

Report By:

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Report: TAB Report
Function: Test, Adjust, & Balance
Date: 12/08/2025
Completed By: National TAB

PROJECT

12-01-25 WAWA #6619 WINCHESTER, VA

1230 MILLWOOD PIKE

WINCHESTER, VA 22602

Client

Wawa
260 West Baltimore Pike

Wawa, PA 19063

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Project: 12-01-25 WAWA #6619 WINCHESTER, VA

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Project: 12-01-25 WAWA #6619 WINCHESTER, VA
Function: Test, Adjust, & Balance

Project Summary

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.

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.

Ceiling Exhaust Fans

The ceiling exhaust fans were measured using a flow hood. If speed adjustment was provided, the fan speed was adjusted to within design tolerance. 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 and that the pressure measurement coincides with the actual and design net airflow. Any deviations from these standards are noted throughout the report

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 | FOOD SERVICE | 4500 | 4825 | 3800 | 4055 | 700 | 770 | 15.6% | 16.0% | | | | | | |
| RTU-2 | RETAIL | 3400 | 3358 | 3020 | 2961 | 380 | 397 | 11.2% | 11.8% | | | | | | |
| RTU-3 | FOH | 2400 | 2327 | 2200 | 2123 | 200 | 204 | 8.3% | 8.8% | | | | | | |
| EF-1 | RESTROOMS | | | | | | | | | | | | | 375 | 350 |
| EF-2 | BOH | | | | | | | | | | | | | 400 | 429 |
| EF-3 | TRASH ROOM | | | | | | | | | | | | | 200 | 174 |
| TOTALS | | 10300 | 10510 | 9020 | 9139 | 1280 | 1371 | | | 0 | 0 | 0 | 0 | 975 | 953 |

NET BUILDING AIRFLOW CALCULATION

| TOTALS | DESIGN | ACTUAL |
|--------------------|------------|------------|
| TOTAL OA | 1280 | 1371 |
| TOTAL EXHAUST | 975 | 953 |
| NET AIRFLOW | 305 | 418 |

| DOOR TESTED | BUILDING PRESSURE MEASUREMENTS (IN. H2O) |
|----------------|--|
| FRONT | -0.008 |
| SIDE | -0.009 |
| REAR | -0.009 |
| AVERAGE | -0.0087 |

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:

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Project: 12-01-25 WAWA #6619 WINCHESTER, VA

System/Unit: AHU/RTU



Asset: RTU1

AREA:FOOD SERVICE

| Unit Data | | |
|---------------------|-----------|-------------|
| | Design | Actual |
| MFG | LENNOX | LENNOX |
| Serial Num | - | 5624L03669 |
| Model Num | LCT150H4E | LCT150H4E |
| Type | RTU | RTU |
| Configuration | VERTICAL | VERTICAL |
| Num OA Filters 1 | - | 2 |
| OA Filter Size 1 | - | 14.125"X23" |
| Num Final Filter 1 | - | 4 |
| Final Filter Size 1 | - | 20"X25"X2" |

| Motor Data | | |
|----------------|--------|----------|
| | Design | Actual |
| Motor MFG | - | EBMPAPST |
| Frame | - | N/L |
| Horsepower | 3.75 | 3.75 |
| Motor Rpm | - | 1780 |
| Phase | 3 | 3 |
| Rated Voltage | 208 | 208 |
| Rated Amperage | - | 8.0 |
| Service Factor | - | N/L |

| Drive Data | |
|--------------------|--------|
| | Actual |
| Motor Sheave Size | DD |
| Motor Bore Size | DD |
| Motor Sheave SetPt | DD |
| Fan Sheave Size | DD |
| Fan Sheave Bore | DD |
| Belt CL Distance | DD |
| Num of Belts | DD |
| Belt Size | DD |

| Test Data | | |
|--------------------|--------|-------------------|
| | Design | Actual |
| SF CFM | 4500 | 4825 |
| SF RPM | - | 1673 |
| MOTOR RPM | - | 1673 |
| RA CFM | 3800 | 4055 |
| OA CFM | 700 | 770 |
| RL Voltage | - | 214.0/213.4/212.8 |
| RL Amperage | - | 6.6/6.8/6.6 |
| SF System SetPt | - | 94% |
| RA Damper Position | - | 83% |
| RA Damper Type | - | ECONOMIZER |
| OA Damper Position | - | 17% |
| OA Damper Type | - | ECONOMIZER |

| Performance Data | | |
|------------------|--------|--------|
| | Design | Actual |
| MA Plenum SP | - | -0.73" |
| Fan Suction SP | - | -1.18" |
| Fan Discharge SP | - | 0.93" |
| Total ESP | 0.70" | 1.66" |
| Fan Total SP | - | 2.11" |

Completed By: John Barresi on 12/04/2025

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Project:12-01-25 WAWA #6619 WINCHESTER, VA

AHU/RTU



Diffuser Supply (GRD)

RTU1/FOOD SERVICE

| Asset | | | | | | | | | |
|------------|--------------|------|------|------------|----|--------|--------|-----------|-------------|
| Asset Name | Location | Type | Size | DESIGN CFM | AK | CFM(1) | CFM(2) | FINAL CFM | % to design |
| SGRD1 | COFFEE | SD-6 | 12" | 500 | 1 | 611 | 433 | 549 | 109.8 |
| SGRD2 | FOOD SERVICE | SD-6 | 10" | 425 | 1 | 522 | 356 | 470 | 110.6 |
| SGRD3 | FOOD SERVICE | SD-6 | 10" | 425 | 1 | 592 | 402 | 454 | 106.8 |
| SGRD4 | FOOD SERVICE | SD-6 | 10" | 425 | 1 | 651 | 476 | 452 | 106.4 |
| SGRD5 | FOOD SERVICE | SD-6 | 10" | 425 | 1 | 668 | 490 | 466 | 109.6 |
| SGRD6 | FOOD SERVICE | SD-6 | 10" | 425 | 1 | 50 | 479 | 460 | 108.2 |
| SGRD7 | FOOD SERVICE | SD-6 | 10" | 400 | 1 | 418 | 328 | 439 | 109.8 |
| SGRD8 | FOOD SERVICE | SD-6 | 10" | 400 | 1 | 539 | 428 | 423 | 105.8 |
| SGRD9 | FOOD SERVICE | SD-6 | 10" | 400 | 1 | 608 | 475 | 435 | 108.8 |
| SGRD10 | TRASH ROOM | SD-1 | 10" | 300 | 1 | 517 | 408 | 329 | 109.7 |
| SGRD11 | ELECTRICAL | SD-1 | 10" | 375 | 1 | 273 | 225 | 348 | 92.8 |
| Total | | | | 4500 | | 5449 | 4500 | 4825 | 107.22% |

Diffuser Ret/Exh (GRD)

RTU1/FOOD SERVICE

| Asset | | | | | | | | | |
|------------|--------------|------|-------|------------|----|--------|--------|-----------|-------------|
| Asset Name | Location | Type | Size | DESIGN CFM | AK | CFM(1) | CFM(2) | FINAL CFM | % to design |
| EGRD1 | FOOD SERVICE | RG-1 | 14" | 860 | 1 | 1657 | 976 | 976 | 113.5 |
| EGRD2 | FOOD SERVICE | RG-1 | 14" | 870 | 1 | 320 | 986 | 986 | 113.3 |
| EGRD3 | FOOD SERVICE | RG-1 | 14" | 870 | 1 | 177 | 858 | 858 | 98.6 |
| EGRD4 | WASHROOM | RG-1 | 16X14 | 1200 | 1 | 1683 | 1235 | 1235 | 102.9 |
| Total | | | | 3800 | | 3837 | 4055 | 4055 | 106.71% |

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Project: 12-01-25 WAWA #6619 WINCHESTER, VA

System/Unit: AHU/RTU



Asset: RTU2

AREA:RETAIL

| Unit Data | | |
|---------------------|-----------|-------------|
| | Design | Actual |
| MFG | LENNOX | LENNOX |
| Serial Num | - | 5624K03719 |
| Model Num | LGT10245E | LGT10245E |
| Type | RTU | RTU |
| Configuration | VERTICAL | VERTICAL |
| Num OA Filters 1 | - | 2 |
| OA Filter Size 1 | - | 14.125"X23" |
| Num Final Filter 1 | - | 4 |
| Final Filter Size 1 | - | 20"X25"X2" |

| Motor Data | | |
|----------------|--------|----------|
| | Design | Actual |
| Motor MFG | - | EBMPAPST |
| Frame | - | N/L |
| Horsepower | 3.75 | 3.75 |
| Motor Rpm | - | 2200 |
| Phase | 3 | 3 |
| Rated Voltage | 208 | 208 |
| Rated Amperage | - | 8.7 |
| Service Factor | - | N/L |

| Drive Data | |
|--------------------|--------|
| | Actual |
| Motor Sheave Size | DD |
| Motor Bore Size | DD |
| Motor Sheave SetPt | DD |
| Fan Sheave Size | DD |
| Fan Sheave Bore | DD |
| Belt CL Distance | DD |
| Num of Belts | DD |
| Belt Size | DD |

| Test Data | | |
|--------------------|--------|-------------------|
| | Design | Actual |
| SF CFM | 3400 | 3358 |
| SF RPM | - | 990 |
| MOTOR RPM | - | 990 |
| RA CFM | 3020 | 2961 |
| OA CFM | 380 | 397 |
| RL Voltage | - | 214.0/213.8/212.7 |
| RL Amperage | - | 1.3/1.3/1.3 |
| SF System SetPt | - | 45% |
| RA Damper Position | - | 74% |
| RA Damper Type | - | ECONOMIZER |
| OA Damper Position | - | 26% |
| OA Damper Type | - | ECONOMIZER |

| Performance Data | | |
|------------------|--------|--------|
| | Design | Actual |
| MA Plenum SP | - | -0.21" |
| Fan Suction SP | - | -0.33" |
| Fan Discharge SP | - | 0.19" |
| Total ESP | 1.00" | 0.40" |
| Fan Total SP | - | 0.52" |

Completed By: John Barresi on 12/04/2025

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Project: 12-01-25 WAWA #6619 WINCHESTER, VA

AHU/RTU



Diffuser Supply (GRD)

RTU2/RETAIL

| Asset | | | | | | | | | |
|------------|----------------|------|------|------------|------|--------|--------|-----------|-------------|
| Asset Name | Location | Type | Size | DESIGN CFM | AK | CFM(1) | CFM(2) | FINAL CFM | % to design |
| SGRD1 | RETAIL | SD-2 | | 275 | 0.63 | 544 | 194 | 286 | 104.0 |
| SGRD2 | RETAIL | SD-2 | | 275 | 0.63 | 777 | 318 | 290 | 105.5 |
| SGRD3 | RETAIL | SD-2 | | 300 | 0.63 | 706 | 268 | 312 | 104.0 |
| SGRD4 | RETAIL | SD-2 | | 275 | 0.63 | 997 | 452 | 282 | 102.5 |
| SGRD5 | RETAIL | SD-2 | | 275 | 0.63 | 1038 | 440 | 285 | 103.6 |
| SGRD6 | RETAIL | SD-2 | | 275 | 0.63 | 331 | 145 | 273 | 99.3 |
| SGRD7 | RETAIL | SD-2 | | 275 | 0.63 | 602 | 228 | 288 | 104.7 |
| SGRD8 | RETAIL | SD-2 | | 275 | 0.63 | 644 | 252 | 293 | 106.5 |
| SGRD9 | RETAIL | SD-2 | | 275 | 0.63 | 1091 | 437 | 267 | 97.1 |
| SGRD10 | HALLWAY | SD-1 | 8" | 200 | 1 | 351 | 145 | 193 | 96.5 |
| SGRD11 | WOMENS RR | SD-5 | 8" | 100 | 1 | 49 | 71 | 90 | 90.0 |
| SGRD12 | REAR VESTIBULE | SD-5 | 8" | 200 | 1 | 335 | 120 | 174 | 87.0 |
| SGRD13 | MENS RR | SD-5 | 8" | 150 | 1 | 61 | 124 | 150 | 100.0 |
| SGRD14 | DELIVERY ROOM | SD-1 | 8" | 250 | 1 | 80 | 134 | 175 | 70.0 |
| Total | | | | 3400 | | 7606 | 3328 | 3358 | 98.76% |

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Project: 12-01-25 WAWA #6619 WINCHESTER, VA

System/Unit: AHU/RTU



Asset: RTU3

AREA:FOH

| Unit Data | | |
|---------------------|-----------|------------|
| | Design | Actual |
| MFG | LENNOX | LENNOX |
| Serial Num | - | 5624K03088 |
| Model Num | LGT072H4E | LGT072H4E |
| Type | RTU | RTU |
| Configuration | VERTICAL | VERTICAL |
| Num OA Filters 1 | - | 1 |
| OA Filter Size 1 | - | 28.75"X14" |
| Num Final Filter 1 | - | 4 |
| Final Filter Size 1 | - | 20"X20"X2" |

| Motor Data | | |
|----------------|--------|----------|
| | Design | Actual |
| Motor MFG | - | EBMPAPST |
| Frame | - | N/L |
| Horsepower | 1.5 | 1.5 |
| Motor Rpm | - | 3300 |
| Phase | 3 | 3 |
| Rated Voltage | 208 | 208 |
| Rated Amperage | - | 4.4 |
| Service Factor | - | N/L |

| Drive Data | |
|--------------------|--------|
| | Actual |
| Motor Sheave Size | DD |
| Motor Bore Size | DD |
| Motor Sheave SetPt | DD |
| Fan Sheave Size | DD |
| Fan Sheave Bore | DD |
| Belt CL Distance | DD |
| Num of Belts | DD |
| Belt Size | DD |

| Test Data | | |
|--------------------|--------|-------------------|
| | Design | Actual |
| SF CFM | 2400 | 2327 |
| SF RPM | - | 1782 |
| MOTOR RPM | - | 1782 |
| RA CFM | 2200 | 2123 |
| OA CFM | 200 | 204 |
| RL Voltage | - | 212.7/212.3/212.2 |
| RL Amperage | - | 1.1/1.1/1.1 |
| SF System SetPt | - | 54% |
| RA Damper Position | - | 79% |
| RA Damper Type | - | ECONOMIZER |
| OA Damper Position | - | 21% |
| OA Damper Type | - | ECONOMIZER |

| Performance Data | | |
|------------------|--------|--------|
| | Design | Actual |
| MA Plenum SP | - | -0.21" |
| Fan Suction SP | - | -0.31" |
| Fan Discharge SP | - | 0.28" |
| Total ESP | 0.50" | 0.49" |
| Fan Total SP | - | 0.59" |

Completed By: John Barresi on 12/04/2025

Unit Data - PHOTO LOG



12/04/2025



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Project: 12-01-25 WAWA #6619 WINCHESTER, VA

AHU/RTU



Diffuser Supply (GRD)

RTU3/FOH

| Asset | | | | | | | | | |
|-------------------|--------------------|-------------|-------------|-------------------|-----------|---------------|---------------|------------------|--------------------|
| Asset Name | Location | Type | Size | DESIGN CFM | AK | CFM(1) | CFM(2) | FINAL CFM | % to design |
| SGRD1 | ENTRANCE | SD-5 | 8" | 250 | 1 | 211 | 134 | 227 | 90.8 |
| SGRD2 | FOH | SD-2 | | 450 | 0.63 | 788 | 500 | 456 | 101.3 |
| SGRD3 | FOH | SD-2 | | 450 | 0.63 | 762 | 484 | 435 | 96.7 |
| SGRD4 | FOH | SD-2 | | 450 | 0.63 | 784 | 498 | 422 | 93.8 |
| SGRD5 | FOH | SD-2 | | 450 | 0.63 | 794 | 504 | 441 | 98.0 |
| SGRD6 | ASSOCIATES AREA | SD-1 | 8" | 200 | 1 | 246 | 156 | 196 | 98.0 |
| SGRD7 | OFFICE | SD-1 | 8" | 150 | 1 | 251 | 159 | 150 | 100.0 |
| Total | | | | 2400 | | 3836 | 2435 | 2327 | 96.96% |

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Project: 12-01-25 WAWA #6619 WINCHESTER, VA

System/Unit: FAN - Exhaust



Asset: EF1

AREA:RESTROOM

| Unit Data | | |
|---------------|-----------|--------------|
| | Design | Actual |
| MFG | GREENHECK | GREENHECK |
| Model Num | GB-098-6 | GB-098-6 |
| Serial Num | - | 27000322 25E |
| Type | DOWNBLAST | DOWNBLAST |
| Configuration | VERTICAL | VERTICAL |

| Motor Data | | |
|------------------|--------|------------|
| | Design | Actual |
| Motor MFG | - | VARI-GREEN |
| Frame | - | N/L |
| Horsepower | 0.167 | 0.167 |
| Motor Rpm | - | 1750 |
| Phase | 1 | 1 |
| Voltage (rated) | 120 | 120 |
| Amperage (rated) | - | 2.2 |
| Service Factor | - | N/L |

| Test Data | | |
|------------------|--------|--------|
| | Design | Actual |
| CFM | 375 | 350 |
| Fan RPM | - | 1085 |
| Fan Rotation | - | CW |
| Motor RPM | - | 1085 |
| System SetPt | - | 62% |
| RL Voltage | - | N/A |
| RL Amperage | - | N/A |
| Total ESP | 0.38" | 0.28" |
| Fan Inlet SP | - | -0.28" |
| Fan Discharge SP | - | ATM |

Completed By: John Barresi on 12/04/2025

Unit Data - PHOTO LOG



12/04/2025



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Project: 12-01-25 WAWA #6619 WINCHESTER, VA

System/Unit: FAN - Exhaust



Asset: EF2

AREA:BOH

| Unit Data | | |
|----------------------|-----------|--------------|
| | Design | Actual |
| MFG | GREENHECK | GREENHECK |
| Model Num | GB-098-6 | GB-098-6 |
| Serial Num | - | 27000323 25E |
| Type | DOWNBLAST | DOWNBLAST |
| Configuration | VERTICAL | VERTICAL |

| Motor Data | | |
|-------------------------|--------|------------|
| | Design | Actual |
| Motor MFG | - | VARI-GREEN |
| Frame | - | N/L |
| Horsepower | 0.167 | 0.167 |
| Motor Rpm | - | 1750 |
| Phase | 1 | 1 |
| Voltage (rated) | 120 | 120 |
| Amperage (rated) | - | 2.2 |
| Service Factor | - | N/L |

| Test Data | | |
|-------------------------|--------|--------|
| | Design | Actual |
| CFM | 400 | 429 |
| Fan RPM | - | 1085 |
| Fan Rotation | - | CW |
| Motor RPM | - | 1085 |
| System SetPt | - | 62% |
| RL Voltage | - | N/A |
| RL Amperage | - | N/A |
| Total ESP | 0.38" | 0.47" |
| Fan Inlet SP | - | -0.47" |
| Fan Discharge SP | - | ATM |

Completed By: John Barresi on 12/04/2025

Notes:

- Unable to reach/locate damper for 2-1.
- Unable to reach/locate damper for 2-2.

Written By: John Barresi on 12/03/2025

Unit Data - PHOTO LOG



12/04/2025



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Project: 12-01-25 WAWA #6619 WINCHESTER, VA

System/Unit: FAN - Exhaust



Asset: EF3

AREA: TRASH ROOM

| Unit Data | | |
|----------------------|-----------|--------------|
| | Design | Actual |
| MFG | GREENHECK | GREENHECK |
| Model Num | SP-B200 | SP-B200 |
| Serial Num | - | S33G382XB-01 |
| Type | CEILING | CEILING |
| Configuration | VERTICAL | VERTICAL |

| Motor Data | | |
|-------------------------|--------|-----------|
| | Design | Actual |
| Motor MFG | - | GREENHECK |
| Frame | - | N/L |
| Horsepower | 0.167 | 0.033 |
| Motor Rpm | - | 1000 |
| Phase | 1 | 1 |
| Voltage (rated) | 120 | 115 |
| Amperage (rated) | - | 2.7 |
| Service Factor | - | N/L |

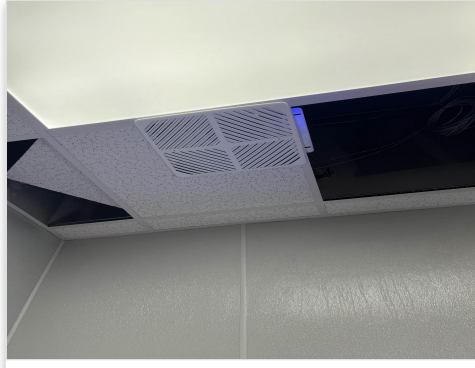
| Test Data | | |
|-------------------------|--------|--------|
| | Design | Actual |
| CFM | 200 | 174 |
| Fan RPM | - | 1000 |
| Fan Rotation | - | CW |
| Motor RPM | - | 1000 |
| System SetPt | - | 100% |
| RL Voltage | - | N/A |
| RL Amperage | - | N/A |
| Total ESP | 0.50" | 0.05" |
| Fan Inlet SP | - | -0.05" |
| Fan Discharge SP | - | ATM |

Completed By: John Barresi on 12/04/2025

Unit Data - PHOTO LOG



12/04/2025



12/04/2025

