

# TECHNICAL MEMORANDUM

**Project:** Helion Energy Facility, Chelan County, WA

**Subject:** Trip Generation Estimate

**Date:** December 19, 2024

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This memorandum presents the trip generation estimate for the proposed Helion Energy fusion generating facility near the Rock Island Dam in Chelan County, WA. The facility will include three permanent structures on an approximately 6-acre site area (occupying 12% of the total parcel), each constructed, prepared for operation, and operated in multiple phases. The first phase of the project will include constructing a 26,800 -square-foot building that will be used to assemble sub-systems of Helion's fusion generator, and a 6,240-square-foot building that will serve as the administrative office. The site's access road and parking lot will also be constructed in Phase 1. The second phase of the project will include a 100,000-square-foot building and the fusion generation housed in that building. Following construction, Helion will conduct startup and commissioning activities, and subsequently operate of the fusion generator.

Site-generated trips would change depending on the phase of work. During the initial phases of site development, building construction, and machine assembly, the contractor and staff are expected to be on site from 6:00 A.M. to 6:00 P.M. seven days a week. Peak staffing is expected during building construction and machine assembly when 60 to 130 workers could be on site simultaneously. Once the site is operational, it is expected to have 30 staff on site 24-hours a day, 7 days a week, using two daily crews working 12-hour shifts. All phases would have peak shift-change times from 5:30 to 6:30 A.M. and 5:30 to 6:30 P.M.

Based on the estimated staff and number of contractors required for the project; vehicle trip generation was estimated for the AM peak hour and PM peak hours, which correspond to the peak shift times above. The vehicle trips were based on the highest estimated number of workers for each phase, and assuming all employees would drive alone to the site. The following lists the anticipate peak hour trip generation for each phase:

- **Phase 1 – Site Development & Small Building Construction**  
AM Peak Hour (32 in / 3 out = 35 trips); PM Peak Hour (2 in / 30 out = 32 trips)
- **Phase 2 – Large Building Construction & Machine Assembly**  
AM Peak Hour (130 in / 20 out = 150 trip); PM Peak Hour (2 in / 125 out = 127 trips)
- **Phase 3 – Complete and Fully Operational**  
AM Peak Hour (30 in / 30 out = 60 trips); PM Peak Hour (30 in / 30 out = 60 trips).

In addition, during the construction phases, there would be some truck activity to and from the site during the day to deliver materials. Once the site is fully operational, it is expected that one freight truck and one parcel truck would access the site each day, in addition to standard waste management service estimated at three times a week. Based on this activity, truck trips would represent about 2% of the total daily vehicle trips per day.