



October 27, 2021  
2020089.19

**Mr. John Picuri, P.E.**  
**District Deputy Director**  
**ODOT District 12**  
**5500 Transportation Boulevard**  
**Garfield Heights, Ohio 44125**

**Attn: Mr. Brian Blayney, P.E.**

## **VAR-District 12/District 3 Traffic Engineering Services Agreement No. 34112, PID 107433 Work Order No. 12-19; GEA/LAK-44 Corridor Study**

Dear Mr. Blayney,

In response to your request, GPD Group is pleased to present this formal cost proposal to prepare a Corridor Study for SR 44 in Chardon Township, Geauga County and in Concord Township, Lake County. Our Scope of Work and Fee Summary are included.

### **Scope of Work**

GPD's work includes the following tasks:

1. Study Area – The study area will consist of SR 44 from the northern corporation line of the City of Chardon (approximate SLM 18.38), through Chardon Township, and continuing into Concord Township, to the four-lane section south of the Capital Parkway intersection (approximate SLM 1.07). Intersections within proximity to the SR 44 corridor will be included. The following intersections are included in the study area:
  - a. SR 44 / Girdled Road
  - b. Girdled Road / Auburn Road
  - c. Girdled Road / Crile Road
  - d. SR 44 / Colburn Road
  - e. SR 44 / Clark Road
  - f. SR 44 / Hosford Road
2. Data Collection – Turning movement traffic counts at the study intersections will be collected for the hours of 7 am to 7pm. Using ODOT's GIS Crash Analysis Tool (GCAT), crash data for the entire study area will be collected for the years of 2017 through 2021.
3. Field Visit – Through a field visit, the site will be inspected, and field sketches made of existing roadways, paying particular attention to lengths of turning lanes, widths of travel lanes, sight distances, grades and existing traffic control.
4. Volume Development – The traffic counts collected will be compared to traffic data on ODOT's website to determine if any adjustments need to be made related to the COVID-19 pandemic. As we will be investigating the potential to add capacity, we will seek Certified Traffic for this project including developing Opening Year and Design Year volumes and an Early Coordination Meeting with ODOT District, ODOT Central Office, and NOACA.
5. Collision Diagram – Collision diagrams will be prepared showing the crashes collected in Task 1. This will be used to determine any crash trends along the corridor that may influence the

recommended improvements. Based on a preliminary review from GCAT, it appears that there have been 178 crashes in this corridor from 2017 through 2021 as follows:

| YEAR                | CRASHES    |
|---------------------|------------|
| 2017                | 37         |
| 2018                | 32         |
| 2019                | 49         |
| 2020                | 38         |
| 2021 (not complete) | 22         |
| <b>Total</b>        | <b>178</b> |

6. Signal Warrant Analysis – A signal warrant analysis will be conducted for all intersections noted above in accordance with the Ohio Manual of Uniform Traffic Control Devices. All applicable warrants will be reviewed.
7. Turn Lane Warrants – If a traffic signal is not warranted at an intersection, turn lanes warrants will be investigated. If a traffic signal is warranted, the capacity analysis will determine if a turn lane is needed.
8. No-Build Capacity Analysis – Capacity analysis for the No-Build condition will be prepared for both the Opening Year and Design (20) Year scenarios. The analysis will be a combination of Highway Capacity Software (HCS) and Transmodeler. Transmodeler will be used as needed to include the influence of the closely spaced adjacent intersections and potential improvement options. Due to the intersection spacing, it is not anticipated that the intersections along SR 44 will influence each other (2,200' minimum spacing).
9. Traffic Operation Assessment Systems Tool (TOAST) Analysis – There are five TOAST section through the project area. Prior to preparing any Build analysis, an investigation into the TOAST scoring of the corridor will be prepared. The intention of this task is to get an overall understanding of the deficiencies of this corridor as they pertain to the potential Build improvements.
10. Build Capacity Analysis – Capacity analysis for the Build condition will be prepared for both the Opening Year and Design Year scenarios. Improvements under the Build scenario will be determined based on the capacity analysis, crash analysis and TOAST investigation. Again, the analysis will be a combination of HCS and Transmodeler. It is envisioned that one or two alternatives will be developed for each intersection in the Build scenario. In addition, we will investigate the extension of the four-lane section just south of the Capital Parkway through the Girdled Road intersection. Each SR 44 intersection will be analyzed individually for any alternative.
11. Turn Lane Storage Calculations – If turn lanes are determined to be warranted, turn lane storage length calculations will be conducted.
12. Conceptual Renderings – Conceptual renderings over aerial photos will be prepared for each alternative for each SR 44 intersection. These drawings will be to scale but will not be based on survey data.
13. Construction Cost Estimates – For each of the SR 44 intersections, a planning level estimate will be prepared.

14. Draft Study – Summarizing the information and analysis developed, a draft Corridor Study will be prepared for your review and comment.

15. Final Study – Upon receipt of any comments, the study will be finalized and submitted.

No 'If Authorized' services are being proposed at this time. It is understood that modification to this proposal may be necessary if the project scope changes.

I look forward to working with you on this project. Please do not hesitate to call me should you have any questions or concerns.

Sincerely,

GPD Group

A handwritten signature in dark ink that reads "Kevin Westbrooks". The signature is written in a cursive, flowing style.

Kevin P. Westbrooks, PE, PTOE  
Project Manager