

Appendix C: Additional Analyses

Several analyses were conducted that helped to inform recommendations. The tables and charts which follow provide additional information.

The table below shows the number of police officers on a per-capita basis for Hubbard Township and peers.

Officer per Capita Comparison

Department	County	Officers FT	Officers Total	Residents ¹	Officers per 1,000 Residents	FT Officers per 1,000 Residents
Bazetta Township	Trumbull	7	10	5,563	1.8	1.3
Brookfield Township	Trumbull	9	14	8,330	1.7	1.1
Goshen Police District	Mahoning	10	16	7,097	2.3	1.4
Springfield Township	Mahoning	11	14	6,443	2.2	1.7
St. Clair Township	Columbiana	12	15	7,533	2.0	1.6
Weathersfield Township	Trumbull	13	15	8,062	1.9	1.6
Hubbard Township	Trumbull	9.0	12	5,341	2.2	1.7
Peer Average		11.5	15.0	7,171	2.1	1.6

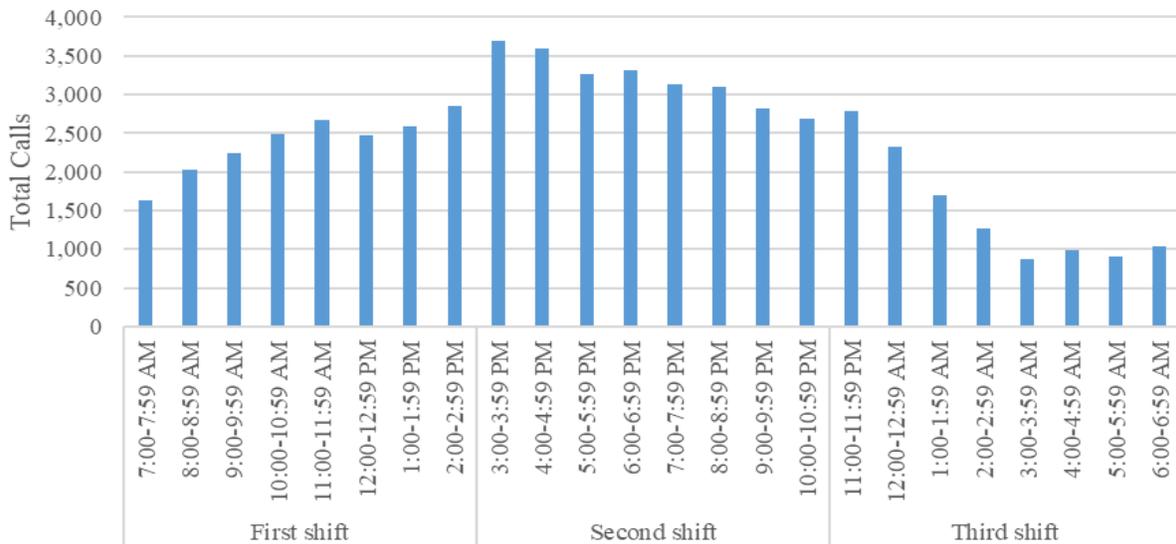
Source: Hubbard Township, Peers, U.S. Census Bureau

Note: Champion Township and Warren Township, both in Trumbull County, were not included in this comparison because they did not respond to attempts to confirm staffing levels.

¹ Based on most recent 2018 population estimates.

The chart on the following page provides historical data on the number of calls by hour and shift for the Police Department.

HTPD Total Calls by Hour and Shift – 2015 to 2019



Source: Trumbull County 9-1-1 Dispatch Center

The following table provides additional information related to the shift relief factor calculated for HTPD.

HTPD Shift Relief Factor – 2017 to 2019

Annual Compensated FTE Hours	2,080
Average Annual Leave per Officer	418
Required Minimum Training Hours ¹	28
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Combined Leave and Training Hours	446
Annual Hours Available to Work	1,634
% of an FTE Available for Patrol	78.5%
Total Hours Required for a Single Shift ²	2,920
Shift Relief Factor³	1.79

Source: Hubbard Township

¹ The minimum hours required by ORC § 109.801 for annual firearms requalification and ORC § 109.803 for continuing professional training for peace officers and troopers.

² Hours based on an 8-hour shift staffed 365 days per year.

³ Hours required to staff a single shift divided by the annual hours available from a single full-time officer.

The table on the following page provides a historical view of the average saturation index on an hourly basis.

HTPD Average Saturation Index – 2015 to 2019

Hour	Sun	Mon	Tue	Wed	Thurs	Fri	Sat	Average
12:00 AM	47.8%	23.0%	23.0%	18.3%	22.6%	17.8%	50.8%	29.1%
1:00 AM	32.6%	15.2%	19.6%	16.5%	15.2%	17.4%	32.2%	21.2%
2:00 AM	27.4%	14.8%	10.9%	10.0%	10.0%	15.2%	23.5%	16.0%
3:00 AM	15.6%	11.7%	11.3%	7.8%	7.8%	9.1%	13.9%	11.0%
4:00 AM	14.8%	12.6%	12.6%	11.3%	11.3%	10.9%	13.9%	12.5%
5:00 AM	10.0%	12.2%	13.0%	10.4%	12.6%	10.0%	10.9%	11.3%
6:00 AM	6.5%	13.5%	17.8%	15.2%	13.9%	13.5%	11.7%	13.2%
7:00 AM	8.8%	12.3%	15.5%	17.5%	16.1%	14.9%	10.8%	13.7%
8:00 AM	9.9%	19.9%	19.6%	20.2%	19.3%	17.2%	12.9%	17.0%
9:00 AM	15.8%	22.2%	17.8%	20.2%	18.4%	19.6%	17.8%	18.8%
10:00 AM	19.9%	21.3%	19.6%	18.1%	19.3%	25.1%	22.2%	20.8%
11:00 AM	22.5%	22.5%	19.9%	23.7%	21.9%	21.6%	24.5%	22.4%
12:00 PM	19.3%	18.7%	23.7%	21.6%	17.2%	23.4%	21.6%	20.8%
1:00 PM	24.0%	20.5%	21.0%	21.6%	21.3%	22.2%	21.6%	21.8%
2:00 PM	24.8%	21.3%	21.6%	24.5%	26.6%	25.7%	23.1%	24.0%
3:00 PM	32.3%	36.6%	34.0%	35.0%	37.3%	39.6%	31.6%	35.2%
4:00 PM	33.3%	38.3%	33.0%	29.3%	38.0%	37.6%	30.3%	34.3%
5:00 PM	26.0%	33.3%	32.0%	30.6%	34.3%	35.0%	27.3%	31.2%
6:00 PM	30.3%	31.6%	27.3%	30.3%	34.6%	35.3%	32.3%	31.7%
7:00 PM	29.0%	27.3%	27.3%	29.0%	31.6%	34.0%	31.6%	30.0%
8:00 PM	27.6%	30.0%	25.6%	33.0%	29.0%	32.3%	30.0%	29.6%
9:00 PM	25.3%	26.3%	29.3%	24.3%	25.3%	29.3%	29.6%	27.1%
10:00 PM	27.0%	21.3%	20.0%	20.6%	19.6%	31.0%	41.0%	25.8%
11:00 PM	31.7%	27.8%	24.3%	24.8%	27.8%	53.0%	53.4%	34.7%
Average	23.4%	22.3%	21.7%	21.4%	22.1%	24.6%	25.8%	23.0%

Source: Hubbard Township and Trumbull County 9-1-1 Dispatch Center

The following table shows when the Police Department’s call history suggests that more than one officer would be required to handle workload based on saturation index.

Patrol Officers Required by Hour and Day based on 9-1-1 Call Volume

Shift	Time	Sat	Sun	Mon	Tue	Wed	Thurs	Fri
3rd	12:00 AM	1.69	1.59	0.77	0.77	0.61	0.75	0.59
3rd	1:00 AM	1.07	1.09	0.51	0.65	0.55	0.51	0.58
3rd	2:00 AM	0.78	0.91	0.49	0.36	0.33	0.33	0.51
3rd	3:00 AM	0.46	0.52	0.39	0.38	0.26	0.26	0.30
3rd	4:00 AM	0.46	0.49	0.42	0.42	0.38	0.38	0.36
3rd	5:00 AM	0.36	0.33	0.41	0.43	0.35	0.42	0.33
3rd	6:00 AM	0.39	0.22	0.45	0.59	0.51	0.46	0.45
1st	7:00 AM	0.54	0.44	0.61	0.77	0.88	0.80	0.75
1st	8:00 AM	0.64	0.50	0.99	0.98	1.01	0.96	0.86
1st	9:00 AM	0.89	0.79	1.11	0.89	1.01	0.92	0.98
1st	10:00 AM	1.11	0.99	1.07	0.98	0.91	0.96	1.26
1st	11:00 AM	1.23	1.13	1.13	0.99	1.18	1.10	1.08
1st	12:00 PM	1.08	0.96	0.94	1.18	1.08	0.86	1.17
1st	1:00 PM	1.08	1.20	1.02	1.05	1.08	1.07	1.11
1st	2:00 PM	1.15	1.24	1.07	1.08	1.23	1.33	1.29
2nd	3:00 PM	1.05	1.08	1.22	1.13	1.17	1.24	1.32
2nd	4:00 PM	1.01	1.11	1.28	1.10	0.98	1.27	1.25
2nd	5:00 PM	0.91	0.87	1.11	1.07	1.02	1.14	1.17
2nd	6:00 PM	1.08	1.01	1.05	0.91	1.01	1.15	1.18
2nd	7:00 PM	1.05	0.97	0.91	0.91	0.97	1.05	1.13
2nd	8:00 PM	1.00	0.92	1.00	0.85	1.10	0.97	1.08
2nd	9:00 PM	0.99	0.84	0.88	0.98	0.81	0.84	0.98
2nd	10:00 PM	1.37	0.90	0.71	0.67	0.69	0.65	1.03
3rd	11:00 PM	1.78	1.06	0.93	0.81	0.83	0.93	1.77

Source: Hubbard Township and Trumbull County 9-1-1 Dispatch Center

The following table provides a comparison of several benefits between HTPD and peer averages. The recommendations for cost savings were based on the lowest level offered by peers, which is also identified in the table below.

Benefit Provision Comparison

	Hubbard	Peer Average	Difference	Lowest Peer	Difference	% Above Peer Min
Sick Leave Hours per Year	119.6	118.8	0.8	111.8	7.8	7.0%
Personal Leave Days per Year	2.0	2.6	(0.6)	1	1	100%
Vacation Hours Over 25 Years	3960	3795	165	3360	600	17.9%
All Leave Hours Over 25 Years	7485.6	7416.5	69.1	6474.8	1010.8	15.6%
Comp Time Max Accrual	300	142.9	157.1	40	260	650%
Severance Payout Days	60	61.3	(1.3)	25	35	140%
Minimum Court Hours	4	2.8	1.2	2	2	100%
Uniform Allowance (Annual) ³⁰	\$1,150	\$793.63	\$356.37	\$500	\$650	130%

Source: Hubbard Township, Peers, and ORC

The following three tables provide additional information on potential cost savings if recommendations are implemented and benefit levels are reduced.

Potential Severance Obligation Savings Based on R3

	Retirement-Eligible Staff	All Staff
Sick Accumulated	3,497.3	8,012.6
Days	437.2	1,001.6
1/2 of Days	218.6	500.8
Max Days	60	60
Days Owed	85.0	297.0
Rate	\$26.59	\$23.93
Total Owed	\$17,987.68	\$57,737.18
Minimum	\$10,629.28	\$35,568.44
Savings	\$7,358.40	\$22,168.74

Source: HTPD

³⁰ Officers in Hubbard Township receive a uniform allowance that is taxable. Peer departments may use taxable allowances or non-taxable methods such as uniform cost reimbursement or a quartermaster system.

Cost Impact of HTPD Higher Leave Provisions on Substitute Pay

	Coverage Using Regular Pay	Coverage Using Overtime Pay
Excess Leave ¹	1010.8	1010.8
Career Length	25	25
Hours per Year	40.4	40.4
Rate of Pay (Department Average)	\$24.34	\$36.51
Excess Annual Leave Pay per Officer	\$984	\$1,476
Total Officers	9	9
Cost to Cover Excess Leave	\$8,857	\$13,286

Source: Hubbard Township

¹ Amount of additional total leave time (vacation, sick, and personal leave) above that which is offered to an officer in Brookfield Township, the peer with the lowest combined total leave granted.

Potential Uniform Allowance Cost Savings

	Officer FTEs ¹	Allowance ²	Total Cost ³	Annual Savings
Current State	8.0	\$1,150	\$9,542	N/A
Future State	8.0	\$500	\$4,342	\$5,200
Reduce 1.0 FTE Officers and All PT Officers	7.0	\$500	\$3,842	\$6,042
Reduce 2.0 FTE Officers and All PT Officers	6.0	\$500	\$3,000	\$6,542
Reduce 3.0 FTE Officers and All PT Officers	5.0	\$500	\$2,500	\$7,042

¹ Reflects just the full-time detective, sergeants, and patrol officers who receive a fixed rate uniform allowance.

² Officers in Hubbard Township receive a uniform allowance that is taxable. Peer departments may use taxable allowances or non-taxable methods such as uniform cost reimbursement or a quartermaster system.

³ Includes the current fixed rate uniform allowance of the full-time officers as well as the average historical uniform allowance of all part-time officers between 2017 and 2019, which was paid out at \$0.10 per hour worked and equal to \$342.29.

The table below provides additional information regarding the elimination of police vehicles:

Fleet Reduction Mileage Displacement to Remaining Vehicles

	Eliminate 3	Eliminate 4	Eliminate 5
Maximum Annual Mileage ¹	178,311	178,311	178,311
Total Vehicles	9	8	7
Average per Vehicle	19,812	22,289	25,473
Total Cruisers	7	6	5
Average per Cruiser	23,187	27,051	32,462
Cycle Years	7	6	5
Final Cruiser Odometer Reading	162,309	162,309	162,309

Source: Hubbard Township

¹ Based upon the highest total annual mileage driven by Department vehicles over the past 21 years.