Bay Area Rapid Transit Police Department

Five-Year Strategic Patrol Staffing Plan

Final Report

August 2018
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In September 2017, the Bay Area Rapid Transit Police Department (BART PD) contracted with the University of North Texas for the development of a five-year strategic patrol staffing plan. Various methodologies were employed during the study including discussions with BART PD personnel and external stakeholders. The research team completed several interviews with BART PD personnel. The interviews with BART PD personnel focused on topics such as the current allocation and deployment of patrol personnel, the efficiency and effectiveness of current patrol staffing allocation and deployment, the future staffing patrol allocation and deployment needs, and efficiencies that can be gained through improved processes and procedures. The interviews with external stakeholders focused on topics such as the expectations and operational philosophy of BART PD patrol, operational priorities for BART PD patrol, extent to which BART PD patrol is meeting expectations and operational demands, and the sufficiency of current patrol staffing.

A list of the interviews, by assignment at the time of the interview, is presented below.

BART PD Personnel

- Chief Carlos Rojas
  Operations Bureau
- Deputy Chief Lance Haight
- Lt. Mike Hayes
- Lt. Gil Lopez
- Lt. Jason Scott
- Sgt. Tanzanika Carter
- Sgt. Gina Galletti
- Sgt. Jason Ledford
- Sgt. Rick Martinez
- Sgt. Jesse Sekhon
- Sgt. Nate Weissich
- Sgt. Mike Williamson

External Stakeholders

- Debora Allen – BART Board of Directors
- Robert Raburn – BART Board of Directors
- Cydia Garrett – Citizen Review Board
- Ken Loo – Citizen Review Board
- Les Mensinger – Citizen Review Board
- Russell Bloom – Office of the Independent Police Auditor
- Patrick Caceres – Office of the Independent Police Auditor

In addition to the interviews, the research team conducted a comprehensive review of statistical data, reports, and departmental policies relevant to BART PD patrol workload, staffing, scheduling, and overtime demands, an assessment of national best practices applicable to BART
PD patrol, and the development of statistical models to determine and validate patrol staffing needs.

This report is structured in three primary sections and provides the reader with data, information, and analysis leading to the development of a five-year strategic patrol staffing plan for BART PD. The three sections are as follows:

- **Section I: Patrol Division Staffing;**

- **Section II: Summary of Patrol Officer Staffing Recommendations; and,**

- **Section III: List of Recommendations.**
SECTION I: PATROL DIVISION STAFFING

According to the San Francisco Bay Area Rapid Transit District Annual Report, BART provides service to an average of 423,400 riders per day on weekdays and 321,700 riders on weekends. Personnel assigned to the Patrol Division within the Bay Area Rapid Transit Police Department (BART PD) are responsible for providing police service throughout the entire BART service area. This includes 48 BART stations with a peak of 62 trains in operation during the weekdays and a peak of 40 trains in operation during the weekends. In addition, the BART PD Patrol Division is responsible for police service at all BART owned/operated facilities and parking lots which includes over 49,000 parking stalls. Overall, the authorized patrol staffing level in BART PD is 150 police officers.

In order to assess the Patrol Division staffing needs, the below data were assessed.

1) Annual number of calls for service, by priority level, by year (2014-2017)

2) Annual number of calls for service, by disposition and month, by year (2014-2017)

3) Annual number of calls for service, by call type and priority level, by year (2014-2017)

4) Annual number of calls for service, by station, by year (2014-2017)

5) Amount of time spent on calls for service, by priority level and call type, by year (2014-2017)

6) Annual number of back-up unit responses, by priority level, by year (2014-2017)

7) Amount of time spent on back-up unit responses, by priority level, by year (2014-2017)

8) Annual number of officer-initiated activities and time spent on these activities, by year (2014-2017)

9) Annual average response time to calls for service, by priority level, by year (2014-2017)

10) Annual number of hours of leave for patrol officers, by leave category, in 2017


12) Sample of daily patrol schedule

13) Personnel list by assignment
14) Current BART PD patrol deployment plan

15) Maps of patrol zones/beats/rail lines/stations

16) Number of trains on system by hour of day and day of week

17) Ridership by station, by hour of day and day of week (2014-2017)

18) BART PD general orders that impact staffing allocation and deployment

19) BART PD Annual Report – 2017

20) San Francisco Bay Area Rapid Transit District Annual Report – January 2018

The research team developed an overlay deployment model which includes the following operational functions for the BART PD Patrol Division:

• Train Coverage Function;
• Fixed Assignment Coverage Function; and,
• Patrol Zone/Beat Coverage Function.

Each of the operational functions is discussed in this report as well as the statistical models developed to determine staffing levels needed to accomplish each function.

**Train Coverage Function**

BART PD patrol officers are responsible for providing police visibility on trains and responding to calls for service which originate on trains. According the BART PD Standard Operating Procedures, “officers will strive to board and ride a minimum of six trains during their shift in their assigned beat/zone, unless mitigating circumstances prevent.” The research team found that this goal is met inconsistently because other patrol responsibilities hinder officers’ ability to ride trains. In order to provide consistent police presence on trains throughout the BART system, it is recommended that BART PD create train teams comprised of patrol officers. These officers will be assigned to the train coverage function of the overlay patrol deployment model developed in this report.

The variables used to build the train coverage model are presented in Table 1. There are currently six patrol zones (1, 2C, 2R, 3, 4, and 5) within the BART PD patrol zone/beat structure (See Figure 1).
Based on the number of trains in service by hour of day and day of week, it is anticipated that the train coverage function will be operational 20 hours per day, 365 days per year. Further, it is expected that each train coverage officer will work in two officer teams. The utilization of two officer teams for the train coverage function will significantly minimize the need for back-up unit responses since most calls for service and self-initiated activities that require a back-up unit can be handled by two officers. In addition, the use of two officer train coverage teams will allow patrol officers who are not assigned to the rail coverage function to maintain consistent focus on their primary areas of responsibility. Furthermore, due to the mobility of the trains and the inability to provide a back-up response except when the trains are at a station, two officer train coverage teams are needed for officer safety purposes.

BART PD personnel provided the research team with the annual number of hours of leave taken by patrol officers for each category of leave (e.g., vacation leave, sick leave, compensatory time, FMLA, and training, among others) for 2017. Patrol officers used an average of 475.25 hours of leave per officer in 2017; leave percentage of 22.79%. The BART PD leave percentage fits within
the expected range of 18%-24% established in prior staffing studies conducted by the research team.

<table>
<thead>
<tr>
<th>Table 1: Train Coverage Model Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Train Coverage Variables - Patrol Officers</td>
</tr>
<tr>
<td>Total Number of Patrol Zones</td>
</tr>
<tr>
<td>Number of Hours of Train Coverage per Day</td>
</tr>
<tr>
<td>Percentage of Patrol Zones Staffed with Two Officers</td>
</tr>
<tr>
<td>Percentage of Time on Leave</td>
</tr>
<tr>
<td>Total Number of Patrol Officers Needed</td>
</tr>
</tbody>
</table>

In order to implement the train coverage function in BART PD within the parameters discussed above, 54 train coverage officers are needed. Since the train coverage function does not currently exist within BART PD, the 54 train coverage officers will be new hires. The following recommendation is offered.

**Recommendation #1:** Based on the results of the train coverage model, it is recommended that 54 patrol officers be assigned to the train coverage function within BART PD by the end of fiscal year 2022-23.

**Implementation Timeframe:**
- FY 2018-19 – Add 11 patrol officers
- FY 2019-20 – Add 11 patrol officers
- FY 2020-21 – Add 10 patrol officers
- FY 2021-22 – Add 11 patrol officers
- FY 2022-23 – Add 11 patrol officers

It is important to note, the train coverage model does not include administrative time for patrol officers, which is a common variable in patrol allocation models, for two reasons. Administrative time includes shift preparation activities such as briefing, shift completion activities such as end of shift paperwork, and meal breaks. First, it is expected the shift preparation and completion activities can be attended to by creating a shift overlap which makes accounting for administrative time separately in the train coverage model unnecessary. However, breaks are not accounted for in the model. Second, it is anticipated that patrol officers assigned to the patrol beats within the zone or train teams in contiguous patrol zones will be able to cover any train related calls for service, as needed, during breaks taken by train team officers.

Finally, the train coverage model excluded the Critical Asset Protection (CAP) team. The CAP team includes 6 officers and 1 sergeant and is operational from 5:30AM-10:00PM Monday through Friday. The primary responsibility of the CAP team is officer presence on trains. The team is funded through federal grants and focuses on the BART system primary corridor; Civic Center to
Fruitvale and up to Orinda. The continuation of federal grant funding for the CAP team is not guaranteed, and the funding is not part of the District’s budget.

**Fixed Assignment Coverage Function**

Currently, BART PD assigns patrol officers on foot in downtown San Francisco which encompasses six stations; from Embarcadero to 24th Street Mission. Under current deployment practices, from 5:30AM-12:00PM a minimum of four officers are assigned to the six stations on weekdays. The officers work in two officer teams with one team covering three stations (Embarcadero, Montgomery Street, and Powell Street) and the second team covering the other three stations (Civic Center/UN Plaza, 16th Street Mission, and 24th Street Mission). In the early morning hours, a minimum of two officers are assigned to cover all six stations. In addition to the deployment of patrol officers in downtown San Francisco, one officer is assigned daily to the San Francisco International Airport station during operational hours.

Since officers assigned to downtown San Francisco and at the San Francisco International Airport are assigned to foot patrol, the research team built a fixed assignment model to determine the number of patrol officers needed for these areas. The variables illustrated in Table 2 were utilized in the fixed assignment model. The number of fixed assignments that need to be covered seven days per week is one and includes the San Francisco International Airport station. It is anticipated the airport assignment will be covered 18 hours per day. For the downtown San Francisco area, from Embarcadero to 24th Street Mission, six fixed assignments will be covered 18 hours per day Monday through Friday. Under the current BART PD deployment plan, the number of fixed assignments is four which allows for the deployment of two, two officer teams across two shifts. Due to the level of ridership and activity in downtown San Francisco, the deployment level is inadequate. The research team recommends an expansion to three, two officer teams across two shifts. Under this deployment model, each two officer team will be responsible for two stations instead of three stations as is currently practiced. As previously discussed, the leave percentage for BART PD patrol officers is 22.79%.
Table 2: Fixed Assignment Coverage Model Variables

<table>
<thead>
<tr>
<th>Fixed Assignment Coverage Variables - Patrol Officers</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number of Fixed Assignments that Need to be Covered 7 Days a Week (SFO)</td>
<td>1</td>
</tr>
<tr>
<td>Number of Hours per Day to be Covered by 7 Day a Week Fixed Assignment</td>
<td>18</td>
</tr>
<tr>
<td>Total Number of Fixed Assignments that Need to be Covered 5 Days a Week</td>
<td>6</td>
</tr>
<tr>
<td>Number of Hours per Day to be Covered by 5 Day a Week Fixed Assignments</td>
<td>18</td>
</tr>
<tr>
<td>Administrative Time for each Officer on each Shift</td>
<td>0</td>
</tr>
<tr>
<td>Percentage of Fixed Assignments Staffed with Two Officers (all but SFO)</td>
<td>85.7</td>
</tr>
<tr>
<td>Percentage of Time on Leave</td>
<td>22.79</td>
</tr>
<tr>
<td><strong>Total Number of Patrol Officers Needed</strong></td>
<td><strong>40</strong></td>
</tr>
</tbody>
</table>

In order to implement the fixed assignment coverage function in BART PD within the parameters discussed above, 40 fixed assignment officers are needed. Currently, 28 officers are utilized to implement the current BART PD deployment plan in downtown San Francisco and the San Francisco International Airport. Therefore, 12 additional officers are needed to move to the recommended deployment model. The following recommendation is offered.

**Recommendation #2:** Based on the results of the fixed assignment model, it is recommended that 40 patrol officers be assigned to downtown San Francisco and San Francisco International Airport by the end of fiscal year 2022-23. This is 12 additional patrol officers above the current authorized patrol staffing of 28 for fixed assignments.

**Implementation Timeframe:**
- FY 2018-19 – Add 4 patrol officers
- FY 2020-21 – Add 4 patrol officers
- FY 2022-23 – Add 4 patrol officers

As with the train coverage model, the fixed assignment model does not include administrative time for patrol officers, which is a common variable in patrol allocation models, for two reasons. First, as previously discussed, it is expected the shift preparation and completion activities can be attended to by creating a shift overlap which makes accounting for this time separately in the fixed assignment model unnecessary. However, breaks are not accounted for in the model. Second, it is anticipated that patrol officers assigned to the patrol beats within Zone 5, for San Francisco International Airport, or contiguous fixed assignment teams, for downtown San Francisco, will be able to cover any calls for service, as needed, during breaks taken by fixed assignment officers.

**Patrol Zone/Beat Coverage Function**

Two of the three operational functions included in the overlay deployment model have been discussed. First, the train coverage model provides a two officer train team for each of the six patrol zones 20 hours per day, 365 days per year. Second, the fixed assignment model provides
patrol officers at the downtown San Francisco stations and at the San Francisco International Airport station. Providing police service to the remaining BART service area is the responsibility of patrol zone/beat officers. This includes the 48 BART stations and platforms, parking lots, and all BART owned/operated facilities.

The patrol zone/beat coverage function of the overlay BART PD deployment model is discussed in this section of the report. The patrol zone/beat coverage model excludes the functions previously discussed including the train coverage and fixed assignment functions. However, patrol zone/beat officers will have primary responsibility for the BART trains when the train teams are off duty (i.e., late evening and early morning hours) and when the downtown San Francisco fixed assignment officers are off duty (i.e., early morning hours during weekdays and all day on weekends). The patrol zone/beat coverage model accounts for these times to ensure patrol coverage of all areas of BART PD responsibility 24/7/365.

BART PD patrol zone/beat officers are currently deployed into the following six patrol zones as illustrated in Figure 2:

- Patrol Zone 1;
- Patrol Zone 2C;
- Patrol Zone 2R;
- Patrol Zone 3;
- Patrol Zone 4; and,
- Patrol Zone 5.
Each patrol zone is divided into beats and one patrol officer is assigned per beat under the current BART PD patrol deployment plan. Officers work a combination of 10 hour and 12 hour patrol shifts. During the day shift, BART PD deploys a minimum of 23 patrol officers across 23 beats while during the swing shift, BART PD deploys a minimum of 24 patrol officers across 24 beats.

Figure 3 illustrates the current BART PD patrol beats. A few anomalies in Figure 3 require further discussion. First, the officer assigned to cover beat 14 is not assigned to any stations. Instead, the officer is expected to stay within the patrol zone, respond to calls for service, as needed, and provide back-up responses to officers assigned to beats 10, 11, and 13. Second, downtown San Francisco is divided into four patrol beats with two sets of two beats covering the same geographic area. For example, officers assigned to beat 40 and 41 are responsible for the Embarcadero, Montgomery Street, and Powell Street stations. Since the officers work in two officer teams, as previously mentioned under the fixed assignment model, and one officer is assigned to each beat under the current BART PD deployment plan, the area is depicted as two beats. The same applies...
to beat 42 and 43. Third, beat 32 and 36 both include Fremont Station and Warm Springs Station. During day shift, one officer is assigned to cover the area, but during swing shift, two officers are assigned to cover the area. This explains the different minimum patrol staffing levels previously mentioned; 23 patrol officers during day shift but 24 patrol officers during swing shift. As the rail line expands, it is expected that beats 32 and 36 will be permanently separated and one officer will be assigned to each beat on each shift. Fourth, a newly created beat, Beat 28, is not included in Figure 3. It includes the Pittsburg Center Station, Antioch Station, and eBART Transfer.

**Figure 3: BART PD Patrol Beats**

The research team built a minimum staffing allocation model to determine the number of officers that need to be assigned to the patrol zone/beat coverage function within BART PD. The variables utilized in the model are illustrated in Table 3 and discussed below.
1) The “Total Number of Patrol Beats” is 18. As previously mentioned, there are a total of 24 patrol beats within BART PD. The value of 18 for this variable excludes the four downtown San Francisco beats since they are accounted for in the fixed assignment model and the third variable in this patrol zone/beat model. It also excludes cover beat 14 since cover beats are accounted for in the second variable in this patrol zone/beat model. Finally, it excludes the San Francisco International Airport because it is included, in its entirety, in the fixed assignment model.

2) The “Total Number of Cover Beats” is 10 and includes the one cover beat in the current BART PD patrol deployment plan (i.e., cover beat 14). The officer assigned to a cover beat is not assigned to any stations. Instead, the officer is expected to stay within the patrol zone, respond to calls for service, as needed, and provide back-up responses to officers assigned to other beats within the zone. The primary responsibility of the cover unit is to serve as a back-up unit to other patrol officers within the zone.

The use of cover units is an essential element of a patrol deployment plan and it is recommended BART PD significantly expand their use. Without cover units, patrol officers assigned to specific beats must serve as back-up units for each other. Serving as a back-up unit in another beat removes the officer from the officer’s primary beat assignment. This is an inefficient practice and increases the amount of time an officer must wait for a back-up unit to arrive and increases response times since officers are not maintaining beat integrity. Beat integrity is a foundational principle of effective and efficient patrol deployment and means the officer always remains in the assigned beat except under exigent circumstances. By keeping patrol zone/beat officers geographically dispersed across the BART PD beats, faster response times will result.

Since most calls for service and self-initiated activities that require a back-up unit can be handled by two officers, the use of cover units is an effective and efficient utilization of patrol resources. In the patrol zone/beat coverage model, a total of 10 cover beats/units are recommended. Under the proposed deployment model, two cover units will be deployed on both the day and swing shifts in each of the following zones: Zone 1; Zone 2C; Zone 3; and, Zone 4. One cover unit is recommended on both the day and swing shifts in Zone 2R and Zone 5. All cover units will be one officer per vehicle.

3) The “Total Number of Beats Requiring Partial Coverage” is four and includes the six hours of weekday coverage in the late evening and early morning during which the fixed assignment officers in downtown San Francisco are off duty and weekend coverage of downtown San Francisco by patrol zone/beat officers.
4) As previously discussed, the leave percentage for BART PD patrol officers is 22.79%.

Table 3: Patrol Zone/Beat Model Variables*

<table>
<thead>
<tr>
<th>Patrol Zone/Beat Coverage Variables - Patrol Officers</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number of Patrol Beats (excludes downtown San Francisco, cover beat 14, and San Francisco International Airport)</td>
<td>18</td>
</tr>
<tr>
<td>Total Number of Cover Beats (includes current cover beat 14)</td>
<td>10</td>
</tr>
<tr>
<td>Total Number of Beats Requiring Partial Coverage (downtown San Francisco)</td>
<td>4</td>
</tr>
<tr>
<td>Percentage of Time on Leave</td>
<td>22.79</td>
</tr>
<tr>
<td><strong>Total Number of Patrol Officers Needed</strong></td>
<td><strong>150</strong></td>
</tr>
</tbody>
</table>

*The San Francisco International Airport beat is not included in the patrol zone/beat model because it is included, in its entirety, in the fixed assignment model.

In order to implement the patrol zone/beat coverage function in BART PD within the parameters discussed above, 150 patrol zone/beat officers are needed. The current authorized staffing level for BART PD patrol officers is 150. Of the 150 officers, 28 are accounted for in the fixed assignment model for downtown San Francisco and the San Francisco International Airport. The remaining 122 officers are authorized for patrol zone/beat assignments throughout the BART PD service area. In order to implement the patrol zone/beat coverage function in BART PD within the parameters discussed in this section, 28 additional police officers are needed for the patrol zone/beat coverage function within BART PD. The following recommendation is offered.

**Recommendation #3:** Based on the results of the patrol zone/beat model, it is recommended that 150 patrol officers be assigned to the patrol zone/beat coverage function by the end of fiscal year 2022-23. This is 28 additional patrol officers above the current authorized patrol staffing of 122 for patrol zone/beat coverage.

**Implementation Timeframe:**
- FY 2018-19 – Add 4 patrol officers
- FY 2019-20 – Add 8 patrol officers
- FY 2020-21 – Add 4 patrol officers
- FY 2021-22 – Add 8 patrol officers
- FY 2022-23 – Add 4 patrol officers

As with the other two models previously presented, the patrol zone/beat model does not include administrative time for patrol officers, which is a common variable in patrol allocation models, for two reasons. First, as previously discussed, it is expected the shift preparation and completion activities can be attended to by creating a shift overlap which makes accounting for this time separately in the fixed assignment model unnecessary. However, breaks are not accounted for in the model. Second, it is anticipated that patrol zone/beat officers will be available to answer
incoming calls for service, if needed, during meal breaks or cover units will be able to cover any calls for service, as needed, during breaks taken by other officers.

**Patrol Division Supervision**

As part of the BART PD patrol staffing assessment, the research team assessed the level of supervision within the Patrol Division. Sergeants and lieutenants provide patrol supervision. Recommended staffing levels for each are discussed in this section of the report.

**Lieutenants**

BART PD should assign one lieutenant to each of the six patrol zones. The lieutenant will have supervision over all patrol related functions, activities, and roles within the geographic area of the patrol zone. In addition, BART PD assigns a watch commander to what is referred to as the “box” which is an office co-located within the Communication Division. In order to staff this watch commander function, five lieutenants are needed. In sum, a total of 11 lieutenants should be assigned to the BART PD Patrol Division. The following recommendation is offered.

**Recommendation #4:** Eleven lieutenants should be assigned to the BART PD Patrol Division.

**Sergeants**

BART PD should assign one patrol sergeant to each of the six patrol zones for both the day shift and the swing shift. In order to provide this level of patrol supervision seven days a week, a total of 24 patrol sergeants should be assigned to the BART PD Patrol Division. The following recommendation is offered.

**Recommendation #5:** Twenty-four patrol sergeants should be assigned to the BART PD Patrol Division.
SECTION II: SUMMARY OF PATROL OFFICER STAFFING RECOMMENDATIONS

The patrol officer staffing recommendations, by fiscal year, are included in Table 4.

<table>
<thead>
<tr>
<th>Positions – FY 2018-19</th>
<th>Number of Positions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patrol Division</strong></td>
<td></td>
</tr>
<tr>
<td>Patrol Officer – Fixed Assignment Coverage</td>
<td>4</td>
</tr>
<tr>
<td>Patrol Officer – Train Coverage</td>
<td>11</td>
</tr>
<tr>
<td>Patrol Officer – Zone/Beat Coverage</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total Positions</strong></td>
<td><strong>19</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Positions – FY 2019-20</th>
<th>Number of Positions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patrol Division</strong></td>
<td></td>
</tr>
<tr>
<td>Patrol Officer – Fixed Assignment Coverage</td>
<td>0</td>
</tr>
<tr>
<td>Patrol Officer – Train Coverage</td>
<td>11</td>
</tr>
<tr>
<td>Patrol Officer – Zone/Beat Coverage</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total Positions</strong></td>
<td><strong>19</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Positions – FY 2020-21</th>
<th>Number of Positions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patrol Division</strong></td>
<td></td>
</tr>
<tr>
<td>Patrol Officer – Fixed Assignment Coverage</td>
<td>4</td>
</tr>
<tr>
<td>Patrol Officer – Train Coverage</td>
<td>10</td>
</tr>
<tr>
<td>Patrol Officer – Zone/Beat Coverage</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total Positions</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Positions – FY 2021-22</th>
<th>Number of Positions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patrol Division</strong></td>
<td></td>
</tr>
<tr>
<td>Patrol Officer – Fixed Assignment Coverage</td>
<td>0</td>
</tr>
<tr>
<td>Patrol Officer – Train Coverage</td>
<td>11</td>
</tr>
<tr>
<td>Patrol Officer – Zone/Beat Coverage</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total Positions</strong></td>
<td><strong>19</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Positions – FY 2022-23</th>
<th>Number of Positions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patrol Division</strong></td>
<td></td>
</tr>
<tr>
<td>Patrol Officer – Fixed Assignment Coverage</td>
<td>4</td>
</tr>
<tr>
<td>Patrol Officer – Train Coverage</td>
<td>11</td>
</tr>
<tr>
<td>Patrol Officer – Zone/Beat Coverage</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total Positions</strong></td>
<td><strong>19</strong></td>
</tr>
</tbody>
</table>

| Total Number of Patrol Officers Needed over 5 Years | 94 |
SECTION III: LIST OF RECOMMENDATIONS

**Recommendation #1:** Based on the results of the train coverage model, it is recommended that 54 patrol officers be assigned to the train coverage function within BART PD by the end of fiscal year 2022-23.

**Implementation Timeframe:**
- FY 2018-19 – Add 11 patrol officers
- FY 2019-20 – Add 11 patrol officers
- FY 2020-21 – Add 10 patrol officers
- FY 2021-22 – Add 11 patrol officers
- FY 2022-23 – Add 11 patrol officers

**Recommendation #2:** Based on the results of the fixed assignment model, it is recommended that 40 patrol officers be assigned to downtown San Francisco and San Francisco International Airport by the end of fiscal year 2022-23. This is 12 additional patrol officers above the current authorized patrol staffing of 28 for fixed assignments.

**Implementation Timeframe:**
- FY 2018-19 – Add 4 patrol officers
- FY 2020-21 – Add 4 patrol officers
- FY 2022-23 – Add 4 patrol officers

**Recommendation #3:** Based on the results of the patrol zone/beat model, it is recommended that 150 patrol officers be assigned to the patrol zone/beat coverage function by the end of fiscal year 2022-23. This is 28 additional patrol officers above the current authorized patrol staffing of 122 for patrol zone/beat coverage.

**Implementation Timeframe:**
- FY 2018-19 – Add 4 patrol officers
- FY 2019-20 – Add 8 patrol officers
- FY 2020-21 – Add 4 patrol officers
- FY 2021-22 – Add 8 patrol officers
- FY 2022-23 – Add 4 patrol officers

**Recommendation #4:** Eleven patrol lieutenants should be assigned to the BART PD Patrol Division.

**Recommendation #5:** Twenty-four patrol sergeants should be assigned to the BART PD Patrol Division.