



# Downtown Parking Study

For the City of  
Grass Valley



December 6, 2007

Funded under the State Housing  
and Community Development  
CDBG Planning and Technical  
Assistance General Allocation  
Grant

# Table of Contents

<b>Introduction.....</b>	<b>1</b>
Study Summary.....	1
Study Recommendations.....	2
<b>Existing Conditions.....</b>	<b>6</b>
Parking Occupancy Surveys.....	6
Results of Occupancy Surveys Conducted on Wednesday, December 14, 2005.....	8
Results of Surveys Conducted on Saturday, December 17, 2005.....	8
Parking Duration Surveys.....	13
Results of Duration Surveys Conducted on Wednesday, December 14, 2005.....	13
Results of Duration Surveys Conducted on Saturday, December 17, 2005.....	16
<b>Strategies to Improve Parking in Grass Valley Downtown.....</b>	<b>17</b>
Need for Better Utilization of Private Lots.....	17
Sell More Parking Permits.....	17
Add Private Lots to Permit Parking Program.....	17
Issue Separate Permits for Weekend Use.....	18
Need for Better Utilization of On-Street Spaces.....	18
Allow Permit Patrons to Park On-Street.....	19
<b>Evaluation of City of Grass Valley Parking Requirements.....</b>	<b>20</b>
<b>Expected Parking Demand in Downtown with Future Development.....</b>	<b>21</b>
Near Term Development.....	21
Expected Change in Parking Requirement.....	22
Impact of Special or Seasonal Events.....	24
Saturday Parking Demand by Time of Day.....	25
Shared Parking.....	26
<b>Parking Garage Strategies and Funding Opportunities.....</b>	<b>27</b>
Parking Supply Options – Site 1.....	27
Parking Supply Options – Site 2.....	28
<b>Summary of Garage Evaluations.....</b>	<b>29</b>
Proposed ± 300 Space Parking Structure – Project Financing Options.....	50
<b>Results of Public Workshop.....</b>	<b>51</b>
<b>Study Recommendations.....</b>	<b>53</b>
<b>Study Participants.....</b>	<b>54</b>
TJKM Transportation Consultants.....	54
International Parking Design.....	54
City of Grass Valley.....	54

## List of Figures

Figure 1: Study Area.....	7
Figure 2: Parking Occupancy on Wednesday, December 14, 2005.....	10
Figure 3: Parking Occupancy on Saturday, December 17, 2005.....	11
Figure 4: Parking Conditions for the "Public" Parking Areas.....	12
Figure 5: Average Parking Duration on December 14, 2005.....	14
Figure 6: Average Parking Duration on December 17, 2005.....	15
Figure 7: Location of Sites 1 and 2.....	30
Figure 8: Site 1 - Ground Level Plan.....	31
Figure 9: Site 1 - Second Level Plan.....	32
Figure 10: Site 1 - Third Level Plan.....	33
Figure 11: Site 1 - Roof Plan.....	34
Figure 12: Site 1 – Building Section.....	35
Figure 13: Site 2 Option 1 – Ground Level Plan .....	38
Figure 14: Site 2 Option 1 – Second Level Plan.....	39
Figure 15: Site 2 Option 1 – Third Level Plan.....	40
Figure 16: Site 2 Option 1 – Building Section .....	41
Figure 17: Site 2 Option 2 – Ground Level Plan .....	44
Figure 18: Site 2 Option 2 – Second Level Plan.....	45
Figure 19: Site 2 Option 2 – Roof Level Plan.....	46
Figure 20: Site 2 Option 2 – Building Structure .....	47

## List of Tables

Table I: Parking Spaces Inventory.....	6
Table II: Parking Occupancy by Time of Day (Wednesday, December 14, 2005).....	8
Table III: Parking Occupancy by Time of Day (Saturday, December 17, 2005).....	8
Table IV: Average Parking Duration Off-Street and On-Street (10 a.m. - 5:30 p.m.).....	13
Table V: Parking Occupancy in Private Lots by Time of Day.....	17
Table VI: On-Street Parking Occupancy by Time of Day .....	19
Table VII: Near Term Development in Downtown.....	21
Table VIII: Near Term Development - Beyond Downtown.....	22
Table IX: Expected Peak Parking Demand by Retail Type.....	23
Table X: Public Parking Occupancy by Time of Day (Wednesday, December 14, 2005).....	23
Table XI: Summary of Events - Grass Valley Downtown .....	24
Table XII: Fairground Events.....	24
Table XIII: Parking Occupancy by Time of Day (Saturday, December 17, 2005).....	25
Table XIV: Expected Parking Demand on a Typical Saturday .....	25
Table XV: Site 1 - Budget Construction Cost Estimate.....	36
Table XVI: Parking Space & Area Summary (Site 1) .....	37
Table XVII: Site 2 Option 1 - Budget Construction Cost Estimate .....	42
Table XVIII: Parking Space Area Summary (Site 2).....	43
Table XIX: Site 2 Option 2 - Budget Construction Cost Estimate.....	48
Table XX: Parking Space & Area Summary (Site 2 Option 2) .....	49

## Introduction

This is the final report of the City of Grass Valley Parking Study. TJKM Transportation Consultants was retained by the City to examine parking issues in the downtown area. The study consisted of the following tasks:

- 1) Finalize Work Scope and Review Documents
- 2) Parking Data Collection
  - a. Study area mapping
  - b. Occupancy and duration studies
- 3) Parking Data Analysis and Recommendations
  - a. Evaluate results
  - b. Evaluate existing parking areas
- 4) Evaluation of Current Standards
  - a. Zoning Ordinance requirements
  - b. Generation rates for mixed use development
  - c. Parking space dimensions
- 5) Management of Future Parking Conditions
  - a. Future land use
  - b. Future parking needs
- 6) Parking Garage Strategy
  - a. Pros and cons of parking garages at four locations
- 7) Identify Funding Opportunities
- 8) Draft and Final Reports
- 9) Public Participation and Workshops

## Study Summary

Additional parking is needed in downtown Grass Valley. A parking garage with an approximate capacity of about 326 stalls, to be located on S. Auburn Street north of Neal Street, is recommended. This is considered a long-term recommendation, with construction in about seven years. The short-term recommendations include expanding permit parking, evaluating means to provide a better balance between underutilized private parking and at-capacity public parking, beginning detailed planning and feasibility studies for the ultimate parking garage, and considering the need for a residential parking permit program on the fringes of downtown. Mid-term recommendations include evaluating the potential to create new at-grade parking stalls at locations on the periphery of the downtown. Such parking would primarily be intended to serve all day employee parking. In addition, preparation of construction drawings for the parking garage and assembling required private properties would take place within the mid-term time frame.

Evaluation Of Parking Requirements Off-street parking requirements in the Zoning Ordinance were reviewed by TJKM and recommendations for changes were presented. Subsequently, on March 6, 2007 the City adopted Article 3 of the Development Code, which revised parking standards and requirements. The City fully considered the TJKM recommendations prior to adopting the new standards.

## **Study Recommendations**

### **I. Strategies to Utilize Existing Parking Spaces**

#### A. Existing Conditions

Most of the customers and employees in downtown Grass Valley arrive by personal vehicle and therefore need to find a parking space. TJKM surveyed the downtown area on Wednesday, December 14, 2005 and Saturday, December 17, 2005 to determine parking occupancy and duration conditions less than two weeks before Christmas.

Results of the surveys indicate that over 95 percent of the 226 spaces in the City's five public parking lots were occupied on both December 14 and December 17, 2005. This is a very high occupancy level that exceeds the 85 percent threshold for off-street parking occupancy (*Parking Requirements for Shopping Centers, 1999*). Results also showed that, when aggregated with other on- and off-street parking spaces ("private" lots with spaces assigned to individual businesses and retail stores), occupancy rates dropped to 50 to 65 percent throughout the downtown area. Therefore, typically there is not enough parking capacity in the five public lots, while the private lots appear to be underutilized. Given these results, the City may want to explore options that would increase available parking for the general public, including better utilization of the private lots.

The study advances the recommendations listed below as viable resources that will expand future parking opportunities in the short, mid, and long term.

#### B. Strategies to Improve Parking

TJKM evaluated five strategies to improve parking conditions in the downtown area. The following are the strategies which should be considered as short term solutions:

- 1) Selling more parking permits
- 2) Adding more private lots to the permit parking program
- 3) Issuing separate parking permits for weekend only use
- 4) Allowing permit patrons to park on the street
- 5) Increasing space turnover by implementing shorter time restrictions
- 6) Adjusting the City's Downtown Parking In-Lieu Fee to better reflect current land values

The utilization of existing resources would be improved by expanding the permit-parking program, implementing time restrictions (e.g., reduce 3-hour parking to either 2-hour or 90 minute parking) and/or by installing parking meters. If the permit parking program were to be expanded, the City should evaluate how future adjustments can be made to the parking permit fee to better offset the cost of maintaining existing parking or adding new parking.

Strategies that require more of a substantial financial commitment (e.g., adding more private lots to the permit parking program) are more difficult to implement than ones that are more policy oriented (e.g., allowing permit patrons to park on-street or altering the time limits for parking in the downtown). If the City were to pursue the purchase of additional properties for parking, the present "Downtown Parking In-Lieu Fee" should be re-evaluated to assess current land values and what improvement costs for constructing an at-grade parking space. It is difficult to predict the potential success of any of the above strategies. The City would face challenges in gaining cooperation of private property owners to convert and potentially expand their lots into public parking and undertaking additional enforcement tasks that may not be reimbursable. Fortunately, it would not be costly to investigate these measures to determine their economic feasibility. Strategies requiring expensive capital improvements, such as building surface or garage parking spaces, were not considered as part of this phase and were the subject of subsequent analysis.

The five strategies presented above are intended to improve utilization of existing resources (i.e., private parking lots and on-street spaces) through the permit-parking program, as well as strategies that require substantial financial compensation (e.g., adding more private lots to the permit parking program) and one that is more policy oriented (e.g., allowing permit patrons to park on-street). Although it is difficult to predict the potential success of any of these strategies, it appears that it will be difficult to substantially increase the use of private lots, where there is the most existing parking capacity. Therefore, the utilization and supply of public spaces will need to be the focus for parking improvements in downtown.

## **II. Strategies to Expand Inventory of Public Parking Spaces**

### Expected Future Parking Demand

Unlike special events, business growth in the downtown would increase parking demand incrementally on a daily basis. Given the expense of building new off-street spaces in lots or garages, the City should consider means to create higher turnover of on-street spaces.

As summarized in Tables XI and XIV, the parking occupancy in the public lots and on-street spaces are often over 80 percent during the mid-day period under typical weekday and Saturday conditions. Special events in downtown and at the Fairgrounds create even more demand for public parking spaces. These events can result in hundreds of visitors converging into downtown within a couple of hours and thus create a concentrated parking demand that would be best accommodated by large amount of spaces in a lot or garage. Overall, the study concluded that about **300** additional parking stalls will be needed to satisfy the parking demands over the next 10-year period. Therefore, the City should consider the cost effectiveness of building lots or garages to meet the peak parking demand of special events that occur throughout the year.

### Parking Garage Strategies

In earlier tasks of this study, TJKM conducted comprehensive surveys of existing parking conditions and found the public parking areas to be at or above their practical capacity, suggesting the need for additional stalls to accommodate any planned development in the downtown area. TJKM also examined existing parking standards for Grass Valley and evaluated the future growth in and near the downtown. After reviewing the results of these tasks preliminary analyses of four potential locations were conducted. The four locations are all existing municipal parking lots. These include the parking lot on S. Auburn Street at Neal Street, the City Hall Parking lot on S. Auburn Street, the lot on Richardson Street east of Auburn Street, and the lot on S. Church Street north of Neal Street. The Parking Committee directed the consultant team to develop a preliminary conceptual analysis of parking garages of the first two locations, Sites 1 and 2. Site 1 includes the existing public

parking lot and surrounding facilities on the west side of S. Auburn Street north of Neal Street. Site 2 includes the existing City Hall parking lot plus adjoining properties on Stewart Street. The Richardson Street lot was rejected as a candidate for a garage because it is too small and too far removed from the heart of downtown. The S. Church Street lot does not work well for a garage site because it also provides access to the rear of Mill Street shops, which would not be possible with a garage on the site.

Site 1 can be developed as a 3-1/2 story parking structure with 326 spaces with a construction cost of about \$8.8 million. Site 2 can be developed on three levels with 286 stalls at a cost of about \$8.3 million. Site 1 is more desirable in terms of dimensions to provide an efficient parking structure. The dimensions of Site 2 are more restrictive in developing an efficient structure. Both sites require acquisition and/or demolition of existing buildings for the parking structure project.

During a September 13, 2007 workshop, the attendees indicated that the preferred site for the parking structure was Site 1: South Auburn & Neal Streets. The attendees stated that this site is deemed to be more centrally located and offers the potential for an enhanced downtown entrance

Please note that the level of analysis presented within this report generally validates the feasibility of locating a parking structure in downtown Grass Valley. However, additional detailed analysis is recommended and desirable as a next step to help establish the final configuration of a parking structure for the selected site. Any additional analysis should include the following tasks:

- A. Reestablish site boundaries for the parking structure.
- B. Identify ground floor commercial space criteria.'
- C. Analyze possible parking structure layout based on site availability and constraints to help establish the most desirable layout.
- D. Conduct a cost-benefit analysis
- E. Determine estimated property purchase costs
- F. Review the findings with the City staff and all stake holders to solicit input.
- G. Based on the review, refine the scheme and develop massing and exterior design concepts.
- H. Help develop project cost based on necessary property acquisitions and relocation issues of the selected layout and exterior architectural design concepts.
- I. Submit the presentation data for the City Council review and approval.

### III. **Next Steps**

Based on the overall comments at the meeting, these are the appropriate next steps:

- Review this study with the Planning Commission and City Council
- Obtain direction from Council on implementing the study to:
  - A. Address the need for additional at-grade parking through the evaluation of such low-cost, short-term solutions as:
    - Selling more parking permits
    - Adding more private lots to the permit parking program

- Evaluate how future adjustments can be made to the parking permit fee to better offset the cost of maintaining existing parking or adding new parking
  - Issuing separate parking permits for weekend only use
  - Allowing permit patrons to park on the street
  - Increasing space turnover by implementing shorter time restrictions
- B. Address the need for expanding the inventory of at-grade parking spaces through the purchase of additional property within or adjacent to the downtown
- Evaluate and adjust the City's Downtown Parking In-Lieu Fee to better reflect current land values
  - Inventory the downtown area to determine any feasible options for adding parking. Prioritize areas of the downtown where future purchase and/or lease options should be pursued.
- C. Finalize preferred parking garage location and its financial feasibility. Conduct detailed feasibility study for structure including design, engineering, financing, environmental, etc. per the items referenced in Page 5. Also, as part of financial component, conduct cost/benefit analysis with future income stream which incorporates:
- ✓ With retail on first floor front
  - ✓ Without retail
  - ✓ On-going operating costs

## Existing Conditions

As shown on Figure 1, downtown is roughly bounded by Richardson Street, Washington Street, East Bennett Street, Westbound State Route 20, Walsh Street and South School Street. TJKM surveyed 1,412 parking spaces on December 14 and 17, 2005. The majority (954 or 68 percent) of these spaces are in off-street private parking lots associated with specific businesses or office/retail centers. There are another 226 off-street spaces (16 percent) located in the City's five public parking lots. A total of 230 on-street spaces (187 of them with 3-hour limit) make up the remaining 16 percent of the parking inventory. Table I provides a summary of the type of spaces that were surveyed.

**Table I: Parking Spaces Inventory**

Type of Spaces	Spaces	Percent of All Types
Off-Street Parking Lots:		
Private	954	67.6
Public	226	16.0
Off-Street Subtotal	<u>1,180</u>	<u>83.6</u>
On-Street		
3-Hour Limit	187	13.3
No Time Limit	15	1.1
Truck Loading Zone	9	0.6
Passenger Loading Zone	6	0.4
24-Minute Limit	5	0.4
15-Minute Limit	5	0.4
Handicapped	3	0.2
On-Street Subtotal	<u>232</u>	<u>16.4</u>
<b>Total Number of Spaces Surveyed</b>	<b>1,410</b>	<b>100.0</b>

## Parking Occupancy Surveys

As requested by City staff, the downtown was surveyed on Wednesday, December 14, 2005 and Saturday, December 17, 2005. These dates were chosen because they occur during the Christmas shopping season. On both days, duration and occupancy information was collected between 10:00 a.m. and 5:30 p.m. for the on-street spaces by recording license plate information every 45-minutes. Occupancy is determined by counting the number of license plates that were recorded for one time period (e.g., 10:00 a.m.). For example, if six license plates were recorded on a block face that had 10 spaces, then the occupancy would be 60 percent. Detailed parking occupancy data are included in Appendix A.

Typically, the percent ranges for low, medium, high, and very high occupancy levels are assumed to be 0-49, 50-84, 85-89, and 90-100 percent, respectively. The notion of effective parking supply in relation to occupancy level originates from the recognition of parking turnover, time lost in searching for parking, and competition with other drivers for preferred parking spaces, in addition to other factors, all serve to diminish the likelihood that 100 percent of the parking supply would be used at any one time. Traffic engineers typically use parking occupancy thresholds of 85 percent for off-street parking lots and 90 percent for on-street parking. The difference between these thresholds is generally due to the primary purpose of each facility type. The primary purpose of off-street parking, parking lots and garages, is to provide storage of vehicle, while the primary function of streets is the movement of vehicles. Therefore, the unoccupied parking spaces within lots and garages are expected to be found more quickly and easily than unoccupied spaces along street curbs.

**Figure 1: Study Area**

**Results of Occupancy Surveys Conducted on Wednesday, December 14, 2005**

Table II summarizes the results of the occupancy surveys and indicates the highest occupancy for the entire study area occurred at 1:00 p.m. on Wednesday when 65 percent of the 1,410 spaces surveyed were occupied. Figure 2 provides a block-by-block display of parking occupancy recorded at approximately 1:00 p.m. on Wednesday throughout the entire study area. A closer look at the data indicates that at 1:00 p.m. the occupancy levels were approximately 91 percent for the 226 off-street spaces in public lots, 79 percent (=182/230) for the 230 on-street spaces, and only approximately 22 percent for 954 off-street spaces in private lots.

**Table II: Parking Occupancy by Time of Day (Wednesday, December 14, 2005)**

Type of Parking	Inventory	Occupancy on Wednesday, December 14, 2005										
		10:00 a.m.	10:45 a.m.	11:30 a.m.	12:15 p.m.	1:00 p.m.	1:45 p.m.	2:30 p.m.	3:15 p.m.	4:00 p.m.	4:45 p.m.	5:30 p.m.
Private Lots	954	15%	20%	22%	22%	22%	21%	21%	20%	20%	18%	16%
Public Lots	226	63%	83%	92%	95%	91%	90%	88%	84%	84%	77%	67%
On-Street	230	68%	78%	79%	82%	79%	68%	65%	65%	72%	63%	64%
Total	1,410	49%	56%	61%	64%	65%	60%	59%	57%	58%	51%	46%

**Results of Surveys Conducted on Saturday, December 17, 2005**

Table III summarizes the results of the occupancy surveys and indicates the highest occupancy for the entire study area also occurred at 1:00 p.m. on Saturday when 63 percent of the spaces surveyed were occupied. The owner of a business (on the east side of South Auburn Street between Neal Street and Bank Street) did not want his 27- space lot surveyed. Therefore, only 1,153 (=1,180-27) off-street spaces were surveyed on Saturday compared to 1,180 spaces on Wednesday. Figure 3 provides a block-by-block display of parking occupancy recorded at approximately 1:00 p.m. on Saturday. A more detailed look at the data indicates that at 1:00 p.m. the occupancy levels were approximately 89 percent for the 226 off-street spaces in public lots, 83 percent (=191/230) for the 230 on-street spaces, and only approximately 22 percent for 954 off-street spaces in private lots.

**Table III: Parking Occupancy by Time of Day (Saturday, December 17, 2005)**

Type of Parking	Inventory	Occupancy on Saturday, December 17, 2005										
		10:00 a.m.	10:45 a.m.	11:30 a.m.	12:15 p.m.	1:00 p.m.	1:45 p.m.	2:30 p.m.	3:15 p.m.	4:00 p.m.	4:45 p.m.	5:30 p.m.
Private Lots	927	15%	19%	21%	22%	22%	21%	21%	20%	20%	19%	16%
Public Lots	226	60%	76%	86%	89%	89%	88%	87%	83%	82%	78%	67%
On-Street	230	59%	65%	74%	82%	83%	82%	81%	69%	68%	58%	50%
Total	1,383	39%	47%	55%	61%	64%	63%	60%	55%	52%	47%	38%

Although the overall peak off-street occupancy was around 64 percent on both Wednesday and Saturday, the surveys indicated very high off-street occupancies (approximately 90 percent) for the “public” parking areas. As shown on Figure 4, these areas include lots at the following locations:

- Lot A: Northeast corner of South Church Street/Neal Street intersection (72 parking spaces)
- Lot B: Near the southwest corner of South Auburn Street/Bank Street intersection (70 parking spaces)
- Lot C: Southeast corner of East Main Street/South Auburn Street intersection (36 parking spaces)
- Lot D: West side of Stewart Street between East Main Street and Bank Street (13 parking spaces)
- Lot E: Southeast corner of Richardson Street/South Auburn Street intersection (35 parking spaces).

Furthermore, Figure 4 illustrates the parking conditions (occupancy and duration) for these public parking lots on Wednesday as well as Saturday.

**Figure 2: Parking Occupancy on Wednesday, December 14, 2005**

---

**Figure 3: Parking Occupancy on Saturday, December 17, 2005**

---

**Figure 4: Parking Conditions for the "Public" Parking Areas**

### Parking Duration Surveys

Parking duration surveys were conducted on Wednesday (December 14, 2005) and Saturday (December 17, 2005) and summarized on Figures 5 and 6, respectively. The last three characters of parked vehicles' license plates were recorded every 45 minutes on both days between 10:00 a.m. and 5:30 p.m. A vehicle observed once (e.g., at 10:45 but not 10:00 a.m. or 11:30 a.m.) may have arrived at 10:45 a.m., left immediately at 10:46 a.m., or arrived at 10:01 a.m. and left at 11:29 a.m. Given this possible range of a one minute to 88-minute stay, it is assumed that a vehicle that was recorded only once parked for 45 minutes. Similarly, a vehicle recorded in two consecutive time periods is assumed to have parked for 1 hour and 30 minutes. A vehicle recorded for three consecutive time periods is assumed to have parked for 2 hours and 15 minutes, etc.

### Results of Duration Surveys Conducted on Wednesday, December 14, 2005

On Wednesday, 4,206 vehicles were surveyed using a possible 1,180 off-street parking spaces and 985 vehicles were surveyed using a possible 230 on-street spaces. The average stay for off-street vehicles was approximately two hours and 18 minutes, while on-street vehicles were parked for an average of one-hour and 45 minutes. The longer stay for off-street vehicles may be due to a higher concentration of employees who may be more likely to park longer and in parking lots.

Of the off-street vehicles surveyed, 63 percent parked for 45 minutes, 14 percent for 1 hour and 30 minutes, 8 percent for two hours and 15 minutes, 4 percent for three hours, and 11 percent for more than three hours. With the great majority of on-street spaces having a 3-hour limit, only 7 percent of the on-street vehicles were documented to have parked longer than three hours. To avoid getting a parking violation, longer-term parkers (e.g., employees) appear to prefer to park off-street.

A closer look at the duration data presented on Table IV shows that 93 percent of the 985 on-street vehicles were parked for three hours or less. This data indicates that there is probably minimal abuse of the three-hour time limit. Figure 5 indicates the average parking duration recorded on Wednesday, December 14, 2005 for the on-street spaces in downtown.

**Table IV: Average Parking Duration Off-Street and On-Street (10 a.m. - 5:30 p.m.)**

Wednesday 10 A.M. – 5:30 P.M.	Vehicles Surveyed	Duration (hours: minutes)								
		0:45	1:30	2:15	3:00	3:45	4:30	5:15	6:00	6:45+
Off-Street Parking	4,206	63%	14%	8%	4%	2%	2%	1%	2%	4%
On-Street Parking	985	68%	14%	8%	3%	2%	1%	2%	0%	2%
Wednesday Total	5,191	64%	14%	8%	4%	2%	2%	1%	1%	3%

Saturday 10 A.M. – 5:30 P.M.	Vehicles Surveyed	Duration (hours: minutes)								
		0:45	1:30	2:15	3:00	3:45	4:30	5:15	6:00	6:45+
Off-Street Parking	3,611	59%	16%	9%	4%	3%	2%	1%	1%	5%
On-Street Parking	823	61%	17%	7%	5%	3%	2%	2%	0%	4%
Saturday Total	4,434	60%	16%	8%	4%	3%	2%	1%	1%	5%

**Figure 5: Average Parking Duration on December 14, 2005**

**Figure 6: Average Parking Duration on December 17, 2005**

### **Results of Duration Surveys Conducted on Saturday, December 17, 2005**

On Saturday, December 17, 2005 the survey covered 3,611 off-street vehicles and 823 on-street vehicles. Similar to the results of December 14<sup>th</sup>, the average stay for off-street vehicles was approximately two hours and 12 minutes, while on-street vehicles were parked for an average of one-hour and 47 minutes. A closer look at the results presented in Table IV indicates that the results for off-street and on-street duration were very similar. The combined results for both off-street and on-street were: 60 percent parked for 45 minutes, 16 percent for 1 hour and 30 minutes, 8 percent for two hours and 15 minutes, 4 percent for three hours, and 12 percent for more than three hours.

Compared to the Wednesday survey, it appears that a lower percentage (60 percent vs. 64 percent) of parkers on Saturday were parked for only 45 minutes and a higher percentage (16 percent vs. 14 percent) of parkers were parked for one hour and 30 minutes. These differences may be partly due to the fact that most people do not work on Saturdays and thus may take more time to shop or dine compared to a weekday.

Figure 6 shows the average parking duration for on-street spaces recorded on Saturday, December 17, 2005. A higher percentage of on-street vehicles (11 percent vs. 7 percent) were parked longer than three hours on Saturday compared to Wednesday. This may be partially attributed to the assumption that there is less parking enforcement (of the three hour limit) on weekends.

## Strategies to Improve Parking in Grass Valley Downtown

### Need for Better Utilization of Private Lots

Table I summarizes the results of the occupancy surveys for the private lots on Wednesday, December 14, 2005 and Saturday, December 17, 2005. The occupancy levels ranged from a low of 15 percent (10:00 a.m. on both Wednesday and Saturday) to a high of 22 percent (11:30 a.m. to 1:00 p.m. on Wednesday and 12:15 p.m. to 1:00 p.m. on Saturday). Assuming that the desired occupancy rate is approximately 85 percent, approximately 63 percent (=85%-22%) of the 927 private spaces (or 584 spaces= [0.63 x 927]) are available in the downtown area even during the mid-day period of highest demand. For perspective, 584 spaces are more than double the 226 spaces in the five public lots. However, Grass Valley's Historic Downtown District contains uneven topography and grade changes between private properties, often resulting in retaining walls and other grade support structures between parcels, buildings and parking lots. In light of these topographic challenges, the improvement and conversion of these private lots into public parking lots would be constrained. In any case, if the 584 private spaces were further evaluated for their use for public purposes, it could help alleviate the demand on the public lots, which are practically full during the mid-day.

**Table V: Parking Occupancy in Private Lots by Time of Day**

Day and Date	Inventory	Occupancy of Private Lots on Wednesday, December 14, 2005 and Saturday, December 17, 2005										
		10:00 a.m.	10:45 a.m.	11:30 a.m.	12:15 p.m.	1:00 p.m.	1:45 p.m.	2:30 p.m.	3:15 p.m.	4:00 p.m.	4:45 p.m.	5:30 p.m.
Wednesday, 12/14/05	954	15%	20%	22%	22%	22%	21%	21%	20%	20%	18%	16%
Saturday, 12/17/05	927	15%	19%	21%	22%	22%	21%	21%	20%	20%	19%	16%

### Sell More Parking Permits

The City has had a permit-parking program since 1992. Administered by the Police Department, this program allows for the sale of up to 135 parking permits at a price of \$50 per quarter. The City may wish to adjust this rate so that parking demand and supply can be better balanced. Even though the number of permits sold per quarter typically exceeds the 108 available parking spaces, nobody seems to have difficulty finding a spot based on the results of the survey. Therefore, the total number of parking permits sold per quarter can be increased by increments of 10. These types of increases can continue until the occupancy of the four permit parking lots is approximately 90 percent during its peak time. Perhaps the Parking Enforcement Officer can be asked to conduct a quick parking occupancy survey during the mid-day (documenting the number of available spaces) at least once a month at the four lots.

### Add Private Lots to Permit Parking Program

Currently, permit patrons are allowed to park in four privately and/or publicly owned lots: one behind the Center for The Arts on Richardson Street; one at the corner of South Auburn Street and Neal Street (across from Safeway). As demand for parking permits increase, the permit program should be expanded to include private lots. Candidate lots to be added to the permit program would be lots that had at least seven spaces available during its peak occupancy time before it reached 90 percent of capacity. In other words, at least seven more vehicles can park in the lot before the lot becomes 90 percent occupied.

The following is a list of lots (lot designation corresponds with the 15 areas shown on Figure 1) with the most capacity (the number of vehicles that can park before reaching 90 percent occupancy at the busiest time on Wednesday, December 14, 2005 and Saturday, December 17, 2005 are provided in parenthesis, respectively):

- Lot “6C”: a privately owned lot containing 36 spaces and driveway on Richardson west of North Auburn (10 on Wed. and 23 on Sat.); Public - designated “3 Hour Limit”.
- Lot “11A”: a publicly owned lot containing 36 spaces located on northeast corner of Neal and South Auburn (7 on Wed. and 17 on Sat.); Public - designated “Permit Only”.
- Lot “2A, Center for The Arts”: a privately owned lot containing 32 spaces accessed via a driveway on South Church south of West Main (10 on Wed. and 13 on Sat.); Public - designated 16 spaces “Permit Only” and 16 spaces “3 Hour Limit”.
- Police Department Lot: a publicly owned lot containing 10 spaces accessible from South Auburn Street (not included in study); Public – designated 5 spaces “Permit Only” and 5 spaces “3 Hour Limit”.

For each of first three lots, there were more empty spaces on Saturday than on Wednesday. A total of 27 spaces were available at these lots on Wednesday and 53 spaces on Saturday. Therefore, adding these four lots to the permit program would allow at least 30 more parking permits to be issued. However, it may be difficult to obtain permission to use even one of these lots for permit parking. For example, not one of the 22 respondents to the Grass Valley Downtown Association (GVDA) questionnaire (as of May 22, 2006) stated that they would make their private lot “available for contract parking”. To evaluate the feasibility of this task, the City and GVDA could follow up with a survey to each of the private property owners to determine what financial incentives would prompt their interest in such a program. Such incentives could include assisting in the future maintenance of the parking area or offering to improve the property with ADA compliance measures, lighting, landscaping or paving.

### **Issue Separate Permits for Weekend Use**

Given the extra capacity available on weekends compared to weekdays, some consideration should be made to issuing separate parking permits for weekend only use. For example, the available parking capacity at the four lots listed above on a weekend was practically double the weekday capacity. So in theory, adding these four lots would not only allow at least 40 more “seven day permits” (current permits that are good seven days a week) but also another 40 or so weekend only permits. The price for the weekend only permits can be “prorated” so that it would cost only \$15 per quarter (based on the current seven day permits that cost \$50 per quarter). A logical next step after issuing weekend only permits would be to look into the possibility of weekday only permits, perhaps for \$35 per quarter.

### **Need for Better Utilization of On-Street Spaces**

Table II summarizes the results of the occupancy surveys for the on-street spaces on Wednesday, December 14, 2005 and Saturday, December 17, 2005. On both days, the on-street parking occupancy levels reached a high of approximately 82 percent during the mid-day and decreased to as low as 50 percent on Saturday at 5:30 p.m. Assuming that the desired occupancy rate is approximately 90 percent, at least 26 percent (=90 percent-64 percent) of the 230 on-street spaces (or 60 spaces=[0.26 x 230]) are available in the downtown area even during the late afternoon period (after 4:00 p.m.) of highest demand. For perspective, there are only two lots in Grass Valley downtown with more than 60 spaces. Therefore, better utilization of the 60 on-street spaces is similar to building a relatively large parking lot with 60 spaces.

**Table VI: On-Street Parking Occupancy by Time of Day**

Day and Date	Inventory	On-Street Parking Occupancy on Wednesday, December 14, 2005 and December 17, 2005										
		10:00 a.m.	10:45 a.m.	11:30 a.m.	12:15 p.m.	1:00 p.m.	1:45 p.m.	2:30 p.m.	3:15 p.m.	4:00 p.m.	4:45 p.m.	5:30 p.m.
Wednesday, 12/14/05	230	68%	78%	79%	82%	79%	68%	65%	65%	72%	63%	64%
Saturday, 12/17/05	230	59%	65%	74%	82%	83%	82%	81%	69%	68%	58%	50%

**Allow Permit Patrons to Park On-Street**

The main reason why employees and customers drive alone to Grass Valley downtown is because it is convenient (quicker than other modes) and cheap (parking is free in most cases). The great majority of people like to park close to their destination, especially after sun down. The existing four permit parking lots may not be located close to the destination of current permit patrons. For example, one of the respondents to the GVDA questionnaire made the following request, “Permit Parking on street so employees can park near businesses-nearest lot is over a block away.” Another respondent expressed the need to “Provide more and closer parking to local business”.

Based on the above analysis, there appears to be at least 60 on-street spaces that can be better utilized after 4:00 p.m. One way to better utilize these spaces is to allow permit patrons to park on-street beginning at 2:00 p.m. (and not be subject to the standard 3-hour parking restriction that ends at 6:00 p.m.). With this privilege, permit patrons may decide to move their vehicles (perhaps during their afternoon break) from a lot to an on-street space closer to their place of employment. This “added value” regarding convenience and sense of personal safety may help create a greater demand for parking permits and thus increase the sale of permits (one of the strategies listed above).

If the City were to implement a program that would allow permit patrons to park on-street, the City should consider additional approaches for increasing the availability of on-street parking spaces at different hours. To accomplish this task, the City should consider the feasibility of: 1) evaluating the application of timed parking for the entire downtown district; and/or 2) evaluate reducing the current 3 Hour Limit (given the data of peak parking occupancy and parking locations as outlined in TJKM’s, *Results of Downtown Parking Occupancy/Durations Surveys*, Figures 2, 3, 4, 5 & 6, dated April 17, 2006).

---

## **Evaluation of City of Grass Valley Parking Requirements**

On March 6, 2007, the City of Grass Valley adopted Article 3, Site Planning and Project Design Standards, of the City Development Code. Article 3 includes Chapter 17.36, Parking and Loading. As a part of this study TJKM was tasked to review the prior parking standards (Article 14 Off-Street Parking) and to provide recommendations. The City considered the TJKM recommendations prior to the March 6, 2007 adoption. The full listing of TJKM's recommendations is contained in Appendix A.

## Expected Parking Demand in Downtown with Future Development

The purpose of this chapter is to briefly estimate future parking demand based on expected development in Grass Valley Downtown. Ideally, there will be sufficient parking capacity to meet future demand.

### Near Term Development

To understand near term future development in the next three years or so, TJKM obtained future land use forecasts from the City of Grass Valley. Table VII summarizes the four developments in downtown that are on the City's list of Current Planning Projects as of January 2007. Four of the five developments have been approved and thus are assumed to have met the City's parking requirements (one developer paid in-lieu fees).

**Table VII: Near Term Development in Downtown**

Project Description / Status	Address	Size / Projected Use	Parking Requirement
Retail and residential building expansion (Approved in 2006 and under construction)	130 W. Main Street	1,155 sq. ft. added commercial space	Required 9 spaces; Developed 3 spaces, \$12,000 in lieu parking fees were collected.
Commercial lodging, retail and conference center facility "Holiday Inn Express Hotel and Conference Center" (Approved in 2002 and under construction with opening projected for Spring 2007)	108 Bank Street	80 rooms with 5,000 sq. ft. retail & 3,300 sq. ft. meeting space	Required 156 spaces; Developed 151 spaces. Deficit of 5 spaces. However, these spaces will be gained through conversion to valet parking.
Maria's Restaurant Expansion (Application incomplete)	214 E. Main Street	1,600 sq. ft. added restaurant space	Required 38 spaces; Developed 22 spaces. Deficit of 16 spaces.
Mullin Mixed Use Project (The "Wisconsin Hotel") (Approved in 2003, pending filing of building plans)	139-141 Richardson 152 E. Main Street	5,543 sq. ft. commercial with 12 residential apartments	Phase I: Required 40 spaces; Proposed 38; The 2 spaces needed will be added during Phase II construction.
Alpha Building (Approved in 2004 and constructed in 2005)	204 W. Main Street	9,053 sq. ft. remodeled commercial space	No additional parking required.

These projects required 243 parking spaces, of which 214 spaces are proposed or developed, resulting in a deficit of 29 spaces. The City has collected "in-lieu" parking fees of \$12,000 for six of the required spaces. Of the remaining 23 spaces, seven spaces will be added at a future date, and 16 spaces are a result of the proposed expansion of Maria's Restaurant. The application for expansion is incomplete at this time and pending further negotiations.

In addition to the projects in Table VII, further deliberation should be devoted to near term downtown development projects within one mile of the Downtown area. Table VIII summarizes two major development projects (the "Adit" and "Julia Morgan"), once completed, will bring substantial attendance to the area. The *Adit* is an underground mine tour project at the Empire State Mine, which was recently granted nearly \$1.9 million in funds to complete. *Julia Morgan* (named after the

famous architect) is a historical restoration project of the North Star House located on 14 acres. The grounds are being developed for outdoor performances, tours, weddings and special events. Attendance is projected to be at 2,000 per outdoor performance. Completion is expected in 2008. These projects are located on the fringe of the downtown area, and inevitably there will be positive spillover effects for downtown businesses; consequently, the impact to the downtown parking must be addressed in order to accommodate the increased flow of visitors.

**Table VIII: Near Term Development - Beyond Downtown**

Attraction	Location	Size/Projected use	Current Average Daily Attendance	Projected Daily Attendance
The Adit	Empire State Mine	800 ft tram with dioramas	500 on weekends 195 on weekdays	975 on weekends 683 on weekdays
Julia Morgan	North Star House	14 acres	Not Applicable	2,000/performance

As businesses grow, so will the demand for parking. For example, the Center for The Arts is expecting guest attendance to continue to grow. In 2001 the Center drew approximately 70,000 guests, while the projected attendance for 2007 is expected to be 170,000. Given an increase of 100,000 in annual attendance, this equates to an average increase of approximately 300 people per day. Yet, there have not been any additional parking spaces available to accommodate its growth. The current seating capacity is 750 with a projected expansion for theater classes estimated at 50 seats.

**Expected Change in Parking Requirement**

According to the City of Grass Valley Downtown Strategic Plan, currently there is approximately 487,100 square feet of retail space and 1,412 parking spaces (954 private and 458 public, including on-street) in the downtown area. With the anticipated adoption of the City’s new Development Code, the parking space requirement for some land uses is expected to increase from one space per 300 square feet to one space per 250 square feet. If this new requirement was applied to the existing downtown retail space of 487,100, then 536 additional parking spaces would be required [(487,100/250=1,948) -1,412]

**Long Term Development**

In 2002, a marketing study was completed as part of the Downtown Strategic Plan, which showed that the downtown could support or absorb an additional 77,000 square feet of retail space, between the years 2000 to 2020. Through the efforts of the Downtown Parking Subcommittee and with information contained in the Downtown Strategic Plan, the following breakdown for the 77,000 square feet was established:

- 15,000 square feet of convenience retail space (e.g., pharmacy, health food store, bakery, delicatessen, wine and cheese shop, traditional dry goods/”surplus” store, laundry-mat, and travel agency).
- 47,000 square feet of comparison retail space (e.g., household goods/appliances, specialty stores, clothing/shoes, office supplies and bookstores, sporting goods/recreation, variety/office/novelty stores).
- 15,000 square feet of restaurant/entertainment retail space (e.g., performing arts, movie theatre, galleries, local artists, upper floor clubs, Center for the Arts classes and events).

Table IX illustrates that 77,000 of additional retail space can generate an additional average peak demand of 199 spaces. As shown on Table X, results of our surveys indicate that 95 percent of the 226 spaces in the City’s five public parking lots were occupied on both December 14, 2005. This is a

very high occupancy level that exceeds the 85 percent threshold for off-street parking occupancy (*Parking Requirements for Shopping Centers*, 1999). Given the limited amount of available public parking in lots and on-street, future retail development proposals should be evaluated on an individual basis and the expected peak parking demand should be accommodated on-site, especially if their peak demand occurs during the midday (between 10:30 a.m. and 2:00 p.m.). Furthermore, in-lieu fees are not a good substitute for on-site parking spaces because the fees have not resulted in increasing the parking supply in downtown.

**Table IX: Expected Peak Parking Demand by Retail Type**

Type and Size of Land Use	Average Peak Parking Demand Rate (vehicles per 1,000 sq. ft. of land use)	Expected Parking Demand (spaces)
Convenience Retail (15,000 sq. ft.)	1.83 for Pharmacy/Drugstore	27 (=15 ksf x 1.83 spaces/ksf)
Comparison Retail (47,000 sq. ft.)	1.90 for Hardware/Paint Store	89 (=47 ksf x 1.90 spaces/ksf)
Restaurant/entertainment (15,000 sq. ft.)	5.55 for Urban Family Restaurant	83 (=15 ksf x 5.55 spaces/ksf)
<b>Totals</b>		<b>199</b>

Source: *Parking Generation*, 3rd Edition, Institute of Transportation Engineers.

**Table X: Public Parking Occupancy by Time of Day (Wednesday, December 14, 2005)**

Type of Parking	Inventory	Occupancy on Wednesday, December 14, 2005										
		10:00 a.m.	10:45 a.m.	11:30 a.m.	12:15 p.m.	1:00 p.m.	1:45 p.m.	2:30 p.m.	3:15 p.m.	4:00 p.m.	4:45 p.m.	5:30 p.m.
Public Lots	226	63%	83%	92%	95%	91%	90%	88%	84%	84%	77%	67%
On-Street	230	68%	78%	79%	82%	79%	68%	65%	65%	72%	63%	64%
Total	456	66%	80%	85%	89%	85%	79%	77%	75%	76%	70%	65%

**Impact of Special or Seasonal Events**

Throughout the year, the Grass Valley Downtown Association (GVDA) and the Nevada County Fairgrounds, located within a half-mile of downtown, host several events that attract more than 500,000 visitors annually to the downtown or the Fairgrounds, as shown in Tables XI and XII.

**Table XI: Summary of Events - Grass Valley Downtown**

Attraction	Event Day(s)	Locations of Lot and/or Street Closures	Average Daily Attendance
Grass Valley Car Show	4 <sup>th</sup> Saturday in April	City Hall Lot/ Main Street, from Church to the Post Office/ Mill Street	7,000
Sierra Festival of the Arts	Sunday of Memorial weekend	Mill Street	4,000
4 <sup>th</sup> of July Parade	July 4 <sup>th</sup>	All over Downtown area	2,000
Thursday Farmers	Thursdays in June	Mill Street	3,000
Thursday Marketplace	Thursdays in July and August	Main Street, from Church to Stewart/ Mill Street	5,625
Cornish Christmas	Fridays-Thanksgiving to Christmas	Main Street/ Mill Street	4,000
Del Oro Theater	Continuous	None	375
Center for The Arts	Continuous	None	475

**Table XII: Fairground Events**

Attraction	Event Dates	Average Daily Attendance	Daily Rider-ship	Shuttle / Public Services Available
Nevada County Fair	August (5 days)	22,000	1,200	Durham
			740	Gold Country Stage
Draft Horse Classic	September (4 days)	1,525		
Country Christmas Fair	Thanksgiving Weekend (3 days)	1,975		

The downtown special events require street closures resulting in “spill over” affects which burden the vendor, residential, and commercial sectors. During these events, residential streets adjacent to downtown are burdened with non-residents using the available on- street spaces. Also, business deliveries and loading or unloading needs are impacted. According to the GVDA, there has been a decrease in vendor participation due to the lack of available parking and the need to walk greater distances from their vehicle to their vendor stations. Now that attendance is in excess of 20,000 for the Cornish Christmas event, the GVDA has resorted to providing a shuttle service for vendors to accommodate their loading and unloading needs. Street closures and fairground events reduces the amount of on-street parking available to downtown businesses. During special events at the Fairgrounds, visitors park throughout downtown (utilizing residential, on-street, private and public parking spaces) and catch the shuttle or public transportation to and from the Fairgrounds. Thus, the downtown commercial sector is impacted when their customers (not visiting the Fairgrounds) cannot find a place to park during Fairground events.

**Saturday Parking Demand by Time of Day**

Table XIII illustrates how parking occupancy currently varies on a typical Saturday in Grass Valley downtown. For example, almost 26 percent more spaces (or 360 spaces) are available at 5:30 p.m. (overall occupancy = 38 percent) compared to 1:00 p.m. (overall occupancy = 64 percent). Therefore, there is existing capacity for land uses (e.g., dinner restaurants) that generate parking demand during the evening.

**Table XIII: Parking Occupancy by Time of Day (Saturday, December 17, 2005)**

Type of Parking	Inventory	Occupancy on Saturday, December 17, 2005										
		10:00 a.m.	10:45 a.m.	11:30 a.m.	12:15 p.m.	1:00 p.m.	1:45 p.m.	2:30 p.m.	3:15 p.m.	4:00 p.m.	4:45 p.m.	5:30 p.m.
Private Lots	927	15%	19%	21%	22%	22%	21%	21%	20%	20%	19%	16%
Public Lots	226	60%	76%	86%	89%	89%	88%	87%	83%	82%	78%	67%
On-Street	230	59%	65%	74%	82%	83%	82%	81%	69%	68%	58%	50%
Total	1,383	39%	47%	55%	61%	64%	63%	60%	55%	52%	47%	38%

TJKM conducted a more specific parking study for a community shopping center (i.e., Hopyard Village) in Pleasanton where parking occupancy data collected on two consecutive Saturdays (September 27, 2003 and October 4, 2004) from 7:30 a.m. to 9:30 p.m. Similar to Grass Valley downtown, Hopyard Village has a mixture of retail and restaurant uses. The purpose of presenting data from Hopyard Village is to give an example of retail parking demand for morning and evening hours not covered on December 17, 2005 in Grass Valley.

Based on the survey results summarized on Table XIV, the peak parking demand is expected to typically occur between 11:30 p.m. and 2:30 p.m. because of the popularity of eating lunch at restaurants on a Saturday. Although restaurants are also popular for dinner, some of the retail uses close by 6:30 p.m. on a Saturday. Therefore, the peak parking demand is not expected to typically occur during the evening. In fact, between 9:30 p.m. and 8:30 a.m. the Hopyard Village occupancy ranges from a high of 61 percent (at 9:30 p.m.) and a low of 26 percent (at 7:30 a.m.).

**Table XIV: Expected Parking Demand on a Typical Saturday**

Time on a Saturday	Hopyard Village Percent of Peak Demand	Grass Valley Downtown Percent of Peak Demand
7:30 a.m.	26 percent	Not Available
8:30 a.m.	38 percent	Not Available
9:30 a.m.	78 percent	61 percent at 10:00 a.m.
10:30 a.m.	94 percent	73 percent at 10:45 a.m.
11:30 a.m.	95 percent	86 percent
12:30 p.m.	88 percent	95 percent at 12:15 p.m.
1:30 p.m.	88 percent	98 percent at 1:45 p.m.
2:30 p.m.	100 percent	94 percent
3:30 p.m.	68 percent	86 percent at 3:15 p.m.
4:30 p.m.	66 percent	73 percent at 4:45 p.m.
5:30 p.m.	67 percent	60 percent
6:30 p.m.	71 percent	Not Available
7:30 p.m.	78 percent	Not Available
8:30 p.m.	66 percent	Not Available
9:30 p.m.	61 percent	Not Available

### Shared Parking

Shared parking opportunities exist when retail/restaurant uses are combined with uses (e.g., residential) that generate higher late night/early morning parking demand. Table X shows that 65 percent of the public parking spaces in Grass Valley downtown were occupied at 5:30 p.m. on Wednesday, December 14, 2005, assuming that this occupancy level continued until 10:00 a.m. the next morning (as implied in Table X), there would be approximately 35 percent of the public parking (or 160 spaces) available. Therefore, it appears that even the current availability of public parking can support a substantial amount of “new apartments over ground floor retail space” recommended on page 24 of the Downtown Strategic Plan.

Article 14 of the current Grass Valley Zoning Ordinance states “the (Planning) Commission may reduce the total parking space requirement by up to twenty percent when the times of maximum parking demand from various uses will not coincide”. Based on the Hopyard Village data, it appears that there could be situations where the total parking space requirement can be reduced by more than 20 percent. For example, a mixed-use development with a 10,000 square foot commercial component with a peak demand of 40 spaces may generate a demand of 31 spaces ( $= 40 \times 0.78$ ) between 5:30 p.m. on Saturday and 9:30 a.m. on Sunday. During this same period, the multi-family housing component may generate a peak parking demand of 9 spaces ( $= 6 \text{ units} \times 1.5 \text{ spaces/unit}$ ). In this case, the peak demand in the evening would be 40 ( $= 31 + 9$ ) spaces while parking requirement (with the 20 percent reduction for shared parking) may be 51 spaces ( $= ([5.5 \times 10] + [1.5 \times 6]) \times 0.8$ ). The purpose of this example is to illustrate that there could be situations where the shared parking reduction can be greater than 20 percent, and therefore each shared parking development should be evaluated on an individual basis. Such analysis can be conducted with use of the Shared Parking Model, a spreadsheet developed by the Urban Land Institute (ULI) to estimate the shared parking demand in mixed-use projects. Detailed explanations of various land use categories and a description of land use variables are provided in *Shared Parking*, Second Edition published by ULI and the International Council of Shopping Centers in 2005.

The City’s proposed Development Code addresses reductions to Shared Parking requirements in Section 17.72.060 and states, “where two or more uses on the same side or adjacent parcels have distinct and differing peak parking usage periods (e.g. a theater and a bank), a reduction in the required number of parking spaces may be allowed.” The Community Development Director has the authority to approve a *Minor Use Permit* for variances up to a 20 percent reduction in the number of required parking spaces, and similarly the Commission has the authority to approve a *Use Permit* when the variance exceeds a 20 percent reduction. The variances of Shared Parking requirements will be reviewed on a case-by-case basis.

## Parking Garage Strategies and Funding Opportunities

The purpose of this chapter is to summarize TJKM's recommendations on parking garage strategies and funding opportunities, Tasks 6 and 7 of the City of Grass Valley Parking Demand/Supply Study. In earlier tasks of this study, TJKM conducted comprehensive surveys of existing parking conditions and found the public parking areas to be at or above their practical capacity, suggesting the need for additional stalls to accommodate any planned development in the downtown area. TJKM also examined existing parking standards for Grass Valley and evaluated the future growth in and near the downtown.

After reviewing the results of these tasks, the Parking Committee decided to direct the consultant team to develop a preliminary conceptual analysis of parking garages at two locations in the downtown. The bulk of the work in this chapter has been prepared under the direction of Mr. Dilip L. Nandwana of International Parking Design, Inc. As shown on Figure 7, the location identified as Site 1 includes the existing public parking lot and surrounding facilities on the west side of S. Auburn Street north of Neal Street. Site 2 includes the existing City Hall parking lot plus adjoining properties on Stewart Street.

### Parking Supply Options – Site 1

In order to meet the anticipated demand of parking in the downtown area, a parking structure can be developed along S. Auburn Street near Neal Street. This however, will require assembling three parcels, which includes two surface lots and two existing buildings between the two lots. The two existing buildings are currently privately owned and the City will need to purchase them. By assembling these parcels, an efficient, two-bay parking structure can be developed on a 126' x 281' footprint. The site at the corner of Neal and S. Auburn Streets can be sold to a private developer or developed by the City as a commercial space. The vehicular access to the garage can be provided along S. Auburn Street. The garage footprint will also allow the City to maintain service access to the existing business on the North and West sides.

The garage, as shown on the attached Figures 8, 9, 10, 11, and 12 would be able to accommodate about 100 spaces per level and can have a capacity of approximately 326 spaces on three and one-half levels. As shown in Table XV, a 326-stall parking garage is estimated to cost \$8.8 million. Table XVI shows the design efficiencies.

When the Parking Committee reviewed the recommendations contained in this chapter, several important comments were made, which are summarized below. All of the comments and suggestions are feasible, and would appropriately be addressed when the City advances to subsequent stages of garage implementation. Generally, they are at a level of detail somewhat beyond the conceptual details addressed in this study. The comments are:

1. Evaluate 24' wide service delivery access, and identify the access on Figure 2.
2. Add retail to the 1<sup>st</sup> floor along South Auburn Street
3. Analyze approaches to relocate businesses
4. Design consideration (ground level) - along the north side (back) of the structure add an additional parking aisle with two rows, to compensate for spaces that will be dedicated to retail.
5. Design consideration (second floor) – add an elevated pedestrian access from the parking second floor to the ground level of Mill Street.

As noted above, all of these comments can be addressed in future stages of the project.

### **Parking Supply Options – Site 2**

Alternately, a parking structure can also be developed adjacent to the City Hall fronting S. Auburn, E. Main and Stewart Streets. In order to have a reasonable amount of spaces and good circulation, this site will also require acquisition of a private property along Stewart Street. The vehicular access to the parking structure can be provided on both E. Main and Stewart Streets. The structure can accommodate about 117 spaces per level on the footprint shown on the attached plans in option-1 with approximately 286 spaces on three levels. If the parking structure development only utilizes the site behind the City Hall fronting Stewart Street, the smaller structure as shown in Site-2, option 2 can accommodate 53 spaces per level or a total of 239 spaces in 3 levels including the surface lot along Auburn Street.

The Option 1 design, shown in Figures 13 - 16, also can accommodate a ground floor retail area of about 9,600 square feet. Tables XVII and XVIII show that the costs for this option are \$8.3 million. In the Option 2 design, the garage structure is omitted from the existing surface lot to the west of the City Hall building. This design is depicted in Figures 11-14. Tables XIX and XX show that the costs for this option are \$6.3 million. Note that all costs depicted are for construction only and do not include property costs or design and related costs.

As with Site 1, when the Parking Committee reviewed the recommendations contained in this chapter, several important comments were made, which are summarized below. All of the comments and suggestions are feasible, and would appropriately be addressed when the City advances to subsequent stages of garage implementation. Generally, they are at a level of detail somewhat beyond the conceptual details addressed in this study. The comments are:

1. Design consideration (Figure 13) - Parking Structure Study map: acquire two parcels on Bank Street, adjacent to Stewart, so that the current rectangle could extend along the back of the Police Station on Stewart to Bank St. The objective would be to extend the City Hall building over the current employee parking lot, and extend the employee parking lot to Stewart Street for both employee and public use. Employee parking would be below the City Hall extension.
2. Design consideration – Extend current upper level of City Hall Main St parking level to run along the back of the Police station to Bank Street. Ground level along back of Police Station would be secured police storage and parking. The extension of the Main Street area would be the 2<sup>nd</sup> level, going to a height of three levels.
3. Extending the parking structure to Bank St allows for additional ingress and egress.

As noted above, all of these comments can be addressed in future stages of the project.

## Summary of Garage Evaluations

Based on the demand analysis and the review with the City staff, a study was conducted to evaluate the feasibility of building a parking structure on two sites.

**SITE 1:** Near the corner of Neal and Auburn Streets.

**SITE 2:** Near the City Hall along Auburn, East Main, and Stewart Streets.

As indicated on the attached conceptual layout for each site a parking structure can be developed on each site to obtain the required number of spaces. Site 1 is more desirable in terms of dimensions to provide an efficient parking structure. The dimensions of Site 2 are more restrictive in developing an efficient structure. Both sites require acquisition and/or demolition of existing buildings for the parking structure project. This analysis is presented in the report only to validate the feasibility of a parking structure. Detailed analysis is recommended and desirable as a next step for the selected site to help establish the final configuration of a parking structure.

This will include the following:

1. Reestablish site boundaries for the parking structure. The exact boundaries of the structure can be determined following a more detailed definition of the project, including necessary capacity as well as property values.
2. Identify ground floor commercial space criteria. Constructing leasable space within the garage should help it to fit better with its surroundings and provide additional income.
3. Analyze possible parking structure layout based on site availability and constraints to help establish the most desirable layout. The preliminary drawings show how many spaces may be constructed at each location.
4. Review the findings with the City staff and all stake holders to solicit input. See the results of the initial discussion on the two garage sites at the conclusion of this report.
5. Based on the review, refine the scheme and develop massing and exterior design concepts. A variety of architectural designs for the exterior is possible.
6. Help develop project cost based on the selected layout and exterior architectural design concept.
7. Submit the presentation data for the City Council review and approval.

**Figure 7: Location of Sites 1 and 2**

**Figure 8: Site I - Ground Level Plan**

**Figure 9: Site I - Second Level Plan**

**Figure 10: Site I - Third Level Plan**

**Figure 11: Site 1 - Roof Plan**

**Figure 12: Site I – Building Section**



**Table XV: Site I - Budget Construction Cost Estimate**

SCOPE OF WORK: A 3-1/2 level parking structure on a 281' x 126' footprint to accommodate approximately 326 parking spaces.

AREAS:	Slab on Grade	35,237.00 sq. ft.
	Elevated Slab	<u>79,000 sq. ft.</u>
	TOTAL	114,237 sq. ft.
COSTS:	Slab on Grade	\$ 705,000
	Elevated Slab	<u>\$ 4,740,000</u>
	Sub Total	\$ 5,445,000

Other Costs:

	Site Work	\$ 38,000
	Property Line Walls	\$ 270,000
	Sprinkler System	\$ 118,000
	Elevators	\$ 200,000
	Exterior Façade	\$ 977,000
	Interior Painting	\$ 79,000
	Landscaping (Allow.)	\$ 38,000
	Signs & Graphics	\$ 50,000
	Security System	\$ 50,000
	Parking Control Equipment	\$ 100,000
		<u>\$ 1,920,000</u>
	Subtotal	<u>\$ 7,365,000</u>
	Contractor's O.H. & Profit	\$ 736,000
	Contingency	<u>\$ 736,000</u>
	*Total Construction Cost	\$ 8,837,000

Cost/Stall = \$27,107/Stall

Cost/sq. ft. = \$77.36/s.f.

- The above construction cost does not include land cost, property acquisition cost, demolition cost, financing cost, escalation cost, site survey, geotechnical report, EIR cost, A & E fees, permit, testing and inspection, construction management and painting cost.

P:\07\_Projects\07191\_City of Grass valley\Budget Construction Cost Estimate Site I 0502047.doc



Project of Grass Valley (Site I)

Parking Structure

Project No. 07-191

Date: 06/05/07

By: JZ

**Table XVI: Parking Space & Area Summary (Site I)**

BLDG. SIZE: 281'  
0" X 126'-0"

S=9.0'

ANGLE OF PARK = 90°

AREA	ON- GRADE SLAB (S.F.)	ELEVATED SLAB (S.F.)	NUMBER OF SPACES				TOTAL	S.F./STALL
			M	A.S.	F.S.	C		
GA	17,703			2	43		45	393.40
GB	4,147			5	4		9	460.78
2A		17,703			54		54	327.83
2B	13,387	4,147			51		51	343.8
3A		17,703			54		54	327.83
3B		17,534			51		51	343.80
4A		4,379			10		10	437.90
4B		17,534			52		52	337.19
SUBTOTALS	35,237	79,000	0	7	319	0	326	350.42

GROSS BLDG. AREA (S.F.): 114,237

PERCENT OF COMPACTS  
TO TOTAL: 0

DESIGN EFFICIENCY: 350.42 SF/STALL

**Figure 13: Site 2 Option 1 – Ground Level Plan**

**Figure 14: Site 2 Option 1 – Second Level Plan**

**Figure 15: Site 2 Option 1 – Third Level Plan**

**Figure 16: Site 2 Option 1 – Building Section**

**Table XVII: Site 2 Option 1 - Budget Construction Cost Estimate**

SCOPE OF WORK: A 3-level parking structure on an irregular footprint to accommodate approximately 286 parking spaces.

AREAS:	Slab on Grade	47,955 sq. ft.
	Elevated Slab	<u>71,860 sq. ft.</u>
	TOTAL	119,815 sq. ft.
COSTS:	Slab on Grade	= \$ 959,000
	Elevated Slab	= <u>\$ 4,312,000</u>
	Sub Total	\$ 5,271,000

Other Costs:

Site Work	\$ 45,000
Property Line Walls	\$ 482,000
Sprinkler System	\$ 108,000
Elevators	\$ 200,000
Exterior Façade	\$ 468,000
Interior Painting	\$ 72,000
Landscaping (Allow.)	\$ 45,000
Signs & Graphics	\$ 45,000
Security System	\$ 80,000
Parking Control Equipment	\$ 100,000
	<u>\$ 1,645,000</u>
Subtotal	<u>\$ 6,916,000</u>
Contractor's O.H. & Profit	\$ 692,000
Contingency	<u>\$ 692,000</u>
<b>*Total Construction Cost</b>	<b>\$ 8,300,000</b>

Cost/Stall = \$29,021/Stall  
Cost/s.f. = \$69.27/s.f.

\*The above construction cost does not include land cost, property acquisition cost, demolition cost, financing cost, escalation cost, site survey, geotechnical report, EIR cost, A & E fees, permit, testing and inspection, construction management and painting cost.

P:\07\_Projects\07191\_City of Grass valley\BUDGET CONSTRUCTION COST ESTIMATE 060607.doc



**Figure 17: Site 2 Option 2 – Ground Level Plan**

**Figure 18: Site 2 Option 2 – Second Level Plan**

**Figure 19: Site 2 Option 2 – Roof Level Plan**

**Figure 20: Site 2 Option 2 – Building Structure**

**Table XIX: Site 2 Option 2 - Budget Construction Cost Estimate**

SCOPE OF WORK: A 3-level parking structure and a surface lot on an irregular footprint to accommodate approximately 239 parking spaces.

AREAS:	Slab on Grade		48,850 sq. ft.
	Elevated Slab		<u>49,028</u> sq. ft.
	TOTAL		97,878 sq. ft.
COSTS:	Slab on Grade	=	\$ 977,000
	Elevated Slab	=	<u>\$ 2,942,000</u>
	Sub Total		\$ 3,919,000

Other Costs:

	Site Work	\$	45,000
	Property Line Walls	\$	420,000
	Sprinkler System	\$	74,000
	Elevators	\$	109,000
	Exterior Façade	\$	298,000
	Interior Painting	\$	49,000
	Landscaping (Allow.)	\$	45,000
	Signs & Graphics	\$	30,000
	Security System	\$	50,000
	Parking Control Equipment	\$	100,000
	Surface Lot Fence	\$	106,000
			<u>\$ 1,317,000</u>
	Subtotal		<u>\$ 5,236,000</u>
	Contractor's O.H. & Profit	\$	524,000
	Contingency	\$	<u>524,000</u>
	*Total Construction Cost	\$	6,284,000

Cost/Stall = \$26,293/Stall  
Cost/sq. ft. = \$64.20/sq. ft.

\*The above construction cost does not include land cost, property acquisition cost, demolition cost, financing cost, escalation cost, site survey, geotechnical report, EIR cost, A & E fees, permit, testing and inspection, construction management and painting cost.

\\svralameda\projects\07\_Projects\07191\_City of Grass valley\Budget Construction Cost Estimate Site2 #2 060607.doc



### **Proposed ± 300 Space Parking Structure – Project Financing Options**

A public parking structure project can be financed in various ways. Some of the common ways a public parking structure financing can be done are show below:

1. Use of City's general fund revenue
2. Use of redevelopment funds (if available)
3. Use of parking revenues (if available)
4. Borrowing money from financial institutions with loan guarantee from the general fund
5. Sale of Municipal Bonds backed by general fund.

There are some creative ways City's and other public agencies have recently funded some parking structure projects.

- A. Charging developers in-lieu fees for parking and developing a common use parking facility.
- B. Setting up an assessment district for business and landowners benefiting from the parking facility.
- C. Establishing a developer/City partnership whereby the developer benefits from not having to build his own parking and City gets part of the project funded by private money; thus reducing the City's cash outlay.
- D. City setting up a lease-lease back arrangement with a private developer where the private developer funds the project and the City would pay the developer back by leasing the project on a "Long-Term Lease" basis. Sacramento City College just finished a 1,950 space parking structure using this method.
- E. City can apply for Economic Development Administration (EDA) Grant from the Federal Government to help reduce the City's cost for the project. The Cities of Salinas, Santa Cruz and Modesto have built their parking facilities using this Federal Grant Assistance.

## Results of Public Workshop

The City of Grass Valley hosted its second public workshop on the Parking Demand/Supply Study at 6:00 p.m. on September 13, 2007 at the Grass Valley City Hall. Approximately 25 attendees were present. Nineteen signed in with their mailing addresses and phone numbers for future notification and follow-up.

Vice Mayor Lisa Swarthout opened the workshop with introductions and a general explanation as to why the issue of downtown parking was under review, how the study was funded, etc.

Joe Heckel, Community Development Director, followed with discussion about the planning background behind the study and scope of investigation. Chris Kinzel, President of TJKM Transportation Consultants and Dilip Nandwana, Chief Executive Officer of International Parking Design, gave a PowerPoint presentation outlining parking occupancy and duration surveys of the downtown area. The survey findings were followed by present and future parking demand issues with short and long term solutions. Additionally, the public reviewed two potential parking garage site locations: Site 1) South Auburn & Neal Streets; and Site 2) South Auburn/East Main/Stewart Streets (City Hall). The workshop concluded with addressing the needs for the next and final steps to complete the parking study.

### Issues raised by workshop attendees include the following:

- ❖ Many “public” parking spaces are taken up by permit-holders and employees, and therefore are not available to visitors.
- ❖ Participants agreed that a strong need exists for increased long-term employee parking opportunities.
- ❖ Participants agreed that private parking seemed to be underutilized, while public parking was at capacity limits, suggesting the need for shared parking where feasible.
- ❖ Residents from adjacent neighborhoods expressed their concerns about the increasing impact of downtown parking on their streets.
- ❖ It was suggested that the City should look to the Caltrans lot for additional parking space inventory.

### Potential short and long term solutions discussed:

- ❖ Short and Long Term Solutions (at-grade)
  - Parking Management:
    - Add time restrictions – Limited interest in shortening time limits below three hours or in adding parking meters at this time
    - Weekend Enforcement
    - For residential areas, implement Residential “Decal” Permits
    - Better utilization of private parking lots
      - ✓ Make arrangements with private owners to share parking use.
      - ✓ Increase permit parking
      - ✓ Develop marketing approach for negotiating with private owners of private lots

- Potential New At-Grade Parking Stalls
  - Evaluate Caltrans lot for additional parking spaces
  - Identify and purchase peripheral properties for public and employee parking only
  - Mill Street: Consider changing to a one-way street with diagonal spaces
  - Closer parking spaces to downtown should be for public use, while peripheral spaces should be used for permit parking
- ❖ Parking Structure Location and Design
  - Preferred location was Site 1: South Auburn & Neal Streets – this site is deemed to be more centrally located and offers the potential for an enhanced downtown entrance

Next Steps (as summarized at conclusion of workshop):

1. Complete the Parking Study with input from Workshop #2
2. Review Study with Planning Commission and City Council
3. Continue to plan for long term
4. Obtain direction from Council
  - a. Need for additional at-grade parking
  - b. Evaluate low-cost, short-term solutions
  - c. Improve management of existing spaces
  - d. Finalize preferred garage location – conduct detailed feasibility study for structure including design, engineering, financing, environmental, etc.
  - e. Conduct cost/benefit analysis with future income stream
    - With retail on first floor front
    - Without retail
    - On-going operating costs

## Study Recommendations

This study concludes that additional parking is needed in downtown Grass Valley. Ultimately, a parking garage should be constructed to accommodate the existing and future demand. The City should select a preferred location and begin planning for a garage that can be constructed in a seven to ten year time frame, if not sooner. This is considered the primary long-term recommendation of this study. In the meantime, some short-term and mid-term solutions should be considered. The specific recommendations are as follows:

### Short-Term (0 to 3 years)

- Improve utilization of private parking lots by increasing permit parking.
- Evaluate how future adjustments can be made to the parking permit fee to better offset the cost of maintaining existing parking or adding new parking.
- Examine methods to share underutilized private parking areas with “public” users or at least for employee permit parking.
- Evaluate desirability of adjusting fee for permit parking.
- Consider implementation of residential parking decals to minimize all-day parking in residential districts near downtown.
- Consider timed parking (parking meters) and /or reduce current 3-hour time limits
- Evaluate and adjust the City’s Downtown Parking In-Lieu Fee to better reflect current land values.
- Identify properties on the downtown periphery that may be suitable for employee-public parking. Determine location, capacity and costs.
- Develop parking garage planning strategies for Site I. This will entail conducting architectural studies to determine specific location, preliminary engineering, determine advisability of retail space within and/or adjacent to the garage, determine preliminary costs and relocation issues, and preliminary funding strategies. Actual construction may not begin until year six.

### Mid-Term (4 to 6 years)

- Construct new at-grade parking stalls in the downtown periphery indentified in short-term recommendations.
- Prepare construction drawings for Site I garage; acquire necessary property; and, develop relocation plans for any displaced owners or tenants.
- Develop garage financing strategies

### Long-Term (7 to 10 years)

- Construct a parking garage at Site I with an approximate capacity of 326 stalls.

## **Study Participants**

### **TJKM Transportation Consultants**

Chris D. Kinzel, P.E.	Principal in Charge
Gordon Lum, P.E.	Project Manager
Dan Harrison	Data Collection
Geri Foley	Graphics Specialist
Margie Pfaff	Word Processing

### **International Parking Design**

Dilip L. Nandwana, P.E.	Principal in Charge
-------------------------	---------------------

### **City of Grass Valley**

Joe C. Heckel	Community Development Director
Jeri Amendola	Economic Development Specialist

---

## Appendix A – Evaluation of City of Grass Valley Parking Requirements

## Appendix A: Evaluation of City of Grass Valley Parking Requirements

On March 6, 2007, the City of Grass Valley updated Article 3, Site Planning and Project Design Standards, of the City Development Code. Article 3 includes Chapter 17.36, Parking and Loading. As a part of this study TJKM was tasked to review the prior parking standards and to provide recommendations. The City considered the recommendations contained in this appendix prior to the March 6, 2007 adoption.

The purpose of this appendix is to provide recommendations regarding possible modifications to Article 14 Off-Street Parking of the Grass Valley Zoning Ordinance, which provides parking requirements for approximately 65 land use categories. Though Article 14 of the City's Zoning Ordinance currently applies to all pending development proposals, our firm is aware the City is nearing the completion of a "new" Development Code that contains new standards or policies relative to the provision of off-street parking requirements. Our report does highlight some of the differences between the City's present and proposed parking requirements

### Parking Generation Manual

*Parking Generation*, 3<sup>rd</sup> Edition published by the Institute of Transportation Engineers in 2004, provides data on 91 land uses. These land uses are grouped together in the following ten categories:

1. Ports and Terminals (includes airport and rail uses not applicable to Grass Valley)
2. Industrial
3. Residential
4. Lodging
5. Recreational
6. Institutional
7. Medical
8. Office
9. Retail
10. Services

### Proposed Modifications to the Zoning Ordinance.

Based on a comparison between weekday data provided in the *Parking Generation* and off-street parking requirements from the present and proposed Grass Valley Zoning Ordinance, the following are recommended changes in the parking requirements for land uses that may occur in a downtown setting.

#### **Industrial (Mini-Warehouse)**

With an 85<sup>th</sup> percentile parking demand of 0.20 vehicle per 1,000 square feet (ksf) of gross floor area (GFA), the Ordinance's requirement should be reduced from one space per 800 square feet of indoor storage (or 1.25 spaces/ksf) to one space per 4,000 square feet (or 0.25 space/ksf). The new code sets forth a standard of 1 space per each 500 square feet (sq. ft.) of ground area: 1 space per 5,000 sq. ft. of open storage; 1 space per 200 sq. ft. of office area.

#### **Residential**

Single-Family Detached Housing: With an 85<sup>th</sup> percentile parking demand of 2.14 vehicles per dwelling unit (d.u.), the Ordinance's requirement of two spaces per dwelling is appropriate.

Low/Mid-Rise Apartment: With an 85<sup>th</sup> percentile parking demand of 1.17 vehicle per d.u., the Ordinance's requirement of 1.5 spaces per studio or single-bedroom unit and two spaces for each two bedroom or larger is probably too high. Surveys conducted by TJKM indicate that apartments generate approximately 0.7 spaces per bedroom. Therefore, the requirement in the Ordinance should be reduced to one space per studio or single-bedroom and 1.5 spaces for two bedrooms or larger.

#### ***Lodging (Hotel and Motel)***

With an 85<sup>th</sup> percentile parking demand of 1.14 vehicles per hotel room and 1.02 vehicles per motel room, the Ordinance's requirement of one space per room is appropriate. The new code sets forth a standard of 1 space per unit, plus 2 spaces for the manager/owner, plus required spaces for accessory.

#### ***Recreation***

Bowling Alley: With an 85<sup>th</sup> percentile parking demand of 3.78 vehicles per lane (Monday through Thursday), the Ordinance's requirement should be reduced from five spaces per lane to four spaces per lane. The new code sets forth a standard of 5 spaces per lane.

Live Theater: With an 85<sup>th</sup> percentile parking demand of 0.32 vehicles per seat, the Ordinance's requirement of one space per four seats (0.25 spaces/seat) is appropriate. The new code sets forth a standard of 1 space per 4 seats or 1 space per 100 sq. ft.; whichever is greater.

Athletic Club: With an 85<sup>th</sup> percentile parking demand of 4.94 vehicles/ksf GFA, the Ordinance's requirement should be increased from one space per 250 square feet to one space per 200 square feet (or 5 spaces/ksf). The new code sets forth a standard of 1 space per 200 sq. ft.

#### ***Institutional (Day Care Center)***

With an 85<sup>th</sup> percentile parking demand of 3.70 vehicles/ksf GFA, the Ordinance's requirement should be reduced from one space per 100 square feet to one space per 250 square feet (or 4 spaces/ksf).

#### ***Medical (Nursing Home)***

With an 85<sup>th</sup> percentile parking demand of 0.52 vehicles per bed, the Ordinance's requirement for "sanitariums, children's homes, homes for the aged, nursing homes" should be simplified from "one space per each five beds, plus 1 for each employee and employer" to one space per two beds (or 0.5 spaces/bed). The new code sets forth a standard of 1 space per 3 beds/patients the facility is licensed to accommodate.

#### ***Office***

Office Building: With an 85<sup>th</sup> percentile parking demand of 2.97 vehicles/ksf GFA, the Ordinance's requirement for "offices not providing customer service on the premises" should be reduced from one space per 200 square feet to one space per 350 square feet (or 2.86 spaces/ksf).

Medical-Dental Office: With an 85<sup>th</sup> percentile parking demand of 4.30 vehicles/ksf GFA, the Ordinance's requirement for "medical, dental and health care offices and clinics" should be simplified from "one space per 100 square feet for the first 1,000 square feet plus one space per 300 gross square feet thereafter" to one space per 250 square feet (or 4 spaces/ksf). The new code sets forth a standard of 1 space per 250 sq. ft. or 4 spaces per doctor; whichever is greater.

Government Office Building: With an average peak demand of 4.15 vehicles/ksf GFA and an 85<sup>th</sup> percentile parking demand of 6.13 vehicles/ksf GFA, the Ordinance's requirement of one space per 300 square feet should be increased to one space per 200 square feet (or 5 spaces/ksf). The new code sets forth a standard of 1 space per 250 sq. ft. of floor area.

**Retail (Video Rental Store)**

With an 85<sup>th</sup> percentile parking demand of 2.64 vehicles/ksf GFA, the Ordinance's requirement for "retail stores, except as otherwise specified herein" should be reduced from one space per 200 square feet to one space per 350 square feet (or 2.86 spaces/ksf).

**Services**

Walk-In Bank: With an 85<sup>th</sup> percentile parking demand of 2.76 vehicles/ksf GFA, the Ordinance's requirement for "offices-banks, business or professional offices and utility offices" should be reduced from one space per 200 square feet to one space per 350 square feet (or 2.86 spaces/ksf). The new code sets forth a standard of 1 space per 200 sq. ft., plus 4 tandem stacking spaces for each drive-up teller.

Family (Sit-Down) Restaurant (No Bar or Lounge): With an 85<sup>th</sup> percentile parking demand of 6.37 vehicles/ksf GFA, the Ordinance's requirement for "restaurants, sandwich shops, takeout food, etc" should be simplified from "one space per 60 customer use area, plus per 100 square feet food preparation, etc." to one space per 150 square feet (or 6.67 spaces/ksf). The new code sets forth a standard of 1 space per 60 sq. ft. of dining area.

Dry Cleaners: With an average peak demand of 1.40 vehicles/ksf GFA and an 85<sup>th</sup> percentile parking demand of 2.44 vehicles/ksf GFA, the Ordinance's requirement of one space per 500 square feet (or 2 spaces/ksf) is appropriate. The new code sets forth a standard of 1 space per 300 sq. ft.

**Proposed Deletions**

Due to the absence of specific parking demand data in *Parking Generation*, the following 33 land uses should be considered for deletion from the Zoning Ordinance:

1. Amusement arcades\*
2. Animal grooming\*
3. Barber Shops and Beauty Parlors\*
4. Bars, taverns, etc.\*
5. Broadcast studios
6. Caretaker's quarters
7. Carwash – mechanical
8. Carwash – self-service
9. Circus, carnival, fair, festivals, parades
10. Contractor's yards
11. Delivery and private postal services
12. Equipment rental\*
13. Feed stores and farm supply sales
14. Florists
15. Gas distributors – containerized
16. Homeless shelters

17. Laboratories\*
18. Mobile home/trailer parks\*
19. Mortuaries and Funeral Homes\*
20. Motor Vehicle or Machinery Sales and Automotive Repair Shops
21. Museums
22. Nightclubs, discotheques, etc.
23. Offices-Real Estate
24. Photocopy services, photo finishing-retail and photographic studios\*
25. Printing and publishing\*
26. Residential care facilities less than six residents
27. Residential care facilities greater than six residents
28. Retail Sales Lots such as Lumber Yards, Builder Supply Stores, Yards and Nurseries\*
29. Rooming Houses, Lodging Houses, Clubs and Fraternity Houses
30. Service stations\*
31. Telegram office
32. Ticket/travel agencies
33. Trucking/taxi service

\*Land Use Category proposed to be retained in new Development Code

**Table A-1: Zoning Ordinance Modifications**

Land Use Category	Current Parking Ordinance	TJKM Proposed	Development Code Proposed	Recommended Code Revisions
<i>Recommendation 1</i>				
Mini-warehouse	1 space (sp) per 300 sq. ft. of office area, plus 1 sp per 800 sq. ft. of indoor storage area	Reduce parking requirement	4 spaces for manager's office	New code lessens parking requirement. No change.
Multi-family Residential	1 ½ sp per studio or one bedroom; 2 sps per 2 bedroom or larger	Reduce parking requirement	Studio & 1 bedroom: 1 covered sp per unit, plus 1 sp per 2 units for guest parking. 2 bedroom & larger: 2 covered sp per unit, plus 1 sp per 4 units for guests parking	New code lessens parking requirement. No change.
Bowling Alley	5 sps per lane	Reduce parking requirement	5 sps per lane	To be discussed.
Day Care Center	1 sp per 100 sq. ft. of assembly area, plus 1 sp per 300 sq. ft. of office, plus 1 sp for each employee	Reduce parking requirement	1 sp per employee, plus 1 sp per 10 attendees	New code lessens parking requirement. No change.
Offices	1 sp per 2 employees, or 1 per 200 sq. ft., which is greater	Reduce parking requirement	1 sp per 250 sq. ft.	New code lessens parking requirement. No change.
Video Rental	1 sp per 200 sq. ft.	Reduce parking requirement	1 sp per 250 sq. ft.	New code lessens parking requirement. No change.
Walk-In Bank	1 sp per 200 sq. ft., or fraction thereof	Reduce parking requirement	1 sp per 200 sq. ft., plus 4 tandem stacking sps per drive-up teller or teller station.	To be discussed.
<i>Recommendation 2</i>				
Single-Family Residential	2 sps per dwelling, of which one must cover	Do not change parking requirement	2 sps, at least 1 covered.	Parking standard similar in new code. No change
Hotels & Motels	1 sp per room/suite, plus 1 sp for manager, plus dining area requirements	Do not change parking requirement	1 sp per unit, plus 2 sps for manager or owner, plus required sps for accessory uses.	Parking standard similar in new code. No change
Live Theater	1 sp per 4 fixed seats, or 1 sp per 40 sq. ft. assembly floor area indoors; whichever is greater, and 1 sp per 500 sq. ft. outdoor assembly area.	Do not change parking requirement	1 sp per 4 seats, or 1 sp per 100 sq. ft. of assembly area, whichever is greater.	To be discussed.
Dry Cleaners (pick-up facilities)	1 sp per 500 sq. ft.	Do not change parking requirement	1 sp per 300 sq. ft.	To be discussed.

Table continued next page

**Table AI: Zoning Ordinance Modifications (Continued)**

Land Use Category	Current Parking Ordinance	TJKM Proposed	Development Code Proposed	Recommended Code Revisions
<i>Recommendation 3</i>				
Nursing Home	1 sp per 5 beds, plus 1 per employee or employer	Simplify the parking requirement	1 sp per 3 beds or patients the facility is licensed to serve	New code simplifies requirement. No change.
Medical-Dental Offices	1 sp per 100 sq. ft. for the first 1,000 sq. ft., plus 1 sp per 300 sq. ft. thereafter.	Simplify the parking requirement	1 sp per 250 sq. ft., or 4 sps per doctor, whichever is greater.	New code simplifies requirement. No change.
Family Restaurant	1 sp per 60 sq. ft. of public use area, plus 1 sp per 100 sq. ft. for food prep, counter space, pantry storage, pantry storage and dish washing areas; excluding walls, halls, restrooms, and dead storage.	Simplify the parking requirement	1 sp per 60 sq. ft. of dining area	New code simplifies requirement. No change.
<i>Recommendation 4</i>				
Athletic Club	1 sp per 250 sq. ft., plus 1 sp for each employee and employer.	Increase parking requirement	1 sp per 200 sq. ft.	New code increases parking requirement. No change.
Government Offices	1 sp per 300 sq. ft.	Increase parking requirement	1 sp per 250 sq. ft.	New code increases parking requirement. No change.