RSG has performed an analysis of parking needs for the Birchwood Terrace¹ nursing facility on Starr Farm Road in Burlington, VT. This memo includes the following sections:

1. Problem statement
2. Relevant parameters for improvement, including city ordinance restrictions
3. Background information for the facility
4. Current parking management efforts
5. Parking supply and need survey results
6. Comparison to two similar nearby facilities
7. Study findings
8. Parking management recommendations (plan)

1.0 PROBLEM STATEMENT

Birchwood Terrace currently has parking needs that significantly exceed the capacity of their on-site parking area(s). A substantial contributing factor to this condition is a recent restriction to on-street parking along Starr Farm Road, forcing all parking on-site.

2.0 PROJECT PARAMETERS

To provide more parking spaces, the City of Burlington zoning regulations require a parking study, per Comprehensive Development Ordinance (CDO) Sec. 8.1.9 Maximum Parking Spaces – Item 5:

A. The applicant requesting the waiver shall also provide a peak demand parking study for two similar uses in the area; and,

B. The following additional review criteria shall be addressed regarding how:

(i) The need for additional parking cannot reasonably be met through provision of on-street parking or shared parking with adjacent or nearby uses;

¹ A.k.a. Kindred Transitional Care & Rehabilitation Birchwood Terrace
(ii) The proposed development demonstrates that its design and intended uses will continue to support high levels of existing or planned transit and pedestrian activity; and,

(iii) The site plan indicates where additional parking can be redeveloped to a more intensive transit supportive use in the future.

The Burlington CDO calls for 1 parking space for 4 beds (Convalescent Homes), with a 125% maximum. Thus, for Birchwood the maximum parking allowed is 50 spaces, assuming the current permit allowance for 160 beds.

### 3.0 BACKGROUND

Birchwood Terrace is a 144-bed Skilled Nursing Facility (SNF) that provides short term and long-term care to the Greater Burlington area’s most frail seniors, with as many as 104 residents calling Birchwood their permanent home. As a SNF, we are governed by both the state and federal government, which requires that we provide services that meet each individual’s care needs. This includes, but is not limited to, 24-hour nursing care and services, access to a physician 24 hours/day, medication management, 3 meals/day, physical therapy, occupational therapy, speech therapy, respiratory therapy, daily activities, Social Services, laundry and housekeeping services, facility maintenance, laboratory services, x-ray services, transportation, banking, etc. There are also mandated staffing requirements to ensure the facility provides adequate staffing based on the residents’ needs.

The Facility employs or contracts 168 employees and is a 24/hour a day business. Staff includes:

- **Nursing/medical** – (3) 8-hours shifts, 7 days a week
  - LNA/CLA – 6:00 am to 2:30 pm, 2:00 pm to 10:30pm, and 10pm to 6:30 am
  - LPN/RN – 6:45 am to 3:15 pm, 2:45 pm to 11:15pm, and 10:45pm to 7:15 am
  - Physicians – hours vary
- **Maintenance** – Monday through Friday 7:30 am to 4:30 pm, and as needed
- **Administration** – Monday through Friday from 7:30 am to 6:00 pm
- **Therapy** – PT, OT, ST, RT – 7 days a week from 7:00 am to 5:00 pm
- **Culinary/Dietary** – 7 days a week, from 5:00 am to 7:30 pm
- **Laundry/Housekeeping** – 7 days a week, from 5:00 am to 6:00 pm

**Visitors/Vendors**

The facility welcomes family, friends, guests and vendors at any time. Peak visiting hours are from 10:00 am to 1:00 pm and again from 4:00 pm to 7:00 pm. It is not uncommon for there to be 20-25 visitors here at peak times.

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2 Section 8.1.8
3 The facility is permitted for 160 beds, however only 144 beds are available at this time.
4 Licensed/Certified Nursing Assistant, Licensed Practical Nurse/Registered Nurse
5 Physical, occupational, speech or respiratory
Student Nursing

The facility also partners with the local colleges to provide educational and practical training for their Nursing Programs. Both the University of Vermont and Vermont Technical College utilize Birchwood as their clinical site for practicum work. Class sizes range from 8 students to 30 students, with 1 to 4 clinical instructors to oversee their work.

4.0 BIRCHWOOD PARKING MANAGEMENT

On-Street Parking

Parking along Starr Farm Road or North Avenue is currently not allowed.

Shared Parking

Shared parking takes advantage of 2 adjacent parking lots where the associated land use is complementary to each. Typically, these are applicable in large mixed land use developments where residential uses (peaking in the nighttime hours) complement commercial uses, which peak in the daytime.

Birchwood is situated in a largely residential area with no neighboring businesses or institutions with complementary parking needs. Flynn Elementary School is located across Starr Farm Road to the north, with their own parking restrictions. Birchwood has worked with School Administration to limit/cease use of Birchwood’s parking lot for school drop-offs and pick-ups.

Off-Site Parking

Birchwood has pursued several off-site parking options within the last year, including:
- Leddy Park
- North Avenue Alliance Church
- St. Mark’s Church
- Price Chopper, Colchester
- Elks Lodge

Parking was either not available at these locations, or the number of spaces available was far less than the facility’s current additional needs.

Parking Demand Management

- Birchwood encourages travel by other transportation modes for all employees, however, many visitors and nursing students do not have the luxury of time required to ride transit for a short duration visit.
- Sidewalks currently exist on Starr Farm Rd. leading from the facility to North Avenue.
- Transit is readily available throughout the day via the North Avenue GMT line, with north and southbound stops at Starr Farm Rd.
- Bike parking is available on-site, however peak parking demand still occurs in winter months, when biking is impractical.
- Currently 33 employees utilize alternate means of transportation to get to work.
**Other Considerations**

Signage has been recently upgraded on-site to indicate where parking is allowed and how each lot is used.

Employee vehicle placards are implemented to ensure only authorized vehicles use designated parking areas.

Ideally, all parking should be within close proximity of the facility, minimizing travel time, thus optimizing staff’s ability to get to work, which directly impacts patient care.

Parking should have adequate lighting for employee and vehicle safety, as well as the ability to be maintained in the winter time.

**5.0 BIRCHWOOD FACILITY PARKING**

**Existing Site Parking Supply**

The existing facility has 5 general parking areas (see site plan):

- The maintenance area on the SW end, which serves company vehicle parking only (# of spaces unknown/undesignated)
- The SW visitor lot (9 spaces)
- The NW visitor lot (11 Spaces)
- The NE Employee Lot (24 spaces)
- The SE Employee Lot (24 spaces)

Total parking is 68 spaces + the maintenance lot capacity

**Parking Need**

RSG polled facility management for the number of employees and the hours (shifts) for each group. Detailed personnel shift data by time of day is attached. Plotting this data shows a theoretical maximum need, with and without the visiting student population, as shown in Figure 1. There are an estimated maximum of 118 personnel on-site, not including visitors.
RSG staff observed parking activity on 10/5, 10/10, 10/24 and 10/26. Observations include:

- Employee parking was full and overflowed into grass areas by as many as 24 vehicles (72 vehicles vs. 48 available spaces).
- Visitor parking was 50-80% full (10-16 of 20 spaces occupied), however peak visitor hours are known to occur later than the times of observations.
- There were 3-4 vehicles in the maintenance area (no actual designated spaces).

Comparing the maximum observed parking vs. maximum personnel on-site data illustrates that significant TDM\textsuperscript{6} measures, such as car-pooling and use of alternate modes, are already in place.

### Parking Ratios – Supply vs. Need

The current parking supply is 68 designated spaces. [space/permitted bed ratio = 68/160 or 0.425]

Based on site observations, the current parking need is determined as follows:

- 72+ employee (personnel)
- 20 visitor
- 4 maintenance area

Total need is at least 96 spaces. [space/bed ratio = 96/160, or 0.600]

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\textsuperscript{6} Transportation Demand Management
6.0 OTHER EXAMPLE FACILITIES

Starr Farm Nursing Center, Starr Farm Road, Burlington:

- Recent aerial photos show 99 parking spaces for this 150-bed facility\(^7\)
- The resulting parking space/bed ratio = 99 / 150, or 0.660

Green Mountain Nursing, Fort Ethan Allen, Colchester:

- Recent aerial photos show 68 parking spaces for this 73-bed facility
- The resulting parking space/bed ratio = 68 / 73, or 0.932

7.0 SUMMARY OF FINDINGS

Our findings include:

1. Birchwood Terrace provides a comprehensive care service that entails a wide variety of services and subsequent staffing needs.
2. Birchwood’s operation has aspects that demand more parking (e.g. visiting nurses) than typical convalescent nursing facilities, as implied by the City CDO.
3. Staffing hours are well staggered to maximize parking efficiency (e.g. shift changes are staggered to minimizing space needs).
4. The current site is well situated to take advantage of the use of alternate transportation modes and estimated staff participation in use of alternate modes well exceeds current norms (33/168=20%)\(^8\)
5. Comparing theoretical employee demand to observed maximum parking indicates excellent TDM measures are already taking place.
6. On-site employee parking needs regularly exceed supply, as observed, by at least 24 spaces.
7. Other typical facilities (see examples) supply more parking (i.e. ratio of spaces per patient bed) than Birchwood.
8. A waiver is justified on the maximum spaces allowed by the CDO for 96 spaces (vs. 50 allowed).

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\(^7\) Facility capacity was determined from website information.

\(^8\) VTrans TDM guidelines suggest 5-10% is typical
8.0 PARKING MANAGEMENT PLAN

With daily on-site personnel and nursing students peaking at 118 persons, plus visitors and vendors/contractors, the CDO restriction to 50 parking spaces\(^9\) is clearly not appropriate or applicable.

Even with a waiver on the restriction of the maximum parking spaces, site constraints may limit parking to less than the suggested 96 spaces, thus parking management is essential.

To minimize the necessary parking demand, Birchwood Terrace can take the following measures:

1. Optimize the site layout for the number of parking spaces, loading, and site circulation.
2. Ensure continued easy access to the existing bus stops on North Avenue (i.e. via sidewalk), some 450 feet away.
3. Provide on-site bicycle parking, including secure parking for overnight storage and during inclement weather.
4. Continue to encourage the use of alternate modes by employees by:
   a. Providing incentives such as health insurance credits, bus pass credits, or other rewards.
   b. Providing a flexible workspace, allowing staggered shifts, telecommuting where possible.
   c. Exploring rideshare options such as carpooling/vanpooling.
   d. Offering a guaranteed ride home program.
5. Create sensible rules for on-site parking that ensure opportunities for shared use between users is maximized.
6. Optimize shift staggering so that the availability of spaces is optimized.
7. Consider obtaining a 1-year membership in the Chittenden Area Transportation Management Association (CATMA). CATMA provides a range of services that assist an organization to better understand and manage their transportation demands. As a member of CATMA, Birchwood Terrace will have access to their knowledge base and programs. In addition, CATMA may be able to assist with the following programs:
   a. Securing off-site parking;
   b. Coordinating shuttles to and from the site, if needed;
   c. Guaranteed ride home program;
   d. Implementing a Bulk Transit Pass program for employees; and
   e. Providing regional expertise on parking management strategies.

\(^9\) Maximum 1 space per 4 beds plus 25% (i.e. \(160/4*1.25\))
END OF MEMO

Attachments:
   1. Birchwood Terrace site map
   2. Starr Farm site map
   3. Green MT Nursing site map
   4. Birchwood personnel on-site by time-of-day data
Visitor parking

Employee parking

No parking

Maintenance vehicles only
### PERSONNEL ON-SITE BY TIME OF DAY

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### Visitor Traffic
- **Typical**:
  - 7:00 AM - 7:00 PM: 10-20 veh.
- **Student**:
  - 7:00 AM - 7:00 PM: 30 students

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*Note: The table above represents the personnel on-site by time of day with specific shift details for various categories.*