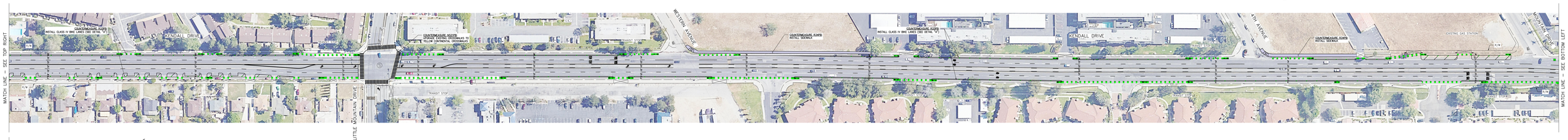
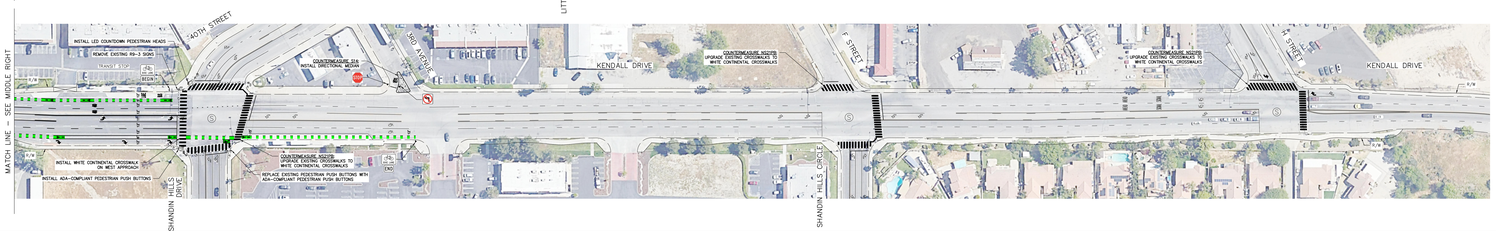
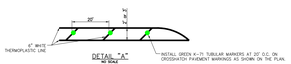






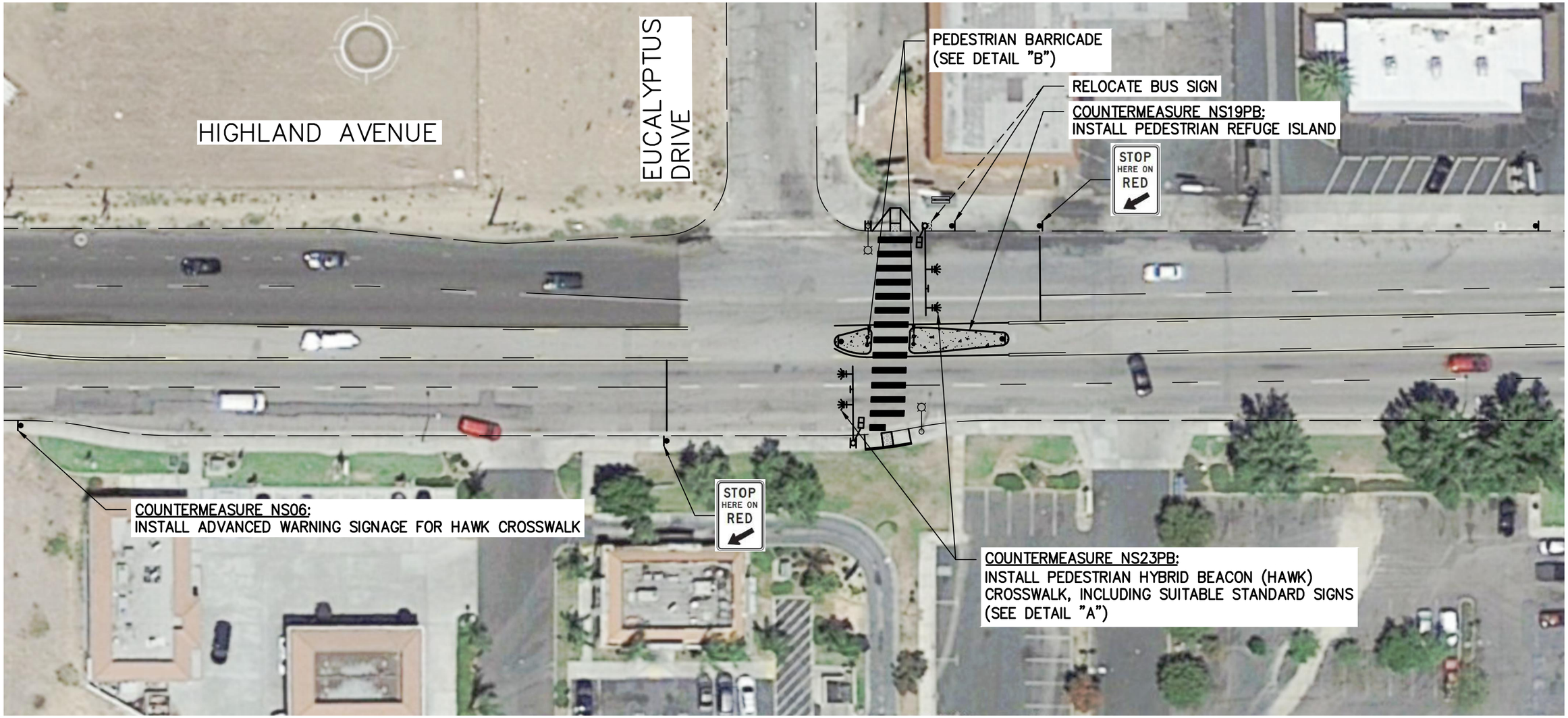
KOA CORPORATION 3880 LAKESIDE AVENUE, SUITE 300 RIVERSIDE, CALIFORNIA 92501 (951) 684-4049	CITY OF SAN BERNARDINO, CALIFORNIA
	CONCEPT PLAN–COUNTER MEASURES
	KENDALL DRIVE BETWEEN UNIVERSITY PARKWAY AND H STREET

CITY OF SAN BERNARDINO

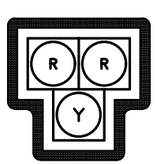
KENDALL DRIVE BETWEEN UNIVERSITY PARKWAY AND H STREET

PRELIMINARY ENGINEER'S COST ESTIMATE

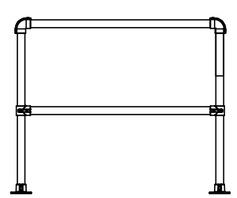
COUNTER MEASURE	ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	ITEM TOTAL
R34PB	***CIVIL***				
	Demo/unclassified excavation	130	CY	$350	$45,500
	Native fill	115	CY	$60	$6,900
	Install curb and gutter	800	LF	$65	$52,000
	Install 4" PCC sidewalk	4,794	SF	$15	$71,910
	Install curb ramp	2	EA	$6,500	$13,000
				COUNTERMEASURE SUBTOTAL	$189,310
NS21PB	***SIGNING AND STRIPING***				
	Remove striping	3,715	LF	$1	$3,715
	Install limit line striping	1,051	LF	$3	$3,153
	Install white continental crosswalk	5,547	SF	$4	$22,188
	Install yellow continental crosswalk	2,616	SF	$4	$10,464
				COUNTERMEASURE SUBTOTAL	$39,520
NS03	***TRAFFIC SIGNAL***				
	Install new traffic signal	1	LS	$500,000	$500,000
				COUNTERMEASURE SUBTOTAL	$500,000
R33PB	***SIGNING AND STRIPING***				
	Remove striping	57,941	LF	$1.00	$57,941
	Remove pavement marking	32	EA	$300	$9,600
	Install striping (solid)	23,341	LF	$1.40	$32,677
	Install striping (dashed)	15,870	LF	$1.80	$28,566
	Install striping (double yellow)	11,815	LF	$2.20	$25,993
	Install green conflict zone striping	5,291	LF	$15	$79,365
	Install pavement marking	134	EA	$500	$67,000
	Remove sign and post (R1-1 at 3rd Ave)	1	EA	$150	$150
	Install sign panel and post	20	EA	$550	$11,000
	Install sign panel - R2-1(40)	4	EA	$500	$2,000
	Remove sign panel - R2-1(50)	4	EA	$50	$200
	Install K71-Type bollard delineator	332	EA	$225	$74,700
	Install red curb	415	LF	$2	$830
				COUNTERMEASURE SUBTOTAL	$390,022
NS14	***CIVIL***				
	Demo/unclassified excavation	10	CY	$350	$3,500
	Native fill	10	CY	$60	$600
	Install curb only	102	LF	$50	$5,100
	Install 4" PCC sidewalk	407	SF	$15	$6,105
	SIGNING AND STRIPING				
	Remove striping	30	LF	$1	$30
	Remove pavement marking	1	EA	$300	$300
	Install limit line	12	LF	$3.50	$42
	Install pavement marking	1	EA	$500	$500
				COUNTERMEASURE SUBTOTAL	$16,177
				TOTAL FOR BASE BID ITEMS	**$1,135,029**
				MOBILIZATION & DEMOBILIZATION	**$113,503**
				TRAFFIC CONTROL, PUBLIC CONVENIENCE AND SAFETY	**$50,000**
				CONSTRUCTION SURVEY AND MONUMENTATION	**$20,000**
				FINAL DESIGN	**$120,000**
				CONSTRUCTION MANAGEMENT AND INSPECTION	**$80,840**
				PROJECT MANAGEMENT	**$113,503**
				STORM WATER BEST MANAGEMENT PRACTICES (BMPs)	**$120,000**
				30% CONTINGENCY	**$525,863**
				INFLATION ADJUSTMENT (3% PER YEAR @ 6 YEARS)	**$442,194**
				GRAND TOTAL	**$2,720,932**



NOTE:
ALL PEDESTRIAN HEADS SHALL BE COUNTDOWN AND PEDESTRIAN PUSH BUTTONS SHALL BE ADA–COMPLIANT.



DETAIL "A"
ALL 12" LENSES
(TYPICAL BEACON)



DETAIL "B"
PEDESTRIAN RAILING

40' 20' 0 20' 40'
1"=40' GRAPHIC SCALE

KOA
2141 W. Orangewood Ave., Suite A
Orange, California 92868
Tel: (714) 573-0317 Fax: (714) 573-9534

CITY OF SAN BERNARDINO, CALIFORNIA

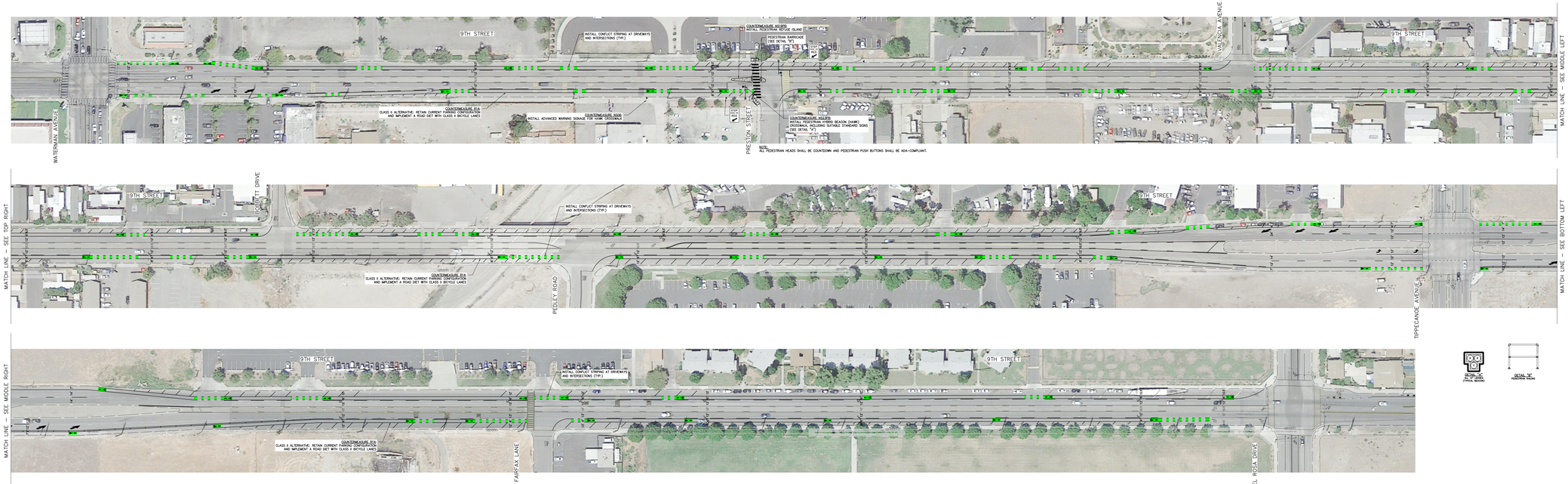
CONCEPT PLAN–COUNTER MEASURES
HIGHLAND AVENUE AND EUCALYPTUS DRIVE

CITY OF SAN BERNARDINO

HIGHLAND AVENUE AND EUCALYPTUS DRIVE

PRELIMINARY ENGINEER'S COST ESTIMATE

COUNTER MEASURE	ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	ITEM TOTAL
NS23PB	***TRAFFIC SIGNAL (HAWK)***				
	Install Type 332 cabinet with 2070 controller complete	1	EA	$25,000	$25,000
	Install Type III-BF service pedestal complete	1	EA	$10,000	$10,000
	Install Type 19 standard and foundation complete	1	EA	$12,000	$12,000
	Install Type 24 standard and foundation complete	1	EA	$17,000	$17,000
	Install 30' mast arm complete	1	EA	$3,600	$3,600
	Install 35' mast arm complete	1	EA	$4,200	$4,200
	Install 3-12" LED vehicle head with mounting	4	EA	$1,200	$4,800
	Install Type B pedestrian push button	2	EA	$750	$1,500
	Install LED countdown pedestrian head with mounting	2	EA	$1,600	$3,200
	Install sign on mast arm	2	EA	$800	$1,600
	Install sign on pole	4	EA	$250	$1,000
	SIGNING AND STRIPING				
	Relocate bus sign	1	EA	$250	$250
				COUNTERMEASURE SUBTOTAL	$84,150
OTHER	***SIGNING AND STRIPING***				
	Remove striping	310	LF	$1	$310
	Install striping	172	LF	$3.00	$516
	Install white continental crosswalk	980	SF	$4.00	$3,920
	CIVIL				
	Install curb ramp	2	EA	$6,500	$13,000
				OTHER SUBTOTAL	$17,746
NS19PB	***CIVIL***				
	Demo/unclassified excavation	10	CY	$350	$3,500
	Native fill	52	CY	$60	$3,120
	Install curb only	130	LF	$50	$6,500
	Install sidewalk	175	SF	$15	$2,625
				COUNTERMEASURE SUBTOTAL	$15,745
OTHER	***CIVIL***				
	Install tubular hand railing	12	LF	$225	$2,700
				OTHER SUBTOTAL	$2,700
NS06	***SIGNING AND STRIPING***				
	Install sign panel and post	4	EA	$550	$2,200
				COUNTERMEASURE SUBTOTAL	$2,200
				TOTAL FOR BASE BID ITEMS	**$122,541**
				MOBILIZATION & DEMOBILIZATION	**$12,254**
				TRAFFIC CONTROL, PUBLIC CONVENIENCE AND SAFETY	**$6,000**
				CONSTRUCTION SURVEY AND MONUMENTATION	**$5,000**
				FINAL DESIGN	**$40,000**
				CONSTRUCTION MANAGEMENT AND INSPECTION	**$28,200**
				PROJECT MANAGEMENT	**$12,254**
				STORM WATER BEST MANAGEMENT PRACTICES (BMPs)	**$1,000**
				30% CONTINGENCY	**$68,175**
				18% INFLATION (3% PER YEAR @ 6 YEARS)	**$57,328**
				GRAND TOTAL	**$352,752**



KOA CIVIL ENGINEERING • LAND SURVEYING • TRANSPORTATION • WATER RESOURCES • ENVIRONMENTAL	CITY OF SAN BERNARDINO, CALIFORNIA
	CONCEPT PLAN–COUNTER MEASURES
	9th STREET
	BETWEEN WATERMAN AVENUE AND DEL ROSA DRIVE

CITY OF SAN BERNARDINO

9TH STREET BETWEEN WATERMAN AVENUE AND DEL ROSA AVENUE

PRELIMINARY ENGINEER'S COST ESTIMATE

COUNTER MEASURE	ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	ITEM TOTAL
NS23PB	***TRAFFIC SIGNAL (HAWK)***				
	Install Type 332 cabinet with 2070 controller complete	1	EA	$25,000	$25,000
	Install Type III-BF service pedestal complete	1	EA	$10,000	$10,000
	Install Type 1-A standard and foundation complete	1	EA	$3,650	$3,650
	Install Type 19 standard and foundation complete	2	EA	$12,000	$24,000
	Install 25' mast arm complete	2	EA	$3,300	$6,600
	Install 3-12" LED vehicle head with mounting	2	EA	$1,200	$2,400
	Install Type B pedestrian push button	2	EA	$750	$1,500
	Install LED countdown pedestrian head with mounting	2	EA	$1,600	$3,200
	Install sign on mast arm	2	EA	$800	$1,600
	Install sign on pole	4	EA	$250	$1,000
				COUNTERMEASURE SUBTOTAL	$78,950
OTHER	***SIGNING AND STRIPING***				
	Remove striping	480	LF	$1	$480
	Install striping	25	LF	$3	$75
	Install yellow continental crosswalk	290	SF	$4	$1,160
	CIVIL				
	Install curb ramp	2	EA	$6,500	$13,000
				OTHER SUBTOTAL	$14,715
NS19PB	***CIVIL***				
	Demo/unclassified excavation	9	CY	$350	$3,150
	Native fill	6	CY	$60	$360
	Install curb only	120	LF	$50	$6,000
	Install sidewalk	322	SF	$15	$4,830
				COUNTERMEASURE SUBTOTAL	$14,340
OTHER	***CIVIL***				
	Install tubular hand railing	12	LF	$225	$2,700
				OTHER SUBTOTAL	$2,700
NS06	***SIGNING AND STRIPING***				
	Install sign panel and post	2	EA	$550	$1,100
				COUNTERMEASURE SUBTOTAL	$1,100
R14	***SIGNING AND STRIPING***				
	Remove pavement marking	21	EA	$300	$6,300
	Remove striping	17,975	LF	$1	$17,975
	Install pavement marking	70	EA	$500	$35,000
	Install striping	37,240	LF	$3	$111,720
	Install green conflict zone striping	2,770	LF	$15	$41,550
	Install sign panel and post	11	EA	$550	$6,050
				COUNTERMEASURE SUBTOTAL	$212,545
				TOTAL FOR BASE BID ITEMS	**$310,010**
				MOBILIZATION & DEMOBILIZATION	**$31,001**
				TRAFFIC CONTROL, PUBLIC CONVENIENCE AND SAFETY	**$12,000**
				CONSTRUCTION SURVEY AND MONUMENTATION	**$5,000**
				FINAL DESIGN	**$55,000**
				CONSTRUCTION MANAGEMENT AND INSPECTION	**$28,200**
				PROJECT MANAGEMENT	**$31,001**
				STORM WATER BEST MANAGEMENT PRACTICES (BMPs)	**$120,000**
				30% CONTINGENCY	**$177,664**
				18% INFLATION (3% PER YEAR @ 6 YEARS)	**$149,396**
				GRAND TOTAL	**$919,272**