City of Tampa Traffic Circulation Elements Update: Alternative methods for Calculating Level of Service

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City of Tampa
Traffic Circulation Element Update
Alternative Methods for Calculating Level of Service

prepared by
The Center for Urban Transportation Research
University of South Florida
College of Engineering

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Introduction

This report presents alternative methods for measuring roadway level of service (LOS). It was prepared in response to a request by the City of Tampa, to provide information necessary to update their Traffic Circulation Element of the Local Government Comprehensive Plan. The paper is divided into five sections, which describe the current LOS measurement system used by Tampa and problems that have resulted from its use, case studies detailing the LOS measurement approaches utilized by five other Florida municipalities, methods for addressing specific concerns raised by Tampa, and conclusions, as supported by recently enacted legislation. This section provides a brief introduction to LOS. The next section discusses problems the City of Tampa has encountered when operationalizing standard LOS measurements.

Description of Current System and Problems

LOS is defined in the City of Tampa's current Traffic Circulation Element as:

"an indicator of the extent or degree of service provided by, or proposed to be provided by a facility based on and related to the operational characteristics of a facility. Thus, it is a qualitative perception of the operating conditions on a roadway based on such factors as speed, travel time, traffic volumes, delay and safety. LOS indicates the capacity per unit of demand for each public facility."

The 1985 Growth Management Act requires adequate infrastructure to be available concurrent with the impacts of development. Level of service standards (LOS) are used to determine adequacy of the transportation system for concurrency determinations. For transportation facilities, communities may evaluate transportation concurrency against a five year capital improvements program. If this approach is used, the community must demonstrate that the necessary facilities will be available within three years of issuing the development permit.

The City of Tampa currently measures LOS using the 1985 Highway Capacity Manual guidelines. Thus, LOS is measured on a link-by-link basis and development orders can only be approved if the proposed development does not cause roadways to exceed a peak-hour LOS D. However, the City has found that by using these standards, several deficiencies have arisen due to lack of flexibility:

- The recognition that while a particular route may be below LOS D, there are several parallel routes with available capacity.
- The recognition that downtown is a transit destination.
- The recognition that Interstate 275 will be undergoing reconstruction for the next 10 to 15 years.
- The recognition that the two large areawide Developments of Regional Impact (DRIs)--Westshore and Downtown--as well as several DRIs in the University area representing a considerable amount of vested development.
- The desire to diverge from the link-by-link measurement approach to address overall system effectiveness and to incorporate TDM strategies.
Case Studies of Alternative Methods for Measuring LOS

This section contains five case studies of how other municipalities have developed LOS standards that incorporate community needs. The municipalities highlighted are Orange County, the City of Orlando, Lee County, Dade County, and the City of Miami. Each case study will outline the key elements of the method, describe general applicability, and present a detailed description of the method. The main source of information for each of the following case studies has been the respective comprehensive plans.

Orange County

Orange County has adopted a "grouping analysis" alternative for determining concurrency, which aggregates volumes and capacities of functionally classified parallel roadway segments designated as transportation "groups" (see Appendix A). This approach and related policies are described within the County's comprehensive plan. The County also permits a 15-percent degradation of the existing peak hour volume (as designated in the comprehensive plan) on backlogged roads and on constrained roads operating below the adopted levels of service. A de minimis impacts exemption is also allowed in the unincorporated areas for developments generating less than 20 average daily vehicle trip ends.

Orange County initiated "grouping" analysis to provide a flexible alternative to link-by-link analysis that recognizes the availability in some corridors of parallel routes with excess capacity. The approach was pursued to avoid widespread development moratoriums in areas where the existing road system is at or approaching its LOS standard and improvements are unfunded or not possible. The position that parallel roadways in some cases function as alternative routes in a corridor is also consistent with FDOT's practice of providing state funding for capacity improvements on local roadways that parallel overburdened state facilities.

Orange County has determined that 62 percent of state roads, 50 percent of toll roads, and 16 percent of county roads will be below the recommended level of service in 1995. The plan estimates the total cost for correcting these deficiencies (bringing them up to the desired level of service) at $414.6 million. Based on the revenue projections, the County developed a financially feasible plan which enables improvement of only some of these deficient roadways. The remainder are designated as "backlogged facilities" with a minimum level of service (E or F in some cases). The many miles of backlogged and constrained roads have been particularly problematic given the county's high rate of growth, heavy tourism, and considerable amount of through traffic. The Department of Community Affairs (DCA) has approved the grouping analysis approach based upon these justifications. Orange County was, however, required to amend selected policies and roadway groupings during the plan review process.
Orange County provides for a grouping analysis procedure for LOS evaluations in areas where parallel roadways accommodate similar types of traffic and serve to divert traffic from congested facilities to alternate routes. Eighteen groups (Groups A-R) containing from two to four roadway facilities were identified based upon the following criteria:

1. Roadways must be in a parallel direction;
2. Group roadways must serve similar functions;
3. The group must be at least two miles long;
4. The group must not exceed two miles in width; and
5. Parallel cross streets used to divert traffic within the group must not be more than two miles apart.

The grouping analysis procedure is as follows:

1. Determine the existing LOS and capacity of each of the roadways;
2. Calculate the volume-to-capacity ratio of the entire group using a weighted average of the individual roadway volume-to-capacity ratios, and determine the existing LOS of the group;
3. Determine the existing available capacity within the entire group by subtracting the sum of the volumes from the sum of the capacities of each roadway within the group;
4. Calculate the future year volume-to-capacity ratio for the entire group using a weighted average of the individual roadway projected volume-to-capacity ratios, and determine the projected LOS of the group.

According to Orange County staff, the link level of service for each segment will take precedence over the grouping analysis level of service in evaluating specific development proposals for concurrency management purposes. If a project exceeds allowable trips on that link, the developer must demonstrate that the corridor grouping approach is practical for that location and intensity of development. Standards have not been drafted and adopted through the land development regulations for guiding this review process. Because the County allows an additional 15 percent degradation of level of service for backlogged and constrained roadways, no projects have exceeded the required level of service and thus the County has not yet applied the grouping analysis approach. Engineering staff propose to evaluate proposals on a case by case basis to determine whether it is reasonable to assume that some of the trips to that project could be captured by other roadways grouped in that corridor. This includes whether a cross street connecting the site to a parallel roadway is reasonably accessible to the site.

The grouping approach permits greater flexibility in concurrency determinations for constrained and backlogged roadways, allowing the County to pursue alternatives to road widening and building while avoiding widespread development moratoriums. The decision not to rely solely on capacity expansions emerged from a determination by FDOT and
Orange County that the benefits of widening a six-lane road to eight lanes did not outweigh the costs of construction.

In turn, Orange County is pursuing a broader and more strategic approach to congestion management that includes land use strategies, transportation demand management, and transit alternatives. Road construction and widening are pursued in the context of this comprehensive strategy. The county has also designated an urban service area around the City of Orlando to encourage infill development and expansion from the urban core, within the limitations of pre-existing development patterns.

Orange County's Strategic Development Plan for Activity Centers targets transit service to and from activity centers and includes a circulation strategy that integrates pedestrian and various other modes of transportation. The objective is to obtain an internal capture rate of thirty percent. Transit providers are required to identify strategic locations for park-and-ride lots and high occupancy vehicle lanes must be considered in all expressway and principal arterial improvements.

Minimum transit headways and stringent modal split standards (15 percent by 2000, 25 percent by 2010) have been set for the International Drive Activity Center. As part of its Transit Corridor Plan scheduled for completion by September 1994, the County is examining the feasibility of basing transportation LOS on person trips as well as vehicle trips to reflect both parallel roadway and transit capacity.

Access management and transportation demand management are also emphasized, including the establishment of Transportation Management Associations. The County recommends that each TMA prepare a trip reduction plan.

LOS on county roads and some state roads is monitored annually, using a comprehensive traffic counting system. Three-day (Tuesday, Wednesday, and Thursday) traffic counts are taken from 600 counting stations across the county. LOS on limited access state roads is monitored annually through FDOT's counting system. The Florida Standard Urban Transportation Model Structure (FSUTMS) is used to evaluate the three-year condition of roadways and is updated annually based on new land use data, socioeconomic projections, and transportation improvement programs. Results are compared against FDOT's generalized tables. Stepwise analysis using ART-Plan, Art-Tab, and other modeling programs are used for additional accuracy when evaluating groups.

Because funding of state roadways has lagged far behind growth, Orange County is pursuing the use of additional matching funds to accelerate construction of high priority state road projects in the Orlando Urban Area Transportation System (OUATS) long range plan.
City of Orlando

The City of Orlando uses a performance approach to measuring LOS and managing concurrency called Traffic Performance Districts and Transportation Management Areas. A detailed description of the system and related policies is included in the comprehensive plan. Characteristics of this approach include:

- targeting transportation improvements to advance long term congestion management goals and support higher densities in activity centers;
- establishing average vehicle occupancy standards for activity centers (increase from 1.2 to 1.5); and transit mode split standards (4 percent in year 2000; 7 percent in 2010); in addition to LOS standards;
- allowing 15 percent degradation of average travel speed on major thoroughfares operating at LOS F;
- using a *de minimis* impacts exemption of 10.06 average daily trip ends for (re)development outside the boundaries of the "traditional city" core and 28.88 average daily trip ends for (re)development inside the "traditional city";
- using a trip allocation model to monitor the proportion of trip ends allocated to traffic analysis zones (s) within each performance district to determine available capacity;
- using a Transportation Primary Impact Area approach: select link analysis to determine which s in the region are contributing to a link deficiency and reduction of trip allocations in those zones per the City's proportionate fair share of the trips;
- basing concurrency management on three capacity thresholds that reflect whether district capacity is (1) sufficient, (2) limited and trips must be transferred from adjacent zones, or (3) constrained and additional modeling is required;
- revalidating the trip allocation model annually based on development permit data and trip allocation reservations; and
- addressing site-specific congestion through strong access management guidelines and transportation demand management strategies.

The City of Orlando's transportation concurrency management system monitors available capacity in each of 15 Transportation Performance Districts--three of which are designated as Transportation Management Areas (TMAs) (see Figure 1). Orlando's TMA approach served as the impetus for the state of Florida's TCMA policy articulated in rule 9J5.0057. In most TPDs, LOS standards must be maintained on a link-by-link basis.

TMAs provide a more flexible approach to monitoring LOS based on the percent of lane miles that meet established LOS standards. In addition, the Transportation Management Areas are limited to compact geographic areas that offer opportunities for higher density, mixed-use development and alternative modes of transportation. There is a more flexible areawide approach that provides for monitoring the percent of lane miles (85 percent of lane miles or more) that meet link LOS standards in each performance district. If a moratorium is required, it would be established across that entire performance district.
Figure 1
Orlando Traffic Performance Districts

TRAFFIC PERFORMANCE DISTRICTS

City of Orlando

Traffic Performance District
This performance district approach could be tailored to most metropolitan areas. Transportation Management Areas, however, are applicable only to selected portions of the metropolitan areas, like urban downtowns or other regional activity centers, characterized by compact form, high density, mixed-use development patterns, a dense roadway network, mass transit services, and other qualities now defined by rule 9J-5.0057 for Transportation Concurrency Management Areas (TCMAs).

Because Orlando's Comprehensive Plan predated adoption of the TCMA rule, it does not reflect all of the TCMA requirements. For example, the City did not consolidate all of its transportation-related elements into a single transportation mobility element. Yet as was later mandated in 9J5.0057, DCA only allowed Orlando to designate TMAs in geographically compact areas that include a complete roadway network, mass transit, and transportation demand management programs. DCA denied Orlando's request to apply an areawide averaging approach across all transportation performance districts.

Traffic performance is analyzed on the internal roadway network of each district. Performance districts were drawn based on the following criteria:

1. Boundaries do not cross transportation impact fee benefit area boundaries;
2. Major activity centers are contained within single districts;
3. No traffic analysis zone was divided;
4. Boundaries generally follow geographic features, limited access facilities, or lightly traveled streets, but generally do not follow arterial or collector roads; and
5. Districts generally are aligned along major commuting or traffic circulation patterns.

Current and future operating characteristics of individual roadway segments on all major thoroughfares were calculated in a three step process. First, a travel demand model was used to estimate travel on the network and to calculate link capacity according to an internal speed/capacity look-up table. FDOT's Generalized Tables were used in the second iteration to calculate performance. Finally, FDOT's "ART-ALL2" procedure was used to calculate in more detail the levels of service on state signalized intersections deemed critical for the city's preservation of overall mobility.

LOS was evaluated for 1990, 1995, and 2010 peak hour volumes. Analysis of existing and projected traffic circulation LOS and system needs were conducted both for daily and peak-hour conditions using the 100th highest hourly volume. The LOS standard selected was based on the least stringent of three alternatives: 1) existing (1990) link conditions; 2) 1995 forecasted link conditions; 3) FDOT standards. Major thoroughfares operating at LOS F are permitted 15 percent degradation of average travel speed.

Compliance with LOS standards is monitored based on the road segment LOS and the Trip Allocation Program. The concept is to limit development by allocating average daily
trips annually by traffic zone to ensure a predictable LOS on individual roadway segments. The Trip Allocation Program performs a five year annual trip allocation, based on 1995 land use projections in the Future Land Use Element (i.e., undeveloped land within the city and county by traffic analysis zone). If a roadway link is a boundary between two Traffic Performance Districts, then half of its entire inventory is assigned to each adjacent district.

If annexation occurs, trip increases are transferred from the county to the city based upon the new proportion of vacant land found within the traffic zone. When redevelopment occurs, the new project receives a credit for the trips removed due to demolition for concurrency determinations.

An areawide transportation model is run annually using data related to traffic, socioeconomic characteristics, accidents, road characteristics, transit ridership, and pedestrian movement. A semi-annual model is also run once every 6 months using new development data. This model allocates average daily trip ends by traffic zone, according to a trip allocation program and reflects growth permitted since the previous run, plus trips reserved. It is revalidated annually based on most recent traffic count data.

Orlando’s concurrency management system for TPDs evaluates development proposals against the proportion of trips allocated and available to that TPD, in accordance with the following thresholds:

- **Threshold 1:** Capacity is available and development may be approved. Less than 50 percent of the trips for the calendar year have been allocated within the TPD.

- **Threshold 2:** Capacity is becoming limited. More than 50 percent, but less than 90 percent of the trips for the calendar year have been allocated. Adequate trips exist in the or adjacent to the proposed development. (Trips may be transferred from adjacent’s within the district.)

- **Threshold 3:** Development approval must be deferred until needed capital improvements are complete or new trip allocation becomes available. More than 90 percent of the trips but less than 100 percent have been allocated. Insufficient capacity available in the or adjacent to accommodate the proposed development. District is approaching capacity ahead of schedule and additional modeling is required to determine concurrency.

If a road segment in the performance district is deemed deficient, then the impacted area of the deficient roadway link is designated a Transportation Primary Impact Area. Although none have yet been designated, the staff have set up preliminary procedures for determining the impact area. Transportation Primary Impact Areas would be defined as those in the region that contribute to traffic on that link. These would be identified using select link analysis. The trip allocation for the contributing and receiving s within
the city is then adjusted downward, based on the City's proportionate share of the impact on the deficient link, (i.e., the proportion of trips generated from's within the city versus those from's outside the city). This "fair share" approach to transportation concurrency reflects the regional nature of transportation systems and recognizes the need to address both ends of the traffic congestion problem. Development would not be permitted within a transportation primary impact area if it would cause that road segment to be degraded below the adopted LOS standard.

In the three Transportation Management Areas, an areawide performance approach to maintaining LOS is applied. System performance is measured based on the percentage of lane miles meeting designated LOS standards, that is, 85 percent of lane miles must meet the LOS standards (as determined through semi-annual modeling). Concurrency determinations in TMA's are made as follows:

1. Sum total lane miles of the major thoroughfare network;
2. Sum lane miles meeting LOS standards;
3. Calculate the percent lane miles meeting LOS standards;
4. Compare and validate the district meets the (85 percent) performance criteria.

If less than 85 percent of lane miles achieve their LOS standard, then a development moratorium is declared in that TMA. The 15 percent deviation here and for major thoroughfares is justified based on the inaccuracies inherent in travel models like FSUTMS.

Developments that require a concurrency evaluation must obtain a concurrency encumbrance letter before building plans can be accepted. The letter is valid for 90 days. A building permit must be pulled or the Capacity Reservation Certificate must be obtained to reserve that capacity prior to the end of that 90 days. The City's capacity reservation program includes "capacity waiting lists" for equitable processing of reservation certificates as capacity becomes available in that district.

Using a de minimis impacts approach, the City permits development or redevelopment generating 10.06 average daily trip ends or less by right in all areas outside of the "traditional city" core, and those generating 28.88 average daily trip ends by right inside the "traditional city". The traditional city boundary does not conform to performance district boundaries, but rather conforms to the subjective boundary of "downtown" Orlando as designated in the urban design element. These trip ends are included in the trip allocation program for monitoring capacity.

Orlando's transportation plan proposes an aggressive program for enhancing system capacity, including: a) planned and programmed improvements adding over 520 lane mile to the road network over the planning period; b) transit improvements and TDM strategies to capture work trips; c) a corresponding increase in vehicle occupancy rates from 1.2 to 1.5 by 2000; and d) reductions in transit headways from 60 to 15 minutes to and
through metropolitan activity centers by 2005; and 5 minute headways within activity centers by 2010. It aims to cut headways in half (60 to 30 minutes) in the rest of the city. 

The needs plan involved identifying planned (10 years), programmed (5 years), and long range improvements (may have funding commitment within 20 years) and calculating additional lane miles by Traffic Performance District. Forecast vehicle trips were assigned to this test network and evaluated these against the desired link level of service for that major thoroughfare network. Some streets and highway segments would not be able to accommodate future traffic volumes even with the proposed improvements that the City could afford within its current revenue stream.

The mitigation plan includes a combination of increased roadway supply (current revenue stream and needs plan projects), transportation systems management, and transit strategies. It was recommended that the most important arterial improvement projects be phased earlier in the funding program, thereby improving the performance for most of the roadway links (Semoran Boulevard, John Young Parkway, Colonial Drive, and Kirkman Road). Additional lane mile needs were identified for each performance district and costed out based on the link level of service for those links.

Under the plan, the most important state arterials within the City will still perform at or below the existing level of service over the long run. The transportation plan is intended to solve congestion problems whenever reasonable, but accept congestion in a number of areas where it is unavoidable or the solution is undesirable. According to the plan: "Along those major corridors, more efficient modes of transportation will provide the needed personal mobility when private vehicle operation fails."

Orlando also has strong access management requirements to address the site specific congestion in activity centers. The comprehensive plan includes area-specific policies and calls for metropolitan activity center plans for Downtown, East Colonial Drive/Fashion Square, and International Drive, that focus on increasing pedestrian and bicycle access, developing internal transit circulators, and increasing vehicle occupancy and transit usage through parking management.
Lee County

Lee County uses a Traffic District Program for evaluating LOS. The original Lee County Comprehensive Plan of 1989 included a listing of roadways by segment for purposes unrelated to the traffic district program (the traffic districts closely resemble the districts of the Road Impact Fees Ordinance). Key elements of this approach include the aggregation of roadway service volumes within traffic districts for the purpose of determination of a district-wide surplus or deficiency in roadway service capacity. "Controlling intersections" operate at LOS below those of their respective crossing streets and are analyzed separately for purposes of concurrency. However, it is important to note that after December 31, 1999, the Traffic District Program will be replaced with a concurrency program for all roads measured on a link by link basis.

The traffic districts as defined for use in Lee County are large and include both north/south and east/west routes. This may be justifiable due to the expansive development pattern of Lee County in which destinations are reached by traveling on both north/south and east/west routes. As part of the Lee County concurrency management system, all proposed developments are reviewed using the Traffic District Program. Lee County was permitted by DCA to use a district-wide approach in return for a commitment to identify those improvements required to bring roads up to the adopted LOS standards by 1999, to schedule them into the CIP, and to identify the funding mechanisms to pay for the improvements. For LOS measurement and standard setting, roadway LOS are weighted within the district according to roadway length. LOS is measured using FDOT computer planning software based upon the methodology of the 1985 Highway Capacity Manual.

Under the Traffic District Program, service volumes for each state, county and municipal roadway link (including freeways such as I-75) in a district are annually estimated and multiplied by its length. The vehicle-miles of travel for all roadway links are added together to determine the total vehicle-miles of travel available in the district. The annual district-wide growth in traffic of the past year is then calculated and compared to the district-wide service volume to determine an overall deficiency or surplus of available service volume in the district. A determination is then made about how much new development that would affect backlogged roads can be approved. This determination is made based upon the impact on a district-wide basis rather than on the basis of how the new development would affect the particular backlogged roads. New development that would affect backlogged roads would be approved if the surplus service volume as a percentage of the existing service volume in the district was equal to or greater than the percentage growth in traffic volumes in the district. For backlogged roads, there is no limit to the degree to which degradation of LOS can occur to a specific facility within a traffic district, so long as there remains surplus service capacity.

Backlogged roads are those that fall below the adopted minimum accepted LOS standards. An annual determination of roadway capacity, measured as a district-wide
service volume surplus or deficiency, is made for each of nine traffic districts. Proposed developments that would affect backlogged roads would still be approved if:

existing surplus service volume
+ service volume increases due to committed roadway improvements
+ service volume increases from developer-provided improvements

> or = the annual percentage growth in district-wide traffic

If \((SSV + SVI + SVC)/SV * 100 > or = (V2-V1)/V1 * 100\), then continued growth on backlogged facilities may occur, where:

- \(V1\) = sum of weighted District traffic volumes, previous year
- \(V2\) = sum of weighted District traffic volumes, current year
- \(SV\) = sum of weighted District service volume, current year
- \(SVI\) = sum of increases in weighted District service volume due to interim/operational improvements
- \(SVC\) = sum of increases in weighted District service volume due to committed improvements
- \(SSV\) = District surplus service volume during the current year \((SV-V2)\)

The annual percentage growth in traffic volumes would include the amount of traffic generated by proposed development.

In addition, mitigation would be required by providing improvements as identified in the Interim/Operational Improvement Program. If an increase in the district-wide service volume is less than the growth in estimated development traffic that would affect the backlogged roads, then no development permit would be issued, unless roadway and operational improvements are programmed within the affected District so that the service volume on the backlogged road will become greater than or equal to traffic growth.

The Traffic District Program provides a means for determining allowable development affecting backlogged roads and to manage degradation of traffic operations on backlogged and constrained roads. In addition, roadway improvements to bring LOS up to standard by 1999 have been identified. The Plan states that by 1998, 25 percent of the overall system deficiencies will be eliminated. New facilities will be added at a rate equal to growth demands. The Plan contains a list of backlogged road segments that will be improved to meet the minimum standards no later than December 31, 1999. After December 31, 1999, the Traffic District Program will be replaced with concurrency measured on a link by link basis for all roads. In the meantime, development that affects the backlogged roads will be permitted if mitigation measures are implemented as identified in the Interim/Operational Improvements Program.
Several characteristics about Lee County, as described in the Lee County/DCA Settlement Agreement, contributed to the development of the Traffic District Program. Lee County’s traffic more than doubled in the 1980s while at the same time funds for roadway improvements were scarce. The growth pattern of community "pockets" were also identified as contributing to the overloading of traffic onto state and county roads that connected the communities. Physical barriers were identified as channeling traffic onto particular roadways. Also, the existence of over 480,000 vested plats in Lee County has also made retrofitting the transportation system difficult.

For purposes of establishing minimum LOS, the peak hour of the peak season is used for analysis. The peak hour is defined as 8 percent of the average daily volume, calculated from the three consecutive highest volume months for the peak season. The minimum acceptable peak hour, peak season LOS standard is D for county freeways, for state freeways (I-75) and for all state principal arterials other than U.S. 41. The minimum acceptable peak hour, peak season LOS standard is E for all county arterials and collectors, all state minor arterials and for U.S. 41.

Constrained roads, defined as those that cannot be widened due to scenic, environmental, historic, or right-of-way characteristics, would not be included in the determination of the district-wide service volume. The minimum LOS for constrained roads is defined as a volume/capacity ratio of 1.85. Development that affects constrained roads will be permitted only if a v/c ratio of 1.85 is not exceeded and if mitigation requirements are met under the Operational Improvement Program.

The Interim/Operational Improvement Program identifies improvements to be implemented for backlogged roads. Interim/operational improvements are implemented to maximize operational efficiency and provide additional roadway capacity. These improvements are short-term measures, prior to phased implementation of permanent improvements, which are included in the Capital Improvements Program. Backlogged roads in unincorporated Lee County that are eligible for interim improvements are listed. Maintenance for these backlogged roads is identified as either a state or county responsibility.

Due to the crossing of two major streets, the performance of some intersections do not correspond to the service volumes and LOS for the streets themselves. These are referred to as "controlling intersections". In the event that a proposed development or proposed planned development rezoning would contribute five percent or more of the LOS C service volume on the approach of the intersection cross street, then an operational analysis is conducted within a designated intersection impact area to identify appropriate mitigation measures. Impact areas surround designated controlling intersections and are sized based upon the trip generation of the proposed development that would affect the operation of the controlling intersection.
Controlling intersections are identified and listed in the comprehensive plan. The impact area size for the purpose of an operational study depends upon the number of trips generated by the new development. For example, for a development that generates 100 to 300 peak hour trips, the impact area is radius of 1,320 feet from the intersection or larger, up to that area where the development contributes five percent or more of the LOS C approach service volume of the cross street. According to the CIP Policy 70.1.3., "the 'minimum acceptable level of service' shall be the basis for facility design, for setting impact fees, and (where applicable) for the operation of the concurrency management system (CMS)."
Dade County

Dade County has applied a number of innovations to their evaluation of LOS. For comparing LOS standards against existing traffic and traffic generated by proposed development, the time period analyzed is a peak hour calculated by averaging the two highest consecutive hours of traffic volume during a weekday. The stringency of the roadway LOS standards is based upon the availability of a transit alternative.

The County annually monitors the LOS conditions of county and state facilities. Based upon 24-hour traffic counts, average daily traffic data is compiled for roads. The data is converted to highway segment format and the guidelines of the 1985 Highway Capacity Manual are used as the basis for measuring LOS. The FDOT LOS Manual is used to devise service volume tables for roadway segments in Dade County. LOS calculations for road segments are computed for the peak period. The peak period is defined as the average of the two highest consecutive hours of traffic volume during a weekday. In the absence of peak-period counts, typical peak-period factors are used, which represent the percentage of the total daily trips that occur during the average of the two consecutive hours of highest traffic volume.

Graphics that list the peak-period volume/capacity ratios for roadway segments operating at LOS D, E, and F are updated annually. These graphics enable identification of those road segments operating below the adopted standard.

The minimum acceptable LOS for all state and county roads in Dade County differ depending upon if the roadway facility is within the Urban Development Boundary, the Urban Infill Area or within a Special Transportation Area. Generally, the LOS standards become less stringent as one travels toward the urban core. As defined in the Land Use Element, the Urban Development Boundary (UDB) is "...the area where urban development may occur through year 2000 as distinguished from areas where it should not occur. Development orders would be issued for properties within the UDB provided that LOS standards are met." The Urban Infill Area (UIA) is located within the UDB and has defined boundaries located west of Palmetto Expressway and west of the Miami downtown area.

Outside of the UDB, for all state minor arterials, the LOS standard during the peak period is D. For all other state roads and county roads outside the UDB, the LOS standard during the peak period is C.

Within the UDB prior to 1995, the LOS standard outside the UIA for any road operating below LOS E, is 10 percent below the existing LOS, as measured in 1989. Within the UIA, the LOS standard for any road operating below LOS E, is 15 percent below the existing LOS. In Special Transportation Areas, 20 percent of the non-state facilities may operate below LOS E.
An area one-half mile on each side of the centerline of a congested road segment (operating below LOS E in 1989) and one half mile beyond each endpoint is called a "Substandard Area". For a proposed development, impact is evaluated for those roads that are accessed by the development. The estimated peak traffic generation of the proposed development would be added into existing plus committed peak-period traffic. This total would be compared against the existing or programmed road segment capacity. If the proposed development is located within the UDB but outside the UIA and in a Substandard Area and the potentially affected roadways were already operating below E in 1989, then capacity for purposes of development approval is defined as 110 percent of the 1989 traffic volume. If the proposed development is within a UIA, then capacity is defined as 115 percent of the 1989 traffic volume.

By 1995, the presence of transit service will become part of the defining condition for establishing a peak period LOS standard. Where transit service is an available alternative, the LOS standard decreases. Where transit service is not only available but also convenient, the LOS standard decreases further. A summary of Dade County’s LOS standards is shown in Table 1.

Within the UDB but outside STAs or UIAs, all roadways except state urban minor arterials must operate at LOS D by 1995. State urban minor arterials must operate at LOS E. For roadways that are within one-half mile from public mass transit service that operates with at least 20 minute headways, the LOS for those roadways is E. Roadways that are within one-half mile of commuter rail or express bus service must operate at no worse than 120 percent of their capacity.

Within both UIAs and STAs, the LOS standard for roadways will be 120 percent of their capacity. Where commuter rail or express bus service is available within one-half mile of parallel roadways, the LOS standard is 150 percent of operating capacity for those roadways. The LOS standard within both UIAs and STAs will be at or above LOS E where no public mass transit service is available.

A network model is under development that would project LOS on the highway network. This would enable identification of impacted roads by proposed developments, projection of roadway network conditions concurrent with development buildout schedules, determination of facilities needed to remedy existing and projected deficiencies and to remedy deficiencies caused by development. Other goals include the identification of monitoring procedures to ensure that the necessary facilities will be operating concurrently with new development, provision for annual model updates of socio-economic information, and the development of procedures for the County to update traffic information.
### Table 1
**Dade County LOS Standards**

<table>
<thead>
<tr>
<th></th>
<th>Prior to 1/1/95</th>
<th>Beginning 1/1/95</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outside UDB</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C:</td>
<td>County roads</td>
<td>Same as prior to 1/1/95</td>
</tr>
<tr>
<td></td>
<td>State princ. arterials</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Freeways - I-95</td>
<td></td>
</tr>
<tr>
<td>D:</td>
<td>State minor arterials</td>
<td></td>
</tr>
<tr>
<td><strong>Inside UDB</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E:</td>
<td>All roads at LOS E or above</td>
<td>D:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No Transit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>All roads except SUMA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No Transit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SUMA</td>
</tr>
<tr>
<td></td>
<td>110% capacity: Roads</td>
<td>E:</td>
</tr>
<tr>
<td></td>
<td>already below LOS E in 1989</td>
<td>Transit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>within 1/2 mi.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20 min. hdwy.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>120% capacity:</td>
<td>120% capacity:</td>
</tr>
<tr>
<td></td>
<td>Commuter rail</td>
<td>Commuter rail</td>
</tr>
<tr>
<td></td>
<td>Express bus</td>
<td>Express bus</td>
</tr>
<tr>
<td></td>
<td>within 1/2 mi.</td>
<td>within 1/2 mi.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>150% capacity:</td>
<td>150% capacity:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Commuter rail</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Express bus</td>
</tr>
<tr>
<td></td>
<td></td>
<td>within 1/2 mi.</td>
</tr>
</tbody>
</table>

| **Inside UIA** |                                                     |                                                     |
| E:            | All roads at LOS E or above                         | E:                                                   |
|               |                                                     | No Transit                                          |
|               | 115% capacity:                                      |                                                     |
|               | Roads already below LOS E in 1989                   |                                                     |
|               | 120% capacity:                                      |                                                     |
|               | Transit                                             |                                                     |
|               | within 1/2 mi.                                      |                                                     |
|               | 20 min. hdwy.                                       |                                                     |
|               | 150% capacity:                                      |                                                     |
|               | Commuter rail                                       |                                                     |
|               | Express bus                                          |                                                     |
|               | within 1/2 mi.                                      |                                                     |

**Source:** Metro-Dade County A.O. No. 4-85, Service Concurrency Fee Schedule, Standards, Evaluation Methods, Criteria, and Policies and Procedures. Effective June 2, 1992

21
City of Miami

The City of Miami measures LOS using a Transportation Corridors approach. The key elements to this type of approach include:

- multiple facilities within a common corridor.
- transit facilities in determination of capacity.
- based on person trips, not vehicle trips.
- allow for higher auto occupancy.
- analysis period based on 2-hour peak period.

Applicability is best for densely developed communities, with major public transportation systems, particularly those operating in an exclusive right-of-way. To utilize the corridor concept, multiple facilities would need to exist within a common corridor. Use of a two-hour peak period relates best to expectations in large urban areas, where considerable peak-spreading has occurred and congestion is accepted.

The Transportation Corridors have characteristics that distinguish them from other streets and highways. A Transportation Corridor Type LS (low speed) contains at least a major street and a public transit bus route with peak hour headways no greater than twenty minutes. Its service area is 1/4 mile each side of the roadway. A Type HS (high speed) Transportation Corridor contains one or more major streets, plus a limited-access highway and/or a rail transit line. It might also contain high occupancy vehicle (HOV) lanes, express bus service, expressway ramp metering, and other facilities. Its service area is a circle 1/2 mile in diameter centered on an expressway interchange or rail transit station (see Figure 2).

The Transportation Corridor's capacity and LOS are expressed in terms of person-trips, rather than vehicle-trips. The person-trip capacity within a Corridor is determined by adding the various person-trip capacities of each mode within the Corridor to produce a total capacity. The actual person-trip volume moving through the Corridor, divided by the capacity, yields a volume to capacity ratio (v/c), similar to conventional traffic capacity analysis. In turn, these v/c ratios are used as a measure of LOS, as indicated in Table 2.

LOS determinations are made for a peak period defined as the average of the two highest consecutive hours of trip volume during a weekday. For purposes of determining capacity, private passenger vehicles were taken to have a practical capacity of 1.6 persons per vehicle. Practical capacity was taken to be 150 percent of seated load for local buses, 125 percent of seated load for express buses, and 130 percent of seated load for rail rapid transit. Based on these computational procedures, peak period LOS standards of LOS E have been adopted.
Figure 2
City of Miami Transportation Corridors

TRANSPORTATION CORRIDORS
1988 AND 2000

A Transportation Corridor is an area within which the capacities of one or more major arterial transportation systems combine to provide a network of transportation facilities.

The Type LS Corridor contains one or more major surface roadways, arterial or transit service, and a rail transit line. Limited access highways are principal components of those high capacity transportation options to 400 lanes per hour volume and facilitate highway access to corridors, encourage pedestrian walking, and the like. The service area is a retail/office area with limited access to an expressway interchange or rail service station.

(Source: City of Miami Planning Dept., Transportation Corridors: Meeting the Challenge of Growth Management in Miami. Revised, Sept. 1990. p.12.)
Table 2
Person Trip V/C LOS Designations

<table>
<thead>
<tr>
<th>Person-Trip Volume/Person-Trip Capacity in Corridor</th>
<th>Level of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>.01 - .60</td>
<td>A</td>
</tr>
<tr>
<td>.61 - .70</td>
<td>B</td>
</tr>
<tr>
<td>.71 - .80</td>
<td>C</td>
</tr>
<tr>
<td>.81 - .90</td>
<td>D</td>
</tr>
<tr>
<td>.91 - 1.00</td>
<td>E</td>
</tr>
<tr>
<td>1.01+</td>
<td>F</td>
</tr>
</tbody>
</table>

A number of exceptions to the LOS standards are provided:

- In the Downtown Special Transportation Area, 20 percent of non-state facilities may operate below LOS E.
- Roadways can operate below LOS E if projects are included in the first three years of the Dade County Transportation Improvement Program that will bring the facility into compliance, or where a developer is making improvements necessary to accommodate the impacts concurrent with the development’s traffic generation.
- Roadway segments can operate below the standard if they are legislatively constrained (e.g. scenic or historical purposes), or less than one mile in length, where adherence to the City Land Use Plan assures no significant deterioration as a result of additional development.

Miami staff are presently undertaking research and development of the Transportation Corridors concept to incorporate principals of measuring LOS based upon the methodology of the 1985 Highway Capacity Manual. This will include measuring LOS based upon average speed of the average trip, rather than measuring LOS based upon a ratio of volume to capacity. The distinction is made that the volume to capacity ratio is a major determinant of speed but the v/c ratio should not be the specific measure for LOS; rather, average speed should be used as the measure.

A major question to address in the measurement of LOS, using average speed, is the definition of an average trip. What are the characteristics of the average peak hour trip? From the traditional use of the v/c ratio, the average trip is implicitly defined by the characteristics of the trip at the location where the traffic count is conducted. Miami
transportation planning staff intend to define the average trip as a work-to-home trip miles with LOS as experienced over the entirety of the trip.

Methods for Increasing Flexibility in Measuring LOS

The City of Tampa has indicated a desire for increased flexibility in managing transportation concurrency and measuring LOS. As a result of interviews with City staff, specific areas where this flexibility is needed include: the recognition of capacity on parallel routes; the recognition of transit capacity; the movement away from a link-by-link measurement; the inclusion of vested rights; handling of the Interstate system; and site-specific congestion. Each of these issues is discussed below, and where appropriate, alternative approaches are identified.

Recognition of Available Capacity on Parallel Routes

The City of Tampa would like to identify a method of LOS measurement that recognizes available capacity on parallel routes. One solution might be an adaptation of Orange County’s "grouping analysis" approach, which aggregates volumes and capacities of functionally classified parallel roadway segments designated as transportation "groups". Appendix A contains a list of segments included in each of Orange County's groups. These groups are comprised of parallel roadways which accommodate similar types of traffic and serve to divert traffic from congested facilities to alternate routes. One consideration might be a public education campaign or strategically locating signs as a means of informing drivers of the availability of alternate routes.

Recognition of Transit Capacity

Miami's approach is the most flexible in recognizing transit capacity. The underlying premise of the concept appears to be that the City's responsibility is to provide adequate capacity for personal travel during an extended period. It might be argued that if individuals choose to persist in the use of private vehicles on congested facilities while there is available capacity on parallel facilities (whether roadways or transit), that is a voluntary choice of those individuals and local government has met its responsibility. Moreover, if individuals choose to accept those congested facilities in preference to uncongested parallel facilities it can be argued that the requirements of concurrency have been met. Similarly, if individuals and businesses choose schedules that put them into the peak period of the peak hour of traffic, while there is available capacity within the two-hour defined peak period, this is consistent with the requirements of concurrency.

There is some logical appeal to these arguments. In essence, the key elements of the concept reflect a willingness on the part of the community to accept certain constraints
on tripmaking which are common in major metropolitan areas. These constraints include
the acceptance of certain congested highway facilities since parallel capacity exists on
transit, and also the acceptance of a certain amount of rescheduling of tripmaking outside
of the highest peak demand periods. It has been strongly argued that in the absence of
highway congestion, guideway transit will never become feasible. However, there are
several considerations which should be noted:

- In Transportation Corridors with transit services operating on exclusive rights
  of way, if an individual chooses to leave his automobile and utilize transit, that
  individual decision immediately affects the LOS experienced by that individual.
  With this option available, it seems appropriate to take credit for transit
  capacity. However, in Transportation Corridors with only surface transit
  operating in mixed traffic, the marginal effect of an individual switching from
  auto to transit has an insignificant effect on both the individual's LOS and the
  LOS in the corridor. As such, the rationale for this approach is less compelling
  in these situations.

- Although local tripmakers can be expected to have knowledge of alternative
  facilities and to be able to avail themselves of transit alternatives, these
  alternatives are generally impractical for long distance trips.

- For service and delivery vehicles, as well as for over the road trucking, the
  transit alternative is impossible and the use of alternative roadways is
  impractical.

- The assumption of a significantly higher average vehicle occupancy rate needs
  to be justified by experience. In the case of Miami, increasing auto occupancy
  from 1.4 to 1.6 will only be accomplished with aggressive promotion and
  probably disincentives to single-occupant vehicles.

- A two hour peak period may be appropriate for a major urban area like Miami,
  but it is less appropriate for smaller urban areas.

Dade County also recognizes transit availability when calculating LOS. As described
previously, by 1995 the presence of transit service will become part of the defining
condition for establishing a peak period LOS standard. Where transit service is an
available alternative, the LOS standard decreases. Where transit service is not only
available but also convenient, the LOS standard decreases further.

Movement Away from Link-by-Link LOS Evaluation

Three of the municipalities profiled above use facility averaging methods: Lee County’s
Traffic District Program, Orange County’s grouping analysis, and Miami’s Transportation
Corridors Approach. Lee County’s approach aggregates roadway service volumes within
traffic districts for the purpose of determining a district-wide surplus or deficit. If Tampa were to adopt a program similar to Lee County's Traffic Districts, it may be advisable to adopt smaller size districts, which treat north/south routes separately from east/west routes. This would recognize that in the Tampa roadway layout, there tend to be alternative parallel routes to choose from (as discussed above).

Orange County provides for evaluating LOS using grouping analysis, which aggregates volumes and capacities of functionally classified parallel roadway segments designated as transportation groups (see Appendix A). This approach is applicable to metropolitan areas with constrained and backlogged state roadways. The rationale behind this method was that parallel routes with excess capacity were available in these corridors.

Miami's approach is unique in that it expresses capacity and LOS in terms of person-trips, rather than vehicle-trips. Thus, the volume to capacity ratio \( (v/c) \) also reflects person trips and is the basis for determining LOS.

**Inclusion of Vested Rights**

Lee County also struggled with vested rights in the development of their Traffic District Program. Under its program, Lee County has been able to determine allowable development affecting backlogged roads and to manage degradation of traffic operations on backlogged and constrained roads. The Traffic District program enables new development to draw upon the available capacity there is in the district.

Another approach is that used for Pine Island Road. The minimum acceptable LOS for Pine Island Road is subject to special conditions. Pine Island Road is the only road connecting Pine Island with the Lee County mainland. Due to previously granted property rights for future residential development, Lee County is attempting to balance these property rights with the need to prevent LOS standards from being exceeded. Lee County is implementing a program of gradually reduced development approvals. As the average annual two-way peak hour trips reach certain volume thresholds, the County will restrict rezonings and the issuance of residential development orders. The minimum acceptable LOS standard for Pine Island Road for the peak season, peak hour is E.

Orange County has adopted a "vested rights ordinance" that provides procedures for determination and recognition of vested rights for development that is inconsistent with the comprehensive plan. The ordinance defines procedures for issuance of a vested rights certificate, developments entitled to a vested rights certificate, and expiration of these certificates. One purpose of the ordinance is to set forth an administrative procedure to address vested rights and thereby avoid a regulatory taking. The County also has a policy not to delete from the Capital Improvements schedule any road improvement for which building permits were issued dependent upon the capacity of the road with the improvement.
Inclusion of the Interstate System

As evidenced by the list of roads forming each "group" in Orange County's grouping analysis approach (see Appendix A), I-4 is "grouped" with parallel roadways serving similar functions. Furthermore, because I-4 is designated in the comprehensive plan as a "backlogged" road, the County permits an additional 15% degradation in the 91/92 peak hour directional volume.

Under Lee County's Traffic District Program, service volumes for each state, county, and municipal roadway link (including I-75) in a district are annually estimated and multiplied by its length. The vehicle-miles of travel for all roadway links are added together to determine the total vehicle-miles of travel available in the district. The minimum acceptable peak hour, peak season LOS standard for I-75 is D.

Site-Specific Congestion

While allowing for flexibility in the evaluation of concurrency, the City of Tampa wants to maintain its ability to regulate specific site features. Orange County's grouping analysis alternative will allow City of Tampa to accomplish this by requiring developers to meet link LOS standards but allowing for grouping analysis where it is reasonable.

Yet site specific congestion is best addressed through a variety of techniques, rather than relying predominantly on level of service and concurrency evaluations. The goal is to increase connectivity between the site and alternative means of accessing the site. Site specific issues should be addressed through the site plan review process and traffic impact studies required through the City's land development regulations for large scale development proposals. Discretionary standards for the review of large scale developments permit the City to evaluate whether the intensity of use is reasonable for that site and the adequacy of the on-site circulation system.

The development review process should address whether site accessibility is adequate for access needs. It is advisable to promote more than one access point for projects that generate substantial traffic—not only to reduce daily congestion, but also for emergency evacuation purposes. Developers could be required to provide alternative access to side or rear collector roads and tie their project into the circulation system of adjacent sites wherever possible to maximize accessibility. Transit access could be required —whether on-site or off-site. If off-site, the City should take action to assure that the project is accessible to pedestrians.

The City could also condition development approval upon the requirements that large-scale employers implement flex-time, telecommuting, ride-sharing, transit passes, or other transportation demand management techniques to help reduce peak hour congestion. Several communities have used this approach, although only marginally (see Table 3).
Several communities in Florida have regulatory and design strategies for managing access to land development, as a means of improving the functional capacity of arterials and managing site-specific congestion. These provisions are aimed at controlling turning movements, reducing the number of curbcuts, increasing opportunities for alternate access, and encouraging joint access and parking lot cross access on designated corridors. Although not retroactive, access management provisions can be applied to existing properties during a proposed change in land use, an increase in size or trips generated, a request for additional driveways, or during a change in roadway design that would affect the site.

Like the City of Tampa, the City of Orlando has been successful in addressing site-specific congestion through strong access management guidelines and transportation demand management strategies (see Appendix B). The comprehensive plan includes area-specific policies and calls for metropolitan activity center plans that focus on increasing pedestrian and bicycle access, developing internal transit circulators, and increasing vehicle occupancy and transit usage through parking management.
Access management can be applied to help reduce site-specific congestion in the City of Tampa. Joint access requirements, for example, are relevant to Tampa's many commercial strips and activity centers. These include provisions for temporary access, vacating these driveways as adjacent properties develop, responsibilities for joint maintenance, and joint access easements that are maintained through written agreement with the City and recorded with the deed.

Lee County requires the review of all development orders against the traffic district program, the interim/operational improvement program for backlogged roads, and the operational improvement program for constrained roads. Mitigation of traffic impacts can include advanced, lump sum payments of roads impact fees to Lee County, and developer construction or financing of identified improvements. As shown in Table 4, a developer in Lee County could provide funding or actually make the identified improvements.

### Table 4
Lee County Mitigated Traffic Impacts

<table>
<thead>
<tr>
<th>Roadway</th>
<th>Segment (or Intersection)</th>
<th>Auxiliary Lanes</th>
<th>Geometrics</th>
<th>Signal Timing/Progression</th>
<th>Misc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anderson Ave. (SR 82)</td>
<td>Fowler St./Ortiz Ave.</td>
<td>Provide right-turn lane at select locations (i.e., SB on Ortiz Ave.)</td>
<td>Realign side streets to eliminate offsets (i.e., Ford St.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anderson Ave. Immokalee Rd. (SR 82)</td>
<td>I-75/Lee Blvd.</td>
<td>Provide left-turn lane at select locations (i.e., EB at Buckingham Rd.)</td>
<td>Realign intersections to provide 90 degree angles (i.e., at Buckingham Rd. and Lee Blvd.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hanson St.</td>
<td>Fowler St./Metro Pkwy</td>
<td>Provide left-turn lanes EB and WB at Evans Ave.</td>
<td></td>
<td>See detailed study (Metro Pkwy/Hanson)</td>
<td></td>
</tr>
<tr>
<td>Metro Pkwy</td>
<td>Hanson St./Warehouse Rd.</td>
<td>Consider providing two-way left-turn land</td>
<td></td>
<td>See detailed study (Metro St.)</td>
<td></td>
</tr>
<tr>
<td>Metro Pkwy</td>
<td>Colonial Blvd./Idlewild St.</td>
<td></td>
<td></td>
<td>Under construction: widening to 4LD</td>
<td></td>
</tr>
</tbody>
</table>

Source: Lee County Planning Division, "The Lee Plan", revised and adopted September 1990.
Recent Activities of the 1993 Florida Legislative Session

The ELMS-III legislation passed in the 1993 Florida Legislative session may assist the City as it allows for more flexibility in transportation concurrency management. These changes will allow Tampa a greater array of alternatives in developing a workable concurrency management system. Section 163.3180 specifically addresses concurrency. In subsection 5a, the legislature recognizes that planning and public policy goals may conflict with concurrency requirements, and that an unintended result of concurrency is the discouragement of urban infill. As such, "exemptions from the concurrency requirement may be granted."

In subsection 5b, the state requirements for local conformance with FDOT LOS standards were revised to address only the Florida Intrastate Highway System. For all other roads on the State Highway System, local governments may "establish an adequate LOS standard that need not be consistent with any level-of-service standard established by the DOT." In addition, local government may now grant a concurrency exemption if the project is consistent with the comprehensive plan and "promotes public transportation or is located within an area designated for urban infill development, urban redevelopment, or downtown revitalization" (ss.5b). The legislation defines these terms as follows:

- **Urban Infill Development**--Development of vacant parcels in otherwise built-up areas where public facilities (sewer, roads, schools, recreation) are already in place; the average residential density is 5 DUs per acre; average nonresidential intensity is FAR1; and vacant, developable land does not constitute more than 10% of the area.

- **Urban Redevelopment**--Demolition and reconstruction or substantial renovation of existing buildings or infrastructure within urban infill areas or existing urban service areas.

- **Downtown Revitalization**--Physical and economic renewal of a CBD as designated by local government.

- **Projects that Promote Public Transportation**--"Projects that directly affect the provision of public transit, including transit terminals, transit lines and routes, separate lanes for the exclusive use of public transit services, transit stops (shelters and stations), and office buildings or projects that include fixed-rail or transit terminals as part of the building." Section 163.3164(28)

The legislation also provides exceptions from transportation concurrency for developments that post only special part-time demands on the transportation system. This is defined as a project that does not have more than 200 scheduled events during any calendar year and does not affect the 100th highest traffic volume hours (i.e., events are typically not scheduled to conflict with peak hour traffic).
The legislation retains a three year time frame for bringing transportation facilities on line, but provides that each local government may adopt as part of its plan, a long-term concurrency management system with a planning period of up to 10 years for specially designated districts where significant backlogs exist. Communities may adopt interim level of service standards on certain facilities and may rely on a 10-year schedule of capital improvements as a basis for issuing development permits in these districts. This may be extended to 15 years, depending upon:

1. The extent of the backlog;
2. Whether the backlog is on local or state roads;
3. The cost of eliminating the backlog;
4. The local government’s tax and other revenue-raising efforts

Transportation Concurrency Management Areas (TCMAs) are retained, but requirements are revised in an effort to make the process less cumbersome and complicated. The TCMA approach provides for establishing an areawide level of service standard in "a compact geographic area with an existing network of roads where multiple, viable alternative travel paths or modes are available for common trips." Local governments may establish areawide levels of service standards for transportation concurrency management areas based upon "an analysis that provides for a justification for the areawide level of service, how urban infill development or redevelopment will be promoted, and how mobility will be accomplished within the transportation concurrency management area."

Communities are no longer explicitly required to prepare a transportation mobility element to undertake a TCMA approach, although section 163.3177(j) of the bill does require communities in an urbanized area with a Metropolitan Planning Organization to prepare a new transportation element that incorporates all alternative modes of travel, including transit, ports, and aviation. The revised element must also address consistency between transportation and future land use plans.
Conclusion

In conclusion, this report has presented several alternatives, which DCA and FDOT have found acceptable, for addressing the concerns of meeting concurrency requirements. It has also identified several revisions to the State policy framework that afford much more flexibility for local transportation concurrency management. While the underlying concepts may be transferable for use by the City of Tampa, it is recognized that those approaches, or combinations thereof, must be tailored to the unique conditions characterizing Tampa’s transportation system.
BIBLIOGRAPHY


City of Miami Planning Department. "Transportation Corridors." Miami, FL: City of Miami Planning Department, September 1990.


---. "Special Amendments to the Comprehensive Development Master Plan." Miami, FL: Metropolitan Dade County Planning Department, April 1990.

APPENDIX A

ORANGE COUNTY ROADWAY GROUPS
APPENDIX A

The County’s Concurrency Management System shall designate and utilize a grouping method of analysis for planning applications. Such groupings shall be used to maximize the use of existing roadway facilities, particularly those constructed to divert traffic from adjacent congested roadway facilities. Such analysis shall not deviate from the adopted level of service standards referenced in Traffic Circulation Element Policy 1.1.1. Transportation analysis groupings shall be based on the criteria listed below (TC 1.1.5):

1. A roadway facility which is parallel to a constrained roadway facility for a distance of not less than two (2) miles; and

2. A roadway facility which is a distance of not less than two (2) miles from a constrained roadway facility; and

3. A roadway facility serving functions similar to the constrained roadway facility; and

4. A roadway facility which is designated or classified as at least a collector.

ORANGE COUNTY ROADWAY GROUPS

The following road analysis groupings shall be considered as part of the Concurrency Management System (THE 1.1.5.1).

A. GROUPING A
   Hiawassee Road from State Road 50 to Clarcona-Ocoee Road
   Pine Hills Road from State Road 50 to Clarcona-Ocoee Road
   Powers Road from State Road 50 to Clarcona-Ocoee Road
   Hastings Street from State Road 50 to Silver Star Road

B. GROUPING B
   State Road 50 from the Western Extension of the East-West Expressway to Orange Blossom Trail
   Western Extension of the East-West Expressway/Florida Turnpike from State Road 50 to Orange Blossom Trail
   Old Winter Garden from State Road 50 to Orange Blossom Trail
C. GROUPING C
Silver Star Road/Plant Street from State Road 50 to Orange Blossom Trail
Balboa Drive from Good Homes Road to Pine Hills Road
Story Road from Plant Street to Bluford Road

D. GROUPING D
Sand Lake Road from I-4 to Orange Blossom Trail
Beeline Expressway from I-4 to Orange Blossom Trail
Central Florida Parkway from I-4 to Orange Blossom Trail

E. GROUPING E
Goldenrod/Narcoossee Road from the Aloma Avenue to the Beeline Expressway
State Road 436 from the Beeline Expressway to Aloma Avenue

F. GROUPING F
East-West Expressway and its Eastern Extension from State Road 436 to State Road 50
State Road 50 from State Road 436 to the Eastern Extension of the East-West Expressway

G. GROUPING G
Lake Underhill Road from State Road 436 to Dean Road
Curry Ford Road form State Road 436 to Dean Road
H. GROUPING H
Rouse Road from Lake Underhill Road to the Seminole County line
Alafaya Trail from Lake Underhill Road to Seminole County Line

I. GROUPING I
Dean Road from Curry Ford Road to University Boulevard
Econlockhatchee Trail from Curry Ford Road to University Boulevard
Eastern Beltway from Curry Ford Road to University Boulevard

J. GROUPING J
John Young Parkway from the Osceola County line to Sand Lake Road
Orange Blossom Trail from the Osceola County line to Sand Lake Road

K. GROUPING K
Orange Avenue from Wetherbee Road to Osceola County
Landstar Boulevard from Wetherbee Road to Osceola County

L. GROUPING L
Lee Road from Orange Blossom Trail to U.S. 17-92
Lake Avenue/All American Boulevard from Orange Blossom Trail to U.S. 17-92
Maitland Boulevard from Forest City Road to U.S. 17-92

M. GROUPING M
Apopka-Vineland Road from Sand Lake Road to Conroy-Windermere Road
Dr. Phillips Road from Sand Lake Road to Conroy-Windermere Road
Turkey Lake Road from Sand Lake Road to Conroy-Windermere Road
N. GROUPING N
   Americana Boulevard/Vineland Road from Kirkman Road to Orange Blossom Trail
   Oak Ridge Road/International Drive from Kirkman Road to Orange Blossom Trail

O. GROUPING O
   Rock Springs Road/Park Avenue from Welch Road to State Road 441
   Thompson Road from Welch Road to State Road 436

P. GROUPING P
   Orange Blossom Trail from Lee Road to State Road 50
   John Young Parkway from Lee Road to State Road 50

Q. GROUPING Q
   Landstreet Road from Orange Blossom Trail to Orange Avenue
   Taft-Vineland Road from Orange Blossom Trail to Orange Avenue
   Wetherbee Road from Orange Blossom Trail to Orange Avenue

R. GROUPING R
   Orange Avenue from Wetherbee Road to Sand Lake Road
   Boggy Creek Road from Wetherbee Road to Sand Lake Road
APPENDIX B

ORLANDO ACCESS MANAGEMENT CODE
PART 1. MAJOR THOROUGHFARES

1A. DESIGN ALONG MAJOR THOROUGHFARES

Section 61.100 Purpose of Requirements For Design Along Thoroughfares

The design requirements of this Part are intended to recognize that Orlando's thoroughfares serve two divergent functions: moving traffic between dispersed parts of the City, and providing public access to individual properties located on the thoroughfare. Because of the conflicting requirements of these two functions, the traffic movement function of thoroughfares can be compromised by the provision of access to individual properties. It is the purpose of this Part to maintain an appropriate balance between these two thoroughfare functions, recognizing both the rights of property owners to reasonable access and the public purpose of efficient traffic flow.

Whenever any building site will take vehicular access from a major thoroughfare street designated by Chapter 61, Part 2B, the building site shall be designed in accordance with the requirements of this Part and in accordance with the Access Management Classification System and Standards. Chapter 61, Part 2B, Sections 61.211 - 61.213.

DRIVEWAYS AND CURBCUTS

Section 61.101 General Requirements

In addition to any applicable driveway approach and curbcut requirements of Chapter 61, Part 2E, the following standards shall apply:

Section 61.102 Curbcut Spacing

The minimum distance between curbcuts on any one block face, whether or not such curbcuts are located on the same property, shall be based upon the Access Management Classification System and Standards, Chapter 61, Part 2B, Sections 61.211 - 61.213.

Section 61.103 Spacing Reductions and Joint-Use Driveways

Where the existing configuration of properties and curbcuts in the vicinity of the building site precludes spacing of a curbcut access in accordance with the Access Management Classification System and Standards, Chapter 61, Part 2B, Sections 61.211 - 61.213, the Public Works Director shall be authorized to waive the spacing requirement if he finds that all of the following conditions have been met:

(a) Joint Use Driveways - Wherever feasible, the Public Works Director shall require the establishment of a joint-use driveway serving two abutting building sites, with cross-access easements provided in accordance with Section 61.108.

(b) Unified Access and Circulation - Where feasible, the building site shall incorporate unified access and circulation in accordance with the requirements of Sections 61.108 - 61.113.
(c) **Curbcut Closings** - The property owner shall agree to close and eliminate any pre-existing curbcuts on the building site after the construction of both sides of the joint-use driveway, in accordance with the requirements of Section 61.107.

![Diagram of old curbcuts closed and joint use driveway reduced space]

**Section 61.104  Corner Clearance Measurement**

This distance is measured from the closest edge of pavement of the intersecting road to the closest edge of pavement of the connection along the right-of-way line. Where the right-of-way line is offset, this distance shall be measured along the traveled way of the controlled access facility. The future edge of pavement should be used where planning for the intersecting road has defined this edge location.

**Section 61.105  Driveway Sight Distance**

Driveway Approaches must be so designed and located that an exiting vehicle will have an unobstructed sight distance (exclusive of tree trunks, and posts or columns less than one foot in diameter) in accordance with the following schedule:

<table>
<thead>
<tr>
<th>Posted Speed</th>
<th>Sight Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 mph</td>
<td>150 ft</td>
</tr>
<tr>
<td>30</td>
<td>175</td>
</tr>
<tr>
<td>35</td>
<td>225</td>
</tr>
<tr>
<td>40</td>
<td>275</td>
</tr>
<tr>
<td>45</td>
<td>325</td>
</tr>
<tr>
<td>50+</td>
<td>350</td>
</tr>
</tbody>
</table>

**Measurement Rules** - The sight distance shall be measured from the centerline of the driveway.
Section 61.106  
**One-way Driveways**

The Public Works Director shall be authorized to allow a pair of one-way driveways in lieu of a two-way driveway otherwise permitted by this Part, where traffic flow will be improved as a result.

Section 61.107  
**Closing of Existing Curbcuts**

Wherever a driveway or curbcut is permitted in accordance with the requirements of the Access Management Classification System and Standards, access rights along the remaining thoroughfare frontage shall be dedicated to the City, and all other pre-existing driveways and curbcuts shall be closed and eliminated. In the case of a joint-use driveway, the property owner shall at his own expense, enter into a written agreement with the City, recorded in the records of Orange County and running with the land, that pre-existing curbcuts on the building site will be closed and eliminated after the construction of both sides of the joint-use driveway.

---

**UNIFIED ACCESS AND CIRCULATION**

Section 61.108  
**General Requirements**

In addition to any other applicable subdivision and building site design requirements of this Chapter, the following standards shall apply:

Section 61.109  
**Cross-Access Corridors**

The Planning Official, in coordination with the Public Works Director shall be authorized to designate cross-access corridors on properties adjacent to thoroughfares. Such designation may be made in connection with the approval of any subdivision or site plan within the affected area, or as part of an overall planning program.
Design of Cross-Access Corridors - Cross-access corridors shall be designed to provide unified access and circulation among parcels on each block of the thoroughfare, in order to assist in local traffic movement (see illustration). Each corridor should be designed to include the following elements:

(a) A continuous linear travel corridor extending the entire length of the block which it serves, or at least 1000 feet linear frontage along the thoroughfare, and having a design speed of 10 mph. Final design of the facility shall be approved by the Public Works Director.

(b) Sufficient width to accommodate two-way travel aisles designed to accommodate automobiles, service vehicles and loading vehicles in accordance with the requirements of Chapter 61, Part 3.

(c) Stub-outs and other design features which made it visually obvious that the abutting properties may be tied in to provide cross-access.

(d) Linkage to other cross-access corridors in the area.

Easements Required to be Dedicated - Wherever a cross-access corridor is designated by the Planning Official no subdivision plat, site plan or other development shall be approved unless the property owner shall grant an easement, running with the land, allowing general cross-access to and from the other properties in the affected area. Such easement shall be recorded in the public records of Orange County and constitute a covenant running with the land.

Indication on the Zoning Map - Wherever the Planning Official designates a cross-access corridor, he shall cause the corridor to be indicated on the Official Zoning Map by means of dashed or dotted lines or other suitable symbols. This indication shall distinguish those portions of the designated corridor for which easements have been granted.

Section 61.110 Coordinated or Joint Parking Design

Wherever a cross-access corridor has been designated in accordance with Section 61.109, the business sites within the affected area shall be so designed as to provide for mutually coordinated or joint parking, access and circulation systems, and shall include stub-outs and other design features as necessary to make it visually obvious that the abutting properties may be tied in to create a unified system.

Development Prior to Abutting Use - In the event that the building site is developed prior to an abutting property, it shall be designed to ensure that its parking, access and circulation may be easily tied in to create a unified system at a later date.

Existing Abutting Uses - In the event that the building site abuts an existing developed property, it shall be so designed as to tie into the abutting parking, access and circulation to create a unified system unless the Planning Official finds that this would be impractical.
Section 61.111  Design to Accommodate Service Vehicles

Each unified access and circulation system shall be so designed that the cross-access corridor(s) and coordinated or joint parking systems will allow adequate access for service and loading vehicles to each business site, and all easements, agreements and stipulations shall so provide.

Section 61.112  Joint Cross-Access Maintenance Easement

Wherever cross-access corridors or coordinated or joint parking design is provided in accordance with this Part, each applicant for subdivision plat or site plan approval shall provide such easements, agreements and stipulations as may be necessary to ensure that adjoining properties may be easily tied together to create a unified system allowing general cross-access to and from the other properties in the affected area and have joint maintenance responsibility for said easement. Such easements, agreements and stipulations shall be recorded in the public records of Orange County and constitute a covenant running with the land.

Section 61.113  Tie-Ins to Abutting Properties

Phased Development in Same Ownership - Where the abutting properties are in the same ownership, no subdivision plat or site plan shall be approved unless all building sites within the affected area are made subject to the necessary easements, agreements and stipulations required by this Part, which shall be recorded as a binding lot agreement prior to the issuance of any Building Permits.

Leasing Situations - Where individual building site(s) within an overall development site are leased rather than owned fee-simple, the development site shall be subject to all requirements of this Part. The owner of the development site and the lessee of the building site shall be jointly and individually responsible for compliance with these requirements. Failure to comply shall be considered a violation of this Chapter subject to enforcement in accordance with Chapter 5 of the City Code. In such cases, citations of violation shall be issued both to the owner of the development site, and to all lessees within the affected area.
Abutting Properties in Different Ownership - Where the abutting properties are in different ownership cooperation between the various owners is encouraged but not required. Only the building site(s) under consideration for development approval shall be required to be subject to the necessary easements, agreements and stipulations required by this Part which shall be recorded as a Binding Lot Agreement prior to the issuance of any Building Permits. Abutting properties developed at a later date shall at that time provide unified access and circulation, together with all necessary easements, agreements and stipulations.

Where Unified Access and Circulation is not Practical - The Planning Official in coordination with the Public Works Director shall be authorized to modify the requirements of this Part where he finds that abutting properties have been so developed that it is clearly impractical to create a unified access and circulation system within part or all of the affected area.
2B. MAJOR THOROUGHFARE PLAN

Section 61.210 Enumeration

The following street center line setbacks have been established to accommodate changes which should occur within the City of Orlando generally as a result of the increase of vehicular and pedestrian traffic, congestion and intensified use of property associated with growth and development and based upon Transportation Planning Bureau Technical Report #8, Plan Recommendations October 1989.

Street center line setbacks are established by the Transportation Planning Bureau within the limits of the right-of-way for each street. In establishing such center lines the Transportation Planning Bureau shall give consideration to previous dedications, established section lines and logical street alignments. The center line setbacks and typical cross sections apply to both sides of the streets unless otherwise specified.

All segments of the Major Thoroughfare Plan have been assigned an access classification consistent with the standards of Section 61.211.

Section 61.211 Access Management Classification System

This section adopts an access classification system and standards to implement the Traffic Circulation Element of the Growth Management Plan for the regulation and control of vehicular ingress to, and egress from the Major Thoroughfare System. The implementation of the classification system and standards is intended to protect public safety and general welfare, provide for the mobility of people and goods, and preserve the function integrity of the Major Thoroughfare System. All segments of the Major Thoroughfare System shall be assigned an access classification and standards. The standards shall be the basis for connection permitting and the planning and development of City-related road construction projects.

Section 61.212 Standards for the Access Management System

(a) Figure 1 provides the classification system and standards for each major thoroughfare within the City. Access classes are defined as follows:

(b) Access Class 2 - These are highly controlled facilities distinguished by the ability to serve high speed and high volume traffic over long distances in a safe and efficient manner. These facilities also are distinguished by a system of existing or planned frontage roads. This access class is characterized by a highly controlled limited number of connections, median openings, and infrequent traffic signals.

(c) Access Class 3 - These facilities are controlled access roads where direct access to abutting land will be controlled to maximize the operation of the through traffic movement. This class will be used where existing land use and roadway sections have not completely built out to the maximum land use or roadway capacity or where the probability of significant land use change in the near future is high. These facilities will be distinguished by existing or planned restrictive medians and maximum distance between traffic signals and driveway connections.

61 - 11 Supp. 91-3 (9-91)
(d) **Access Class 4** - These facilities are controlled access roads where direct access to abutting land will be controlled to maximize the operation of the through movement. This class will be used where existing land use and roadway sections have not completely built out to the maximum land use or roadway capacity or where the probability of significant land use change in the near future is high. These facilities are distinguished by existing or planned non-restrictive median treatments.

(e) **Access Class 5** - This class will be used where existing land use and roadway sections have been built out to a greater extent than those roadway segments classified as Access Classes 3 and 4 and where the probability of major land use change is not as high as those roadway segments classified Access Classes 3 and 4. This access class also will be used to classify collectors. These facilities will be distinguished by existing or planned restrictive medians.

(f) **Access Class 6** - This class will be used where existing land use and roadway sections have been built out to a greater extent than those roadway segments classified as Access Classes 3 and 4 and where the probability of major land use change is not as high as those roadway segments classified Access Classes 3 and 4. This access class also will be used to classify collectors. These facilities will be distinguished by existing or planned non-restricted medians or centers.

(g) **Access Class 7** - This class shall be used where existing roadway sections and existing land uses are built out to the maximum feasible intensity and where significant road widening will be limited. This class will be assigned to facilities with high speed travel difficulties. These facilities can have either restrictive or non-restrictive medians.

(h) **Access Class 8** - This class shall only be used in the zoning district AC-3A (Downtown Orlando), where the existing roadway sections are built out to the maximum feasible and other modes of transportation are encouraged. This class also recognizes the difficulty of providing high speed travel but shall not be used to compromise the public health, welfare or safety.

(i) Connection permits on every facility segment on the Major Thoroughfare Plan issued after adoption of this amendment shall meet the requirements of this section.

**Section 61.213 Other Access Management Standards Considerations-Existing Properties**

(a) At the time of adoption of this amendment by City Council, existing permitted connections, median openings, and signals not meeting the standards of the assigned classification shall be allowed to remain in place. Such features shall be brought into compliance with the standards of the assigned classification in the Major Thoroughfare Plan under the following conditions:

1. When new connection permits are needed;
2. when changes in existing property use which increase land use intensity on the site;
3. substantial enlargements or improvements;
4. significant change in trip generation according to the most recent trip generation manual or independent fee calculation; or
5. as changes to the roadway design allow.
(b) A development site that cannot meet the minimum connection spacing standards of Figure 1 on a particular segment of the adjacent roadway shall at least comply with the minimum connection standard depicted in Figure 2. These conditions may limit access to a specific use, prohibit an increase in intensity as outlined in Chapter 58, Part 1, Table 3, Land Use Intensity Table, and require joint use driveways and cross-access easements. Redevelopment sites which qualify for these exceptions shall not have site frontage greater than 660 feet under single ownership.

(c) Due to inadequate lot frontage, location of existing driveways on abutting properties or other similar physical constraints, a development site may not meet the minimum spacing requirements. A development site that cannot be permitted access and has no reasonable alternative means of access to the public road system shall be issued approval for a non-conforming connection by the Public Works Director with conditions specified in Section 61.213(b).

(d) The minimum connection and median opening spacings specified in this section (Figures 1 and 2 Access Management Classification System) may be waived if the Public Works Director requires auxiliary lanes or storage lanes. Greater distances between connections and median openings shall be required by the City to provide sufficient site-specific turn lane storage, or to further the goals, objectives, and policies of the Growth Management Plan, based on health, safety, or welfare issues.

(e) Where a development site is composed of more than one building site, the building sites shall not be considered as separate properties for the purpose of the standards associated with the access class of the roadway segment. Such sites with frontage exceeding the minimum standards of the assigned access class may not be permitted automatically the maximum number of connections, median openings, or signals possible based on the spacing standards. The number of connections permitted shall be the minimum number necessary to provide reasonable access based on operational, safety and functional integrity considerations.

(f) Development sites and building sites directly abutting roadways where corridor studies adopted by City Council shall comply with the access management standards contained in such studies.

(g) The speed referred to in Figures 1 and 2 shall indicate the speed limit posted for the roadway segment at the time of the access class designation. When a change in posted speed limit on a segment is approved by the pertaining authority (the City of Orlando, Orange County or Florida Department of Transportation), the access class designation shall be updated and appropriately applied.

(h) New connections shall not be located within the functional area of an existing intersection. Corner clearances for connections must meet or exceed the minimum connection spacing requirements for the assigned access class. A single connection may be placed closer to the intersection if corner clearance standards cannot be met to provide reasonable access to the property. Approval of a connection may be provided upon review of a study performed by a registered engineer provided by the applicant. The Planning Official and the Public Works Director shall determine that the connection does not create a safety or operational problem on the roadway or at the intersection.
(i) Traffic signals meeting signal warrants may be spaced at intervals closer than the minimum standard for the access class for the roadway segment when the Public Works Director determines that the addition of such signals is needed for the safety and operation of the roadway based on a detailed engineering study performed by a registered engineer and subject to review by the Planning Official.
## ACCESS MANAGEMENT CLASSIFICATION SYSTEM AND STANDARDS

**STANDARDS BY ACCESS CLASS**

_Update: April 3, 1991_

<table>
<thead>
<tr>
<th>Functional Classification</th>
<th>Access Class</th>
<th>Facility Design Features</th>
<th>Minimum Constriction Spacing</th>
<th>Directional Access Opening</th>
<th>Full Access Opening</th>
<th>Minimum Signal Spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Median Treatment &amp; Service Road</td>
<td>Posted Speed</td>
<td>Posted Speed</td>
<td>Posted Speed</td>
<td>Posted Speed</td>
</tr>
<tr>
<td>Arterials</td>
<td>2*</td>
<td>Restrictive Median w/ Frontage Road (Divided Arterial with parallel service road)</td>
<td>1,320 Feet</td>
<td>660 Feet</td>
<td>1,320 Feet</td>
<td>660 Feet</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Restrictive Median (Divided Arterial)</td>
<td>660 Feet</td>
<td>440 Feet</td>
<td>1,320 Feet</td>
<td>(Not Applicable)</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Non-Restrictive Median (Continuous Left Turn Lane or Undivided Road)</td>
<td>660 Feet</td>
<td>440 Feet</td>
<td>(Not Applicable)</td>
<td>(Not Applicable)</td>
</tr>
<tr>
<td>Collectors</td>
<td>5</td>
<td>Restrictive Median (Raised/Imagined median treatment)</td>
<td>440 Feet</td>
<td>245 Feet</td>
<td>660 Feet</td>
<td>660 Feet</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Non-Restrictive Median (Continuous Left Turn Lane or Undivided Road)</td>
<td>440 Feet</td>
<td>245 Feet</td>
<td>(Not Applicable)</td>
<td>(Not Applicable)</td>
</tr>
<tr>
<td>Arterials, Collectors</td>
<td>7</td>
<td>With or Without Median</td>
<td>125 Feet</td>
<td>125 Feet</td>
<td>330 Feet</td>
<td>330 Feet</td>
</tr>
<tr>
<td>Residential Collectors</td>
<td>8</td>
<td>Zoning District A-5A (Downtown Orlando)</td>
<td>(Not Applicable)</td>
<td>125 Feet</td>
<td>(Not Applicable)</td>
<td>(Not Applicable)</td>
</tr>
</tbody>
</table>


NOTE: Access Class 1 is reserved for limited access facilities.

*Frontage roads identified in corridor studies shall comply with Access Class 7 standards.
**ACCESS MANAGEMENT CLASSIFICATION SYSTEM AND STANDARDS**

**SUBSTANDARD CONNECTIONS ALLOWED AT INTERSECTIONS**

Update: April 3, 1991

<table>
<thead>
<tr>
<th>Functional Classification</th>
<th>Access Class</th>
<th>Facility Design Features (Median Treatment &amp; Service Road)</th>
<th>Standard Connection Minimum Spacing</th>
<th>Substandard Connection Allowances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arterials</td>
<td>2</td>
<td>Restrictive Median w/Frontage Road (Divided Arterials with parallel service road (a))</td>
<td>Posted Speed &gt; Than 45 mph 660 Feet</td>
<td>Right In Or Out Only III</td>
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<tr>
<td></td>
<td>3</td>
<td>Restrictive Median (Divided Arterials)</td>
<td>660 Feet 440 Feet</td>
<td>330 Feet 165 Feet 660 Feet 330 Feet</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Non-Restrictive Median (Continuous Left Turn Lane or Undivided Roads)</td>
<td>660 Feet 440 Feet</td>
<td>165 Feet 125 Feet 330 Feet 220 Feet</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Restrictive Median (Raised/depressed median treatment)</td>
<td>440 Feet 245 Feet</td>
<td>220 Feet 125 Feet (Not Applicable)</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Non-Restrictive Median (Continuous Left Turn Lane or Undivided Roads)</td>
<td>440 Feet 245 Feet</td>
<td>220 Feet 125 Feet (Not Applicable)</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>With or Without Median</td>
<td>125 Feet 125 Feet</td>
<td>(Not Applicable) (Not Applicable)</td>
</tr>
<tr>
<td>Arterials, Collectors, Residential Collectors</td>
<td>8</td>
<td>Zoning District AC-3A (Downtown Orlando)</td>
<td>125 Feet 125 Feet</td>
<td>(Not Applicable) (Not Applicable)</td>
</tr>
</tbody>
</table>

[1] NOTE: Right In OR Right Out depending upon the location of the corner site on the intersection. (See FIGURE C)


*Frontage roads identified in corridor studies shall comply with Access Class 7 standards.*
ACCESS MANAGEMENT
CLASSIFICATION SYSTEM AND STANDARDS

Substandard Connections allowed at intersections
Typical Diagram

61-17 Supp. 91-3 (9-91)
PEDESTRIAN STREET REQUIREMENTS

Section 61.250  Purpose of Streetscape and Pedestrian Street Requirements

Streetscape and Pedestrian street requirements are established to provide systems of pedestrian-oriented streets, walkways and open spaces of high quality; to beautify streets and create a sense of orientation for the street user; to protect, maintain and enhance the integrity of historic districts and features; and to promote continuity and compatibility among private and public developments.

Streetscape and Pedestrian street requirements also implement the design principles of the Downtown Growth Management Plan and apply these principles to other areas of the City, to link major open spaces through landscaped streets or walkways; to incorporate isolated open spaces into a coherent pattern; to "green" the Downtown and to incorporate the Orlando imagery of water and foliage into these areas.

The pedestrian circulation system and open space system are closely linked, and are complimentary to the Major Thoroughfare Plan set forth in Chapter 61, Part 2B.

Section 61.251  Classification of Pedestrian Streets

Pedestrian streets shall be divided into three categories as follows. Designated streets in each category shall be as shown in Figures 7 and 8.

Primary Pedestrian Street - These streets, although they sometimes play an important vehicular traffic role, are the ones which have been designated to receive strong pedestrian emphasis, either because they carry heavy pedestrian flows or because they play an important visual role or because they link important activities or open spaces. Emphasis on the pedestrian requires wide sidewalks, frequently-spaced street trees, and other amenities to make walking a pleasant experience.

Secondary Pedestrian Street - These streets are also important pedestrian routes, but play a secondary role in the visual and functional design structure for the streetscape.

Mall - The Mall is a pedestrian walkway which will include provision for minor vehicular traffic required for emergency and service functions, surveillance, or access essential to existing facilities such as drive-in banks or other businesses.
Section 61.252 Designation of Additional Pedestrian Streets

Pedestrian streets may be designated by ordinance amending this Part in any area of the City for which a comprehensive study has been undertaken to assess the need for pedestrian streets and their relationship to the purposes of this Part. Individual streets shall not be designated as pedestrian streets in the absence of such a comprehensive study.

Section 61.253 Design of Pedestrian Streets

Cross-sections and detailed design of Pedestrian Streets shall be in accordance with the Streetscape Design Guidelines established by the Orlando Downtown Development Board.
PART 3. PARKING AND LOADING

3A. OFF-STREET PARKING

Section 61.300 Purpose of Off-Street Parking Requirements

The off-street parking requirements of this Part are intended to provide minimum standards necessary for the parking needs of the various uses permitted by this Chapter, to protect the capacity of the City's street system and avoid undue congestion on those streets, and to lessen unnecessary conflicts between vehicles and pedestrians. Methods are also provided to encourage the use of bicycles and mass transit in order to reduce potential demand for off-street parking.

Section 61.301 When Off-Street Parking Requirements Apply

The requirements of this Part apply to all development, whether new structures or alterations to existing structures. Off-street parking shall be available for use prior to the issuance of any Certificate of Occupancy or Occupational License.

Compliance with Regulations - The requirements for off-street parking space applicable to any use shall be a continuing obligation of the owner and occupant of the property on which any such use is located, so long as the use is in existence and its need for parking facilities continues. It shall be unlawful for an owner or occupant of any use affected by this Part to discontinue, change or dispense with, or cause the discontinuance or change of the required parking spaces apart from the discontinuance of such use, without establishing alternative parking space which meets the requirements of, and is in compliance with this Part, or for any person to use such building without acquiring such land for parking which meets the requirements of, and is in compliance with this Part.

Determinations in Cases of Uncertainty - Where parking design standards are not specifically stated herein, determinations shall be made by the Zoning Official based on the standards and guidelines of the Institute of Transportation Engineers. Determinations of required number of spaces for uses not specifically listed in this Section shall be made by the Zoning Official based on requirements for uses with similar demand.

PARKING DESIGN REQUIREMENTS

Section 61.302 General Requirements

All parking facilities, whether parking lots or parking garages, shall conform to the following requirements:

Location of Parking Spaces - Permanent parking spaces required by this Part shall be located on the same building site as the use they serve, or on a properly zoned and improved lot within 300 feet of the building site. However, this requirement shall not apply to parking provided in connection with the payment-in-lieu-of-parking provisions of the Downtown Parking Requirements contained in this Part.
Remote Parking Encumbrance - Whenever parking required by this Part is not located on the same building site as the use it serves, the applicant for such use shall submit with the application an instrument duly executed, approved by the City Attorney, and recorded in the Public Records of Orange County, Florida, which subjects the parcels or tracts of land to parking uses in connection with the principal use for which it is available.

Existing and Proposed Rights-of-Way - All required parking spaces shall be located outside of existing street rights-of-way and proposed right-of-way lines established by the Major Thoroughfare Plan (Chapter 61, Part 2B). All required parking spaces shall be located behind proposed right-of-way lines established by the Major Thoroughfare Plan (Chapter 61, Part 2B) and shall be arranged so that the required landscaping may be provided behind said line.

Front Yard Parking - All parking spaces and vehicular use areas shall be so located that required parking lot landscaping and bufferyards can be provided behind the existing right-of-way line or proposed right-of-way line established by the Major Thoroughfare Plan. In all residential and office zoning districts except MXD-2, parking facilities shall be prohibited in the required front yard. In the IP districts, parking lots and vehicular use areas shall be prohibited in the front 50% of required front yard setbacks. These provisions on Front Yard Parking apply to property with existing structures, as well as to properties with structures which are new or about to be altered.

Maneuverability - Parking lots and vehicular use areas for all multifamily and non-residential uses, and all uses on major thoroughfares, shall be designed so as to eliminate the need for backing and maneuvering from, on or onto streets, pedestrian ways or bikeways in order to maneuver out of parking spaces or leave the lot.

Accessibility to Dwellings - Parking spaces for dwellings shall be not more than 250 feet from the dwelling unit(s) they are intended to serve.

Bus Spaces - Within Activity Core districts only, bus spaces may be provided in lieu of up to 30% of required parking spaces. All spaces, aisles and accessways for busses shall be prominently marked and posted, and shall be so designed as to provide a passenger drop-off point convenient to the principal entrance of the use. Where such spaces are provided, the total off-street parking area provided shall not be reduced below that which would ordinarily be required and the Final Site Plan shall so demonstrate. One (1) bus space will be equal to seven (7) parking spaces. Said bus space shall be 12 ft. by 55 ft.

Motorcycle Spaces - In building sites containing at least 20 parking spaces, motorcycle parking spaces may be provided in lieu of or in addition to automobile spaces in accordance with the following standards:

(a) Minimum Width = 3 feet.

(b) Minimum Depth = 10 feet.

(c) All motorcycle parking shall be clearly identified through signage or marking as reserved for motorcycles.

(d) Where motorcycle spaces are provided in lieu of automobile spaces, not more than 2% of all automobile spaces or one space (whichever is greater) may be so converted.
**Lighting** - Lights used to illuminate any off-street parking facility shall be arranged so as not to create a hazard or nuisance to traffic or to adjacent properties.

**Encroachment** - The front of a motor vehicle may encroach into any landscaped area a maximum of 2.0 feet from the stopping edge of a wheel stop or curb, when such protective devices are provided. This vehicular encroachment area may be counted as part of the required parking space depth.

**Parking in Non-designated Areas Prohibited** - On any lot or building site for which parking spaces and vehicular use areas have been constructed either on-site, off-site or on-street, parking or storage of vehicles shall be prohibited on any portion of the building site except on those areas which have been specifically constructed as parking spaces or vehicular use areas.

**Airport Hotels** - Airport hotels shall meet the following criteria:

(a) Located in the Metropolitan Activity Center (MAC) south of the Beeline and north of the Beeline on the east and west sides of Semoran Boulevard. In cases of uncertainty, the Planning Official shall determine the MAC boundary.

(b) Provide a twenty-four (24) hour shuttle service to the Orlando International Airport.

(c) Provide at least one courtesy phone in the Terminal Building of the Orlando International Airport.

**Section 61.303 Surface Parking Lots**

**Parking Space and Aisle Dimensions** - As shown in Figure 10. These standards provide a number of alternatives from which a developer may choose depending on the needs of the use being served. In designing off-street parking, spaces and aisles may all be designed to a specific standard, or a mix of different design arrangements may be provided subject to the approval of the Zoning Official. However, compact spaces shown in Figure 15 shall be prohibited in surface parking lots.

**Accessory Parking in Certain Districts** - Lots located in R-3A, R-3B, R-3C, R-3D, MXD-1, MXD-2, O-1, O-2, O-3, MU-1, MU-2, I-G, I-P districts which are contiguous for a minimum of 50 ft. to an Activity Core district or to a permitted or conditional use in a MU-1 district may be approved as a conditional use for use as a free parking lot to serve only said contiguous use provided that:

(a) No advertising signs shall be erected on the lots;
(b) No structures, other than approved walls or fences, shall be erected on the lots;
(c) Lots separated by a street shall not be deemed to be abutting;
(d) Access to and from streets abutting such parking lots shall be prohibited if any abutting property (including across the street) is zoned as a residential zoning district.
(e) The parking lot shall be screened from surrounding uses in accordance with the Bufferyard requirements of Chapter 60, Part 2E for the principal use which it serves.

No such accessory parking shall be approved for any discouraged use in an MU-1 district nor for any use made permitted or conditional by an SP Overlay District.
**FIGURE 9: MINIMUM PARKING SPACE AND AISLE DIMENSIONS FOR PARKING FACILITIES**

All parking spaces, aisles and modules shall conform to the following minimum standards:

<table>
<thead>
<tr>
<th>Parking Angle</th>
<th>Spaces</th>
<th>Aisles</th>
<th>Modules</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Width</td>
<td>Depth to Wall</td>
<td>Depth to Interlock</td>
</tr>
<tr>
<td>45°</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.5 ft. space</td>
<td>12.0</td>
<td>17.5</td>
<td>15.3</td>
</tr>
<tr>
<td>9.0 ft. space</td>
<td>12.7</td>
<td>17.5</td>
<td>15.3</td>
</tr>
<tr>
<td>9.5 ft. space</td>
<td>13.4</td>
<td>17.5</td>
<td>15.3</td>
</tr>
<tr>
<td>60°</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.5 ft. space</td>
<td>9.8</td>
<td>19.0</td>
<td>17.5</td>
</tr>
<tr>
<td>9.0 ft. space</td>
<td>10.4</td>
<td>19.0</td>
<td>17.5</td>
</tr>
<tr>
<td>9.5 ft. space</td>
<td>11.0</td>
<td>19.0</td>
<td>17.5</td>
</tr>
<tr>
<td>75°</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.5 ft. space</td>
<td>8.8</td>
<td>19.5</td>
<td>18.8</td>
</tr>
<tr>
<td>9.0 ft. space</td>
<td>9.3</td>
<td>19.5</td>
<td>18.8</td>
</tr>
<tr>
<td>9.5 ft. space</td>
<td>9.8</td>
<td>19.5</td>
<td>18.8</td>
</tr>
<tr>
<td>90°</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.5 ft. space</td>
<td>8.5</td>
<td>18.5</td>
<td>18.5</td>
</tr>
<tr>
<td>9.0 ft. space</td>
<td>9.0</td>
<td>18.5</td>
<td>18.5</td>
</tr>
<tr>
<td>9.5 ft. space</td>
<td>9.5</td>
<td>18.5</td>
<td>18.5</td>
</tr>
<tr>
<td>Compact Space - 90°**</td>
<td>7.5 ft. space</td>
<td>7.5</td>
<td>17.0</td>
</tr>
</tbody>
</table>

* Measured between ends of space lines.

** Compact spaces are permitted in parking garages but prohibited in surface parking lots.

See Sections 58.3212 and 58.3213.
Section 61.304 Parking Garages (or Structures)

Parking Space and Aisle Dimensions - As shown in Figure 10. These standards provide a number of alternatives from which a developer may choose, depending on the needs of the use being served. In designing a particular parking garage, spaces and aisles may all be designed to the same standard, or a mix of different sized spaces may be provided subject to the approval of the Zoning Official.

Compact Spaces - Up to 30% of the required parking spaces in any parking garage may be designed as Compact Spaces in accordance with the standards of Figure 15. Such spaces shall be prominently marked and posted.

Section 61.305 Requirements For Particular Uses

Funeral Homes - Funeral homes shall provide on-site service drives of sufficient size that streets need not be used to form funeral processions.

Personal Storage Facilities - See Chapter 58, Part 4H.

NUMBER OF PARKING SPACES

Section 61.306 When Additional Parking Spaces Are Required

New Use - Whenever a new use is established, parking spaces shall be provided in the amount required by this Part.

Expansion of a Building or Structure - Whenever an existing building or structure having a conforming number of parking spaces is enlarged so that the available parking facilities are less than required by this Part, additional spaces shall be provided in the amount required by this Part.

Change of Use - Whenever a change of use occurs, not involving structural enlargement to an existing use having a conforming number of parking spaces, so that the available parking facilities are less than required by this Part, additional spaces shall be provided in the amount required by this Part. However, when the additional parking requirement is less than 25% of the parking required for the previous conforming use, the additional spaces need not be provided.

Expansion or Change in Nonconformities - Whenever an expansion or change of use occurs to a building or structure having a nonconforming number of parking spaces, the nonconformity requirements of Chapter 58, Part 7.
Section 61.307 Counting Rules

Multiple Uses, Joint Use of Facilities - In the case of more than one principal use on a single building site, the required number of parking spaces shall be the sum of the separate requirements for the individual uses. No parking spaces provided to meet the requirements for one building or use shall be counted as part of the spaces required for another building or use, unless the Zoning Official determines that the uses are of such a nature that the periods of use of parking facilities will not conflict. Nothing in this Section shall be construed to prevent the joint use of parking facilities for two or more buildings or uses, provided that the minimum design and number of space requirements of this Chapter are otherwise met.

No Credit for Demolished Floor Area - Whenever any building or structure, or portion thereof is fully demolished and new construction followed, the pre-existing gross floor area shall not receive credit in the calculation of off-street parking required for the new building or structure.

Fractional Spaces - When units or measurements determining the number of required off-street parking spaces result in a requirement of a fractional space, any fraction up to and including one-half (1/2) shall be disregarded and fractions over one-half (1/2) require one off-street parking space.

Unmarked Spaces - If spaces are not shown by actual plan and count, 400 sq. ft. of area per parking space shall be used in determining the equivalent number of spaces.

Section 61.308 Parking Space Requirements

Parking spaces for residential uses shall be provided as listed in Figure 12.

Parking spaces for non-residential uses shall be provided as listed in Figure 13.

Section 61.309 Alternative Minimum Parking Requirements in Certain Traditional City Districts

Within the Traditional City, all uses shown on the Non-Residential Parking Chart (Figure 12) except those indicated by an asterisk (*) may use the following alternative minimum number of parking spaces in lieu of the requirements shown on that chart. However, the special requirements shown in Column 6 of the Parking Chart shall continue to apply.

Whenever these alternative minimum requirements are used, the property owner must dedicate cross-access and through-access easements to all abutting properties in O, MXD, MU or AC districts, and must design all of the building site(s) to incorporate joint access and circulation among and between the building site(s) and all abutting properties in O, MXD, MU and AC districts. In addition, the building site(s) must be designed to incorporate the pedestrian-oriented design features of Chapter 62 (the Traditional City O, MXD, MU and AC standards).

Whenever a building site is eligible to use these alternative minimum requirements, no variance of number of parking spaces shall be considered by the Board of Zoning Adjustment in lieu of the alternative minimum requirement.
FIGURE 12: MINIMUM NUMBER OF PARKING SPACES
REQUIRED FOR RESIDENTIAL USES

Use this chart to determine the number of parking spaces required for residential uses. The uses listed in Column 1 shall provide one off-street parking space for each unit of measurement or fraction thereof shown in Columns 2 or 3. Special requirements are shown in Column 4 and shall be in addition to those spaces required in Columns 2 or 3. Where there are two or more criteria, the greater requirements shall apply.

<table>
<thead>
<tr>
<th>Dwelling Unit</th>
<th>Rated Patron Capacity</th>
<th>Special Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessory Apartments</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Adult congregate living facilities</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Attached dwellings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-bedroom</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2-bedrooms</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3-or more bedrooms</td>
<td>2/unit</td>
<td></td>
</tr>
<tr>
<td>Group housing</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Mobile home dwellings</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Multi-family dwellings</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Efficiency apt. | 1 | | For government assisted elderly housing, these standards shall be reduced by 40%. For housing in a mixed use development, these standards shall be reduced by 25%.
| Studio & 1-bedroom | 1.5/unit | | |
| 2-bedrooms | 1.75/unit | | |
| 3 or more bedrooms | 2/unit | | |
| Multiplex dwellings | 2 | | |
| Nursing homes | 2 | | |
| One family dwellings | 1 | | Same as for attached dwellings. |
| (includes average-lot, cluster & zero-lot-line) | | | |
| Residential social service facilities (except CRH Homes with 6 or fewer residents) | 5 | | Plus 1 space |
| Two family dwellings (includes average-lot, cluster & zero-lot-line) | 1 | | Plus double wide driveway with direct access |
| (cluster & zero-lot-line) | | | |

NOTE: In residential districts, parking spaces shown in Columns 2 or 3 are required to be located behind the building line. Section Section 61.302.
NON-RESIDENTIAL PARKING APPLIES CITY-WIDE

FIGURE 13: MINIMUM NUMBER OF PARKING SPACES REQUIRED FOR NON-RESIDENTIAL USES

Use this chart to determine the number of spaces required for non-residential uses. The uses listed in Column 1 shall provide one off-street parking space for each unit of measurement or fraction thereof shown in Columns 2, 3, or 4. Special requirements are shown in Column 6 and shall be in addition to those spaces required in Columns 2, 3 or 4. Where there are two or more criteria, the greater requirement shall apply. Column 5 shows the maximum number of parking spaces permitted.

See Alternative minimum standards for certain Traditional City Districts (See Insert 1).

<table>
<thead>
<tr>
<th>Amusement Centers</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>(includes skating rinks, billiard parlors, indoor tennis and racquet ball)</td>
<td>Minimum</td>
<td>Gross</td>
<td>Rated</td>
<td>Floors</td>
<td>Patron</td>
</tr>
<tr>
<td>Amusement Centers</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auditoriums</td>
<td>10 Seats</td>
<td>8 Seats</td>
<td>3 Spaces for each repair or service bay.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auto Service Stations*</td>
<td>300</td>
<td>250</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Banks &amp; Savings Institutions</td>
<td>100</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beauty &amp; Barber Shops</td>
<td>1 lodging unit</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bed &amp; Breakfast Facilities*</td>
<td>5/Lane+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bowling Lanes</td>
<td>1/175</td>
<td>4 spaces for each lane, plus 1 space for each 200 sq. ft. of lobby, waiting area, etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Traditional City Alternative minimum standards do NOT apply to these uses.

The maximum number of parking spaces may be exceeded ONLY in accordance with the requirement of Section 61.309 310. These maximum standards do not apply to AC-N Districts, or to O-1 Districts outside the Traditional City.

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### FIGURE 13: MINIMUM NUMBER OF PARKING SPACES REQUIRED FOR NON-RESIDENTIAL USES

<table>
<thead>
<tr>
<th>Gross Floor Area</th>
<th>Gross Floor Area</th>
<th>Gross Floor Area</th>
<th>Gross Floor Area</th>
<th>Gross Floor Area</th>
<th>Gross Floor Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child Care Centers</td>
<td>300</td>
<td>500</td>
<td>200</td>
<td>300</td>
<td>100</td>
</tr>
<tr>
<td>Churches &amp; Religious Institutions</td>
<td>400</td>
<td>500</td>
<td>200</td>
<td>300</td>
<td>100</td>
</tr>
<tr>
<td>Clubs &amp; Lodges, Civic*</td>
<td>100</td>
<td>80</td>
<td>80</td>
<td>3 Seats</td>
<td>2.5 Seats</td>
</tr>
<tr>
<td>Community Centers</td>
<td>300</td>
<td>500</td>
<td>200</td>
<td>300</td>
<td>100</td>
</tr>
<tr>
<td>Contractors &amp; Trade Shops</td>
<td>500</td>
<td>400</td>
<td>175</td>
<td>250</td>
<td>80</td>
</tr>
<tr>
<td>Convention Halls</td>
<td>200</td>
<td>175</td>
<td>250</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>Dance Studios</td>
<td>300</td>
<td>250</td>
<td>80</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>Discoteques &amp; Dance Halls*</td>
<td>100</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eating &amp; Drinking Establishments*</td>
<td>100</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Funeral Homes</td>
<td>300</td>
<td>250</td>
<td>80</td>
<td>80</td>
<td></td>
</tr>
</tbody>
</table>

**Minimum**

- Beds, Rated Seats
- Patron Rooms, Capacity
- Spaces

**Maximum**

- N/A
- Includes all principal buildings, e.g. sunday school, rectory, etc.
- Including outside improved areas used for assembly, recreation, etc.
- Plus 1 space per 25 sq. ft. area for temporary seats or standing, plus spaces for vehicles operated by the establishment.

**Special Requirements**

- Traditional City Alternative minimum standards do NOT apply to these uses.
- The maximum number of parking spaces may be exceeded ONLY in accordance with the requirement of Section 61.399 310.

These maximum standards do not apply to AC-N Districts, or to O-1 Districts outside the Traditional City.
# Non-Residential Parking Applies City-Wide

**Figure 13: Minimum Number of Parking Spaces Required for Non-Residential Uses**

<table>
<thead>
<tr>
<th>Gross Floor Area</th>
<th>Capacity</th>
<th>Minimum</th>
<th>Maximum**</th>
<th>Special Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furniture Stores</td>
<td>600</td>
<td>300</td>
<td>500</td>
<td>4 spaces for each hole plus 1 space for each 200 sq. ft. of non-golf use.</td>
</tr>
<tr>
<td>Games Rooms</td>
<td>300</td>
<td>250</td>
<td>N/A</td>
<td>Either standard shall apply—plus spaces for emergency vehicles, etc.</td>
</tr>
<tr>
<td>Golf Courses*</td>
<td>350</td>
<td>250</td>
<td>N/A</td>
<td>Plus additional spaces for restaurants, cocktail lounges, conference halls, game rooms, gift shops, etc.</td>
</tr>
<tr>
<td>Health Spas</td>
<td>300</td>
<td>1 Bed</td>
<td>250</td>
<td>With 24 hour shuttle service (See Section 61.302).</td>
</tr>
<tr>
<td>Hospitals</td>
<td>350</td>
<td>1 Room</td>
<td>1.2/Rooms</td>
<td></td>
</tr>
<tr>
<td>Hotels &amp; Motels</td>
<td>350</td>
<td>2</td>
<td>1.75 Beds</td>
<td></td>
</tr>
</tbody>
</table>

Traditional City Alternative minimum standards do NOT apply to these uses.

The maximum number of parking spaces may be exceeded ONLY in accordance with the requirement of Section 61.309 310. These maximum standards do not apply to AC-N Districts, or to O-1 Districts outside the Traditional City.
NON-RESIDENTIAL PARKING APPLIES CITY-WIDE

FIGURE 13: MINIMUM NUMBER OF PARKING SPACES REQUIRED FOR NON-RESIDENTIAL USES

<table>
<thead>
<tr>
<th>Gross Floor Area</th>
<th>Rated Gross Floor Area</th>
<th>Patron Capacity</th>
<th>Maximum**</th>
<th>Special Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offices, governmental</td>
<td>300</td>
<td>250</td>
<td>null</td>
<td>Based on Building site area rather than floor area.</td>
</tr>
<tr>
<td>Offices, medical &amp; dental</td>
<td>200</td>
<td>175</td>
<td>null</td>
<td>Parking Aisles (see Article II, Part 3L). Plus 3 spaces for the managers office.</td>
</tr>
<tr>
<td>Open Air Markets</td>
<td>300</td>
<td>250</td>
<td>null</td>
<td>Plus spaces for storage of mail delivery vehicles.</td>
</tr>
<tr>
<td>Personal Services</td>
<td>300</td>
<td>250</td>
<td>null</td>
<td>Plus 5 spaces at the manager’s office.</td>
</tr>
<tr>
<td>Personal Storage</td>
<td>300</td>
<td>N/A</td>
<td>null</td>
<td>Number of spaces as required by the Zoning Administrator.</td>
</tr>
<tr>
<td>Post Offices</td>
<td>300</td>
<td>250</td>
<td>1 Space</td>
<td></td>
</tr>
<tr>
<td>Recreational Vehicle Parks*</td>
<td>300</td>
<td>250</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Recreation, Outdoor*</td>
<td>300</td>
<td>250</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>(includes skeet &amp; gun ranges, miniature golf, go-cart tracks, water slides, etc.)</td>
<td>300</td>
<td>250</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Residential Social Services Facilities*</td>
<td>300</td>
<td>250</td>
<td>N/A</td>
<td>Plus 1 space</td>
</tr>
<tr>
<td>(except CRH Homes with 6 or fewer residents)</td>
<td>300</td>
<td>250</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

Traditional City Alternative minimum standards do NOT apply to these uses.

The maximum number of parking spaces may be exceeded ONLY in accordance with the requirement of Section 61.309 310. These maximum standards do not apply to AC-N Districts, or to O-1 Districts outside the Traditional City.
NON-RESIDENTIAL PARKING APPLIES CITY-WIDE

**FIGURE 13: MINIMUM NUMBER OF PARKING SPACES REQUIRED FOR NON-RESIDENTIAL USES**

<table>
<thead>
<tr>
<th>Area</th>
<th>Minimum</th>
<th>Maximum**</th>
<th>Special Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gross Floor Area</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retail Sales (includes light and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>intensive retailing)</td>
<td>300</td>
<td>250</td>
<td></td>
</tr>
<tr>
<td>Schools - Elementary &amp; Middle</td>
<td>N/A</td>
<td>1</td>
<td>1 for each 6 auditorium or gymnasium seats, or 2 for each</td>
</tr>
<tr>
<td>School</td>
<td></td>
<td></td>
<td>classroom whichever is most restrictive.</td>
</tr>
<tr>
<td>Schools - High School, Vocational,</td>
<td>N/A</td>
<td>1</td>
<td>1 for each 4 auditorium or gymnasium seats or 6 for each</td>
</tr>
<tr>
<td>Business, College</td>
<td></td>
<td></td>
<td>classroom whichever is most restrictive.</td>
</tr>
<tr>
<td>Shopping Centers</td>
<td>300</td>
<td>250</td>
<td></td>
</tr>
<tr>
<td>Stadiums</td>
<td>5</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Theaters</td>
<td>10</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Vehicle Sales and Rental*</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(includes autos, RV's utility</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>trailers, boats, etc.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warehousing &amp; Storage</td>
<td>1000</td>
<td>800</td>
<td></td>
</tr>
<tr>
<td>Whole Blood and Plasmapheresis</td>
<td>N/A</td>
<td>2</td>
<td>2 spaces for each 1.5 operating stations.</td>
</tr>
<tr>
<td>Facilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wholesale Distribution</td>
<td>600</td>
<td>500</td>
<td></td>
</tr>
</tbody>
</table>

Traditional City Alternative minimum standards do NOT apply to these uses.

The maximum number of parking spaces may be exceeded ONLY in accordance with the requirement of Section 61.309 310.

These maximum standards do not apply to AC-N Districts, or to O-1 Districts outside the Traditional City.
## Zoning District | Alternative Minimum Parking Requirement (spaces: GFA)
--- | ---
O-1, MXD-1, MU-1, AC-N | 1:450
O-2, AC-1 | 1:650
O-3, MXD-2, MU-2, AC-2 | 1:850
AC-3 | 1:1000

### Section 61.310 Bonus Parking Spaces for Mass Transit Fund Contribution

The Planning Official shall be authorized to allow parking spaces in excess of the maximum permitted number of parking spaces shown on the Non-Residential Parking Chart (Figure 17) in exchange for a contribution by the developer to the City of Orlando Mass Transit Facilities Fund, where all of the following requirements are met. Whenever a building site is eligible to receive these bonus parking spaces, no variance of the maximum number of parking spaces shall be considered by the Board of Zoning Adjustment in lieu of the bonus parking spaces.

**Unimproved Reserve Area** - In the Traditional City, all such parking spaces in excess of the maximum permitted number of parking spaces shall remain as unimproved reserve area, designed in accordance with the requirements of Section(s) 61.435 - 61.436 (Unimproved Reservation of Parking Areas). Outside of the Traditional City, improvement of bonus parking spaces shall be permitted but not required.

**Bonus Available** - The number of bonus parking spaces permitted shall not exceed 25% of the maximum number of parking spaces which would otherwise be permitted on the building site in the absence of the bonus.

**Amount of Contribution** - The amount of payment to the Trust Fund shall be determined by the average cost to the City for the construction of a parking space multiplied by the total number of spaces to be awarded. The average total cost shall be determined by the Director of Public Works. The costs shall include actual costs and fees for design, legal engineering, actual construction, inspection, finance and planning, and may include land costs. The average total cost shall be revised annually, by resolution of the City Council.
PART 4.   DOWNTOWN PARKING REQUIREMENTS

4A.   CITY OF ORLANDO DOWNTOWN PARKING PROGRAM AND TRANSIT SYSTEM

Section 61.400   Purpose

In enacting this Part, consideration has been given to two major facts related to the provision of off-street parking within the area shown if Figure 11: (1) development conditions and trends within this area are indicative of the need to alter public regulatory mechanisms affecting the provision and location of parking; (2) the adopted Growth Management Plan for downtown provides goals and guidelines for the future development of downtown based, in part, on such changing conditions and trends. Included among these are goals and recommendations which address the provision of off-street parking and relationship to the land use downtown. In light of these facts, this Part prescribes a regulatory mechanism whose components have been specifically developed to be more consistent with changing conditions and adopted Growth Management goals and strategies.

The purpose of this Part is implementation of the Orlando Urban and Core Area Growth Management Program, of which the Downtown Growth Management Plan is a component, and the promotion of the health, safety, and general welfare of the present and future inhabitants of the City of Orlando by:

(a) Giving effect to goals, guidelines, policies and proposals of the Orlando Urban and Core Area Growth Management Plan.

(b) Providing standards for the provision of off-street parking within the designated Downtown Parking Area.

(c) Protecting the capacity of the street system and avoiding undue congestion on those streets.

(d) Lessening unnecessary conflicts between vehicles and pedestrians.

(e) Providing methods for the encouragement of the use of various forms of mass transit to lessen the potential demand for off-street parking.

(f) Protecting the air quality of Downtown through the control and management of the parking system and encouragement of increased transit ridership, thereby reducing the number of automobiles downtown.

(g) Providing incentives to development which are consistent with other purposes of this Chapter and which serve to encourage the appropriate location and timing of new development and redevelopment as well as increases in the parking supply.

(h) Regulating the type and location of parking facilities provided to be consistent with other developmental goals and proposals for downtown.

Each purpose seeks to balance the interests of the general public and those of individual property owners.
Section 61.401 General Requirements

(a) Off-street parking for uses located in the Downtown Parking Area, which is defined by Figure 18, shall be provided according to the requirements in Sections 61.402 - 61.405.

(b) Notwithstanding the provisions of Chapter 65, Part 2, the provisions contained in this Part shall not be subject to a variance or any type of waiver unless expressly declared within this Part.

Section 61.402 Parking Requirements

RESIDENTIAL USES:

See Figure 12.

NON-RESIDENTIAL USES:

(a) All non-residential uses in the Downtown Parking Area with a gross floor area (GFA) greater than 10,000 square feet shall provide parking spaces in accordance with the following:

(1) Requirements

(i) Minimum

Two (2) parking spaces per 1,000 sq. ft., GFA.

(ii) Maximum

Three (3) parking spaces per 1,000 sq. ft., GFA, until December 31, 1995.

Two and one-half (2.5) parking spaces per 1,000 sq. ft., GFA, from January 1, 1996 to December 31, 2000.

Two (2.0) parking spaces per 1,000 sq. ft., GFA, from January 1, 2001 and thereafter.

(iii) Bonus

Until June 30, 1992, a bonus space of 0.5 per 1,000 sq. ft., GFA, over and above the three (3) parking space maximum, may be provided on-site or in the Program upon a payment to the trust Fund in an amount equal to the cost of providing 0.5 spaces, according to the formula in Section 61.404, whether or not the parking spaces are provided on-site or in the Program.

61 - 90 Supp. 91-3 (9-91)
(2) Allocation

The parking spaces provided in (a)(1), above, shall be allocated to a ratio of one (1) space-in-the-Program (City of Orlando - Downtown Parking Program, [Program] as defined in Section 61.404) for every two (2) spaces-allowed-on-site. The ratio shall be allocated as follows:

(i) The first required space per 1,000 sq. ft., GFA, shall be provided in the Program by payment to the Program Trust Fund (Trust Fund); and

(ii) The remaining required spaces and the optional spaces shall be provided either on-site or in the Program by payment to the Trust Fund; and

(iii) Any bonus spaces may be provided either on-site or in the Program by payment to the Trust Fund.

(3) Designation

Prior to issuance of a building permit, the applicant shall present to the City Planning and Development Department a written document which:

(i) Allocates the off-street parking spaces to be provided on-site and in the Program by payment to the Trust Fund; and

(ii) Separately indicates any use of bonus spaces, allowed pursuant to this Part.

(4) Payment Schedule

The total payment to the Trust Fund for spaces in the Program and any bonus spaces shall be made in four equal quarterly payments, with the first such payment to be presented to the City at the time the building permit is issued, or according to the terms of a parking payment agreement agreed to between the City and the landowner. However, any payment pursuant to a parking payment agreement shall be complete prior to the initial Certificate of Occupancy for the building. The required off-street parking spaces provided on-site shall be available for the use prior to the issuance of the Certificate of Occupancy. Spaces provided in the Program shall be available at the issuance of Certificate of Occupancy; or at a subsequent date, as outlined in the parking payment agreement.

(b) Non-residential land uses less than 10,000 sq. ft.

The requirements of this Part shall not apply to Non-residential uses less than 10,000 sq. ft., GFA, except that if on-site parking is provided, such parking shall be:

(1) Provided pursuant to the ratio of one(1) parking space-in-the-Program/two (2) parking spaces-on-site; and
(2) Limited to a maximum total of:

(i) two (2) on-site parking spaces per 1,000 sq. ft., GFA, until December 31, 1995.

(ii) one and one-half (1.5) on-site parking spaces per 1,000 sq. ft., GFA, from January 1, 1996 to December 31, 2000.

(iii) one (1) on-site parking space per 1,000 sq. ft., GFA, from January 1, 2001 and thereafter.

(c) **Exempt Non-Residential Uses**

(1) The following non-residential uses are exempt from the provisions of (a) or (b), above:

(i) Retail Uses
(ii) Personal and Entertainment Services
(iii) Theaters
(iv) Eating and drinking establishments
(v) Child care centers
(vi) Hotel and Motel

(2) Notwithstanding the exemption in (c)(1), above, any on-site parking provided for uses listed in (c)(1), above, shall be limited to a maximum total of:

(i) two (2) parking spaces per 1,000 sq. ft., GFA, until December 31, 1995.

(ii) one and one-half (1.5) on-site parking spaces per 1,000 sq. ft., GFA, from January 1, 1996 to December 31, 2000.

(iii) one (1) on-site parking space per 1,000 sq. ft., GFA, from January 1, 2001 and thereafter.

(d) **Non-Conformities**

(1) All Non-exempt non-residential land uses in the Downtown Parking Area shall be deemed non-conforming to this Part if:

(i) They are lawful and existing uses on August 6, 1990 and do not meet all of the provisions of (a) or (b), above, (i.e. have not contributed to the Trust Fund, do not satisfy the minimum parking requirements or exceed the maximum parking limits); or

(ii) Uses for which a building permit has been lawfully issued prior to August 6, 1990 in which the permit remains valid, the property is consistent with the GMP, as amended, the property is zoned and platted for the use, sewer capacity has been reserved, and the transportation impact fee has been paid.

61 - 92 Supp. 91-3 (9-91)
(2) Any building permit issued for a use listed in (d)(1)(ii), above, shall not be granted an extension of time beyond the initial time period unless the use complies with the applicable provisions of (a) or (b), above.

(3) **Divest of Non-conforming Status**

In addition to the terms of Chapter 58, Part 7, any expansion, addition, modification or alteration (hereinafter collectively "change") to a use defined as non-conforming in (d)(1), above, and which is a substantial enlargement or improvement, shall be subject to the following.

If the total GFA of the existing use and change results in a building or structure with a combined GFA:

(i) Less than 10,000 sq. ft., GFA, and no additional parking is provided on-site, then the requirements of (a) or (b), above, shall not apply.

(ii) Less than 10,000 sq. ft., GFA, and additional parking is provided on-site, then the requirements of (a) and (b) shall not apply; however, (1) any additional on-site parking shall be provided according to the ratio of one (1) parking-space-in-the-Program/two (2) parking spaces-on-site, (2) the amount of existing and additional on-site parking shall be limited to a maximum total of two (2) parking spaces per 1,000 sq. ft., GFA and (3) no additional on-site parking shall not be permitted if the total parking (additional and existing) is greater than two (2) parking spaces per 1,000 sq. ft. GFA.

(iii) Greater than 10,000 sq. ft., the requirements of (a) and (b) shall not apply if no additional parking is provided on-site and the existing on-site parking for the Change is at a minimum of one space per 1,000 sq. ft. GFA.

(iv) Greater than 10,000 sq. ft. and additional parking is provided on-site, then the requirements of (a) and (b), above, shall apply.

(4) **Aggregation** - For purposes of this Part any substantial enlargement or improvement, to any existing use, from August 6, 1990, shall be aggregated and the aggregate changes shall be the amount used in the calculations and determinations in this Part.

(5) **Demolition** - For purposes of this Part, after the demolition, removal, destruction or substantial improvement of any use deemed non-conforming in (d)(1), above, the requirements of this Part shall apply to the construction, reconstruction, redevelopment of the site; and, in the calculations pursuant to this Part no credit from the prior non-conforming use shall be applied to a new structure, building or use.

(e) **Calculation**

In calculations for (a) and (b), above, any fractional or incremental portion of a parking space shall be rounded to the greater value.

61-93

Supp. 93-1 (3-93)
Section 61.403  Surface Parking Facility Restriction

(a) Within the Downtown Parking Area, parking spaces may be contained in either a surface parking lot or parking garage facility; however, that the number of spaces provided in a surface parking lot facility shall not exceed 25% of the total amount of required spaces. The remaining parking spaces on-site or parking spaces in the Program by payment to the Trust Fund shall be provided in a parking garage facility.

(b) City Council may waive the structure requirements in (a) above, upon recommendation by the Municipal Planning Board, where circumstances clearly indicate that the standard requirements would create a situation wherein the number of required on-site parking spaces is insufficient to justify, from either a financial or structural feasibility standpoint, the construction of a parking structure.

Section 61.404  Downtown Parking Program

(a) The Downtown Parking Program (Program) consists of two components:

(1) The provision of on-site parking spaces in City-owned Parking Facilities for land uses located in the Downtown Parking Area; and

(2) The Downtown Public Transit System.

The Parking Facilities shall be constructed from the payments to the Program Trust Fund pursuant to this Part. The Program shall be administered by the Director of Public Works as part of the overall City of Orlando Parking System.

(b) Program Trust Fund (Trust Fund)

(1) Payment to the Trust Fund shall be made at the time specified in Section 61.402. The amount of payment shall be determined according to the terms of this Section.

(2) The Trust Fund shall be established by the Orlando City Council at the time of the payment for the first parking space in the Program.

(3) The amount of the payment to the Trust Fund shall be determined by the average cost to the City for the construction of a parking space in a parking structure on a Program wide basis. The average total cost shall be determined by the Director of Public Works. The costs shall include actual costs and fees for design, legal, engineering, actual construction, inspection, finance, and planning, and may include land costs. The average total cost shall be revised annually, by resolution of the City Council.

(4) The payment to the Trust Fund shall be used for the following:

(i) Acquire, construct or develop off-street parking and related facilities on interim or ultimate basis;
(ii) Fund the capital costs associated with new, upgraded and/or expanded off-street parking area serving land uses within the Downtown Parking Area;

(iii) Acquisition of land for present and future garage construction or interim uses; or

(iv) Reimburse capital costs or advances, or related financing costs, for spaces in existing facilities or to be constructed which are designated or set aside for the Program.

(5) The landowner, or its designee, of each parking space shall be responsible for the average monthly operation and maintenance costs for each space provided in the parking facilities of the Program, a reasonable and equitable allocation of shuttle costs for the Transit System in (c), below, and other administrative costs (collectively O & M Costs). The payment of O & M costs shall begin at the issuance of a Certificate of Occupancy, or at a date agreed to in the Parking Payment Agreement.

(6) The Director of Public Works is hereby delegated the responsibility to establish administrative rules and procedures for the implementation of this Part. The procedures shall include, but not be limited to allocation of spaces, assessment of operations, maintenance and commuter costs, and supervision. These procedures shall be presented by resolution to the City Council for review and initial approval. The administrative procedures shall be reviewed and revised from time to time, at least every five (5) years, and presented by resolution to City Council for approval.

(c) Transit System

A Transit System connecting the remote parking facilities of the Program with the land uses in the Downtown Parking area shall be created for the implementation of this Part.
CITY OF ORLANDO
CODE OF ORDINANCES
LAND DEVELOPMENT CODE

Chapter 59
Concurrency Management System

Outline of Chapter

Part I  Overview and Exemptions
59.100  Introduction
  • The purpose of Chapter 59 is to implement the concurrency provisions of the
    GMP, as mandated by Chapter 163 and Rule 9J-5.0055, F.A.C.
59.101  Procedures
  • Establishes a Concurrency Management Official that will be responsible for
    carrying out the requirements of Chapter 59.
59.102  Exempt Development
  • Building Permits Issued Prior to Effective Date shall be exempt from
    concurrency.
  • De Minimis Development as defined below shall be exempt from concurrency:
    Outside the Traditional City - equivalent to one single family house
    Inside the Traditional City - equivalent to four residential units
  • Exempt permits that do not impact public facilities or do not determine the density
    or intensity of development.
59.103  Change of Use
  • Increased/Decreased Impact on Public Facilities
59.104  Demolitions

Part 2  Level of Service (LOS) Standards
59.200  Introduction
  • LOS standards shall be the indicator used to determine if public facility and
    services are adequate to support the impact of new development.
Transit LOS Standards
Potable Water LOS Standards
Solid Waste LOS Standards
Wastewater LOS Standards
Parks and Recreation LOS Standards
Stormwater LOS Standards
Roads LOS Standards

Effect of LOS Standards

• LOS standards shall be used by the CMO in performing concurrency evaluations.

Part 3 Concurrency Evaluations by the CMO

When Chapter 59 requirements shall apply:
• Concurrency Verification Letters
• Concurrency Encumbrance Letters for:
  • Building Permit
  • Capacity Reservation Certificate
  • Preliminary Residential Plat Approvals

Rezonings and GMP Plan Amendments

• A Concurrency Evaluation shall be prepared for:
  • Rezonings - Zoning Map Amendments
  • GMP Amendments - Land use Map Amendments
• Approvals granted by MPB, City Council, or City Staff shall not guarantee that capacity availability unless secured through the Capacity Reservation Process.

Concurrency Evaluation for Roads

• Application of Link or District LOS standard
• Traffic Performance Districts
• Maintenance of LOS standards through application of the Trip Allocation Program
• Performance of Road LOS standards measured on a semi-annual basis using the Travel Demand Model
• Official Source of Information shall be the Transportation Planning Bureau
• Concurrency Rule: Achieve Road LOS standards within three (3) years of
issuance of building permit

- Trip Allocation Program - Based on Five Year Capital Improvements Schedule and Five Year Growth Projections
- Program is based on achieving LOS standards through metering trips allocated for new development over time by TPD and TZ

**Link Trip Allocation Program**

- Must maintain roadway link LOS based on semi-annual monitoring and modeling
- Cannot exceed annual allocation without plan amendment
  - Threshold 1 - Up to 50% allocated throughout the District
  - Threshold 2 - >50% and <90% allocated at the Traffic Zone level
  - Threshold 3 - Up to 100% allocated in the TPD or trips are not available at the Traffic Zone level
- Primary Impact Areas established for deficient roadway links

**District Trip Allocation Program**

- Must maintain 85% of lane miles at LOS standards
- District is shut down if falls below 85% lane miles achieving LOS standards
- Must maintain roadway District LOS based on semi-annual monitoring and modeling
- Cannot exceed annual allocation without plan amendment
  - Threshold 1 - Up to 50% allocated throughout the District
  - Threshold 2 - >50% and <90% allocated at the Traffic Zone level
  - Threshold 3 - Up to 100% allocated in the TPD or trips are not available at the Traffic Zone level

**Part 4**  **Concurrency Verification Letters**

59.400  A snapshot of available capacity at the time the letter is issued. Letter does not guarantee capacity availability

**Part 5**  **Concurrency Encumbrance Letters**

59.500  Determination by the CMO, that capacity is available based on the proposed densities and intensities of development, to serve the development and that capacity shall be encumbered for 90 days
Part 6  Capacity Reservation Certificates

59.600 Purpose of the Capacity Reservation Process is to ensure that capacity will be available, thereby providing a higher degree of certainty to the development community.

59.603 Reservation Time Periods
- Fixed Time Frames
- Flexible Time Frames
- Capacity Waiting List
- Transferability

Part 7  Concurrency Administration

59.700 The CMO shall be responsible for the administration of Chapter 59
- Evaluation - Ongoing
- Monitoring - Ongoing
- Reporting - February 1 and September 1

Part 8  Concurrency Resolution Process

59.800 The resolution process is intended to identify the options available to the City and applicant in mitigating impacts on public facilities and services.

59.801 The Concurrency Resolution Process shall be available when:
- A Concurrency Encumbrance Letter is denied
- 100% of the Annual Trip Allocation has been used
- The Semi-Annual Capacity Availability Report indicates that any public facility or service is not available

59.803 Review Process
- 30 day sufficiency determination after application is made
- 45 day review followed by a concurrency resolution offer
- 30 day acceptance period by applicant
- Prepare Resolution Agreement
- Approved by City Council
APPENDIX C

LIST OF CONTACTS
LOCAL CONTACTS

Orange County
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