



TO:	Context Architecture	DATE:	November 13, 2018
FROM:	Katie Enright, P.E. Elizabeth Peart Melissa Restrepo	HSH PROJECT NO.:	2017138.00
SUBJECT:	Westford Community Building – Parking Demand Study		

Overview

The Town of Westford is studying a proposal to redevelop the Fire Department building located at 51 Main Street in Westford, Massachusetts, to provide a new Community Center Building and expanded parking.

As part of the design team led by Context Architecture, *Howard Stein Hudson (HSH)* has prepared this technical memorandum presenting the results of the parking demand study performed in the Westford Town Center. This memorandum describes the existing parking inventory and occupancy of the Town parking lots and roadways surrounding the Project site, as well as the future parking demand with the new Center Building. **Figure 1** shows a locus map of the Project site.



Figure 1. *Locus Map*





Existing Parking Inventory

HSH conducted an inventory of parking supply in several locations near the Town center including the following parking lots and roadways:

- Town Hall Complex, including Police Department;
- Fletcher Library;
- First Parish Church United;
- Westford Museum;
- Lincoln Street;
- Main Street; and
- Connell Drive.

Table 1 summarizes the parking supply and regulations for each location and **Figure 2** presents a map of these locations.

Based on field observations, parking in the town parking lots consists of unrestricted, visitor, and handicapped parking, with the exception of the Police Department lot, where all parking spaces are restricted to authorized vehicles only. The study area streets have some unrestricted parking spaces and some 15-minute parking space for library and town hall uses. Because the majority of the on-street parking spaces do not have pavement markings, capacity was calculated by length of curb. A parking space was assumed to be approximately 20 feet long.

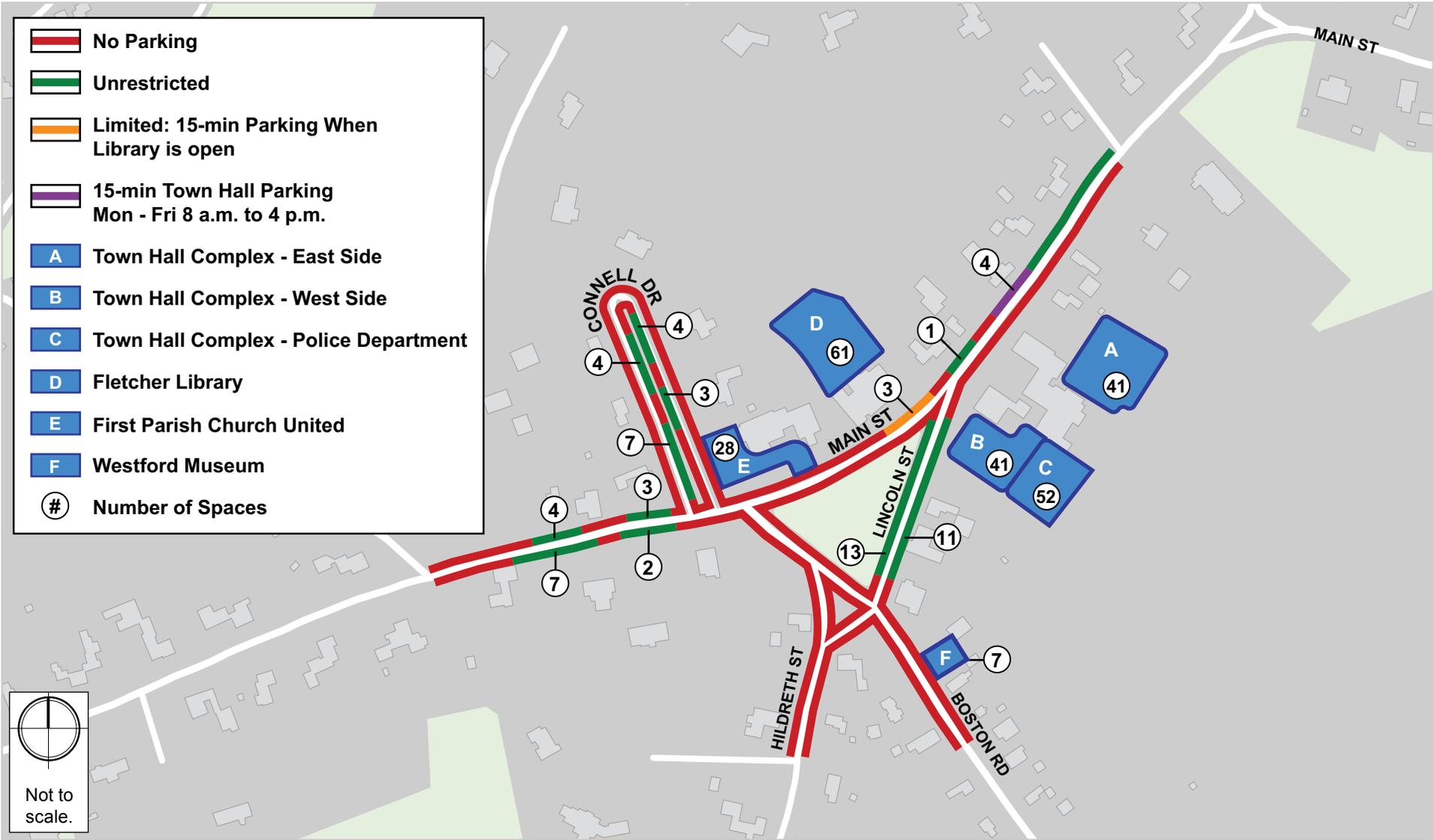


Table 1. Existing Parking Regulations and Supply

Location	Regulation	Supply (spaces)
Off-Street Parking		
Town Hall Complex at 55 Main St. East Side (next to Town Hall Building)	Generally for Town employees and visitors with public parking permitted during: Mon-Fri after 4 pm, weekends & holidays	41
Town Hall Complex at 51 Main St. West Side (next to Fire Station Building)		41
Town Hall Complex at 53 Main St. Police Department Only	Authorized Vehicles Only	52
Fletcher Library at 50 Main St.	Unrestricted	61
First Parish Church United at 48 Main St.		28
Westford Museum at 2 Boston Rd.		7
Subtotal Off-Street		230
On-Street Parking		
Lincoln St. between Boston Rd. & Main St.	Unrestricted	24
Main St. - between Graniteville Rd. & Connell Dr. (north side of Main St.)		7
Main St. - between Graniteville Rd. & Connell Dr. (south side of Main St.)		9
Main St. - between Library & Town Hall (north side of Main St.)	15-min parking when Library is open	3
Main St. - between Library & Town Hall (north side of Main St.)	Unrestricted	1
Main St. - between Library and Town Hall (north side of Main St.)	15-min Town Hall Parking Mon-Fri 8am-4pm	4
Connell Dr. (next to Church)	Unrestricted	18
Subtotal On-Street		66
TOTAL		296



Figure 2. *Westford Town Center Parking Areas*





Parking Occupancy Analysis

On Thursday, July 19, 2018, parking occupancy data was collected by HSH staff during the late-morning at approximately 11:00 a.m. On Wednesday, July 18, 2018, and Tuesday, August 28, 2018, parking occupancy data was collected by HSH staff during the evening period at approximately 7:30 p.m. and 6:45 p.m., respectively. During the August 28, 2018 evening observations, HSH staff collected data twice, at 6:45 p.m. and at 7:45 p.m. Of the 296 total spaces, the total occupancy rates for the entire study were as follows:

- Late-morning occupancy – 07/19/2018 at 11:00 a.m.: 120 vehicles (41%);
- Evening occupancy – 07/18/2018 at 7:30 p.m.: 107 vehicles (36%);
- Evening occupancy – 08/28/2018 at 6:45 p.m.: 105 vehicles (36%); and
- Evening occupancy – 08/28/2018 at 7:45 p.m.: 154 vehicles (52%).

Table 2 shows highest parking occupancy per time period in each parking lot and along street segments within the study area.

It is important to note that because Lincoln Street was closed during the morning of Thursday, July 19, 2018, due to repaving, no parking was observed along this segment. During the evening of Tuesday, August 28, 2018, there were several events and meetings at the Town Hall (Board of Selectmen), Fletcher Library (dance practice), and First Parish Church United.



Table 2. Parking Occupancy Summary

Name/Location	Regulation	Supply (spaces)	Occupancy			
			Mid-Morning ¹ ≈ 11:00 a.m.		Evening ² ≈ 7:45 p.m.	
			%	Veh.	%	Veh.
Off-Street Parking						
Town Hall Complex at 55 Main St. East Side (next to Town Hall Building)	Generally for Town employees and visitors with public parking permitted during: Mon-Fri after 4 pm, weekends & holidays	41	73%	30	63%	26
Town Hall Complex at 51 Main St. West Side (next to Fire Station Building)		41	44%	18	49%	20
Town Hall Complex at 53 Main St. Police Department Only	Authorized Vehicles Only	52	54%	28	60%	31
Fletcher Library at 50 Main St.	Unrestricted	61	54%	33	92%	56
First Parish Church United at 48 Main St.		28	0%	0	64%	18
Westford Museum at 2 Boston Rd.		7	14%	1	0%	0
Subtotal Off-Street		230	48%	110	66%	151
On-Street Parking						
Lincoln St. between Boston Rd. & Main St.	Unrestricted	24	0%	0	9%	2
Main St. - between Graniteville Rd. & Connell Dr (north side of Main St.)		7	29%	2	0%	0
Main St. - between Graniteville Rd. & Connell Dr. (south side of Main St.)		9	33%	3	0%	0
Main St. - between Library & Town Hall (north side of Main St.)	15-min parking when Library is open	3	0%	0	33%	1
Main St. - between Library & Town Hall (north side of Main St.)	Unrestricted	1	0%	0	0%	0
Main St. - between Library & Town Hall (north side of Main St.)	15-min Town Hall Parking Mon-Fri 8am-4pm	4	0%	0	0%	0
Connell Dr. (next to Church)	Unrestricted	18	28%	5	0%	0
Subtotal On-Street		66	15%	10	5%	3
TOTAL		296	41%	120	52%	154

1 – Thursday, July 19, 2018
2 – Tuesday, August 18, 2018



Future Condition

Community Center Building

The proposed Community Center Building would be located at 51 Main Street, adjacent to Town Hall, on the site of the former Fire Department building. (As of November 1, 2018, the fire department building was relocated to a new facility on Boston Road.) The proposed Community Center would include a new 100-person meeting space, the Veteran Services department, the Town’s Information Technology (IT) departments, and the new Facilities Department. The number of estimated staff who will work within the Community Center building is shown in **Table 3**.

Table 3. Town Staff at Community Center

Department	Staff
Veterans Services	
Part-time	1
Full-time	1
Technology Department (IT)	
Full-time	7
Facilities Department	
Full-time	3
Total Department Staff	12

Parking Demand at Town Hall Complex

For the future parking demand analysis, only the supply of parking spaces at the Town Hall Complex, including the Police Department, were used as a comparison to the forecasted demand. The existing Town Hall Complex has approximately 135 parking spaces for staff, visitors, and fire and police department use. Based on the site plans for the proposed Community Center, the parking supply will increase to approximately 141 parking spaces.

MIDDAY PARKING CONDITIONS

Midday conditions at the Town Hall Complex were assessed for two future scenarios, as summarized in **Table 4** and described below:

- **Typical Event Day** – This event day is anticipated to occur about once per week. The parking demand under this scenario includes demands generated by:



- Existing daytime uses at Town Hall (48 spaces);
 - New employees at the Center (8 spaces);
 - A small-sized event at the Center’s public meeting room (15 spaces); and
 - Meeting at the Center’s public conference room (10 spaces).
- **Minor Event Day** – This event day is anticipated to occur about once a month. The parking demand under this scenario includes demands generated by:
- Existing daytime uses at Town Hall (48 spaces);
 - New employees at the Center (8 spaces);
 - An IT training event (10 spaces);
 - Moderately-sized event at the Center’s public meeting room (30 spaces); and
 - Meeting at the Center’s public conference room (10 spaces).

As noted in **Table 4**, under the Existing condition and on a Future Typical Event Day, all of the Town Hall parking demand can be served in the available Town Hall spaces. On a Future Minor Event Day, however, the Town Hall parking demand for 106 spaces would require an additional 21 parking spaces. This excess parking demand could be met in the available Police Department spaces if the restriction on police-use only use was lifted.



**Table 4. Westford Town Hall Complex
 Existing and Future Parking Demand - Midday Conditions**

Parking Location	Spaces			Comment
	Supply	Demand	Available	
Existing				
Town Hall (public, staff) Police Department only	83 <u>52</u> 135	48 ¹ <u>30</u> ¹ 78	35 <u>22</u> 57	No shortfall in Town Hall spaces. Under this condition, all Town Hall parking demand is met in available Town Hall spaces.
Future Typical Event Day <i>about once per week</i>				
Town Hall (public, staff) Police Department only	85 <u>56</u> 141	81 <u>30</u> 111	4 <u>26</u> 30	No shortfall in Town Hall spaces. Under this condition, all Town Hall parking demand can be met in available Town Hall spaces.
Future Minor Event Day <i>about once per month</i>				
Town Hall (public, staff) Police Department only	85 <u>56</u> 141	106 <u>30</u> 136	0 <u>26</u> ² 26	Shortfall at Town Hall = 21 spaces. Under this condition, Town Hall parking demand would require an additional 21 spaces. This excess parking demand could be met at the Police Department.

1 Existing parking demand as observed on Thursday, July 19, 2018.

2 The number of available spaces prior to assigning excess demand from Town Hall with a major event day.



EVENING PARKING CONDITIONS

Evening conditions at the Town Hall Complex were assessed for two future scenarios as summarized in **Table 5** and described below:

- **Typical Event Evening** – This event evening is anticipated to occur about once per week. The parking demand under this scenario includes demands generated by:
 - Existing evening meetings at Town Hall (46 spaces); and
 - A moderately-sized event at the Center’s public meeting room (40 spaces).
- **Major Event Evening** – This event evening is anticipated to occur several times per year with no simultaneous meetings in other Town Hall facilities. The parking demand under this scenario includes demand generated by:
 - A major event at the Center’s public meeting room (120 spaces plus one for IT support).

Under the Existing condition, all of the Town Hall parking demand can be served in the available Town Hall spaces. On a Future Typical Event Evening, the Town Hall parking demand for 86 spaces falls one space short of available parking. On a Future Major Event Evening, the Town Hall parking demand for 121 spaces would require an additional 36 parking spaces. The Police Department could provide up to 25 parking spaces if the restriction on police-use only use was lifted. The remaining 11 parking spaces could be accommodated along Lincoln Street, which was observed to have between 22-24 parking spaces available. By avoiding simultaneous major events, the Library could also provide a few spaces necessary to support the Town Hall event.



**Table 5. Westford Town Hall Complex
 Existing and Future Parking Demand – Evening Conditions**

Parking Location	Spaces			Comment
	Supply	Demand	Available	
Existing				
Town Hall (public, staff)	83	46 ¹	35	No shortfall in Town Hall spaces. Under this condition, all Town Hall parking demand is met in available Town Hall spaces
Police Department only	<u>52</u>	<u>31</u> ¹	<u>22</u>	
	135	77	57	
Future Typical Event Evening <i>about once per week</i>				
Town Hall (public, staff)	85	86	0	Shortfall at Town Hall = 1 space Under this condition, all Town Hall parking demand can generally be met in available Town Hall spaces. The shortfall is estimated at 1 space.
Police Department only	<u>56</u>	<u>31</u>	<u>25</u>	
	141	117	25	
Future Major Event Evening <i>several times per year</i>				
Town Hall (public, staff)	85	121	0	Shortfall at Town Hall = 36 spaces Under this condition, Town Hall parking demand would require an additional 36 spaces. The Police Department could provide up to 25 spaces. The demand for 11 more spaces could be accommodated along Lincoln Street (which was observed to have 22-24 spaces available).
Police Department only	<u>56</u>	<u>31</u>	<u>26</u> ²	
	141	152	26	

1 Existing parking demand as observed on Tuesday, August 28, 2018.

2 The number of available spaces prior to assigning excess demand from Town Hall on major event evening.



Conclusion

The proposed Community Center Building will provide additional office space for several Town departments and expand public space for meetings and events. Based on observed parking activity and forecasted parking demand, the parking supply at the Town Hall Complex will be enough to meet parking demands associated with a future typical midday event and a future typical evening event.

On future minor event days, anticipated to occur about once a week, and on the occasional future major event evenings, anticipated to occur several times per year, additional spaces will be needed. The Police Department lot could accommodate much of the short-fall if the restriction on police-use only use was lifted. During major evening events, use of on-street parking spaces will likely be necessary.