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Draft Memorandum

SRF No. 11098.00

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City of Bloomington

From: Emily Gross, PE, Associate
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Date: February 22, 2018

Subject: Bloomington Central Station Residential Development Parking Review Update

Introduction

As requested, SRF has completed a parking study update for the next phase of the Bloomington Central Station residential development located in the southwest quadrant of the 34th Avenue/ American Boulevard intersection in Bloomington, Minnesota. The next phase of the residential development is located south of the IndiGO Apartments. This document is an update to the *Bloomington Central Station Residential Parking Review*, dated November 18, 2013. The main objectives of the study are to identify the existing parking demand at comparable apartment sites, estimate the parking demand for the next phase of the residential development (with and without transit reductions), and determine if the proposed parking supply is sufficient. This memorandum provides the assumptions, analysis, and study findings offered for consideration.

Parking Practices

A literature review of parking standards and best practices for similar developments adjacent to transit facilities indicates that many factors contribute to increased transit ridership and reduced personal vehicle reliance. The following sections highlight elements that are directly relatable to the Bloomington Central Station area.

Case Studies

In December 2016, the University of Utah studied and published the *Trip and Parking Generation at Transit-Orientated Developments: Five US Case Studies*. The study focused on five existing transit oriented development (TOD) sites in the Seattle, Washington, San Francisco, Denver, and Los Angeles metro areas, where the parking demand, trip generation, and mode share was reviewed. The sites selected were characterized by land-use diversity, pedestrian-friendly environments, and proximity to transit stations. The parking supplies ranged from 0.81 to 1.60 spaces per dwelling unit and the peak parking demands ranged from 0.44 to 1.29 spaces per dwelling unit.

Parking Policy for TOD

California State Polytechnic University studied and published a *Parking Policy for Transit-Oriented Development: Lessons for Cities, Transit Agencies, and Developers,* which discusses how the "process of adjusting parking supply and policies from status-quo, parking focused approaches is different in each community. Some communities embrace the changes, while others doubt the impact of rail transit on travel behavior and automobile ownership. If TODs are transit adjacent but not functionally related, developers and cities have justification in being cautious about reducing parking supply. Fortunately, the growing body of evidence about the types of circumstances where TODs substantively change mode choice and automobile ownership will help communities assess their own conditions. It is also important to recognize that many existing regulations and building practices have the effect of creating a self-fulfilling prophecy, such as high parking requirements mean low or zero parking prices, undermining the realization of full transit or TOD benefits." The article offers the following strategies for Cities to implement in order to realize TOD benefits:

- Adopt demand-based, locally-calibrated TOD parking requirements that reflect expected transit shares and automobile ownership in the particular TOD under consideration.
- Adopt a district-based approach to assessing parking demand, require shared parking, and create urban design standards that make the sharing of parking resources possible.
- Pursue partnerships with transit agencies for shared station-area parking planning and supply, and use legal arrangements, such as joint powers authorities, to implement multiagency and multi-property owner strategies.

A component of the California State Polytechnic University effort was the review of 26 residential sites in California to understand the travel characteristics of TODs. The rail system varied amongst the developments reviewed but included heavy and light rail adjacent developments. On average the 26 sites used in the study had the following properties:

- Parking spaces per unit: 1.41
- Percent households with less than one vehicle per driver: 26.4 percent
- Percent of transit used for just trips to work: 22.4 percent
- Percent of transit used for all trips: 20.7 percent

For comparison purposes, the Bloomington Central Station (BCS) area as the following properties:

- Parking spaces per unit: 1.5 (based on two high-density residential BCS sites)
- Percent households with less than one vehicle per driver: 32 percent *
- Percent of transit used for just trips to work: 15.9 percent *
- Percent of transit used for all trips: 9.4 percent *

* Represents data from the *Travel Behavior Inventory(TBI)* for areas of the Twin Cities within one quarter-mile of high frequency transit (sample size is not necessarily statistically significant).

Existing Parking Conditions/Comparable Sites

A current on-street parking inventory was conducted near the proposed development as well as at comparable residential complexes, to better understand the expected parking demand rate for the proposed residential development. The proposed development is located near the BCS Blue Line Light Rail Transit (LRT) Station. Due to the close proximity of the proposed development to the LRT station, the parking needs are expected to be less than a Bloomington apartment complex not adjacent to a LRT station. Therefore, the existing on-street parking supply/demand as well as the parking supply/demand at comparable sites were reviewed to better estimate a transit reduction that can be applied to a residential building within walking distance to high-frequency, reliable transit such as LRT.

On-Street Parking Utilization Counts

On-street parking utilization counts were collected along 33rd Avenue between American Boulevard and East Old Shakopee Road and along 80-1/2 Street between 33rd Avenue and 34th Avenue. The parking counts were collected on Thursday, November 2, Friday, November 3, and Monday, November 6, 2017. The weekday and Friday night periods were reviewed as they are expected to coincide with the peak parking demand for the proposed development guest parking. On-street parking counts were also collected during the mid-morning, afternoon, and evening on a Monday to provide additional reference to current conditions.

Results of the parking utilization counts shown in Table 1 indicate that on-street parking is highly utilized throughout the day. While dedicated parking is provided for guests at the IndiGO and The Reflections residential buildings, on-street parking is a convenient parking alternative for employees/ visitors to Health Partners and the Hyatt Regency hotel as well. This results in higher utilization throughout the day.

Table 1. On-Street Parking Utilization Counts

		Parking Demand (Percent Occupied)					
Segment	Parking Supply	Thursday 10:00 p.m.	Friday 8:00 p.m.	Friday 10:00 p.m.	Monday 9:30 a.m.	Monday 2:00 p.m.	Monday 5:30 p.m.
33rd Avenue North of Hotel Drop-Off	9	8 (89%)	7 (78%)	7 (78%)	9 (100%)	9 (100%)	8 (89%)
33rd Avenue (Hotel Drop-Off to LRT Tracks)	7	7 (100%)	5 (71%)	7 (100%)	7 (100%)	7 (100%)	6 (85%)
33rd Avenue South LRT Tracks	8	7 (88%)	4 (50%)	5 (63%)	8 (100%)	7 (88%)	2 (25%)
80-1/2 Street	24 (1)	24 (100%)	19 (79%)	24 (100%)	23 (96%)	20 (83%)	20 (83%)

(1) Four spaces were signed as either "1 hour parking" or "Future Resident Parking".

The Reflections Condominium Complex

The parking supply and demand was inventoried at The Reflections residential building. The Reflections has 263 units and provides 384 garage parking spaces, including 353 spaces reserved for tenants and 31 guest spaces. It is important to note that approximately 20 percent of the units are not used as primary residences year-round. All tenant parking spaces are assigned to units in the building.

Parking utilization counts were conducted at The Reflections residential building on Thursday, November 2 and Friday, November 3, 2017 to observe the number of parking spaces occupied on-site for both the tenant and guest parking spaces. Based on discussions with The Reflections staff, there are weeknights and weekends when the dedicated on-site guest parking is fully occupied. When the guest parking on-site is fully occupied, guests will park on-street if space is available. While not included in the parking rate estimates, there are eight (8) on-street parking spaces along 33rd Avenue south of the LRT tracks that are available to support guest parking for The Reflections. Results shown in Table 2 indicate that the tenant parking was 63 to 74 percent occupied and the on-site guest parking was 45 to 58 percent occupied. For reference, the on-street parking along 33rd Avenue south of the LRT tracks was also included in Table 2. Including the garage tenant and guest parking, the resultant parking rate for The Reflections is 1.46 spaces per dwelling unit (384 spaces/263 units).

Table 2. The Reflections Parking Utilization Counts

		Parking Demand (Percent Occupied)		
Parking Area	Parking Supply	Thursday 10:00 p.m.	Friday 8:00 p.m.	Friday 10:00 p.m.
Tenant Parking	353 (1)	261 (74%)	224 (63%)	249 (70%)
Guest Parking - Garage-	31	14 (45%)	18 (58%)	15 (48%)
Total	384	289 (75%)	251 (65%)	276 (72%)
33rd Avenue South of LRT Tracks – On-Street (2)	*8*	*7 (88%)*	*4 (50%)*	*5 (63%)*

(1) The parking supply includes double parked spaces (12), but does not include motorcycle parking spaces.

(2) The on-street parking spaces are not allocated to Reflections and were not included in the Reflections parking rate.

IndiGO Apartments

IndiGO Apartments have 395 units, including 51 studio units, 185 one-bedroom units, 27 one-bedroom + den units, 113 two-bedroom units, and 18 three-bedroom units. In addition, IndiGO Apartments provides 678 parking spaces, which includes 608 spaces for tenants to reserve (structured), 55 guest spaces (31 structured and 24 on-street spaces), and 15 electric charging spaces. The apartment complex is currently 95 percent leased. While leasing activity fluctuates, approximately 500 of the 608 spaces are currently reserved by tenants. It should be noted that there is some ambiguity in the planning documents about specifically what on-street parking is allocated to the IndiGO Apartments to use as guest parking. The on-street parking is not currently signed as designated guest parking.

Based on the current number of leased spaces for tenants (500 spaces), assuming all of the guest and electric charging spaces are occupied (70 spaces), the resultant parking demand rate for the IndiGO Apartments is 1.44 spaces per dwelling unit (570 spaces/395 units). Tenant spaces not currently leased were not included in the parking demand rate.

Proposed Development

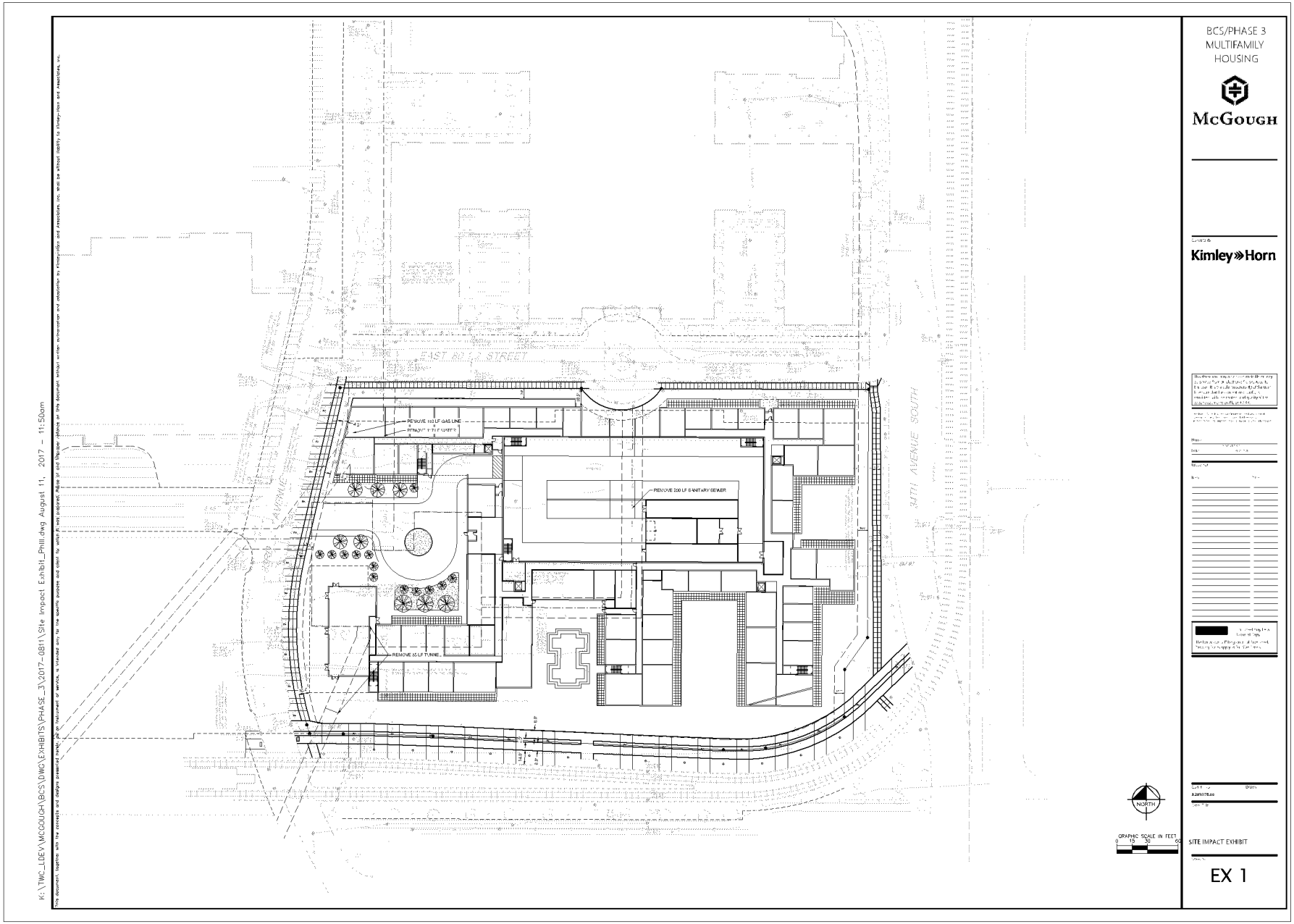
The proposed development is located west of 34th Avenue, south of the Indigo Apartments and north of The Reflections (see Figure 1). The current development proposal consists of 402 apartment dwelling units, which includes one guest unit, 113 studio units, 148 one-bedroom units, 128 two-bedroom units, nine (9) three-bedroom units, and three (3) town homes, as well as 14,724-square feet of amenity/party room space and 2,050 square feet of retail or restaurant space. A 620-space parking structure is proposed to serve the development, including 540 resident/tenant, 60 resident guest, and 20 retail parking spaces.

City Parking Code

The City of Bloomington parking code was reviewed to determine the required parking supply needed for the proposed development. The parking requirements are presented in Table 3. The proposed parking supply from the applicant is 620 spaces. The applicant is also considering a restaurant type use in the proposed retail space. The restaurant use, which is currently anticipated to be either a coffee shop or a grab and go lunch place, is estimated to have approximately 50 indoor seats and 10 outdoor seats. A restaurant has a different parking code requirement than retail, therefore, the City parking code requirements were reviewed for both scenarios and are summarized in Table 3. It should be noted that the 14,724-square foot amenity/party room space proposed is not expected to create additional parking demand and was therefore not included as a parking generator in the analysis.

Table 3. City Parking Code Requirements

Unit Distribution	Units	Parking Code Rate	Required Parking	Proposed Parking	% of Proposed to Code Parking
Guest	1 DU	1.8	2		
Studio/Alcove	113 DU	1.8	203		
One Bedroom	148 DU	1.8	266		
Two Bedroom	128 DU	2.2	282		
Townhomes (Two BR)	3 DU	2.2	7		
Three Bedroom	9 DU	2.6	23	540	
Retail (GSF) or Restaurant (Seats)	2050 SF / 50 indoor+10 outdoor	0.0056 / 0.4 (indoor)+ 0.2 (outdoor)	11 / 22	20	
Guest				60	
Totals	402 DU		794 - 805	620	77% - 78%



Proposed Development

Bloomington Central Station Residential Development Parking Review Update

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Figure 1

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February 2018

The parking calculations presented in Table 3 are based on the parking code requirement and do not take into account any reductions for transit nor do they account for any internal capture rate (i.e. residents, hotel, Health Partners using the retail). The results of this analysis indicate that the proposed development has a 174 to 185 parking space deficit, based on City parking requirements.

ITE Parking Demand

Projected parking demand levels were analyzed using the *Institute of Transportation Engineers (ITE) Parking Manual 4th Edition (2010).* ITE estimates the average peak parking occupancy, which is the average number of occupied parking spaces during the time of peak usage of a particular land use. In addition to the average parking demand rate, ITE also quantifies the 85th percentile parking demand, which means that 85 percent of sites will have a peak parking at or below this reported value. Both the average and the 85th percentile ITE parking rates were reviewed for comparison purposes for the residential, party room, and retail or restaurant components of the proposed development.

As shown in Table 4, the proposed apartment units alone have a parking demand range between 551 and 611 spaces, including both tenant and guest parking. The High-Rise Apartment land use code was selected since the land use description was the best comparable to the proposed development in terms of number of stories proposed and rental property versus ownership. Low/Mid-Rise Apartments and Residential Condo/Townhouse were also considered. While no additional transit reductions were applied at this stage of the comparison, the land use description does note that all sites were within three blocks of transit service. Therefore, a transit reduction is likely already included in the observed parking demand rate, however the transit reduction percentage for the study sites was not provided.

To estimate the retail parking demand, a range of ITE land use types were considered. An internal capture rate was also reviewed based on ITE and engineering judgment. The internal capture rate for the retail space depends on the tenant, for instance if a coffee shop was in the space, 75 percent or more of customers are expected to be from the nearby residential, hotel, or office land uses. However, if a destination-type restaurant were to be located in the space a lower internal capture rate is expected (approximately 10 percent). For all retail types, a 10 percent transit reduction was also applied.

Results of the ITE parking demand estimates shown in Table 4 indicate that the proposed development is expected to have a parking demand between 560 and 622 spaces, which ranges from a parking surplus of 60 spaces to a parking deficit of two (2) spaces.

Table 4. ITE Parking Demand for Proposed 402-Unit Apartment

ITE Land Use (Code)	Size	Average Rate	Average Demand	85th% Rate	85th% Demand
Residential					
High-Rise Apartment (222)	402 DU	1.37	551	1.52	611
Surplus / Deficit *Percent of Proposed Residential Parking Supply (600 spaces) to ITE Demand Parking* (1)			+49 spaces 109%%		-11 spaces 98%
Retail					
General Retail (820)	2,050 SF	2.55	5	3.16	6
Urban Restaurant (932)	2,050 SF	5.55	11	6.37	13
Coffee Shop (936)	2,050 SF	13.56	28	17.33	36
Retail Subtotal			5-28		6-36
Transit Reduction (10%)			*(1-3)*		*(1-7)*
Internal Capture Rate (10% to 75%) (2)			*(1-21)*		*(1-27)*
Retail Total (Max Scenario) (3)			9		11
Surplus / Deficit *Percent of Proposed Retail Parking Supply (20 spaces) to ITE Demand Parking* (1)			*+11 spaces* *(222%)*		*+9 spaces* *182%*
Proposed Development					
Total			560-		622
Surplus / Deficit *Percent of Proposed Parking Supply (620 spaces) to ITE Demand Parking*			*+40 spaces* *111%*		*-2 spaces* *99.7%*

(1) Residential parking supply is provided in a range since the guest parking differs for the retail and restaurant scenarios.

(2) A 10 percent internal capture rate was applied to the general retail and restaurant land uses and a 75 percent internal capture rate was applied to the coffee shop land use.

(3) The maximum parking demand estimates for the retail, restaurant or coffee shop uses is shown in the table (accounting for transit and internal capture reductions).

Comparable Site Parking Demand

The existing parking supply and demand rate was reviewed at The Reflections and IndiGO Apartments. These two residential complexes represent the best comparison to the proposed development. The observed parking demand rates for these two sites were 1.46 and 1.44, respectively. Applying a parking demand rate of 1.45 spaces per unit to the proposed 402-unit apartment, yields an expected parking demand of 583 spaces, which accounts for the parking demand for both resident tenants and resident guests. The 583 spaces do not include the parking demand for the retail/restaurant component, which is estimated to be 22 spaces or less based on the City code and ITE parking demand estimates. Therefore, the parking demand for the proposed development is 605 spaces (583 spaces + 22 spaces), which is a 15-space surplus from the proposed parking supply of 620 spaces (540 resident spaces, 60 guest spaces, and 20 retail spaces).

Transit Consideration

It is important to account for the impact of transit (e.g. Blue Line LRT), which is immediately adjacent to the proposed development. Without consideration of this transit, the parking requirement for the proposed development would be based on the City parking code, which requires 794 to 805 spaces depending on the retail or restaurant scenarios. Since the Reflections and IndiGO Apartments are also adjacent to the Blue Line LRT, these two sites represent the best comparison to the parking demand expected for the proposed development. Therefore, the parking demand expected for the proposed development is approximately 605 spaces. It should be noted that in theory, overparking developments that are intended to be TOD will not achieve the desired goals.

Conclusion

Based on the analysis contained herein, the proposed parking supply of 620 spaces is expected to be adequate. The parking analysis estimates a parking demand of 583 spaces for the apartment and 22 spaces for the retail/restaurant space for a total parking demand of 605 spaces. To fully utilize the proposed parking, consider a shared parking agreement with the retail/guest designated parking so that guests can use the retail parking when the retail space is not open and vice versa. This will provide additional guest parking on-site for days when it may be needed. In addition, the guest parking spaces should be monitored and enforced so that residents do not use these spaces and are encouraged to purchase spaces in the parking ramp.