



*City of Bristol
Board of Fire Commissioners*

INFORMATION TO ACCESS THIS MEETING

[https://bristolct-
gov.zoom.us/j/83403921047?pwd=WkZhN052YlVXTFRhM3RjMnd2VmtTUT09](https://bristolct.gov.zoom.us/j/83403921047?pwd=WkZhN052YlVXTFRhM3RjMnd2VmtTUT09)

*Meeting ID: 834 0392 1047
Passcode: 12345*

The regular Board of Fire Commissioners will be held on Thursday, May 23, 2024, at 6:00 pm. in Council Chambers, 111 North Main Street, Bristol, Connecticut.

AGENDA

1. Call to Order
2. Employee Recognition
3. Public Participation
4. Communications
 - a. Firefighter Donald DeForge to retire
5. Approval of Minutes
 - a. April 25, 2024 Meeting Minutes
6. Approval of Monthly Reports
 - a. Chief's Report
 - b. Monthly Reports
 - c. Incident Reports
7. Committee Reports
 - a. Firehouse 3 Building Committee Updates
8. New Business

- a. Thomaston Savings Bank grant application.

9. Adjournment

PER ORDER OF THE CHAIRPERSON

Board of Fire Commissioners' Regular Meeting

April 25, 2024

A Regular Meeting of the Board of Fire Commissioners was held on Thursday, April 25, 2024 at 6:00 p.m., in Council Chambers, City Hall, 111 N Main Street Bristol, CT

Present: Commissioners Sean Moore, Anthony Benvenuto, Hal Kilby, Dana Jandreau and Joyce Ptak, Mayor Jeffrey Caggiano, Council Member Andrew Howe, and Fire Chief Richard Hart.

1. CALL TO ORDER

- a. The meeting was called to order by Mayor Caggiano at 6:01 pm.

2. EMPLOYEE RECOGNITION

- a. None.

3. PUBLIC PARTICIPATION

- a. None.

4. COMMUNICATIONS

- a. Firefighter Donald DeForge advised Chief Hart he is planning to retire end of July.

5. APPROVAL OF MEETING MINUTES

- a. On motion of Commissioner Moore and seconded by Council Member Howe, it was voted: To approve the March 28, 2024 Meeting Minutes. Following a voice vote in which there was no opposition, the Chairperson declared the motion carried.

6. APPROVAL OF MONTHLY REPORTS

- a. Chief Hart gave a summary of the reports to the boards. He stated that Public Works will be replacing the front and rear aprons, the grant application for the CPAT center was submitted, Safety Priority Consulting will be overseeing changes from OSHA.
- b. On motion of Commissioner Moore and seconded by Commissioner Kilby, it was voted: To accept the March Monthly Reports. Following a voice vote in which there was no opposition, the Chairperson declared the motion carried.

7. COMMITTEE REPORTS

- a. A summary of the Fire House 3 Building Committee Report was given by Chief Hart and Commissioner Moore. An overview of the schematic design was presented and a schedule update.

8. OLD BUSINESS

- a. None.

9. NEW BUSINESS

- a. A Board of Finance request to appropriate donated funds in the amount of \$100.00 for Molly the Fire Dog. On motion of Commissioner Ptak and seconded by Commissioner Jandreau, it was voted: To approve the request to appropriate donated funds in the amount of \$100.00 for the Molly the Fire Dog Account. Following a voice vote in which there was no opposition, the Chairperson declared the motion carried.
- b. A Board of Finance request to transfer funds in the amount of \$20,005.00 for the purchase of capital outlay items in this fiscal year Items are swift water training equipment, W tools, training mannequins, and mobile repeaters. On motion of Commissioner Ptak and seconded by Commissioner Moore, it was voted: To approve the request to transfer funds in the amount of \$20,005.00 for capital outlay items. Following a voice vote in which there was no opposition, the Chairperson declared the motion carried.

10. ADJOURN

- a. On motion of Commissioner Moore and seconded by Commissioner Benvenuto, it was voted: To adjourn the meeting at 6:32 pm. Following a voice vote in which there was no opposition, the Chairperson declared the motion carried.

Recording Secretary: Sara Bianchi



BRISTOL FIRE DEPARTMENT
181 NORTH MAIN ST.
BRISTOL CT

OFFICE OF THE FIRE CHIEF
RICHARD HART
FIRE CHIEF

Fire Chief's April Monthly Report

May 23, 2024

To the Honorable Fire Commissioners;

The month of April saw the BFD respond to 203 calls for service. There were 5 residential structure fires, 10 total structure fires (\$ 8,100 est. property loss), 2 vehicle fires, 62 EMS, extrication/rescue, and 39 false alarms.

Mutual Aid: 1 given

Employee recognition:

None

Personnel:

FF Don DeForge notified the Department of his impending retirement

Apparatus/equipment:

Engine 1 brought to Gowan's and Knight for repairs

Engine 4 was brought to Cummins for some motor issues. Both are back in service

Stations and Facilities:

Nothing to report

Meetings and Public Functions:

Met with members of the Bristol Family Fun Day committee to discuss upcoming event in June

Met with Hartford healthcare for their quarterly safety meeting

Finalized specifications for new Engine 5 and 1



BRISTOL FIRE DEPARTMENT
181 NORTH MAIN ST.
BRISTOL CT

OFFICE OF THE FIRE CHIEF
RICHARD HART
FIRE CHIEF

Met with architect to discuss engineering and mechanical issues at Station 4 for inclusion at the new Station 3

Attended educational seminar at Shipman and Goodwin to discuss issues facing fire departments

Met with reps from DPW to layout removal and repaving of front and rear apron at Headquarters

Miscellaneous:

None

Respectfully submitted,

Richard Hart

Fire Chief

Tower 1

Monthly Report

April 2024

Summary

As of this writing, Tower 1's monthly call statistics were not available due to an issue with the reporting software specific to Tower 1.

Personnel

Nothing to report.

Apparatus/Equipment

A very minor hydraulic leak was found on Tower 2's aerial system. This will be addressed in May.

Fire Stations/Facilities

The coded lockset to one of the stairways to access the second floor is broken and awaiting repair from Public Works.

Miscellaneous

Nothing to report.

Respectfully submitted,

James Plaster, Captain



Engine Company 1

April 2024 monthly report

Summary of calls for service

Engine 1 responded to 103 calls for service the past month. These included 1 structure fire, 2 car fires, 4 unauthorized burning complaints, 2 outside trash fires, 2 brush fire, 19 motor vehicle accidents, 5 CO investigations, 8 electrical problem investigations, 3 assist PD/EMS, 9 lock out/lock in calls, 2 gas leak investigations, 1 haz mat investigation, 25 alarm investigations, 10 good intent calls, 2 smoke/odor removal, 8 cancelled.

Personnel None at this time

Apparatus/Equipment. Engine 1 had air brake air tank replaced by Gowans & Knight due to a pinhole leak. Hose reel rewind button replaced by Jay Kelly. Engine 1 sent to Cummins for repair of DEF leak onto exhaust causing a severe smoking problem. Spring cleaning assignment completed for Engine 1. Hose testing in progress. Specifications being reviewed By Engine 1 officers for replacement Engine 1.

Fire Station/Facilities. Spring cleaning assignments of headquarters underway. Public works crews fixed issue with urinal not flushing properly. Washing machine at headquarters was not working properly. Fred's Appliance examined machine and found it to not be repairable. New washing machine purchased at Bristol Home Depot and put in service. Vent hood and roof leaks still persist, awaiting specifications for vent hood repair/replacement. Plans under development to replace back and front ramps due to deteriorating of asphalt.

Miscellaneous. Mask fit, forcible entry and entering training in Firehouse system completed at the drill field with Acting training Officer. Engine 1 and Tower 1 crews participated in Earth Day cleanup activities on Memorial BLVD.

Respectfully submitted.

Captain Thomas Scully

Engine Company 2

Monthly Report

April, 2024

Summary

Station 2 Personnel responded to 37 calls for service and performed 6 company area surveys during the month of April. Again, Engine 2 personnel had a busy month of training and performed some public relations at the Carousel Museum. Contractors were also at the station throughout the month.

Breakdown of Calls:

1 - Fire (2.7%)
6 - Rescue / EMS (16.22%)
2 - Hazardous Condition (5.41%)
2 - Calls for Service (5.40%)
7 - Good Intent (18.92%)
19 - False Alarm / False Call (51.35%)
YTD – 186 calls

Personnel

April Training :

- Hydraulic PPV fan training

- SCBA mask fit test

- Forcible entry training

There were no changes to Engine 2 personnel.

Apparatus/Equipment

- There were no issues with Engine 2.
- The light bar was repaired on brush 1.
- The boat trailer wiring was replaced.

Fire Stations/Facilities

- Public works removed brush pile from the side of the shed.
- New Cambridge Painting power washed and painted the exterior of the station.
- Accurate Door replaced exterior door to the weight room.
- R.L.C. electric replaced some outlets, covers and switches throughout the station.
- Orkin checked and reset traps.

Miscellaneous

- Spring cleaning has begun inside and outside of the station.
- All shifts at Station 2 continue to perform their duties with professionalism.

Respectfully submitted,
Acting Captain Steven Barnosky

Engine 3
April
Monthly Report
2024

Summary

This month Engine 3 responded to a total of 48 calls for service. These responses included one structure fire and automobile fire. The majority of calls this month were for motor vehicle accident followed by activated fire alarms.

Personnel

No changes in personnel.

Apparatus/Equipment

- E-3 open compartment warning light sensor broke but was repaired.
- Air pack E3-02 was take OOS and repaired this month.
- E-6 Ladder raise/lower switch was replaced.
- New Officer's flashing light was mounted
- E-6 hood latch is broken, replacement ordered by Jay Kelly.

Fire Stations/Facilities

- Light ballast out in back room, replaced by P.W.
- The Plymo exhaust vent hose was repaired.
- Toilet flush value broke, but has since been repaired by P.W.
- Kitchen oven stopped working but it has since been replaced.

Miscellaneous

- Members attended MRT class this month at station 4.
- Members have conducted hose testing for the station and has tested and repacked over a mile of hose this month.

Respectfully submitted,

Craig Henderson,
Captain Engine 3
Bristol Fire Dept.

Engine 4
Monthly Report
April 2024

Summary

Engine 4 responded to 62 calls for service in April.

The Southington Fire Department used the burn building for their annual live fire training on Saturday, April 20, 2024, and Saturday, April 27, 2024.

Personnel

Station 4 personnel received their annual face-piece fit testing during the Month of April.

Firefighters were trained on the use of a new Super-Vac ventilation fan. The fan is powered by a 1 ¾ inch hose.

Forcible entry training was conducted by the acting Training Officer Todd Cutler.

Apparatus/ Equipment

Engine 4 has an engine oil leak. The Fire Equipment Technician will schedule a date to have the oil leak diagnosed at the Cummins dealer. Engine 4 remains in service.

Fire Station/ Miscellaneous

Public Works replaced a faulty light in the bay over the Fire Equipment Technician's office.

The fan motor was replaced in the range hood by Public Works.

Air Temp diagnosed the problem with the heat in the watch room. A plugged heating coil is the problem. David Oakes will schedule the repair after July 1st as the heat will not be needed until the fall. The Air Conditioning will still work.

The Bristol Radio Club used the training room for their monthly meeting. They have scheduled three dates to use the training room in May.

Respectfully submitted,

Scott McKearney

Scott McKearney, Captain

ENGINE COMPANY #5

MONTHLY REPORT

APRIL 2024

SUMMARY

Engine Company #5 responded to 50 calls for service in the month of April 2024. Calls for service included 1 Structure Fire, 1 Passenger Vehicle Fire, 1 Brush Fire, 1 Rubbish Fire, 8 Commercial and Residential Fire Alarm activations, 1 Carbon Monoxide Alarm activation, 2 Gas Leak or other Hazardous Materials incidents, 14 Motor Vehicle Accidents with or without injuries, 2 EMS Assists, 4 Electrical Equipment/Wiring calls, 8 Motor Vehicle/Residential Lockouts, 3 Unauthorized Burning calls, 4 Good Intent/Public Service calls.

PERSONNEL

Several members of Engine Company #5 participated in the annual stair climb in Hartford to raise money for Charity. As always they performed well and at the top of the pack of competitors. All Groups remained the same and intact for the month.

APPARATUS/EQUIPMENT

Engine #5 had only one mechanical issue during the month. That being an ongoing air leak problem. Problem was referred to the EFT who corrected it again. The air horns also continue to have an intermittent problem. EFT has narrowed the problem down to the age of the apparatus and vibration cause them to go in and out on different occasions.

Engine #8 also had a few minor problems during the month that were addressed. First one being a low voltage issue upon start up. Secondly, an ongoing air leak and lastly a broken rear tire stem. All issues were addressed in a timely manner by Jay Kelly.

Nothing to report for Service #1.

All vehicles are fully operational at time of this report.

A new Hydraulic Ventilation fan was put into service during the month and is stored on Support #1.

FIRE STATION/FACILITIES

Nothing new to report at this time.

SURVEYS

Some of the locations that visited by the crews during the month were Wings over Bristol, Meridian Tower, New Cambridge Apartments, Chippens Hill School, Ivy Drive School, Stop and Shop.

TRAINING

Hydraulic Ventilation Fan and Forcible Entry training were performed by all members of Station #5 during the month.

MISCELLANEOUS

Spring Cleaning and Hose Testing assignments were posted during the month and all assignments are scheduled to be finished by June 1. Multiple crews have taken it upon themselves to keep their skills up during company level training by continuing to perform driver training, pump operator evolutions, and testing each other's knowledge on the Engine #5 first due area street guide. Very proud of everyone's pride in themselves and the Fire Service.

RESPECTFULLY SUBMITTED,

CAPTAIN BRIAN D'AMATO

**CITY OF BRISTOL FIRE DEPARTMENT
OFFICE OF THE FIRE MARSHAL
MONTHLY REPORT**

April 2024



Kristopher Lambert

Kristopher Lambert, Fire Marshal

**CITY OF BRISTOL FIRE DEPARTMENT
OFFICE OF THE FIRE MARSHAL
MONTHLY REPORT**

April 2024



TO: City of Bristol Fire Board Members
FROM: Kristopher Lambert, Fire Marshal
SUBJECT: Monthly Report – April 2024

INCIDENTS

There were two hundred three (203) incidents for this month that required computer-generated reports communicated to the State Fire Marshal's Office and FEMA. There were two (2) investigation(s) of fire/explosions by this office. Total estimated loss for the period is \$17,000 dollars.

130 Moody
149 School St.

There was one (1) civilian injury(s), and zero (0) Firefighter injury reported during this period. There was one (1) mutual aid call(s) given/received within the month. A copy of the cumulative monthly inspection reviews and permits account is included with this report.

REVIEWS, MEETINGS, MISC.

- The interior of this office will remain closed to the public while all business will continue to be conducted electronically, or at the new customer service window.
- Thirteen (13) plans for new construction, occupancy changes, and renovations were reviewed. Some of the plans included electrical and mechanicals, including Fire Alarm and Fire Sprinkler systems. Site plan drawings are also included. Coordination and consultation regarding plan review is ongoing with other city agencies.
- The Fire Marshal's Office attended four (4) formal Site Plan Committee meetings this month to coordinate details for future Plan Review submittals in the City of Bristol. Twenty four (24) other site meetings attended by staff were conducted with business/property owners.
- There were approximately ninety eight (98) Fire Prevention Bureau business related calls managed by the staff this month.

- Approximately fifteen (15) visitors were received at our office to speak with Fire Marshal's Personnel.
- The City Hall Atrium Lobby has a monitor that is used for special city announcements. This office has been using the monitor to share fire prevention tips with the public.
- The office has shifted its focus slightly in order to assist with the Code Enforcement Committee's aggressive pursuit of substantial code compliance within the city. This approach has proven to be beneficial from an efficiency standpoint with regards to us gaining legal access to the properties for inspections.

TRAINING CLASSES

- Staff of the Fire Marshal's Office earned thirty (30) hour(s) of continuing education credits this month.

INSPECTIONS AND PERMITS **

- 23 Apartment Building Inspections (71 units)**
- 2 Assembly Occupancy Inspections
- 8 Automatic Sprinkler / Standpipe System Inspections
- 1 Blasting Permit(s) Issued
- 5 Business Occupancy Inspections
- 1 Certificate of Compliance
- 3 Complaint Inspections
- 0 Day Care Inspections
- 2 Educational Inspection
- 8 Fire Alarm Inspections
- 1 Fire Investigations
- 1 Gasoline Station / Vehicle Repair Facility Inspection
- 1 Health Care / Nursing Home / Group Home Inspections
- 3 Hood & Duct Inspections
- 2 Hotel / Dorm
- 1 Industrial Inspection
- 1 Liquor License Inspections
- 2 Mercantile Inspections
- 0 Modification Application(s)
- 0 Recreation/Summer Camp
- 0 Residential Board / Care
- 1 Storage Facility
- 3 Special Amusement/Assembly Inspection
- 3 Tent Inspections

****** In larger residential occupancies, where the building construction is modular in design and contains similar apartments with like layouts and amenities, representative apartments are chosen at random to determine compliance with the Connecticut State Fire Safety Code (CSFSC) and the Connecticut State Fire Prevention Code (CSFPC). With smaller occupancies, we do commonly enter as many units as possible where access is granted and time permits. The corresponding figures represent the number of occupancies and the total number of units affected by the inspection. *In order to achieve our statutory inspection requirements, I strongly recommend increasing the number certified personnel in this office to eight (8). There has been a significant increase in the number of residential units within this city to support the need for additional personnel within this office. While the number of residential units has increased over the years, the staff of this office has not.*

OFFICE OF THE FIRE MARSHAL STAFF VEHICLES

Fire 3 - 2013 Ford Explorer - White

Fire 4 - 2012 Ford Escape – Gray

Fire 5 - 2011 Dodge Grand Caravan – White - ****Unsafe and needs to be replaced****

Fire 6 - 2013 Ford Expedition - Red

Mileage and fuel usage reports are generated automatically and submitted by the mechanic.

Incident Summary Report

Alarm Date Between {04/01/2024} And {04/30/2024}

Total Number of Calls:	Fire: 203	EMS: 0	Exposures: 0	Unknown: 203	All: 203
Average Calls per day:	Fire: 6.7	EMS: 0.0			All: 6.7
Total number of arson calls:	0				
Estimated Dollar Loss:	Fire: \$ 0	Other: \$ 0		All: \$ 0	Arson: \$ 0
Estimated Value:	Fire: \$ 0	Other: \$ 0		All: \$ 0	Arson: \$ 0
Percentage Saved:	Fire: 0.0%	Other: 0.0%		All: 0.0%	Arson: 0.0%
Total Injuries:	Fire Service: 0	Civilian: 0		EMS: 0	Arson: 0
Total Fatalities:	Fire Service: 0	Civilian: 0		EMS: 0	Arson: 0
Total aid given calls:	0				
Total aid received calls:	0				

Bristol Monthly Incident Report

Alarm Date Between {04/01/2024} And {04/30/2024}

Incident Type	Count	Pct of Incidents	Total Est Loss	Pct of Losses
	203	100.00%	\$0	0.00%
	203	100.00%	\$0	0.00%

Total Incident Count: 203

Total Est Loss: \$0

Bristol Monthly Incident Report

Alarm Date Between {04/01/2024} And {04/30/2024}

Incident Type	Count	Avg Resp Time	Aid Given	Aid Rec'd	Exposures
	203	00:04:28	0	0	0

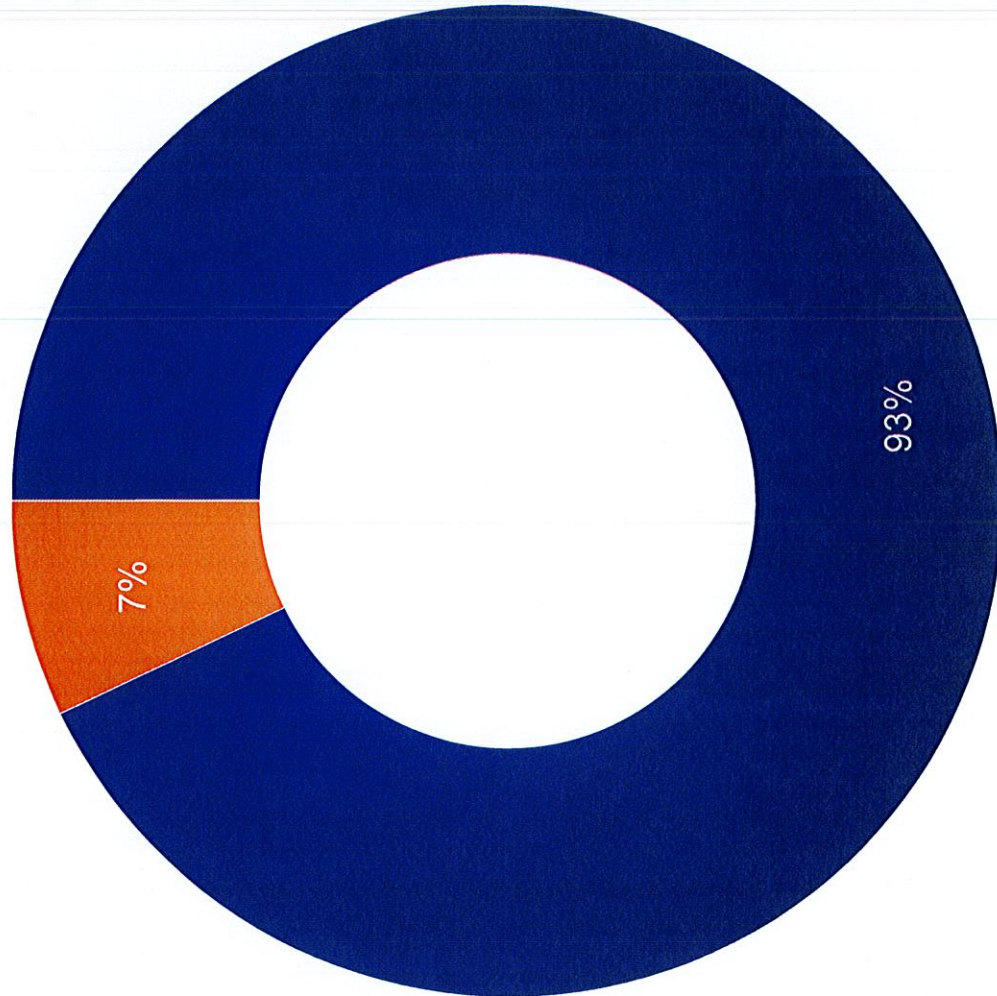
Total Incident Count: 203

Avg Resp Time: 00:04:28

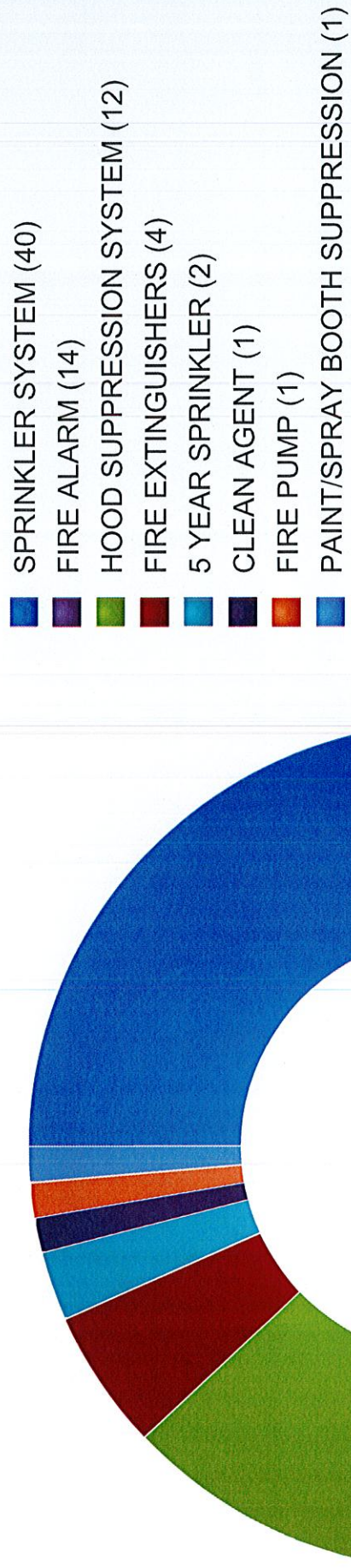
Total Calls by Property Use Group		Count	Percent of Incidents	Total Est Loss	Percent of Losses
		167	82.26%	\$0	0.00%
100	Assembly	1	0.49%	\$0	0.00%
200	Educational	3	1.47%	\$0	0.00%
400	Residential	20	9.85%	\$0	0.00%
500	Mercantile, Business	11	5.41%	\$0	0.00%
700	Manufacturing, Processing	1	0.49%	\$0	0.00%

Compliant vs. Deficient Systems

Compliant (990)
Deficient (75)



Deficient Systems by System Type



Incident Report

Report Type

Response Breakdown

✕ Date Interval ✕



Advance

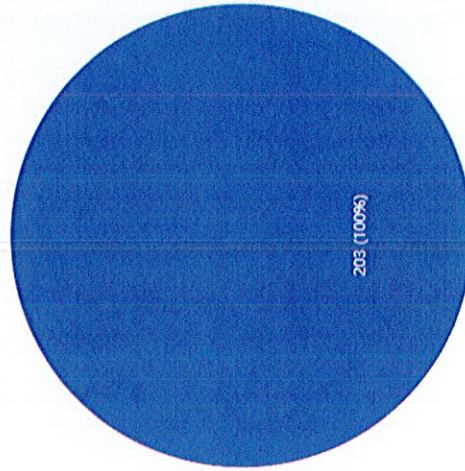
Incident Type



No

All

Total (203)



203 (100%)

Incident Report

Report Type

Mutual Aid Summary

x Date Interval x Incident Type x

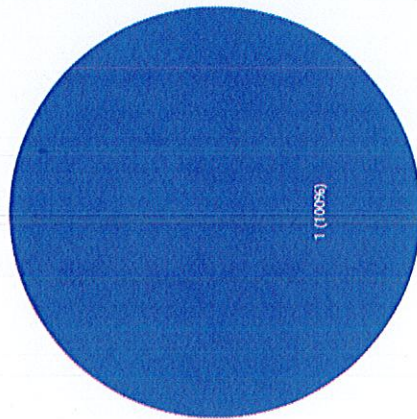


Advanced Search

Mutual aid

AID

Total aid given and received (1)



Completed Fire Inspection Assignments Month of April 2024

Fire Inspector Hoyt

Fire Alarm Inspections - 1

Sprinkler Inspections -

Commercial Inspections - 5

- Assembly -**
- Business - 1**
- Carnival -**
- Day Care -**
- Dormitories -**
- Educational -**
- Fire Drills -**
- Fire Works/Special Effects-**
- Group Home -**
- Health Care – 2**
- Industrial -**
- Mercantile -**
- Nursing Home -**
- Residential Board and Care -**
- Special Amusement/Assembly - 1**
- Tent -**
- Liquor License Inspections – 1**
- Hood and Duct Inspections -**
- Gas Station -**
- LPG Point of Sale/Bulk Storage -**

Residential Inspections-
Buildings- 3 @ Units- 11
Fire Investigations - 1

Meetings – 2

Complaints- 1
Plan Reviews - 4
Modifications - 1
Blasting Permit -

Phone Messages/Calls – 14

Department Training –
Public Fire Education – 1
Continuing Education/CFI-
Event/Smoke Scheduling-

Completed Fire Inspection Assignments Month of April 2024

Fire Inspector Yacovino

Fire Alarm Inspections - 4

Sprinkler Inspections - 5

Commercial Inspections -

Assembly -

Business - 1

Carnival -

Day Care -

Dormitories -

Educational -

Fire Drills -

Fire Works/Special Effects-

Group Home -

Health Care -

Industrial -

Mercantile -

Nursing Home -

Residential Board and Care -

Special Amusement/Assembly - 1

Tent -

Liqueur License Inspections -

Hood and Duct Inspections -

Gas Station -

LPG Point of Sale/Bulk Storage -

Residential Inspections- Buildings 19 @ 60 Units

Residential Completed Inspections -

Fire Investigations -

Meetings - 7

Complaints - 1

Plan Reviews - 12

Modifications -

Blasting Permit -

Phone Messages - 39

OEMD Training – 15 hrs

Public Fire Education –

Fire 6 - Actual Mileage -

Completed Fire Code Inspection Assignments Month of **April 2024**

Fire Marshal Lambert

Fire Alarm Inspections - 3

Sprinkler Inspections – 3

Standpipe Inspections - 1

Commercial Inspections:

- Assembly - 2
- Business - 3
- Day Care –
- Camps -
- Dormitories -
- Educational - 2
- Fire Drills/Fire Alarm - 3
- Fire Works/Special Effects- 1
- Gas Station -
- Group Home -
- Health Care –
- Hood and Duct Inspections - 3
- Hotel - 2
- Industrial -
- Liquor License Inspections -
- LPG Point of Sale/Bulk Storage -
- Mercantile - 2
- Nursing Home -
- Residential Board and Care -
- Special Amusement/Assembly – 1
- Storage - 1
- Tent -

****Residential Inspections- Buildings 2@ 63 Units**

Fire Investigations -

Meetings - 20

Complaints - 3

- Certificate of Occupancy –**
- Certificate of Compliance - 1**
- Plan Reviews - 19**
- Modifications -**
- Blasting Permit - 1**

Phone Calls/Messages - 22

- OEDM Training -**
- Continuing Education Training - 2 hrs.**

BRISTOL FIRE DEPARTMENT – TRAINING DIVISION

Captain Todd Cutler – Acting Training Officer

MONTHLY TRAINING REPORT

April 2024

- The greatest amount of work this month in the Training Division was to OSHA respiratory mask fit testing. This test ensures a tight-fitting mask seal when SCBA is worn in hazardous atmospheres. The test is required by OSHA once a year.
- We performed a psychomotor skills drill here at the drill field. Crews have been refreshing on forcible entry and SCBA donning. We will continue this through the spring along with other psychomotor skills.
- The BFD assisted Southington with their Live Burns on the 20th and 27th. The BFD provided a Safety Officer and two burn tenders for each day.
- The Training Division assisted the Bristol Health Department with hands-only CPR classes for Public Works in April. It is faster and easier to learn than traditional CPR. It is also less exhausting and less intimidating for people.
- Nicer weather has allowed for outside company-level training to continue. Crews have been at the drill field working on vehicle lifting and stabilization.
- The Training Division participated in career day at North East Middle School on the 5th and Chippens Hill Middle School on the 30th

Respectfully Submitted,

Captain Todd Cutler

Bristol Fire Department

Mechanical Division Monthly Report

April 2024

Engine 1

- Replace booster reel switch
- Repairs to DEF regen system @ Cummins

Engine 3

- Adjust rear compartment door switch

Engine 4

- Calibrate water level gauge
- Currently OOS @ Cummins for oil leaks

Tower 1

- Hydra ram control valve rebuilt
- Repair R/S On-Spots

Miscellaneous

- Station 2 riding mower: new battery
- Repair Station 2 weed wacker
- FMO fleet inspections
- Approximately 2 days spent working on spec's for E-1 & E-5
- E-6: Replace R/S hood latch
- E-7: Repair L-3 roll up door
- E-8: Repair R/R cats eye. Install new auto-charge system. Repair weather-stripping on 3 cab doors
- Pick up and deliver new stove for Station 3
- Brush 1: Repair strobe light bar. Repairs to wiring and taillights on boat trailer

Jay Kelly
Equipment Technician

Richard Hart
Chief of Department

TYPE OF FALSE ALARM	NUMBER O
Malicious, Mischievous False Call	0
System Malfunction	7
Unintentional (tripping on interior device accidentally, etc.)	21
Other False Alarms (bomb scares, etc.)	8

	NUMBER OF CIVILIAN FIRE CASUALTIES		
	NUMBER OF FIRES	DEATHS	INJURIES
Private Dwellings (1 or 2 family), Including mobile homes	3	0	0
Apartments (3 or more families)	0	0	0
Hotels and Motels	0	0	0
All Other Residential (dormitories, boarding houses, tents, etc.)	0	0	0
TOTAL RESIDENTIAL FIRES	3	0	0
Public Assembly (church, restaurant, clubs, etc.)	0	0	0
Schools And Colleges	0	0	0
Health Care And Penal Institutions (hospitals, nursing homes, prisons, etc.)	0	0	0
Stores And Offices	0	0	0
Industry, Utility, Defense, Laboratories, Manufacturing	1	0	0
Storage In Structures (barns, vehicle storage garages, general storage, etc.)	0	0	0
Other Structures (outbuildings, bridges, etc.)	0	0	0
TOTALS FOR STRUCTURE FIRES	4	0	0
Fires In Highway Vehicles (autos, trucks, buses, etc.)	1	0	0
Fires In Other Vehicles (planes, trains, ships, construction or farm vehicles, etc.)	0	0	0
Fires outside of Structures with Value involved, but Not Vehicles (outside storage, crops, timber, etc.)	0	0	0
Fires in Brush, Grass, Wildland (excluding crops and timber), with no value involved	2	0	
Fires in Rubbish, Including Dumpsters (outside of structures), with no value involved	1	0	
All Other Fires	0	0	0
TOTALS FOR FIRES	8	0	0
Rescue, Emergency Medical Responses (ambulance, EMS, rescue)	60		

False Alarm Responses (malicious or unintentional false calls, malfunctions, bomb scares)	36
Mutual Aid Responses Given	1
Hazardous Materials Responses	6
Other Hazardous Responses (arcing wires, bomb removal, power line down, etc.)	17
All Other Responses (smoke scares, lock-outs, animal rescue, etc.)	66
TOTAL FOR ALL INCIDENTS	194

	NUMBER OF CONFINED FR OF NONCONFINED FIRES	
Residential Fires	2	1
Structure Fires	1	0

ESTIMATED PROP

5500

0

0

0

5500

0

0

0

0

0

0

0

5500

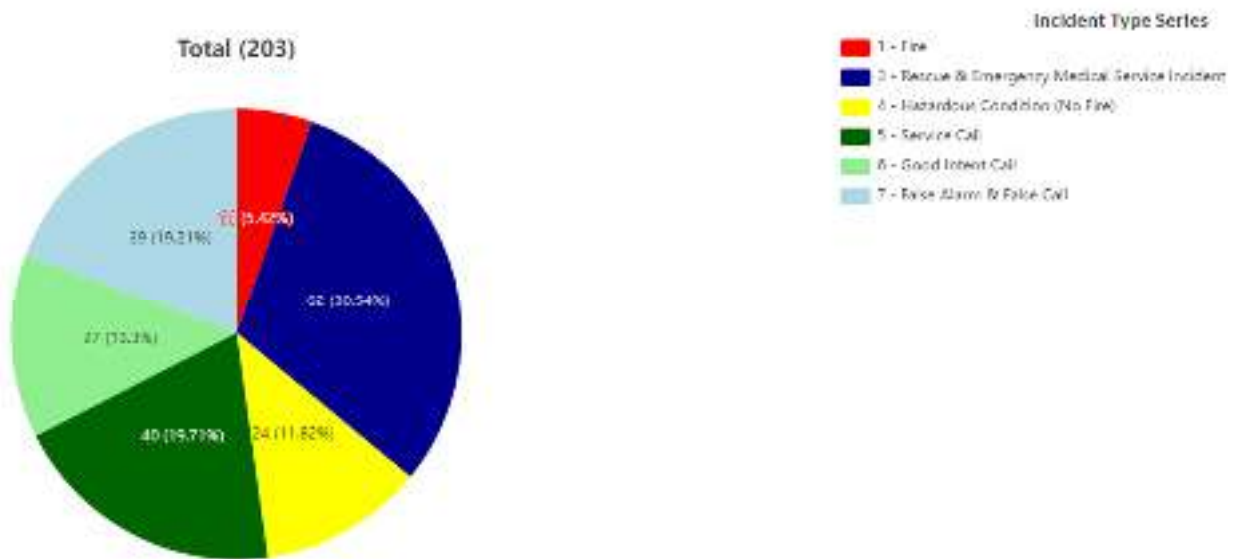
2600

0

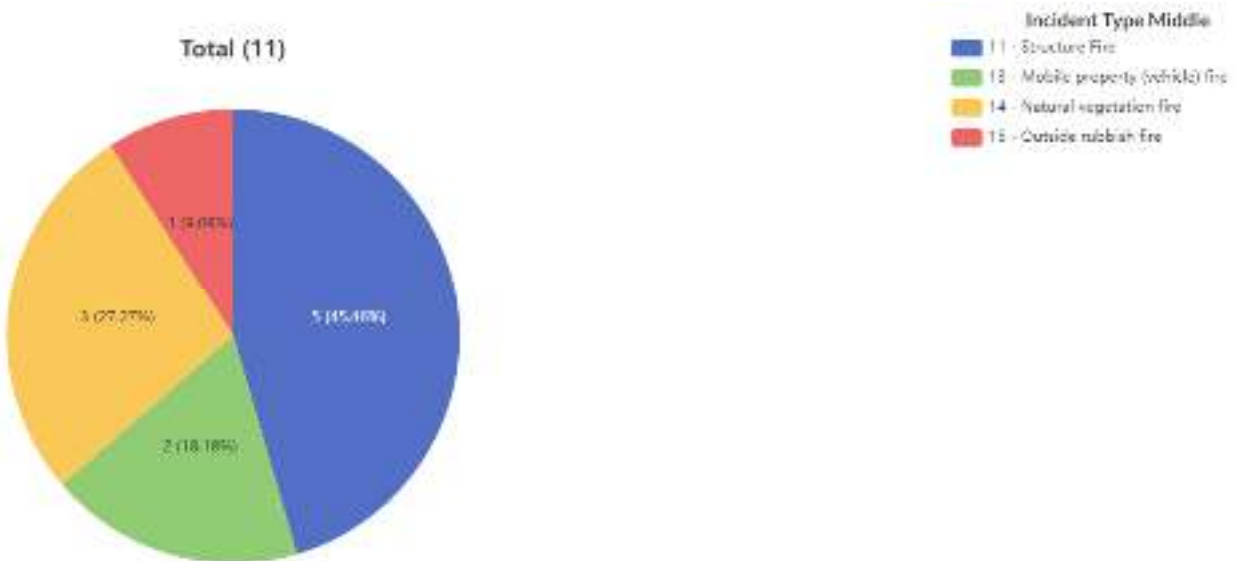
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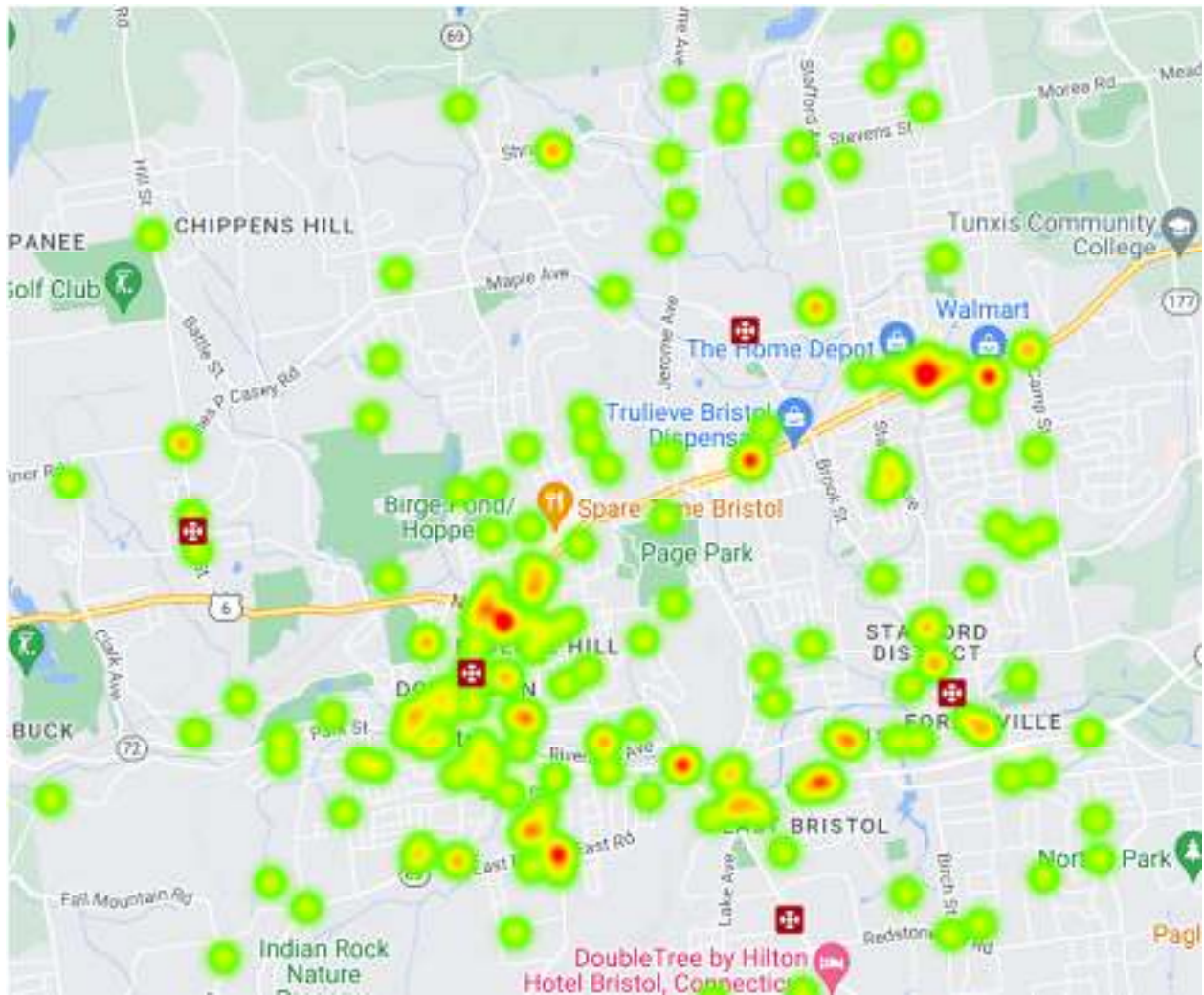
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Fires





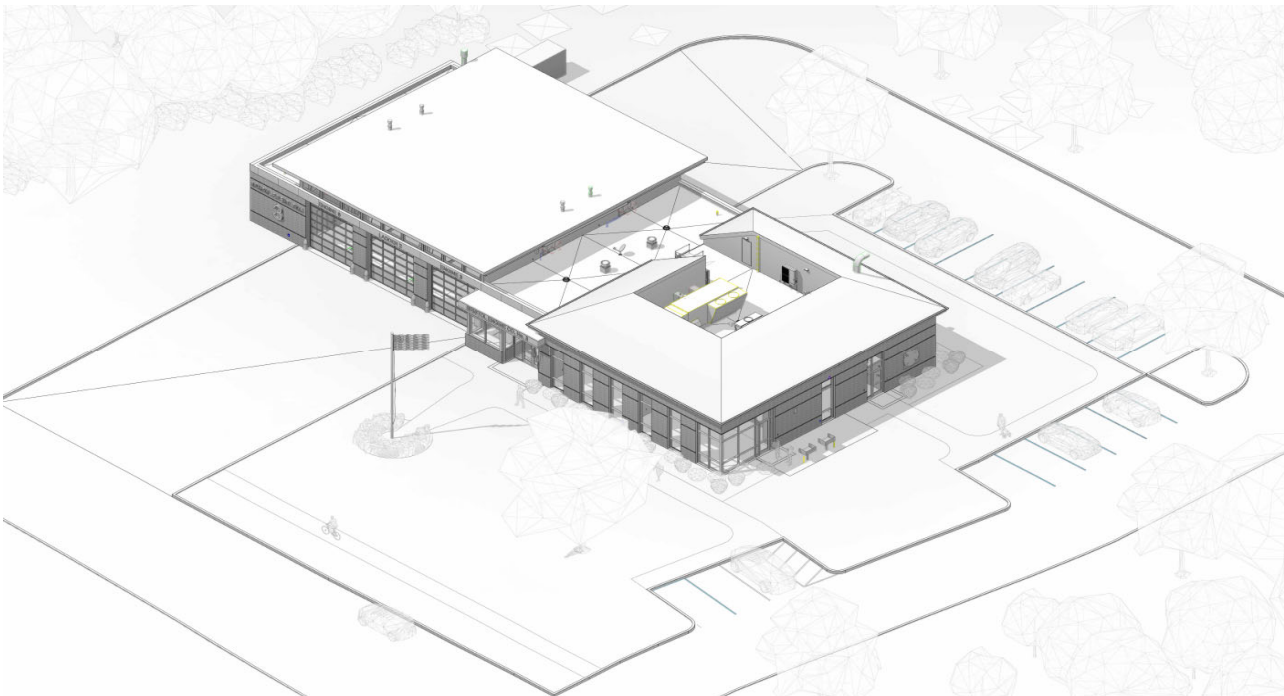
OVERLAPPING CALLS	INCIDENT NUMBER	NUMBER OF INCIDENTS OVERLAPPING	ALARM DATE/TIME	LAST UNIT CLEARED DATE/TIME
Overlap 1		2		
	BFD-2024-0000790		4/1/2024 15:07	4/1/2024 15:16
	BFD-2024-0000791		4/1/2024 15:15	4/1/2024 15:36
Overlap 2		2		
	BFD-2024-0000797		4/3/2024 13:31	4/3/2024 14:04
	BFD-2024-0000798		4/3/2024 14:02	4/3/2024 14:33
Overlap 3		2		
	BFD-2024-0000798		4/3/2024 14:02	4/3/2024 14:33
	BFD-2024-0000799		4/3/2024 14:04	4/3/2024 14:05
Overlap 4		2		
	BFD-2024-0000802		4/4/2024 6:35	4/4/2024 6:43
	BFD-2024-0000803		4/4/2024 6:38	4/4/2024 6:59
Overlap 5		2		
	BFD-2024-0000810		4/4/2024 17:11	4/4/2024 17:29
	BFD-2024-0000811		4/4/2024 17:12	4/4/2024 17:31
Overlap 6		2		
	BFD-2024-0000825		4/7/2024 17:27	4/7/2024 17:48
	BFD-2024-0000826		4/7/2024 17:32	4/7/2024 17:46
Overlap 7		2		
	BFD-2024-0000850		4/10/2024 11:57	4/10/2024 13:57
	BFD-2024-0000851		4/10/2024 12:26	4/10/2024 12:31
Overlap 8		3		
	BFD-2024-0000856		4/11/2024 13:52	4/11/2024 14:32
	BFD-2024-0000857		4/11/2024 14:18	4/11/2024 14:30
	BFD-2024-0000858		4/11/2024 14:29	4/11/2024 14:47
Overlap 9		2		
	BFD-2024-0000860		4/11/2024 20:40	4/11/2024 21:17
	BFD-2024-0000861		4/11/2024 20:54	4/11/2024 21:34
Overlap 10		2		
	BFD-2024-0000861		4/11/2024 20:54	4/11/2024 21:34
	BFD-2024-0000862		4/11/2024 21:21	4/11/2024 21:28
Overlap 11		2		
	BFD-2024-0000881		4/13/2024 20:22	4/13/2024 20:34
	BFD-2024-0000882		4/13/2024 20:28	4/13/2024 20:39
Overlap 12		2		
	BFD-2024-0000894		4/15/2024 18:18	4/15/2024 19:29
	BFD-2024-0000895		4/15/2024 19:16	4/15/2024 19:31
Overlap 13		2		
	BFD-2024-0000901		4/16/2024 16:05	4/16/2024 16:26
	BFD-2024-0000902		4/16/2024 16:08	4/16/2024 16:41
Overlap 14		2		
	BFD-2024-0000906		4/17/2024 12:34	4/17/2024 12:49
	BFD-2024-0000907		4/17/2024 12:42	4/17/2024 12:49

Overlap 15		3		
	BFD-2024-0000918		4/19/2024 14:10	4/19/2024 14:42
	BFD-2024-0000919		4/19/2024 14:29	4/19/2024 15:00
	BFD-2024-0000920		4/19/2024 14:34	4/19/2024 15:16
Overlap 16		2		
	BFD-2024-0000932		4/22/2024 7:30	4/22/2024 8:01
	BFD-2024-0000933		4/22/2024 7:46	4/22/2024 8:05
Overlap 17		2		
	BFD-2024-0000953		4/25/2024 16:39	4/25/2024 17:38
	BFD-2024-0000954		4/25/2024 16:40	4/25/2024 16:48
Overlap 18		2		
	BFD-2024-0000960		4/27/2024 11:05	4/27/2024 11:17
	BFD-2024-0000961		4/27/2024 11:17	4/27/2024 11:40
Overlap 19		2		
	BFD-2024-0000963		4/27/2024 13:00	4/27/2024 13:18
	BFD-2024-0000964		4/27/2024 13:13	4/27/2024 13:18
Overlap 20		2		
	BFD-2024-0000968		4/27/2024 21:09	4/27/2024 21:21
	BFD-2024-0000969		4/27/2024 21:11	4/27/2024 21:45
Overlap 21		2		
	BFD-2024-0000978		4/29/2024 10:31	4/29/2024 11:04
	BFD-2024-0000979		4/29/2024 10:46	4/29/2024 11:05
unt of Overlapping Incidents		44		

City of Bristol New Firehouse No.3

DD Documents Estimate

Date: 5/17/2024 REVISED
Per Review 5-17-24



Basis Of Estimate

Basis of Estimate

Introduction

PACS has been engaged by the Silver Petrucelli to provide a Cost Estimate for:

Estimate is based on the following documents provided by Silver Petrucelli & Associates

- **23-017_Bristol Fire #3_DESIGN DEVELOPMENT_COMBINED by Silver Petrucelli dated April 17, 2024, 87pp**
- **090000 Schedule of Finishes by Silver Petrucelli, 8pp**
- **Revised Geotechnical Engineering Report - Fire Station No. 3, Bristol, CT by DTE Consulting dated April 2024 35pp**

Quantities and Methodology

- The cost estimate is based on the measurement of quantities wherever possible.
- Where actual measurements are not used, parametric measurements are used in conjunction with previous but similar project benchmarks.
- PACS uses a wide range of standard measurement and quantifying methods that are common practice in the construction industry today.

Basis of Pricing

- a) The construction costs shown in this estimate represent the fair market value and are not intended to be a prediction of the lowest bid.
- b) The costs include: labor, material, equipment and the subcontractors overhead and profit. (Subcontractor's Mark Up)
- c) The cost of labor is based on local Prevailing wage rates for all trades.
- d) The construction rates used are based in "today's dollar" and an escalation allowance is included in the Estimate summary.
- e) Our pricing assumes competitive bidding on all elements of the construction work, assuming a minimum of three competitive bidders for all general contractors, subcontractors, materials and
- f) It is typical in our experience that if fewer bids are received or solicited, prices can be expected to be higher due to lack of competition.
- g) The subcontractor's mark ups include their own overhead, including the cost in the field as well as profit.
- h) PACS has priced this taking into account current market conditions, competition between trades and the cost fluctuations in the construction industry.
- i) Estimate assumes no Phasing required..
- j) Proposal is based on construction being performed on regular hours.

Design and Pricing Contingency

A Design and Pricing Contingency is used as a budgetary tool that allows for scope and detail not defined during the design stage. As the design becomes more defined as the project passes through the design stages, the Design and Pricing Contingency decreases as more scope and detail is now being shown in the documents and is therefore reflected in the cost estimate as actual trade cost. The Design and Pricing Contingency is reduced to zero at 100% Bid Documents.

Escalation

As outlined above the estimate is calculated using rates that are "today's dollar" and reflect the cost of the project as if it was to bid on the date of issue. Due to construction projects having long design phases and long construction schedules, it is imperative to project the construction cost further ahead into the future to the point at which it is bid out. It is common practice to escalate the cost estimate to the mid point of construction to accommodate for economic inflation. This percentage accounts for this increase.

Construction Contingency

PACS advise that a Construction Contingency is carried for unforeseen project conditions and field changes. Typically we see this in the range of 3% to 5% dependent on the scope of the project.



Basis Of Estimate

Probable Cost

It is important for the Owner and Design team to carefully review this cost estimate including all line item descriptions, clarifications, exclusions, unit prices, assumptions, allowances, mark ups and contingencies to ensure the estimate reflects the scope of the project.

PACS has produced the cost estimate based on the widely practiced methods of cost estimating and aims to reflect the fair market value of the construction project. Our aim is to be not the highest or the lowest in the range of bids but to use our experience and expertise in the construction industry to provide the client with a degree of confidence that the project will be close to our calculated estimate.

Exclusions

This cost estimate excludes the following:

- Premiums for working in inaccessible or partially accessible spaces during construction
- Surplus Stock and Spares
- Premiums for restrictive and uncompetitive bidding
- Premiums for non-standard work times
- Work beyond the project limits
- CT Sales Tax - Assumes Exempt
- Wellpoints - Assumes open trench pumping only
- Rock or Unsuitable soils remediation
- Hazardous, Contaminated or Polluted soils
- AV Equipment / Technology Budget
- Utility Costs - Electric, Gas, Water (assumes by Owner)

Risks to the Cost Estimate

Items that may affect the cost estimate, the list as follows but not limited:

- Changes to the design subsequent to the issue of the documents stated above which this estimate is based on
- Non Competitive Bid restrictions and the sole sourcing of products/materials from specific vendors
- Restrictive technical specifications that produce a non competitive environment
- Changes to the project schedule that delay the project and therefore have impact on cost
- Incomplete and poorly coordinated documentation
- Access restrictions, unidentified out of hours work policies and phasing restrictions
- Restrictive technical specifications that produce a non competitive environment
- Unforeseen and unknown Site conditions

Trade		Cost	Cost / SF
01 50 00	Temporary Facilities and Controls	\$ 39,470	\$ 4.50
03 30 00	Cast-In-Place Concrete	\$ 269,240	\$ 30.70
04 20 00	Unit Masonry	\$ 398,460	\$ 45.43
05 12 00	Structural Steel	\$ 464,740	\$ 52.99
05 40 00	Cold Formed Metal Framing	\$ 103,060	\$ 11.75
05 50 00	Metal Fabrications	\$ 64,250	\$ 7.33
06 10 00	Rough Carpentry	\$ 111,222	\$ 12.68
06 20 00	Finish Carpentry	\$ 154,012	\$ 17.56
07 21 00	Thermal Insulation	\$ 31,995	\$ 3.65
07 25 00	Air & Vapor Barriers	\$ 28,007	\$ 3.19
07 40 00	Metal Siding & Panels	\$ -	\$ -
07 50 00	Roofing	\$ 265,018	\$ 30.22
07 92 00	Joint Sealants	\$ 12,500	\$ 1.43
08 10 00	Doors and Frames	\$ 48,715	\$ 5.55
08 30 00	Specialty Doors	\$ 173,750	\$ 19.81
08 41 00	Entrances & Storefront	\$ 224,570	\$ 25.60
08 71 00	Door Hardware	\$ 38,400	\$ 4.38
08 80 00	Glass & Glazing	\$ -	\$ -
09 21 00	Gypsum Board Assemblies	\$ 100,169	\$ 11.42
09 30 00	Tile	\$ 6,790	\$ 0.77
09 51 00	Acoustical Ceiling	\$ 30,483	\$ 3.48
09 61 10	Vapor Mitigation	\$ 5,745	\$ 0.66
09 65 00	Resilient Flooring	\$ 38,419	\$ 4.38
09 67 00	Resinous Flooring	\$ 93,952	\$ 10.71
09 68 00	Carpet	\$ 5,999	\$ 0.68
09 91 00	Painting & Wallcoverings	\$ 74,404	\$ 8.48
10 14 00	Signage & Graphics	\$ 22,750	\$ 2.59
10 26 00	Wall & Door Protection	\$ 4,370	\$ 0.50
10 28 00	Toilet Accessories	\$ 11,080	\$ 1.26
10 41 00	Emergency Access Cabinets	\$ 610	\$ 0.07

Trade		Cost	Cost / SF
10 44 00	Fire Protection Specialties	\$ 2,085	\$ 0.24
10 51 00	Lockers	\$ 52,590	\$ 6.00
11 30 00	Residential Appliances	\$ -	\$ -
11 40 00	Foodservice Equipment	\$ 28,814	\$ 3.29
11 52 00	Audio-Visual Equipment	\$ 2,500	\$ 0.29
11 90 00	Miscellaneous Equipment	\$ 50,810	\$ 5.79
12 20 00	Window Treatment	\$ 15,065	\$ 1.72
21 00 00	Fire Protection	\$ 84,640	\$ 9.65
22 00 00	Plumbing	\$ 273,069	\$ 31.13
23 00 00	HVAC	\$ 633,603	\$ 72.24
26 00 00	Electrical	\$ 695,455	\$ 79.29
33 00 00	Sitework	\$ 1,119,731	\$ 127.66
TOTAL DIRECT COST		\$ 5,787,489	\$659.84

Trade		Cost	Cost / SF
TOTAL DIRECT COST (FROM PREVIOUS PAGE)		\$ 5,787,489	\$659.84
Design & Estimating Contingency	4.00%	\$ 231,500	#
Escalation - @ 6% Annually	1.00%	\$ 60,190	#
General Conditions- (11 mos @ 50,000 / Month)	\$ 550000	\$ 550,000	#
Preconstruction - Assumes None		\$ -	
GC Insurances	0.85%	\$ 56,348	#
Building Permit		\$ 50,000	#
GC Surety Bond	0.78%	\$ 47,418	#
GC Fee	3.00%	\$ 182,375	#
TOTAL CONSTRUCTION COST (DIRECT & INDIRECT COSTS)		\$ 6,965,320	\$794.13
Bonding & Legal fees to Town	\$ 10000	\$ 10,000	
A&E Fees / Professional Services	\$ 307800	\$ 307,800	
Commissioning agent	\$ 35000	\$ 35,000	
Owners Representative	\$ 175000	\$ 175,000	
Builders Risk Insurance - Town	\$ 40000	\$ 40,000	
Testing & Inspections	\$ 20000	\$ 20,000	
Moving & Relocation costs	Excluded		
FF&E (Furniture Fixtures and Equipment)	\$ 300000	\$ 300,000	
State Permit 0.26%	\$ 7853120	\$ 20,418	
A/V Systems - Assumes in FF&E	Excluded		
Artwork - By Owner	Excluded		
Utility Connection fees allowance	\$ 25000	\$ 25,000	
Owners Contingency:	% 5.00%	\$ 394,927	
TOTAL CONSTRUCTION & SOFT COSTS		\$ 8,293,465	\$945.56
<u>Alternates</u>			
* Add Fire Water Storage tank and Practice Hydrant		\$ 190,000	
* Deduct EPX-1 / EPX-2 in all areas but the Decon area		\$ (109,450)	
* Provide Bifold Doors at Apparatus Bay ILO Overhead doors		\$ 80,183	

Base Estimate

Element / Description	Quantity	Unit	Unit Rate (\$)	Extension (\$)	Subtotal (\$)
01 50 00 Temporary Facilities and Controls					
Temporary Site Services - GC Bid (minimal)	8,771	SF	\$ 4.50	\$ 39,470	
Subtotal Temporary Facilities and Controls					\$ 39,470
02 11 00 Contaminated Soil Excavation & Disposal					
Excluded			< Excluded >		
Subtotal Contaminated Soil Excavation & Disposal					\$ -
02 12 00 Transportation/Disposal of Contaminated Materials					
Excluded			< Excluded >		
Subtotal Transportation/Disposal of Contaminated Materials					\$ -
02 80 00 Hazardous Abatement					
Excluded			< Excluded >		
Subtotal Hazardous Abatement					\$ -
02 41 16 Building Demolition					
Assumes not required			< N/A >		
Subtotal Building Demolition					\$ -
02 41 19 Selective Demolition					
Assumes not required			< N/A >		
Subtotal Selective Demolition					\$ -
03 30 00 Cast-In-Place Concrete					
Continuous footings	42.00	CYD	\$ 645.00	\$ 27,090	
Column Footings	71.00	CYD	\$ 695.00	\$ 49,345	
Haunch slab footings			< N/A >		
Frostwall Foundations with Brick Ledge	81.00	CYD	\$ 865.00	\$ 70,065	
Piers & Pilasters	7.00	CYD	\$ 1,175.00	\$ 8,225	
Stair pan infill			< N/A >		
Slab on Grade 5"	5,350	SF	\$ 10.25	\$ 54,838	
Slab on Grade 7" reinforced & Sloped in Aparatus Bay	3,153	SF	\$ 17.50	\$ 55,178	
Slab on Deck			< N/A >		
Self leveling underlayment			< N/A >		
Concrete mechanical equipment pads	120	sf	\$ 22.50	\$ 2,700	
Concrete curb @ Decon Wash area	8	lf	\$ 225.00	\$ 1,800	
Concrete Locker basses			< N/A >		
Subtotal Cast-In-Place Concrete					\$ 269,240
04 20 00 Unit Masonry					
Envelope					
Envelope CMU Backup - 8"	1,956	SF	\$ 29.00	\$ 56,724	
Envelope CMU Bond Beam	320	SF	\$ 60.00	\$ 19,200	
Brick Veneer	4,598	SF	\$ 43.00	\$ 197,714	
Cast Stone veneer band	563	SF	\$ 55.00	\$ 30,965	
Interior					
Interior CMU Partition 2A - 8"	3,046	SF	\$ 29.50	\$ 89,857	
Interior CMU Partition 2C - 4"	160	SF	\$ 25.00	\$ 4,000	
Subtotal Unit Masonry					\$ 398,460
05 12 00 Structural Steel					
Structural Steel - Beams & Columns and Braced Frames per drawings	57.20	TON	\$ 4,750.00	\$ 271,700	
Structural Steel Misc angles, Plates, Lintels, bracing - 20%	11.44	TON	\$ 4,750.00	\$ 54,340	
Galvanized Steel premium - exposed	1.00	LS	\$ 25,000.00	\$ 25,000	
Metal Decking @ Composite deck			< N/A >		
Metal Decking @ Roof Systems - 1.5 B deck	5,582.00	SF	\$ 6.75	\$ 37,679	
Metal Decking @ Roof Systems - 5.5 Acoustical deck	4,170.00	SF	\$ 13.95	\$ 58,172	
Column Base Plates, AB, Grouting	30.00	EA	\$ 595.00	\$ 17,850	
Subtotal Structural Steel					\$ 464,740
05 40 00 Cold Formed Metal Framing					
Roof Truss Vertical Framing CFMF	2,252	SF	\$ 13.95	\$ 31,415	
Envelope CFMF Backup @ 14'	1,870	SF	\$ 13.95	\$ 26,087	
CFMF Channel Rafters	2,682	LF	\$ 12.25	\$ 32,855	
Soffit framing systems	1,037	LF	\$ 12.25	\$ 12,703	
Subtotal Cold Formed Metal Framing					\$ 103,060
05 50 00 Metal Fabrications					
Misc Metals - Roof Screening and Supports - Assumes not required			< Not required >		
Misc Metals - Relieving Angles - Assumes none required			< Not required >		
Beam Pocket Imbeds	24	EA	\$ 325.00	\$ 7,800	
Duct supports @ Roof and Attic	1	LS	\$ 5,000.00	\$ 5,000	
Equipment support rails	1	LS	\$ 3,500.00	\$ 3,500	
Roof Access Ladder	14	VLF	\$ 225.00	\$ 3,150	
Misc Metals - Aparatus Door Frames	6	EA	\$ 4,500.00	\$ 27,000	
Misc Metals - Fitted Bollards 12" Concrete filled	12	EA	\$ 1,275.00	\$ 15,300	
Misc Metals - Axe Sculpture	1	LS	\$ 2,500.00	\$ 2,500	
Subtotal Metal Fabrications					\$ 64,250
06 10 00 Rough Carpentry					
Window Blocking @ Windows	1,214	LF	\$ 13.95	\$ 16,935	
Roof Blocking	1,054	LF	\$ 18.50	\$ 19,499	
Nailboard (uninsulated) @ Asphalt pitched roof	3,255	SF	\$ 8.95	\$ 29,132	
5/8" Plywood in Attic Space floor			< Removed >		
Plywood Sheathing @ CFMF Envelope	4,122	SF	\$ 8.65	\$ 35,655	
Inwall and OnWall blocking - Interior	1	LS	\$ 2,500.00	\$ 2,500	
Exterior blocking - Trims	1	LS	\$ 7,500.00	\$ 7,500	
Subtotal Rough Carpentry					\$ 111,222

Base Estimate

Element / Description	Quantity	Unit	Unit Rate (\$)	Extension (\$)	Subtotal (\$)
06 20 00 Finish Carpentry					
Exterior Finish Carpentry					
Sloped roof fascia - PVC 12"	234	LF	\$ 13.67	\$ 3,199	
Sloped roof trip @ Fascia 4"	221	LF	\$ 7.35	\$ 1,624	
Azek or similar PVC Siding & Soffit systems	2,818	SF	\$ 28.00	\$ 78,904	
Interior Finish Carpentry & Millwork					
Kitchen base cabinets - Island	12	LF	\$ 825.00	\$ 9,900	
Kitchen base cabinets Deep with PLAM Tpps	16	LF	\$ 575.00	\$ 9,200	
Stainless tops	91	SF	\$ 155.00	\$ 14,105	
PLAM upper Cabinets	17	LF	\$ 295.00	\$ 5,015	
PLAM upper Cabinet fillers	27	LF	\$ 150.00	\$ 4,050	
PLAM Full height Pantry	4	LF	\$ 795.00	\$ 3,180	
Workroom counter Stainless Surface with RAKKS supports - wide HD	19	LF	\$ 345.00	\$ 6,555	
Watchroom counter Solid Surface with RAKKS supports	18	LF	\$ 295.00	\$ 5,310	
Pantry Storage Shelving X5	16	LF	\$ 55.00	\$ 880	
Interior window sills - Solid surface eased edge	186	LF	\$ 65.00	\$ 12,090	
Personnel Bunk Wardrobe Units	< In FF&E >				
Subtotal Finish Carpentry					\$ 154,012
07 10 00 Damp / Waterproofing					
Waterproofing & Drainage Board	< Included in Civil Structural E&B >				
Subtotal Damp / Waterproofing					\$ -
07 21 00 Thermal Insulation					
Insulation @ Exterior	1,870	SF	\$ 6.45	\$ 12,062	
Insulation @ Attic	2,393	SF	\$ 8.33	\$ 19,934	
Subtotal Thermal Insulation					\$ 31,995
07 25 00 Air & Vapor Barriers					
AVB @ Envelope	4,001	SF	\$ 7.00	\$ 28,007	
Subtotal Air & Vapor Barriers					\$ 28,007
07 40 00 Metal Siding Panels & Soffits -					
See Finish Carpentry	< See finish Carpentry >				
Subtotal Metal Siding Panels & Soffits -					\$ -
07 50 00 Roofing					
EPDM Roof on Tapered Insulation	7,307	SF	\$ 29.50	\$ 215,557	
EPDM Roof walk pads	50	EA	\$ 81.25	\$ 4,063	
Roof curbs and Dunnage flashing & Penetrations	1	LS	\$ 3,500.00	\$ 3,500	
Asphalt Shingles on Ice & Water Shield	3,255	SF	\$ 9.25	\$ 30,109	
Gutters - Aluminum	235	LF	\$ 39.00	\$ 9,165	
Leaders - Aluminum	75	LF	\$ 35.00	\$ 2,625	
Subtotal Roofing					\$ 265,018
07 81 00 Applied Fireproofing					
Assumes not required	< Not included >				
Subtotal Applied Fireproofing					\$ -
07 84 00 Penetration Firestopping					
In Trades					
Subtotal Penetration Firestopping					\$ -
07 92 00 Joint Sealants					
Caulking & Sealants	1	LS	\$ 12,500.00	\$ 12,500	
Subtotal Joint Sealants					\$ 12,500
07 95 00 Expansion Control					
Expansion systems - Assumes not required	< Not included >				
Subtotal Expansion Control					\$ -
08 10 00 Doors & Frames					
Frame A - HM3070	27	EA	\$ 450.00	\$ 12,150	
Frame A - HM6070	3	EA	\$ 595.00	\$ 1,785	
Door leaf 3070 HM	33	EA	\$ 365.00	\$ 12,045	
Premium Rating	5	EA	\$ 550.00	\$ 2,750	
Premium 1/2 lite	1	EA	\$ 575.00	\$ 575	
Door hardware premium - Electrified Locksets	3	EA	\$ 2,750.00	\$ 8,250	
Install frame	30	EA	\$ 220.00	\$ 6,600	
Install Door leaf	38	EA	\$ 120.00	\$ 4,560	
Subtotal Doors & Frames					\$ 48,715
08 30 00 Specialty Doors					
New 14x14 Vertically acting Aparatus Bay Doorswith High Speed operator and controls - Installed	6	EA	\$ 27,500.00	\$ 165,000	
Roof Hatch with Safety Railings	1	EA	\$ 3,250.00	\$ 3,250	
Roof access to Pitched Attic Space - DF&H	2	EA	\$ 2,750.00	\$ 5,500	
Subtotal Specialty Doors					\$ 173,750
08 41 00 Entrances & Storefront					
Exterior Aluminum Glazed Storefront Doors and Hardware - Installed	8	EA	\$ 4,250.00	\$ 34,000	
Storefront Systems - Glazed openings -	1,971	SF	\$ 95.00	\$ 187,245	
Storefront Systems - Glazed openings - Added mullions - eliminate framing	35	SF	\$ 95.00	\$ 3,325	
Subtotal Entrances & Storefront					\$ 224,570
08 44 00 Metal Framed Curtainwall					
Curtainwall Systems -	< N/A >				
Subtotal Metal Framed Curtainwall					\$ -
08 50 00 Windows					
See Storefronts	< N/A >				
Subtotal Windows					\$ -
08 71 00 Door Hardware					
Hardware set / leaf - Passage (installed)	38	EA	\$ 900.00	\$ 34,200	
Hardware Set / Leaf - Egress (installed) - premium	6	EA	\$ 700.00	\$ 4,200	
Access Control Head end Equipment	< In Technology >				
Subtotal Door Hardware					\$ 38,400
08 80 00 Glass & Glazing					
Interior Borrowed Lites - Sidelites	< Removed >				
Skylights - None Identified	< N/A >				
Full height mirror @ Fitness - None identified	< Not included >				
Full height mirror @ Bunk rooms and Bathrooms	< Not included >				
Subtotal Glass & Glazing					\$ -

Base Estimate

Element / Description	Quantity	Unit	Unit Rate (\$)	Extension (\$)	Subtotal (\$)
08 90 00 Louvers & Vents					
None identified					
			< Included in Mechanical >		
Subtotal Louvers & Vents					\$ -
09 21 00 Gypsum Board Assemblies					
Wall Type 1A	553	SF	\$ 7.95	\$ 4,396	
Wall Type 1B	6,628	SF	\$ 10.45	\$ 69,263	
Wall Type 1C	351	SF	\$ 13.25	\$ 4,651	
Gyp @ Envelope walls	3,966	SF	\$ 3.45	\$ 13,683	
Gyp ceilings - suspended	81	SF	\$ 18.00	\$ 1,458	
Gyp soffits and Ceiling transitions	625	SF	\$ 10.75	\$ 6,719	
Subtotal Gypsum Board Assemblies					\$ 100,169
09 30 00 Tile					
PF-1- Toilets 24x24	237	SF	\$ 21.00	\$ 4,977	
PFT-1 Base	148	LF	\$ 12.25	\$ 1,813	
Porcelainwall tile - full height at wet walls			< Removed >		
Subtotal Tile					\$ 6,790
09 51 00 Acoustical Ceiling					
Ceilings - ACT 2x2 Ultima	3,523	SF	\$ 7.10	\$ 25,013	
Ceilings - ACT 2x2 Healthzone	585	SF	\$ 9.35	\$ 5,470	
Subtotal Acoustical Ceiling					\$ 30,483
09 64 00 Wood Flooring					
None identified			< N/A >		
Subtotal Wood Flooring					\$ -
09 61 10 Vapor Mitigation					
Topical Moisture Mitigation- High Performance Glues	3,482	SF	\$ 1.65	\$ 5,745	
Subtotal Vapor Mitigation					\$ 5,745
09 65 00 Resilient Flooring					
Resilient LVT	1,610	SF	\$ 7.65	\$ 12,317	
Safety sheet floor	500	SF	\$ 13.10	\$ 6,550	
RAF - Rubber Athletic Floor	515	SF	\$ 17.65	\$ 9,090	
Rubber Stair Treads and risers			< Not included >		
Sealer @ Mechanical spaces			< Not included >		
Resilient Base RB-1 / RB-2	1,142	LF	\$ 3.45	\$ 3,940	
Integral Base @ Safety floor	217	LF	\$ 11.00	\$ 2,387	
Transition Strips	1	LS	\$ 750.00	\$ 750	
Floor Prep - Resilient	2,625	SF	\$ 1.10	\$ 2,888	
Attic Stock Flooring 10% Materials	10%	LS	\$ 4,982	\$ 498	
Subtotal Resilient Flooring					\$ 38,419
09 66 00 Terrazzo					
None identified			< N/A >		
Subtotal Terrazzo					\$ -
09 67 00 Resinous Flooring					
EPX1 -	738	SF	\$ 19.65	\$ 14,502	
EPX1 - EPX-2 flooring / patterns Aparatus Bay	3,152	SF	\$ 23.95	\$ 75,490	
EPX Base integral	360	SF	\$ 11.00	\$ 3,960	
Subtotal Resinous Flooring					\$ 93,952
09 68 00 Carpet					
Carpet Tile	857	SF	\$ 6.25	\$ 5,356	
Carpet Tile floor prep	857	SF	\$ 0.75	\$ 643	
Subtotal Carpet					\$ 5,999
09 80 00 Acoustical Treatment					
None identified			< N/A >		
Subtotal Acoustical Treatment					\$ -
09 91 00 Painting & Wallcoverings					
Painting - walls & Ceilings - Gyp	19,183	SF	\$ 0.78	\$ 14,963	
Painting - walls CMU including block-fill - Epoxy Paint	8,494	SF	\$ 4.65	\$ 39,497	
Painting - Exposed Structure & Decking - Epoxy	3,804	SF	\$ 3.45	\$ 13,124	
Painting Exterior trims and siding			< N/A >		
Paint Doors and Frames	38	EA	\$ 80.00	\$ 3,040	
Vinyl Wallcoverings			< N/A >		
Digital Wallcoverings	216	SF	\$ 17.50	\$ 3,780	
Subtotal Painting & Wallcoverings					\$ 74,404
10 11 00 Visual Display Surfaces					
Wallboard & Tackboards allowance			< N/A >		
Display Cabinet	1	LS	\$ 3,000.00	\$ 3,000	
Subtotal Visual Display Surfaces					\$ 3,000
10 14 00 Signage & Graphics					
Signage - Interior Wayfinding	1	LS	\$ 1,250.00	\$ 1,250	
Signage - Interior ADA / Rooms	35	EA	\$ 95.00	\$ 3,325	
Signage - Exterior Building Pin Letters 12" (removed over front entry)	62	EA	\$ 225.00	\$ 13,950	
Signage -Exterior Building Pin Letters 36"	1	EA	\$ 725.00	\$ 725	
Signage -Exterior Fire Rescue Sign	1	EA	\$ 3,500.00	\$ 3,500	
Subtotal Signage & Graphics					\$ 22,750
10 21 13 Toilet Compartments					
None identified			< N/A >		
Subtotal Toilet Compartments					\$ -
10 21 23 Cubicle Curtain & Track					
None identified			< N/A >		
Subtotal Cubicle Curtain & Track					\$ -
10 22 00 Operable Partitions					
None identified			< N/A >		
Subtotal Operable Partitions					\$ -
10 26 00 Wall & Door Protection					
FRP Paneling @ Custodial	200	SF	\$ 9.35	\$ 1,870	
Corner Guards - Allowance	1	LS	\$ 2,500.00	\$ 2,500	
Subtotal Wall & Door Protection					\$ 4,370

Base Estimate

Element / Description	Quantity	Unit	Unit Rate (\$)	Extension (\$)	Subtotal (\$)
10 28 00 Toilet Accessories					
TR Accessories - Grab Bars set (3)	2	EA	\$ 365.00	\$ 730	
TR Accessories - Lav Guard	4	EA	\$ 295.00	\$ 1,180	
TR Accessories - Shower seat	1	EA	\$ 965.00	\$ 965	
TR Accessories - Shower curtain & rod assy	4	EA	\$ 395.00	\$ 1,580	
TR Accessories - Shower bench floor mounted	8	lf	\$ 225.00	\$ 1,800	
TR Accessories - Soap dispensers	7	EA	\$ 95.00	\$ 665	
TR Accessories - PT Dispenser	6	EA	\$ 95.00	\$ 570	
TR Accessories - Mirrors	4	EA	\$ 345.00	\$ 1,380	
TR Accessories - Coat hooks	10	EA	\$ 35.00	\$ 350	
TR Accessories - Custodial	1	EA	\$ 310.00	\$ 310	
TP Dispensers	4	EA	\$ 65.00	\$ 260	
Baby changing stations	< None identified >				
Accessory Installation	43	EA	\$ 30.00	\$ 1,290	
Subtotal Toilet Accessories					\$ 11,080
10 41 00 Emergency Access Cabinets					
Knox Box	1	LS	\$ 610.00	\$ 610	
Subtotal Emergency Access Cabinets					\$ 610
10 44 00 Fire Protection Specialties					
FE Cabinets and Extinguishers - Qty assumed	3	EA	\$ 695.00	\$ 2,085	
Subtotal Fire Protection Specialties					\$ 2,085
10 51 00 Lockers					
Penco Patriot double door gear lockers GW242472SS4DCL	32	EA	\$ 1,395.00	\$ 44,640	
Penco Patriot double door gear lockers - shipping and distribution	1	LS	\$ 3,000.00	\$ 3,000	
Penco Patriot double door gear lockers - installation	30	EA	\$ 165.00	\$ 4,950	
Subtotal Lockers					\$ 52,590
11 13 00 Loading Dock Equipment					
None identified	< N/A >				
Subtotal Loading Dock Equipment					\$ -
11 30 00 Residential Appliances					
Dryer - residential	< FF&E >				
Washer - residential	< FF&E >				
Washer - Commercial @ Gear wash room	< FF&E >				
Extractor- Commercial @ Gear wash room	< FF&E >				
Subtotal Residential Appliances					\$ -
11 40 00 Foodservice Equipment					
Food Lockers	< N/A >				
6 burner range with 24" Griddle (2 ovens) - Southbend S80-DD	1	LS	\$ 7,750.00	\$ 7,750	
Drop in Sink Single	1	LS	\$ 977.00	\$ 977	
Drop in Sink - Dual with drain boards	1	LS	\$ 2,822.00	\$ 2,822	
Reach in Refrigerator - 2 door	1	LS	\$ 5,500.00	\$ 5,500	
Reach in Freezer True TR-38 FRZ	1	LS	\$ 4,750.00	\$ 4,750	
Under Counter Refrigerator True TUR-24-I	1	LS	\$ 2,750.00	\$ 2,750	
Pot Filler T&S Brass	1	LS	\$ 325.00	\$ 325	
Coffee Maker Curtiss AL3GPT	1	LS	\$ 1,750.00	\$ 1,750	
Trash Chute	1	LS	\$ 225.00	\$ 225	
Microwave Waring WMQ-120	1	LS	\$ 715.00	\$ 715	
Commercial Toaster HATCO TQ-10	1	LS	\$ 1,250.00	\$ 1,250	
Range hood with Anslu System - Installed	< In Mechanical >				
Subtotal Foodservice Equipment					\$ 28,814
11 52 00 Audio-Visual Equipment					
IT Data Rack with Switches (Cable & terminations in Electrical / Security)	1	LS	\$ 2,500.00	\$ 2,500	
Large Format Projection Systems - Not included	< N/A >				
Video Conferencing System - Not included	< By Owner >				
Radio / Dispatch Systems - Not included	< By Owner >				
Subtotal Audio-Visual Equipment					\$ 2,500
11 66 00 Athletic Equipment					
None identified	< By Owner >				
Subtotal Athletic Equipment					\$ -
11 90 00 Miscellaneous Equipment					
Magnegrip Aparatus Vehicle Exhaust System - 2 bays 60"	1	LS	\$ 42,860.00	\$ 42,860	
Vehicle Exhaust Modification	3	EA	\$ 650.00	\$ 1,950	
Gear wash SS Table with integral basins	1	LS	\$ 3,500.00	\$ 3,500	
Gear wash Track & Curtain @ Basin	1	LS	\$ 1,250.00	\$ 1,250	
Gear hanger rod @ Gear wash room	1	LS	\$ 1,250.00	\$ 1,250	
Defibrillator cabinet	< N/A >				
Subtotal Miscellaneous Equipment					\$ 50,810
12 20 00 Window Treatment					
Mechoshade - Manual light filtering	898	SF	\$ 9.10	\$ 8,172	
Mechoshade - Mechoshade Blackout	384	SF	\$ 17.95	\$ 6,893	
Subtotal Window Treatment					\$ 15,065
12 48 13 Entrance Mats					
Walk off Mats	220	SF	\$ 17.95	\$ 3,949	
Subtotal Entrance Mats					\$ 3,949
12 52 00 Furnishings - Movable					
Beds	< FF&E >				
Desk and Chair	< FF&E >				
Subtotal Furnishings - Movable					\$ -
13 00 00 Special Construction					
N/A	< N/A >				
Subtotal Special Construction					\$ -
14 20 00 Conveying					
Elevators / lifts - Not required	< N/A >				
Subtotal Conveying					\$ -

Base Estimate

Element / Description	Quantity	Unit	Unit Rate (\$)	Extension (\$)	Subtotal (\$)
21 00 00 Fire Protection	8,771	SF	9.65		
RPDA Discharge (Drain / test)	1	LS	\$ 1,750.00	\$ 1,750	
Fire Sprinkler Riser assembly	1	LF	\$ 12,500.00	\$ 12,500	
2-3" Branch	805	LF	\$ 38.00	\$ 30,590	
4" Mains	188	LF	\$ 55.00	\$ 10,340	
Dropperd Sidewall heads @ Doors	9	EA	\$ 225.00	\$ 2,025	
Dry Sidewall heads	2	EA	\$ 310.00	\$ 620	
FD Connection	1	EA	\$ 2,125.00	\$ 2,125	
Recessed heads	63	EA	\$ 265.00	\$ 16,695	
Upright heads	41	EA	\$ 195.00	\$ 7,995	
Fire Pump -Assumes not required	< Excluded >				
Subtotal Fire Protection					\$ 84,640
22 00 00 Plumbing	8,771	SF	31.13		
DOM Connection with BFP & valve assy	1	LS	\$ 3,625.00	\$ 3,625	
Domestic water booster pump - Assumes not required	<NIC>				
Gas Meter / riser assy	1	LS	\$ 2,210.00	\$ 2,210	
Gas Emergency Shut-off	1	LS	\$ 1,500.00	\$ 1,500	
Gas Grill Regulator and connections	1	LS	\$ 500.00	\$ 500	
Pipe Gas AG 0.75"	22	LF	\$ 26.00	\$ 572	
Pipe Gas AG 1"	70	LF	\$ 34.00	\$ 2,380	
Pipe Gas AG 2"	269	LF	\$ 52.00	\$ 13,988	
Pipe Gas Buried 0.75" to Grills	28	LF	\$ 37.00	\$ 1,036	
Pipe Gas Buried 2" to generator	69	LF	\$ 65.00	\$ 4,485	
Water heater -	1	LS	\$ 12,500.00	\$ 12,500	
Water heater - Intake & Exhaust Flue	32	LF	\$ 38.00	\$ 1,216	
PET-1 - Expansion Tank	1	EA	\$ 1,850.00	\$ 1,850	
Air Separator	1	EA	\$ 1,975.00	\$ 1,975	
2-1/2" Reduced Backflow Preventer	1	EA	\$ 1,725.00	\$ 1,725	
Hot water tempering valve 140 / 110	1	LS	\$ 3,500.00	\$ 3,500	
Hot water recirculation system with pump and controls	1	LS	\$ 3,750.00	\$ 3,750	
Balancing vales for HWR	8	EA	\$ 125.00	\$ 1,000	
Domestic water booster pump - Assume not required	<NIC>				
Domestic Water 3"	198	LF	\$ 51.00	\$ 10,098	
Domestic Water 2"	236	LF	\$ 45.00	\$ 10,620	
Domestic Water 1.25"	-	LF	\$ 27.00	\$ -	
Domestic Water 1.0"	257	LF	\$ 23.00	\$ 5,911	
Domestic Water 0.75" & 0.5"	341	LF	\$ 17.00	\$ 5,797	
Pipe insulation - blended cost	1,032	LS	\$ 7.25	\$ 7,482	
Sanitary 3" PVC	147	LF	\$ 26.00	\$ 3,822	
Sanitary 4" PVC	340	LF	\$ 32.00	\$ 10,880	
Sanitary 6" PVC	287	LF	\$ 44.00	\$ 12,628	
Sanitary Vent piping - PVC	160	LF	\$ 28.00	\$ 4,480	
Sanitary CO	7	EA	\$ 375.00	\$ 2,625	
T&B for underslab sanitary	531	LF	\$ 25.00	\$ 13,275	
Storm Drains	4	EA	\$ 795.00	\$ 3,180	
Storm Drains - Combination Overflow	1	EA	\$ 975.00	\$ 975	
Storm Overflow cows tongue	4	EA	\$ 565.00	\$ 2,260	
Condensate Drains	528	LF	\$ 22.00	\$ 11,616	
Fixture - ADA Dual water cooler Bottle filler Elkay EZH2O	1	EA	\$ 2,150.00	\$ 2,150	
Fixture - Custodial basin and Hydrants	1	EA	\$ 795.00	\$ 795	
Fixture - FP Hose Bib	4	EA	\$ 310.00	\$ 1,240	
Fixture - Floor drain with trap primer	4	EA	\$ 1,225.00	\$ 4,900	
Fixture - Floor drain Kitchen	< Removed >				
Fixture - KS-1 - Kitchen	< In Food Service Equip >				
Fixture - KS-2 - Kitchen	< In Food Service Equip >				
Fixture - Eyewash	1	EA	\$ 1,725.00	\$ 1,725	
Fixture - Sink and faucet - TR wall hung vitreous	4	EA	\$ 1,100.00	\$ 4,400	
Fixture - Wall Hydrant	6	EA	\$ 225.00	\$ 1,350	
Fixture - Water Closet	4	EA	\$ 1,675.00	\$ 6,700	
Fixture - Faucet / Sprayer @ Gear wash sinks	< Removed >				
Fixture - Shower Assembly and Shower valves	4	EA	\$ 3,375.00	\$ 13,500	
Fixture - Gear Wash Basin and Valve / Sprayer Assembly	1	EA	\$ 3,500.00	\$ 3,500	
Fixture Carriers	8	EA	\$ 425.00	\$ 3,400	
Fixture Rough-in	25	EA	\$ 275.00	\$ 6,875	
Compressor AC-1 Champion VRV5-6 installed	1	LS	\$ 5,500.00	\$ 5,500	
Pipe - compressed Air	285	LF	\$ 24.00	\$ 6,840	
AJ Air Connection	6	EA	\$ 235.00	\$ 1,410	
Temperature Maintenance Cable and contoller	1	LS	\$ 6,500.00	\$ 6,500	
Aparatus Trench Drains - Prefab with H20 Grates	140	LF	\$ 195.00	\$ 27,300	
Fixture Rough-in & Connections - Kitchen	3	LS	\$ 375.00	\$ 1,125	
Fixture Rough-in & Connections - Water heaters	1	LS	\$ 750.00	\$ 750	
Other Plumbing Systems (includes Subcontractor Mgmt, Submittals, testing, Temp svcs)	8,771	SF	\$ 1.10	\$ 9,648	
Subtotal Plumbing					\$ 273,069
23 00 00 HVAC	8,771	SF	72.24		
Major Equipment					
VRF Systems	18.5	ton	\$ 5,390.00	\$ 99,715	
VRF Refrigerant Pipe w/ Insulation	1,410.0	IF	\$ 45.00	\$ 63,450	
VRF Refrigerant Pipe w/ Insulation to CU	141.0	IF	\$ 75.00	\$ 10,575	
VRF Controllers	3.0	EA	\$ 6,500.00	\$ 19,500	
Condensate Pumps - Diamond	21.0	EA	\$ 285.00	\$ 5,985	
DOAS / ERV Allowance	1	LS	\$ 51,474.00	\$ 51,474	
Mini Split HVAC System - IT Room 1 ton	1	TON	\$ 7,500.00	\$ 7,500	
EF-1 & EF-2 Electrical & Mechanical	1,000	CFM	\$ 4.95	\$ 4,950	
EF-3 & EF-4 Sprinkler & Work Room	300	CFM	\$ 7.95	\$ 2,385	
EF-5 - Exhaust Fan with CO Sensors @ Aparatus Bays	2,400	CFM	\$ 4.95	\$ 11,880	
EF-6 - Exhaust Fan with CO Sensors @ Aparatus Bays	180	CFM	\$ 7.95	\$ 1,431	
EF-8 & EF-9 Gear locker - Exhaust Fan with CO Sensors @ Aparatus Bays	200	CFM	\$ 7.95	\$ 1,590	
EF-7 - Exhaust Fan Decon	175	CFM	\$ 7.95	\$ 1,391	
EF-11 - Exhaust Fan SCBA	1,980	CFM	\$ 4.95	\$ 9,801	
SF-1 - Supply Fan	< Removed >				
SF-2 - Supply Fan	< Removed >				
Motorised Ventilation Louver ILO SF-1 / SF-2	1	LS	\$ 3,500.00	\$ 3,500	
KMUA-1	1	LS	\$ 22,850.00	\$ 22,850	
KEF-1 - Exhaust Fan	1,250	CFM	\$ 6.45	\$ 8,063	
Gas fired unit heaters	4	EA	\$ 3,150.00	\$ 12,600	
EWB Electric Wall Heaters	3	EA	\$ 2,750.00	\$ 8,250	
EUH Electric Unit Heaters	3	EA	\$ 2,250.00	\$ 6,750	

Base Estimate

Element / Description	Quantity	Unit	Unit Rate (\$)	Extension (\$)	Subtotal (\$)
Kitchen Hood with Ansul System	1	LS	\$ 12,500.00	\$ 12,500	
<u>Distribution Systems</u>					
16 Gauge Sched 40 Grease Duct (Welded)	1	LS	\$ 7,500.00	\$ 7,500	
Stainless Steel Duct (Dishwasher Exhaust)	< N/A >				
Ductwork Galvanized	6,600	LBS	\$ 17.00	\$ 112,200	
<u>Insulation</u>					
Duct Wrap Insulation	4,539	SF	\$ 6.15	\$ 27,915	
Duct Fire Wrap	1	LS	\$ 5,500.00	\$ 5,500	
Registers	38	ea	\$ 140.00	\$ 5,320	
Supply / Return Sound Attenuators	2	ls	\$ 2,500.00	\$ 5,000	
Volume Dampers	38	ea	\$ 110.00	\$ 4,180	
Misc. Duct Accessories / connections	1	ls	\$ 5,500.00	\$ 5,500	
Flues for GFUH	4	EA	\$ 1,250.00	\$ 5,000	
Exterior Louvers	1	LS	\$ 3,750.00	\$ 3,750	
Vehicle CO Detection controls	1	LS	\$ 3,500.00	\$ 3,500	
Controls and Instrumentation - Assumes Factory Controls with minimal DDC for local access	8,771	SF	\$ 5.45	\$ 47,802	
Systems Testing & Balancing	8,771	SF	\$ 0.65	\$ 5,701	
<u>Other HVAC Systems & Equipment</u>					
Coordination & Management	1	LS	\$ 12,500.00	\$ 11,875	
Seismic Restraints / Bracing	1	LS	\$ 1,500.00	\$ 1,425	
Coring & Patching / Firestopping	1	LS	\$ 750.00	\$ 713	
Hoisting & Rigging / Floor Loading	1	LS	\$ 2,500.00	\$ 2,375	
Shop Drawings & Submittals	1	LS	\$ 1,850.00	\$ 1,758	
BIM Coordination & Mgmt	< N/A >				
Record Drawings / as built	1	LS	\$ 3,500.00	\$ 3,325	
Equipment Start up and Inspection	1	LS	\$ 2,500.00	\$ 2,375	
Access panels - furnish only	1	LS	\$ 1,500.00	\$ 1,425	
Commissioning	1	LS	\$ 3,500.00	\$ 3,325	
Subtotal HVAC					\$ 633,603
26 00 00 Electrical					
Normal Power Distribution					
MCB 800A / CT Cab	1	ea	\$ 17,500.00	\$ 17,500	
SB-1 800A 120/208	1	ea	\$ 28,000.00	\$ 28,000	
Panel RP1 225A 60p	1	ea	\$ 9,750.00	\$ 9,750	
Panel RP-2 225A 60p	1	ea	\$ 9,750.00	\$ 9,750	
Panel RP-3 225A 60p	1	ea	\$ 9,750.00	\$ 9,750	
Panel RP-4 400A 42p	1	ea	\$ 6,750.00	\$ 6,750	
Feeders					
Secondary feeder 800A	70	lf	\$ 465.00	\$ 32,550	
400A Feeder EMT copper	200	lf	\$ 161.00	\$ 32,200	
225A Feeder EMT copper	250	lf	\$ 115.00	\$ 28,750	
Machine & Equipment Power					
DOAS-1 50A 208v connect	1	ea	\$ 1,825.00	\$ 1,825	
KMUA-1 30A 208v connect	1	ea	\$ 1,428.14	\$ 1,428	
ERC-1 30A 208v connect	1	ea	\$ 1,165.00	\$ 1,165	
EW1-1-3	3	ea	\$ 975.00	\$ 2,925	
EUH 1-2	2	ea	\$ 1,225.00	\$ 2,450	
EF1-11	10	ea	\$ 595.00	\$ 5,950	
CU 60A 120v connect	3	ea	\$ 695.00	\$ 2,085	
FCU 20 A Circuit & Connection	20	ea	\$ 425.00	\$ 8,500	
VRF Control Boxes	3	ea	\$ 795.00	\$ 2,385	
Equipment connection Washing Machine 100A	2	ea	\$ 725.00	\$ 1,450	
Equipment connection Dryer	2	ea	\$ 845.00	\$ 1,690	
Equipment connection Door operator	6	ea	\$ 1,125.00	\$ 6,750	
Chord reel hard wired	4	ea	\$ 795.00	\$ 3,180	
Equipment - DECON Room	2	ea	\$ 525.00	\$ 1,050	
Equipment - Antennae Ground in Conduit 75'	1	ea	\$ 1,250.00	\$ 1,250	
Equipment - Conduit roof to watch room	1	ea	\$ 800.00	\$ 800	
Equipment connection Plymovent system	3	ea	\$ 525.00	\$ 1,575	
Fire pump connection	< N/A >				
KEF-1 Kitchen exhaust fan 1-1/2HP 480v connect	1	ea	\$ 1,250.00	\$ 1,250	
Kitchen Equipment & Hood controls connections	1	ls	\$ 3,750.00	\$ 3,750	
Floor boxes and outlets	< N/A >				
Equipment Power branch wiring	8,771	ls	\$ 1.65	\$ 14,472	
Emergency Power and Distribution					
Generator and 800A ATS -175 KW Natural Gas	1	ls	\$ 175,000.00	\$ 175,000	
General Power					
<u>Device Branch</u>					
Equipment Disconnect	13	EA	\$ 525.00	\$ 6,825	
Equipment Disconnect WP	21	EA	\$ 735.00	\$ 15,435	
Recept Double duplex	11	EA	\$ 142.00	\$ 1,562	
Recept Duplex	67	EA	\$ 96.00	\$ 6,432	
Recept Duplex GFI	64	EA	\$ 135.00	\$ 8,640	
Recept Duplex GFI WP	19	EA	\$ 165.00	\$ 3,135	
Recept Duplex WP	13	EA	\$ 112.00	\$ 1,456	
Recept Emergency Power Off	1	EA	\$ 650.00	\$ 650	
Sensor OC	19	EA	\$ 182.00	\$ 3,458	
Switch \$	21	EA	\$ 75.00	\$ 1,575	
Switch \$3K	3	EA	\$ 325.00	\$ 975	
Switch D	15	EA	\$ 145.00	\$ 2,175	
Switch OC	9	EA	\$ 250.00	\$ 2,250	
Conduits & Conductors	8,771	SF	\$ 1.71	\$ 14,998	
Lighting and Branch					
<u>Lighting</u>					
W1 Exterior wall packs	14	ea	\$ 650.00	\$ 9,100	
B2 Exterior recessed fixtures	4	ea	\$ 435.00	\$ 1,740	
A1 Fixture	33	ea	\$ 265.00	\$ 8,745	
A2 Fixture	4	ea	\$ 265.00	\$ 1,060	
A3 Fixture	16	ea	\$ 265.00	\$ 4,240	
B1 Fixture	29	ea	\$ 165.00	\$ 4,785	
B2 Fixture	2	ea	\$ 165.00	\$ 330	
C1 Fixture	16	ea	\$ 655.00	\$ 10,480	
D1 Fixture	12	ea	\$ 225.00	\$ 2,700	
D2 Fixture	3	ea	\$ 345.00	\$ 1,035	
E1 Fixture	3	ea	\$ 395.00	\$ 1,185	
E2 Fixture	5	ea	\$ 395.00	\$ 1,975	

Base Estimate

Element / Description	Quantity	Unit	Unit Rate (\$)	Extension (\$)	Subtotal (\$)
E3 Fixture	3	ea	\$ 395.00	\$ 1,185	
W3 Fixture	9	ea	\$ 7.50	\$ 68	
Lighting Device Branch & Controls	8,771	SF	\$ 3.20	\$ 28,067	
<u>Lightning and Power Specialties</u>					
Building & service grounding	1	ls	\$ 4,500.00	\$ 4,500	
Lighting protection	< N/A >				
<u>Miscellaneous Systems</u>					
Temporary power and lights	8,771	ls	\$ 0.65	\$ 5,701	
Subcontractor site office & storage	1	ls	\$ 5,000.00	\$ 5,000	
Subcontractor lifts & scaffolding	1	ls	\$ 2,500.00	\$ 2,500	
BIM Coordination	< N/A >				
Bond excluded	< N/A >				
<u>Testing and Commissioning</u>					
Testing and commissioning	1	ls	\$ 3,500.00	\$ 3,500	
Communications					
<u>Telephone and Communications Systems</u>					
< Assumes by Owner >					
Telecomm Backbone raceways	1	ls	\$ 3,500.00	\$ 3,500	
Telecomm Box & 1-1/4" EMT wall sleeve	1	ls	\$ 1,250.00	\$ 1,250	
Telecomm box and riser	19	ea	\$ 225.00	\$ 4,275	
2V/2D CAT 6 cable /termination & testing	33	ea	\$ 395.00	\$ 13,035	
WAP 2D CAT 6 cable /termination & testing	10	ea	\$ 265.00	\$ 2,650	
IDF Closet fit up	1	ea	\$ 3,500.00	\$ 3,500	
<u>Av System</u>					
Local Sound System in Exercise room	1	ea	\$ 5,000.00	\$ 5,000	
<u>Public Address Systems</u>					
Public Address Systems - Head end	1	ea	\$ 3,500.00	\$ 3,500	
Speakers	34	ea	\$ 225.00	\$ 7,650	
Television Mount	7	ea	\$ 300.00	\$ 2,100	
Safety & Security					
<u>Security Access Control</u>					
< Assumes by Owner >					
Control panels , licenses and programming allowance	1	LS	\$ 5,000.00	\$ 5,000	
Access control door roughing & devices	1	EA	\$ 1,250.00	\$ 1,250	
Door bell / buzzer	4	EA	\$ 3,500.00	\$ 14,000	
[CR] Card reader raceway, device & wire	7	EA	\$ 795.00	\$ 5,565	
[DC] Door contact					
<u>Fire Alarm System</u>					
Equipment ,devices and programming	1	LS	\$ 3,250.00	\$ 3,250	
F/A Addressable control panel	1	EA	\$ 1,725.00	\$ 1,725	
FA-CFA	5	EA	\$ 925.00	\$ 4,625	
FA-Heat	8	EA	\$ 196.00	\$ 1,568	
FA-Horn Strobe	9	EA	\$ 240.00	\$ 2,160	
FA-Horn Strobe WP	4	EA	\$ 365.00	\$ 1,460	
FA-Pull	7	EA	\$ 239.00	\$ 1,673	
FA-Smoke	35	EA	\$ 385.00	\$ 13,475	
F/A Tamper switch & monitor module	2		\$ 378.90	\$ 758	
F/A Flow switch & monitor module	1		\$ 377.18	\$ 377	
F/A Pressure switch & monitor module	2		\$ 355.29	\$ 711	
F/A SLC/NAC 3/4" EMT & loop circuits	260	lf	\$ 10.00	\$ 2,599	
F/A 14/4 FPLP/IMC cable	725	lf	\$ 4.31	\$ 3,127	
F/A 16/2 FPLP/IMC cable	700	lf	\$ 3.26	\$ 2,280	
Subtotal Electrical					\$ 695,455
33 00 00 Sitework					
Sitework from PACS Site estimate	1	LS	\$ 1,119,731.16	\$ 1,119,731	
					\$ 1,119,731

		City of Bristol New Firehouse No.3				\$ 1,119,731	
		Quantity	Unit			5/17/2024 REVISED	
				Unit Price	Extended Total		
Temporary Site Security Fencing						8,080.75	
6' CLF, panels	975	lf		5.69	5,547.75		
24' Double drive gate	1	ea		900.00	900.00		
Privacy mesh	300	lf		1.61	483.00		
Temp. signage as needed	1	ls		1,150.00	1,150.00		
Surveying & Layout for Sitework						13,650.00	
Surveying LS	1	ls		12,500.00	12,500.00		
Red line as-builts	1	ls		1,150.00	1,150.00		
A-2 As-Built survey - Excluded					-		
Winter Conditions - Excluded						-	
Erosion Control						28,927.87	
Construction entrance	1	ea		2,750.00	2,750.00		
Staked hay bales	144	ea		13.00	1,872.00		
Dewatering - open pumping only	60	hrs		153.90	9,234.00		
Dust control	10	hrs		124.89	1,248.90		
Inlet protection	12	ea		157.32	1,887.84		
Silt fence, 36" tall	557	lf		4.04	2,250.28		
Pump water filter bag (15' x 15')	3	ea		745.96	2,237.88		
Sweeping (truck)	10	hrs		124.89	1,248.90		
Temp. sediment basin	< Removed >				-		
Temp swales / earth dikes	< Removed >				-		
Mulch on temp swale	< Removed >				-		
Temp. outlet structure w/ riser	< Removed >				-		
Overflow spillway / checkdams - Stone	< Removed >				-		
E&S Inspection & reports	40	hrs		90.00	3,600.00		
Furnish 20 gallon oil spill kit	1	ea		146.57	146.57		
Removal of E&S measures	1	ls		1,653.02	1,653.02		
Site Demolition						22,664.54	
Clearing & Grubbing / Selective tree removals	1	ls		7,500.00	7,500.00		
Remove fencing	250	lf		5.65	1,412.50		
Sawcut Asphalt	683	lf		9.18	6,269.94		
Strip & load asphalt	59	cy		47.31	2,800.05		
Export asphalt	59	cy		20.12	1,190.81		
Strip & load concrete - small area, sidewalk (backhoe & handwork)	27	cy		45.73	1,226.58		
Export concrete	27	cy		20.12	539.66		
Dumpsters	2	ea		862.50	1,725.00		
Building Demolition - Not Required (See Selective)						-	
Earthwork -						33,754.55	
Strip & Stockpile topsoil for processing	933	CY		6.35	5,924.55		
Export excess topsoil (load & Haul)	< Assumes balanced >				-		
Unsuitable Soils / removal and replacement per Geotech	< Excluded >				-		
Mass Earthwork Cuts to fills	2,200	CY		12.65	27,830.00		
Mass Earthwork Import & Place	< Assumes balanced >				-		
Segmental Block Retaining Walls - Assumes not required						-	
Structural Excavation						129,136.50	
Foundation Structural Earthwork	9,430	SF		7.95	74,968.50		
Furnish rigid insulation 4' x 8' x 2"	3,904	SF		4.45	17,372.80		
Footing Drains w/ Crushed Stone & Fabric	488	LF		43.65	21,301.20		
Furnish vertical drain board	2,440	SF		6.35	15,494.00		
Work Inside Existing Building						-	
Storm Drainage						255,505.81	
Test pits in street prior to construction - Assumes no street connection	2	ea		1,750.00	3,500.00		
Traffic control	80	hrs		86.25	6,900.00		
6" HDPE Storm drains (2-4vf)	90	lf		40.22	3,619.80		
8" HDPE Storm drains (2-4vf)	106	lf		43.57	4,618.42		
12" HDPE (4-6vf)	460	lf		50.52	23,239.20		
15" HDPE (4-6vf)	35	lf		70.14	2,454.90		
24" HDPE (4-6vf)	10	lf		87.68	876.80		
12" RCP (10-12vf)	223	lf		78.72	17,554.56		
15" RCP (10-12vf)	< Removed >				-		
Yard drains (2-4vf)	3	ea		2,123.89	6,371.67		
Catch basin w/ 4' sump (6-8vf)	5	ea		3,436.68	17,183.40		
Manhole 4' diameter (10-12vf)	1	ea		3,173.18	3,173.18		
Tie into existing structure in street	1	ea		2,250.00	2,250.00		
Tie into stub at building	2	ea		382.25	764.50		
Stone bedding	48	cy		31.86	1,514.06		
Sand cover	130	cy		26.51	3,439.23		
Detention System -							
Outlet Control Structure	1	ea		8,234.42	8,234.42		
Water quality structure Barracuda	1	ea		18,195.00	18,195.00		
Detention System - Excavate to bottom of stone in Mass EW					-		
Crushed stone bottom - in place	100	cy		52.00	5,200.00		
Crushed stone Sides - in place	107	cy		52.00	5,546.67		
Retain it structures 3' delivered	40	ea		1,295.00	51,800.00		
Retain it inspection risers	4	ea		395.00	1,580.00		
F&I Liner	4,000	sf		9.65	38,600.00		
Install Structures	24	hrs		907.00	21,768.00		
4" HDPE Underdrain system in Stone bedding	100	lf		40.22	4,022.00		
Install Inspection manholes	4	ea		775.00	3,100.00		

								\$ 1,119,731			
City of Bristol New Firehouse No.3											
		Quantity	Unit			Unit Price	Extended Total	5/17/2024 REVISED			
Sanitary Sewer										47,239.03	
Tie in in street		1	ea			6,468.84	6,468.84				
Traffic control		12	hrs			86.25	1,035.00				
Temp pavement patch		30	sy			46.00	1,380.00				
Core into existing manhole		< Removed >					-				
4" PVC SDR-35 (6-8vf)		16	lf			38.76	620.16				
6" PVC SDR-35 (8-10vf)		225	lf			46.28	10,413.00				
Cleanouts		2	ea			955.67	1,911.34				
Wye in Street - Connect to Main		1	ls			2,000.00	2,000.00				
Manhole over existing Sanitary in street		< Removed >					-				
Decontamination-storage-tank Pipes, Level-controls		<Removed >					-				
Oil / water separator 1000 gallon		1	ea			5,394.83	5,394.83				
Tie into stub at building		2	ea			382.25	764.50				
Stone bedding		19	cy			34.00	637.31				
Sand cover		37	cy			26.51	993.83				
Export excess material		56	cy			23.00	1,293.37				
Testing (vacuum)		2	ls			1,412.85	2,825.70				
Water System - New Fire & DOM Water Service										57,874.87	
Test pits in street prior to construction		2	ea			1,617.21	3,234.42				
Traffic control		16	hrs			86.25	1,380.00				
Temp pavement patch		2	sy			46.00	92.00				
8" x 6" Wet-tap in Road		2	ea			5,325.00	10,650.00				
Traffic control		20	hrs			86.25	1,725.00				
Temp pavement patch		20	sy			46.00	920.00				
Meter vault		< Excluded >					-				
4" DIP CL54		140	lf			61.01	8,541.40				
6" DIP CL54		135	lf			77.07	10,404.45				
4" Gate valve		1	ea			1,146.95	1,146.95				
6" Gate valve		1	ea			1,312.63	1,312.63				
6" Post indicator valve		1	ea			2,867.52	2,867.52				
4" Bends		3	ea			458.72	1,376.16				
6" Bends		3	ea			516.07	1,548.21				
6" x 4" Reducer		1	ea			471.46	471.46				
Fire Water Storage-Assembly		< Removed >					-				
Excavate for Tank Foundation		<Removed >					-				
Tank Hold-down slab Assumes 12" thick for-		<Removed >					-				
Tank Cover-slab		<Removed >					-				
Tank, Manway, collars, Sump, hold-down straps, turnbuckles, deadman anchors delivered		<Removed >					-				
Installation of tank, anchors, straps, plumbing		<Removed >					-				
Backfill tank with stone		<Removed >					-				
Pumping - Open pumping watertable		<Removed >					-				
Hydrants - Practice Hydrant		<Removed >					-				
Thrust blocks		6	ea			354.65	2,127.90				
Stub 4" DIP inside building from 5' away, stub AFF & flanged cap		1	ea			2,639.36	2,639.36				
Stub 6" DIP inside building from 5' away, stub AFF & flanged cap		1	ea			2,602.40	2,602.40				
Stone bedding		21	cy			34.00	727.22				
Sand cover		43	cy			26.51	1,134.04				
Export excess material		64	cy			19.36	1,242.27				
Testing (bacteria & pressure tests)		1	ls			1,731.48	1,731.48				
Gas Service E/B										7,195.59	
Gas service -		< Removed >					-				
Traffic control		16	hrs			86.25	1,380.00				
Temp pavement patch		20	sy			46.00	920.00				
Permanent pavement restoration		< Removed >				115.00	-				
E/B for Gas service		228	lf			9.49	2,163.72				
Sand bedding		41	cy			26.51	1,074.54				
Export excess material		41	cy			13.75	557.33				
Provide Gas Service to Grill locations		50	lf			22.00	1,100.00				
Site Electric										66,865.77	
Locate existing service on-site		1	ea			592.89	592.89				
E/B Primary ductbank		249	lf			11.86	2,953.14				
Primary Conduits		498	lf			20.00	9,960.00				
Sand bedding		22	cy			26.51	586.75				
Concrete encasement (free pour)		5	cy			209.58	1,117.76				
#4 Rebar for ductbank		240	lf			0.92	220.80				
E/B Secondary ductbank		70	lf			11.86	830.20				
Secondary Conduits		280	lf			20.00	5,600.00				
Sand bedding		6	cy			26.51	164.95				
E/B Generator UG Feed		60	lf			11.86	711.60				
Generator Conduits		60	lf			60.00	3,600.00				
Sand bedding		5	cy			26.50	141.33				
E/B EV Charger		< Removed >					-				
EV Charger Conduit's		< Removed >					-				
Sand bedding		< Removed >					-				
Quartzite pull boxes		< Removed >					-				
E/B Other conduits (Telecom)		300	lf			11.86	3,558.00				
Telecom Conduit's		900	lf			20.00	18,000.00				
Sand bedding		22	cy			26.51	586.75				
Concrete encasement (free pour)		5	cy			209.58	1,117.76				
#4 Rebar for ductbank		240	lf			0.92	220.80				
Transformer pad & Grounding		1	ls			4,275.00	4,275.00				
Generator pad & Grounding		1	ls			6,750.00	6,750.00				
Electric handhole		1	ls			1,426.82	1,426.82				
Pole riser		1	ls			1,662.30	1,662.30				
Load & Export excess material		66	cy			28.00	1,861.69				
Eversource Pole relocation #2379 - Assumes by Utility Company		< Excluded >					-				

		City of Bristol New Firehouse No.3		\$ 1,119,731	
		Quantity	Unit	Unit Price	Extended Total
					5/17/2024 REVISED
Site Lighting					51,982.62
Concrete pole bases (6-8vf bury)	6	ea		1,082.19	6,493.14
E/B for Conduits	775	lf		11.86	9,191.50
Site Lighting conduits & Conductors	775	lf		12.95	10,036.25
Sand bedding	34	cy		26.51	913.12
Export excess material	34	cy		13.75	473.61
Site light poles, fixtures, conduits, and wiring	8	ea		2,650.00	21,200.00
Flagpole light fixtures	3	ea		1,225.00	3,675.00
Curbing					34,720.00
Cast-in-place concrete curb	1,085	lf		32.00	34,720.00
Concrete Sidewalks & Pavers					35,540.37
Form subgrade	351	sy		4.74	1,663.74
6" Base material	70	cy		34.75	2,439.45
Fine grade	351	sy		4.74	1,663.74
E/B Monolithic curb	187	lf		4.54	848.98
5" Concrete sidewalks w/ wire	3,159	sf		8.45	26,693.55
Monolithic curb	187	lf		11.93	2,230.91
Detectable warning surfaces - tiles	< Removed >				-
Concrete Site Stairs - None identified					-
Paved Surfaces					210,426.45
<u>Standard Duty</u>					
Form subgrade	1,258	sy		1.03	1,295.63
12" Subbase	503	cy		38.00	19,119.91
6" Process Base	-	cy		48.00	-
Fine grade	1,258	sy		1.15	1,446.57
Prime coat	1,258	sy		1.15	1,446.57
1.5" Binder	110	ton		160.00	17,610.44
Tack coat	1,258	sy		0.58	729.58
1.5" Surface	110	ton		165.00	18,160.77
<u>Heavy Duty</u>					
Form subgrade	820	sy		1.03	844.14
12" Subbase	328	cy		38.00	12,457.24
6" Process Base	164	cy		48.00	7,867.73
Fine grade	820	sy		1.15	942.49
Prime coat	820	sy		1.15	942.49
3" Binder	143	ton		160.00	22,947.56
Tack coat	820	sy		0.58	475.34
1.5" Surface	72	ton		165.00	11,832.33
<u>Heavy Duty Concrete Apron @ Building</u>					
Form subgrade	142	sy		1.03	146.72
Geotextile fabric	1,410	sf		0.30	423.06
10" Base	47	cy		56.00	2,658.96
Fine grade	142	sy		1.15	163.81
8" Reinforced Concrete Apron with 2x Rebar mats T&B	1,282	sf		22.50	28,845.00
<u>Heavy Duty Concrete Apron @ road</u>					
Form subgrade	49	sy		1.03	50.93
Geotextile fabric	490	sf		0.30	146.85
10" Base	16	cy		56.00	922.96
Fine grade	49	sy		1.15	56.86
8" Reinforced Concrete Apron with 2x Rebar mats T&B	445	sf		22.50	10,012.50
<u>Pavement patching - Temp and permanent @ street for utility connections</u>					
	418	sy		117.00	48,880.00
Site Signage					3,750.00
Site Signage Allowance	1	ls		3,750.00	3,750.00
Landscaping					52,236.44
Plantings					
Trees	19	ea		1,250.00	23,750.00
Shrubs	20	ea		265.00	5,300.00
Annuals, Perennials & Grasses	52	ea		65.00	3,380.00
Plantings mix & Mulch (18")	13	cy		95.00	1,266.67
Stone mulch - river cobble	18	cy		65.00	1,161.33
Weed barrier fabric / Mirafi root barrier	1,250	sf		0.96	1,200.00
Steel edging	202	lf		6.90	1,393.80
Topsoil Screen stockpiled (assume 70% useable)	482	cy		6.00	2,889.60
Load & Export screening spoils (Assumes clean)	144	cy		23.00	3,323.04
Move and place screened topsoil	482			9.00	4,338.00
Seeding	21,675	sf		0.08	1,734.00
Maintenance	1	ls		1,500.00	1,500.00
Watering	1	ls		1,000.00	1,000.00
Fence & Guiderail					46,775.00
6' Ornamental metal fence	30	lf		210.00	6,300.00
8' Screen fence @ Generator	120	lf		135.00	16,200.00
6' Ornamental Man Gate - 5' swing	1	ea		3,500.00	3,500.00
8' Dual Swing Gate - 8' swing	1	ea		4,500.00	4,500.00
8' Ornamental fence augured footings	21	ea		775.00	16,275.00
Bollards					6,755.00
8" Steel bollards	7	ea		965.00	6,755.00
Site Furnishings					6,650.00
<u>Furnish materials</u>					
Flagpole and base	1	ls		4,500.00	4,500.00
Shipping	1	ls		2,150.00	2,150.00
End of Estimate					

COMMISSIONING DESIGN REVIEW COMMENTS-MECHANICAL									
Project Name: Bristol Fire House Church Street									
van Zelm #: 2023084.00									
Phase (% DD or CD)	Issued Date	Review Date	Notes:						
100% DD	4/17/2024	5/12/2024	Project Drawings and Specs dated 4/17/24 and identified as DD						
XX% CD									
ITEM #	ROOM NAME/AREA	EQUIPMENT ID	DWG/SPEC SECTION	REVIEW COMMENTS	DATE IDENTIFIED	RESPONSE	STATUS (OPEN/CLOSED)	DATE	
M1	All Areas	MEP/FP Equipment	All MEP/FP Drawings	Has the final room numbering scheme been established by Owner and Architect? This will be important to establish early, all trades have the correct room numbering so labeling of various items (BMS, Electrical Panels, Fire Alarm, etc.) so there is less confusion later on.	5/6/2024		Open		
M2	Bunk Rooms	DOAS Delivery	M101	With such a low volume of needed for ventilation, why not connect F.A. directly to Ceiling cassettes for a less expensive cleaner installation.	5/6/2024		Open		
M3	Gear Locker	IDU	M101	Nomenclature is a bit confusing IDU-1-2 and FCU-2-2 are almost identical, why change the name, help me.	5/6/2024		Open		
M4	Gear Locker	Exhaust	M101	There appears to be two separate exhaust fans (8&9) for gear locker rooms, and these are intended to run 24/7? Could these be tied into common exhaust. If same usage why not combined into one larger system, could ERV be utilized?	5/6/2024		Open		
M5	Decon/Bay 1,2,3	Exhaust	M101	There appears to be two separate exhaust fans (6&7) for gear Decon and (3) bays, and these are intended to run 24/7? Similar to item 13 above.	5/6/2024		Open		
M6	Jan Closet 240	Supply	M101	Why are we delivering fresh air and exhaust into jan closet, why not just exhaust	5/6/2024		Open		
M7	All Areas	Sensors	M101	There are no wall mounted thermostats indicated in Bunk Room 116. Symbol used is difficult to see.	5/6/2024		Open		
M8	All Areas	Refrigerant	M101	Has mechanical contractor provided volume calculations to meet ASHRAE monitoring for areas with VRF.	5/6/2024		Open		

COMMISSIONING DESIGN REVIEW COMMENTS-ELECTRICAL								
Project Name: Bristol Fire House Church Street								
vanZelm # 2023084.00								
Phase (% DD or CD)	Issued Date	Review Date	Notes:					
100% DD	1/26/2024	3/12/2024	Project Drawings and Specs dated 1/26/24 and identified as DD-Pricing					
100% CD								
ITEM #	ROOM NAME/AREA	EQUIPMENT ID	DWG/SPEC SECTION	REVIEW COMMENTS	DATE IDENTIFIED	RESPONSE	STATUS (OPEN/CLOSED)	DATE
E1	All Areas	MEP/FP Equipment	All MEP/FP Drawings	Has the final room numbering scheme been established by Owner and Architect? This will be important to establish early, all trades have the correct room numbering so labeling of various items (BMS, Electrical Panels, Fire Alarm, etc.) so there is less confusion later on.	5/6/2024		Open	Open
E2	Kitchen	EPO	P101	There is no EPO switch shown in kitchen to kill associated gas valve.	5/6/2024		Open	
E3	All Areas	Electrical Symbols	E001	Symbols list has two symbols for GFI. I assume either one meets proximity to wet locations but only one has GFI marking on the drawings, confusing, please clarify/simplify.	5/6/2024		Open	
E4	Kitchen	Hood	E001	Does kitchen hood fire suppression system shut down gas and alarm with hood interlock?	5/6/2024		Open	
E5	High Bay	Lighting	E110	I assume the roof lighting plan is the high bay lighting not actually roof lighting	5/13/2024		Open	
E6	Equipment	Lighting	E210	Is there any Rooftop equipment service lighting being provided for convenience	5/13/2024		Open	
END OF 100% DD ELECTRICAL REVIEW								
Abbreviations: vZ = van Zelm Engineers								
Notes:								

COMMISSIONING DESIGN REVIEW COMMENTS-PLUMBING								
Project Name: Bristol Fire House Church Street								
vanZelm #: 2023084.00								
Phase (% DD or CD)	Issued Date	Review Date	Notes:					
100% DD	1/26/2024	3/12/2024	Project Drawings and Specs dated 1/26/24 and identified as DD-Pricing					
100% CD								
ITEM #	ROOM NAME/AREA	EQUIPMENT ID	DWG/SPEC SECTION	REVIEW COMMENTS	DATE IDENTIFIED	RESPONSE	STATUS (OPEN/CLOSED)	DATE
P1	MER	Leak detection	P101	There appears to be no leak detection in MER for domestic water tanks, should one be added with inline control valve.	5/6/2024		Open	
P2	All	Drainage Plan	P101	I can see that the Engineer is using trap guards in most floor drain locations which does meet code. Has local authority approved this application?	5/6/2024		Open	
P3	Garage	Trench Drains	P101	How are you meeting trap seals in the trench drain /Catch Basin application? Details are not clear.	5/6/2024		Open	
P4	Kitchen	Grease separator	P101 FS-1.11	There does nor appear to be a kitchen grease separator indicated in either Plumbing or Kitchen consultants plans. Please show us where this is located, I could not find.	5/6/2024		Open	
P5	Kitchen	Water Booster	P101 FS-1.11	There is no information on water heater requirements indicated. Domestic water heater is only providing 120 LWT. Does dishwasher have its own booster, please verify.	5/6/2024		Open	
P6	Kitchen	Emergency Gas switch	P101-FS-1.11	There is no EPO switch shown in kitchen to kill associated gas valve. Coordinate with kitchen consultant. Is this required to meet state and local codes?	5/6/2024		Open	
P7	Garage Bays	Plymo Vent	FP-floor plans	There is a note for Plymo vent controls, refer to Div 23. I cannot find detail on M-Drawings, coordinate with as required.	5/10/2024		Open	
END OF 100% DD PLUMBING REVIEW								
Abbreviations: vZ = van Zelm Engineers								
Notes:								

COMMISSIONING DESIGN REVIEW COMMENTS-FIRE PROTECTION					 VANZELM ENGINEERS VANZELM ENGINEERS LLC 12 VANZELM DRIVE, SUITE 100, CHICAGO, IL 60641 (773) 234-1100 • FAX (773) 234-1101			
Project Name: Bristol Fire House Church Street								
vanZelm #: 2023084.00								
Phase (% DD or CD)	Issued Date	Review Date	Notes:					
100% DD	1/26/2024	3/12/2024	Project Drawings and Specs dated 1/26/24 and identified as DD-Pricing					
100% CD								
ITEM #	ROOM NAME/AREA	EQUIPMENT ID	DWG/SPEC SECTION	REVIEW COMMENTS	DATE IDENTIFIED	RESPONSE	STATUS (OPEN/CLOSED)	DATE
FP1	All	Heads	FP-floor plans	Areas appear to have complete coverage	5/6/2024		Open	
FP1	Garage Bays	Sprinkler	FP-floor plans	Is there any concerns about wet piping within garage especially near overhead doors? Might dry pipe be used?	5/10/2024		Open	
END OF 100% DD FIRE PROTECTION REVIEW								
Abbreviations: vZ = van Zelm Engineers								
Notes:								



