

48/96 EXECUTIVE SUMMARY



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PURPOSE



- The Prosper Fire Department is a group of dedicated professionals working together through our commitment to service and excellence. We dedicate ourselves to the safety of our community by providing the highest level of service possible. We strive for constant improvement to better serve the community and each other.
- The objective of this proposal is to present factual information that supports the transition from our current work schedule, which is a 24/48, to a 48/96 work schedule for the Prosper Fire Department.
- Our aim is to articulate how this proposed schedule change would benefit both the shift employees and the services we provide to the Town.

INTRODUCTION

Prepared by the 48/96 Fire Shift Advisory Committee

- *Finance- Sherry Fangio*
- *Human Resources- Cindy Slate*
- *Captain Jordan Doughty (16 years)*
- *Driver Engineer Riley Lowrance (8 years)*
- *Driver Engineer Trey Freeman (8 years)*
- *Captain Justin Smith (9 years)*
- *Driver Engineer Justin Roederer (8 years)*
- *Firefighter Paramedic Quinton Ewalt (12 years)*
- *Captain Tim Easterling (12 years)*
- *Driver Engineer Cody Eastep (10 years)*
- *Firefighter/Paramedic Ryland Dougan (10 years)*

Additional Advisement

- *Fire Chief Stuart Blasingame (24 years)*
- *Assistant Fire Chief Shaw Eft (26 years)*
- *Town Manager Mario Canizares*
- *Finance Director Chris Landrum*
- *Payroll Administrator Sheila Thornhill*

INTRODUCTION

24/48 Schedule

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1 C	2 A	3 B
4 C	5 A	6 B	7 C	8 A	9 B	10 C
11 A	12 B	13 C	14 A	15 B	16 C	17 A
18 B	19 C	20 A	21 B	22 C	23 A	24 B
25 C	26 A	27 B	28 C	29 A	30 B	

48/96 Schedule

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1 B	2 B	3 C
4 C	5 A	6 A	7 B	8 B	9 C	10 C
11 A	12 A	13 B	14 B	15 C	16 C	17 A
18 A	19 B	20 B	21 C	22 C	23 A	24 A
25 B	26 B	27 C	28 C	29 A	30 A	

- The 48/96 work schedule, which is similar to our current 24/48 schedule, has been utilized by professional fire departments since the early 1990s. Unlike a theoretical experiment, this schedule has been proven effective by professional departments with diverse demographics, management structures, and overall philosophies.
- On the 48/96 schedule, firefighters would work two consecutive 24-hour shifts before utilizing 96-hours of off-duty time before reporting back to work.
- Many of the policies, procedures, and methods of operation currently in place for the 24/48 schedule will apply to the 48/96 schedule with little or no changes necessary.

ADVANTAGES

- Mental/Physical Health and Wellness
- Quality of Life
- Recruitment
- Retention
- Productivity
- Training

DISADVANTAGES

- Short-term fatigue
- Belief that it leads to increased fireground Maydays
- Being away from family for 48-hour shifts
- Working two consecutive holidays
- Difficulty staying connected during four days off



MENTAL/PHYSICAL HEALTH

- Short-term fatigue is an inevitable aspect of firefighting, which occurs when consecutive hours are worked without adequate sleep. However, firefighters have developed coping mechanisms to manage this challenge. Adequate rest can correct this type of fatigue. The proposed 48/96 work schedule, which involves working 48 continuous hours instead of the current 24-hours, may increase short-term fatigue due to longer work hours. Nonetheless, it provides more time for recovery, which is beneficial.
- On the other hand, long-term fatigue accumulates over weeks, months, or extended periods without proper rest. This type of fatigue poses a more significant threat to firefighters, as the body is less able to compensate for the lack of rest. The 48/96 work schedule offers the following solutions to reduce long-term fatigue or sleep deprivation:
 1. Introducing a four-day rest period, providing firefighters with more time to catch up on lost sleep consistently.
 2. Long-term fatigue leads to an accumulation of the stress hormone (cortisol). Having 96-hours off will enable the body to remove the stress hormone adequately, resulting in improved physical and mental health for firefighters.

QUALITY OF LIFE

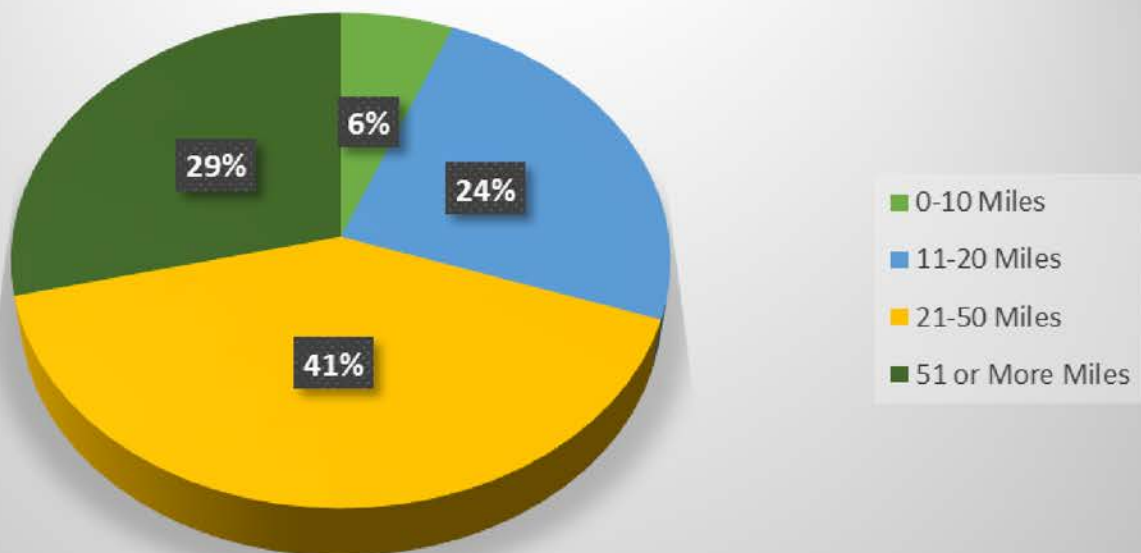
- Allowing firefighters opportunities to spend longer, uninterrupted mornings and evenings with their families.
- Granting opportunity to eleven additional full weekends off per year, which equates to having a complete Saturday and Sunday off together. Currently, firefighters only receive a Saturday and Sunday off every three weeks.
- Implementing a 48/96 work schedule, which would enable members to spend 15 days per month and 180 days per year at home. In comparison, the current 24/48 schedule only permits members to wake up at home ten days a month during their off days.
- Providing firefighters with nearly a 70% increase in the number of sleep-in days at home, thus eliminating the need for travel to or from work.

QUALITY OF LIFE

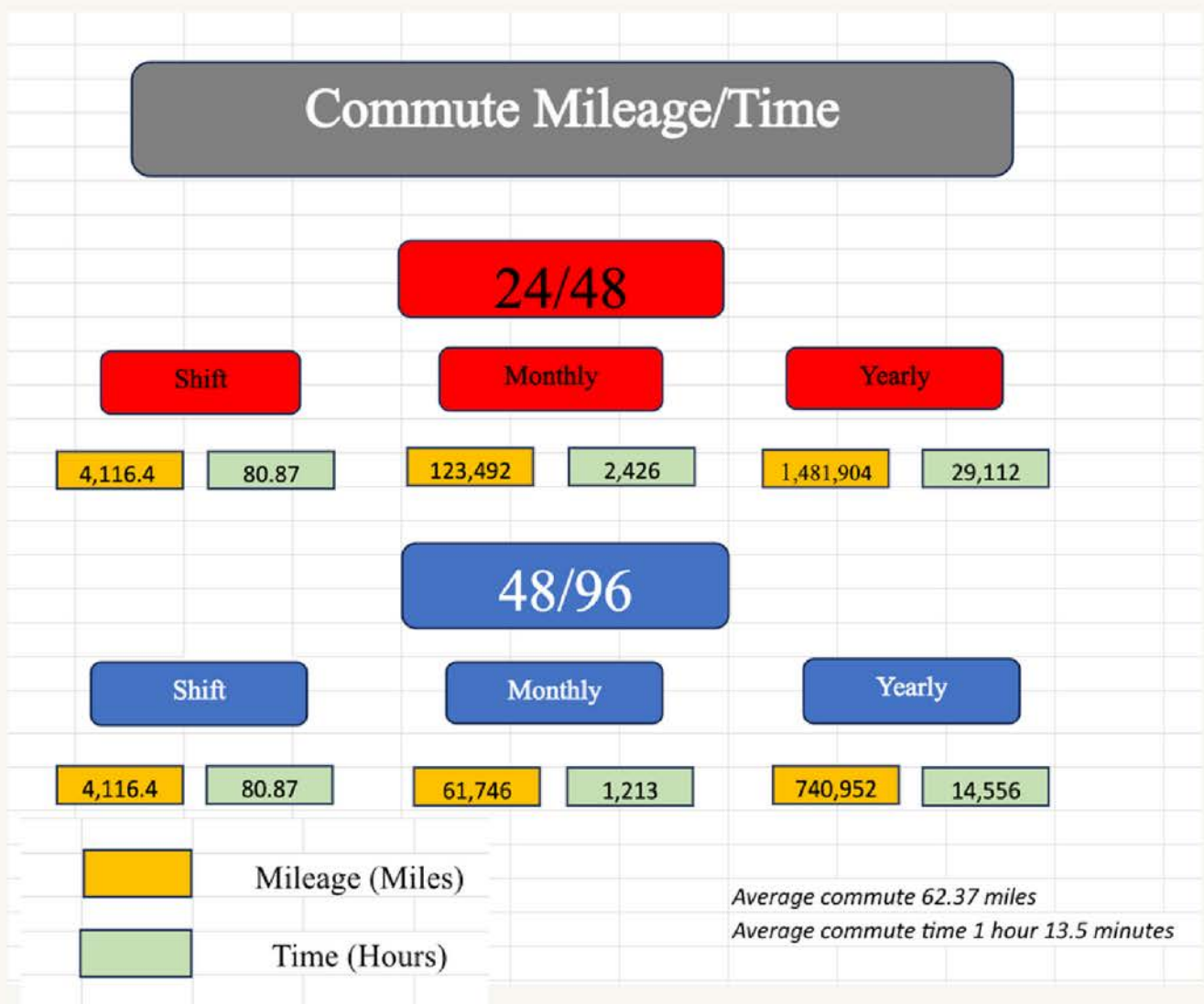
Commute decreased in half:

- A 48/96 work schedule presents a clear-cut advantage for firefighters, as it reduces their commute time by half. Under the current arrangement, firefighters commute to work 122 times annually. In contrast, adopting a 48/96 schedule would significantly reduce this number to 61 times per year, equating to approximately five times per month.
- With the current 24/48 schedule, firefighters are required to commute two out of every three days.

Current Personnel-Mileage to Work



QUALITY OF LIFE

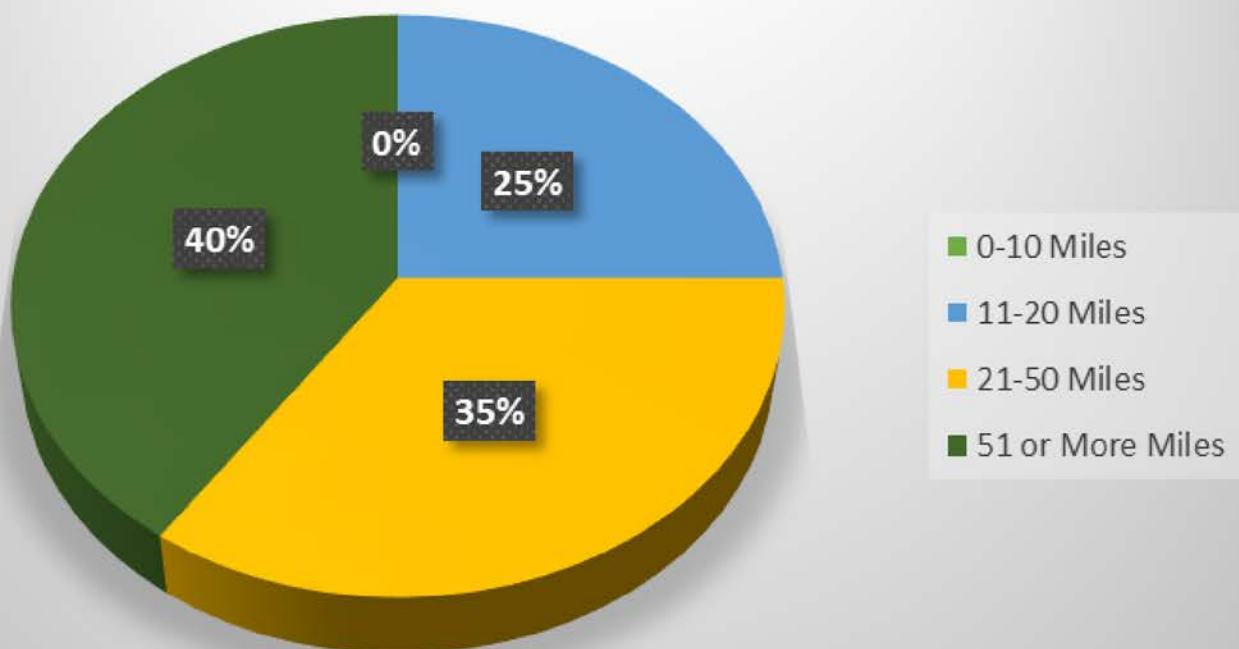


- Upon comparing the 24/48 schedule to the 48/96, one will notice that transportation costs are doubled for the 24/48 schedule. Unfortunately, the members will bear the brunt of this added expense, an expense that could be avoided with a 48/96 schedule.

RECRUITMENT

- During the hiring process, when the department is contacted from our applicants for additional information, a common question posed is whether we follow a 48/96 work schedule or have any plans to adopt it.
- The graph below illustrates the cities of applicants who recently applied for employment for Prosper Fire Rescue. It's noteworthy that 75% of applicants live beyond 21-miles, and none of them reside within a 10-mile radius.

Current Applicants-Mileage to Work



Recruitment

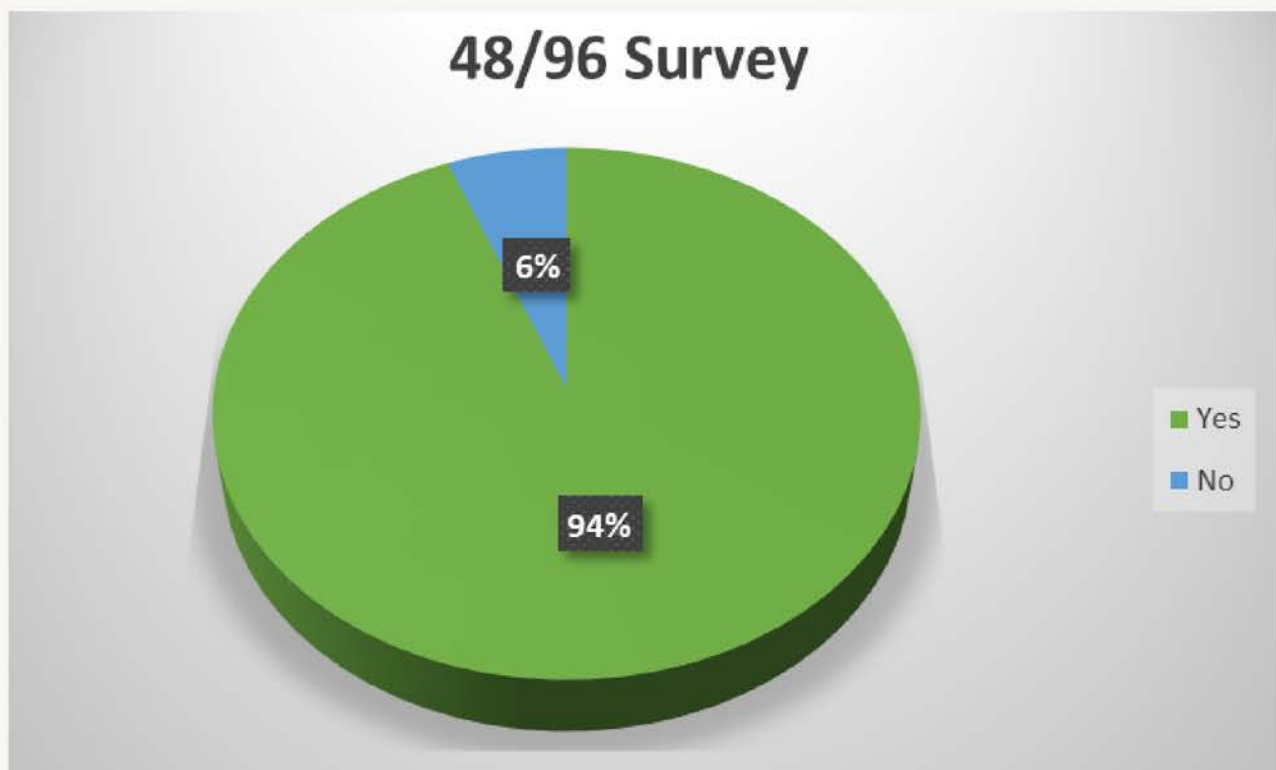
- Provided below is an incomplete inventory of cities that have adopted the 48/96 work schedule. It's essential to note that four out of the nine of our comparator cities have already implemented this new timetable, denoted in bold with an asterisk.

1.Argyle	18. Little Elm *
2.Terrell	19.The Colony
3. McKinney (Effective January) *	20. Grand Prairie
4.Richardson	21. Euless
5.Colleyville	22. Abilene
6.Richland Hills	23. Stephenville
7.Haltom City	24. Hurst
8.Highland Park	25. Trophy Club
9.Mansfield	26. Westlake
10.Bedford	27. Keller *
11.Rowlett	28. Southlake
12.Rockwall	29. Roanoke
13. Flower Mound *	30. Highland Village
14.Saginaw	31. Grapevine
15.Lake Worth	32. Lake Cities
16.Kennedale	33. Various out-of-state cities.
17.Murphy	

The fire service is gradually transitioning towards a 48/96 work schedule as the future standard.

RETENTION

- In August 2023, all 66 shift level members of Prosper Fire Rescue were surveyed by the Executive Chief Officer staff. The results indicated that 94% of participants voted in favor of transitioning to the 48/96 schedule.
- As previously mentioned, decreasing the members' commutes by half also reduces fuel costs by half, which could be interpreted as an increase in annual savings, and subsequently lead to an increase in annual income.



PRODUCTIVITY

Employees who believe that management is concerned about them as a whole person- -not just an employee -- are more productive, more satisfied, more fulfilled. Satisfied employees mean satisfied customers, which leads to profitability” Anne M. Mulcahy---Former Chairman and CEO of Xerox.



- Two consecutive days for company members to work on assigned administrative duties and projects. This will provide them with more focused and uninterrupted time to complete tasks such as EMS ordering/inventorying, SCBAs, vehicle maintenance, uniforms, bunker gear, equipment, special operations, and more.
- This approach will provide company officers with greater flexibility in meeting shift objectives rather than waiting for several days to accomplish tasks that might require more than one 24-hour shift.

TRAINING



- Adopting a 48/96 shift schedule would enhance our training schedule flexibility while maintaining current annual training hour requirements.
- This flexibility facilitates scheduling training on consecutive days within the 48-hour work cycle, and allows for more makeup training opportunities in case of call volume interruptions.

MAYDAY

- The National Fire Protection Association (NFPA) defines mayday as a situation that poses a threat to life and safety.
- Fire departments transitioning to a 48/96 shift schedule have raised concerns about an increase in mayday events.
- "Mayday by the Numbers," a document released in 2015 by Don Abbott, aimed to educate the fire service on the prevention of a mayday event, but has been misused to claim that a 48/96 schedule leads to more mayday events.
- More recent data from Project Mayday's 2021 General Report shows that departments operating on a 24/48 schedule have a higher number of mayday events.
- Currently, the NFPA and the US Fire Administration do not quantify injuries or fatalities based on specific fire department shift schedules.
- The Prosper Fire Rescue 48/96 Committee has researched and analyzed data from various sources and has determined that a 48/96 shift schedule is not directly responsible for an increase in mayday events or injuries on the fire ground.

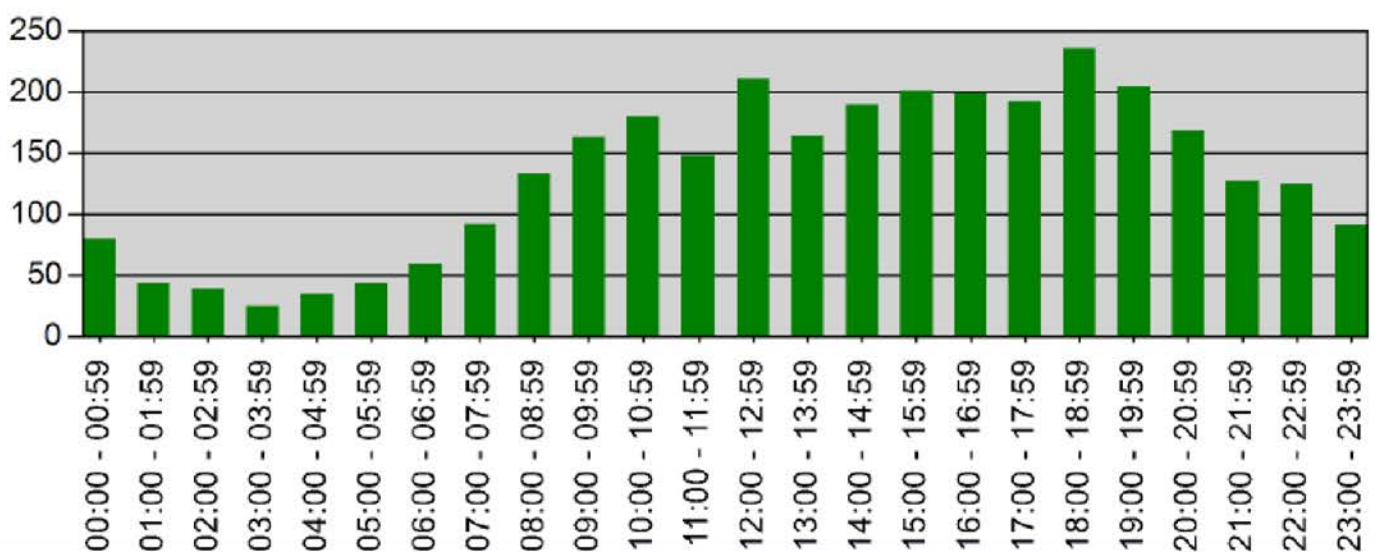


SHIFT CHANGE TIME

- Following an evaluation of shift change times, the 48/96 committee recommends maintaining the current 7:00am shift change time as it aligns with the operational needs of Prosper Fire Rescue.
- The primary objective of this recommendation is to maximize operational readiness while minimizing unnecessary expenses. This decision is based on an assessment of community operations and call volume by the hour.
- In particular, call volume is higher mid-morning and steadily progresses, making it more likely for holdovers and, consequently, increased overtime expenditures.

Incidents by Hour for Zone for Date Range

Zone: All Zones | Start Date: 01/01/2023 | End Date: 12/31/2023



SHIFT CHANGE TIME

- US Census data indicates that the average commute time for Prosper citizens is 30-minutes, and a majority of Texas citizens arrive at work after 7:30am. These statistics may explain the progression in call volume starting at 7:00am. As emergency response personnel, it's critical that we respond promptly and effectively. Changing our crews out at 7:00am will ensure that our personnel are relieved of duty before call volume increases.
- Prosper ISD begins school between 7:45-8:45am. Therefore, it's imperative that our personnel are changed over by 7:00am to respond promptly to critical incidents involving our PISD students.

	Texas
Label	Estimate
▼ Total:	11,401,207
12:00 a.m. to 4:59 a.m.	470,525
5:00 a.m. to 5:29 a.m.	292,203
5:30 a.m. to 5:59 a.m.	497,019
6:00 a.m. to 6:29 a.m.	731,953
6:30 a.m. to 6:59 a.m.	1,044,556
7:00 a.m. to 7:29 a.m.	1,424,905
7:30 a.m. to 7:59 a.m.	1,640,920
8:00 a.m. to 8:29 a.m.	1,474,782
8:30 a.m. to 8:59 a.m.	846,055
9:00 a.m. to 9:59 a.m.	966,852
10:00 a.m. to 10:59 a.m.	414,253
11:00 a.m. to 11:59 a.m.	180,807
12:00 p.m. to 3:59 p.m.	669,888
4:00 p.m. to 11:59 p.m.	746,489

Pre-K

7:25 AM - 2:38 PM

Elementary

7:42 AM - 2:55 PM

Middle School

8:15 AM - 3:30 PM

High School

8:45 AM - 4:10 PM

Prosper ISD School Hours

Texas 2021 US Census

VACATION/HOLIDAY

- Vacation/holiday hours will not be altered.
- Members will continue to select their vacation based on the current policy.
- One vacation day will remain as 24-hours, while two days will increase to 48-hours, encompassing the entire tour if desired.
- Implementing a new policy whereby taking two days off in a row will result in ten consecutive days off, compared to the current eight days.

OVERTIME

- Our current schedule poses a significant challenge to employees who are required to work 48-hour shifts, as they only receive a 24-hour break before or after their shift to recuperate.
- The 48/96 schedule we propose would allow for 96-hours of rest both before and after the 48-hour shift. Additionally, employees who accept a 24-hour overtime shift would have the potential to work for 72-hours, followed by a minimum of 72-hours of recovery time.
- Compared to our current schedule and other alternatives, the 48/96 schedule offers more recovery time, significantly reducing the likelihood of long-term fatigue.
- No member will be permitted to work 72-hours without the direct consent from the Fire Chief.

MANDATORY

- The Battalion Chief will oversee the deployment, execution, and documentation of all mandatory shifts.
- In certain circumstances, members may be required to work mandatory shifts to ensure adequate staffing and maintain quality fire protection services. For example, if a member were to call in sick the morning of their shift and minimum staffing is needing to be maintained on apparatuses.
- The mandatory policy will undergo minimal adjustments to accommodate the new work schedule.
- The initial 24-hour mandatory overtime shift will be covered by an off-going tour member, and additional coverage will be provided by the incoming shift if necessary.
- After working four hours of additional overtime, the member's name will be added to the bottom of the call-back list.
- Members who are scheduled off on vacation, holiday, or substitution may volunteer for overtime during any of their time off, except for their regularly assigned tours.

MANDATORY

- No personnel shall be permitted to work more than 72 consecutive hours of duty without at least 24-hours off from duty unless approved by the Fire Chief.
- This overview cannot encompass all circumstances, and the Battalion Chief shall resolve any issues with fairness and impartiality at their discretion.

Personnel Time Off Hours				
	2023	2022	2021	2020
Sick	4525	5286	5525	3656
Esick/Qleave	112	1063	116	1757
Overtime	13272	8797	18765	15243
Mandatory Overtime	322	274	1432	566

- Displayed is data outlining the annual mandatory house statistics over the previous four years, following a 24/48 schedule. The data exhibits inconsistency that makes it difficult to discern a clear pattern. However, other departments operating on a 48/96 work schedule have reported a decline in annual mandatory and sick hours.

DISADVANTAGES

- The 48/96 schedule may pose a significant risk of short-term fatigue for firefighters, particularly those stationed in busy companies, who may experience sleep deprivation and exhaustion after working for 48-hours straight. However, short term fatigue is not as critical as long term fatigue, which can have more severe consequences.
- Over the past five years, data has shown that Prosper Fire Rescue typically responds to an average of 1.15 incidents each night between 10:00pm to 6:00am. This suggests that the department does not frequently encounter many night incidents.
- In the event of multiple night incidents, the Battalion Chief holds the authority to redistribute staff, enabling members to be assigned to a less active unit for the remainder of their shift.

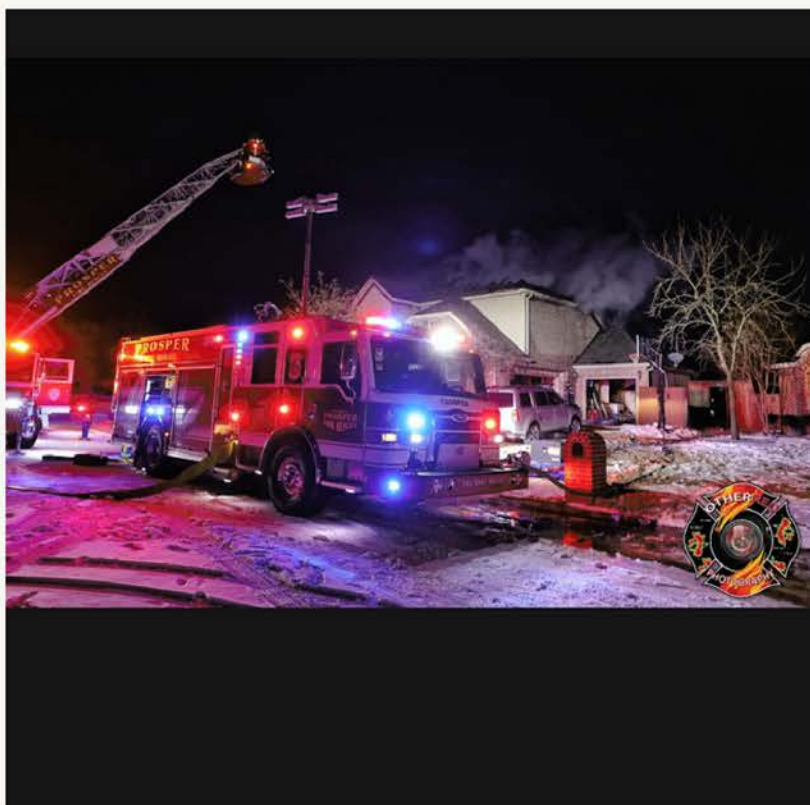
Comparison of Daytime to Nighttime Incidents

	2023		2022		2021		2020		2019	
	Incidents	Average	Incidents	Average	Incidents	Average	Incidents	Average	Incidents	Average
Daytime 6:00AM-9:59PM										
Annual Incidents	2472*	85%	3468	86%	2993	86%	2197	85%	1945	87%
Incidents Per Shift	9.1		9.5		8.2		6.0		5.3	
Nighttime 10:00PM-5:59AM										
Annual Incidents	452*	15%	573	14%	489	14%	389	15%	301	13%
Incidents Per Shift	1.7		1.6		1.3		1.1		0.8	
Total Incidents for Year	2924		4041		3482		2586		2246	
Average Incidents per Shift	11		12		9		7		6	

*Report for 2023 was run 9/30/2023

DISADVANTAGES

- While being away from home and family for 48-hours is mandatory, it can be balanced by being present at home for four consecutive days.
- Appropriate arrangements for childcare, custody care, or family member care should be made.
- Work is required on both Saturdays and Sundays, nine times a year (every six weeks). However, the 48/96 schedule provides an additional 11 full weekends each year.
- Regular communication with the administration staff should be established to stay connected during periods of absence through various mediums such as text, cell, and email.
- Employees are expected to work on Christmas Eve and Christmas Day every 7-8 years. In the case of working on these holidays, employees may take one day off, or they can opt to trade with another eligible member.



FAIR LABOR STANDARD ACT

- The following pages will outline the financial ramifications that may arise from implementing the proposed schedule modification.
- The US Department of Labor regulates the FLSA (Fair Labor Standards Act) guidelines for all law enforcement and fire protection personnel. The 48/96 schedule has 42 distinct FLSA applications, which could result in cost implications ranging from approximately \$30,000 in annual savings to roughly \$300,000 in annual increases.
- After careful consideration, the committee has identified two schedules that would be fitting for Prosper's needs. Both of these options have joint support from Fire Department members, finance, Human Resources and payroll.



The committee is seeking input and approval from the Prosper Town Council and Town Manager to determine the most appropriate FLSA cycle that aligns with the annual budget.

FAIR LABOR STANDARD ACT

	OPTION 1	OPTION 2	CURRENT
	48/96	48/96	24/48
FLSA schedule	14	28	27
FLSA hours per cycle (7.57/day)	106	212	204
Total Hours Worked per FLSA Period	120,120,96	216,216,240	216,216,216
Overtime Hours per FLSA period	14,14,0	4,4,28	12
FLSA Cycles per yr.	26.071	13.036	13.52
Hours/Year/Firefighter	243	156	162
\$15 half-time OT Avg	\$3,645.00	\$2,340.00	\$2,430.00
Est. Annual Cost	\$255,150.00	\$163,800.00	\$170,100.00

Option 1 is the recommended choice.

After extensive discussions between Fire Department personnel, HR, Finance, and Payroll, the 14-day FLSA cycle is deemed most suitable for all FLSA OT-involved employees.

Pros-

- Ease of comprehension
- Simplification of FLSA OT calculations and synchronization of all departments on the same bi-weekly pay schedule
- Reduced risk of clerical errors, given that all hours in question would fall within one pay period
- Consistent FLSA OT payment, as per the policy (if a check has over 106-hrs. of straight time, the remaining balance is paid as FLSA OT)
- Straightforward to explain to new and existing employees

Cons-

- Increased annual cost of approximately \$85,050.00; which equates to 1.09% of salary benefits adopted budget.

FAIR LABOR STANDARD ACT

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Option 2

Proposes extending the FLSA cycle to 28-days, aligning with two complete paycheck cycles, resulting in a slightly lower overall cost. While the department representatives consider the 14-day cycle as optimal, they acknowledge the potential financial impact.

Below are some additional advantages/disadvantages:

Pros-

1. Simpler to comprehend than the current FLSA cycle
2. Annual cost savings of roughly \$6,300

Cons-

1. Cost savings attained through current employee pay (approximately \$90/yr/employee)
2. The likelihood of clerical errors increases due to an extended cycle encompassing 28-days
3. An employee who utilizes one sick day loses 28-days worth of FLSA OT.

FAIR LABOR STANDARD ACT

FLSA / START DATE 1/6/24 C shift day 2					
FLSA Cycle		FLSA OT hrs	Paycheck Cycle	Paycheck FLSA hrs	
11/28/23-12/24/23	27	12,12,12	12/9/23 - 12/23/23	0,0,0	\$330 x 23 C Shift members = \$7,590
12/24/23 - 1/6/24	13	0,0,22	12/23/23 - 1/6/24	12,12,34	
1/6/24 - 1/20/24	14	14,0,14	1/6/24 - 1/20/24	14,0,14	

- The start date of January 6th, 2024 was selected based on several reasons, including coinciding with the first pay period of the calendar year, the synchronization of FLSA and paycheck cycles.
- Since the fire department's annual vacation period aligns with the calendar year, the proposed changes will not affect it.
- To ensure synchronization of the FLSA cycle with the paycheck period, a switch to a 13-day FLSA cycle will take place on December 24th, 2023, at 7:00am. This will cost approximately **\$7,590**, involving additional FLSA OT for 23 C shift members. This switch is a one-time occurrence and will not repeat.
- Starting January 6th, 2024, a 14-day or 28-day FLSA cycle that matches the paycheck start/end times can be implemented.
- Please note that the FLSA cycle and paycheck cycle will not naturally align until October 2024.

2024 Prosper Fire Rescue

[illegible]

The proposed calendar for the Prosper Fire Rescue in 2024 is set to commence on January 6, 2024.

Closing Statement



- Following an extensive evaluation of the factors impacting service delivery by Prosper Fire Rescue, the transition to a 48/96 schedule has emerged as the optimum approach for the benefit of both the citizens and firefighters of the Town of Prosper.
- Our organization is committed to fostering a professional outlook that continuously strives for innovation and betterment in our service to the community we serve.
- We trust that this executive summary provides adequate information to secure approval for the implementation of the 48/96 schedule, scheduled to commence on January 6th 2024.