

Report By:

National TAB
1329 E. KEMPER ROAD
SUITE 4210
CINCINNATI, OH 45246



Report: TAB Report
Function: Test, Adjust, & Balance
Date: 03/07/2024

PROJECT
03-04-24 PENN STATION - SEYMOUR, IN

449 COTTONWOOD DR

SEYMOUR, IN 47274

Client

C&T DESIGN
4025 PORT UNION RD.
FAIRFIELD, OH 45014

National TAB

Project: 03-04-24 PENN STATION - SEYMOUR, IN

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Project Summary

The summary below provides a quick understanding of our scope of work and general testing procedures. Enclosed in the report is further detail about your building performance including recommendations, asset data, and pictures. Our focus is to work with the trades to remedy any issues or deficiencies during the actual field balancing and not after the balancing has occurred to achieve a positive environment and outcome. The level of success is determined by the availability of the trades, possible parts needed, or time constraints.

RTU's (Roof Top Units) w/ Diffusers

Each of the RTU's were measured at their terminal devices or via traverse to establish a total flow for that unit. Each RTU was adjusted to within tolerance of the engineer's design flow. Each outlet was then adjusted to within tolerance of the design flow. Outside air was measured by reading the intake air opening with a velocity grid and multiplying by the free area. The outside air damper was adjusted until the airflow was within the design requirements. Any equipment that fell outside of that tolerance is noted throughout the report.

Kitchen Exhaust Hood & Associated Fans

Each kitchen exhaust fan was measured at the hood filter bay utilizing a velocity matrix and a manufacturer's correction factor. Each filter velocity is multiplied by the manufacturer's corrected area. The sum of these readings equals the total flow of the exhaust fans. The total flow of the exhaust was then adjusted to within tolerance of the design flow. . Any EF's that fell outside of this tolerance is noted throughout the report.

MUA (Make Up Air Unit) w/ PSP

Total flow for the MAU (Make-up Air Unit) unit was measured by readings taken at the discharge of the hood's perforated supply plenum. Readings taken with a velocity matrix were averaged and multiplied by a manufacturer's corrected area. Adjustments to the fan speed were made in order to bring the unit to within design tolerance. Any MUA's that fell outside of this tolerance is noted throughout the report.

General Exhaust Fans w/ Grilles

The general exhaust fans were measured by reading each air device with a flow hood. The total airflow for each fan is equivalent to the sum of these readings. Fan speed was then adjusted so that the airflow was within tolerance of design. Each terminal device was balanced to within tolerance of the design volume using the installed volume dampers. Any equipment that fell outside of this tolerance is noted throughout the report.

Final Building Tests

After completing the test and balance the final building pressure was measured. It was confirmed that the building pressure fell within acceptable tolerances of $-0.02''$ wc to $+0.02''$ wc and that the pressure measurement coincides with the actual and design net airflow. Any deviations from these standards are noted throughout the report.

The hood capture was tested at the perimeter of the hood and the cook top level with the equipment heat on to ensure satisfactory hood capture and containment.

Issue List

- Hood 3 Gap in Filter Bank
- RTU-2 Damper Handle
- RTU-2 Diffuser Above Design



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Project Issue Information

Issue Name : Hood 3 Gap in Filter Bank
Description : Hood 3 hood bank has a slight gap when all filters are installed. Taped over during testing. Recommend installing attachment to close gap.
Created By : National TAB **Assigned To :** National TAB - Jordan Best
Status : Open
Priority : Medium **Asset Tag :**
Originated Date : 03/06/2024 - Jordan Best - National TAB

Project Issue File Details



IMG_3146
03/06/2024



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Project Issue Information

Issue Name : RTU-2 Damper Handle
Description : RTU-2, diffuser 6 damper handle is broken. Damper was jammed, in the process of attempting to adjust wing nut, the handle snapped off. I was still able to get diffuser to design but recommend replacing damper/handle.
Created By : National TAB **Assigned To :** National TAB - Jordan Best
Status : Open
Priority : Medium **Asset Tag :**
Originated Date : 03/06/2024 - Jordan Best - National TAB



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Project Issue Information

Issue Name : RTU-2 Diffuser Above Design
Description : RTU-2 diffuser 5 is above design CFM. Damper is fully closed limiting flow as much as possible. This is causing diffusers 7-10 to be slightly outside of design.
Created By : National TAB **Assigned To :** National TAB - Jordan Best
Status : Open
Priority : Medium **Asset Tag :**
Originated Date : 03/06/2024 - Jordan Best - National TAB

AIR BALANCE SCHEDULE

| UNIT | AREA SERVED | HVAC SUPPLY | | HVAC RETURN | | HVAC OUTDOOR | | OA % | | HOOD MAKE-UP | | HOOD EXHAUST | | GENERAL EXH. | |
|---------------|-------------|-------------|--------|-------------|--------|--------------|--------|--------|--------|--------------|--------|--------------|--------|--------------|--------|
| | | DESIGN | ACTUAL | DESIGN | ACTUAL | DESIGN | ACTUAL | DESIGN | ACTUAL | DESIGN | ACTUAL | DESIGN | ACTUAL | DESIGN | ACTUAL |
| RTU-1 | DINING | 2400 | 2474 | 1750 | 1823 | 650 | 651 | 27.1% | 26.3% | | | | | | |
| RTU-2 | KITCHEN | 3115 | 2928 | 2515 | 2283 | 600 | 645 | 19.3% | 22.0% | | | | | | |
| MUA-1 | HD 1 & HD 2 | | | | | | | | | 1630 | 1635 | | | | |
| KEF-1 | HD1 GRILL | | | | | | | | | | | 1120 | 1108 | | |
| KEF-2 | HD2 OVN | | | | | | | | | | | 600 | 542 | | |
| KEF-3 | HD 3 FRY | | | | | | | | | | | 850 | 860 | | |
| EF-4 | RESTROOM | | | | | | | | | | | | | 75 | 82 |
| EF-5 | RESTROOM | | | | | | | | | | | | | 75 | 78 |
| TOTALS | | 5515 | 5402 | 4265 | 4106 | 1250 | 1296 | | | 1630 | 1635 | 2570 | 2510 | 150 | 160 |

NET BUILDING AIRFLOW CALCULATION

| TOTALS | DESIGN | ACTUAL |
|--------------------|------------|------------|
| TOTAL OA | 2880 | 2931 |
| TOTAL EXHAUST | 2720 | 2670 |
| NET AIRFLOW | 160 | 261 |

| DOOR TESTED | BUILDING PRESSURE MEASUREMENTS (IN. H2O) |
|----------------|------------------------------------------|
| FRONT | 0. |
| SIDE | 0.0008 |
| REAR | 0.0001 |
| AVERAGE | 0.0003 |

FINAL CHECKS

- ACTUAL NET AIRFLOW COINCIDES WITH DESIGN: ✓

- MEASURED PRESSURES COINCIDES WITH ACTUAL NET AIRFLOW: ✓

- PRESSURE FALLS WITHIN IMC TOLERANCE OF +/-0.02" W.C. ✓

NOTES:

CheckList List

- TAB READINESS
- TECH - SITE PICTURES
- TECH - STEP 1: INITIAL WALKTHROUGH
- TECH - STEP 2: UNIT DATA AND EVAL
- TECH - STEP 3: TEST, ADJUST AND BALANCE
- TECH - STEP 4: FINAL TESTS



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CheckList Information

Name : TAB READINESS **Status :** Not Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 02/19/2024 - Brianna Biggs - National TAB

CheckList Item Details

MANDATORY SCHEDULING INFORMATION (THE INFORMATION BELOW IS REQUIRED TO BE FILLED OUT PRIOR TO JOB BEING PLACED ON THE SCHEDULE)

Certificate of Occupancy (C.O.) date:

Comment:

TO AS SOON AS WE ARE DONE WITH TAB

Is the TAB report required for the city to issue the C.O.?

Comment:

NO DOES NOT THINK SO / NOT PLANNING FOR FINAL TRYING TO FINAL 3/4

Permanent power is provided to the building? If not when is it scheduled

Comment:

YES

Fire final date:

Comment:

Scheduled date for startups:

Comment:

2/26

Opening date

Comment:

Tentative TAB Date:

Comment:

3/4

BUILDING INFORMATION

Does building have a roof hatch or a ladder for roof access?

Comment:

Will there be ladders available on site to access ductwork above the ceiling?

Comment:

**IN ORDER FOR US TO ARRIVE ON SITE, THE FOLLOWING ITEMS MUST BE COMPLETED PRIOR TO OUR ARRIVAL ON SITE.
(THERE WILL BE A CANCELLATION CHARGE IF CANCELLED AFTER ARRIVAL)**

Gas service is provided to the building

Comment:

YES

Doors and windows installed

Comment:

YES

Thermostats and sensors are 100% wired and functional

Comment:

YES

All ceiling tiles are installed

Comment:

YES

Kitchen equipment in place under the hood and able to be turned on

Comment:

YES

Ductwork and diffusers are all installed?

Comment:

YES

Mechanical contractor will be on site for duration of TAB or on-call and available to be on site within 30 minutes?

Comment:

YES



IMG_3135
03/06/2024

RTU-2

Comment:



IMG_3134
03/06/2024

KEF-1

Comment:



IMG_3131
03/06/2024

KEF-2

Comment:



IMG_3132
03/06/2024

KEF-3

Comment:



IMG_3133
03/06/2024

EF-4

Comment:



IMG_3154
03/06/2024

EF-5

Comment:



IMG_3155
03/06/2024

MUA-1

Comment:



IMG_3136
03/06/2024

HD-1

Comment:



IMG_3140
03/06/2024

HD-2

Comment:



IMG_3141
03/06/2024

HD-3

Comment:



IMG_3142
03/06/2024



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CheckList Information

Name : TECH - STEP 1: INITIAL WALKTHROUGH **Status :** Not Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 02/28/2024 - Brianna Biggs - National TAB

CheckList Item Details

INITIAL SITE WALKTHROUGH

Review Plan Review Checklist, has it been signed off and meets our standards to start balancing? If not contact processor to ensure job is ready.

Comment:

All diffusers and grilles are installed and match design?

Comment:

YES

All hood filters installed and accounted for?

Comment:

YES

Hoods are wired and have power?

Comment:

YES

Hood is free of alarms?

Comment:

YES

Thermostats have power?

Comment:

YES

Have trades/general contractor been notified about any issues and are they created on FaciliBuild?

Comment:

GC was not on site, issues created on FaciliBuild.



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CheckList Information

Name : TECH - STEP 2: UNIT DATA AND EVAL **Status :** Not Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 02/28/2024 - Brianna Biggs - National TAB

CheckList Item Details

UNIT DATA AND EVALUATION WHILE GATHERING UNIT DATA CHECK THE FOLLOWING:

RTU's/AHU's

Economizers are assembled and functional?

Comment:

N/A

DCV Max damper opening position is set to minimum?

Comment:

N/A

Free cooling enthalpy set point set for lowest setting (Typically "D")

Comment:

N/A

Motors are all operating below the FLA rating?

Comment:

YES

Are belts tight?

Comment:

N/A

If direct drive unit is the speed controller working.

Comment:

YES

Is gas piping installed and valves turned on?

Comment:

YES

Unit free of noticeable noise and vibration

Comment:

YES

EF's

Rotation is correct?

Comment:

YES

Belts are tight?

Comment:

N/A

Grease cup installed on hood fan?

Comment:

YES

Hinge kit installed installed on hood fan?

Comment:

YES

Lean fan back. Is grease duct installation adequate and is duct ran all the way to the base of the fan?

Comment:

YES

Flex conduit is long enough so that fan can be completely tilted back?

Comment:

YES

There is no major leakage around base of fan?

Comment:

NO

Is the motor operating below the motor FLA rating?

Comment:

YES

For restroom fan(s) is the back draft damper installed and can it fully open?

Comment:

N/A

Unit free of noticeable noise and vibration?

Comment:

YES

MUA

Rotation is correct?

Comment:

YES

Gas piping is installed and valves are in on position?

Comment:

YES

Heater tested and is functional?

Comment:

YES

Internal motorized damper is fully opening?

Comment:

YES

Motor is operating below the FLA rating?

Comment:

YES

Unit free of noticeable noise and vibration?

Comment:

YES

HOODS

Kitchen equipment installed in proper places?

Comment:

YES

Can kitchen equipment be turned on for final smoke test?

Comment:

NO

DOCUMENTATION

Have trades/general contractor been notified about any issues and are they created on FaciliBuild?

Comment:

GC was not on site, issues created on FaciliBuild.



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CheckList Information

Name : TECH - STEP 3: TEST, ADJUST AND BALANCE **Status :** Not Completed

Assigned Organization : National TAB **Asset :**

Requesting Organization : National TAB

Created Date : 02/28/2024 - Brianna Biggs - National TAB

CheckList Item Details

TEST, ADJUST, AND BALANCE ALL EQUIPMENT:

DURING TESTING MAKE NOTE OF THE FOLLOWING:

Is space free of drafting?

Comment:

YES

Is space comfortable in all areas?

Comment:

YES

Is the space free of ventilation noise?

Comment:

YES

If deviations from design were necessary to resolve 1-3 what were they? Otherwise put "NA".

Comment:

NA



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CheckList Information

Name : TECH - STEP 4: FINAL TESTS **Status :** Not Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 02/28/2024 - Brianna Biggs - National TAB

CheckList Item Details

FINAL TESTS

HOOD CAPTURE TEST

List equipment turned on for testing

Comment:

NONE

List smoke candle type used

Comment:

45 SECOND

Smoke test capture - Perimeter of hood

Comment:

100%

Smoke test capture - Top of cooking surface

Comment:

100%

WITNESS

Date test was completed

Comment:

03/05/2024

TAB tech name / Firm

Comment:

Jordan Best / NTi

Site super name / Firm

Comment:

Sean Curran / Curran Construction

Owner representative name / Firm (if Applicable)

Comment:

N/A

Building pressure at front & back doors (All Systems On)

Comment:

0 / 0.0008 / 0.0001

ADDITIONAL

Do actual net building airflow, design net building airflow, and pressure coincide? If not why? (All three should either be positive or negative)

Comment:

YES

PROGRAM THERMOSTATS

Occupied 7:15AM-10:15PM: 68 Heat/72 Cool (NOTE: 3 degree MAX setback)

Comment:

YES

Unoccupied 10:16PM-7:14AM: 65 Heat/75 Cool

Comment:

YES

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Project: 03-04-24 PENN STATION - SEYMOUR, IN

System/Unit: AHU/RTU



Asset: RTU1

AREA:

| Unit Data | | |
|---------------------|--------------------|---------------|
| | Design | Actual |
| MFG | CARRIER | BRYANT |
| Serial Num | - | 2523P64041 |
| Model Num | 48FCEMO7A3M5-6W0A0 | 582KP08N180A2 |
| Type | RTU | RTU |
| Configuration | VERTICAL | VERTICAL |
| Num OA Filters 1 | - | 1 |
| OA Filter Size 1 | - | 11"X12" |
| Num Final Filter 1 | - | 4 |
| Final Filter Size 1 | - | 16"X20"X2" |

| Motor Data | | |
|----------------|--------|--------|
| | Design | Actual |
| Motor MFG | - | NA |
| Frame | - | NA |
| Horsepower | - | NA |
| Motor Rpm | - | NA |
| Phase | 3 | 3 |
| Rated Voltage | 208 | 208 |
| Rated Amperage | - | 6.4 |

| Test Data | | |
|------------------------|--------|-------------------|
| | Design | Actual |
| SF CFM | 2400 | 2474 |
| SF RPM | - | 5.3 VDC |
| RA CFM | 1750 | 1823 |
| OA CFM | 650 | 651 |
| RL Voltage | - | 211.7/210.3/210.7 |
| RL Amperage | - | 1.83/1.68/1.97 |
| SF Rotation | - | CCW |
| Min OA Damper Position | - | 1/3 |
| Min OA Damper Type | - | MANUAL |

| Performance Data | | |
|------------------|--------|--------|
| | Design | Actual |
| MA Plenum SP | - | -0.35" |
| Fan Suction SP | - | -0.66" |
| Fan Discharge SP | - | 0.25" |
| Total ESP | - | 0.6" |
| Fan Total SP | - | 0.91" |

| General | | |
|----------------------------|--------|--------|
| | Design | Actual |
| Fan Rotation Correct | - | YES |
| Unit Filters Clean | - | YES |
| Condensate Drain Installed | - | YES |

Completed By: Jordan Best on 03/05/2024

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Project:03-04-24 PENN STATION - SEYMOUR, IN

AHU/RTU



Diffuser Supply (GRD)

RTU1/

| Asset | | | | | | | | | |
|------------|----------|------|------|------------|----|--------|--------|-----------|-------------|
| Asset Name | Location | Type | Size | DESIGN CFM | AK | CFM(1) | CFM(2) | FINAL CFM | % to design |
| SGRD1 | DINING | 10" | 10" | 300 | 1 | 395 | 304 | 304 | 101.3 |
| SGRD2 | DINING | 10" | 10" | 300 | 1 | 402 | 315 | 315 | 105.0 |
| SGRD3 | DINING | 10" | 10" | 300 | 1 | 412 | 313 | 313 | 104.3 |
| SGRD4 | DINING | 10" | 10" | 300 | 1 | 442 | 326 | 326 | 108.7 |
| SGRD5 | DINING | 10" | 10" | 300 | 1 | 338 | 278 | 278 | 92.7 |
| SGRD6 | DINING | 10" | 10" | 300 | 1 | 448 | 325 | 325 | 108.3 |
| SGRD7 | DINING | 10" | 10" | 300 | 1 | 397 | 285 | 285 | 95.0 |
| SGRD8 | DINING | 10" | 10" | 300 | 1 | 442 | 328 | 328 | 109.3 |
| Total | | | | 2400 | | 3276 | 2474 | 2474 | 103.08% |

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Project: 03-04-24 PENN STATION - SEYMOUR, IN

System/Unit: AHU/RTU



Asset: RTU2

AREA:

| Unit Data | | |
|---------------------|--------------------|---------------|
| | Design | Actual |
| MFG | CARRIER | BRYANT |
| Serial Num | - | 2523P64042 |
| Model Num | 48FCDM07A3M5-6W0A0 | 582KP08N180A2 |
| Type | RTU | RTU |
| Configuration | VERTICAL | VERTICAL |
| Num OA Filters 1 | - | 1 |
| OA Filter Size 1 | - | 12"X11" |
| Num Final Filter 1 | - | 4 |
| Final Filter Size 1 | - | 16"X20"X2" |

| Motor Data | | |
|----------------|--------|--------|
| | Design | Actual |
| Motor MFG | - | NA |
| Frame | - | NA |
| Horsepower | - | NA |
| Motor Rpm | - | NA |
| Phase | 3 | 3 |
| Rated Voltage | 208 | 208 |
| Rated Amperage | - | 6.4 |

| Test Data | | |
|------------------------|--------|-------------------|
| | Design | Actual |
| SF CFM | 3115 | 2928 |
| SF RPM | - | 7.84 VDC |
| RA CFM | 1800 | 2283 |
| OA CFM | 600 | 645 |
| RL Voltage | - | 211.5/209.9/210.9 |
| RL Amperage | - | 4.65/4.26/4.17 |
| SF Rotation | - | CCW |
| Min OA Damper Position | - | 1/3 |
| Min OA Damper Type | - | MANUAL |

| Performance Data | | |
|------------------|--------|--------|
| | Design | Actual |
| MA Plenum SP | - | -0.71" |
| Fan Suction SP | - | -1.37" |
| Fan Discharge SP | - | 0.54" |
| Total ESP | - | 1.25" |
| Fan Total SP | - | 1.91" |

| General | | |
|----------------------------|--------|--------|
| | Design | Actual |
| Fan Rotation Correct | - | YES |
| Unit Filters Clean | - | YES |
| Condensate Drain Installed | - | YES |

Completed By: Jordan Best on 03/05/2024

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Project:03-04-24 PENN STATION - SEYMOUR, IN

AHU/RTU



Diffuser Supply (GRD)

RTU2/

| Asset | | | | | | | | | |
|------------|------------|-------|------|------------|------|--------|--------|-----------|-------------|
| Asset Name | Location | Type | Size | DESIGN CFM | AK | CFM(1) | CFM(2) | FINAL CFM | % to design |
| SGRD1 | RR HALLWAY | | 6" | 100 | 1 | 151 | 148 | 96 | 96.0 |
| SGRD2 | RESTROOM | | 6" | 50 | 1 | 134 | 139 | 55 | 110.0 |
| SGRD3 | RESTROOM | | 6" | 50 | 1 | 125 | 150 | 45 | 90.0 |
| SGRD4 | PREP AREA | | 10" | 300 | 1 | 286 | 311 | 273 | 91.0 |
| SGRD5 | PREP AREA | | 10" | 300 | 1 | 492 | 520 | 420 | 140.0 |
| SGRD6 | PREP AREA | | 10" | 300 | 1 | 80 | 79 | 285 | 95.0 |
| SGRD7 | SERVELINE | | | 325 | 1 | 209 | 264 | 272 | 83.7 |
| SGRD8 | SERVELINE | | | 325 | 1 | 231 | 257 | 264 | 81.2 |
| SGRD9 | SERVELINE | | | 325 | 1 | 171 | 169 | 273 | 84.0 |
| SGRD10 | SERVELINE | | | 325 | 1 | 243 | 267 | 230 | 70.8 |
| SGRD11 | HOOD 1 | ACPSP | 8" | 250 | 1.5 | 286 | 276 | 234 | 93.6 |
| SGRD12 | HOOD 2 | ACPSP | 8" | 465 | 2.83 | 563 | 540 | 481 | 103.4 |
| Total | | | | 3115 | | 2971 | 3120 | 2928 | 94% |

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Project: 03-04-24 PENN STATION - SEYMOUR, IN

System/Unit: FAN - Exhaust



Asset: EF4

AREA:RESTROOM

| Unit Data | | |
|---------------|--------|-----------|
| | Design | Actual |
| MFG | NA | BROAN |
| Model Num | NA | QTXE080-F |
| Serial Num | - | NA |
| Type | - | CEILING |
| Configuration | - | VERTICAL |

| Test Data | | |
|-----------|--------|--------|
| | Design | Actual |
| CFM | 75 | 82 |

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Project: 03-04-24 PENN STATION - SEYMOUR, IN

System/Unit: FAN - Exhaust



Asset: EF5

AREA:RESTROOM

Unit Data

| | Design | Actual |
|----------------------|--------|-----------|
| MFG | NA | BROAN |
| Model Num | NA | QTXE080-F |
| Serial Num | - | NA |
| Type | - | CEILING |
| Configuration | - | VERTICAL |

Test Data

| | Design | Actual |
|------------|--------|--------|
| CFM | 75 | 78 |

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Project: 03-04-24 PENN STATION - SEYMOUR, IN

System/Unit: FAN - Exhaust



Asset: KEF1

AREA:HOOD 1 GRILL

| Unit Data | | |
|---------------|-------------|----------|
| | Design | Actual |
| MFG | CAPTIVEAIRE | ECON AIR |
| Model Num | DU85HFA | EADU85H |
| Serial Num | - | 6291537 |
| Type | UPBLAST | UPBLAST |
| Configuration | VERTICAL | VERTICAL |

| Motor Data | | |
|------------------|--------|-------------|
| | Design | Actual |
| Motor MFG | - | TELCO GREEN |
| Frame | - | NA |
| Horsepower | 0.750 | 0.750 |
| Motor Rpm | - | 1800 |
| Phase | 1 | 1 |
| Voltage (rated) | 115 | 115 |
| Amperage (rated) | - | 8.9 |

| Test Data | | |
|------------------|--------|-----------|
| | Design | Actual |
| CFM | 1120 | 1108 |
| Fan RPM | 1215 | NA |
| Fan Rotation | - | CCW |
| Motor RPM | - | NA |
| System SetPt | - | 52% |
| RL Voltage | - | 120.2 |
| RL Amperage | - | 3.29/3.16 |
| Total ESP | 1.150" | 0.46" |
| Fan Inlet SP | - | -0.46" |
| Fan Discharge SP | - | ATM |

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Project: 03-04-24 PENN STATION - SEYMOUR, IN

System/Unit: FAN - Exhaust



Asset: KEF2

AREA:HOOD 2 OVEN

| Unit Data | | |
|---------------|-------------|----------|
| | Design | Actual |
| MFG | CAPTIVEAIRE | ECON AIR |
| Model Num | DU33HFA | EADU33H |
| Serial Num | - | 6291537 |
| Type | UPBLAST | UPBLAST |
| Configuration | VERTICAL | VERTICAL |

| Motor Data | | |
|------------------|--------|-------------|
| | Design | Actual |
| Motor MFG | - | TELCO GREEN |
| Frame | - | NA |
| Horsepower | 0.333 | 0.333 |
| Motor Rpm | - | 1800 |
| Phase | 1 | 1 |
| Voltage (rated) | 115 | 114 |
| Amperage (rated) | - | 4.3 |

| Test Data | | |
|------------------|--------|-----------|
| | Design | Actual |
| CFM | 600 | 542 |
| Fan RPM | 1360 | NA |
| Fan Rotation | - | CCW |
| Motor RPM | - | NA |
| System SetPt | - | 56% |
| RL Voltage | - | 121.3 |
| RL Amperage | - | 1.22/1.17 |
| Total ESP | 0.600" | 0.20" |
| Fan Inlet SP | - | -0.20" |
| Fan Discharge SP | - | ATM |

Completed By: Jordan Best on 03/05/2024

National TAB

Project: 03-04-24 PENN STATION - SEYMOUR, IN

System/Unit: FAN - Exhaust



Asset: KEF3

AREA:HOOD 3 FRY

| Unit Data | | |
|---------------|-------------|----------|
| | Design | Actual |
| MFG | CAPTIVEAIRE | ECON AIR |
| Model Num | DU85HFA | EADU85H |
| Serial Num | - | 6291537 |
| Type | UPBLAST | UPBLAST |
| Configuration | VERTICAL | VERTICAL |

| Motor Data | | |
|------------------|--------|-------------|
| | Design | Actual |
| Motor MFG | - | TELCO GREEN |
| Frame | - | NA |
| Horsepower | 0.750 | 0.750 |
| Motor Rpm | - | 1800 |
| Phase | 1 | 1 |
| Voltage (rated) | 115 | 115 |
| Amperage (rated) | - | 8.9 |

| Test Data | | |
|------------------|--------|-----------|
| | Design | Actual |
| CFM | 850 | 860 |
| Fan RPM | 1144 | NA |
| Fan Rotation | - | CCW |
| Motor RPM | - | NA |
| System SetPt | - | 54% |
| RL Voltage | - | 122.7 |
| RL Amperage | - | 3.29/3.28 |
| Total ESP | 1.150" | 0.69" |
| Fan Inlet SP | - | -0.69" |
| Fan Discharge SP | - | ATM |

Completed By: Jordan Best on 03/05/2024

National TAB

Project: 03-04-24 PENN STATION - SEYMOUR, IN



System/Unit: FAN - Supply

Asset: MUA1

AREA:HOOD 1 & HOOD 3

| Unit Data | | |
|---------------|--------------|---------------|
| | Design | Actual |
| MFG | CAPTIVEAIRE | ECON AIR |
| Model Num | A1-D.250-15D | EA1-D.250-15D |
| Serial Num | - | 6291537 |
| Type | MUA | MUA |
| Configuration | VERTICAL | VERTICAL |

| Test Data | | |
|------------------|--------|---------|
| | Design | Actual |
| CFM | 1630 | 1635 |
| SF RPM | 1855 | NA |
| Motor RPM | - | NA |
| SF System SetPt | - | 44.7 HZ |
| RL Voltage | - | 81 |
| RL Amperage | - | 2.5 |
| Total ESP | - | 0.28" |
| Fan Discharge SP | - | 0.28" |

| Motor Data | | |
|------------------|--------|----------------------|
| | Design | Actual |
| Motor MFG | - | TECO WESTINGHOUSE |
| Frame | - | 145T |
| Horsepower | 1.5 | 1.5 |
| Motor Rpm | - | 1740 |
| Phase | 3 | 3 |
| Voltage (rated) | 208 | 230 |
| Amperage (rated) | - | 4.03 |
| Service Factor | - | 1 |

| Gas Heat | | |
|---------------------------|--------|--------|
| | Design | Actual |
| Heater Operates (y/n) | - | YES |
| Flame Status (pass/fail) | - | PASS |
| Inlet Air Temp SetPt | 55 | 55 |
| Discharge Air Temp SetPt | 60 | 60 |
| Air Flow Switch SP Actual | - | 0.28" |

Completed By: Jordan Best on 03/05/2024

Notes:
Volts and Amps read from VFD

Written By: Jordan Best on 03/05/2024

National TAB

Project:03-04-24 PENN STATION - SEYMOUR, IN

FAN - Supply



Diffuser Supply (GRD)

MUA1/HOOD 1 & HOOD 3

| Asset | | | | | | | | | |
|------------|----------|------|---------|------------|------|--------|--------|-----------|-------------|
| Asset Name | Location | Type | Size | DESIGN CFM | AK | CFM(1) | CFM(2) | FINAL CFM | % to design |
| HOOD1 | HOOD 1 | PSP | 14"X72" | 1000 | 7 | | | | - |
| HOOD3 | HOOD 3 | PSP | 14"X50" | 630 | 4.86 | | | | - |
| Total | | | | 1630 | | 0 | 0 | 0 | 0% |

National TAB

Project: 03-04-24 PENN STATION - SEYMOUR, IN

System/Unit: Kitchen Hood Type I



Asset: HD1

AREA:GRILL

| Unit Data | | |
|----------------------|----------------------------------|-------------|
| | Design | Actual |
| MFG | CAPTIVEAIRE | ECON AIR |
| Model Num | 3650 ELPX-2 246 ACPSP ONLY | 3650 ELPX-2 |
| Job / Serial Num | - | 6291537 |
| Type | TYPE I CANOPY | TYPE I SOLO |
| Hood length | 72" | 72" |
| Hood Width | 36" | 36" |
| Supply Plenum Type | - | ACPSP |
| Supply Plenum Width | 14" | 14" |
| Supply Plenum Length | 72" | 72" |

| Test Data Supply | | |
|------------------|--------|--------|
| | Design | Actual |
| Total AK Area | 7 | 7 |
| Kv factor (Vel) | 0.89 | 0.89 |
| Num of Readings | - | 6 |
| Reading1 FPM | - | 164 |
| Reading2 FPM | - | 153 |
| Reading3 FPM | - | 148 |
| Reading4 FPM | - | 166 |
| Reading5 FPM | - | 144 |
| Reading6 FPM | - | 162 |
| Ave FPM(corr) | - | 156 |
| CFM | 1000 | 971 |

| Test Data Exhaust | | |
|-------------------------|------------------|------------------|
| | Design | Actual |
| Filter Type | CAPTRATE SOLO | CAPTRATE SOLO |
| Filter Size 1 | 16X16 | 16"X16" |
| Filter Qty 1 | 4 | 4 |
| Filter AK factor size 1 | 1.62 | 1.62 |
| Filter Total AK Area | 6.48 | 6.48 |
| Filter1 FPM | - | 160 |
| Filter2 FPM | - | 192 |
| Filter3 FPM | - | 159 |
| Filter4 FPM | - | 175 |
| Filter Ave FPM(corr) | - | 171 |
| CFM | 1120 | 1108 |

| Cooking Equipment | | |
|-------------------|--------|--------|
| | Design | Actual |
| Item 1 | - | GRILL |

Completed By: Jordan Best on 03/05/2024

National TAB

Project: 03-04-24 PENN STATION - SEYMOUR, IN

System/Unit: Kitchen Hood Type I



Asset: HD2

AREA:OVEN

Unit Data

| | Design | Actual |
|------------------|------------------|---------|
| MFG | CAPTIVEAIRE | NA |
| Model Num | 4412 PS-OVN | NA |
| Job / Serial Num | - | NA |
| Type | TYPE I CANOPY | TYPE II |
| Hood length | 21.25" | 44" |
| Hood Width | 44" | 21.25" |

Test Data Exhaust

| | Design | Actual |
|-------------------------|-----------|-----------|
| Filter Type | SS BAFFLE | SS BAFFLE |
| Filter Size 1 | 10X20 | 20"X10" |
| Filter Qty 1 | 2 | 2 |
| Filter AK factor size 1 | 1.2 | 1.2 |
| Filter Total AK Area | 2.4 | 2.4 |
| Filter1 FPM | - | 214 |
| Filter2 FPM | - | 238 |
| Filter Ave FPM(corr) | - | 226 |
| CFM | 600 | 542 |

Cooking Equipment

| | Design | Actual |
|--------|--------|---------|
| Item 1 | - | TOASTER |

Completed By: Jordan Best on 03/05/2024

National TAB

Project: 03-04-24 PENN STATION - SEYMOUR, IN

System/Unit: Kitchen Hood Type I



Asset: HD3

AREA:FRY

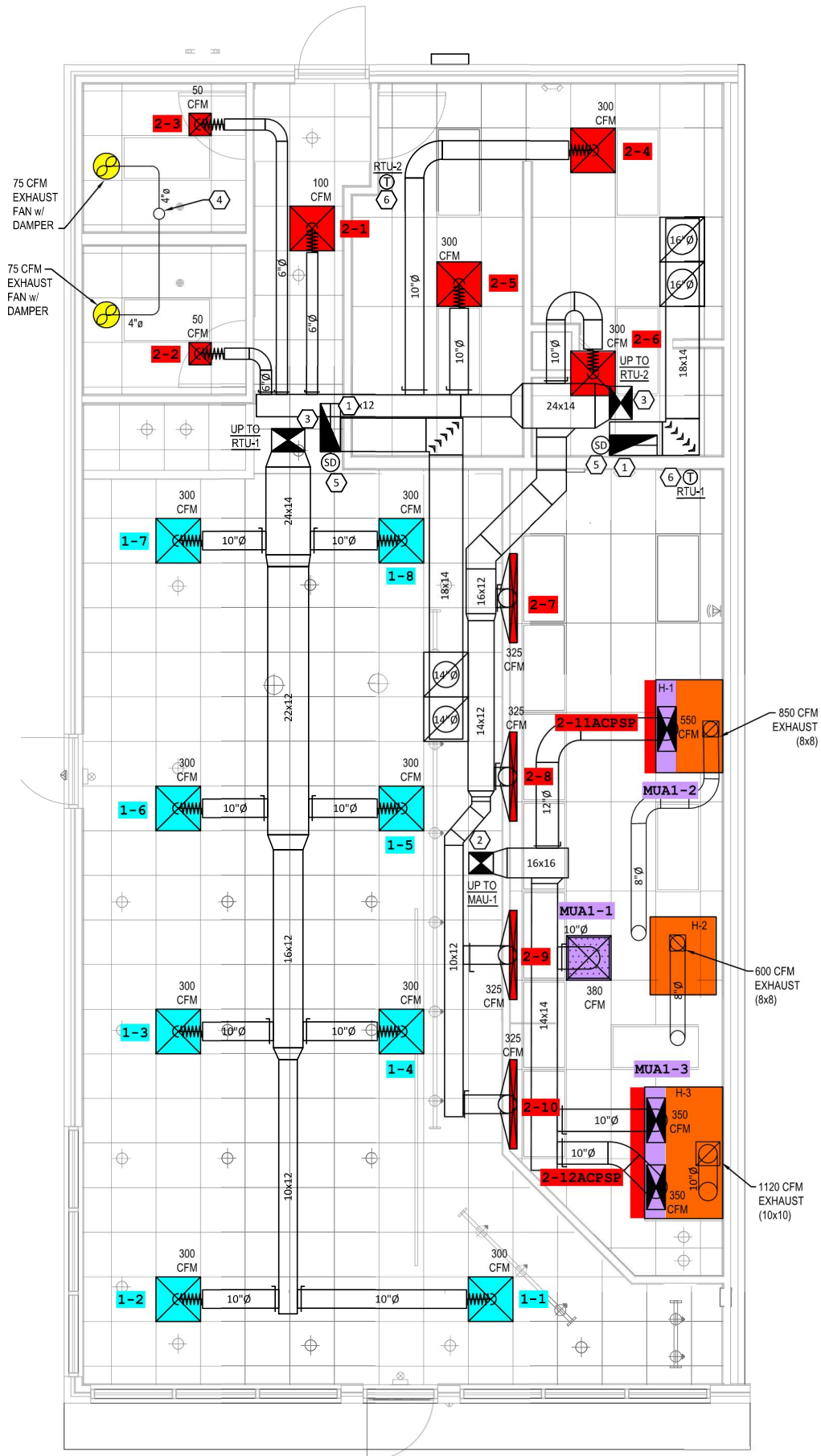
| Unit Data | | |
|----------------------|----------------------------------|------------------|
| | Design | Actual |
| MFG | CAPTIVEAIRE | ECON AIR |
| Model Num | 3650 ELPX-2 246 ACPSP ONLY | 3650 ELPX-2 |
| Job / Serial Num | - | 6291537 |
| Type | TYPE I CANOPY | TYPE I CANOPY |
| Hood length | 50" | 50" |
| Hood Width | 36" | 36" |
| Supply Plenum Type | - | ACPSP |
| Supply Plenum Width | 14" | 14" |
| Supply Plenum Length | 50" | 50" |

| Test Data Supply | | |
|------------------|--------|--------|
| | Design | Actual |
| Total AK Area | 4.86 | 4.86 |
| Kv factor (Vel) | 0.89 | 0.89 |
| Num of Readings | - | 4 |
| Reading1 FPM | - | 157 |
| Reading2 FPM | - | 154 |
| Reading3 FPM | - | 153 |
| Reading4 FPM | - | 149 |
| Ave FPM(corr) | - | 153 |
| CFM | 630 | 664 |

| Test Data Exhaust | | |
|-------------------------|------------------|------------------|
| | Design | Actual |
| Filter Type | CAPTRATE SOLO | CAPTRATE SOLO |
| Filter Size 1 | 16X16 | 16"X16" |
| Filter Qty 1 | 3 | 3 |
| Filter AK factor size 1 | 1.62 | 1.62 |
| Filter Total AK Area | 4.86 | 4.86 |
| Filter1 FPM | - | 173 |
| Filter2 FPM | - | 184 |
| Filter3 FPM | - | 174 |
| Filter Ave FPM(corr) | - | 177 |
| CFM | 850 | 860 |

| Cooking Equipment | | |
|-------------------|--------|--------|
| | Design | Actual |
| Item 1 | - | FRYER |

Completed By: Jordan Best on 03/05/2024



Date: 3/7/2024

MECHANICAL - FLOOR PLAN
 SCALE: 1/4" = 1'-0"
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1
 M1.0

| | |
|-------------------------|---|
| Penn Station - Seymour, | |
| ROOM # | R |