Cynthia Brown

Web Developer // Problem Solver

Database Integration for On-Demand Reporting

Project

VTRC (Virginia Transportation Research Council) Reports Integration

Live Site

vtrc.virginia.gov/reports

Problem

The Virginia Transportation Research Council needed to retrieve and render data-heavy reports on demand from an external database located outside the CMS ecosystem. While the front-end templates were already designed, the template fields lacked the mapping and dynamic endpoints required to talk to the backend database, preventing users from dynamically generating and searching reports in real time.

Solution

- **Cross-Functional Collaboration:** Collaborated closely with the **Backend Engineer / Database Administrator** to establish the API payload structure, response schemas, and authentication protocols.
- **API Testing & Dynamic Creation:** Utilized **Postman** to build, test, and validate API requests to generate and populate page templates "on the fly."
- **Data Mapping & Front-End Rendering:** Mapped the external database response fields to the CMS template components, enabling seamless, real-time fetching and rendering of dynamic report data for end users.