

MEMO

To: Tri-Cities Impact Fee Review Group

From: Brent Coulter, PE, PTOE

Date: November 8, 2006

Subject: General Review of the Preliminary Kane County CRIP

Kane County requested in recent (late October 2006) correspondence that municipalities provide input on the Preliminary Comprehensive Road Improvement Plan (CRIP) dated 10/26/2006. This list appears similar to one dated 10/17/06 that was presented at the October 18, 2006 IFAC except that individual project cost estimates are excluded.

Each of you will obviously be reviewing this list with respect to specific projects affecting your planning area. Per your request I have provided this review of the broader issues involved with overall CRIP development under the County's proposed "facilities-driven" method for impact fee determination.

I. OVERVIEW - GENERAL CRIP COST ISSUES

Under the current "needs driven" impact fee program CRIP project costs are not used to calculate the impact fee schedule. With the "facility" method currently in progress project cost estimates for the subject CRIP will be used directly in the calculation of an impact fee schedule, and therefore project scoping and cost estimates must be much more accurate than for the typical long-range transportation plan/study.

Since the CRIP project list is the outcome of a long-range traffic modeling process, in order to properly assess the CRIP list it is imperative to understand the underlying traffic projection and capacity analysis assumptions and methods that resulted in that CRIP project list. To date we have not seen any documentation of the traffic modeling or capacity analysis process that lead to the Preliminary CRIP.

The following comments are intended to raise critical issues that should be addressed as you individually respond to the County's request to review the CRIP on a project by project basis within your planning area.

As you prepare your response, however, I would stress the following two caveats:

1. Municipal review of the CRIP list should not be construed as blanket municipal support for any specific project scope of work prior to completion of all applicable engineering and environmental studies (including municipal review and input) prior to the project being let for construction.

2. The CRIP is one of several key components of the “facility-driven” impact fee method being pursued by the County that will directly determine the overall impact fee schedule. Concurrence with the CRIP and other critical components (e.g. zone delineation) should be withheld until their cumulative affect on an overall impact fee schedule is known.

II. IDENTIFICATION OF HIGHWAY DEFICIENCIES AND SUBSEQUENT PROJECT SCOPE

A. Capacity Methods

As presented at the October 18, 2006 IFAC meeting, it appears that volume/capacity (v/c) ratios for individual highway segments were used to identify future deficiencies on the County Highway network. Documentation should be provided by the County showing how the modeled v/c criteria correspond to (intersection) delay or travel speed “Level of Service D” criteria in the Highway Capacity Manual, which is the acknowledged source of road capacity evaluation in the State of Illinois and Kane County. Documentation should also be provided on critical assumptions for peak hour factor, ideal saturation flow rate, method for incorporating coordinated signal system effect (progression factor or simulation) and numerous other factors affecting the capacity/level of service evaluation.

B. Cost Calculation

No information is provided on how project costs were calculated. For example, were they based on recent comparable projects using empirically derived unit-cost per lineal foot (mile) or a more project specific analysis based on a concept plan and rough quantity take-off. For some projects already in Phase I or Phase II study, cost could reflect an actual Preliminary or Final Engineer’s Estimate of Cost. Standard improvement (unit) costs should be documented for review and appropriateness and applied consistently to all projects included in the CRIP.

C. Standardized Cost Elements

A major factor in determining the impact fee under the “Facilities-Driven” method is the calculated cost of capital improvements (capacity expansion) for specific intersections and sections of roadway. Many typical components of roadway design are related more to enhanced safety, not system capacity. Examples include sidewalks, street lighting, wide outer-lanes for bicycle use, and pavement cross-section (structural design thickness). The standard roadway features and appurtenances incorporated into CRIP projects (and impact fee eligible costs) should be clearly documented.

III. EXAMPLE LACK OF PROJECT SCOPE OF WORK DETAIL

The exact scope of work and hence reasonableness of cost is difficult to ascertain from a simple CRIP project description. For example on Randall Road (Main Street to Keslinger Road), the designation is to widen to 6-lanes at a cost of over 22 million dollars per mile. This simple description is inadequate to answer the following important questions which affect project cost and local environmental impact:

- Is the intent to provide mainline dual-left-turn lanes at all signalized intersections?
- Will the proposed median cross-section (type and width) at intersections be continuous between intersections (or narrowed where feasible)?
- When three through lanes per direction are provided, many highway agencies (including IDOT) will consider not providing exclusive right-turn lanes (i.e. the outer through lane serves both through and right-turn movements) in order to minimize overall width and make the intersection more pedestrian friendly. What is the intent on Randall Road?
- There is a major bridge structure over the UP Railroad just south of Keslinger Road. What type of improvement to this bridge is reflected in the overall project cost (widening or complete replacement).
- Most developments abutting Randall Road have provided a substantial setback buffer (typically 50-feet) that in many cases (by the time access permits were issued) may have been dedicated as easement or fee-simple right-of-way for County roadway use. To what extent does the project cost reflect right-of-way acquisition and does this need actually exist?
- How will Kane County Stormwater Management Ordinance requirements for the improved roadway be satisfied?
- Highway capacity is typically constrained at intersection bottlenecks. Was the staging of Randall Road improvements considered? For example, intersection capacity (add through lanes and/or turn lane improvements) could be constructed in the current proposed CRIP but the continuous widening (add-lane) improvements between intersections deferred to a later CRIP update, with the objective of (temporally) spreading project costs among more developments rather than forcing the entire improvement burden on fewer near-term developments.

- Randall Road is a “designated freeway” and has continuity through and beyond Kane County (as Orchard Road on the south) in close proximity to three adjacent counties. “Travel Desire Line” from the Year 2030 Kane County Transportation Plan Analysis (see attached figure) clearly shows Randall Road as a route destination for most of Kane County with significant external tripmaking across county lines. The result is a Preliminary CRIP that is highly skewed to the eastern third of Kane County. How will the regional nature of this route, as is apparently reflected in volume forecasts and improvement scope of work ultimately be reflected in the impact fee schedule.
- Kane County impact fee revenue must be expended on the County highway system. How far out on non-county (e.g. municipal or IDOT) cross-streets do intersection project improvements extend and is it anticipated that municipalities will be asked to fund the cost to improve the municipal legs of these Randall Road intersections ?
- The \$22,000,000 cost per mile for the subject section of Randall Road appears to be 2 to 4 times greater than comparable road projects in other jurisdictions (other widening projects appear to have similarly high disparities with comparable projects). What accounts for this high cost per mile?

IV. GENERAL FAIRNESS ISSUES

A. Excess Benefit to Existing/Future Fee Payers/Users

Under the current “Needs Driven” method, additional capacity required to accommodate a specific development’s trip generation was added incrementally in fractions of a lane (or lane-mile) based on a site’s trip generation and length so that (in the fee equation) new travel demand balanced exactly with required additional highway capacity. As described below, in the “Facilities” method this balancing of added highway capacity to meet new demand is not always maintained.

1. Potential for Existing Development to Subsidize Future Development

Under the “Facilities” method now in progress, highway capacity, which is indivisible, is added in increments of lanes. As a result, capacity-related improvements with a useful life of 20 to 40 years identified in the Preliminary CRIP generate benefits well beyond the 10-year horizon of the CRIP and may create surplus capacity above and beyond that needed to serve new development traffic at the design level of service. As a consequence, current road impact fee payers may pay a higher fee that in effect subsidizes future developments (i.e. who would pay a lower fee).

2. Potential to Create Surplus Capacity that Benefits Existing Users

Adding capacity to meet future development-generated traffic growth may in some cases create surplus design capacity that also improves the quality of service (i.e. less delay and congestion) for existing users.

3. Potential to Extend Useful Roadway Life for the Benefit of All Users

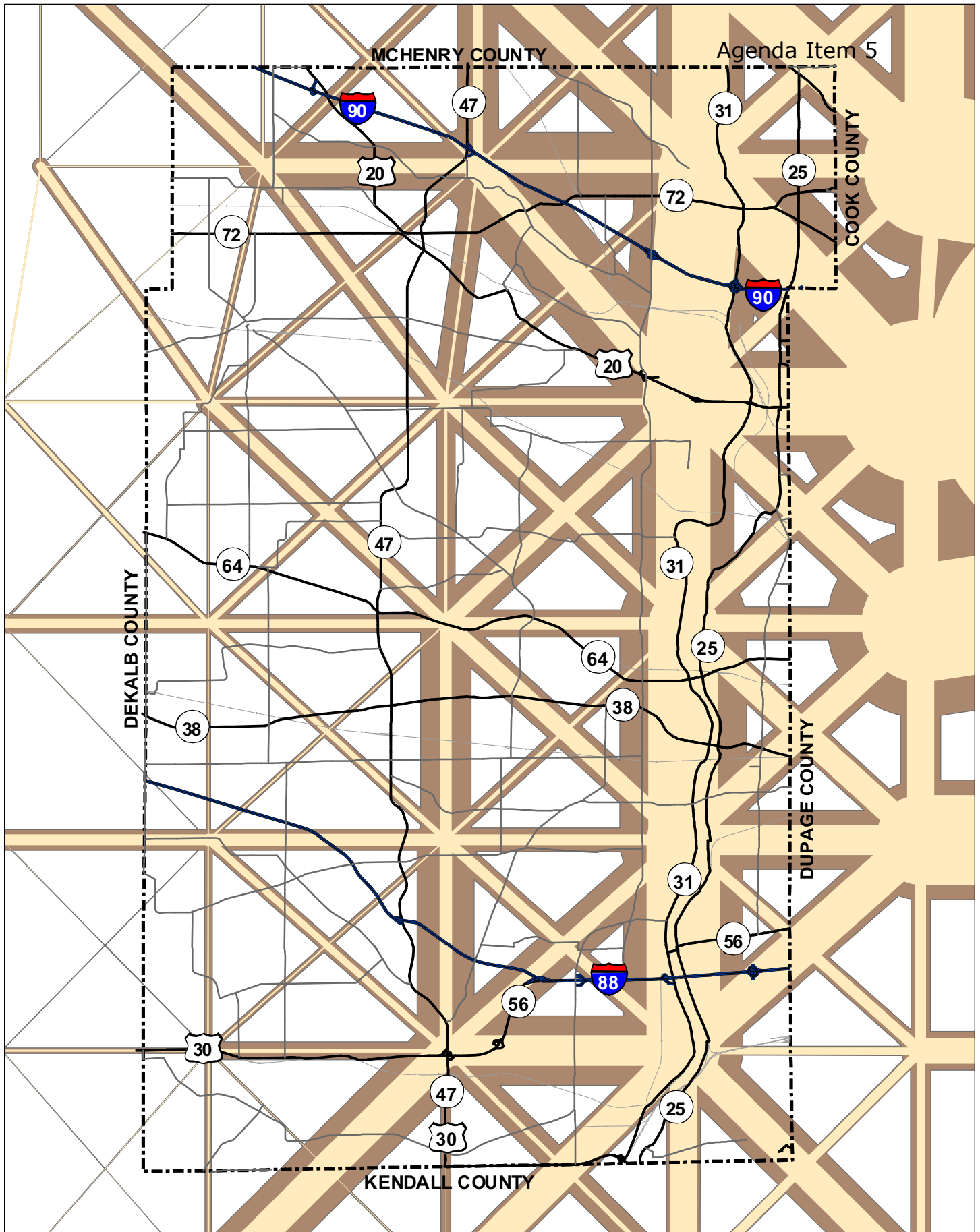
Certain add-lanes projects may require extensive reconstruction of the existing roadway and/or extensive rehab or replacement of existing bridges to correct existing non-capacity related deficiencies. As a result, the useful life of the pavement or structure may be extended in the process. This benefits existing and future users and KDOT (i.e. property tax or gas tax based revenue that the County now designates for maintenance/operations would not be needed for future reconstruction, rehab or repair work).

State enabling legislation for road impact fees requires that local governments identify “the proportionate share of road improvement costs to be paid by new development”. This requirement would appear to take into consideration the “fairness”, “specifically and uniquely attributable”, and “existing deficiency” issues outlined above.

B. Ability to Implement the CRIP

The projected Preliminary CRIP cost totals an ambitious \$1,032 million and raises the question of whether that magnitude of highway improvement program is doable in a 10-year time frame given the time required for engineering/environmental processing, interagency review, staffing, and regional competition for contractor resources? Also, revenue from impact fees invariably seems to come in lower than projected for various reasons and outside supplemental sources of funding (i.e. federal dollars) may not be realized to the full extent anticipated. Since the total CRIP cost is reflected directly in the fee schedule, overestimation of impact fee revenues will result in initial payment of higher fees that could penalize development projects, especially early in the ten-year program.

It may be desirable to prioritize the CRIP list with respect to need, geographic distribution and staging potential and select the highest rated projects using a projected 10-year revenue collection that is discounted based on the above considerations.



Agenda Item 5

MCHENRY COUNTY

COOK COUNTY

DEKALB COUNTY

DUPAGE COUNTY

KENDALL COUNTY



Volume of Trips (Two-Way)



Future Travel Growth Desire Bands
2003 - 2030

Figure 7-8

Kane County 2030 Transportation Plan