ITRE
Institute for Transportation
Research and Education

May 7, 2025

Dr. Lisa Fletcher
Superintendent
Transylvania County Schools
225 Rosenwald Lane
Brevard, NC 28712

Dr. Fletcher:

Thank you for inviting the Institute for Transportation Research and Education (ITRE) to propose an Integrated Planning for Schools and Communities (IPSAC) project for Transylvania County Schools (TCS). We look forward to the opportunity to provide long-range planning solutions that are based on data and driven by Board policy. This Proposal includes a timeline and cost for the 2025-26 Integrated Planning for Schools and Communities (IPSAC) Land Use Study and Facility Master Planning support. A list of project tasks and project timeline follows:

September 2025

- Comprehensive Land Use Study: ITRE will conduct interviews with county, municipal, and other stakeholders to determine growth potentials affecting student populations. These interviews may be conducted virtually. An TCS staff representative will participate in the interviews.
- In addition to the stakeholder interviews, ITRE will conduct a Geographic Information Systems (GIS) parcel-resolution analysis with a focus on existing and planned subdivisions and other high-impact residential developments.
- Collect latest GIS layers from Transylvania County GIS
- TCS will review/update school building capacity data including renovations, closings, and openings.

October 2025

- Collect electronic student records for SY 2025-26 suitable for geocoding from TCS
- Create Planning Segment geometry
- Collect ADM data
- Generate neighborhood-level student population forecast
- Generate school-level 10-year membership forecast (Out-of-Capacity table)

November 2025

- Present IPSAC findings to the TCS Board of Education and staff.

Please note: Delays in data collection may adversely impact this schedule.

A joint activity of North Carolina universities

NC A&T State University
NC Central University
NC State University
UNC Chapel Hill
Duke University

Centennial Campus
Box 8601, Raleigh, NC 27695-8601
919.515.8899 Fax: 919.515.8898
http://itre.ncsu.edu

ITRE
Institute for Transportation
Research and Education

On-going

- School Facility Master Planning support services

The cost for the 2025-26 IPSAC Land Use Study and Facility Master Planning Support for TCS is $35,000.00. If the terms of this Proposal are acceptable, please contact me and I will forward an Agreement to sign and return.

Sincerely,

Thomas E. Dudley
Program Manager
ITRE @ NCSU Centennial Campus- Box 8601
Raleigh, NC 27695-8601
tedudley@ncsu.edu

Centennial Campus
Box 8601, Raleigh, NC 27695-8601
919.515.8899 Fax: 919.515.8898
http://itre.ncsu.edu

Technical Description of Integrated Planning for School and Community

Services Provided

A complete Integrated Planning for School and Community (IPSAC) study typically involves the following processes:

- Data collection and verification. Data integrity is essential in the IPSAC process.
- Building a central Geographic Information Systems (GIS) database that can be used for analysis, forecasting, and optimization.
- Quantifying land use factors which are likely to affect membership demographics for the next 10 years.
- Constructing a 10-year cohort forecast, and then disaggregating it by attendance zone and by school, using historic data, resident live births, and land use factors.
- Constructing a graphic representation of over- and under-utilization status for all schools for 10 years.
- Determining how many new schools should be built and when.
- Determining *where* new schools should be built to optimize transportation costs, to balance demographic metrics, and to meet the school building utilization constraints.
- Determining the optimal attendance boundaries for impacted schools in the district based on membership forecasts for some specific future year, minimizing transportation, eliminating over- and under-utilization, and, optionally, meeting other school policies on demographic balance.

More specifically, the following tasks are necessary to complete a full IPSAC study. Note: Not all items will be included in every IPSAC study.

1. GIS Planning Segments and School Attendance Zones

Normal inputs and assumptions

- The school district shall assist in the acquisition of GIS data for parcels, streets and other relevant layers.
- School district shall participate in the transfer of elementary, middle, and high school attendance zones to a GIS database.
- School district shall participate in the creation of GIS-based planning segments. Planning segments are the geographic units used by OREd for analysis and optimization.
- School district shall provide a file containing the location of existing schools.

OREd processes

- Provide technical assistance to the district for the above tasks.
- Collect and disseminate GIS data layers relevant to the study.
- Digitization of school boundaries and planning segments.

2. GIS Student Database

Normal inputs and assumptions

- The school district shall provide a current-year student database in a format suitable for GIS parcel-resolution geocoding (address-matching). The student database must include accurate street addresses, school code, grade, and possibly other demographic data.

OREd processes

- Address-matching students to parcels and/or with available GIS reference data.
- Communicate to district if results of address-matching were unsatisfactory.

3. Land Use Study: Community Interviews and GIS Analysis

Normal inputs and assumptions

- School district shall provide names, locations, and authorization for the OREd Land Use specialist to meet with county/municipal stakeholders including: city and county planners, zoning officers, utility planners and/or commissioners, utility company representatives, highway planners, community development representatives, surveyors, and any others who would have informed opinions regarding anticipated growth and/or demographic changes in the district.
- School district shall coordinate and schedule interviews with stakeholders. OREd strongly encourages a representative from the school district attend these meetings.

OREd processes

- Meet individually with stakeholders.
- Draft Land Use Study report to summarize Community Interview findings.
- Use GIS data to validate and quantify Land Use Study Community Interview findings by calculating the Student Generating Ratio and potential student gain.
- Construct and negotiate with district the Allocation of Gain.

4. 10-Year Disaggregated Membership Forecast

Normal inputs

- The district shall provide six years of fall K-12 membership data by grade and school for the entire system. Month-1 or Month-2 ADM is preferred.
- School district shall provide a list of exceptions to the attendance area plan, such as Pre-Kindergarten programs, magnet schools, special large-area exceptional child programs, hospital programs, etc.
- School district shall provide annotations to above concerning any recent changes in grade structure or other matters that would affect forecasting.

OREd Processes

- Build district-wide enrollment forecasting model for up to ten years.
- Disaggregate 10-year forecast by attendance area using Allocation of Gain as determined by Land Use Studies and recent historical membership trends.

5. Out-of-Capacity Report

Normal inputs and assumptions

- School district shall provide a complete list of school capacities, paying particular attention to how program-specific space was or was not included in the calculation.
- School district shall specify which schools are candidates for closure based on their condition.
- School district shall specify which schools are candidates for expansion based on land availability, general condition, size of core facilities, etc.

OREd processes

- Build Out-of-Capacity table forecasting student population by building for up to ten years.
- Present Land Use Study report and Out-of-Capacity table to school officials.

6. Model Optimal Locations for New Schools and/or Optimal Attendance Zone Scenarios

Normal inputs and assumptions

- School district shall provide specific facilities needs based on the Land Use Study and Out-of-Capacity table.
- School district shall provide a policy on new school capacities.
- School district may provide a planning standard for demographic balance, if relevant.

OREd processes

- Run new school location optimization algorithms for impacted grade levels.
- Run boundary optimization(s) for each impacted level for specific years as requested by the school district.
- Create maps and data summaries to describe optimal scenarios.
- Present all findings to school officials for review.
- Create and implement a process of scenario review in order to realize specific modifications to optimal scenarios.

7. Public Meetings and Reports

OREd processes

- Assemble all relevant documentation, including Land Use Study report, Out-of-Capacity table, and optimal scenario maps/data.
- Plan for and attend one meeting with the school district administration, committee, and/or school board to explain the results of the project.
- OREd staff presence at additional Community Engagement meetings such as Assignment Planning committees, parent group meetings, and/or other community groups is not included as part of this contract.

8. Facility Planning Support

OREd processes

- Project Timeline and Management from inception through approved BOE Facility Master Plan
- Establishing Plan Objectives / Clear Problem Statement(s) based on enrollment and facility data
- Data collection and integration of core Planning Pillars: Academic Programming, Student Enrollment, and School Facilities (e.g. 10-Year Enrollment Forecasting and Facility Conditions / Capacity Database)
- Identifying BOE, Administration, and Community Priorities
- Developing Facility Planning Scenarios (e.g. facility renovations / expansion, new school construction, school boundary adjustments)
- Developing a Draft Facility Master Plan reflecting data collection, problems to address, and viable facility scenarios

Note that project pricing is based on the assumption that only one <u>presentation</u> trip to the work site will be required, although multiple meetings during the trip can be scheduled.