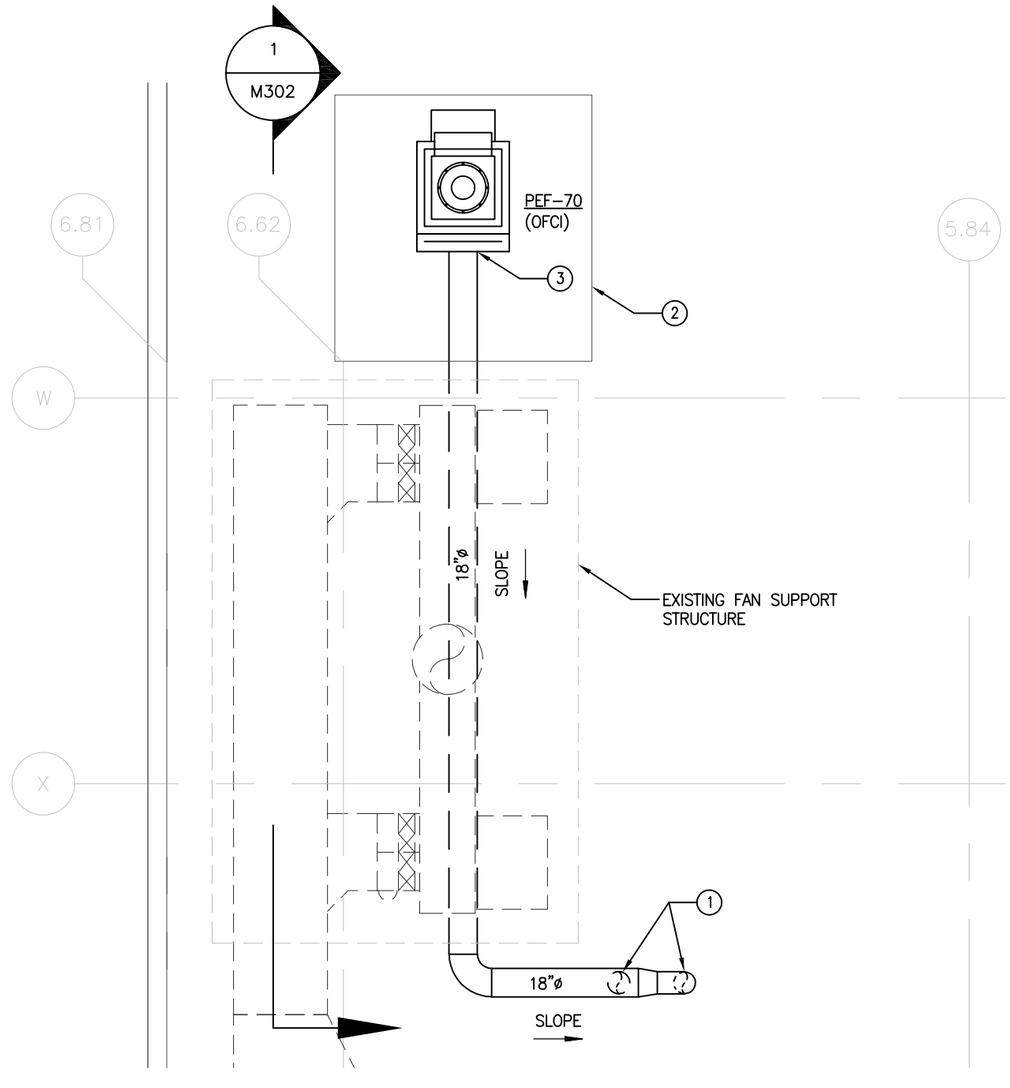
GENERAL NOTES: (THIS SHEET ONLY)

A. SLOPE EXHAUST DUCT BACK TO ROOF PENETRATION.

B. THE CONTRACTOR SHALL PROTECT THE ROOF WHILE PERFORMING WORK ON THE ROOF AND SHALL REPAIR ANY ROOF DAMAGE THAT MAY OCCUR DURING CONSTRUCTION ACTIVITIES.

C. PROVIDE DUCT SUPPORTS FOR THE NEW EXHAUST AIR DUCT. SUPPORTS SHALL BE ADJUSTABLE WITH UNIVERSAL ROOF SUPPORT FOOTINGS. THE BASE SHALL BE MIN 16 GAUGE STAINLESS STEEL WITH STAINLESS STEEL NUTS AND BOLTS. UNISTRUT AND ALL OTHER HARDWARE SHALL BE GALVANIZED. PROVIDE INTERVALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION. LAYOUT BASIS: ROOFSTUFF, MODEL SS–H–1 OR EQUAL.

D. PEF–70 SHALL BE OWNER FURNISHED, CONTRACTOR INSTALLED, (OFCI). THE CONTRACTOR SHALL COORDINATE DELIVERY OF FAN AND SHALL PROVIDE ALL LABOR AND EQUIPMENT NECESSARY TO SET THE FAN ON THE ROOF.



1 FLOOR PLAN – NEW WORK
SCALE: 1/8" = 1'–0"

ISSUE FOR BID AND CONSTRUCTION

DLS LABORATORY CONSULTANTS

SEAL: 5/05/21

GEORGIA REGISTERED No. 27447 PROFESSIONAL ENGINEER CRAIG M. FREE

SOLVAY SPECIALTY POLYMERS
N2004 EXHAUST FAN ADDITION

ISSUE	DESC.	DATE
0	IFBC	5/05/21

DATE:	05 MAY 2021
REVISION:	
DRAWN BY:	CMF
PROJ. NO:	21005

M202

NOTES: (THIS SHEET ONLY)

1. 12"ø UP FROM FLOOR BELOW. REFER TO M201 FOR CONTINUATION. REFER TO 2/M601 FOR ROOF PENETRATION DETAILS.
2. PEF-70 MOUNTED ON STRUCTURAL FRAME. REFER TO STRUCTURAL AND 1/M601 FOR DETAILS.
3. PROVIDE 18 GA. GALVANIZED PLENUM BOX, WITH ALL EXPOSED SURFACES LINED WITH 1/4" CHEMICAL RESISTANT SHEET PVC, SAME SIZE AS FAN OPENING WITH 1-1/2" FLANGE AT FAN PLENUM CONNECTION. REFER TO REFER TO 1/M601 FOR CONNECTION DETAILS.
4. PROVIDE BELLMOUTH FITTING TO PVC LINED PLENUM BOX.
5. COORDINATE LOCATION OF BYPASS DAMPER WITH OWNER PRIOR TO SETTING FAN.

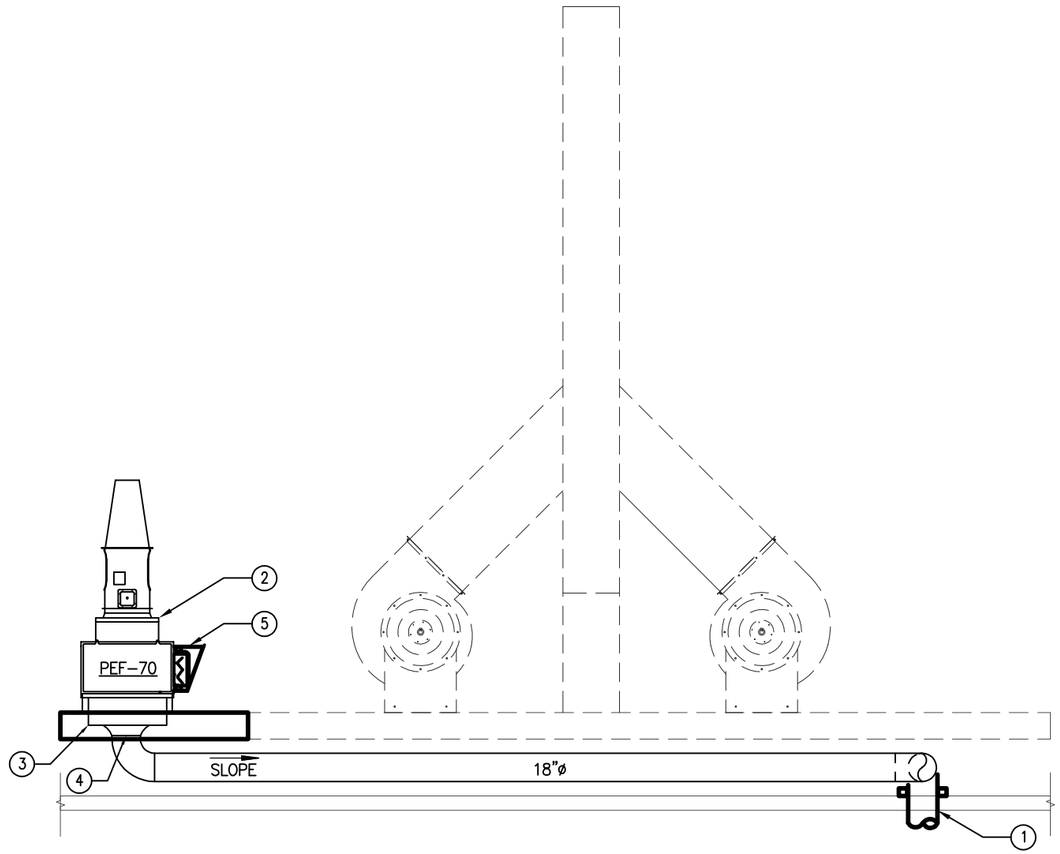
GENERAL NOTES: (THIS SHEET ONLY)

A. SLOPE EXHAUST DUCT BACK TO ROOF PENETRATION.

B. THE CONTRACTOR SHALL PROTECT THE ROOF WHILE PERFORMING WORK ON THE ROOF AND SHALL REPAIR ANY ROOF DAMAGE THAT MAY OCCUR DURING CONSTRUCTION ACTIVITIES.

C. PROVIDE DUCT SUPPORTS FOR THE NEW EXHAUST AIR DUCT. SUPPORTS SHALL BE ADJUSTABLE WITH UNIVERSAL ROOF SUPPORT FOOTINGS. THE BASE SHALL BE MIN 16 GAUGE STAINLESS STEEL WITH STAINLESS STEEL NUTS AND BOLTS. UNISTRUT AND ALL OTHER HARDWARE SHALL BE GALVANIZED. PROVIDE INTERVALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION. LAYOUT BASIS: ROOFSTUFF, MODEL SS-H-1 OR EQUAL.

D. PAINT ALL PVC DUCT WITH WHITE WATER-BASED LATEX PAINT FOR UV PROTECTION. CLEAN, PRIME, AND PAINT PVC DUCT IN ACCORDANCE WITH MANUFACTURER WRITTEN RECOMMENDATIONS.



1 HVAC – SECTION
SCALE: 1/8" = 1'-0"

ISSUE FOR BID AND CONSTRUCTION

DLS LABORATORY CONSULTANTS

SEAL: 5/05/21

GEORGIA REGISTERED No. 27447 PROFESSIONAL ENGINEER CRAIG M. FREE

SOLVAY SPECIALTY POLYMERS
N2004 EXHAUST FAN ADDITION

ISSUE	DESC.	DATE
0	IFBC	5/05/21

DATE:	05 MAY 2021
REVISION:	
DRAWN BY:	CMF
PROJ. NO:	21005

M301

GENERAL NOTES: (THIS SHEET ONLY)

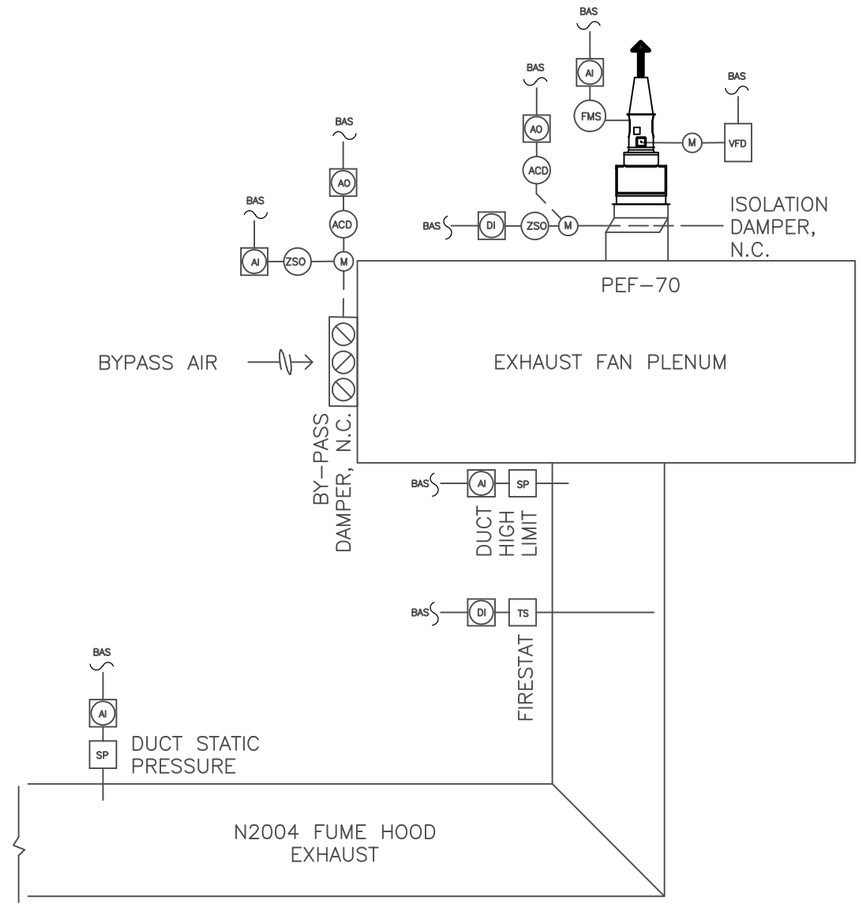
A. ALL CONTROL DAMPERS SHALL BE EQUIPPED WITH END SWITCHES AND CONNECTED TO THE BAS TO REPORT REAL–TIME DAMPER POSITION (AI).

B. BOTH FUME HOOD AIR VALVES (NEW AND EXISTING) WILL MAINTAIN THEIR CURRENT SOO.

C. INSTALL DUCT MOUNTED STATIC PRESSURE SENSOR 2/3'S OF THE DUCT RUN FROM THE FAN.

D. ALL CONTROL COMPONENTS EXPOSED TO THE AIRSTREAM SHALL BE CORROSION RESISTANT TO THE CHEMICALS IDENTIFIED ON THE COVER SHEET.

CONTROL POINT ABBREVIATIONS	
ACD	AIR CONTROL DAMPER - CONTROL SIGNAL
AI	ANALOG INPUT
AO	ANALOG OUTPUT
CD	CONTROL DAMPER
CT	CURRENT SWITCH - FAN STATUS
DI	DIGITAL INPUT
DO	DIGITAL OUTPUT
DPIT	DIFFERENTIAL PRESSURE INDICATOR GAGE WITH TRANSMITTER
ES	EQUIPMENT STATUS
FCD	FLOW CONTROL DAMPER - CONTROL SIGNAL
HOA	HAND-OFF-AUTOMATIC
IBS	INVERTER BY-PASS STATUS
M	MOTOR
MCV	MOTORIZED CONTROL VALVE - CONTROL SIGNAL
PSH	PRESSURE SENSOR - HIGH
SCD	SMOKE CONTROL DAMPER
SP	STATIC PRESSURE - DUCT
SPC	SPEED COMMAND
SPF	SPEED FEEDBACK
TE	TEMPERATURE SENSOR - AVERAGING
TRS	TROUBLE STATUS
TSL	TEMPERATURE SENSOR - LOW
XS	SMOKE DETECTOR
YA	START/STOP
ZSO	POSITION END SWITCH



1 HVAC CONTROLS DIAGRAM
NTS

ISSUE FOR BID AND CONSTRUCTION

DLS LABORATORY CONSULTANTS

SEAL: 5/05/21

GEORGIA REGISTERED No. 27447 PROFESSIONAL ENGINEER CRAIG M. FREE

SOLVAY SPECIALTY POLYMERS
N2004 EXHAUST FAN ADDITION

ISSUE	DESC.	DATE
0	IFBC	5/05/21

DATE: 05 MAY 2021
REVISION:
DRAWN BY: CMF
PROJ. NO: 21005

M401

1 LABORATORY EXHAUST FAN SYSTEM (PEF - 70)

A. GENERAL
1. EXHAUST SYSTEM IS DESIGNED AS VARIABLE VOLUME.
2. EXHAUST SYSTEM CONSISTS OF PEF- 70, VARIABLE FREQUENCY DRIVES (VFD), AIRFLOW CONTROL DAMPERS, ISOLATION DAMPERS, AND SENSORS.
3. ALL SEQUENCES ARE INITIATED BY DDC SYSTEM AND EXECUTED BY THE EXISTING HONEYWELL TRIDIUM BUILDING AUTOMATION SYSTEM (BAS) AND TIME OF DAY PROGRAMMING.
4. SYSTEM IS DESIGNED FOR 24-HOUR OPERATION WITH SETBACK MODE FOR AFTER BUSINESS HOURS (ADJUSTABLE).
5. SYSTEM OVERRIDES SHALL BE PROVIDED. COORDINATE WITH OWNER.

B. SAFETY CONTROLS
1. HIGH TEMPERATURE DETECTOR (FIRESTAT) LOCATED IN EXHAUST DUCT.
2. HIGH LIMIT PRESSURE SWITCH.

C. EXHAUST SYSTEM START
1. WHEN EXHAUST SYSTEM IS INDEXED TO RUN, ALL SAFETIES AND INTERLOCKS ARE PROVEN AND CONTROL LOOPS ARE ENERGIZED AND ACTIVATED. THE EXHAUST FAN SHALL START THROUGH NORMALLY OPEN CONTACT AND TIME OF DAY PROGRAMMING.
2. FAN SHALL NOT START UNTIL RESPECTIVE AIRFLOW CONTROL DAMPERS AND N.C. BYPASS DAMPER ARE IN THEIR OPERATIONAL POSITION AS CONFIRMED BY THE RESPECTIVE DAMPER END SWITCH.

D. EXHAUST FAN SYSTEM STOP
1. WHEN EXHAUST SYSTEM IS INDEXED TO STOP, THE FAN IS POWERED DOWN BY REDUCING THE VFD OUTPUT TO 0 HZ, FAN SHALL COAST TO A STOP. THE RESPECTIVE AIRFLOW CONTROL DAMPERS AND BYPASS DAMPER SHALL GO TO THEIR NORMAL POSITION, WITH POSITIONS CONFIRMED BY THE RESPECTIVE DEVICE END SWITCH, IN A CONTROLLED AND COORDINATED MANNER, WITH ALL CONTROL LOOPS BEING DEACTIVATED.

E. FIRE/SMOKE ALARM
1. IF A FIRE ALARM IS INITIATED WITHIN THE LABORATORY BUILDING, THE EXHAUST SYSTEMS SHALL OPERATE IN MINIMUM CAPACITY MODE.
2. IF THE DUCT MOUNTED FIRE STAT IS ACTIVATED, THE EXHAUST SYSTEM SHALL BE COMMANDED TO STOP, NORMAL EXHAUST FAN SYSTEM STOP SEQUENCE IS INITIATED, AND CRITICAL BAS ALARM IS GENERATED.

F. EXHAUST FAN CAPACITY CONTROL
1. GENERAL:
   a. EXHAUST AIR CAPACITY CONTROL SHALL BE ACCOMPLISHED BY A COMBINATION OF VARYING THE OUTPUT OF THE EXHAUST FAN VFD, AND MODULATING BYPASS AIR CONTROL DAMPER TO MAINTAIN BOTH THE DUCT STATIC PRESSURE SET POINT AND THE MINIMUM FAN STACK DISCHARGE VELOCITY OF 3,500 FPM, MEASURED BY THE AIRFLOW STATION PROVIDED BY THE FAN MANUFACTURER AND INSTALLED BY THE CONTROLS CONTRACTOR.

2 NORMAL MODE:
   a. THE EXHAUST SYSTEM SHALL BE INDEXED TO OPERATE AT NORMAL OPERATING CAPACITY BY TIME OF DAY PROGRAMMING OR BY MANUAL INPUT AT THE OWS.
   b. THE EXHAUST FAN SHALL CONTROL LABORATORY FUME HOOD EXHAUST AIRFLOW (BASED UPON BAS INPUT FROM THE DUCT STATIC PRESSURE SENSOR) IN TWO (2) STAGES. **STAGE 1 - FAN VFD:** THE FAN VFD SHALL VARY THE FAN SPEED TO MAINTAIN THE DUCT STATIC PRESSURE SET POINT DOWN TO THE MINIMUM SPEED REQUIRED TO MAINTAIN THE MINIMUM FAN STACK DISCHARGE VELOCITY. **STAGE 2 - FAN VFD AND BY-PASS DAMPER:** IF A FURTHER REDUCTION IN DUCT STATIC PRESSURE IS NEEDED TO MAINTAIN THE DUCT STATIC PRESSURE SETPOINT, THE N.C. BY-PASS DAMPERS SHALL MODULATE OPEN TO MAINTAIN DUCT STATIC PRESSURE WHILE THE VFD REMAINS IN THE STAGE 2 POSITION. THE REVERSE SHALL OCCUR IF AN INCREASE IN DUCT STATIC PRESSURE IS NEEDED.
   c. IF THE SYSTEM IS UNABLE TO MAINTAIN DUCT STATIC PRESSURE SET POINT, AN ALARM SHALL BE INITIATED TO THE BAS.

3. FAILURE SEQUENCES
   a. **FAN FAILURE:** WHEN THE EXHAUST FAN FAILS AS DETECTED BY THE RESPECTIVE VFD AND FAN FLOW MEASURING STATION, THE FAN STOP SEQUENCE SHALL BE INITIATED, A CRITICAL ALARM SHALL BE INITIATED AND THE SUPPLY AIR SYSTEM SHALL MODULATE TO MAINTAIN NEGATIVE PRESSURE WITHIN THE SPACE. THE FAILED FAN WILL REQUIRE A MANUAL RESET THROUGH THE BAS BEFORE BEING BROUGHT BACK ON LINE.
   b. **VFD FAILURE:** WHEN EXHAUST FAN VFD FAILS AS DETECTED BY THE RESPECTIVE VFD, THE FAN STOP SEQUENCE SHALL BE INITIATED, A CRITICAL ALARM SHALL BE INITIATED AND THE SUPPLY AIR SYSTEM SHALL MODULATE TO MAINTAIN NEGATIVE PRESSURE WITHIN THE SPACE. THE FAILED VFD FAN WILL REQUIRE A MANUAL RESET THROUGH THE BAS BEFORE BEING BROUGHT BACK ON LINE.
   c. PROVIDE INTERLOCK BETWEEN DISCONNECT SWITCH AT FAN VFD TO STOP VFD AND INDICATE FAN OUT OF SERVICE.
   d. ON A DDC PANEL MALFUNCTION, A CRITICAL ALARM WILL BE GENERATED BY THE BAS.

4. MINIMUM CAPACITY MODE
   a. MINIMUM CAPACITY MODE SHALL BE INITIATED WHENEVER THE AHU HAS FAILED OR WHEN THE BUILDING FIRE ALARM HAS BEEN ACTIVATED.
   b. IF THE BUILDING FIRE ALARM HAS BEEN ACTIVATED, THE SUPPLY AIR SYSTEM SHALL SHUTDOWN SEQUENCE SHALL BE INITIATED.
   c. EXHAUST FAN SHALL STAGE DOWN AS REQUIRED TO MAINTAIN DUCT STATIC PRESSURE AND 100 FPM FACE VELOCITY AT EACH FUME HOOD.
   d. A CRITICAL ALARM WILL BE GENERATED BY THE BAS.

G. POWER INTERRUPTION MODE
1. ON LOSS OF NORMAL POWER, THE EXHAUST FANS SHALL OPERATE ON GENERATOR SUPPLIED EMERGENCY POWER. ALL NORMAL SEQUENCES SHALL BE MAINTAINED.
2. A SHUTDOWN OF THE EXHAUST SYSTEM SHALL BE INITIATED FOLLOWED BY AN AUTOMATIC STARTUP SEQUENCE UPON POWER RESTORATION.
3. ON RESTORATION OF NORMAL POWER, ALL NORMAL SEQUENCES SHALL BE RESTORED. FANS SHALL RE-START VIA FLYING START

1 LABORATORY SPACE CONTROL

A. MAINTAIN EXISTING SEQUENCES FOR ALL LABORATORY CONTROLS, INCLUDING FUME HOODS.
B. PROVIDE NEW FUME HOOD CONTROLLER FOR ACID RESISTANT HOODS (SIEMENS MODEL QVE3001); QTY: 2

ISSUE FOR BID AND CONSTRUCTION

DLS LABORATORY CONSULTANTS

SEAL: 5/05/21

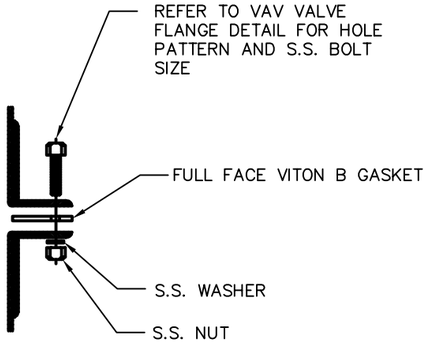
GEORGIA REGISTERED No. 27447 PROFESSIONAL ENGINEER CRAIG M. FREE

SOLVAY SPECIALTY POLYMERS
N2004 EXHAUST FAN ADDITION

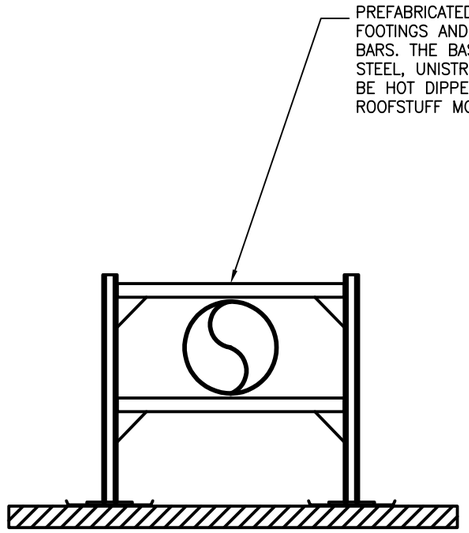
ISSUE	DESC.	DATE
0	IFBC	5/05/21

DATE: 05 MAY 2021
REVISION:
DRAWN BY: CMF
PROJ. NO: 21005

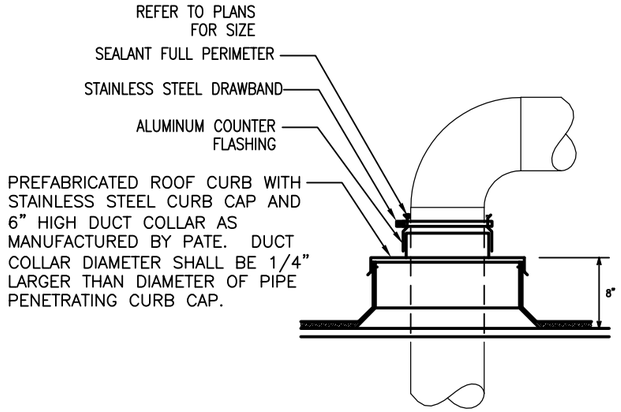
M402



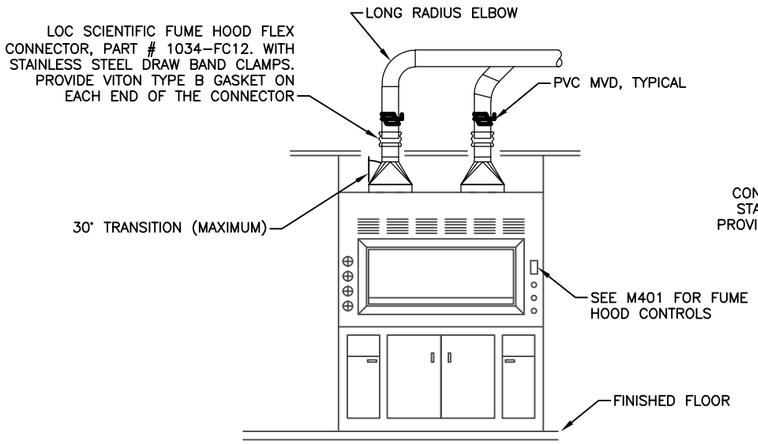
6 EXHAUST DUCT FLANGE DETAIL
SCALE: NTS



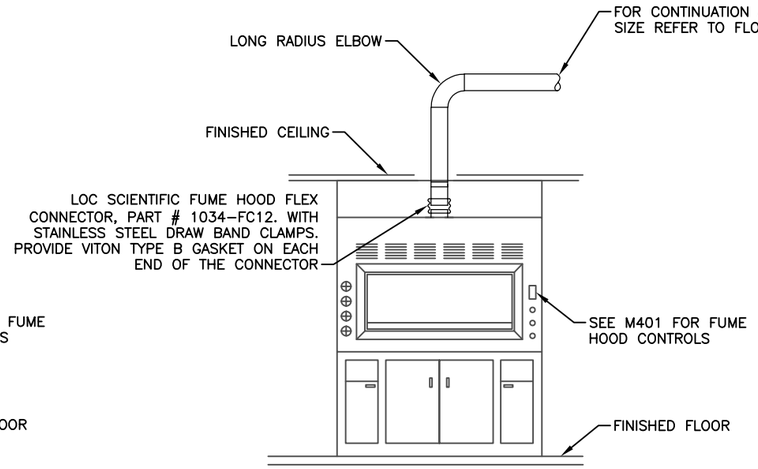
5 ROOFTOP DUCT SUPPORT DETAIL
SCALE: NTS



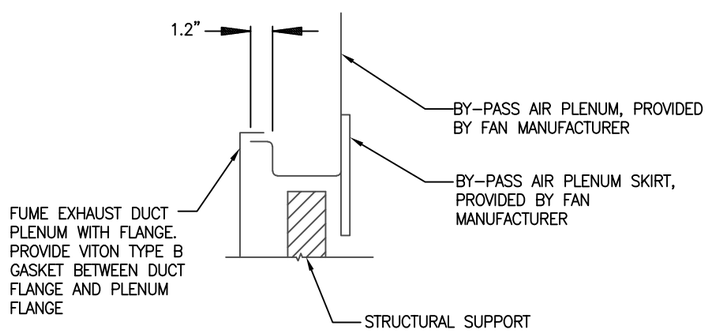
4 ROUND DUCT ROOF PENETRATION DETAIL
SCALE: NTS



3 FUME HOOD 2 CONNECTION DETAIL
SCALE: NTS



2 FUME HOOD 1 CONNECTION DETAIL
SCALE: NTS



1 EXHAUST FAN PLENUM CONNECTION DETAIL
SCALE: NTS

ISSUE FOR BID AND CONSTRUCTION

DLS LABORATORY CONSULTANTS

SEAL: 5/05/21

GEORGIA REGISTERED No. 27447 PROFESSIONAL ENGINEER CRAIG M. FREE

SOLVAY SPECIALTY POLYMERS
N2004 EXHAUST FAN ADDITION

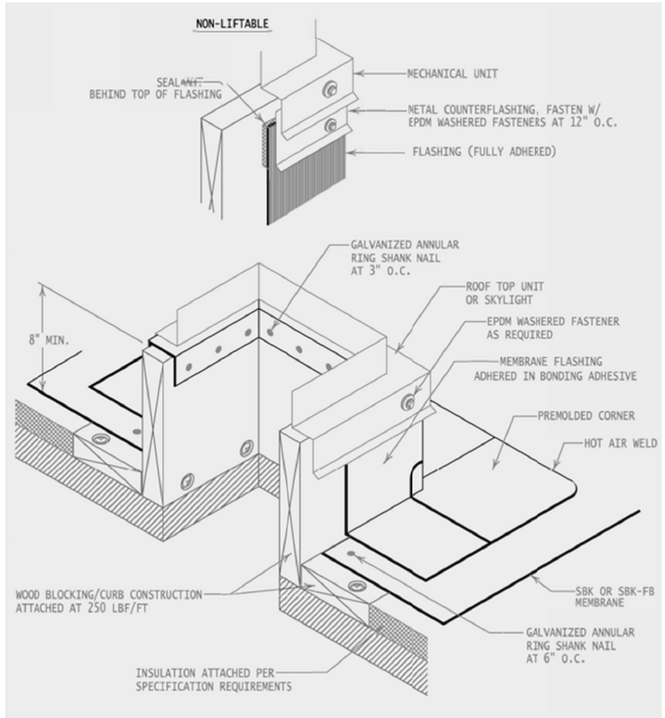
ISSUE	DESC.	DATE
0	IFBC	5/05/21

DATE:	REVISION:	DRAWN BY:	PROJ. NO:
05 MAY 2021		CMF	21005

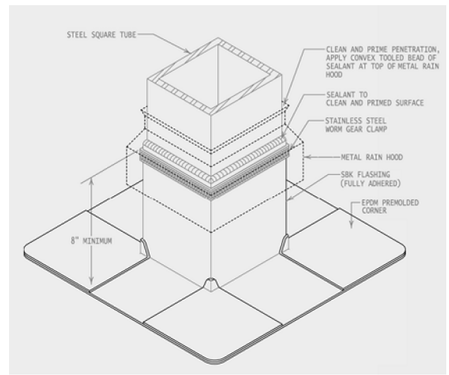
M601

GENERAL NOTES: (THIS SHEET ONLY)

A. THE DETAILS ON THIS DRAWING ARE FOR THE EXISTING ROOFING SYSTEM. DETAILS SHOWN ARE STANDARD DETAILS PROVIDED BY THE GARLAND COMPANY, INC. FINAL DETAILS MAY VARY. CONTACT GARLAND REPRESENTATIVE BLAKE MCCLENDON AT 678-332-6169 OR BMCCLENDON@GARLANDIND.COM FOR ADDITIONAL SITE SPECIFIC DETAILS REQUIRED TO MAINTAIN ROOF WARRANTY.

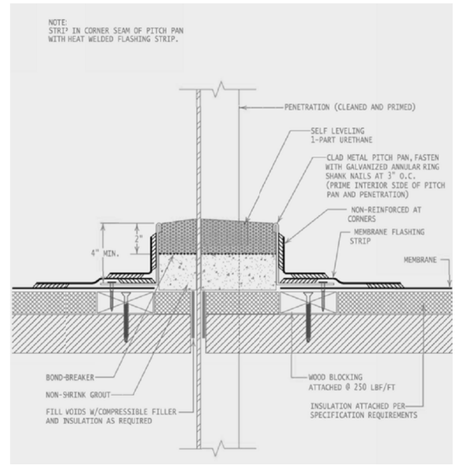


3 TYPICAL WOOD CURB FLASHING DETAIL
SCALE: NTS



2 FIELD FABRACTED SQUARE TUBE FLASHING DETAIL
SCALE: NTS

4 TYPICAL WOOD CURB FLASHING DETAIL
SCALE: NTS



1 PITCH PLAN FLASHING DETAIL
SCALE: NTS

ISSUE FOR BID AND CONSTRUCTION

DLS LABORATORY CONSULTANTS

SEAL: 5/05/21

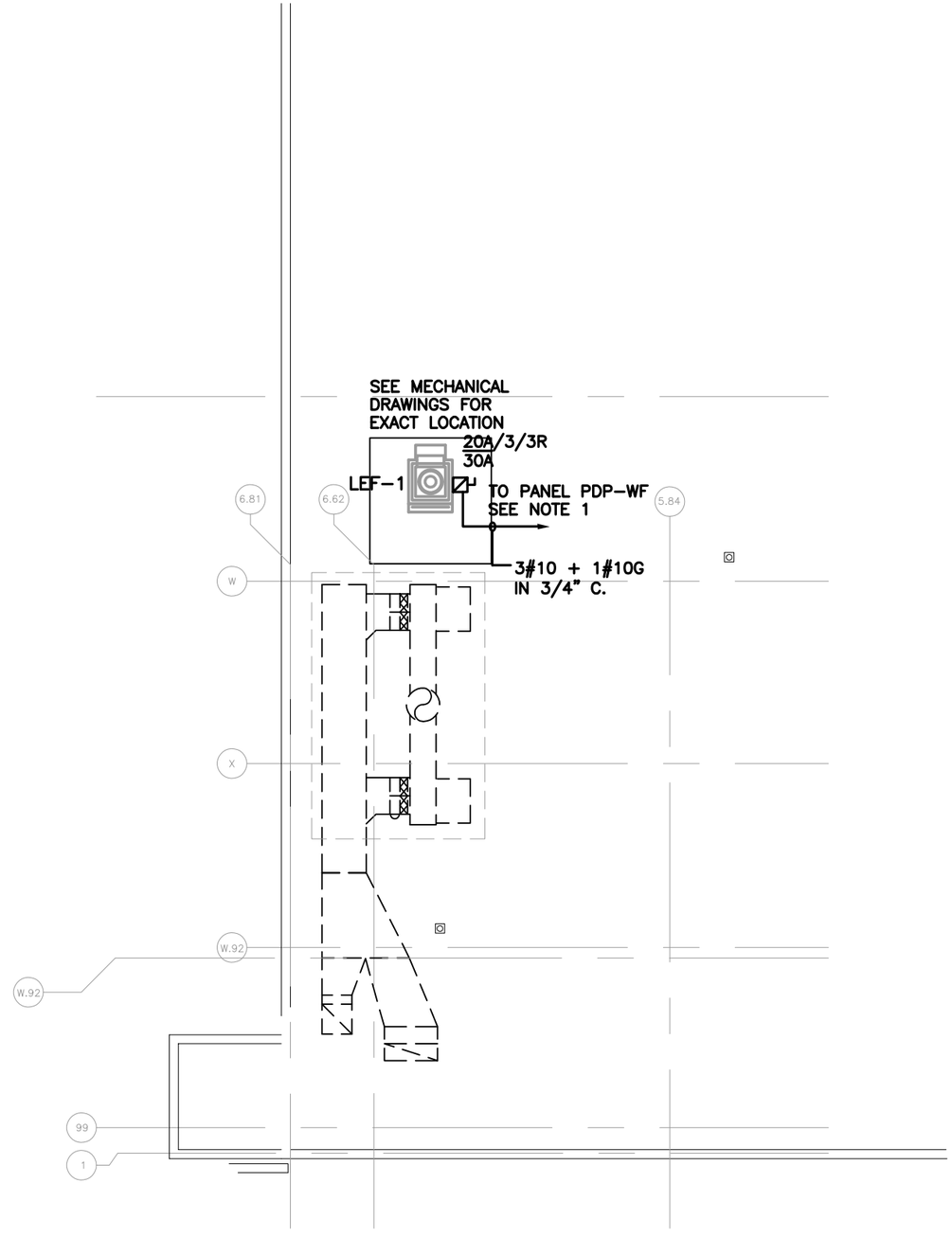
GEORGIA REGISTERED No. 27447 PROFESSIONAL ENGINEER CRAIG M. FREE

SOLVAY SPECIALTY POLYMERS
N2004 EXHAUST FAN ADDITION

ISSUE	DESC.	DATE
0	IFBC	5/05/21

DATE: 05 MAY 2021
REVISION:
DRAWN BY: CMF
PROJ. NO: 21005

M602



1 HVAC NEW WORK PLAN – POWER – LEF-1
SCALE: 1/4" = 1'-0"

LEGEND

	CONCEALED CONDUIT. SEE NOTE BELOW
	EXPOSED CONDUIT. SEE NOTE BELOW
	FLEX CONDUIT, SIZE AND CONDUCTORS SAME AS HOMERUN.
J	J–BOX WITH BLANK COVER, UNLESS OTHERWISE NOTED.
	PANELBOARD.
10 S	MOTOR. NUMBER INDICATES HORSEPOWER. "S" INDICATES FRACTIONAL HORSEPOWER MOTOR WITH 120/277 V. TOGGLE SWITCH AS DISCONNECT.
$m	MOTOR RATED SWITCH
10A/30A/3/1	FUSIBLE DISCONNECT SWITCH, FUSE SIZE OVER FRAME SIZE, NUMBER OF POLES, AND ENCLOSURE TYPE NOTED.

NOTE: SHORT HASH MARKS INDICATE NUMBER OF #12 CU. HOT CONDUCTORS, LONG HASH MARKS INDICATE #12 CU. NEUTRAL CONDUCTOR, RESPECTIVELY. GROUND CONDUCTOR NOT SHOWN. NO HASH MARKS INDICATE 3#12 CU. CONDUCTORS (A HOT, NEUTRAL AND GROUND), UNLESS OTHERWISE NOTED. 1/2" CONDUIT MINIMUM.

NOTES

1. RUN HOMERUN TO EXISTING PANEL PDP–WF IN THE PENTHOUSE ON THE ROOF. PROVIDE AND INSTALL 20A FUSES IN EXISTING SPARE 30A COMPARTMENT. TERMINATE CIRCUIT FOR THE NEW EXHAUST FAN UNDER THIS BREAKER. NOTE ADDITION TO PANEL SCHEDULE.

Shepherd, Harvey & Associates, Inc.
4855 River Green Parkway, Suite 400
Duluth, Georgia 30096-2569
770-495-4007 FAX 770-495-7112 Project Number: 21-079
GEORGIA COA # PEF004149 Expire: 06/30/2022

ISSUE FOR BID AND CONSTRUCTION

DLS LABORATORY CONSULTANTS

SEAL: GEORGIA REGISTERED No. 23810 PROFESSIONAL ENGINEER RICHARD R. TOUCH
Richard R. Touch, PE
05/04/21

SOLVAY SPECIALTY POLYMERS
N2004 EXHAUST FAN ADDITION

ISSUE	DESC.	DATE
0	IFBC	5/05/21

POWER PLAN
DATE: 05 MAY 2021
REVISION:
DRAWN BY: RRT
PROJ. NO: 21005

E-1