

## **Oakland Police Department Calls for Service Analysis 2018-2020**

### **Introduction and Summary**

The National Institute for Criminal Justice Reform (NICJR) conducted an analysis of Calls for Service (CFS) received by the Oakland Police Department over the three years spanning 2018-2020 in compliance with a City Council directive. For this report, NICJR defines Calls for Service as 911 Calls, officer-initiated calls/activity, and calls to the OPD non-emergency line. OPD provided NICJR three years of data from its CAD (Computer Aided Dispatch) system in order to conduct this study.

The City Council directed OPD “to provide a detailed analysis and recommendations for operationalizing the removal of low-level, non-violent calls for service from the Police Department’s responsibilities and options for an alternative response. Low-level, non-violent calls for service include what the Police Department classifies as “Administrative, Animal-related, Homeless, Mental Health, Noise-related, Ambulance Requested, and Other.”

Over the three-year study period, OPD received nearly 1.3 million CFS. Of those calls, one or more officers responded to 56.7% (722,815). After discussion with OPD command staff it was determined another 96,900 CFS should be removed from the analysis due to having a disposition code of Cancel, Administrative, or Duplicate. The subsequent analysis is based on a review of the remaining 49.1% of CFS (625,915). One of the main objectives of this study was to determine which types of CFS could safely and responsibly be responded to by non-police alternatives, like community-based responders. Therefore, NICJR focused its assessment on those CFS where one or more officers arrived on scene.

Based on the California Penal Code and our own analysis, NICJR categorizes CFS in four different types:

- 1) Non-Criminal (calls for incidents or issues that are not a violation of the penal code, like noise complaints, but may be a violation of a local ordinance)
- 2) Misdemeanor (or Low Level, like a stolen bicycle)
- 3) Non-Violent Felony (like car theft)
- 4) Serious and violent felony (like an armed robbery)

NICJR assessed the type of calls for service, the time it took officers to respond to a call, the amount of time officers spent on a call, and how calls were initiated. The following report includes findings from the assessment with recommendations on how OPD could more effectively and efficiently use its limited resources given alternative response models. NICJR’s call categorization themselves are not recommendations for alternatives responses, for instance there are some call types in the non-criminal category that will still require an officer to respond.

The assessment of Calls for Service conducted by NICJR is based on data from OPD’s CAD system.

As noted in the report, the CAD system is archaic and is in need of improvements and upgrades. Due to the data limitations, some of the findings in the report need to be verified by reviewing the notes made by responding officers in association with calls for service. Due to the extremely large volume of calls, NICJR will review notes from a sample number of calls from each call category in OPD's Records Management System (RMS). This extended review will take another eight to twelve weeks to complete once initiated. Until then, the findings of this report should be considered preliminary.

OPD's Motorola Legacy system that serves as its CAD, does not contain some fields that other police agencies capture, and it is difficult to search for certain data in the system. This may have some impacts on this analysis. OPD is in the process of replacing CAD and its accompanying records management system; these improved systems may help with more accurate CFS assessments in the future.

## Findings

A review of 625,915 CFS that had an on-scene arrival time, covering the period 2018-2020, found that nearly 60% of OPD calls were for Non-Criminal events. Approximately 18% of calls were associated with felonies of any kind, and 9% of calls over the three year period were for serious and violent felonies. Although serious and violent felonies comprised less than 10% of calls, the total number of such incidents was still extremely large for a city the size of Oakland. During the three-year period there were nearly 60,000 such incidents that officers responded to, an average of nearly 54 serious violent calls for service each day.

Officers may also self-initiate a CFS. For example, a self-initiated call can include an instance when a patrol officer notices something that requires a response, such as a crime in progress. These calls are very generally categorized in the CAD data as "On-View" <sup>1</sup> incidents. On-view incidents accounted for 9.9% of CFS over the review period. Details about what types of incidents make up the On-View CFS require an assessment of call details that NICJR will conduct when it receives additional information from the RMS. There are other officer initiated CFS that are detailed in CAD and categorized by the type of call.

For Serious Violent events, officers took an average of 1 hour and 5 minutes to respond and spent 2 hours and 15 minutes on-scene. But for Priority 1, Serious Violent Felony CFS which require an expedited response, over the three-year study period, OPD officers took an average of 18 minutes and 57 seconds to respond from the time of the call to an officer arriving on scene. Priority 1 Calls are usually crimes in progress.

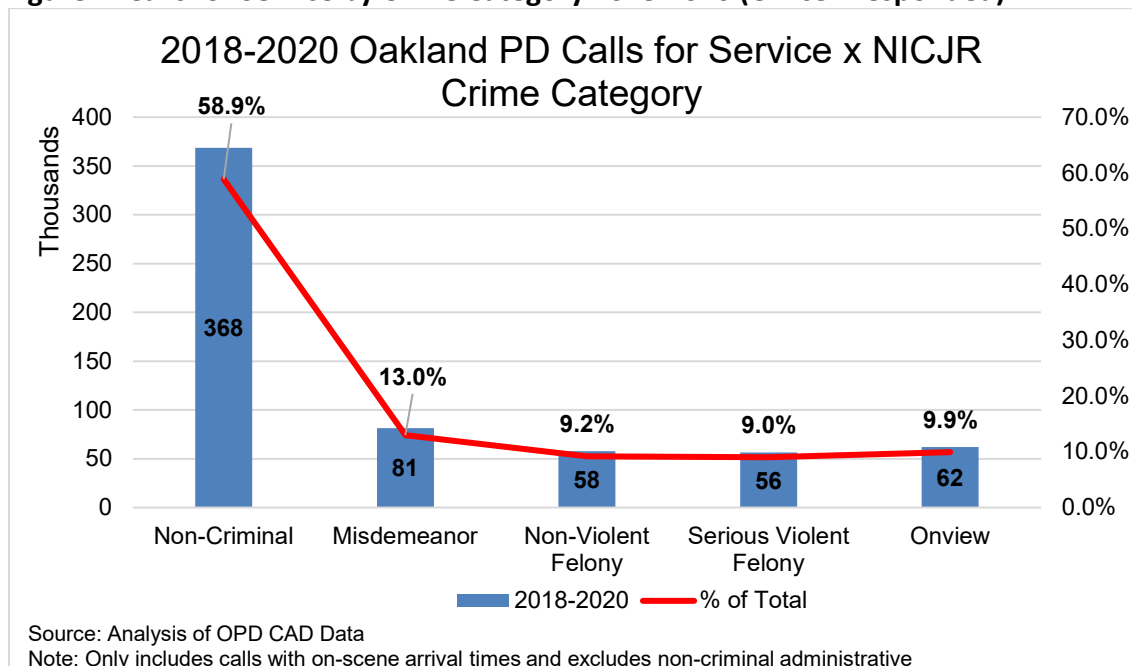
For Non-Criminal CFS, officers spent an average of 1 hour and 4 minutes on scene handling these calls, which may also include follow up or report writing about the incident after the initial response to the call. The CAD data does not differentiate the time spent on scene of the

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<sup>1</sup> On-View is the code used in the OPD CAD data for when an officer on patrol observes something that needs to be responded to and therefore NICJR categorizes it as Officer Initiated. One of the limitations of the CAD data is that the information on the reason or the purpose of the officer stopping is not included so NICJR is not able to categorize the call by non-criminal, misdemeanor, non-violent felony, or serious and violent felony. There are other Officer Initiated calls that information for the calls are included in the CAD data.

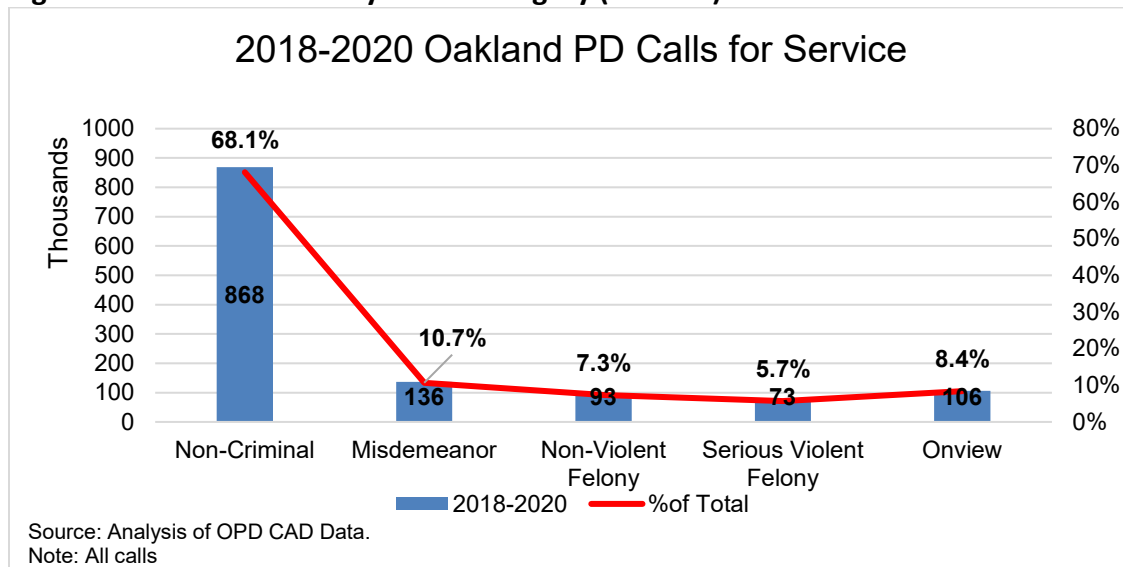
initial call and time spent following up on the call. But for non-criminal CFS, there is likely less time spent on following up on such low-level calls. Given OPD's high call volume and attention paid to more serious calls, officers took an average of 1 hours and 39 minutes to respond to Non-Criminal events. It should be noted that according to data in CAD, some calls were not responded to for two or more days. OPD reports that this is likely inaccurate and an example of one of the data challenges in CAD. But there are some CFS that are not responded to for more than 24 hours due to the low level nature of the call. For Misdemeanor event types, officers took an average of 2 hours and 15 minutes to respond and spent an average of 1 hours and 11 minutes on-scene. For Non-Violent Felony event types, officers took an average of 2 hours and 55 minutes to respond and spent 1 hour and 30 minutes on-scene. These response times appear to be inaccurate and another illustration of the problems with the data, but these are correct calculations based on the information that is in the CAD system.

**Figure 1. Calls for Service by Crime Category 2018-2020 (Officer Responded)**



**It is worth noting, that although serious and violent felonies only account for 9% of all calls responded to by OPD, that is 56,000 calls over three years, an average of 18,666 calls per year and 51 serious and violent felony calls every single day.**

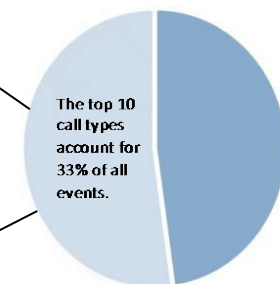
**Figure 2. Calls for Service by Crime Category (All Calls)**



**Table 1. Top 10 Call Types Overall 2018-2020**

Call Types	Total Events
ON VIEW	62,138
SECURITY CHECK	41,605
CAR STOP	21,544
STOLEN VEHICLE	19,540
ALARM-RINGER	16,533
MENTALLY ILL	12,485
911 HANG UP FROM ACC	12,275
415 UNKNOWN	10,083
DISTURBING THE PEACE	9,632
BURGLARY	7,262

Note: Only Includes Calls with On-Scene Arrival Time



Although the OPD utilized between 208 and 348 unique call types during the study period, just ten comprised more than 33% of all events.

An average of slightly more than 1 officer responded to each CFS, spending an average of 1.45 hours per event, as measured by arrival on-scene to call clearance.

**Table 2. Time Spent Responding to Events 2018-2020**

Crime Category	Total Hours Arrival to Close	Average Hours Per Event	Proportion of Total Officer Time
Non-Criminal	387,075	1.04	50.1%
Misdemeanor	96,512	1.18	12.5%
Non-Violent Felony	84,616	1.50	11.0%
Serious Violent Felony	126,294	2.26	16.4%
On View (officer initiated)	76,738	1.25	10.0%
Total	771,235	1.45	100%

Note: Only Includes Calls with On-Scene Arrival Time

NICJR has developed a tailored approach to the analysis of CAD calls for service data based on hands-on experience in multiple cities nationwide. NICJR CFS analyses use the following categorization of *call type incident description* of CAD events: Non-Criminal (NC), Misdemeanor (MISD), Non-Violent Felony (NV FEL), and Serious Violent Felony (SV FEL). NICJR crime categorization cross walked with OPD incident type descriptions can be found in [Appendix A](#). NICJR categories are aligned with state specific penal codes and their associated penalties. If a call type is not found in the penal code, it is placed into the Non-Criminal Category. NICJR uses this method of categorizing events because it affords the most linear correlation between the event and its associated criminal penalty. By categorizing events in this manner, NICJR can clearly identify the portion of CFS that are either non-criminal, low-level, non-violent, and serious violent offenses.

OPD provided NICJR with a comprehensive CFS data set for each of the three calendar years 2018-2020, representing a total of 1,274,154 unique calls for service. Each year's dataset included the call type descriptions for the respective reporting period. There were between 208 and 348 available call type descriptions for each year. The data did not include Racial Identity and Profiling Advisory (RIPA) Board disposition codes associated with vehicle, pedestrian, and bike stops as required by Assembly Bill 953, which requires law enforcement agencies to collect "perceived demographic and other detailed data regarding pedestrian and traffic stops." RIPA data is collected and reported through an OPD system outside of CAD.

**Table 3. NICJR Crime Categories**

Crime Category	Description
Non-Criminal (NC)	Any event not identified in the California State Penal Code
Misdemeanor (MISD)	Any event identified in the California State Penal Code as a Misdemeanor
Non-Violent Felony (NV FEL)	Any event identified in the California State Penal Code as a Non-Violent Felony
Serious Violent Felony (SV FEL)	Any event identified in the California State Penal Code as a Serious Violent Felony

Call type initiation source variables also allowed NICJR to determine CFS initiation source – officer-initiated activity or On-View, non-emergency line, 911 emergency line, or alarm.

In addition, CFS response time data was used to determine how long it takes OPD officers to respond to CFS and how much time officers spend on CFS by incident type once they arrive on-scene. There were five time variables provided in the data. To determine how long it took officers to respond to CFS, NICJR assessed the length of time between call dispatch and an officer arriving on-scene. To determine how long officers spent resolving events, NICJR analyzed the length of time between an officer arriving on-scene and clearing the call. NICJR was also able to use CAD data to determine the mean number of officers responding to each type of call by Crime Category. The time value for officers while enroute to an incident was not included.

**Table 4. Oakland CAD Data Time Variable Descriptions**

CAD Data Variable Label	CAD Translation
Transmit TimePrimaryUnit	Time call was transmitted over the radio to the primary unit
CreateTimeIncident	Time the call was created in the CAD system
DispatchTimePrimaryUnit	Time call was first dispatched to an officer
ArrivalTimePrimaryUnit	Time officer arrived on-scene
ClosedTimeIncident	Time officer is back in service to take new calls

## Characteristics of Calls

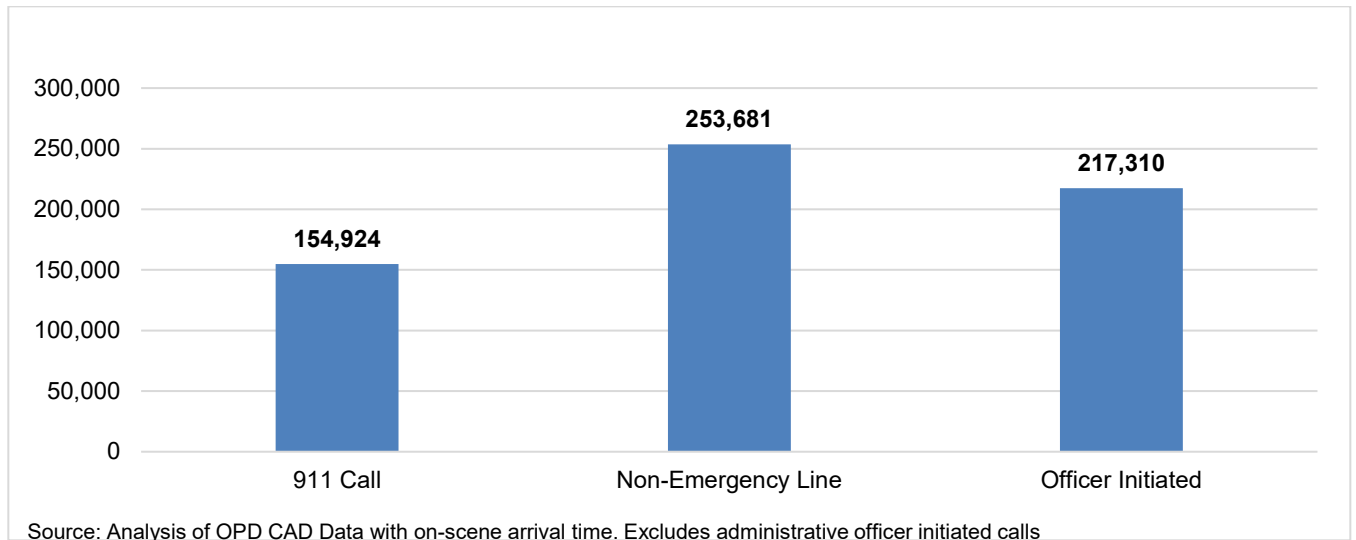
*Analysis of 625,915 events with on-scene arrival times from 2018-2020*

NICJR analyzed the CFS data set across a number of metrics including overall call type frequency, call initiation source, and call NICJR Crime Category. Figures and tables in this section draw from a sample of 625,915 unique calls for service with an on-scene arrival time covering the period 2018-2020 within the CAD files NICJR obtained from OPD.

### Event Initiation

Calls for service may be initiated in three primary ways: by calling 911, by calling the OPD non-emergency line, or by an officer initiating a call. Figure 2 shows the proportion of events by initiation source. Approximately 35% of all calls during the 2018-2020 period were initiated by an officer.

**Figure 3. Events by Initiation Source 2018-2020**



### Top Ten Events

Table 5 provides the top ten events by Initiation Source. Together, these call types comprised 46% of all OPD events over the study period. Initiation source by year can be found in [Appendix B](#).

**Table 5. Top 10 Calls by Initiation Source 2018-2020**

Officer Initiated	911 Emergency	Non-Emergency Line
ON VIEW	911 HANG UP FROM ACC	ALARM-RINGER
SECURITY CHECK	415 UNKNOWN	STOLEN VEHICLE
CAR STOP	MENTALLY ILL	AUTO BLOCKING DRIVEW
ABANDONED AUTOMOBILE	BATTERY	415 SHOT SPOTTER GUN
TOW REQUESTED	415 FAMILY	MENTALLY ILL
THEFT	BATTERY ON CO-HABITANT	TRESPASS
WALKING STOP	STOLEN VEHICLE	DISTURBING THE PEACE
EMERGENCY TRAFFIC ON	DISTURBING THE PEACE	RECOVERED STOLEN VEH
CHECK VEHICLE	EVALUATION	BATTERY
BURGLARY	SUSPICIOUS PERSON	SUSPICIOUS PERSON

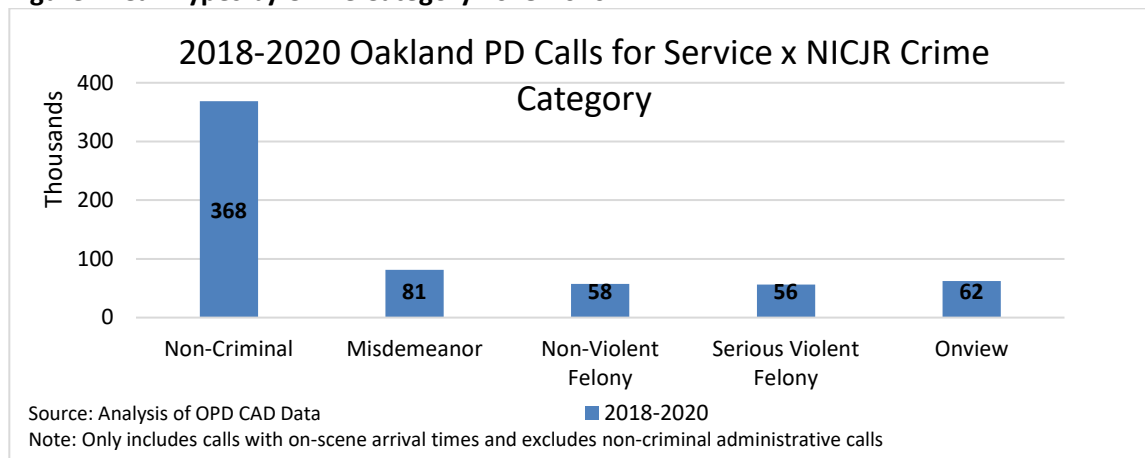
Note: Only includes call with on-scene arrival times

### Events by Crime Category

Figure 4 shows the frequency of call types by Crime Category. OPD averaged 424,719 total events and 208,638 events with an on-scene arrival time per year during the analysis period. The majority of these CFS, 68.1% for all calls and 58.9% for calls with an on-scene arrival time, are

classified as Non-Criminal; as reflected in [Appendix C](#), Non-Criminal CFS consistently comprised a majority of events during the 2018 to 2020 period.

**Figure 4. Call Types by Crime Category 2018-2020**



During the three-year period reviewed, an average of 36.1% of Officer Initiated events were Non-Criminal and an average of 20.5% of 911 calls comprised Non-Criminal events. As traditionally expected, non-emergency line calls were the most likely to be Non-Criminal.

**Table 6. Percent of Non-Criminal Events by Initiation Source**

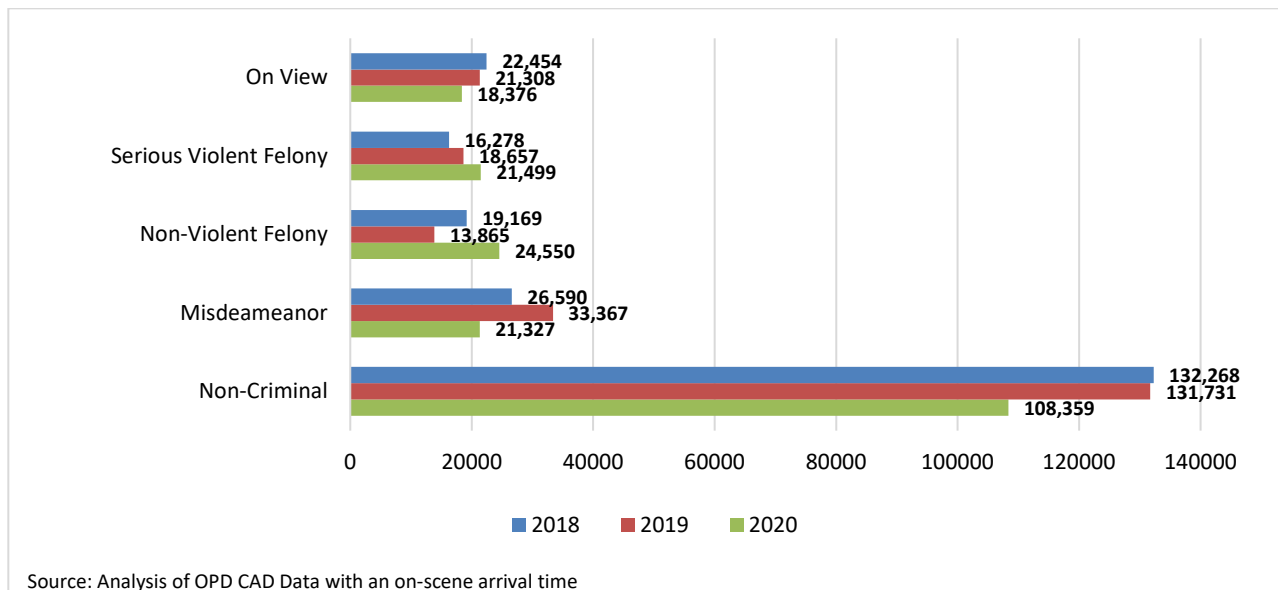
Event Initiation Source	Year		
	2018	2019	2020
911 Calls	16.2%	24.1%	21.3%
Non-Emergency Calls	39.2%	42.0%	42.0%
Officer-Initiated	37.6%	33.9%	36.7%

Note: Only Includes Calls with On-Scene Arrival Time

Figure 5 identifies the number of events by Crime Category over the review period. The total number of events in the aggregate declined between 2018 and 2020. When looking at non-violent and serious violent felonies alone, there was an observed increase of 28.1% and 32.1%.

**Figure 5. Number of Events by Crime Category 2018-2020**





## Number of Responding Personnel

The number of personnel who responded to CFS varied depending on the event type. Table 7 shows the average number of personnel who responded to a CFS by Crime Category based on the data in CAD. As expected, when dealing with a call that is more serious in nature, the average number of responding officers was higher than for a less serious event. The average number of responding personnel across all event types was 1.4. NICJR will also further assess Priority 1 calls, which will very likely find many more officers respond to Priority 1, Serious and Violent CFS. It is very possible that many more officers respond to serious violent felony CFS that is not being accurately captured in CAD as the CAD system has a limitation on the number of officers than can be counted.

**Table 7. Responding Personnel by Crime Category 2018-2020**

	Non-Criminal	Misdemeanor	Non-Violent Felony	Serious Violent Felony	On View
2018	1.3	1.3	1.3	1.4	1.3
2019	1.3	1.3	1.3	1.5	1.3
2020	1.4	1.5	1.3	1.6	1.3

Note: Only Includes Calls with On-Scene Arrival Time

## Response Time to Calls

Tables 8 through 11 note the average response time for the top five incident types from call creation to an officer arriving on-scene by crime category. More detailed information can be found by year in [Appendix D](#). It should be noted that a call describing someone with potential mental illness in need of service has an average response time more than an hour and a half. This is an example of how the use of MACRO can help improve responses to such calls.

**Table 8. Average Response Time for Non-Criminal Calls**

2018-2020: Top 5 Non-Criminal Calls			
Call Type Description	Count	Avg Time to Respond (Hrs,Mins,Sec)	% of Total
SECURITY CHECK	41,604	0:21:19	6.5%
CAR STOP	28,065	0:00:01	4.4%
ALARM-RINGER	25,788	2:43:27	4.0%
MENTALLY ILL	19,581	1:33:36	3.1%
ABANDONED AUTOMOBILE	16,912	N/A	2.7%

Note: Only Includes Calls with On-Scene Arrival Time

**Table 9. Average Response Time for Misdemeanor Calls**

2018-2020: Top 5 Misdemeanor Calls			
Call Type Description	Count	Avg Time to Respond (Hrs,Mins,Sec)	% of Total
BATTERY	15,045	1:06:13	2.4%
DISTURBING THE PEACE	9,951	1:56:27	1.6%
TRESPASS	8,270	2:52:00	1.3%
415 THREATS	7,195	4:38:47	1.1%
THEFT	3,911	2:33:57	1.0%

Note: Only Includes Calls with On-Scene Arrival Time

**Table 10. Average Response Time for Non-Violent Felony Calls**

2018-2020: Top 5 Non-Violent Felony Calls			
Call Type Description	Count	Avg Time to Respond (Hrs,Mins,Sec)	% of Total
STOLEN VEHICLE	19,439	2:55:38	3.1%
BURGLARY	9,657	2:23:02	1.5%
AUTO BURGLARY	3,943	2:46:12	1.0%
VIOLATION OF COURT ORDER	2,424	4:10:28	0.6%
HIT & RUN (PROPERTY) <sup>2</sup>	2,284	2:16:07	0.4%

Note: Only Includes Calls with On-Scene Arrival Time

**Table 11. Average Response Time for Serious Violent Felony Calls**

2018-2020: Top 5 Serious Violent Felony Calls			
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<sup>2</sup> These are wobbler cases and can be charged as felonies or misdemeanors

Call Type Description	Count	Avg Time to Respond (Hrs,Mins,Sec)	% of Total
BATTERY ON CO-HABITANT W/ SERIOUS INJURY	10,796	0:46:43	1.7%
415 SHOT SPOTTER GUN	10,032	0:57:56	1.6%
ROBBERY	7,431	1:12:25	1.2%
415 GUNSHOTS	5,869	1:15:28	0.9%
ASSAULT W/DEADLY WEA	5,723	0:44:57	0.9%

Note: Only Includes Calls with On-Scene Arrival Time

### Time Spent on Calls

Tables 12 and 13 outline the total amount of time spent on CFS by Crime Category. In determining the time spent on event response, NICJR analyzed two time periods. First, the time period beginning when an officer arrived on-scene to when the officer closed or “cleared” the call and was back “in-service” and able to take other calls and second, the period beginning when the call came in and when an officer arrived on-scene. There are a number of CFS that spanned more than two or three days. Due to the unreliability of the time values associated with these types of CFS, NICJR capped the maximum time a CFS could take was 24 hours. Using this methodology, NICJR was able to better identify how much time officers spent handling a specific call. An alternate and more comprehensive view of officer response time accounts for the time from event initiation to close.

**Table 12. Time Spent Responding to Events, On-Scene to Close 2018-2020**

Crime Category	Total Hours Arrival to Close	Average Hours Per Event	Proportion of Total Officer Time
Non-Criminal	387,075	1.04	50.1%
Misdemeanor	96,512	1.18	12.5%
Non-Violent Felony	84,616	1.50	11.0%
Serious Violent Felony	126,294	2.26	16.4%
On-View	76,738	1.25	10.0%
Grand Total	771,235	1.45	100%

Note: Excludes calls with missing on-scene arrival time values.

**Table 13. Time Spent Responding to Events, Initiation to Close 2018-2020**

Crime Category	Total Hours Initiation to Close	Average Hours Per Event	Proportion of Total Officer Time
Non-Criminal	964,481	2.9	57.8%
Misdemeanor	223,529	3.2	13.4%
Non-Violent Felony	240,412	4.2	14.4%
Serious Violent Felony	162,739	3.2	9.8%
On View	76,791	1.3	4.6%
Grand Total	1,667,952	3.0	100.0%

Note: Excludes calls with missing on-scene arrival time values.

## Recommendations

Based on our analysis, NICJR developed the following recommendations:

### 1) Improve the OPD CAD system:

- OPD should include Final Call Type in the CAD data. The final call type, which reflects an officer's assessment from the scene, may differ from the initial call classification based on information from the caller. Unless CAD data includes the final call type, it will not accurately reflect the nature of crime-related calls and other problems that are phoned into the communications center.
- Need for linkages to other Systems: Linkages to other information systems could enhance the utility of the OPD's CAD system even further.<sup>3</sup> For example, most CAD systems assign a complaint number to crimes and traffic accidents. Reports on serious incidents usually are entered into separate databases for analyzing the characteristics of these events.<sup>4</sup> However, it is rare that linkages are established between these systems and the CAD data. The technical obstacles for making these linkages are not significant. The complaint number is usually the key between them. With most database applications, it is fairly simple to merge records together using the common complaint number as a key.

### 2) Increase utilization of alternative responders

With more than half of all Calls for Service responded to by OPD patrol officers being for low level, non-criminal activity, OPD can safely and responsibly reduce its use of sworn officers responding to those incidents, once alternative responders are up and running and effectively responding to some subset of CFS. Due to the challenges of the CAD system as pointed out several times in this report, further assessment is needed before certain call categories can be responsibly assigned to community based alternative response. Therefore, NICJR has the following recommendations on alternative calls for service:

- Include the following type of calls MARCO responds to:
  - Abandoned Automobile: Over the three-year study period, there were more than 13,000 such calls, of which a sworn officer responded to 2,000.
  - Loud Music: Over the three-year study period, there were just under 1,600 such calls, of which a sworn officer responded to more than 1,000.
- Increase use of OPD civilian crime technicians to respond to calls for service that are not crimes in progress, like burglaries that occurred several hours or even days earlier.

### 3) After a successful alternative response program is up and running and well staffed, OPD can re-examine deployment strategies to increase focus on serious crime and violence.

With the expansion of community responders, which may free time of patrol officers, OPD can examine priorities for patrol officers and increase the focus of every section of the

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<sup>3</sup> [Improving Information-Sharing Across Law Enforcement: Why Can't We Know? | RAND](#)

<sup>4</sup> [Integrating Computer-Aided Dispatch Data with Traffic Management Centers - Chapter 4 - FHWA Operations \(dot.gov\)](#)

Department towards serious crime, violence, and incidents which impact the safety of the community.

