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CASE STUDY

Gold Line Authority Light Rail Transit System

LOS ANGELES, CALIFORNIA

VALUE DELIVERED

Development of the new $260 million Gold Line Light Rail System between Los Angeles and Pasadena is intended to enhance mobility and improve the quality of life for area residents and commuters. Dynalectric Los Angeles played a key role on the project, installing new traffic signals and street lighting, and upgrading existing signalized intersections along the 13.7 mile segment's right-of-way. The project was done on a fast-track basis, with construction commencing before the completion of design in order to meet an ambitious two-year construction schedule. Value engineering by Dynalectric provided solutions that enabled the project to stay within budgetary constraints.

SCOPE OF WORK

Under its multi-million dollar contract, Dynalectric provided design assistance, review and construction of nine new and 14 upgraded signalized intersections; street lighting along the right-of-way, at intersections and at-grade crossings; and decorative lighting and right-of-way lighting. The project also involved installation of 17 radio-controlled, solar-powered track switches in the rail yard. In addition, Dynalectric relocated, added and integrated CCTV cameras for an Automated Traffic Surveillance and Control System.

Services included:

- Electrical Design Assistance and Review
  - -Value Engineering
- Electrical Contracting
  - -Material and Equipment Procurement
  - -Material and Equipment Installation

TRANSPORTATION

RAIL

OPERATING COMPANY:
Dynalectric Los Angeles

CLIENT:
Los Angeles to Pasadena Metro (Blue) Gold Line Authority

GENERAL CONTRACTOR:
Kiewit — Washington JV

ARCHITECT:
Design Build Project.
Original concept came from the Metropolitan Transit Authority

ENGINEER:
Parsons — Washington JV

PROJECT DURATION:
(exclusive of preliminary design)
Overall: 2.5 Years
Dynalectric's work: 2 Years

CONTRACT AMOUNT:
Multi-million dollar contract

TECHNICAL SOLUTIONS
Relationships
Quality Service
VALUE ENGINEERING
Experience
Project Schedule & Coordination
EXPERTISE

- [x] New Construction
- [x] Retrofit
- [x] Electrical Construction
- [ ] Mechanical Construction
- [ ] Facilities Services
- [ ] Consulting Services

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BACKGROUND

The Gold Line Authority was established by the Los Angeles Metropolitan Transportation Authority (MTA) to manage design and construction of the project as a separate entity on their behalf. The California Public Utilities Commission (CPUC) enforces state and federal standards. The new Gold Line runs through three municipalities, Los Angeles, South Pasadena and Pasadena, each with its own design requirements, construction standards and expectations.

OBJECTIVES

In order to ease traffic congestion in the heavily traveled Pasadena/Los Angeles corridor, the MTA developed conceptual plans for a light rail transit system for commuters. Parsons-Washington was responsible for final engineered construction drawings. With trains running at grade level, a key concern was to ensure safety and reliability of the system. Signal improvements using modern technologies were critical to the success of the project. Street lighting enhancements were important factors in providing an added level of safety for motorists and pedestrians along the route.

SOLUTIONS

Dynalectric implemented a number of strategies to enable the Gold Line Authority to achieve its goals:

- **Value Engineering** — Dynalectric modified pole sizes and lamp types to provide the required lighting effect within Pasadena and South Pasadena while maintaining the project's fixed budget.
- **Purchasing Strategies** — to lessen the potential for error and delay, Dynalectric reduced the number of vendors required for decorative lighting, allowing assembly and wiring of all components to be completed smoothly in the field. Long lead time items were ordered well in advance to ensure timely delivery of equipment and materials.
- **Fast-Track Scheduling** — careful planning ensured adherence to a two-year construction schedule. With work sites scattered — posing scheduling, supervision and labor and equipment challenges — Dynalectric maintained a contingency equipment and labor pool to enable rapid deployment. Dynalectric's general foreman or project manager drove the length of the job once, and sometimes twice a day, to assess overall construction progress and anticipate the next "hot spot."
- **The Right Equipment** — the project employed the latest in safety and security technology. Interconnected controllers with vehicle and train detection sensors were installed at intersections with stop indications for cross traffic instead of using railroad crossing gates. Signalization included protected/permissive left turn indicators, fiber optic and LED "blank-out" message signs and graphic train signs. Dynalectric also relocated, added and integrated CCTV cameras for Los Angeles' Automated Traffic Surveillance and Control Systems

Dynalectric and its management team have over 50 years of experience in the electrical construction and control systems integration markets.

Dynalectric

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