

SDOT Freight Master Plan Implementation Plan (2018-2023)

PROJECT: FMP Project No. 1: Ballard Bridge Replacement



DESIGN ASSUMPTIONS:

Bridge will include 4 x 11' vehicle lanes and 2 x 10' pedestrian/bike lanes

ESTIMATED TOTAL PROJECT COST:

\$714,597,000.00

Full set excluding
"acknowledge" projects
and Adiam projects
(47,57,61)



Top-Down Cost Estimating Tool Tab B. Cost Estimate Summary

Project Name

Prepared by

Project Number

Date

Milestone

BUILD-UP ASSUMPTIONS

Baseline

Engineer's Estimate

Estimated Acquisition Cost

Escalation Schedule

	Year	Rate
Current	2017	-
Design Midpoint	2018	3.0%
Acquisition Midpoint	2019	5.6%
Construction Midpoint	2019	5.6%

Build-Up Rates

Construction Contingency	20%
Engineer's Est. Allowance	40%
Design Contingency	30%
Acquisition Contingency	30%
Construction Soft Cost Ratio	29%
Design Soft Cost Ratio	19%

BUILD-UP SUMMARY

	A	B	C = A + B	D	E = C + D
	Base Estimate	Contingency	Current-Year Cost	Midpoint Escalation	TOTAL
Contractor Cost (Hard Cost)					
Engineer's Estimate (EE)	270,280,100				
EE Allowance (40%)	108,112,040				
Estimated Contractor Cost (ECC)	378,392,140	75,678,428	454,070,568	25,269,346	479,339,914
Construction Admin. (Soft Cost)					
29% of \$378.4M ECC	109,733,721	21,946,744	131,680,465	7,328,110	139,008,575
Design (Soft Cost)					
19% of \$378.4M ECC	71,894,507	21,568,352	93,462,859	2,785,150	96,248,009
Acquisition Cost					
Estimated Acquisition Cost	0	0	0	0	0
Estimated Total Project Cost	\$ 560,020,367	#####	\$ 679,213,891	\$ 35,382,606	\$ 714,596,498

Build-Up Notes

1. The Engineer's Estimate Allowance, Design Contingency, and Acquisition Contingency are determined by the selected level of
2. Escalation rates are based on IHS Global Insight indices.

Version 21 - Aug 2014

BASIS OF ESTIMATE NOTES AND CLARIFICATIONS

The design and construction soft costs used in this estimate are based on the historical averages of the following filter

PLANNING LEVEL OPINION OF COST SUMMARY - NO CONTINGENCY

Project Description	SDOT Freight Master Plan Implementation	Client	SDOT
Corridor Section	15th Ave W, Emerson St to NW 50th St	Date	4/20/2017
Location	Seattle	Date of Cost Index	2017
		Calculated By/Entered By	KCM
		Checked By	VWW

FMP Project No. 1 Ballard Bridge Replacement

#	ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
CONSTRUCTION					
1	PREPARATION/GRADING/DRAINAGE				
1.1	PREPARATION				
	CLEAR & GRUB DEMO	ACRE	\$10,000		\$0
	REMOVING EXISTING PAVEMENT	SY	\$5		\$0
	REMOVAL STRUCTURES & OBSTRUCTIONS	LS	\$0	1	\$0
1.2	EARTHWORK				
	ROADWAY EXCAVATION INCL HAUL	CY	\$40		\$0
	STRUCTURE EXCL INCL HAUL	CY	\$25		\$0
	BORROW INCL HAUL	TON	\$16		\$0
	EMBANKMENT COMPACTION	CY	\$2		\$0
1.3	STORMWATER MITIGATION				
	DETENTION AND TREATMENT	SF	\$6		\$0
1.4	STORM SEWER				
	CATCH BASIN TYPE 1	EA	\$1,500		\$0
	CATCH BASIN TYPE 2	EA	\$3,000		\$0
	PLAN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	\$35		\$0
	PLAN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	\$80		\$0
	STRUCTURE EXCAVATION CL B	CY	\$20		\$0
2	STRUCTURE				
	CONCRETE BRIDGES	SF	\$500	256,700	\$128,350,000
	CONCRETE BRIDGES W/DENING	SF	\$200		\$0
	PEDESTRIAN BRIDGES	SF	\$250		\$0
	STEEL BRIDGES	SF	\$100		\$0
	BRIDGE ABUTMENT RETROFIT	SF	\$150		\$0
	RETAINING WALLS (Cast in Place)	SF	\$65		\$0
	RETAINING WALLS (Cast in Place with Cast in Place Facing)	SF	\$150		\$0
	BRIDGE REMOVAL	SF	\$75	252,000	\$18,900,000
	NOISE WALLS	SF	\$25		\$0
3	SURFACING				
	PORTLAND CEMENT CONCRETE	SF	\$150		\$0
	HOT MIX ASPHALT	TON	\$160		\$0
	CRUSHED SURFACING	TON	\$40		\$0
4	ROADSIDE DEVELOPMENT				
	FENCING	LF	\$0		\$0
	SEEDING, MULCHING & FERTILIZING	ACRE	\$1,200		\$0
	WETLAND MITIGATION	LS	\$0	1	\$0
	TEMPORARY WATER POLLUTION & EROSION CONTROL (5%)	LS	\$10,005,000	1	\$10,005,000
	LANDSCAPING	LS	\$0	1	\$0
5	TRAFFIC				
	GUARD RAIL	LF	\$18		\$0
	CONCRETE BARRIER	LF	\$50		\$0
	SIGNAL SYSTEMS	LS	\$0	1	\$0
	ILLUMINATION	LS	\$0	1	\$0
	SIGNING	LS	\$0	1	\$0
	CURBS	LF	\$25		\$0
	PERPENDICULAR CURB RAMP	EA	\$3,000		\$0
	SIDEWALKS	SY	\$45		\$0
	TRAFFIC CONTROL (10%)	LS	\$16,675,100	1	\$16,675,100
5.1	OTHER ITEMS				
	SURVEYING (5%)	LS	\$10,005,100	1	\$10,005,100
	SPECIAL ITEMS	EST	\$0	1	\$0
	UTILITY RELOCATIONS	EST	\$0	1	\$0
6	MISCELLANEOUS (10%)	LS	\$20,543,500	1	\$20,543,500
7	CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)				\$223,778,800
8	MOBILIZATION (10%)				
	10% OF ITEM 7	EST	\$22,577,900	1	\$22,577,900
9	SUBTOTAL (ITEMS 7 & 8)				\$246,356,700
10	SALES TAX				
	9.8% OF ITEM 9	EST	\$24,123,400	1	\$24,123,400
11	AGREEMENTS (Utilities, WSP, etc.)				
		EST	\$0	1	\$0
12	SUBTOTAL (ITEMS 9 THRU 11)				\$270,480,100

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet Inc. does not guarantee or warrant the accuracy of this planning level estimate.

SDOT Freight Master Plan Implementation Plan (2018-2023)

PROJECT: FMP Project 3: SODO Rail Corridor Grade Separation



DESIGN ASSUMPTIONS:

Bridge will be similar to Lander St overpass

ESTIMATED TOTAL PROJECT COST:

\$273,230,000.00



Top-Down Cost Estimating Tool Tab B. Cost Estimate Summary

Project Name

Project Number

Prepared by

Date

Milestone

BUILD-UP ASSUMPTIONS

Baseline

Engineer's Estimate
Estimated Acquisition Cost

Escalation Schedule

	Year	Rate
Current	2017	-
Design Midpoint	2018	3.0%
Acquisition Midpoint	2019	5.6%
Construction Midpoint	2019	5.6%

Build-Up Rates

Construction Contingency	20%
Engineer's Est. Allowance	40%
Design Contingency	30%
Acquisition Contingency	30%
Construction Soft Cost Ratio	29%
Design Soft Cost Ratio	19%

BUILD-UP SUMMARY

	A	B	C = A + B	D	E = C + D
	Base Estimate	Contingency	Current-Year Cost	Midpoint Escalation	TOTAL
Contractor Cost (Hard Cost)					
Engineer's Estimate (EE)	103,342,955				
EE Allowance (40%)	41,337,182				
Estimated Contractor Cost (ECC)	144,680,136	28,936,027	173,616,164	9,661,861	183,278,025
Construction Admin. (Soft Cost)					
29% of \$144.7M ECC	41,957,240	8,391,448	50,348,687	2,801,940	53,150,627
Design (Soft Cost)					
19% of \$144.7M ECC	27,489,226	8,246,768	35,735,994	1,064,916	36,800,910
Acquisition Cost					
Estimated Acquisition Cost	0	0	0	0	0
Estimated Total Project Cost	\$ 214,126,602	\$ 45,574,243	\$ 259,700,845	\$ 13,528,717	\$ 273,229,562

Build-Up Notes

1. The Engineer's Estimate Allowance, Design Contingency, and Acquisition Contingency are determined by the selected level of
2. Escalation rates are based on IHS Global Insight indices.

Version 21 - Aug 2014

BASIS OF ESTIMATE NOTES AND CLARIFICATIONS

The design and construction soft costs used in this estimate are based on the historical averages of the following filter

PLANNING LEVEL OPINION OF COST SUMMARY - NO CONTINGENCY

Project Description	SDOT Freight Master Plan Implementation	Client	SDOT
Corridor Section	1st Ave Sover Auto Yard	Date	4/20/2017
Location	SODO	Date of Cost Index	2017
		Calculated By/Entered By	KCM
		Checked By	VWW

FMP Project 5 SODO Rail Corridor Grade Separation

ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
CONSTRUCTION				
1	PREPARATION/GRADING/DRAINAGE			
1.1	PREPARATION			
	ACRE	\$10,000	1	\$0
	SY	\$15	1	\$0
	LS	\$0	1	\$0
1.2	EARTHWORK			
	CY	\$40	1	\$0
	CY	\$25	1	\$0
	TON	\$15	1	\$0
	CY	\$2	1	\$0
1.3	STORMWATER MITIGATION			
	SF	\$5	1	\$0
1.4	STORM SEWER			
	EA	\$1,500	1	\$0
	EA	\$3,000	1	\$0
	LF	\$35	1	\$0
	LF	\$80	1	\$0
	CY	\$20	1	\$0
2	STRUCTURE			
	LS	\$103,542,554.50	1	\$103,542,555
	SF	\$500	1	\$0
	SF	\$200	1	\$0
	SF	\$250	1	\$0
	SF	\$100	1	\$0
	SF	\$150	1	\$0
	SF	\$65	1	\$0
	SF	\$150	1	\$0
	SF	\$75	1	\$0
	SF	\$75	1	\$0
3	SURFACING			
	SF	\$150	1	\$0
	TON	\$180	1	\$0
	TON	\$40	1	\$0
4	ROADSIDE DEVELOPMENT			
	LF	\$0	1	\$0
	ACRE	\$1,200	1	\$0
	LS	\$0	1	\$0
	LS	\$5,200,500	1	\$5,200,500
	LS	\$0	1	\$0
5	TRAFFIC			
	LF	\$18	1	\$0
	LF	\$50	1	\$0
	LS	\$0	1	\$0
	LS	\$0	1	\$0
	LS	\$0	1	\$0
	LF	\$25	1	\$0
	EA	\$3,000	1	\$0
	SY	\$45	1	\$0
	LS	\$10,354,300	1	\$10,354,300
5.1	OTHER ITEMS			
	LS	\$5,200,500	1	\$5,200,500
	EST	\$0	1	\$0
	EST	\$0	1	\$0
6	MISCELLANEOUS (10%)			
	LS	\$12,507,900	1	\$12,507,900
7	CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)			
				\$138,585,355
8	MOBILIZATION (10%)			
	EST	\$13,858,700	1	\$13,858,700
9	SUBTOTAL (ITEMS 7 & 8)			
				\$152,444,055
10	SALES TAX			
	EST	\$14,950,400	1	\$14,950,400
11	AGREEMENTS (Utilities, WSP, etc.)			
	EST	\$0	1	\$0
12	SUBTOTAL (ITEMS 9 THRU 11)			
				\$167,394,455

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SDOT Freight Master Plan Implementation Plan (2018-2023)

PROJECT: FMP Project 4. 4th Ave S Viaduct Replacement



DESIGN ASSUMPTIONS:

- Bridge will include 4 x 11' vehicle lanes and 1 x 8' sidewalk
- Unit price will be similar to unit price of Lander St Overpass

ESTIMATED TOTAL PROJECT COST:

\$487,996,000.00



Top-Down Cost Estimating Tool Tab B. Cost Estimate Summary

Project Name

Project Number

Prepared by

Date

Milestone

BUILD-UP ASSUMPTIONS

Baseline

Engineer's Estimate
 Estimated Acquisition Cost

Escalation Schedule

	Year	Rate
Current	2017	-
Design Midpoint	2018	3.0%
Acquisition Midpoint	2019	5.6%
Construction Midpoint	2019	5.6%

Build-Up Rates

Construction Contingency	20%
Engineer's Est. Allowance	40%
Design Contingency	30%
Acquisition Contingency	30%
Construction Soft Cost Ratio	29%
Design Soft Cost Ratio	19%

BUILD-UP SUMMARY

	A	B	C = A + B	D	E = C + D
	Base Estimate	Contingency	Current-Year Cost	Midpoint Escalation	TOTAL
Contractor Cost (Hard Cost)					
Engineer's Estimate (EE)	184,573,255				
EE Allowance (40%)	73,829,302				
Estimated Contractor Cost (ECC)	258,402,556	51,680,511	310,083,068	17,256,340	327,339,408
Construction Admin. (Soft Cost)					
29% of \$258.4M ECC	74,936,741	14,987,348	89,924,090	5,004,339	94,928,428
Design (Soft Cost)					
19% of \$258.4M ECC	49,096,486	14,728,946	63,825,431	1,901,969	65,727,400
Acquisition Cost					
Estimated Acquisition Cost	0	0	0	0	0
Estimated Total Project Cost	\$ 382,435,783	\$ 81,396,805	\$ 463,832,589	\$ 24,162,648	\$ 487,995,236

Build-Up Notes

1. The Engineer's Estimate Allowance, Design Contingency, and Acquisition Contingency are determined by the selected level of
2. Escalation rates are based on IHS Global Insight indices.

Version 21 - Aug 2014

BASIS OF ESTIMATE NOTES AND CLARIFICATIONS

The design and construction soft costs used in this estimate are based on the historical averages of the following filter

PLANNING LEVEL OPINION OF COST SUMMARY - NO CONTINGENCY

Project Description	SDOT Freight Master Plan Implementation	Client	SDOT
Corridor Section	4th Ave S over Airport Yard	Date	4/20/2017
Location	SODO	Date of Cost Index	2017
		Calculated By/Entered By	KCM
		Checked By	VWW

FMP Project 4: 4th Ave S Voaduct Replacement

ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
CONSTRUCTION				
1 PREPARATION/GRADING/DRAINAGE				
1.1 PREPARATION				
CLEAR & GRUB DEMO	ACRE	\$10,000	1	\$0
REMOVING EXISTING PAVEMENT	SF	\$15	1	\$0
REMOVAL STRUCTURES & OBSTRUCTIONS	LS	\$0	1	\$0
1.2 EARTHWORK				
ROADWAY EXCAVATION INCL HAUL	CY	\$40	1	\$0
STRUCTURE EX CL A INCL HAUL	CY	\$25	1	\$0
BORROW INCL HAUL	TON	\$15	1	\$0
EMBANKMENT COMPACTION	CY	\$2	1	\$0
1.3 STORMWATER MITIGATION DETENTION AND TREATMENT				
	SF	\$5	1	\$0
1.4 STORM SEWER				
CATCH BASIN TYPE 1	EA	\$1,500	1	\$0
CATCH BASIN TYPE 2	EA	\$3,000	1	\$0
PLAIN CONC STORM SEWER PIPE 12 IN DIAM	LF	\$35	1	\$0
PLAIN CONC STORM SEWER PIPE 18 IN DIAM	LF	\$80	1	\$0
STRUCTURE EXCAVATION CL B	CY	\$20	1	\$0
2 STRUCTURE				
2.1 LANDSCAPE				
LANDSCAPE	LS	\$103,542,554.50	1	\$103,542,555
CONCRETE BRIDGES	SF	\$500	1	\$0
CONCRETE BRIDGES WIDENING	SF	\$200	1	\$0
PEDESTRIAN BRIDGES	SF	\$250	1	\$0
STEEL BRIDGES	SF	\$100	1	\$0
BRIDGE ABUTMENT RETROFIT	SF	\$150	1	\$0
RETAINING WALLS (Cast in Place)	SF	\$55	1	\$0
RETAINING WALLS (Shotcrete with Cast in Place Facing)	SF	\$150	1	\$0
BRIDGE REMOVAL	SF	\$75	1	\$10,530,000
NOISE WALLS	SF	\$25	1	\$0
3 SURFACING				
PORTLAND CEMENT CONCRETE	SF	\$150	1	\$0
HOT MIX ASPHALT	TON	\$180	1	\$0
CRUSHED SURFACING	TON	\$40	1	\$0
4 ROADSIDE DEVELOPMENT				
FENCING	LF	\$0	1	\$0
SEEDING, MULCHING & FERTILIZING	ACRE	\$1,200	1	\$0
WETLAND MITIGATION	LS	\$0	1	\$0
TEMPORARY WATER POLLUTION & EROSION CONTROL (5%)	LS	\$5,832,400	1	\$5,832,400
LANDSCAPING	LS	\$0	1	\$0
5 TRAFFIC				
GUARDRAIL	LF	\$18	1	\$0
CONCRETE BARRIER	LF	\$50	1	\$0
SIGNAL SYSTEMS	LS	\$0	1	\$0
ILLUMINATION	LS	\$0	1	\$0
SIGNING	LS	\$0	1	\$0
CURBS	LF	\$25	1	\$0
PERPENDICULAR CURB RAMP	EA	\$3,000	1	\$0
SIDEWALKS	SF	\$45	1	\$0
TRAFFIC CONTROL (10%)	LS	\$11,287,500	1	\$11,287,500
5.1 OTHER ITEMS				
SURVEYING (2%)	LS	\$5,832,400	1	\$5,832,400
SPECIAL ITEMS	EST	\$0	1	\$0
UTILITY RELOCATIONS	EST	\$0	1	\$0
6 MISCELLANEOUS (10%)				
	LS	\$13,892,500	1	\$13,892,500
7 CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)				
				\$152,817,555
8 MOBILIZATION (10%)				
10% OF ITEM 7	EST	\$15,281,800	1	\$15,281,800
9 SUBTOTAL (ITEMS 7 & 8)				
				\$168,099,455
10 SALES TAX				
9.8% OF ITEM 9	EST	\$16,473,800	1	\$16,473,800
11 AGREEMENTS (Utilities, WSP, etc.)				
	EST	\$0	1	\$0
12 SUBTOTAL (ITEMS 9 THRU 11)				
				\$184,573,255

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SDOT Freight Master Plan Implementation Plan (2018-2023)

PROJECT: FMP Project 5: 1st Ave S Viaduct Replacement



DESIGN ASSUMPTIONS:

Bridge will include 4 x 12' vehicle lanes and 2 x 6' sidewalks
Anticipated horizon year 2035

ESTIMATED TOTAL PROJECT COST:

\$568,262,000.00



Top-Down Cost Estimating Tool Tab B. Cost Estimate Summary

Project Name

Project Number

Prepared by

Date

Milestone

BUILD-UP ASSUMPTIONS

Baseline

Engineer's Estimate
Estimated Acquisition Cost

Escalation Schedule

	Year	Rate
Current	2017	-
Design Midpoint	2018	3.0%
Acquisition Midpoint	2019	5.6%
Construction Midpoint	2019	5.6%

Build-Up Rates

Construction Contingency	20%
Engineer's Est. Allowance	40%
Design Contingency	30%
Acquisition Contingency	30%
Construction Soft Cost Ratio	29%
Design Soft Cost Ratio	19%

BUILD-UP SUMMARY

	A	B	C = A + B	D	E = C + D
	Base Estimate	Contingency	Current-Year Cost	Midpoint Escalation	TOTAL
Contractor Cost (Hard Cost)					
Engineer's Estimate (EE)	214,932,222				
EE Allowance (40%)	85,972,889				
Estimated Contractor Cost (ECC)	300,905,111	60,181,022	361,086,133	20,094,697	381,180,829
Construction Admin. (Soft Cost)					
29% of \$300.9M ECC	87,262,482	17,452,496	104,714,979	5,827,462	110,542,441
Design (Soft Cost)					
19% of \$300.9M ECC	57,171,971	17,151,591	74,323,562	2,214,808	76,538,370
Acquisition Cost					
Estimated Acquisition Cost	0	0	0	0	0
Estimated Total Project Cost	\$ 445,339,564	\$ 94,785,110	\$ 540,124,674	\$ 28,136,967	\$ 568,261,640

Build-Up Notes

1. The Engineer's Estimate Allowance, Design Contingency, and Acquisition Contingency are determined by the selected level of
2. Escalation rates are based on IHS Global Insight indices.

Version 21 - Aug 2014

BASIS OF ESTIMATE NOTES AND CLARIFICATIONS

The design and construction soft costs used in this estimate are based on the historical averages of the following filter

PLANNING LEVEL OPINION OF COST SUMMARY - NO CONTINGENCY

Project Description	SDOT Freight Master Plan Implementation	Client	SDOT
Corridor Section	1st Ave S over Argo Yard	Date	4/20/2017
Location	SODO	Date of Cost Index	2017
		Calculated By/Entered By	KCM
		Checked By	VWW

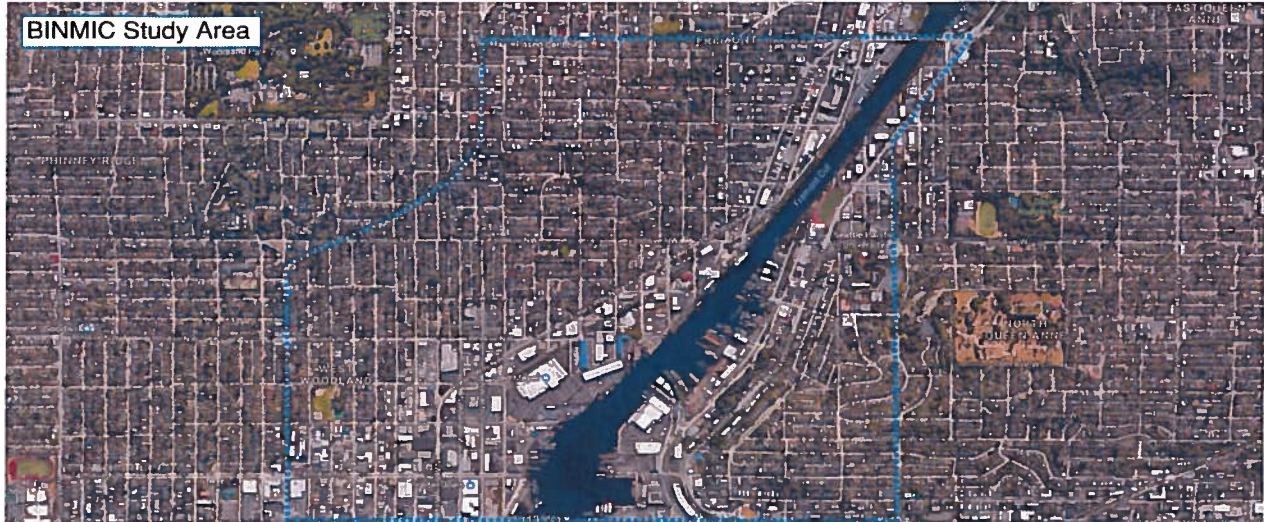
FMP Project 5 - 1st Ave S V Adjuct Replacement

#	ITEM	UNIT	ESTIMATED COST	UNIT QTY	COST
CONSTRUCTION					
1	PREPARATION/GRADING/DRAINAGE				
1.1	PREPARATION				
	CLEAR & GRUB DEMO	ACRE	\$10,000	1	\$0
	REMOVING EXISTING PAVEMENT	SY	\$15	1	\$0
	REMOVAL STRUCTURES & OBSTRUCTIONS	LS	\$0	1	\$0
1.2	EARTHWORK				
	ROADWAY EXCAVATION INCL HAUL	CY	\$40	1	\$0
	STRUCTURE EXCL INCL HAUL	CY	\$25	1	\$0
	BORROW INCL HAUL	TON	\$15	1	\$0
	EMBANKMENT COMPACTION	CY	\$2	1	\$0
1.3	STORMWATER MITIGATION				
	DETENTION AND TREATMENT	SF	\$5	1	\$0
1.4	STORM SEWER				
	CATCH BASIN TYPE 1	EA	\$1,500	1	\$0
	CATCH BASIN TYPE 2	EA	\$3,000	1	\$0
	PLAIN CONC STORM SEWER PIPE 12 IN DIAM	LF	\$25	1	\$0
	PLAIN CONC STORM SEWER PIPE 18 IN DIAM	LF	\$80	1	\$0
	STRUCTURE EXCAVATION CL B	CY	\$20	1	\$0
2	STRUCTURE				
	LANDSCAPAR	LS	\$18,553,021.50	1	\$18,553,022
	CONCRETE BRIDGES	SF	\$500	1	\$0
	CONCRETE BRIDGES W/DENING	SF	\$200	1	\$0
	PEDESTRIAN BRIDGES	SF	\$250	1	\$0
	STEEL BRIDGES	SF	\$100	1	\$0
	BRIDGE ABUTMENT RETROFIT	SF	\$150	1	\$0
	RETAINING WALLS (Cast in Place)	SF	\$55	1	\$0
	RETAINING WALLS (Sold Nail with Cast in Place Facing)	SF	\$150	1	\$0
	BRIDGE REMOVAL	SF	\$75	189,000	\$15,950,000
	NOISE WALLS	SF	\$25	1	\$0
3	SURFACING				
	PORTLAND CEMENT CONCRETE	SF	\$150	1	\$0
	HOT MIX ASPHALT	TON	\$180	1	\$0
	CRUSHED SURFACING	TON	\$40	1	\$0
4	ROADSIDE DEVELOPMENT				
	FENCING	LF	\$0	1	\$0
	SEEDING, MULCHING & FERTILIZING	ACRE	\$1,200	1	\$0
	WETLAND MITIGATION	LS	\$0	1	\$0
	TEMPORARY WATER POLLUTION & EROSION CONTROL (5%)	LS	\$7,955,200	1	\$7,955,200
	LANDSCAPING	LS	\$0	1	\$0
5	TRAFFIC				
	GUARDRAIL	LF	\$18	1	\$0
	CONCRETE BARRIER	LF	\$50	1	\$0
	SIGNAL SYSTEMS	LS	\$0	1	\$0
	ILLUMINATION	LS	\$0	1	\$0
	SIGNING	LS	\$0	1	\$0
	CURBS	LF	\$25	1	\$0
	PERPENDICULAR CURB RAMP	EA	\$3,000	1	\$0
	SIDEWALKS	SY	\$45	1	\$0
	TRAFFIC CONTROL (10%)	LS	\$13,250,400	1	\$13,250,400
5.1	OTHER ITEMS				
	SURVEYING (2%)	LS	\$7,955,200	1	\$7,955,200
	SPECIAL ITEMS	EST	\$0	1	\$0
	UTILITY RELOCATIONS	EST	\$0	1	\$0
6	MISCELLANEOUS (10%)	LS	\$15,177,500	1	\$15,177,500
7	CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)				\$177,953,422
8	MOBILIZATION (10%)				
	10% OF ITEM 7	EST	\$17,795,400	1	\$17,795,400
9	SUBTOTAL (ITEMS 7 & 8)				\$195,748,822
10	SALES TAX				
	5.8% OF ITEM 9	EST	\$19,185,400	1	\$19,185,400
11	AGREEMENTS (Utilities, WSP, etc.)				
		EST	\$0	1	\$0
12	SUBTOTAL (ITEMS 9 THRU 11)				\$214,932,222

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet Inc does not guarantee or warrant the accuracy of this planning level estimate.

SDOT Freight Master Plan Implementation Plan (2018-2023)

PROJECT: FMP Project 6: BINMIC Truck Route Improvements



DESIGN ASSUMPTIONS:

- Data collection will be performed by a consultant.
- Study will include draft and final reports with recommendations for project prioritization.
- Estimated cost does not require SDOT top-down estimating tool

ESTIMATED TOTAL PROJECT COST:

\$200,000.00

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description	SDOT Freight Master Plan Implementation	Client	SDOT
Corridor Section	Interbay, W Dravus St to Fremont Ave N	Date	4/6/2017
Location	Seattle	Date of Cost Index	2015
		Calculated By/Entered By	KCM
		Checked By	VWW

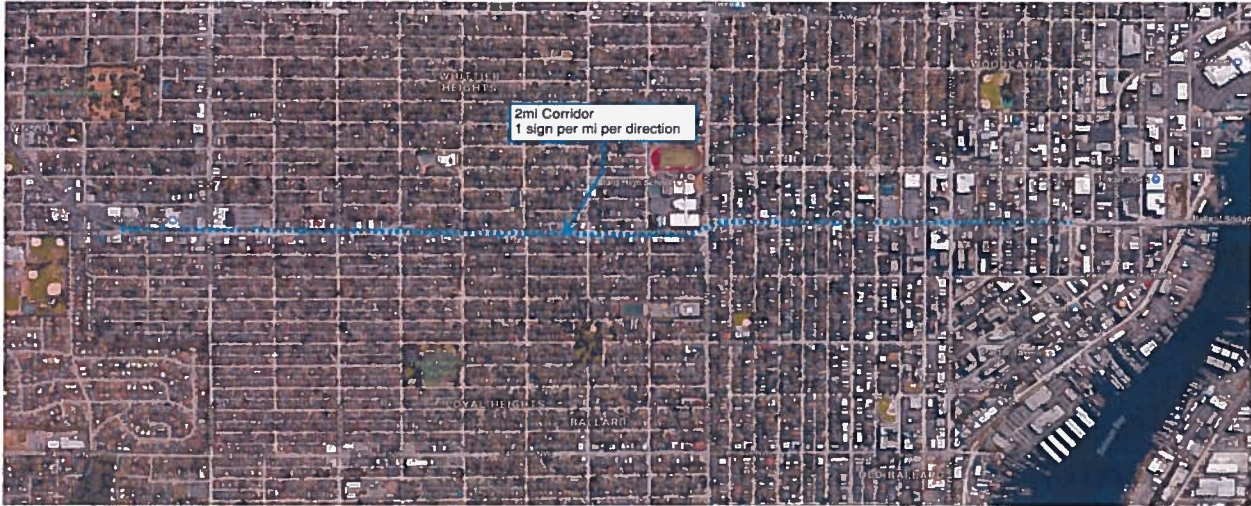
FMP Project 6 BINMIC Truck Route Improvements

ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
Data Gathering BINMIC Study	LS	\$200,000.00	1	\$200,000

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet Inc. does not guarantee or warrant the accuracy of this planning level estimate.

SDOT Freight Master Plan Implementation Plan (2018-2023)

PROJECT: FMP Project No. 10: Dynamic Message Signs Along 15th Ave NW Corridor



DESIGN ASSUMPTIONS:

Assumed 4 signs required

Unit cost includes pole, sign, foundation, cabinets, wiring, installation, and hardware

ESTIMATED TOTAL PROJECT COST:

\$2,636,000.00



Top-Down Cost Estimating Tool Tab B. Cost Estimate Summary

Project Name

Project Number

Prepared by

Date

Milestone

BUILD-UP ASSUMPTIONS

Baseline

Engineer's Estimate
Estimated Acquisition Cost

Escalation Schedule

	Year	Rate
Current	2017	-
Design Midpoint	2018	3.0%
Acquisition Midpoint	2019	5.6%
Construction Midpoint	2019	5.6%

Build-Up Rates

Construction Contingency	20%
Engineer's Est. Allowance	40%
Design Contingency	30%
Acquisition Contingency	30%
Construction Soft Cost Ratio	29%
Design Soft Cost Ratio	19%

BUILD-UP SUMMARY

	A	B	C = A + B	D	E = C + D
	Base Estimate	Contingency	Current-Year Cost	Midpoint Escalation	TOTAL
Contractor Cost (Hard Cost)					
Engineer's Estimate (EE)	996,944				
EE Allowance (40%)	398,778				
Estimated Contractor Cost (ECC)	1,395,722	279,144	1,674,866	93,207	1,768,073
Construction Admin. (Soft Cost)					
29% of \$1.4M ECC	404,759	80,952	485,711	27,030	512,741
Design (Soft Cost)					
19% of \$1.4M ECC	265,187	79,556	344,743	10,273	355,016
Acquisition Cost					
Estimated Acquisition Cost	0	0	0	0	0
Estimated Total Project Cost	\$ 2,065,668	\$ 439,652	\$ 2,505,320	\$ 130,511	\$ 2,635,831

Build-Up Notes

1. The Engineer's Estimate Allowance, Design Contingency, and Acquisition Contingency are determined by the selected
2. Escalation rates are based on IHS Global Insight indices.

Version 21 - Aug 2014

BASIS OF ESTIMATE NOTES AND CLARIFICATIONS

The design and construction soft costs used in this estimate are based on the historical averages of the following filter

PLANNING LEVEL OPINION OF COST SUMMARY - NO CONTINGENCY

Project Description	SDOT Freight Master Plan Implementation	Client	SDOT
Corridor Section	15th Ave NW from Shiloh Canal to Helman Rd	Date	4/20/2017
Location	Ballard	Date of Cost Index	2017
		Calculated By/Entered By	KCM
		Checked By	VWW

EMD Project No. 10 - Dynamic Message Signs Along 15th Ave NW Corridor

	ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I	ITS				
	CCTV CAMERA	EA	\$12,000		\$0
	CONDUIT (4" PVC) INCL TRENCHING AND RESTORATION	LF	\$80		\$0
	DETECTOR LOOP 5 FT DIA	EA	\$500		\$0
	JUNCTION BOX	EA	\$200		\$0
	VARIABLE MESSAGE SIGN	EA	\$5,120	4	\$544,800
	SIGNAL TIMING STUDY	LS	\$500,000		\$0
	TOTAL				\$544,800
II	CONSTRUCTION				
I	PREPARATION/GRADING/DRAINAGE				
11	PREPARATION				
	CLEAR & GRUB DEMO	ACRE	\$5,000		\$0
	REMOVING EXISTING PAVEMENT	SY	\$10		\$0
	REMOVAL STRUCTURES & OBSTRUCTIONS	LS	\$0	1	\$0
12	EARTHWORK				
	ROADWAY EXCAVATION INCL HAUL	CY	\$20		\$0
	STRUCTURE EXCL A INCL HAUL	CY	\$25		\$0
	BORROW INCL HAUL	TON	\$15		\$0
	EMBANKMENT COMPACTION	CY	\$2		\$0
13	STORMWATER MITIGATION				
	DETENTION AND TREATMENT	SF	\$5		\$0
14	STORM SEWER				
	CATCH BASIN TYPE 1	EA	\$1,000		\$0
	CATCH BASIN TYPE 2	EA	\$2,200		\$0
	PLAN CONC. STORM SEWER PIPE 12 IN. DIAM	LF	\$35		\$0
	PLAN CONC. STORM SEWER PIPE 18 IN. DIAM	LF	\$45		\$0
	STRUCTURE EXCAVATION CL B	CY	\$15		\$0
2	STRUCTURE				
	CONCRETE BRIDGES	SF	\$150		\$0
	CONCRETE BRIDGES WIDENING	SF	\$200		\$0
	PEDESTRIAN BRIDGES	SF	\$250		\$0
	STEEL BRIDGES	SF	\$100		\$0
	BRIDGE ABUTMENT RETROFIT	SF	\$150		\$0
	RETAINING WALLS (Cast in Place)	SF	\$55		\$0
	RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	\$150		\$0
	BRIDGE REMOVAL	SF	\$20		\$0
	NOISE WALLS	SF	\$25		\$0
3	SURFACING				
	PORTLAND CEMENT CONCRETE	SF	\$10		\$0
	HOT MIX ASPHALT	TON	\$50		\$0
	CRUSHED SURFACING	TON	\$25		\$0
4	ROADSIDE DEVELOPMENT				
	FENCING	LF	\$15		\$0
	SEEDING, MULCHING & FERTILIZING	ACRE	\$120		\$0
	WETLAND MITIGATION	LS	\$0	1	\$0
	TEMPORARY WATER POLLUTION & EROSION CONTROL (5%)	LS	\$38,588	1	\$38,588
	LANDSCAPING	LS	\$0	1	\$0
5	TRAFFIC				
	GUARDRAIL	LF	\$15		\$0
	CONCRETE BARRIER	LF	\$50		\$0
	SIGNAL SYSTEMS	LS	\$0	1	\$0
	ILLUMINATION	LS	\$0	1	\$0
	SIGNING	LS	\$0	1	\$0
	CURBS	LF	\$15		\$0
	SIDEWALKS	SY	\$25		\$0
	TRAFFIC CONTROL (10%)	LS	\$54,480	1	\$54,480
5I	OTHER ITEMS				
	SURVEYING (2%)	LS	\$12,895	1	\$12,895
	SPECIAL ITEMS	EST	\$0	1	\$0
	UTILITY RELOCATIONS	EST	\$0	1	\$0
6	MISCELLANEOUS (10%)	LS	\$54,480	1	\$54,480
7	CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 5)				\$825,344
8	MOBILIZATION (10%)				
	10% OF ITEM 7	EST	\$82,500	1	\$82,500
9	SUBTOTAL (ITEMS 7 & 8)				\$907,844
10	SALES TAX				
	9.8% OF ITEM 9	EST	\$89,000	1	\$89,000
11	AGREEMENTS (Utilities, WSP, etc.)				

SDOT Freight Master Plan Implementation Plan (2018-2023)

PROJECT: FMP Project No. 11: Operational Improvements at NW 45th St



DESIGN ASSUMPTIONS:

Reconstruction of 46th already underway by Trevor Partap

\$50k is SDOT's total commitment

This amount funds operational improvements necessitated by the NW 46th St alterations

ESTIMATED TOTAL PROJECT COST:

\$50,000.00

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description	SDOT Freight Master Plan Implementation	Client	SDOT
Corridor Section	Southpark between 5th Ave S, Holden St, Kenyon St, and 8th Ave S	Date	4/6/2017
Location	Seattle	Date of Cost Index	2015
		Calculated By/Entered By	KCM
		Checked By	VWW

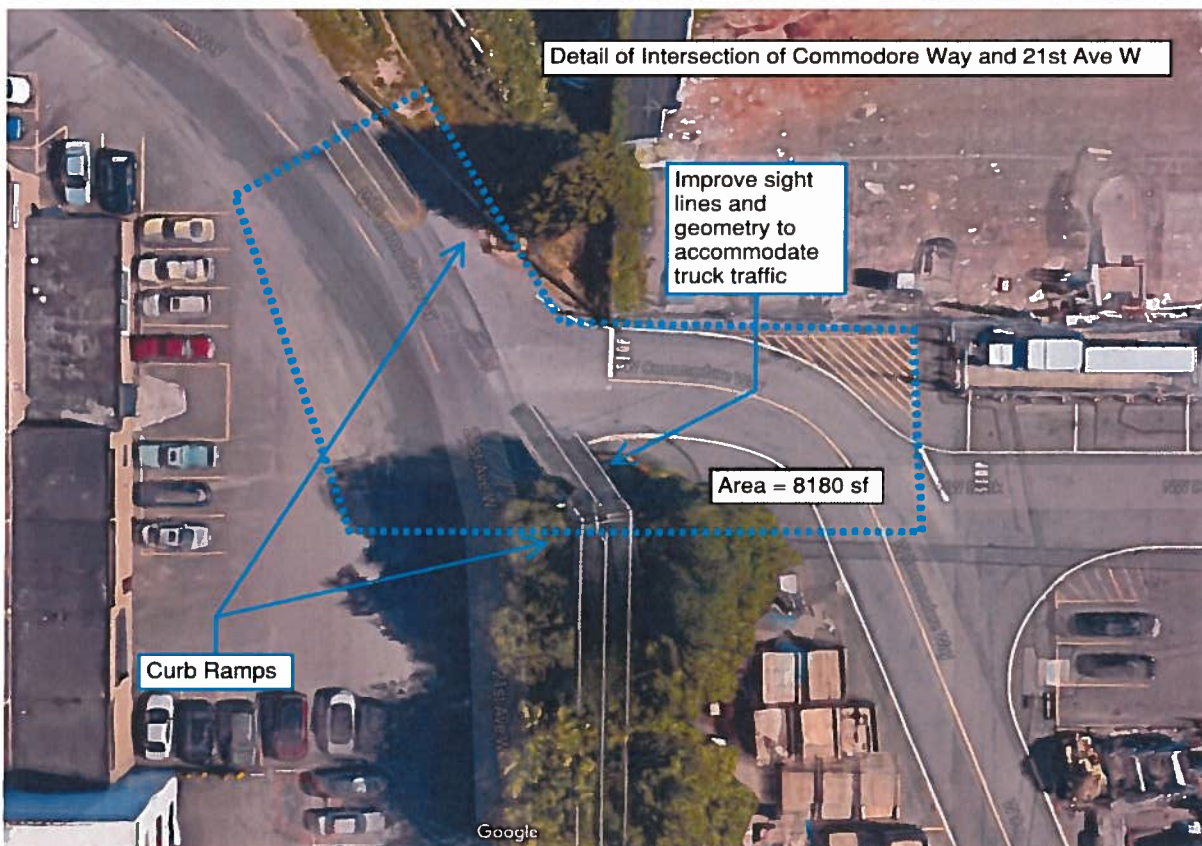
FMP Project No. II: Operational Improvements at NW 45th St

ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I. Traffic Operations Operational Improvements	LS	\$50,000.00	1	\$50,000

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SDOT Freight Master Plan Implementation Plan (2018-2023)

PROJECT: FMP Project No. 12: 21st Ave W Corridor Improvements



DESIGN ASSUMPTIONS:

- New storm system will be installed
- Intersection will be realigned
- Roadway cross section will consist of 12' asphalt shoulder, 30' asphalt roadway, 6' sidewalk
- Illumination will be installed

ESTIMATED TOTAL PROJECT COST:

\$16,830,000.00



Top-Down Cost Estimating Tool Tab B. Cost Estimate Summary

Project Name

Prepared by

Project Number

Date

Milestone

BUILD-UP ASSUMPTIONS

Baseline

Engineer's Estimate

Estimated Acquisition Cost

Escalation Schedule

	Year	Rate
Current	2017	-
Design Midpoint	2018	3.0%
Acquisition Midpoint	2019	5.6%
Construction Midpoint	2019	5.6%

Build-Up Rates

Construction Contingency	20%
Engineer's Est. Allowance	40%
Design Contingency	30%
Acquisition Contingency	30%
Construction Soft Cost Ratio	29%
Design Soft Cost Ratio	19%

BUILD-UP SUMMARY

	A	B	C = A + B	D	E = C + D
	Base Estimate	Contingency	Current-Year Cost	Midpoint Escalation	TOTAL
Contractor Cost (Hard Cost)					
Engineer's Estimate (EE)	6,365,340				
EE Allowance (40%)	2,546,136				
Estimated Contractor Cost (ECC)	8,911,476	1,782,295	10,693,771	595,116	11,288,887
Construction Admin. (Soft Cost)					
29% of \$8.9M ECC	2,584,328	516,866	3,101,194	172,584	3,273,777
Design (Soft Cost)					
19% of \$8.9M ECC	1,693,180	507,954	2,201,135	65,593	2,266,727
Acquisition Cost					
Estimated Acquisition Cost	0	0	0	0	0
Estimated Total Project Cost	\$ 13,188,984	\$ 2,807,115	\$ 15,996,099	\$ 833,292	\$ 16,829,392

Build-Up Notes

1. The Engineer's Estimate Allowance, Design Contingency, and Acquisition Contingency are determined by the selected level
2. Escalation rates are based on IHS Global Insight indices.

Version 21 - Aug 2014

BASIS OF ESTIMATE NOTES AND CLARIFICATIONS

The design and construction soft costs used in this estimate are based on the historical averages of the following filter

PLANNING LEVEL OPINION OF COST SUMMARY - NO CONTINGENCY

Project Description	SDOT Freight Master Plan Implementation	Client	SDOT
Corridor Section	21st Ave W from Commodore Way and Emerson Pl	Date	4/25/2017
Location	Seattle	Date of Cost Index	2017
		Calculated By/Entered By	KCM
		Checked By	VWW

FMP Project No 12 21st Ave W Corridor Improvements

#	ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
CONSTRUCTION					
1	PREPARATION/GRADING/DRAINAGE				
	PREPARATION				
	CLEAR & GRUB DEMO	ACRE	\$10,000	0.2	\$2,000
	REMOVING EXISTING PAVEMENT	SY	\$15		\$0
	REMOVAL STRUCTURES & OBSTRUCTIONS	LS	\$10,000	1	\$10,000
	EARTHWORK				
	ROADWAY EXCAVATION INCL HAUL	CY	\$40	53,400	\$2,136,000
	STRUCTURE EX CL INCL HAUL	CY	\$25		\$0
	BORROW INCL HAUL	TON	\$15		\$0
	EMBANKMENT COMPACTION	CY	\$2		\$0
	STORMWATER MITIGATION				
	DETENTION AND TREATMENT	SF	\$5		\$0
	STORM SEWER				
	CATCH BASIN TYPE 1	EA	\$1,500	12	\$18,000
	CATCH BASIN TYPE 2	EA	\$3,000	3	\$9,000
	PLAIN CONC STORM SEWER PIPE 12 IN DIAM	LF	\$35		\$0
	PLAIN CONC STORM SEWER PIPE 18 IN DIAM	LF	\$80	1,960	\$156,800
	STRUCTURE EXCAVATION CL B	CY	\$20	1,300	\$26,000
2	STRUCTURE				
	CONCRETE BRIDGES	SF	\$150		\$0
	CONCRETE BRIDGES WIDENING	SF	\$200		\$0
	PEDESTRIAN BRIDGES	SF	\$250		\$0
	STEEL BRIDGES	SF	\$100		\$0
	BRIDGE ABUTMENT RETROFIT	SF	\$150		\$0
	RETAINING WALLS (Cast in Place)	SF	\$65		\$0
	RETAINING WALLS (Spill Nail with Cast in Place Facing)	SF	\$150		\$0
	BRIDGE REMOVAL	SF	\$20		\$0
	NOISE WALLS	SF	\$25		\$0
3	SURFACING				
	ROADWAY CEM CONC (HES (24 HR) 12 IN	SY	\$150		\$0
	HOT MIX ASPHALT	TON	\$180	4,500	\$828,000
	CRUSHED SURFACING	TON	\$40	5,200	\$208,000
4	ROADSIDE DEVELOPMENT				
	FENCING	LF	\$0		\$0
	SEEDING MULCHING & FERTILIZING	ACRE	\$1,200	0.2	\$240
	WETLAND MITIGATION	LS	\$0	1	\$0
	TEMPORARY WATER POLLUTION & EROSION CONTROL (5%)	LS	\$233,500	1	\$233,500
	LANDSCAPING	LS	\$7,300	1	\$7,300
5	TRAFFIC				
	GUARDRAIL	LF	\$18		\$0
	CONCRETE BARRIER	LF	\$50		\$0
	SIGNAL SYSTEMS	LS	\$0	1	\$0
	ILLUMINATION	LS	\$109,000	1	\$109,000
	SIGNING	LS	\$5,000	1	\$5,000
	CURBS	LF	\$25	1,500	\$37,500
	PERPENDICULAR CURB RAMP	EA	\$3,000	2	\$6,000
	SIDEWALKS	SY	\$45	1,000	\$45,000
	TRAFFIC CONTROL (10%)	LS	\$385,100	1	\$385,100
5.1	OTHER ITEMS				
	SURVEYING (2%)	LS	\$77,500	1	\$77,500
	SPECIAL ITEMS	EST	\$0	1	\$0
	UTILITY RELOCATIONS	EST	\$200,000	1	\$200,000
5	MISCELLANEOUS (10%)	LS	\$475,100	1	\$475,100
7	CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)				\$5,270,040
8	MOBILIZATION (10%)				
	10% OF ITEM 7	EST	\$527,100	1	\$527,100
9	SUBTOTAL (ITEMS 7 & 8)				\$5,797,140
10	SALES TAX				
	5.8% OF ITEM 9	EST	\$558,200	1	\$558,200
11	AGREEMENTS (Utilities WSP, etc)				
		EST	\$0	1	\$0
12	SUBTOTAL (ITEMS 9 THRU 11)				\$6,355,340

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SDOT Freight Master Plan Implementation Plan (2018-2023)

PROJECT: FMP Project No. 15: Holman Rd NW/13th Ave W Height Restriction Removal



DESIGN ASSUMPTIONS:

- Demolition, restoration, and signal installation will be provided by others.
- Total SDOT Freight contribution is limited to \$250,000.

ESTIMATED TOTAL PROJECT COST:

\$250,000.00

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description	SDOT Freight Master Plan Implementation	Client	SDOT
Corridor Section	Ballard, Holman Rd NW and 12 Ave W	Date	4/6/2017
Location	Seattle	Date of Cost Index	2015
		Calculated By/Entered By	KCM
		Checked By	VWW

FMP Project No. 15, Holman Rd NW/13th Ave W Height Restriction Removal

	ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I	CONSTRUCTION				
	SDOT FREIGHT CONTRIBUTION	EST	\$250,000.00	1	\$250,000

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet Inc. does not guarantee or warrant the accuracy of this planning level estimate.

SDOT Freight Master Plan Implementation Plan (2018-2023)

PROJECT: FMP Project No. 18: Montlake Blvd Height Restriction Rebuild



DESIGN ASSUMPTIONS:

Bridge dimensions are 200' x 18'

New bridge will have the same dimensions

ESTIMATED TOTAL PROJECT COST:

\$5,015,000.00



Top-Down Cost Estimating Tool Tab B. Cost Estimate Summary

Project Name
 Prepared by

Project Number
 Date
 Milestone

BUILD-UP ASSUMPTIONS

Baseline

Engineer's Estimate
 Estimated Acquisition Cost

Escalation Schedule

	Year	Rate
Current	2017	-
Design Midpoint	2018	3.0%
Acquisition Midpoint	2019	5.6%
Construction Midpoint	2019	5.6%

Build-Up Rates

Construction Contingency	20%
Engineer's Est. Allowance	40%
Design Contingency	30%
Acquisition Contingency	30%
Construction Soft Cost Ratio	29%
Design Soft Cost Ratio	19%

BUILD-UP SUMMARY

	A	B	C = A + B	D	E = C + D
	Base Estimate	Contingency	Current-Year Cost	Midpoint Escalation	TOTAL
Contractor Cost (Hard Cost)					
Engineer's Estimate (EE)	1,896,800				
EE Allowance (40%)	758,720				
Estimated Contractor Cost (ECC)	2,655,520	531,104	3,186,624	177,338	3,363,962
Construction Admin. (Soft Cost)					
29% of \$2.7M ECC	770,101	154,020	924,121	51,428	975,549
Design (Soft Cost)					
19% of \$2.7M ECC	504,549	151,365	655,913	19,546	675,459
Acquisition Cost					
Estimated Acquisition Cost	0	0	0	0	0
Estimated Total Project Cost	\$ 3,930,170	\$ 836,489	\$ 4,766,658	\$ 248,312	\$ 5,014,970

Build-Up Notes

1. The Engineer's Estimate Allowance, Design Contingency, and Acquisition Contingency are determined by the selected level of
2. Escalation rates are based on IHS Global Insight indices.

Version 21 - Aug 2014

BASIS OF ESTIMATE NOTES AND CLARIFICATIONS

The design and construction soft costs used in this estimate are based on the historical averages of the following filter

PLANNING LEVEL OPINION OF COST SUMMARY - NO CONTINGENCY

Project Description	SDOT Freight Master Plan Implementation	Client	SDOT
Corridor Section	3870 Monroe Blvd	Date	4/20/2017
Location	University District	Date of Cost Index	2017
		Calculated By/Entered By	KCM
		Checked By	VWW

FMP Project No. 18 - Monroe Blvd Height Restriction Rebuild

ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
CONSTRUCTION				
1 PREPARATION/GRADING/DRAINAGE				
1.1 PREPARATION				
CLEAR & GRUB DEMO	ACRE	\$10,000	1	\$0
REMOVING EXISTING PAVEMENT	SY	\$15	1	\$0
REMOVAL STRUCTURES & OBSTRUCTIONS	LS	\$0	1	\$0
1.2 EARTHWORK				
ROADWAY EXCAVATION INCL HAUL	CY	\$40	1	\$0
STRUCTURE EXCL A INCL HAUL	CY	\$25	1	\$0
BORROW INCL HAUL	TON	\$16	1	\$0
EMBANKMENT COMPACTION	CY	\$2	1	\$0
1.3 STORMWATER MITIGATION				
RETENTION AND TREATMENT	SF	\$6	1	\$0
1.4 STORM SEWER				
CATCH BASIN TYPE 1	EA	\$1,500	1	\$0
CATCH BASIN TYPE 2	EA	\$3,000	1	\$0
PLAN CONC STORM SEWER PIPE 12 IN DIAM	LF	\$35	1	\$0
PLAN CONC STORM SEWER PIPE 18 IN DIAM	LF	\$80	1	\$0
STRUCTURE EXCAVATION CL B	CY	\$20	1	\$0
2 STRUCTURE				
CONCRETE BRIDGES	SF	\$225	4,000	\$500,000
CONCRETE BRIDGES WIDENING	SF	\$200	1	\$0
PEDESTRIAN BRIDGES	SF	\$250	1	\$0
STEEL BRIDGES	SF	\$100	1	\$0
BRIDGE ABUTMENT RETROFIT	SF	\$150	1	\$0
RETAINING WALLS (Cast in Place)	SF	\$55	1	\$0
RETAINING WALLS (Sold Nail with Cast in Place Facing)	SF	\$150	1	\$0
BRIDGE REMOVAL	SF	\$75	3,600	\$270,000
NOISE WALLS	SF	\$25	1	\$0
3 SURFACING				
PORTLAND CEMENT CONCRETE	SF	\$150	1	\$0
HOT MIX ASPHALT	TON	\$180	1	\$0
CRUSHED SURFACING	TON	\$40	1	\$0
4 ROADSIDE DEVELOPMENT				
FENCING	LF	\$0	1	\$0
SEEDING MULCHING & FERTILIZING	ACRE	\$1,200	1	\$0
WETLAND MITIGATION	LS	\$0	1	\$0
TEMPORARY WATER POLLUTION & EROSION CONTROL (5%)	LS	\$70,200	1	\$70,200
LANDSCAPING	LS	\$0	1	\$0
5 TRAFFIC				
GUARD RAIL	LF	\$18	1	\$0
CONCRETE BARRIER	LF	\$50	1	\$0
SIGNAL SYSTEMS	LS	\$0	1	\$0
ILLUMINATION	LS	\$0	1	\$0
SIGNING	LS	\$0	1	\$0
CURBS	LF	\$25	1	\$0
PERPENDICULAR CURB RAMP	EA	\$3,000	1	\$0
SIDEWALKS	SY	\$45	1	\$0
TRAFFIC CONTROL (10%)	LS	\$17,100	1	\$17,100
5.1 OTHER ITEMS				
SURVEYING (5%)	LS	\$70,300	1	\$70,300
SPECIAL ITEMS	EST	\$0	1	\$0
UTILITY RELOCATIONS	EST	\$0	1	\$0
6 MISCELLANEOUS (10%)				
	LS	\$142,800	1	\$142,800
7 CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)				
				\$1,570,400
8 MOBILIZATION (10%)				
10% OF ITEM 7	EST	\$157,100	1	\$157,100
9 SUBTOTAL (ITEMS 7 & 8)				
				\$1,727,500
10 SALES TAX				
9.8% OF ITEM 9	EST	\$159,300	1	\$159,300
11 AGREEMENTS (Utilities WSP etc)				
	EST	\$0	1	\$0
12 SUBTOTAL (ITEMS 9 THRU 11)				
				\$1,886,800

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SDOT Freight Master Plan Implementation Plan (2018-2023)

PROJECT: FMP Project No. 19: Ballard Bridge Access and Seismic Improvements



DESIGN ASSUMPTIONS:

- Bridge will be widened 6' on each side to create 10' sidewalks
- Seismic retrofit will be comparable to Phase 2, completed in 2014

ESTIMATED TOTAL PROJECT COST:

\$191,989,000.00



Top-Down Cost Estimating Tool Tab B. Cost Estimate Summary

Project Name

Project Number

Prepared by

Date

Milestone

BUILD-UP ASSUMPTIONS

Baseline

Engineer's Estimate
Estimated Acquisition Cost

Escalation Schedule

	Year	Rate
Current	2017	-
Design Midpoint	2018	3.0%
Acquisition Midpoint	2019	5.6%
Construction Midpoint	2019	5.6%

Build-Up Rates

Construction Contingency	<input type="text" value="20%"/>
Engineer's Est. Allowance	<input type="text" value="40%"/>
Design Contingency	<input type="text" value="30%"/>
Acquisition Contingency	<input type="text" value="30%"/>
Construction Soft Cost Ratio	<input type="text" value="29%"/>
Design Soft Cost Ratio	<input type="text" value="19%"/>

BUILD-UP SUMMARY

	A	B	C = A + B	D	E = C + D
	Base Estimate	Contingency	Current-Year Cost	Midpoint Escalation	TOTAL
Contractor Cost (Hard Cost)					
Engineer's Estimate (EE)	72,615,300				
EE Allowance (40%)	29,046,120				
Estimated Contractor Cost (ECC)	101,661,420	20,332,284	121,993,704	6,789,035	128,782,739
Construction Admin. (Soft Cost)					
29% of \$101.7M ECC	29,481,812	5,896,362	35,378,174	1,968,820	37,346,994
Design (Soft Cost)					
19% of \$101.7M ECC	19,315,670	5,794,701	25,110,371	748,278	25,858,648
Acquisition Cost					
Estimated Acquisition Cost	0	0	0	0	0
Estimated Total Project Cost	\$ 150,458,902	\$ 32,023,347	\$ 182,482,249	\$ 9,506,133	\$ 191,988,382

Build-Up Notes

1. The Engineer's Estimate Allowance, Design Contingency, and Acquisition Contingency are determined by the selected level of
2. Escalation rates are based on IHS Global Insight indices.

Version 21 - Aug 2014

BASIS OF ESTIMATE NOTES AND CLARIFICATIONS

The design and construction soft costs used in this estimate are based on the historical averages of the following filter

PLANNING LEVEL OPINION OF COST SUMMARY - NO CONTINGENCY

Project Description	SDOT Freight Master Plan Implementation	Client	SDOT
Contract Section	Ballard Bridge	Date	4/20/2017
Location	Seattle	Date of Cost Index	2017
		Calculated By/Entered By	KCM
		Checked By	VWW

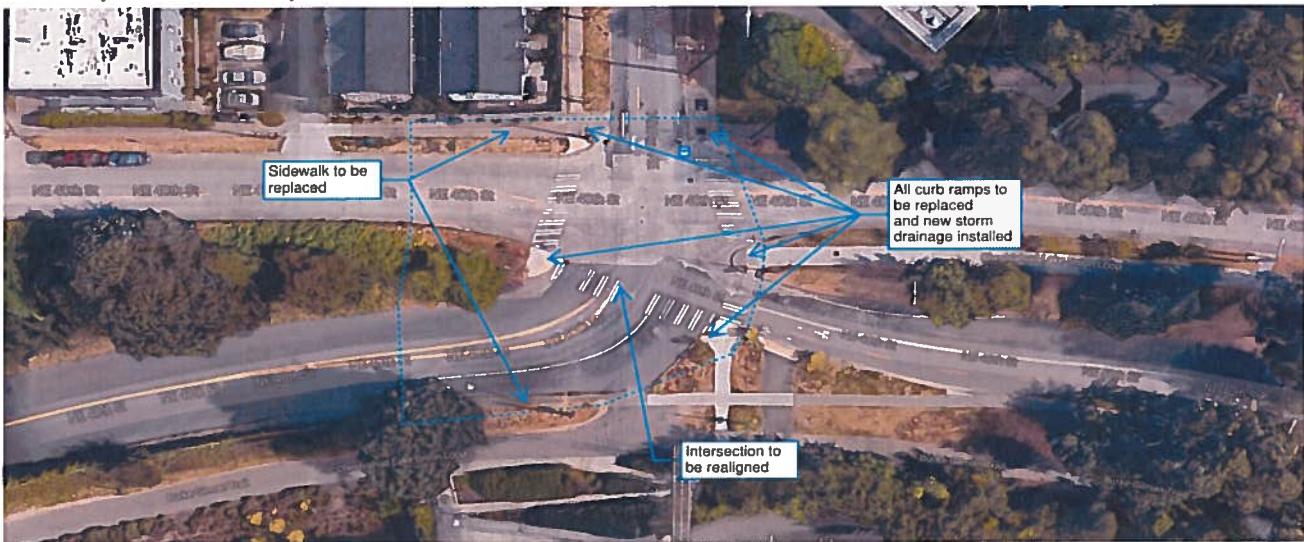
FMP Project No. 15 - Ballard Bridge Access and Seismic Improvements

ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
CONSTRUCTION				
1 PREPARATION/GRADING/DRAINAGE				
1.1 PREPARATION				
CLEAR & GRUB DEMO	ACRE	\$10,000		\$0
REMOVING EXISTING PAVEMENT	SY	\$15		\$0
REMOVAL STRUCTURES & OBSTRUCTIONS	LS	\$0	1	\$0
1.2 EARTHWORK				
ROADWAY EXCAVATION INCL HAUL	CY	\$40		\$0
STRUCTURE EXCAVATION INCL HAUL	CY	\$26		\$0
BORROW INCL HAUL	TON	\$16		\$0
EMBANKMENT COMPACTION	CY	\$2		\$0
1.3 STORMWATER MITIGATION				
DETENTION AND TREATMENT	SF	\$5		\$0
1.4 STORM SEWER				
CATCH BASIN TYPE 1	EA	\$1,500		\$0
CATCH BASIN TYPE 2	EA	\$3,000		\$0
PLAIN CONC STORM SEWER PIPE 12 IN DIAM	LF	\$35		\$0
PLAIN CONC STORM SEWER PIPE 18 IN DIAM	LF	\$80		\$0
STRUCTURE EXCAVATION CL B	CY	\$20		\$0
2 STRUCTURE				
CONCRETE BRIDGES	SF	\$500		\$0
CONCRETE BRIDGES WIDENING	SF	\$500	55,500	\$27,750,000
PEDESTRIAN BRIDGES	SF	\$250		\$0
STEEL BRIDGES	SF	\$100		\$0
BRIDGE ABUTMENT RETROFIT	SF	\$150		\$0
RETAINING WALLS (Cast in Place)	SF	\$65		\$0
RETAINING WALLS (Shotcrete with Cast in Place Facing)	SF	\$150		\$0
BRIDGE REMOVAL	SF	\$75		\$0
NOISE WALLS	SF	\$25		\$0
SEISMIC RETROFIT	LS	\$17,050,000		\$17,050,000
3 SURFACING				
PORTLAND CEMENT CONCRETE	SF	\$150		\$0
HOT MIX ASPHALT	TON	\$180		\$0
CRUSHED SURFACING	TON	\$40		\$0
4 ROADSIDE DEVELOPMENT				
FENCING	LF	\$0		\$0
SEEDING, MULCHING & FERTILIZING	ACRE	\$1,200		\$0
WETLAND MITIGATION	LS	\$0	1	\$0
TEMPORARY WATER POLLUTION & EROSION CONTROL (5%)	LS	\$2,688,000	1	\$2,688,000
LANDSCAPING	LS	\$0	1	\$0
5 TRAFFIC				
GUARD RAIL	LF	\$18		\$0
CONCRETE BARRIER	LF	\$50		\$0
SIGNAL SYSTEMS	LS	\$0	1	\$0
ILLUMINATION	LS	\$0	1	\$0
SIGNING	LS	\$0	1	\$0
CURBS	LF	\$25		\$0
PERPENDICULAR CURB RAMP	EA	\$3,000		\$0
SIDEWALKS	SY	\$45		\$0
TRAFFIC CONTROL (10%)	LS	\$4,480,100	1	\$4,480,100
5.1 OTHER ITEMS				
SURVEYING (5%)	LS	\$2,688,100	1	\$2,688,100
SPECIAL ITEMS	EST	\$0	1	\$0
UTILITY RELOCATIONS	EST	\$0	1	\$0
6 MISCELLANEOUS (10%)				
	LS	\$5,455,700	1	\$5,455,700
7 CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)				
				\$50,121,500
8 MOBILIZATION (10%)				
10% OF ITEM 7	EST	\$5,012,200	1	\$5,012,200
9 SUBTOTAL (ITEMS 7 & 8)				
				\$55,133,700
10 SALES TAX				
5.8% OF ITEM 9	EST	\$5,481,200	1	\$5,481,200
11 AGREEMENTS (Utilities, WSP, etc.)				
	EST	\$0	1	\$0
12 SUBTOTAL (ITEMS 9 THRU 11)				
				\$72,614,900

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study and is supplied as a budgeting guideline. Perteet Inc does not guarantee or warrant the accuracy of this planning level estimate.

SDOT Freight Master Plan Implementation Plan (2018-2023)

PROJECT: FMP Project No. 20: 7th Ave NE/NE 40th St Intersection Improvements



DESIGN ASSUMPTIONS:

- New storm system will be installed
- Intersection will be realigned
- Intersection will become signalized

ESTIMATED TOTAL PROJECT COST:

\$3,671,000.00



Top-Down Cost Estimating Tool Tab B. Cost Estimate Summary

Project Name **FMP Project No. 20: 7th Ave NE/NE 40th**

Project Number **NA**

Prepared by **Perteet Inc.**

Date **5/2/2017**

Milestone **10%**

BUILD-UP ASSUMPTIONS

Baseline

Engineer's Estimate **\$ 1,388,340**

Estimated Acquisition Cost

Escalation Schedule

	Year	Rate
Current	2017	-
Design Midpoint	2018	3.0%
Acquisition Midpoint	2019	5.6%
Construction Midpoint	2019	5.6%

Build-Up Rates

Construction Contingency	20%
Engineer's Est. Allowance	40%
Design Contingency	30%
Acquisition Contingency	30%
Construction Soft Cost Ratio	29%
Design Soft Cost Ratio	19%

BUILD-UP SUMMARY

	A	B	C = A + B	D	E = C + D
	Base Estimate	Contingency	Current-Year Cost	Midpoint Escalation	TOTAL
Contractor Cost (Hard Cost)					
Engineer's Estimate (EE)	1,388,340				
EE Allowance (40%)	555,336				
Estimated Contractor Cost (ECC)	1,943,676	388,735	2,332,411	129,800	2,462,212
Construction Admin. (Soft Cost)					
29% of \$1.9M ECC	563,666	112,733	676,399	37,642	714,041
Design (Soft Cost)					
19% of \$1.9M ECC	369,298	110,790	480,088	14,306	494,394
Acquisition Cost					
Estimated Acquisition Cost	0	0	0	0	0
Estimated Total Project Cost	\$ 2,876,640	\$ 612,258	\$ 3,488,898	\$ 181,749	\$ 3,670,647

Build-Up Notes

1. The Engineer's Estimate Allowance, Design Contingency, and Acquisition Contingency are determined by the selected
2. Escalation rates are based on IHS Global Insight indices.

Version 21 - Aug 2014

BASIS OF ESTIMATE NOTES AND CLARIFICATIONS

The design and construction soft costs used in this estimate are based on the historical averages of the following filter

PLANNING LEVEL OPINION OF COST SUMMARY - NO CONTINGENCY

Project Description	SDOT Freight Master Plan Implementation	Client	SDOT
Corridor Section	University District NE 40th St to 7th Ave NE	Date	4/9/2017
Location	Seattle	Date of Cost Index	2017
		Calculated By/Entered By	KCM
		Checked By	VWW

FMP Project No. 20 7th Ave NE/NE 40th St Intersection Improvements

ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
CONSTRUCTION				
PREPARATION/GRADING/DRAINAGE				
1.1	PREPARATION			
	ACRE	\$10,000	0.2	\$2,000
	SY	\$5		\$0
	LS	\$10,000	1	\$10,000
1.2	EARTHWORK			
	CY	\$40	800	\$32,000
	CY	\$25		\$0
	TON	\$15		\$0
	CY	\$2		\$0
1.3	STORMWATER MITIGATION			
	SF	\$5		\$0
1.4	STORM SEWER			
	EA	\$1,500	9	\$13,500
	EA	\$3,000	5	\$15,000
	LF	\$35		\$0
	LF	\$80	270	\$21,600
	CY	\$20	280	\$5,600
2	STRUCTURE			
	SF	\$150		\$0
	SF	\$200		\$0
	SF	\$250		\$0
	SF	\$100		\$0
	SF	\$150		\$0
	SF	\$55		\$0
	SF	\$150		\$0
	SF	\$70		\$0
	SF	\$25		\$0
3	SURFACING			
	SY	\$150	1,000	\$150,000
	TON	\$180	800	\$144,000
	TON	\$40	400	\$16,000
4	ROADSIDE DEVELOPMENT			
	LF	\$0		\$0
	ACRE	\$1,200	0.2	\$240
	LS	\$0	1	\$0
	LS	\$41,600	1	\$41,600
	LS	\$7,500	1	\$7,500
5	TRAFFIC			
	LF	\$18		\$0
	LF	\$50		\$0
	LS	\$250,000	1	\$250,000
	LS	\$17,000	1	\$17,000
	LS	\$5,000	1	\$5,000
	LF	\$25	500	\$12,500
	EA	\$3,000	10	\$30,000
	SY	\$45	200	\$9,000
	LS	\$55,300	1	\$55,300
5.1	OTHER ITEMS			
	LS	\$41,600	1	\$41,600
	EST	\$0	1	\$0
	EST	\$200,000	1	\$200,000
6	MISCELLANEOUS (10%)			
	LS	\$104,500	1	\$104,500
7	CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)			
				\$1,149,340
8	MOBILIZATION (10%)			
	EST	\$115,000	1	\$115,000
9	SUBTOTAL (ITEMS 7 & 8)			
				\$1,264,340
10	SALES TAX			
	EST	\$124,000	1	\$124,000
11	AGREEMENTS (Utilities, WSP, etc.)			
	EST	\$0	1	\$0
12	SUBTOTAL (ITEMS 9 THRU 11)			
				\$1,388,340

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perreet Inc. does not guarantee or warrant the accuracy of this planning level estimate.

SDOT Freight Master Plan Implementation Plan (2018-2023)

PROJECT: FMP Project No. 21: Integrated Corridor Management on N 85th St



DESIGN ASSUMPTIONS:

Assumed 4 signs required

Unit cost includes pole, sign, foundation, cabinets, wiring, installation, and hardware

ESTIMATED TOTAL PROJECT COST:

\$2,636,000.00



Top-Down Cost Estimating Tool Tab B. Cost Estimate Summary

Project Name

Project Number

Prepared by

Date

Milestone

BUILD-UP ASSUMPTIONS

Baseline

Engineer's Estimate

Estimated Acquisition Cost

Escalation Schedule

	Year	Rate
Current	2017	-
Design Midpoint	2018	3.0%
Acquisition Midpoint	2019	5.6%
Construction Midpoint	2019	5.6%

Build-Up Rates

Construction Contingency	20%
Engineer's Est. Allowance	40%
Design Contingency	30%
Acquisition Contingency	30%
Construction Soft Cost Ratio	29%
Design Soft Cost Ratio	19%

BUILD-UP SUMMARY

	A	B	C = A + B	D	E = C + D
	Base Estimate	Contingency	Current-Year Cost	Midpoint Escalation	TOTAL
Contractor Cost (Hard Cost)					
Engineer's Estimate (EE)	996,944				
EE Allowance (40%)	398,778				
Estimated Contractor Cost (ECC)	1,395,722	279,144	1,674,866	93,207	1,768,073
Construction Admin. (Soft Cost)					
29% of \$1.4M ECC	404,759	80,952	485,711	27,030	512,741
Design (Soft Cost)					
19% of \$1.4M ECC	265,187	79,556	344,743	10,273	355,016
Acquisition Cost					
Estimated Acquisition Cost	0	0	0	0	0
Estimated Total Project Cost	\$ 2,065,668	\$ 439,652	\$ 2,505,320	\$ 130,511	\$ 2,635,831

Build-Up Notes

1. The Engineer's Estimate Allowance, Design Contingency, and Acquisition Contingency are determined by the selected
2. Escalation rates are based on IHS Global Insight indices.

Version 21 - Aug 2014

BASIS OF ESTIMATE NOTES AND CLARIFICATIONS

The design and construction soft costs used in this estimate are based on the historical averages of the following filter

PLANNING LEVEL OPINION OF COST SUMMARY - NO CONTINGENCY

Project Description	SDOT Freight Master Plan Implementation	Client	SDOT
Corridor Section	N 85th St Aurora Ave to I 5	Date	4/19/2017
Location	Seattle	Date of Cost Index	2015
		Calculated By/Entered By	KCM
		Checked By	VWW

FMP Project No. 21 Integrated Corridor Management on N 85th St

	ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
1	ITS				
	CCTV CAMERA	EA	\$12 000		\$0
	CONDUIT (4 IN PVC) INCL TRENCHING AND RESTORATION	LF	\$80		\$0
	DETECTOR LOOP 5 FT DIA	EA	\$500		\$0
	JUNCTION BOX	EA	\$200		\$0
	VARIABLE MESSAGE SIGN	EA	\$14 200	4	\$544 800
	SIGNAL TIMING STUDY	LS	\$500 000		\$0
	TOTAL				\$544 800
II	CONSTRUCTION				
1	PREPARATION/GRADING/DRAINAGE				
11	PREPARATION				
	CLEAR & GRUB DEMO	ACRE	\$5 000		\$0
	REMOVING EXISTING PAVEMENT	SY	\$10		\$0
	REMOVAL STRUCTURES & OBSTRUCTIONS	LS	\$0	1	\$0
12	EARTHWORK				
	ROADWAY EXCAVATION INCL HAUL	CY	\$20		\$0
	STRUCTURE EX CL INCL HAUL	CY	\$25		\$0
	BORROW INCL HAUL	TON	\$15		\$0
	EMBANKMENT COMPACTION	CY	\$2		\$0
13	STORMWATER MITIGATION				
	DETENTION AND TREATMENT	SF	\$5		\$0
14	STORM SEWER				
	CATCH BASIN TYPE 1	EA	\$1 000		\$0
	CATCH BASIN TYPE 2	EA	\$2 200		\$0
	PLAIN CONC STORM SEWER PIPE 12 IN DIAM	LF	\$35		\$0
	PLAIN CONC STORM SEWER PIPE 18 IN DIAM	LF	\$45		\$0
	STRUCTURE EXCAVATION CL B	CY	\$15		\$0
2	STRUCTURE				
	CONCRETE BRIDGES	SF	\$150		\$0
	CONCRETE BRIDGES WIDENING	SF	\$200		\$0
	PEDESTRIAN BRIDGES	SF	\$250		\$0
	STEEL BRIDGES	SF	\$100		\$0
	BRIDGE ABUTMENT RETROFIT	SF	\$150		\$0
	RETAINING WALLS (Cast-in-Place)	SF	\$65		\$0
	RETAINING WALLS (Split Nail with Cast-in-Place Facing)	SF	\$150		\$0
	BRIDGE REMOVAL	SF	\$20		\$0
	NOISE WALLS	SF	\$25		\$0
3	SURFACING				
	PORTLAND CEMENT CONCRETE	SF	\$10		\$0
	HOT MIX ASPHALT	TON	\$50		\$0
	CRUSHED SURFACING	TON	\$25		\$0
4	ROADSIDE DEVELOPMENT				
	FENCING	LF	\$15		\$0
	SEEDING MULCHING & FERTILIZING	ACRE	\$1 200		\$0
	WETLAND MITIGATION	LS	\$0	1	\$0
	TEMPORARY WATER POLLUTION & EROSION CONTROL (5%)	LS	\$38 588	1	\$38 588
	LANDSCAPING	LS	\$0	1	\$0
5	TRAFFIC				
	GUARDRAIL	LF	\$18		\$0
	CONCRETE BARRIER	LF	\$50		\$0
	SIGNAL SYSTEMS	LS	\$0	1	\$0
	ILLUMINATION	LS	\$0	1	\$0
	SIGNING	LS	\$0	1	\$0
	CURBS	LF	\$15		\$0
	SIDEWALKS	SY	\$25		\$0
	TRAFFIC CONTROL (10%)	LS	\$54 480	1	\$54 480
5I	OTHER ITEMS				
	SURVEYING (2%)	LS	\$12 896	1	\$12 896
	SPECIAL ITEMS	EST	\$0	1	\$0
	UTILITY RELOCATIONS	EST	\$0	1	\$0
6	MISCELLANEOUS (10%)	LS	\$54 480	1	\$54 480
7	CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)				\$825 544
8	MOBILIZATION (10%)				
	10% OF ITEM 7	EST	\$82 500	1	\$82 500
9	SUBTOTAL (ITEMS 7 & 8)				\$907 544
10	SALES TAX				
	9.8% OF ITEM 9	EST	\$89 000	1	\$89 000
11	AGREEMENTS (Utilities WSP, etc)				

SDOT Freight Master Plan Implementation Plan (2018-2023)

PROJECT: FMP Project No. 22: ITS Improvements to N 85th St



DESIGN ASSUMPTIONS:

- Conduit to be installed for fiberoptic connections to existing and future systems.
- Each trench will hold a single line of conduit.
- Intersection of Wallingford Ave and 85th St will need 22 detectors on 85th, Wallingford approaches already have loops
- Complete signal system required at Wallingford and 85th St
- Junction box required at each leg of each intersection
- Additional detector loops installed at 300' intervals for congestion information

ESTIMATED TOTAL PROJECT COST:

\$3,424,000.00



Top-Down Cost Estimating Tool Tab B. Cost Estimate Summary

Project Name

Prepared by

Project Number

Date

Milestone

BUILD-UP ASSUMPTIONS

Baseline

Engineer's Estimate

Estimated Acquisition Cost

Escalation Schedule

	Year	Rate
Current	2017	-
Design Midpoint	2018	3.0%
Acquisition Midpoint	2019	5.6%
Construction Midpoint	2019	5.6%

Build-Up Rates

Construction Contingency	20%
Engineer's Est. Allowance	40%
Design Contingency	30%
Acquisition Contingency	30%
Construction Soft Cost Ratio	29%
Design Soft Cost Ratio	19%

BUILD-UP SUMMARY

	A	B	C = A + B	D	E = C + D
	Base Estimate	Contingency	Current-Year Cost	Midpoint Escalation	TOTAL
Contractor Cost (Hard Cost)					
Engineer's Estimate (EE)	1,294,744				
EE Allowance (40%)	517,898				
Estimated Contractor Cost (ECC)	1,812,642	362,528	2,175,170	121,050	2,296,220
Construction Admin. (Soft Cost)					
29% of \$1.8M ECC	525,666	105,133	630,799	35,104	665,904
Design (Soft Cost)					
19% of \$1.8M ECC	344,402	103,321	447,722	13,342	461,064
Acquisition Cost					
Estimated Acquisition Cost	0	0	0	0	0
Estimated Total Project Cost	\$ 2,682,710	\$ 570,982	\$ 3,253,692	\$ 169,496	\$ 3,423,188

Build-Up Notes

1. The Engineer's Estimate Allowance, Design Contingency, and Acquisition Contingency are determined by the selected
2. Escalation rates are based on IHS Global Insight indices.

Version 21 - Aug 2014

BASIS OF ESTIMATE NOTES AND CLARIFICATIONS

The design and construction soft costs used in this estimate are based on the historical averages of the following filter

PLANNING LEVEL OPINION OF COST SUMMARY - NO CONTINGENCY

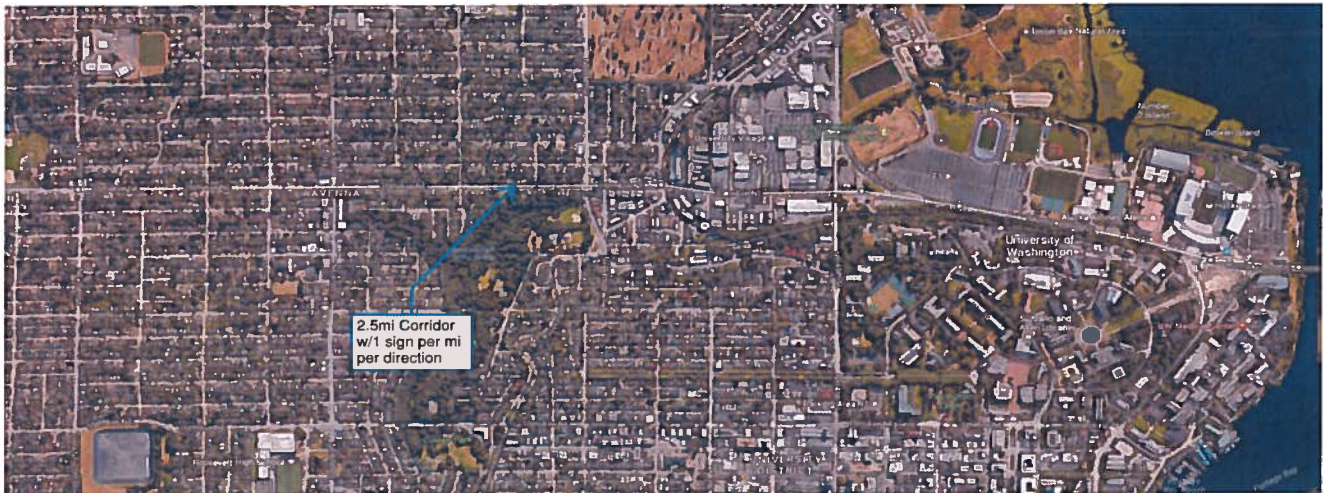
Project Description	SDOT Freight Master Plan Implementation	Client	SDOT
Corridor Section	N 85th St from Aurora Ave to I 5	Date	4/19/2017
Location	Seattle	Date of Cost Index	2015
		Calculated By/Entered By	KCM
		Checked By	VWW

FMP Project No. 22 ITS Improvements to N 85th St

	ITEM	UNIT	ESTIMATED COST	UNIT QTY	COST
1	ITS				
	CCTV CAMERA	EA	\$12,000		\$0
	CONDUIT (4" N PVC) INCL TRENCHING AND RESTORATION	LF	\$80	4,500	\$358,000
	DETECTOR LOOP 5 FT DIA	EA	\$500	88	\$52,800
	JUNCTION BOX	EA	\$200	25	\$5,000
	VARIABLE MESSAGE SIGN	EA	\$5,200		\$0
	SIGNAL TIMING STUDY	LS	\$500,000		\$0
	TOTAL				\$425,800
4	CONSTRUCTION				
1	PREPARATION/GRADING/DRAINAGE				
	PREPARATION				
	CLEAR & GRUB DEMO	ACRE	\$10,000		\$0
	REMOVING EXISTING PAVEMENT	SY	\$15		\$0
	REMOVAL STRUCTURES & OBSTRUCTIONS	LS	\$10,000		\$0
1.2	EARTHWORK				
	ROADWAY EXCAVATION INCL HAUL	CY	\$40		\$0
	STRUCTURE EXCAVATION INCL HAUL	CY	\$25		\$0
	BORROW INCL HAUL	TON	\$16		\$0
	EMBANKMENT COMPACTION	CY	\$2		\$0
1.3	STORMWATER MITIGATION				
	DETENTION AND TREATMENT	SF	\$5		\$0
1.4	STORM SEWER				
	CATCH BASIN TYPE 1	EA	\$1,500		\$0
	CATCH BASIN TYPE 2	EA	\$3,000		\$0
	PLAIN CONC STORM SEWER PIPE 12 IN DIAM	LF	\$35		\$0
	PLAIN CONC STORM SEWER PIPE 18 IN DIAM	LF	\$60		\$0
	STRUCTURE EXCAVATION CL B	CY	\$20		\$0
2	STRUCTURE				
	CONCRETE BRIDGES	SF	\$150		\$0
	CONCRETE BRIDGES WIDENING	SF	\$200		\$0
	PEDESTRIAN BRIDGES	SF	\$250		\$0
	STEEL BRIDGES	SF	\$100		\$0
	BRIDGE ABUTMENT RETROFIT	SF	\$150		\$0
	RETAINING WALLS (Cast in Place)	SF	\$65		\$0
	RETAINING WALLS (Shotcrete with Cast in Place Facing)	SF	\$150		\$0
	BRIDGE REMOVAL	SF	\$20		\$0
	NOISE WALLS	SF	\$25		\$0
3	SURFACING				
	ROADWAY CEM CONC HES (24 HR) 12 IN	SY	\$150		\$0
	HOT MIX ASPHALT	TON	\$180		\$0
	CRUSHED SURFACING	TON	\$40		\$0
4	ROADSIDE DEVELOPMENT				
	FENCING	LF	\$0		\$0
	SEEDING MULCHING & FERTILIZING	ACRE	\$1,200		\$0
	WETLAND MITIGATION	LS	\$0		\$0
	TEMPORARY WATER POLLUTION & EROSION CONTROL (5%)	LS	\$49,548		\$49,548
	LANDSCAPING	LS	\$7,500		\$0
5	TRAFFIC				
	GUARD RAIL	LF	\$18		\$0
	CONCRETE BARRIER	LF	\$50		\$0
	SIGNAL SYSTEMS	LS	\$400,000		\$400,000
	ILLUMINATION	LS	\$25,000		\$0
	SIGNING	LS	\$5,000		\$0
	CURBS	LF	\$25		\$0
	SIDEWALKS	SY	\$45		\$0
	TRAFFIC CONTROL (10%)	LS	\$82,580		\$82,580
5.1	OTHER ITEMS				
	SURVEYING (2%)	LS	\$15,516		\$15,516
	SPECIAL ITEMS	EST	\$0		\$0
	UTILITY RELOCATIONS	EST	\$0		\$0
5	MISCELLANEOUS (10%)	LS	\$57,500		\$57,500
7	CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 5)				\$1,071,944
8	MOBILIZATION (10%)				
	10% OF ITEM 7	EST	\$107,200		\$107,200
9	SUBTOTAL (ITEMS 7 & 8)				\$1,179,144
10	SALES TAX				
	9.8% OF ITEM 9	EST	\$115,500		\$115,500
11	AGREEMENTS (Utilities, WSP, etc)				

SDOT Freight Master Plan Implementation Plan (2018-2023)

PROJECT: FMP Project No. 23: Dynamic Message Signs on 25th Ave NE



DESIGN ASSUMPTIONS:

Assumed 6 signs required

Unit cost includes pole, sign, foundation, cabinets, wiring, installation, and hardware

ESTIMATED TOTAL PROJECT COST:

\$3,954,000.00



Top-Down Cost Estimating Tool Tab B. Cost Estimate Summary

Project Name

Project Number

Prepared by

Date

Milestone

BUILD-UP ASSUMPTIONS

Baseline

Engineer's Estimate

Estimated Acquisition Cost

Escalation Schedule

	Year	Rate
Current	2017	-
Design Midpoint	2018	3.0%
Acquisition Midpoint	2019	5.6%
Construction Midpoint	2019	5.6%

Build-Up Rates

Construction Contingency	20%
Engineer's Est. Allowance	40%
Design Contingency	30%
Acquisition Contingency	30%
Construction Soft Cost Ratio	29%
Design Soft Cost Ratio	19%

BUILD-UP SUMMARY

	A	B	C = A + B	D	E = C + D
	Base Estimate	Contingency	Current-Year Cost	Midpoint Escalation	TOTAL
Contractor Cost (Hard Cost)					
Engineer's Estimate (EE)	1,495,416				
EE Allowance (40%)	598,166				
Estimated Contractor Cost (ECC)	2,093,582	418,716	2,512,299	139,811	2,652,110
Construction Admin. (Soft Cost)					
29% of \$2.1M ECC	607,139	121,428	728,567	40,545	769,112
Design (Soft Cost)					
19% of \$2.1M ECC	397,781	119,334	517,115	15,410	532,525
Acquisition Cost					
Estimated Acquisition Cost	0	0	0	0	0
Estimated Total Project Cost	\$ 3,098,502	\$ 659,478	\$ 3,757,980	\$ 195,766	\$ 3,953,747

Build-Up Notes

1. The Engineer's Estimate Allowance, Design Contingency, and Acquisition Contingency are determined by the selected
2. Escalation rates are based on IHS Global Insight indices.

Version 21 - Aug 2014

BASIS OF ESTIMATE NOTES AND CLARIFICATIONS

The design and construction soft costs used in this estimate are based on the historical averages of the following filter

PLANNING LEVEL OPINION OF COST SUMMARY - NO CONTINGENCY

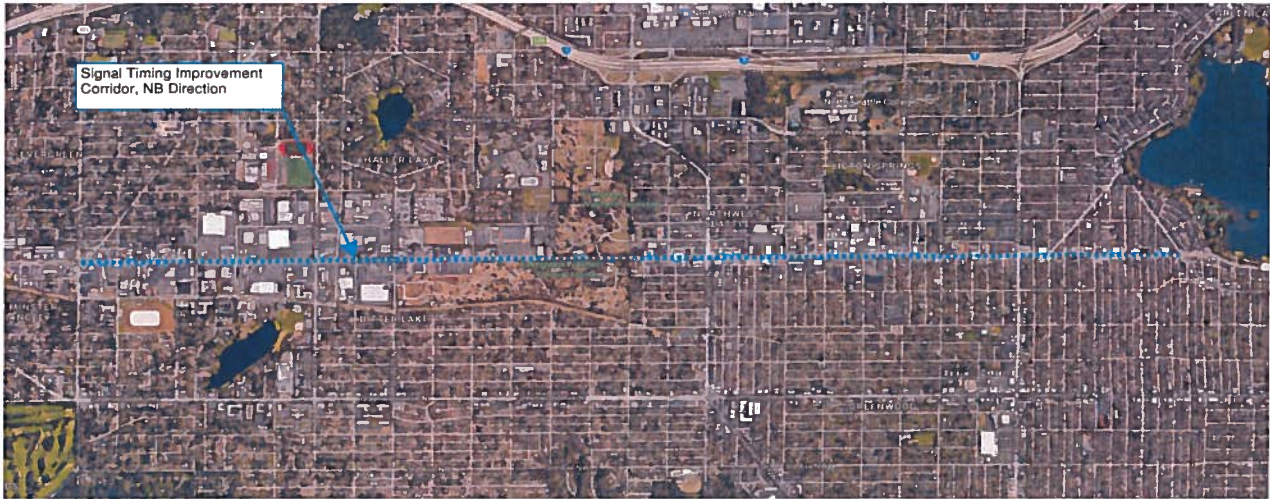
Project Description	SDOT Freight Master Plan Implementation	Client	SDOT
Corridor Section	25th Ave NE, Ship Canal to NE 75th St	Date	4/15/2017
Location	Seattle	Date of Cost Index	2015
		Calculated By/Entered By	KCM
		Checked By	VWW

FMP Project No. 23 - Dynamic Message Signs on 25th Ave NE

ITEM	UNIT	ESTIMATED COST	UNIT QTY	COST
1. ITS				
CCTV CAMERA	EA	\$12,000		\$0
CONDUIT (MIN PVC) INCL TRENCHING AND RESTORATION	LF	\$80		\$0
DETECTOR LOOP 5 FT DIA	EA	\$500		\$0
JUNCTION BOX	EA	\$200		\$0
VARIABLE MESSAGE SIGN	EA	\$11,200	5	\$59,720
SIGNAL TIMING STUDY	LS	\$500,000		\$0
TOTAL				\$59,720
II. CONSTRUCTION				
1. PREPARATION/GRADING/DRAINAGE				
11. PREPARATION				
CLEAR & GRUB DEMO	ACRE	\$5,000		\$0
REMOVING EXISTING PAVEMENT	SY	\$10		\$0
REMOVAL STRUCTURES & OBSTRUCTIONS	LS	\$0	1	\$0
12. EARTHWORK				
ROADWAY EXCAVATION INCL HAUL	CY	\$20		\$0
STRUCTURE EX CL INCL HAUL	CY	\$25		\$0
BORROW INCL HAUL	TON	\$15		\$0
EMBANKMENT COMPACTION	CY	\$2		\$0
13. STORMWATER MITIGATION				
DETENTION AND TREATMENT	SF	\$5		\$0
14. STORM SEWER				
CATCH BASIN TYPE 1	EA	\$1,000		\$0
CATCH BASIN TYPE 2	EA	\$2,200		\$0
PLAIN CONC STORM SEWER PIPE 12 IN DIAM	LF	\$35		\$0
PLAIN CONC STORM SEWER PIPE 18 IN DIAM	LF	\$45		\$0
STRUCTURE EXCAVATION CL B	CY	\$15		\$0
2. STRUCTURE				
CONCRETE BRIDGES	SF	\$150		\$0
CONCRETE BRIDGES WIDENING	SF	\$200		\$0
PEDESTRIAN BRIDGES	SF	\$250		\$0
STEEL BRIDGES	SF	\$100		\$0
BRIDGE ABUTMENT RETROFIT	SF	\$150		\$0
RETAINING WALLS (Cast in Place)	SF	\$55		\$0
RETAINING WALLS (Sp/Nail with Cast in Place Facing)	SF	\$150		\$0
BRIDGE REMOVAL	SF	\$20		\$0
NOISE WALLS	SF	\$25		\$0
3. SURFACING				
PORTLAND CEMENT CONCRETE	SF	\$10		\$0
HOT MIX ASPHALT	TON	\$50		\$0
CRUSHED SURFACING	TON	\$25		\$0
4. ROADSIDE DEVELOPMENT				
FENCING	LF	\$15		\$0
SEEDING, MULCHING & FERTILIZING	ACRE	\$1,200		\$0
WETLAND MITIGATION	LS	\$0	1	\$0
TEMPORARY WATER POLLUTION & EROSION CONTROL (5%)	LS	\$58,032	1	\$58,032
LANDSCAPING	LS	\$0	1	\$0
5. TRAFFIC				
GUARDRAIL	LF	\$18		\$0
CONCRETE BARRIER	LF	\$50		\$0
SIGNAL SYSTEMS	LS	\$0	1	\$0
ILLUMINATION	LS	\$0	1	\$0
SIGNING	LS	\$0	1	\$0
CURBS	LF	\$15		\$0
SIDEWALKS	SY	\$25		\$0
TRAFFIC CONTROL (10%)	LS	\$56,720	1	\$56,720
5I. OTHER ITEMS				
SURVEYING (2%)	LS	\$19,344	1	\$19,344
SPECIAL ITEMS	EST	\$0	1	\$0
UTILITY RELOCATIONS	EST	\$0	1	\$0
6. MISCELLANEOUS (10%)				
	LS	\$59,720	1	\$59,720
7. CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 5)				
				\$1,238,016
8. MOBILIZATION (10%)				
10% OF ITEM 7	EST	\$125,900	1	\$125,900
9. SUBTOTAL (ITEMS 7 & 8)				
				\$1,363,916
10. SALES TAX				
5.8% OF ITEM 9	EST	\$135,500	1	\$135,500
11. AGREEMENTS (Utilities, WSP, etc.)				

SDOT Freight Master Plan Implementation Plan (2018-2023)

PROJECT: FMP Project No. 24: ITS Improvements on Aurora Ave N



DESIGN ASSUMPTIONS:

- The work is a signal operation study in the northbound direction during AM peak.
- VISSIM modeling will be required.
- A draft and final report will be needed.
- Assumed SDOT top-down estimate tool not needed

ESTIMATED TOTAL PROJECT COST:

\$250,000.00

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description	SDOT Freight Master Plan Implementation	Client	SDOT
Corridor Section	NB Aurora Ave N, Winona Ave N to N 145th St	Date	4/6/2017
Location	Seattle	Date of Cost Index	2017
		Calculated By/Entered By	KCM
		Checked By	VWW

FMP Project No. 24: ITS Improvements on Aurora Ave N

	ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I	STUDIES				
	OPERATIONAL IMPROVEMENTS TO SIGNAL TIMING	LS	\$250,000	1	\$250,000
	STUDIES TOTAL				\$250,000

SDOT Freight Master Plan Implementation Plan (2018-2023)

PROJECT: FMP Project No. 25: W Galer St Interchange Ramp



DESIGN ASSUMPTIONS:

- Bridge will be similar to Lander St overpass
- Existing bridge will be removed

ESTIMATED TOTAL PROJECT COST:

\$151,278,000.00



Top-Down Cost Estimating Tool Tab B. Cost Estimate Summary

Project Name

Prepared by

Project Number

Date

Milestone

BUILD-UP ASSUMPTIONS

Baseline

Engineer's Estimate

Estimated Acquisition Cost

Escalation Schedule

	Year	Rate
Current	2017	-
Design Midpoint	2018	3.0%
Acquisition Midpoint	2019	5.6%
Construction Midpoint	2019	5.6%

Build-Up Rates

Construction Contingency	20%
Engineer's Est. Allowance	40%
Design Contingency	30%
Acquisition Contingency	30%
Construction Soft Cost Ratio	29%
Design Soft Cost Ratio	19%

BUILD-UP SUMMARY

	A	B	C = A + B	D	E = C + D
	Base Estimate	Contingency	Current-Year Cost	Midpoint Escalation	TOTAL
Contractor Cost (Hard Cost)					
Engineer's Estimate (EE)	57,217,435				
EE Allowance (40%)	22,886,974				
Estimated Contractor Cost (ECC)	80,104,409	16,020,882	96,125,290	5,349,440	101,474,730
Construction Admin. (Soft Cost)					
29% of \$80.1M ECC	23,230,278	4,646,056	27,876,334	1,551,338	29,427,672
Design (Soft Cost)					
19% of \$80.1M ECC	15,219,838	4,565,951	19,785,789	589,607	20,375,396
Acquisition Cost					
Estimated Acquisition Cost	0	0	0	0	0
Estimated Total Project Cost	\$ 118,554,525	\$ 25,232,889	\$ 143,787,413	\$ 7,490,385	\$ 151,277,798

Build-Up Notes

1. The Engineer's Estimate Allowance, Design Contingency, and Acquisition Contingency are determined by the selected level of
2. Escalation rates are based on IHS Global Insight indices.

Version 21 - Aug 2014

BASIS OF ESTIMATE NOTES AND CLARIFICATIONS

The design and construction soft costs used in this estimate are based on the historical averages of the following filter



3107 Colby Avenue Suite 900 Everett WA 98201 | P:425.252.7700

PLANNING LEVEL OPINION OF COST SUMMARY - NO CONTINGENCY

Project Description	SDOT Freight Master Plan Implementation	Client	SDOT
Corridor/Section	Galer Street BNSF Tracks	Date	4/20/2017
Location	Interbay	Date of Cost Index	2017
		Calculated By/Entered By	KCM
		Checked By	VWW

FMP Project No. 25 - W Galer St Interchange Ramp

#	ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
CONSTRUCTION					
1	PREPARATION/GRADING/DRAINAGE				
1.1	PREPARATION				
	CLEAR & GRUB DEMO	ACRE	\$10,000		\$0
	REMOVING EXISTING PAVEMENT	SY	\$15		\$0
	REMOVAL STRUCTURES & OBSTRUCTIONS	LS	\$0	1	\$0
1.2	EARTHWORK				
	ROADWAY EXCAVATION INCL HAUL	CY	\$40		\$0
	STRUCTURE EX CL A INCL HAUL	CY	\$25		\$0
	BORROW INCL HAUL	TON	\$15		\$0
	EMBANKMENT COMPACTION	CY	\$2		\$0
1.3	STORMWATER MITIGATION				
	DETENTION AND TREATMENT	SF	\$5		\$0
1.4	STORM SEWER				
	CATCH BASIN TYPE 1	EA	\$1,500		\$0
	CATCH BASIN TYPE 2	EA	\$3,000		\$0
	PLAN CONC STORM SEWER PIPE 12 IN. DIAM	LF	\$35		\$0
	PLAN CONC STORM SEWER PIPE 18 IN. DIAM	LF	\$80		\$0
	STRUCTURE EXCAVATION CL B	CY	\$20		\$0
2	STRUCTURE				
	LANDSCAPE	LS	\$10,620,134.70	1	\$10,620,135
	CONCRETE BRIDGES	SF	\$150		\$0
	CONCRETE BRIDGES WIDENING	SF	\$200		\$0
	PEDESTRIAN BRIDGES	SF	\$250		\$0
	STEEL BRIDGES	SF	\$100		\$0
	BRIDGE ABUTMENT RETROFIT	SF	\$150		\$0
	RETAINING WALLS (Cast in Place)	SF	\$65		\$0
	RETAINING WALLS (Spill Nail with Cast in Place Facing)	SF	\$150		\$0
	BRIDGE REMOVAL	SF	\$75	62,400	\$4,680,000
	NOISE WALLS	SF	\$25		\$0
3	SURFACING				
	PORTLAND CEMENT CONCRETE	SF	\$150		\$0
	HOT MIX ASPHALT	TON	\$180		\$0
	CRUSHED SURFACING	TON	\$40		\$0
4	ROADSIDE DEVELOPMENT				
	FENCING	LF	\$0		\$0
	SEEDING MULCHING & FERTILIZING	ACRE	\$1,200		\$0
	WETLAND MITIGATION	LS	\$0	1	\$0
	TEMPORARY WATER POLLUTION & EROSION CONTROL (5%)	LS	\$2,118,100	1	\$2,118,100
	LANDSCAPING	LS	\$0	1	\$0
5	TRAFFIC				
	GUARDRAIL	LF	\$18		\$0
	CONCRETE BARRIER	LF	\$50		\$0
	SIGNAL SYSTEMS	LS	\$0	1	\$0
	ILLUMINATION	LS	\$0	1	\$0
	SIGNING	LS	\$0	1	\$0
	CURBS	LF	\$25		\$0
	PERPENDICULAR CURB RAMP	EA	\$3,000		\$0
	SIDEWALKS	SY	\$45		\$0
	TRAFFIC CONTROL (10%)	LS	\$5,550,100	1	\$5,550,100
5.1	OTHER ITEMS				
	SURVEYING (2%)	LS	\$2,118,100	1	\$2,118,100
	SPECIAL ITEMS	EST	\$0	1	\$0
	UTILITY RELOCATIONS	EST	\$0	1	\$0
6	MISCELLANEOUS (10%)	LS	\$4,305,700	1	\$4,305,700
7	CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)				\$47,373,135
8	MOBILIZATION (10%)				
	10% OF ITEM 7	EST	\$4,737,400	1	\$4,737,400
9	SUBTOTAL (ITEMS 7 & 8)				\$52,110,535
10	SALES TAX				
	5.8% OF ITEM 9	EST	\$5,105,500	1	\$5,105,500
11	AGREEMENTS (Utilities WSP etc)				
		EST	\$0	1	\$0
12	SUBTOTAL (ITEMS 9 THRU 11)				\$57,217,435

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perreet Inc does not guarantee or warrant the accuracy of this planning level estimate.

SDOT Freight Master Plan Implementation Plan (2018-2023)

PROJECT: FMP Project No. 27: Denny Way ITS



DESIGN ASSUMPTIONS:

- Conduit to be installed for fiberoptic connections to existing and future systems.
- One camera installed per intersection on Denny Way
- 9 loop detectors per signalized intersection on main line, 2 loop detectors per lane on cross streets
- Four Type 2 junction boxes per signalized intersection
- Each trench will hold a single line of conduit.
- Signal timing cost will be similar to Aurora Ave N (\$250,000 per direction)
- Assumed four DMS signs required

ESTIMATED TOTAL PROJECT COST:

\$10,621,000.00



Top-Down Cost Estimating Tool Tab B. Cost Estimate Summary

Project Name

Project Number

Prepared by

Date

Milestone

BUILD-UP ASSUMPTIONS

Baseline

Engineer's Estimate

Estimated Acquisition Cost

Escalation Schedule

	Year	Rate
Current	2017	-
Design Midpoint	2018	3.0%
Acquisition Midpoint	2019	5.6%
Construction Midpoint	2019	5.6%

Build-Up Rates

Construction Contingency	20%
Engineer's Est. Allowance	40%
Design Contingency	30%
Acquisition Contingency	30%
Construction Soft Cost Ratio	29%
Design Soft Cost Ratio	19%

BUILD-UP SUMMARY

	A	B	C = A + B	D	E = C + D
	Base Estimate	Contingency	Current-Year Cost	Midpoint Escalation	TOTAL
Contractor Cost (Hard Cost)					
Engineer's Estimate (EE)	4,016,880				
EE Allowance (40%)	1,606,752				
Estimated Contractor Cost (ECC)	5,623,632	1,124,726	6,748,358	375,551	7,123,909
Construction Admin. (Soft Cost)					
29% of \$5.6M ECC	1,630,853	326,171	1,957,024	108,910	2,065,934
Design (Soft Cost)					
19% of \$5.6M ECC	1,068,490	320,547	1,389,037	41,393	1,430,430
Acquisition Cost					
Estimated Acquisition Cost	0	0	0	0	0
Estimated Total Project Cost	\$ 8,322,975	\$ 1,771,444	\$ 10,094,419	\$ 525,853	\$ 10,620,273

Build-Up Notes

1. The Engineer's Estimate Allowance, Design Contingency, and Acquisition Contingency are determined by the selected
2. Escalation rates are based on IHS Global Insight indices.

Version 21 - Aug 2014

BASIS OF ESTIMATE NOTES AND CLARIFICATIONS

The design and construction soft costs used in this estimate are based on the historical averages of the following filter

PLANNING LEVEL OPINION OF COST SUMMARY - NO CONTINGENCY

Project Description	SDOT Freight Master Plan Implementation	Client	SDOT
Corridor Section	Denny Way from Western Ave to I-5	Date	4/19/2017
Location	Seattle	Date of Cost Index	2015
		Calculated By/Entered By	KCM
		Checked By	VWW

FMP Project No. 27 - Denny Way I-5

	ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I	ITS				
	CCTV CAMERA	EA	\$12,000	15	\$180,000
	CONDUIT (4 IN PVC) INCL TRENCHING AND RESTORATION	LF	\$80	5,200	\$1,216,000
	DETECTOR LOOP, 5 FT DIA	EA	\$500	375	\$225,500
	JUNCTION BOX	EA	\$200	60	\$12,000
	VARIABLE MESSAGE SIGN	EA	\$16,600	4	\$66,400
	SIGNAL TIMING STUDY	LS	\$500,000	1	\$500,000
	TOTAL				\$2,775,000
II	CONSTRUCTION				
I	PREPARATION/GRADING/DRAINAGE				
11	PREPARATION				
	CLEAR & GRUB DEMO	ACRE	\$5,000		\$0
	REMOVING EXISTING PAVEMENT	SY	\$10		\$0
	REMOVAL STRUCTURES & OBSTRUCTIONS	LS	\$0	1	\$0
12	EARTHWORK				
	ROADWAY EXCAVATION INCL HAUL	CY	\$20		\$0
	STRUCTURE EX CL A INCL HAUL	CY	\$25		\$0
	BORROW INCL HAUL	TON	\$15		\$0
	EMBANKMENT COMPACTION	CY	\$2		\$0
13	STORMWATER MITIGATION				
	DETENTION AND TREATMENT	SF	\$6		\$0
14	STORM SEWER				
	CATCH BASIN TYPE 1	EA	\$1,000		\$0
	CATCH BASIN TYPE 2	EA	\$2,200		\$0
	PLAIN CONC STORM SEWER PIPE 12 IN DIAM	LF	\$35		\$0
	PLAIN CONC STORM SEWER PIPE 18 IN DIAM	LF	\$45		\$0
	STRUCTURE EXCAVATION CL B	CY	\$15		\$0
2	STRUCTURE				
	CONCRETE BRIDGES	SF	\$150		\$0
	CONCRETE BRIDGES WIDENING	SF	\$200		\$0
	PEDESTRIAN BRIDGES	SF	\$250		\$0
	STEEL BRIDGES	SF	\$100		\$0
	BRIDGE ABUTMENT RETROFIT	SF	\$150		\$0
	RETAINING WALLS (Cast in Place)	SF	\$65		\$0
	RETAINING WALLS (Spill Nail with Cast in Place Facing)	SF	\$150		\$0
	BRIDGE REMOVAL	SF	\$20		\$0
	NOSE WALLS	SF	\$25		\$0
3	SURFACING				
	PORTLAND CEMENT CONCRETE	SF	\$10		\$0
	HOT MIX ASPHALT	TON	\$60		\$0
	CRUSHED SURFACING	TON	\$25		\$0
4	ROADSIDE DEVELOPMENT				
	FENCING	LF	\$15		\$0
	SEEDING, MULCHING & FERTILIZING	ACRE	\$1,200		\$0
	WETLAND MITIGATION	LS	\$0	1	\$0
	TEMPORARY WATER POLLUTION & EROSION CONTROL (5%)	LS	\$165,550	1	\$165,550
	LANDSCAPING	LS	\$0	1	\$0
5	TRAFFIC				
	GUARDRAIL	LF	\$16		\$0
	CONCRETE BARRIER	LF	\$50		\$0
	SIGNAL SYSTEMS	LS	\$0	1	\$0
	ILLUMINATION	LS	\$0	1	\$0
	SIGNING	LS	\$0	1	\$0
	CURBS	LF	\$15		\$0
	SIDEWALKS	SY	\$25		\$0
	TRAFFIC CONTROL (10%)	LS	\$277,900	1	\$277,900
5I	OTHER ITEMS				
	SURVEYING (2%)	LS	\$55,520	1	\$55,520
	SPECIAL ITEMS	EST	\$0	1	\$0
	UTILITY RELOCATIONS	EST	\$0	1	\$0
6	MISCELLANEOUS (10%)	LS	\$50,000	1	\$50,000
7	CONSTRUCTION SUBTOTAL (ITEMS I THRU 6)				\$3,325,580
8	MOBILIZATION (10%)				
	10% OF ITEM 7	EST	\$332,600	1	\$332,600
9	SUBTOTAL (ITEMS 7 & 8)				\$3,658,280
10	SALES TAX				
	5.8% OF ITEM 9	EST	\$458,500	1	\$458,500
11	AGREEMENTS (Utilities WSP, etc)				

SDOT Freight Master Plan Implementation Plan (2018-2023)

PROJECT: FMP Project No. 28: Elliot Ave W Truck Lane



DESIGN ASSUMPTIONS:

- Lane extends from Broad St to SR99
- Lane will need to be repaved.
- A new sign will be required at each intersection.
- No storm drainage will be altered

ESTIMATED TOTAL PROJECT COST:

\$4,475,000.00



Top-Down Cost Estimating Tool Tab B. Cost Estimate Summary

Project Name

Project Number

Prepared by

Date

Milestone

BUILD-UP ASSUMPTIONS

Baseline

Engineer's Estimate

Estimated Acquisition Cost

Escalation Schedule

	Year	Rate
Current	2017	-
Design Midpoint	2018	3.0%
Acquisition Midpoint	2019	5.6%
Construction Midpoint	2019	5.6%

Build-Up Rates

Construction Contingency	20%
Engineer's Est. Allowance	40%
Design Contingency	30%
Acquisition Contingency	30%
Construction Soft Cost Ratio	29%
Design Soft Cost Ratio	19%

BUILD-UP SUMMARY

	A	B	C = A + B	D	E = C + D
	Base Estimate	Contingency	Current-Year Cost	Midpoint Escalation	TOTAL
Contractor Cost (Hard Cost)					
Engineer's Estimate (EE)	1,692,500				
EE Allowance (40%)	677,000				
Estimated Contractor Cost (ECC)	2,369,500	473,900	2,843,400	158,237	3,001,637
Construction Admin. (Soft Cost)					
29% of \$2.4M ECC	687,155	137,431	824,586	45,889	870,475
Design (Soft Cost)					
19% of \$2.4M ECC	450,205	135,062	585,267	17,441	602,707
Acquisition Cost					
Estimated Acquisition Cost	0	0	0	0	0
Estimated Total Project Cost	\$ 3,506,860	\$ 746,393	\$ 4,253,253	\$ 221,567	\$ 4,474,819

Build-Up Notes

1. The Engineer's Estimate Allowance, Design Contingency, and Acquisition Contingency are determined by the selected
2. Escalation rates are based on IHS Global Insight indices.

Version 21 - Aug 2014

BASIS OF ESTIMATE NOTES AND CLARIFICATIONS

The design and construction soft costs used in this estimate are based on the historical averages of the following filter

PLANNING LEVEL OPINION OF COST SUMMARY - NO CONTINGENCY

Project Description	SDOT Freight Master Plan	Client	SDOT
Corridor/Section	Elliot Ave. Broad Street SR99	Date	3-Apr
Location	Seattle	Date of Cost Index	2015
		Calculated By/Entered By	KCM
		Checked By	VWM

FMP Project No. 28 Elliot Ave W Truck Lane

	ITEM	UNIT	ESTIMATED COST	UNIT QTY	COST
1	RIGHT OF WAY				
	RIGHT OF WAY (urban undeveloped)	SF	\$45		\$0
	RIGHT OF WAY (urban undeveloped)	SF	\$20		\$0
	RELOCATIONS BUSINESSES	EA	\$300,000		\$0
	RELOCATIONS RESIDENCES	EA	\$250,000		\$0
	CONDEMNATION PROCEDURE	EA	\$100,000		\$0
	ADMINISTRATION (TITLES APPRAISALS ETC)	EA	\$25,000		\$0
	RIGHT OF WAY TOTAL				\$0
1	CONSTRUCTION				
	PREPARATION/GRADING/DRAINAGE				
1.1	PREPARATION				
	CLEAR & GRUB DEMO	ACRE	\$10,000		\$0
	REMOVING EXISTING PAVEMENT	SY	\$15	3,100	\$46,500
	REMOVING STRUCTURES & OBSTRUCTIONS	LS	\$10,000	1	\$10,000
1.2	EARTHWORK				
	ROADWAY EXCAVATION INCL HAUL	CY	\$40	800	\$32,000
	STRUCTURE EXCL INCL HAUL	CY	\$25		\$0
	BORROW INCL HAUL	TON	\$15		\$0
	EMBANKMENT COMPACTION	CY	\$2		\$0
1.3	STORMWATER MITIGATION				
	DETENTION AND TREATMENT	SF	\$5		\$0
1.4	STORM SEWER				
	CATCH BASIN TYPE 1	EA	\$1,500		\$0
	CATCH BASIN TYPE 2	EA	\$3,000		\$0
	PLAN CONC STORM SEWER PIPE 12 IN DIAM	LF	\$35		\$0
	PLAN CONC STORM SEWER PIPE 18 IN DIAM	LF	\$80		\$0
	STRUCTURE EXCAVATION CL B	CY	\$20		\$0
2	STRUCTURE				
	CONCRETE BRIDGES	SF	\$150		\$0
	CONCRETE BRIDGES WIDENING	SF	\$200		\$0
	PEDESTRIAN BRIDGES	SF	\$250		\$0
	STEEL BRIDGES	SF	\$100		\$0
	BRIDGE ABUTMENT RETROFIT	SF	\$150		\$0
	RETAINING WALLS (Cast-in-Place)	SF	\$55		\$0
	RETAINING WALLS (Shotcrete with Cast-in-Place Facing)	SF	\$150		\$0
	BRIDGE REMOVAL	SF	\$20		\$0
	NOISE WALLS	SF	\$25		\$0
3	SURFACING				
	ROADWAY CEM CONC HES (24 HR) 12 IN	SY	\$150	3,400	\$510,000
	HOT MIX ASPHALT	TON	\$180	900	\$162,000
	CRUSHED SURFACING	TON	\$40	800	\$32,000
4	ROADSIDE DEVELOPMENT				
	FENCING	LF	\$0		\$0
	SEEDING MULCHING & FERTILIZING	ACRE	\$1,200		\$0
	WETLAND MITIGATION	LS	\$0	1	\$0
	TEMPORARY WATER POLLUTION & EROSION CONTROL (5%)	LS	\$52,100	1	\$52,100
	LANDSCAPING	LS	\$0	1	\$0
5	TRAFFIC				
	GUARDRAIL	LF	\$18		\$0
	CONCRETE BARRIER	LF	\$50		\$0
	SIGNAL SYSTEMS	LS	\$0	1	\$0
	ILLUMINATION	LS	\$0	1	\$0
	PERMANENT STRIPING	LF	\$1	7,000	\$7,000
	SIGNING	LS	\$3,000	1	\$3,000
	CURBS	LF	\$25	2,500	\$62,500
	SIDEWALKS	SY	\$45		\$0
	TRAFFIC STUDY	LS	\$250,000	1	\$250,000
	TRAFFIC CONTROL (10%)	LS	\$85,800	1	\$85,800
5.1	OTHER ITEMS				
	SURVEYING (2%)	LS	\$17,400	1	\$17,400
	SPECIAL ITEMS	EST	\$0	1	\$0
	UTILITY RELOCATIONS	EST	\$0	1	\$0
6	MISCELLANEOUS (10%)	LS	\$127,400	1	\$127,400
7	CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)				\$1,401,200
8	MOBILIZATION (10%)				
	10% OF ITEM 7	EST	\$140,200	1	\$140,200
9	SUBTOTAL (ITEMS 7 & 8)				\$1,541,400
10	SALES TAX				

SDOT Freight Master Plan Implementation Plan (2018-2023)

PROJECT: FMP Project No. 29: I-5 Connector ITS



DESIGN ASSUMPTIONS:

- Conduit to be installed for fiberoptic connections to existing and future systems.
- One camera installed per freeway access point per 300' of roadway.
- Each trench will hold a single line of conduit.

ESTIMATED TOTAL PROJECT COST:

\$4,614,000.00



Top-Down Cost Estimating Tool Tab B. Cost Estimate Summary

Project Name **FMP Project No. 29: I-5 Connector ITS**

Project Number **NA**

Prepared by **Perteet Inc.**

Date **5/2/2017**

Milestone **10%**

BUILD-UP ASSUMPTIONS

Baseline

Engineer's Estimate **\$ 1,744,900**

Estimated Acquisition Cost

Escalation Schedule

	Year	Rate
Current	2017	-
Design Midpoint	2018	3.0%
Acquisition Midpoint	2019	5.6%
Construction Midpoint	2019	5.6%

Build-Up Rates

Construction Contingency	20%
Engineer's Est. Allowance	40%
Design Contingency	30%
Acquisition Contingency	30%
Construction Soft Cost Ratio	29%
Design Soft Cost Ratio	19%

BUILD-UP SUMMARY

	A	B	C = A + B	D	E = C + D
	Base Estimate	Contingency	Current-Year Cost	Midpoint Escalation	TOTAL
Contractor Cost (Hard Cost)					
Engineer's Estimate (EE)	1,744,900				
EE Allowance (40%)	697,960				
Estimated Contractor Cost (ECC)	2,442,860	488,572	2,931,432	163,136	3,094,568
Construction Admin. (Soft Cost)					
29% of \$2.4M ECC	708,429	141,686	850,115	47,310	897,425
Design (Soft Cost)					
19% of \$2.4M ECC	464,143	139,243	603,386	17,981	621,367
Acquisition Cost					
Estimated Acquisition Cost	0	0	0	0	0
Estimated Total Project Cost	\$ 3,615,433	\$ 769,501	\$ 4,384,934	\$ 228,426	\$ 4,613,360

Build-Up Notes

1. The Engineer's Estimate Allowance, Design Contingency, and Acquisition Contingency are determined by the selected
2. Escalation rates are based on IHS Global Insight indices.

Version 21 - Aug 2014

BASIS OF ESTIMATE NOTES AND CLARIFICATIONS

The design and construction soft costs used in this estimate are based on the historical averages of the following filter

PLANNING LEVEL OPINION OF COST SUMMARY - NO CONTINGENCY

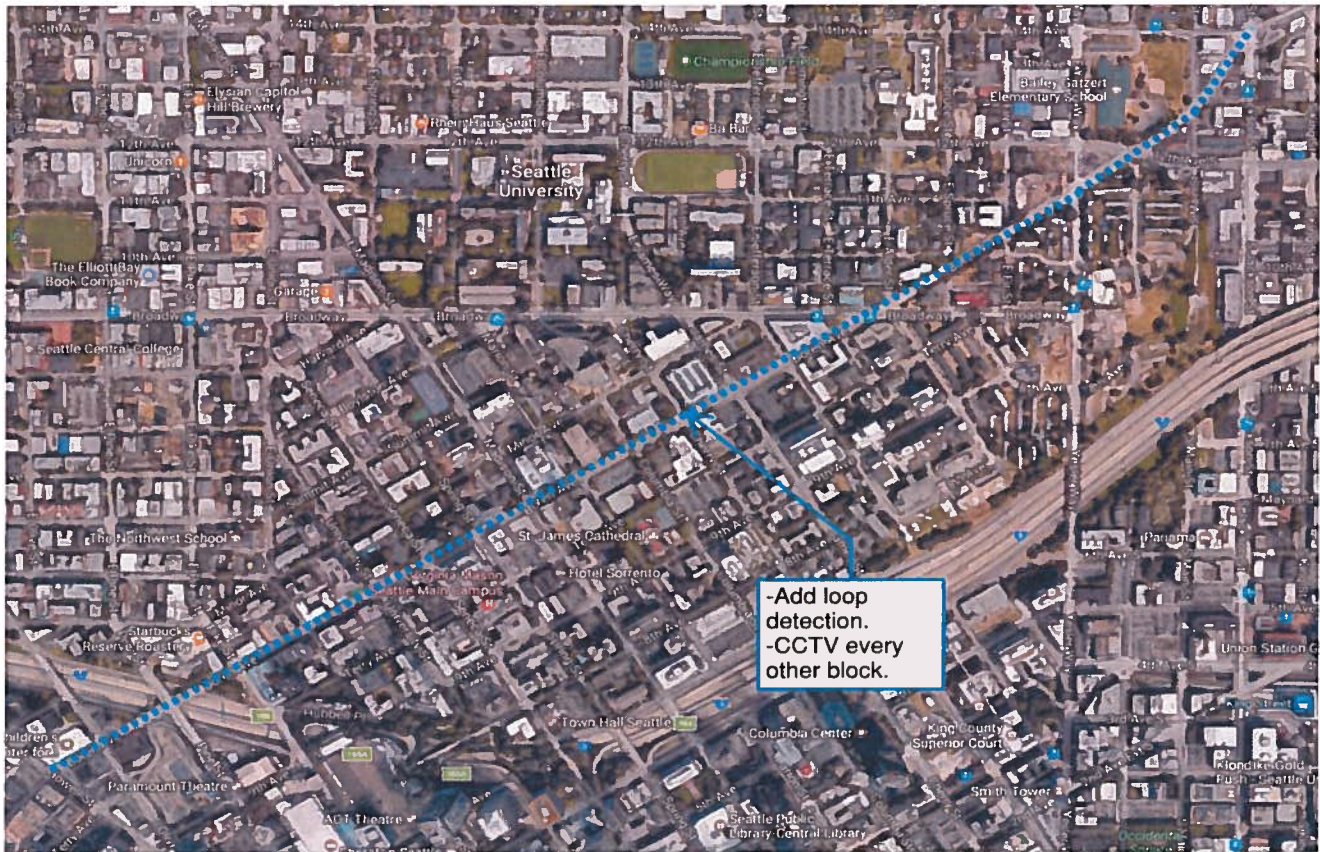
Project Description	SDOT Freight Master Plan Implementation	Client	SDOT
Corridor/Section	I-5 from Dearborn Street to Mercer St	Date	4/15/2017
Location	Seattle	Date of Cost Index	2015
		Calculated By/Entered By	KCV
		Checked By	VWV

FMP Project No. 25-1-5 Connector ITS

	ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
1	ITS				
	CCTV CAMERA	EA	\$12,000	32	\$384,000
	CONDUIT (2IN PVC)	LF	\$10	9,500	\$95,000
	TRENCHING CONDUIT	LF	\$15	9,500	\$142,500
	PAVEMENT RESTORATION	LF	\$57	9,500	\$541,500
	TOTAL				\$1,163,000
3	CONSTRUCTION				
1	PREPARATION/GRADING/DRAINAGE				
1.1	PREPARATION				
	CLEAR & GRUB DEMO	ACRE	\$5,000		\$0
	REMOVING EXISTING PAVEMENT	SF	\$10		\$0
	REMOVAL STRUCTURES & OBSTRUCTIONS	LS	\$0	1	\$0
1.2	EARTHWORK				
	ROADWAY EXCAVATION INCL HAUL	CY	\$20		\$0
	STRUCTURE EXCAVATION INCL HAUL	CY	\$25		\$0
	BORROW INCL HAUL	TON	\$15		\$0
	EMBANKMENT COMPACTION	CY	\$2		\$0
1.3	STORMWATER MITIGATION				
	DETENTION AND TREATMENT	SF	\$5		\$0
1.4	STORM SEWER				
	CATCH BASIN TYPE 1	EA	\$1,000		\$0
	CATCH BASIN TYPE 2	EA	\$2,200		\$0
	PLAIN CONC STORM SEWER PIPE 12 IN DIAM	LF	\$35		\$0
	PLAIN CONC STORM SEWER PIPE 18 IN DIAM	LF	\$45		\$0
	STRUCTURE EXCAVATION CL B	CY	\$15		\$0
2	STRUCTURE				
	CONCRETE BRIDGES	SF	\$150		\$0
	CONCRETE BRIDGES WIDENING	SF	\$200		\$0
	PEDESTRIAN BRIDGES	SF	\$250		\$0
	STEEL BRIDGES	SF	\$100		\$0
	BRIDGE ABUTMENT RETROFIT	SF	\$150		\$0
	RETAINING WALLS (Cast in Place)	SF	\$55		\$0
	RETAINING WALLS (Spill Nalwth Cast in Place Facing)	SF	\$150		\$0
	BRIDGE REMOVAL	SF	\$20		\$0
	NOISE WALLS	SF	\$25		\$0
3	SURFACING				
	PORTLAND CEMENT CONCRETE	SF	\$10		\$0
	HOT MIX ASPHALT	TON	\$50		\$0
	CRUSHED SURFACING	TON	\$25		\$0
4	ROADSIDE DEVELOPMENT				
	FENCING	LF	\$15		\$0
	SEEDING, MULCHING & FERTILIZING	ACRE	\$1,200		\$0
	WETLAND MITIGATION	LS	\$0	1	\$0
	TEMPORARY WATER POLLUTION & EROSION CONTROL (5%)	LS	\$59,800	1	\$59,800
	LANDSCAPING	LS	\$0	1	\$0
5	TRAFFIC				
	GUARDRAIL	LF	\$18		\$0
	CONCRETE BARRIER	LF	\$50		\$0
	SIGNAL SYSTEMS	LS	\$0	1	\$0
	ILLUMINATION	LS	\$0	1	\$0
	SIGNING	LS	\$0	1	\$0
	CURBS	LF	\$15		\$0
	SIDEWALKS	SF	\$25		\$0
	TRAFFIC CONTROL (10%)	LS	\$114,400	1	\$114,400
5.1	OTHER ITEMS				
	SURVEYING (2%)	LS	\$59,800	1	\$59,800
	SPECIAL ITEMS	EST	\$0	1	\$0
	UTILITY RELOCATIONS	EST	\$0	1	\$0
5	MISCELLANEOUS (10%)	LS	\$25,500	1	\$25,500
7	CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 5)				\$1,444,500
8	MOBILIZATION (10%)				
	10% OF ITEM 7	EST	\$144,500	1	\$144,500
9	SUBTOTAL (ITEMS 7 & 8)				\$1,589,000
10	SALES TAX				
	5.8% OF ITEM 9	EST	\$95,800	1	\$95,800
11	AGREEMENTS (Utilities WSP, etc.)				

SDOT Freight Master Plan Implementation Plan (2018-2023)

PROJECT: FMP Project No. 30: ITS Updates on Boren Ave



DESIGN ASSUMPTIONS:

- One camera installed every other intersection
- 2 loop detectors per left turn lane, 18 for through lanes per intersection
- A timing study will be required to calibrate signals, assumed \$250,000 per direction

ESTIMATED TOTAL PROJECT COST:

\$2,970,000.00



Top-Down Cost Estimating Tool Tab B. Cost Estimate Summary

Project Name

Project Number

Prepared by

Date

Milestone

BUILD-UP ASSUMPTIONS

Baseline

Engineer's Estimate
Estimated Acquisition Cost

Escalation Schedule

	Year	Rate
Current	2017	-
Design Midpoint	2018	3.0%
Acquisition Midpoint	2019	5.6%
Construction Midpoint	2019	5.6%

Build-Up Rates

Construction Contingency	20%
Engineer's Est. Allowance	40%
Design Contingency	30%
Acquisition Contingency	30%
Construction Soft Cost Ratio	29%
Design Soft Cost Ratio	19%

BUILD-UP SUMMARY

	A	B	C = A + B	D	E = C + D
	Base Estimate	Contingency	Current-Year Cost	Midpoint Escalation	TOTAL
Contractor Cost (Hard Cost)					
Engineer's Estimate (EE)	1,122,980				
EE Allowance (40%)	449,192				
Estimated Contractor Cost (ECC)	1,572,172	314,434	1,886,606	104,991	1,991,597
Construction Admin. (Soft Cost)					
29% of \$1.6M ECC	455,930	91,186	547,116	30,447	577,563
Design (Soft Cost)					
19% of \$1.6M ECC	298,713	89,614	388,326	11,572	399,898
Acquisition Cost					
Estimated Acquisition Cost	0	0	0	0	0
Estimated Total Project Cost	\$ 2,326,815	\$ 495,234	\$ 2,822,049	\$ 147,010	\$ 2,969,059

Build-Up Notes

1. The Engineer's Estimate Allowance, Design Contingency, and Acquisition Contingency are determined by the selected
2. Escalation rates are based on IHS Global Insight indices.

Version 21 - Aug 2014

BASIS OF ESTIMATE NOTES AND CLARIFICATIONS

The design and construction soft costs used in this estimate are based on the historical averages of the following filter

PLANNING LEVEL OPINION OF COST SUMMARY - NO CONTINGENCY

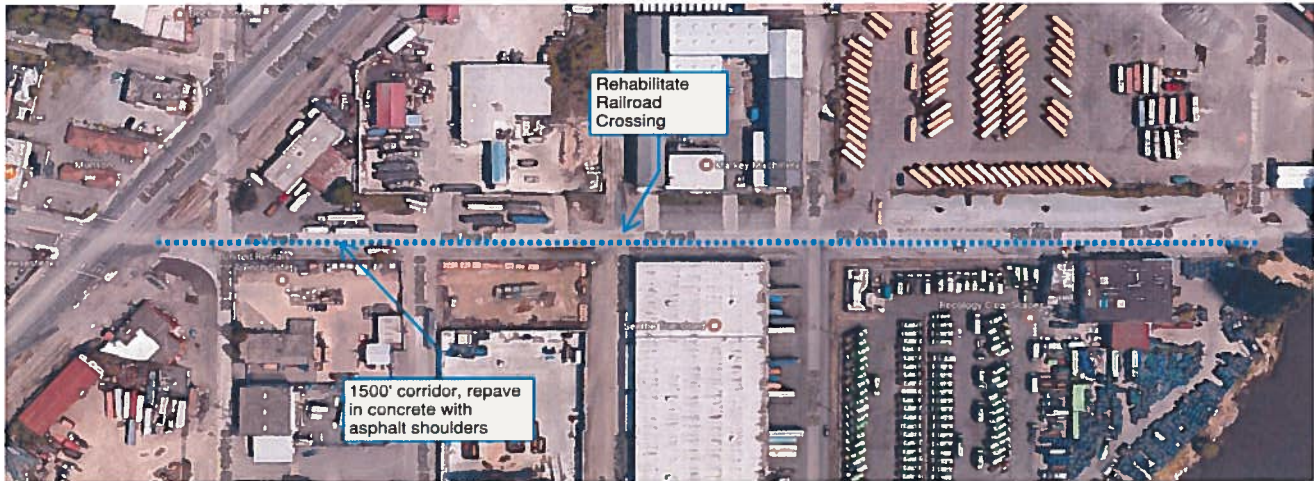
Project Description	SDOT Freight Master Plan Implementation	Client	SDOT
Corridor Section	Boren Ave from Jackson St to Howell St	Date	4/19/2017
Location	Seattle	Date of Cost Index	2015
		Calculated By/Entered By	KCM
		Checked By	VWW

FMP Project No. 30 ITS Updates on Boren Ave

	ITEM	UNIT	ESTIMATED COST	UNIT QTY	COST
I	ITS				
	CCTV CAMERA	EA	\$12,000	8	\$95,000
	CONDUIT (4 IN PVC) INCL TRENCHING AND RESTORATION	LF	\$80		\$0
	DETECTOR LOOP 5 FT DIA	EA	\$500	300	\$180,000
	JUNCTION BOX	EA	\$200		\$0
	VARIABLE MESSAGE SIGN	EA	\$0		\$0
	SIGNAL TIMING STUDY	LS	\$500,000	1	\$500,000
	TOTAL				\$775,000
II	CONSTRUCTION				
1	PREPARATION/GRADING/DRAINAGE				
	PREPARATION				
	CL. EAR & GRUB DEMO	ACRE	\$5,000		\$0
	REMOVING EXISTING PAVEMENT	SY	\$10		\$0
	REMOVAL STRUCTURES & OBSTRUCTIONS	LS	\$0	1	\$0
	1.2 EARTHWORK				
	ROADWAY EXCAVATION INCL HAUL	CY	\$20		\$0
	STRUCTURE EX. CL. A INCL HAUL	CY	\$25		\$0
	BORROW INCL HAUL	TON	\$15		\$0
	EMBANKMENT COMPACTION	CY	\$2		\$0
	1.3 STORMWATER MITIGATION				
	DETENTION AND TREATMENT	SF	\$5		\$0
	1.4 STORM SEWER				
	CATCH BASIN TYPE 1	EA	\$1,000		\$0
	CATCH BASIN TYPE 2	EA	\$2,200		\$0
	PLAIN CONC. STORM SEWER PIPE 12 IN. DIAM.	LF	\$35		\$0
	PLAIN CONC. STORM SEWER PIPE 18 IN. DIAM.	LF	\$45		\$0
	STRUCTURE EXCAVATION CL. B	CY	\$15		\$0
2	STRUCTURE				
	CONCRETE BRIDGES	SF	\$150		\$0
	CONCRETE BRIDGES WIDENING	SF	\$200		\$0
	PEDESTRIAN BRIDGES	SF	\$250		\$0
	STEEL BRIDGES	SF	\$100		\$0
	BRIDGE ABUTMENT RETROFIT	SF	\$150		\$0
	RETAINING WALLS (Cast in Place)	SF	\$55		\$0
	RETAINING WALLS (S+I Nail with Cast in Place Facing)	SF	\$150		\$0
	BRIDGE REMOVAL	SF	\$20		\$0
	NOISE WALLS	SF	\$25		\$0
3	SURFACING				
	PORTLAND CEMENT CONCRETE	SF	\$10		\$0
	HOT MIX ASPHALT	TON	\$50		\$0
	CRUSHED SURFACING	TON	\$25		\$0
4	ROADSIDE DEVELOPMENT				
	FENCING	LF	\$15		\$0
	SEEDING, MULCHING & FERTILIZING	ACRE	\$1,200		\$0
	WETLAND MITIGATION	LS	\$0	1	\$0
	TEMPORARY WATER POLLUTION & EROSION CONTROL (5%)	LS	\$45,550	1	\$45,550
	LANDSCAPING	LS	\$0	1	\$0
5	TRAFFIC				
	GUARD RAIL	LF	\$18		\$0
	CONCRETE BARRIER	LF	\$50		\$0
	SIGNAL SYSTEMS	LS	\$0	1	\$0
	ILLUMINATION	LS	\$0	1	\$0
	SIGNING	LS	\$0	1	\$0
	CURBS	LF	\$15		\$0
	SIDEWALKS	SY	\$25		\$0
	TRAFFIC CONTROL (10%)	LS	\$77,500	1	\$77,500
5I	OTHER ITEMS				
	SURVEYING (2%)	LS	\$15,520	1	\$15,520
	SPECIAL ITEMS	EST	\$0	1	\$0
	UTILITY RELOCATIONS	EST	\$0	1	\$0
6	MISCELLANEOUS (10%)	LS	\$14,000	1	\$14,000
7	CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 5)				\$929,580
8	MOBILIZATION (10%)				
	10% OF ITEM 7	EST	\$95,000	1	\$95,000
9	SUBTOTAL (ITEMS 7 & 8)				\$1,022,580
10	SALES TAX				
	9.8% OF ITEM 9	EST	\$100,500	1	\$100,500
11	AGREEMENTS (Utilities, WSP, etc.)				

SDOT Freight Master Plan Implementation Plan (2018-2023)

PROJECT: FMP Project No. 32: 8th Ave S/E Marginal Way/S Myrtle St Improvements



DESIGN ASSUMPTIONS:

- Lane extends from E Marginal Way to 10th Ave S
- Assumed 2 x 12' concrete lanes and 2 x 10' asphalt shoulders
- New storm drainage system will be installed

ESTIMATED TOTAL PROJECT COST:

\$6,757,000.00



Top-Down Cost Estimating Tool Tab B. Cost Estimate Summary

Project Name

Project Number

Prepared by

Date

Milestone

BUILD-UP ASSUMPTIONS

Baseline

Engineer's Estimate

Estimated Acquisition Cost

Escalation Schedule

	Year	Rate
Current	2017	-
Design Midpoint	2018	3.0%
Acquisition Midpoint	2019	5.6%
Construction Midpoint	2019	5.6%

Build-Up Rates

Construction Contingency	20%
Engineer's Est. Allowance	40%
Design Contingency	30%
Acquisition Contingency	30%
Construction Soft Cost Ratio	29%
Design Soft Cost Ratio	19%

BUILD-UP SUMMARY

	A	B	C = A + B	D	E = C + D
	Base Estimate	Contingency	Current-Year Cost	Midpoint Escalation	TOTAL
Contractor Cost (Hard Cost)					
Engineer's Estimate (EE)	2,555,400				
EE Allowance (40%)	1,022,160				
Estimated Contractor Cost (ECC)	3,577,560	715,512	4,293,072	238,912	4,531,984
Construction Admin. (Soft Cost)					
29% of \$3.6M ECC	1,037,492	207,498	1,244,991	69,285	1,314,275
Design (Soft Cost)					
19% of \$3.6M ECC	679,736	203,921	883,657	26,333	909,990
Acquisition Cost					
Estimated Acquisition Cost	0	0	0	0	0
Estimated Total Project Cost	\$ 5,294,789	\$ 1,126,931	\$ 6,421,720	\$ 334,530	\$ 6,756,250

Build-Up Notes

1. The Engineer's Estimate Allowance, Design Contingency, and Acquisition Contingency are determined by the selected
2. Escalation rates are based on IHS Global Insight indices.

Version 21 - Aug 2014

BASIS OF ESTIMATE NOTES AND CLARIFICATIONS

The design and construction soft costs used in this estimate are based on the historical averages of the following filter

PLANNING LEVEL OPINION OF COST SUMMARY - NO CONTINGENCY

Project Description	SDOT Freight Master Plan	Client	SDOT
Corridor Section	8th Ave S from E Marginal Way to 10th Ave S	Date	20 Apr
Location	SODO	Date of Cost Index	2017
		Calculated By/Entered By	KCM
		Checked By	VWW

FMP Project No. 52 8th Ave S/E Marginal Way/S Myrtle St Improvements

	ITEM	UNIT	ESTIMATED COST	UNIT QTY	COST
1	RIGHT OF WAY				
	RIGHT OF WAY (urban developed)	SF	\$45		\$0
	RIGHT OF WAY (urban undeveloped)	SF	\$20		\$0
	RELOCATIONS BUSINESSES	EA	\$900,000		\$0
	RELOCATIONS RESIDENCES	EA	\$250,000		\$0
	CONDEMNATION PROCEDURE	EA	\$100,000		\$0
	ADMINISTRATION (TITLES APPRAISALS ETC)	EA	\$25,000		\$0
	RIGHT OF WAY TOTAL:				\$0
1	CONSTRUCTION				
	PREPARATION/GRADING/DRAINAGE				
11	PREPARATION				
	CLEAR & GRUB DEMO	ACRE	\$10,000		\$0
	REMOVING EXISTING PAVEMENT	SY	\$15		\$0
	REMOVAL STRUCTURES & OBSTRUCTIONS	LS	\$10,000	1	\$10,000
12	EARTHWORK				
	ROADWAY EXCAVATION INCL HAUL	CY	\$40	2,700	\$108,000
	STRUCTURE EXCAVATION INCL HAUL	CY	\$25		\$0
	BORROW INCL HAUL	TON	\$15		\$0
	EMBANKMENT COMPACTION	CY	\$2		\$0
13	STORMWATER MITIGATION				
	RETENTION AND TREATMENT	SF	\$6		\$0
14	STORM SEWER				
	CATCH BASIN TYPE 1	EA	\$1,500	9	\$13,500
	CATCH BASIN TYPE 2	EA	\$5,000	1	\$5,000
	PLAIN CONC STORM SEWER PIPE 12 IN DIAM	LF	\$35		\$0
	PLAIN CONC STORM SEWER PIPE 18 IN DIAM	LF	\$80	1,680	\$132,000
	STRUCTURE EXCAVATION CL B	CY	\$20	1,500	\$25,000
2	STRUCTURE				
	CONCRETE BRIDGES	SF	\$150		\$0
	CONCRETE BRIDGES WIDENING	SF	\$200		\$0
	PEDESTRIAN BRIDGES	SF	\$250		\$0
	STEEL BRIDGES	SF	\$100		\$0
	BRIDGE ABUTMENT RETROFIT	SF	\$150		\$0
	RETAINING WALLS (Cast in Place)	SF	\$65		\$0
	RETAINING WALLS (Shot-Nail with Cast in Place Facing)	SF	\$150		\$0
	BRIDGE REMOVAL	SF	\$20		\$0
	NOISE WALLS	SF	\$25		\$0
3	SURFACING				
	ROADWAY CEM CONC HES (24 HR) 12 IN	SY	\$150	3,400	\$510,000
	HOT MIX ASPHALT	TON	\$180	1,700	\$306,000
	CRUSHED SURFACING	TON	\$45	1,900	\$85,500
4	ROADSIDE DEVELOPMENT				
	FENCING	LF	\$0		\$0
	SEEDING MULCHING & FERTILIZING	ACRE	\$1,200		\$0
	WETLAND MITIGATION	LS	\$0	1	\$0
	TEMPORARY WATER POLLUTION & EROSION CONTROL (5%)	LS	\$72,400	1	\$72,400
	LANDSCAPING	LS	\$7,500	1	\$7,500
5	TRAFFIC				
	GUARDRAIL	LF	\$18		\$0
	CONCRETE BARRIER	LF	\$50		\$0
	SIGNAL SYSTEMS	LS	\$0	1	\$0
	ILLUMINATION	LS	\$0	1	\$0
	PERMANENT STRIPING	LF	\$1	5,000	\$5,000
	SIGNING	LS	\$3,000	1	\$3,000
	CURBS	LF	\$25		\$0
	SIDEWALKS	SY	\$45		\$0
	REFURBISH RAILROAD CROSSING	LS	\$500,000	1	\$500,000
	TRAFFIC CONTROL (10%)	LS	\$20,700	1	\$20,700
51	OTHER ITEMS				
	SURVEYING (2%)	LS	\$24,200	1	\$24,200
	SPECIAL ITEMS	EST	\$0	1	\$0
	UTILITY RELOCATIONS	EST	\$0	1	\$0
6	MISCELLANEOUS (10%)	LS	\$152,400	1	\$152,400
7	CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)				\$2,115,700
8	MOBILIZATION (10%)				
	10% OF ITEM 7	EST	\$211,500	1	\$211,500
9	SUBTOTAL (ITEMS 7 & 8)				\$2,327,200
10	SALES TAX				

SDOT Freight Master Plan Implementation Plan (2018-2023)

PROJECT: FMP Project No. 35: Duwamish Local Freight Access Improvements Study



DESIGN ASSUMPTIONS:

- Data collection will be performed by a consultant.
- Study will include draft and final reports with recommendations for project prioritization.
- Estimated cost does not require SDOT top-down estimating tool
- Assumed \$100,000 per year for 5 years

ESTIMATED TOTAL PROJECT COST:

\$500,000.00

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	SDOT Freight Master Plan Implementation	Client:	SDOT
Corridor Section:	Southpark between 5th Ave S, Holden St, Kenyon St, and 8th Ave S	Date:	4/6/2017
Location:	Seattle	Date of Cost Index:	2015
		Calculated By/Entered By:	KCM
		Checked By:	VWW

FMP Project No. 35 Duwamish Local Freight Access Improvements Study

	ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.	Data Gathering				
	Freight Access Improvement Study	LS	\$500,000.00	1	\$500,000

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet Inc. does not guarantee or warrant the accuracy of this planning level estimate.

SDOT Freight Master Plan Implementation Plan (2018-2023)

PROJECT: FMP Project No. 36: S Spokane St Freight-Only Lanes Pilot



DESIGN ASSUMPTIONS:

- Lane extends from 6th Ave to E Marginal Way.
- Lane will need to be repaved.
- A new sign will be required at each intersection.
- No storm drainage will be altered

ESTIMATED TOTAL PROJECT COST:

\$5,849,000.00



Top-Down Cost Estimating Tool
Tab B. Cost Estimate Summary

Project Name
 Prepared by

Project Number
 Date
 Milestone

BUILD-UP ASSUMPTIONS

Baseline

Engineer's Estimate
 Estimated Acquisition Cost

Escalation Schedule

	Year	Rate
Current	2017	-
Design Midpoint	2018	3.0%
Acquisition Midpoint	2019	5.6%
Construction Midpoint	2019	5.6%

Build-Up Rates

Construction Contingency	20%
Engineer's Est. Allowance	40%
Design Contingency	30%
Acquisition Contingency	30%
Construction Soft Cost Ratio	29%
Design Soft Cost Ratio	19%

BUILD-UP SUMMARY

	A	B	C = A + B	D	E = C + D
	Base Estimate	Contingency	Current-Year Cost	Midpoint Escalation	TOTAL
Contractor Cost (Hard Cost)					
Engineer's Estimate (EE)	2,212,000				
EE Allowance (40%)	884,800				
Estimated Contractor Cost (ECC)	3,096,800	619,360	3,716,160	206,807	3,922,967
Construction Admin. (Soft Cost)					
29% of \$3.1M ECC	898,072	179,614	1,077,686	59,974	1,137,660
Design (Soft Cost)					
19% of \$3.1M ECC	588,392	176,518	764,910	22,794	787,704
Acquisition Cost					
Estimated Acquisition Cost	0	0	0	0	0
Estimated Total Project Cost	\$ 4,583,264	\$ 975,492	\$ 5,558,756	\$ 289,575	\$ 5,848,331

Build-Up Notes

1. The Engineer's Estimate Allowance, Design Contingency, and Acquisition Contingency are determined by the selected
2. Escalation rates are based on IHS Global Insight indices.

Version 21 - Aug 2014

BASIS OF ESTIMATE NOTES AND CLARIFICATIONS

The design and construction soft costs used in this estimate are based on the historical averages of the following filter

PLANNING LEVEL OPINION OF COST SUMMARY - NO CONTINGENCY

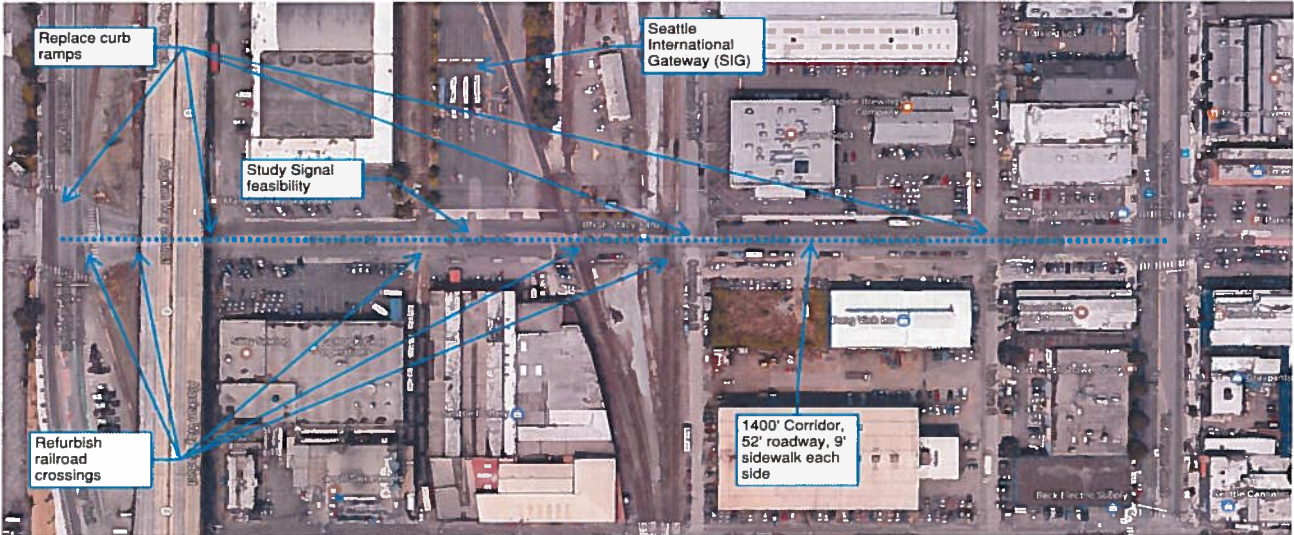
Project Description	SDOT Freight Master Plan	Client	SDOT
Corridor/Section	1st Ave to 5th Ave	Date	3 Apr
Location	SDOT	Date of Cost Index	2015
		Calculated By/Entered By	KCM
		Checked By	VWV

FMP Project No. 35 S Spokane St Freight Only Lanes Pilot

	ITEM	UNIT	ESTIMATED COST	UNIT QTY	COST
1	RIGHT OF WAY				
	RIGHT OF WAY (urban developed)	SF	\$45		\$0
	RIGHT OF WAY (urban undeveloped)	SF	\$20		\$0
	RELOCATIONS BUSINESSES	EA	\$300,000		\$0
	RELOCATIONS RESIDENCES	EA	\$250,000		\$0
	CONDEMNATION PROCEDURE	EA	\$100,000		\$0
	ADMINISTRATION (TITLES APPRAISALS ETC)	EA	\$25,000		\$0
	RIGHT OF WAY TOTAL				\$0
2	CONSTRUCTION				
1	PREPARATION/GRADING/DRAINAGE				
1.1	PREPARATION				
	CLEAR & GRUB DEMO	ACRE	\$10,000		\$0
	REMOVING EXISTING PAVEMENT	SY	\$15		\$0
	REMOVAL STRUCTURES & OBSTRUCTIONS	LS	\$10,000	1	\$10,000
1.2	EARTHWORK				
	ROADWAY EXCAVATION INCL HAUL	CY	\$40	3,200	\$128,000
	STRUCTURE EX CL A INCL HAUL	CY	\$25		\$0
	BORROW INCL HAUL	TON	\$15		\$0
	EMBANKMENT COMPACTION	CY	\$2		\$0
1.3	STORMWATER MITIGATION				
	DETENTION AND TREATMENT	SF	\$5		\$0
1.4	STORM SEWER				
	CATCH BASIN TYPE 1	EA	\$1,500		\$0
	CATCH BASIN TYPE 2	EA	\$3,000		\$0
	PLAIN CONC STORM SEWER PIPE 12 IN DIAM	LF	\$35		\$0
	PLAIN CONC STORM SEWER PIPE 18 IN DIAM	LF	\$60		\$0
	STRUCTURE EXCAVATION CL B	CY	\$20		\$0
2	STRUCTURE				
	CONCRETE BRIDGES	SF	\$150		\$0
	CONCRETE BRIDGES WIDENING	SF	\$200		\$0
	PEDESTRIAN BRIDGES	SF	\$250		\$0
	STEEL BRIDGES	SF	\$100		\$0
	BRIDGE ABUTMENT RETROFIT	SF	\$150		\$0
	RETAINING WALLS (Cast in Place)	SF	\$65		\$0
	RETAINING WALLS (Spill Nal with Cast in Place Facing)	SF	\$100		\$0
	BRIDGE REMOVAL	SF	\$20		\$0
	NOISE WALLS	SF	\$25		\$0
3	SURFACING				
	ROADWAY CEM CONC, HES (24 HR) 12 IN	SY	\$150	5,500	\$840,000
	HOT MIX ASPHALT	TON	\$180	1,400	\$252,000
	CRUSHED SURFACING	TON	\$40	200	\$8,000
4	ROADSIDE DEVELOPMENT				
	FENCING	LF	\$0		\$0
	SEEDING MULCHING & FERTILIZING	ACRE	\$1,200		\$0
	WETLAND MITIGATION	LS	NA	1	\$0
	TEMPORARY WATER POLLUTION & EROSION CONTROL (5%)	LS	\$81,500	1	\$81,500
	LANDSCAPING	LS	\$7,500	1	\$7,500
5	TRAFFIC				
	GUARDRAIL	LF	\$18		\$0
	CONCRETE BARRIER	LF	\$50		\$0
	SIGNAL SYSTEMS	LS	\$0	1	\$0
	ILLUMINATION	LS	\$0	1	\$0
	PERMANENT STRIPING	LF	\$1	12,000	\$12,000
	SIGNING	LS	\$2,000	1	\$2,000
	CURBS	LF	\$25	4,200	\$105,000
	SIDEWALKS	SY	\$45		\$0
	TRAFFIC CONTROL (10%)	LS	\$145,500	1	\$145,500
5.1	OTHER ITEMS				
	SURVEYING (2%)	LS	\$81,500	1	\$81,500
	SPECIAL ITEMS	EST	\$0	1	\$0
	UTILITY RELOCATIONS	EST	\$2	1	\$0
6	MISCELLANEOUS (10%)	LS	\$155,500	1	\$155,500
7	CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 5)				\$1,831,300
8	MOBILIZATION (10%)	EST	\$183,200	1	\$183,200
9	SUBTOTAL (ITEMS 7 & 8)				\$2,014,500
10	SALES TAX				

SDOT Freight Master Plan Implementation Plan (2018-2023)

PROJECT: FMP Project No. 43: S Hanford St Reconstruction and Traffic Study



DESIGN ASSUMPTIONS:

- Roadway will be repaved
- Study to determine signal and railroad adjustments will be performed by consultant
- Storm drainage will be replaced

ESTIMATED TOTAL PROJECT COST:

\$19,603,000.00



Top-Down Cost Estimating Tool Tab B. Cost Estimate Summary

Project Name **FMP Project No. 43: S Hanford St**

Prepared by **Pertee Inc.**

Project Number **NA**

Date **5/2/2017**

Milestone **10%**

BUILD-UP ASSUMPTIONS

Baseline

Engineer's Estimate **\$ 7,414,300**

Estimated Acquisition Cost

Escalation Schedule

	Year	Rate
Current	2017	-
Design Midpoint	2018	3.0%
Acquisition Midpoint	2019	5.6%
Construction Midpoint	2019	5.6%

Build-Up Rates

Construction Contingency	20%
Engineer's Est. Allowance	40%
Design Contingency	30%
Acquisition Contingency	30%
Construction Soft Cost Ratio	29%
Design Soft Cost Ratio	19%

BUILD-UP SUMMARY

	A	B	C = A + B	D	E = C + D
	Base Estimate	Contingency	Current-Year Cost	Midpoint Escalation	TOTAL
Contractor Cost (Hard Cost)					
Engineer's Estimate (EE)	7,414,300				
EE Allowance (40%)	2,965,720				
Estimated Contractor Cost (ECC)	10,380,020	2,076,004	12,456,024	693,186	13,149,210
Construction Admin. (Soft Cost)					
29% of \$10.4M ECC	3,010,206	602,041	3,612,247	201,024	3,813,271
Design (Soft Cost)					
19% of \$10.4M ECC	1,972,204	591,661	2,563,865	76,402	2,640,267
Acquisition Cost					
Estimated Acquisition Cost	0	0	0	0	0
Estimated Total Project Cost	\$ 15,362,430	\$ 3,269,706	\$ 18,632,136	\$ 970,613	\$ 19,602,748

Build-Up Notes

1. The Engineer's Estimate Allowance, Design Contingency, and Acquisition Contingency are determined by the selected level of
2. Escalation rates are based on IHS Global Insight indices.

Version 21 - Aug 2014

BASIS OF ESTIMATE NOTES AND CLARIFICATIONS

The design and construction soft costs used in this estimate are based on the historical averages of the following filter

PLANNING LEVEL OPINION OF COST SUMMARY - NO CONTINGENCY

Project Description	SDOT Freight Master Plan Implementation	Client	SDOT
Corridor Section	Harford St from East Marginal Way to 1st Ave S	Date	4/20/2017
Location	SODO	Date of Cost Index	2017
		Calculated By/Entered By	KCM
		Checked By	VWW

FMP Project No. 43 - 5 Harford St Reconstruction and Traffic Study

ITEM	UNIT	ESTIMATED COST	QTY	COST
CONSTRUCTION				
1	PREPARATION/GRADING/DRAINAGE			
1.1	PREPARATION			
	ACRE	\$10,000		\$0
	SY	\$15		\$0
	LS	\$0	1	\$0
1.2	EARTHWORK			
	CY	\$40	5,100	\$204,000
	CY	\$25		\$0
	TON	\$15		\$0
	CY	\$2		\$0
1.3	STORMWATER MITIGATION			
	SF	\$6		\$0
1.4	STORM SEWER			
	EA	\$1,500	42	\$63,000
	EA	\$3,000	11	\$33,000
	LF	\$35		\$0
	LF	\$80	540	\$43,200
	CY	\$20	1,000	\$20,000
2	STRUCTURE			
	SF	\$150		\$0
	SF	\$200		\$0
	SF	\$250		\$0
	SF	\$100		\$0
	SF	\$150		\$0
	SF	\$65		\$0
	SF	\$150		\$0
	SF	\$70		\$0
	SF	\$25		\$0
3	SURFACING			
	SY	\$150	8,500	\$1,275,000
	TON	\$180	2,200	\$396,000
	TON	\$40	2,100	\$84,000
4	ROADSIDE DEVELOPMENT			
	LF	\$0		\$0
	ACRE	\$1,200		\$0
	LS	\$0	1	\$0
	LS	\$271,100	1	\$271,100
	LS	\$0	1	\$0
5	TRAFFIC			
	LF	\$18		\$0
	LF	\$50		\$0
	LS	\$0	1	\$0
	LS	\$0	1	\$0
	LS	\$0	1	\$0
	LF	\$25	3,100	\$77,500
	EA	\$3,000	12	\$36,000
	SY	\$45	3,100	\$139,500
	LS	\$2,000,000	1	\$2,000,000
	LS	\$250,000	1	\$250,000
	LS	\$451,800	1	\$451,800
5.1	OTHER ITEMS			
	LS	\$50,400	1	\$50,400
	EST	\$0	1	\$0
	EST	\$0	1	\$0
6	MISCELLANEOUS (10%)			
	LS	\$558,100	1	\$558,100
7	CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 5)			
				\$5,138,500
8	MOBILIZATION (10%)			
	EST	\$513,900	1	\$513,900
9	SUBTOTAL (ITEMS 7 & 8)			
				\$5,652,500
10	SALES TAX			
	EST	\$551,800	1	\$551,800
11	AGREEMENTS (Utilities, WSP, etc.)			
	EST	\$0	1	\$0
12	SUBTOTAL (ITEMS 9 THRU 11)			
				\$7,414,300

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study and is supplied as a budgeting guide only. Perteet Inc does not guarantee or warrant the accuracy of this planning level estimate.

SDOT Freight Master Plan Implementation Plan (2018-2023)

PROJECT: FMP Project No. 45: West Marginal Way SW/ Chelan St SW Intersection Improvement



DESIGN ASSUMPTIONS:

- Signal timing is well understood, no study required
- Number of poles and signal heads will not change
- BNSF railroad signs will be preserved
- Signal control cabinet will be replaced
- Project does not involve hardscape improvements
- Pedestrian signals to be replaced

ESTIMATED TOTAL PROJECT COST:

\$1,364,000.00



Top-Down Cost Estimating Tool Tab B. Cost Estimate Summary

Project Name

Project Number

Prepared by

Date

Milestone

BUILD-UP ASSUMPTIONS

Baseline

Engineer's Estimate

Estimated Acquisition Cost

Escalation Schedule

	Year	Rate
Current	2017	-
Design Midpoint	2018	3.0%
Acquisition Midpoint	2019	5.6%
Construction Midpoint	2019	5.6%

Build-Up Rates

Construction Contingency	20%
Engineer's Est. Allowance	40%
Design Contingency	30%
Acquisition Contingency	30%
Construction Soft Cost Ratio	29%
Design Soft Cost Ratio	19%

BUILD-UP SUMMARY

	A	B	C = A + B	D	E = C + D
	Base Estimate	Contingency	Current-Year Cost	Midpoint Escalation	TOTAL
Contractor Cost (Hard Cost)					
Engineer's Estimate (EE)	515,800				
EE Allowance (40%)	206,320				
Estimated Contractor Cost (ECC)	722,120	144,424	866,544	48,224	914,768
Construction Admin. (Soft Cost)					
29% of \$.7M ECC	209,415	41,883	251,298	13,985	265,283
Design (Soft Cost)					
19% of \$.7M ECC	137,203	41,161	178,364	5,315	183,679
Acquisition Cost					
Estimated Acquisition Cost	0	0	0	0	0
Estimated Total Project Cost	\$ 1,068,738	\$ 227,468	\$ 1,296,205	\$ 67,524	\$ 1,363,729

Build-Up Notes

1. The Engineer's Estimate Allowance, Design Contingency, and Acquisition Contingency are determined by the selected
2. Escalation rates are based on IHS Global Insight indices.

Version 21 - Aug 2014

BASIS OF ESTIMATE NOTES AND CLARIFICATIONS

The design and construction soft costs used in this estimate are based on the historical averages of the following filter

PLANNING LEVEL OPINION OF COST SUMMARY - NO CONTINGENCY

Project Description	SDOT Freight Master Plan Implementation	Client	SDOT
Corridor/Section	West Marginal Way at Chelan St	Date	4/20/2017
Location	West Seattle	Date of Cost Index	2017
		Calculated By/Entered By	KCM
		Checked By	VWW

FMP Project No. 45 West Marginal Way SW/Chelan St SW Intersection Improvement

ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
CONSTRUCTION				
1	PREPARATION/GRADING/DRAINAGE			
11	PREPARATION			
	ACRE	\$10,000		\$0
	SY	\$15		\$0
	LS	\$0	1	\$0
12	EARTHWORK			
	CY	\$40		\$0
	CY	\$25		\$0
	TON	\$16		\$0
	CY	\$2		\$0
13	STORMWATER MITIGATION			
	SF	\$5		\$0
14	STORM SEWER			
	EA	\$1,500		\$0
	EA	\$3,000		\$0
	LF	\$55		\$0
	LF	\$80		\$0
	CY	\$20		\$0
2	STRUCTURE			
	SF	\$150		\$0
	SF	\$200		\$0
	SF	\$250		\$0
	SF	\$100		\$0
	SF	\$150		\$0
	SF	\$55		\$0
	SF	\$150		\$0
	SF	\$20		\$0
	SF	\$25		\$0
3	SURFACING			
	SF	\$150		\$0
	TON	\$180		\$0
	TON	\$40		\$0
4	ROADSIDE DEVELOPMENT			
	LF	\$0		\$0
	ACRE	\$1,200		\$0
	LS	\$0	1	\$0
	LS	\$19,100	1	\$19,100
	LS	\$0	1	\$0
5	TRAFFIC			
	LF	\$18		\$0
	LF	\$50		\$0
	LS	\$18,000	1	\$18,000
	LS	\$0	1	\$0
	LS	\$5,000	1	\$5,000
	LF	\$25		\$0
	EA	\$3,000		\$0
	SY	\$45		\$0
	LS	\$1,900	1	\$1,900
5.1	OTHER ITEMS			
	LS	\$19,100	1	\$19,100
	EST	\$0	1	\$0
	EST	\$0	1	\$0
6	MISCELLANEOUS (10%)			
	LS	\$18,900	1	\$18,900
7	CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)			
				\$427,000
8	MOBILIZATION (10%)			
	EST	\$42,700	1	\$42,700
9	SUBTOTAL (ITEMS 7 & 8)			
				\$469,700
10	SALES TAX			
	EST	\$45,100	1	\$45,100
11	AGREEMENTS (Utilities, WSP, etc.)			
	EST	\$0	1	\$0
12	SUBTOTAL (ITEMS 9 THRU 11)			
				\$515,800

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study and is supplied as a budgeting guide only. Perteet Inc. does not guarantee or warrant the accuracy of this planning level estimate.

SDOT Freight Master Plan Implementation Plan (2018-2023)

PROJECT: FMP Project No. 49: S Bailey St Channelization and Operation Improvements Study



DESIGN ASSUMPTIONS:

- Data collection will be performed by a consultant.
- Study will include draft and final reports with recommendations for project prioritization.
- Estimated cost does not require SDOT top-down estimating tool

ESTIMATED TOTAL PROJECT COST:

\$1,000,000.00

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description:	SDOT Freight Master Plan Implementation	Client:	SDOT
Corridor Section:	S Bailey St from Michigan St to Carleton Ave S	Date:	4/6/2017
Location:	Seattle	Date of Cost Index:	2017
		Calculated By/Entered By:	KCM
		Checked By:	VWW

FMP Project No. 49 S Bailey St Channelization and Operation Improvements Study

ITEM	UNIT	ESTIMATED UNIT		COST
		COST	QTY	
1. Data Gathering				
Freight Access Improvement Study	LS	\$1,000,000.00	1	\$1,000,000

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SDOT Freight Master Plan Implementation Plan (2018-2023)

PROJECT: FMP Project No. 55: West Seattle Bridge Access to Terminal 5 and 18



DESIGN ASSUMPTIONS:

Quantities estimated using the WSDOT Planning Level Cost Estimating Manual (2012)

ESTIMATED TOTAL PROJECT COST:

\$324,671,000.00



Top-Down Cost Estimating Tool Tab B. Cost Estimate Summary

Project Name **FMP Project No. 55:West Seattle Bridge**

Prepared by **Perteet Inc.**

Project Number **NA**

Date **5/2/2017**

Milestone **10%**

BUILD-UP ASSUMPTIONS

Baseline

Engineer's Estimate **\$ 122,799,200**

Estimated Acquisition Cost

Escalation Schedule

	Year	Rate
Current	2017	-
Design Midpoint	2018	3.0%
Acquisition Midpoint	2019	5.6%
Construction Midpoint	2019	5.6%

Build-Up Rates

Construction Contingency	20%
Engineer's Est. Allowance	40%
Design Contingency	30%
Acquisition Contingency	30%
Construction Soft Cost Ratio	29%
Design Soft Cost Ratio	19%

BUILD-UP SUMMARY

	A	B	C = A + B	D	E = C + D
	Base Estimate	Contingency	Current-Year Cost	Midpoint Escalation	TOTAL
Contractor Cost (Hard Cost)					
Engineer's Estimate (EE)	122,799,200				
EE Allowance (40%)	49,119,680				
Estimated Contractor Cost (ECC)	171,918,880	34,383,776	206,302,656	11,480,887	217,783,543
Construction Admin. (Soft Cost)					
29% of \$171.9M ECC	49,856,475	9,971,295	59,827,770	3,329,457	63,157,228
Design (Soft Cost)					
19% of \$171.9M ECC	32,664,587	9,799,376	42,463,963	1,265,407	43,729,370
Acquisition Cost					
Estimated Acquisition Cost	0	0	0	0	0
Estimated Total Project Cost	\$ 254,439,942	\$ 54,154,447	\$ 308,594,390	\$ 16,075,752	\$ 324,670,141

Build-Up Notes

1. The Engineer's Estimate Allowance, Design Contingency, and Acquisition Contingency are determined by the selected level of
2. Escalation rates are based on IHS Global Insight indices.

Version 21 - Aug 2014

BASIS OF ESTIMATE NOTES AND CLARIFICATIONS

The design and construction soft costs used in this estimate are based on the historical averages of the following filter

PLANNING LEVEL OPINION OF COST SUMMARY NO CONTINGENCY

Project Description	SDOT Freight Master Plan Implementation	Client	SDOT
Corridor Section	West Seattle Bridge over the Duwamish	Date	4/20/2017
Location	SDOT	Date of Cost Index	2017
		Created By/Entered By	KCM
		Checked By	VWW

FMP Project No. 55 West Seattle Bridge Access to Terminal 5 and 1B

	ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
1	RIGHT OF WAY				
	RIGHT OF WAY (Urban developed)	SF	\$45	50,000	\$2,250,000
	RIGHT OF WAY (Urban undeveloped)	SF	\$20	0	\$0
	RELOCATIONS - BUSINESSES	EA	\$500,000	7	\$2,500,000
	RELOCATIONS - RESIDENCES	EA	\$250,000	0	\$0
	CONDEMNATION PROCEDURE	EA	\$100,000	0	\$0
	ADMINISTRATION (TITLES, APPRAISALS, ETC.)	EA	\$25,000	0	\$0
	RIGHT OF WAY TOTAL				\$4,850,000.00
1	CONSTRUCTION				
	PREPARATION/GRADING/DRAINAGE				
1.1	PREPARATION				
	CLEAR & GRUB DEMO	ACRE	\$10,000		\$0
	REMOVING EXISTING PAVEMENT	SY	\$15		\$0
	REMOVAL STRUCTURES & OBSTRUCTIONS	LS	\$0	1	\$0
1.2	EARTHWORK				
	ROADWAY EXCAVATION INCL HAUL	CY	\$40	25,900	\$1,076,000
	STRUCTURE EXCAVATION INCL HAUL	CY	\$25		\$0
	BORROW INCL HAUL	TON	\$18	561,400	\$5,782,400
	EMBANKMENT COMPACTION	CY	\$2		\$0
1.3	STORMWATER MITIGATION				
	RETENTION AND TREATMENT	SF	\$6		\$0
1.4	STORM SEWER				
	CATCH BASIN TYPE 1	EA	\$1,500		\$0
	CATCH BASIN TYPE 2	EA	\$3,000		\$0
	PLAIN CONC. STORM SEWER PIPE 12" DIAM	LF	\$85		\$0
	PLAIN CONC. STORM SEWER PIPE 18" DIAM	LF	\$80		\$0
	STRUCTURE EXCAVATION CL B	CY	\$20		\$0
2	STRUCTURE				
	LANDER SCALAR	LS	\$0.00	1	\$0
	CONCRETE BRIDGES	SF	\$500	25,400	\$62,700,000
	CONCRETE BRIDGES WIDENING	SF	\$200		\$0
	PEDESTRIAN BRIDGES	SF	\$250		\$0
	STEEL BRIDGES	SF	\$100		\$0
	BRIDGE ABUTMENT RETROFIT	SF	\$150		\$0
	RETAINING WALLS (Cast in Place)	SF	\$65	27,800	\$1,794,000
	RETAINING WALLS (Soil Nail with Cast in Place Facing)	SF	\$150		\$0
	BRIDGE REMOVAL	SF	\$75		\$0
	NOISE WALLS	SF	\$25		\$0
3	SURFACING				
	PORTLAND CEMENT CONCRETE	SF	\$150		\$0
	HOT MIX ASPHALT	TON	\$180		\$0
	CRUSHED SURFACING	TON	\$40		\$0
4	ROADS DEVELOPMENT				
	FENCING	LF	\$0		\$0
	SEEDING, MULCHING & FERTILIZING	ACRE	\$1,200		\$0
	WETLAND MITIGATION	LS	\$0	1	\$0
	TEMPORARY WATER POLLUTION & EROSION CONTROL (16% LANDS CAPD)	LS	\$4,384,700	1	\$4,384,700
		LS	\$0	1	\$0
5	TRAFFIC				
	GUARD RAIL	LF	\$18		\$0
	CONCRETE BARRIER	LF	\$50		\$0
	SIGNAL SYSTEMS	LS	\$0	1	\$0
	ILLUMINATION	LS	\$0	1	\$0
	SIGNING	LS	\$1,725,000	1	\$1,725,000
	CURBS	LF	\$25		\$0
	PERPENDICULAR CURBRAMP	EA	\$8,000		\$0
	SIDEWALKS	SY	\$45		\$0
	TRAFFIC CONTROL (10%)	LS	\$7,407,800	1	\$7,407,800
5.1	OTHER ITEMS				
	SURVEYING (6%)	LS	\$4,384,700	1	\$4,384,700
	SPECIAL ITEMS	EST	\$0	1	\$0
	UTILITY RELOCATIONS	EST	\$0	1	\$0
6	MISCELLANEOUS (10%)	LS	\$8,915,500	1	\$8,915,500
7	CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)				\$98,070,100
8	MOBILIZATION (10%)	EST	\$9,807,100	1	\$9,807,100
9	SUBTOTAL (ITEMS 7 & 8)				\$107,877,200
10	SALES TAX				
	9.8% OF ITEM 9	EST	\$10,572,000	1	\$10,572,000
11	AGREEMENTS (Utilities, WSP, etc.)	EST	\$0	1	\$0
12	SUBTOTAL (ITEMS 9 THRU 11)				\$122,799,200

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Perteet Inc. does not guarantee or warrant the accuracy of this planning level estimate.

SDOT Freight Master Plan Implementation Plan (2018-2023)

PROJECT: FMP Project No. 56: SR99 Access to Terminal 5 and 18



DESIGN ASSUMPTIONS:

Quantities estimated using the WSDOT Planning Level Cost Estimating Manual (2012)

ESTIMATED TOTAL PROJECT COST:

\$435,926,000.00



Top-Down Cost Estimating Tool Tab B. Cost Estimate Summary

Project Name

Project Number

Prepared by

Date

Milestone

BUILD-UP ASSUMPTIONS

Baseline

Engineer's Estimate
Estimated Acquisition Cost

Escalation Schedule

	Year	Rate
Current	2017	-
Design Midpoint	2018	3.0%
Acquisition Midpoint	2019	5.6%
Construction Midpoint	2019	5.6%

Build-Up Rates

Construction Contingency	20%
Engineer's Est. Allowance	40%
Design Contingency	30%
Acquisition Contingency	30%
Construction Soft Cost Ratio	29%
Design Soft Cost Ratio	19%

BUILD-UP SUMMARY

	A	B	C = A + B	D	E = C + D
	Base Estimate	Contingency	Current-Year Cost	Midpoint Escalation	TOTAL
Contractor Cost (Hard Cost)					
Engineer's Estimate (EE)	164,879,100				
EE Allowance (40%)	65,951,640				
Estimated Contractor Cost (ECC)	230,830,740	46,166,148	276,996,888	15,415,071	292,411,959
Construction Admin. (Soft Cost)					
29% of \$230.8M ECC	66,940,915	13,388,183	80,329,098	4,470,371	84,799,468
Design (Soft Cost)					
19% of \$230.8M ECC	43,857,841	13,157,352	57,015,193	1,699,027	58,714,219
Acquisition Cost					
Estimated Acquisition Cost	0	0	0	0	0
Estimated Total Project Cost	\$ 341,629,495	\$ 72,711,683	\$ 414,341,178	\$ 21,584,468	\$ 435,925,647

Build-Up Notes

1. The Engineer's Estimate Allowance, Design Contingency, and Acquisition Contingency are determined by the selected level of
2. Escalation rates are based on IHS Global Insight indices.

Version 21 - Aug 2014

BASIS OF ESTIMATE NOTES AND CLARIFICATIONS

The design and construction soft costs used in this estimate are based on the historical averages of the following filter

PLANNING LEVEL OPINION OF COST SUMMARY - NO CONTINGENCY

Project Description	SDOT Freight Master Plan Implementation	Client	SDOT
Corridor Section	SR99 over the Duwamish	Date	4/20/2017
Location	SD00	Date of Cost Index	2017
		Calculated By/Entered By	KCM
		Checked By	VWW

FMP Project No. 56, SR99 Access to Terminal 5 and 1B

ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I RIGHT OF WAY				
RIGHT OF WAY (urban developed)	SF	\$45	690,000	\$40,050,000
RIGHT OF WAY (urban undeveloped)	SF	\$20	0	\$0
RELOCATIONS - BUSINESSES	EA	\$500,000	1	\$500,000
RELOCATIONS - RESIDENCES	EA	\$250,000	0	\$0
CONDEMNATION PROCEDURE	EA	\$100,000	0	\$0
ADMINISTRATION (TITLES APPROVALS ETC.)	EA	\$25,000	0	\$0
RIGHT OF WAY TOTAL				\$40,550,000.00
II CONSTRUCTION				
1 PREPARATION/GRADING/DRAINAGE				
1.1 PREPARATION				
CLEAR & GRUB DEMO	ACRE	\$10,000	1	\$10,000
REMOVING EXISTING PAVEMENT	SY	\$15	1	\$15
REMOVAL STRUCTURES & OBSTRUCTIONS	LS	\$0	1	\$0
1.2 EARTHWORK				
ROADWAY EXCAVATION INCL HAUL	CY	\$40	28,800	\$1,152,000
STRUCTURE EXCAVATION INCL HAUL	CY	\$25	0	\$0
BORROW INCL HAUL	TON	\$16	380,400	\$6,086,400
EMBANKMENT COMPACTION	CY	\$2	0	\$0
1.3 STORMWATER MITIGATION				
RETENTION AND TREATMENT	SF	\$6	0	\$0
1.4 STORM SEWER				
CATCH BASIN TYPE 1	EA	\$1,500	0	\$0
CATCH BASIN TYPE 2	EA	\$3,000	0	\$0
PLAIN CONC. STORM SEWER PIPE 12 IN. D.I.A.M.	LF	\$35	0	\$0
PLAIN CONC. STORM SEWER PIPE 18 IN. D.I.A.M.	LF	\$80	0	\$0
STRUCTURE EXCAVATION CL. B	CY	\$20	0	\$0
2 STRUCTURE				
LANDER SCALAR	LS	\$0.00	1	\$0
CONCRETE BRIDGES	SF	\$500	132,000	\$66,000,000
CONCRETE BRIDGES W/DEN. NG	SF	\$200	0	\$0
PEDESTRIAN BRIDGES	SF	\$250	0	\$0
STEEL BRIDGES	SF	\$100	0	\$0
BRIDGE ABUTMENT RETROFIT	SF	\$150	0	\$0
RETAINING WALLS (Cast-in Place)	SF	\$65	29,000	\$1,885,000
RETAINING WALLS (Sal. No. 1 with Cast-in Place Forming)	SF	\$150	0	\$0
BRIDGE REMOVAL	SF	\$75	0	\$0
NOISE WALLS	SF	\$25	0	\$0
3 SURFACING				
PORTLAND CEMENT CONCRETE	SF	\$150	0	\$0
HOT MIX ASPHALT	TON	\$180	0	\$0
CRUSHED SURFACING	TON	\$40	0	\$0
4 ROADSIDE DEVELOPMENT				
FENCING	LF	\$0	0	\$0
SEEDING, MULCHING & FERTILIZING	ACRE	\$1,200	0	\$0
WETLAND MITIGATION	LS	\$0	1	\$0
TEMPORARY WATER POLLUTION & EROSION CONTROL (16%)	LS	\$4,609,800	1	\$4,609,800
LANDSCAPING	LS	\$0	1	\$0
5 TRAFFIC				
GUARD RAIL	LF	\$18	0	\$0
CONCRETE BARRIER	LF	\$50	0	\$0
SIGNAL SYSTEMS	LS	\$0	1	\$0
ILLUMINATION	LS	\$0	1	\$0
SIGNING	LS	\$1,725,000	1	\$1,725,000
CURBS	LF	\$25	0	\$0
PERPENDICULAR CURB RAMP	EA	\$5,000	0	\$0
SIDEWALKS	SY	\$43	0	\$0
TRAFFIC CONTROL (10%)	LS	\$7,682,900	1	\$7,682,900
6 OTHER ITEMS				
SURVEYING (16%)	LS	\$4,609,800	1	\$4,609,800
SPECIAL ITEMS	EST	\$0	1	\$0
UTILITY RELOCATIONS	EST	\$0	1	\$0
7 MISCELLANEOUS (10%)				
	LS	\$9,375,100	1	\$9,375,100
8 CONSTRUCTION SUBTOTAL (ITEMS 1 THRU 6)				
				\$103,104,000
9 MOBILIZATION (10%)				
10% OF ITEM 7	EST	\$10,310,400	1	\$10,310,400
10 SUBTOTAL ITEMS 7 & 9				
				\$113,414,400
11 SALES TAX				
9.8% OF ITEM 9	EST	\$11,114,700	1	\$11,114,700
12 AGREEMENTS (Utilities, WSP, etc.)				
	EST	\$0	1	\$0
13 SUBTOTAL (ITEMS 9 THRU 11)				
				\$124,529,100

The above opinion of cost is a planning level estimate only. It is based on best available information and scope at the time, not on the results of a detailed engineering study, and is supplied as a budgeting guide only. Peritec Inc. does not guarantee or warrant the accuracy of this planning level estimate.

SDOT Freight Master Plan Implementation Plan (2018-2023)

PROJECT: FMP Project No. 66: S Industrial Way Reconstruction and Operational Improvement Study



DESIGN ASSUMPTIONS:

- Data collection will be performed by a consultant.
- Study will include draft and final reports with recommendations for project prioritization.
- Estimated cost does not require SDOT top-down estimating tool

ESTIMATED TOTAL PROJECT COST:

\$300,000.00

PLANNING LEVEL OPINION OF COST SUMMARY

Project Description	SDOT Freight Master Plan Implementation	Client	SDOT
Corridor Section	Industrial Way from Airport Way to 4th Ave S	Date	4/18/2017
Location	Seattle	Date of Cost Index	2017
		Calculated By/Entered By	KCM
		Checked By	VWW

FMP Project No. 66 S Industrial Way Reconstruction and Operational Improvement Study

	ITEM	UNIT	ESTIMATED UNIT COST	QTY	COST
I.	Data Gathering				
	Railroad Crossing Study	LS	\$100,000.00	1	\$100,000
	6th Ave S Crossing Study	LS	\$200,000.00	1	\$200,000
	STUDY TOTAL				\$300,000

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Project Number	Project Name	Subtotal	Bid Item Total	ROW	Total	Estimate Range	
						Lower bound (-25%)	Upper bound (+25%)
7(E)	15th Ave W Spot Improvements at W Emerson St	\$ 8,000.00	\$ 8,000.00	\$ -	\$ 8,000.00	\$ 6,000.00	\$ 10,000.00
7(D)	15th Ave W Spot Improvements at W Drava St and W Emerson St	\$ 100,000.00	\$ 130,000.00	\$ -	\$ 130,000.00	\$ 104,000.00	\$ 156,000.00
8	15th Ave NW / NW Market St Intersection Improvement	\$ 148,000.00	\$ 231,000.00	\$ -	\$ 231,000.00	\$ 184,000.00	\$ 278,000.00
13	NW Market St / Leary Way NW / N 28th St Improvements	\$ 85,000.00	\$ -	\$ -	\$ 85,000.00	\$ 52,000.00	\$ 78,000.00
14	Mobility Improvements along NW Market St between 8th Ave NW and Stone Way N	\$ 85,000.00	\$ -	\$ -	\$ 85,000.00	\$ 52,000.00	\$ 78,000.00
16	Intersection Improvements at 4th Ave N, Westdler Ave N, Dexter Ave N, and Nelson St	\$ 3,072,000.00	\$ 4,871,000.00	\$ 2,204,000.00	\$ 7,076,000.00	\$ 5,620,000.00	\$ 8,430,000.00
17	Intersection Improvements at 8th Ave NE and NE 4th St	\$ 1,472,000.00	\$ 2,310,000.00	\$ -	\$ 2,310,000.00	\$ 1,848,000.00	\$ 2,772,000.00
37	S Holgate St Real Crossing Improvements (S Holgate St from Occidental Ave S to 4th Ave S)	\$ 2,317,000.00	\$ 3,637,000.00	\$ -	\$ 3,637,000.00	\$ 2,909,000.00	\$ 4,365,000.00
48	Alport Way S / S Edmunds St Intersection Improvement	\$ 733,000.00	\$ 1,150,000.00	\$ -	\$ 1,150,000.00	\$ 920,000.00	\$ 1,380,000.00
50	16th Ave S and East Marginal Way S Intersection Improvements	\$ 313,000.00	\$ 480,000.00	\$ 13,000.00	\$ 493,000.00	\$ 392,000.00	\$ 588,000.00
52	S Massachusetts St Rebuild (locally used - Colorado Ave S to 1st Ave S)	\$ 1,891,000.00	\$ 2,968,000.00	\$ -	\$ 2,968,000.00	\$ 2,374,000.00	\$ 3,562,000.00
53	Diagonal Ave St / S Oregon St / Denver Ave S Reconstruction (East Marginal Way (SR 99) to Union Pacific Argo Yard)	\$ 4,073,000.00	\$ 6,393,000.00	\$ 100,000.00	\$ 6,493,000.00	\$ 5,194,000.00	\$ 7,792,000.00
59	S Holden St Reconstruction	\$ 2,839,000.00	\$ 4,458,000.00	\$ -	\$ 4,458,000.00	\$ 3,564,000.00	\$ 5,348,000.00
60	8th Ave S Reconstruction	\$ 2,812,000.00	\$ 4,570,000.00	\$ -	\$ 4,570,000.00	\$ 3,656,000.00	\$ 5,484,000.00
83	SW Kitchikan Way Reconstruction	\$ 731,000.00	\$ 1,147,000.00	\$ -	\$ 1,147,000.00	\$ 917,000.00	\$ 1,377,000.00

Project Name
15th Ave W Spot Improvements at W Emerson St

Description

The W Emerson St ramp over 15th Ave W serves trucks going to and from W Nickerson St. This component includes moving the centerline on the ramp to provide a greater turning radius for trucks and making adjustments to the stop bars channelization at the intersection on the west side of the ramp.

Scope Assumptions

- 1-Assume this is done by City crews
- 2-Assume 1 day of work

Item	Unit	Unit Cost	Quantity	Cost	Notes
REMOVE PAVEMENT MARKING	LF	\$1.00	390.00	\$390.00	
PAVEMENT MARKING, PAINT, 8 IN STRIPE	LF	\$6.00	418.13	\$2,498.78	
		Subtotal		\$2,888.78	
CONSTRUCTION SURVEYING	%	1/2 day 2 man crew		\$1,000.00	
MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL INCLUDING FLAGGING	%	1 day, \$2000/day		\$2,000.00	
		Subtotal		\$5,888.78	
30% DESIGN ALLOWANCE	%			\$1,766.03	
		Bid Item Total		\$8,000.00	

Project Name
 15th Ave W Spot Improvements at W Dravus St and W Emerson St

Description
 W Dravus St is used by trucks of all sizes, including overlegal vehicles unable to pass underneath the bridge on 15th Ave W. Northbound trucks have particular difficulty turning left onto W Dravus St from the off-ramp. This component of the project includes upgrading signal timing and hardware at the ramp terminals to ensure vehicle queues on the bridge clear to allow trucks adequate space to turn at the intersection. This project can be bundled with Ballard Bridge Access improvements

Scope Assumptions
 1-Assume 2 new signal cabinets

Item	Unit	Unit Cost	Quantity	Cost	Notes
OWNER FURNISHED TRAFFIC CONTROL CABINET	EA	\$50,000.00	2.00	\$100,000.00	
		Subtotal		\$100,000.00	
30% DESIGN ALLOWANCE	%			\$30,000.00	
		Bid Item Total		\$130,000.00	

Project Name
15th Ave NW / NW Market St Intersection Improvement

Description
Improve southeast corner curb radius, which would impact existing signal equipment.

- Scope Assumptions**
1. Remove and relocate the signal cabinet.
 2. Remove and relocate the curb, sidewalk, and ramps.
 3. Trenching for conduit and hand hole relocations.
 4. Assume 1 new CB
 5. Assume minor roadway pavement removal

Item	Unit	Unit Cost	Quantity	Cost	Notes
CLEARING & GRUBBING	SF	\$1.00	200.00	\$200.00	
REMOVE PAVEMENT	SY	\$27.50	10.00	\$275.00	
REMOVE FOUNDATION, STREET LIGHT POLE	EA	\$1,119.00	1.00	\$1,119.00	
REMOVE CEM CONC SIDEWALK	SY	\$11.00	363.19	\$3,995.09	
REMOVE POLE, STREET LIGHT	EA	\$742.00	2.00	\$1,484.00	
REMOVE POST, TRAFFIC SIGN	EA	\$336.00	1.00	\$336.00	
ROADWAY CEM CONC, 12 IN	SY	\$121.00	103.89	\$12,570.69	
CATCH BASIN PERKFILTER - 4-18" CARTRIDGE	EA	\$22,889.00	1.00	\$22,889.00	
PIPE, CB CONN, PVC, 8 IN	LF	\$59.00	20.00	\$1,180.00	
BEDDING, CL B, 8 IN PIPE	LF	\$11.00	20.00	\$220.00	
TEE, 8 IN, CUT-IN EXISTING CONC PIPE	EA	\$1,237.00	1.00	\$1,237.00	
CURB, CEM CONC	LF	\$24.00	150.88	\$3,616.32	
CURB RAMP, NON-STANDARD	SY	\$390.00	8.00	\$3,120.00	
SIDEWALK, CEM CONC	SY	\$68.00	259.30	\$17,113.80	
DETECTABLE WARNING PLATE	SF	\$60.00	2.00	\$120.00	
POST, TRAFFIC SIGN	EA	\$247.00	1.00	\$247.00	
PAVEMENT MARKING, PAINT, 4 IN STRIPE	LF	\$3.00	100.00	\$300.00	
OWNER FURNISHED TRAFFIC CONTROL CABINET	EA	\$50,000.00	1.00	\$50,000.00	
SIGNAL WIRING, LOCATION	LS	\$5,000.00	1.00	\$5,000.00	
PEDESTRIAN PUSH-BUTTON POST	EA	\$919.00	1.00	\$919.00	
MAST ARM, 31 FT TO 40 FT	EA	\$2,622.00	1.00	\$2,622.00	
FOUNDATION, TRAFFIC SIGNAL CONTROL, CAB, TYPE III	EA	\$6,943.00	1.00	\$6,943.00	
FOUNDATION, STREET LIGHT POLE	EA	\$1,715.00	2.00	\$3,430.00	
FOUNDATION, PEDESTRIAN PUSH BUTTON POST	EA	\$711.00	1.00	\$711.00	
FOUNDATION, POLE, MAST ARM 31 FT TO 40 FT	EA	\$4,596.00	1.00	\$4,596.00	
CONDUIT, PVC, 2 IN	LF	\$13.21	50.00	\$660.50	
TRENCHING, CONDUIT	LF	\$14.00	50.00	\$700.00	
HANDHOLE, TYPE 2	EA	\$700.00	2.00	\$1,400.00	
		Subtotal		\$147,004.40	
CONSTRUCTION SURVEYING	%	.75 percent		\$1,102.53	
MOBILIZATION	%	10 percent		\$14,700.44	
MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL INCLUDING FLAGGING	%	8 percent		\$11,760.35	
CONSTRUCTION STORMWATER & EROSION CONTROL PLAN (CSECP)	%	2 percent		\$2,940.09	
		Subtotal		\$177,507.81	
30% DESIGN ALLOWANCE	%			\$53,252.34	
		Bid Item Total		\$231,000.00	

Project Name
NW Market St / Leary Way NW / N 36th St Improvements

Description
Reconstruct and make operational/ITS improvements to Leary Way NW corridor to facilitate freight movement. This project would coordinate specific truck operational improvements with the BINMIC Truck Route Improvements. This is effectively acknowledgement of a need for larger corridor study as well as identifying possible improvements needed to support BINMIC during/after trail improvements. No specifics are noted as far as I remember.

- Scope Assumptions**
1. Work is a 4 mile long corridor study by a consultant.
 2. Assume data collection is required.
 3. Assume a VISSIM model for existing and future conditions
 4. Draft and final report

Item	Unit	Unit Cost	Quantity	Cost	Notes
CORRIDOR STUDY				\$65,000.00	

Project Name

Mobility improvements along NW Market St between 8th Ave NW and Stone Way N

Description

Restrict left turns at non-critical intersections to improve east/ west mobility for freight. Need to assume a particular number of locations may have medians added, signage, and raised curbs to prevent left turns. May want to identify specific intersections where this may occur.

Scope Assumptions

1. Work is a corridor study by a consultant to determine where left turns should be restricted.
2. Assume some VISSIM modeling required.
3. Draft and final report

Item	Unit	Unit Cost	Quantity	Cost	Notes
CORRIDOR STUDY				\$65,000.00	

Project Name
Intersection Improvements at 4th Ave N, Westlake Ave N, Dexter Ave N, and Nickerson St

Description
Evaluate the intersection of 4th Ave N, Westlake Ave N, Dexter Ave N, and Nickerson St to improve freight mobility. Add one lane on Dexter Ave (NB), Add one lane on Nickerson St. (WB), Add bike lane on Nickerson St. (WB), Add bike lane on 4th Ave N (North of intersection before the Fremont Bridge) (NB), ROW Acquisition

- Scope Assumptions**
1. Assume full pavement removal and replacement.
 2. Assume storm system upgrades required.
 3. Assume allowance for new signage and signal
 4. Assume 8 new light poles are installed.
 5. Assume wall height is 10-foot average

Item	Unit	Unit Cost	Quantity	Cost	Notes
RETAINING WALL	SF	\$75.00	1620	\$121,500.00	
CLEARING & GRUBBING	SF	\$1.00	1176	\$1,175.78	
REMOVE PAVEMENT	SY	\$27.50	12575	\$345,825.15	Total Existing Pavement
REMOVE CEM CONC SIDEWALK	SY	\$11.00	1158	\$12,738.38	
REMOVE FOUNDATION, STREET LIGHT POLE	EA	\$1,119.00	3	\$3,357.00	
REMOVE PAVEMENT MARKING	LF	\$1.00	3369	\$3,369.20	
REMOVE LUMINAIRE AND BRACKET ARM	EA	\$190.00	5	\$950.00	
REMOVE POLE, STREET LIGHT	EA	\$742.00	5	\$3,710.00	
REMOVE POST, TRAFFIC SIGN	EA	\$336.00	2	\$672.00	
REMOVE SIGN, TRAFFIC	EA	\$262.00	2	\$524.00	
BUILDING DEMOLITION	SQFT	\$2.50	5370	\$13,425.90	
COMMON EXCAVATION	CY	\$50.47	100	\$5,047.00	
SAFETY SYSTEMS IN TRENCH EXCAVATION, MIN. BID = \$0.80 per SF	SF	\$3.00		\$0.00	
MINERAL AGGREGATE, TYPE 2	TN	\$40.00	2175	\$87,008.06	Added New Pavement
ROADWAY CEM CONC, 12 IN	SY	\$121.00	1176	\$142,289.93	Added New Pavement
ROADWAY CEM CONC, 12 IN	SY	\$121.00	12575	\$1,521,630.66	Total Existing Pavement
CATCH BASIN PERKFILTER - 4-18" CARTRIDGE	EA	\$22,889.00	6	\$137,334.00	
MAINTENANCE HOLE, TYPE 204A	EA	\$4,292.00	2	\$8,584.00	
CATCH BASIN PERKFILTER - 4-18" CARTRIDGE	EA	\$22,889.00	6	\$137,334.00	
MAINTENANCE HOLE, TYPE 204A	EA	\$4,292.00	2	\$8,584.00	
PIPE, CB CONN, PVC, 8 IN	LF	\$59.00	100	\$5,900.00	
BEDDING, CL B, 8 IN PIPE	LF	\$11.00	100	\$1,100.00	
TEE, 8 IN, CUT-IN EXISTING CONC PIPE	EA	\$1,237.00	6	\$7,422.00	
LANDSCAPING Allowance	SF	\$50,000.00	1	\$50,000.00	
CURB, CEM CONC	LF	\$24.00	1778	\$42,662.78	
SIDEWALK, CEM CONC	SY	\$66.00	958	\$63,200.51	
CURB RAMP 422A	SY	\$1,575.00	8	\$12,600.00	
DETECTABLE WARNING PLATE	SF	\$60.00	8	\$480.00	
DRIVEWAY, CEM CONC, 8 IN	SY	\$100.00	30	\$3,000.00	
PERMANENT SIGNAGE ALLOWANCE	LS	\$20,000.00	1	\$20,000.00	
PERMANENT STRIPING ALLOWANCE	EA	\$10,000.00	1	\$10,000.00	
LUMINAIRE, LED, 120 W	EA	\$3,770.00	8	\$30,160.00	
NEW SIGNAL ALLOWANCE	EA	\$200,000.00	1	\$200,000.00	
POLE, STEEL LIGHTING 25 to 35 FT	EA	\$3,800.00	8	\$30,400.00	
FOUNDATION, STREET LIGHT POLE	EA	\$1,715.00	8	\$13,720.00	
BRACKET ARM, WFS, 8-FT	EA	\$1,295.00	8	\$10,360.00	
CONDUIT, PVC, 2 IN	LF	\$13.21	400	\$5,284.00	
TRENCHING, CONDUIT	LF	\$14.00	200	\$2,800.00	
HANDHOLE, TYPE 2	EA	\$700.00	10	\$7,000.00	
		Subtotal		\$3,071,128.36	
CONSTRUCTION SURVEYING	%	.75 percent		\$23,033.46	
MOBILIZATION	%	10 percent		\$307,112.84	
MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL INCLUDING FLAGGING	%	8 percent		\$245,890.27	
CONSTRUCTION STORMWATER & EROSION CONTROL PLAN (CSECP)	%	2 percent		\$61,422.57	
		Subtotal		\$3,708,387.49	
30% DESIGN ALLOWANCE	%			\$1,112,516.25	
		Bid Item Total		\$4,820,903.74	
RIGHT OF WAY				\$2,203,500.00	
		Total		\$7,024,403.74	

Project Name
Intersection Improvements at 6th Ave NE and NE 40th St

Description
Eliminate the height restriction and turning movement conflicts on 6th Ave NE at the Burke-Gilman Trail bridge. Bridge rebuild is a possibility.

Scope Assumptions
1-Raise the Bridge to 16ft clearance

Item	Unit	Unit Cost	Quantity	Cost	Notes
REMOVE BRIDGE	SF	\$50.00	395	\$19,750.00	
BRIDGE RECONSTRUCTION	SF	\$500.00	395	\$197,500.00	
RETAINING WALL	SF	\$75.00	1852	\$138,912.00	EW (0-16ft) Wall Southside
RETAINING WALL	SF	\$75.00	1827	\$137,022.00	EW (0-16ft) Wall Northside
REMOVE WALL	SF	\$50.00	1142	\$57,092.50	EW (0-10ft) Wall Northside
RETAINING WALL	SF	\$75.00	2501	\$187,584.47	SN 16ft Wall
REMOVE WALL	SF	\$50.00	1563	\$78,160.20	SN 10ft Wall
REMOVE PAVEMENT	SY	\$27.50	1563	\$42,992.43	Roadway Pavement
REMOVE PAVEMENT	SY	\$27.50	742	\$20,407.75	Trail Pavement
REMOVE CEM CONC SIDEWALK	SY	\$11.00	194	\$2,135.61	
REMOVE LUMINAIRE AND BRACKET ARM	EA	\$190.00	1	\$190.00	
REMOVE POLE, STREET LIGHT	EA	\$742.00	1	\$742.00	
REMOVE POST, TRAFFIC SIGN	EA	\$336.00	6	\$2,016.00	
REMOVE SIGN, TRAFFIC	EA	\$262.00	1	\$262.00	
MINERAL AGGREGATE, TYPE 17	TN	\$33.93	1373	\$46,581.99	Trail Grading
MINERAL AGGREGATE, TYPE 2	TN	\$40.00	1373	\$54,915.40	Trail Pavement
MINERAL AGGREGATE, TYPE 2	TN	\$40.00	2892	\$115,688.73	Roadway Pavement
ROADWAY CEM CONC, 12 IN	SY	\$121.00	742	\$89,794.10	Trail Pavement
ROADWAY CEM CONC, 12 IN	SY	\$121.00	1563	\$189,166.71	Roadway Pavement
CATCH BASIN PERFILTER - 4-18" CARTRIDGE	EA	\$22,889.00	2	\$45,778.00	
PIPE, CB CONN, PVC, 8 IN	LF	\$59.00	100	\$5,900.00	
BEDDING, CL B, 8 IN PIPE	LF	\$11.00	100	\$1,100.00	
TEE, 8 IN, CUT-IN EXISTING CONC PIPE	EA	\$1,237.00	2	\$2,474.00	
CURB, CEM CONC	LF	\$24.00	441	\$10,583.51	
SIDEWALK, CEM CONC	SY	\$66.00	194	\$12,813.65	
SIGN, TRAFFIC	SF	\$427.00	6	\$2,562.00	
SIGN, STREET DESIGNATION	EA	\$819.00	1	\$819.00	
POST, TRAFFIC SIGN	EA	\$247.00	6	\$1,482.00	
POST, STREET NAME	EA	\$197.00	1	\$197.00	
PAVEMENT MARKING, PAINT, 8 IN STRIPE	LF	\$6.00	240	\$1,442.71	
LUMINAIRE, LED, 120 W	EA	\$3,770.00	1	\$3,770.00	
FOUNDATION, STREET LIGHT POLE	EA	\$1,715.00	1	\$1,715.00	
		Subtotal		\$1,471,350.77	
CONSTRUCTION SURVEYING	%	.75 percent		\$11,035.13	
MOBILIZATION	%	10 percent		\$147,135.08	
MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL INCLUDING FLAGGING	%	8 percent		\$117,708.08	
CONSTRUCTION STORMWATER & EROSION CONTROL PLAN (CSECP)	%	2 percent		\$29,427.02	
		Subtotal		\$1,776,656.08	
30% DESIGN ALLOWANCE	%			\$532,696.82	
		Bid Item Total		\$2,310,000.00	

Project Name
S Holgate St Rail Crossing Improvements (S Holgate St from Occidental Ave S to 4th Ave S)

Description
Amtrak is anticipated to install new quad gates and improve pavement at the railroad crossings, while SDOT will be installing ITS equipment to inform the public about train crossing delays and provide dynamic signage to identify alternative routes. This project would rebuild the pavement to Heavy Haul route requirements, improve channelization and signage, add new curb/gutter, and provide sidewalks along the south side outside the immediate crossing areas.

- Scope Assumptions**
1. Remove and replace pavement.
 2. Construct new sidewalk.
 3. Amtrak is anticipated to install new quad gates and improve pavement at the railroad crossings
 4. No Curb replacement between 3rd and 4th only concrete panel replacement

Item	Unit	Unit Cost	Quantity	Cost	Notes
REMOVE PAVEMENT	SY	\$27.50	5557	\$152,812.52	
MINERAL AGGREGATE, TYPE 2	TN	\$40.00	10280	\$411,218.00	
ROADWAY CEM CONC, 12 IN	SY	\$121.00	5557	\$672,397.00	
CATCH BASIN PERKFILTER - 4-18" CARTRIDGE	EA	\$22,889.00	6	\$137,334.00	
PIPE, CB CONN, PVC, 8 IN	LF	\$59.00	100	\$5,900.00	
BEDDING, CL B, 8 IN PIPE	LF	\$11.00	100	\$1,100.00	
TEE, 8 IN, CUT-IN EXISTING CONC PIPE	EA	\$1,237.00	8	\$9,896.00	
LANDSCAPING	SF	\$25.00	21340	\$533,500.28	
CURB, CEM CONC	LF	\$24.00	2073	\$49,752.37	
CURB RAMP 422A	SY	\$1,575.00	8	\$12,600.00	
MEDIAN, CEM CONC	SY	\$66.00	915	\$60,380.10	
SIDEWALK, CEM CONC	SY	\$66.00	1418	\$93,578.38	
DRIVEWAY, CEM CONC, 8 IN	SY	\$100.00	883	\$68,319.01	
PAVEMENT MARKING, PAINT, 8 IN STRIPE	LF	\$6.00	2100	\$12,600.00	
POLE, STEEL LIGHTING 25 to 35 FT	EA	\$3,800.00	8	\$30,400.00	
FOUNDATION, STREET LIGHT POLE	EA	\$1,715.00	8	\$13,720.00	
BRACKET ARM, WFS, 8-FT	EA	\$1,295.00	8	\$10,360.00	
PERMANENT SIGNAGE ALLOWANCE	LS	\$20,000.00	1	\$20,000.00	
PERMANENT STRIPING ALLOWANCE	EA	\$10,000.00	1	\$10,000.00	
CONDUIT, PVC, 2 IN	LF	\$13.21	400	\$5,284.00	
TRENCHING, CONDUIT	LF	\$14.00	200	\$2,800.00	
HANDHOLE, TYPE 2	EA	\$700.00	4	\$2,800.00	
		Subtotal		\$2,316,751.88	
CONSTRUCTION SURVEYING	%	.75 percent		\$17,375.64	
MOBILIZATION	%	10 percent		\$231,675.17	
MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL INCLUDING FLAGGING	%	8 percent		\$185,340.13	
CONSTRUCTION STORMWATER & EROSION CONTROL PLAN (CSECP)	%	2 percent		\$46,335.03	
		Subtotal		\$2,797,477.62	
30% DESIGN ALLOWANCE	%			\$839,243.29	
		Bid Item Total		\$3,637,000.00	

Project Name
 Airport Way S / S Edmunds St Intersection Improvement

Description
 Monitor and evaluate for future signal warrants and address geometric issues. SW corner radius needs to be made larger, and ramps would need to be installed at least on SW and NW corners (NW may or may not have ramp installed). Elevation issue with driveway on S Edmunds west of Airport Way S. Yes on curb ramp widening. Signal would need a warrant analysis.

- Scope Assumptions**
1. Assume pavement removed and replaced with 12" Concrete
 2. Assume 2 new storm filter catch basins
 3. Assume new signal is warranted

Item	Unit	Unit Cost	Quantity	Cost	Notes
REMOVE PAVEMENT	SY	\$27.50	1709.22	\$47,003.63	
MINERAL AGGREGATE, TYPE 2	TN	\$40.00	3660.28	\$146,411.19	
ROADWAY CEM CONC, 12 IN	SY	\$121.00	1978.53	\$239,402.08	
CATCH BASIN PERKFILTER - 4-18" CARTRIDGE	EA	\$22,889.00	2.00	\$45,778.00	
PIPE, CB CONN, PVC, 8 IN	LF	\$59.00	100.00	\$5,900.00	
BEDDING, CL B, 8 IN PIPE	LF	\$11.00	100.00	\$1,100.00	
TEE, PVC, 8 IN	EA	\$113.00		\$0.00	
TEE, 8 IN, CUT-IN EXISTING CONC PIPE	EA	\$1,237.00	2.00	\$2,474.00	
LANDSCAPING	SF	\$25.00	28.45	\$711.25	
CURB, CEM CONC	LF	\$24.00	870.80	\$20,899.20	
SIDEWALK, CEM CONC	SY	\$66.00	432.33	\$28,533.80	
CURB RAMP 422A	SY	\$1,575.00	2.00	\$3,150.00	
DETECTABLE WARNING PLATE	SF	\$60.00	20.00	\$1,200.00	
DRIVEWAY, CEM CONC, 8 IN	SY	\$100.00	315.11	\$31,511.36	
SIGNAGE	SF	\$5,000.00	1.00	\$5,000.00	
PAVEMENT MARKING, PAINT, 8 IN STRIPE	LF	\$6.00	559.61	\$3,357.66	
SIGNAL ALLOWANCE	EA	\$150,000.00	1.00	\$150,000.00	
			Subtotal	\$732,432.17	
CONSTRUCTION SURVEYING	%	.75 percent		\$5,493.24	
MOBILIZATION	%	10 percent		\$73,243.22	
MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL INCLUDING FLAGGING	%	8 percent		\$58,594.57	
CONSTRUCTION STORMWATER & EROSION CONTROL PLAN (CSECP)	%	2 percent		\$14,648.64	
			Subtotal	\$884,411.84	
30% DESIGN ALLOWANCE	%			\$265,323.55	
			Bid Item Total	\$1,150,000.00	

Project Name
18th Ave S and East Marginal Way S Intersection Improvements

Description
Improve NB right turn radius

- Scope Assumptions**
1. ROW acquisition is needed.
 2. No lane narrowing on EMW is feasible.
 3. Project will remove pavement, landscaping and build a new right turn with traffic island
 4. Pedestrian signals will be added for N-S movement.
 5. Power pole will need to be relocated.
 6. RR crossing panels will need to be added.
 7. Signal modification will be required for right turn pocket.
 8. Add island for pedestrian refuge.

Item	Unit	Unit Cost	Quantity	Cost	Notes
REMOVE CEM CONC SIDEWALK	SY	\$11.00	183	\$1,795.86	
MINERAL AGGREGATE, TYPE 2	TN	\$40.00	405	\$16,205.20	
ROADWAY CEM CONC, 12 IN	SY	\$121.00	219	\$26,497.69	
RR PANELS	SF	\$106.00	900	\$95,400.00	
CATCH BASIN PERKFILTER - 4-18" CARTRIDGE	EA	\$22,889.00	2	\$45,778.00	
PIPE, CB CONN, PVC, 8 IN	LF	\$59.00	50	\$2,950.00	
BEDDING, CL B, 8 IN PIPE	LF	\$11.00	50	\$550.00	
TEE, 8 IN, CUT-IN EXISTING CONC PIPE	EA	\$1,237.00	2	\$2,474.00	
CURB, CEM CONC	LF	\$24.00	255	\$6,120.88	
SIDEWALK, CEM CONC	SY	\$66.00	166	\$10,970.64	
SIGNAL ALLOWANCE - MODIFIED	LS	\$100,000.00	1	\$100,000.00	
PAVEMENT MARKING, PAINT, 8 IN STRIPE	LF	\$8.00	544	\$3,266.29	
		Subtotal		\$312,008.57	
CONSTRUCTION SURVEYING	%	.75 percent		\$2,340.06	
MOBILIZATION	%	10 percent		\$31,200.86	
MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL INCLUDING FLAGGING	%	8 percent		\$24,960.69	
CONSTRUCTION STORMWATER & EROSION CONTROL PLAN (CSECP)	%	2 percent		\$6,240.17	
		Subtotal		\$376,750.35	
30% DESIGN ALLOWANCE	%			\$113,025.11	
		Bld Item Total		\$490,000.00	
RIGHT OF WAY				\$12,254.00	
		Total		\$490,000.00	

Project Name
S Massachusetts St Rebuild (access road - Colorado Ave S to 1st Ave S)

Description

Reconstruct S Massachusetts St to improve safety and access to North SIG Yard, while maintaining two-way operations. Seek to provide separated travel lanes for general purpose and truck traffic. Provide improved truck access/operations at the 1st Ave S / S Massachusetts St Intersection.

Scope Assumptions

1. Remove and replace pavement.
2. Install sidewalks and curb ramps at corners of 1st/Mass.
3. Regrade the roadway to improve property access at N Sig
4. New pavement marking.
5. Remove and replace drainage - storm filter catch basins - required.
6. Replace the signal

Item	Unit	Unit Cost	Quantity	Cost	Notes
REMOVE PAVEMENT	SY	\$27.50	6077.97	\$167,144.18	
MINERAL AGGREGATE, TYPE 2	TN	\$40.00	8440.00	\$337,599.84	
MINERAL AGGREGATE, TYPE 17	TN	\$33.93	8439.996	\$286,369.08	
ROADWAY CEM CONC, 12 IN	SY	\$121.00	4562.16	\$552,021.36	
CATCH BASIN PERKFILTER - 4-18" CARTRIDGE	EA	\$22,889.00	6.00	\$137,334.00	
PIPE, CB CONN, PVC, 8 IN	LF	\$59.00	200.00	\$11,800.00	
BEDDING, CL B, 8 IN PIPE	LF	\$11.00	200.00	\$2,200.00	
TEE, 8 IN, CUT-IN EXISTING CONC PIPE	EA	\$1,237.00	6.00	\$7,422.00	
LANDSCAPING	SF	\$25.00	3407.51	\$85,187.63	
CURB, CEM CONC	LF	\$24.00	631.18	\$15,148.34	
SIDEWALK, CEM CONC	SY	\$66.00	771.46	\$50,918.37	
CURB RAMP 422A	SY	\$1,575.00	8.00	\$12,600.00	
DETECTABLE WARNING PLATE	SF	\$60.00	80.00	\$4,800.00	
DRIVEWAY, CEM CONC, 8 IN	SY	\$100.00	365.73	\$36,573.08	
PAVEMENT MARKING, PAINT, 8 IN STRIPE	LF	\$8.00	2299.88	\$13,799.28	
LIGHTING ALLOWANCE	EA	\$20,000.00	1.00	\$20,000.00	
SIGNAL ALLOWANCE	EA	\$150,000.00	1.00	\$150,000.00	
		Subtotal		\$1,890,915.12	
CONSTRUCTION SURVEYING	%	.75 percent		\$14,181.86	
MOBILIZATION	%	10 percent		\$189,091.51	
MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL INCLUDING FLAGGING	%	8 percent		\$151,273.21	
CONSTRUCTION STORMWATER & EROSION CONTROL PLAN (CSECP)	%	2 percent		\$37,818.30	
		Subtotal		\$2,283,280.01	
30% DESIGN ALLOWANCE	%			\$684,984.00	
		Bid Item Total		\$2,968,000.00	

Project Name
 Diagonal Ave S / S Oregon St / Denver Ave S Reconstruction (East Marginal Way (SR 99) to Union Pacific Argo Yard)

Description
 Rebuild existing truck route facility.

Scope Assumptions
 1. Assume sidewalk on one side.
 2. Assume new lighting

Item	Unit	Unit Cost	Quantity	Cost	Notes
REMOVE PAVEMENT	SY	\$27.50	16190.32	\$445,233.83	
MINERAL AGGREGATE, TYPE 2	TN	\$40.00	24196.67	\$967,866.83	
ROADWAY CEM CONC, 12 IN	SY	\$121.00	13079.28	\$1,582,593.06	
RR PANELS	SF	\$25.00	18878.00	\$471,950.00	
CATCH BASIN PERKFILTER - 4-18" CARTRIDGE	EA	\$22,889.00	10.00	\$228,890.00	
PIPE, CB CONN, PVC, 8 IN	LF	\$59.00	400.00	\$23,600.00	
BEDDING, CL B, 8 IN PIPE	LF	\$11.00	400.00	\$4,400.00	
TEE, 8 IN, CUT-IN EXISTING CONC PIPE	EA	\$1,237.00	10.00	\$12,370.00	
CURB, CEM CONC	LF	\$24.00	2789.99	\$66,959.74	
SIDEWALK, CEM CONC	SY	\$68.00	3111.04	\$205,328.86	
CURB RAMP 422A	SY	\$1,575.00	8.00	\$12,600.00	
PERMANENT SIGNAGE ALLOWANCE	LS	\$10,000.00	1.00	\$10,000.00	
PAVEMENT MARKING, PAINT, 8 IN STRIPE	LF	\$8.00	1806.83	\$10,841.00	
LIGHTING ALLOWANCE	LS	\$30,000.00	1.00	\$30,000.00	
		Subtotal		\$4,072,633.31	
CONSTRUCTION SURVEYING	%	.75 percent		\$30,544.75	
MOBILIZATION	%	10 percent		\$407,263.33	
MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL INCLUDING FLAGGING	%	8 percent		\$325,810.66	
CONSTRUCTION STORMWATER & EROSION CONTROL PLAN (CSECP)	%	2 percent		\$81,452.67	
		Subtotal		\$4,917,704.72	
30% DESIGN ALLOWANCE	%			\$1,475,311.42	
		Bid Item Total		\$8,393,000.00	
RIGHT OF WAY				\$100,000.00	
		Total		\$8,493,000.00	

Project Name
S Holden St Reconstruction

Description
Reconstruct and make operational/ITS improvements to S Holden St. Limits are SR-99/West Marginal Way east to approximately 8th Ave S. This coincides with some SPU pump station repair and replacement. We should coordinate ITS reader boards at Holden/SR99 would be of benefit to all modes - assuming this fits with Adiam's plans.

- Scope Assumptions**
1. No ITS improvements scoped.
 2. Assume repaving with 12' CCP.
 3. Assume new drainage along the corridor

Item	Unit	Unit Cost	Quantity	Cost	Notes
REMOVE PAVEMENT	SY	\$27.50	5092.26	\$140,037.15	
MINERAL AGGREGATE, TYPE 2	TN	\$40.00	14609.33	\$584,373.33	
ROADWAY CEM CONC, 12 IN	SY	\$121.00	7896.94	\$955,529.36	
CATCH BASIN PERKFILTER - 4-18" CARTRIDGE	EA	\$22,889.00	16.00	\$366,224.00	
PIPE, CB CONN, PVC, 8 IN	LF	\$59.00	1000.00	\$59,000.00	
BEDDING, CL B, 8 IN PIPE	LF	\$11.00	1000.00	\$11,000.00	
TEE, PVC, 8 IN	EA	\$113.00	16.00	\$1,808.00	
LANDSCAPING	SF	\$25.00	1000.00	\$25,000.00	
CURB, CEM CONC	LF	\$24.00	3730.01	\$89,520.24	
SIDEWALK, CEM CONC	SY	\$66.00	5763.46	\$380,388.16	
CURB RAMP 422A	SY	\$1,575.00	18.00	\$28,350.00	
DETECTABLE WARNING PLATE	SF	\$60.00	180.00	\$10,800.00	
DRIVEWAY, CEM CONC, 8 IN	SY	\$100.00	1264.30	\$126,430.15	
PERMANENT SIGNAGE ALLOWANCE	LS	\$20,000.00	1.00	\$20,000.00	
PERMANENT STRIPING ALLOWANCE	EA	\$10,000.00	1.00	\$10,000.00	
LIGHTING ALLOWANCE	LF	\$30,000.00	1.00	\$30,000.00	
		Subtotal		\$2,838,460.39	
CONSTRUCTION SURVEYING	%	.75 percent		\$21,288.45	
MOBILIZATION	%	10 percent		\$283,846.04	
MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL INCLUDING FLAGGING	%	8 percent		\$227,076.83	
CONSTRUCTION STORMWATER & EROSION CONTROL PLAN (CSECP)	%	2 percent		\$56,769.21	
		Subtotal		\$3,427,440.93	
30% DESIGN ALLOWANCE	%			\$1,028,232.28	
		Bld Item Total		\$4,456,000.00	

Project Name
6th Ave S Reconstruction

Description
Reconstruct and make operational / ITS improvements to 6th Ave S. Panel replacement starting at Industrial and working north to Spokane- NB Airport Way S approach to Industrial Ave S may benefit from an ITS reader showing time to downtown along Airport or along 4th Ave S.

Scope Assumptions
1-SDOT will cover the cost estimation for ITS improvements.
2-Concrete panel replacement on 8th Ave
3-Pavement marking
4-Sidewalk
5-Landscape

Item	Unit	Unit Cost	Quantity	Cost	Notes
REMOVE PAVEMENT	SY	\$27.50	8953.85	\$246,230.96	
REMOVE PAVEMENT MARKING	LF	\$1.00	5009.72	\$5,009.72	
MINERAL AGGREGATE, TYPE 2	TN	\$40.00	16564.83	\$662,585.12	
ROADWAY CEM CONC, 12 IN	SY	\$121.00	8953.85	\$1,083,416.21	
CATCH BASIN PERKFILTER - 4-18" CARTRIDGE	EA	\$22,889.00	16.00	\$366,224.00	
PIPE, CB CONN, PVC, 8 IN	LF	\$59.00	1000.00	\$59,000.00	
BEDDING, CL B, 8 IN PIPE	LF	\$11.00	1000.00	\$11,000.00	
TEE, 8 IN, CUT-IN EXISTING CONC PIPE	EA	\$1,237.00	16.00	\$19,792.00	
LANDSCAPING	SF	\$25.00	1575.72	\$39,393.07	
IRRIGATION SYSTEM, AUTOMATIC	LS			\$0.00	
CURB, CEM CONC	LF	\$24.00	3305.51	\$79,332.26	
CURB AND GUTTER, CEM CONC	LF	\$43.00		\$0.00	
SIDEWALK, CEM CONC	SY	\$66.00	2946.33	\$194,458.09	
CURB RAMP 422A	SY	\$1,575.00	12.00	\$18,900.00	
DRIVEWAY, CEM CONC, 8 IN	SY	\$100.00	656.67	\$65,666.56	
PAVEMENT MARKING, PAINT, 8 IN STRIPE	LF	\$6.00	5009.72	\$30,058.34	
LIGHTING ALLOWANCE	LF	\$30,000.00	1.00	\$30,000.00	
		Subtotal		\$2,911,066.32	
CONSTRUCTION SURVEYING	%	.75 percent		\$21,833.00	
MOBILIZATION	%	10 percent		\$291,106.63	
MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL INCLUDING FLAGGING	%	8 percent		\$232,885.31	
CONSTRUCTION STORMWATER & EROSION CONTROL PLAN (CSECP)	%	2 percent		\$58,221.33	
		Subtotal		\$3,515,112.58	
30% DESIGN ALLOWANCE	%			\$1,054,533.77	
		Bid Item Total		\$4,570,000.00	

Project Name
SW Klickitat Way Reconstruction

Description
Reconstruct and make operational/ITS improvements to SW Klickitat Way. Klickitat Ave SW from SW Spokane St (signalized intersection) west and north to Klickitat Ave Bridge signal update as needed and roadway/panel replacement. It would also be prudent to update the markings on this roadway in MMA to prolong marking life.

- Scope Assumptions**
- 1-Concrete panel replacement
 - 2-Pavement marking for both WN and ES bounds
 - 3-Omit ES bound paving quantities if not required
 - 4-Sidewalk already exist
 - 5-Street Lights exist

Item	Unit	Unit Cost	Quantity	Cost	Notes
REMOVE PAVEMENT	SY	\$27.50	1284.03	\$35,310.83	WN
REMOVE PAVEMENT	SY	\$27.50	1214.02	\$33,385.55	ES
MINERAL AGGREGATE, TYPE 2	TN	\$40.00	2375.46	\$95,018.22	WN
MINERAL AGGREGATE, TYPE 2	TN	\$40.00	2245.94	\$89,837.48	ES
ROADWAY CEM CONC, 12 IN	SY	\$121.00	1284.03	\$155,367.63	WN
ROADWAY CEM CONC, 12 IN	SY	\$121.00	1214.02	\$146,896.42	ES
CATCH BASIN PERKFILTER - 4-18" CARTRIDGE	EA	\$22,889.00	6.00	\$137,334.00	
PIPE, CB CONN, PVC, 8 IN	LF	\$58.00	100.00	\$5,900.00	
BEDDING, CL B, 8 IN PIPE	LF	\$11.00	100.00	\$1,100.00	
TEE, PVC, 8 IN	EA	\$113.00		\$0.00	
TEE, 8 IN, CUT-IN EXISTING CONC PIPE	EA	\$1,237.00	8.00	\$9,896.00	
PAVEMENT MARKING, PAINT, 8 IN STRIPE	LF	\$6.00	2305.46	\$13,832.78	
FOUNDATION, TRAFFIC SIGNAL CONTROL CAB, TYPE III	EA	\$6,943.00	1.00	\$6,943.00	
			Subtotal	\$730,821.91	
CONSTRUCTION SURVEYING	%	.75 percent		\$5,481.16	
MOBILIZATION	%	10 percent		\$73,082.19	
MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL INCLUDING FLAGGING	%	8 percent		\$58,465.75	
CONSTRUCTION STORMWATER & EROSION CONTROL PLAN (CSECP)	%	2 percent		\$14,616.44	
			Subtotal	\$882,467.45	
30% DESIGN ALLOWANCE	%			\$284,740.24	
			Bid Item Total	\$1,147,000.00	