

**PLANNING COMMISSION
OF THE CITY OF CHESTERFIELD
AT CHESTERFIELD CITY HALL
SPECIAL WORK SESSION
February 11, 1999**



The meeting was called to order at 7:00 p.m.

PRESENT

Mr. Fred Broemmer
Mr. Charles Eifler
Ms. Rachel Nolen
Mr. Jerry Right
Ms. Victoria Sherman
Chairman Robert Grant
Mr. Douglas R. Beach, City Attorney
Mayor Nancy Greenwood
Ms. Mary Brown, Council Liaison
Ms. Teresa Price, Director of Planning
Ms. Annissa McCaskill, Planner I
Ms. Kathy Lone, Executive Secretary/Planning Assistant

ABSENT

Mr. Dan Layton, Jr.
Ms. Stephanie Macaluso
Mr. Allen Yaffe

Others in attendance:

Mr. Rick Brown, Missouri Department of Transportation
Mr. Richard Beckman, St. Louis County Highway Department
Mr. Douglas Shatto, Crawford, Bunte, Bramaier (CBB)(Vitt Traffic Consultant)
Mr. Paul Plotas, The Larkin Group (City of Chesterfield Traffic Consultant)
Mr. Mark Schlotzhauer, City of Chesterfield Department of Public Works

Chairman Grant stated that the meeting is a work session for the Planning Commission to get an in-depth explanation of the various traffic studies that have been presented with respect to the developments known as the Sachs Development (P.Z. 30-98 Altschuler Tract) and the Vitt Development (P.Z. 32-98 Conway Land Company-Chesterfield Corporate Campus) which are the proposed offices between the North Outer Road and Conway Road. The Planning Commission will listen to presentations by traffic consultants and Commission members will be allowed to ask questions. The traffic consultant for the Sachs Development was not able to be in attendance. Mr. Steve Koslosky, attorney for the Sachs Development, is present to answer questions. The audience will not be allowed to speak but can come to the next scheduled Planning Commission Meeting, February 22, 1999, to speak during the Public Comment portion of the meeting.

Chairman Grant recognized the attendance of Councilmember Barry Streeter (Ward II), Councilmember Larry Grosser (Ward II), Councilmember Mike Casey (Ward III) and

Councilmember Dan Hurt (Ward III).

Mr. Doug Shatto gave a history of the process of the Traffic Impact Study. The Traffic Impact Study he will be referring to this evening is dated February 2, 1998. It was submitted to the City of Chesterfield, Missouri Department of Transportation (MoDOT) and the St. Louis County Highway Department. The traffic study took into effect the Sachs and Vitt Developments, as well as the already approved developments of Solomon Brothers and the Timberlake Office Park, all of which are located along North Outer Forty Road. The basic steps of the Traffic Impact Study were:

1. An evaluation of the existing conditions (traffic counts and the critical intersections that will be impacted);
2. Capacity Analysis (comparison of an intersection's capacity relative to the amount of traffic going through that intersection and then grading with a level of service; A-best, F- worst). D is considered acceptable for a peak period condition in an urban area, such as this; E and F are undesirable;
3. Established existing conditions and then factor in the additional traffic that would be generated by the proposed developments. That traffic is added to what is there now, assigned to the road system based on how they envision traffic is going to be coming from and going to the development. The intersections are then re-evaluated and other circumstances associated with it to determine how much deterioration, if any, is in those levels of service at each of the critical intersections. If any deterioration is identified, they evaluate ways to try to improve those conditions and, at the very least, try to get them up to the level before the projects were proposed and, if at all possible, try to establish improvements over and above the existing conditions.

Mr. Shatto stated that the greatest constraints are going to be at the intersections and during the peak periods of flow – morning and afternoon rush hour. Traffic will have to flow into the projects from the east and depart to the west. The outbound flow is going to have the greatest impact on Chesterfield Parkway. Signalized intersections in close proximity are: Conway Road, North Outer Forty and South Outer Forty. Each are operating at acceptable levels of service. All are ranked at a level B during the morning and afternoon rush hours. The one exception is North Outer Forty at Chesterfield Parkway during the afternoon rush hour. It operates at a level D, which is still acceptable but indicates there is a little bit more congestion. West-bound traffic on North Outer Forty in the afternoon going north or south does back up at a considerable distance. It often takes more than one cycle of the light to get through. More moderate congestion was observed at the intersection with South Outer Forty. In the morning there is heavy north-bound movement. Some of the current traffic buildup is because of the present synchronization of the lights.

Progression Analysis is evaluating the timing of each intersection in combination with the movements and trying to find out the amount of time that is devoted to any one movement and, when that signal comes up and goes green, how they relate to each other and come up with a recommended plan that will create the most movement at any given time – to avoid as many stops as possible.

Accident Analysis is the concern about right turn movements for north-bound traffic at the South Outer Road and right turn movements from the west-bound Outer Road onto Chesterfield Parkway.

There are right turn lanes that have a large radius on them. As you come around the corner, you are having to look over your shoulder to see traffic approaching from your left. This is called a channeled right turn.

There were about 8-10 accidents per year at each of the three intersections. Only about 4 at each location were associated with the right-turn channels. The others were rear-end accidents.

Crawford, Bunte, Bramaier (CBB) felt that, with the County and State review, tightening up the radii at each of those corners so that someone making the rights turn, either off North Outer Forty or Chesterfield Parkway, would be forced to yield to traffic on the cross street, instead of coming into the intersection at an angle. They found that the accident history did not seem to be as severe as was perceived by a lot of people nor were they of the type that would be correctable by those measures. CBB doesn't feel that these modifications are needed at this time. Most intersections are operating acceptably under the current traffic loadings.

For future conditions, they project the amount of traffic associated with the developments and add to the existing traffic. The forecast is from The Institute of Transportation Engineers Trip Generation Manual and is based upon square footage for the Vitt and Sachs Development and included the Solomon Brothers and Timberlake buildings. The people coming from the Timberlake development wanting to go west on the North Outer Road and then north or south on Chesterfield Parkway are basically local residents or people doing business in the area. There was a very limited impact on the findings. The heaviest movements to or from any one of these developments is to and from the east on Highway 40.

As of now, the Vitt and Sachs developments only have access on North Outer 40. There will not be any access onto Conway Road. There would be a token amount of traffic on Conway Road but this would be local residents who work in the developments. The major routes, even with some of the congestion that exists now, are by far the most attractive routes for people to utilize and those are the criteria by which most people choose their routes to and from work. They are looking for the shortest or quickest possible route. Under every circumstance, Conway Road was a slower or longer route so they don't envision any more traffic using Conway Road based upon the proposed access.

People coming from the east on Highway 40 in the morning would get off at Timberlake Manor Drive, continue west on the Outer Road and then access the development. The primary outbound movement in the afternoon would be people that would leave the development, turn onto North Outer 40 Drive, make a left turn onto Chesterfield Parkway, turn left onto South Outer Forty, and continue east onto Highway 40 via the slip ramp.

There are acceptable operating conditions on Chesterfield Parkway but in one or two cases there is minor congestion now and, with added traffic from the new developments, it is expected to see some pretty significant increases in congestion unless improvements are made.

Possible improvements:

1. Retiming the signals on Chesterfield Parkway;
2. Texas U-Turn from North Outer 40 on Chesterfield Parkway to South Outer 40 is the single biggest movement in terms of existing conditions, as well as what is being added.
3. The construction of a triple left turn at North Outer 40 and Chesterfield Parkway. Currently, there are double left turns and a separate right turn lane. They are suggesting adding another lane for distance going back from this intersection and allowing three left turns onto Chesterfield Parkway. The innermost turn lane would be designated solely to go into the two southbound left turn lanes at South Outer 40 and would be forced to take a left onto South Outer 40. The other two lanes would operate much like they do now.

The length of the weave at Timberlake is to be a subsequent analysis that would take place as the road improvements are laid out, determining how far back lane should start, and what the dimensions of the lanes should be. The County and the State acknowledged all along that they expected to see the analysis since they are their roads and must maintain acceptable conditions. It was not done as part of an Impact Study in this early stage.

The first challenge is to make sure traffic is not backed up at Chesterfield Parkway and maintain as much room as possible to accommodate the weave. Currently, approximately 1,600 cars are exiting Highway 40 from the Solomon Brothers and Timberlake Developments onto Chesterfield Parkway during the afternoon rush hour. Approximately 400 vehicles turn right and 1,200 turn left.

There will be 2,250 vehicles with the new developments that will use the Chesterfield Parkway intersection. With a high-end office building, traffic is distributed over a minimum of two and sometimes three hours in the morning and afternoon.

Commissioner Eifler stated that there are 2,965 parking places planned for the Vitt and Sachs Properties. Of those, the traffic study shows 805 cars going on Chesterfield Parkway during peak hours. Why the difference?

Mr. Shatto stated that there is not a direct correlation between the number of parking spaces provided and the amount of traffic that is generated. In this case, the developers are providing more than is required under zoning from a parking standpoint, so there may or may not be a surplus of parking at the office complexes. At any office complex, you will see a little less than 40% of the occupants coming and going at any given time within any given hour – like this type A office space where you have higher rent, higher-end users, more fluctuation in people's hours – not like Earth City where people work on shifts. Traffic is distributed over a minimum of two and sometimes three hours in the morning and afternoon as people come and go at various times. The Trip Generation Estimates are based upon the Institute of Transportation Engineers Trip General Manual which is the universal source for projecting traffic with any development. That is based on the square footage of the

developments and takes into consideration the number of people that might be there but not necessarily the number of parking spaces.

Councilmember Brown asked what basis was used for the analysis that most traffic would be going east.

Mr. Shatto stated that limited data available from other developments in the area shows most traffic going to the east. They have also collected zip code information and a distribution of population in the St. Louis metropolitan area. For traffic going to the development from the west, the quickest route would be to go to Timberlake and back west on the Outer Road.

Mayor Nancy Greenwood asked when the indepth analysis would take place since a vote on this development could take place at the next Planning Commission meeting.

Mr. Shatto stated he is aware of the concern raised by the City and residents. Some of the issues raised are legitimate issues but are not something they typically put into a Traffic Impact Study. If the City specifically requests that, they will address it. A simulation, which replicates conditions on these roadways and allows the traffic consultant to identify where there are problems (weaving movements), how severe the problems are and what needs to be done to contend with them can be done.

Levels of service are based upon the amount of delay that everyone experiences at the intersection. Someone that does not need to stop is a Level A; a Level B would be a stop from 5 seconds to 15 seconds; Level C would be 15 to 25 seconds per vehicle; Level D would be 25 to 40; over 40 seconds is a Level E. Level F is over 60 seconds. This is an average time stopped at an intersection while waiting for a light to turn green.

Mr. Richard Beckman, St. Louis County, stated that if the County had not been satisfied that the traffic was doable, the County would have tried to make some other recommendation. He feels that the traffic that is produced in this corridor can be mitigated - the questions are what extreme it is going to take and how much money needs to be spent. He stated that the additional analysis has not been completed because of the cost. If the development get a heads up, then they will go ahead with further studies to see what design considerations need to be undertaken.

Chairman Grant stated that in Mr. Brown's last communication, he said that a traffic simulation will be necessary.

Mr. Beckman stated that if the development progresses, a traffic simulation is needed to satisfy both County and State requirements. The question is whether or not the developer has enough confidence in the project going ahead to put the money into the study.

Mr. Brown also stated that for approval from MoDOT, a traffic simulation will be required and the study will address their concern of traffic on the North Outer Road and South Outer Road and

potential problems with the weaving movement and access on and off the Outer Roads. This a concern the State expressed early in the project with CBB. The simulation model is a state of the art, nationally recognized, valuable tool. It will show you visually how traffic uses the roadway network, how weaving occurs, what kind of stacking results at signals, etc. It will show the problems that may or may not result.

Mr. Beckman stated that the triple left lane is adequate for the Vitt development and probably the Sachs development. It will not be adequate and was not considered in the CBB study, if the level of growth is experienced from further developments on Chesterfield Parkway, west of Olive.

The developer pays for the Texas U-Turn and the money in turn comes out of the Highway 40 Corridor Trust Fund. The Trust Fund is funded by any developers within the Traffic Generation Assessment Trust Fund.

Mr. Shatto stated that if a traffic plan just will not work, they have discouraged a developer from going forward with a plan or try to come back with an alternative plan. He is doing a Traffic Impact Study for all four developments (Vitt, Sachs, Solomon and Timberlake).

A Texas U-Turn constructs a one-way bridge or expansion of an existing bridge and constructing a one-way U turn lane that would take the traffic from the North Outer Road to the South Outer Road thereby keeping all movements out of the two signalized intersections on Chesterfield Parkway. This will significantly relieve much of the congestion. Ways to address that are: Extend medians down the Outer Road or potentially up from Schoettler Road to eliminate some of the weaving movements. This would prevent people from cutting across three lanes of traffic. In their study, CBB proposed these two as an either/or option. The Texas U-Turn is a Level B for service, so this would be in improvement in service.

Page 13 of the Traffic Study discusses the Triple Left Turn and the Texas U-Turn.

City Attorney Beach stated that Level D should not be acceptable. He asked if the City will have to wait for the Trust Fund to be funded or if the money is available so that construction could start on a Texas U-Turn at the same time as the development.

Mr. Shatto stated that Level D is considered acceptable for rush hour conditions by transportation professionals because you can't fund a road system that would operate at Level C or better at all times of the day. It is not realistic. There is an exception of some deterioration during the rush hours knowing that throughout the remainder of the day you are going to have better conditions.

City Attorney Beach asked about the timing of the Trust Fund.

Mr. Shatto said that synchronizing of the lights could happen as soon as the project breaks ground; therefore, improving the conditions presently there now and accommodating the initial phases of traffic that would be associated with those developments. The triple left turn would give them the ability to accommodate between 400,000-500,000 square feet of office space and maintain the same

conditions that are there now (Level D). The Texas U-Turn would depend on the pace of development which would dictate the pace of the funding for the improvements. If nothing is developed along Highway 40, no improvements would be made because the money will not be placed in the Trust Fund to budget them. As development comes in (approximately 200,000 square feet) that will place money in the Trust Fund that would allow the Triple Left Turn to be constructed (approximately \$250,000-\$300,000). The Texas U-Turn may be contingent on full development as it would be the most expensive. The present projects considered should generate approximately \$1.4 million in the Trust Fund – a small amount would go to other improvements but the remainder would go for construction of the Texas U-Turn. It is possible that the Texas U-Turn would cost more than would be available in the Trust Fund. In that case, the developers would cover the difference, not the County or MoDOT.

Mr. Beckman stated that if there is a need for the Texas U-Turn immediately, the current developers would construct the Texas U-Turn (bridge attachment) and would be reimbursed through an agreement with the Trust Fund.

Mr. Shatto stated that they are talking about developers (plural). That it would go beyond just the impact or the amount of traffic generation assessment that would be generated by any one of these – accumulation of the trip generation assessment fees. The parking lot ratio is required for the developments (based on the square footage of the developments), so they know how much monys will be generated from the developments. Any one, in itself, would not get them up to the \$1.4 million but the four projects accumulative would get them to the \$1.4 million.

Mr. Shatto stated that the square footage for the One Chesterfield Place (Vitt property) project may place somewhere in the vicinity of \$700,000 into the Trust Fund so those monys would be available as soon as it is deemed that improvements are needed and the Trust fund drawn from.

Mr. Beckman stated that there would be conditions to the development whereby the County would require the developer to put in the appropriate guide signage on both roads, to do whatever is necessary to mitigate a weaving problem that might be uncovered through further analysis. These costs would be credited to the developer's total Trust Fund obligations. If the obligation was \$750,000 and his road improvements were \$200,000, he would be responsible to deposit an additional \$550,000 that would be held in the Trust fund for future allocations. The developer would still be required to do the road improvements associated with the development. If the Texas U-Turn is not needed because of lack of interest in development or further development or because there is not the additional traffic that would be anticipated to use the ramp, it will not be built.

Commissioner Eifler asked if it was possible or probable that the cost of the Texas U-Turn would exceed the amount of money in the Trust Fund? If so, who would pay the short-fall?

Mr. Shatto stated that it was. He stated that there would be some method in place by which the developers would cover the short-fall as the County or MoDOT would not pay for it.

Mr. Brown stated there are currently no plans to widen Highway 40 in this immediate vicinity

(they are possibly widening Highway 40 west of Clarkson to six lanes) but there is a study underway that is being sponsored jointly between MoDOT, East West Gateway and Bi-State to look at possible transportation improvements in this corridor. The primary focus of the study is mass transit, possibly metro-link options, but not a large scale Highway 40 project in the future.

Mr. Beckman stated that once the improvements are made farther west, you will not see the congestion in the area of this development because the limitation is the bridge and the approaches to the bridge going into St. Charles County.

Chairman Grant stated that there was the possibility that a consultant representing the residents was going to be in attendance. The residents stated they are still in negotiations with their consultant as to what will be spent on the study.

Mr. Beckman stated that the County will look at the studies by CBB and the simulation package and make an educated judgement as to how much development can be supported by any given improvement. The County is very conservative in their outlook.

Commissioner Sherman stated that when the citizens of Chesterfield talk about the quality of life they envision for the City, their ideas can clash against the standards that professionals have determined as acceptable. For example, the Chesterfield Parkway was built by the County Highway Department over the highway connecting residential areas to the Post Office and the heart of Chesterfield with inadequate walkways. Yet Chesterfield believes pedestrian walkways are an important aspect for the City's quality of life. In the future, other big parcels on the Parkway will be developed which will further impact this area in terms of traffic, air pollution and the ability and desire to take leisurely walks. The Commission struggles with these issues that can't be converted into objective data on a study table.

Mr. Beckman applauded the ideas but stated that they look from a professional standpoint as far as transportation is considered. It is the Planning Commission's decision to decide how the land is used.

City of Chesterfield Traffic Consultant Paul Plotas stated that there are some discrepancies between the studies by the two developments. For the most part, the issues that were raised will be addressed in the simulation model for further study. There are drawbacks to both of the solutions (Triple Left Turn and Texas U-Turn). Mr. Plotas has a different method for explaining level of service. Level of Service A can be described as half the vehicles that come to the intersection will catch the green light, the other half will stop for the light, then get green and go. Level of Service C, most everyone stops at the light and everyone makes it through although there will be a few times when somebody will stop, get the green and will not make it through the light. With Level of Service D, not everyone makes it through the intersection every time. This happens the most frequently. With Levels E's and F's you have a lot of people sitting through two red lights before they make it through the intersection.

Commissioner Eifler asked that if there is a need for the Texas U-Turn.

Mr. Beckman indicated that it will happen but first they have to wait and see how the traffic develops.

Commissioner Eifler stated that that seems to be in conflict with the general approach of development which says "I am going to build an 8-story office building. I'm going to build four 6-story office buildings and whether they get occupied or not, I am going to put in all of the parking spaces necessary and do all the infrastructure within the site necessary." It seems to me appropriate to do all of the road construction necessary to accommodate the development at its maximum capacity and not wait for an empirical actuality.

Mr. Beckman thinks that is true but thinks that if you are talking about Mr. Vitt, if 300,000 square feet is accommodated by the Triple Left, then he puts all of his infrastructure in or not in his own development, if he doesn't develop that other 100,000 square feet it is going to push it over mark then he shouldn't be putting in the bridge. You're saying "anticipate the worst?"

Commissioner Eifler said no-anticipate the design occupancy. The design that the developer is presenting to the Planning Commission calls for an 8-story office building and four 4-6 story office buildings. The Planning Commission and City say that for that design you have to put in so many parking places and Commissioner Eifler does not know why they would not also say you have to put in whatever is necessary to accommodate the traffic that is generated at design capacity.

Mr. Beckman stated that it is probably economics.

Commissioner Eifler stated that it sounds like the State does not have any plans to make any changes despite the need for change. One of the reasons there is weaving is because there are not enough lanes on the north and south service roads, especially the south service road where all of the lanes are merging into one to get onto the highway. Even though there are not any plans for changing Highway 40 is it possible that you might be able to change the service roads design to accommodate this extra traffic without changing the highway itself.

Mr. Shatto stated the analysis has not been concluded to a level needed to determine what kind of roadway improvements would be needed on the north and south roads in terms of changes in the configuration to address the weaving problems. They have stated that they are very concerned about that. The traffic simulation model will identify what problems, if any, exist and then look for solutions to the problems. He believes that the options that are on the table to mitigate the traffic that is generated are viable and feels comfortable that they can address any weaving problems that are on the Outer Road at this time.

Commissioner Eifler asked if they were going to do anything different or make infrastructure changes.

Mr. Shatto stated that if there are problems that result from the computer simulation model then they will look for changes in the roadway that will alleviate those problems.

Commissioner Eifler asked if the changes would occur by the time the buildings were occupied?

Mr. Shatto stated yes.

Commissioner Eifler asked if there were Trust Funds for those or who would pay for those changes.

Mr. Shatto stated when the traffic simulation is completed and if problems are present, they determine what the solutions to those problems are, then those roadway improvements will be defined and the cost to implement those improvements will be credited to the developer and the Trust Fund.

Mr. Beckman stated that the County has the Trust Fund.

Mr. Brown stated analysis has not been completed to determine roadway improvements that would need to be made on the Outer Roads. The simulation will address problems if any exist and then they will look for solutions. MoDOT feels that the current options to mitigate the traffic that is generated are viable and feels comfortable addressing any weaving problems on the Outer Road at this time.

Mr. Beckman stated that when a developer comes in for a building permit in the County, he is required to submit either a letter of credit or cash escrow deposit for the amount of the TJA for which he is applying. The developer is required to do certain roadway improvements.

Mr. Shatto stated that he expects that there will have to be physical modifications to the Outer Roads made as part of the concepts that have been promoted. Example, (concept only) as part of the Texas U-Turn recommendation that has been made, they would anticipate that as the U-Turn lane comes around onto the south Outer Road, it will probably be necessary to extend that lane and create an auxillary lane, a third lane on the South Outer Road that will extend as far as the existing slip ramp. That will provide additional capacity versus those weaving movements to occur. So instead of having two lanes there now we are going to have a third lane, again in concept only at this point. Details would be worked out with the Highway Departments.

Mr. Shatto showed a graphics simulation tool that provides measures of effectiveness, such as levels of service, but also graphically illustrates what conditions are going to be like on a computer or video screen.

Commissioner Eifler stated that there is only 27% of the total parking places moving out in one peak hour. At any given point in time, within the hour or any given 15 minute segment, there could be a real mess. If only 27% of the parking spaces move out in a peak hour, you would need 4 peak hours to get all of the traffic out of there.

Mr. Shatto stated that when they predict traffic, it is done without consideration to the number of parking spaces provided. They could provide twice as many as are needed and there would be no correlation between the amount of traffic and the number of spaces. It is based on the square footage

of the buildings which dictates how many people you can get into those buildings. That is what parking spaces are based on but the developer has exceeded the needed requirements. The method they used to forecast traffic is the standard method – basically done for all traffic impact studies. It is based on a worst case scenario – the most traffic that would be generated in any given hour.

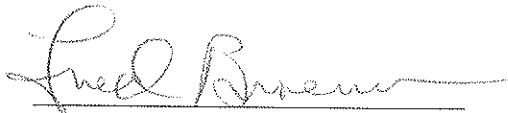
In the St. Louis area, they have found that in these types of office buildings, generally about 40 percent of the occupants or a little less would come and go in any given one hour.

Mayor Greenwood presented notes from the resident's traffic consultant to the Planning Commission.

Mr. Vitt stated that he is willing to proceed with the additional simulation analysis and will complete this prior to the Planning Commission deliberating further on this project. It may take three to four weeks for completion.

Chairman Grant took an informal poll of the Planning Commission members present to wait for this additional simulation before further debate on the project.

The meeting adjourned at 9:30 p.m.



Fred Broemmer, Secretary