Capital Construction

ROAD IMPROVEMENT DESIGN OF COUNTY WOODSIDE AVE

Cost Estimate

Table 1: Material Costs

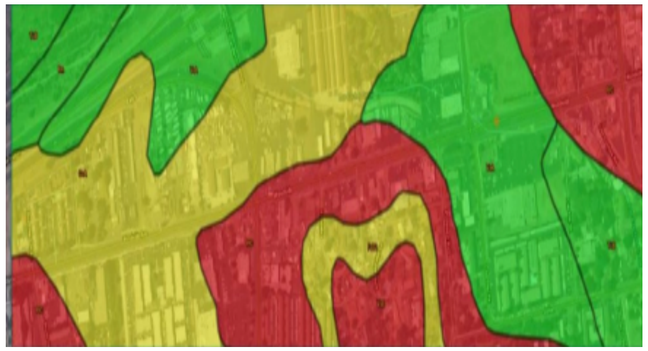
No.	Item (Source References)	Quantity	Unit	Unit Cost	Total ($)
1	Mobilization	1	LS	$21,000.00	$21,000.00
2	Skin Patching	9459	SF	$2.00	$18,918.00
3	Asphalt Hot Concrete Mix	250	Ton	$70.00	$17,500.00
4	Construct 6" Case A Median Curb	110	LF	$15.00	$1,650.00
5	Concrete Sidewalk/Driveway	500	SF	$5.20	$2,600.00
6	Removal of Concrete sidewalk/Driveway/Slabs	900	SF	$6.00	$5,400.00
7	4" Asphalt Patching	61670	SF	$3.50	$215,845.00
8	Access Ramps	1	EA	$4,000.00	$4,000.00
9	Geotechnical Testing	1	LS	$15,000.00	$15,000.00
10	Water Pollution Prevention	1	LS	$4,000.00	$4,000.00
11	Traffic Control	1	LS	$45,000.00	$45,000.00
12	Striping	1	LS	$14,000.00	$14,000.00
13	Striping Removal	1	LS	$11,000.00	$11,000.00
14	Adjust Storm Drain Manhole	4	EA	$1,000.00	$4,000.00
15	6" Asphalt Patching	38956	SF	$5.75	$223,997.00
16	Pavement Fabric	11000	SF	$0.56	$6,160.00
17	Install upgraded traffic signals and signal equipment	1	LS	$425,000.00	$425,000.00
18	Field Orders	1	LS	$5,000.00	$5,000.00
19	Curb Inlet	3	EA	$6,687.00	$20,061.00
20	Curb Outlet	3	EA	$3,040.97	$3,040.97
21	Drainage Channel	1	LF	$1,246.81	$1,246.81
22	Strom Drain Cleanouts	3	EA	6081.96	$18,245.88
23	6" Curb	900	LF	19.46	$17,514.00
				Total Cost	$1,100,178.66

Materials and Items Costs: This table represents what materials and items will be used regarding our project thus resulting in the overall Total Cost.

Project Description

This project required our team to do an investigation to the existing site and to make improvements upon it. Our civil engineering was focused on the traffic design/transportation, site civil engineering, stormwater treatment, geotechnical engineering, and construction engineering. We decided the most crucial locations of improvement were the existing bike lanes, sidewalks, a traffic signal, and storm drain inlets.

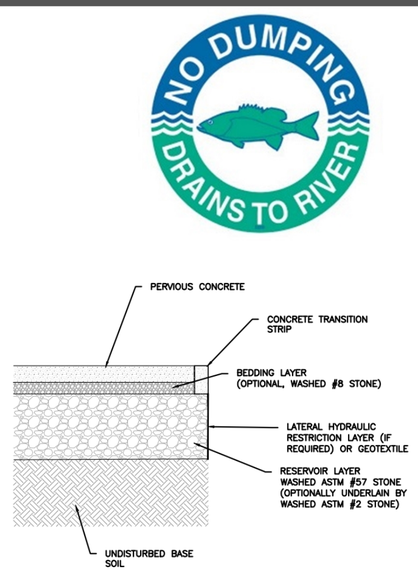
Geotechnical



- **Subgrade**
  - **Regions denoted by map unit symbol PfC rating (red regions) hass poor subgrade. Minimally acceptable rating is fair.**
  - **Compaction must be conducted to 90-95% for roadfill**
- **Building Pads**
  - **Graded within .1 foot vertically and .5 foot horizontally of the grading plans**
- **Drainage**
  - **Remedial measures in place to avoid any localized flooding**
  - **Temporary drainage control during construction until permanent features are in place.**

SWQMP

- **The proposed source controlled BMP is storm drain stenciling and signage while the design site BMP chosen is using permeable pavement on our proposed sidewalks.**
- **The type of permeable pavement is pervious concrete.**
- **No under drain is needed for the permeable pavement because the site is classified as hydrologic soil group B. This means subsoil infiltration rate is greater than 0.5 inches per hour [in/hr].**



PERVIOUS CONCRETE SECTION

FULLY INFILTRATING OPTION SHOWN. IF UNDERDRAINS ARE REQUIRED, SEE PICP SECTION DETAIL.

Transportation

Primary Street	Existing LOS	Future LOS
Winter Gardens (San Vicente Fwy / Woodside Ave)	B	C
Woodside Ave (Winter Gardens Blvd / Erwin Ln)	E	E
Woodside Ave (Erwin Ln / Prospect Ave	A	A
Woodside Ave (Prospect Ave / Channel Rd)	A	A
Channel Rd (Parkside St / Woodside Ave)	C	B
Prospect Ave (Woodside Ave / Julian Ave)	A	B

Recommendations

- **Shrink lanes to 11’ to accommodate space for proper proper sidewalk and bike lanes**
- **Enforce county driveway standards, reduce driveway widths and number per property to two**
- **Make pedestrian safety emphasis of roadway as opposed to private business access**
- **Use permeable pavement to increase water drainage in area**