DAYBREAK INTERSECTION REALIGNMENT AND RESTRIPING

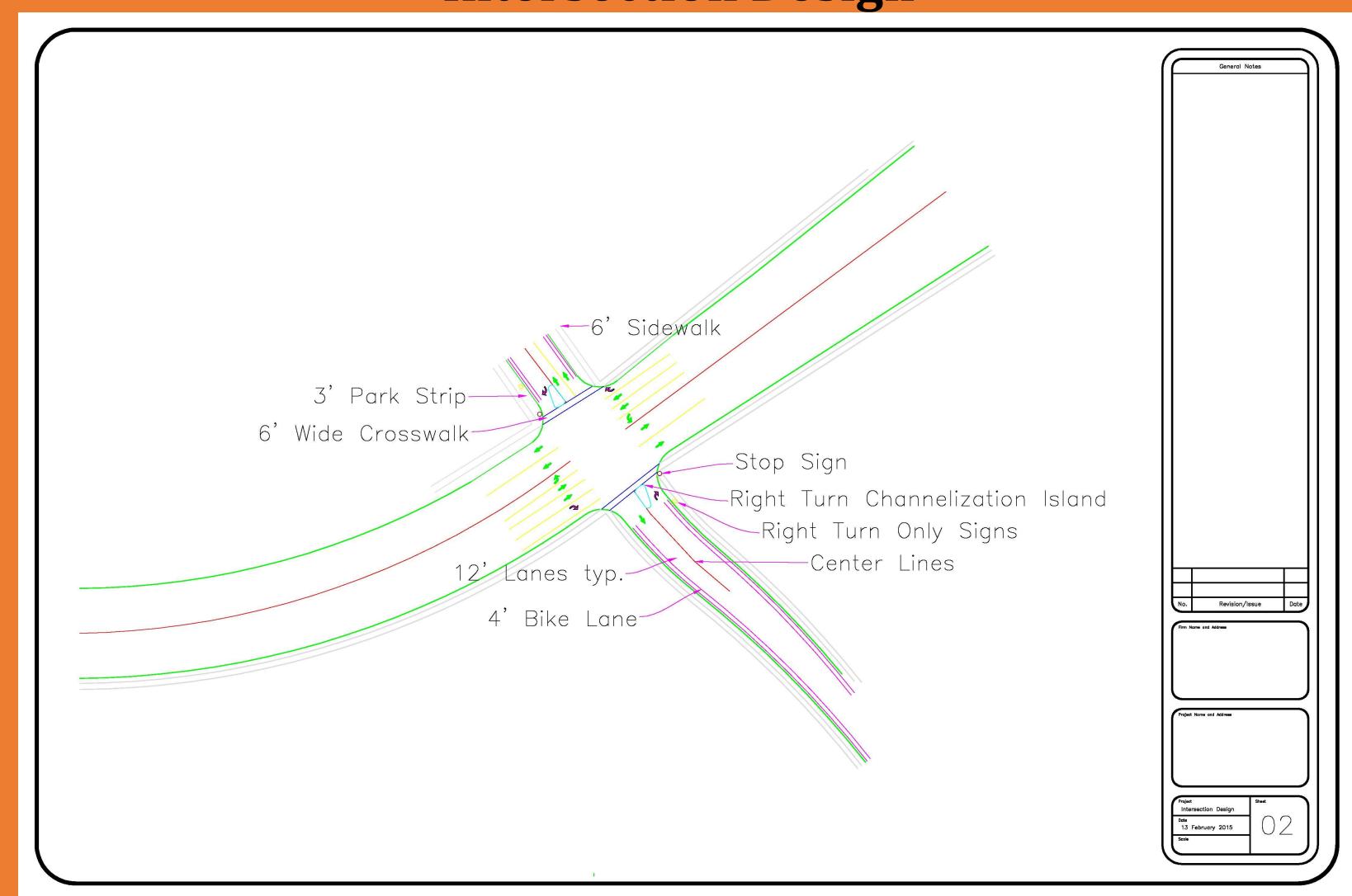


Purpose

Rio Tinto is planning the addition of a new commercial center to the Daybreak Community. The company had a pre-determined alignment for accessing this new center. AKT Engineering was hired to evaluate the existing alignment and provide recommendations for improvement of the design.



Intersection Design



Original Alignment



Cost

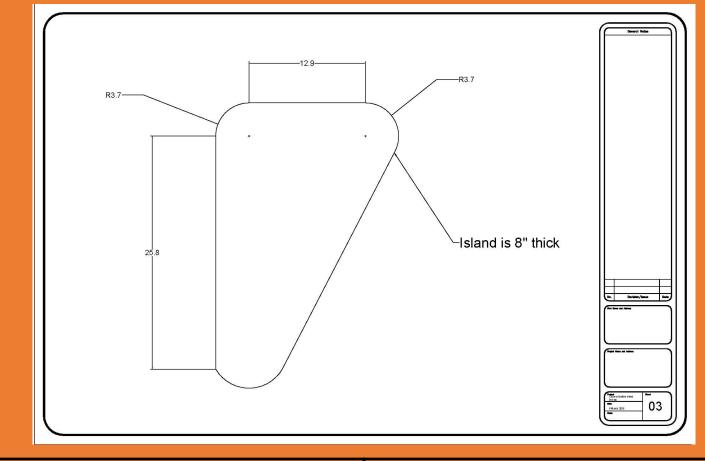
Category	Items	Quantity	Estimated Cost	Tota	al Estimated
Pavement Design	Asphalt [Sq-Yd]	2300	\$18.00		\$41,400.00
	Base [Sq-Yd]	2300	\$10.00		\$23,000.00
	Construction [Sq-Yd]	2300	\$22.00		\$50,600.00
Intersection Design	MUTCD Traffic Sign [EA]	6	\$500.00		\$3,000.00
	Lane/Bike Striping Paint [gal]	25	\$52.00		\$1,300.00
	Pavement Marking Paint (Crosswalk, stop line) [EA]	5	\$58.00		\$290.00
	Pavement Arrows [EA]	4	\$200.00		\$800.00
	Bike Lane Symbols [EA]	4	\$325.00		\$1,300.00
	Curb Ramp	4	\$1,048.00		\$4,192.00
	Curb [LF]	100	\$60.00		\$6,000.00
	6' Sidewalk w/ 6" Base [LF]	4800	\$26.00		\$124,800.00
	3' Park Strip [LF]	2400			\$24,000.00
	Sprinkler System for Park Strips	1	\$3,500.00		\$3,500.00
	Pork Chop	1	\$5,2 00.00		\$5,200.00
Utility Relocation	Excavation (Cubic Yards)	850	\$96.00		\$81,600.00
	Conduit Pipe (HDPE 4", 4 pipes, 1940 feet, Labor Included)	7760	\$0.51		\$3,957.60
	Power Conduit Pipe (6" HDPE, 2 Pipes, 1940 Feet, Labor Included)	3880	\$0.74		\$2,871.20
	Utilties are responsible for own cabling through conduits				
Total				\$377,810.80	
		Subtotal		\$	377,810.80
	Contingency - Add 20% Mobility (10% Total Project) Engineering Fee (10% Total Proj.		\$	75,562.16	
				\$	37,781.08
				\$	37,781.08
		Total		\$	528,935.12

Overview

In AKT Engineering's proposed alignment, the intersection was realigned for the north-south approaches to directly face one another. Three-quarter access is recommended, with a right turn channelization island to prohibit left turns out of the development. The intersection was not signalized due to the proximity of signalized intersections up- and downstream on Daybreak Parkway.

***More adequate site access may be obtained at nearby signalized intersections. It may be more appropriate to tie development to adjacent roadways than to provide direct access. Consideration should be given to not building an intersection at this location.

Channelization Island Design



Pavement Design

