

*NYU Hospitals Center Request for
Expansion of Existing Ambulance Service*

PREPARED FOR:
New York State Department of Health
The Regional EMS Council of New York City

PREPARED BY:
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Emergency Medical Services
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Application Part I (Narrative)

Introduction

NYU Hospitals Center (“NYUHC”) is seeking to permanently expand its current operating territory of southwest Brooklyn (New York City 68 and 72 Police Precincts) to all of Brooklyn and Manhattan (the “Proposed Service Area”). Temporary expansion [for all five boroughs] was approved on March 4th, 2016 by the NYS Department of Health (see Attachment A).

Since 1972, the division of NYUHC formerly known as Lutheran Medical Center (“LMC”) has been providing emergency medical services (“EMS”) to southwest Brooklyn. With the merger of LMC into NYUHC effectuated on January 1, 2016, the number of facilities operated by NYUHC and its affiliate, NYU School of Medicine (operating jointly as NYU Langone) has grown significantly. As of the date of this application, NYU Langone facilities include:

- Tisch Hospital at 550 First Avenue, Manhattan; NYU Hospital for Joint Diseases at 301 East 17th Street in Manhattan; and NYU Lutheran Medical Center at 150 55th Street in Brooklyn, inpatient facilities operated by NYUHC;
- a free-standing Emergency Department operated by NYUHC in the Cobble Hill section of Brooklyn;
- 35 Article 28 extension clinics operated by NYUHC, primarily in the Proposed Service Area;
- 40 Family Health Centers co-operated by NYUHC and Sunset Park Health Council, Inc. (d/b/a NYU Lutheran Family Health Centers) under NYUHC’s Article 28 license;
- 16 mental health centers operated by NYUHC under NYUHC’s Article 31 license; and
- Over 200 faculty group practice sites operated by the NYU School of Medicine.

Expansion to the Proposed Service Area would enable NYUHC to meet the EMS needs of NYU Langone patients and, equally important:

- Help reduce the strain on New York City’s municipal 911 system by providing more ambulances;
- Benefit patient care by decreasing ambulance response times and getting emergency medical services (“EMS”) to patients in an expedited fashion;
- Increase the availability of EMS to residents of neighborhoods which have experienced hospital closures or significant reductions of service; and
- Ensure the availability of a financially strong EMS provider in an unstable market.

Section 1. Services and Staffing – Existent and Proposed

NYUHC has a fleet of seventeen ambulances, eleven of which are in operation. Nine ambulances (6 providing basic life support and 3 providing advanced life support) operate out of the NYU Lutheran campus and provide services in Brooklyn, and two ambulances provide services in Manhattan (1 providing basic life support and 1 providing advanced life support.)¹ To date, NYUHC's EMS units have operated with a 0% out of service time for completed tours.

Currently, the EMS Department has a staff of 200, including 118 Emergency Medical Technicians, 77 paramedics, a Quality Assurance Coordinator, a lead EMT, a supervisor, a director and an assistant director. The EMS Department is under the direction of NYUHC's Medical Director and Director of Clinical Operations, Department of Emergency Medicine (NYU Lutheran) and Medical Director of the EMS Department.

- ***EMS staffing***

With the January 1, 2016 merger of LMC into NYUHC, the funding for additional staffing of the EMS Department has significantly increased. In 2007, LMC's Emergency Services Department had a staff of 80; as noted above, the current EMS Department roster is 200. The ferry service operating between the First Avenue campus and the NYU Lutheran campus facilitates travel between the two campuses to address staffing needs. In addition, NYUHC has allocating funding to hire an additional 25 EMTs, 25 paramedics and 1 supervisor if the application for expansion is approved.

- ***Vehicle Capacity***

As noted above, eleven ambulances out of a fleet of 17 are in daily service for response to emergency calls twenty four hours a day/seven days a week. NYUHC has allocated funding for the purchase of 4 additional ambulance units and 1 supervisor vehicle if this application is approved.

Seven vehicles are Type I Ambulances with four-wheel drive capable of maneuvering hilly terrain and inclement weather, and two logistics vehicles are available to support EMS operations.

- ***Proximity to Proposed Service Areas***

NYUHC's current and proposed bases (the two Brooklyn locations 150 55 Street and NYU Langone Cobble Hill at 83 Amity Street and the main campus at 550 First Avenue in Manhattan) are all located near major roadways. Proximity to the Belt Parkway, the Gowanus Expressway, the Brooklyn-Queens Expressway, the FDR Drive, the E 34th Street thoroughfare, the Brooklyn Bridge, Manhattan Bridge, Williamsburg Bridge and Brooklyn

¹ As a result of the bankruptcy filing by TransCare, Inc., NYUHC is operating two ambulances in Manhattan in accordance with the emergency application made to REMSCO by letter dated February 26, 2016.

Battery Tunnel enable NYUHC to respond to emergencies in a timely and efficient manner. (For further information, see Section 4, Response Times)

Section 2: Population Demographics

NYUHC's current service area is 17 miles (see Attachment B). The Proposed Service Area (see Attachment C) covers 93.83 square miles (Brooklyn is 71 square miles and Manhattan is 22.83 square miles) and includes at least 30 911-receiving hospitals, all accessible by the major roadways described above.

New York City is currently at its 2020 population forecast and every sign indicates that the growth rate will continue. The Proposed Service Area has approximately 4.3 million residents, with an additional 9,000 new residential units anticipated for Brooklyn by 2018² and 7,000 new residential units in Manhattan³. The maps on the following pages demonstrate the rapid residential growth taking place in Manhattan and Brooklyn.

The requested expansion will allow NYUHC to leverage its EMS resources to better serve the needs of Manhattan and Brooklyn residents and meet the needs of patients of its multiple ambulatory facilities.

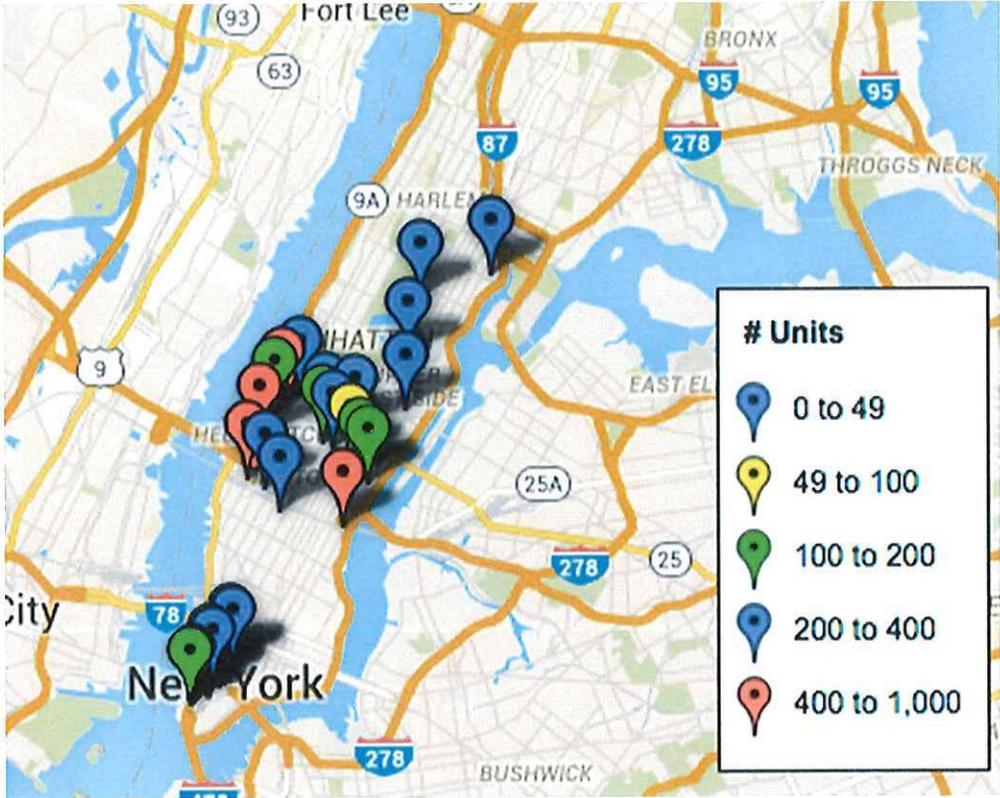
New residential development sites in Kings County (Brooklyn) as of 2015. Copyright 2016 Google Maps.

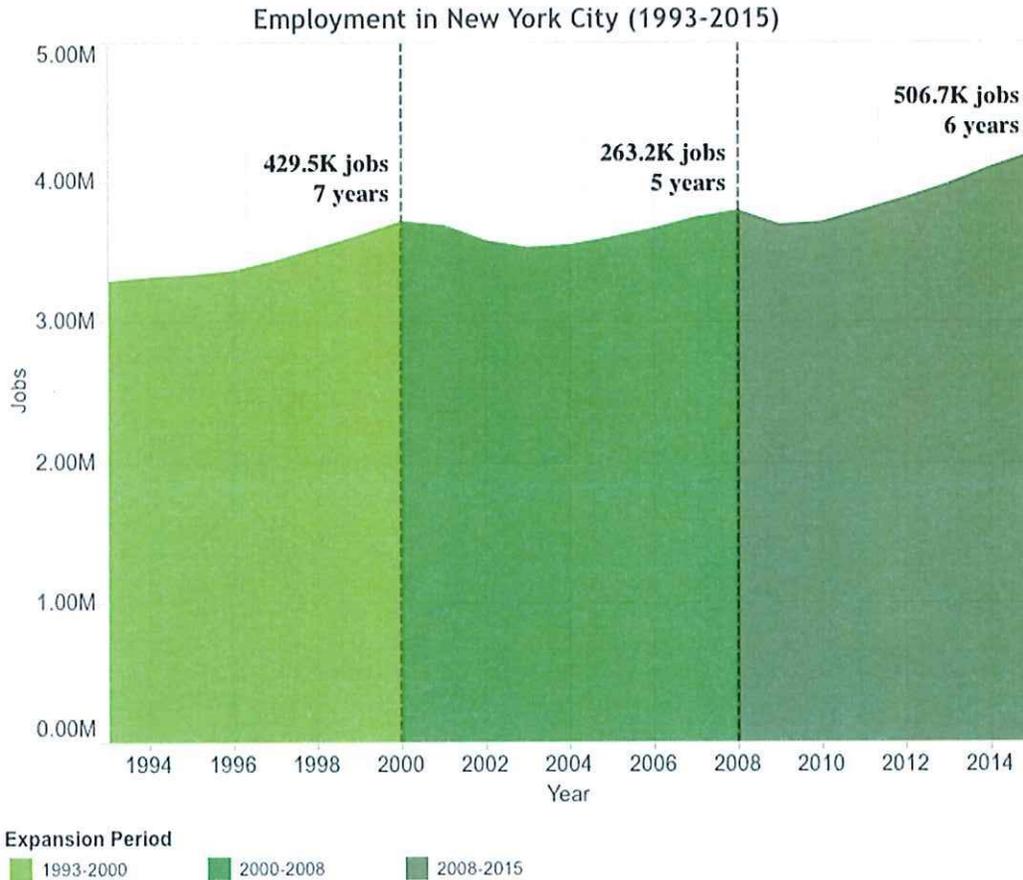


² "Mapping The Masses of New Downtown Brooklyn Apartments," http://ny.curbed.com/archives/2014/06/26/mapping_the_masses_of_new_downtown_brooklyn_apartments.php (June 2014)

³ "Mapping 7,000 New Apartments On The Rise In Manhattan Right Now," http://ny.curbed.com/archives/2014/06/09/mapping_7000_new_apartments_rising_in_manhattan_right_now.php (June 2014).

New residential development sites in New York County (Manhattan) as of 2015. Copyright 2016 Google Maps.





- *The healthcare landscape has shifted from hospital-based to ambulatory facilities located farther away from main medical centers.*

Across the country, healthcare has experienced a shift from inpatient to ambulatory care. Both from a policy perspective and from marketplace realities, this shift has played a major role in New York City. St. Vincent's Medical Center closed its doors in 2010 and in 2014, SUNY ceased operating University Hospital of Brooklyn at the former Long Island College Hospital (LICH) in Cobble Hill. Neither facility was acquired or re-opened as a hospital. NYUHC elected to operate a free-standing Emergency Department at the former LICH site and has plans to build a multi-story ambulatory center and a freestanding ambulatory emergency medical facility is operated by Northwell at the former St. Vincent campus)^{4,5}. Increased reliance on ambulatory facilities and urgent care centers will require ambulance service to tertiary care hospitals in the event of an emergency.

⁴ Sam Roberts, The New York Times, <http://www.nytimes.com/2012/10/20/nyregion/rebounding-from-9-11-lower-manhattan-sees-population-growth.html> (October 19, 2012)

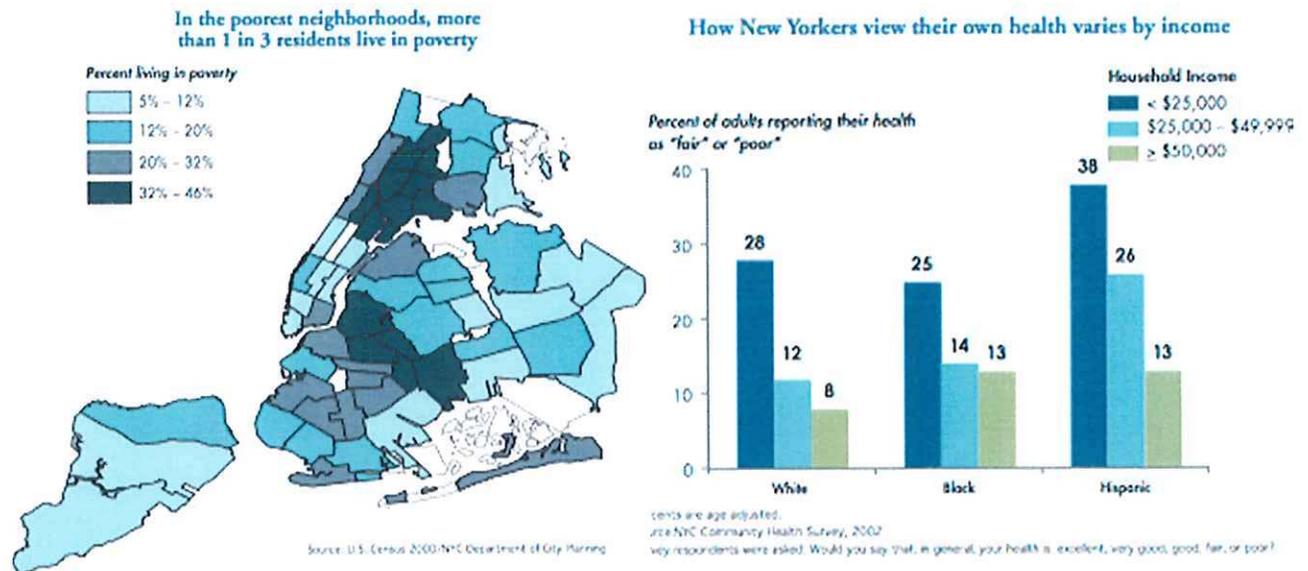
⁵ Anemona Hartocolis, The New York Times, http://www.nytimes.com/2012/10/10/nyregion/after-losing-st-vincents-hospital-manhattan-sees-rise-in-clinic-care.html?_r=0 (October 19, 2012)

- *Contributing to reducing rates of potentially avoidable hospitalizations.*

The New York State Department of Health’s Division of Quality and Evaluation⁶ has set a goal of reducing the rate of potentially avoidable hospitalizations. Coordinating care between inpatient and ambulatory settings is one way to help reach that goal. NYU Langone’s network of ambulatory and inpatient facilities throughout the Proposed Service Area (and beyond) are at the forefront of addressing and treating many of the conditions that lead to potentially preventable hospitalizations. An expansion of the Proposed Service Area would allow NYUHC to further improve coordination of care between the NYU Langone’s facilities and broaden the surrounding communities’ access to these facilities.

- *Increase underserved communities’ access to healthcare.*

New York City residents who live below the poverty line or in poor neighborhoods often lack access to preventive medical care and adequate emergency medical care. The following figures from the New York City Department of Mental Health and Hygiene illustrate that many of the poorest neighborhoods in New York City are located in Brooklyn and Manhattan. Furthermore, those New Yorkers who have lower income are significantly more likely to report their health as “fair” or “poor” when compared with higher income residents⁷.



⁶ New York State Department of Health. https://www.health.ny.gov/health_care/managed_care/reports/statistics_data/6potentially_avoidable_hospitalizations.pdf (2009)
⁷ New York City Department of Mental Health & Hygiene <http://www.nyc.gov/html/doh/downloads/pdf/epi/disparities-2004.pdf> (2004)

The New York City Department of Mental Health and Hygiene has called for public health resources and interventions to better target communities disproportionately affected by illness or death, which is often attributable to lack of access to preventive care⁸. Many of the outpatient clinics operated by NYU Langone are in close proximity to these underserved areas. Approval of this application will allow for transports between these facilities and the inpatient facilities operated by NYUHC.

- *Address needs of the rapidly growing senior population.*

According to the New York City Department of the Aging, the population of New York City residents aged 60 or older has grown faster than any other population group, with Manhattan experiencing the single largest increase, with a growth of 49,264 elderly residents⁹. This segment of the population will continue to grow and will likely contribute to increased call volume and EMS utilization rates. Expansion of services to the Proposed Service Area would enable NYUHC to better serve this population.

- *Importance of community-based organizations to bolster preventive care and enhance community health.*

According to a 2007 report from the New York City Department of Health and Mental Hygiene, New York City would benefit from bolstered community health care programs and outpatient/preventative care¹⁰. NYU Langone operates numerous ambulatory clinics and community-based health service centers which provide both preventive care and a pathway to the specialty services provided by NYUHC's tertiary care facilities.

Section 3: Description of Calls

Call Volume Statistics – Current and Proposed

In 2015 NYUHC responded to 28,938 calls, an increase of over 7,000 calls (32.0%) from the 21,941 calls responded to in 2010. Those calls resulted in the transport of 18,472 patients, of whom 12,872 were transported to the NYU Lutheran campus; in 2010, the EMS Department completed 14,752 transports. This averages out to nearly 80 daily service calls with an average of 51 patients transported daily in 2015.

According to New York City Fire Department statistics for calendar year 2015, there were 476,949 EMS incidents in Brooklyn and 419,852 EMS incidents in Manhattan, which translates to a daily call average of 1,307 in Brooklyn and 1,150 in Manhattan. These figures represent an increase from calendar year 2014 when there were 439,878 EMS incidents in Brooklyn and 378,415 EMS incidents in Manhattan (daily call average of 1,205 in Brooklyn and 1,036 in Manhattan).

⁸ New York City Department of Mental Health & Hygiene
<http://www.nyc.gov/html/doh/downloads/pdf/episrv/disparitiesone.pdf> (2010)

⁹ NYC Department of the Aging;
http://www.nyc.gov/html/dfta/downloads/pdf/demographic/elderly_population_070912.pdf (2010)

¹⁰ New York City Department of Mental Health and Hygiene, <http://www.nyc.gov/html/doh/downloads/pdf/hca/hca-nyc-adults.pdf>, (May 2007)

NYUHC anticipates an annual call volume of 36,000 if this application is granted. Based on current call volume statistics and the number of call-generating facilities in the Proposed Service Area, NYUHC believes there is sufficient demand to accommodate this application for expanding its current operating certificate. As noted above, NYUHC has a current EMS staff roster of 200 and has allocated \$2.0 million for additional staffing.

Destination Hospitals

NYUHC adheres to all applicable protocols and guidelines, including, without limitation, REMSCO and REMAC BLS and ALS protocols, and FDNY EMS' operating guidelines and FDNY General Operating Procedure Guidelines covering patient transports.

As noted above, there are at least 30 911-receiving hospitals and free-standing Emergency Departments within the Proposed Service Area. Brooklyn facilities include the NYU Lutheran campus, NYU Langone Cobble Hill, Maimonides Medical Center, Coney Island Hospital, Mount Sinai Beth Israel Brooklyn, Kings County Hospital Center, NY Community Hospital, Brooklyn Hospital, Wyckoff Heights Medical Center, Kingsbrook Jewish Medical Center, Interfaith Medical Center, Brookdale Hospital Medical Center, Woodhull Medical Center, The Brooklyn VA, and NY Methodist Hospital. Manhattan facilities include NYUHC's main campus at 550 First Avenue, NewYork-Presbyterian Lower Manhattan, Lenox Health Greenwich Village, Mount Sinai Beth Israel Medical Center, The Manhattan VA, Bellevue Hospital Center, Mount Sinai Roosevelt Hospital, Lenox Hill Hospital, NewYork-Presbyterian Cornell, Mount Sinai St. Luke's, Metropolitan Hospital, Mount Sinai Medical Center, Harlem Hospital Center, NewYork-Presbyterian Allen Pavilion and NewYork-Presbyterian Columbia University Medical Center.

Patients may be transported to hospitals outside of the Proposed Service Area if a specialty center is required or a specific hospital is requested by the patient. In the case of a patient request, NYUHC will comply with FDNY protocols and obtain FDNY online medical control approval if the estimated transport time to the requested destination is ten minutes greater than the transport time to the closest hospital.

Section 4: Response Times

Current EMS Response Times

The 911 EMS System, administered by the FDNY and staffed by municipal and local hospital personnel, is currently the primary provider of emergency response services in the Proposed Service Area. Several private ambulance companies and volunteer services are also authorized in the Proposed Service Area but no response time data is available for those organizations.

According to FDNY 2015 statistics, the average response time for the 476,949 EMS incidents in Brooklyn was 9 minutes and 16 seconds, and 3 minutes and 55 seconds for the 203,349 life-threatening EMS incidents (defined as call types categorized as segments 1 through 3)¹¹. In

¹¹ New York City Fire Department, http://www.nyc.gov/html/fdny/pdf/stats/2015/ems/bk/ems_bksum_cy15.pdf, (2015)

Manhattan, the average response time for the 419,852 calls was 10 minutes and 16 seconds, with an average of 7 minutes and 1 second for 173,881 life-threatening EMS calls (segments 1-3)¹². While a majority of EMS incidents are categorized as segment 4 or higher, many calls not initially categorized as life-threatening by FDNY may in fact turn into life-threatening emergencies. FDNY protocols anticipate this occurrence by requiring that EMTs carry AEDs to the scene of all medical assignments (FDNY EMS Command Operating Guide Procedure 108-01).

Between 2014 and 2015, the average response time in Brooklyn increased from 8 minutes and 51 seconds to 9 minutes and 16 seconds. For EMS life-threatening incidents (defined as segments 1-3), the average response time rose from 6 minutes and 41 seconds to 6 minutes and 55 seconds. In Manhattan the average response time increased from 8 minutes and 55 seconds to 10 minutes and 16 seconds; for EMS life-threatening incidents (defined as segments 1-3), the average response time increased from 6 minutes and 26 seconds to 7 minutes and 1 second. As evidenced by these increased response times, some facilities may be experiencing difficulties in obtaining a timely response to a request for ambulance service.

In addition, the recent bankruptcy of TransCare has placed increased burden on the municipal EMS system. In Manhattan, 3 hospitals lost their ambulance provider with minimal notice. NYUHC anticipated this possibility and placed into service ambulances from the NYU Lutheran campus on February 25th at 6:00pm, 3 ½ hours before the time that TransCare ceased operations. While other Manhattan hospitals are relying on the municipal EMS system to cover their tours, NYUHC took steps to ensure that service was not interrupted, at no additional cost to the FDNY system.

Current NYUHC Response Times

In 2015 NYUHC's response time averaged 6 minutes, over 3 minutes faster than the average 911 EMS response time and about 1 minute faster than the average response to life-threatening incidents in Brooklyn. These statistics demonstrate NYUHC's commitment – and ability – to respond to calls in a timely manner, as minutes in a life-threatening situation can mean the difference between life and death.

NYUHC's ambulances are posted at strategic cross street locations (CSLs) as mandated by FDNY EMS and can establish postings at additional CSLs in the Proposed Service Area if this application is granted. NYUHC anticipates that the response time will continue to remain at the current EMS average of 6 minutes and that expansion to the Proposed Service Area will positively impact current 911 ambulance service and average response times with no negative impact on the Proposed Service Area.

¹² New York City Fire Department, http://www.nyc.gov/html/fdny/pdf/stats/2015/ems/mn/ems_mnsum_cy15.pdf, (2015)

Section 5: Quality of Service

The New York City 911-based EMS System is the primary provider of emergency response services to the area. Currently, several hospital-based and municipal ambulance services operate in the Proposed Service Area, with FDNY EMS being the largest provider operating in Brooklyn and Manhattan. In Brooklyn, current hospital-based services include The Brooklyn Hospital EMS (run by SeniorCare EMS), Maimonides Medical Center EMS, Kingsbrook Jewish Medical Center EMS (run by SeniorCare EMS), Interfaith Medical Center EMS (run by SeniorCare EMS), Wyckoff Heights Medical Center EMS, NY Methodist Hospital EMS, and NY Community Hospital EMS (both run by NewYork-Presbyterian EMS). In Manhattan, current hospital-based EMS services include New York-Presbyterian EMS, Mount Sinai Beth Israel EMS (previously run by TransCare EMS), Mount Sinai EMS (previously run by TransCare EMS), Mount Sinai St. Luke's-Roosevelt EMS, and Lenox Hill Hospital EMS. In addition, private ambulance services operate within this service area.

Cutbacks in services as well as the fiscal weakness of some private ambulance services (e.g., the TransCare bankruptcy) do not bode well for a healthy EMS system. Given the population growth and increased call volume, an expansion of the service area for a fiscally sound healthcare provider such as NYUHC would benefit the currently strained EMS system and result in improved 911 call response times. Moreover, it would enable NYUHC to service the facilities within the NYU Langone network and meet the needs of the residents of the Proposed Service Area.

2015 was the busiest year ever for New York City's EMS system, in which providers responded to 1.7 million calls for service. While Mayor de Blasio has proposed increases to the EMS budget, City Council members have questioned whether this is sufficient¹³. In addition, numerous hospitals which operated their own ambulance services have closed their doors in the last ten years (e.g., Cabrini, North General, St. Vincent's Medical Center, St. John's Queens, Mary Immaculate, Parkway, and Victory Memorial). Overcrowded Emergency Departments in hospitals which operate ambulance services often leads to extended ambulance turnaround time and therefore, less availability. An expansion of NYUHC's service area will help address some of these issues.

Section 6: Mutual Aid

NYUHC is party to a Memorandum of Understanding with NYC REMSCO and a participant in NYC REMSCO's Mutual Aid Mobilization System (see Attachment D). The System allows the FDNY and/or the NYC Office of Emergency Management (OEM) to activate a mutual aid response to a disaster, unusual emergency, multiple casualty incident, or evacuation in the New York City region that requires additional resources to supplement those dispatched through the 911 EMS System. Moreover, NYUHC has consistently responded to mutual aid activation requests from NYC REMSCO (e.g., the 2010 major snowstorm, Hurricane Sandy -

¹³ CBS News, De Blasio Hammers Out Conservative Budget Amid Fears of State, Federal Cuts, <http://newyork.cbslocal.com/2015/02/09/councilwoman-ems-needs-even-more-funding-than-what-de-blasio-is-proposing/> (February 9, 2015)

notwithstanding the forced evacuation and shut-down of Tisch Hospital- and annual summer enhancement activations due to surges in call volume, most recently in 2015).

As the events of September 11, 2001 demonstrated, the City was, and remains, a target for terrorism attacks. Large scale emergency incidents such as 9/11 can quickly overwhelm the City's 911 EMS resources. In addition, New York City regularly experiences Multiple Casualty Incidents (MCIs), (defined as an incident involving five (5) or more patients with the potential need for extraordinary resources). MCIs can tie up the EMS of an entire neighborhood for an extended period of time, and events such as 9/11 can bring the municipal 911 system to a standstill. The expansion of NYUHC's coverage area can only benefit the 911 system and the City.

Section 7: Member Qualifications and Skill Retention

NYUHC EMS employees include NYS-certified EMTs and Paramedics who receive extensive training. They are provided with a copy of the FDNY 911 Provider Guide and receive periodic in-service, including training in the use of the N95 Respirator Masks and reviewing ALS and BLS skills and protocols regularly. As responders to a high number of daily calls, staff members have adequate opportunity to practice and refine their clinical skills on a daily basis. Prehospital care reports (PCRs) are reviewed internally for compliance with treatment and documentation standards, and senior employees routinely provide feedback to their colleagues in the field. Established protocols are in place to ensure the continuing education and constant refinement of skills of EMS staff, including a departmental Quality Assurance Program that utilizes a standardized process to inform and encourage employees' clinical growth (see Attachment E). NYUHC does not anticipate a dilution of service calls with the expansion of the Proposed Service.

Section 8: Communications

NYUHC operates portable, base and mobile radio units and utilizes a digital radio system. Mobile devices are utilized for backup communications. These devices have been successfully used to direct ambulance personnel and maintain contact with medical control. The current communication system has the bandwidth to support expansion to the Proposed Service Area.

Section 9: Fiscal Stability

NYUHC's audited 2015 financial statements are included as Attachment F. As noted above, NYUHC plans to purchase four ambulances if the proposed expansion is approved. Below is the budget which has been allocated for EMS operations.

NYUHC EMS Annual Budget	
Revenue	
Transports	36,000
Reimbursement Rate per Transport	\$ 214
Total Net Revenue	\$ 7,704,000
Direct Operating Costs	
Staffing	\$ 6,914,042
OTPS	\$ 801,810
Total Operating Costs	\$ 7,715,852
Operating Contribution Margin	\$ (11,852)
One-Time Capital Costs	\$ 976,714

NYUHC has already allocated funding for capital and operating costs and has the financial strength to continue to do so. (The reimbursement rate is based on 2014 and 2015 rates; staffing costs based on an EMS roster of 200 staff (includes the anticipated hires) and the purchase of 4 ambulances, 1 supervisor vehicle and equipment constitutes the one-time capital costs (see Attachment G).

Section 10: Organization and Administration

As noted above, NYUHC's EMS Department operates under the supervision of the Medical Director and Director of Clinical Operations, Department of Emergency Medicine (NYU Lutheran) and, the Medical Director for Emergency Medical Services. The Director of the EMS Department is Mitchell Powell and the Assistant Director is Dale Garcia.

Section 11: Cost-Benefit Ratio

NYUHC's strong balance sheet supports the expansion to the Proposed Service Area without negatively impacting existing ambulance services in terms of call volume or skill retention. NYUHC would benefit by its ability to provide EMS services to patients of the NYU Langone facilities, Manhattan and Brooklyn residents, workers and tourists requiring EMS services will be the recipients of an expanded service base and the FDNY would be freed up to redeploy its units to other areas of the City, thus reducing response times and increasing the mobility of its resources.

The proposed expansion will not dislocate employees of the municipal or hospital-based EMS system. As previously noted, 911 call volumes have increased and are projected to continue to increase; expansion of NYUHC's service area will relieve the strain on existing service providers.