



COST ESTIMATE

Elements	Quantities	Units	Unit Cost	Total Cost
Transfer Yards			Element Total	\$ 12,691,867
Logistics Transfer Yard		16 Acres (65% Paved)	Component Total	\$ 2,176,139
Clearing and grubbing	16	acre	\$ 2,500.00	\$ 40,000
Grading	16	acre	\$ 5,000.00	\$ 80,000
Subbase, pavement, drainage	10.4	acre	\$ 175,000.00	\$ 1,820,000
Lighting	10.4	acre	\$ 1,000.00	\$ 10,400
Perimeter fence	2,693	ft	\$ 15.00	\$ 40,395
Power distribution	1.26	mile	\$ 90,000.00	\$ 113,400
Communications (Microfiber)	0.86	mile	\$ 26,400.00	\$ 22,704
Communication totem (5G Edge Device / WiFi / LoRa)	2	each	\$ 24,620.00	\$ 49,240
Automated trailer breakdown and container lifter system			Component Total	\$ 1,450,000
Automated yard jockey/Over-the-road transfer vehicle	2	each	\$ 225,000.00	\$ 450,000
Automated trailer freight container transfer	2	each	\$ 500,000.00	\$ 1,000,000
Opportunity charging for freight lifters and jockeys			Component Total	\$ 186,000
Charging stations - (480v, horizontal "pantograph")	2	each	\$ 75,000.00	\$ 150,000
Power distribution	0.40	mile	\$ 90,000.00	\$ 36,000
Electric truck charging stations			Component Total	\$ 309,000
Charging stations - DC Fast	2	each	\$ 150,000.00	\$ 300,000
Power distribution	0.10	mile	\$ 90,000.00	\$ 9,000
Solar field/farm and storage			Component Total	\$ 3,992,688
Solar array and storage	9	acre	\$ 425,000.00	\$ 3,825,000
Site power distribution system	1	LS	\$ 150,000.00	\$ 150,000
Communications (Microfiber)	0.67	mile	\$ 26,400.00	\$ 17,688
Rail Intermodal @ NS Goodman Yard		4 Acre	Component Total	\$ 1,101,600
Clearing and grubbing	4	acre	\$ 2,500.00	\$ 10,000
Grading	4	acre	\$ 5,000.00	\$ 20,000
Subbase, pavement, drainage	4.0	acre	\$ 175,000.00	\$ 700,000
Rail, ties, ballast and subballast	900.0	lf	\$ 300.00	\$ 270,000
Lighting	4.0	acre	\$ 1,000.00	\$ 4,000
Power distribution	0.76	mile	\$ 90,000.00	\$ 68,400
Communications (Microfiber)	0.50	mile	\$ 26,400.00	\$ 13,200
Cabinet Small Equipment (Furnish and Install)	2	each	\$ 8,000.00	\$ 16,000
Paved truck parking and trailer layover area		16 Acres (65% Paved)	Component Total	\$ 2,325,440
Clearing and grubbing	16	acre	\$ 2,500.00	\$ 40,000
Grading	16	acre	\$ 5,000.00	\$ 80,000
Subbase, pavement, drainage	10.4	acre	\$ 175,000.00	\$ 1,820,000
Lighting	10.4	acre	\$ 1,000.00	\$ 10,400
Power distribution	0.70	mile	\$ 90,000.00	\$ 63,000
Communications (Microfiber)	0.25	mile	\$ 26,400.00	\$ 6,600
ITS Cabinet for OTIC Fiber connection	1	each	\$ 10,000.00	\$ 10,000
Communication totem (5G Edge Device / WiFi / LoRa)	12	each	\$ 24,620.00	\$ 295,440
Truck parking information system			Component Total	\$ 1,151,000
Truck parking information system	1	LS	\$ 391,000.00	\$ 391,000
Dynamic message sign (DMS)	8	each	\$ 75,000.00	\$ 600,000
Communications and power (DMS signs)	8	each	\$ 10,000.00	\$ 80,000
ITS Cabinet	8	each	\$ 10,000.00	\$ 80,000

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Smart Corridors				Element Total	\$	3,010,011
Automated freight (over-the-road)				Component Total	\$	549,011
Pavement marking eradication	26,638	lf	\$ 0.25	\$	6,659	
Pavement markings	213,101	lf	\$ 2.50	\$	532,752	
automated freight jockey	12	each		\$	-	
Signage	80	each	\$ 120	\$	9,600	
Freight Signal Priority (V2X communication)				Component Total	\$	409,180
RSU per intersection (C-V2X)	8	each	\$ 13,500.00	\$	108,000	
Signal controller upgrade and cabinet	8	each	\$ 15,000.00	\$	120,000	
OBU (C-V2X)	4	each	\$ 4,045.00	\$	16,180	
OBU application development	1	LS	\$ 15,000.00	\$	15,000	
OBU integration in AV system	1	each	\$ 150,000.00	\$	150,000	
In-road inductive charging				Component Total	\$	45,000
Power distribution for P3 pilot	0.5	mile	\$ 90,000.00	\$	45,000	
Situational awareness devices at intersections				Component Total	\$	174,900
Roadside application development	1	LS	\$ 120,000.00	\$	120,000	
Camera detection system	2	per int.	\$ 25,000.00	\$	50,000	
Roadside processing unit	2	each	\$ 1,250.00	\$	2,500	
Connection to RSU/LIVE Zone	2	each	\$ 1,200.00	\$	2,400	
Fiber communication				Component Total	\$	601,920
Communications - 432-strand microfiber and microduct	15.20	mile	\$ 39,600.00	\$	601,920	
Central control cloud based system				Component Total	\$	445,000
Mission Control Software	1	each	\$ 265,000.00	\$	265,000	
Data Ingestion Software	1	each	\$ 180,000.00	\$	180,000	
Interface to external distribution systems				Component Total	\$	144,000
Enterprise service bus to other systems	8	each	\$ 18,000.00	\$	144,000	
Communication totems at each business				Component Total	\$	631,000
Communications (Microfiber)	7.0	mile	\$ 26,400.00	\$	184,800	
communication totem (5G Edge Device / WiFi / LoRa)	10	each	\$ 24,620.00	\$	246,200	
network management software	1	each	\$ 200,000.00	\$	200,000	
Connection to ODOT ESP and OARnet				Component Total	\$	10,000
ITS Cabinet for Fiber connection with Lumen Fiber	1	each	\$ 10,000.00	\$	10,000	
EV Charging				Element Total	\$	3,531,300
Electric truck charging and CNG refueling				Component Total	\$	2,795,300
Charging stations - DC Fast	9	each	\$ 150,000.00	\$	1,350,000	
Charging stations - 500kW	1	each	\$ 1,000,000.00	\$	1,000,000	
Power distribution	0.17	mile	\$ 90,000.00	\$	15,300	
CNG station (pumps)	2	each	\$ 115,000.00	\$	230,000	
CNG attendant building and storage	500	sf	\$ 400.00	\$	200,000	
Private EV charging stations at businesses				Component Total	\$	736,000
Level 2 charging	10	each	\$ 25,000.00	\$	250,000	
Power distribution	5.4	mile	\$ 90,000.00	\$	486,000	
Transit				Element Total	\$	843,500
First/last mile AV transit				Component Total	\$	800,000
Automated transit bus (including hardware and software stack)	2	each	\$ 400,000.00	\$	800,000	
WRTA Regional Transit Hub (SE Quad I-76 & S Bailey Rd)				Component Total	\$	43,500
Fiber communications splice to transit hub	1	each	\$ 3,000.00	\$	3,000	
Power distribution	0.45	mile	\$ 90,000.00	\$	40,500	
Subtotal Phase Costs					\$	20,076,678
				Inflation (2.5%/year)	\$	1,016,382
				Contingency (5%)	\$	1,003,834
				Total Capital Costs	\$	22,096,895
				System Engineering (2%)	\$	441,938
				Detailed Design (5%)	\$	1,104,845
				Construction Administration (5%)	\$	1,104,845
				Total Project Cost	\$	24,748,523