

PROJECT MEMORANDUM

PORT CHESTER SHARED PARKING



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PROJECT NAME: Port Chester – United Hospital Site

PROJECT NUMBER: 18-1004.00

SUBJECT: Conceptual Shared Parking

To assist in planning the parking for the site, Walker performed a preliminary code review and tested the potential for shared parking to reduce the needed parking supply. Generally speaking, mixed-use campuses need fewer spaces than codes require due to the variations in peak hours of demand for different land uses on the site. Whereas a traditional code will add up the peak-hour requirement for each land use, shared parking takes into account that land uses will peak at different times, and can thus share some of their spaces with complementary land uses. Section 345-67 of the Village code outlines shared parking principles for use in, and specific to, the MUR Marina Redevelopment Project Urban Renewal District.

Our preliminary analysis suggests that planning parking according to the principles outlined in Urban Land Institute's Shared Parking would make sense for this campus. Given that finding, we have provided sample zoning language for a Shared Parking district.

CODE EVALUATION

The Village requires offices to provide one space per 200 sf of gross floor area (5 spaces per 1,000 sf). However, research provided in Urban Land Institute's Shared Parking has shown that 3.37 spaces per 1,000 sf is sufficient for a complex with 120,000 SF of Office.

The result of the preliminary code assessment is shown in Table 1. In addition, 12 or more spaces would be required for loading. The code is inconclusive on loading calculations; clarification from the Village is needed.

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Table 1: Preliminary Code Calculation

Current Program			Village Code Requirement			
Site Land Use	Qty.	Unit	Relevant Land Use	Qty.	Unit	Required Spaces
Retail + Grocery	80,000	sf	Retail	1	/300 sf gfa	267
Residential	762	units	Multifamily Dwelling**	1.5	/unit	1,143
Office	120,000	sf	Office	1	/200 sf gfa	600
Total						2,010

**Includes Condo or Coop. Code is the same for PTD (Planned Tower Development) and non-PTD districts.
 Source: Village of Port Chester Code Article IV, Sections 345-14 and 345-57.2, and Walker Parking Consultants, 2009.

ADAAG CALCULATION

The Americans with Disabilities Act Accessibility Guidelines (ADAAG) requires that a certain number of accessible stalls be provided, depending on the number of stalls in the facility. Table 2 shows how the requirement is calculated. Please note that of the accessible spaces required, one in six must be van accessible. Van accessible stalls need a clearance of 8’2” and can be concentrated on one level of the structure rather than distributed throughout.

Table 2: ADA Stall Requirements

Parking Stalls in Facility	Minimum Accessible Stalls
1 - 25	1
26 - 50	2
51 - 75	3
76 - 100	4
101 - 150	5
151 - 200	6
201 - 300	7
301 - 400	8
401 - 500	9
501 - 1000	2% of total
1001 - 1100	21
1101 - 1200	22
1201 - 1300	23
1301 - 1400	24
1401 - 1500	25
1501 - 1600	26
1601 - 1700	27
1701 - 1800	28
1801 - 1900	29
1901 - 2000	30

Source: ADAAG 4.1.3(5)(a)

SHARED PARKING ANALYSIS

A shared parking model calculates the site-specific parking needs of a mixed-use development to account for the fact that in a mixed-use setting the combined parking demand will generally be lower than if each use provided the parking needed to accommodate its peak demand. The lower combined demand is the result of differing peak hours, and also the “captive effect” that produces synergy between different land uses. These are described below.

The modeling process uses industry research on parking generation rates – the cars generated per thousand square feet (or other unit, as appropriate) of a land use – which are then adjusted for site specific conditions . Once the ratios used in the model are modified to reflect the area in question, rather than national averages, we make further adjustments for “presence” to account for the utilization patterns over the course of a day, week and year. The adjustments are as follows:

- Alternative modes of travel: Industry standard ratios are designed to describe areas with minimal transit use. In our studies we research alternative modes of travel for the area (transit, bikes, walking, carpooling, etc.) and adjust the ratios downward where we find use of alternatives.
- Captive markets: Where there are several types of land uses together, it is generally the case that some user groups create an on-site market for other uses, and thus create demand for the secondary venue without creating additional demand for parking. Office workers eating at a restaurant in the ground level of their building create such a “captive” market. Since they are already counted as parked as an office tenant, they do not create additional demand for parking when they walk to the commercial space. Thus the restaurant may be very busy at lunch hour but generate significantly fewer cars than the stand-alone restaurants described by the standard industry ratios.
- Presence factors: Some land uses, like offices, are busy during weekdays while others, like cinemas, are busy after work and on weekends. Because these two land uses have very different peak hours, they can share much of the same parking supply. Our model looks at the demand generated by each land use in a development for 18 hours each weekday and weekend, for every month of the year, and determines the combined peak for all the land uses. This combined peak is generally lower than the amount of parking that would be provided if we calculated each land uses peak and added them.

Because we are in the very preliminary stages with Port Chester, Walker has not run a comprehensive model that would include adjustments for mode of travel and captive markets. The models summarized below contain the standard base ratios, adjusted for presence at different hours, days, and months.

Walker ran three models. The first model assumes all resident parking is shared with all other uses. This is usually not acceptable to leasing and thus is typically unlikely to occur, but is provided for comparison. The second model assumes that each unit has one reserved space and shares the other (if they lease another; not every renter will need two spaces. On average rental units require 1.5 spaces per unit plus guest spaces.). The third model assumes all resident parking is reserved, and only resident guest spaces are shared with other land uses.

The model assumes the following program:

- 120,000 sf of office
- 35,000 sf of retail
- 45,000 sf of supermarket
- 762 residential units

The results of the models are shown in Table 3.

Table 3: Shared Parking Model Summary – All Phases

	Weekday			Weekend		
	Unadjusted	Shared Peak	% Reduction	Unadjusted	Shared Peak	% Reduction
All Parking Shared	1,974	1,531	22%	1,627	1,435	12%
One Reserved Space per Resident Unit	1,974	1,727	13%	1,627	1,458	10%
All Resident Spaces Reserved	1,974	1,841	7%	1,627	1,491	8%

Source: Walker Parking Consultants, 2009

Because Phase III (274 units) will have a separate parking facility, we have also run the model excluding Phase III. The findings are shown in Table 4.

Table 4: Shared Parking Model Summary - Phases I and II

	Weekday			Weekend		
	Unadjusted	Shared Peak	% Reduction	Unadjusted	Shared Peak	% Reduction
All Parking Shared	1,522	1,215	20%	1,175	995	15%
One Reserved Space per Resident Unit	1,522	1,349	11%	1,175	1,010	14%
All Resident Spaces Reserved	1,522	1,422	7%	1,175	1,072	9%

Source: Walker Parking Consultants, 2009

FINDINGS

Even assuming that all resident spaces are reserved, our preliminary shared parking model suggests that the campus will need fewer parking spaces than a code calculation would require. In part this is because the code uses a higher initial ratio for offices. While the code requires 5 spaces per 1,000 sf of office space, ULI research indicates that 3.37 spaces per 1,000 sf of office is sufficient for an office in this size range. In addition to the lower “base” ratios, variations in peak hours also contribute to the lower combined demand.

Given this finding, we believe that the rezoning should request language that would allow the parking to be determined based upon a ULI *Shared Parking* analysis with appropriate supplemental data. This would allow the development to move away from the conservative ratios in the current zoning ordinance for this area. The Village of Port Chester uses shared parking principles in its zoning for the Marina Redevelopment Project. The use of shared parking principles would also allow the development team the alternative of sharing the residential parking, at least for the first two phases. This would allow for the office workers to utilize empty residential spaces during the day, which would significantly benefit the viability of the development by reducing the amount of parking which must be constructed from 2,143 per current zoning to the range of 1,530 to 1,850 spaces.

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Since Phase 3 is only residential, this parking probably would not be shared, as the first two phases would need to function with only their parking supply. Once Phase 3 is constructed, the parking surplus would increase.

SAMPLE REZONING LANGUAGE:

A Shared Parking Study shall be prepared by an appropriate professional. The study shall demonstrate that the proposed parking supply will be adequate to serve the parking needs of the development. Such study may be based upon accepted industry standards such as that described in the current edition of "Shared Parking," published by the Urban Land Institute, supplemented as appropriate by actual experience and studies of, or known to, the professional preparing the report. The study should consider parking demand variations due to factors such as time of day, weekday versus weekend demand, monthly variations in parking demand, captive markets within the site and modal split, all of which would affect when the peak accumulated parking demand would occur.