



## MEMORANDUM

To: Pine Plains Planning Board  
From: R. Chamberlin, PE/PTOE  
Subject: Preliminary Completeness Review, Carvel Proposal, Pine Plains, NY  
Date: 7 April 2008

Pine Plains United has retained Resource Systems Group to review the completeness and substance of Chapter 11 (Transportation and Traffic) of the Carvel Property Development DEIS.

### 1.0 SUMMARY OF FINDINGS

- With regard to transportation impacts the DEIS focuses almost solely on issues of congestion. **Conventional traffic engineering approaches are not suitable for evaluating the impact of a new suburban development in a rural setting.**
- **Transportation safety is of far greater concern than congestion.** The traffic study includes only a cursory narrative of safety. There is no analysis of the location, rate, or mechanism of vehicle crashes. Based solely on the creation of new street intersections with Route 199 along the project's frontage, **a 7-11% increase in crash rates is estimated.** The creation of at least 9 new street intersections along Route 199 is inconsistent with the Town's Comprehensive Plan to promote access management.
- The traffic analysis assumes that the patterns of future traffic will mirror the patterns of existing traffic. The project represents an 83% increase in the Pine Plains housing stock. **The magnitude of this change is so substantial that it is very unlikely that future travel patterns will resemble the traffic patterns we see today.** This assumption is flawed, yet is at the foundation of the traffic analysis.
- **There is no analysis, qualitative or quantitative, of the aesthetic impact that increased traffic will have on the community character of Pine Plains.** Using the assumptions of the traffic study overall traffic levels on the most frequently traveled roads are projected to increase from 30% to 450%. Traffic on Route 199 from the Taconic State Parkway to the center of Pine Plains will at least double. These types of traffic increases have multiple adverse impacts on community character beyond the visual impacts that are the focus of DEIS Chapter 7.
- **The construction phase of this proposal could last for decades.** No analysis of the ability of roads to withstand truck loads is provided. A detailed analysis should be developed

for each haul route which estimates the routing and number of trucks per day, an analysis of truck weight, and the period over which truck deliveries occur. The ability of NYS Route 199 and other local roads to withstand this type of construction traffic and its potential accelerated degradation cannot be understood without this additional analysis.

## 2.0 SCOPE OF THE REVIEW

Chapter 11 provides a summary of the analysis and field observations related to transportation and traffic. The Appendices provide further detail, as follows:

- Appendix 11.1 Traffic Impact Study
- Appendix 11.1-D Roadway Segment Capacity Analysis
- Appendix 11.1-E: Intersection Capacity Analysis
- Appendix 11.1-F: Evaluation of Traffic Conditions During the Dutchess County Fair
- Appendix 11.1-G&H: Copies of NYSDOT and Dutchess County Counts and Accident Summary Tables

It is noted that much of the analysis for this work was conducted in 2005 and based on traffic counts and crash statistics obtained before that time. The Chapter 11 dated January 11, 2008 is identical to the Chapter 11 previously dated January 8, 2007. The covers have been re-dated but, to our knowledge, the content of the 2 reports is identical. It is also noted that the detailed traffic study upon which Chapter 11 is based is contained in Appendix 11.1 and that the pagination in the Table of Contents is almost entirely inconsistent with the contents of the report.

## 3.0 PROJECT DESCRIPTION

The key development parameters of the proposal are:

- The traffic study is based on a development program with the following elements:
  - 615 single family units
  - 412 attached townhouse units
  - Expansion of the existing 9-hole golf course to an 18-hole golf course.
- Other development amenities are proposed as well, including: Clubhouse, Members Club, summer camp, lake beachfront and clubhouse, a spa and fitness center, and arts and crafts studios.



#### 4.0 SCOPE OF THE TRANSPORTATION CHAPTER OF THE DEIS

The scope of the transportation analysis was developed in consultation with representatives from the municipalities of Pine Plains and Milan, and with a representative from NYSDOT in meetings which took place in January and February 2006. Important decisions were made during these meetings that shaped the technical content of the DEIS traffic investigations. RSG did not participate in these discussions and RSG has not reviewed any memoranda summarizing those meetings.

The decision of what to include in a DEIS is critical. The DEIS scope directs the subsequent effort to evaluate a project's impacts. In this case of the Carvel Property Development DEIS, the overall analytical approach does not necessarily address the most important transportation issues that Pine Plains will face if the project is built.

The emphasis within the traffic study is on roadway and intersection capacity analysis. This is a conventional traffic engineering approach that is well suited for areas experiencing some level of congestion. Urban-type congestion is not an issue in Pine Plains, and will not likely be an issue even considering the addition of traffic from this proposal. Thus, the findings of Chapter 11 report what is readily observable: the project is being sited in a rural setting with light traffic flows.

Conventional traffic engineering approaches are not well suited for evaluating the impact of a new suburban development in a rural setting. The Federal Highway Administration, in their "Planning for Transportation in Rural Areas"<sup>1</sup> points out the several issues facing rural roads:

- Transportation safety is a greater concern than adequate capacity.
- The rural transportation system is dispersed resulting in higher unit costs for operation and maintenance.
- The rural roadway system has a greater number of environmental constraints to manage including wet areas, ledge, and steep terrain.
- Rural areas are subject to more dramatic weather events and their effects on road conditions.

We believe that the DEIS traffic investigation is unduly focused on capacity issues which do not appear on the list of top concerns for rural transportation systems. We are concerned that a project of this magnitude has not appropriately addressed the most important transportation issues of this rural area.

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<sup>1</sup> <http://www.fhwa.dot.gov/planning/rural/planningfortrans/2ourrts.html>



## 5.0 TRAFFIC SCENARIO INVESTIGATED

A critical decision made in the scoping discussions identified the traffic scenario that would be used as the basis for evaluating the traffic/transportation impacts of the development proposal. This scenario is referred to as the “Worst Case Scenario” and assumes that all of the proposed housing (615 single family units and 412 townhouse units = 1,027 units) is primary housing and that the grade crossing (at Ferris Lane) to the Taconic State Parkway would be closed. It was judged that this scenario would generate the highest amount of traffic to the local highway network.

The traffic study uses this scenario as the basis for analysis and thus is complete in this regard.

The traffic study states that site and background traffic are re-routed to account for an assumed limiting of the TSP access at Ferris Road. It appears that site traffic is re-routed, but it is unclear how background traffic is re-routed given this change in the highway network. The logic behind the re-routing, which is a very important assumption, is not provided in the narrative.

Of greater importance is the fact that the magnitude of the proposal – an 83% increase in the Pine Plains housing stock – is so substantial that existing patterns of travel are very likely to change in response. In other words, using background patterns of travel to project future patterns of travel is not the best model to apply. However, all of the analysis of the traffic study is based on the assumption that traffic from the project in the future will mirror current traffic patterns. This is a critical flaw in the traffic analysis.

## 6.0 INCOMPLETE ITEMS

The traffic analysis and associated narrative that have been submitted is voluminous. The work has conscientiously responded to the items listed in the scoping document. We believe that the core of the transportation analysis, with its focus on capacity, is not particularly relevant, while other impacts that are more critical to the rural setting have received little or no attention.

Within the confines of the Final Scoping Document, we have identified 4 incomplete items:

- Trip Generation—based on housing and golf course but no trips associated with other facilities such as the spa and fitness center.
- Safety Analysis—a narrative of safety issues was provided and a listing of the crashes obtained from NYSDOT was provided in Appendix 11-I. However, no analysis in the form of crash rates or crash characterizations is apparent. This is an important deficiency in the submitted materials given the importance of highway safety in rural areas as reported in the FHWA document referenced above. Based only on the introduction of new street



intersections along the project's Route 199 frontage, a 7-11% increase in crash rates for this highway segment is estimated.<sup>2</sup>

- Roadway Segment Capacity analysis – future capacity analyses for some roadway segments was either not conducted or not included in the traffic study.
- Construction Impacts—the DEIS Final Scoping Document, under item 2b) states:  
“Evaluate the impact of construction vehicle traffic on local roads, including the ability of the roads to withstand the truck loads, if two-way traffic will be possible, and any potential impact of noise and dust from these vehicles. Include type and size of vehicles, truck routing and access, and estimated daily trips.”

The submitted materials are deficient in their addressing of construction impacts. The Traffic Impact Study (Appendix 11.1) describes the potential routing of construction vehicles and material delivery to the project site, and emphasizes two factors that will lead to minimizing offsite impacts:

1. the overall phasing of the project into 4 phases which will occur over several years;
2. the existence on site of a 7 +/- acre permitted sand and gravel mine which “is estimated to contain a maximum of 250,000 cubic yards of material.”

No analysis of the ability of roads to withstand truck loads is provided other than the statement that “all delivery vehicles will be road legal as to length and weight allowances.” The scoping document implies that a detailed analysis should be developed which estimates the routing and number of trucks per day, an analysis of truck weight, and the period over which truck deliveries occur.

Each haul route to be used for material delivery, which will primarily be NYS Route 199, should be analyzed using pavement structure indices representative of that highway. The design life of the pavement under normal traffic loadings (No Build) should be compared to the design life of the pavement under projected loading assuming phased construction (Build). The ability of NYS Route 199 to withstand this type of construction traffic and its potential accelerated degradation cannot be understood without this additional analysis.

## 7.0 SUBSTANTIVE ISSUES

A number of other issues have emerged in our review.

1. The traffic study indicates that there “are numerous new site access points planned on .... NYS Route 199...” and this is confirmed in the project's site plan. Of specific note is the increase in intersections of Route 199 within the boundaries of the project. The project's site plan shows

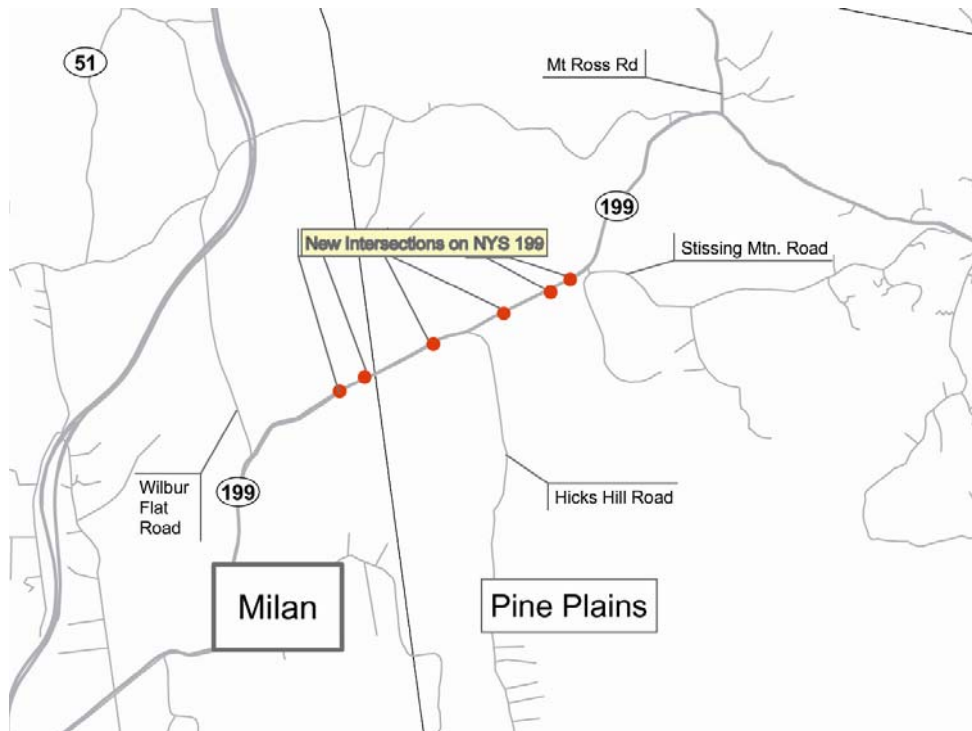
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<sup>2</sup> NCHRP Report 420 “The Impact of Access Management Techniques”. National Academy of Sciences. 1999.



approximately 2.8 miles of frontage on Route 199. Currently there are 7 local roads that intersect Route 199 within this 2.8 mile segment. The proposed site plan shows a total of 16 local road intersections resulting from the project. Between the western project boundary and Stissing Mountain Road, a total of 6 new intersections are proposed (Figure 1).

**Figure 1: Proposed New Street Intersections on NYS 199 West of Stissing Mountain Road**



Numerous new curb cuts on a rural arterial create safety concerns and are counter to sound access management principles. Each new intersection with NYS Route 199 will need to be analyzed for left turn lane warrants. The Planning Board should review, at minimum, conceptual designs for any left turn lanes on Route 199 as they will have a significant environmental and aesthetic impact. This type of information is critical and should not be left for the Planning Board's consideration after final approvals have been granted.

2. The traffic study states on page 11-44 that "...the results presented within ...the Traffic Impact Study...recognize both the traffic statistics that will result from the proposed action, but also...the character and setting of the area's roadway network." As mentioned above, the traffic study is overly concerned with conventional capacity analysis, which is simply not an important issue.





