

2019
Evaluation of
Emergency Medical Services
for
Boardman Township



Executive Summary

The Boardman Township Exploratory EMS Committee describes their recommendations to address concerns regarding the ability of the private ambulance companies to deliver timely 911 response to the residents of Boardman Township. Trend reports of quality metrics demonstrated the increased demand for Emergency Medical Services in Boardman Township, resulting in 911 response times of an ambulance crew on scene as low as 6 minutes 66% of the time. This is outside the specification established by the Memorandum of Understanding Boardman Township currently has with Lane Life Trans¹ for Emergency Medical Service (EMS) calls for township constituents. Current 911 response of Boardman Fire in a fire truck to the scene of a 911 call averages 4.5 minutes. The crew is equipped to provide basic life support and must transfer care to a transporting ambulance service in the current model. There is an upward trend of EMS calls over recent years, which will exacerbate delays in 911 responses to our community.

In December 2018, the Boardman Township Elected Officials laid out guidelines for creation of a Boardman Township Exploratory EMS Committee to explore options for feasibility of Emergency Medical Services in Boardman Township. This document summarizes Boardman Township Exploratory EMS Committee findings and outlines recommendations for most effective and efficient way to ensure Emergency Medical Services for Boardman Township.

Committee Composition and Charge

Seven stakeholders within the community with experience and knowledge in the following relatable fields such as medical, insurance, business professional, and/or legal expertise, with one being a non-industry related resident were selected to serve in the Township Exploratory EMS Committee. Three township employees, specifically, the Township Administrator, Fire Chief and Police Chief provided information, resources, contacts, and served to coordinate meetings, by keeping meeting notes and minutes.

The Elected Officials wanted members of this Committee to be from related fields of business that could help provide insight and expertise in the review and analysis. The Committee Members are:

- Thomas Sanborn, LLC
Attorney at Law
- Daniel Segool, Assistant Vice President / Business Banking Lender
Chemical Bank
- Teresa Volsko, MBA, MHHS, RRT, CMTE, FAARC
Director, Respiratory Care, Transport and the Communication Center
Akron Children's Hospital
- Jeff Michalenok, Former Partner
Cailor Fleming Insurance
- Maryann Forrester, BSN, RN, NRP, EMSI, CCISM
EMS Program Coordinator
Akron Children's Hospital
- Amanda Lencyk, MSN, RN, ACNS-BC, CEN, TCRN
Trauma Injury Prevention and Outreach Coordinator
St. Elizabeth Youngstown Hospital
- Joseph Mistovich, Chairperson & Professor
Department of Health Professions
Youngstown State University
- Mark Pitzer, Boardman Fire Chief
- Todd Werth, Boardman Police Chief
- Jason Loree, Boardman Township Administrator

The committee was educated on the current process for dispatching and responding to 911 or emergency medical service calls, evaluated the costs associated with complimenting the current system by providing a this service through the Boardman Fire Department. Data obtained and used in the analysis included:

- Equipment Start-up, maintenance and replacement cost
- Personnel Cost (Structure, Training, Staffing, and Management)
- Emergency Medical Dispatching Cost as it relates to the COG (Training, Staffing, and Management)
- Current service model in Fire Department
- Community Needs

Current Operational Model

The EMS model in Boardman Township consists of a two-tier response which includes a fire department resource, along with the contracted private ambulance provider. Each of the three fire stations are staffed with firefighters who are medically trained at various skill levels. EMS Protocol is provided through Trumbull Memorial Hospital which allows our personnel to function at their level of certification as directed by Dr. Swift. Currently, the department is staffed with 11 Paramedics, 2 Advanced EMTs, 15 Basic EMTs, and 10 Emergency Medical Responders (EMR). The fire department arrives on scene prior to the ambulance company nearly 50% of the time. During these critical minutes our personnel begin to provide patient care with equipment available on the fire apparatus including an AED, medical and trauma supplies, oxygen, BLS drug kit, IV supplies, and intubation equipment. The current compliment of EMS equipment allows our crews to initially stabilize a patient.

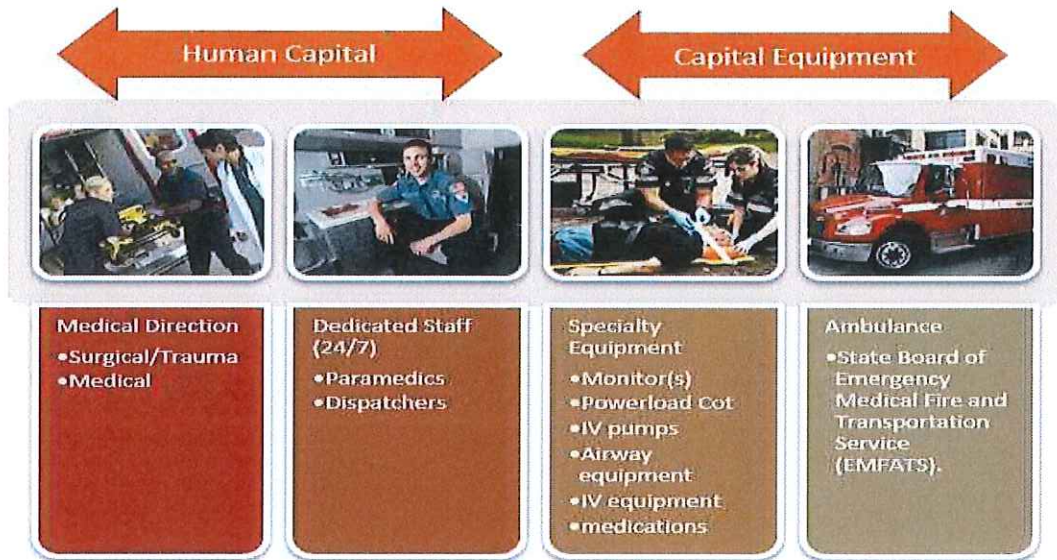
The current demand for medical services in Boardman Township is high. The Boardman community is unique in the fact that we are the mecca for activity in the Mahoning Valley. Our residential population is 40,000; however, the day time population swells to nearly 100,000, due to Boardman having a significant commercial setting that includes various businesses, industrial, retail, dining, and a large medical service presence. The average call volume for medical emergencies is 12 calls per day and many days that demand is even higher. The unique aspect of this call volume comes in the way of multiple calls occurring simultaneously. On average, there are 122 times a month where we have 2 or more emergency calls occurring simultaneously.

Boardman Township has joined a council of governments (COG) with Austintown and the Mahoning County Sheriff's Department. Under this COG, a joint radio system was purchased, and the consolidation of the Sherriff's Dispatching Center with Boardman and Austintown Township occurred. There is a protocol set by the State of Ohio that requires any agency providing EMS services must provide emergency medical dispatch (EMD). This requires a Dispatcher to stay on the call with the caller until the EMS crew arrives on scene providing instructions to support the best possible outcome for the patient. Additional training, software and staffing are needed to meet this requirement. Dispatcher turnover is higher due to the nature of the job and the system used to aid them is just being upgraded. The upgrades to the Computer Automated Dispatching software, voice call logger, and county 911 software are all in progress. While the CAD upgrade may have a positive impact on dispatch personnel requirements, it's expected that meeting adequate staffing levels in the Boardman Communications Center will continue to be a challenge.

Options

Option	Benefits	Risks
No change in the current model	No financial impact on the township or its constituents	Risk for adverse events due to 911 response time delays, including temporary or permanent harm including risk of death.
Single EMS unit model - operating out of the main fire station	Does not improved 911 or emergency medical service to the community	<p>Only addresses a small portion of the need.</p> <p>Does not negate the need for contracted services from private ambulance company.</p>
Double EMS unit model - operating from the main fire station and/or a second fire station.	<p>Improved 911 or emergency medical service to the community.</p> <p>Fewer responses to a medical call by a fire truck and crew.</p>	<p>Does not adequately address the community need.</p> <p>There would be an increased need for outside ambulance companies to provide backup.</p>
Three EMS unit model	<p>Serves a majority of the 911 or emergency medical service community needs</p> <p>Can be implemented effectively with mutual aid agreements to accommodate surge.</p> <p>Ability to extend the life expectancy of current fleet of fire apparatus due to approximately 50% decrease in fire truck responses to 911 calls.</p>	Financial implications *Refer to capital investment and summary of the financial commitment below.

Capital Investment



Financial Commitment

A snapshot of the financial analysis is found below. This is based upon a full workbook found in Appendix B.²

	Year 1	Year 2	Year 3
Expense			
Capital			
Ambulance	\$ 166,282.41	\$ 166,282.41	\$ 166,282.41
Buildings	\$ 3,082.40	\$ 2,080.62	\$ 2,184.65
Vehicle Replacement Fund	\$ 70,000.00	\$ 70,000.00	\$ 70,000.00
Salaries and Benefits			
Personnel	\$ 1,308,487.53	\$ 1,426,284.70	\$ 1,554,103.56
Operating Costs			
EMD Software	\$ 120,859.00	\$ 11,700.00	\$ 11,700.00
Fire Training Cost	\$ 1,000.00	\$ -	\$ 1,000.00
Dispatch Training Cost	\$ 28,215.00	\$ 7,120.00	\$ 7,120.00
Drug Cost	-	-	-
Fuel Cost	\$ (10,539.56)	\$ (9,907.10)	\$ (9,312.67)
Insurance Cost	\$ 1,487.03	\$ 1,487.03	\$ 1,487.03
Maintenance	\$ (700.00)	\$ (700.00)	\$ (700.00)
Total EMS Program Expense	\$ 1,688,173.81	\$ 1,674,347.66	\$ 1,803,864.98
Revenue			
Insurance	\$ 363,698.50	\$ 385,520.41	\$ 408,651.64
Medicaid	\$ 30,505.64	\$ 32,335.98	\$ 34,276.14
Medicare	\$ 391,867.00	\$ 415,379.02	\$ 440,301.76
Private Care	\$ 187,834.50	\$ 199,104.57	\$ 211,050.84
Total Revenue	\$ 973,905.64	\$ 1,032,339.98	\$ 1,094,280.38
Operating Margin			
	\$ (714,268.17)	\$ (641,375.22)	\$ (708,357.71)

"Year 1" will have "start-up" cost associated with hiring, training, equipment, and software. Revenues listed above were done with the assumption that everything is in place to run an EMS at the start of a year. This highlights the need for having "start-up" revenues established and understanding what billing model will be pursued. Those two factors will ultimately impact the how this program moves forward for sustainability of the service.

Options for Operationalizing EMS Services

Option	Detail
Hard Bill for all EMS services	All patients (residents and non-residents) would receive a bill and would be responsible for any amounts not covered by insurance.
Soft Bill	Boardman residents insurance would be billed. Township would write-off remaining balance (no co-pay for residents). Hard billing will continue for non-residents.
No Bill	Township will subsidize EMS services for residents. No bill will be presented to their insurance company. Hard billing will continue for non-residents.

Due to the inability to differentiate residents versus non-residents on call volumes (this information is not tracked), the financial analysis was based on only option two, soft billing. Changing to option one would decrease the amount of funding needed to support the EMS system and option three would increase the amount of funding needed to support the EMS system.

Supplemental information is found in Appendix C.³

Recommendation

In studying EMS in Boardman, the committee found that the issues facing Boardman are not unique to our community, but are, in fact, part of a trend that is seen nationwide. The issue of increased response times is being experienced in many municipalities. It is also reasonable to assume that the problem will get worse over time given the increasing demand for EMS in our community.

The committee believes that a proactive response is warranted, rather than waiting for the situation to reach a critical stage. In addition to our specific recommendation, the township would be well served to investigate any partnerships that may be developed within the area.

There is no one recommendation that will eliminate all the issues faced in EMS, so we don't present our recommendation as an absolute solution. We believe this is not the end, but rather the beginning of an important community conversation.

It is the recommendation of the Boardman Township Exploratory EMS Committee to support a three-unit model. This means locating an ambulance and crew at each fire station in Boardman. It will provide the most timely, efficient and effective emergency medical service to the constituents of Boardman Township. We acknowledge that this model will require funding above and beyond the expected revenues generated by billings.

We believe it is important for the residents and leaders of our township to have an open dialog surrounding the issues we face and how to fund the solutions we consider. We thank the Trustees for the opportunity to serve our community through this committee.

END NOTES:

¹ Appendix A: Memorandum of Understanding between Boardman Township and Lane Ambulance

² Appendix B: Full financial workbook

³ Appendix C: Supplemental supporting documents

1	Lane MOU
2	Workbook Program Summary
3	Personnel Costs
4	Ambulance Costs
5	Fuel Costs
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7	EMD Software
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Appendix A:

Memorandum of Understanding (MOU) between Boardman Township and Lane
Life-Trans

EMERGENCY MEDICAL SERVICE AGREEMENT

This agreement is made this 25th day of March, 2019 by and between Boardman Township, 8299 Market Street, Boardman, Ohio, hereinafter referred to as the "Township," and Lane LifeTrans Paramedics, a Division of Lane Life Corp., 5801 Mahoning Ave., Austintown, Ohio 44515, hereinafter referred to as the "Provider".

WHEREAS, the Provider is engaged in the business of providing emergency paramedic ambulance service, and also non-emergency ambulance services, with at least one or more facilities located inside the Township.

WHEREAS, the Provider currently serves other political sub-divisions, under written contract in Mahoning County and/or adjacent counties; and

WHEREAS, the Provider shall have at least twelve (12) Ambulances in its fleet to ensure adequate availability of service to the Township and also verified back-up capability; and

WHEREAS, the Provider will have at least one fixed facility centrally located in Boardman Township located within the Township to ensure adequate response locations; and

WHEREAS, the Township, pursuant to its authority under the Ohio Revised Code Sec. 505.44 desires to obtain Emergency Medical Services, for its citizens as well as having access to Paramedic Advanced Life Support services, and ;

WHEREAS, the Township provides no emergency medical services via ambulance transport to the Township residents for emergency calls that surface as a result of direct calls to the police or fire departments, or via 9-1-1, or that originate as a results of, or in the course of, police and fire department operations;

IT IS THEREFORE AGREED, that:

1. The Provider will provide two (2) twenty-four hour paramedic ALS (Advanced Life Support) ambulances dedicated to the community of Boardman Township, Ohio, during the term of this agreement.
2. The Provider will provide said service from one primary location centrally located in Boardman Township, and back up from the Provider's other facilities.
3. The Provider shall respond within six minutes to 85% of emergency calls and within eight minutes or less for 90% of the emergency calls. Response time is determined in this contract from when Provider's dispatch is notified until the ambulance arrives at the scene.
4. The Provider shall not exceed eight minutes for the first unit dispatched and ten minutes for the second unit and no more than fifteen minutes for the third unit if needed under the circumstances.
5. Failure to meet the criteria in Item 3 and Item 4 will result in a four step disciplinary process to be administered by the Township Fire Chief, as follows. Step 1. A \$1,000.00 fine payable to the Township. Step 2. A second violation within a six month period will result in a \$1,500.00 fine payable to the Township. Step 3. A third violation within a one year period will result in a \$2,500 fine, payable by the provider to the Township. Step 4. The fourth violation within a one year period will result in termination of the Agreement. The Township Fire Chief may waive discipline for justifiable reasons, such as natural disasters, snow storms, or other prevailing reasons. All fines must be paid within 10

business days upon the provider being notified of the violation and after failure of non-payment may result in immediate termination of the agreement.

6. The Provider may appeal any disciplinary action determined by the Township Fire Department to the Board of Trustees at a hearing requested by the Provider. Any decision by the Board will be final.
7. Provider units will respond on a standby basis to all emergency fire calls or police situations, to be determined by written protocol from their respective departments and said protocols will be attached to this agreement as Exhibit A & B.
8. The Provider will utilize modular ambulances as their first line vehicles and will further support said vehicles with non-transporting response units. Said vehicles will meet all State of Ohio Ambulance Licenses requirements.
9. The Provider will maintain a current written Mahoning County Disaster Plan and be able to implement the plan and coordinate with existing safety services.
10. The Provider shall provide EMDs (Emergency Medical Dispatchers) trained pursuant to NAEMD (National Academy of Emergency Medical Dispatch) standards.
11. The Provider will provide emergency medical dispatching pre-arrival instruction to the caller on all calls transferred by the Boardman dispatcher to the provider's dispatcher. Once the caller has made voice communication with the Provider's dispatcher, the Boardman dispatcher will disconnect from the conversation.
12. Should the National Standards indicate a non-emergency response, Item #3 of this agreement will not be in effect and the maximum allowed response time will be ten minutes.
13. If the Provider determines that the call requires a fire department response, the Provider's Dispatcher shall immediately contact the Boardman Dispatcher and give the call information.
14. The Provider will provide standby coverage upon request at no cost, at all public Township functions (including school events) when requested.
15. The Provider shall have Bariatric Equipment available to handle obese patients.
16. The Provider shall handle all lift assists. In those instances where their crews need additional assistance, assistance may be requested from the fire department. The Provider shall provide one lift assist per calendar month per Township resident at no charge. The Provider may charge for any subsequent lift assists in the same calendar month in accordance with the usual and customary charges. The Provider shall provide the resident with written notification that he/she may be charged for subsequent lift assist in that calendar month. A copy of all written notifications delivered by the Provider shall be forwarded to the Boardman Township Fire Chief.
17. The Provider will bill patients or their insurance carriers directly for services rendered and the Township will have no responsibility of payment for ambulance services.
18. The Township of Boardman will call the Provider for all emergency medical situations that surface as a result of calls to the Township Communications Center, or that originate as a result of, or in the course of Police and Fire Department operations.

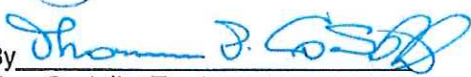
19. The Provider will exchange any supplies used by the Boardman Fire Department including oxygen at no cost to the Township.
20. The Township of Boardman shall in no way inhibit an individual's choice of an ambulance service.
21. The Provider will provide paramedics certified under the State of Ohio and holding current standing orders from a local Medical Director. All ambulances responding under this agreement shall be staffed by a minimum of one Paramedic and one EMT-Basic.
22. The Provider shall maintain an agreed to Quality Assurance Program and meet upon request of the Fire Chief to review results.
23. The Provider shall keep detailed records of all services performed under this agreement and shall provide those records excluding any information prohibited by HIPAA to the fire chief by the 10th of each month.
24. This agreement shall commence on April 1, 2019, and will be for a term of three (3) years, unless terminated under the provisions of this agreement. The Parties will meet annually to review and amend the terms of the agreement, if necessary. This agreement will automatically renew upon the same terms and conditions unless either party notifies the other in writing sixty (60) days prior to the expiration date.
25. Either party may terminate this agreement at any time by giving sixty (60) days' written notice to the other party to be delivered to: Boardman Township Fire Chief, 136 Boardman-Poland Rd, and Lane LifeTrans Paramedics, 5801 Mahoning Ave., Austintown, Ohio, 44515.
26. The Provider shall deliver to the Township proof of compliance with the Ohio Worker's Compensation laws.
27. The Provider shall maintain an Auto Insurance, General Liability and Malpractice Insurance in the minimum total amount of Three Million Dollars (\$ 3,000,000), a copy of which shall be provided to the Township upon request. In addition, the Provider will add the Township as an additional insured on their insurance policy and provide proof of insurance at the time of signing the Agreement.
28. The Provider will maintain a drug-free work place, consistent with the high degree of responsibility and accountability needed in the Paramedic field, and to that end will conduct pre-employment and random drug testing for all employees.
29. The Provider will provide their rehab services unit when available for their firefighters on all major fires.
30. The Provider may at its discretion and if available, provide to the Boardman Police, its Tactical Emergency Medical Support team (TEMS) for any police matter that the Police Chief requests.
31. The Provider will complete in-house quality assurances on all emergency medical calls.
32. The Provider will submit to Boardman Township a copy of the Certificate of License from Ohio Medical Transport Board.

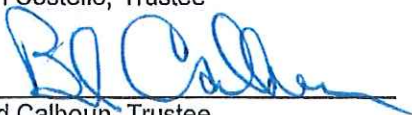
33. This agreement supersedes any and all other agreements or memorandums of understanding, either oral or writing, between the parties hereto with respect to the subject matter hereof, and no other agreement, statement of promise relating to the subject matter of this agreement that is not contained herein shall be valid or binding,
34. This agreement may be amended in writing, if mutually agreed upon by both parties.
35. To the fullest extent permitted by law and in compliance with applicable law, Provider agrees to indemnify and hold harmless the Township, its officers, employees and agents from any and all liability, damages, losses, claims, suits, actions, attorney fees, court costs, and litigation expenses arising out of or due to the breach of the Emergency Medical Service Agreement by Provider or due to any act or omission of Provider's employees, agents, subcontractors or assigns.
36. Neither this agreement or any duties or obligations herein shall be assignable by Provider without the prior written consent of the Township.
37. The validity of this agreement and of any its terms or provisions, as well as the rights and duties of the parties hereunder, shall be governed by the laws of the State of Ohio.
38. The parties may execute more than one counterpart of this Agreement hereto, and each fully executed counterpart shall be deemed an original.
39. If any part of this agreement is declared to be invalid or unconstitutional by a court of competent jurisdiction, such decision shall not affect the remainder of the agreement.
40. The Provider shall not be considered an employee of the Township for any purpose and is not entitled to any benefits of the Township.
41. Provider is entitled to any immunity granted under Section 4765.49 Ohio Revised Code.
42. The Provider shall be liable for all state, local and federal income taxes and the reporting of same to the appropriate taxing agencies.

Executed at Boardman, Ohio on the day and year first above written.

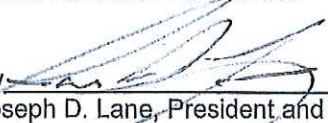
Township of Boardman

By 
Larry Moliterno, Chairman

By 
Tom Costello, Trustee

By 
Brad Calhoun, Trustee

Lanes LifeTrans Paramedics

By 
Joseph D. Lane, President and CEO

By 
Thomas Lambert, Lane Life-Trans, COO

Appendix B:

Full Financial Excel Spreadsheet Workbook

Executive Summary

This Workbook has been developed for the EMS Committee's Review. It contains the raw figures used to fill out a modified business plans.

EMS Program Cost

Years	Total	Percentage
2020	1,688,173.81	100%
2021	1,663,808.01	100%
2022	1,793,325.34	100%

Billing Revenue Estmiates

	Insurance	Medicaid	Medicare	Private Care
Annual Est.	\$ 973,905.64	\$ 550.00	\$ 82.00	\$ 259.00
Lowest.	\$ 866,037.64	\$ 450.00	\$ 82.00	\$ 259.00
Higest.	\$ 1,027,839.64	\$ 600.00	\$ 82.00	\$ 259.00

Operating Cost

2020	210,321.47	12.5%
2021	69,160.28	4.2%
2022	70,754.71	3.9%

Personnel

2020	1,308,487.53	77.5%
2021	1,426,284.70	85.7%
2022	1,554,103.56	86.7%

Year 1 is a "Start-Up" year. Funding would need to be secured to hire, train, and purchase equipment. The timing to do these actions all varies which will impact the start of 911 services. This impacts billing and there are too many variables to determine revenes in Year 1. In the Body of the workbook provided in Appendix B, the anlysis used years 2020, 2021, 2022 to capture the "start-up" and "full operations" we are using Year 1, Year 2, and Year 3.

Ambulance

2020	166,282.41	9.8%
2021	166,282.41	10.0%
2022	166,282.41	9.3%

Buildings

2020	3,082.40	0.18%
2021	2,080.62	0.13%
2022	2,184.65	0.12%

Operating Cost

EMD Software		Priority Dispatch (includes training costs)
	2020	120,859.00
	2021	11,700.00
	2022	11,700.00

Training Cost

Fire

		Training Cost
	2020	1,000.00
	2021	-
	2022	1,000.00

Dispatch

		Training Cost
	2020	28,215.00
	2021	7,120.00
	2022	7,120.00

Drug Cost n/a

	2020	2021	2022
Fuel Cost	(10,539.56) \$	(9,907.19) \$	(9,312.76)

Insurance Cost 1,487.03

Maintenance

	Current Cost	Reduced Cost on Trucks	Est. EMS Maintenance Cost	Adjusted Total	Change in Cost
2020	36,500.00	29,200.00	6,600.00	35,800.00	(700.00)
2021	36,500.00	29,200.00	6,600.00	35,800.00	(700.00)
2022	36,500.00	29,200.00	6,600.00	35,800.00	(700.00)

Personnel Cost

Total Wages and Benefits

	Wages	Benefits	Combined
2020	668,290.62	640,196.91	1,308,487.53
2021	710,961.77	715,322.93	1,426,284.70
2022	753,898.41	800,205.15	1,554,103.56

Total Cost Associated with Hiring Staff

Fire Fighter Equipment	75,942.00	Replacement Times Vary
Fire Civil Service Test	3,500.00	(Only if needed)

Summary by Personnel Cost Item:

12 Fire Fighters

Year	Wages	Benefits	Combined			
2020	377,139.86	417,424.87	794,564.73	66,213.73	198,641.18	214,710.36
2021	399,822.22	466,667.48	866,489.70	72,207.48	216,622.43	233,108.03
2022	424,313.92	522,822.78	947,136.70	78,928.06	236,784.17	253,719.41

6 Dispatchers

Year	Wages	Benefits	Combined
2020	191,898.72	192,879.37	384,778.09
2021	210,603.59	218,381.01	428,984.60
2022	227,662.23	246,695.68	474,357.91

Combined

Year	Wages	Benefits	Combined
2020	569,038.58	610,304.24	1,179,342.82
2021	610,425.82	685,048.49	1,295,474.30
2022	651,976.14	769,518.46	1,421,494.60

Personnel Cost (cont.)**FLSA**

	Wages	Benefits	Combined		
2020	21,347.54	6,347.90	27,695.44	2,307.95	6,923.86
2021	22,631.45	6,729.69	29,361.13	2,446.76	7,340.28
2022	24,017.77	7,141.92	31,159.69	2,596.64	7,789.92

Ambulance Staffing Cost

	Wages	Benefits	Combined		
2020	27,904.50	8,676.76	36,581.26	3,048.44	9,145.32
2021	27,904.50	8,676.76	36,581.26	3,048.44	9,145.32
2022	27,904.50	8,676.76	36,581.26	3,048.44	9,145.32

Overtime for Staffing Ambulance at 8 for Minimum Staffing

	Wages	Benefits	Combined
2020	50,000.00	14,868.00	64,868.00
2021	50,000.00	14,868.00	64,868.00
2022	50,000.00	14,868.00	64,868.00

Building Cost

Utility Cost Est. Increase

2020	3,082.40
2021	2,080.62
2022	2,184.65

Ambulance Cost

Plan 2	4 Ambulances	Total Cost	5 Year Loan 5.4%	6 Year Loan 5.4%	7 Year Loan 5.4%
		788,816.00	166,282.41	138,568.68	118,773.15
		5 year	6 Year	7 year	
	2020	166,282.41	138,568.68	118,773.15	
	2021	166,282.41	138,568.68	118,773.15	
	2022	166,282.41	138,568.68	118,773.15	
	2023	166,282.41	138,568.68	118,773.15	
	2024	166,282.41	138,568.68	118,773.15	
	2025		138,568.68	118,773.15	
	2026			118,773.15	
	2027			118,773.15	

Replacement Every 3 years

Cost of 1 Ambulance

Heart	Ambulance	Equipment	Radio	Radio mnt.	Power Cots	Vehicle
35,000.00	128,000.00	17,000.00	8,000.00	204.00	8,000.00	1,000.00
<u>197,204.00</u> Total Cost						

Personnel Cost Fire Department and Dispatched

Fire Department EMS Staffing Needs for 3 Ambulances

24.03

1 Year		2020		Multiplier 0.24	Multiplier 0.0145	Family Rate 23,609.88	Multiplier 0.04286					
No. of FF	NAME	RANK	Wages	Police and Fire	Medicare	Health Care	Workers Comp	Life Insurance	Clothing	Perform.	Attendance	Employee Cost
1	New Firefighter	Paramedic	31,428.32	7,542.80	455.71	23,609.88	1,347.02	105.00	625.00	500.00	600.00	66,213.73
2	New Firefighter	Paramedic	31,428.32	7,542.80	455.71	23,609.88	1,347.02	105.00	625.00	500.00	600.00	66,213.73
3	New Firefighter	Paramedic	31,428.32	7,542.80	455.71	23,609.88	1,347.02	105.00	625.00	500.00	600.00	66,213.73
4	New Firefighter	Paramedic	31,428.32	7,542.80	455.71	23,609.88	1,347.02	105.00	625.00	500.00	600.00	66,213.73
5	New Firefighter	Paramedic	31,428.32	7,542.80	455.71	23,609.88	1,347.02	105.00	625.00	500.00	600.00	66,213.73
6	New Firefighter	Paramedic	31,428.32	7,542.80	455.71	23,609.88	1,347.02	105.00	625.00	500.00	600.00	66,213.73
7	New Firefighter	Paramedic	31,428.32	7,542.80	455.71	23,609.88	1,347.02	105.00	625.00	500.00	600.00	66,213.73
8	New Firefighter	Paramedic	31,428.32	7,542.80	455.71	23,609.88	1,347.02	105.00	625.00	500.00	600.00	66,213.73
9	New Firefighter	Basic EMT	31,428.32	7,542.80	455.71	23,609.88	1,347.02	105.00	625.00	500.00	600.00	66,213.73
10	New Firefighter	Basic EMT	31,428.32	7,542.80	455.71	23,609.88	1,347.02	105.00	625.00	500.00	600.00	66,213.73
11	New Firefighter	Basic EMT	31,428.32	7,542.80	455.71	23,609.88	1,347.02	105.00	625.00	500.00	600.00	66,213.73
12	New Firefighter	Basic EMT	31,428.32	7,542.80	455.71	23,609.88	1,347.02	105.00	625.00	500.00	600.00	66,213.73
Totals			377,139.86	90,513.57	5,468.53	283,318.56	16,164.21	1,260.00	7,500.00	6,000.00	7,200.00	794,564.73

26.20

Year 2

	Multiplier 0.24	Multiplier 0.0145	Family Rate 1.15	Multiplier 0.04286					
	Police and Fire	Medicare	Health Care	Workers Comp	Life Insurance	Clothing	Perform.	Attendance	Employee Cost
33,318.52	7,996.44	483.12	27,151.36	1,428.03	105.00	625.00	500.00	600.00	72,207.48
33,318.52	7,996.44	483.12	27,151.36	1,428.03	105.00	625.00	500.00	600.00	72,207.48
33,318.52	7,996.44	483.12	27,151.36	1,428.03	105.00	625.00	500.00	600.00	72,207.48
33,318.52	7,996.44	483.12	27,151.36	1,428.03	105.00	625.00	500.00	600.00	72,207.48
33,318.52	7,996.44	483.12	27,151.36	1,428.03	105.00	625.00	500.00	600.00	72,207.48
33,318.52	7,996.44	483.12	27,151.36	1,428.03	105.00	625.00	500.00	600.00	72,207.48
33,318.52	7,996.44	483.12	27,151.36	1,428.03	105.00	625.00	500.00	600.00	72,207.48
33,318.52	7,996.44	483.12	27,151.36	1,428.03	105.00	625.00	500.00	600.00	72,207.48
33,318.52	7,996.44	483.12	27,151.36	1,428.03	105.00	625.00	500.00	600.00	72,207.48
33,318.52	7,996.44	483.12	27,151.36	1,428.03	105.00	625.00	500.00	600.00	72,207.48
33,318.52	7,996.44	483.12	27,151.36	1,428.03	105.00	625.00	500.00	600.00	72,207.48
33,318.52	7,996.44	483.12	27,151.36	1,428.03	105.00	625.00	500.00	600.00	72,207.48
399,822.22	95,957.33	5,797.42	325,816.34	17,136.38	1,260.00	7,500.00	6,000.00	7,200.00	866,489.70

28.64

Year 3	Multiplier	Multiplier	Family Rate	Multiplier					Employee Cost	
	0.24	0.0145	1.15	0.04286	Police and Fire	Workers Comp	Life Insurance	Clothing		Perform.
	Wages	Police and Fire	Medicare	Health Care	Workers Comp	Life Insurance	Clothing	Perform.	Attendance	Employee Cost
	35,359.49	8,486.28	512.71	31,224.07	1,515.51	105.00	625.00	500.00	600.00	78,928.06
	35,359.49	8,486.28	512.71	31,224.07	1,515.51	105.00	625.00	500.00	600.00	78,928.06
	35,359.49	8,486.28	512.71	31,224.07	1,515.51	105.00	625.00	500.00	600.00	78,928.06
	35,359.49	8,486.28	512.71	31,224.07	1,515.51	105.00	625.00	500.00	600.00	78,928.06
	35,359.49	8,486.28	512.71	31,224.07	1,515.51	105.00	625.00	500.00	600.00	78,928.06
	35,359.49	8,486.28	512.71	31,224.07	1,515.51	105.00	625.00	500.00	600.00	78,928.06
	35,359.49	8,486.28	512.71	31,224.07	1,515.51	105.00	625.00	500.00	600.00	78,928.06
	35,359.49	8,486.28	512.71	31,224.07	1,515.51	105.00	625.00	500.00	600.00	78,928.06
	35,359.49	8,486.28	512.71	31,224.07	1,515.51	105.00	625.00	500.00	600.00	78,928.06
	35,359.49	8,486.28	512.71	31,224.07	1,515.51	105.00	625.00	500.00	600.00	78,928.06
	35,359.49	8,486.28	512.71	31,224.07	1,515.51	105.00	625.00	500.00	600.00	78,928.06
	35,359.49	8,486.28	512.71	31,224.07	1,515.51	105.00	625.00	500.00	600.00	78,928.06
	35,359.49	8,486.28	512.71	31,224.07	1,515.51	105.00	625.00	500.00	600.00	78,928.06
	424,313.92	101,835.34	6,152.55	374,688.80	18,186.09	1,260.00	7,500.00	6,000.00	7,200.00	947,136.70

Est. Employee Cost Totals for Fire Fighters by Year

Year	Wages	Police and Fire	Medicare	Health Care	Workers Comp	Life Insurance	Clothing	Perform.	Attendance	Employee Cost
2020	377,139.86	90,513.57	5,468.53	283,318.56	16,164.21	1,260.00	7,500.00	6,000.00	7,200.00	794,564.73
2021	399,822.22	95,957.33	5,797.42	325,816.34	17,136.38	1,260.00	7,500.00	6,000.00	7,200.00	866,489.70
2022	424,313.92	101,835.34	6,152.55	374,688.80	18,186.09	1,260.00	7,500.00	6,000.00	7,200.00	947,136.70

Year	Wages	Benefits	Total
2020	377,139.86	417,424.87	794,564.73
2021	399,822.22	466,667.48	866,489.70
2022	424,313.92	522,822.78	947,136.70

This is the Estimated Cost of New Hires for the EMS service over 3 years. The assumptions used for Health insurance were 15% for each year. April 16th renewal increase was 14.9% as a reference. Each year of the Fire Fighter Cost include the step increase for the following year with a 2% general wage increase.

Ambulance Employee Compensation (Subject to Collective Bargain Agreement)

Under the recommendation of Chief Pitzer, anyone who would be scheduled to work on an Ambulance Crew would receive a Rate increase of \$1.50 at the Paramedic Level and \$.75 at the Basic EMT level. With that Assumption plus the Assumption of running 3 staff ambulances the following table has the wage rates of the Fire Contract between Boardman Township and the IAFF Contract Expiring in February 2020

Fire Fighter Wage Scale as of 4/16/2019 with the Assumptions of a 2% Wage Increase for a Hire Date in 2020

Years	Step	2020 Wage	2021 Wage	2022 Wage	2020 Wage Rate 2756	2021 Rate 2756	2020 Rate 2756	1.5 Paramedic Rate ON	0.75 EMT Basic ON	0.75 Paramedic Rate ON	0.375 EMT Basic ON	FLSA Paramedic On	FLSA EMT On	FLSA Paramedic Off	FLSA EMT Off
Entry	Fire Fighter Entry	31,428.32	32,056.89	32,698.03	11.40	11.63	11.86	1.50	0.75	0.75	0.375	234	117	117	58.5
After 1	Fire Fighter 1 * 2%	32,665.21	33,318.52	33,984.89	11.85	12.09	12.33	1.50	0.75	0.75	0.375	234	117	117	58.5
After 2	Fire Fighter 2 * 2%	33,986.44	34,666.17	35,359.49	12.33	12.58	12.83	1.50	0.75	0.75	0.375	234	117	117	58.5
After 3	Fire Fighter 3 * 2%	35,335.78	36,042.49	36,763.34	12.82	13.08	13.34	1.50	0.75	0.75	0.375	234	117	117	58.5
After 4	Fire Fighter 4 * 2%	37,472.23	38,221.67	38,986.11	13.60	13.87	14.15	1.50	0.75	0.75	0.375	234	117	117	58.5
After 5	Fire Fighter 5 * 2%	39,693.01	40,486.87	41,296.61	14.40	14.69	14.98	1.50	0.75	0.75	0.375	234	117	117	58.5
After 6	Fire Fighter 6 * 2%	40,901.80	41,719.83	42,554.23	14.84	15.14	15.44	1.50	0.75	0.75	0.375	234	117	117	58.5
After 7	Fire Fighter 7 * 2%	42,532.25	43,382.89	44,250.55	15.43	15.74	16.06	1.50	0.75	0.75	0.375	234	117	117	58.5
After 8	Fire Fighter 8 * 2%	44,247.03	45,131.97	46,034.61	16.05	16.38	16.70	1.50	0.75	0.75	0.375	234	117	117	58.5
After 9	Fire Fighter 9 * 2%	46,018.03	46,938.40	47,877.16	16.70	17.03	17.37	1.50	0.75	0.75	0.375	234	117	117	58.5
After 10	Fire Fighter 10 * 2%	47,845.26	48,802.17	49,778.21	17.36	17.71	18.06	1.50	0.75	0.75	0.375	234	117	117	58.5
After 11	Fire Fighter 11 * 2%	49,756.82	50,751.96	51,767.00	18.05	18.42	18.78	1.50	0.75	0.75	0.375	234	117	117	58.5
After 12	Fire Fighter 12 * 2%	51,752.72	52,787.77	53,843.53	18.78	19.15	19.54	1.50	0.75	0.75	0.375	234	117	117	58.5
After 13	Fire Fighter 13 * 2%	53,804.84	54,880.93	55,978.55	19.52	19.91	20.31	1.50	0.75	0.75	0.375	234	117	117	58.5
After 14	Fire Fighter 14 * 2%	55,969.40	57,088.79	58,230.56	20.31	20.71	21.13	1.50	0.75	0.75	0.375	234	117	117	58.5
After 15	Fire Fighter 15 * 2%	58,133.96	59,296.64	60,482.57	21.09	21.52	21.95	1.50	0.75	0.75	0.375	234	117	117	58.5
	Old Max Rate	63,525.80	64,796.32	66,092.24	23.05	23.51	23.98	1.50	0.75	0.75	0.375	234	117	117	58.5

This wage scale does not include longevity nor does it calculate all FLSA Time. FLSA time is dependent on the hours worked by the Fire Fighter Max FLSA. The Assumption used here is the rate increase could have an increase of 3,000 for a Paramedic and 2,500 for a EMT.

FLSA Pay Calculations

FLSA pay is calculated based on hours worked over 159 in a 21 day cycle. Estimated hours would apply to rate of pay at the Hourly Rate in the Collective Bargaining Agreement and the Fair Labor Standards Act. FLSA is subject to roll-up cost.

52 Weeks / 21 days	Hours per cycle	Total Hours	Example Using a Rate	21 day cycle x hours per cycle x hourly rate
17	9	159	3,290.60	

FLSA cost on new hires for first 3 years:

Year	Max FLSA	12 New Hires	Max FLSA Liability	0.24 Retirement	0.0145 Medicare	0.04286 Work Comp	Max Total With Rollup
2020	1,778.96	12	21,347.54	5,123.41	309.54	914.96	27,695.44
2021	1,885.95	12	22,631.45	5,431.55	328.16	969.98	29,361.13
2022	2,001.48	12	24,017.77	5,764.26	348.26	1,029.40	31,159.69

Ambulance Staffing Cost for 3 Units Accounting for Current and Proposed New Hires

Staffing for 3 Ambulances would require additional 12 Fire Fighters (4 per-shift) and utilizing 2 existing FF-EMT/PARA from each shifts. Staffing this way based on 2019 current schedule looking at the vacation, potential injury and adjusting for sick-time would cause an overtime cost between \$36,000-\$50,000. This number was derived by the Fire Department and not in

	Rate Bump 1.5 Paramedic	Rate Bump 0.75 EMT		Year-Cost 3 Paramedics	Year-Cost 3 EMT
Class	4,134.00	2,067.00	Wages	12,402.00	6,201.00
Retirement	0.24	0.24	Roll-up	3,856.34	1,928.17
Medicare	0.0145	0.0145			
Work. Comp	0.04286	0.04286	Total	16,258.34	8,129.17
FLSA	234.00	117.00			
Roll-up	1,285.45	642.72			
Total	5,419.45	2,709.72			

Current Staff Credits Based on Proposed Plan

Medics	EMT
13	11
8	4
21	15

Paramedic Count

A Turn Paramedic	B Turn Paramedic	C Turn Paramedic	
7	7	7	Total
3	3	3	On Ambulance
4	4	4	Off Ambulance
Paramedics not on Ambulances		12	

EMT Count

<u>EMT Count</u>				Rate Bump 0.75 Paramedic	Rate Bump 0.375 EMT		Year-Cost 3 Paramedics	Year-Cost 3 EMT	
A Turn	B Turn	C Turn		Class	2,067.00	1,033.50	Wages	6,201.00	3,100.50
EMT	EMT	EMT		Retirement	0.24	0.24	Roll-up	1,928.17	964.08
5	5	5	Total	Medicare	0.0145	0.0145			
3	3	3	On Ambulance	Work. Comp	0.04286	0.04286	Total	8,129.17	4,064.58
2	2	2	Off Ambulance	FLSA	117.00	58.50			
EMTs Not on Ambulances				Roll-up	642.72	321.36			
		6		Total	2,709.72	1,354.86			

Staffing Analysis

	Chief	Suppression	Prevention	
	12	12	11	
	AC	AC	AC	FPO
	Capt.	Capt.	Capt.	FPO
	FF	FF	FF	
	FF	FF	FF	
	FF	FF	FF	
	FF	FF	FF	
7 min staff	FF	FF	FF	
8 min staff	FF	FF	FF	Blue Highlighted indicates vacation allowance
	FF	FF	FF	
	FF	FF	FF	Red Lettering indicates staff needed for 12-12-12 turn strength
Crew 3	FF	FF	FF	Yellow Heighted is Additional Staff for
	FF	FF	FF	3rd Ambulances

The Staffing Analysis below shows the current operational chart of the Fire Department with the addition of 3 EMS crews. There is one Fire Fighter position that is currently unfilled that position may be filled at a later date. Considerations will need to be made on minimum staffing levels as it will relate to overtime increases. To operate 3 EMS units it will require 2 current suppression staff per-shift. In the event the committee wants to evaluate the cost of staffing EMS without utilizing current fire suppression staff the recommendation for new hires would shift from 12 to 16. The recommendation is however that the overtime cost are less than that of the additional 4 staff needed.

New Hires

Need to Pull 2 Certified from Suppression

	A Turn	B Turn	C Turn
Crew 1	FF	FF	FF
	FF	FF	FF
Crew 2	FF	FF	FF
	FF	FF	FF

Overtime to staff at 8 min would require at least 12-12-12 shift staffing with and this is the best estimated for OT cost below.

Overtime		0.24	0.0145	0.04286	Total
		Retirement	Medicare	Work Comp	
Min	36,000.00	8,640.00	522.00	1,542.96	46,704.96
Max	50,000.00	12,000.00	725.00	2,143.00	64,868.00

Health Insurance Plan As of 4/16/2019 New Rate

Plan Cost by Category

	Employee	Employ/Sp	Employ/Child	Family
Vision	8.07	14.12	15.32	23.39
Dental	26.89	53.68	65.28	100.86
Medical*	645.88	1433.74	1217.54	1843.24
	680.84	1501.54	1298.14	1967.49
12 Months	8,170.08	18,018.48	15,577.68	23,609.88

Per-pay premium contribution

Bi-weekly	78.79	149.44	173.88	226.36
Yearly	2,048.54	3,885.44	4,520.88	5,885.36
%	0.25	0.22	0.29	0.25

* Included Teledoc flat 5.00 a month charge

Figures used for the Calculations on the Health Insurance Cost are based on the 2019 renewal rate for the Township and applying a 15% increase each consecutive year.

Equipment and Physical Evaluation Cost

Coat	1,268.00	gear bag	68.00
Pant	815.00	Psych	325.00
Boot	373.00	background/p	free
Face-piece	262.00	x-ray	350.00
Helmet	289.00	Spirometry	75.00
Shield	44.00	Stress test	293.00
gloves	76.00	Physical	259.00
EMS Jacket	275.00	blood work	70.00
Hood	21.00	Drug test	40.50
Uniforms	1,200.00	radiologist	225.00

Total to Outfit	6,328.50	Per FF
12	75,942.00	Times 12 FF

Equipment are Physical Cost will be applied in full on all new hires. After which the lifespan or testing is based on need. Annual physicals are covered under Health Insurance there after.

Civil Service Testing

Per Civil Service Commission a test run 3,500 for a Fire Fighter Test. This cost is already being realized in the Township and should not be considered additional unless there is not enough available candidates on the current Civil Service List.

One-Additional Civil Service Test	3,500.00
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Dispatch Cost

Currently the Dispatch Center is operating under a Council of Governments and provides dispatching services to the other area departments. Starting an EMS service will require all current staff to be training in Emergency Medical Dispatching (EMD). As Boardman and Austintown work as a backup to each others agency in an Emergency Situation, some consideration needs to be made in the event one of the centers is unable to take calls. EMD requires a dispatcher to stay on the line until an Ambulance arrives on scene. Chief Werth has provided figures on the personnel needed to provide for EMD.

Year 1		0.17	0.0145	23,609.88	0.04286					
No. of FTE	Classification	Wages	OPERS	Medicare	Health Care	Workers Comp	Life Insurance	Department Clothing	Attendance	Employee Cost
1	Dispatcher	31,983.12	5437.13	463.76	23,609.88	1,370.80	105	260	900	64,129.68
2	Dispatcher	31,983.12	5437.13	463.76	23,609.88	1,370.80	105	260	900	64,129.68
3	Dispatcher	31,983.12	5437.13	463.76	23,609.88	1,370.80	105	260	900	64,129.68
4	Dispatcher	31,983.12	5437.13	463.76	23,609.88	1,370.80	105	260	900	64,129.68
5	Dispatcher	31,983.12	5437.13	463.76	23,609.88	1,370.80	105	260	900	64,129.68
6	Dispatcher	31,983.12	5437.13	463.76	23,609.88	1,370.80	105	260	900	64,129.68
		191,898.72	32,622.78	2,782.53	141,659.28	8,224.78	630.00	1,560.00	5,400.00	384,778.09

Year 2 0.17 0.0145 27,151.36 0.04286

No. of FTE	Classification	Wages	OPERS	Medicare	Health Care	Workers Comp	Life Insurance	Department Clothing	Attendance	Employee Cost
1	Dispatcher	35,100.60	5967.10	508.96	27,151.36	1,504.41	105	260	900	71,497.43
2	Dispatcher	35,100.60	5967.10	508.96	27,151.36	1,504.41	105	260	900	71,497.43
3	Dispatcher	35,100.60	5967.10	508.96	27,151.36	1,504.41	105	260	900	71,497.43
4	Dispatcher	35,100.60	5967.10	508.96	27,151.36	1,504.41	105	260	900	71,497.43
5	Dispatcher	35,100.60	5967.10	508.96	27,151.36	1,504.41	105	260	900	71,497.43
6	Dispatcher	35,100.60	5967.10	508.96	27,151.36	1,504.41	105	260	900	71,497.43
		210,603.59	35,802.61	3,053.75	162,908.17	9,026.47	630.00	1,560.00	5,400.00	428,984.60

Year 3 0.17 0.0145 31,224.07 0.04286

No. of FTE	Classification	Wages	OPERS	Medicare	Health Care	Workers Comp	Life Insurance	Department Clothing	Attendance	Employee Cost
1	Dispatcher	37,943.70	6450.43	550.18	31,224.07	1,626.27	105	260	900	79,059.65
2	Dispatcher	37,943.70	6450.43	550.18	31,224.07	1,626.27	105	260	900	79,059.65
3	Dispatcher	37,943.70	6450.43	550.18	31,224.07	1,626.27	105	260	900	79,059.65
4	Dispatcher	37,943.70	6450.43	550.18	31,224.07	1,626.27	105	260	900	79,059.65
5	Dispatcher	37,943.70	6450.43	550.18	31,224.07	1,626.27	105	260	900	79,059.65
6	Dispatcher	37,943.70	6450.43	550.18	31,224.07	1,626.27	105	260	900	79,059.65
		227,662.23	38,702.58	3,301.10	187,344.40	9,757.60	630.00	1,560.00	5,400.00	474,357.91

Year	Wages	OPERS	Medicare	Health Care	Workers Comp	Life Insurance	Department Clothing	Attendance	Employee Cost
2020	191,898.72	32,622.78	2,782.53	141,659.28	8,224.78	630.00	1,560.00	5,400.00	384,778.09
2021	210,603.59	35,802.61	3,053.75	162,908.17	9,026.47	630.00	1,560.00	5,400.00	428,984.60
2022	227,662.23	38,702.58	3,301.10	187,344.40	9,757.60	630.00	1,560.00	5,400.00	474,357.91

Year	Wages	Benefits
2020	191,898.72	192,879.37
2021	210,603.59	218,381.01
2022	227,662.23	246,695.68

Dispatch Wage Scale as of 4/16/2019 with the Assumptions of a 2% Wage Increase for a Hire Date in 2020

Step	2% Over 3 Years			2080 hours			Year 1 Pay Mix
	1.02						
	2020	2021	2022	2020	2021	2022	
Hourly Rate	Hourly Rate	Hourly Rate	Annual	Annual	Annual		
Entry	15.00	15.30	15.61	31,208.74	31,832.91	32,469.57	15,604.37
Training	15.75	16.06	16.39	32,757.50	33,412.65	34,080.91	16,378.75
After 1	16.54	16.88	17.21	34,412.35	35,100.60	35,802.61	<u>31,983.12</u>
After 2	17.53	17.88	18.24	36,470.30	37,199.71	37,943.70	
After 3	18.58	18.96	19.34	38,655.55	39,428.66	40,217.24	
After 4	19.79	20.18	20.59	41,159.04	41,982.22	42,821.87	
After 5	21.08	21.51	21.94	43,853.47	44,730.54	45,625.15	
After 6	22.61	23.07	23.53	47,035.87	47,976.59	48,936.12	

Ambulance Plans:

Number of Amb.	Heart Monitor	3 New 1 Chasis	All New	Equipment	Radio	Radio Mnt.	Power Cots	Vehicle Insurance
		Ambulance Plan 1	Ambulance Plan 2					
1	35,000.00	128,000.00	128,000.00	17,000.00	8,000.00	204.00	8,000.00	1,000.00
2	35,000.00	128,000.00	128,000.00	17,000.00	8,000.00	204.00	8,000.00	1,000.00
3	35,000.00	128,000.00	128,000.00	17,000.00	8,000.00	204.00	8,000.00	1,000.00
4	35,000.00	100,000.00	128,000.00	17,000.00	8,000.00	204.00	8,000.00	1,000.00
	140,000.00	484,000.00	512,000.00	68,000.00	32,000.00	816.00	32,000.00	4,000.00

		5 Year Loan 5.4%	6 Year Loan 5.4%	7 Year Loan 5.4%
		5	6	7
Plan 1	Ambulance	760,816.00	160,380.01	133,650.01
Plan 2	Ambulance	788,816.00	166,282.41	138,568.68

Based on cost, Plan 2 is preferred. Ambulances will need to be rotated and replaced. All are new and warranted and can allow for a better rotation schedule. Used or re-chaised fort he price would be more costly as replacement would be done more frequently.

Ambulance Replacement Plan Options:

After Operating Cost, (which included personnel, building, and operating) the remaining funds need to used for Ambulance Replacement. Radios and Radio Maintenance Cost may be less as radios tend to last longer and maintenance costs are per radio. If no funding is available from a "carryover" or "surplus" of revenue then the cost of replacement needs to included in Operations Costs. See Operations Tab for Captial Budget Plan

Captial Budget in Operations Tak 70,000.00

Cost of 1 Ambulance

Heart	Ambulance	Equipment	Radio	Radio mnt.	Power Cots	Vehicle
35,000.00	128,000.00	17,000.00	8,000.00	204.00	8,000.00	1,000.00

197,204.00 Total Cost

Estimated Replacement Plan Option 1: Buy when you can replace

Year 1	Year 2	Replace Year 3	Year 4	Replace Year 5	Year 6	Year 7	Replace Year 8	Year 9	Replace Year 10	Year 11	Year 12	Year 13	Year 14	Year 15
70,000	140,000	210,000												
		197,204												
		12,796	82,796	152,796 (44,408)	25,592	95,592	165,592 (31,612)	38,388	108,388 (88,816)	(18,816)	51,184	121,184 (76,020)	(6,020)	63,980 (133,224)

Year 1	Year 2	Replace Year 3	Year 4	Year 5	Replace Year 6	Year 7	Year 8	Replace Year 9	Year 10	Year 11	Replace Year 12	Year 13	Year 14	Year 15
70,000	140,000	210,000												
		12,796	82,796	152,796	222,796 25,592	95,592	165,592	235,592 38,388	108,388	178,388	248,388 51,184	121,184	191,184	261,184 63,980

Fuel

Fuel Consumption Estimates are based of 2018 Actuals. We are also taking into consideration that 74% of all calls to the Fire Department are EMS. Knowing the Fire Engines may have to run on certain EMS Calls a reduction factor of truck runs was applied. That factor was 50% Due to the flux in fuel prizing we are going to apply a 20%

	2018			
	Spent			
Gas	4,678.00	2020	32,680.56	
Diesel	28,002.56	2021	32,680.56	
	<u>32,680.56</u>	2022	32,680.56	
Ambulance Runs Represent	74%			
Fire Truck Reduction on Calls	50%			
Est. Diesel Reduction	(14,001.28)			
Est. Gas Increase	3,461.72			
Est. Fuel Savings	2020 (10,539.56)	2021 (632.37) (9,907.19)	2022 (594.43)	(9,312.76)

Fuel Cost were adjusted by 6% based on an estimate of increased call volume.

EMS Maintenance

On New Ambulances warrant covers major systems. However cost associated with use will vary. Items like Tires, Lights, Fluids, etc. would be inspected by the Township's Mechanics. Ohio has a State Inspection program annually at a cost of \$250 for Ambulances. Routine maintenance for each ambulance estimates are \$400.

	State Inspections	Routine Maintenance	Tires Brakes Etc.		Total Maintenance
Unit 1	250.00	400.00	1,000.00	2020	6,600.00
Unit 2	250.00	400.00	1,000.00	2021	6,600.00
Unit 3	250.00	400.00	1,000.00	2022	6,600.00
Unit 4	250.00	400.00	1,000.00		
	<u>1,000.00</u>	<u>1,600.00</u>	<u>4,000.00</u>		
	<u>Est. Total</u>	<u>6,600.00</u>			

Current Maintenance Cost

The current cost to maintain the fleet is 36,500. Cost on useable may decrease with the introduction of EMS. This would relate to cost of brakes, tires, etc. However due to all of the factors related to the use of a fire truck it is the

	Current Cost	Reduced Cost on Trucks	Est. EMS Maintenance Cost	Adjusted Total	Change in Cost
2020	36,500.00	29,200.00	6,600.00	35,800.00	(700.00)
2021	36,500.00	29,200.00	6,600.00	35,800.00	(700.00)
2022	36,500.00	29,200.00	6,600.00	35,800.00	(700.00)

EMD Software

In order to EMD, software solutions are employed for the dispatchers. Two different software systems were reviewed APCO Software was 53,459.38, and would need a plug-in for CAD system. The 2nd software solution was Priority Dispatch at a cost of 107,859. It will interface with CAD system. Both options have annual costs and training costs.

	Cost	Annual Fees	365.00 x OT 23 F.T.E C.E. 32 Hours	2nd Year C.E.
Priority Dispatch	107,859.00	4,800.00	13,000.00	6,900.00
APCO	53,459.38	10,691.88		

Training

Training Cost are associated with Continuing Education and in case of Dispatch all staff will need to be trained in Emergency Medical Dispatching. The Fire Department is currently paying for Paramedic Refreshers at \$125.00 every 2 years.

Fire	Cost of		Dispatch				Year 2 Cost for CE			
	Paramedic Refreshers	8 Staff Training		389.00 EMD Training	105.00 CPR Cert	Est. Overtime Cost	160.00 \$40*4 days 4 day Per-Diem	120.00 APCO Dues	200.00 C.E. Credit	Est. Overtime Cont. Ed.
	125.00	1,000.00								
Year	Training		Current Staff							
2020	1,000.00		17	6,613.00	1,785.00	17,026.00	2,720.00	2,040.00	3,400.00	2,520.00
2021										
2022	1,000.00		6	2,334.00	630.00		960.00	720.00	1,200.00	
Combined Year 2 C.E.	28,215.00 7,120.00		(Overtime was only added once for the group as the cost was not broken out between the new and current staff)							

Personal Property Insurance

The Township is covered under a Ohio Public Risk Entity Pull of Ohio. Our representative from this agency stated our current liability insurance coverage is \$4,585 in the Fire Department. The policy has a million dollar rider. The best estimate was derived by dividing current staffing by the insurance cost then adding the additional staff for an increase.

Current Fire Department Staff	37
Current FD Coverage Cost	4,585.00
Per Employee Cost	123.92
Adding 12 Fire Fighters	1,487.03

Capital Replacement Plan

In Order to Replace Ambulances every 3 years a Capital Budget is needed to buildup funds to replace.

Per-Year Capital Budget	Per-Year	Per-Year
70,000.00		Capital Funding
	2020	70,000.00
	2021	140,000.00
	2022	210,000.00

Building Maintenance

All 3 Fire Stations have the ability to house the 12 additional staff and Ambulances. Building Cost would be subject to a utility increase. Best Estimated would be and 8% increase in utility costs the first year and a 1.05 multiplier thereafter due to fluctuating cost of utilities.

Utilities

2019		
Current Budget		
Gas	9,430.00	
Water	4,500.00	
Electric	24,600.00	
	<u>38,530.00</u>	
1.08		
	Projected	Difference
Gas	10,184.40	754.40
Water	4,860.00	360.00
Electric	26,568.00	1,968.00
	<u>41,612.40</u>	<u>3,082.40</u>

	Total Utility Cost	1.05 Multiplier for each consecutive year
2020	41,612.40	3,082.40
2021	43,693.02	2,080.62
2022	45,877.67	2,184.65

Revenue Est.

Fee Schedule:	BLS	\$550.00
	ALS	\$700.00
	ALS 2	\$850.00
	mileage	\$14.00

Based on 2018 Transports

Payer Mix	Counts	Percentage	Revenue	Count x Rev.	0.89
			Per-Call	Totals	89% collection rate
Insurance	743	22%	\$ 550.00	\$ 408,650.00	\$ 363,698.50
Medicaid	418	13%	\$ 82.00	\$ 34,276.00	\$ 30,505.64
Medicare	1700	51%	\$ 259.00	\$ 440,300.00	\$ 391,867.00
Private Care	469	14%	\$ 450.00	\$ 211,050.00	\$ 187,834.50
Totals	3330	100%	n/a	\$ 1,094,276.00	\$ 973,905.64

Average Per-Call Rate based on total Count \$ 328.61 \$ 292.46

Low Estimate

Payer Mix	Counts	Percentage	Revenue	Count x Rev.	0.89
			Per-Call	Totals	89% collection rate
Insurance	743	22%	\$ 450.00	\$ 334,350.00	\$ 297,571.50
Medicaid	418	13%	\$ 82.00	\$ 34,276.00	\$ 30,505.64
Medicare	1700	51%	\$ 259.00	\$ 440,300.00	\$ 391,867.00
Private Care	469	14%	\$ 350.00	\$ 164,150.00	\$ 146,093.50
Totals	3330	100%	n/a	\$ 973,076.00	\$ 866,037.64

Average Per-Call Rate based on total Count \$ 292.22 \$ 260.07

Revenue estimates have been taken from figures provided by the Fire Chief. In an attempt to consolidate the information, estimates are provided below. The tables will calculate revenue estimates by changing the "Counts" and "Revenue Per-Call" figures. The figures below were derived from the payer mix for Boardman Township in 2018 provided by Lane Life Trans. Medicare and Medicaid reimbursements are set amounts. These do vary slightly based on call type. The estimates for insurance were calculated at a standard 80-20 reimbursement rate for most insurance policies. Private care was initially set as an average amount and then decreased or increased for the low and high estimates. These estimates are in line with other fire departments in the area regarding their average reimbursement amounts per call.

High Estimate

Payer Mix	Counts	Percentage	Revenue	Count x Rev.	0.89
			Per-Call	Totals	89% collection rate
Insurance	743	22%	\$ 600.00	\$ 445,800.00	\$ 396,762.00
Medicaid	418	13%	\$ 82.00	\$ 34,276.00	\$ 30,505.64
Medicare	1700	51%	\$ 259.00	\$ 440,300.00	\$ 391,867.00
Private Care	469	14%	\$ 500.00	\$ 234,500.00	\$ 208,705.00
Totals	3330	100%	n/a	\$ 1,154,876.00	\$ 1,027,839.64

Average Per-Call Rate based on total Count \$ 346.81 \$ 308.66

Appendix C:

Supplemental Supporting Documents

Boardman Township

7440 Market St., Boardman, Ohio 44512 (330) 726-4199 **FAX** (330) 726-4195

FIRE DEPARTMENT

Mark A. Pitzer, Chief

EMS Costs

Personnel:

The current Collective Bargaining Agreement identifies the wage scale of our firefighters. We referred to the wage scale as the starting point for wages. Refer to these wage amounts in the CBA. We also looked at certification based pay on top of this wage scale. The cost of hiring a Firefighter/EMT in the fire department is \$6,300.00.

12 FF/EMT = \$75,600.00

Purchase and equip an Ambulance:

Type III Ambulance would be the preferred choice. Type III's are the middle of the road size ambulances. The smaller van style is not very conducive when treating any type of trauma, cardiac, arrest, or SOB patient when multiple EMS providers must work together on a patient. The larger International or Freightliner style ambulance, although big and nice with a lot of working room, I feel is a little too big for our community.

Type III Quotes:

Braun Signature Series 150" box, Ford E350:	\$140,776.00
Braun Signature Series 150" box, F350 4x4:	\$167,757.00
Medix 153", Ford E350:	\$123,235.00
Medix 153", F450 4x4:	\$148,765.00
Osage Type III Warrior E350:	\$118,942.00
Osage Type III S-Warrior E450:	\$128,503.00

There are many different options. These are base prices and include a regular cot.

To equip an ambulance with supplies: \$16,977.08

Boardman Township

7440 Market St., Boardman, Ohio 44512 (330) 726-4199 FAX (330) 726-4195

FIRE DEPARTMENT

Mark A. Pitzer, Chief

New cardiac monitor ranging from \$35,000.00 a piece or refurbished units starting at \$16,000.00.

Mobile and Portable Radios for each unit: Motorola Radios - \$8,000.00

Insurance for the ambulances was estimated at \$1,000 per unit as provided by Cailor-Fleming.

All of the companies stated there are finance options out there that allow initial payment to be deferred 6-12 months. So, essentially we could get up and running generating revenue prior to making any loan/lease payments. Also may be able to roll in the cost of a monitor into the loan/lease payment.

Billing:

There are several private billing companies; most charge a percentage fee per billable incident at 6-8%. One company charges a flat rate of \$40.00 per billable incident.

\$560.00 application fee for Medicaid

Ohio Billing: \$795.00 * one time start-up fee
\$100.00 Monthly maintenance fee (if applicable)
\$40.00 billing fee per incident

Medicount: Fees based on setting up with insurance companies etc.
No monthly fee
8% billing fee per incident
*Medicount did give a rough estimate of \$275.00 reimbursement to twp. (lower end)

Quest Advantage: \$495.00 *one time start-up fee
No monthly fee
7% billing fee per incident

Boardman Township

7440 Market St., Boardman, Ohio 44512 (330) 726-4199 FAX (330) 726-4195

FIRE DEPARTMENT

Mark A. Pitzer, Chief

Dispatch:

I will rely on information from the Police Chief regarding capabilities involving dispatch and EMD. Due to EMD requirements, it will be necessary to add additional dispatch personnel. Attached is also a report generated from our reporting system on peak call times for 2018 by hour.

Liability Insurance:

The Township carries liability insurance for our personnel as we currently respond to EMS calls. It is a million dollar malpractice rider and Cailor-Fleming stated there would be a small increase in the amount of \$1,487.03.

Reporting:

Last year our department purchased new reporting software that encompasses both Fire and EMS reporting. This reporting system is already set up to report to billing companies and the State of Ohio.

Protocol:

The Fire Department has Protocol through Trumbull Memorial Hospital for all levels of EMS Providers. The fire Department also has Drug License for the State of Ohio through the Board of Pharmacy for all 3 fire stations.

Training and Education/ CE:

We currently provide continuing education for all our EMTs and Medics. We have monthly medical training provided by TMH, free of charge. We also have partnered with Canfield Fire to provide bi-annual Paramedic refresher courses.

Currently we have usable staff of: 11 Paramedics, 2 EMT-A, and 15 EMTs.

Boardman Township

7440 Market St., Boardman, Ohio 44512 (330) 726-4199 FAX (330) 726-4195

FIRE DEPARTMENT

Mark A. Pitzer, Chief

“Skates” and Part-Time Considerations:

The option of placing current staff on “skates”, meaning bouncing from the fire truck to the ambulance, was discussed at length. The Committee determined that is not a viable option in Boardman as the amount of calls occurring simultaneously would greatly reduce fire protection response. On average, over 35% of emergency calls overlap requiring multiple units to engage. This average of 31 times a month where 3 or more calls are occurring simultaneously puts the Township at the risk of having no fire apparatus available. Boardman Fire apparatus have equipment to address numerous non-ems situations such as: structure fires, carbon monoxide calls, gas leaks, vehicle accidents, fire alarms, vehicle fires, dumpster fires, brush fires, and entrapment. The Committee determined that reducing fire protection services for EMS would put the community at a risk. The concept of “Skating” firefighters may be a viable options in a smaller or more rural community, but due to amount of residential, commercial, and commerce in Boardman Township the committee does not recommend this as a viable option.

The Committee also reviewed options of supplementing full-time staff with part-time staff. Although the cost savings with not having to provide a full fringe benefits package to the part-time staff would reduce cost, the number of part-time Firefighters with all the credentials would be enough of an hindrance that there would be no way to guarantee a 3 EMS unit response. For ever full-time firefighter used to fill a spot on one of the EMS crews you would need 3 or more part-time employees. All part-time personnel would still need to meet all the requirements and be provided the same equipment as a full-time firefighter. A complete set of turn-out gear would be issued and with the training investment, funding becomes disposable as it is believed that most part-time positions would be short-term positions. It was discovered that a neighboring department has had many issues related part-time staffing to the point where a lack of coverage from call-offs closed a fire station. There would be a need for a large part-time pool of personnel to cover a 24-7 operation to the point where it just becomes inefficient. Discussing this issues at length, the Committee would not recommend relying on part-time employees to staff or supplement an EMS service.

Department Name	Chief	Phone Number	EMS Primary Contact
Miami Twp.	Steve Kelly	513-248-3700	Daniel Mack
Union Twp.	Stanley Deimling	513-528-4446	Mark Fyffe
Orange Twp.	Matthew Noble	740-657-8290	John Hodges
Violet Twp.	Mike Little	614-837-4123	Jason Smith
Jackson Twp.	Randy Little	614-875-5588	William Dolby
Mifflin Twp.			
Norwich Twp.	Jeff Warren	614-876-7694	EMS Captain on each shift
Truro Twp.	Steve Hein	614-729-1911	Chuck Brooks
Beavercreek Twp.	David VandenBos	937-426-1213	Scott Dorsen
Anderson Twp.	Mark Ober	513-688-8400	Robert Herrlinger
Colerain Twp.	Frank Cook	513-825-6143	Will Mueller
Delhi Twp.	Doug Campbell	513-922-2011	Andy Ihle
Green Twp.	Douglas Witsken	513-574-0474	Darren Mooney
Springfield Twp.	Robert Leininger	513-522-1410	Richard Browe
Sylvania Twp.	Jeffrey Kowalski	419-882-7676	Michael Ramm
Austintown Twp.	Andy Frost	330-799-8502	Andy Frost
Marion Twp.	Ben Meddles	740-387-5404	Ben Meddles
Harrison Twp.			
Miami Twp.	Matt Queen	937-560-2114	Andy Harp
Washington Twp.	William Gaul	937-433-3083	Joel Holbrook
Scioto Twp.	Ryan Horsley	740-775-1431	Nate Freeman
Jackson Twp.	Tracy Hogue	330-834-3953	Timothy Berczik
Perry Twp.	Mark Martin	330-833-3865	Ron Riggs
Plain Twp.	Charles Shalenberger	330-492-4089	Charles Shalenberger
Liberty Twp.	Gus Birch	330-759-0363	Chris Olson
Liberty Twp.	Timothy Jensen	740-938-2021	William Piwtorak
Clearcreek	ACs Tim Simpson or Steve Agenbroad	937-748-2766	same
Deerfield Twp.	Robert Eisele	513-701-6962	Dan James
Franklin Twp.	Steve Bishop	sbishop@ftfd.org	N/A
Hamilton Twp.			

Phone Number	Administrator/Trustee	Phone Number	EMS at ALS level YorN	# of EMS calls/year
513-290-6130	Jeff Wright	513-248-3725	yes	3,600
513-528-4446	Ken Geis	513-752-1741	yes	5,500-6,000
740-548-6346	Lee Bodnar	740-548-5430	yes	1,393
614-837-4123	Harry Myers	harry.myers@violet.oh.us	yes	4,350
614-875-5588	Mike Lilly	614-875-0100	yes	7,216
614-876-7694	Jamie Fisher	614-876-7694	yes	3,500
614-729-1909	Jason Nicodemus	614-729-1911	yes	7,500
937-427-6589	Alex Zaharieff	937-429-4472	yes	4,500
513-688-8091	Vicky Earheart	513-688-8400	yes	3,113
513-923-5045	Jim Rowan	513-385-7500	yes	7,500
513-922-2011	Pete Lamburm	513-922-3111	yes	2,600-2,700
513-574-0474	Kevin Celerek	513-574-4848	yes	6,000
513-522-1410	Mike Hinnenkamp	513-522-1410	yes	4,535
419-882-7676	John Zeitler	419-882-0031	yes	4,000
330-799-8502	Mike Dockry	330-270-4747	Co-op	2,606
740-387-5404	Lynn Clabaugh	740-225-5097	yes	1,466
937-560-2119	John Stalder	937-433-9969	yes	8,100
937-433-3083	Jesse Lightle	937-433-0152	yes	5,900
740-637-9479/ 740-775-1431	Missy Butt	740-775-1431	yes	1,000
330-834-3953	Mike Vaccaro	330-832-7416	yes	6,000
330-833-3865	Joyce Fetzer	330-833-2141	yes	2,558
330-492-4089	Lisa Campbell	lcmapbell@plaintownship.com	yes	3,300
330-759-0363	Patrick Ungard	330-759-13315	yes	1,900
740-938-2021	Matt Huffman	740-938-2000	yes	1,600
937-748-2766	Jack Cameron	937-748-1267	yes	1,809
513-697-2745	Bill Decker	513-701-6958	yes	2,200
N/A	N/A	N/A	N/A	N/A

# of ambulances/day	Billing company YorN	Av. Billing collect per call	Total yearly revenue
4	yes, Medicount		
6	yes, Medicount	\$160	\$216,840
2	no billing	\$0	\$0
3	yes, McKesson	\$328	\$803,611
4	yes, McKesson	\$819	\$1,548,556
3	yes, Med3000	\$375	\$950,000
2	yes, McKesson	\$700	\$810,000
3	yes	\$325	\$1,300,000
4	yes, McKesson	\$800	\$852,675
6	yes, Intermedix	\$187	\$1,400,000
3	yes	\$313	\$540,000-\$599,000
4	yes	\$334	\$1,300,000
4	yes, Medicount	\$250	\$700,000
1	yes, Medicount	N/A	N/A
half of one	N/A	N/A	N/A
2	yes, Medicount	\$230	\$250,000
5	yes	\$300	\$1,000,000
3	yes, McKesson	Medicare max	\$800,000-1,000,000
1	yes, Medicount	\$300	\$273,300
5	own billing specialist	\$405	\$1,300,000
3	yes	80%	\$500,000
4	yes, Ohio billing	\$450	N/A
2	yes, Medicount	N/A	N/A
2	no billing	\$0	\$0
2 or 3	yes, McKesson	\$893	\$520,000
3	yes, Medicount	\$720	\$642,154
N/A	N/A	N/A	N/A

Funding Source

Two levies that generate \$10.4 million

Holistic budget for both Fire and EMS provided through \$7.0 million levy based on property tax.

Tax levy for overall operations including EMS, generating approx. \$10.8 million annually.

Self-funded through current budget.

General operating levies that pay for both Fire and EMS, generating just under \$14 million annually.

FIRE/EMS Levy that raises approximately \$6 million.

Funded by both EMS revenue and three continuing levies yielding \$7,425,000.

Going for Fire/Ems levy this year. EMS/Fire grants

EMS billing revenue and property taxes supported by tax levy which supports approx. 75% of dept. budget

Self-funded through eEMS billing revenue. Operating levy generates additional \$3.2 million.

Various Fire and EMS levies provide approx. \$8.4 million budget.

Part of overall fire department budget, revenue is generated from a fire levy.

Self-funded through current budget.

N/A

N/A

City and township fire levies as well as billing contributes to \$9.8 million budget.

\$4.7 million levy, generating approx. \$2.5 million for first year.

Self-funded through EMS billing.

Fire levy generates \$8.9 million + \$1.3 million revenue from EMS transporting = entire Fire/EMS budget

Fire levy that generates \$2,391,508.

Fire budget that is supplemented by EMS soft billing of residents and hard billing of non-residents

Self-funded, no levy.

Levy that generates roughly \$7 million.

Three property tax levies = \$5,031,548

Fire levy of \$7.1 million which provides primary funding for EMS.

N/A