



MEMORANDUM

To: Doug Plummer
From: David Saladino, P.E.; Benjamin Swanson
Subject: Kimball Union Academy Baseline Parking and Traffic Assessment
Date: 2 July 2012

Executive Summary

Kimball Union Academy (KUA) requested Resource Systems Group (RSG) conduct an assessment of traffic volumes and parking utilization on and adjacent to its campus to provide a baseline reference to determine the adequacy of its roads and parking currently, to support future development proposals to be submitted to the Town for Planning Board and Zoning Board approval, to determine the volume of traffic late at night in order to assess the benefit of operating its Main Street lights during periods of darkness, to determine the potential need for traffic calming measures on Main Street, and to assess the impact on the planned removal of the Post Office from its current Main Street location.

Based on the assessment summarized in this memorandum, our key observations and findings are summarized as follows:

- **Adequacy of Roads Within and Adjacent to Campus:** Roadway travel lane widths and alignments along Main Street, Chellis Road, and Campus Center Drive were all found to be adequate given their respective functional roles and current traffic volumes. We also found that adequate capacity is present on all roads and intersections adjacent to the campus to accommodate current traffic volumes.
- **Adequacy of Campus Parking:** Based on our observation of campus parking utilization, we found there to be ample parking capacity on campus during both average and peak event days. During an average weekday, we found the largest campus lot (i.e. Campus Center lot) to be 60% occupied at its peak. During a peak event Saturday, the Campus Center lot was 62% occupied at its peak. Looking at all campus-related parking (258 spaces), we found peak utilization during a typical weekday of 58% and during a peak Saturday campus parking utilization at its peak was 55%. For planning purposes, parking demand consistently exceeding 85% of capacity is typically considered an indicator of inadequate parking supply.
- **Need for Overnight Lighting of Main Street:** Based on two weeks of count data, we found that traffic volumes along Main Street average two cars per hour between 12 AM and 5 AM. Based on the relatively low volume of overnight traffic, we feel that pedestrian-crossing safety would not be adversely affected if the overhead lighting on Main Street were turned off from 12 AM to 5 AM.
- **Need for Traffic Calming on Main Street:** We found that the 85th percentile speed on Main Street just east of the Post Office was 32 miles per hour (posted speed is 30 miles per hour). However, given the location of this counter adjacent to the Post Office, the speed records included a number of vehicles travelling less than 15 miles per hour (likely pulling into or out of the Post Office or slowing for a pedestrian crossing the road). If we remove the vehicles traveling less than 15 miles per hour, the 85th percentile speed increase to 35 miles per hour. As reported in our previous memo on Main Street pedestrian crossings (December 2010) we found that

vehicle speeds at or exceeding 35 miles per hour would have difficulty stopping for pedestrians at either the Chellis or Miller crosswalks. While this calculation accounted for the grade on Main Street, it did not account for the potential presence of ice or snow on the road ~ which would adversely affect the stopping distance for vehicles. Based on the recorded speeds, sight distances, frequent pedestrian crossings, and downhill grade, we would recommend implementing one or more traffic calming measures along Main Street to encourage slower speeds and enhance pedestrian prominence within the streetscape.

- **Impact of Planned Relocation of Post Office:** We understand that the school is currently considering the potential of relocating the Post Office from its current location on Main Street to a location adjacent to the Main Street/NH 120 intersection. Based on our assessment, we would estimate that this relocation would remove approximately 60-70 cars during a typical day from the eastern section of Main Street (i.e. cars that are currently reaching the Post Office via NH 120). The removal of the vehicle activity associated with the Post Office has the potential to slightly increase average travel speeds on Main Street, as the combination of vehicle access and egress and the physical presence of the Post Office building likely contributes to overall speed reductions today along this section of Main Street.

