

Letter of Transmittal

Mr. Roger Nawrot, PE, PLS
Assistant City Engineer
125 S. La Fayette Boulevard
South Bend, IN
46601

October 14, 2015

Dear Mr. Nawrot:

Please find attached the Impact Report of the Western & Olive intersection rehabilitation project. In this report, Green Light American Designs will identify various potential environmental hazards, delimit the impacted areas, and provide recommendations to tackle these hazards. Our team will also look into any societal or economic impacts this project may have. Our proposals will relate to the content discussed on our meeting on September 18, 2015.

The key points are:

1) **Environmental hazard identification and mitigation:** The site is located in a mix residential and commercial area. The main concerns for this project are:

- Air pollution
- Contaminated runoff from rainwater
- Noise

We would like to emphasize that the project is taking place in a completely urban area and therefore there are no sensitive ecosystems in the vicinity at risk of being impacted by the project. The project does not include the release of any hazardous substances that may percolate into the water table.

2) **Societal Impact:** The GLAD group will interview at least 5 business and home owners to identify any potential impacts. We believe that obtaining input from our project neighbors will help us identify previously unforeseen questions. We will present further information on how we will identify our interview candidates in the upcoming weeks.

3) **Economic Impact:** Our team believes that increased mobility on a major city road will result in potential economic gains for the neighborhood and local industries.

Our firm is committed to provide environmentally sensible proposals while addressing both the economic and societal constraints of the project. Please find enclosed further information regarding the project, including: General Information and Background, Detailed Project Information and a concise summary of this report.

Sincerely,

Santiago Espinosa-Wild
Project manager

Enclosure: Impact Report

Background and Introduction

The Western & Olive intersection is located on the eastern part of the City of South Bend. Approximately 1.5 miles of the Four Winds Stadium and about 10 miles from Interstate 80, the closest interstate. Both roads are truck road designated. In its current state the intersection fails to provide drivers with both an acceptable sight distance and enough space to turn their vehicles. The GLAD group will be submitting a series of proposals to make the intersection more safe and accessible.

All of our proposals will take into account environmental, economic and societal considerations. We will meet with several stakeholders to obtain their input on the project and we will do independent research on potential environmental concerns. If our team finds out that a certain issue stands out, we will design in such way as to diminish or eliminate that issue. For example, if our team finds out that noise is an issue for the neighborhood we may explore the possibility of including an earth embankment or concrete panels to reduce the noise levels in the area.

This report includes a preliminary set of potential issues and their hypothetical solutions.

Assessment of Environmental Risks

The area around the Olive and Western Intersection is highly industrialized. The majority of the area has been previously paved or otherwise developed. This means there is little need to consider the impacts of this project on native ecosystems. However, there are several other types of environmental risks that need to be considered during the construction of intersection improvements at Olive and Western.

One major issue that will be a concern during this project is water pollution. During rainfalls, the runoff from the construction site could potentially pollute the water supply in the area. Any additional chemicals or pollution that enters the drainage system would be deposited into the rivers, which would be unacceptable. The GLAD group plans to provide temporary barriers around the perimeter of the project throughout construction, so that no harmful pollutants could drain into the surrounding environment. Drains will be covered throughout all days when construction is actively being done on the project.

A second potential environmental issue on the job site is air pollution. Any large construction machinery will produce emissions; however, it is our goal to reduce all other air pollutants as much as possible. The GLAD group intends to use vehicles and equipment with low emissions, and equipment that can run on alternative fuel sources (for example, methane from the wastewater treatment plant). Testing will be done regularly throughout construction as to monitor the quality of the air in the area affected by the construction.

Lastly, noise pollution is a major concern in this area. There is a residential area just one block south of the Olive and Western intersection which would be affected by any excessive noise. If heavy construction becomes necessary, the impact of this noise on the surrounding community will be constantly monitored. To prevent noise pollution, the construction crews will only work during sanctioned hours, and never on the weekends. Noise level monitoring devices

will also be used in locations around the site to ensure that the noise levels from construction are never unbearable for members of the community.

Impact on Surrounding Environment

Economic Impact

During construction, the project could cause economic impact through travel delay cost, vehicle operating cost, crash cost, trucking and local business impacts. Travel delay includes the time required to reduce vehicle speed to the work zone speed and travel through the work zone. Vehicle operating costs included added cost due to speed change, queueing, stopping, and detours. This adds cost for vehicle operators through fuel and engine oil consumption, maintenance, and depreciation costs due to mileage. Crash cost is the economic impact of how construction zones create safety hazards for workers and vehicle operators. This intersection is also on a truck route, which will cause delays for trucking companies. Local businesses will also be impacted through decreased customer access, delivery access, and parking issues. These impacts will be mitigated through increased visualization such as speed advisories, delay advisories, and alternate route guidance. An efficient schedule will also reduce the economic impact of the construction by decreasing project duration.

By improving the intersection, the GLAD group hopes to increase accessibility and mobility in the area. These improvements should lead to economic gains for the businesses in the area. There are several business located at the intersection itself, and several more in the general vicinity. Increasing access to these businesses will ideally improve and increase the number of customers or patrons. Along with this, and increasing mobility, the number of people travelling in the area could increase, again adding to the number of patrons in the local businesses.

Social Impact

As well as having an economic impact, construction will also have a social impact by decreasing mobility to nearby locations. This project could impact the nearby transportation infrastructure, such as the Amtrak station northwest of the intersection. The construction site is in between two railroads as well. The railroad south of the intersection is crossed by bridge, but the railroad north of the intersection has a railroad crossing. GLAD will coordinate with the railroad company to ensure that the construction will not cause traffic backup into the railroad crossing during peak train travel. Construction could also impact the Western bus route, which services through Western Avenue. In addition, there are parks, schools, churches, and a US Post office nearby. The construction on this intersection could decrease the access of the community to these locations. At the very intersection of Olive Road and Western Avenue, there is Marathon Gas, Wells Fargo Bank, and Midwest Muffler. There are more small businesses and restaurants along Western Avenue. Utilizing phase scheduling will ensure that traffic flow interruption to these locations will be minimal. GLAD will also create public awareness through signs, brochures, and updates on the company website.

Improving the intersection should ultimately improve the condition and quality of life of the area. During construction/renovation, however, the area could experience some delays and

backups resulting in unsatisfactory conditions. The GLAD group intends to interview several of the nearby businesses and homeowners to insure that all possible impacts have been evaluated and mitigated to the best of our ability.