

Glen Lennox Parking Multifamily Phase

Chapel Hill, North Carolina

PREPARED FOR

Judy Johnson
Assistant Director
Town of Chapel Hill Planning Department
405 Martin Luther King Jr Blvd.
Chapel Hill NC 27514

PREPARED BY



VHB Engineering NC, P.C. (C-3075)
940 Main Campus Drive, Suite 500
Raleigh, NC 27606
919.829.0328

10/19/2022

Executive Summary



Background

Grubb Properties has plans to construct a mixed-use development including multifamily housing, townhomes, offices, senior housing, retail, and a hotel in Chapel Hill, North Carolina. The site is located on the northern side of NC 54 and eastern side of US 15-501. The next phase will be redeveloped to consist of 595 total multifamily dwelling units (du) across two six- or seven-story buildings. The mix of units will be 29.6% studio, 49.6% one bedroom, and 20.8% two bedroom units.

VHB Engineering NC, P.C. (VHB) was retained by Grubb Properties to conduct a parking evaluation for this phase of the proposed Glen Lennox development. This evaluation serves to assess the parking needs of the proposed Glen Lennox development from both a qualitative and quantitative perspective.

Analysis

Alternative modes of transportation available as well as proposed plans were considered to ensure the transportation needs of the development and surrounding area are expected to be adequately served. Examples of the modes considered include pedestrian facilities such as sidewalks and marked crosswalks, bicycle facilities such as bike lanes and multi-use paths, and transit services such local and intracity bus routes.

The Institute of Transportation Engineers (ITE) Parking Generation Manual, 5th Edition is a common resource for determining the average parking rates for various land uses. The manual was used to review parking rates based on similar types of development. Land Use Code (LUC) 221 (Multifamily Housing (Mid-Rise)) was selected as the most appropriate land use for this phase of development. Parking requirements for other locations throughout region and country with similar characteristics and contexts were also researched to assist in the determination of a practical parking rate.

Conclusion

The projected parking demand for the Glen Lennox multifamily sites is in the 0.68 space per studio and one bedroom units. Factoring in a higher rate for the two bedroom units, an overall rate of 0.80 space per unit or a minimum of 476 total parking spaces for this site is estimated to be appropriate to adequately serve the parking needs of the development. Based on the published hourly parking distributions for this use, this level of parking demand would only be needed during the overnight hours (12:00 AM-4:00 AM), with parking occupancies ranging between approximately 50% and 70% between 7:00 AM and 7:00 PM. While this assessment focuses only on this specific residential phase, a review of hourly parking demand across the entire site would result in an even reduced parking demand due to shared parking across the entire site.

Table of Contents

1	Executive Summary	i
2	Introduction	1
3	Analysis	1
4	Conclusion	5

List of Tables and Figures

Table No.	Description	Page
Table 1:	Town of Chapel Hill UDO Required Parking and ITE Parking Generation.....	2
Table 2:	ITE Published Parking Generation – Multifamily Housing.....	3
Table 3:	Hourly Parking Distribution based on ITE Parking Demand.....	4

List of Figures

Figure No.	Description	Page
Figure 1	Bicycle Network Exhibit.....	6



Introduction

Background

Grubb Properties has plans to construct a mixed-use development including multifamily housing, townhomes, offices, senior housing, retail, and a hotel in Chapel Hill, North Carolina. The site is located on the northern side of NC 54 and eastern side of US 15-501. The next phase will be redeveloped to consist of 595 total multifamily dwelling units across two six- or seven-story buildings. The mix of units will be 29.6% studio, 49.6% one bedroom, and 20.8% two bedroom units.

Purpose

VHB Engineering NC, P.C. (VHB) was retained by Grubb Properties to conduct a parking evaluation for this phase of the proposed Glen Lennox development in Chapel Hill. This evaluation assesses the parking needs of the proposed Glen Lennox development from both a qualitative and quantitative perspective.

Analysis

Existing Transit

The Town of Chapel Hill has established itself as a transit-oriented community with excellent high-frequency, fare-free bus service. Combined with fees and limited parking options, traveling by bus will continue to be a primary mode of transportation for individuals traveling to downtown and the UNC campus. The high ridership levels are expected to grow with future system enhancements and expanded service, including bus rapid service.

The development is located along the A Route of Chapel Hill Transit which has multiple stops on Hamilton Road and Brandon Road. This route operates from morning to evening every day of the week and provides access throughout Chapel Hill including Downtown Chapel Hill, University of North Carolina (UNC) campus, and University Place. Additionally, the development is located along the Safe Ride G Route which offers late night bus service Thursday through Saturday. In addition, numerous routes stop along the Glen Lennox NC 54 frontage. These include Chapel Hill Transit Route S, Route N, and Route B which connect to downtown Chapel Hill, Meadowmont, UNC Hospitals, and other regional destinations. GoTriangle routes also travel along this route, including the 800 and 805 routes, which connect to multiple destinations in Durham and the Research Triangle Park (RTP) including Southpoint Mall. Both GoTriangle routes also connect to the Regional Transit Center in RTP which has transit transfer connections across the Triangle including the Durham Station, Cary Train Station, and GoRaleigh Station. Between these routes, residents will have opportunities to board a bus adjacent to the site every 5 to 7 minutes all day.

Existing Pedestrian and Bicycle Facilities

Bicycle facilities including the greenway along NC 54 and buffered bike lanes along Glen Lennox Drive to Hayes Road can be accessed from the residential streets within the development. Pedestrian facilities within the area include sidewalks and the greenway along NC 54 to Downtown Chapel Hill and UNC campus. Glenwood Square Shopping Center including The Fresh Market and multiple restaurants are within walking distance of the development and accessible by sidewalk via the intersection of Hamilton Road and NC 54 which has pedestrian signal heads and marked crosswalks.

Proposed Pedestrian and Bicycle Facilities

In addition to the existing pedestrian and bicycle facilities, the redevelopment plan for Glen Lennox has been designed with the needs of pedestrians and users of other modes of transportation in mind including design elements that prioritize non-car-based travel such as walking, biking, and taking public transit. The site design included the construction of a signalized intersection on US 15-501 and associated pedestrian and bicycle amenities at that location. Similarly, improvements are being made to the signalized intersection of Hamilton Road and NC 54, which will create a more direct crosswalk on the west leg and will widen the high visibility pavement markings to accommodate both pedestrian movement between the sidewalks and bicycle movement between multi-use paths on all corners. The plans also propose to extend the multi-use path along NC 54 from Meadowmont. Bicycle paths, bike rooms, bike parking, bike-related street signage, and sidewalks around and through all blocks of the development are planned to make for easier and more enjoyable walking or cycling. The figure at the end of this report shows the proposed Bicycle Network Exhibit for the development. These improvements are intended to provide users with accessible transportation options that operate harmoniously alongside vehicular traffic.

Parking Generation

The Institute of Transportation Engineers (ITE) *Parking Generation Manual, 5th Edition* is a common resource for determining the average parking rates for various land uses. Based on a review of parking rates Land Use Code 221 (Multifamily Housing (Mid-Rise)), the parking rates range from 0.22 to 0.75 spaces per bedroom, depending on the setting. These rates are based on surveys of similar sites nationwide in the 1980s-2010s. Table 1 shows the ITE projected parking generation results for these types of apartments on a typical weekday.

Table 1: Town of Chapel Hill UDO Required Parking and ITE Parking Generation

Setting	Proximity to Rail Transit	Parking Demand Ratio Per Bedroom
Center City Core	Within ½ mile	0.22
Dense Multi-Use Urban	Not Within ½ mile	0.48
Dense Multi-Use Urban	Within ½ mile	0.50
General Urban/Suburban	Not Within ½ mile	0.75
General Urban/Suburban	Within ½ mile	0.61

Although Glen Lennox is not located specifically near rail transit, there is adjacent high-frequency, fare-free bus service serving the area’s major destinations. Also, recent mobility trends are further reducing automobile dependency since these ITE parking surveys were performed originally. These trends include improved micro-mobility options such as ebikes, ride- and car-sharing services, increased gas prices, and environmental awareness, particularly for recent college graduates or younger professionals that may be attracted to this location.

Using the above-mentioned factors for a general urban/suburban setting and as shown in Table 2, the projected parking demand for the Glen Lennox multifamily sites is in the 0.68 range per one bedroom unit. Assuming the studio spaces have the same parking demand at the one bedroom units and that a two bedroom unit has an 85% higher parking rate than a one bedroom unit, an overall rate of 0.80 space per unit or a minimum of 476 total parking spaces for this site is estimated to be appropriate to adequately serve the parking needs of the development. Based on the published hourly parking distributions for this use shown in Table 3, this level of parking demand would only be needed during the overnight hours (12:00 AM-4:00 AM), with approximately 50% and 70% of that demand between 7:00 AM and 7:00 PM. While this assessment focuses only on this specific residential phase, a review of hourly parking demand across the entire site would result in an even reduced parking demand due to shared parking.

Table 2: ITE Published Parking Generation – Multifamily Housing

Setting & Location	Near Rail Transit	Average Rate (Studio)	Average Rate (1 bedroom)	Average Rate (2 bedroom)	Blended Rate
Urban/ Suburban	No	0.75	0.75	1.39	0.88
	Yes	0.61	0.61	1.13	0.72
	Average	0.68	0.68	1.26	0.80

Table 3: Hourly Parking Distribution based on ITE Parking Demand

Hour Beginning	Percent of Peak Parking Demand	Hourly Demand for Spaces
12:00–4:00 a.m.	100%	476
5:00 a.m.	94%	447
6:00 a.m.	83%	395
7:00 a.m.	71%	338
8:00 a.m.	61%	290
9:00 a.m.	55%	262
10:00 a.m.	54%	257
11:00 a.m.	53%	252
12:00 p.m.	50%	238
1:00 p.m.	49%	233
2:00 p.m.	49%	233
3:00 p.m.	50%	238
4:00 p.m.	58%	276
5:00 p.m.	64%	305
6:00 p.m.	67%	319
7:00 p.m.	70%	333
8:00 p.m.	76%	362
9:00 p.m.	83%	395
10:00 p.m.	90%	428
11:00 p.m.	93%	443

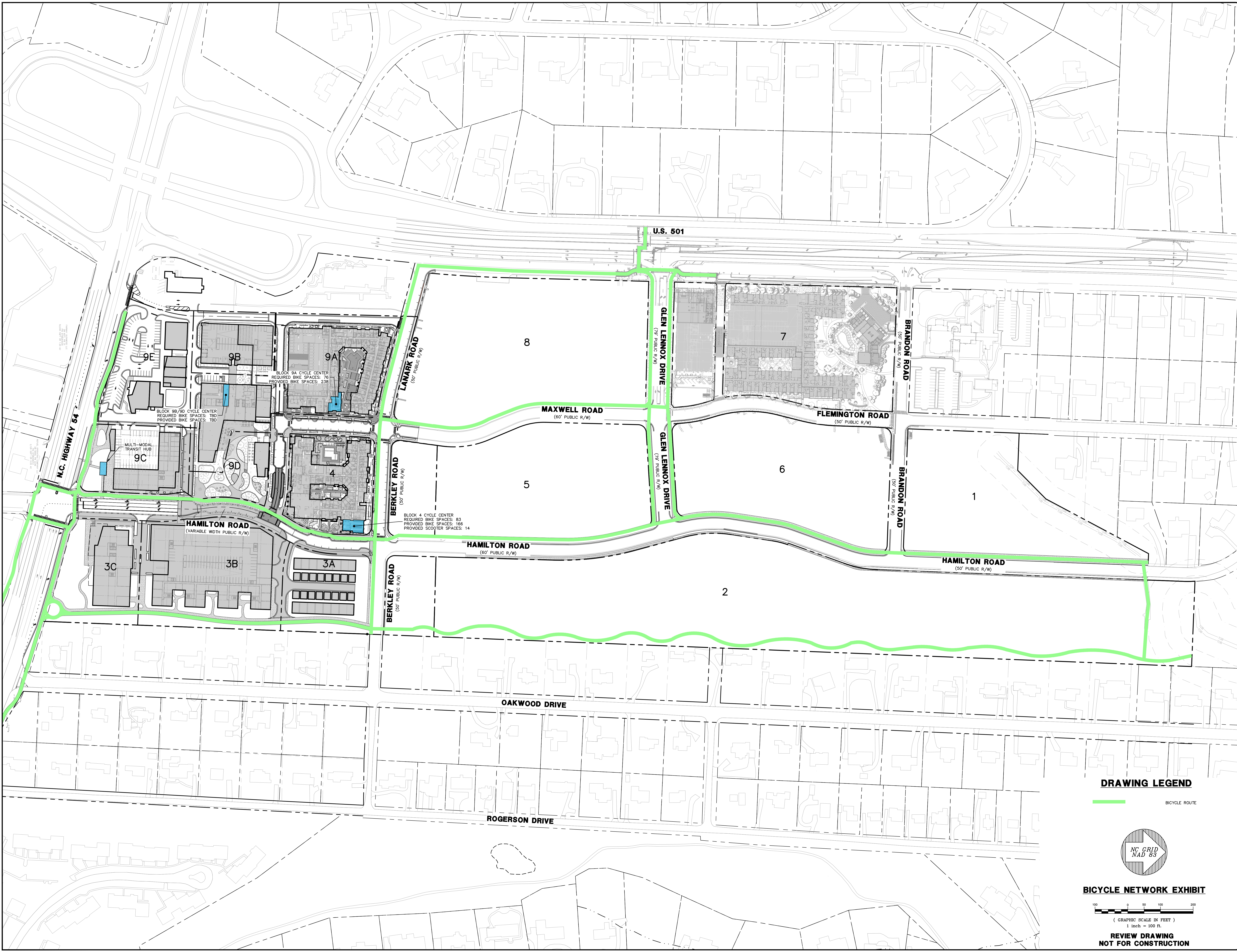
Comparable Municipality Parking Requirements

As cities and towns throughout the country modernize zoning ordinances to increase housing availability and advance alternative modes of transportation, parking requirements are updated to reflect the evolving transportation needs of users. Many of these municipalities with similarities to Chapel Hill have reduced parking minimums or have removed their parking requirements in their downtown and university districts or in areas near transit corridors. For example, Ithaca, New York allows one parking space per three bedrooms and has no parking minimum in their downtown or mixed-use districts including near Ithaca College and Cornell University. Alternatively, the City of Berkeley in California has eliminated minimum parking requirements citywide and has a maximum parking rate of 0.5 spaces per dwelling unit near transit corridors including near the University of California, Berkeley. Other municipalities with college or university campuses including South Bend in Indiana and Ann Arbor in Michigan have eliminated minimum parking requirements, and as well as portions of Raleigh and Durham in the Triangle. Several others such as Charlottesville in Virginia, Gainesville in Florida, and Madison in Wisconsin have removed minimum parking requirements in downtown or city center districts as well as in certain areas with mixed-use developments. Portland, Maine and Charlotte have also removed minimum parking requirements near transit areas.

Conclusion

The development's proximity to the downtown and UNC Campus and the availability of transportation options including local and intracity bus routes as well as bicycling and pedestrian facilities near the development indicate a reduced need for a personal vehicle. The proposed improvements to the existing bicycle and pedestrian facilities as well as the planned accessibility within the development further support this indication.

Using the *ITE Parking Generation Manual, 5th Edition* as a reference, the demand for parking in the development should be adequately met with an overall rate of 0.80 space per unit or a minimum of 476 total parking spaces. This determination is reinforced by the review of parking requirements in other municipalities with a similar context.



DATE	REVISIONS	NUM

OWNER INFORMATION
2858B PROPERTIES
4500 CAMERON VALLEY
PARKWAY, SUITE 350
CHARLOTTE, NC 28211
OWNER'S REPRESENTATIVE:
DAN SCHUMACHER
PH: (704) 971-8924
FAX
EMAIL: dschumacher@2858bproperties.com

DATE	ISSUED

GLEN LENNOX
CHAPEL HILL, NC

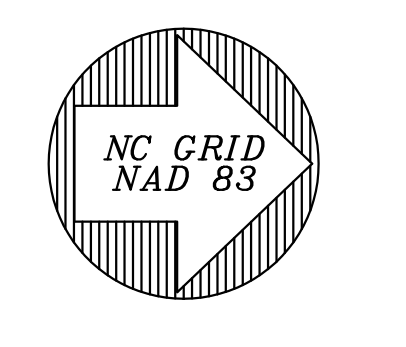
MASTERPLANNING EXHIBITS

JOB #: 107013.01
DATE: 29 JUL 22
SCALE: AS NOTED
DRAWN BY: D.W.S.
REVIEWED BY: G.J.R.

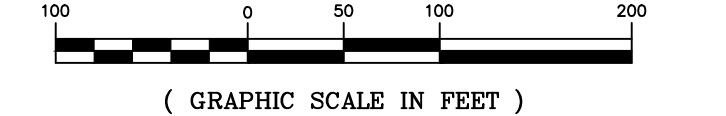
SHEET
C1006

DRAWING LEGEND

BICYCLE ROUTE



BICYCLE NETWORK EXHIBIT



(GRAPHIC SCALE IN FEET)
1 inch = 100 ft.

REVIEW DRAWING
NOT FOR CONSTRUCTION