



INSTITUTE OF TRANSPORTATION ENGINEERS
BYU STUDENT CHAPTER



December 3, 2018

Amit Kothari
Technical Committee Chair
ITE Western District

RE: 2019 Data Collection Project Proposal

Dear Mr. Kothari,

Thank you for the opportunity to submit a proposal for the Institute of Transportation Engineers (ITE) Western District 2019 Data Collection Project. As members of the Brigham Young University (BYU) Student Chapter of ITE, we understand the importance of reliable transportation data for planning and operations in the transportation field and are excited to have the opportunity to submit this proposal for data collection.

Attached, please find our proposal to collect trip generation and traffic volume data for a Charter Elementary School in Provo, Utah. Treeside Charter School was chosen being an underrepresented land use that could greatly benefit from additional data being gathered. The proposal contains the scope of work to be completed, information on our mentor, a proposed schedule for the work, the anticipated level of effort in person-hours to complete the project, and payment information.

We are confident that our student chapter can submit accurate data and a thorough, professionally prepared report. We look forward to utilizing the data collection funds to provide travel and accommodations for student chapter members to attend upcoming ITE conferences at the Chapter, Section, and District levels. We also anticipate utilizing the funds to support social and recruiting activities on campus at BYU.

Again, thank you for considering our proposal for completing this data collection project and receiving data collection funds. If you have any questions about our proposal please feel free contact me by email at mckayparkinson@gmail.com, or by telephone at (505) 660-4405.

Sincerely,

McKay Parkinson
Vice President
BYU ITE Student Chapter

Data Collection Proposal Scope

The Brigham Young University Institute of Transportation Engineers (BYU ITE) student chapter proposes to collect trip generation and adjacent street volume data of Treeside Charter School located in Provo, Utah. This is currently an underrepresented land use (LU 537) in ITE Trip Generation with at most 11 studies completed.

The proposed charter school is located at 1724 S State St. in Provo, Utah, and is outlined in Figure 1. Treeside Charter School has its own parking lot with one driveway, connecting it with State street on the East side of the property.



The school consists of two buildings with gross floor areas of 35,000 and 34,000 square feet. The total gross floor area of the school is 69,000 square feet. There are 67 parking spots located on the property. Treeside Charter School is open Monday through Friday, from 8:30 am to 4:00 pm. There are also two public bus stops located near the facility. The executive director of the charter school has been contacted and has agreed to work with BYU ITE.

To facilitate accurate counting, BYU ITE will place its traffic cameras at the location to monitor driveways, walkways, parking lots, and transit stops. One camera will monitor the driveway, a second will monitor the adjacent street, a third will monitor the parking lot to determine parking occupancy, and the fourth will monitor the nearby transit stops. BYU ITE will attempt to determine vehicle

Figure 1: Site Location

occupancy using a combination of the driveway camera as well as the parking camera data, but due to circumstances such as camera angle, vehicle window tinting, and privacy concerns for the children riding in the vehicles, it may not be viable to collect vehicle occupancy.

The recorded video will then be reviewed to obtain hourly counts of entering and exiting vehicles, pedestrians, and bicyclists. BYU ITE will report the trip generation with separate counts for motor vehicles, trucks, transit, pedestrians, and bikes. The traffic volume on the adjacent road, State Street (US-89), will be counted and reported. This will be done from 7:00 a.m. to 6:00 p.m. on all three data collection days.

Trip generation will be counted between the hours of 7:00 a.m. to 6:00 p.m. on a Tuesday, Wednesday, and Thursday. Parking occupancy will also be counted hourly for 12 consecutive hours during all three data collection days. The BYU ITE team members will be flexible to change these hours based on the selection committee's input. Data will not be collected during weeks that include holidays or periods of inclement weather, as travel patterns may be affected during those times.

The summarized data will conform to the formats of the ITE "Trip Generation Data Form." BYU ITE will include information on the gross floor area, the number of students, and adjacent street volumes of both the a.m. and p.m. peak hours. A draft abstract and final abstract of findings will be provided according to the dates specified in the schedule outlined in Table 1.

Mentoring

Jeremy Searle, P.E., PTOE, of Hales Engineering has agreed to mentor BYU ITE by training those who will collect, reduce, and analyze the data, responding to questions or problems that arise, and reviewing the results and final report. Mr. Searle will submit the draft abstract of findings, response to comments from the evaluation committee, and the final abstract of findings to the Data Fund Collection Committee. BYU faculty member and ITE student chapter advisor Dr. Grant Schultz, P.E., PTOE, will also provide assistance.

Schedule

BYU ITE will complete this project according to the schedule shown in Table 1.

Table 1: Work Schedule

Date	Work to be Completed
January 31	Training by mentor
March 5-7	Data collection
March 11-15	Data reduction and analysis
March 18-22	Write summary and report
March 25-29	Report reviewed and revised as necessary
April 5	Submit draft abstract and data
April 25	Submit final abstract and data

Level of Effort

BYU ITE anticipates spending approximately 80 person-hours on this project. These hours will be allocated as summarized in Table 2. BYU ITE student members and other civil engineering students will be encouraged to participate in the data collection and will be given credit in the form of service points, which are required as part of a BYU Civil Engineering undergraduate seminar course.

Table 2: Level of Effort

Task	Number of Students	Hours per Student	Total Hours
Training	14	1	14
Data collection	6	2	12
Data reduction and analysis	14	3	42
Writing and revision	3	4	12
			<u>80</u>

Project Management

Table 3 provides contact information for individuals that will provide project management services.

Table 3: Project Management

Faculty Members	Student Coordinator	Primary Mentor
Grant Schultz, Ph.D., P.E., PTOE 430 Engineering Building Brigham Young University Provo, UT 84602 801-422-6326 gschultz@byu.edu	Jordi Berrett 1849 N Freedom Blvd. Apt. 111 Provo, UT 84606 385-888-2340 jordiberrett@gmail.com	Jeremy Searle, P.E., PTOE Hales Engineering 1220 North 500 West, Ste. 202 Lehi, UT 84043 801-766-4343 Jeremy@halesengineering.com

Grant money will be used to send students to ITE conferences and meetings. Our chapter has sent students to Utah Chapter ITE activities, Intermountain Section conferences, Western District Student Leadership Summits, and to Western District annual meetings. In particular, we are planning to assist four to six students in attending the 2019 Western District Annual Meeting in Monterey, California, to compete in the Western District Collegiate Traffic Bowl.

Agreement to Hold Harmless

The BYU ITE Student Chapter holds harmless and indemnifies the ITE Western District from any and all liability associated with the conduct and completion of this proposal, data collection, and associated activity.