

## Elgin O'Hare – West Bypass: Build Alternatives Roadway Improvement Cost Analysis

PREPARED FOR: IDOT  
PREPARED BY: CH2M HILL  
DATE: June 23, 2009

### Background

The preliminary cost estimate presented in this memorandum represents the second in a series of cost analyses performed through the current project stage (Tier One studies). This cost analysis was prepared to provide a comparative planning-level estimate for Build Alternatives 203 and 402 (with West Bypass South Connection Options A and D), and to support alternative screening decisions.

Cost estimates for the build alternatives were prepared on the basis of the refined representative conceptual design layout for the remaining alternatives. At this stage, the estimates considered roadway as well as proposed complementary transportation improvements (e.g. transit, bike/pedestrian facilities) within the build alternative roadway improvement limits. Estimated costs for proposed transit improvements are presented separately in the *Build Alternative Transit Improvement Cost Analysis Memorandum*.

Build alternative cost estimates were prepared on the basis of the following assumptions:

- Estimates prepared at this stage were based upon only one representative conceptual design layout for roadway improvements, including required supporting improvements to existing roadways identified to date. Design alternatives and their estimated costs will be considered with future Tier Two studies.
- Given the very limited information regarding existing roadway infrastructure condition and re-use potential available at this time, estimates were prepared on the assumption of full reconstruction within the designated footprint areas, except at existing freeway connections (see below). Potential re-use of existing roadways and structures, as well as cost comparisons for alternate design layouts and treatments (e.g. interchange type alternates) will be considered as part of subsequent Tier Two studies.
- Estimated costs for improvements to existing freeways in the vicinity of system interchanges were included on the basis of the following assumptions:
  - Additional construction needed above and beyond the assumed 2030 Baseline condition for these roadways is assumed as new construction quantities.
  - Along I-90 near the potential West Bypass system interchanges, the 2030 Baseline provides 4 lanes in each direction. Costs for any additional lanes (beyond the 4 lane condition) have been included in the estimates. Additionally, in order to be conservative, the outer lane of the 2030 Baseline has been assumed reconstructed as well. New retaining walls constructed with the I-90 baseline improvements are assumed to remain in place.

- Along I-294 near the potential West Bypass system interchange, the 2030 Baseline maintains the existing lane arrangement. Similar to the I-90 connection, any proposed lanes greater than the 2030 Baseline are included in this estimate along with the assumed reconstruction of the outer-most lane.
- Along I-290 near the proposed Elgin O'Hare system interchange, the 2030 Baseline maintains the existing lane arrangement. Similar to the I-90 connection, any proposed lanes greater than the 2030 Baseline are included in this estimate along with the assumed reconstruction of the outer-most lane.

Estimated costs were prepared in current year (2009) dollars. Estimates considered construction, engineering, and right-of-way acquisition costs. Implementation cost estimates (in future implementation year dollars) will be prepared with Tier Two studies.

## Cost Estimating Methodology

Cost analyses for the Build Alternatives 203 and 402 were prepared to allow an understanding and comparison of costs for major roadway improvement sections. Analyses were prepared on the basis of the refined representative conceptual layout for the build alternatives, using a planning level cost model. The following sections include a description of the analysis sections, conceptual layout refinements, and cost model features.

### Analysis Sections

For analysis purposes, the proposed improvements were divided into the following geographical sections (see Exhibit 1):

#### Elgin O'Hare Corridor:

*Section 1:* Existing Expressway west terminus (US 20) to approximately 3,000 ft west of Meacham Road.

*Section 2:* West of Meacham Road to approximately 2,500 ft east of Prospect Road including a system interchange with I-290 providing connections to the north and south.

*Section 3:* East of Prospect Road to the System Interchange at O'Hare Western Terminal (includes sections of the West Bypass from approximately 1,400 ft south of Devon Avenue to approximately 2,800 ft north of IL 19).

#### West Bypass Corridor and Arterial Improvements:

*Section 4:* West Bypass at proposed IL 19 interchange (from approximately 2,800 ft north of IL 19 to just north of Metra-Milwaukee District West line).

*Section 5:* West Bypass South Connection (from north of Metra-Milwaukee District West line to I-294 including connections north and south on I-294). Two connection options are shown for Section 5. South Connection A moves from an alignment paralleling the Bensenville Rail Yard from west to east to a south bearing along the existing County Line Rd. alignment. South Connection D moves from the west to the south, crossing over the UPRR main line and continuing along the east side of the tracks.

*Section 6: West Bypass/York Rd/Elmhurst Rd corridor (from approximately 1,400 ft south of Devon Avenue to I-90 including connections east and west on I-90).*

## **Build Alternative Refinements**

The representative conceptual layout of the Build Alternatives 203 and 402 reflects several design refinements to the layout identified previously with the seven Finalist Roadway System Alternatives. The layout was refined where appropriate to address stakeholder input, and to reflect planned or ongoing improvements by others. Where needed, the representative layout for freeway mainline, system interchanges, and service interchanges was also refined to incorporate a representative layout for dedicated transit and bike/pedestrian facilities. Thus, the layouts include features (e.g. bridges, retaining walls) needed to accommodate these complementary improvements within the estimated construction footprint of proposed roadway improvements.

Build alternative roadway improvement costs do not include costs for proposed transit improvements (see *Build Alternative Transit Improvement Cost Analysis Memorandum*). However, estimated roadway costs do incorporate various indirect costs due to the inclusion of transit corridors. For example, wider medians were incorporated into the conceptual layout along portions of the Elgin O'Hare and West Bypass corridors to accommodate potential new dedicated transit service. The wider median was reflected in the construction footprint and in the associated right-of-way (ROW) costs. Also, longer bridge structures were used to accommodate the wider medians. These structure requirements were reflected in the estimated construction costs of the build alternatives.

As noted previously, Tier One estimates were prepared with the assumption of complete removal and reconstruction of mainline, interchange, and arterial roadways, including all pavement and structures within the proposed roadway improvement limits. The one exception to this are existing freeways in the vicinity of proposed system interchanges, where estimates reflect improvements beyond 2030 Baseline conditions.

A more detailed ROW analysis was conducted for the build alternatives. The analysis was performed via a GIS analysis of refined construction footprint requirements, as well as limited field reconnaissance to verify impacts to property site layout and operations. Issues reviewed with the field reconnaissance included constructability (e.g. mobilization of construction equipment), access to property (e.g. entrance/exit to structure, entrance/exit to loading docks, entry/exit to parking facilities), potential accommodations for relocation of lost economic activity, and viability of permanent easements and aerial/underground access rights (as opposed to full ROW purchase). Refined ROW estimates were then prepared based on the refined footprint limits, current property assessment, tax information available in the GIS database, and field reconnaissance of properties. The fair market value was calculated based on the current parcel assessments and tax information provided by Cook County and DuPage County. Exempt properties that are owned by the Illinois Department of Transportation, as well as railroad tracks within the transportation corridor, were not included in the ROW cost.

## Cost Model, Major Construction Items, and Unit Costs

The cost model relies on quantity estimates for major items that have the greatest influence on construction cost and which can reasonably be defined at this early stage of concept design. These items include:

- Pavement Removal
- New Pavement
- Bridge Removal
- New Bridges and Tunnels
- Retaining Walls

The quantity basis and suggested unit costs are shown in Tables 1 and 2 for the above items. As the study process moves forward, unit costs may need to be adjusted according to more current construction pricing information.

**TABLE 1**  
Roadway Pavement Costs

Item	Unit Cost	Unit
Pavement Removal	\$15	yd <sup>2</sup>
Mainline and Ramp Pavement (incl. shoulders)	\$110	yd <sup>2</sup>
Local Roads Pavement (incl. shoulders)	\$65	yd <sup>2</sup>

**TABLE 2**  
Structure Costs

Item	Unit Cost	Unit
Bridge Removal	\$35	ft <sup>2</sup>
New Tunnel <sup>a</sup>	\$875	ft <sup>2</sup>
New Bridge		
Two Level	\$160	ft <sup>2</sup>
Three Level	\$230	ft <sup>2</sup>
Four Level	\$280	ft <sup>2</sup>
Railroad Bridge(s)	\$1400-1625	ft <sup>2</sup>
Retaining Wall	\$1000	lin. ft

<sup>a</sup>Tunnel unit cost includes all labor and materials needed to construct the tunnels, as well as temporary earth support, excavation, backfill, ventilation, drainage, and lighting.

The cost model accounts for all other items as a percentage of the major construction items listed above. Table 3 presents a percentage range for these items and the basis with which they are applied. All percentages are based on historical construction cost data from projects of a similar type.

**TABLE 3**  
Other Cost Items Based on Major Construction Costs

<b>Item</b>	<b>Percent of Costs</b>	<b>Cost Basis</b>
Earthwork	30-55%	Roadway Pavement Cost
Erosion Control	3%	Roadway Pavement and Earthwork Cost
Traffic Control During Construction	5-8%	Roadway Pavement Cost
Lighting	4-6%	Roadway Pavement Cost
Signing and Pavement Marking	5-7%	Roadway Pavement Cost
Typical Utilities	5-10%	Roadway Pavement and Earthwork Cost
Roadway Incidentals	20%	Roadway Pavement and Earthwork Cost
Structure Incidentals	15%	Total Structure Cost
Design and Construction Engineering	20%	Total Construction Cost
Construction Contingency	25%	Total Construction Cost
ROW Contingency	50%	ROW Cost

### **Pavement Removal**

The area of pavement removal was estimated in Microstation based on available aerial mapping. Pavement removal quantities were calculated at all locations within the project limits where construction occurs over existing pavement and where existing roadways are abandoned. At this stage, an assumption was made that the existing pavement structure will have reached the end of its useful life by the time the proposed improvements are implemented. Therefore, removal of all pavement including mainline, ramps, local roads and shoulders was included in the estimate.

### **New Pavement**

The area of new pavement required was estimated from the conceptual plan view information in Microstation for the mainline, ramps and local roads. The unit cost of new pavement includes base and subbase materials. A more durable pavement structure is assumed for the mainline and ramps as compared to local roads. In addition, all paved shoulders were treated the same as the roadway.

### **Earthwork**

Roadway profiles and cross sections were not developed at this stage; thus, earthwork quantities were based on a percentage of roadway pavement cost.

## **Drainage**

This item is intended to cover all roadway drainage including storm water retention/detention, median drains, catch basins, inlets, box culverts, etc. Lump sum values applied along corridors vary based on the complexity of the design location. All values represented in the cost summary tables are a product of engineering judgment and historical data for projects using similar drainage networks. A conceptual understanding of cross sections (open/closed drainage) allows a high level assumption of cost/lane mile to be made for continuous roadway segments. In cases where special drainage features are anticipated (e.g. pump stations), a separate line item was provided for these costs.

## **Erosion Control**

The cost of erosion control during construction was based on a percentage of roadway pavement and earthwork cost.

## **Traffic Control During Construction**

The cost of traffic control during construction was based on a percentage of roadway pavement cost. This item is intended to include all typical costs of traffic control including temporary signing, temporary pavement and pavement marking, temporary signalization, channelizing devices, barricades, etc.

## **Lighting**

The cost of roadway lighting was based on a percentage of roadway pavement cost.

## **Signing and Pavement Marking**

The cost of highway signing (including ITS/CMS) and pavement marking was based on a percentage of roadway pavement cost.

## **Utilities**

The cost of typical utilities was based on a percentage of roadway pavement and earthwork cost. Typical utilities are defined as electric service, cable, water, storm and sanitary sewer, telephone, standard gas line, etc. In cases where special utilities such as major overhead transmission lines were identified, a separate line item was provided for these costs.

## **Signalized Intersections**

Within the roadway improvement limits, a count of proposed and existing intersection sites to be improved was included.

## **Special Waste Site Remediation**

The project GIS database identifies special waste sites within the roadway improvement limits, based on data provided by published sources and governmental agencies including the Environmental Protection Agency. The identified sites include: Comprehensive Environmental Response and Liability Information System (CERCLIS) (Active); CERCLIS (Archived); Leaking Underground Storage tanks (LUST); UST; Resource Conservation and Recovery Act (RCRA); Site Remediation Program (SRP); Toxic Release Information (TRI) and Landfills. These sites vary by size and type and are represented as a data point in the

GIS database. At this stage, impacts were accounted for in the estimate as number of sites, multiplied by an assumed lump sum remediation cost per type. More accurate estimates of site remediation requirements will be developed with future Tier Two studies.

### **Roadway Incidentals**

Roadway Incidentals were estimated as a percentage of roadway pavement and earthwork cost. Incidental items include guardrail, median barrier, bike/pedestrian facilities (including paved trails and crossing locations within roadway improvement limits), curb and gutter, landscaping, mobilization, environmental mitigation, clearing and grubbing, fencing, etc.

### **Bridges and Tunnels**

Bridge removal, new bridge and tunnel costs were calculated based on the width of the roadway (travel lanes plus shoulders and parapets or walls). Structure limits were estimated from the conceptual plan view information in Microstation. Tunnel unit cost includes all labor and materials needed to construct the tunnels, as well as temporary earth support, excavation, backfill, ventilation, drainage, and lighting.

### **Retaining Walls**

Locations and approximate lengths of retaining walls were determined from the conceptual plan view information in Microstation. The estimated construction cost was based on the plan length of each retaining wall and an average height (14-15 feet) assumed throughout the alternative. The type of retaining wall has not been considered at this time. The unit cost assumed was based on past experience with other planning level projects and engineering judgment.

### **Structure Incidentals**

Structure Incidentals were estimated as a percentage of total structure cost including bridges, tunnels and retaining walls. Incidentals include mobilization, traffic control during construction, and temporary shoring for bridges and roadway items directly associated with structure construction.

### **Railroad Relocation and Coordination**

Multiple rail lines exist within the project boundary and it is anticipated that their operation will be affected by roadway construction. Some lines will have temporary stoppages, while others may be relocated or removed completely. A lump sum amount was included in this estimate to capture the costs for these activities.

### **Engineering**

Costs for preliminary design (Tier Two), final design, and construction inspection services were estimated as a percentage of total construction cost.

### **Right-of-Way Acquisition**

- Right-of-Way (ROW) cost was estimated based on the refined footprint limits developed for use as part of the build alternatives impact analyses, as well as current property assessment and tax information available in the GIS database. Impacted parcels were grouped by type (commercial, industrial, residential and miscellaneous which includes

public facilities such as water towers and government facilities). ROW costs for non-exempt properties were assumed to be equivalent to Fair Market Values based on 2007 tax assessment information from Cook County and DuPage County for each parcel type (most current tax information available). It was assumed that the Fair Market Value for 2009 has not change from the 2008 value.

- The Build Alternative ROW estimate was prepared using a GIS analysis of refined footprints (including accommodations for transit improvements), as well as limited field reconnaissance to verify impacts to property site layout and operations, and to determine the need for partial versus full parcel acquisition. Issues reviewed with the field reconnaissance included constructability (e.g. mobilization of construction equipment), access to property (e.g. entrance/exit to structure, entrance/exit to loading docks, entry/exit to parking facilities), potential accommodations for relocation of lost economic activity, and viability of permanent easements and aerial/underground access rights (as opposed to full ROW purchase).
- Acreage was used to estimate ROW cost for exempt properties. Properties currently owned by the Illinois Department of Transportation were not included in the estimate. Similarly, railroad property cost within the transportation corridor is not included in the ROW cost. The ROW cost for exempt property, other than those listed above, are divided into 4 unit cost groupings:

Exempt Properties other than those listed below

\$1,000,000/ acres

Open lands adjacent to O'Hare property

\$500,000/ acre

Small commercial/industrial adjacent to O'Hare property

\$800,000/ acre

All other commercial/industrial adjacent to O'Hare property

\$1,100,000/ acre

- Estimated ROW acquisition costs reflect only permanent property impacts identified to date with conceptual design studies. Detailed ROW acquisition requirements, including temporary and permanent easements will need to be developed with future Tier Two studies.

### **Contingency**

A contingency of 25 percent of the total construction cost was applied to the cost estimate to account for the many unknowns at this stage of the project. Note that the contingency is not intended to cover anticipated inflation.

A ROW contingency of 50 percent, for items including but not limited to relocation, legal costs, and damages to remainder, was applied to account for the many uncertainties at this stage of the project. Note that the contingency is not intended to cover anticipated inflation.

### **Build Alternatives Roadway Improvement Cost Estimate**

Build Alternative 203 and 402 roadway improvement costs are summarized in Table 4. Further detail of each roadway section can be found in Tables 5 through 13 (attached).

Build alternative costs were estimated in year 2009 dollars. Construction durations, time between major phases of construction, and inflation was not considered at this time. Predicted costs in implementation year terms will be developed as part of a future Risk Based Cost Analysis.

**TABLE 4**  
Finalist System Build Alternative Cost Summary (in 2009 \$ Million)

	Alternative 203				Alternative 402			
	Option A		Option D		Option A		Option D	
	Roadway	ROW	Roadway	ROW	Roadway	ROW	Roadway	ROW
Section 1 (Elgin O'Hare corridor Gary Ave. to Roselle Rd.)	263	21	263	21	263	21	263	21
Section 2 (Elgin O'Hare corridor Roselle Rd. to Wood Dale Rd.)	660	35	660	35	660	35	660	35
Section 3 (Wood Dale Rd. to West Terminal)	557	72	557	72	469	62	469	62
Section 4 (Irving Park Rd. Interchange)	147	68	147	68	147	68	147	68
Section 5 (South Section to I-294)	689	125	615	210	689	125	615	210
Section 6 (York/Elmhurst Rd. corridor north to I-90)	745	242	745	242	177	77	177	77
Subtotals	<u>3,061</u>	<u>563</u>	<u>2,987</u>	<u>648</u>	<u>2,405</u>	<u>388</u>	<u>2,331</u>	<u>473</u>
<b>Total Roadway Cost</b>	<b>3,624</b>		<b>3,635</b>		<b>2,793</b>		<b>2,804</b>	
Transit Cost <sup>a</sup>	<u>427</u>		<u>427</u>		<u>246</u>		<u>246</u>	
Total Project Capital Cost	4,051		4,062		3,039		3,050	

<sup>a</sup>Estimated construction costs for new dedicated transit service along the Elgin O'Hare corridor (Schaumburg proposed O'Hare West Terminal) and along the north leg of the West Bypass (I-90 to proposed O'Hare West Terminal). See *Build Alternative Transit Improvement Cost Analysis Memorandum* for details regarding cost estimating procedures and assumptions.

**TABLE 5**

Finalist System Build Alternatives - 203, 402 Section 1

*Comparative Level Cost Estimate Summary*

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY		UNIT PRICE	TOTAL	
1	<b>PAVEMENT REMOVAL</b>	yd <sup>2</sup>	415,296		\$15	\$6,229,438	
2	<b>NEW PAVEMENT</b> Freeway/Ramps Arterials / Local Roads						
		yd <sup>2</sup>	346,638		\$110	\$38,130,156	
		yd <sup>2</sup>	191,962		\$65	\$12,477,501	
<b>PAVEMENT COSTS</b>						\$56,837,095	
3	<b>EARTHWORK</b>	L.S.	35	% of Items 1-2	N/A	\$19,892,983	
4	<b>DRAINAGE</b>	L.S.	N/A		N/A	\$10,000,000	
5	<b>EROSION CONTROL</b>	L.S.	3	% of Items 1-3	N/A	\$2,301,902	
6	<b>TRAFFIC CONTROL DURING CONSTRUCTION</b>	L.S.	7	% of Items 1-2	N/A	\$3,978,597	
7	<b>LIGHTING</b>	L.S.	5	% of Items 1-2	N/A	\$2,841,855	
8	<b>SIGNING/MARKINGS</b>	L.S.	6	% of Items 1-2	N/A	\$3,410,226	
9	<b>UTILITIES</b>	L.S.	7	% of Items 1-3	N/A	\$5,371,105	
10	<b>SIGNALIZED INTERSECTIONS</b>	each	13		\$200,000	\$2,600,000	
11	<b>PUMPING STATIONS</b>	each	0		\$5,000,000	\$0	
12	<b>ROADWAY INCIDENTALS</b>	L.S.	20	% of Items 1-3	N/A	\$15,346,016	
13	<b>SPECIAL WASTE SITE REMEDIATION</b>	L.S.	N/A		N/A	\$1,040,000	
<b>TOTAL ROADWAY COSTS (Items 1-13)</b>						\$123,619,779	
14 15 16 17 18 19	<b>STRUCTURES</b> Bridge Removal Proposed Bridges 2 <sup>nd</sup> level 3 <sup>rd</sup> level 4 <sup>th</sup> level Railroad Bridges Tunnels Retaining Walls Structural Incidentals (Includes Mob.)	ft <sup>2</sup>	165,016		\$35	\$5,775,560	
		ft <sup>2</sup>	258,086		\$160	\$41,293,760	
		ft <sup>2</sup>	0		\$230	\$0	
		ft <sup>2</sup>	0		\$280	\$0	
		ft <sup>2</sup>	0		\$550	\$0	
		ft <sup>2</sup>	0		\$875	\$0	
		lin. ft.	2,914		\$1,000	\$2,914,000	
		L.S.	15	% of 14-18		N/A	\$7,497,498
		<b>TOTAL STRUCTURE COSTS (Items 14-19)</b>					
20	<b>RAILROAD RELOCATION AND COORDINATION</b>	L.S.	N/A		N/A	\$0	
<b>TOTAL CONSTRUCTION COSTS (Items 1-20)</b>						\$181,100,597	
21	<b>CONSTRUCTION CONTINGENCY</b>	L.S.	25	% of items 1-20	N/A	\$45,275,149	
22	<b>DESIGN AND CONSTRUCTION ENGINEERING</b>	L.S.	20	% of items 1-20	N/A	\$36,220,119	
		<b>TOTAL INFRASTRUCTURE COSTS (Items 1-22)</b>					\$263,000,000
23	<b>ROW ACQUISITION</b>	L.S.	N/A		N/A	\$14,106,204	
24	<b>ROW CONTINGENCY</b>	L.S.	50	% of Item 23		\$7,053,102	
<b>TOTAL ROW COSTS</b>						\$21,159,306	
<b>TOTAL PROJECT COST<sup>1,2</sup></b>						<b>\$284,000,000</b>	

Note: 1. Cost in 2009 dollars

2. Transit, Bike/Pedestrian and other transportation facilities cost are not included in this estimate

**TABLE 6**

Finalist System Build Alternatives - 203, 402 Section 2

Comparative Level Cost Estimate Summary

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY		UNIT PRICE	TOTAL
1	<b>PAVEMENT REMOVAL</b>	yd <sup>2</sup>	454,305		\$15	\$6,814,577
2	<b>NEW PAVEMENT</b>					
	Freeway/Ramps	yd <sup>2</sup>	553,416		\$110	\$60,875,736
	Arterials / Local Roads	yd <sup>2</sup>	282,347		\$65	\$18,352,548
<b>PAVEMENT COSTS</b>						\$86,042,860
3	<b>EARTHWORK</b>	L.S.	50	% of Items 1-2	N/A	\$43,021,430
4	<b>DRAINAGE</b>	L.S.		N/A	N/A	\$20,000,000
5	<b>EROSION CONTROL</b>	L.S.	3	% of Items 1-3	N/A	\$3,871,929
6	<b>CONSTRUCTION</b>	L.S.	8	% of Items 1-2	N/A	\$6,883,429
7	<b>LIGHTING</b>	L.S.	5	% of Items 1-2	N/A	\$4,302,143
8	<b>SIGNING/MARKINGS</b>	L.S.	6	% of Items 1-2	N/A	\$5,162,572
9	<b>UTILITIES</b>	L.S.	9	% of Items 1-3	N/A	\$11,615,786
10	<b>SIGNALIZED INTERSECTIONS</b>	each	9		\$200,000	\$1,800,000
11	<b>PUMPING STATIONS</b>	each	0		\$5,000,000	\$0
12	<b>ROADWAY INCIDENTALS</b>	L.S.	20	% of Items 1-3	N/A	\$25,812,858
13	<b>REMEDIATION</b>	L.S.		N/A	N/A	\$400,000
<b>TOTAL ROADWAY COSTS (Items 1-13)</b>						\$208,913,007
14	<b>STRUCTURES</b>					
	Bridge Removal	ft <sup>2</sup>		82,052	\$35	\$2,871,820
15	Proposed Bridges 2 <sup>nd</sup> level 3 <sup>rd</sup> level 4 <sup>th</sup> level					
		ft <sup>2</sup>		587,144	\$160	\$93,943,040
		ft <sup>2</sup>		271,675	\$230	\$62,485,250
		ft <sup>2</sup>		110,825	\$280	\$31,031,000
16	Railroad Bridges	ft <sup>2</sup>		0	\$550	\$0
17	Tunnels	ft <sup>2</sup>		0	\$875	\$0
18	Retaining Walls	lin. ft.		24,077	\$1,000	\$24,077,000
19	Mob.)	L.S.	15	% of 14-18	N/A	\$32,161,217
<b>TOTAL STRUCTURE COSTS (Items 14-19)</b>						\$246,569,327
20	<b>RAILROAD RELOCATION AND COORDINATION</b>	L.S.		N/A	N/A	\$0
<b>TOTAL CONSTRUCTION COSTS (Items 1-20)</b>						\$455,482,333
21	<b>CONSTRUCTION CONTINGENCY</b>	L.S.	25	% of items 1-20	N/A	\$113,870,583
22	<b>DESIGN AND CONSTRUCTION ENGINEERING</b>	L.S.	20	% of items 1-20	N/A	\$91,096,467
	<b>TOTAL INFRASTRUCTURE COSTS (Items 1-22)</b>					<b>\$660,000,000</b>
23	<b>ROW ACQUISITION</b>	L.S.		N/A	N/A	\$23,605,042
24	<b>ROW CONTINGENCY</b>	L.S.	50	% of Item 23		\$11,802,521
<b>TOTAL ROW COSTS</b>						\$35,407,563
<b>TOTAL PROJECT COST</b>						<b>\$696,000,000</b>

**TABLE 7**

Finalist System Build Alternatives - 203 Section 3

Comparative Level Cost Estimate Summary

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY		UNIT PRICE	TOTAL
1	PAVEMENT REMOVAL	yd <sup>2</sup>	263,787		\$15	\$3,956,810
2	NEW PAVEMENT					
	Freeway/Ramps	yd <sup>2</sup>	493,668		\$110	\$54,303,480
	Arterials / Local Roads	yd <sup>2</sup>	343,308		\$65	\$22,315,027
<b>PAVEMENT COSTS</b>						<b>\$80,575,317</b>
3	EARTHWORK	L.S.	50	% of Items 1-2	N/A	\$40,287,659
4	DRAINAGE	L.S.		N/A	N/A	\$18,000,000
5	EROSION CONTROL	L.S.	3	% of Items 1-3	N/A	\$3,625,889
6	TRAFFIC CONTROL DURING CONSTRUCTION	L.S.	7	% of Items 1-2	N/A	\$5,640,272
7	LIGHTING	L.S.	5	% of Items 1-2	N/A	\$4,028,766
8	SIGNING/MARKINGS	L.S.	6	% of Items 1-2	N/A	\$4,834,519
9	UTILITIES	L.S.	9	% of Items 1-3	N/A	\$10,877,668
10	SIGNALIZED INTERSECTIONS	each	11		\$200,000	\$2,200,000
11	PUMPING STATIONS	each	1		\$5,000,000	\$5,000,000
12	ROADWAY INCIDENTALS	L.S.	20	% of Items 1-3	N/A	\$24,172,595
13	SPECIAL WASTE SITE REMEDIATION	L.S.	N/A		N/A	\$2,490,000
<b>TOTAL ROADWAY COSTS (Items 1-13)</b>						<b>\$201,732,685</b>
14	STRUCTURES					
	Bridge Removal	ft <sup>2</sup>	0		\$35	\$0
15	Proposed Bridges					
	2 <sup>nd</sup> level	ft <sup>2</sup>	293,319		\$160	\$46,931,040
	3 <sup>rd</sup> level	ft <sup>2</sup>	249,372		\$230	\$57,355,560
	4 <sup>th</sup> level	ft <sup>2</sup>	26,232		\$280	\$7,344,960
16	Railroad Bridges	ft <sup>2</sup>	0		\$550	\$0
17	Tunnels					
	Ramp - Cut and Cover	ft <sup>2</sup>	23,916		\$875	\$20,926,500
18	Retaining Walls					
	Standard Wall Type	lin. ft.	24,146		\$1,000	\$24,146,000
19	Structural Incidentals (Includes Mob.)	L.S.	15	% of 14-18	N/A	\$23,505,609
<b>TOTAL STRUCTURE COSTS (Items 14-19)</b>						<b>\$180,209,669</b>
20	RAILROAD RELOCATION AND COORDINATION					
	Single Lane Ramp	L.S.	N/A			\$1,000,000
	Two Lane Ramp	L.S.	N/A			\$1,100,000
<b>TOTAL CONSTRUCTION COSTS (Items 1-20)</b>						<b>\$384,042,354</b>
21	CONSTRUCTION CONTINGENCY	L.S.	25	% of items 1-20	N/A	\$96,010,589
22	DESIGN AND CONSTRUCTION ENGINEERING	L.S.	20	% of items 1-20	N/A	\$76,808,471
<b>TOTAL INFRASTRUCTURE COSTS (Items 1-22)</b>						<b>\$557,000,000</b>
23	ROW ACQUISITION	L.S.	N/A		N/A	\$48,000,000
24	ROW CONTINGENCY	L.S.	50	% of Item 23		\$24,000,000
<b>TOTAL ROW COSTS</b>						<b>\$72,000,000</b>
<b>TOTAL PROJECT COST</b>						<b>\$629,000,000</b>

<b>TABLE 8</b>						
Finalist System Build Alternatives - 203, 402 Section 4						
Comparative Level Cost Estimate Summary						
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY		UNIT PRICE	TOTAL
1	<b>PAVEMENT REMOVAL</b>	yd <sup>2</sup>	21,495		\$15	\$322,420
2	<b>NEW PAVEMENT</b>					
	Freeway/Ramps	yd <sup>2</sup>	108,865		\$110	\$11,975,126
	Arterials / Local Roads	yd <sup>2</sup>	21,854		\$65	\$1,420,517
<b>PAVEMENT COSTS</b>						\$13,718,063
3	<b>EARTHWORK</b>	L.S.	35	% of Items 1-2	N/A	\$4,801,322
4	<b>DRAINAGE</b>	L.S.		N/A	N/A	\$4,000,000
5	<b>EROSION CONTROL</b>	L.S.	3	% of Items 1-3	N/A	\$555,582
6	<b>TRAFFIC CONTROL DURING CONSTRUCTION</b>	L.S.	5	% of Items 1-2	N/A	\$685,903
7	<b>LIGHTING</b>	L.S.	5	% of Items 1-2	N/A	\$685,903
8	<b>SIGNING/MARKINGS</b>	L.S.	6	% of Items 1-2	N/A	\$823,084
9	<b>UTILITIES</b>	L.S.	5	% of Items 1-3	N/A	\$925,969
10	<b>SIGNALIZED INTERSECTIONS</b>	each	2		\$200,000	\$400,000
11	<b>PUMPING STATIONS</b>	each	0		\$5,000,000	\$0
12	<b>ROADWAY INCIDENTALS</b>	L.S.	20	% of Items 1-3	N/A	\$3,703,877
13	<b>SPECIAL WASTE SITE REMEDIATION</b>	L.S.		N/A	N/A	\$520,000
<b>TOTAL ROADWAY COSTS (Items 1-13)</b>						\$30,819,703
14	<b>STRUCTURES</b>					
	Bridge Removal	ft <sup>2</sup>	0		\$35	\$0
15	Proposed Bridges					
	2 <sup>nd</sup> level	ft <sup>2</sup>	47,590		\$160	\$7,614,400
	3 <sup>rd</sup> level	ft <sup>2</sup>	0		\$230	\$0
	4 <sup>th</sup> level	ft <sup>2</sup>	0		\$280	\$0
16	Railroad Bridges	ft <sup>2</sup>	36,173		\$1,400	\$50,642,200
17	Tunnels	ft <sup>2</sup>	0		\$875	\$0
18	Retaining Walls					
	Standard Wall Type	lin. ft.	3,224		\$1,000	\$3,224,000
19	Structural Incidentals (Includes Mob.)	L.S.	15	% of 14-18	N/A	\$9,222,090
<b>TOTAL STRUCTURE COSTS (Items 14-19)</b>						\$70,702,690
20	<b>RAILROAD RELOCATION AND COORDINATION</b>	L.S.			N/A	\$0
<b>TOTAL CONSTRUCTION COSTS (Items 1-20)</b>						\$101,522,393
21	<b>CONSTRUCTION CONTINGENCY</b>	L.S.	25	% of items 1-20	N/A	\$25,380,598
22	<b>DESIGN AND CONSTRUCTION ENGINEERING</b>	L.S.	20	% of items 1-20	N/A	\$20,304,479
<b>TOTAL INFRASTRUCTURE COSTS (Items 1-22)</b>						<b>\$147,000,000</b>
23	<b>ROW ACQUISITION</b>	L.S.		N/A	N/A	\$45,197,933
24	<b>ROW CONTINGENCY</b>	L.S.	50	% of Item 23		\$22,598,967
<b>TOTAL ROW COSTS</b>						\$67,796,900
<b>TOTAL PROJECT COST</b>						<b>\$215,000,000</b>

**TABLE 9**

Finalist System Build Alternatives - 203, 402 Section 5, South A

Comparative Level Cost Estimate Summary

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY		UNIT PRICE	TOTAL
1	PAVEMENT REMOVAL	yd <sup>2</sup>	195,574		\$15	\$2,933,617
2	<b>NEW PAVEMENT</b>					
	Freeway/Ramps	yd <sup>2</sup>	271,584		\$110	\$29,874,264
	Arterials / Local Roads	yd <sup>2</sup>	225,259		\$65	\$14,641,857
<b>PAVEMENT COSTS</b>						\$47,449,738
3	<b>EARTHWORK</b>	L.S.	45	% of Items 1-2	N/A	\$21,352,382
4	<b>DRAINAGE</b>	L.S.		N/A	N/A	\$15,000,000
5	<b>EROSION CONTROL</b>	L.S.	3	% of Items 1-3	N/A	\$2,064,064
6	<b>TRAFFIC CONTROL DURING CONSTRUCTION</b>	L.S.	7	% of Items 1-2	N/A	\$3,321,482
7	<b>LIGHTING</b>	L.S.	5	% of Items 1-2	N/A	\$2,372,487
8	<b>SIGNING/MARKINGS</b>	L.S.	6	% of Items 1-2	N/A	\$2,846,984
9	<b>UTILITIES</b>	L.S.	8	% of Items 1-3	N/A	\$5,504,170
10	<b>SIGNALIZED INTERSECTIONS</b>	each	10		\$200,000	\$2,000,000
11	<b>PUMPING STATIONS</b>	each	1		\$5,000,000	\$5,000,000
12	<b>ROADWAY INCIDENTALS</b>	L.S.	20	% of Items 1-3	N/A	\$13,760,424
13	<b>SPECIAL WASTE SITE REMEDIATION</b>	L.S.		N/A	N/A	\$3,970,000
<b>TOTAL ROADWAY COSTS (Items 1-13)</b>						\$124,641,730
14	<b>STRUCTURES</b>					
	Bridge Removal	ft <sup>2</sup>	16,505		\$35	\$577,675
15	Proposed Bridges					
	2 <sup>nd</sup> level	ft <sup>2</sup>	514,250		\$160	\$82,280,000
	3 <sup>rd</sup> level	ft <sup>2</sup>	420,715		\$230	\$96,764,450
	4 <sup>th</sup> level	ft <sup>2</sup>	55,097		\$280	\$15,427,160
16	Railroad Bridges					
	Metra/CP Girder Bridges (3 Dual Track Structures)	ft <sup>2</sup>	34,764		\$1,400	\$48,669,600
	Metra/CP Girder Bridge (1 Single Track Structure)	ft <sup>2</sup>	7,848		\$1,625	\$12,753,000
17	Tunnels	ft <sup>2</sup>	0		\$875	\$0
18	Retaining Walls					
	Standard Wall Type	lin. ft.	26,487		\$1,000	\$26,487,000
19	Structural Incidentals (Includes Mob.)	L.S.	15	% of 14-18	N/A	\$42,443,833
<b>TOTAL STRUCTURE COSTS (Items 14-19)</b>						\$325,402,718
20	<b>RAILROAD RELOCATION AND COORDINATION</b>					
	Metra/CP Girder Bridges	L.S.		N/A	N/A	\$23,300,000
	CP Turntable Relocation	L.S.		N/A	N/A	\$1,600,000
<b>TOTAL CONSTRUCTION COSTS (Items 1-20)</b>						\$474,944,448
21	<b>CONSTRUCTION CONTINGENCY</b>	L.S.	25	% of items 1-20	N/A	\$118,736,112
22	<b>DESIGN AND CONSTRUCTION ENGINEERING</b>	L.S.	20	% of items 1-20	N/A	\$94,988,890
<b>TOTAL INFRASTRUCTURE COSTS (Items 1-22)</b>						<b>\$689,000,000</b>
23	<b>ROW ACQUISITION</b>	L.S.		N/A	N/A	\$83,500,000
24	<b>ROW CONTINGENCY</b>	L.S.	50	% of Item 23		\$41,750,000
<b>TOTAL ROW COSTS</b>						\$125,250,000
<b>TOTAL PROJECT COST</b>						<b>\$814,000,000</b>

**TABLE 10**  
Finalist System Build Alternatives - 203, 402 Section 5, South D  
Comparative Level Cost Estimate Summary

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY		PRICE	TOTAL
1	PAVEMENT REMOVAL	yd <sup>2</sup>	160,712		\$15	\$2,410,673
2	NEW PAVEMENT					
	Freeway/Ramps	yd <sup>2</sup>	308,763		\$110	\$33,963,942
	Arterials / Local Roads	yd <sup>2</sup>	144,057		\$65	\$9,363,719
<b>PAVEMENT COSTS</b>						<b>\$45,738,335</b>
3	EARTHWORK	L.S.	50	% of Items 1-2	N/A	\$22,869,168
4	DRAINAGE	L.S.		N/A	N/A	\$13,000,000
5	EROSION CONTROL	L.S.	3	% of Items 1-3	N/A	\$2,058,225
6	CONSTRUCTION	L.S.	7	% of Items 1-2	N/A	\$3,201,683
7	LIGHTING	L.S.	5	% of Items 1-2	N/A	\$2,286,917
8	SIGNING/MARKINGS	L.S.	6	% of Items 1-2	N/A	\$2,744,300
9	UTILITIES	L.S.	10	% of Items 1-3	N/A	\$6,860,750
10	SIGNALIZED INTERSECTIONS	each	6		\$200,000	\$1,200,000
11	PUMPING STATIONS	each	1		\$5,000,000	\$5,000,000
12	ROADWAY INCIDENTALS	L.S.	20	% of Items 1-3	N/A	\$13,721,500
13	REMEDICATION	L.S.		N/A	N/A	\$4,430,000
<b>TOTAL ROADWAY COSTS (Items 1-13)</b>						<b>\$123,110,878</b>
14	<b>STRUCTURES</b>					
	Bridge Removal	ft <sup>2</sup>	19,873		\$35	\$695,555
15	Proposed Bridges					
	2 <sup>nd</sup> level	ft <sup>2</sup>	252,463		\$160	\$40,394,080
	3 <sup>rd</sup> level	ft <sup>2</sup>	409,779		\$230	\$94,249,170
	4 <sup>th</sup> level	ft <sup>2</sup>	38,271		\$280	\$10,715,880
16	Railroad Bridges					
	Metra/CP Girder Bridges (3 Dual Track Structures)	ft <sup>2</sup>	34,764		\$1,400	\$48,669,600
	Metra/CP Girder Bridges (1 Single Track Structure)	ft <sup>2</sup>	7,848		\$1,625	\$12,753,000
17	Tunnels	ft <sup>2</sup>	0		\$875	\$0
18	Retaining Walls					
	Standard Wall Type	lin. ft.	31,945		\$1,000	\$31,945,000
19	Structural Incidentals (Includes Mob.)	L.S.	15 % of 14-18		N/A	\$35,913,343
<b>TOTAL STRUCTURE COSTS (Items 14-19)</b>						<b>\$275,335,628</b>
20	<b>COORDINATION</b>					
	Metra/CP Girder Bridges	L.S.	N/A		N/A	\$23,300,000
	CP Spur Relocation	L.S.	N/A		N/A	\$700,000
	CP Turntable Relocation	L.S.	N/A		N/A	\$1,600,000
<b>TOTAL CONSTRUCTION COSTS (Items 1-20)</b>						<b>\$424,046,506</b>
21	CONSTRUCTION CONTINGENCY	L.S.	25	% of items 1-20	N/A	\$106,011,627
22	DESIGN AND CONSTRUCTION ENGINEERING	L.S.	20	% of items 1-20	N/A	\$84,809,301
	<b>TOTAL INFRASTRUCTURE COSTS (Items 1-22)</b>					<b>\$615,000,000</b>
23	ROW ACQUISITION	L.S.	N/A		N/A	\$140,000,000
24	ROW CONTINGENCY	L.S.	50	% of Item 23		\$70,000,000
<b>TOTAL ROW COSTS</b>						<b>\$210,000,000</b>
<b>TOTAL PROJECT COST</b>						<b>\$825,000,000</b>

**TABLE 11**  
Finalist System Build Alternatives - 203 Section 6  
Comparative Level Cost Estimate Summary

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY		PRICE	TOTAL
1	PAVEMENT REMOVAL	yd <sup>2</sup>	360,935		\$15	\$5,414,030
2	NEW PAVEMENT					
	Freeway/Ramps	yd <sup>2</sup>	419,758		\$110	\$46,173,417
	Arterials / Local Roads	yd <sup>2</sup>	251,257		\$65	\$16,331,698
<b>PAVEMENT COSTS</b>						\$67,919,145
3	EARTHWORK	L.S.	50	% of Items 1-2	N/A	\$33,959,572
4	DRAINAGE	L.S.		N/A	N/A	\$18,000,000
5	EROSION CONTROL	L.S.	3	% of Items 1-3	N/A	\$3,056,362
6	TRAFFIC CONTROL DURING CONSTRUCTION	L.S.	6	% of Items 1-2	N/A	\$4,075,149
7	LIGHTING	L.S.	5	% of Items 1-2	N/A	\$3,395,957
8	SIGNING/MARKINGS	L.S.	6	% of Items 1-2	N/A	\$4,075,149
9	UTILITIES	L.S.	7	% of Items 1-3	N/A	\$7,131,510
10	SIGNALIZED INTERSECTIONS	each	9		\$200,000	\$1,800,000
11	PUMPING STATIONS	each	1		\$5,000,000	\$5,000,000
12	ROADWAY INCIDENTALS	L.S.	20	% of Items 1-3	N/A	\$20,375,743
13	SPECIAL WASTE SITE REMEDIATION	L.S.		N/A	N/A	\$5,510,000
<b>TOTAL ROADWAY COSTS (Items 1-13)</b>						\$174,298,586
<b>STRUCTURES</b>						
14	Bridge Removal	ft <sup>2</sup>	102,277		\$35	\$3,579,695
15	Proposed Bridges					
	2 <sup>nd</sup> level	ft <sup>2</sup>	379,138		\$160	\$60,662,080
	3 <sup>rd</sup> level	ft <sup>2</sup>	384,500		\$230	\$88,435,000
	4 <sup>th</sup> level	ft <sup>2</sup>	64,128		\$280	\$17,955,840
16	Railroad Bridges					
	PCC Deck Bridge (Devon area underpass)	ft <sup>2</sup>	104,100		\$700	\$72,870,000
	UP Spur Bridge	ft <sup>2</sup>	6,953		\$1,620	\$11,263,860
17	Tunnels	ft <sup>2</sup>	0		\$875	\$0
18	Retaining Walls					
	Standard Wall Type	lin. ft.	33,540		\$1,000	\$33,540,000
19	Structural Incidentals (Includes Mob.)	L.S.	15 % of 14-18		N/A	\$43,245,971
<b>TOTAL STRUCTURE COSTS (Items 14-19)</b>						\$331,552,446
20	RAILROAD RELOCATION AND COORDINATION					
	PCC Deck Bridge (Devon area underpass)	L.S.	N/A		N/A	\$6,400,000
	UP Spur Bridge	L.S.	N/A		N/A	\$1,300,000
<b>TOTAL CONSTRUCTION COSTS (Items 1-20)</b>						\$513,551,033
21	CONSTRUCTION CONTINGENCY	L.S.	25	% of items 1-20	N/A	\$128,387,758
22	DESIGN AND CONSTRUCTION ENGINEERING	L.S.	20	% of items 1-20	N/A	\$102,710,207
<b>TOTAL INFRASTRUCTURE COSTS (Items 1-22)</b>						<b>\$745,000,000</b>
23	ROW ACQUISITION	L.S.	N/A		N/A	\$161,000,000
24	ROW CONTINGENCY	L.S.	50 % of Item 23			\$80,500,000
<b>TOTAL ROW COSTS</b>						\$241,500,000
<b>TOTAL PROJECT COST</b>						<b>\$986,000,000</b>

**TABLE 12**Finalist System Build Alternatives - 402 Section 3  
Comparative Level Cost Estimate Summary

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY		PRICE	TOTAL
1	<b>PAVEMENT REMOVAL</b>	yd <sup>2</sup>	263,787		\$15	\$3,956,810
2	<b>NEW PAVEMENT</b>					
	Freeway/Ramps	yd <sup>2</sup>	402,825		\$110	\$44,310,787
	Arterials / Local Roads	yd <sup>2</sup>	356,455		\$65	\$23,169,582
<b>PAVEMENT COSTS</b>						<b>\$71,437,179</b>
3	<b>EARTHWORK</b>	L.S.	45	% of Items 1-2	N/A	\$32,146,731
4	<b>DRAINAGE</b>	L.S.		N/A	N/A	\$17,000,000
5	<b>EROSION CONTROL</b>	L.S.	3	% of Items 1-3	N/A	\$3,107,517
6	<b>CONSTRUCTION</b>	L.S.	7	% of Items 1-2	N/A	\$5,000,603
7	<b>LIGHTING</b>	L.S.	5	% of Items 1-2	N/A	\$3,571,859
8	<b>SIGNING/MARKINGS</b>	L.S.	6	% of Items 1-2	N/A	\$4,286,231
9	<b>UTILITIES</b>	L.S.	9	% of Items 1-3	N/A	\$9,322,552
10	<b>SIGNALIZED INTERSECTIONS</b>	each	6		\$200,000	\$1,200,000
11	<b>PUMPING STATIONS</b>	each	0		\$5,000,000	\$0
12	<b>ROADWAY INCIDENTALS</b>	L.S.	20	% of Items 1-3	N/A	\$20,716,782
13	<b>REMEDIATION</b>	L.S.	N/A		N/A	\$2,105,000
<b>TOTAL ROADWAY COSTS (Items 1-13)</b>						<b>\$169,894,453</b>
14	<b>STRUCTURES</b>					
	Bridge Removal	ft <sup>2</sup>	0		\$35	\$0
	Proposed Bridges					
	2 <sup>nd</sup> level	ft <sup>2</sup>	284,716		\$160	\$45,554,560
	3 <sup>rd</sup> level	ft <sup>2</sup>	332,075		\$230	\$76,377,250
	4 <sup>th</sup> level	ft <sup>2</sup>	0		\$280	\$0
	Railroad Bridges	ft <sup>2</sup>	0		\$550	\$0
	Tunnels	ft <sup>2</sup>	0		\$875	\$0
	Retaining Walls	lin. ft.	11,741		\$1,000	\$11,741,000
19	Structural Incidentals (Includes Mob.)	L.S.	15 % of 14-18		N/A	\$20,050,922
<b>TOTAL STRUCTURE COSTS (Items 14-19)</b>						<b>\$153,723,732</b>
20	<b>COORDINATION</b>	L.S.	N/A		N/A	\$0
<b>TOTAL CONSTRUCTION COSTS (Items 1-20)</b>						<b>\$323,618,184</b>
21	<b>CONTINGENCY</b>	L.S.	25	% of items 1-20	N/A	\$80,904,546
22	<b>ENGINEERING</b>	L.S.	20	% of items 1-20	N/A	\$64,723,637
<b>TOTAL INFRASTRUCTURE COSTS (Items 1-22)</b>						<b>\$469,000,000</b>
23	<b>ROW ACQUISITION</b>	L.S.	N/A		N/A	\$41,577,816
24	<b>ROW CONTINGENCY</b>	L.S.	50	% of Item 23		\$20,788,908
<b>TOTAL ROW COSTS</b>						<b>\$62,366,724</b>
<b>TOTAL PROJECT COST</b>						<b>\$532,000,000</b>

<b>TABLE 13</b>						
Finalist System Build Alternatives - 402 Section 6						
Comparative Level Cost Estimate Summary						
ITEM	ITEM DESCRIPTION	UNIT	QUANTITY		UNIT PRICE	TOTAL
1	PAVEMENT REMOVAL	yd <sup>2</sup>	224,198		\$15	\$3,362,972
2	NEW PAVEMENT					
	Freeway/Ramps	yd <sup>2</sup>	97,151		\$110	\$10,686,622
	Arterials / Local Roads	yd <sup>2</sup>	306,535		\$65	\$19,924,789
<b>PAVEMENT COSTS</b>						<b>\$33,974,383</b>
3	EARTHWORK	L.S.	35	% of Items 1-2	N/A	\$11,891,034
4	DRAINAGE	L.S.		N/A	N/A	\$8,000,000
5	EROSION CONTROL	L.S.	3	% of Items 1-3	N/A	\$1,375,963
6	TRAFFIC CONTROL DURING CONSTRUCTION	L.S.	6	% of Items 1-2	N/A	\$2,038,463
7	LIGHTING	L.S.	5	% of Items 1-2	N/A	\$1,698,719
8	SIGNING/MARKINGS	L.S.	6	% of Items 1-2	N/A	\$2,038,463
9	UTILITIES	L.S.	9	% of Items 1-3	N/A	\$4,127,888
10	SIGNALIZED INTERSECTIONS	each	7		\$200,000	\$1,400,000
11	PUMPING STATIONS	each	0		\$5,000,000	\$0
12	ROADWAY INCIDENTALS	L.S.	20	% of Items 1-3	N/A	\$9,173,084
13	SPECIAL WASTE SITE REMEDIATION	L.S.	N/A		N/A	\$4,630,000
<b>TOTAL ROADWAY COSTS (Items 1-13)</b>						<b>\$80,347,996</b>
14	STRUCTURES					
	Bridge Removal	ft <sup>2</sup>	41,557		\$35	\$1,454,495
	Proposed Bridges					
	2 <sup>nd</sup> level	ft <sup>2</sup>	145,530		\$160	\$23,284,800
	3 <sup>rd</sup> level	ft <sup>2</sup>	0		\$230	\$0
	4 <sup>th</sup> level	ft <sup>2</sup>	0		\$280	\$0
	Railroad Bridges	ft <sup>2</sup>	0		\$550	\$0
	Tunnels	ft <sup>2</sup>	0		\$875	\$0
	Retaining Walls	lin. ft.	11,764		\$1,000	\$11,764,000
	Structural Incidentals (Includes Mob.)	L.S.	15 % of 14-18		N/A	\$5,475,494
<b>TOTAL STRUCTURE COSTS (Items 14-19)</b>						<b>\$41,978,789</b>
20	RAILROAD RELOCATION AND COORDINATION	L.S.	N/A		N/A	\$0
<b>TOTAL CONSTRUCTION COSTS (Items 1-20)</b>						<b>\$122,326,786</b>
21	CONSTRUCTION CONTINGENCY	L.S.	25	% of items 1-20	N/A	\$30,581,696
22	DESIGN AND CONSTRUCTION ENGINEERING	L.S.	20	% of items 1-20	N/A	\$24,465,357
<b>TOTAL INFRASTRUCTURE COSTS (Items 1-22)</b>						<b>\$177,000,000</b>
23	ROW ACQUISITION	L.S.	N/A		N/A	\$51,000,000
24	ROW CONTINGENCY	L.S.	50	% of Item 23		\$25,500,000
<b>TOTAL ROW COSTS</b>						<b>\$76,500,000</b>
<b>TOTAL PROJECT COST</b>						<b>\$254,000,000</b>