



KAREN L. ROSE, RN,c.BA,MS
Director

City of Medford

BOARD OF HEALTH

City Hall - Room 311
85 George P Hassett Drive
Medford, Massachusetts 02155

Telephone
(781) 393-2560
FAX: (781) 393-2562
TDD: (781) 393-2516

Secretary Ian Bowles
Executive Office of Energy and Environmental Affairs
MEPA Office, Attn: Holly Johnson, MEPA Analyst
EEA number # 13886
100 Cambridge Street, Suite 900
Boston, MA. 02114

Katherine Fichter
Executive Office of Transportation
10 Park Plaza, Room 4150
Boston, MA. 02116

December 30, 2009

Dear Secretary Bowles,

The Medford Board of Health has reviewed the Draft Environmental Impact Report/Environmental Assessment and Section 4(f) Statement for the Greenline Extension Project EEA #13886. Areas reviewed include, but are not limited to Noise, Vibration, Air Quality, Construction Mitigation (Noise/Pest/Dust control), Transport of Solids/Trash, and a Long Term Maintenance Plan for the Extension.

Shifting of the existing commuter rail tracks up to 18 feet toward the existing properties and homes to as little as 10 feet from the property line, will increase noise, vibration and the health effects of diesel particulates, a known carcinogen. Though it is a documented change, it appears that additional health assessment information would be necessary to plan appropriate remediation.

Air Quality

Though Air Quality Modeling methodology is an accepted evaluation tool, it appears to be lacking in information specific to the air quality in Medford between Ball Square and Mystic Valley Parkway. It would be useful to have more health assessment, in particular to the moving of the commuter rail closer to the homes with the impact of diesel particulate in closer proximity. "There is limited information on exposure to just diesel particulate matter but there is enough evidence to indicate that inhalation exposure to diesel exhaust causes acute and chronic health effects." "Acute exposure to diesel exhaust may cause irritation to the eyes, nose, throat and lungs, some neurological effects such as lightheadedness. Acute exposure may also elicit a cough or nausea as well as exacerbate asthma. Chronic exposure in experimental animal inhalation studies have shown a range of dose dependent lung inflammation and cellular changes in the

lung, and there are also diesel exhaust immunological effects. Based upon human and laboratory studies, there is considerable evidence that diesel exhaust is a likely carcinogen.”¹ Due to this knowledge and the closer proximity to homes, it would be most advantageous if the commuter line trains could be upgraded to a more environmentally aware technology. It was stated in the report that there is a “slight increase” in the diesel particulate exposure, where the tracks are closer to homes. Mitigation must include a requirement that there be no worsening of conditions, no matter how small, and an effort to maximize mitigation to improve the quality of life for residents living along the tracks.

The Transportation Reform Act signed by Governor Patrick on June 26, 2009 requires the Massachusetts Department of Public Health (MDPH) to study the health effects of exposure to fine and ultrafine particulate air pollution upon populations located close to the sources of such pollution. It is clear that long term effects have known outcomes, especially for those at risk. Consideration should be given to have MDPH study this area to ascertain inclusion of any findings in the remediation plan for the Greenline Extension.

The project states that there is a possibility of eliminating freight service from the rail lines. Movement of the freight to the roadways negates air quality improvements proposed in this project by adding Vehicle Miles traveled, VOC’s and CO, as well as adding to the burdens on the already heavily traveled streets of Medford.

Wherever possible, review of bus routes should be considered for opportunities to shift to the Greenline, for additional air quality benefits, as well as removing bus exhaust in slow and congested traffic on Boston Avenue.

Reference to Exposure Levels and Health Effects from Air Toxics in section 5.6.6 states that “even if emission levels and concentrations of MSAT’s could be accurately predicted, shortcomings in current techniques for exposure assessment and risk analysis preclude meaningful conclusions about project specific health impacts”, causes concern for this public health department. Reference to national MSAT’s does not take into consideration differences in climate, ambient conditions, urban impacts and population effects. Other health assessments should be added to this report to better inform decision makers and the public about the health effects.

Additional data is noted on the Fay, Spofford and Thorndike peer review including the attached memorandum from KM Chng Environmental Inc.

Stations

Station design in Medford has immediate public health and safety concerns for this department. Access to College Avenue off of the bridge, at an intersection with high traffic and pedestrian accidents appears to be a health and safety risk for pedestrians and motorists. This intersection has a high volume in the commuter rush hours in the morning and evening. It is a five point intersection, which in itself is a challenge for motorists and pedestrians to navigate. Recent

¹ Air Toxics in New England, EPA, <http://www.epa.gov/eco/airtox/diesel.html>, last updated June 24, 2009

improvements have made the area somewhat safer, but the station will add another facet for navigation issues. Re-design should be considered to remove the access off of the bridge, which is barely enough for pedestrians and two lanes of traffic.

The same health and safety issue for pedestrians and motorists comes from the location on Boston Avenue, for entrance and exit on Boston Avenue for the Mystic Valley Parkway station. This is a highly congested area, where even now entrance and exit of existing businesses is difficult during commuter hours. Redesign and reconfiguration of this location must be considered and the logical move is to the Parkway location of Whole Foods, where there are existing large entrances and exits to the roadway. In addition, Whole Foods could be included in a multi-use building to prevent the loss of this business.

A long term station maintenance plan for upkeep of bathroom facilities and trash maintenance will need to be submitted to the Medford Board of Health with contacts for corrective actions.

The indoor air quality plan which talks about the provision of outdoor air ventilation to improve indoor air quality via “ventilation system monitoring to help sustain station occupant comfort will reduce indoor air contaminants that are odorous, irritating or harmful to station occupants”, does not address the effects of this ventilation on outdoor air quality for the inhabitants of these locations. Further information must be made available for review and comment.

Noise/Vibration

This reviewer believes that there is inadequate testing for Noise and Vibration in Medford’s portion of the Greenline. Only 3 noise meters, 2 vibration and 1 combo unit were used for assessment. Additional noise and vibration impacts must be considered due to the proximity to homes, elderly housing, schools and businesses.

If a 10 dB increase equals a doubling of perceived loudness, which can effectively be met with a change in volume of a human voice, it is clear that this is truly a public health issue. Health effects analysis can associate changes in motor vehicle traffic volumes with health-related outcomes such as injuries, sleep disturbance, noise-related stress, diabetes, respiratory disease, and social cohesion. The report states that, “Since existing noise levels are relatively high at locations along the existing commuter rail line, even small increases in future noise levels are considered to have the potential for moderate to severe noise impact.” Therefore, Noise barriers need to be installed throughout the entire Medford line due to the proximity to homes, Tufts dorms, elderly housing, and schools.

Noise barriers installed should be high enough to remediate any noise impact, but would assist in the Visual impact of the installed catenary lines. Illustrations, specific locations and height projections should be provided for review as soon as possible for further comment.

Existing noise conditions list the commuter train noise level as 88 – 99 dBA in Medford, at distances of 50 – 60 feet. The plans bring the commuter line to within 10 feet of the property line of some homes. Additional data for noise mitigation needs to be provided and should be emulated at such distances to ensure proper measures can be taken with the construction. In the

same section of the report,, a narrative states there were measurements listed in Table 4.8-1 for additional measurements taken in the College Ave. to Mystic Valley Parkway area. Only measurements at Burget Avenue and Orchard St. were completed at 71 Ldn, with a commuter train max. of 88-89. Additional sites should have measurements, as this stretch has dense residential areas with two and three family homes. This information is not adequate for a public health review. An pre-project assessment should be provided for all abutters of the project to document existing conditions of the homes/businesses foundations, walls and windows to make mitigation with insurers less complex during and after the project.

All noise and vibration control measures need to be implemented to mitigate noise and vibration impacts from train operations. More specific site plans are needed for evaluation and review.

It is a general feeling in Medford that the Route 16/Mystic Valley Parkway station needs to be reconfigured. To that end, vibration studies for 200 Boston Ave need to be included, as that is generally inhabited by Research and Development companies.

Homes on Morton, Granville and Winchester Pl. are within 15 – 19 feet from the future commuter line. Disruption of normal home environments, impeded sleep and wellness must be included in the studies of noise and vibration and installation of noise barriers and insulation measures on homes such as these must both be used to protect the health and wellness of the residents.

Consideration of tunneling from at least College Avenue to Mystic Valley Parkway should be reconsidered as a measure to control the effects of lessening the distance to homes in the area, where long term effects of these health indicators are most likely to effect the health and wellness of the neighborhood population.

Long term maintenance plans must be committed to the project, as current public nuisance complaints have been ignored by the MBTA, in particular the Wellington station location abutting residential properties. Residents are often answered by MBTA employees with curt and disregarding comments, including “the trains were there before the homes”. When we are advocating for SMART building and transportation projects, this comment is not acceptable. Public Health needs a plan that can be guaranteed.

Additional data is noted on the Fay, Spofford and Thorndike peer review including the attached memorandum from KM Chng Environmental Inc.

Demolition/Construction/Hazardous Materials

Additional information is needed for demolition and construction remediation planning. Specific plans for noise control, dust/particulate matter control, trash disposal and health measures for demolition including lead and asbestos contamination, and unidentified hazardous waste is required to adequately comment from a public health perspective.

Medford has a robust set of regulations for demolition and construction including preventive baiting for pests, pest contracts including pre-demolition to post-construction have provided

Medford with fewer pest issues over the past years. Observance of these measures in Medford are needed by this project. Asbestos DEP notification copies should be submitted to the Medford Board of Health. Any unknown Hazardous waste findings should be reported to the Medford Board of Health when Massachusetts Department of Environmental Protection is notified. A more complete and detailed plan for Hazardous materials is needed for review by this department, as it is mentioned in the EIR, it is not detailed. Measures to protect the public health and safety will be agreed upon at the time of construction once the site specific Health & Safety plan is written and reviewed by this Board of Health.

Water treatment for dust control in the summer months is often not adequate to mitigate health effects. Calcium Chloride applied to surfaces has been a measure used by construction crews with good results. Expanded plans should include this measure. Tarps should be used to cover stockpiled soils to prevent the spread of dust in windy conditions, not just water application.

Control of particulate matter has been discussed, regarding construction equipment retrofitting, maintenance of all motor vehicles, machinery and equipment associated with construction activities and proper fitting of equipment with mufflers or other regulatory required emissions control devices. It also proposes to limit idling vehicles. Additional information is needed for public health to adequately address this concern.

Noise remediation is an important concern in the long term, but construction mitigation measures must be applied in a preventive plan to decrease health/wellness effects to the citizens in these neighborhoods. Areas which require pile driving should have robust plans to protect the public health, as well as heavy construction equipment impact on noise. The 10 decibel level, which doubles perceived sound, could easily be multiplied. Avoidance of night construction is imperative for areas where property lines close in on residences. The community requires adequate rest and stress relief during construction to maintain their health.

The effects on the Saint Clements schools must be studied in more detail, due to the impact of construction focused on day time hours to protect the health of inhabitants in the neighborhoods at the Harvard Street bridge. Additional information should be studied to limit the effects on students that will be studying within close proximity to the work.

Socioeconomic/Environmental Justice

Census 2000 does not adequately represent the City of Medford and its citizens. When this Board of Health is preparing health assessment or statements for grants, it is the census of the schools that more appropriately identifies our community. In sharing this, it is clear that we have a higher immigrant population with non-English speaking families than represented in this report. A revision should be considered as it will most definitely affect citizens not identified previously.

Medford also has a very elderly population. 18% of our population is 65 years or older. It is not clear by the information presented that consideration of this population and the effects of this project to this at risk and isolated population has been sufficiently reviewed and considered. This project abuts an elderly housing project in Medford for which there is no specific mitigation

plan. A letter from the Medford Council on Aging Board of Director's to Mayor Michael J. McGlynn, dated November 20, 2009, confirms the general feeling that not enough accommodation was given to the large senior citizen population in Medford. (Attached)

Throughout the project, meetings with affected residents should occur, at a minimum quarterly, to assist in additional needs and disturbances not anticipated by the project. The Medford Board of Health would assist in hosting and facilitating these meetings with construction contractors and principles of this project.

Additional Permits

The City of Medford Board of Health requires permits for Rubbish Haulers, dumpsters and temporary septic (portable toilets). Applications can be made in the Board of Health office.

Closing Remarks

While the project is supported, the EIR is missing integral information for evaluation and review. While the overall project is to improve air quality, it appears that other measures can be made to make the cost and effort a more substantial gain. It is imperative that special consideration be given to the residents who will bear great disruption during construction despite the efforts of the mitigation and they will need a voice and response to any ongoing concerns.

Thank you for the opportunity to comment on the Draft Environmental Impact Report and we look forward to an open and honest working relationship with the principles of the Greenline Extension project.

Sincerely,

Karen L. Rose, RN, BC, BA, MS
City of Medford
Director of Public Health/Director of Elder Affairs