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MICHAEL P. CAREY
FIRE CHIEF

To: William Fazioli
Chairperson East Providence
Waterfront Commission

From: Michael P. Carey
Fire Chief

Date: November 13, 2024

Subj: Metacomet Redevelopment Project
Review of Public Safety Study and Hydraulic Model Evaluation

Dear Chairperson, Fazioli,

I have reviewed the Public Safety Study, prepared by Christopher Bruce on December 28, 2023, and the Hydraulic Model Evaluation, prepared by Pare Corporation, project number 23062, dated August 8, 2024. Both documents advocate for the referenced Metacomet redevelopment project. I acknowledge the significance of this study and offer a response to both the research findings and my comprehension of the impact this advancement will have on our emergency response capabilities and the safety of our residents, workers, and visitors.

Review of Public Safety Impact Study

Fire and Emergency Medical Services Background

This development will be unprecedented in scope within our urban landscape. Multiple sites, previously approved and either completed or in progress, have exhibited an escalation in service demand over the past three years, both within their respective districts and across the department. Despite our ability to keep pace with existing demands, the volume of service requests is consistently increasing year-over-year, and the ongoing construction of new housing units within the city will inevitably contribute to continued growth in these numbers. The recent development projects include the Christine Apartments, providing 416 living units, East Point with 392 units, and a number of smaller apartment buildings containing 12 or more units dispersed throughout the city center. During the preceding three-year period, we have observed an approximate eight percent rise in the demand for services citywide.

The Metacomet Redevelopment area will be the initial priority for response by Fire Station 1, located at 913 Broadway. As the primary responder to all calls within the 02914 zip code area, Fire Station 1 is the busiest fire station in the city. This area represents 47% of the city's population, housing 22,140 residents according to data.cdnsus.gov. The facility houses Engine Companies 1 and 5, in addition to Rescue Company 1, which is an ambulance unit. These three companies, which are among the most active in the city, have witnessed a sustained rise in service call volume over the past three years (figures 1 to 3). It is important to note that not all responses were confined to the 02914 zip code area. This is attributable to the existence of incident types demanding multi-company responses and/or the relocation or transfer of companies to guarantee coverage in all districts, at all times, taking into account call volume variations and training necessities.

Engine 1 - Responses	2021	2022	2023
100 Series – Fires	163	200	224
200 Series – Overpressure Rupture, Explosion,	2	4	1
300 Series – Emergency Medical Services	2280	2326	2419
400 Series -Hazardous conditions	59	76	89
500 Series – Public service	250	219	232
600 Series – Good intent calls	44	65	41
700 Series – Alarms no fire or hazard	512	638	707
800 Series – Severe weather	0	0	0
900 Series – Special type of incident not covered	1	0	0
Total Runs	5332	5550	5736
Percentage of Increase from Previous Year	13.74%	6.55%	5.27%

Figure 1.

Engine 5 - Responses	2021	2022	2023
100 Series – Fires	143	175	189
200 Series – Overpressure Rupture, Explosion, Overheat	2	2	1
300 Series – Emergency Medical Services	2107	2168	2297
400 Series -Hazardous conditions	47	71	65
500 Series – Public service	276	269	270
600 Series – Good intent calls	39	47	42
700 Series – Alarms no fire or hazard	447	560	646
800 Series – Severe weather	1	1	0
900 Series – Special type of incident not covered	0	0	0
Total Runs	5083	5315	5533
Percentage of Increase from Previous Year	11.75%	7.54%	6.59%

Figure 2.

Rescue 1 - Responses	2021	2022	2023
100 Series – Fires	62	84	76
200 Series – Overpressure Rupture, Explosion, Overheat	1	2	0
300 Series – Emergency Medical Services	3479	3450	3584
400 Series -Hazardous conditions	23	28	36
500 Series – Public service	78	58	38
600 Series – Good intent calls	13	42	75
700 Series – Alarms no fire or hazard	184	267	240
800 Series – Severe weather	0	0	0
900 Series – Special type	0	0	0
Total Runs	5861	5953	6072
Percentage of Increase from Previous Year	6.52%	2.37%	3.00%

Figure 3.

Study Anticipated Calls for Service

Based on the evaluation, the anticipated maximum annual calls for service for the entire development is 359. Notably, the proposal includes 240 units of senior living and assisted living, representing 50% of the estimated maximum annual service calls. The remaining 50% is attributed to the proposed 97,800 square foot grocery store. The study excluded consideration of the following occupancies in the development of the anticipated calls for service calculations. The proposed occupancies include the remaining 650 residential units, two restaurants, a coffee shop, retail establishments, a daycare center, a golf facility, and a food hall.

The study utilized the Anchor Bay facility, situated at 1440 Wampanoag Trail, Riverside, as the foundation for projecting service call volume. The remaining anticipated calls were projected to originate from the planned grocery store development. Please be advised that this facility is not located within the affected zip code response area of 02914. Anchor Bay accommodates 100 residents in assisted living and memory care units. Analysis of the past three years of service call data (Figure 4) reveals a trend of annual increases surpassing the projected figures outlined in the study. Notably, this facility only represents 42% of the living units proposed for Metacommet (240) in this study. As of the present, there have been 196 service calls to this facility in 2024, with two months remaining in the year.

Facility	Living Units	2021	2022	2023
Anchor Bay	100	103	133	183

Figure.4

Applicable Data for Anticipated Calls for Service

The Tockwotten on the Water Facility, situated at 500 Waterfront Drive within the 02914 zip code area, would have been a more suitable location for conducting this impact study. This facility accommodates 156 residential units dedicated to assisted living and memory care. As illustrated in Figure 5, the past three years of service calls have exhibited an upward trend exceeding the study's projections. Notably, this facility only represents 65% of the living units proposed for Metacomet (240) in this study. The current service call total for this year stands at 209, with two months remaining in the year.

Based on the last three years of service requests to the Tockwotten on the Water facility, the average annual number of calls for service is 185. To adjust for the disparity in housing units between the proposed development and Tockwotten, a 35% increase is applied to the projected number. These calculations project an annual service call volume of 250 for the proposed 240 units of senior housing and assisted living within the 02914 zip code response area.

Facility	Living Units	2021	2022	2023
Tockwotton on the Water	156	139	222	193

Figure 5.

The data displayed below (Figure 6) depicts the annual calls for service within the 02914 zip code area over the past three years. The average number of service calls over the most recent three-year period is roughly 7,097. Dividing this number by the zip code area's population of 22,140 yields a call for service rate of 0.32 per resident.

02914 Zip Code Area	2021	2022	2023
Calls for Service	7099	7328	6865

Figure 6.

The calls for service anticipated for the remaining development phases, including the grocery store, would be more accurately estimated by multiplying the number of new residents, not included in the public safety study, by the appropriate service demand factors. The 650 additional living units should be estimated to accommodate two individuals each, regardless of bedroom count, as a representative average. The projected population increase of 1,300 residents within the zip code area, multiplied by the previously established service call rate of 0.32, results in an estimated annual increase of 416 service calls.

Anticipated Calls for Service Impact

Combining the population growth projections and the addition of senior and assisted living facilities, it is estimated that this development will generate approximately 666 calls for service annually. The data suggests a 10% increase in service demand in the 02914 ZIP code response area, given the comparison of this number to the average call volume over the last three years.

Department-wide data indicates an approximate eight percent rise in the demand for services over the past three years across the city (Figure 7). As of this date, we have addressed 11,860 incidents this year. With two months remaining, we anticipate maintaining this current response rate. The anticipated 666 service calls stemming from the development project, when compared to the three-year average of citywide service calls, result in a 5% overall increase in the demand for services across our department citywide.

City-Wide	2021	2022	2023
Calls for Service	12801	12943	13797

Figure 7.

Development Impact on Fire and Emergency Medical Services

The observed 10% surge in service demand within the 02914 zip code area, in conjunction with the existing daily service demands faced by current companies, indicates the need for potential restructuring of the district and a possible increase in the number of service providers.

The fire department's budget for the 2025 fiscal year is set at \$27,302,357.00. A calculation of ten percent results in a sum of \$2,730,235. Although this figure represents only a percentage increase in demand for services, the necessary personnel increase and restructuring to accommodate the new demand will likely be significantly greater. This figure represents a conservative estimate of the financial impact.

Review of Hydraulic Model Evaluation

The existing water supply for the Metacomet Redevelopment Project was previously deemed insufficient for fire suppression and/or the projected domestic water requirements. Upon review of the evaluation, it has become apparent that the approach of offering multiple options to achieve adequate fire flow to all areas and buildings within the development necessitates input from the Director of Public Works and the Water Department.

I would, however, offer the following recommendation concerning fire flow and the presented evaluation. It is recommended that all phases of the project include, as a Phase I requirement, the development of a water supply and distribution system capable of supporting fire flow for the entire development. This encompasses the required enhancements to the Lyon Avenue water main as determined in the evaluation. The study's indication that certain nodes will fall short of required fire flows, coupled with the reliance on future building or fire suppression designs to compensate, raises concerns that could potentially lead to further discussions and issues during the construction phase. My conviction is that the water supply and distribution system is a top priority for any final approvals.

Conclusion

The proposed Metacomet Redevelopment Project is anticipated to substantially alter the demand for fire and emergency services citywide, with a pronounced effect on the 02914 response area. These demands result in a ten percent increase and a five percent increase, respectively. To effectively meet the needs of the 02914 response area, a realignment of current asset response zones is recommended. This realignment will necessitate the addition of resources, including an engine and a rescue unit, to support the construction of a new fire station. This initiative is intended to mitigate the anticipated increase in service demands resulting from the development in the area. As a requirement of Phase I, all water supply and system distribution enhancements across all project phases must be implemented. These improvements should prioritize the attainment of maximum fire flow for all proposed building occupancies site-wide.

Yours in Service,

A handwritten signature in black ink, appearing to read 'M.P. Carey', with a long horizontal flourish extending to the right.

Michael P. Carey
Fire Chief
East Providence Fire Department