Southbridge Environmental Enhancements
Corridor 6, Project 1

This focus of this project is the primary throughways within Southbridge. It looks to improve the visual character and increase pedestrian and bicycle safety in the area between South Heald, Claymont, D and Lobdell Streets. It will also improve and upgrade community streetscape resources such as gateway areas.

At the public meetings the community stated crossing the street or riding a bicycle is difficult due to the speeding traffic and large number of trucks in the residential area. In addition, street lighting is only provided at the intersections, which creates many dark areas and leads to an unsafe feeling. The community would also like to have additional transit stops along the corridor.

The area is primary residential with commercial businesses such as markets or auto repair shops scattered throughout. It is surrounded by industrial companies, some of which are no longer operational, and is near the Port of Wilmington. This area also serves as one of the primary gateways into the City and is the focus of several economic development projects.

General streetscape conditions include (Photo 1):

- Intersections without crosswalks and/ or handicap ramps.
- Unscreened vacant lots, parking areas, and an unscreened gas station.
- Street tree coverage is sporadic with many areas lacking street trees.
- Many existing trees appear to be in poor condition.
- Occasional damaged or missing sidewalks and curbs.
- Unattractive cobra head light fixtures attached to utility poles.
- The building line along most streets in the project area is located close to the sidewalk, forming a tight built-to line.

Southbridge Environmental Enhancements Photo 1.

The Christiana River bridge crossing from Fourth Street to South Heald Street and the South Heald Street and Christiana Avenue intersection serves as a major neighborhood gateway (Photo 2). This area lacks distinctive gateway streetscape enhancements such as crosswalks and attractive pavement treatments. On the bridge crossing, there is an unattractive concrete barrier that separates vehicles from pedestrian traffic.

Southbridge Environmental Enhancements Photo 2.

The median island used to separate South Heald Street from New Castle Avenue offers the opportunity to announce and identify the Southbridge neighborhood (Photo 3).

Southbridge Environmental Enhancements Photo 3.

Several other key areas along South Heald Street have either streetscape or pedestrian safety issues. For instance, a park located at southeast corner of South Heald and B Street faces blank walls and lacks lighting, attractive landscaping, and other appropriate streetscape amenities (Photo 4). At South Heald and C Streets, wide curb cuts near the intersection, lack of sidewalks, and an excessive intersection width is undesirable (Photo 5). The intersection of South Heald and D Street is where the Southbridge neighborhood ends, though attractive gateway streetscape enhancements at this intersection are absent (Photo 6). Overhead utilities exist on both sides of South Heald Street.

Southbridge Environmental Enhancements Photo 4.

Southbridge Environmental Enhancements Photo 5.

Southbridge Environmental Enhancements Photo 6.

Key streetscape issues relating to the side streets between South Bridge Street and New Castle Avenue include the wide width of B Street, considering the street only accommodates one-way traffic (Photo 7). A Street has high levels of both vehicular and pedestrian traffic though it lacks appropriate pedestrian accommodations such as handicap ramps, crosswalks, and pedestrian signals (Photo 1).

Southbridge Environmental Enhancements Photo 7.

South Heald Street, U.S. Route 13A, is a 40 foot wide two-lane southbound roadway with parking allowed on both sides. New Castle Avenue, State Route 9, is a 34 foot wide two-lane northbound roadway that generally allows parking on the east side. Transit routes, parks, school and other community centers are shown on the map in the appendix of this report. Side streets widths vary but in general are wide enough to allow for two vehicles and parking on each side of the roadway.

The primary streets (South Heald and New Castle Ave.) within the corridor carry approximately 9,688 and 6,525 vehicles a day, respectively but there are no intersections with a level of service ratings of D, E or F. This indicates that there is relatively little congestion at the intersections largely due to the low volumes at the side streets. The traffic for these roads was estimated for the future year of 2020, which produced volumes of 8,150 and 12,110 vehicles respectively, again, with no level of service ratings of D, E or F. Typically in urban areas a level of service of A, B, C or D is considered acceptable.

A truck origin/destination study was performed as part of the Wilmington Corridor Studies to determine where truck traffic was coming from and where it was going. This study showed that 4% of the traffic on South Heald Street consisted of trucks and 6% of the traffic on New Castle Avenue consisted of trucks. The majority of trucks that traveled in this area were straight trucks making local stops.

A three-year crash history was studied for this project and it showed an increasing number of accidents each year. The two intersections that had the most accidents were at South Heald Street and D Street with 22 accidents and South Heald Street at C Street with 14 accidents. Forty-six percent of the accidents resulted in injuries including one fatal accident at South Heald and D Streets. The history also showed that there was one pedestrian and bicycle accident at New Castle and New York Avenues and bicycle accidents along South Heald Street at A, B, C, and Lobdell Streets.

To determine the speed of the traffic through the corridor a speed study was performed. The posted speed limit along South Heald Street and New Castle Avenue is 25 mph. The study found the 85th percentile speed along South Heald Street to be 32 mph and 37 mph along New Castle Avenue.

The busiest transit stops in the project area are at New Castle Avenue at A and C Streets. These locations currently have shelters and benches. Review of the bus ridership numbers indicates that benches may be warranted at stops located along New Castle Avenue at B and Claymont Streets and New York Avenue.

Recommended Improvements

To address the concerns of the community, the recommended improvement was a streetscape project whose main focuses was on the non-vehicle mode of transportation. General improvement recommendations include:

- Installation of textured crosswalks, handicap ramps (where needed), decorative paving, and pedestrian signs at signalized (major) intersections and painted crosswalks at unsignalized (minor) intersections.
- Repairing/replacement of damaged or missing sidewalks and curbs.
- Upgrading plain concrete medians and paved island areas with attractive streetscape enhancements.

- Installation of decorative pedestrian scale lighting fixtures throughout the project area to brighten the walking areas and allow for pedestrians and bicyclists to be more visible.
- Installation of small street trees (amur maple) where a tight built to line and overhead utilities exist. Where building set backs are deep and overhead utilities exist larger, columnar trees (European hornbeam) can be used. Where building setbacks are deep and there are no overhead utilities, large trees (willow oak) can be used. The infill of street trees should be consistent with existing street tree species. Improved street tree maintenance procedures are recommended.

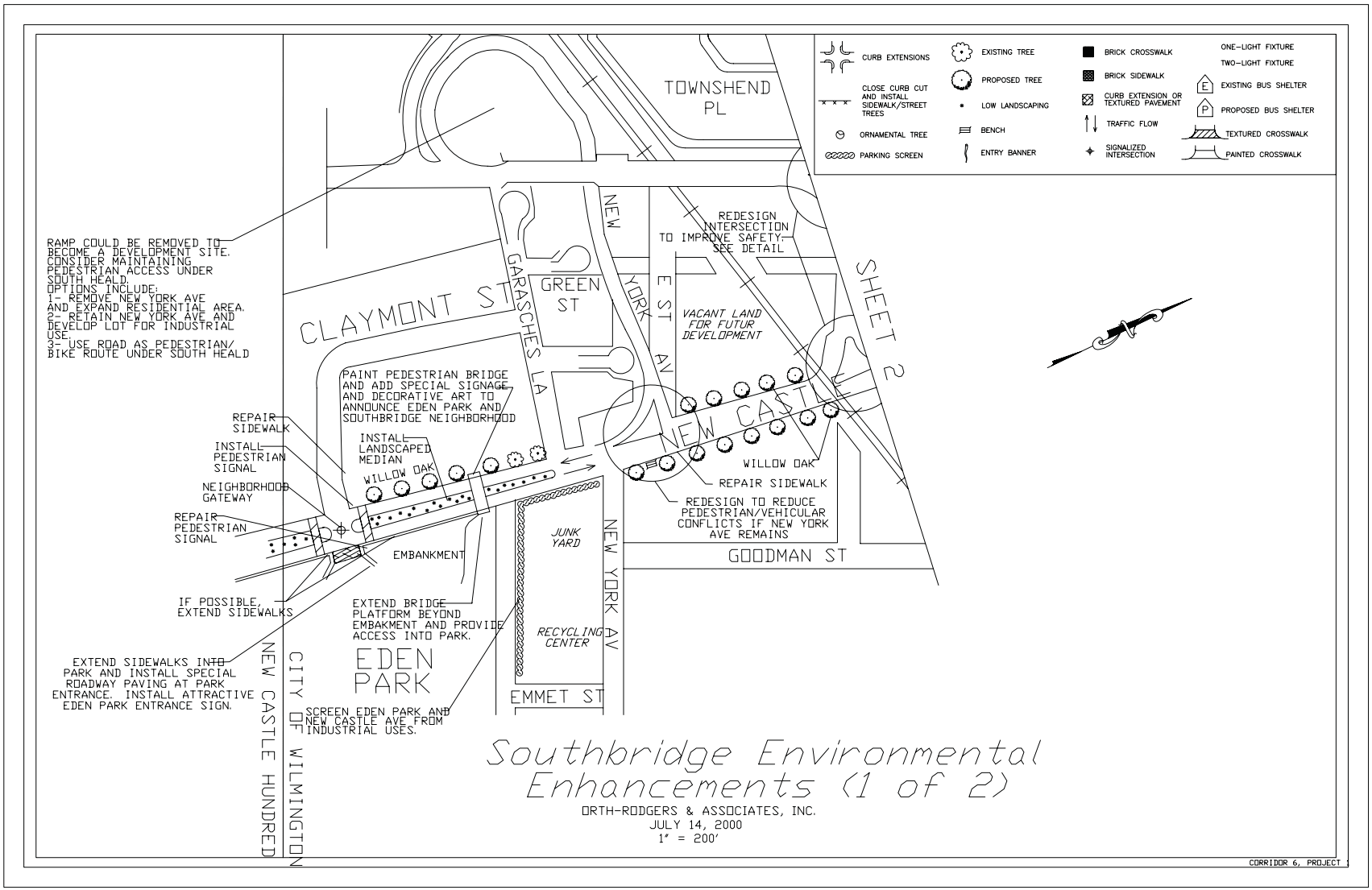
Bulbouts would be installed at intersections with heavy pedestrian traffic to direct the pedestrian to preferred crossing locations where they would be more visible and can see the oncoming traffic better. The bulbouts would also help reduce the speeds of the vehicles.

Further streetscape improvements would include the upgrade of the traffic island separating South Heald Street from New Castle Avenue, with seasonal plantings (daylily, black eyed susan), a distinctive paving treatment around the perimeter of the island, and a decorative “Welcome to Southbridge” sign. Next to the traffic island, a turnoff onto South Heald Street from New Castle Avenue should have a yield sign or stop sign/ stop bar installed to enhance traffic safety. Moving further south, the upgrading of a park located at South Heald and B Street is recommended, including the landscaping of blank building walls facing the park and the installation of attractive landscaping and pedestrian scale lighting fixtures. At South Heald and D Streets, it is recommended that a “Leaving the Southbridge Neighborhood” sign and decorative landscaping be installed in a lawn area next to the intersection to announce the departure from the Southbridge neighborhood.

To reduce the truck traffic and speeders, appropriate signage such as weight restrictions, will be installed in visible areas and enforced. Signs to alert, or direct, trucks to alternate routes would also be installed as indicated in the Wilmington Truck Study report (see corridor 5).

Additional improvements such as repairing and/or replacing transit amenities in poor conditions would be performed to encourage pedestrian and transit use.

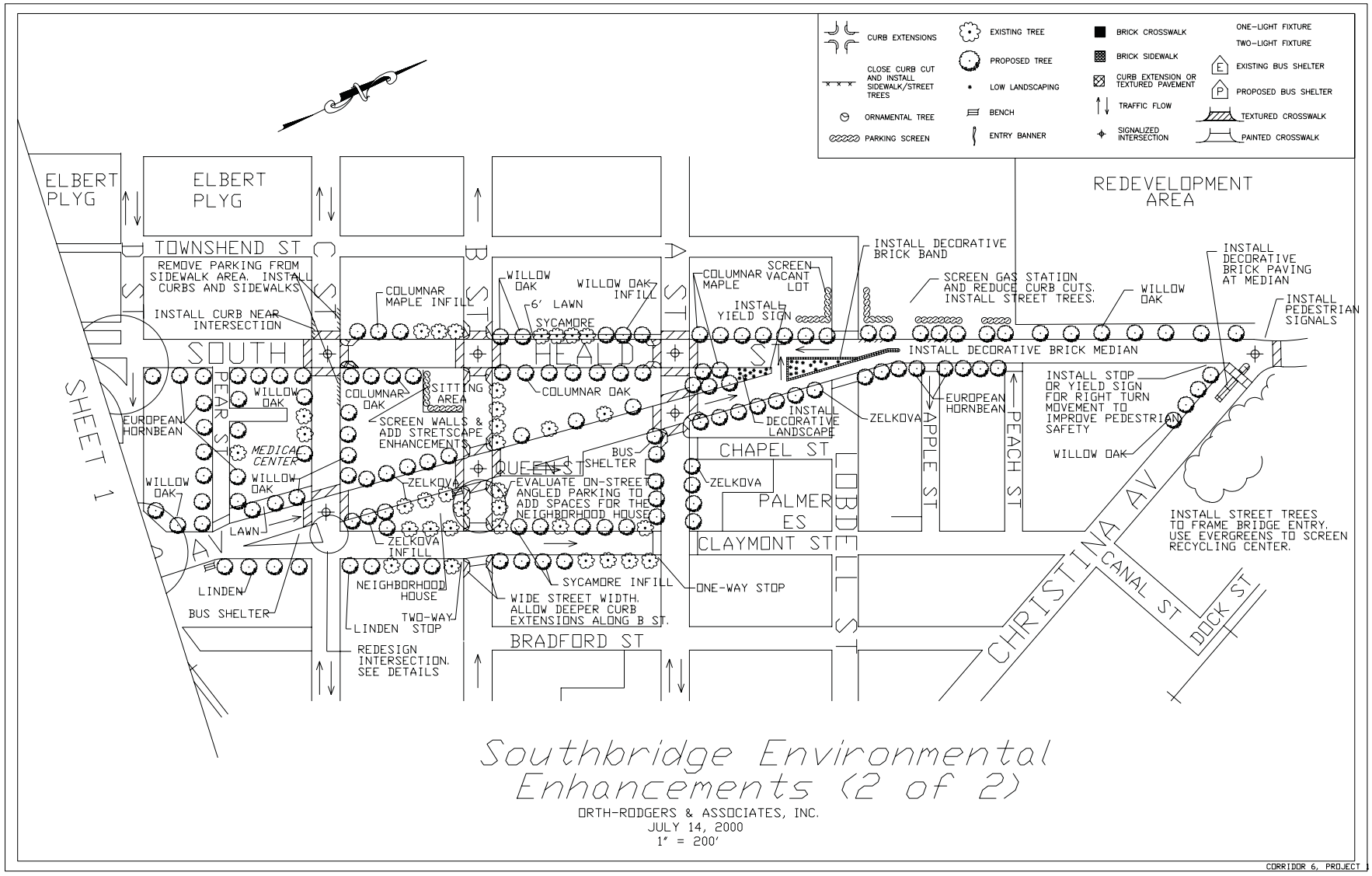
When presented to the community this project was well received but there was limited attendance at the meeting. It may be beneficial to perform additional outreach with the community to ensure the approval and priority of the project.



Southbridge Environmental Enhancements (1 of 2)

ORTH-RODGERS & ASSOCIATES, INC.
JULY 14, 2000
1" = 200'

CORRIDOR 6, PROJECT 1



Southbridge Environmental Enhancements (2 of 2)

ORTH-RODGERS & ASSOCIATES, INC.
JULY 14, 2000
1" = 200'

CORRIDOR 6, PROJECT 1

Wilmington Urban Corridor Studies

Opinion of Probable Construction Costs - Planning Level Estimate - July 2000

Southbridge Environmental Enhancements

Corridor 6, Project 1

Item No.	Item Description	Quantity	Units	Unit Price	Total Cost
PAVING					
1	Pavement removal	50,000	S.F.	3.00	$150,000
2	Full-depth pavement		S.F.	15.00	$0
3	Concrete sidewalk	4,000	S.F.	6.00	$24,000
4	brick paving	1,200	S.F.	8.00	$9,600
5	Textured paving	2,000	S.F.	10.00	$20,000
6	Sidewalk narrowing, 2' wide, one side of street		L.F.	35.00	$0
7	Concrete median, 4' wide		L.F.	50.00	$0
8	Sidewalk widening, 3' wide, one side of street		L.F.	50.00	$0
9	Textured crosswalk	160	L.F.	100.00	$16,000
10	Brick crosswalk, raised		L.F.	150.00	$0
11	Brick median, 10' wide	90	L.F.	170.00	$15,300
12	Speed hump		EA.	3,000.00	$0
13	Traffic circle		EA.	5,000.00	$0
14	Bulbout	10	EA.	10,000.00	$100,000
15	Concrete bollard		EA.	250.00	$0
LANDSCAPE					
16	Large tree	133	EA.	400.00	$53,200
17	Small tree	15	EA.	300.00	$4,500
18	Shrubs		EA.	75.00	$0
19	Plantings	12,500	S.F.	20.00	$250,000
20	Tree grate		EA.	500.00	$0
21	Landscape screen	1,330	L.F.	25.00	$33,250
22	Landscaped median, 10' wide	620	L.F.	70.00	$43,400
23	Entry banner	1	EA.	1,500.00	$1,500
LIGHTING AND TRAFFIC					
24	Comprehensive pavement markings	1,000	L.F.	2.00	$2,000
25	Comprehensive traffic control signage		L.F.	3.00	$0
26	Pedestrian-scale ornamental lighting, one side of street		L.F.	36.00	$0
27	Single pedestrian-scale ornamental luminaire	96	EA.	2,500.00	$240,000
28	Double pedestrian-scale ornamental luminaire	34	EA.	3,500.00	$119,000
29	New or rebuilt conventional signal		EA.	40,000.00	$0
30	New or rebuilt ornamental signal		EA.	60,000.00	$0
MISCELLANEOUS CONSTRUCTION					
31	Ornamental fence		L.F.	50.00	$0
32	Stone retaining wall		L.F.	200.00	$0
33	concrete wall		S.F.	100.00	$0
34	Transit shelter		EA.	5,000.00	$0
35	Billboard removal		EA.	5,000.00	$0
36	Bench	3	EA.	250.00	$750
	Subtotal - construction cost				**$1,082,500**
	Preliminary engineering			20%	$216,500
	Construction engineering			20%	$216,500
	Initial expense			5%	$54,125
	Maintenance of traffic			10%	$108,250
	Erosion & sediment control allowance			5%	$54,125
	Contingency			20%	$216,500
	TOTAL COST				**$1,948,500**

Estimated budget: $1,949,000

Wilmington Urban Corridor Studies

Opinion of Probable Construction Costs - Planning Level Estimate - July 2000

East Fourth Street Environmental Enhancements

Corridor 6, Project 2

Item No.	Item Description	Quantity	Units	Unit Price	Total Cost
PAVING					
1	Excavation	16,000	S.F.	3.00	$48,000
2	Full-depth pavement	16,000	S.F.	21.00	$336,000
3	Concrete sidewalk	3,000	S.F.	6.00	$18,000
4	brick paving		S.F.	8.00	$0
5	Textured paving		S.F.	10.00	$0
6	Sidewalk narrowing, 2' wide, one side of street	450	L.F.	35.00	$15,750
7	Concrete median, 4' wide		L.F.	50.00	$0
8	Sidewalk widening, 3' wide, one side of street		L.F.	50.00	$0
9	Textured crosswalk	530	L.F.	100.00	$53,000
10	Brick crosswalk, raised		L.F.	150.00	$0
11	Brick median, 10' wide		L.F.	170.00	$0
12	Speed hump		EA.	3,000.00	$0
13	Traffic circle		EA.	5,000.00	$0
14	Bulbout		EA.	10,000.00	$0
15	Concrete bollard		EA.	250.00	$0
LANDSCAPE					
16	Large tree	28	EA.	400.00	$11,200
17	Small tree	5	EA.	300.00	$1,500
18	Shrubs		EA.	75.00	$0
19	Plantings	300	S.F.	20.00	$6,000
20	Tree grate		EA.	500.00	$0
21	Landscape screen	670	L.F.	25.00	$16,750
22	Landscaped median, 10' wide	1,100	L.F.	70.00	$77,000
23	Entry banner	1	EA.	1,500.00	$1,500
LIGHTING AND TRAFFIC					
24	Comprehensive pavement markings	2,000	L.F.	2.00	$4,000
25	Traffic control sign	5	EA.	100.00	$500
26	Pedestrian-scale ornamental lighting, one side of street		L.F.	36.00	$0
27	Single pedestrian-scale ornamental luminaire	32	EA.	2,500.00	$80,000
28	Double pedestrian-scale ornamental luminaire		EA.	3,500.00	$0
29	New or rebuilt conventional signal		EA.	40,000.00	$0
30	New or rebuilt ornamental signal		EA.	60,000.00	$0
MISCELLANEOUS CONSTRUCTION					
31	Remove abandonned railroad track	1	EA.	50,000.00	$50,000
32	New railroad crossing	1	EA.	200,000.00	$200,000
33	concrete wall		S.F.	100.00	$0
34	Transit shelter	3	EA.	5,000.00	$15,000
35	Billboard removal	2	EA.	5,000.00	$10,000
36	Bench		EA.	250.00	$0
	Subtotal - construction cost				**$944,200**
	Preliminary engineering			20%	$188,840
	Construction engineering			20%	$188,840
	Initial expense			5%	$47,210
	Maintenance of traffic			10%	$94,420
	Erosion & sediment control allowance			5%	$47,210
	Contingency			20%	$188,840
	TOTAL COST				**$1,699,560**

Estimated budget : $1,700,000