Finance Committee Agenda

City of Newton
In City Council

Monday, March 23, 2020

The Finance Committee will hold this meeting as a virtual meeting on Monday, March 23, 2020 at 7:00 pm. To view this meeting use this link at the above date and time: https://zoom.us/j/698611335

Items scheduled for discussion:

#192-20 **Authorization to expend a Massachusetts Clean Energy Center grant of $8,500**
HER HONOR THE MAYOR requesting authorization to accept and expend an eight thousand and five hundred dollars ($8,500) grant from the Massachusetts Clean Energy Center (MassCEC) for marketing and technical advice for a "Heat Smart" program.

#193-20 **Authorization to expend MassDOT Workforce Transportation grant of $250,000**
HER HONOR THE MAYOR requesting authorization to accept and expend a two hundred and fifty thousand-dollar ($250,000) MassDot Workforce Transportation grant for a new technology-enabled ride share shuttle for Newton's thriving Wells Avenue innovation district and the new UMass Amherst Mount Ida campus.

#194-20 **Authorization to expend Executive Office of Elder Affairs grant of $15,000**
HER HONOR THE MAYOR requesting authorization to accept and expend a fifteen-thousand-dollar ($15,000) grant from the Executive Office of Elder Affairs to provide financial assistance for qualified seniors in the City of Newton to receive the services of Newton at Home Inc.

Referred to Public Facilities and Finance Committees

#198-20 **Appropriate $7,000,000 for Water Main Improvements in FY2021**
HER HONOR THE MAYOR requesting authorization to appropriate and expend seven million dollars ($7,000,000) and authorize a general obligation borrowing of an equal amount for the estimated design and construction costs associated with Water Main Improvements in FY2021 and authorization to apply any premium received upon the sale of the bonds or notes, less the cost of preparing, issuing, and marketing them, and any accrued interest received upon the delivery of the bonds or notes to the costs of the

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The location of this meeting is accessible and reasonable accommodations will be provided to persons with disabilities who require assistance. If you need a reasonable accommodation, please contact the city of Newton's ADA Coordinator, Jini Fairley, at least two business days in advance of the meeting: jfairley@newtonma.gov or (617) 796-1253. The city's TTY/TDD direct line is: 617-796-1089. For the Telecommunications Relay Service (TRS), please dial 711.

project and to reduce the amount authorized to be borrowed for the project by like amount.

Public Facilities Approved 8-0

Referred to Land Use and Finance Committees

#165-20 Requesting CPA funding be awarded to the Newton Housing Authority

COMMUNITY PRESERVATION COMMITTEE requesting that one million one hundred and five thousand ($1,105,000) in CPA funding for the support of Community Housing be awarded to the Newton Housing Authority for the acquisition of the CAN-DO Housing Portfolio.

Land Use Approved 7-0

Referred to Public Facilities and Finance Committees

#196-20 Transfer of $60,000 for HVAC system at Police Headquarters

HER HONOR THE MAYOR requesting authorization to transfer the sum of sixty thousand dollars ($60,000) from Current Year Budget Reserve to a non-lapsing Public Buildings Department account for the evaluation and recommendations for the upgrade of the Police Headquarters HVAC System.

Public Facilities Approved 8-0

Referred to Public Facilities and Finance Committees

#197-20 Transfer of $500,000 for improvements at Horace Mann at 225 Nevada Street

HER HONOR THE MAYOR requesting authorization to appropriate five hundred thousand dollars ($500,000) from June 30, 2019 Certified Free Cash for the purpose of providing interior and exterior improvements at the Horace Mann School at 225 Nevada Street.

Public Facilities Approved 8-0

Referred to Programs & Services and Finance Committees

#199-20 Transfer of $250,000 to prepared for COVID-19

HER HONOR THE MAYOR requesting authorization to transfer the sum of two hundred and fifty thousand dollars ($250,000) from June 30, 2019 Certified Free Cash to Acct #0121030-543500 Emergency Operations-Supplies account for the purpose of being prepared to act, should the need arise.

Programs & Services Approved 8-0

Referred to Programs & Services, Public Facilities and Finance Committees

#200-20 Accept $270,000 of lighting equipment for Winkler Stadium Field

HER HONOR THE MAYOR requesting authorization to accept $270,000 of lighting equipment as well as authorization to accept more funds to be expended on the installation of a field light system for the Newton South High School Winkler Stadium Field which is on Newton Parks and Recreation property. The funds are being donated by the Newton South High School Booster Club.

Public Facilities Approved 6-0-1 (Councilor Kalis abstaining and Councilor Gentile recused)
Programs & Services Approved 8-0

Referred to Public Facilities and Finance Committees

#201-20 **Transfer of $650,000 for the purpose of reimbursing Newton Public Schools**
HER HONOR THE MAYOR requesting authorization to transfer the sum of six hundred and fifty thousand dollars ($650,000) from June 30, 2019 Certified Free Cash to the Newton Public Schools for the purpose of reimbursing Newton Public Schools for one-time costs associated with several projects that were necessary to accomplish the move of the Horace Mann Elementary School community to the former Carr School on Nevada Street.
Public Facilities Approved 6-0-2 (Councilors Laredo and Gentile abstaining)

#195-20 **Approve settlement of $62,500 for Workers' Compensation Claim**
HER HONOR THE MAYOR requesting authorization to approve the settlement of Workers' Compensation Claim #003554 in the amount of sixty-two thousand five hundred thousand dollars ($62,500). The funds will be appropriated from Acct# 67A109A-515201-Municpal Workers' Compensation.
Note: A motion for Executive Session may be entertained

Respectfully submitted,

Rebecca Walker Grossman, Chair

192-20

RUTHANNE FULLER
MAYOR

City of Newton, Massachusetts
Office of the Mayor

Telephone
(617) 796-1100
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(617) 796-1113
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(617) 796-1089
E-mail
rfuller@newtonma.gov

March 9, 2020

Honorable City Council
Newton City Hall
1000 Commonwealth Avenue
Newton Centre, MA 02459

Councilors:

I respectfully submit a docket item to your Honorable Council requesting authorization to accept and expend a grant in the amount of $8,500 from the Massachusetts Clean Energy Center (MassCEC) for marketing and technical advice for a "Heat Smart" program.

The grant will enable the City, with the help of volunteers, to increase outreach, education, and adoption of clean heating, cooling, and hot water heat pump technology within the City.

Thank you for your consideration of this matter.

Sincerely,

Ruthanne Fuller
Mayor

March 9, 2020

Mayor Ruthanne Fuller
Newton City Hall
1000 Commonwealth Avenue
Newton MA 02459

Mayor Fuller:

I write to request that the City Council docket for consideration a request to accept grant funds from the Massachusetts Clean Energy Center in the amount of $8,500 for the purpose of implementing a "Heat Smart" program.

This grant, from the Massachusetts Clean Energy Center (MassCEC) is for marketing and technical advice for a "Heat Smart" program. The program is intended to drive community adoption of clean heating, cooling, and hot water technology through a partnership with MassCEC and the Cadmus Group, its technical consultant.

The grant is intended to increase the adoption of heat pump technology in Newton. Heat pumps are a highly efficient electric technology designed to heat and cool buildings, avoiding the use of natural gas, heating oil, or inefficient electric equipment; and to provide hot water without the use of natural gas or less efficient electric equipment.

The use of efficient electric technology reduces our greenhouse gas emissions more and more as the electric grid becomes cleaner through the use of additional renewable generating resources (like solar, wind, and hydro). Using more, and cleaner, electricity is one of the most important strategies available for addressing climate change.

The grant will enable the City, with the help of volunteers, to increase outreach, education, and adoption of clean heating, cooling, and hot water heat pump technology within the City.

Very truly yours,

Ann G. Berwick
Co-Director of Sustainability

193-20

City of Newton, Massachusetts
Office of the Mayor

RUTHANNE FULLER
MAYOR

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March 9, 2020

Honorable City Council
Newton City Hall
1000 Commonwealth Avenue
Newton Centre, MA 02459

Councilors:

I respectfully submit a docket item to your Honorable Council requesting authorization to accept and expend a MassDOT Workforce Transportation Grant in the amount of $250,000. This grant award is for a new, technology-enabled ride share shuttle for Newton's thriving Wells Avenue innovation district and the new UMass Amherst Mount Ida campus.

The project will provide first/last mile shared transportation to three rail lines in Newton and Needham. It is an innovative public-private partnership including numerous businesses, landowners, educational institutions, the Chamber of Commerce and the City of Newton. The City of Newton will provide project management and oversight, while our partners will provide financial support. We believe this combination will ensure the ongoing financial success of the system.

Thank you for your consideration of this matter.

Sincerely,

Ruthanne Fuller

Ruthanne Fuller
Mayor

193-20

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Office of the Mayor

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October 11, 2019

Astrid Glynn
Rail and Transit Administrator
MassDOT Rail and Transit Division
10 Park Plaza, Suite 4160
Boston, MA 02116

Dear Astrid,

As Mayor of the City of Newton, I am pleased to submit our application for a MassDOT Workforce Transportation Program grant for a new, technology-enabled ride share shuttle for Newton's thriving Wells Avenue innovation district and the new UMass Amherst Mount Ida campus.

The project will provide first/last mile shared transportation to three rail lines in Newton and Needham. It is an innovative public-private partnership including numerous businesses, land owners, educational institutions, the Chamber of Commerce and the City of Newton. The City of Newton will provide project management and oversight, while our partners will provide financial support. We believe this combination will ensure the ongoing financial success of the system.

Thank you for your consideration of our application. Please feel free to reach out me with any questions.

Sincerely,

Ruthanne Fuller

Ruthanne Fuller

Mayor, City of Newton

Workforce Transportation Grant

Wells Avenue Business District Area Shuttle

Reducing single occupancy vehicle trip by providing first/last mile access to public transit in Newton's high density Wells Avenue business district area

City of Newton
Nicole Freedman
Nfreedman@newtonma.gov
(617) 429-8440

Question 1: Briefly provide an overview of the project for which you are requesting funds and how the project will demonstrably generate transit ridership within the project service area by shifting commuters from single-occupancy vehicles, or demonstrate innovation in serving the workforce population. Please provide the projected ridership numerically and describe the underlying methodology and rationale used to calculate the ridership number.

OVERVIEW

The City of Newton, with support from the Chamber of Commerce as well as multiple businesses and educational institutions, respectfully submits this application to MassDOT for funding to launch a new technology enabled transportation service. The system will provide shared, first/last mile rides between three MBTA rail lines and the Wells Avenue business district area of Newton which has 7,478 employees and 3,144 residents. The system intends to cost-effectively deliver the service using state-of-the-art technology, preferably using on-demand, dynamically routed microtransit technology. It is envisioned that this service will be the foundation for a system that ultimately expands citywide to all residents and employees.

GOAL

1. *Sustainability* - Reduce single occupancy vehicle commute trips to the Wells Avenue business district area by providing first/last mile access to transit
2. *Economic Development* - Foster a thriving business community by increasing access to jobs
3. *Equity* - Enable low-income workers (i.e. those least likely to have a personal vehicle) to access Newton's dense Wells Avenue area employment center

VISION

The shuttle system will offer affordable, reliable, sustainable, convenient, shared first mile/last mile transportation between three rail lines and the Wells Avenue business district area. The system will operate weekdays from 7:00 AM until 8:00 PM using multiple vehicles.

Passengers will book trips in real-time using a smartphone or by calling the call center. Riders will walk to up to 5 minutes to pick-up locations; shuttle vans carrying multiple passengers will arrive within 10-15 minutes. Partner organizations will subsidize fares for their passengers, who will ride for free or pay a nominal rate of $1.

The system will employ state-of-the-art technology to enable real-time bookings, dynamic routing and automated payments while providing options for people without smartphones or credit cards. Vendor will provide WAVE vehicles as needed.

Anonymized trip data will be made available to the City to facilitate evaluation and performance management. Vendor will adhere to tight service levels ensuring a high rate of on-time performance and customer satisfaction.

SERVICE AREA

Launch - At launch, the system will serve the 4,194 employees and 1223[1] residents of the Wells Avenue Business Park and the UMass Amherst Mount Ida campus. The service area houses dozens of technology focused businesses as well as three educational institutions: UMass Mount Ida Ida (abuts Wells Avenue), Williams James College, and the Solomon Schechter Day School. Stops will include:

- Newton Highlands MBTA (Green Line)
- Newtonville Commuter Rail (Worcester/Framingham line)
- Needham Heights Commuter Rail (Needham Line)
- Wells Avenue
- Jewish Community Center
- UMass Amherst Mount Ida

Near-Term Expansion – The City envisions expanding the system to greater Wells Avenue business district area within 12-18 months, once proof of concept is established. The expanded service zone adds Needham Street and Upper Falls, while continuing service to Wells Avenue and UMass Mount Ida. The total population in the service area will grow to 7,478 employees and 3,144 residents. Expansion to this full service area is central to the plan in that it will:

- Double the population served, and likewise triple ridership
- Reduce the cost per trip through economies of scale
- Introduce hundreds of new potential funding partner

Long-Term – The City sees the shuttle as the foundation for a new citywide transportation system providing first/last mile access to transit, filling MBTA service gaps for intra-city travel, and serving all residents, employees and visitors. The City currently operates NewMo, a City subsidized microtransit system providing more than 25,000 trips annually for Newton seniors. The Wells Avenue business district area shuttle and NewMo would merge to provide the citywide service.

See map of service area on following page.

SERVICE INNOVATION

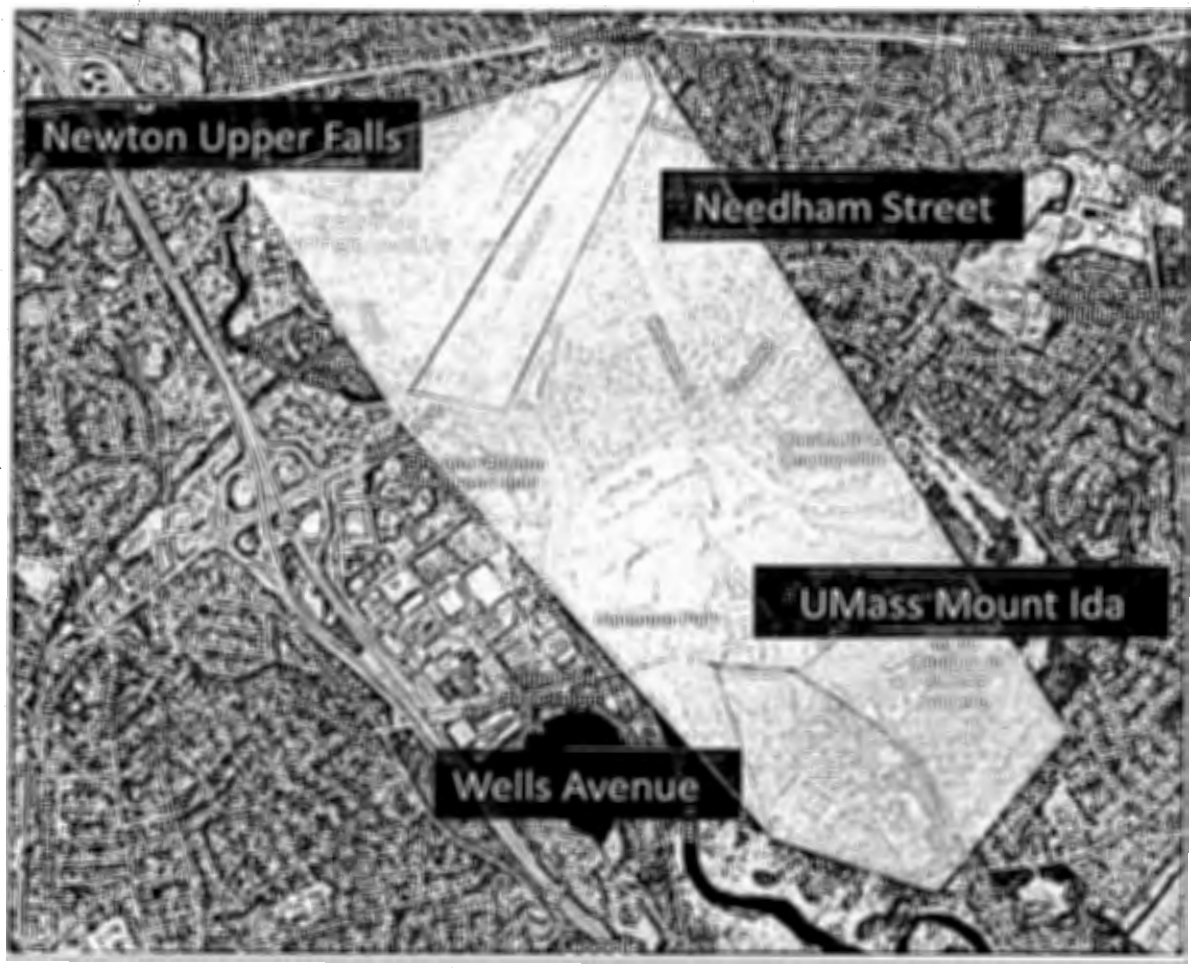
After significant analysis, as well as experience operating NewMo, the City has concluded that the microtransit service model is preferable to a fixed route system for the shuttle. Disparate home zip codes of employees and staff in the service area means the shuttle needs to serve as many different rail lines and pickup points as possible to maximize the pool of users. The microtransit system is optimal for this in that[2]:

- Vehicles are only routed to where passengers and demand exists
- Wait times are minimized without time buffers required for a fixed schedule
- During low-demand times, riders see improved quality of service with shorter wait times

[1] The UMass student population, currently negligible, will be growing substantially in the upcoming years.

[2] Newton's RFP will express a preference for on-demand microtransit system as the means to address these needs but the City will remain open to the most superior service model proposed to address needs.

Map of Service Area



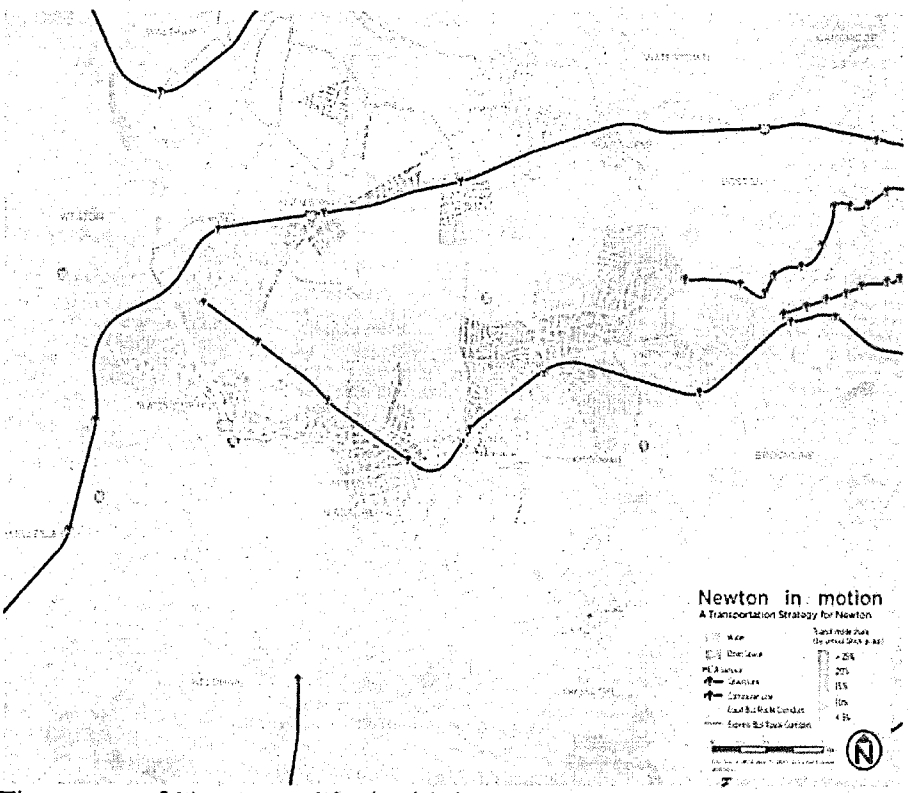
GENERATING RIDERSHIP

The service area has a strong need for a first/last mile transportation service. Access to public transit is currently poor in the service area. The three closest rail line stops, Newtonville commuter rail (Worcester Line), Needham Heights commuter rail (Needham Heights) and Green Line (Newton Highlands) are prohibitively far by foot for most commuters. MBTA bus route variant, route 52, serves the Wells Ave area, but stops infrequently.

Station	Walking Distance To Wells Ave		Walking Distance to Needham St	
	Miles	Minutes	Miles	Minutes
Newton Highlands Green Line	2.4	48	.6	12
Needham Heights Commuter Rail	1.9	38	2.3	47
Newtonville Commuter Rail	4.5	90	2.8	57

Access to transit in Newton corresponds positively to rates of transit usage.[3] Residents in the proposed shuttle service area, with weaker transit access, have lower rates of commuting by transit than residents living closer to transit in Newton. In much of the service area, only 10-15% of residents commute to work by transit, compared with more than 25% in areas closer to transit. Increasing access to transit will improve the rates of transit usage for residents and workers.

Transit Mode Share by Proximity to Transit



The areas of Newton with the highest percentages of residents riding transit to work are closest to the transit network, such as in Newton Centre and in Newtonville.

The recent establishment of UMass Amherst Mount Ida campus creates a time-critical opportunity to establish commuting patterns at the outset for the growing numbers of anticipated students, staff and faculty.

[3] Newton's Transportation Strategy, Newton-In-Motion, shows that areas of Newton with better transit access see higher rates of commuting by transit.

PROJECTED RIDERSHIP

We project the system will provide 17,000 and 34,000 annual rides for the launch area (Wells Avenue and UMass) and expanded (Wells Avenue, UMass, Needham Street and Upper Falls) service areas respectively. This projection represents the average of results from four different projection methods as shown below.

Annual Ride Projections

Projected Annual Rides		
Projection Method	**Launch Phase (Wells & UMass)**	**Expanded Service Area Phase (Wells, UMass, Needham St, Upper Falls)**
Method 1: Addressable Market	20,246	39,700
Method 2: Needham Xing 128 Business Council Shuttle	32,211	64,422
Method 3: Peer City - South Seattle	9,601	18,825
Method 4: NewMo	6,177	12,113
FINAL Projected Annual Rides (Average #1-4)	**17,059**	**33,765**

Population Data			
	Wells & UMass Service Area Population	data from Chamber of Commerce	5,417
	Expanded Service Area Population	data from Chamber of Commerce	10,622
	% increase (Expanded/Launch service area)	2.0 = 10,622/ 5,417	2.0

Method 1: Addressable Market			
This method projects rides based on a reasonable assumption that 5-7% of the addressable market uses the shuttle daily. To calculate the addressable market, we mapped 700 home zip codes of Wells Ave employees and students to determine the percentage, 23%, who live along one of the proposed rail line stops. We then calculated ridership based on whether 5% or 7.5% of this addressable market takes the shuttle, before taking the midpoint of the two projections.	% Addressable Market Served	23% calculated from zip code map	23%
	Addressable Mkt - Wells & UMass	1253 = 23% * 5417	1246
	Annual Rides - 5% Addressable Mkt	16,197 = .05* 1246 * 52 wks * 5 days/wk	16,197
	Annual Rides - 7.5% Addressable Mkt	24,295 = .075* 1246 * 52 wks * 5 days/wk	24,295
	Annual Ride Projection - Wells & UMass	20,246 = average (16,197, 24,295)	**20,246**
	Annual Ride Projection - Expanded Area	39,700 = 2.0 * 20,246	**39,700**

Method 2: Needham Xing 128 Business Council Shuttle			
This method projects rides assuming the same percentage of the population taking the existing and comparable Needham Xing workforce shuttle (between Needham Xing business park near Wells Ave and the Newton Highlands MBTA) will take our shuttle.	Total population Needham Xing service area	from Chamber data	4,581
	Annual rides - Needham Xing shuttle	from 128 Business Council website	27,240
	Annual Ride Projection - Wells & UMass	32,211 = 27,240 * (5417/4581)	32,211
	Annual Ride Projection - Expanded Area	64,422 = 2.0 * 32,211	64,422

Method 3: Peer City - South Seattle			
Seattle runs a comparable first/last mile micro-transit system connecting to 5 rail lines in South Seattle which is of similar density and suburban/urban feel to Newton. This model calculates the percentage of the population that takes the shuttle daily in Seattle and applies that percentage to the Wells Ave area population. This projection is then adjusted downward because: 1) South Seattle's system serves commuters heading downtown, where parking is expensive, whereas the Wells system serves commuters coming into Newton, with ample free parking 2) South Seattle's larger low income population is more apt take transit 3) The Seattle population numbers don't include jobs, which are low for this area, but not negligible.	Pop - Mt Baker	online population data	12,095
	Pop - Columbia City	online population data	13,031
	Pop - Othello	online population data	7,364
	Pop - Rainier Beach	online population data	6,313
	Pop - Tukwilia	online population data	19,878
	Total population in Seattle service area	sum of above	58,681
	Daily rides - Seattle shuttle	from Seattle presentation, SUMC	800
	% served daily - Seattle shuttle	1.4% = 800 / 58,681	1.4%
	Daily Ride Projections - Wells	74 = .0014 * 5417	74
	Downward adjustment of Daily projection	reduce by half to account for differences	37
	Annual Ride Projection - Wells & UMass	9,601 = 37*52*5	**9,601**
	Annual Ride Projection - Expanded Area	18,825= 2.0 * 9,601	**18,825**

Method 4: NewMo			
Newton currently runs NewMo, a micro-transit system for seniors over 60 years of age to go to village centers, medical appointments, shopping and houses of worship. This method calculates the percentage of seniors that take the system daily and applies this percentage to our service area population.	Newton senior population >60	from senior center	17,784
	Average daily weekday rides	from NewMo data	78
	% served daily	.006 = 78/17,784	0.4%
	Daily Ride Projections - Wells	24 = .004* 5417	24
	Annual Ride Projection - Wells & UMass	6177 = 24*52*5	**6,177**
	Annual Ride Projection - Expanded Area	12,113= 2.0 * 6,177	**12,113**

COST - BENEFIT

The following calculations project cost per trip, annual VMT eliminated, cost per VMT eliminated and gallons of gas saved by the shuttle service[4].

	Launch Phase (Wells & UMass)	Near Term Expansion (Wells, UMass, Needham St, Upper Falls)	Notes
Projected Rides (annual)	17,059	33,765	
Anticipated Cost (annual)	$300,000	$400,000	The City and Chamber of Commerce received written quotes from 4 shuttle vendors, which informs anticipated cost figures and leads to reasonable confidence in the projected costs
Average SOV commute distance (miles)	9.8	9.8	Source: CTPS, Exploring the 2011Massachusetts Travel Survey: Focus on Journeys to Work
VMT eliminated (annual)	167,176	330,897	Each ride eliminates a commute trip. VMT eliminated = # Rides * average commute distance of addressable market
Gallons of gas saved (annual)	7,598	15,041	Uses 22.0 mpg as average fuel efficiency of light duty vehicle, from Bureau of Transportation Statistics, 2016
Cost/Trip	$18	$12	
Cost/VMT Eliminated	$1.8	$1.2	

FUNDING REQUEST

The City of Newton respectfully requests a grant in the following amount for the first year. The City requests funding for future years at a reduced rate consistent with increased levels of funding by partners and developers.

Total Project Cost	$400,000
City Match/ Funding Partners (confirmed)	$110,000
Amount provided by grant	$250,000
City Match/ Developer Contributions (in process, support required by special permit)	$remainder

[4] VMT and gallons of gas used by the shuttle are not included as part of these calculations

Question 2: Describe the implementation plan for the project. Please include the potential tasks, benchmarks, key milestones, key personnel, and deliverables that will be required to complete this project. Please describe your ability to deliver the project and describe your business plan which at a minimum contains project scope, cost, target market, assets to be used, staffing, technical resources to be used, and an implementation schedule.

PROJECT DELIVERY

The City is confident it can deliver this project successfully, on time and on budget. The City recently launched a similar microtransit service, NewMo, with operations partner Via, providing 25,000 trips per year to Newton seniors. The City will apply the knowledge gained and lessons learned over the last fifteen months, relative to research, procurement, contracting and service design to make the Wells Avenue business district area shuttle as successful as possible.

DELIVERABLES

The winning vendor will provide a turnkey transportation shuttle service within the Wells Avenue business district service area as discussed in the response to Question 1. *Please see question 1: Vision for specifics relative to deliverables.*

SCOPE (TASKS).

Vendor provides:

- *Vehicles* includes maintenance, cleaning and inspection
- *Drivers* includes driver training
- *Customer Service* includes sign-up and complaints
- *Scheduling and Dispatching*
- *Insurance*
- *Reporting & Data*
- *Project Management*

SCHEDULE (MILESTONES &BENCHMARKS)

COST

The City anticipates the annual cost of service to be $290,000 and $400,000 for the initial and expanded service areas respectively. This estimate is informed by four written quotes requested and received the City and Chamber of Commerce. The City is in the process of formally procuring the service. *Please see Question 1, cost-benefit section, for more detail on cost.*

BUDGET

The City can provide a budget once the vendor is selected. Please note that the City will be purchasing a turnkey service and does not require the vendor to report on their operations cost to provide the service. The City typically limits its involvement to paying a monthly invoice for service hours delivered. System revenue will be nominal as most riders will pay $0-$1 per ride.

TARGET MARKET

The target market is comprised foremost of the 7,478 employees commuting to Newton's dense Wells Avenue business district area, which includes Wells Avenue, UMass Mount Ida, Needham Street and Newton Upper Falls. The shuttle will also provide service to the 3,144 residents of the area, many of whom will benefit from increased access to transit for their commutes to work outside of the service area. Of particular interest:

- Needham Street contains a significant number of retail employees whose incomes tend to be lower than the area median.
- UMass is poised to grow substantially adding new resident and commuting students
- The Northland Development on Needham Street proposes to add 800 new residential units, and more than 200,000 square feet of office and retail space.

Wells Ave Business District Area Population

Area	Employees	Residents	Total
Wells Ave Proper & UMass employees	4,194	1,223	5,417
Needham St employees	2,290	728	3,018
Upper Falls employees	994	1,193	2,187
TOTAL Shuttle Service Area Population	**7,478**	**3,144**	**10,622**

KEY PERSONNEL (STAFFING)

- The Director of Transportation Planning, reporting to the Director of Planning and Development, Mayor and Chief Operating Officer will provide project management and oversight for the City. Nicole Freedman currently serves in this role.
- Newton's Economic Development Director will facilitate partnerships with the business community. Devra Bailin currently serves in this role.
- Newton's Chief Operating Officer and Mayor will provide overall oversight of the project.
- The Executive Director of the Newton-Needham Chamber of Commerce will serve as the liaison to the business community and oversee private partnerships. Greg Reibman currently serves in this role.
- The winning vendor will be required to have a full-time Project Manager or General Manager
- The winning vendor will, in addition to the Project Manager or General Manager, be responsible for providing staff and/or contractors to deliver on the scope of work.

ASSETS & TECHNICAL RESOURCES

No City assets are required for this project. The vendor will be required to provide purchased or leased vehicles as part of this service. The City and/or private sector partners may provide parking for the vehicles. No specific technical resources are required.

Question 3: Describe your organization's plan for monitoring and evaluating the project's effectiveness, and describe how the deliverables of the project will be implemented

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The vendor will be responsible for delivering a turnkey solution including vehicles, drivers, customer service, scheduling and dispatching, insurance, reporting and project management. Newton's Director of Transportation Planning will be responsible for monitoring and evaluating the project to ensure successful implementation. The City will employ the same method for monitoring and evaluating that it currently uses with success to monitor its NewMo transportation system.

- *Project Management Meetings* - The City requires regular and ongoing meetings with the vendor's General Manager to discuss system performance. Expected schedule is as follows:
  a. Leading up to launch meeting take place 2-3 times per week
  b. Immediately after launch, until the system stabilizes, meetings take place daily
  c. Once the system is stabilized weekly calls are maintained
  d. When issues arrive, daily calls resume until the issue is resolved.
- *Global Metrics* - The City will be monitoring overall system health, financial sustainability, and environmental benefits through the following key global metrics, with data provided or calculated by the City (financial and environmental) and vendor (system health)
  a. System Health –Total rides, number of unique riders, shuttle rides as percentage of daily commute trips to service area
  b. Financial sustainability – Committed funding, total cost, cost per ride
  c. Environmental benefits – GHG, gallons of gas and VMT eliminated
- *Service Levels* - As with the City's existing NewMo system and bike share system, the City requires access to de-identified data, usually via an online dashboard, which streamlines analysis and helps the City compare actual service levels to committed service levels. These service levels, which serve as the backbone for evaluation are baked into the project from inception; the RFP and subsequent vendor contract specify and require the vendor to commit to and adhere to tight service levels and provide relevant data to monitor these service levels. Anticipated service levels are as follows.

a. Average trip rating	>4.5
b. Average wait time	10-14 minutes
c. Maximum wait time	30 minutes
d. Maximum percentage of missed or declined trips	To be determined
e. Response time to calls and emails	100% w/in 24 hours
f. Average wait time (phone)	To be determined

- *Survey* - The City will issue an annual survey to both users and non-users of the system to get a deeper understanding of the service impact. Questions will be asked to assess:
  a. User demographic
  b. Purpose of trip
  c. How people would have otherwise made the trip
  d. Why people use the system/why people don't use the system
  e. Recommendations and suggestions
- *Direct Interaction* – Not to be minimized, the City receives invaluable feedback directly from passengers and constituents who contact the Mayor's Office or City 311 system. Additionally the City Project Manager intends to ride the system regularly, and speak with drivers and customers to maintain a pulse on system performance.

Question 4: Describe how your organization would be able to sustain this project after the conclusion of the MassDOT funding period, if proven successful. Please describe the viability of your project and provide examples demonstrating the financial sustainability into the future.

Newton is keenly focused on creating a financially sustainable system beyond the MassDOT funding period. Newton is employing a five-point strategy to ensure sustainability.

1. *Local Private-Sector and Non-Profit Funding* - The business and educational communities are deeply committed to reducing drive-alone trips to and from this highly congested area in conjunction with this project. Area businesses and organizations have committed more than $110,000 to support the launch and operations of the shuttle, with the Newton-Needham Chamber of Commerce spearheading fundraising. Funding partners are prepared to contribute annually. Commitments include:
    a. UMass Mount Ida ($60,000)
    b. William James College ($30,000)
    c. Jewish Community Center ($20,000)
    d. Jumbo (amount tbd)
2. *Development* – Newton's development review process requires developers seeking a special permit to financially support a shuttle service. Multiple developments currently have such a requirement.
3. *Cost-Effectiveness* - Newton is being intentional about making the service cost-effective. The City will be procuring the service in a competitive bid, in which cost will be a factor. Additionally, Newton is looking to expand the system citywide introducing significant economies of scale.
4. *Advertising/ Sponsorship* - The City is open to selling advertising and sponsorship on the vehicles to further generate revenue.
5. *Rider Revenue* – Rider revenue, though not anticipated to be significant, will be reapplied to the service.

Question 5: **To assist MassDOT in determining if you are eligible for CMAQ funding, please answer the attached Air Quality Benefits Analysis. Answers to these questions are not part of the competitive application scoring. Rather, they will help MassDOT determine whether an applicant is eligible to receive funds from this funding source. Projects requesting CMAQ funds will be required to undergo a CMAQ Consultation process as part of the application review period.**

See Attachment B: Air Quality Benefits Analysis

Question 6: Please describe any partnerships that you are forming with other organizations in your region in order to ensure the success of the project, as well as any attempts to leverage additional public or private funding.

The City of Newton has established the following partnerships to ensure the project's success.

- *Newton-Needham Chamber of Commerce* – The Chamber of Commerce has taken an active role in convening businesses, outreaching potential vendors and conducting research to help with the business plan. Additionally, the Chamber is spearheading private sector fundraising and will serve on the evaluation committee for procurement representing the business community.
- *Business and Institutional Support* - The City has received more than $110,000 in financial commitments for year one from the following businesses and education institutions.
    - UMass Mount Ida ($60,000)
    - William James College ($30,000)
    - Jewish Community Center ($20,000)
    - Jumbo (amount tbd)
- *Special Vehicle Access* - UMass Amherst Mount Ida has committed to allowing the shuttle exclusive access to an internal road which will enable the shuttle to bypass congestion on the public roads, and thereby have shorter ETA's. The Jewish Community Center is reviewing a similar request.
- *Developers* - Newton's development review process requires developers seeking a special permit to financially support a shuttle service. Multiple developments currently have such a requirement.
- *Newton Senior Center* – As discussed, the proposed system is envisioned to grow citywide which includes potentially merging with NewMo, Newton's existing senior transportation system. This will introduce significant economies of scale.

NEWTON
NEEDHAM
REGIONAL
CHAMBER

Sept. 20, 2019

To Whom It May Concern,

Over the past five years, the Newton-Needham Regional Chamber has been working to revitalize the Wells Ave section of Newton, an underutilized office park that, until our effort began, had not seen any significant upgrades in nearly 15 years.

Thanks to a 2015 seed grant from the U.S. Economic Development Administration we conducted an economic development study and created a program to market Wells Ave, as part of the "N-Squared Innovation District," an destination for new and innovation economy businesses. This effort has yielded great results and growth. Several property owners have invested in renovating and upgrading their properties. Employers working in the life sciences, cybersecurity and education sector have relocated and expanded here.

But our success and future success at Wells Ave has always been impeded by one critical factor: lack of first mile/last mile transportation from the near-by Green Line and Needham Line commuter rail stations.

That's why the chamber enthusiastically supports the City of Newton's application for the MassDOT Workforce Transportation Program grant. We are thrilled to be working with the City of Newton to help implement a new public transportation system, aimed at providing first mile/last mile access to the MBTA. Working closely with the city and our property owners and employers, the chamber is committee to play a proactive role in convening businesses, fundraising, procurement, planning and evaluation of the project.

Thank you for your consideration of Newton's application.

Sincerely,

Greg Reibman

President

Newton-Needham Regional Chamber

UMassAmherst | Mount Ida Campus

September 23, 2019

To Whom It May Concern,

I am writing in support of the City of Newton's application for a MassDOT Workforce Transportation Program grant. We are excited to be working with the City of Newton to help implement a new public transportation system aimed at providing first mile/last mile access to the MBTA.

The UMass Amherst campus at Mount Ida in Newton, established in 2018, is on track to see significant growth each year. As we grow, we are cognizant of the need to establish a robust shuttle system that will enable students, staff and faculty to arrive on campus without a car using public transportation. UMass Amherst at Mount Ida plans to provide $60,000 in funding to support this new transportation system.

Thank you for your consideration of Newton's application.

Sincerely,

Andrew P. Mangels
Vice Chancellor
Administration and Finance

WILLIAM JAMES COLLEGE

September 20, 2019

To Whom It May Concern,

I am writing in support of the City of Newton's application for a MassDOT Workforce Transportation Program grant. We are thrilled to be working with the City of Newton to help implement a new public transportation system, aimed at providing first mile/last mile access to the MBTA. William James College employs approximately 200 full and part time faculty staff and has approximately 750 students. We believe this new system will reduce vehicle trips to and from our facility by enabling our students and employees to access our facility by public transportation. William James College plans to provide $30,000 in funding to support this new transportation system.

Thank you for your consideration.

Sincerely,

Daniel J Brent

Daniel J. Brent, MSA, CPA– Vice President of Finance and Operations
William James College
One Wells Avenue, Newton, MA 02459
617-564-9336 – www.williamjames.edu
Dan_brent@williamjames.edu

JCC Greater Boston

October 7, 2019

To Whom It May Concern:

I am writing in support of the City of Newton's application for a MassDOT Workforce Transportation Program grant. We are thrilled to be working with the City of Newton to help implement a new public transportation system, aimed at providing first mile/last mile access to the MBTA. The Leventhal-Sidman Jewish Community Center employs 125 full and part-time staff and has roughly 10,000 members. We believe this new system will reduce vehicle trips to and from our facility by enabling members and staff to access our facility by public transportation. The Leventhal-Sidman Jewish Community Center plans to provide up to $20,000 in funding to support this new transportation system.

Thank you for your consideration.

Sincerely,

Mark Sokoll

MS:las

JCC Greater Boston
333 Nahanton Street
Newton, MA 02459-3213
T 617.558.6522
bostonjcc.org

Jumbo Capital Management, LLC
REAL ESTATE INVESTMENT | ASSET & PROPERTY MANAGEMENT

1900 Crown Colony Drive Suite 405 Quincy, MA 02169
617-934-2002|
www.JumboCapital.com

October 4, 2019

To Whom It May Concern,

I am writing in support of the City of Newton's application for a MassDOT Workforce Transportation Program grant. We are thrilled to be working with the City of Newton to help implement a new public transportation system, aimed at providing first mile/last mile access to the MBTA. Our properties at 199 Wells Ave, 7-57 Wells Ave and 75-95 Wells Ave employ more than 400 staff. We are eager to help our tenant's staff commute to and from work without a car using via public transportation. Jumbo Capital Management's SPE for Wells Park plans to provide funding to support this new transportation system.

Thank you for your consideration of Newton's application.

Sincerely,

Jordan Berns
Partner
Jumbo Capital Management, LLC
jberns@jumbocapital.com

Attachment B: Air Quality Benefits Analysis

This grant program is funded through the Congestion Mitigation and Air Quality Improvement (CMAQ) Program, which is administered by the Federal Highway Administration (FHWA). The purpose of the CMAQ Program is to support transportation projects, transit service, and other related efforts that contribute to air quality improvements and mitigate the impacts of congestion. As such, to meet federal requirements related to CMAQ, project applicants are required to demonstrate that their proposed projects will reduce emissions and provide an air quality benefit. The questions in this section address this requirement.

The answers provided to these questions will be reviewed by the CMAQ Consultation Committee, which consists of members from the Massachusetts Department of Transportation (MassDOT), the Massachusetts Department of Environmental Protection (MassDEP), the U.S. Environmental Protection Agency (EPA), and regional planning agencies within Massachusetts.

Questionnaire

1.) Please select the category that most closely aligns with the proposed project:

- [x] Transit/Shuttle Service (Section A)
- [ ] Bike share (Section B)
- [ ] Qualitative Analysis / Other _____ (Section C)

A. Transit/Shuttle Service Questions

1.) Does your organization currently operate a transit or shuttle service? If not, skip to question 2. If yes, please complete the following tables:

Table 1: Summary of Currently-Operated Transit/Shuttle Vehicles

Vehicle ID	Vehicle Type	Occupancy	Year of Manufacture	Vehicle Length	Fuel Required
1	Mercedes Metris	6	2019	202.4	premium unleaded (rec)
2	Mercedes Metris	6	2019	202.4	premium unleaded (rec)
3	Mercedes Metris	6	2019	202.4	premium unleaded (rec)
4	Mercedes Metris	6	2019	202..4	premium unleaded (rec)

Vehicle ID	Round Trips / Day	Length of Route (mi)	Average Speed (mph)	Daily Ridership	Days Operated / Year	Operation Hours
1	N/A microtransit	2.62		58	360	M-F 9-5, SaSu 9-12
2						
3						
4						

Numbers in chart 2 above are for all four vehicles, as our system does not separate our figures by vehicle. System is micro-transit, with no fixed route, and hence categories are not fully applicable. Relevant information: All rides are one way, system averages103 total rides per day for all vehicles, with 43% of rides shared and avg ride distance 2.62 miles. Total average distance driven per for all vehicles per day is 300.

2.) Please provide the following details about the proposed transit or shuttle service and vehicles. If unsure, provide an estimate or leave blank:

** 2 vehicles for initial Wells Service area. 3 vehicles for expanded N2 service area.

Table 2: Summary of Proposed Transit/Shuttle Vehicles

Vehicle ID	Vehicle Type	Occupancy (Number of Passengers)	Year of Manufacture	Vehicle Length	Fuel Required
	Metris or Sprinter	6 or 13	2019/2020	202.4 or 233.4	premium gas or diesel
	Metris or Sprinter	6 or 13	2019/2020	202.4 or 233.4	premium gas or diesel
	Metris/Sprinter (expanded)				

Vehicle ID	Round Trips / Day	Length of Route (mi)	Average Speed (mph)	Daily Ridership	Days Operated / Year	Operation Hours
	N/A microtransit	2.9 initial/ 2.4 expanded	N/A	60 initial, 124 expanded	255	M-F 7 AM - 8 PM

60 rides/day for initial Wells/UMass area; 124 for expanded area

B. Bike Share Questions

1.) How many bikes will be included in this project?

2.) What is the expected average bike trip length?

3.) What is the expected average number of trips per bike per day?

4.) How many days of the year will your proposed bike share operate?

C. Qualitative Analysis

If none of the areas above apply to your project, please provide a qualitative assessment of why your project is expected to reduce emissions, citing applicable research where possible.

Please note that although quantitative analysis of air quality impacts is expected for almost all project types under the CMAQ program, an exception will be made when it is not possible to accurately quantify emissions benefits. In these cases, qualitative assessments based on reasoned and logical determinations that the projects or programs will decrease emissions will be conducted.

	Launch Phase	Expanded	Notes
SOV Trips Eliminated			
Projected Rides (annual)	17,059	33,765	
Anticipated Cost (annual)	$300,000	$400,000	The City and Chamber of Commerce received
Average commute distance*	9.8	9.8	Source: CTPS, Exploring the 2011Massachusetts
VMT eliminated (annual)	167,176	330,897	Each ride eliminates a commute trip. VMT eliminated = # Rides * average commute distance
Gallons of gas saved (annual)	7,599	15,041	duty vehicle, from Bureau of Transportation
Shuttle Usage			
Estimated shuttle vehicles miles (daily)	82	162	
Estimated shuttle vehicles miles (annual)	20,880	41,328	
Avg fuel efficiency all vehicles	18	18	Avg of 22 mpg for Metris and 14 mpg for Sprinter
Gallons of gas used by shuttle (daily)	4.5	9.0	
Gallons of gas used by shuttle (annual)	1183	2341	
Net Gallons of Gas saved (annual)	6,416	12,700	
Net VMT eliminated (annual)	146,296	289,569	
Cost/Net VMT eliminated	$2.1	$1.4	

194-20

City of Newton, Massachusetts
Office of the Mayor

RUTHANNE FULLER
MAYOR

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(617) 796-1100
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(617) 796-1113
TDD
(617) 796-1089
E-mail
rfuller@newtonma.gov

March 9, 2020

Honorable City Council
Newton City Hall
1000 Commonwealth Avenue
Newton Centre, MA 02459

Councilors:

I respectfully submit a docket item to your Honorable Council requesting authorization to accept and expend a grant from the Executive Office of Elder Affairs in the amount of $15,000 to provide financial assistance for qualified seniors in the City of Newton to receive the services of Newton at Home Inc. Newton at Home is a non-profit membership organization with the mission of assisting older residents stay independent and safe in their homes.

These funds will be used to assist in meeting Newton at Home's goal of combatting social isolation and increasing opportunities for engagement.

Thank you for your consideration of this matter.

Sincerely,

Ruthanne Fuller

Ruthanne Fuller
Mayor

194-20

City of Newton
Department of Senior Services

Newton Council on Aging

The Senior Center

Mayor Ruthanne Fuller
1000 Commonwealth Ave
Newton, MA 02459

March 10, 2020

Dear Mayor Fuller,

I am writing to request that you docket an item with the City Council requesting authorization for the acceptance and expenditure of a grant from the Executive Office of Elder Affairs in the amount of $15,000 to provide financial assistance for qualified seniors in the City of Newton to receive the services of Newton at Home Inc.

Newton at Home (NAH) is a non-profit membership organization with the mission of assisting older residents to stay independently and safely in their homes. Qualified members are Newton residents who are 60 years of age or older living in their homes, apartments or condominiums. Members request and receive services from a large group of volunteers. Services that are provided include transportation, technology assistance, handyman jobs, friendly visits, shopping assistance and errands.

The funds were earmarked in the FY20 State budget process. The funds will be used to assist in meeting NAH's goal of combatting social isolation and increasing opportunities for engagement. Funding will provide transportation to social, cultural and educational events. The funds will provide opportunities for reduced fee members to attend events that they would not be able to afford. Some of the funding will help to subsidize the reduced fee membership fund. The remaining funding will be used to raise awareness of the organization in order to provide more Newton residents with the opportunity to partake in the services NAH provides.

Thank you for your support of this. Please let me know if you have any questions.

Jayne Colino

Jayne Colino
Director, Department of Senior Services

Newton Council on Aging/Senior Center | 345 Walnut Street | Newton, MA 02460
Tel: 617-796-1660 | Fax: 617-969-9560
E-mail: info@newtonseniors.org | Web Site: www.newtonseniors.org

195-20

City of Newton, Massachusetts
Office of the Mayor

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MAYOR

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(617) 796-1100

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E-mail
rfuller@newtonma.gov

March 9, 2020

Honorable City Council
Newton City Hall
1000 Commonwealth Avenue
Newton Centre, MA 02459

Councilors:

I respectfully submit a docket item to your Honorable Council requesting authorization to approve the settlement of Workers' Compensation Claim # 003554 in the amount of $62,500. Funds will be appropriated from Acct # 67A109A-515201 – Municipal Workers' Compensation.

Kelly Brown, our Workers' Compensation Manager will be available at the Finance Committee meeting to answer any questions.

Thank you for your consideration of this matter.

Sincerely,

Ruthanne Fuller

Ruthanne Fuller
Mayor

CITY OF NEWTON, MASSACHUSETTS
DEPARTMENT OF HUMAN RESOURCES

Telephone (617) 796-1260
Facsimile (617) 796-1272
TDD/tty # (617) 796-1089

Ruthanne Fuller, Mayor
Michelle Pizzi O'Brien Director

Interoffice Memorandum

To: Maureen Lemieux

From: Kelly Brown- WC Manager

Date: March 9, 2020

Re: Docket Request to settle WC Claim # 003554

The Worker's Compensation Manager and our Defense Council Mary Ann Calnan respectfully asks for formal approval to settle WC claim # 003554 in the amount of $62,500 as the Judge and Mediator had suggested. Once approved by the Judge we have 14 days to issue the checks. The Plaintiff Lawyer will receive 15% off the top ($9375.00) as this was settled on pre-liability basis. The Claimant will get $ 53,125. This will come from the budget line 67A109A-515201 the Municipal WC line item.

198-20

RUTHANNE FULLER
MAYOR

City of Newton, Massachusetts
Office of the Mayor

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rfuller@newtonma.gov

March 9, 2020

Honorable City Council
Newton City Hall
1000 Commonwealth Avenue
Newton Centre, MA 02459

Councilors:

I respectfully submit a docket item to your Honorable Council requesting authorization to appropriate and expend $7,000,000 and authorize a general obligation borrowing of an equal amount for estimated design and construction costs associated with Water Main Improvements in FY2021.

Water main rehabilitation projects for FY2021 include Needham Street and Winchester Street from Boylston Street to Needham Street ($5,000,000) and Chestnut Street from Beacon Street to Commonwealth Ave ($2,000,000).

Further, I request that your Honorable Council authorize any premium received upon the sale of the bonds or notes, less the cost of preparing, issuing and marketing them, and any accrued interest received upon the delivery of the bonds or notes be applied to the costs of the project being financed by the bonds or notes and to reduce the amount authorized to be borrowed for the project by a like amount.

Thank you for your consideration of this matter.

Sincerely,

Ruthanne Fuller

Ruthanne Fuller
Mayor

City of Newton

DEPARTMENT OF PUBLIC WORKS
OFFICE OF THE COMMISSIONER
1000 Commonwealth Avenue
Newton Centre, MA 02459-1449

Ruthanne Fuller
Mayor

March 9, 2020

To: Mayor Ruthanne Fuller
Jonathan Yeo, Chief Operating Officer
Maureen Lemieux, Chief Financial Officer

From: James McGonagle, Commissioner

Subject: FY21 Water Main Improvements

I respectfully request a total of $7,000,000 for estimated design and construction costs associated with Water Main improvements in FY 2021.

In the Capital Improvement plan, the City is committing to borrowing $4.6 million annually from City debt and MWRA loans to upgrade our water system, which will improve fire flows, and ensure the delivery of superior water quality. The Needham Street and Winchester Street water main project schedule is driven by MassDOT's reconstruction project. The Chestnut Street water main project schedule is being driven by the schedule of the milling and paving and sidewalk improvements of Chestnut Street by Public Works. We are therefore requesting additional funds to cover the cost of these projects.

Water main rehabilitation projects for FY 2021 include the following estimated design and construction costs:

$5,000,000 - Needham St. and Winchester St. from Boylston St. to Needham St.
$2,000,000 – Chestnut St from Beacon St. to Commonwealth Ave.

Needham St. and Winchester St. from Boylston St. to Needham St.
This work precedes the rehabilitation of Winchester Street and Needham Street by MassDOT. This unlined cast iron water main is 20 inches in diameter, and it was installed in 1877. We have experienced two major leaks on this water main within the past 2 years. New gate valves were recently installed to control water main shut-downs if necessary. Our consulting engineers were tasked to evaluate the pipe, and they made a recommendation as to its rehabilitation. The pipe has a remaining useful life of about 17 years, and complete replacement is recommended prior to roadway rehabilitation. Cost estimates for complete replacement is $5,000,000 (including design). Cost estimates and the testing report is attached. This project will be designed by MassDOT's consulting engineers (under contract with the city), and it will be bid by MassDOT as part of the roadway rehabilitation contract. City of Newton will pay for this construction under a non-participating agreement with MassDOT.

Chestnut St from Beacon St. to Commonwealth Ave.
This work precedes the milling and paving of Chestnut Street. This unlined cast iron water main is 12 inches in diameter, and it was installed in 1877. The estimated construction cost is $2,000,000, based on a recent bid for the Chestnut Street (from Boylston street to Beacon street) water main cleaning and lining project. This project will be designed by our consulting engineers, and it will be bid by the city.

Telephone: 617-796-1009 • Fax: 617-796-1050 • Jmcgonagle@newtonma.gov

TATA & HOWARD

September 25, 2018

Mr. Ted Jerdee, Director of Utilities
City of Newton DPW
1000 Commonwealth Avenue
Newton, MA 02439

Subject: Winchester Street Pipe Analysis
T&H No. 4586-09

Dear Mr. Jerdee:

As requested, Tata & Howard has performed testing on a sample of pipe provided by the City of Newton from the 20-inch diameter main along Winchester Street to evaluate the condition of the pipe. The unlined cast iron pipe was reportedly installed in 1878. The pipe sample was sandblasted at Abrasive Blasting and Coating in Worcester, MA and then delivered to Massachusetts Materials Research, Inc. (MMR) in West Boylston, MA, for metallurgical analysis and testing.

The sandblasted pipe sample was visually inspected by MMR. The minimum and maximum wall thickness was recorded and used to estimate the pipe class based on the measured, remaining thickness of the pipe sample wall and comparison with vintage American Water Works Association (AWWA) pipe thickness class information. Pitting was observed on the interior of the pipe with pits as deep as 0.1365 inches. Reportedly, no external pitting was observed. Table No.1 shows the pipe characteristics measured by MMR, and a photograph of the interior pitting is shown in Figure No. 1, below.

Table No. 1
Summary of MMR Report

Estimated Class	Original Wall Thickness (in)	Existing Wall Thickness (in)	Max. Internal Pit (in)	Max. External Pit (in)	Min. Wall Thickness less Total Pit (in)	Percent Remaining Wall Thickness
D	1.03	0.8465	0.1365	0.00	0.7100	69%

Tata & Howard
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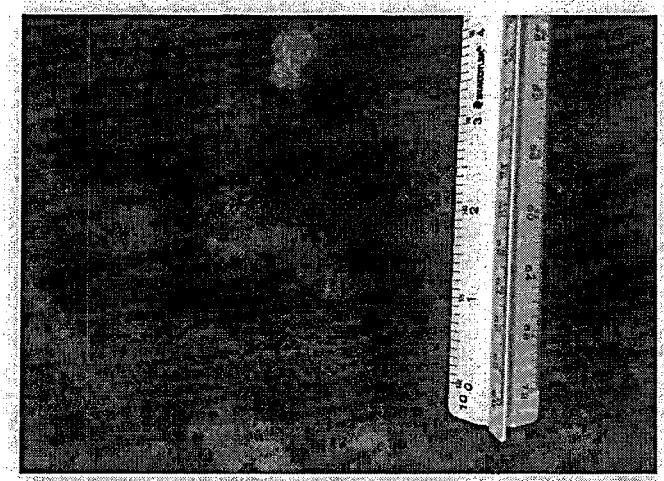
www.tataandhoward.com

Other Offices
MA | NH | CT | ME | VT | AZ | TX

Figure No. 1
Winchester Street Pitting



After measurement of the physical characteristics of the pipe, the sample was crushed by MMR using the ANSI A21.6-13 Ring Test Method. The Factor of Safety (FOS) is the ratio of the pipe resistance capacity to loads that are applied to the pipe itself. The standard factory minimum FOS for new pit cast mains is 2.5. The FOS can begin to decrease as soon as the pipe is installed in the ground. Water quality, soil composition, groundwater characteristics, and groundwater flow can lead to corrosion, metal deterioration and loss of strength in pipe, lowering the FOS. The test result for the pipe sample was 11,700 lbs and the remaining FOS is estimated at 1.15.

MMR performed additional testing on the pipe sample including tests of tensile strength, Talbot strip tests, and metallurgical analysis. Tensile strength was estimated at 5,950 pounds per square inch (psi), compared to the typical original value for cast iron of 20,000 to 60,000 psi. The Talbot strip test results were used to estimate an average modulus of rupture of 18,667 psi, compared to the typical standard for pit cast iron pipe of 40,000 psi. A copy of the MMR report is included in Attachment A.

The City has reported that at least one break has occurred on this main. Based on the extent of metal loss, the low FOS, and the deteriorated tensile strength and modulus of rupture, the Winchester Street water main is near the end of its useful life and should be scheduled for replacement. Cleaning and cement mortar lining will inhibit additional interior corrosion but will not affect structural strength. As at least one break has occurred on this main, cleaning and lining is not recommended. One option is a structural liner, however, additional analysis using the hydraulic model is recommended to evaluate the impact of reducing the internal diameter of the pipe.

At this time, we wish to express our appreciation to the Newton Water Department for their participation in this project and their help in collecting information and the pipe sample. If you have any questions, please do not hesitate to contact us.

Sincerely,

TATA & HOWARD, INC.

Karen Gracey

Karen L. Gracey, P.E.
Co-President

Enclosures

REPORT TO:

Tata & Howard
Marlborough, MA

Attn: Steve Daunais

Purchase Order No. 4586-09

Metallurgical Life Assessment of a 20-inch Pipe from Newton, MA

MMR Project No. 123531

September 7, 2018

From:
Massachusetts Materials Research, Inc.

Veda-Anne Ulčickas
Senior Materials Engineer

BACKGROUND AND INVESTIGATION

Tata & Howard requested that Massachusetts Materials Research, Inc. (MMR) perform a metallurgical life assessment of a section of a 20-inch pipe from Newton, MA. This assessment was to include tensile testing, Talbot strip testing, ring crush testing, chemical analysis, hardness testing and metallurgical examination for microstructure, corrosion/remaining wall/remaining life. The pipe was installed in 1878, and the segment removed in 2018.

RESULTS

Visual Examination

The pipe segment is shown as-received in Figures 1 and 2. The 14-inch tall unlined segment contained numerous visible internal pits, many of which were too wide to be completely accommodated within a metallurgical mount and appeared deep for the pipe's nominal $^{7}/_{8}$-inch wall thickness, Figure 3.

Wall thickness was measured as-received with digital calipers at arbitrarily determined 12 o'clock, 3 o'clock, 6 o'clock and 9 o'clock positions, and the depths of several pits determined. These measurements are summarized in Table I.

Table I
Wall Thickness and ID Pitting Depth

Location	Wall Thickness/Depth, inch
12 o'clock	0.9235
3 o'clock	0.8465
6 o'clock	0.9470
9 o'clock	0.8720
ID Pits, Various	0.1265, 0.1365, 0.1185

Wall thickness measurements taken on as-received piping provide information on total wall thickness only, including corrosion product, not just remaining metal thickness within that wall. Indications of graphitic corrosion were present during the visual examination of this pipe, with some regions revealing as little as ¼-inch remaining metallic wall, Figures 4 and 5. The wall thickness value used during calculation of remaining life for this pipe was assessed from a metallurgical section taken at a region of visibly less general corrosion and no visible pitting.

Overall, the initial visual examination revealed that this pipe appeared to be in poor condition due to graphitic corrosion and pitting along its ID wall surface. Note that no obvious pitting was noted on the OD wall.

Mechanical Testing

Tensile Testing

One longitudinally oriented ASTM flat tensile test specimen with a ½-inch gauge section width was machined from the pipe material. This testing revealed the ultimate strength (UTS) of the pipe metal was 5,950 PSI. This result is summarized below in Table II.

Talbot Strip Testing

Two longitudinally oriented ½-inch deep specimens for Talbot strip testing were machined from the pipe material remaining from ring testing. The modulus of rupture calculated per AWWA C106-75 was 19,620 PSI for one specimen and 17,714 PSI for the second specimen. This produces a mean modulus of rupture of 18,667 PSI. These results are summarized below in Table II.

Ring Crush Testing

Ring crush testing was performed on a 12-inch long section of the submitted pipe. This testing revealed a modulus of rupture of 25,647 PSI, calculated per AWWA C106-75. This result is summarized below in Table II.

Hardness Testing

Brinell (HB) hardness testing using a 10mm ball and a 3,000Kg load was performed on the pipe material. This testing indicated the pipe material hardness was HB 152. The result of this testing is summarized in Table II below, along with a conversion to the Rockwell B (HRB) scale for convenience.

Summary

Table II summarizes the results of the mechanical testing of this pipe segment. As the age of the pipe and its specifications were unknown, some typical mechanical test values are provided for comparison.

Table II
Mechanical Testing Summary

Mechanical Test	Subject Pipe	AWWA Standard	Other Standards (Grey Cast Iron)
Tensile Test – UTS, PSI	5,950	n/a	20,000 – 60,000
Ring Crush Test Modulus of Rupture, PSI	25,647	40,000, min.	n/a
Talbot Strip Test Modulus of Rupture, PSI	18,667	40,000, min.	n/a
Hardness, HB (HRB)	152 (82)	< 95 HRB	Variable

These results revealed that the subject pipe is weaker than modern standards require, but meets the AWWA requirement for hardness. This is a normal result for older piping.

Chemical Analysis

Chemical analysis was performed on the pipe ring material using inductively coupled plasma spectroscopy (ICP) in conjunction with LECO carbon-sulfur analysis. The results of this testing are summarized below.

Table III
Chemical Analysis Results

Element	Composition, wt. %	
	Pipe Material	UNS F10006
Carbon	3.19	3.10 – 3.40
Cobalt	0.01	—
Copper	0.02	—
Manganese	0.20	0.60 -0.90
Nickel	0.02	—
Phosphorus	1.28	0.15 max.
Silicon	1.49	1.90 – 2.30
Sulfur	0.082	0.15 max.
Titanium	0.07	—
Vanadium	0.04	—

This analysis revealed that the pipe material was typical of older grey cast irons, with a high phosphorus content. A modern chemical composition controlled grey iron is provided as a comparison. Phosphorus improves mold filling capabilities of the molten metal and depresses melting temperature. It was intentionally added to older irons for these reasons, as its detrimental effects on pipe metallurgy were not understood. Excess phosphorus levels lead to the development of an iron phosphide eutectic phase known as steadite. This phase is hard and brittle and can encourage brittle cracking of pipes that contain it if they are not cut or handled with care.

Metallurgical Examination

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Etching revealed that the pipe possessed a largely pearlitic microstructure with a well-developed cellular network of steadite, Figure 8. The steadite network would be predicted by the phosphorus content of the pipe material. A detail view of the microstructure with phases labelled is provided in Figure 9. This microstructure, excepting the steadite network, is common in newer cast irons. This pipe did not possess the variability in microstructure and graphite forms typically seen with older irons. Given the state of the art of cast iron metallurgy when this pipe was installed, it was a well-made example of its kind.

Remaining Life Calculations

Remaining life calculations were performed on two regions of this pipe. One was at a region of less corrosion, also used to provide the best estimate of the original wall thickness of the pipe. The second was at a region of thin remaining wall (Figures 4 and 5). Both options are provided in case there exist regions along this pipe that exhibit less internal corrosion than was observed on the submitted segment. If the remainder of the pipe is typical of this segment, then the more corroded data should be used for replacement scheduling.

In the region with less corrosion, wall thickness was 0.839-inch with a remaining wall of 0.587-inch, Figure 10. At 140 years' service, this produces a corrosion rate of 0.0018 inch/year and a remaining life of 326 years. Note that this remaining life assumes a constant corrosion rate and failure by through-wall corrosion penetration. In reality, pipes can fail with as much as 20% remaining wall if pressure spikes, nearby construction disturbance, or undermining occurs. In this less corroded region, a 20% remaining wall failure assumption produces a remaining life of 233 years.

In the region with more noticeable corrosion, remaining wall was 0.2425-inch, which produced a corrosion rate of 0.0043 inch/year. This indicated a remaining life of 56.4 years, assuming through-wall corrosion penetration. For a 20% remaining wall failure, remaining life in the more corroded region was 17 years.

CONCLUSIONS

- The submitted pipe did not possess a cement lining.
- Chemical analysis indicated the pipe material contained an excess of phosphorus over modern requirements. This is typical of older cast irons.
- The pipe microstructure was predominantly pearlitic with a well-developed steadite network and only isolated ferrite. This is typical of older cast irons.
- Mechanical testing indicated the pipe was weaker than modern requirements specify. This is typical of older cast irons, especially ones with extensive corrosion.
- The corrosion rate for this pipe at heavily corroded regions is 0.0043 inch/year. This corrosion rate indicates a remaining life of 56.4 years, assuming failure from through wall corrosion penetration. Assuming failure at 20% remaining wall, this corrosion rate indicates a remaining life of 17 years.

Figure 1: Overall view of pipe segment as-received.

Figure 2: The pipe segment was 14-inches long.

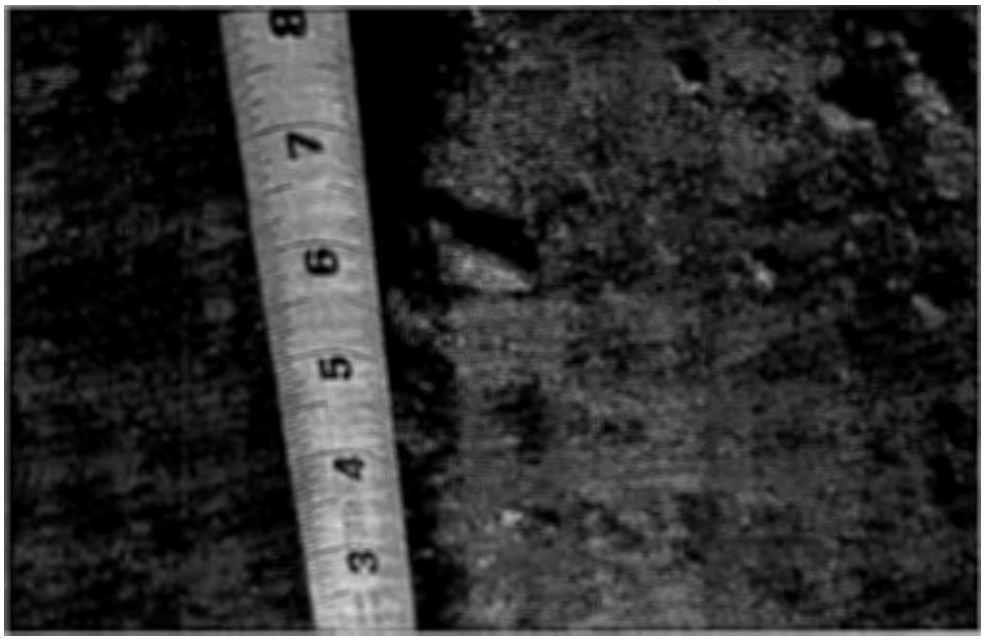

Figure 3: The pipe segment possessed many notable pits on its ID wall.

Figure 4: An overall view of a region of wall with corrosion from both ID and OD.

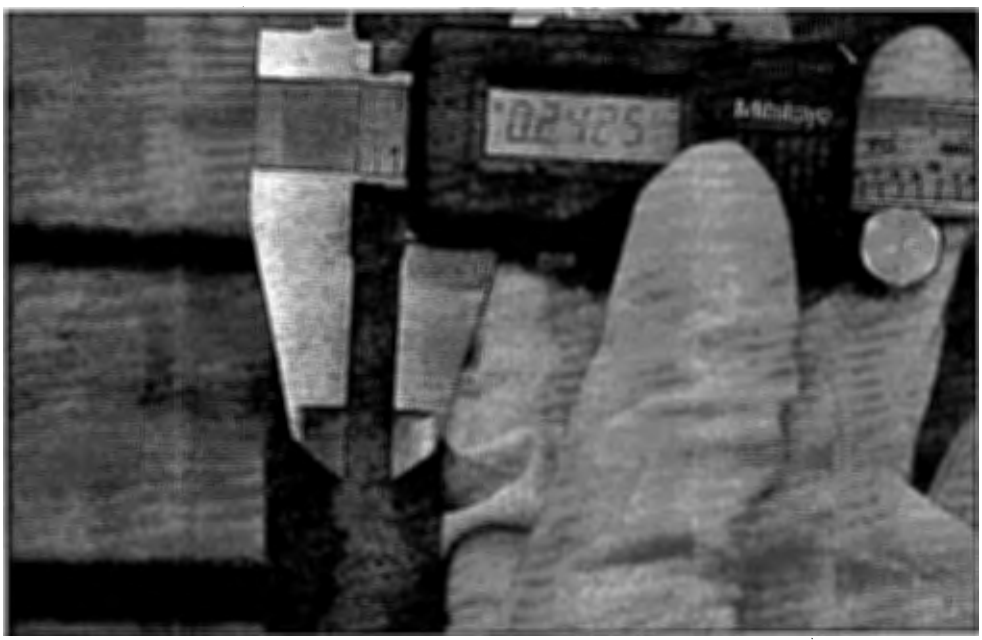

Figure 5: Remaining metal in the wall region shown in Figure 4.

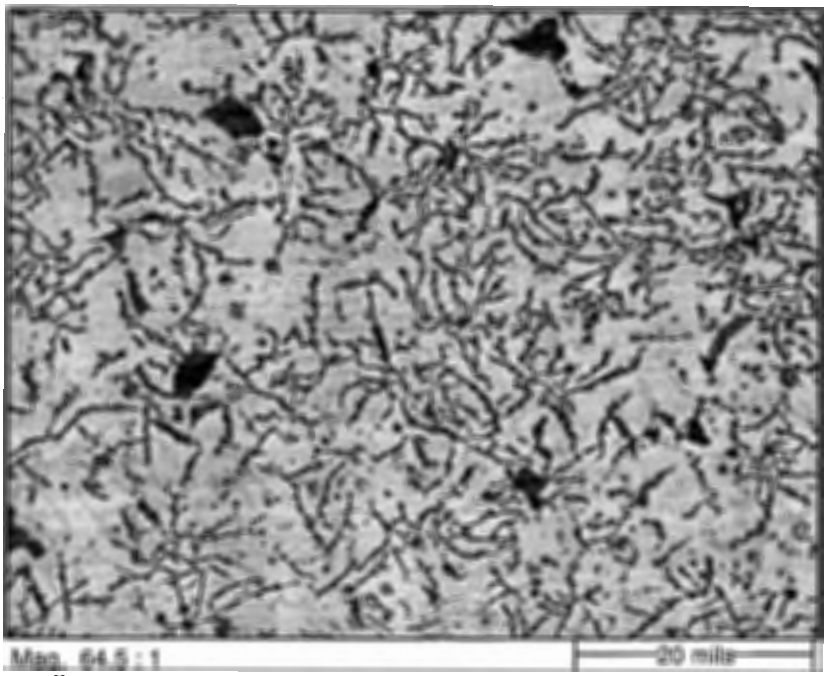

Figure 6: ID graphite form was Type A random flake. As-polished.

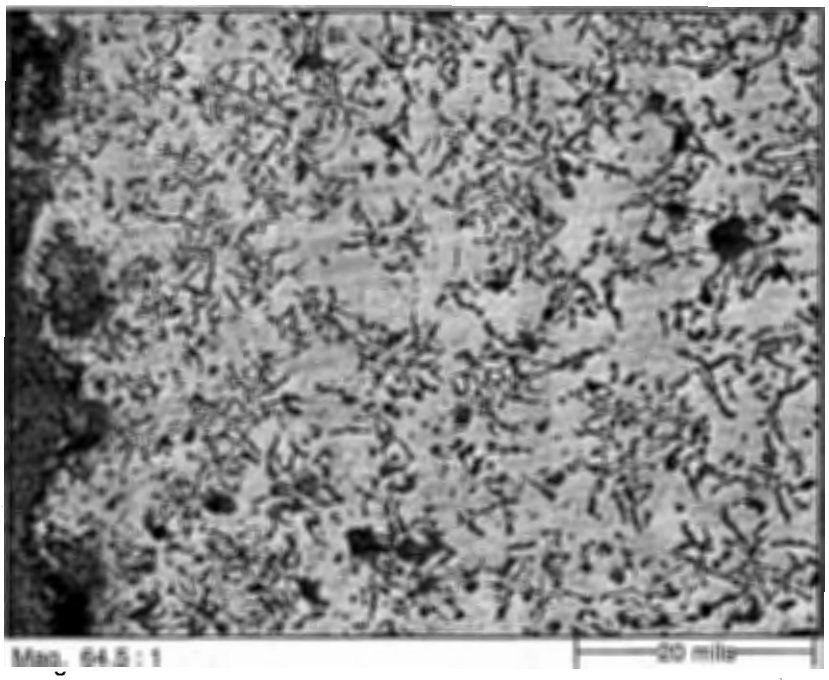

Figure 7: OD graphite form was predominantly Type A with some isolated tendency toward Type B rosette groupings. As-polished.

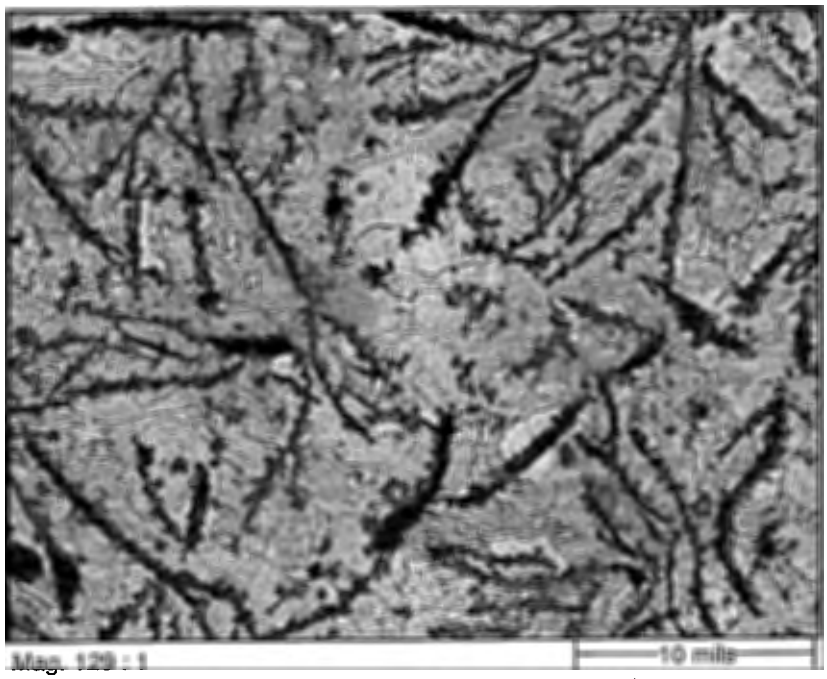

Figure 8: Overall view of predominantly pearlitic microstructure. Etchant: nital.

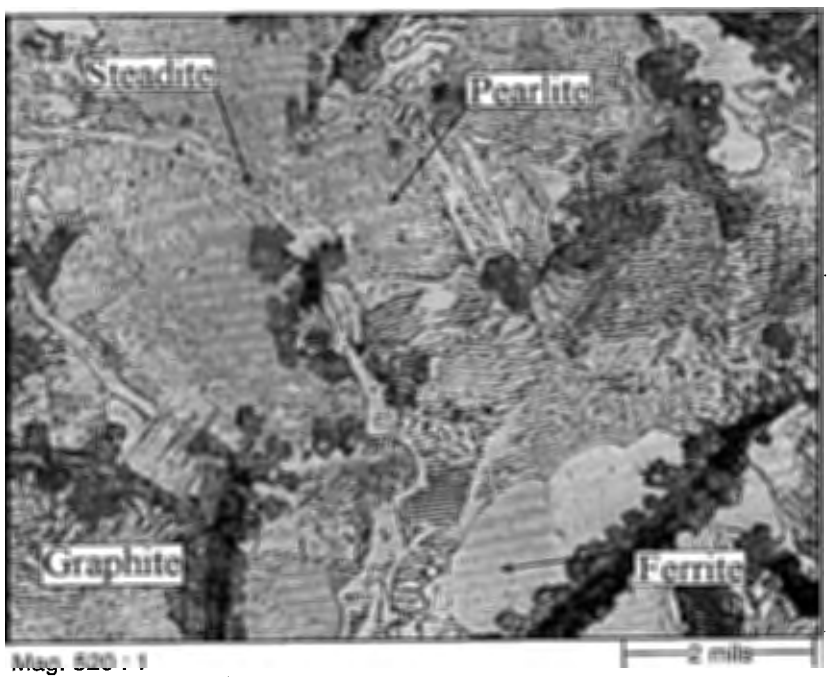

Figure 9: Detail of microstructure with phases labelled for clarity. Etchant: nital.

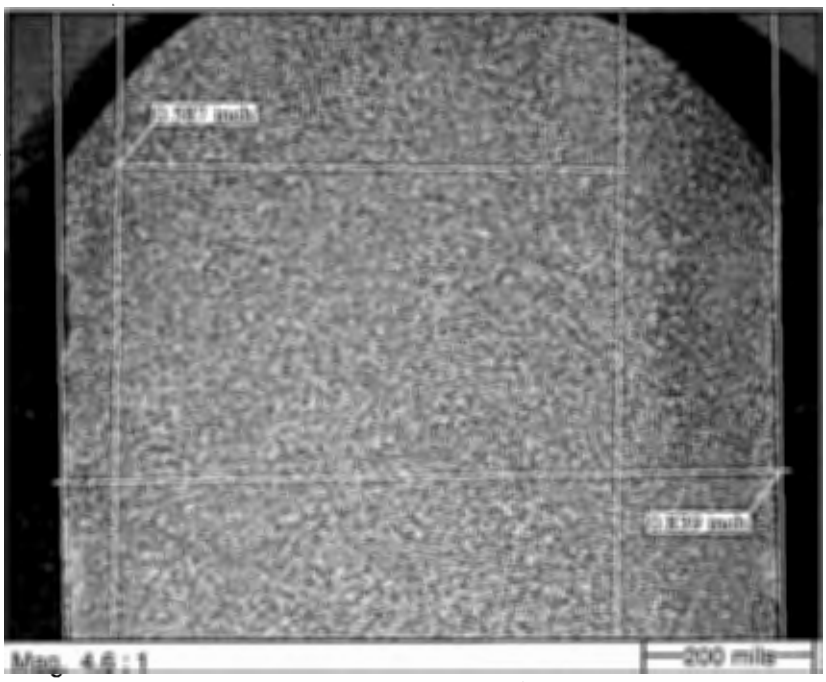

Figure 10: Less corroded region remaining wall. Etchant: nital.

MMR letters and reports apply to the specific materials, products, or processes tested, examined, surveyed, inspected, or calculated; and are not necessarily indicative of the qualities of apparently identical or similar materials, products, or processes. The liability of Massachusetts Materials Research, Inc., with respect to the services rendered, shall be limited to the amount of the consideration paid for such services and not include any consequential damages.

REPORT TO:

Tata & Howard
Marlborough, MA

Attn: Steve Daunais

Purchase Order No. 4586-09

Metallurgical Life Assessment of a 20-inch Pipe from Newton, MA

MMR Project No. 123531

September 7, 2018

From:
Massachusetts Materials Research, Inc.

Veda-Anne Ulčickas
Senior Materials Engineer

BACKGROUND AND INVESTIGATION

Tata & Howard requested that Massachusetts Materials Research, Inc. (MMR) perform a metallurgical life assessment of a section of a 20-inch pipe from Newton, MA. This assessment was to include tensile testing, Talbot strip testing, ring crush testing, chemical analysis, hardness testing and metallurgical examination for microstructure, corrosion/remaining wall/remaining life. The pipe was installed in 1878, and the segment removed in 2018.

RESULTS

Visual Examination

The pipe segment is shown as-received in Figures 1 and 2. The 14-inch tall unlined segment contained numerous visible internal pits, many of which were too wide to be completely accommodated within a metallurgical mount and appeared deep for the pipe's nominal $^{7}/_{8}$-inch wall thickness, Figure 3.

Wall thickness was measured as-received with digital calipers at arbitrarily determined 12 o'clock, 3 o'clock, 6 o'clock and 9 o'clock positions, and the depths of several pits determined. These measurements are summarized in Table I.

Table I
Wall Thickness and ID Pitting Depth

Location	Wall Thickness/Depth, inch
12 o'clock	0.9235
3 o'clock	0.8465
6 o'clock	0.9470
9 o'clock	0.8720
ID Pits, Various	0.1265, 0.1365, 0.1185

Wall thickness measurements taken on as-received piping provide information on total wall thickness only, including corrosion product, not just remaining metal thickness within that wall. Indications of graphitic corrosion were present during the visual examination of this pipe, with some regions revealing as little as ¼-inch remaining metallic wall, Figures 4 and 5. The wall thickness value used during calculation of remaining life for this pipe was assessed from a metallurgical section taken at a region of visibly less general corrosion and no visible pitting.

Overall, the initial visual examination revealed that this pipe appeared to be in poor condition due to graphitic corrosion and pitting along its ID wall surface. Note that no obvious pitting was noted on the OD wall.

Mechanical Testing

Tensile Testing

One longitudinally oriented ASTM flat tensile test specimen with a ½-inch gauge section width was machined from the pipe material. This testing revealed the ultimate strength (UTS) of the pipe metal was 5,950 PSI. This result is summarized below in Table II.

Talbot Strip Testing

Two longitudinally oriented ½-inch deep specimens for Talbot strip testing were machined from the pipe material remaining from ring testing. The modulus of rupture calculated per AWWA C106-75 was 19,620 PSI for one specimen and 17,714 PSI for the second specimen. This produces a mean modulus of rupture of 18,667 PSI. These results are summarized below in Table II.

Ring Crush Testing

Ring crush testing was performed on a 12-inch long section of the submitted pipe. This testing revealed a modulus of rupture of 25,647 PSI, calculated per AWWA C106-75. This result is summarized below in Table II.

Hardness Testing

Brinell (HB) hardness testing using a 10mm ball and a 3,000Kg load was performed on the pipe material. This testing indicated the pipe material hardness was HB 152. The result of this testing is summarized in Table II below, along with a conversion to the Rockwell B (HRB) scale for convenience.

Summary

Table II summarizes the results of the mechanical testing of this pipe segment. As the age of the pipe and its specifications were unknown, some typical mechanical test values are provided for comparison.

Table II
Mechanical Testing Summary

Mechanical Test	Subject Pipe	AWWA Standard	Other Standards (Grey Cast Iron)
Tensile Test – UTS, PSI	5,950	n/a	20,000 – 60,000
Ring Crush Test Modulus of Rupture, PSI	25,647	40,000, min.	n/a
Talbot Strip Test Modulus of Rupture, PSI	18,667	40,000, min.	n/a
Hardness, HB (HRB)	152 (82)	< 95 HRB	Variable

These results revealed that the subject pipe is weaker than modern standards require, but meets the AWWA requirement for hardness. This is a normal result for older piping.

Chemical Analysis

Chemical analysis was performed on the pipe ring material using inductively coupled plasma spectroscopy (ICP) in conjunction with LECO carbon-sulfur analysis. The results of this testing are summarized below.

Table III
Chemical Analysis Results

Element	Composition, wt. %	
	Pipe Material	UNS F10006
Carbon	3.19	3.10 – 3.40
Cobalt	0.01	—
Copper	0.02	—
Manganese	0.20	0.60 -0.90
Nickel	0.02	—
Phosphorus	1.28	0.15 max.
Silicon	1.49	1.90 – 2.30
Sulfur	0.082	0.15 max.
Titanium	0.07	—
Vanadium	0.04	—

This analysis revealed that the pipe material was typical of older grey cast irons, with a high phosphorus content. A modern chemical composition controlled grey iron is provided as a comparison. Phosphorus improves mold filling capabilities of the molten metal and depresses melting temperature. It was intentionally added to older irons for these reasons, as its detrimental effects on pipe metallurgy were not understood. Excess phosphorus levels lead to the development of an iron phosphide eutectic phase known as steadite. This phase is hard and brittle and can encourage brittle cracking of pipes that contain it if they are not cut or handled with care.

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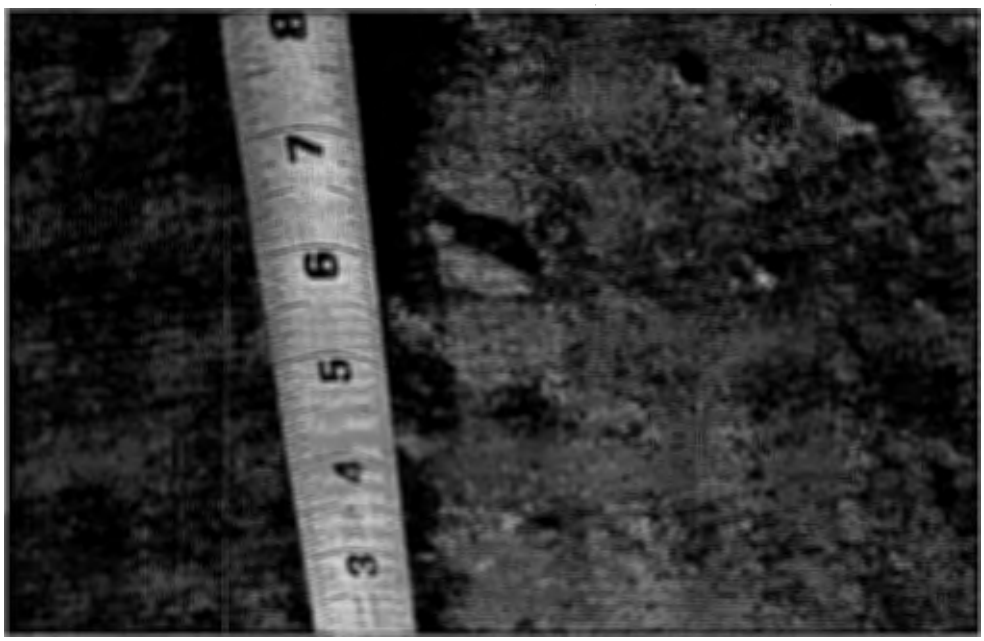

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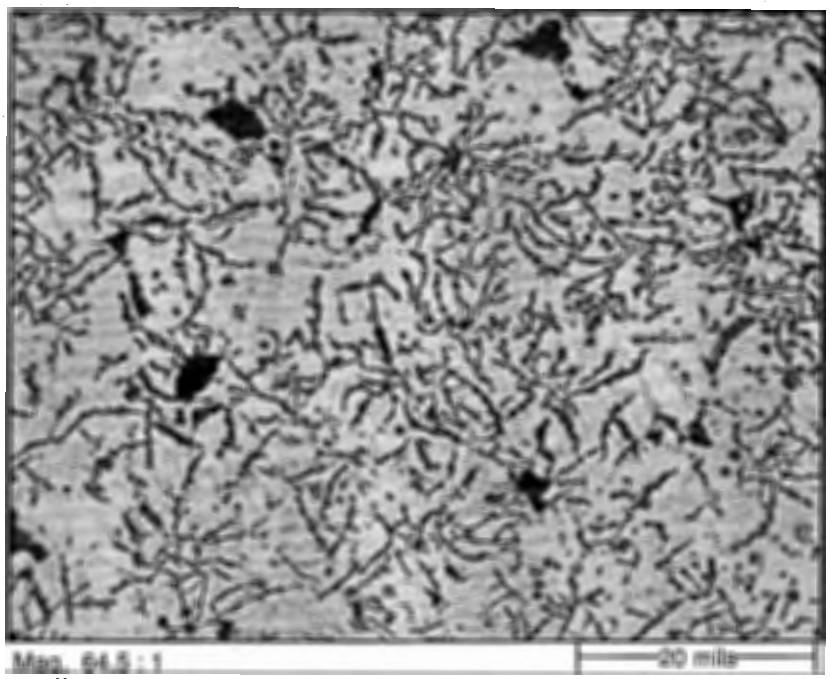

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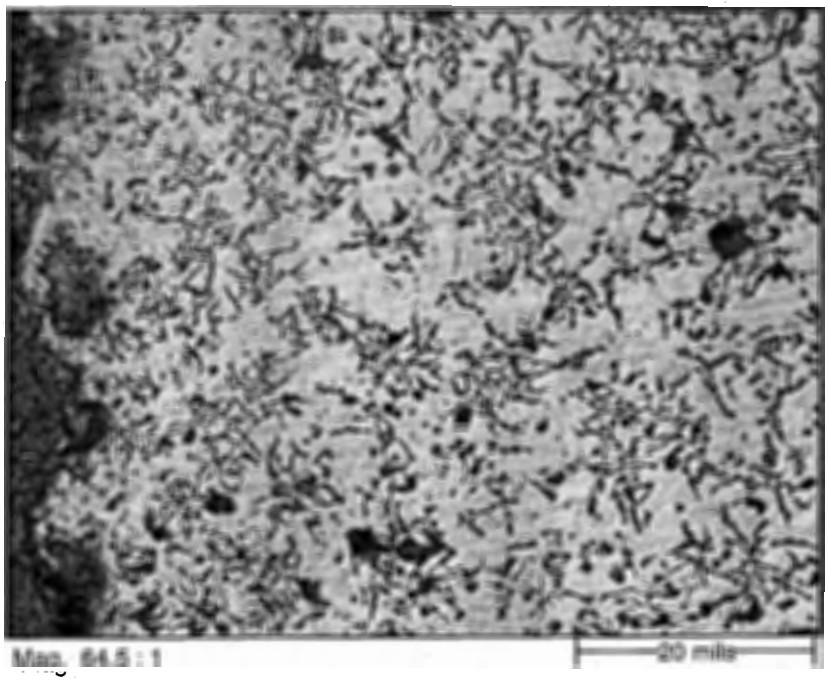


Figure 7: OD graphite form was predominantly Type A with some isolated tendency toward Type B rosette groupings. As-polished.

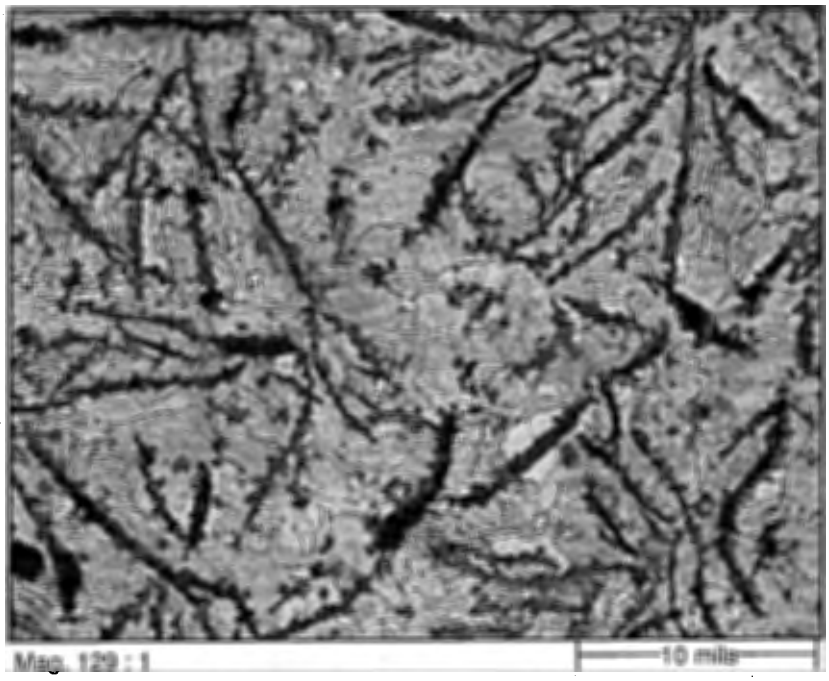


Figure 8: Overall view of predominantly pearlitic microstructure. Etchant: nital.

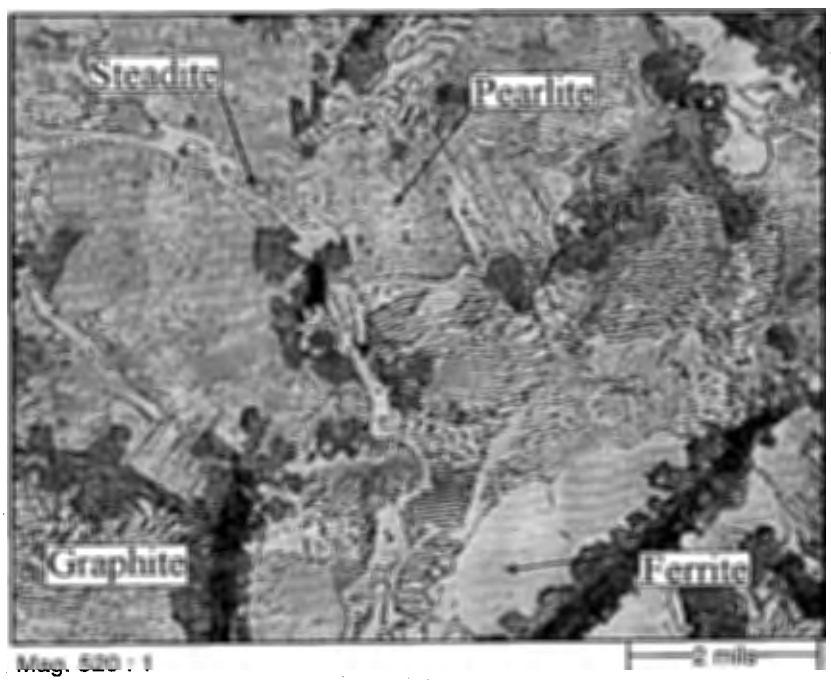
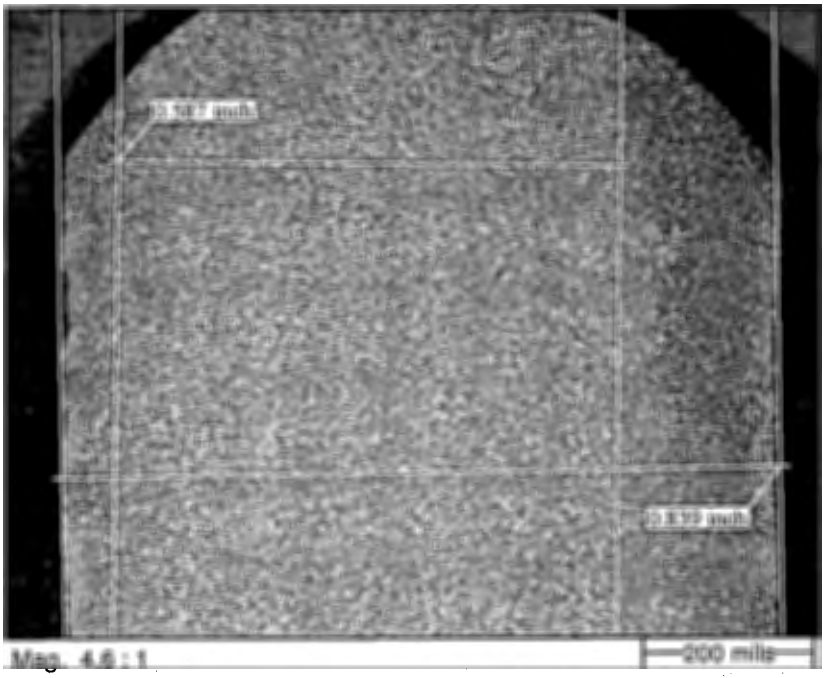


Figure 9: Detail of microstructure with phases labelled for clarity. Etchant: nital.



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New Main Same Trench Cost Estimate
Needham Street Water Main Design
Newton, Massachusetts

	Item	Units	Quantity	Unit Price	Cost
1	Mobilization	L.S.	1	$ 190,055.00	$ 190,055.00
2	Sawcut Bituminous Concrete Roadways	L.F.	7,200	$ 2.00	$ 14,400.00
3	Sawcut Reinforced Concrete Panels	L.F.	100	$ 10.00	$ 1,000.00
4	General Excavation	NA	0		$ -
5	Test Pits	C.Y.	200	$ 60.00	$ 12,000.00
6	Excavation Below Grade	C.Y.	250	$ 150.00	$ 37,500.00
7	Rock Removal	C.Y.	200	$ 75.00	$ 15,000.00
8	Gravel Borrow	TON	2,500	$ 1.00	$ 2,500.00
9	Dense Graded Crushed Stone	TON	1,500	$ 1.00	$ 1,500.00
10	Sand for Water Service Pipe Bedding	TON	300	$ 1.00	$ 300.00
11	3/4" Fractured Crushed Stone	TON	75	$ 25.00	$ 1,875.00
12	Control Density Fill	C.Y.	100	$ 115.00	$ 11,500.00
13	Class B Cement Concrete for Encasement	C.Y.	1,500	$ 1.00	$ 1,500.00
14	Dust Control (Chemical Treatment)	L.B.	5,000	$ 1.00	$ 5,000.00
15	Reset Existing Curb	L.F.	2,000	$ 20.00	$ 40,000.00
16	Temporary 7" Pavement	TON	1,500	$ 200.00	$ 300,000.00
17	MassDOT Mill & Overlay	TON	900	$ 250.00	$ 225,000.00
18	2" Bituminous Concrete Walks & Driveways (Patching Private Property)	S.Y.	150	$ 30.00	$ 4,500.00
19	3" Bituminous Concrete Walks & Driveways (Patching Public Property)	S.Y.	100	$ 50.00	$ 5,000.00
20	4" Cement Concrete Walks with Lampblack	S.Y.	300	$ 65.00	$ 19,500.00
21	6" Cement Concrete Driveway Aprons with Lampblack	S.Y.	75	$ 60.00	$ 4,500.00
22	Cold Patch	TON	500	$ 75.00	$ 37,500.00
23	Regrade, Loam, & Seed (Restore Loam Borders and/or Private Yards)	S.Y.	550	$ 5.00	$ 2,750.00
24	Materials Testing	ALL.	1	$ 12,000.00	$ 12,000.00
25	Miscellaneous Work Allowance (Engineers Discretionary Fund)	ALL.	1	$ 30,000.00	$ 30,000.00
26	Furnish & Mount Safety & Specialty Signboards (Less the Post System)	S.F.	75	$ 50.00	$ 3,750.00
27	Furnish, Establish, & Re-Establish the Post System for Mounted Signboards	S.F.	30	$ 25.00	$ 750.00
28	Safety Controls for Constrection Operations (Primary Portable Traffic Control Devices)	L.S.	1	$ 15,000.00	$ 15,000.00
29	Allowance for Payment of Uniformed Police Officers	ALL.	1	$ 160,000.00	$ 160,000.00
30	Vehicle Loop Detector	L.F.	250	$ 15.00	$ 3,750.00
31	Locate & Exercise Existing Water Main Gates to Determine Pre-Construction serviceability	EA.	10	$ 500.00	$ 5,000.00
32	Locate & Exercise Existing Hydrants to Determine Pre-Construction Serviceability	EA.	5	$ 200.00	$ 1,000.00
33	Acccess Pit, Removal, & Disposal of Water Gates or Hydrants that Lie Beyone the Project Limit	EA.	10	$ 250.00	$ 2,500.00
34	4" D.I. Water Main	L.F.	100	$ 60.00	$ 6,000.00
35	6" D.I. Water Main	L.F.	500	$ 80.00	$ 40,000.00
36	8" D.I. Water Main	L.F.	500	$ 120.00	$ 60,000.00
37	12" D.I. Water Main	L.F.	500	$ 150.00	$ 75,000.00
38	16" D.I. Water Main	L.F.	500	$ 200.00	$ 100,000.00
39	20" D.I. Water Main	L.F.	5,100	$ 210.00	$ 1,071,000.00
40	6" Fire Service	NA	0		$ -
41	6" Water Gate Valves with Sleeve, Box, and Cover	EA.	20	$ 2,500.00	$ 50,000.00
42	8" Water Gate Valves with Sleeve, Box, and Cover	EA.	5	$ 5,000.00	$ 25,000.00
43	12" Water Gate Valves with Sleeve, Box, and Cover	EA.	8	$ 7,500.00	$ 60,000.00
44	20" Butterfly Gate Valves with Sleeve, Box, and Cover	EA.	23	$ 10,000.00	$ 230,000.00
45	6" Insertion Valve with Sleeve, Box and Cover	EA.	5	$ 500.00	$ 2,500.00
46	8" Insertion Valve with Sleeve, Box, and Cover	EA.	5	$ 750.00	$ 3,750.00
47	12" Insertion Valve with Sleeve, Box, and Cover	EA.	5	$ 900.00	$ 4,500.00

New Main Same Trench Cost Estimate
Needham Street Water Main Design
Newton, Massachusetts

48	6" Hydrant	EA.	10	$	9,500.00	$	95,000.00
49	Remove and Dispose or Stockpile Hydrant	EA.	10	$	500.00	$	5,000.00
50	6" Bend	EA.	1	$	100.00	$	100.00
51	12" Bend	EA.	2	$	175.00	$	350.00
52	16" Bend	EA.	1	$	200.00	$	200.00
53	20" Bend	EA.	4	$	225.00	$	900.00
54	20" x 16" Reducer	EA.	2	$	500.00	$	1,000.00
55	12" x 8" Reducer	EA.	4	$	300.00	$	1,200.00
56	12" x 6" Reducer	EA.	5	$	150.00	$	750.00
57	6" x 4" Reducer	EA.	4	$	100.00	$	400.00
58	20" x 20" Mechanical Joint Tee	EA.	1	$	2,500.00	$	2,500.00
59	20" x 12" Mechanical Joint Tee	EA.	8	$	2,200.00	$	17,600.00
60	20" x 8" Mechanical Joint Tee	EA.	5	$	1,800.00	$	9,000.00
61	20" x 6" Mechanical Joint Tee	EA.	23	$	1,750.00	$	40,250.00
62	16" x 16" Mechanical Joint Tee	EA.	1	$	1,700.00	$	1,700.00
63	4" Megalug	EA.	15	$	5.00	$	75.00
64	6" Megalug	EA.	120	$	7.00	$	840.00
65	8" Megalug	EA.	50	$	9.00	$	450.00
66	12" Megalug	EA.	45	$	11.00	$	495.00
67	16" Megalug	EA.	15	$	13.00	$	195.00
68	20" Megalug	EA.	160	$	15.00	$	2,400.00
69	3/4" Diameter Threaded Steel Tie Rod Assembly (Complete in Place)	SET	25	$	20.00	$	500.00
70	Class B Cement Concrete Anchorage and/or Thrust Block	EA.	55	$	1.00	$	55.00
71	4" Mechanical Joint Solid Sleeve or Coupling	EA.	5	$	80.00	$	400.00
72	6" Mechanical Joint Solid Sleeve or Coupling	EA.	16	$	100.00	$	1,600.00
73	8" Mechanical Joint Solid Sleeve or Coupling	EA.	9	$	115.00	$	1,035.00
74	16" Mechanical Joint Solid Sleeve or Coupling	EA.	2	$	175.00	$	350.00
75	20" Mechanical Joint Solid Sleeve or Coupling	EA.	1	$	200.00	$	200.00
76	6" Cap	EA.	1	$	180.00	$	180.00
77	2" Preformed Pipe Insulation with Plastic Jacketing	L.F.	50	$	50.00	$	2,500.00
78	Test Pit to Determine Water Service Tubing Type	EA.	50	$	5.00	$	250.00
79	1" Copper Water Service Tubing	L.F.	400	$	30.00	$	12,000.00
80	1" Corporation	EA.	32	$	1,400.00	$	44,800.00
81	1" Curb Stop & Box	EA.	32	$	800.00	$	25,600.00
82	Nominal 5/8" -1" Water Service Coupling	EA.	32	$	50.00	$	1,600.00
83	2" Copper Water Service Tubing	L.F.	200	$	40.00	$	8,000.00
84	2" Corporation	EA.	14	$	3,200.00	$	44,800.00
85	2" Curb Stop & Box	EA.	14	$	2,000.00	$	28,000.00
86	2" Water Service Pipe Coupling	EA.	14	$	100.00	$	1,400.00
87	Temporary By-Pass Piping	L.S.	1	$	612,000.00	$	612,000.00
88	Pressure Test, Leakage Test, & Disinfection of Water Mains	L.S.	1	$	25,000.00	$	25,000.00
89	Water Sampling (by Laboratory Personanel)	ALL.	1	$	15,000.00	$	15,000.00
90	Supply & Deliver Rust & Stain Remover as Required	CTN.	4	$	25.00	$	100.00
91	Existing Drainage Repair (All Sizes)	L.F.	450	$	125.00	$	56,250.00
92	Silt Sacks	EA.	205	$	50.00	$	10,250.00
93	Existing Sewer Service Repair (All Sizes)	EA.	100	$	45.00	$	4,500.00
94	Tree Protection	EA.	200	$	50.00	$	10,000.00
95	Price Adjustment: Hot Mix Asphalt Mixtures	ALL.	1	$	5,000.00	$	5,000.00
96	Price Adjustment: Fuel	ALL.	1	$	5,000.00	$	5,000.00
					Sub-Total	$	3,991,155.00
					15% Contingency	$	598,673.25
					Total	$	4,589,828.25

CITY OF NEWTON, MASSACHUSETTS
PURCHASING DEPARTMENT
COMPARISON OF BIDS

INVITATION #20-29
Chestnut Street Water Main Cleaning & Lining

Bid Opening: November 14, 2019 at 11:00 am
Public Works/Engineering - James McGonagle

Bidders	N. Granese & Sons Inc.	Umbro & Sons Construction Corp	Biszko Contracting Corp	Dewcon, Inc
Chestnut Street Water Main Cleaning & Lining	$1,793,706.90	$1,847,000.47	$2,193,849.68	$2,293,087.73

Awarded to:

Chief Procurement Officer *Date*

Department Head Date

Mayor or her designee Date

NOTES REGARDING SUBMITTED BIDS

Bidders	QTY	N. Granese & Sons Inc.		Umbro & Sons Construction Corp		Biszko Contracting Corp	
ITEM DESCRIPTION & BID PRICE		Unit Price	Annual	Unit Price	Annual	Unit Price	Annual
1 - Mobilization & Demobilization	1	$15,000.00	$15,000.00	$85,000.00	$85,000.00	$100,000.00	$100,000.00
2 – SAWCUT BITUMINOUS CONCRETE ROADWAYS	4600	$0.01	$46.00	$5.00	$23,000.00	$1.00	$4,600.00
3 – GENERAL EXCAVATION	N/A				N/A		N/A
4 – TEST PITS	20	$25.00	$500.00	$50.00	$1,000.00	$0.01	$0.20
5 –EXCAVATION BELOW GRADE	15	$0.01	$0.15	$0.01	$0.15	$0.01	$0.15
6 – ROCK REMOVAL	15	$0.01	$0.15	$0.01	$0.15	$0.01	$0.15
7 – GRAVEL BORROW	400	$0.01	$4.00	$30.00	$12,000.00	$0.01	$4.00
8 – DENSE GRADED CRUSHED STONE	200	$0.01	$2.00	$50.00	$10,000.00	$0.01	$2.00
9 – SAND FOR WATER SERVICE PIPE BEDDING	250	$0.01	$2.50	$50.00	$12,500.00	$0.01	$2.50
10 - ¾" FRACTURED CRUSHED STONE	15	$0.01	$0.15	$75.00	$1,125.00	$0.01	$0.15
11 - CONTROLLED DENSITY FILL	50	$138.00	$6,900.00	$25.00	$1,250.00	$0.01	$0.50
12 – CLASS B CEMENT CONCRETE FOR ENCASEMENT	250	$0.01	$2.50	$0.01	$2.50	$0.01	$2.50
13 – DUST CONTROL (CHEMICAL TREATMENT)	1500	$0.01	$15.00	$0.01	$15.00	$0.01	$15.00
14 – RESET EXISTING CURB	300	$0.01	$3.00	$0.01	$3.00	$0.01	$3.00
15 – 1.5" Trench Milling and Overlay	275	$225.00	$61,875.00	$50.00	$13,750.00	$100.00	$27,500.00
16 – SEAM & CRACK SEALING (APPLIED AFTER THE PERMANANET PATCH OPERATION	150	$75.00	$11,250.00	$7.00	$1,050.00	$0.01	$1.50
17 – 2" BITUMINOUS CONCRETE WALKS & DRIVEWAYS (PATCHING PRIVATE PROPERT	50	$31.00	$1,550.00	$20.00	$1,000.00	$0.01	$0.50
18 – 3" BIT CONCRETE WALKS & DRIVEWAY APRONS (PATCHING PUBLIC PROPERTY)	100	$34.00	$3,400.00	$30.00	$3,000.00	$0.01	$1.00
19 – 4" CEMENT CONCRETE WALKS WITH LAMPBLACK	160	$100.00	$16,000.00	$40.00	$6,400.00	$40.00	$6,400.00
20 – 6" CEMENT CONCRETE DRIVEWAY APRONS WITH LAMPBLACK	20	$200.00	$4,000.00	$60.00	$1,200.00	$40.00	$800.00
21 – 4" TEMPORARY TRENCH PAVEMENT	170	$235.00	$39,950.00	$500.00	$85,000.00	$100.00	$17,000.00
22 - COLD PATCH	75	$0.01	$0.75	$150.00	$11,250.00	$110.00	$8,250.00
23 - Regrade, Loam, & Seed (Restore Loam Borders and/or Private Yards)	250	$5.00	$1,250.00	$5.00	$1,250.00	$0.01	$2.50
24- Materials Tested	1	$12,000.00		$12,000.00		$12,000.00	
25 – Miscellaneous Work Allowance (Engineers Discretionary Fund)	1	$30,000.00		$30,000.00		$30,000.00	
26 – Furnish & Mount Safety & Specialty Signboards (Less the Post System)	50	$50.00	$2,500.00	$50.00	$2,500.00	$0.01	$0.50
27 – FURNISH, ESTABLISH & RE-ESTABLISH THE POST SYSTEM FOR MOUNTED SIGNBOARDS	15	$200.00	$3,000.00	$25.00	$375.00	$0.01	$0.15
28– SAFETY CONTROLS FOR CONSTRUCTION OPERATIONS (PRIMARILY PORTABLE TRAFFIC CONTROL DEVICES)	1	$2,500.00	$2,500.00	$20,000.00	$20,000.00	$10,000.00	$10,000.00
29 – ALLOWANCE FOR PAYMENT OF UNIFORMED POLICE OFFICERS	1	$75,000.00		$75,000.00		$75,000.00	
30 - VEHICLE LOOP DETECTOR	50	$15.00	$750.00	$100.00	$5,000.00	$0.01	$0.50
31 – LOCATE & EXERCISE EXISTING WATER MAIN GATES TO DETERMINE PRE-CONSTRUCTION SERVICIBILITY	15	$500.00	$7,500.00	$500.00	$7,500.00	$0.01	$0.15
32 – LOCATE & EXERCISE EXISTING HYDRANTS TO DETERMINE PRE-CONSTRUCTION SERVICEABILITY	15	$50.00	$750.00	$250.00	$3,750.00	$0.01	$0.15
33- Access Pit, Removal, & Disposal of Water Gates or Hydrants that Lie Beyond the Project Limit	5	$250.00	$1,250.00	$250.00	$1,250.00	$0.01	$0.05
34–Access Pit, Removal, & Disposal of Obstructions Discovered During the Cleaning and Lining Operation	5	$250.00	$1,250.00	$250.00	$1,250.00	$0.01	$0.05
35 - 6" D.I. Water Main (Class 52 Cement Lined & Dispose of Existing Pipe(s))	200	$15.00	$3,000.00	$150.00	$30,000.00	$80.00	$16,000.00
36 - 8" D.I. Water Main (Class 52 Cement Lined & Dispose of Existing Pipe(s))	450	$20.00	$9,000.00	$150.00	$67,500.00	$120.00	$54,000.00
37 - 10" D.I. Water Main (Class 52 Cement Lined & Dispose of Existing Pipe(s))	20	$25.00	$500.00	$150.00	$3,000.00	$125.00	$2,500.00
38 - 12" D.I. Water Main (Class 52 Cement Lined & Dispose of Existing Pipe(s))	720	$30.00	$21,600.00	$150.00	$108,000.00	$175.00	$126,000.00
39– 16" D.I. Water Main (Class 52 Cement Lined & Dispose of Existing Pipe(s))	50	$35.00	$1,750.00	$200.00	$10,000.00	$200.00	$10,000.00
40– Clean and Line Existing 12" Pipe	4075	$103.00	$419,725.00	$50.00	$203,750.00	$110.00	$448,250.00
41 – 6" Fire Service	n/a				N/A		N/A
42 – 6" WATER GATE VALVE WITH SLEEVE, BOX & COVER	8	$6,000.00	$48,000.00	$2,500.00	$20,000.00	$2,500.00	$20,000.00
43 – 8" WATER GATE VALVE WITH SLEEVE, BOX & COVER	17	$6,000.00	$102,000.00	$5,000.00	$85,000.00	$5,000.00	$85,000.00
44 – 12" WATER GATE VALVE WITH SLEEVE, BOX & COVER	21	$6,000.00	$126,000.00	$7,500.00	$157,500.00	$8,000.00	$168,000.00
45–16" Water Butterfly Valves with Sleeve, Box, and Cover	2	$9,000.00	$18,000.00	$9,500.00	$19,000.00	$7,500.00	$15,000.00
46- 6" Insertion Valve with sleeve, box & cover	5	$0.01	$0.05	$500.00	$2,500.00	$0.01	$0.05
47- 8" Insertion Valve with sleeve, box & cover	5	$0.01	$0.05	$750.00	$3,750.00	$0.01	$0.05
48- 12" Insertion Valve with sleeve, box & cover	5	$0.01	$0.05	$900.00	$4,500.00	$0.01	$0.05
49- 6: Hydrant	8	$8,000.00	$64,000.00	$9,500.00	$76,000.00	$15,000.00	$120,000.00
50 – REMOVE AND DISPOSE OR STOCKPILE HYDRANT	7	$500.00	$3,500.00	$2,000.00	$14,000.00	$0.01	$0.07
51 – 8" BEND	12	$100.00	$1,200.00	$500.00	$6,000.00	$0.01	$0.12
52 – 12" Bend	5	$200.00	$1,000.00	$1,000.00	$5,000.00	$0.01	$0.05
53- 16" x 12" Cross	1	$900.00	$900.00	$2,000.00	$2,000.00	$0.01	$0.01
54- 12" x 8" Cross	2	$350.00	$700.00	$1,500.00	$3,000.00	$0.01	$0.02

Bidders		N. Granese & Sons Inc.		Umbro & Sons Construction Corp		Biszko Contracting Corp	
ITEM DESCRIPTION & BID PRICE		Unit Price	Annual	Unit Price	Annual	Unit Price	Annual
55 – 16" X 10" REDUCER	1	$300.00	$300.00	$1,000.00	$1,000.00	$0.01	$0.01
55 – 12" X 10" REDUCER	1	$110.00	$110.00	$600.00	$600.00	$0.01	$0.01
56 – 8" X 6" REDUCER	11	$500.00	$5,500.00	$500.00	$5,500.00	$0.01	$0.11
57 – 12"x 12" MECHANICAL JOINT TEE	2	$250.00	$500.00	$1,200.00	$2,400.00	$0.01	$0.02
58 – 12"x 8" MECHANICAL JOINT TEE	12	$250.00	$3,000.00	$1,000.00	$12,000.00	$0.01	$0.12
59 – 12"x 6" MECHANICAL JOINT TEE	8	$250.00	$2,000.00	$900.00	$7,200.00	$0.01	$0.08
60 – 6" MEGALUG	76	$40.00	$3,040.00	$4.00	$304.00	$0.01	$0.76
61 – 8" MEGALUG	108	$50.00	$5,400.00	$5.00	$540.00	$0.01	$1.08
62 – 10" MEGALUG	6	$75.00	$450.00	$8.00	$48.00	$0.01	$0.06
63 – 12" MEGALUG	198	$90.00	$17,820.00	$12.00	$2,376.00	$0.01	$1.98
64 – 16" Megalug	11	$175.00	$1,925.00	$18.00	$198.00	$0.01	$0.11
65– ¾" DIAMETER THREADED STEEL TIE ROD ASSEMBLY (COMPLETE IN PLACE)	215	$40.00	$8,600.00	$20.00	$4,300.00	$0.01	$2.15
66 – CLASS B CEMENT CONCRETE ANCHORAGE AND/OR THRUST BLOCK	25	$0.01	$0.25	$40.00	$1,000.00	$0.01	$0.25
67 – 6" MECHANICAL JOINT SOLID SLEEVE OR COUPLING	11	$500.00	$5,500.00	$600.00	$6,600.00	$0.01	$0.11
68 – 8" MECHANICAL JOINT SOLID SLEEVE OR COUPLING	6	$110.00	$660.00	$800.00	$4,800.00	$0.01	$0.06
69 – 10" MECHANICAL JOINT SOLID SLEEVE OR COUPLING	2	$160.00	$320.00	$900.00	$1,800.00	$0.01	$0.02
70 – 12" MECHANICAL JOINT SOLID SLEEVE OR COUPLING	41	$190.00	$7,790.00	$1,100.00	$45,100.00	$0.01	$0.41
71 – 16" MECHANICAL JOINT SOLID SLEEVE OR COUPLING	1	$500.00	$500.00	$1,200.00	$1,200.00	$0.01	$0.01
72 – 6" CAP	9	$180.00	$1,620.00	$300.00	$2,700.00	$0.01	$0.09
73 – 8" CAP	1	$230.00	$230.00	$400.00	$400.00	$0.01	$0.01
74 – 12" CAP	1	$540.00	$540.00	$500.00	$500.00	$0.01	$0.01
75 - 2" Preferred pipe Insulation with Plastic Jacketing	25	$50.00	$1,250.00	$0.01	$0.25	$0.01	$0.25
76 – Test Pit to Determine Water Service Tubing Type	30	$50.00	$1,500.00	$0.01	$0.30	$0.01	$0.30
77 – 1" COPPER WATER SERVICE TUBING	1250	$30.00	$37,500.00	$5.00	$6,250.00	$10.00	$12,500.00
78 – 1" CORPORATION	67	$1,250.00	$83,750.00	$1,250.00	$83,750.00	$1,500.00	$100,500.00
79 – 1" CURB STOP & BOX	62	$500.00	$31,000.00	$100.00	$6,200.00	$1,000.00	$62,000.00
80 – NOMINAL 5/8" - 1" WATER SERVICE Fitting	67	$25.00	$1,675.00	$25.00	$1,675.00	$0.01	$0.67
81– 1.25" Water Service Pipe Fitting	10	$250.00	$2,500.00	$25.00	$250.00	$0.01	$0.10
82 – 1.5" COPPER WATER SERVICE TUBING	200	$35.00	$7,000.00	$15.00	$3,000.00	$10.00	$2,000.00
83 – 1.5" CORPORATION	11	$3,200.00	$35,200.00	$1,500.00	$16,500.00	$1,500.00	$16,500.00
84 – 1.5" CURB STOP & BOX	9	$500.00	$4,500.00	$250.00	$2,250.00	$1,000.00	$9,000.00
85- 1.5" Water Service Pipe Fitting	1	$100.00	$100.00	$100.00	$100.00	$0.01	$0.01
86– TEMPORARY BY-PASS PIPING	1	$350,000.00	$350,000.00	$306,003.00	$306,003.00	$600,000.00	$600,000.00
87 – PRESSURE TEST, LEAKAGE TEST & DISINFECTION OF WATER MAIN(S)	1	$1,500.00	$1,500.00	$15,000.00	$15,000.00	$10,000.00	$10,000.00
88 – Water Sampling (by Laboratory Personnel)	1	$15,000.00		$15,000.00		$15,000.00	
89 - Supply & Deliver Rust & Stain Remover as Required	1	$250.00	$250.00	$24.82	$24.82	$0.01	$0.01
90– Cleaning and Lining Pits	20	$0.01	$0.20	$0.01	$0.20	$0.01	$0.20
91– Additional Cleaning and Lining Pits Beyond the Scope of Work	5	$0.01	$0.05	$0.01	$0.05	$0.01	$0.05
92– Mismarked Main (Cleaning and Lining Trenches Only)	5	$0.01	$0.05	$0.01	$0.05	$0.01	$0.05
93– Existing Drainage Repair (All Sizes)	150	$125.00	$18,750.00	$150.00	$22,500.00	$0.01	$1.50
94– Silt Sacks	56	$50.00	$2,800.00	$85.00	$4,760.00	$0.01	$0.56
95 – Existing Sewer Service Repair (All Sizes)	50	$50.00	$2,500.00	$45.00	$2,250.00	$0.01	$0.50
96 – Tree Protection	40	$50.00	$2,000.00	$50.00	$2,000.00	$0.01	$0.40
97 – Price Adjustment: Hot Mix Asphalt Mixtures	1	$5,000.00		$5,000.00		$5,000.00	
98 – Price Adjustment: Fuel	1	$5,000.00		$5,000.00		$5,000.00	
Total Bid Items		**$1,793,706.90**		**$1,847,000.47**		**$2,193,849.68**	

165-20

_____

RECEIVED

2020 FEB 26 AM 10:53

CITY CLERK
NEWTON, MA. 02459

CITY COUNCIL
CITY OF NEWTON

DOCKET REQUEST FORM

DEADLINE NOTICE: Council require items to be docketed with the Clerk of the Council NO LATER THAN 7:45 P.M. TUESDAY, PRIOR TO THE MONDAY FULL COUNCIL MEETING in order to be voted to be assigned to Committee(s) that evening.

To: Clerk of the City Council **Date:** February 25, 2020

From (Docketer): Lara Kritzer, for Community Preservation Committee

Address/phone/email: Planning & Development Dept., Newton City Hall, lkritzer@newtonma.gov, 617-796-1144

Additional sponsors:

1. Please docket the following item (edit if necessary):

The COMMUNITY PRESERVATION COMMITTEE recommending that $1,105,000 in CPA funding for the support of Community Housing be awarded to the Newton Housing Authority for the Acquisition of the CAN-DO Housing Portfolio.

2. The purpose and intended outcome of this item is:

____ Fact-finding & discussion
__✓__ **Appropriation, transfer, expenditure, or bond authorization**
____ Special permit, site plan approval, zone change (public hearing required)
____ Ordinance change
____ Resolution
____ License or renewal
____ Appointment confirmation
____ Other

3. I recommend that this item be assigned to the following committees:

___ Programs & Services
___ Zoning & Planning
___ Public Facilities
___ Post Audit & Oversight
__✓__ Finance
___ Public Safety
__✓__ Land Use
___ Real Property
___ Special Committee
___ No Opinion

4. This item should be taken up in committee:

___ Immediately (Emergency only, please). Please state nature of emergency: _____
__✓__ **As soon as possible, preferably within a month**
___ In due course, at discretion of Committee Chair
___ When certain materials are made available, as noted in 7 & 8 below
___ Following public hearing

PLEASE FILL OUT REVERSE SIDE

5. I estimate that consideration of this item will require approximately:

____ One half hour or less
____ More than one hour
____ More than one meeting
__✓__ Up to one hour
____ An entire meeting
____ Extended deliberation by subcommittee

6. The following people should be notified and asked to attend deliberations on this item. (Please check those with whom you have already discussed the issue, *especially relevant Department Heads*):

City personnel

Lara Kritzer, CPA Program Manager, x1144, lkritzer@newtonma.gov

Barney Heath, Director, Planning & Development x1131, bheath@newtonma.gov

Project sponsor

Amy Zarechian, Executive Director, Newton Housing Authority, 617-552-5501 azarechian@newtonhousing.org

7. The following background materials and/or drafts should be obtained or prepared by the Clerk's office prior to scheduling this item for discussion *:

8. I ___ have or __✓__ intend to provide additional materials and/or undertake the following research independently prior to scheduling the item for discussion. *

CPC funding recommendation, with proposal and supporting documents.

*(*Note to docketer: Please provide any additional materials beyond the foregoing to the Clerk's office by 2 p.m. on Thursday before the upcoming Committee meeting when the item is scheduled to be discussed so that Councilors have a chance to review all relevant materials before a scheduled discussion. Materials not submitted 48 hours in advance of a meeting to discuss an item will require a vote to suspend the rules the night of the Committee's discussion.)*

Please check the following:

9. ____ I would like to discuss this item with the Chairman before any decision is made on how and when to proceed.

10. __✓__ I would like the Clerk's office to contact me to confirm that this item has been docketed,

__✓__ and inform me of the docket item number.

Email contact **preferred:** lkritzer@newtonma.gov

My daytime phone number is: 617-796-1144

11. __✓__ I would like the Clerk's office to notify me when the Chairman has scheduled the item for discussion.

Thank you.

Lara Kritzer

Signature of person docketing the item

[Please retain a copy for your own records]

City of Newton

Ruthanne Fuller
Mayor

City of Newton, Massachusetts
Department of Planning and Development
1000 Commonwealth Avenue Newton, Massachusetts 02459

165-20
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(617) 796-1089
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Barney S. Heath
Director

Community Preservation Committee Funding Recommendation for Newton Housing Authority Acquisition of CAN-DO Housing Portfolio

Date: March 5, 2020
From: Community Preservation Committee
To: The Honorable City Council
Cc: Her Honor Mayor Ruthanne Fuller

PROJECT GOALS & ELIGIBILITY This project provides funding for the Newton Housing Authority's acquisition of 33 affordable housing units currently owned by the Citizens for Affordable Housing in Newton Development Organization (CAN-D0). These units serve low-income households located in 12 scattered sites projects throughout Newton. This project will preserve and stabilize this important portfolio by reducing its bank debt and addressing its immediate capital needs. As a result, the portfolio's rental income, which is limited by its permanent income restrictions, will be able to cover both future capital needs and resident services. The Newton Housing Authority has extensive experience in managing affordable housing units and their proposal plans for both a reserve fund for future capital needs as well as additional staffing to provide necessary services for its residents. The individuals and families served by these units are identified as priority populations in the City's FY16-FY20 Consolidated Plan. This project is CPA-eligible as the support of affordable housing.

RECOMMENDED FUNDING On February 10, 2020, the Community Preservation Committee voted 8-0 (member Robert Maloney absent) to recommend appropriating $1,105,000 from the Community Preservation Fund's current reserve and fund balance for housing, and as needed from its FY20 unrestricted reserve, to the control of the Planning & Development Department for a grant to the Newton Housing Authority for the purpose of acquiring the CAN-DO housing portfolio and any other related expenses as stated below:

USES of FUNDS	
Bank debt repayments, financing fees (new debt, CPA, CDBG)	$1,929,148
Reserves (replacement $500,000, operating $250,000)	$750,000
Capital Improvements (CDBG)	$551,352
Services & Fees (legal, recording, development consultant, appraisal)	$224,500
TOTAL USES	**$3,455,000**
SOURCES of FUNDS	
Newton Housing Authority (contribution)	$250,000
Village Bank ($250,000 grant + new/refinanced debt)	$900,000
CPA	$1,105,000
CDBG	$1,200,000
TOTAL SOURCES	**$3,455,000**

SPECIAL ISSUES CONSIDERED BY THE CPC

During the CPC's public hearing on this project, members unanimously expressed their support for the NHA's proposal and project goals. Newton has a critical need for affordable housing and the CPC's recommendation considered both the importance of preserving the City's existing affordable housing inventory as well as the fact that these units serve some of Newton's most vulnerable households. Members agreed that the NHA had worked hard with the Planning staff to develop a well thought out proposal to integrate the new units into their existing housing portfolio that takes into consideration both the maintenance needs of these properties and the services required by their residents. The project has received numerous letters of support from Newton affordable housing organizations.

The CPC also recognized that this project is well leveraged with only 32% of the overall project funding requested from CPA funds. The rest of the funding is divided between CDBG funding (35%), a new loan from The Village Bank (TVB) (19%), and funding grants from The Village Bank and NHA (14%). The CPC also noted that the units already have affordable housing restrictions in place.

ADDITIONAL RECOMMENDATIONS *(funding conditions)*

1. The CPC assumes all recommended funds will be appropriated, and the transfer of the portfolio to the Housing Authority will be completed, within twelve (12) months after the date of this recommendation. If this deadline cannot be met, the Housing Authority should submit a written request to the CPC to extend that deadline.
2. The release of CPA funds for the project will be governed by a detailed grant agreement that includes but is not limited to conditions which are generally agreed upon and required for a CPA-funded housing project including the initial release of funds upon the submission of required documentation and the direct payment of funds to the bank(s) for payment of past debt.
3. Any CPA funds appropriated but not used for the purposes stated herein should be returned to the Newton Community Preservation Fund.

KEY OUTCOMES

The Community Preservation Committee will evaluate this project based on its success in using Newton CPA funds to preserve CAN-DO's income-restricted housing portfolio as well as the supportive services and capital needs improvements described in the Housing Authority's proposal, which will rely on non-CPA funding sources. The timeliness of the project and the Housing Authority's ability to meet the completion deadline for the project will also be considered.

ATTACHMENTS

(delivered to the clerks of the Land Use Committee and Finance Committee)

- Revised Proposal letter and selected attachments submitted to the CPC on January 29, 2020
- Planning Department's Memorandum submitted for the February 11 joint Planning Board/CPC Meeting
- Presentation from February 11, 2020 CPC public hearing
- Copy of CPC project webpage, with links to additional information not attached to this recommendation: http://www.newtonma.gov/gov/planning/cpa/projects/housing_authority.asp#NHA-CAN-DO-portfolio

CPC staff note: This updated 29 January 2020 submission includes: cover letter, bank term sheet, and updated project financial tables. All other attachments submitted 2 January 2020 remain valid.

NEWTON HOUSING AUTHORITY
82 Lincoln Street
Newton Highlands, Massachusetts 02461

Telephone: (617) 552-5501
Telecopier: (617) 964-8387
TD: (617) 332-3802

Amy Zarechian
Executive Director

January 29, 2020

Community Preservation Committee
Planning and Development Board
C/o Amanda Berman, Director of Housing and Community Development
Planning and Development Department
City of Newton
1000 Commonwealth Avenue
Newton, MA 02459

Re: NHA Acquisition of CAN-DO Portfolio

Dear Ms. Berman,

Following its presentation to the Newton Housing Partnership on January 7, 2020, the Newton Housing Authority (NHA) has worked closely with the City of Newton's Department of Planning and Development staff and their consultant to address questions raised by the Newton Housing Partnership regarding the NHA's proposed acquisition of the 33-unit CAN-DO (Citizens for Affordable Housing in Newton Development Organization) real estate portfolio.

Through this collaborative effort, the NHA has made the following changes to its proposal and requests that this current version replace the full proposal previously submitted.

- NHA will acquire the CAN-DO portfolio in a transaction in which the existing private debt from the Village Bank, Cambridge Savings Bank, and the Boston Community Loan Fund will be paid down, and the NHA will assume all deferred financing and related affordable housing use agreements from various public agencies, including the City and CPA. No cash consideration will be paid to any party for the acquisition.
- At the suggestion of the City's Department of Planning and Development, the NHA has increased its request for CDBG funds to $1,200,000 to address immediate capital needs and fund a portion of the elimination of existing private debt, allowing for a decrease in the amount of new private debt from the Village Bank to $650,000, which will also fund a portion of the private debt elimination.
- In addition, the request for CPA funds to be used to fund the remaining portion of the private debt elimination has been reduced to $1,105,000.
- In response to comments from the Newton Housing Partnership regarding potential under estimation of construction costs and service needs for the portfolio, the new proposal increases the capital budget by 15% and the supportive services budget to $1,000 per unit per year.
- The new proposal also allows for an increase in the annual contribution to the replacement reserve to $2,000 per unit per year from operating income and eliminates the need for proceeds from the new Village Bank debt to be placed into the replacement reserve.
- The new Village Bank debt will be used to create a $250,000 operating reserve, as well as cover the predevelopment and closing costs.
- The Village Bank's generous $250,000 grant and the NHA's own contribution of $250,000 will continue to be placed into the replacement reserve in annual $25,000 installments over a period of ten years.

The NHA is confident that this revised proposal responds to the concerns of the Newton Housing Partnership and the Department of Planning and Development, provides sufficient funds to address current and future capital needs and reduce debt, and ensures sustainable management of this important portfolio.

We look forward to meeting with the Community Preservation Committee and Planning and Development Board to discuss our proposal further.

Thank you for all your help through this process.

Sincerely,

Amy Zarechian
Executive Director
Newton Housing Authority
82 Lincoln Street
Newton Highlands, MA 02461

CPC staff note: Submitted 29 January 2020.

THE Village Bank

January 27, 2020

Amy Zarechian
Executive Director
Newton Housing Authority
82 Lincoln Street
Newton, MA 02461

Amy:

I am pleased to submit this Term Sheet for your consideration. The Village Bank (the "Bank") will provide Newton Housing Authority with financing and a grant for the CAN-DO properties as detailed below.

1) Borrower:

Newton Housing Authority

2) Purpose:

To provide partial financing for the purchase of the CAN-DO properties.

3) Loan Amount:

$650,000

4) Terms:

Thirty (30) year maturity and thirty (30) year amortization

5) Interest Rates:

Fixed at 4.75%

6) Fees:

Whether or not the Loans close, the Borrower is responsible for paying all closing costs, including, but not limited to, legal, appraisal, recording, flood certification and tax service fees incurred by the Bank.

THE Village Bank

7) Repayment:

The loan will amortize over thirty (30) years. Monthly principal and interest payments will be approximately $3,418. Payments will be made in arrears and interest on the unpaid balance shall be computed on a 365/360 basis; that is, by applying the ratio of the annual interest rate over a year of 360 days, multiplied by the outstanding principal balance, multiplied by the actual number of days the principal balance is outstanding.

8) Security:

First real estate mortgage and assignment of rents on:

12-13 Cambria Road, Newton
18-20 Cambria Road, Newton
163 Jackson Road, Newton
20-22 Falmouth Road, Newton
54 Eddy Street, Newton
2148 Commonwealth Avenue, Newton a/k/a Veterans House

9) Guarantors:

None

10) Depository Account(s):

The Borrower must maintain its main operating checking account(s) at the Bank.

11) Prepayment

There is no prepayment penalty

12) Grant:

The Bank will provide Newton Housing Authority with a $250,000 grant payable $25,000 annually for ten years. The first grant payment will be made in 2020. The use of the grant will be restricted to funding replacement reserves for the properties securing the subject loans.

Sincerely,

Andrew Franklin
Senior Vice President

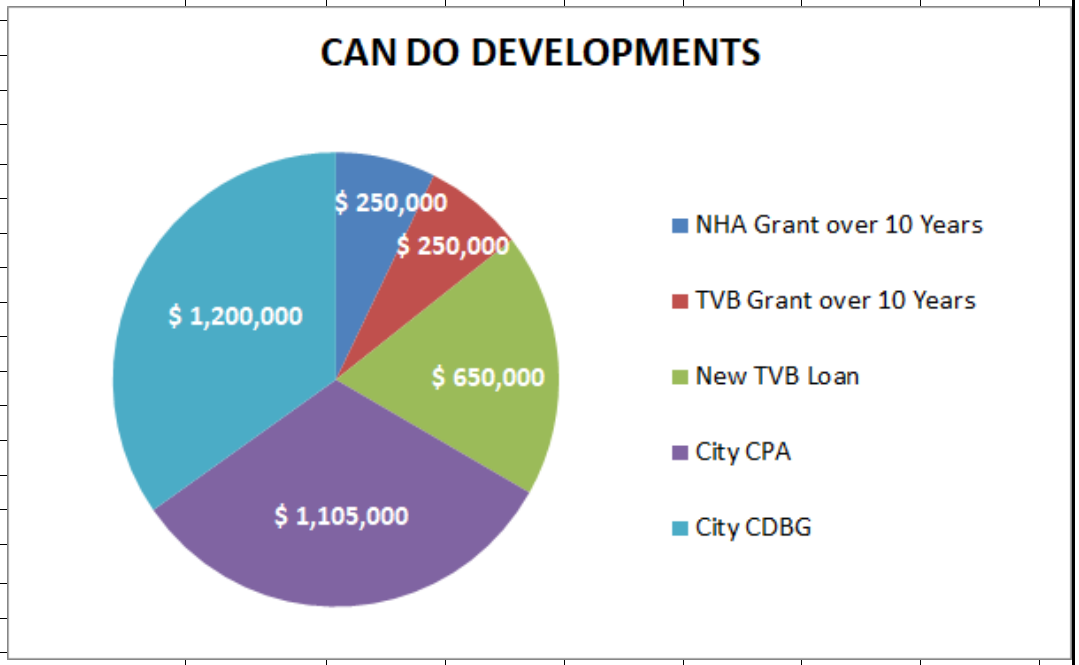
29 January 2020

NHA Acceptance of CAN-DO Portfolio, CPA/CDBG PROPOSAL REVISIONS

SOURCES FOR USES

Can-Do Developments **25-01-20**

SOURCES		
NHA Grant over 10 Years	250,000	
TVB Grant over 10 Years	250,000	
New TVB Loan	650,000	[1]
City CPA	1,105,000	
City CDBG	1,200,000	
TOTAL SOURCES	**3,455,000**	
USES		
TVB Loan Repayment	1,498,784	
CSB Loan Repayment	343,486	
BCLF Loan Repayment	80,378	
Replacement Reserve	500,000	
Operating Reserve	250,000	
Capital Improvements	551,352	[2]
Financing Fees (1%)	6,500	
Legal Fees	150,000	
Title & Recording	40,000	
Development Consultant	30,000	
Appraisal	4,500	
TOTAL USES	**3,455,000**	
SURPLUS / (DEFICIT)	**0**	



[1] New TVB Debt at 4.75%, 30 year amortization.

[2] To fund capital needs in 2020.

NHA Acceptance of CAN-DO Portfolio, CPA/CDBG PROPOSAL REVISIONS 29 January 2020							
USES FOR SOURCES							
Can-Do Developments						**25-01-20**	
			New TVB	**City**	**City CDBG**	**TOTAL**	
SOURCES	**NHA**	**TVB**	**Loan**	**CPA**		**SOURCES**	
TVB Loan Repayment			169,000	681,136	648,648	1,498,784	
CSB Loan Repayment				343,486		343,486	
BCLF Loan Repayment				80,378		80,378	
Replacement Reserve	250,000	250,000				500,000	
Operating Reserve			250,000			250,000	
Capital Improvements					551,352	551,352	
Financing Fees (1%)			6,500			6,500	
Legal Fees			150,000			150,000	
Title & Recording			40,000			40,000	
Development Consultant			30,000			30,000	
Appraisal			4,500			4,500	
USES	**250,000**	**250,000**	**650,000**	**1,105,000**	**1,200,000**	**3,455,000**	
SURPLUS / (DEFICIT)	**-**	**-**	**-**	**-**	**0**	**0**	

NHA Acceptance of CAN-DO Portfolio, CPA/CDBG PROPOSAL REVISIONS 29 January 2020											
CAN DO vs. NHA OPERATING											25-01-20
	CAN DO					NHA					
	Audit	Per	Unaudited	Per		NHA	NHA	NHA	Per	*Footnotes*	Higher of
Can-Do Developments	2017	33 Units	2018	33 Units		12-31-18	57 Units	with Can Do	90 Units	*(p. 2)*	Can Do & NHA
Rental Income											
Rental Subsidy	555,933	16,846	580,915	17,603		-	-	-	-		-
Vacancies & Bad Debt	(15,068)	(457)	(1,744)	(53)		-	-	-	-		-
Laundry & Miscellaneous	3,822	116	3,905	118		-	-	-	-		-
Rental Income	**544,687**	**16,506**	**583,076**	**17,669**		**-**	**-**	**-**	**-**		**-**
Rental Expenses											
Salaries	21,045	638	62,797	1,903		-	-	-	-		-
Taxes & Benefits	5,789	175	4,930	149		-	-	-	-		-
Consultants	19,788	600	-	-		-	-	-	-		-
Office Rent	-	-	-	-		-	-	-	-		-
Condo Fees	8,971	272	5,900	179		-	-	-	-		-
Advertising & Marketing	-	-	400	12		-	-	-	-		-
Telephone & Internet	613	19	-	-		-	-	-	-		-
Audit & Payroll Services	-	-	-	-		-	-	-	-		-
Filing Fees	-	-	500	15		-	-	-	-		-
Bank Charges	-	-	306	9		-	-	-	-		-
Supplies	-	-	87	3		-	-	-	-		-
Miscellaneous	914	28	137	4		-	-	-	-		-
Subtotal Administrative	**57,120**	**1,731**	**75,056**	**2,274**		**233,176**	**4,091**	**308,176**	**3,424**	1	**3,424**
Maintenance	128,546	3,895	71,987	2,181		-	-	-	-		-
Janitorial	-	-	-	-		-	-	-	-		-
Repairs	-	-	50,251	1,523		-	-	-	-		-
Landscaping & Snow Removal	-	-	-	-		-	-	-	-		-
Extermination	-	-	150	5		-	-	-	-		-
Vehicle Expense	-	-	-	-		-	-	-	-		-
Subtotal Maintenance	**128,546**	**3,895**	**122,388**	**3,709**		**158,514**	**2,781**	**277,714**	**3,316**	2	**3,709**
Supportive Services	5,544	168	2,970	90		-	-	33,000	1,000	3	1,000
Security	-	-	-	-		-	-	-	-		-
Utilities	61,957	1,877	75,580	2,290		113,849	1,997	179,762	1,997	4	2,290
Real Estate Taxes	71,379	2,163	66,927	2,028		-	-	-	-		-
Insurance	26,110	791	34,018	1,031		42,314	742	66,812	742	5	1,031
Rental Expenses	**350,656**	**10,626**	**376,939**	**11,422**		**547,853**	**9,611**	**865,463**	**10,480**		**11,454**

NHA Acceptance of CAN-DO Portfolio, CPA/CDBG PROPOSAL REVISIONS 29 January 2020												
CAN DO vs. NHA OPERATING												25-01-20
[1] Adds $70,000 to Administrative salaries + $5,000 to Legal prorated over 90 units.												
[2] Adds $80,000 + 34% Taxes & Benefits to Maintenance salaries prorated over 90 units + $12,000 Turnover prorated over 33 units only.												
[3] Supportive Service prorated over 33 units only.												
[4] Utilities prorated over 90 units.												
[5] Insurance prorated over 90 units.												

NHA Acceptance of CAN-DO Portfolio, CPA/CDBG PROPOSAL REVISIONS 29 January 2020														
2019 NOI assuming NHA Operating														**01-25-20**
									20-22		**61 Pearl Street**		**14 Nonantum Place**	
Can-Do Developments	**10-11 Cambria Road**		**11-13 Cambria Road**		**18-20 Cambria Road**		**163 Jackson Road**		**Falmouth Road**		**Park House**		**Garfield House**	
Number of Units	2	units	2	units	2	units	2	units	2	units	3	units	3	units
Monthly Rent	1,575	NHA	916	NHA	1,700	MBHP	1,600	NHA	1,625	NHA	1,255	N/A	2,100	NHA
	1,691	NHA	1,573	WHA	2,330	NHA	2,000	NHA	1,608	MBHP	1,255	N/A	2,327	NHA
											1,464	NHA	2,419	NHA
Gross Possible Rent	**39,192**		**29,868**		**48,360**		**43,200**		**38,796**		**47,688**		**82,152**	
Vacancy (15%)	(5,879)		(4,480)		(7,254)		(6,480)		(5,819)		(7,153)		(12,323)	
Net Effective Income	**33,313**		**25,388**		**41,106**		**36,720**		**32,977**		**40,535**		**69,829**	
Max Can Do or NHA Expenses														
Administrative	6,848		6,848		6,848		6,848		6,848		10,273		10,273	
Maintenance	7,417		7,417		7,417		7,417		7,417		11,126		11,126	
Supportive Services	2,000		2,000		2,000		2,000		2,000		3,000		3,000	
Replacement Reserve	4,000		4,000		4,000		4,000		4,000		6,000		6,000	
Utilities	4,581		4,581		4,581		4,581		4,581		6,871		6,871	
Real Estate Taxes	-		-		-		-		-		-		-	
Insurance	2,062		2,062		2,062		2,062		2,062		3,093		3,093	
Total Expenses	**26,908**		**26,908**		**26,908**		**26,908**		**26,908**		**40,362**		**40,362**	
Net Operating Income	**6,405**		**(1,520)**		**14,198**		**9,812**		**6,068**		**173**		**29,467**	
Debt Service														
TVB	-		16,202	5.00%	20,768	5.75%	20,992	5.25%	19,619	4.50%	-		9,417	6.00%
TVB Balance				199,486		189,838		219,492		216,424				97,672
CSB	-		-		6,896	4.50%	-		-		14,644	4.50%	-	
CSB Balance						109,987						233,499		
BCLF	-		-		-		-		-		-		-	
BCLF Balance														
Total Debt Service	**-**		**16,202**		**27,663**		**20,992**		**19,619**		**14,644**		**9,417**	
Net Cash Flow	**6,405**		**(17,723)**		**(13,465)**		**(11,180)**		**(13,551)**		**(14,471)**		**20,050**	
													CEDAC HIF	
Loan Balances	**01-01-20**													
TVB	1,498,784													
CSB	343,486													
BCLF	80,378													
Loan Balances	**1,922,648**													

NHA Acceptance of CAN-DO Portfol NHA Acceptance of CAN-DO Portfolio, CPA/CDBG PROPOSAL REVISIONS 29 January 2020													
2019 NOI assuming NHA Operating													**25-01-20**
	90 Christina Street		**2148 Commonwealth**						**228 Webster Street**			**2019**	
Can-Do Developments	**Kayla House**		**Veterans House**		**54 Eddy Street**		**54 Taft Avenue**		**Webster House**			**TOTAL**	
Number of Units	5	units	2	units	2	units	2	units	6	respite units		33	units
Monthly Rent	1,926	NHA	1,612	CHA	1,392	MBHP	2,112	NHA	975	NWW - NHA			
	1,926	NHA	1,826	BHA	2,000	NHA	938	MBHP	895	NWW - NHA			
	1,926	NHA							895	NWW - NHA			
	1,811	NHA							895	NWW - NHA			
	1,811	NHA							895	NWW - NHA			**Per Unit**
									895	NWW - NHA			
Gross Possible Rent	**112,800**		**41,256**		**40,704**		**36,600**		**65,400**			**626,016**	**18,970**
Vacancy (15%)	(16,920)		(6,188)		(6,106)		(5,490)		(9,810)			(93,902)	(2,846)
Net Effective Income	**95,880**		**35,068**		**34,598**		**31,110**		**55,590**			**532,114**	**16,125**
Max Can Do or NHA Expenses													
Administrative	17,121		6,848		6,848		6,848		20,545			112,998	3,424
Maintenance	18,544		7,417		7,417		7,417		22,252			122,388	3,709
Supportive Services	5,000		2,000		2,000		2,000		6,000			33,000	1,000
Replacement Reserve	10,000		4,000		4,000		4,000		12,000			66,000	2,000
Utilities	11,451		4,581		4,581		4,581		13,742			75,580	2,290
Real Estate Taxes	-		-		-		-		-			-	-
Insurance	5,154		2,062		2,062		2,062		6,185			34,018	1,031
Total Expenses	**67,270**		**26,908**		**26,908**		**26,908**		**80,724**			**443,984**	**13,454**
Net Operating Income	**28,610**		**8,159**		**7,690**		**4,202**		**(25,134)**			**88,130**	**2,671**
Debt Service													
TVB	18,877	5.25%	22,935	5.00%	7,353	4.50%	-		18,095	5.25%		154,259	
TVB Balance		173,574		132,643		107,209				162,445			1,498,784
CSB	-		-		-		-		-			21,539	
CSB Balance													343,486
BCLF	8,135	7.00%	-		-		-		-			8,135	
BCLF Balance		80,378											80,378
Total Debt Service	**27,013**		**22,935**		**7,353**		**-**		**18,095**			**183,934**	
													DSCR
Net Cash Flow	**1,597**		**(14,776)**		**337**		**4,202**		**(43,229)**			**(95,804)**	**0.48**
	CEDAC HIF		**FHLB**						**FHLB, AHTF, CEDAC FCF**				
Loan Balances	**01-01-20**												
TVB	1,498,784												
CSB	343,486												
BCLF	80,378												
Loan Balances	**1,922,648**												

NHA Acceptance of CAN-DO Portfolio, CPA/CDBG PROPOSAL REVISIONS 29 January 2020														
2019 NOI assuming New TVB Loan														**01-25-20**
									20-22		**61 Pearl Street**		**14 Nonantum Place**	
Can-Do Developments	**10-11 Cambria Road**		**12-13 Cambria Road**		**18-20 Cambria Road**		**163 Jackson Road**		**Falmouth Road**		**Park House**		**Garfield House**	
Number of Units	2	units	2	units	2	units	2	units	2	units	3	units	3	units
Monthly Rent	1,575	NHA	916	NHA	1,700	MBHP	1,600	NHA	1,625	NHA	1,255	N/A	2,100	NHA
	1,691	NHA	1,573	WHA	2,330	NHA	2,000	NHA	1,608	MBHP	1,255	N/A	2,327	NHA
											1,464	NHA	2,419	NHA
Gross Possible Rent	**39,192**		**29,868**		**48,360**		**43,200**		**38,796**		**47,688**		**82,152**	
Vacancy (15%)	(5,879)		(4,480)		(7,254)		(6,480)		(5,819)		(7,153)		(12,323)	
Net Effective Income	**33,313**		**25,388**		**41,106**		**36,720**		**32,977**		**40,535**		**69,829**	
Max Can Do or NHA Expenses														
Administrative	6,848		6,848		6,848		6,848		6,848		10,273		10,273	
Maintenance	7,417		7,417		7,417		7,417		7,417		11,126		11,126	
Supportive Services	2,000		2,000		2,000		2,000		2,000		3,000		3,000	
Replacement Reserve	4,000		4,000		4,000		4,000		4,000		6,000		6,000	
Utilities	4,581		4,581		4,581		4,581		4,581		6,871		6,871	
Real Estate Taxes	-		-		-		-		-		-		-	
Insurance	2,062		2,062		2,062		2,062		2,062		3,093		3,093	
Total Expenses	**26,908**		**26,908**		**26,908**		**26,908**		**26,908**		**40,362**		**40,362**	
Net Operating Income	**6,405**		**(1,520)**		**14,198**		**9,812**		**6,068**		**173**		**29,467**	
Debt Service														
New TVB Debt Service	-		-		-		-		-		-		-	
New TVB Loan Amount														
Total Debt Service	**-**		**-**		**-**		**-**		**-**		**-**		**-**	
Net Cash Flow	**6,405**		**(1,520)**		**14,198**		**9,812**		**6,068**		**173**		**29,467**	
													CEDAC HIF	

NHA Acceptance of CAN-DO Portf NHA Acceptance of CAN-DO Portfolio, CPA/CDBG PROPOSAL REVISIONS 29 January 2020													
2019 NOI assuming New TVB Loan													**01-25-20**
	90 Christina Street		**2148 Commonwealth**						**228 Webster Street**			**2019**	
Can-Do Developments	**Kayla House**		**Veterans House**		**54 Eddy Street**		**54 Taft Avenue**		**Webster House**			**TOTAL**	
Number of Units	5	units	2	units	2	units	2	units	6	respite units		33	units
Monthly Rent	1,926	NHA	1,612	CHA	1,392	MBHP	2,112	NHA	975	NWW - NHA			
	1,926	NHA	1,826	BHA	2,000	NHA	938	MBHP	895	NWW - NHA			
	1,926	NHA							895	NWW - NHA			
	1,811	NHA							895	NWW - NHA			
	1,811	NHA							895	NWW - NHA			**Per Unit**
									895	NWW - NHA			
Gross Possible Rent	**112,800**		**41,256**		**40,704**		**36,600**		**65,400**			**626,016**	**18,970**
Vacancy (15%)	(16,920)		(6,188)		(6,106)		(5,490)		(9,810)			(93,902)	(2,846)
Net Effective Income	**95,880**		**35,068**		**34,598**		**31,110**		**55,590**			**532,114**	**16,125**
Max Can Do or NHA Expenses													
Administrative	17,121		6,848		6,848		6,848		20,545			112,998	3,424
Maintenance	18,544		7,417		7,417		7,417		22,252			122,388	3,709
Supportive Services	5,000		2,000		2,000		2,000		6,000			33,000	1,000
Replacement Reserve	10,000		4,000		4,000		4,000		12,000			66,000	2,000
Utilities	11,451		4,581		4,581		4,581		*13,742*			75,580	2,290
Real Estate Taxes	-		-		-		-		-			-	-
Insurance	5,154		2,062		2,062		2,062		6,185			34,018	1,031
Total Expenses	**67,270**		**26,908**		**26,908**		**26,908**		**80,724**			**443,984**	**13,454**
Net Operating Income	**28,610**		**8,159**		**7,690**		**4,202**		**(25,134)**			**88,130**	**2,671**
Debt Service													**New TVB Loan**
New TVB Debt Service	-		-		-		-		-			40,688	650,000
New TVB Loan Amount													
Total Debt Service	**-**		**-**		**-**		**-**		**-**			**40,688**	**650,000**
Net Cash Flow	**28,610**		**8,159**		**7,690**		**4,202**		**(25,134)**			**47,441**	
	CEDAC HIF		**FHLB**						**FHLB, AHTF, CEDAC FCF**				

NHA Acceptance of CAN-DO Portfolio, CPA/CDBG PROPOSAL REVISIONS 29 January 2020													
20 YEAR PROJECTION													
Can-Do Developments													**25-01-20**
Trend: 2% Income				**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Trend: 3% Expense	**2019**	**Per Unit**		**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
Gross Possible Rent	**626,016**	**18,970**		**638,536**	**651,307**	**664,333**	**677,620**	**691,172**	**704,996**	**719,096**	**733,478**	**748,147**	**763,110**
Vacancy	(93,902)	(2,846)		(95,780)	(97,696)	(79,720)	(81,314)	(69,117)	(70,500)	(57,528)	(58,678)	(59,852)	(61,049)
Vacancy Rate	**15%**	**15%**		**15%**	**15%**	**12%**	**12%**	**10%**	**10%**	**8%**	**8%**	**8%**	**8%**
Net Effective Income	**532,114**	**16,125**		**542,756**	**553,611**	**584,613**	**596,305**	**622,055**	**634,496**	**661,568**	**674,799**	**688,295**	**702,061**
Max Can Do or NHA Expenses													
Administrative	112,998	3,424		116,388	119,879	123,476	127,180	130,995	134,925	138,973	143,142	147,437	151,860
Maintenance	122,388	3,709		126,059	129,841	133,736	137,748	141,881	146,137	150,521	155,037	159,688	164,479
Supportive Services	33,000	1,000		33,990	35,010	36,060	37,142	38,256	39,404	40,586	41,803	43,058	44,349
Replacement Reserve	66,000	2,000		67,980	70,019	72,120	74,284	76,512	78,807	81,172	83,607	86,115	88,698
Utilities	75,580	2,290		77,847	80,183	82,588	85,066	87,618	90,246	92,954	95,742	98,614	101,573
Real Estate Taxes	-	-		-	-	-	-	-	-	-	-	-	-
Insurance	34,018	1,031		35,039	36,090	37,173	38,288	39,437	40,620	41,838	43,094	44,386	45,718
Total Expenses	**443,984**	**13,454**		**457,303**	**471,022**	**485,153**	**499,708**	**514,699**	**530,140**	**546,044**	**562,425**	**579,298**	**596,677**
Net Operating Income	**88,130**	**2,671**		**85,453**	**82,589**	**99,460**	**96,598**	**107,356**	**104,356**	**115,524**	**112,374**	**108,997**	**105,384**
Debt Service													
New TVB Debt Service	40,688			40,688	40,688	40,688	40,688	40,688	40,688	40,688	40,688	40,688	40,688
New TVB Loan Amount		650,000		-	-	-	-	-	-	-	-	-	-
Total Debt Service	**40,688**			**40,688**	**40,688**	**40,688**	**40,688**	**40,688**	**40,688**	**40,688**	**40,688**	**40,688**	**40,688**
Net Cash Flow	**47,441**			**44,764**	**41,900**	**58,772**	**55,909**	**66,668**	**63,668**	**74,835**	**71,686**	**68,309**	**64,696**
Debt Service Coverage Ratio	**2.17**			**2.10**	**2.03**	**2.44**	**2.37**	**2.64**	**2.56**	**2.84**	**2.76**	**2.68**	**2.59**

NHA Acceptance of CAN-DC	NHA Acceptance of CAN-DO Portfolio, CPA/CDBG PROPOSAL REVISIONS 29 January 2020									
20 YEAR PROJECTION										
Can-Do Developments										**25-01-20**
Trend: 2% Income	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
Trend: 3% Expense	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**
Gross Possible Rent	**778,372**	**793,940**	**809,818**	**826,015**	**842,535**	**859,386**	**876,574**	**894,105**	**911,987**	**930,227**
Vacancy	(62,270)	(63,515)	(64,785)	(66,081)	(67,403)	(68,751)	(70,126)	(71,528)	(72,959)	(74,418)
Vacancy Rate	**8%**	**8%**	**8%**	**8%**	**8%**	**8%**	**8%**	**8%**	**8%**	**8%**
Net Effective Income	**716,102**	**730,424**	**745,033**	**759,934**	**775,132**	**790,635**	**806,448**	**822,577**	**839,028**	**855,809**
Max Can Do or NHA Expenses										
Administrative	156,415	161,108	165,941	170,919	176,047	181,328	186,768	192,371	198,142	204,087
Maintenance	169,413	174,496	179,730	185,122	190,676	196,396	202,288	208,357	214,607	221,046
Supportive Services	45,680	47,050	48,462	49,915	51,413	52,955	54,544	56,180	57,866	59,602
Replacement Reserve	91,359	94,100	96,923	99,831	102,826	105,911	109,088	112,361	115,731	119,203
Utilities	104,620	107,759	110,991	114,321	117,751	121,283	124,922	128,669	132,530	136,505
Real Estate Taxes	-	-	-	-	-	-	-	-	-	-
Insurance	47,090	48,502	49,957	51,456	53,000	54,590	56,227	57,914	59,652	61,441
Total Expenses	**614,577**	**633,015**	**652,005**	**671,565**	**691,712**	**712,464**	**733,837**	**755,853**	**778,528**	**801,884**
Net Operating Income	**101,525**	**97,410**	**93,028**	**88,368**	**83,420**	**78,171**	**72,610**	**66,724**	**60,500**	**53,925**
Debt Service										
New TVB Debt Service	40,688	40,688	40,688	40,688	40,688	40,688	40,688	40,688	40,688	40,688
New TVB Loan Amount	-	-	-	-	-	-	-	-	-	-
Total Debt Service	**40,688**	**40,688**	**40,688**	**40,688**	**40,688**	**40,688**	**40,688**	**40,688**	**40,688**	**40,688**
Net Cash Flow	**60,837**	**56,721**	**52,339**	**47,680**	**42,732**	**37,483**	**31,922**	**26,036**	**19,811**	**13,236**
Debt Service Coverage Ratio	**2.50**	**2.39**	**2.29**	**2.17**	**2.05**	**1.92**	**1.78**	**1.64**	**1.49**	**1.33**

NHA Acceptance of CAN-DO Portfolio, CPA/CDBG PROPOSAL REVISIONS 29 January 2020										
REPLACEMENT RESERVE BALANCE (without CDBG funding)										**25-01-20**
	2020	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
Can-Do Developments	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Starting Replacement Reserve	-	(439,191)	(377,024)	(363,028)	(321,068)	(239,803)	(183,764)	(92,704)	(68,074)	33,107
Monthly Contribution at 3%	5,500	5,665	5,835	6,010	6,190	6,376	6,567	6,764	6,967	7,176
Yearly Contribution at 3%	66,000	67,980	70,019	72,120	74,284	76,512	78,807	81,172	83,607	86,115
Total Replacement Reserve	66,000	(371,211)	(307,005)	(290,908)	(246,785)	(163,291)	(104,957)	(11,533)	15,533	119,222
Interest on Reserve at 1.5%	495	(6,078)	(5,130)	(4,905)	(4,259)	(3,023)	(2,165)	(782)	(394)	1,142
Total Funds Available	66,495	(377,289)	(312,135)	(295,812)	(251,044)	(166,314)	(107,122)	(12,314)	15,139	120,364
NHA & TVB Grants	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**
Capital Needs	555,686	49,735	100,893	75,256	38,760	67,450	35,582	105,760	32,032	111,091
Reserve Balance	(439,191)	(377,024)	(363,028)	(321,068)	(239,803)	(183,764)	(92,704)	(68,074)	33,107	59,273
Over 20 Years										
Yearly Contributions	1,773,445									
Interest on Reserve @ 1.5%	(21,779)									
Capital Needs	(2,391,184)									
NHA & TVB Grants	**500,000**									
Reserve Balance in Year 20	(139,517)									

NHA Acceptance of CAN-DO Portfoli	NHA Acceptance of CAN-DO Portfolio, CPA/CDBG PROPOSAL REVISIONS 29 January 2020									
REPLACEMENT RESERVE BALANCE (without CDBG funding)										**25-01-20**
	2030	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**
Can-Do Developments	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
Starting Replacement Reserve	59,273	33,028	67,167	89,871	100,871	12,584	(130,626)	(112,212)	(211,901)	(195,141)
Monthly Contribution at 3%	7,392	7,613	7,842	8,077	8,319	8,569	8,826	9,091	9,363	9,644
Yearly Contribution at 3%	88,698	91,359	94,100	96,923	99,831	102,826	105,911	109,088	112,361	115,731
Total Replacement Reserve	147,971	124,388	161,267	186,795	200,701	115,410	(24,715)	(3,124)	(99,540)	(79,410)
Interest on Reserve at 1.5%	1,554	1,181	1,713	2,075	2,262	960	(1,165)	(865)	(2,336)	(2,059)
Total Funds Available	149,526	125,569	162,980	188,870	202,963	116,370	(25,880)	(3,989)	(101,876)	(81,469)
NHA & TVB Grants	-	-	-	-	-	-	-	-	-	-
Capital Needs	116,497	58,402	73,109	87,999	190,379	246,996	86,332	207,912	93,265	58,049
Reserve Balance	33,028	67,167	89,871	100,871	12,584	(130,626)	(112,212)	(211,901)	(195,141)	(139,517)
Over 20 Years										
Yearly Contributions			1,773,445							
Interest on Reserve @ 1.5%			(21,779)							
Capital Needs			(2,391,184)							
NHA & TVB Grants			500,000							
Reserve Balance in Year 20			(139,517)							

NHA Acceptance of CAN-DO Portfolio, CPA/CDBG PROPOSAL REVISIONS 29 January 2020										
REPLACEMENT RESERVE BALANCE (with CDBG funding)										**25-01-20**
	2020	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
Can-Do Developments	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Starting Replacement Reserve	-	112,161	182,598	204,989	255,469	345,382	410,199	510,168	543,841	654,201
Monthly Contribution at 3%	5,500	5,665	5,835	6,010	6,190	6,376	6,567	6,764	6,967	7,176
Yearly Contribution at 3%	66,000	67,980	70,019	72,120	74,284	76,512	78,807	81,172	83,607	86,115
Total Replacement Reserve	66,000	180,141	252,618	277,109	329,752	421,894	489,006	591,340	627,448	740,316
Interest on Reserve at 1.5%	495	2,192	3,264	3,616	4,389	5,755	6,744	8,261	8,785	10,459
Total Funds Available	66,495	182,334	255,882	280,725	334,141	427,648	495,750	599,601	636,233	750,774
NHA & TVB Grants	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**
City CDBG	**551,352**	-	-	-	-	-	-	-	-	-
Capital Needs	555,686	49,735	100,893	75,256	38,760	67,450	35,582	105,760	32,032	111,091
Reserve Balance	112,161	182,598	204,989	255,469	345,382	410,199	510,168	543,841	654,201	689,683
Over 20 Years										
Yearly Contributions	1,773,445									
Interest on Reserve @ 1.5%	158,486									
Capital Needs	(2,391,184)									
NHA & TVB Grants	**500,000**									
City CDBG	**551,352**									
Reserve Balance in Year 20	592,099									

NHA Acceptance of CAN-DO Portfoli	NHA Acceptance of CAN-DO Portfolio, CPA/CDBG PROPOSAL REVISIONS 29 January 2020									
REPLACEMENT RESERVE BALANCE (with CDBG funding)										**25-01-20**
	2030	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**
Can-Do Developments	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
Starting Replacement Reserve	689,683	672,895	716,631	749,078	769,965	691,715	558,692	587,446	498,252	525,664
Monthly Contribution at 3%	7,392	7,613	7,842	8,077	8,319	8,569	8,826	9,091	9,363	9,644
Yearly Contribution at 3%	88,698	91,359	94,100	96,923	99,831	102,826	105,911	109,088	112,361	115,731
Total Replacement Reserve	778,382	764,254	810,732	846,001	869,796	794,541	664,603	696,534	610,612	641,395
Interest on Reserve at 1.5%	11,010	10,779	11,455	11,963	12,298	11,147	9,175	9,630	8,316	8,753
Total Funds Available	789,392	775,033	822,187	857,964	882,094	805,688	673,777	706,164	618,929	650,148
NHA & TVB Grants	-	-	-	-	-	-	-	-	-	-
City CDBG	-	-	-	-	-	-	-	-	-	-
Capital Needs	116,497	58,402	73,109	87,999	190,379	246,996	86,332	207,912	93,265	58,049
Reserve Balance	672,895	716,631	749,078	769,965	691,715	558,692	587,446	498,252	525,664	592,099
Over 20 Years										
Yearly Contributions			1,773,445							
Interest on Reserve @ 1.5%			158,486							
Capital Needs			(2,391,184)							
NHA & TVB Grants			500,000							
City CDBG			551,352							
Reserve Balance in Year 20			592,099							

NHA Acceptance of CAN-DO Portfolio, CPA/CDBG PROPOSAL REVISIONS 29 January 2020										
CAPITAL NEEDS BY PROPERTY										**25-01-20**
	2020	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
Can-Do Developments	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
10-11 Cambria Road	16,852	-	-	279	-	190	1,164	3,628	-	-
11-13 Cambria Road	47,780	1,751	-	-	549	3,058	15,463	-	-	848
18-20 Cambria Road	6,940	-	-	30,383	732	754	-	3,690	1,001	-
163 Jackson Road	95,395	-	-	-	-	2,611	1,194	2,460	-	-
20-22 Falmouth Road	100,030	-	-	-	-	4,408	-	2,400	-	-
61 Pearl Street	7,491	7,472	1,326	328	2,983	3,322	-	11,376	-	77,520
14 Nonantum Place	94,218	9,553	1,247	-	-	12,204	-	39,487	-	984
90 Christina Street	6,108	11,647	39,165	18,251	18,102	25,512	8,866	1,291	784	9,786
2148-2150 Commonwealth	48,474	2,987	-	-	366	2,622	388	1,876	1,520	-
54 Eddy Street	11,391	2,802	-	1,366	4,097	424	-	-	24,548	3,392
54 Taft Avenue	13,863	80	-	10,015	5,121	-	2,004	-	-	4,071
228 Webster Street	34,664	6,956	45,996	4,819	1,756	3,547	1,863	25,697	-	-
Annual Totals	**483,206**	**43,248**	**87,734**	**65,441**	**33,706**	**58,652**	**30,942**	**91,905**	**27,853**	**96,601**
Capital Needs	483,205	43,248	87,733	65,440	33,704	58,652	30,941	91,965	27,854	96,601
Capital Needs Inflated by 15%	555,686	49,735	100,893	75,256	38,760	67,450	35,582	105,760	32,032	111,091

NHA Acceptance of CAN-DO	NHA Acceptance of CAN-DO Portfolio, CPA/CDBG PROPOSAL REVISIONS 29 January 2020									
CAPITAL NEEDS BY PROPERTY										**25-01-20**
	2030	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**
Can-Do Developments	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
10-11 Cambria Road	4,991	2,768	4,919	-	-	39,747	14,433	31,707	-	-
11-13 Cambria Road	3,696	-	-	-	12,098	12,522	4,814	-	-	1,140
18-20 Cambria Road	3,091	-	2,545	8,195	983	8,024	-	4,959	68,711	-
163 Jackson Road	5,423	-	-	-	-	17,037	1,605	3,306	-	-
20-22 Falmouth Road	5,548	-	-	-	-	15,818	-	3,306	-	-
61 Pearl Street	7,482	27,561	15,719	441	454	3,895	587	7,520	-	5,773
14 Nonantum Place	22,741	2,116	428	-	48,564	13,013	3,771	-	-	1,322
90 Christina Street	2,688	-	21,895	22,972	8,055	7,608	7,836	51,673	9,495	34,263
2148-2150 Commonwealth	17,117	12,693	-	-	492	67,518	522	2,521	2,894	-
54 Eddy Street	4,926	900	13,110	44,715	75,487	-	-	-	-	-
54 Taft Avenue	15,939	4,745	3,707	-	-	4,440	30,451	14,727	-	7,978
228 Webster Street	7,660	-	1,250	198	19,414	25,159	11,054	61,075	-	-
Annual Totals	**101,302**	**50,783**	**63,573**	**76,521**	**165,547**	**214,781**	**75,073**	**180,794**	**81,100**	**50,476**
Capital Needs	101,302	50,784	63,573	76,521	165,547	214,779	75,071	180,793	81,100	50,477
Capital Needs Inflated by 15%	116,497	58,402	73,109	87,999	190,379	246,996	86,332	207,912	93,265	58,049

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Barney S. Heath
Director

M E M O R A N D U M

CPC staff note: This memo was submitted 29 January 2020 for public hearing scheduled 11 February 2020.

To: Planning and Development Board & Community Preservation Committee

From: Eamon Bencivengo, Housing Development Planner
Amanda Berman, Director of Housing and Community Development

Re: Newton Housing Authority Acquisition of CAN-DO Portfolio

Date: February 11, 2020

BACKGROUND

In January 2017, CAN-DO (Citizens for Affordable Housing in Newton Development Organization) executed an affiliation agreement with Metro West Collaborative Development (Metro West) for Metro West to oversee management of CAN-DO's 33-unit real estate portfolio. In 2019, the two organizations agreed to disaffiliate, placing the management of the CAN-DO portfolio in jeopardy. Several months ago, the Newton Housing Authority (NHA) approached the City of Newton with the intent to acquire the CAN-DO portfolio. In the intervening months, City Planning Staff has worked closing with the NHA to create financing structure that transfers ownership and management of the portfolio to NHA to ensure its long-term stabilization.

The 33-unit portfolio is spread across 12 scattered site projects serving very low-income individuals who require a variety of supportive services. Not only is the City concerned in the well-being of these individuals should the portfolio be neglected, but it is also committed to preserving the deep level of affordability provided in these units. With the approximate $126,700 of City investment awarded each bedroom of the the portfolio over the life span of CAN-DO, the City is compelled to ensure the portfolio continues to serve the most vulnerable in Newton.

PROPOSED PROGRAM RESTRUCTURING

Over the past several weeks, Planning Department Staff, in consultation with the assistance of a third-party consultant and advice from the Newton Housing Partnership (NHP), has collaborated with the NHA to develop a financing structure that allows the NHA to acquire the portfolio through both the responsible allocation of public dollars and leveraging of private investment. As a result, the portfolio maintains a reasonable debt service coverage ratio and healthy replacement reserve over the 20-year projection.

The following two tables summarize the requested funding sources and their corresponding uses. CPA and CDBG funds will be used to reduce the portfolio's existing debt, with remaining CDBG funds being used to support eligible rehab projects outlined in the first year of NHA's capital needs projection.

Table 1. Sources for Uses

SOURCES	
NHA Grant over 10 Years	250,000
TVB Grant over 10 Years	250,000
New TVB Loan [1]	650,000
City CPA	1,105,000
City CDBG - FY 2019 & 2020	1,200,000
TOTAL SOURCES	**3,455,000**

USES	
TVB Loan Repayment	1,498,784
CSB Loan Repayment	343,486
BCLF Loan Repayment	80,378
Replacement Reserve	500,000
Operating Reserve	250,000
Capital Improvements [2]	551,352
Financing Fees (1%)	6,500
Legal Fees	150,000
Title & Recording	40,000
Development Consultant	30,000
Appraisal	4,500
TOTAL USES	**3,455,000**
SURPLUS / (DEFICIT)	**0**

[1] New TVB Debt at 4.75%, 30 year amortization.
[2] To fund capital needs in 2020.

Table 2. Uses for Sources

SOURCES	NHA	TVB	New Loan	City CPA	City FY 19 &	TOTAL SOURC
TVB Loan Repayment			169,0	681,1	648,6	1,498,7
CSB Loan Repayment				343,4		343,4
BCLF Loan Repayment				80,3		80,3
Replacement Reserve	250,0	250,0				500,0
Operating Reserve			250,0			250,0
Capital Improvements					551,3	551,3
Financing Fees (1%)			6,5			6,5
Legal Fees			150,0			150,0
Title & Recording			40,0			40,0
Development Consultant			30,0			30,0
Appraisal			4,500			4,500
USES	**250,0**	**250,0**	**650,0**	**1,105,0**	**1,200,0**	**3,455,0**
SURPLUS / (DEFICIT)	**-**	**-**	**-**	**-**	**0**	**0**

STAFF RECOMMENDATIONS

Given the uniqueness and complexity of this portfolio deal, Planning Staff commends the NHA willingness to utilize the feedback offered by the NHP and third-party consultants in order to preserve the deep affordability of these critical housing units. As a result, Planning Staff is supportive of the NHA funding structure and request to acquire the CAN-DO portfolio. Planning Staff is confident the NHA will not only stabilize, but strengthen the portfolio, ensuring that residents continue to experience a high-quality of life.

Newton Housing Authority Acquisition of CAN-DO Portfolio

Community Preservation Committee
Planning and Development Board
February 11, 2020

Amy Zarechian, Executive Director
Vincent O'Donnell, Commissioner

NEWTON HOUSING AUTHORITY

Newton Housing Authority

- **Newton Housing Authority (NHA)**
  - Established in 1959
  - Largest provider of affordable housing in Newton
  - Over 1300 residents
  - 500 public housing units
  - 441 Rental Assistance Vouchers
  - 57 management units
- **Mission of the NHA**
  - Provide a high standard of housing
  - Create a sense of community for residents
  - Increase affordable housing opportunities in City of Newton
  - Provide robust social services

Jackson Gardens

NEWTON HOUSING AUTHORITY

NHA Programs

- **Federal Public Housing**
  - 298 units for seniors and individuals with disabilities
  - Funded by operating and capital subsidies from US Housing and Urban Development (HUD)
- **State Public Housing**
  - 216 units for families, elders, and individuals with disabilities funded by operating and capital subsidies from MA Dept. of Housing and Community Development (DHCD)
- **Housing Choice Voucher Program (Section 8)**
  - 441 federally subsidized vouchers
  - Includes 15 vouchers set-aside for victims of domestic violence
- **YMCA Project-Based Section 8**
  - 25 project-based section 8 vouchers at the West Suburban YMCA for single, homeless men
- **Mass Rental Voucher Program**
  - 32 state-subsidized vouchers

NEWTON HOUSING AUTHORITY

NHA
Management Program

- **Management Portfolio**
  - 57 units of NHA owned and operated unsubsidized units
  - Purchased with Inclusionary Zoning Funds, donated in two cases
  - Occupied by NHA Section 8 voucher holders
  - Locations:

52-54 Wyman Street	68-70 Wyman Street
76 Webster Park	36, 38, 40, 46 Crescent St.
1115 #8 Beacon Street	9A, 17A Baldwin Street
23 Considine Rd.	50-52 Fuller Street
15-17 Jackson Terrace	31 Murray Rd.
45 Pelham Street	90 Newtonville Ave.
83-85 West Street	

52-54 Wyman Street

NEWTON HOUSING AUTHORITY

NHA Resident Services

Tenant Demographics

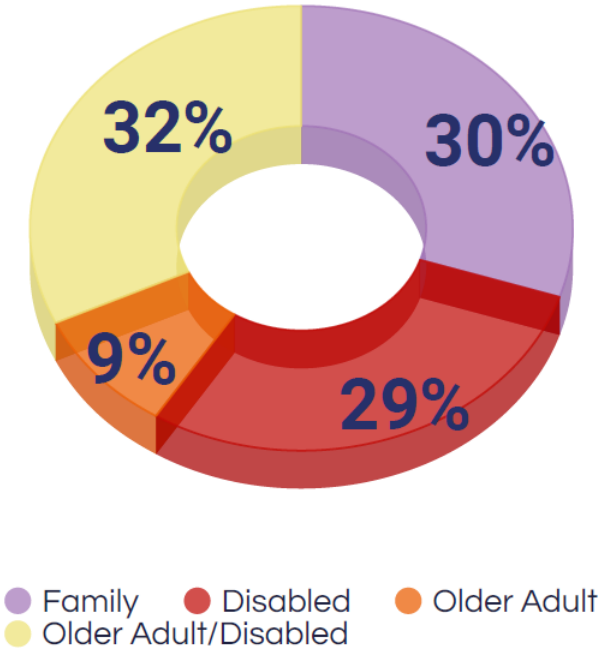
Federal Public Housing:

- 67% Elderly (62yrs +)
- 33% Persons with disabilities
- 30% Mandaring speaking

State Public Housing:

- 33% Under 18 years old
- 14% Persons with disabilities

Residents Utilizing RSD in 2019



Resident Services Department

2 Licensed Social Workers- fluent in Spanish and Mandarin

102 clinical cases open in 2019- 48% clinical cases involved mental health as contributing factor

262 residents served in 2019

NEWTON HOUSING AUTHORITY

CAN-DO Acquisition

- On January 1, 2017, CAN-DO and Metro West Collaborative Development became affiliates upon retirement of CAN-DO's Executive Director
- The two organizations have disaffiliated and Metro West CD management contract expired 1/31/2020
- NHA began a due diligence process, looking carefully at financial projections and commissioning a Capital Needs Assessment
- Due diligence has shown that the portfolio does not have sufficient operating income to break even over time and does not have the reserves necessary for long-term management
- NHA committed to increasing the number of affordable units in the City and preserving CAN-DO portfolio as an important resource, particularly for the vulnerable tenant population served

NEWTON HOUSING AUTHORITY

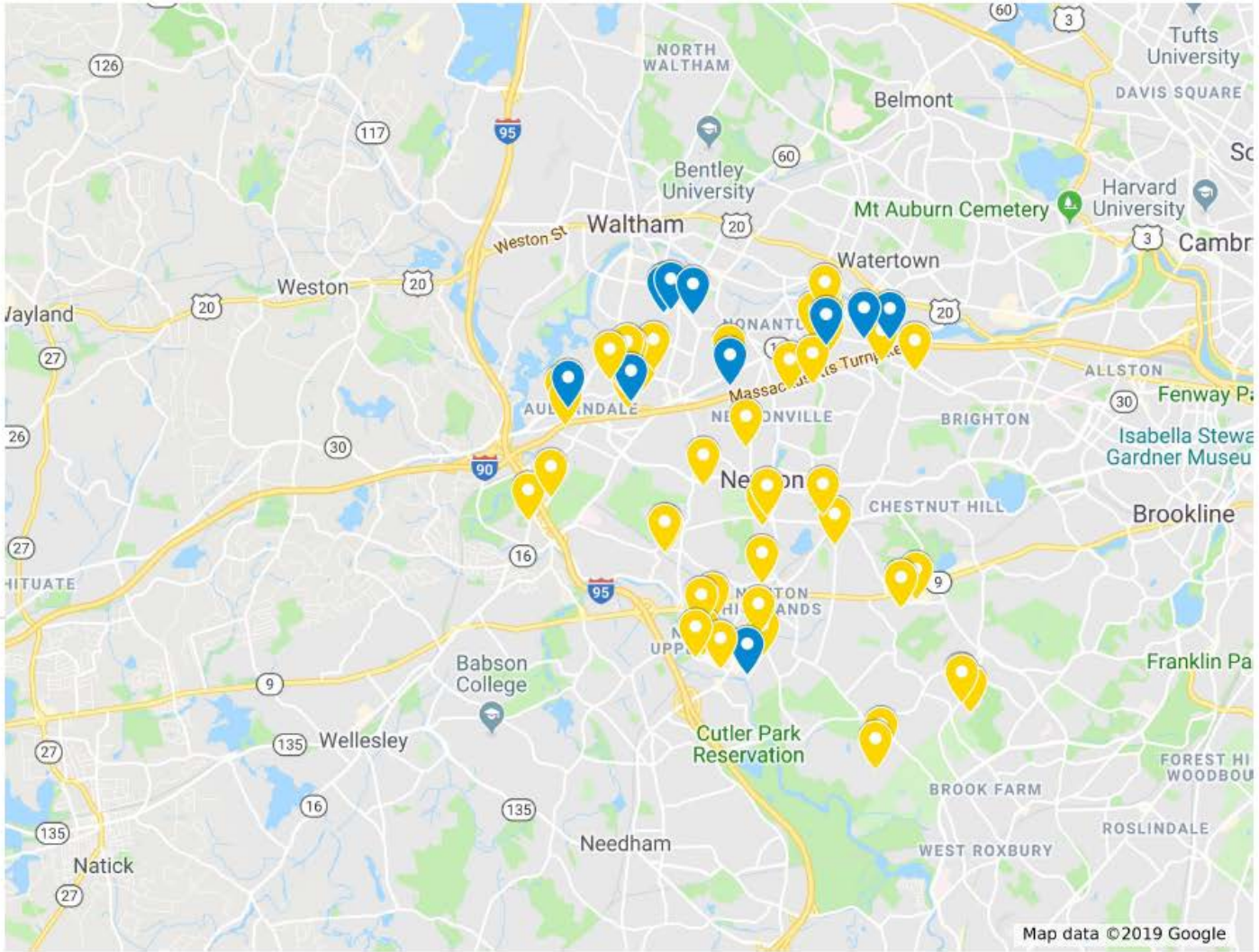
CAN-DO and NHA Properties

CAN-DO Portfolio

- 14 Nonantum Pl
- 90 Christina St
- 10-12 Cambria Rd
- 11 Cambria Rd
- 18 Cambria Rd
- 163 Jackson Rd
- 20 Falmouth Rd #22
- 228 Webster St
- 54 Eddy St
- 61 Pearl St
- 2148 Commonwealth Avenue
- 54 Taft Ave

NHA Properties

- 21 Parker St
- 111 Kennedy Cir
- 676 Watertown St
- 58 Ash St
- 80 Thurston Rd
- 239 Watertown St
- 234 Central St
- 82 Lincoln St
- 541 Grove St
- 15 Wilson Cir



NEWTON HOUSING AUTHORITY

CAN-DO Portfolio

Address	Units	City Sources	Total City $
14 Nonantum Place/Garfield House	3	HOME, NHRF	$308,611
90 Christina St./Kayla House	5	CDBG, HOME	$695,574
10-12 Cambria Rd.	2	CDBG, HOME, CPA	$855,370
11-13 Cambria Rd.	2	CDBG, CPA	$630,850
18-20 Cambria Rd.	2	CDBG, CPA	$541,417
163 Jackson Rd.	2	CDBG, CPA	$587,750
20-22 Falmouth Rd.	2	CDBG, CPA	$651,202
228 Webster St.	6	HOME, NHRF	$237,957
54 Eddy Street	2	CDBG, CPA	$945,250
61 Pearl Street	3	CDBG, HOME, CPA	$1,145,000
2148 Comm. Ave./Veteran House	2	CDBG, CPA	$675,000
54 Taft Ave.	2	CDBG, HOME, CPA	$1,089,029

228 Webster Street

NEWTON HOUSING AUTHORITY

CAN-DO Acquisition

- NHA worked closely with the City's Department of Planning and Development to align proposed funding sources with permissible uses
- At the Department's suggestion, NHA increased CDBG request to $1,200,000 to address immediate capital needs and fund a portion of the elimination of existing private debt
- This allowed for a decrease in the new private debt to $650,000
- CPA funds request reduced to $1,105,000, which will also fund a portion of the elimination of existing private debt
- Based on comments from the Newton Housing Partnership, NHA increased capital budget by 15% and supportive services budget by $1000/unit/year
- The annual contribution to the replacement reserve has been increased to $2,000/unit/year
- New Village Bank debt will be used to create $250,000 operating reserve
- Village Bank grant of $250,000 and NHA grant of $250,000 will be placed into replacement reserve in annual $25,000 installments

NEWTON HOUSING AUTHORITY

CAN-DO Acquisition
Sources for Uses

Sources:	
Village Bank (TVB) Grant over 10 years	$250,000
NHA Grant over 10 years	$250,000
New TVB Loan*	$650,000
City CPA	$1,105,000
City CDBG	$1,200,000
Total:	**$3,455,000**

*New TVB debt at 4.75%, 30 year amortization

Uses:	
TVB Debt Repayment	$1,498,784
Cambridge Savings Debt Repayment	$343,486
Boston Community Loan Fund Repayment	$80,378
Replacement Reserve	$500,000
Operating Reserve	$250,000
Financing Fees (1%)	$10,381
Legal Fees	$150,000
Title & Recording	$40,000
Development Consultant	$30,000
Appraisal	$4,500
Total:	**$3,455,000**

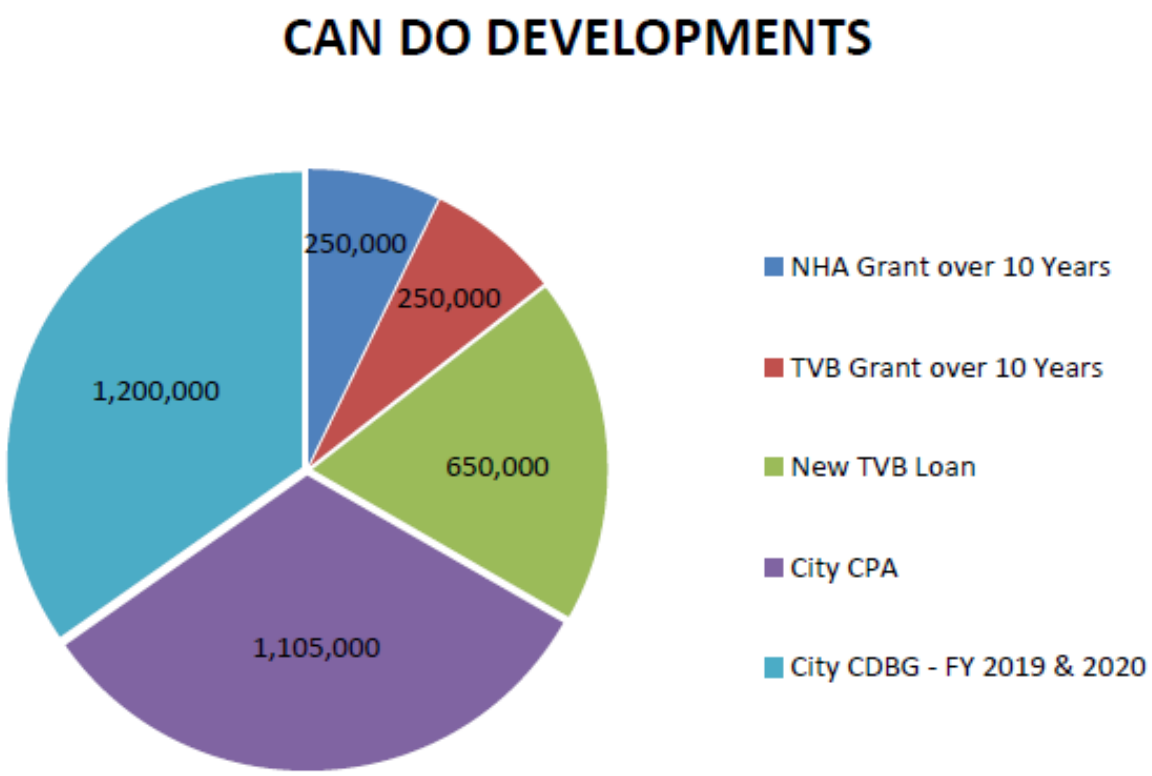
NEWTON HOUSING AUTHORITY

CAN-DO Acquisition
Uses for Sources

SOURCES	NHA	TVB	New TVB Loan	City CPA	City CDBG FY 19 & 20	TOTAL SOURCES
TVB Loan Repayment			169,000	681,136	648,648	1,498,784
CSB Loan Repayment				343,486		343,486
BCLF Loan Repayment				80,378		80,378
Replacement Reserve	250,000	250,000				500,000
Operating Reserve			250,000			250,000
Capital Improvements					551,352	551,352
Financing Fees (1%)			6,500			6,500
Legal Fees			150,000			150,000
Title & Recording			40,000			40,000
Development Consultant			30,000			30,000
Appraisal			4,500			4,500
USES	**250,000**	**250,000**	**650,000**	**1,105,000**	**1,200,000**	**3,455,000**
SURPLUS / (DEFICIT)	**-**	**-**	**-**	**-**	**0**	**0**

NEWTON HOUSING AUTHORITY

CAN-DO Acquisition Sources



NEWTON HOUSING AUTHORITY

CAN-DO 20 Year Projection

Trend: 2% Income Trend: 3% Expense	2019	Per Unit	1 2020	2 2021	3 2022	4 2023	5 2024	6 2025	7 2026	8 2027	9 2028	10 2029
Gross Possible Rent	**626,016**	**18,970**	**638,536**	**651,307**	**664,333**	**677,620**	**691,172**	**704,996**	**719,096**	**733,478**	**748,147**	**763,110**
Vacancy	(93,902)	(2,846)	(95,780)	(97,696)	(79,720)	(81,314)	(69,117)	(70,500)	(57,528)	(58,678)	(59,852)	(61,049)
Vacancy Rate	**15%**	**15%**	**15%**	**15%**	**12%**	**12%**	**10%**	**10%**	**8%**	**8%**	**8%**	**8%**
Net Effective Income	**532,114**	**16,125**	**542,756**	**553,611**	**584,613**	**596,305**	**622,055**	**634,496**	**661,568**	**674,799**	**688,295**	**702,061**
Max Can Do or NHA Expenses												
Administrative	112,998	3,424	116,388	119,879	123,476	127,180	130,995	134,925	138,973	143,142	147,437	151,860
Maintenance	122,388	3,709	126,059	129,841	133,736	137,748	141,881	146,137	150,521	155,037	159,688	164,479
Supportive Services	33,000	1,000	33,990	35,010	36,060	37,142	38,256	39,404	40,586	41,803	43,058	44,349
Replacement Reserve	66,000	2,000	67,980	70,019	72,120	74,284	76,512	78,807	81,172	83,607	86,115	88,698
Utilities	75,580	2,290	77,847	80,183	82,588	85,066	87,618	90,246	92,954	95,742	98,614	101,573
Real Estate Taxes	-	-	-	-	-	-	-	-	-	-	-	-
Insurance	34,018	1,031	35,039	36,090	37,173	38,288	39,437	40,620	41,838	43,094	44,386	45,718
Total Expenses	**443,984**	**13,454**	**457,303**	**471,022**	**485,153**	**499,708**	**514,699**	**530,140**	**546,044**	**562,425**	**579,298**	**596,677**
Net Operating Income	**88,130**	**2,671**	**85,453**	**82,589**	**99,460**	**96,598**	**107,356**	**104,356**	**115,524**	**112,374**	**108,997**	**105,384**
Debt Service												
New TVB Debt Service	40,688		40,688	40,688	40,688	40,688	40,688	40,688	40,688	40,688	40,688	40,688
New TVB Loan Amount		650,000	-	-	-	-	-	-	-	-	-	-
Total Debt Service	**40,688**		**40,688**	**40,688**	**40,688**	**40,688**	**40,688**	**40,688**	**40,688**	**40,688**	**40,688**	**40,688**
Net Cash Flow	**47,441**		**44,764**	**41,900**	**58,772**	**55,909**	**66,668**	**63,668**	**74,835**	**71,686**	**68,309**	**64,696**
Debt Service Coverage Ratio	**2.17**		**2.10**	**2.03**	**2.44**	**2.37**	**2.64**	**2.56**	**2.84**	**2.76**	**2.68**	**2.59**

NEWTON HOUSING AUTHORITY

CAN-DO Capital Needs

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Can-Do Developments	1	2	3	4	5	6	7	8	9	10	11
10-11 Cambria Road	16,852	-	-	279	-	190	1,164	3,628	-	-	4,991
11-13 Cambria Road	47,780	1,751	-	-	549	3,058	15,463	-	-	848	3,696
18-20 Cambria Road	6,940	-	-	30,383	732	754	-	3,690	1,001	-	3,091
163 Jackson Road	95,395	-	-	-	-	2,611	1,194	2,460	-	-	5,423
20-22 Falmouth Road	100,030	-	-	-	-	4,408	-	2,400	-	-	5,548
61 Pearl Street	7,491	7,472	1,326	328	2,983	3,322	-	11,376	-	77,520	7,482
14 Nonantum Place	94,218	9,553	1,247	-	-	12,204	-	39,487	-	984	22,741
90 Christina Street	6,108	11,647	39,165	18,251	18,102	25,512	8,866	1,291	784	9,786	2,688
2148-2150 Commonwealth	48,474	2,987	-	-	366	2,622	388	1,876	1,520	-	17,117
54 Eddy Street	11,391	2,802	-	1,366	4,097	424	-	-	24,548	3,392	4,926
54 Taft Avenue	13,863	80	-	10,015	5,121	-	2,004	-	-	4,071	15,939
228 Webster Street	34,664	6,956	45,996	4,819	1,756	3,547	1,863	25,697	-	-	7,660
Annual Totals	483,206	43,248	87,734	65,441	33,706	58,652	30,942	91,905	27,853	96,601	101,302
Capital Needs	483,205	43,248	87,733	65,440	33,704	58,652	30,941	91,965	27,854	96,601	101,302
Capital Needs Increased by 15%	555,685.75	49,735.20	100,892.95	75,256.00	38,759.60	67,449.80	35,582.15	105,759.75	32,032.10	111,091.15	116,497.30

NEWTON HOUSING AUTHORITY

CAN-DO Acquisition
Replacement Reserve

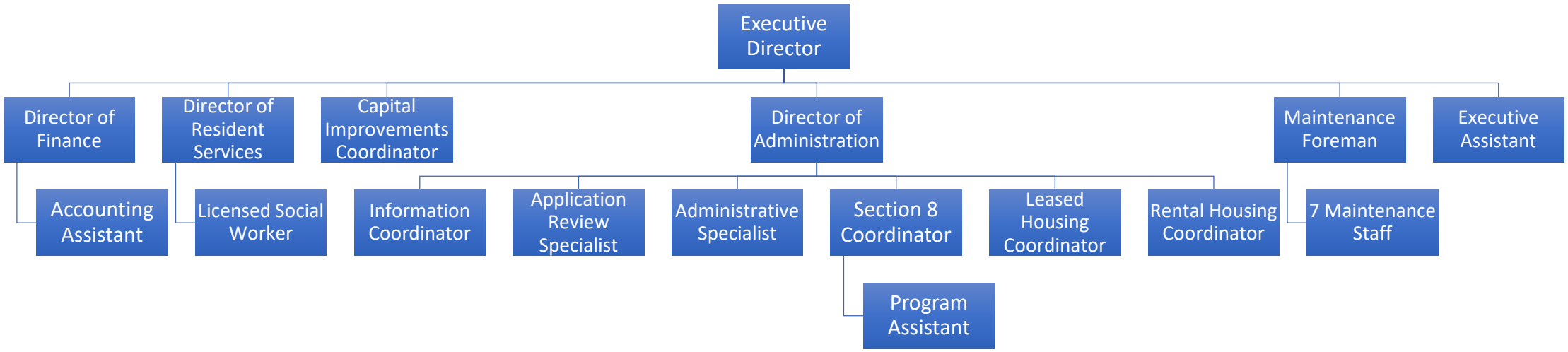
REPLACEMENT RESERVE BALANCE

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Can-Do Developments	1	2	3	4	5	6	7	8	9	10	11
Starting Replacement Reserve	-	(439,191)	(377,024)	(363,028)	(321,068)	(239,803)	(183,764)	(92,704)	(68,074)	33,107	59,273
Monthly Contribution at 3%	5,500	5,665	5,835	6,010	6,190	6,376	6,567	6,764	6,967	7,176	7,392
Yearly Contribution at 3%	66,000	67,980	70,019	72,120	74,284	76,512	78,807	81,172	83,607	86,115	88,698
Total Replacement Reserve	66,000	(371,211)	(307,005)	(290,908)	(246,785)	(163,291)	(104,957)	(11,533)	15,533	119,222	147,971
Interest on Reserve at 1.5%	495	(6,078)	(5,130)	(4,905)	(4,259)	(3,023)	(2,165)	(782)	(394)	1,142	1,554
Total Funds Available	66,495	(377,289)	(312,135)	(295,812)	(251,044)	(166,314)	(107,122)	(12,314)	15,139	120,364	149,526
NHA & TVB Grants	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	-
Capital Needs	555,686	49,735	100,893	75,256	38,760	67,450	35,582	105,760	32,032	111,091	116,497
Reserve Balance	(439,191)	(377,024)	(363,028)	(321,068)	(239,803)	(183,764)	(92,704)	(68,074)	33,107	59,273	33,028

Over 20 Years	
Yearly Contributions	1,773,445
Interest on Reserve @ 1.5%	(21,779)
Capital Needs	(2,391,184)
NHA & TVB Grants	**500,000**
Reserve Balance in Year 20	(139,517)

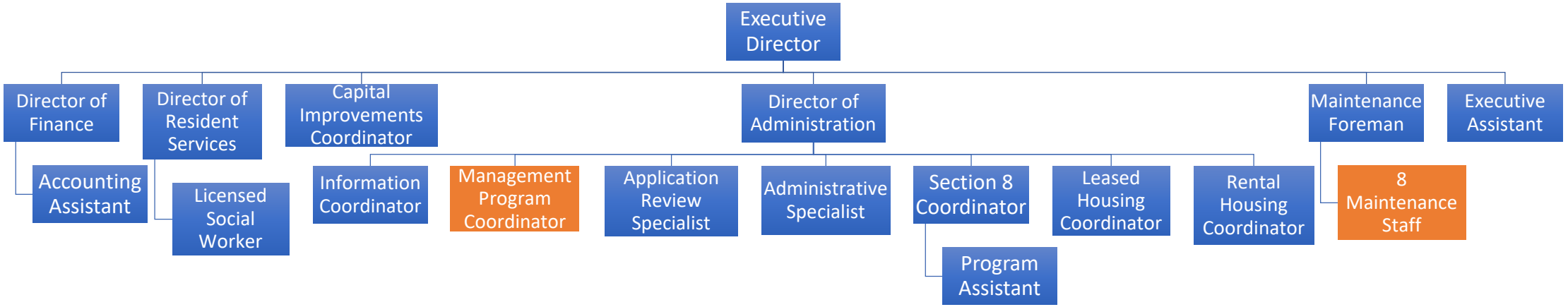
NEWTON HOUSING AUTHORITY

NHA Organizational Chart December 2019



NEWTON HOUSING AUTHORITY

NHA Organizational Chart December 2019
Post CAN-DO Property Acquisition



NEWTON HOUSING AUTHORITY

CAN-DO Acquisition Timeline

• CPC/P&D full-proposal/public hearing	February 2020
• Purchase and Sale Agreement	March 2020
• CPC/CDBG funding awards	April 2020
• Closing	Spring 2020

NEWTON HOUSING AUTHORITY

CPA Proposals & Projects

Newton Housing Authority

contacts:

- Amy Zarechian, Executive Director
  Newton Housing Authority
  82 Lincoln Street, Newton Highlands, MA 02461
  email: **azarechian@newtonhousing.org**
  phone: 617.552.5501

projects below:

- **Housing Authority Acceptance of CAN-DO Portfolio**
- **Haywood House/Jackson Road New Senior Housing**
- **Wyman Street Apartments**

Housing Authority Acceptance of CAN-DO Portfolio

Sites throughout the city. See map submitted with the proposal.

goals:

Preserve the 33 units of scattered-site, deed-restricted rental housing developed throughout the City by CAN-DO (Citizens for Affordable Housing in Newton Development Organization), by reducing bank debt and addressing deferred capital needs under Newton Housing Authority ownership and management.

total funding

(updated 31 January 2020, based on **29-31 January 2020 submission below**)

$1,105,000 CPA funds requested

$1,200,000	CDBG funds requested (Newton-controlled federal funds)
$250,000	Newton Housing Authority contribution
$250,000	Village Bank grant
$650,000	Village Bank debt (new)
$3,455,000	total project cost

Funding Process

24-25 June 2019 - **pre-proposal,** including:

- **pre-proposal**, including: project summary, property descriptions, maps & budgets
- **CAN-DO portfolio capital needs assessment,** completed in November 2018 for the Newton Housing Authority, including photos of CAN-DO properties

2 January 2020 - **full proposal,** divided into the following files:

- **proposal with attachments**, including: project summary, map & description of CAN-DO's scattered-site housing portfolio, market analysis, project team qualifications, affirmative marketing and fair housing policies, letters of support; please note revisions below submitted 29 January 2020
- **appraisal of CAN-DO portfolio, with photos**
- **project finances,** including: sources, uses, and 20-year projections for operating income, operating expenses, replacement reserves and capital needs; please note revisions below submitted 29 January 2020
- **organizational information for both the Housing Authority and CAN-DO,** including: organizational charts, audits or financial statements, and a description of the Housing Authority's own scattered-site "management portfolio"

29 January 2020 - **revised funding request and project finances**

31 January 2020 - **letters and memos about this proposal** (Newton Housing Partnership, Planning & Development Dept. staff, community letters)

11 February 2020 - The CPC voted to recommend the requested funding. Their recommendation will be posted here shortly.

Haywood House/Jackson Road

New Senior Housing

fronting on John F. Kennedy Circle, Newton Corner, MA 02458; rear facing Jackson Road

Click on the following links to

- go directly to **this project's proposal #3 to the CPC** (submitted June 2018)

196-20

City of Newton, Massachusetts
Office of the Mayor

RUTHANNE FULLER
MAYOR

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TDD
(617) 796-1089

E-mail
rfuller@newtonma.gov

March 9, 2020

Honorable City Council
Newton City Hall
1000 Commonwealth Avenue
Newton Centre, MA 02459

Councilors:

I respectfully submit a docket item to your Honorable Council requesting authorization to transfer the sum of $60,000 from Acct # 0110498-579000 Current Year Budget Reserve to a non-lapsing Public Buildings Department account for the evaluation and recommendations for the upgrade of the Police Headquarters HVAC System.

As detailed in the FY21 – FY25 Capital Improvement Plan, Police Headquarters will undergo a series of improvements over the next several years beginning with $1 million in HVAC upgrades in FY21.

Thank you for your consideration of this matter.

Sincerely,

Ruthanne Fuller

Ruthanne Fuller
Mayor

Police Headquarters HVAC Improvements Project Summary of $60,000

1. **Evaluation of existing HVAC Systems - $6,500**
2. **Recommendations of improvements and replacements of existing HVAC Systems - $10,650**
3. **Design of accepted improvements and replacement HVAC Systems - $40,000**
4. **Contingency - $2,850**

197-20

RUTHANNE FULLER
MAYOR

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Office of the Mayor

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rfuller@newtonma.gov

March 9, 2020

Honorable City Council
Newton City Hall
1000 Commonwealth Avenue
Newton Centre, MA 02459

Councilors:

I respectfully submit a docket item to your Honorable Council requesting authorization to appropriate $500,000 from June 30, 2019 Certified Free Cash for the purpose of providing interior and exterior improvements at the Horace Mann School at 225 Nevada Street.

Improvements identified in the FY21 – FY25 Capital Improvement Plan include improvements to the existing playground with programmatically accessible features and new accessible sinks on the second floor among other items.

Thank you for your consideration of this matter.

Sincerely,

Ruthanne Fuller

Ruthanne Fuller
Mayor

CITY OF NEWTON, MASSACHUSETTS

PUBLIC BUILDINGS DEPARTMENT

52 ELLIOT STREET, NEWTON HIGHLANDS, MA 02461

Ruthanne Fuller, Mayor
Josh Morse
Building Commissioner

Telephone (617) 796-1600
Facsimile (617) 796-1601
TDD/tty # (617) 796-1608

February 24, 2020

Ruthanne Fuller, Mayor
Newton City Hall
1000 Commonwealth Avenue
Newton Centre, MA 02459

Re: Funding Request for Horace Mann Improvements

Dear Mayor Fuller:

The Public Buildings Department respectfully requests $500,000 for Interior Improvements and Exterior Improvements at the Horace Mann School at 225 Nevada Street.

Sincerely,

Josh Morse
Public Buildings Commissioner

cc: Maureen Lemieux, Chief Financial Officer
Alex Valcarce, Deputy Buildings Commissioner

Horace Mann Elementary School Interior and Exterior Improvements Project Summary of $500,000

1. **Short term but permanent Interior modifications and improvements to the building. These include but are not limited to plumbing, accessibility modifications and general building modifications to create both educational classrooms and learning areas to meet the unique needs of the school - $340,000**

2. **Installation of a new playground to meet existing school's needs - $135,000**

3. **Contingency - $25,000**

199-20

City of Newton, Massachusetts
Office of the Mayor

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MAYOR

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rfuller@newtonma.gov

March 9, 2020

Honorable City Council
Newton City Hall
1000 Commonwealth Avenue
Newton Centre, MA 02459

Councilors:

All of us are watching the evolving COVID-19 situation closely and, understandably, we're all concerned.

Here in the City of Newton, I am working closely with Deb Youngblood (Commissioner of Health and Human Services), Bruce Proia (Acting Emergency Management Director), Michelle Pizzi O'Brien (Human Resources Director), and many others to maintain a safe workplace, to adopt practices protecting the health of all our employees and to help employees if they are impacted by COVID-19 even as we ensure the continuity of municipal operations.

City of Newton Department Heads are also working with City of Newton Health and Human Services to develop specific protocols for their individual Departments. Examples include providing N95 masks for first responders when necessary, making hand sanitizer/wipes available, placing signage about handwashing in public view, and additional steps by our custodians to disinfect our work sites.

With this in mind and out of an abundance of caution, I respectfully submit a docket item to your Honorable Council requesting authorization to appropriate and expend up to $250,000 from June 30, 2019 Certified Free Cash for the purpose of being prepared to act, should the need arise. Funds should be appropriated to Acct # 0121030-543500 Emergency Operations – Supplies. We will carefully track utilization of these funds and will keep your Honorable Council apprised.

Thank you for your consideration of this matter.

Sincerely,

Ruthanne Fuller
Mayor

200-20

RUTHANNE FULLER
MAYOR

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Office of the Mayor

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E-mail
rfuller@newtonma.gov

March 9, 2020

Honorable City Council
Newton City Hall
1000 Commonwealth Avenue
Newton Centre, MA 02459

Councilors:

I respectfully submit a docket item to your Honorable Council requesting authorization to accept $270,000 of lighting equipment as well as authorization to accept more funds to be expended on the installation of a field light system for the Newton South High School Winkler Stadium Field which is on Newton Parks and Recreation property. The funds are being donated by the Newton South High School Booster Club.

Thank you for your consideration of this matter.

Sincerely,

Ruthanne Fuller

Ruthanne Fuller
Mayor

RECEIVED
2020 MAR -9 PM 4:58
CITY CLERK
NEWTON, MA. 02459

NEWTON PARKS, RECREATION
AND CULTURE DEPARTMENT

246 Dudley Road, Newton, MA 02459
Office: (617) 796-1500
TDD/TTY: (617) 796-1089
parks@newtonma.gov

RUTHANNE FULLER
MAYOR

NICOLE BANKS
COMMISSIONER

March 9, 2020

Honorable Mayor Ruthanne Fuller
Newton City Hall
1000 Commonwealth Ave
Newton, MA 02459

Dear Mayor Fuller,

I am writing to respectfully request that you docket with the Honorable City Council for consideration a request for the acceptance of $270,000 of lighting equipment with technical details attached along with permission to accept more funds to be expended on the installation of a field light system for the Newton South High School Winkler Stadium Field which is on Newton Parks and Recreation property. The funds are being donated by the Newton South High School Booster Club.

Thank you for your consideration in this matter.

Sincerely,

Nicole Banks, Commissioner

CC: Jonathan Yeo, Chief Operating Officer
Maureen Lemieux, Chief Financial Officer

POLE IDENTIFICATION AND RESULTANT FORCES

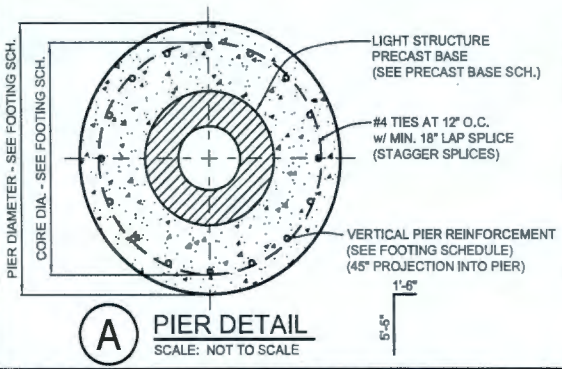
POLE DESIGNATION	POLE TYPE	PRECAST BASE TYPE	FIXTURE CONFIGURATION (FIX. PER XARM)	FIXTURE AND ACCESSORIES EPA (FT^2)	FORCES (1.)		
					MOMENT (M) FT-LBS	SHEAR (V) LBS	VERTICAL (P) LBS
S1, S2	LSS80C	6B	11 (5+4)	29.4	152,192	2,986	4,037
S3, S4	LSS80C	6B	12 (5+4)	29.6	152,452	2,991	4,087

1. ASD LOAD COMBINATION D + 0.6W.
   VERTICAL FORCE IS WEIGHT OF DRESSED POLE.
2. POLES S3 & S4 HAVE (1) MUSCO LED FIXTURE AT 70'-0" AGL INCLUDED ABOVE.
   POLES S1 - S4 HAVE (2) MUSCO LED FIXTURES AT 15'-6" AGL INCLUDED ABOVE.

PRECAST BASE ID FOR SPREAD FOOTING (S1 & S2)

PRECAST BASE TYPE	PRECAST BASE WEIGHT (1.)	PRECAST BASE LENGTH (1.)	PROJECTION ABOVE GRADE	STANDARD EMBEDMENT (1.)	OUTSIDE DIAMETER	CUT LENGTH OFF BOTTOM (2.)	EMBEDMENT INTO FOOTING & PIER (3.)
6B	6,930 LBS	26'-1"	8'-1"	18'-0"	20.56"	10'-0"	6'-0"

1. PRECAST BASE WEIGHT, LENGTH AND STANDARD EMBEDMENT ARE PRECUT PROPERTIES
2. EPOXY COAT NEW BOTTOM SURFACE OF PRECAST BASE AFTER CUTTING
3. EMBEDMENT EQUALS 2'-0" FOOTING THICKNESS PLUS 4'-0" PIER HEIGHT BELOW FOOTING



A PIER DETAIL
SCALE: NOT TO SCALE

CONCRETE/REINFORCEMENT NOTES

CONCRETE SHALL COMPLY WITH THE FOLLOWING ASTM STANDARDS: MIXTURE WITH ASTM C-94, PORTLAND CEMENT WITH ASTM C-150 TYPE 1-A, AGGREGATES (MAX 0.75") WITH ASTM C-33 AND BE IN CONFORMANCE WITH ACI 318. CONCRETE SHALL BE AIR-ENTRAINED (COMPLY WITH ASTM C-260), HAVE A MAXIMUM WATER-CEMENT RATIO, w/cm = 0.45 AND HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 4,500 PSI (S1, S2); 3,000 PSI (S3, S4).

DESIGN SLUMP LIMITS ARE 4" MINIMUM AND 6" MAXIMUM. THE JOB SITE SLUMP MAY BE INCREASED BY THE USE OF A WATER REDUCING AGENT MEETING ASTM C494-92.

CONCRETE REINFORCEMENT SHALL COMPLY WITH ASTM A615 GRADE 60 AND BE IN CONFORMANCE WITH ACI 315 & 318.

CONCRETE FOR SPREAD FOOTINGS MUST ATTAIN DESIGN STRENGTH PRIOR TO POLE INSTALLATION AND FIXTURE MOUNTING.

DESIGN NOTES

DESIGN PARAMETERS:
WIND: V_{ult} = 127 MPH, V_{asd} = 98 MPH (EXPOSURE C, RISK CATEGORY II) PER MASSACHUSETTS STATE BUILDING CODE - 780 CMR, 9TH EDITION (IBC 2015 / ASCE 7-10).

GEOTECHNICAL PARAMETERS:
ALLOWABLE END BEARING SOIL PRESSURE: 1,200 PSF (S1 & S2)
LATERAL SOIL RESISTANCE PARAMETERS: AS PROVIDED IN SOIL REPORT
IN ACCORDANCE WITH MASSACHUSETTS STATE BUILDING CODE - 780 CMR, 9TH EDITION, CHAPTER 18.

OVER EXCAVATE 1'-0" BELOW THE BOTTOM OF THE SPREAD FOOTING TO A DEPTH OF -5'-0" BELOW GRADE. REPLACE THE OVER EXCAVATED AREA WITH COMPACTED STRUCTURAL FILL. THE STRUCTURAL FILL SHOULD BE IBC, TABLE 1806.2, CLASS 3 OR BETTER AND BE COMPACTED TO 98% OF STANDARD PROCTOR.

DESIGN SOIL PARAMETERS ARE AS NOTED. ACTUAL ALLOWABLE SOIL PARAMETERS MUST BE VERIFIED ON SITE. REFERENCE SOILS AND FOUNDATION REPORT, FILE NO. 01.0174475.00, PREPARED BY GZA GEOENVIRONMENTAL, INC.; BOSTON, MA.

A GEOTECHNICAL ENGINEER OR REPRESENTATIVE OF IS RECOMMENDED (NOT REQUIRED) TO BE AVAILABLE AT THE TIME OF THE FOUNDATION INSTALLATION TO VERIFY THE SOIL DESIGN PARAMETERS AND TO PROVIDE ASSISTANCE IF ANY PROBLEMS ARISE IN FOUNDATION INSTALLATION.

ENCOUNTERING SOIL FORMATIONS THAT WILL REQUIRE SPECIAL DESIGN CONSIDERATIONS OR EXCAVATION PROCEDURES MAY OCCUR. POLE FOUNDATIONS WILL NEED TO BE ANALYZED ACCORDING TO THE SOIL CONDITIONS THAT EXIST. IF ANY DISCREPANCIES OR INCONSISTENCIES ARISE, NOTIFY THE ENGINEER OF SUCH DISCREPANCIES. FOUNDATIONS WILL THEN BE REVISED ACCORDINGLY. REVISIONS WILL BE ANALYZED PER RECOMMENDATIONS DIRECTED BY A REGISTERED ENGINEER.

ALL EXCAVATIONS MUST BE FREE OF LOOSE SOIL AND DEBRIS PRIOR TO FOUNDATION INSTALLATION AND CONCRETE BACKFILL PLACEMENT. FOR DRILLED PIERS, TEMPORARY CASINGS OR DRILLERS SLURRY MAY BE USED TO STABILIZE THE EXCAVATION DURING INSTALLATION. CASINGS MUST BE REMOVED DURING CONCRETE BACKFILL PLACEMENT. CONCRETE BACKFILL MUST BE PLACED WITH A TREMIE WHEN SLURRY OR WATER IS PRESENT WITHIN THE EXCAVATION OR WHEN THE FREE DROP EXCEEDS 6'-0".

CONTRACTOR MUST BE FAMILIAR WITH THE COMPLETE SOIL INVESTIGATION REPORT AND BORINGS, AND CONTACT THE GEOTECHNICAL FIRM (IF NECESSARY) TO UNDERSTAND THE SOIL CONDITIONS AND THE POSSIBILITY OF GROUND WATER PUMPING AND EXCAVATION STABILIZATION OR BRACING DURING PRECAST BASE INSTALLATION AND PLACEMENT OF CONCRETE BACKFILL.

GENERAL NOTES:
FIXTURES MUST BE LOCATED TO MAINTAIN 10'-0" MINIMUM HORIZONTAL CLEARANCE FROM ANY OBSTRUCTION. ENGINEER MUST BE NOTIFIED IF FOUNDATIONS ARE NEAR ANY RETAINING WALLS OR WITHIN / NEAR ANY SLOPES STEEPER THAN 3H : 1V. POLES, FIXTURES, PRECAST BASES, ELECTRICAL ITEMS AND INSTALLATION PER MUSCO LIGHTING.

PRELIMINARY

NOT FOR CONSTRUCTION

NEWTON SOUTH HS
FOOTBALL/SOCCER
FIELD LIGHTING
NEWTON, MA

MUSCO Lighting
CORPORATE: 100 - 1ST AVE. WEST
OSKALOOSA, IA 52577
(800) 825-8920

STRUCTURAL ENGINEERS, P.C.
114 NICHOLAS DRIVE
MARSHALLTOWN, IOWA 50158
PHONE NUMBER: 641-752-6334
EMAIL: MSL.INFO@SEPC.BIZ

DRAWING TITLE: POLE AND FOUNDATION
SCALE: SEE PLAN
NOTES: SCAN #117155E

PROJECT NUMBER 117155

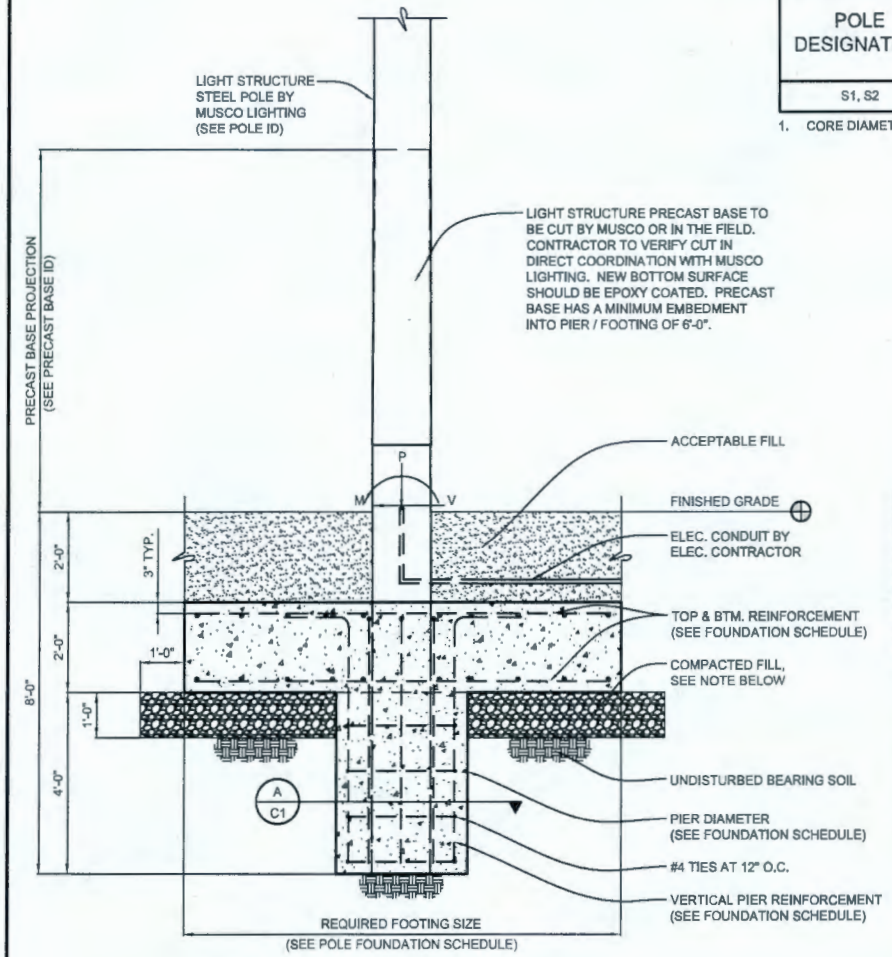
DATE 29 JANUARY 2020

DRAWING NUMBER C1
OF THREE

POLE FOUNDATION SCHEDULE (S1 & S2)

POLE DESIGNATION	FOOTING			PIER			
	SIZE	THICKNESS	REINFORCEMENT TOP & BOTTOM (TOTAL) QUANTITY - SIZE	DIAMETER INCHES	CORE DIA. INCHES (1.)	VERTICAL REINFORCING	HORIZONTAL TIES
S1, S2	12'-0" x 12'-0"	2'-0"	(48) 12 - #7's EACH WAY	42	35	16 - #7	#4 @ 12"

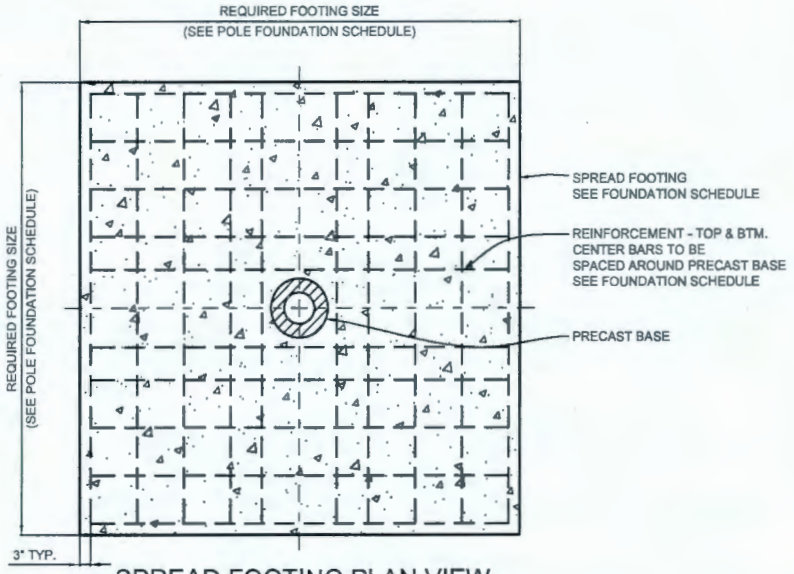
1. CORE DIAMETER EQUAL TO INSIDE DIAMETER OF TIES.



POLE FOUNDATION ELEVATION

SCALE: NOT TO SCALE

NOTE:
OVER EXCAVATE 1'-0" BELOW THE BOTTOM OF THE SPREAD FOOTING TO A DEPTH OF -5'-0" BELOW GRADE. REPLACE THE OVER EXCAVATED AREA WITH COMPACTED STRUCTURAL FILL. THE STRUCTURAL FILL SHOULD BE IBC, TABLE 1806.2, CLASS 3 OR BETTER AND BE COMPACTED TO 98% OF STANDARD PROCTOR.



SPREAD FOOTING PLAN VIEW

SCALE: NOT TO SCALE

PRELIMINARY

NOT FOR CONSTRUCTION

NEWTON SOUTH HS
FOOTBALL/SOCCER
FIELD LIGHTING
NEWTON, MA

MUSCO Lighting
CORPORATE: 100 1ST AVE WEST
OSKALOOSA, IA 52577
(800) 825-6020

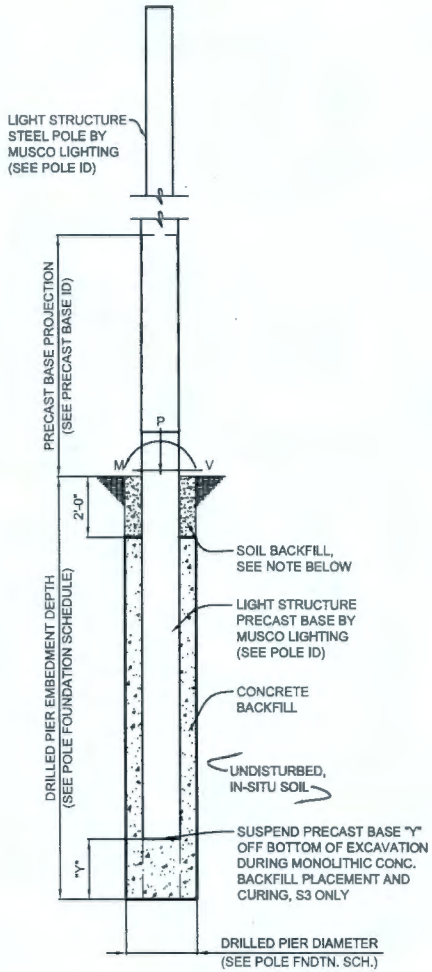
STRUCTURAL ENGINEERS, P.C.
114 NICHOLAS DRIVE
MARSHALLTOWN, IOWA 50158
PHONE NUMBER: 641-752-6334
EMAIL: MSL.INFO@SEPC.BIZ

DRAWING TITLE: POLE AND FOUNDATION
SCALE: SEE PLAN
NOTES: SCAN #117155E

PROJECT NUMBER: 117155

DATE: 29 JANUARY 2020

DRAWING NUMBER: C2
OF THREE



POLE FOUNDATION ELEV.

SCALE: NOT TO SCALE

SOIL BACKFILL NOTE:
THE TOP TWO FEET OF ANNULUS SHALL BE BACKFILLED WITH SOIL, WITH A CLASSIFICATION OF CLASS 5 (TABLE 1806.2) OR BETTER. COMPACTION, 95% FOR COHESIVE SOIL AND 98% FOR A COHESIONLESS SOIL BASED UPON STANDARD PROCTOR TESTING (ASTM D698).

POLE FOUNDATION SCHEDULE (S3 & S4)

POLE DESIGNATION	DRILLED PIER			
	DIAMETER INCHES	EMBEDMENT DEPTH (4.)	SUSPENSION "Y" (2.)	CONCRETE BACKFILL YD^3 (3.)
S3	36	21'-0"	3'-0"	3.7
S4	36	18'-0"	NA	2.9

1. ASD LOAD COMBINATION D + 0.6W.
   VERTICAL FORCE IS WEIGHT OF DRESSED POLE (DOES NOT INCLUDE PRECAST BASE WEIGHT)
2. SUSPEND PRECAST BASE "Y" OFF THE BOTTOM OF THE EXCAVATION DURING MONOLITHIC CONCRETE BACKFILL PLACEMENT AND CURING. NA = NOT APPLICABLE, SUSPENSION NOT REQUIRED.
3. MINIMUM CONCRETE BACKFILL VOLUME, SITE CONDITIONS MAY REQUIRE ADDITIONAL BACKFILL.
4. POTENTIAL FOR ENCOUNTERING ROCK BEFORE REACHING EMBEDMENT DEPTH. ROCK AUGERING EQUIPMENT MAY BE REQUIRED.

PRECAST BASE IDENTIFICATION

PRECAST BASE TYPE	PRECAST BASE WEIGHT	PRECAST BASE LENGTH	PROJECTION ABOVE GRADE	STANDARD EMBEDMENT	OUTSIDE DIAMETER
6B	6,930 LBS	26'-1"	8'-1"	18'-0"	20.56"

PRELIMINARY

NOT FOR CONSTRUCTION

NEWTON SOUTH HS
FOOTBALL/SOCCER
FIELD LIGHTING
NEWTON, MA

musco Lighting
CORPORATE: 100 1st AVE WEST
OSKALOOSA, IA 52577
(800) 825-6020

STRUCTURAL ENGINEERS, P.C.
114 NICHOLAS DRIVE
MARSHALLTOWN, IOWA 50158
PHONE NUMBER: 641-752-6334
EMAIL: MSL.INFO@SEPC.BIZ

DRAWING TITLE: POLE AND FOUNDATION
SCALE: SEE PLAN
NOTES: SCAN #117155E

PROJECT NUMBER 117155

DATE 29 JANUARY 2020

DRAWING NUMBER C3
OF THREE

Control System Summary

Project Specific Notes:

Project Information

Project #:	117155
Project Name:	Newton South High School Football/Soccer
Date:	02/14/20
Project Engineer:	TLanphier
Sales Representative:	Mike Berry
Control System Type:	LED C&M
Communication Type:	PowerLine-ST
Scan:	117155F
Document ID:	117155P1V4-0214092014
Distribution Panel Location or ID:	Electrical Service #1
Total # of Distribution Panel Locations for Project:	1
Design Voltage/Hertz/Phase:	208/60/3
Control Voltage:	120

Equipment Listing

DESCRIPTION	APPROXIMATE SIZE
1.Control and Monitoring Cabinet	24 X 48

	QTY	SIZE
Total Contactors	4	60 AMP
Total Off/On/Auto Switches:	1	

Materials Checklist

Contractor/Customer Supplied:

- ❑ A dedicated control circuit must be supplied per distribution panel location.
  - — If the control voltage is NOT available, a control transformer is required.
- ❑ Electrical distribution panel to provide overcurrent protection for circuits
  - — HID rated or D-curve circuit breaker sized per full load amps on Circuit Summary by Zone Chart
- ❑ Wiring:
  - — See chart on page 2 for wiring requirements
  - — Equipment grounding conductor and splices must be insulated. (per circuit)
  - — Lightning ground protection (per pole), if not Musco supplied.
- ❑ Electrical conduit wireway system
  - — Entrance hubs rated NEMA 4: must be die-cast zinc, PVC, or copper-free die-cast aluminum
- ❑ Mounting hardware for cabinets
- ❑ Breaker lock-on device to prevent unauthorized power interruption to control power and powerline connection (if present)
- ❑ Anti-corrosion compound to apply to ends of wire, if necessary

Call Control-Link Central ™ operations center at 877/347-3319 to schedule activation of the control system upon completion of the installation. Note: Activation may take up to 1 1/2 hours

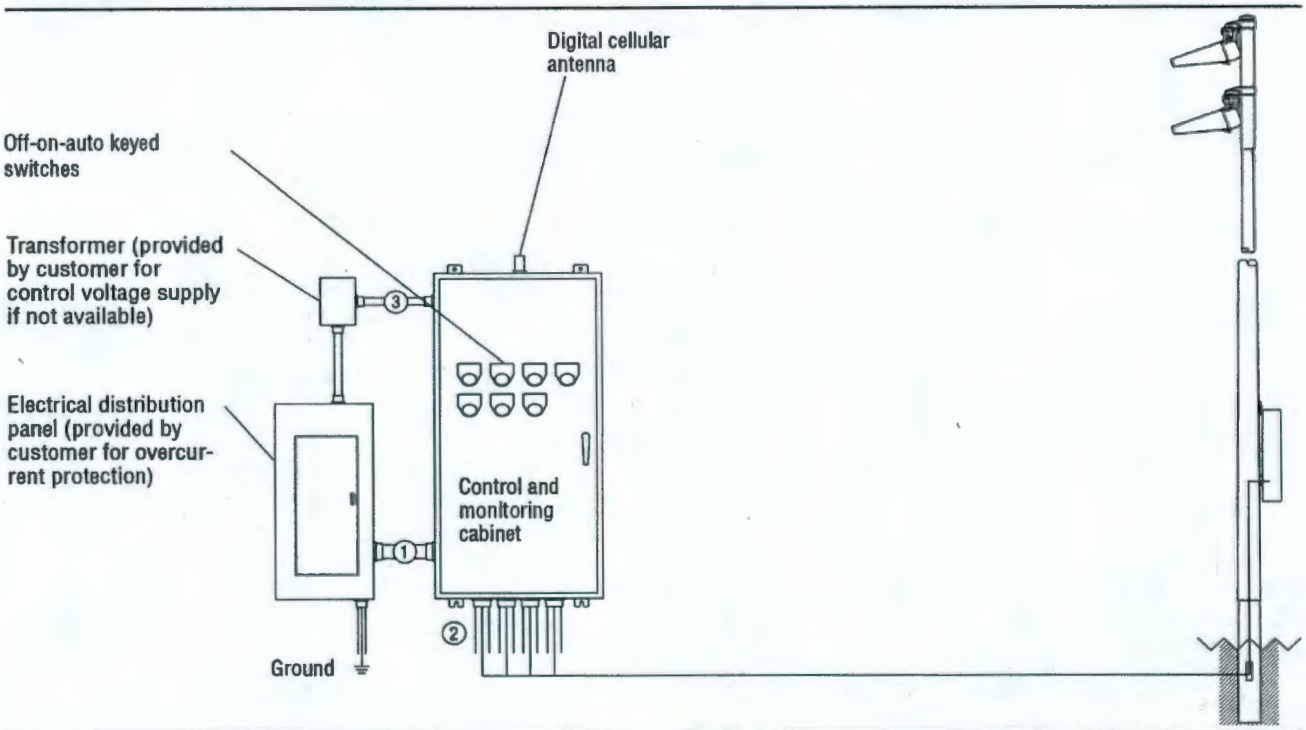
IMPORTANT NOTES

1. Please confirm that the design voltage listed above is accurate for this facility. Design voltage/phase is defined as the voltage/phase being connected and utilized at each lighting pole's electrical components enclosure disconnect. Inaccurate design voltage/phase can result in additional costs and delays. Contact your Musco sales representative to confirm this item.
2. In a 3 phase design, all 3 phases are to be run to each pole. When a 3 phase design is used Musco's single phase luminaires come pre-wired to utilize all 3 phases across the entire facility.
3. One contactor is required for each pole. When a pole has multiple circuits, one contactor is required for each circuit. All contactors are UL 100% rated for the published continuous load. All contactors are 3 pole.
4. If the lighting system will be fed from more than one distribution location, additional equipment may be required. Contact your Musco sales representative.
5. A single control circuit must be supplied per control system.
6. Size overcurrent devices using the full load amps column of the Circuit Summary By Zone chart- Minimum power factor is 0.9.

NOTE: Refer to Installation Instructions for more details on equipment information and the installation requirements

Control System Summary

Control•Link®
Control and Monitoring System



Conduit ID	Description	# of Wires	Wire (AWG)	Conduit (in)	Max. Wire Length (ft)	MUSCO Supplied	Notes
1	Line power to contactors, and equipment grounding conductor	*A	*B	*C	N/A	No	A-E
1	Power-line Communication Connection (dedicated, 20A)	*A	12	*C	N/A	No	A-E
2	Load power to lighting circuits, and equipment grounding conductor	*A	*B	*C	N/A	No	A-E
3	Control power (dedicated, 20A)	3	12	*C	N/A	No	C,E

* Notes:

R60-100-00_A

A. See voltage and phasing per the notes on cover page.
B. Calculate per load and voltage drop.
C. All conduit diameters should be per code unless otherwise specified to allow for connector size.
D. Equipment grounding conductor and any splices must be insulated.
E. Refer to control and monitoring system installation instructions for more details on equipment information and the installation requirements.

IMPORTANT: Control wires (3) must be in separate conduit from line and load power wires (1, 2).

Control System Summary

SWITCHING SCHEDULE

Field/Zone Description	Zones
FB/SO	1

CONTROL POWER CONSUMPTION	
120V Single Phase	
VA loading of Musco Supplied Equipment	INRUSH: 1553.0
	SEALED: 179.8

CIRCUIT SUMMARY BY ZONE

POLE	CIRCUIT DESCRIPTION	# OF FIXTURES	# OF DRIVERS	*FULL LOAD AMPS	CONTACTOR SIZE (AMPS)	CONTACTOR ID	ZONE
S1	FB/SO	11	11	**50.1**	60	C1	1
S2	FB/SO	11	11	**50.1**	60	C2	1
S3	FB/SO	11	11	**50.1**	60	C3	1
S4	FB/SO	11	11	**50.1**	60	C4	1

*Full Load Amps based on amps per driver.

Control System Summary

Newton South High School Football/Soccer / 117155 - 117155F
Electrical Service #1 - Page 4 of 4

PANEL SUMMARY

CABINET #	CONTROL MODULE LOCATION	CONTACTOR ID	CIRCUIT DESCRIPTION	FULL LOAD AMPS	DISTRIBUTION PANEL ID (BY OTHERS)	CIRCUIT BREAKER POSITION (BY OTHERS)
1	1	C1	Pole S1	50.07		
1	1	C2	Pole S2	50.07		
1	1	C3	Pole S3	50.07		
1	1	C4	Pole S4	50.07		

ZONE SCHEDULE

			CIRCUIT DESCRIPTION	
ZONE	SELECTOR SWITCH	ZONE DESCRIPTION	POLE ID	CONTACTOR ID
Zone 1	1	FB/SO	S1	C1
			S2	C2
			S3	C3
			S4	C4

Newton South High School Football/Soccer

Newton, MA

Lighting System

Pole / Fixture Summary

Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load	Circuit
S1-S4	80'	80'	8	TLC-LED-1500	12.87 kW	A
		16'	2	TLC-BT-575	1.15 kW	A
4			*44*		*58.08 kW*	

Circuit Summary

Circuit	Description	Load	Fixture Qty
A	Soccer	58.08 kW	44

Fixture Type Summary

Type	Source	Wattage	Lumens	L90	L80	L70	Quantity
TLC-BT-575	LED 5700K - 75 CRI	575W	52,000	>81,000	>81,000	>81,000	8
TLC-LED-1500	LED 5700K - 75 CRI	1430W	160,000	>81,000	>81,000	>81,000	36

Light Level Summary

Calculation Grid Summary

Grid Name	Calculation Metric	Illumination					Circuits	Fixture Qty
		Ave	Min	Max	Max/Min	Ave/Min		
Bleachers	Horizontal Illuminance	0	0	0	0.00		B	0
Football	Horizontal Illuminance	51	41	59	1.46	1.24	A	44
Property Line	Horizontal	0	0	0.04	0.00		A,B	44
Property Line	Max Candela (by Fixture)	286	0	2317	0.00		A,B	44
Property Line	Max Vertical Illuminance Metric	0.01	0	0.08	0.00		A,B	44
Soccer	Horizontal Illuminance	50.1	41	59	1.46	1.22	A	44
Wetlands Grid	Horizontal	0.01	0	2	0.00		A,B	44
Zero Grid	Horizontal	14.8	0	62	12539.03		A,B	44

From Hometown to Professional

We Make It Happen.

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	S1-S2	80'	-	15.5' 80'	TLC-BT-575 TLC-LED-1500	2 9	2 9	0 0
2	S3-S4	80'	-	15.5' 80'	TLC-BT-575 TLC-LED-1500	2 9	2 9	0 0
4	TOTALS					44	44	0

Newton South High School Football/Soccer
Newton,MA

GRID SUMMARY

Name:	Soccer
Size:	360' x 225'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY

MAINTAINED HORIZONTAL FOOTCANDLES

	Entire Grid
Guaranteed Average:	**50**
Scan Average:	50.06
Maximum:	59
Minimum:	41
Avg / Min:	1.23
Guaranteed Max / Min:	**2**
Max / Min:	1.46
UG (adjacent pts):	1.40
CU:	0.71
No. of Points:	96

LUMINAIRE INFORMATION

Color / CRI:	5700K - 75 CRI
Luminaire Output:	52,000 / 160,000 lumens
No. of Luminaires:	**44**
Total Load:	56.08 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-BT-575	>81,000	>81,000	>81,000
TLC-LED-1500	>81,000	>81,000	>81,000

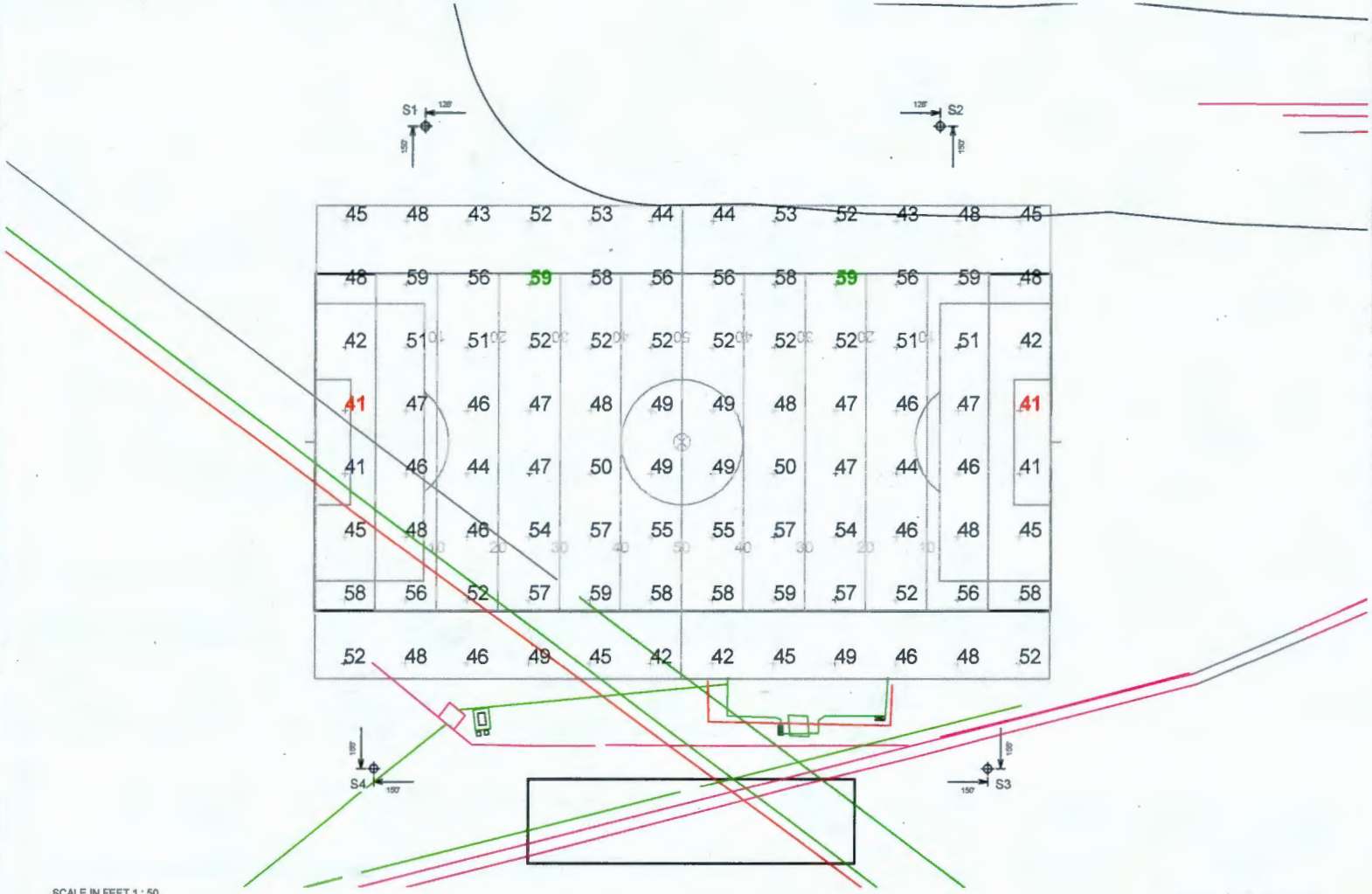
Reported per TM-21-11. See luminaire datasheet for details

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



SCALE IN FEET 1 : 50

0' 50' 100'

Pole location(s) ◆ dimensions are relative to 0,0 reference point(s) ⊗

ENGINEERED DESIGN By: Tanner Lanphier • File #117155F • 14-Feb-20

musco Lighting

We Make It Happen.

ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	S1-S2	80'	-	15.5' 80'	TLC-BT-575 TLC-LED-1500	2 9	2 9	0 0
2	S3-S4	80'	-	15.5' 80'	TLC-BT-575 TLC-LED-1500	2 9	2 9	0 0
4	TOTALS					44	44	0

Newton South High School Football/Soccer
Newton, MA

GRID SUMMARY

Name:	**Football**
Size:	360' x 160'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY

MAINTAINED HORIZONTAL FOOTCANDLES

	Entire Grid
Guaranteed Average:	50
Scan Average:	50.98
Maximum:	59
Minimum:	41
Avg / Min:	1.26
Guaranteed Max / Min:	2
Max / Min:	1.46
UG (adjacent pts):	1.28
CU:	0.55
No. of Points:	72

LUMINAIRE INFORMATION

Color / CRI:	5700K - 75 CRI
Luminaire Output:	52,000 / 160,000 lumens
No. of Luminaires:	**44**
Total Load:	56.08 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-BT-575	>81,000	>81,000	>81,000
TLC-LED-1500	>81,000	>81,000	>81,000

Reported per TM-21-11. See luminaire datasheet for details

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

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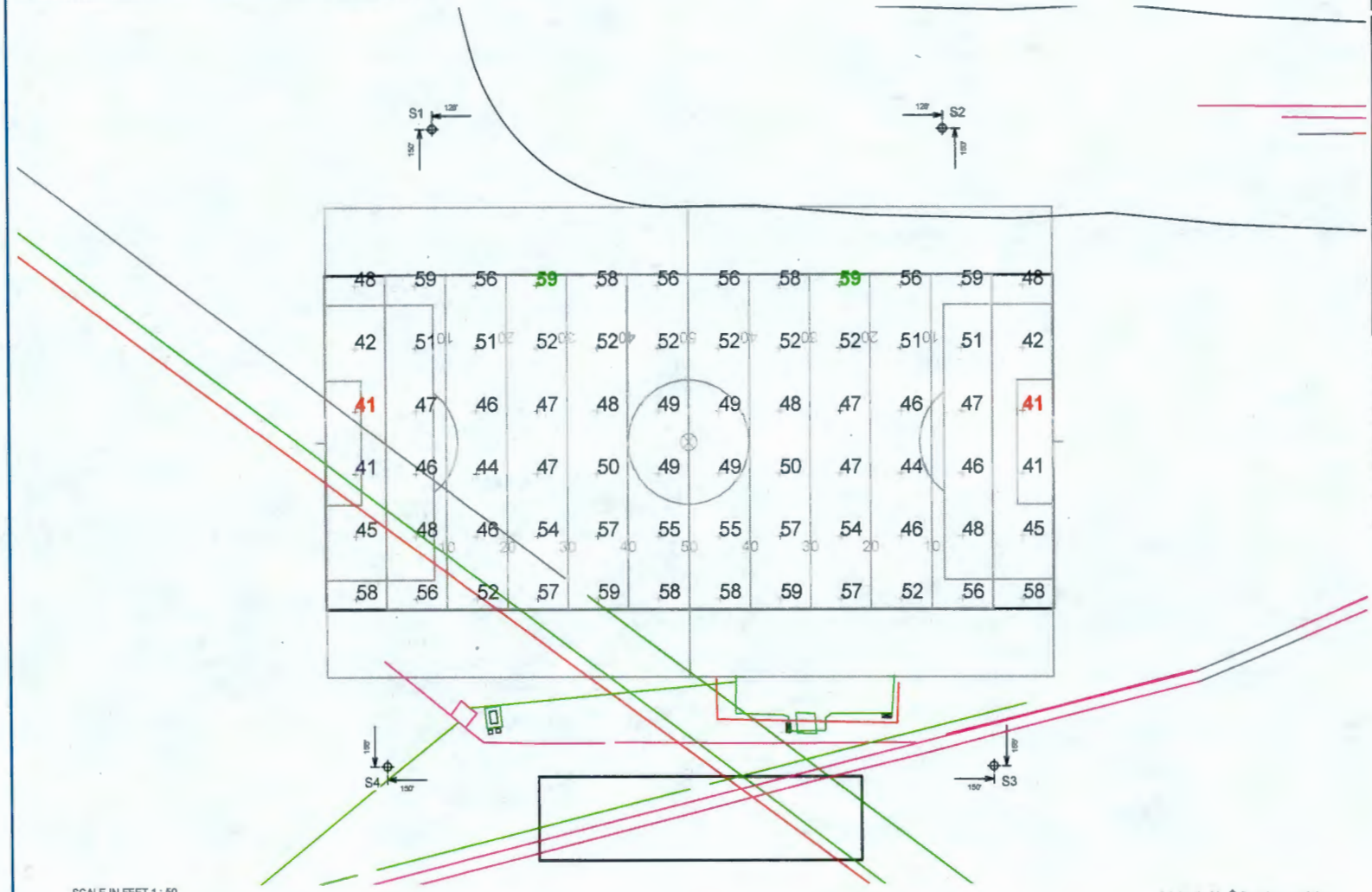
Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



SCALE IN FEET 1 : 50

0' 50' 100'

Pole location(s) ◆ dimensions are relative to 0,0 reference point(s) ⊗

ENGINEERED DESIGN By: Tanner Lanphier • File #117155F • 14-Feb-20

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ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	S1-S2	80'	-	15.5' 80'	TLC-BT-575 TLC-LED-1500	2 9	2 9	0 0
2	S3-S4	80'	-	15.5' 80'	TLC-BT-575 TLC-LED-1500	2 9	2 9	0 0
4	TOTALS					44	44	0

Newton South High School Football/Soccer
Newton,MA

GRID SUMMARY

Name:	**Zero Grid**
Size:	360' x 160'
Spacing:	40.0' x 40.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY

MAINTAINED HORIZONTAL FOOTCANDLES

	Entire Grid
Scan Average:	**14.63**
Maximum:	62
Minimum:	0
Avg / Min:	2980.88
Max / Min:	**12539.03**
UG (adjacent pts):	31.56
CU:	0.93
No. of Points:	240

LUMINAIRE INFORMATION

Color / CRI:	5700K - 75 CRI
Luminaire Output:	52,000 / 160,000 lumens
No. of Luminaires:	**44**
Total Load:	56.08 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-BT-575	>81,000	>81,000	>81,000
TLC-LED-1500	>81,000	>81,000	>81,000

Reported per TM-21-11 See luminaire datasheet for details

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

NOTES: Contour Line Key
Light blue: 1.0FC
Green: 0.5FC
Dark blue: 0.2FC

SCALE IN FEET 1 : 200
0' 200' 400'

Pole location(s) ◆ dimensions are relative to 0,0 reference point(s) ⊗

ENGINEERED DESIGN By: Tanner Lanphier • File #117155F • 14-Feb-20

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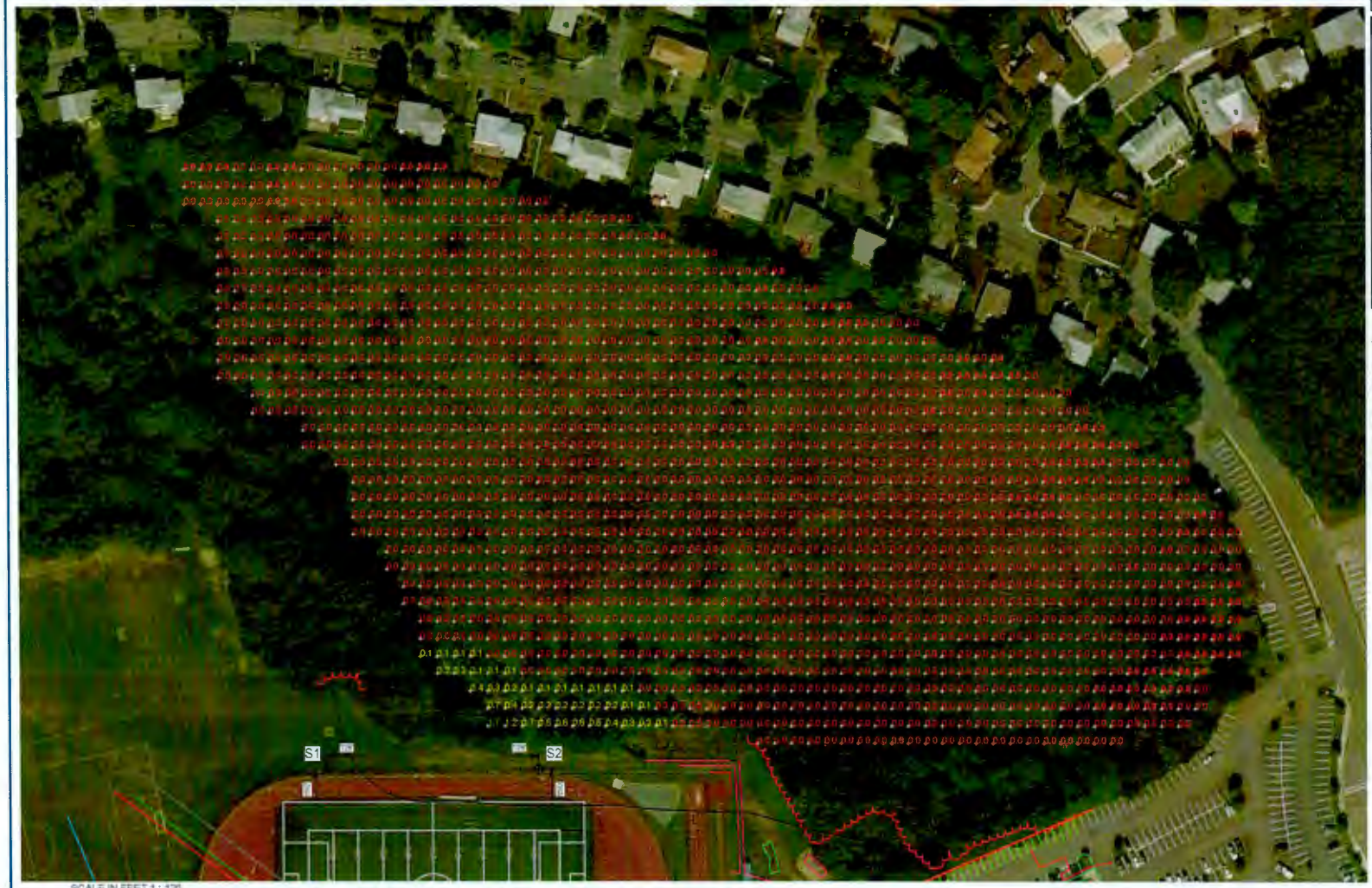
EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	S1-S2	80'	-	15.5' 80'	TLC-BT-575 TLC-LED-1500	2 9	2 9	0 0
2	S3-S4	80'	-	15.5' 80'	TLC-BT-575 TLC-LED-1500	2 9	2 9	0 0
4	TOTALS					44	44	0



SCALE IN FEET 1 : 120
0' 120' 240'

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

ENGINEERED DESIGN By: Tanner Lanphier • File #117155F • 14-Feb-20

Newton South High School Football/Soccer
Newton,MA

GRID SUMMARY

Name:	**Wetlands Grid**
Size:	360' x 160'
Spacing:	20.0' x 20.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY

MAINTAINED HORIZONTAL FOOTCANDLES

	Entire Grid
Scan Average:	**0.01**
Maximum:	2
Minimum:	0
Avg / Min:	-
Max / Min:	**-**
UG (adjacent pts):	14.13
CU:	0.00
No. of Points:	1428

LUMINAIRE INFORMATION

Color / CRI:	5700K - 75 CRI
Luminaire Output:	52,000 / 160,000 lumens
No. of Luminaires:	**44**
Total Load:	56.08 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-BT-575	>81,000	>81,000	>81,000
TLC-LED-1500	>81,000	>81,000	>81,000

Reported per TM-21-11. See luminaire datasheet for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

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ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	S1-S2	80'	-	15.5' 80'	TLC-BT-575 TLC-LED-1500	2 9	2 9	0 0
2	S3-S4	80'	-	15.5' 80'	TLC-BT-575 TLC-LED-1500	2 9	2 9	0 0
4	TOTALS					44	44	0

SCALE IN FEET 1 : 200

0' 200' 400'

Pole location(s) ◆ dimensions are relative to 0,0 reference point(s) ⊗

ENGINEERED DESIGN By: Tanner Lanphier • File #117155F • 14-Feb-20

Newton South High School Football/Soccer
Newton,MA

GRID SUMMARY

Name:	**Property Line**
Spacing:	30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY

HORIZONTAL FOOTCANDLES

	Entire Grid
Scan Average:	0.0038
Maximum:	0.04
Minimum:	0.00
No. of Points:	47

LUMINAIRE INFORMATION

Color / CRI:	5700K - 75 CRI
Luminaire Output:	52,000 / 160,000 lumens
No. of Luminaires:	**44**
Total Load:	56.08 kW

	Lumen Maintenance		
Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-BT-575	>81,000	>81,000	>81,000
TLC-LED-1500	>81,000	>81,000	>81,000

Reported per TM-21-11. See luminaire datasheet for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

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ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	S1-S2	80'	-	15.5' 80'	TLC-BT-575 TLC-LED-1500	2 9	2 9	0 0
2	S3-S4	80'	-	15.5' 80'	TLC-BT-575 TLC-LED-1500	2 9	2 9	0 0
4	TOTALS					44	44	0

SCALE IN FEET 1 : 200

0' 200' 400'

Pole location(s) ✦ dimensions are relative to 0,0 reference point(s) ⊗

ENGINEERED DESIGN By: Tanner Lanphier • File #117155F • 14-Feb-20

Newton South High School Football/Soccer
Newton,MA

GRID SUMMARY

Name:	**Property Line**
Spacing:	30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY

MAX VERTICAL FOOTCANDLES

	Entire Grid
Scan Average:	0.0098
Maximum:	0.08
Minimum:	0.00
No. of Points:	47

LUMINAIRE INFORMATION

Color / CRI:	5700K - 75 CRI
Luminaire Output:	52,000 / 160,000 lumens
No. of Luminaires:	**44**
Total Load:	56.08 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-BT-575	>81,000	>81,000	>81,000
TLC-LED-1500	>81,000	>81,000	>81,000

Reported per TM-21-11. See luminaire datasheet for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

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ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	S1-S2	80'	-	15.5' 80'	TLC-BT-575 TLC-LED-1500	2 9	2 9	0 0
2	S3-S4	80'	-	15.5' 80'	TLC-BT-575 TLC-LED-1500	2 9	2 9	0 0
4	TOTALS					44	44	0

SCALE IN FEET 1 : 200

0' 200' 400'

Pole location(s) ◆ dimensions are relative to 0,0 reference point(s) ⊗

ENGINEERED DESIGN By: Tanner Lanphier • File #117155F • 14-Feb-20

Newton South High School Football/Soccer
Newton,MA

GRID SUMMARY

Name:	Property Line
Spacing:	30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY

CANDELA (PER FIXTURE)

	Entire Grid
Scan Average:	286.1185
Maximum:	2316.63
Minimum:	0.00
No. of Points:	47

LUMINAIRE INFORMATION

Color / CRI:	5700K - 75 CRI
Luminaire Output:	52,000 / 160,000 lumens
No. of Luminaires:	44
Total Load:	56.08 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-BT-575	>81,000	>81,000	>81,000
TLC-LED-1500	>81,000	>81,000	>81,000

Reported per TM-21-11. See luminaire datasheet for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

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ILLUMINATION SUMMARY

SCALE IN FEET 1 : 200

0 200' 400'

Pole location(s) ◆ dimensions are relative to 0,0 reference point(s) ⊗

ENGINEERED DESIGN By: Tanner Lanphier • File #117155F • 14-Feb-20

Newton South High School Football/Soccer
Newton, MA

EQUIPMENT LAYOUT

INCLUDES:
- Bleachers
- Football
- Soccer

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires		
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE
2	S1-S2	80'	-	15.5' 80'	TLC-BT-575 TLC-LED-1500	2 9
2	S3-S4	80'	-	15.5' 80'	TLC-BT-575 TLC-LED-1500	2 9
4	TOTALS					44

SINGLE LUMINAIRE AMPERAGE DRAW CHART

Ballast Specifications (.90 min power factor)	Line Amperage Per Luminaire (max draw)						
Single Phase Voltage	208 (60)	220 (50)	240 (60)	277 (60)	347 (60)	380 (50)	480 (60)
TLC-BT-575	3.4	3.2	2.9	2.5	2.0	1.8	1.5
TLC-LED-1500	8.5	8.1	7.4	6.4	5.1	4.7	3.7

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We Make It Happen.

200-20

Ruthanne Fuller
Mayor

City of Newton, Massachusetts
Department of Planning and Development
1000 Commonwealth Avenue Newton, Massachusetts 02459

Telephone
(617) 796-1120
Telefax
(617) 796-1142
TDD/TTY
(617) 796-1089
www.newtonma.gov

Barney S. Heath
Director

January 31, 2020

Luis Perez-Demorizi
City of Newton Parks, Recreation, and Culture
246 Dudley Road
Newton, MA 02459

RE: 140 Brandeis Road, Request for Determination of Applicability

Project summary

- Install 4 field light poles at the currently unlit Newton South High School field, with related trenching for electrical wiring.
- Work within the buffer zone is limited to the installation of the bases for 2 of the light structures and the trenching associated with the necessary electrical conduit.
- Erosion controls are proposed to be installed between the proposed lights and the resource area.

Approved plans

- "Electrical Site Plan E1.01" prepared by Richard Alexy (1/12/20)
- "Illumination Summary (wetlands grid)" prepared by Musco (11/11/19)
- "Newton South High School Football/Soccer Lighting Design" by Musco (10/4/19)

Dear Mr. Perez-Demorizi:

Enclosed is the Newton Conservation Commission's Determination of Applicability under the Wetlands Protection Act, MGL Ch. 131, s. 40 and the Newton Floodplain/Watershed Protection Ordinance, Section 22-22. The Determination is "Negative-Conditional", i.e., the Commission has determined that by following the referenced plan(s) and the following mandatory conditions listed below, no adverse alteration of the wetland resource area will occur and so no further wetland filing is needed.

- The applicant must schedule and attend a pre-construction site visit to check erosion controls.
- All spoils from trenching and auguring must be properly disposed of off-site.
- Concrete for the footings must be mixed on site to reduce waste. Any excess concrete must be properly disposed of off-site.
- Any concrete washout must occur outside the 100' buffer zone.
- All disturbed areas must be fine-graded, loamed, and seeded to ensure permanent stabilization.

If you have any questions regarding this Determination, please contact me.

Sincerely,

Claire Rundelli
Assistant Environmental Planner

CC: Wetlands Division, DEP - NERO, 205B Lowell St., Wilmington, MA 01887

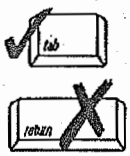
Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 2 – Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

A. General Information

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



From:

Newton
Conservation Commission

To: Applicant

Luis Perez Demorizi, Parks, Rec., and Culture
Name

246 Dudley Road
Mailing Address

Newton | MA | 02459
City/Town | State | Zip Code

Property Owner (if different from applicant):

City of Newton
Name

1000 Commonwealth Ave
Mailing Address

Newton | MA | 02459
City/Town | State | Zip Code

1. Title and Date (or Revised Date if applicable) of Final Plans and Other Documents:

Title	Date
"Electrical Site Plan E1.01" prepared by Richard Alexy	1/12/20
"Illumination Summary (wetlands grid)" prepared by Musco	11/11/19
"Newton South High School Football/Soccer Lighting Design" by Musco	10/4/19

2. Date Request Filed:

1/14/20

B. Determination

Pursuant to the authority of M.G.L. c. 131, § 40, the Conservation Commission considered your Request for Determination of Applicability, with its supporting documentation, and made the following Determination.

Project Description (if applicable):

The scope of work at the Newton South High School Field encompasses the retrofitting of the unlit field with new high efficiency lighting that will help extend the playability of the fields. Excavation occuring on the WPA jurisiction involves digging the light pole foundations and trenching associated with the installation of new electrical conduit. The lighting proposed at the fields has been designed for the least possible spillage.

Project Location:

140 Brandeis Road
Street Address

Newton
City/Town

81051
Assessors Map/Plat Number

0047
Parcel/Lot Number

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 2 – Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

B. Determination (cont.)

The following Determination(s) is/are applicable to the proposed site and/or project relative to the Wetlands Protection Act and regulations:

Positive Determination
Note: No work within the jurisdiction of the Wetlands Protection Act may proceed until a final Order of Conditions (issued following submittal of a Notice of Intent or Abbreviated Notice of Intent) or Order of Resource Area Delineation (issued following submittal of Simplified Review ANRAD) has been received from the issuing authority (i.e., Conservation Commission or the Department of Environmental Protection).

☐ 1. The area described on the referenced plan(s) is an area subject to protection under the Act. Removing, filling, dredging, or altering of the area requires the filing of a Notice of Intent.

☐ 2a. The boundary delineations of the following resource areas described on the referenced plan(s) are confirmed as accurate. Therefore, the resource area boundaries confirmed in this Determination are binding as to all decisions rendered pursuant to the Wetlands Protection Act and its regulations regarding such boundaries for as long as this Determination is valid.

☐ 2b. The boundaries of resource areas listed below are not confirmed by this Determination, regardless of whether such boundaries are contained on the plans attached to this Determination or to the Request for Determination.

☐ 3. The work described on referenced plan(s) and document(s) is within an area subject to protection under the Act and will remove, fill, dredge, or alter that area. Therefore, said work requires the filing of a Notice of Intent.

☐ 4. The work described on referenced plan(s) and document(s) is within the Buffer Zone and will alter an Area subject to protection under the Act. Therefore, said work requires the filing of a Notice of Intent or ANRAD Simplified Review (if work is limited to the Buffer Zone).

☐ 5. The area and/or work described on referenced plan(s) and document(s) is subject to review and approval by:

Name of Municipality

Pursuant to the following municipal wetland ordinance or bylaw:

Name | Ordinance or Bylaw Citation

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 2 – Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

B. Determination (cont.)

☐ 6. The following area and/or work, if any, is subject to a municipal ordinance or bylaw but not subject to the Massachusetts Wetlands Protection Act:

☐ 7. If a Notice of Intent is filed for the work in the Riverfront Area described on referenced plan(s) and document(s), which includes all or part of the work described in the Request, the applicant must consider the following alternatives. (Refer to the wetland regulations at 10.58(4)c. for more information about the scope of alternatives requirements):

- ☐ Alternatives limited to the lot on which the project is located.
- ☐ Alternatives limited to the lot on which the project is located, the subdivided lots, and any adjacent lots formerly or presently owned by the same owner.
- ☐ Alternatives limited to the original parcel on which the project is located, the subdivided parcels, any adjacent parcels, and any other land which can reasonably be obtained within the municipality.
- ☐ Alternatives extend to any sites which can reasonably be obtained within the appropriate region of the state.

Negative Determination

Note: No further action under the Wetlands Protection Act is required by the applicant. However, if the Department is requested to issue a Superseding Determination of Applicability, work may not proceed on this project unless the Department fails to act on such request within 35 days of the date the request is post-marked for certified mail or hand delivered to the Department. Work may then proceed at the owner's risk only upon notice to the Department and to the Conservation Commission. Requirements for requests for Superseding Determinations are listed at the end of this document.

☐ 1. The area described in the Request is not an area subject to protection under the Act or the Buffer Zone.

☐ 2. The work described in the Request is within an area subject to protection under the Act, but will not remove, fill, dredge, or alter that area. Therefore, said work does not require the filing of a Notice of Intent.

☒ 3. The work described in the Request is within the Buffer Zone, as defined in the regulations, but will not alter an Area subject to protection under the Act. Therefore, said work does not require the filing of a Notice of Intent, subject to the following conditions (if any).

1) Applicant must schedule and attend a pre-construction site visit to check erosion controls. 2) All spoils from trenching and auguring shall be properly disposed off-site. 3) Concrete for backfilling of footings shall be mixed on site to reduce waste and any excess concrete must be disposed properly off-site. 4) Any concrete washout must occur outside the 100' buffer zone. 5) All disturbed areas must be fine graded, loamed, and seeded to ensure permanent stabilization.

☐ 4. The work described in the Request is not within an Area subject to protection under the Act (including the Buffer Zone). Therefore, said work does not require the filing of a Notice of Intent, unless and until said work alters an Area subject to protection under the Act.

B. Determination (cont.)

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 2 – Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

☐ 5. The area described in the Request is subject to protection under the Act. Since the work described therein meets the requirements for the following exemption, as specified in the Act and the regulations, no Notice of Intent is required:

Exempt Activity (site applicable statuatory/regulatory provisions)

☐ 6. The area and/or work described in the Request is not subject to review and approval by:

Name of Municipality

Pursuant to a municipal wetlands ordinance or bylaw.

Name

Ordinance or Bylaw Citation

C. Authorization

This Determination is issued to the applicant and delivered as follows:

☒ by hand delivery on Luis Perez-Demorizi 1/31/20
Date

☐ by certified mail, return receipt requested on
Date

This Determination is valid for **three years** from the date of issuance (except Determinations for Vegetation Management Plans which are valid for the duration of the Plan). This Determination does not relieve the applicant from complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.

This Determination must be signed by a majority of the Conservation Commission. A copy must be sent to the appropriate DEP Regional Office (see http://www.mass.gov/eea/agencies/massdep/about/contacts/) and the property owner (if different from the applicant).

Signatures:

1/31/20
Date

D. Appeals

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 2 – Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

The applicant, owner, any person aggrieved by this Determination, any owner of land abutting the land upon which the proposed work is to be done, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate Department of Environmental Protection Regional Office (see http://www.mass.gov/eea/agencies/massdep/about/contacts/) to issue a Superseding Determination of Applicability. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and Fee Transmittal Form (see Request for Departmental Action Fee Transmittal Form) as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Determination. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant if he/she is not the appellant. The request shall state clearly and concisely the objections to the Determination which is being appealed. To the extent that the Determination is based on a municipal ordinance or bylaw and not on the Massachusetts Wetlands Protection Act or regulations, the Department of Environmental Protection has no appellate jurisdiction.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Request for Departmental Action Fee Transmittal Form

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

DEP File Number:

Provided by DEP

A. Request Information

1. Location of Project

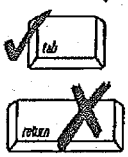
a. Street Address

b. City/Town, Zip

c. Check number

d. Fee amount

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



2. Person or party making request (if appropriate, name the citizen group's representative):

Name

Mailing Address

City/Town

State

Zip Code

Phone Number

Fax Number (if applicable)

3. Applicant (as shown on Determination of Applicability (Form 2), Order of Resource Area Delineation (Form 4B), Order of Conditions (Form 5), Restoration Order of Conditions (Form 5A), or Notice of Non-Significance (Form 6)):

Name

Mailing Address

City/Town

State

Zip Code

Phone Number

Fax Number (if applicable)

4. DEP File Number:

B. Instructions

1. When the Departmental action request is for (check one):

☐ Superseding Order of Conditions – Fee: $120.00 (single family house projects) or $245 (all other projects)

☐ Superseding Determination of Applicability – Fee: $120

☐ Superseding Order of Resource Area Delineation – Fee: $120

Send this form and check or money order, payable to the *Commonwealth of Massachusetts,* to:

Department of Environmental Protection
Box 4062
Boston, MA 02211

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Request for Departmental Action Fee Transmittal Form

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

DEP File Number:

Provided by DEP

B. Instructions (cont.)

2. On a separate sheet attached to this form, state clearly and concisely the objections to the Determination or Order which is being appealed. To the extent that the Determination or Order is based on a municipal bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.

3. Send a **copy** of this form and a **copy** of the check or money order with the Request for a Superseding Determination or Order by certified mail or hand delivery to the appropriate DEP Regional Office (see http://www.mass.gov/eea/agencies/massdep/about/contacts/).

4. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

201-20

RUTHANNE FULLER
MAYOR

City of Newton, Massachusetts
Office of the Mayor

Telephone
(617) 796-1100

Telefax
(617) 796-1113

TDD
(617) 796-1089

E-mail
rfuller@newtonma.gov

March 9, 2020

Honorable City Council
Newton City Hall
1000 Commonwealth Avenue
Newton Centre, MA 02459

Councilors:

I respectfully submit a docket item to your Honorable Council requesting authorization to transfer the sum of $650,000 from June 30, 2019 Certified Free Cash to the Newton Public Schools for the purpose of reimbursing NPS for one-time costs associated with several projects that were necessary to accomplish the move of the Horace Mann Elementary School community to the former Carr School on Nevada Street.

Projects to be included in this reimbursement are as follows:

- new bus loop $235k,
- technology upgrades $120k,
- installation of two modular classrooms $215k, and
- installation of acoustical tiles where needed $80k.

Thank you for your consideration of this matter.

Sincerely,

Ruthanne Fuller

Ruthanne Fuller
Mayor

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NEWTON, MA. 02459

Horace Mann - Phase 1		
Phase 1		
Bus Loop	$ 71,249.54	
Construction	$ 163,586.24	
moving cost	$ 28,085.00	
Technology Costs	$ 122,236.98	
Total	**$ 385,157.76**	

Horace Mann - Construction Phase		
Construction Phrase 2	**Amount PD**	**Notes**
Mod 1 -Rental	$ 41,304.00	Contract Signed
delivery & Install	$ 31,937.00	Money transferred
return charges	$ 977.00	
Mod 2 - rental	$ 48,384.00	Contract Signed
delivery & Install	$ 33,437.00	Money transferred
return charges	$ 2,477.00	
	$ 158,516.00	Amount encumbered
Acoustical Tile Install	$ 20,783.17	Vanguard Invoice 8520
Acoustical Tile Install	$ 20,783.18	Vanguard Invoice 8522
Acoustical Tile Install	$ 24,492.00	Vanguard Invoice 8529
Acoustical Tile Install	$ 12,412.36	Vanuguard Invoice 8534
Acoustical Tile Install	$ 8,565.00	Vanguard Invoice 8538
Acoustical Tile Install	$ 6,800.00	$6,800.00 paid - see 11/21 Invoice
Mod Architect	$ 6,400.00	RDA - Invoice 20191218.2 - 12/18 Invoice
Furniture	$ 6,522.51	paid from Cindy's accoun
Lockers	$ 1,531.98	School Speciality 20812448015(
IT for Mod Classrooms	$ 14,099.08	Reimburse IT / transfer bill
Electrical Work HM Mod	$ 95,500.00	Yes Invoice 174638
Horace Mann Modular Deck	$ 23,200.00	Vanguard invoice 8530
	$ 19,316.00	Vanguard Construction Invoice 8546
Furniture Consultant	$ 1,947.50	Todd Tsiang - PA2012
Misc costs	$ 6,287.32	
	$ 2,900.00	ADI - PO 20203092 - fire alarm supplies
	$ 5,450.00	HM - design for Homer / Vanguard Work
	$ 276,990.10	
Total Cost	**$ 435,506.10**	

	Total amount Pd
HM Phase 1	**$ 385,157.76**
HM Phase 2	**$ 435,506.10**
Total Paid to dat	**$ 820,663.86**