

HIGHWAYS/BRIDGES ■ SUBMITTED BY SEMA Construction Inc.

Denver Interchange Brings Stapleton Into the Loop

In 2000 the commercial and residential redevelopment of the 4,700-acre former Stapleton Airport site was one of the nation's largest mixed-use, urban-infill developments. Today, this area is a nationally acclaimed neighborhood with parks, schools and commercial and retail centers. The original redevelopment, however, lacked critical connections to Denver streets and regional highway infrastructure.

SEMA Construction Inc. and Wilson & Co. partnered with the city and county of Denver on the area's first design-build transportation project to provide a direct connection between the Stapleton redevelopment on the south side of I-70 and The Shops at Northfield Stapleton, a 1.2-million-sq-ft retail center, on the north side of I-70. To do this, the design-build team constructed the new Central Park Boulevard interchange that connects Stapleton's retail district to I-70.

The project included a six-lane bridge over I-70 and two ramp bridges. Through a network of braided ramps, the interchange connects the retail district and two major interstate highways, I-70 and I-270. By creating an entirely

new alignment and moving the direct connection between I-270 and I-70 by half a mile, the interchange has had a positive impact on improving the safety of the traveling public.

The design-build team was challenged to manage this large project in an area where two interstate systems came together while minimizing traffic hazards and ensuring public safety. Government estimates indicated that 228,000 drivers use I-70 and 85,000 drivers use I-270 on a daily basis. The history of the site also revealed a high frequency of severe accidents.

The project team responded to the challenge by developing and putting in place a phased construction plan that kept existing I-70 and I-270 traffic lanes operational during the project, with the exception of limited night and weekend work. To accomplish this, construction of the ramp system was scheduled first, so when it became necessary to build the new interchange bridge, the ramps were used to reroute I-70 traffic without using Stapleton streets for detours. Additionally, traffic was rerouted only at night for key elements like erecting girders for the new bridge.

I-70 & Central Park Boulevard Interchange

Denver

KEY PLAYERS

OWNER City & County of Denver

DESIGN ENGINEER Wilson & Co., Denver

GENERAL CONTRACTOR SEMA Construction Inc., Centennial, Colo.



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