



## Category 5G Technical Rescue Team Program Evaluation

### Summary

In 2020, the Elk Grove Village Fire Department had a total of 43 incidents. Technical rescue incidents are categorized as elevator rescues, vehicle extrications, machine extrications or any of the more complicated rescues such as confined space or structural collapse. The 2020 incident responses are as follows:

Removal of victims from stalled elevator	30
Building or structure weakened or collapsed	7
Motor vehicle accident with extrication	3
Trench rescue	1
High angle rescue	2

The members of the technical rescue team (TRT) attended many great training events last year. The numerous training opportunities allowed our members to complete their required annual training. The addition of our new state of the art training tower has improved our ability to hold quality events with our members and the Division 1 members. We hosted two large scale MABAS drills that were attended by approximately one hundred TRT members from our surrounding communities.

A TRT box was initiated by the Wheeling Fire Department for two employees who had fallen while working inside of a water tower on June 12. The Department had 8 TRT member at a drill in Arlington Heights when the Box was toned out. All the member responded to the scene. One member was put in charge of organizing entry teams and two members were on an entry team in staging.

The Department responded for a TRT emergency in district 8 on December 18. The call came in as a wall collapse. Upon arrival it was determined that the wall collapse turned out to be more of a trench incident where a "wall" of clay fell on the worker while he was excavating a crawl space. Our members mitigated the remaining hazards by using stabilization equipment. The victim was removed and transported to the hospital.

The Department was unable to host an in-person Fire Prevention Week Open House last year due to the COVID pandemic. We did participate in the virtual open house. Residents were able to visit the website to view pictures of the TRT in training. Our hope is that we have a great turnout this year so we can reach more members of the public. This amazing public education event allows us an opportunity to educate hundreds of people about our capabilities and the training that we go through.



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### Operational Performance

The Department’s baseline statements reflect actual performance during 2016-2020. The Department relies on the use of automatic aid from neighboring fire departments to provide its effective response force complement of personnel. These resources are immediately available as part of a seamless response system. The Department’s actual baseline service level performance is as follows:

For 90 percent of ***all high/maximum risk technical rescue incidents***, the total baseline response time for 2016-2020 using only the 2020 calendar year the arrival of the first-due unit, staffed with a minimum of 2 firefighters, is: eight minutes and forty-four seconds (8:44) Village wide. The benchmark is exceeded by fifty-nine seconds (0:59). The first-due unit is capable of: establishing command; evaluating the need for additional resources; and controlling immediate hazards and life safety issues.

For 90 percent of ***all high/maximum risk technical rescue incidents***, the total baseline response time in 2016-2020 for the arrival of the effective response force (ERF), staffed with 20-30 firefighters and officers including the technical response team utilizing MABAS to achieve the desired numbers of members, is: fifteen minutes and fifty-one seconds (15:51) which occurred during the 2020 calendar year. This response surpassed the benchmark by twelve minutes and thirty-nine seconds (12:39). The ERF is capable of appointing a site safety officer; hazard control; primary/secondary teams, and patient stabilization and transport.

*\*The sample size of this response type adds difficulty in using this metric for analysis.*

High/Maximum Risk TRT All Area 90th Percentile Times Baseline Performance			Bench- mark	2016 to 2020	2016	2017	2018	2019	2020
<b>Alarm Handling</b>	Pick-up to Dispatch	Urban	1:30	3:19	N/A	N/A	N/A	N/A	3:19
<b>Turnout Time</b>	Turnout Time 1st Unit	Urban	2:00	0:38	N/A	N/A	N/A	N/A	0:38
<b>Travel Time</b>	Travel Time 1st Unit Distribution	Urban	4:15	4:16	N/A	N/A	N/A	N/A	4:16
	Travel Time ERF <b>Concentration</b>	Urban	25:00	7:29	N/A	N/A	N/A	N/A	7:29
<b>Total Response Time</b>	Total Response Time 1st Unit on Scene <b>Distribution</b>	Urban	7:45	8:44	N/A	N/A	N/A	N/A	8:44
	Total Response Time ERF Concentration			n=2	n=0	n=0	n=0	n=0	n=2
	Total Response Time ERF Concentration	Urban	28:30	15:51	N/A	N/A	N/A	N/A	15:51



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For 90 percent of ***all moderate risk technical rescue incidents***, the total response baseline time in 2016-2020 for the arrival of the first-due unit, staffed with a minimum of 2 firefighters, is: nine minutes and thirty-nine seconds (9:39). With the benchmark being seven minutes and forty-five seconds (7:45) the benchmark was exceeded by one minute and fifty-four seconds (1:54). In 2020 the first unit arrived with a time of eleven minutes and thirty-six seconds (11:36) exceeding the benchmark for 2020 by three minutes and fifty-one seconds (3:51). The first-due unit is capable of: establishing command; evaluating the need for additional resources; and controlling immediate hazards and life safety issues.

For 90 percent of ***all moderate risk technical rescue incidents***, the total baseline response time in 2016-2020 for the arrival of the effective response force (ERF), staffed with 13 firefighters and officers including the technical response team, is: thirteen minutes and thirty-five seconds (13:35). With a benchmark of nine minutes and forty-five seconds (9:45) the Department exceeded its benchmark by three minutes and fifty seconds (3:50). In 2020 the baseline ERF was better at twelve minutes and forty-four seconds (12:44) yet still exceeded the benchmark by two minute and fifty-nine seconds (2:59).). The ERF is capable of appointing a site safety officer; hazard control; and patient stabilization and transport.

*\*The sample size of this response type adds difficulty in using this metric for analysis.*

Moderate Risk TRT All Area 90th Percentile Times Baseline Performance			Bench- mark	2016- 2020	2016	2017	2018	2019	2020
<b>Alarm Handling</b>	Pick-up to Dispatch	Urban	1:30	2:38	2:33	1:26	2:52	2:32	2:27
<b>Turnout Time</b>	Turnout Time 1st Unit	Urban	2:00	2:17	1:45	2:17	2:20	2:25	2:03
<b>Travel Time</b>	Travel Time 1st Unit Distribution	Urban	4:15	6:43	5:49	4:38	6:19	5:23	9:18
	Travel Time ERF Concentration	Urban	6:15	8:07	6:24	5:58	10:57	7:20	9:18
<b>Total Response Time</b>	Total Response Time 1st Unit on Scene Distribution	Urban	7:45	9:39	8:42	7:07	9:49	8:02	11:36
	Total Response Time ERF Concentration			n=63	n=10	n=9	n=13	n=21	n=10
	Total Response Time ERF Concentration	Urban	9:45	13:35	18:37	12:54	17:26	9:37	12:44



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For 90 percent of **all low-risk technical rescue incidents**, the total baseline response time in 2016-2020 for the arrival of the first-due unit, staffed with a minimum of 2 firefighters, is: seven minutes and fourteen seconds (7:14). With a benchmark of nine minutes and thirty seconds (9:30) the Department surpassed the benchmark by two minutes and sixteen seconds (2:16). In 2020 the Department continued to better the response and surpassed its benchmark by two minutes and twenty-nine seconds (2:29) with a baseline response of (7:01). The first-due unit is capable of: establishing command; evaluating the need for additional resources; and controlling immediate hazards and life safety issues.

For 90 percent of all **low-risk technical rescue incidents**, the total baseline response time in 2016-2020 for the arrival of the effective response force (ERF), staffed with 9 firefighters and officers, including the technical response team, is: nine minutes and twelve seconds (9:12) surpassing the benchmark of nine minutes and thirty seconds (9:30) by eighteen seconds (0:18). In 2020 the benchmark for total ERF was exceeded by ten seconds (0:10) with a baseline time of nine minutes and forty seconds (9:40). The ERF is capable of appointing a site safety officer; hazard control; and patient stabilization and transport.

*\*The 2020 sample size of this response type adds difficulty in using this metric for analysis.*

Low Risk TRT All Area 90th Percentile Times Baseline Performance			Bench- mark	2016- 2020	2016	2017	2018	2019	2020
<b>Alarm Handling</b>	Pick-up to Dispatch	Urban	1:30	1:57	0:57	2:05	2:10	1:59	1:55
<b>Turnout Time</b>	Turnout Time 1st Unit	Urban	2:00	1:49	1:57	1:50	1:39	1:38	1:52
<b>Travel Time</b>	Travel Time 1st Unit <b>Distribution</b>	Urban	6:00	4:27	3:42	4:12	4:09	4:25	4:29
	Travel Time ERF <b>Concentration</b>	Urban	6:00	6:08	6:43	5:49	5:51	5:56	5:41
<b>Total Response Time</b>	Total Response Time 1st Unit on Scene <b>Distribution</b>	Urban	9:30	7:14	6:12	7:15	7:23	6:53	7:01
	Total Response Time ERF Concentration	Urban	9:30	9:12	10:09	9:40	9:24	8:41	9:40
				n=116	n=21	n=13	n=20	n=32	n=30



## Category 5G Technical Rescue Team Program Evaluation

### **Strategic Plan Goals and Objectives**

1. Work toward greater participation in team and MABAS drills. COVID-19 continued to weigh on our training in 2020. We were able to meet the annual training requirements, but training attendance was lower than usual due to family commitments during the pandemic.
2. Complete the technical certification of our 4 newest members by FY23.
3. Research technical rescue classes offered by the National Fire Academy and send some of our members.
4. Train with the new Paratech struts.
5. Work with B/C Lodewyck and the FFIB on training props.
6. Continue replacing old rope and hardware on the TRT trailer and frontline vehicles.
7. Research newer equipment with the latest technology.

### **Training**

The minimum attendance requirements are listed in the Department's SOG -TRT Training and Attendance. Each member has the opportunity to complete their training by attending monthly Department or MABAS TRT drills. We use the job performance requirements (JPRs) provided by NFPA 1670 and NFPA 1006 to define the minimum training requirements for the technical rescue team members. The JPRs are listed on the MABAS Division 1 Technical Rescue Team Practical Skills Checklist.

The technical rescue team members had the opportunity to attend 8 MABAS drills and 6 Elk Grove team drills. The highlights of the training were:

1. June 2020 – The Department hosted a MABAS structural collapse drill. The members focused on assessing a collapsed building, marking it accordingly, and then searching with our equipment. The drill included a demonstration of a drone and the use of a K9.
2. October 2020 – Our members attended a MABAS rope drill in Wauconda. They used safety devices while free climbing a cell tower to a height of approximately 70 feet. The drill required them to rescue a person who became incapacitated while on the tower.
3. November 2020 – Our members attended a MABAS rope drill at a water tower in Des Plaines. The simulated rescue was for a contract worker who was on the 80-foot elevated walkway who fell over the side when he became dizzy. He was wearing the correct safety gear, so he only fell about 10 feet on his safety rope. Team members anchored a system to the walkway and then rappelled down to rescue him.



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The team has four members who are still attempting to complete their technician level training. The plan was to complete all or most of it in FY22, but due to a resurgence of COVID-19, some of the classes were canceled. We will need to budget for this short coming in FY23. We would also like to further our current members training by sending them to classes such as; tower rescue, SPRAT, and leadership development.

### **Equipment**

The team did not request many TRT items due to the budget uncertainty from COVID-19. We did replace several smaller items pertaining to rope access.

1. 12 Petzl Chest Ascenders were purchased for each member's harness. It is a small device that captures the progress of the rope being ascended so that the rescuer has fall protection as they move up the rope.
2. 2 safety "Y" lanyards were added to our cache. The lanyards are used as fall protection when the rescuer is free climbing a water tower. These safety devices are essential when making a rescue on water tower.
3. We will request the same equipment replacement line item in next year's budget. We rotate old inventory on an annual basis, as well as purchase new technology.

### **Staffing**

We have a sufficient amount of VMO and VMT members who can manage extrication incidents. Our current TRT staffing level of thirteen is less than previous years. We would prefer to keep staffing at fifteen. On any given shift we have approximately 3 – 5 TRT members that can handle the initial stages of an event. Nine of those thirteen rescuers are trained to the level of technician and four are still working towards the technician status in all four disciplines. There will be a need to add new members in the near future. Two of our members plan to retire in the next year.

### **Program Improvement Plan**

Elevator emergencies continue to be our most frequent calls. The department has only sent a handful of our members to a lecture on elevator emergencies. We suggest that the training division budgets for department wide training in the next fiscal year.

The infrequent motor vehicle accidents with extrication indicate that we will need to focus on keeping up our skills by training throughout the year. Extrication vehicles should be made available as often as it is feasible. Formal shift training should take place at a minimum of once a year.

New members have begun to take the operation level rescue classes. We will continue to foster their growth so they can replace the members expected to leave in the coming years.