Santa Fe Drive: Dartmouth Avenue to Highlands Ranch Parkway



Federal Funds for Littleton

DRCOG engineering staff developed the signal timing and coordination plans in partnership with the project stakeholders.

Project Achievements

Performance Measures	Daily Reduction	
Vehicle travel time	1,610 hours	
Fuel consumption	1,131 gallons	
S Time and fuel costs	\$38,050 savings daily (\$9.5 million annually)	
Greenhouse gas emissions	21,795 pounds	
Emissions of six EPA- regulated pollutants	254 pounds	



Project Scope Santa Fe Drive (8.8 miles)



Overall Improvements



Average Travel Time After Retiming



Traffic Signal Coordination

Traffic signal coordination allows traffic to travel along a street without stopping at every light. A major component of any coordinated signal-timing plan is properly-sized cycle length shared by each intersection along the corridor. The cycle length is the time required for one sequence of signal displays (green, yellow and red) around an intersection to be lit for each approach. DRCOG's engineers evaluate cycle lengths to strike a balance between intersection capacity and delay for all users. The cycle lengths vary by time of day to account for fluctuating numbers of vehicles, bicyclists and pedestrians.

	Time of day	06:00 07:00 08:00	09:00 10:00 11:00 12:00 13:00 14:0	0 15:00 16:00 17:00 18:00
1	Santa Fe Dr & Dartmouth Ave		150-second cycle 120-second cycle	150-second cycle
2	Santa Fe Dr & Hampden North Ramps			
3	Santa Fe Dr & Hampden South Ramps			
4	Santa Fe Dr & Oxford Ave			
5	Santa Fe Dr & Union Ave			
6	Santa Fe Dr & Prince St			
7	Santa Fe Dr & Bowles Ave			
8	Santa Fe Dr & Church Ave			
9	Santa Fe Dr & Sumner St			
10	Santa Fe Dr & Brewery Ln	150-second cycle		
11	Santa Fe Dr & Aspen Grove Way			190 accord avala
12	Santa Fe Dr & Mineral Ave			Tou-secona cycle
13	Santa Fe Dr & County Line Rd			150-second cycle
14	Santa Fe Dr & C-470 North Ramp			
15	Santa Fe Dr & C-470 South Ramp			
16	Santa Fe Dr & Blakeland Dr			
17	Santa Fe Dr & Town Center Dr.			
18	Santa Fe Dr & Highlands Ranch Pkwy			
19	Dartmouth Ave & Inca St	75-second cycle	60-second cycle	75-second cycle
20	Oxford Ave & Navajo St			
21	Mineral Ave & Platte River Pkwy	150-second cycle	120-second cycle	90-second cycle
22	Mineral Ave & Long Ave / Jackass Hill Rd			90-second cycle

City of Littleton

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For more information about signal timing, see: bit.ly/SignalRed For more information about DRCOG's traffic operations program, see: bit.ly/TrafficOps

CDOT



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SIGNAL TIMING PROJECT BRIEF

Santa Fe Drive: Dartmouth Avenue to Highlands Ranch Parkway

The Denver Regional Council of Governments (DRCOG) leads multijurisdictional partnerships to achieve optimal signal timing and coordination on area roadways. **Traffic signal timing adjustments** provide the smoothest possible flow for cars, trucks and buses. At the same time, safety is enhanced for all users, including pedestrians and bicyclists. Signal timing optimization saves drivers time and money, minimizes greenhouse gas and pollutant emissions, and enhances air quality.

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