# Appendix B9

**Cost Estimates** 



# Center Twp Commercial Area Multimodal Improvements Preliminary Construction Cost Estimate

		Item Description		Quantity	Unit	Unit Cost	Item Cost
		Major	Construction Item Quantities				<sup>11</sup>
CLASS 1 EXCAVA	TION			1696	CY	\$30.00	\$50,880
CEMENT CONCR	ETE SIDEWALK			5087	SY	\$130.00	\$661,310
					Constructio	on Item Sub-Total	\$712,190
			Allowances				
						Percentage	Cost
				Erosion & Sedin		2%	\$14,24
			-	& Stormwater n	-	5%	\$35,61
			Mainter	nance & Protecti		2%	\$14,24
					Mobilization	5%	\$35,610
			Ir	ncidental Constru		2%	\$14,24
					Signing	1%	\$7,12
						es Item Sub-Total	\$121,07
	Escala			Constru	iction & Allov	wance Items Total	\$833,262
Current year	Rate	Escalation duration			<b>-</b>		
2021	3% / year	2 years		-	lotal Escalat	ion Through 2023	\$49,990
					Cons	truction Subtotal	\$883,25
				Сог	ntingency @	30%	\$264,977
					Total (	Construction Cost	\$1,148,23
			Other Project Costs				
			other Hoject costs	Construction	Ovorcight @	12%	\$137,788
				Construction	oversignt @	1270	\$157,786
				Design En	gineering @	15%	\$172,23
Right-of-Way Acquisition	0.00 ac	ROW cost/acre	\$25,000			Right-of-Way Cost	\$0.0
		Utility Impact Percentage	5%			Utility Cost	\$57,412
ote: Value rounded up nearest	\$50,000		Fstim	ated Project	Total Cost	\$1	550,000

### Notes:

- Construction Item Cost were derived from PennDOT's ECMS Items Price History using an average cost within a similar quantity range

- Contingency Ranges vary from 10% for minor, Non-Complex projects to 40% for Major, Complex Projects per PennDOT's Publication 352 Cost Estimating Guide

- Allowance item costs are a percentage of the known major construction Items cost. A percentage is assigned to the pertinent items that are expected to be part of the project but can not yet be quantified. The percentage is based on the expected project size and the complexity level based on judgment from previous projects.

- Incidental Construction = Field office, Construction Surveying, CPM Schedule, Equipment Package (2% of construction cost)





# Frankfort Rd Alt 1 (Split Phase Removal) Preliminary Construction Cost Estimate

Major Construction Item Quantities           CLASS 1 EXCAVATION           TOPSOIL FURNISHED AND PLACED           CONCRETE CURB           PLAIN CEMENT CONCRETE PAVEMENT           MILL AND OVERLAY           FULL DEPTH PAVEMENT           TRAFFIC SIGNAL           4" WHITE PAVEMENT MARKINGS           24" WHITE PAVEMENT MARKINGS           4" YELLOW PAVEMENT MARKINGS           WHITE THERMOPLASTIC PAVEMENT LEGEND STRAIGHT ARROW	933 1233 3482 1262 15384 625 1 1 14500 1650	CY CY LF SY SY SY EA LF	\$30.00 \$75.00 \$50.00 \$110.00 \$25.00 \$150.00 \$250,000.00	\$27,990 \$92,475 \$174,100 \$138,820 \$384,600
TOPSOIL FURNISHED AND PLACED         CONCRETE CURB         PLAIN CEMENT CONCRETE PAVEMENT         MILL AND OVERLAY         FULL DEPTH PAVEMENT         TRAFFIC SIGNAL         4" WHITE PAVEMENT MARKINGS         24" WHITE PAVEMENT MARKINGS         4" YELLOW PAVEMENT MARKINGS	1233 3482 1262 15384 625 1 14500	CY LF SY SY SY EA LF	\$75.00 \$50.00 \$110.00 \$25.00 \$150.00	\$92,475 \$174,100 \$138,820 \$384,600
CONCRETE CURB PLAIN CEMENT CONCRETE PAVEMENT MILL AND OVERLAY FULL DEPTH PAVEMENT TRAFFIC SIGNAL 4" WHITE PAVEMENT MARKINGS 24" WHITE PAVEMENT MARKINGS 4" YELLOW PAVEMENT MARKINGS	3482 1262 15384 625 1 14500	LF SY SY EA LF	\$50.00 \$110.00 \$25.00 \$150.00	\$174,100 \$138,820 \$384,600
PLAIN CEMENT CONCRETE PAVEMENT         MILL AND OVERLAY         FULL DEPTH PAVEMENT         TRAFFIC SIGNAL         4" WHITE PAVEMENT MARKINGS         24" WHITE PAVEMENT MARKINGS         4" YELLOW PAVEMENT MARKINGS	1262 15384 625 1 14500	SY SY SY EA LF	\$110.00 \$25.00 \$150.00	\$138,820 \$384,600
MILL AND OVERLAY FULL DEPTH PAVEMENT TRAFFIC SIGNAL 4" WHITE PAVEMENT MARKINGS 24" WHITE PAVEMENT MARKINGS 4" YELLOW PAVEMENT MARKINGS	1233         CY         \$75           3482         LF         \$50           1262         SY         \$110           15384         SY         \$25           625         SY         \$150           1         EA         \$250,000           14500         LF         \$20           1650         LF         \$20           8040         LF         \$00           4         EA         \$250           6         EA         \$250           6         EA         \$250           6         EA         \$250		\$25.00 \$150.00	\$384,600
FULL DEPTH PAVEMENT TRAFFIC SIGNAL 4" WHITE PAVEMENT MARKINGS 24" WHITE PAVEMENT MARKINGS 4" YELLOW PAVEMENT MARKINGS	625 1 14500	SY EA LF	\$150.00	
TRAFFIC SIGNAL 4" WHITE PAVEMENT MARKINGS 24" WHITE PAVEMENT MARKINGS 4" YELLOW PAVEMENT MARKINGS	1 14500	EA LF		
4" WHITE PAVEMENT MARKINGS 24" WHITE PAVEMENT MARKINGS 4" YELLOW PAVEMENT MARKINGS	14500	LF	\$250,000.00	\$93,750
24" WHITE PAVEMENT MARKINGS 4" YELLOW PAVEMENT MARKINGS				\$250,000
4" YELLOW PAVEMENT MARKINGS	1650		\$0.50	\$7,250
		LF	\$20.00	\$33,000
WHITE THERMOPLASTIC PAVEMENT LEGEND STRAIGHT ARROW	8040	LF	\$0.50	\$4,020
	4	EA	\$250.00	\$1,000
WHITE THERMOPLASTIC PAVEMENT LEGEND LEFT ARROW	6	EA	\$250.00	\$1,500
WHITE THERMOPLASTIC PAVEMENT LEGEND RIGHT ARROW	6		\$250.00	\$1,500
		Constructio	on Item Sub-Total	\$1,210,005
Allowances				,
			Percentage	Cost
	Erosion & Sedin	nent Control		\$60,500
Drainag	e & Stormwater n	nanagement		\$121,001
-		-		\$60,500
			5%	\$60,500
				\$24,200
				\$12,100
	Construct			\$338,801
Escalation				\$1,548,806
Current year Rate Escalation duration	constru			÷1,540,000
2021 3% / year 2 years		Total Eccalat	ion Through 2022	\$92.928
				<u></u>
		Conc	truction Subtotal	\$1,641,735
		COIIS		\$1,041,755
	Co		200/	\$492,520
	CO	5,2		\$492,520
		Iotal	construction cost	\$2,134,255
Other Project Costs				
	Construction	Oversight @	12%	\$256,111
			459/	
	Design En	gineering @	15%	\$320,138
ht-of-Way Acquisition 0.00 ac ROW cost/acre \$25,00	0		Right-of-Way Cost	\$0.00
Utility Impact Percentage 5%			Utility Cost	\$106,713

Notes:

- Construction Item Cost were derived from PennDOT's ECMS Items Price History using an average cost within a similar quantity range

- Contingency Ranges vary from 10% for minor, Non-Complex projects to 40% for Major, Complex Projects per PennDOT's Publication 352 Cost Estimating Guide
 - Allowance item costs are a percentage of the known major construction Items cost. A percentage is assigned to the pertinent items that are expected to be part of the project but can not yet be quantified. The percentage is based on the expected project size and the complexity level based on judgment from previous projects.

- Incidental Construction = Field office, Construction Surveying, CPM Schedule, Equipment Package (2% of construction cost)





# Frankfort Rd Alt 2 (Roundabout) Preliminary Construction Cost Estimate

Item Description	Quantity	Unit	Unit Cost	Item Cos
Major Construction Item Quantities		11		
CLASS 1 EXCAVATION	3990	СҮ	\$30.00	\$119,70
FOREIGN BORROW EXCAVATION	3210	СҮ	\$40.00	\$128,40
TRUCK APRON	522	SY	\$125.00	\$65,25
TOPSOIL FURNISHED AND PLACED	1325	СҮ	\$75.00	\$99,37
CONCRETE CURB	1087	LF	\$50.00	\$54,35
PLAIN CEMENT CONCRETE PAVEMENT	622	SY	\$110.00	\$68,42
MILL AND OVERLAY	7672	SY	\$25.00	\$191,80
FULL DEPTH PAVEMENT	8106	SY	\$150.00	\$1,215,90
4" WHITE PAVEMENT MARKINGS	14719	LF	\$0.50	\$7,36
4" YELLOW PAVEMENT MARKINGS	8440	LF	\$0.50	\$4,22
24" WHITE PAVEMENT MARKINGS	370	LF	\$20.00	\$7,40
WHITE THERMOPLASTIC PAVEMENT LEGEND ROUNDABOUT LEFT ARROW	1	EA	\$450.00	\$45
WHITE THERMOPLASTIC PAVEMENT LEGEND ROUNDABOUT LEFT-STRAIGHT ARROW	7	EA	\$575.00	\$4,02
WHITE THERMOPLASTIC PAVEMENT LEGEND ROUNDABOUT RIGHT-STRAIGHT ARROW	1	EA	\$575.00	\$57
WHITE THERMOPLASTIC PAVEMENT LEGEND RIGHT ARROW	1	EA	\$250.00	\$25
WHITE THERMOPLASTIC PAVEMENT LEGEND, "YIELD LINE", 12"X18" TRIANGLE	236	LF	\$25.00	\$5,90
		Constructio	n Item Sub-Total	\$1,973,37
Allowances			Deveetees	Cost
	Erosion & Sedim	ont Control	Percentage 5%	\$98,60
Drainage	& Stormwater m	ŀ	15%	\$296,00
6	nance & Protecti	~ F	7%	\$138,13
mante		Mobilization	7%	\$138,1
	ncidental Constru		2%	\$39,4
		Signing	5%	\$98,6
	Construct		es Item Sub-Total	\$809,08
Escalation	Constru	ction & Allov	vance Items Total	\$2,782,4
Current year Rate Escalation duration				.,,,
2021 3% / year 2 years		Total Escalati	on Through 2023	\$166,94
				. ,
		Cons	truction Subtotal	\$2,949,40
	Cor	ntingency @	30%	\$884,82
	0		construction Cost	\$3,834,22
		Total c		49,034 <u>,</u> 2
Other Project Costs				
	Construction	Oversight @	12%	\$460,1
	Design En	gineering @	15%	\$575,1
				40
Right-of-Way Acquisition0.00 acROW cost/acre\$25,000		4	light-of-Way Cost	\$0.
Utility Impact Percentage 5%			Utility Cost	\$191,7

### Notes:

- Construction Item Cost were derived from PennDOT's ECMS Items Price History using an average cost within a similar quantity range

- Contingency Ranges vary from 10% for minor, Non-Complex projects to 40% for Major, Complex Projects per PennDOT's Publication 352 Cost Estimating Guide

- Allowance item costs are a percentage of the known major construction Items cost. A percentage is assigned to the pertinent items that are expected to be part of the project but can not yet be quantified. The percentage is based on the expected project size and the complexity level based on judgment from previous projects.

- Incidental Construction = Field office, Construction Surveying, CPM Schedule, Equipment Package (2% of construction cost)





# Center Twp Residential & School Area Multimodal Improvements Preliminary Construction Cost Estimate

			Item Description		Quantity	Unit	Unit Cost	Item Cost
			Major	Construction Item Quantities			I I	
	CLASS 1 EXCAVA	TION			2019	CY	\$30.00	\$60,57
	CEMENT CONCRI	ETE SIDEWALK			6056	SY	\$130.00	\$787,28
,	WHITE THERMO	PLASTIC PAVEM	ENT LEGEND SHARED LANE MARK	ING	286	EA	\$450.00	\$128,70
						Constructio	on Item Sub-Total	\$976,55
				Allowances				
							Percentage	Cost
					Erosion & Sedin	nent Control	2%	\$19,53
				Drainage	& Stormwater n	nanagement	5%	\$48,82
				Mainter	nance & Protecti	on of Traffic	5%	\$48,82
					1	Mobilization	5%	\$48,82
				Ir	ncidental Constr	uction Items	2%	\$19,53
						Signing	3%	\$29,29
					Construct	ion Allowanc	es Item Sub-Total	\$214,84
[		Escal	ation		Constru	uction & Allov	wance Items Total	\$1,191,39
Γ	Current year	Rate	Escalation duration					
Γ	2021	3% / year	2 years		-	Total Escalat	ion Through 2023	\$71,48
-								
						Cons	truction Subtotal	\$1,262,87
					Co	ntingency @	30%	\$378,862
						Total (	Construction Cost	\$1,641,73
				Other Project Costs				
					Construction	Oversight @	12%	\$197,00
					Design En	gineering @	15%	\$246,26
Right-of-W	Vay Acquisition	0.00 ac	ROW cost/acre	\$25,000		1	Right-of-Way Cost	\$0.0
			Utility Impact Percentage	5%			Utility Cost	\$82,08
	Inded up nearest	\$50.000		Estim	ated Project	Total Cost	\$2.	200,000

### Notes:

- Construction Item Cost were derived from PennDOT's ECMS Items Price History using an average cost within a similar quantity range

- Contingency Ranges vary from 10% for minor, Non-Complex projects to 40% for Major, Complex Projects per PennDOT's Publication 352 Cost Estimating Guide - Allowance item costs are a percentage of the known major construction Items cost. A percentage is assigned to the pertinent items that are expected to be part of the project but can

not yet be quantified. The percentage is based on the expected project size and the complexity level based on judgment from previous projects.

- Incidental Construction = Field office, Construction Surveying, CPM Schedule, Equipment Package (2% of construction cost)





# North Branch Road (Right In/Right Out) Preliminary Construction Cost Estimate

Item Co	Unit Cost	Unit	Quantity		Item Description
				Construction Item Quantities	Major
\$2,4	\$30.00	СҮ	83		CLASS 1 EXCAVATION
\$2,2	\$40.00	CY	55		FOREIGN BORROW EXCAVATION
\$2,7	\$75.00	CY	28		TOPSOIL FURNISHED AND PLACED
\$2,2	\$45.00	LF	50		BITUMINOUS CURB
\$2	\$20.00	LF	12		24" WHITE PAVEMENT MARKINGS
\$2	\$250.00	EA	1		WHITE THERMOPLASTIC PAVEMENT LEGEND RIGHT ARROW
\$9,5	n Item Sub-Total	Constructio			•
				Allowances	
Cost	Percentage				
\$4	5%	ent Control	Erosion & Sedim		
\$4	5%	anagement	& Stormwater m	Drainage	
\$4	5%	on of Traffic	ance & Protecti	Mainter	
\$4	5%	/lobilization	1		
\$1	2%	uction Items	cidental Constru	Ir	
\$2	3%	Signing			
\$2,3	es Item Sub-Total	on Allowanc	Construct		
\$11,9	vance Items Total	ction & Allov	Constru		Escalation
					Current year Rate Escalation duration
\$7	on Through 2023	Fotal Escalati	-		2021 3% / year 2 years
	Ŭ.			<u>-</u>	
\$12,6	truction Subtotal	Const			
\$3,7	30%	itingency @	Cor		
\$16,4	Construction Cost	Total C			
				Other Project Costs	
\$2,4	15%	Oversight @	Construction (		
\$6,5	40%	gineering @	Design En		
\$0	Right-of-Way Cost	R		\$25,000	-Way Acquisition 0.00 ac ROW cost/acre
	Utility Cost			0%	Utility Impact Percentage

### Notes:

- Construction Item Cost were derived from PennDOT's ECMS Items Price History using an average cost within a similar quantity range

- Contingency Ranges vary from 10% for minor, Non-Complex projects to 40% for Major, Complex Projects per PennDOT's Publication 352 Cost Estimating Guide - Allowance item costs are a percentage of the known major construction Items cost. A percentage is assigned to the pertinent items that are expected to be part of the project but can not yet be quantified. The percentage is based on the expected project size and the complexity level based on judgment from previous projects.

- Incidental Construction = Field office, Construction Surveying, CPM Schedule, Equipment Package (2% of construction cost)





# Baker Rd (Signal and Turn Lane)

**Preliminary Construction Cost Estimate** 

Item Description	Quantity	Unit	Unit Cost	Item Cost
Major Construction Item Quantities	•			
MILL AND OVERLAY	3095	SY	\$25.00	\$77,375
FULL DEPTH PAVEMENT	838	SY	\$150.00	\$125,700
4" WHITE PAVEMENT MARKINGS	540	LF	\$0.50	\$270
4" YELLOW PAVEMENT MARKINGS	3958	LF	\$0.50	\$1,979
24" WHITE PAVEMENT MARKINGS	110	LF	\$20.00	\$2,200
24" YELLOW PAVEMENT MARKINGS	230	LF	\$20.00	\$4,600
TRAFFIC SIGNAL	1	EA	\$250,000.00	\$250,000
WHITE THERMOPLASTIC PAVEMENT LEGEND STRAIGHT ARROW	1	EA	\$250.00	\$250
WHITE THERMOPLASTIC PAVEMENT LEGEND LEFT ARROW	2	EA	\$250.00	\$500
WHITE THERMOPLASTIC PAVEMENT LEGEND RIGHT ARROW	1	EA	\$250.00	\$250
WHITE THERMOPLASTIC PAVEMENT LEGEND THRU-RIGHT ARROW	1	EA	\$400.00	\$400
		Constructio	on Item Sub-Total	\$463,524
Allowances				
			Percentage	Cost
	Erosion & Sedin	nent Control	5%	\$23,176
Drainage	& Stormwater n	nanagement	10%	\$46,352
Mainte	nance & Protecti	on of Traffic	5%	\$23,176
	I	Mobilization	5%	\$23,176
1	ncidental Constr	uction Items	2%	\$9,270
		Signing	1%	\$4,635
	Construct	ion Allowanc	es Item Sub-Total	\$129,787
Escalation	Constru	uction & Allov	wance Items Total	\$593,311
Current year Rate Escalation duration				
2021 3% / year 2 years	-	Total Escalat	ion Through 2023	\$35,599
		Cons	truction Subtotal	\$628,909
	Co	ntingency @	20%	\$188,673
	CO		Construction Cost	\$188,073
		TOLAT		\$617,562
Other Project Costs				
	Construction	Oversight ത	15%	\$122,637
	construction	oversigne @	15/0	Ş122,007
	Design En	gineering @	15%	\$122,637
Right-of-Way Acquisition 0.20 ac ROW cost/acre \$25,000		r	Right-of-Way Cost	\$5,000.00
Right-of-way Acquisition 0.20 ac ROW cost/acre \$25,000			Aight-01-way Cost	\$5,000.00
Utility Impact Percentage 10%			Utility Cost	\$81,758
				0.000
Note: Value rounded up nearest \$50,000 Estim	nated Project	I otal Cost	\$1,1	50,000

### Notes:

- Construction Item Cost were derived from PennDOT's ECMS Items Price History using an average cost within a similar quantity range

- Contingency Ranges vary from 10% for minor, Non-Complex projects to 40% for Major, Complex Projects per PennDOT's Publication 352 Cost Estimating Guide - Allowance item costs are a percentage of the known major construction Items cost. A percentage is assigned to the pertinent items that are expected to be part of the project but can not yet be quantified. The percentage is based on the expected project size and the complexity level based on judgment from previous projects.

- Incidental Construction = Field office, Construction Surveying, CPM Schedule, Equipment Package (2% of construction cost)





# Center Grange Rd (Signal and Turn Lane) Preliminary Construction Cost Estimate

			Item Description		Quantity	Unit	Unit Cost	Item Cost
			Major	Construction Item Quantities			I	
MILL A	AND OVERL	AY			2998	SY	\$25.00	\$74,950
FULL D	DEPTH PAVI	EMENT			560	SY	\$150.00	\$84,000
4" WH	HITE PAVEN	1ENT MARKINGS	5		4260	LF	\$0.50	\$2,130
4" YEL	LLOW PAVE	MENT MARKING	GS		3402	LF	\$0.50	\$1,701
24" W	HITE PAVE	MENT MARKING	GS		128	LF	\$20.00	\$2,560
24" YE	ELLOW PAV	EMENT MARKIN	IGS		320	LF	\$20.00	\$6,400
TRAFF	FIC SIGNAL				1	EA	\$250,000.00	\$250,000
WHITE	E THERMOR	PLASTIC PAVEME	ENT LEGEND LEFT ARROW		2	EA	\$250.00	\$500
WHITE	E THERMOR	PLASTIC PAVEM	ENT LEGEND RIGHT ARROW		2	EA	\$250.00	\$500
WHITE	E THERMOR	PLASTIC PAVEM	ENT LEGEND STRAIGHT ARROW		2	EA	\$250.00	\$500
						Constructio	on Item Sub-Total	\$423,241
				Allowances				
							Percentage	Cost
					Erosion & Sedin	nent Control	5%	\$21,162
				Drainage	& Stormwater n	nanagement	10%	\$42,324
				Mainte	nance & Protecti	on of Traffic	5%	\$21,162
					I	Mobilization	5%	\$21,162
				I	ncidental Constr	uction Items	2%	\$8,465
						Signing	1%	\$4,232
							es Item Sub-Total	\$118,507
		Escala	ation		Constru	iction & Allov	wance Items Total	\$541,748
Curre	ent year	Rate	Escalation duration					
2	2021	3% / year	2 years		-	Total Escalat	ion Through 2023	\$32,505
						Cons	truction Subtotal	\$574,253
					Co	ntingency @		\$172,276
						Total (	Construction Cost	\$746,529
				Other Project Costs			4.50/	A
					Construction	Oversight @	15%	\$111,979
					Design En	gineering @	15%	\$111,979
Right-of-Way Ac	cquisition	0.10 ac	ROW cost/acre	\$25,000		ſ	Right-of-Way Cost	\$2,500.00
			Utility Impact Percentage	10%			Utility Cost	\$74,653
Note: Value rounded	up nearest	\$50,000		Estin	nated Project	Total Cost	Ş1,0	)50,000

### Notes:

- Construction Item Cost were derived from PennDOT's ECMS Items Price History using an average cost within a similar quantity range

- Contingency Ranges vary from 10% for minor, Non-Complex projects to 40% for Major, Complex Projects per PennDOT's Publication 352 Cost Estimating Guide

- Allowance item costs are a percentage of the known major construction Items cost. A percentage is assigned to the pertinent items that are expected to be part of the project but can not yet be quantified. The percentage is based on the expected project size and the complexity level based on judgment from previous projects.

- Incidental Construction = Field office, Construction Surveying, CPM Schedule, Equipment Package (2% of construction cost)





# Pleasant Dr Alt 1 (Lane Reconfiguration with Signal) Preliminary Construction Cost Estimate

Item Description		Quantity	Unit	Unit Cost	Item Cost
Major Cons	truction Item Quantities		I	I	
CLASS 1 EXCAVATION		1049	CY	\$30.00	\$31,470
FOREIGN BORROW EXCAVATION		760	CY	\$40.00	\$30,400
PLAIN CEMENT CONCRETE PAVEMENT		615	SY	\$110.00	\$67,650
TOPSOIL FURNISHED AND PLACED		290	CY	\$75.00	\$21,750
PLAIN CONCRETE MOUNTABLE CURB		1125	LF	\$50.00	\$56,250
MILL AND OVERLAY		6471	SY	\$25.00	\$161,775
FULL DEPTH PAVEMENT		1265	SY	\$150.00	\$189,750
4" WHITE PAVEMENT MARKINGS		7762	LF	\$0.50	\$3,881
24" WHITE PAVEMENT MARKINGS		88	LF	\$20.00	\$1,760
4" YELLOW PAVEMENT MARKINGS		4210	LF	\$0.50	\$2,105
WHITE THERMOPLASTIC PAVEMENT LEGEND, "STRAIGHT ARROW"		2	EA	\$250.00	\$500
WHITE THERMOPLASTIC PAVEMENT LEGEND, "LEFT ARROW"		2	EA	\$250.00	\$500
WHITE THERMOPLASTIC PAVEMENT LEGEND, "RIGHT ARROW"		4	EA	\$250.00	\$1,000
TRAFFIC SIGNAL		1	EA	\$250,000.00	\$1,000
INAFFIC SIGNAL		I		n Item Sub-Total	\$250,000
	Allowances		Constructio	In item Sub-Total	3010,/91
	Allowances			Percentage	Cost
		Erosion & Sedim	ant Control	5%	\$40,940
			-	10%	\$40,940
	-	& Stormwater m			. ,
	Wainten	ance & Protecti		5%	\$40,940
			Nobilization	5%	\$40,940
	In	cidental Constru	H	2%	\$16,376
	r		Signing	1%	\$8,188
				es Item Sub-Total	\$229,261
Escalation		Constru	ction & Allow	vance Items Total	\$1,048,052
Current year Rate Escalation duration					
2021 3% / year 2 years		-	Total Escalati	on Through 2023	\$62,883
			Const	ruction Subtotal	\$1,110,936
		Cor	ntingency @	30%	\$333,281
			Total C	onstruction Cost	\$1,444,216
	·				+-,,
Oth	er Project Costs				
		Construction (	Oversight @	12%	\$173,306
		Design En	gineering @	15%	\$216,632
of-Way Acquisition 0.00 ac ROW cost/acre.	\$25,000		R	ight-of-Way Cost	\$0.00
Utility Impact Percentage	5%			Utility Cost	\$72,211
	070			- othey bost	<i>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</i>
				\$1,9	

### Notes:

- Construction Item Cost were derived from PennDOT's ECMS Items Price History using an average cost within a similar quantity range

- Contingency Ranges vary from 10% for minor, Non-Complex projects to 40% for Major, Complex Projects per PennDOT's Publication 352 Cost Estimating Guide
 - Allowance item costs are a percentage of the known major construction Items cost. A percentage is assigned to the pertinent items that are expected to be part of the project but can not yet be quantified. The percentage is based on the expected project size and the complexity level based on judgment from previous projects.

- Incidental Construction = Field office, Construction Surveying, CPM Schedule, Equipment Package (2% of construction cost)





# Pleasant Dr Alt 2 (Roundabout with Bypass Lanes) Preliminary Construction Cost Estimate

Item Description	Quantity	Unit	Unit Cost	Item Cost
Major Construction Item Quantities		-		
CLASS 1 EXCAVATION	960	CY	\$30.00	\$28,800
FOREIGN BORROW EXCAVATION	778	СҮ	\$40.00	\$31,120
TRUCK APRON	675	SY	\$125.00	\$84,375
TOPSOIL FURNISHED AND PLACED	284	СҮ	\$75.00	\$21,300
CONCRETE CURB	1211	LF	\$50.00	\$60,550
PLAIN CEMENT CONCRETE PAVEMENT	242	SY	\$110.00	\$26,620
MILL AND OVERLAY	4750	SY	\$25.00	\$118,750
FULL DEPTH PAVEMENT	3470	SY	\$150.00	\$520,500
4" WHITE PAVEMENT MARKINGS	5334	LF	\$0.50	\$2,667
4" YELLOW PAVEMENT MARKINGS	5028	LF	\$0.50	\$2,514
WHITE THERMOPLASTIC PAVEMENT LEGEND ROUNDABOUT LEFT ARROW	2	EA	\$450.00	\$900
WHITE THERMOPLASTIC PAVEMENT LEGEND ROUNDABOUT RIGHT-STRAIGHT ARROW	1	EA	\$575.00	\$575
WHITE THERMOPLASTIC PAVEMENT LEGEND, "YIELD LINE", 12"X18" TRIANGLE	56	LF	\$25.00	\$1,400
•		Constructio	n Item Sub-Total	\$900,071
Allowances			÷	
			Percentage	Cost
	Erosion & Sedin	nent Control	7%	\$63,005
Draina	ge & Stormwater n	nanagement	15%	\$135,011
Maint	enance & Protecti	on of Traffic	7%	\$63,005
	1	Mobilization	5%	\$45,004
	Incidental Constr	uction Items	2%	\$18,001
		Signing	5%	\$45,004
	Construct	ion Allowanc	es Item Sub-Total	\$369,029
Escalation	Constru	uction & Allov	vance Items Total	\$1,269,100
Current year Rate Escalation duration				
2021 3% / year 2 years	-	Total Escalati	on Through 2023	\$76,146
		Cons	truction Subtotal	\$1,345,246
				<del></del>
	Co	ntingency @	30%	\$403,574
		0 / 2	Construction Cost	\$1,748,820
				+-,,
Other Project Costs				
	Construction	Oversight の	12%	\$209,858
	construction	oversignt @	12/0	÷203,030
	Design En	gineering @	15%	\$262,323
	Design En	Succure	15/0	,JE02,JE0
-of-Way Acquisition 0.00 ac ROW cost/acre \$25,00	00	F	Right-of-Way Cost	\$0.00
Utility Impact Percentage 7%			Utility Cost	\$122,417
				250.000
ue rounded up nearest \$50,000 Esti	mated Project	Total Cost	\$2,	350,000

Notes:

- Construction Item Cost were derived from PennDOT's ECMS Items Price History using an average cost within a similar quantity range

- Contingency Ranges vary from 10% for minor, Non-Complex projects to 40% for Major, Complex Projects per PennDOT's Publication 352 Cost Estimating Guide - Allowance item costs are a percentage of the known major construction Items cost. A percentage is assigned to the pertinent items that are expected to be part of the project but can not yet be quantified. The percentage is based on the expected project size and the complexity level based on judgment from previous projects.

- Incidental Construction = Field office, Construction Surveying, CPM Schedule, Equipment Package (2% of construction cost)





# Aliquippa Commercial Area Multimodal Improvements **Preliminary Construction Cost Estimate**

Item Co	Unit Cost	Unit	Quantity		Item Description		
	I			Construction Item Quantities	Majo		
\$79,4	\$30.00	CY	2649			TION	CLASS 1 EXCAVA
\$1,032,8	\$130.00	SY	7945			TE SIDEWALK	CEMENT CONCRI
\$9,1	\$20.00	LF	456		S	MENT MARKING	24" WHITE PAVE
\$141,3	\$450.00	EA	314	KING	NT LEGEND SHARED LANE MAR	PLASTIC PAVEME	WHITE THERMOI
\$1,262,7	n Item Sub-Total	Construction					
				Allowances			
Cost	Percentage						
\$25,2	2%	ent Control	Erosion & Sedin				
\$63,1	5%	anagement	& Stormwater n	Drainage			
\$25,2	2%	on of Traffic	ance & Protecti	Mainte			
\$63,1	5%	Nobilization	1				
\$25,2	2%	uction Items	cidental Constru	1			
\$63,1	5%	Signing					
\$265,1	es Item Sub-Total	ion Allowance	Construct				
\$1,527,9	ance Items Total	ction & Allow	Constru		tion	Escala	
					Escalation duration	Rate	Current year
\$91,6	on Through 2023	Total Escalatio	-		2 years	3% / year	2021
							• •
\$1,619,5	ruction Subtotal	Const					
\$485,82	30%	ntingency @ 🗧	Сог				
\$2,105,4	onstruction Cost	Total C					
				Other Project Costs			
\$252,6	12%	Oversight @	Construction				
\$315,8	15%	gineering @	Design En				
\$0.	ight-of-Way Cost	R		\$25,000	ROW cost/acre	0.00 ac	Way Acquisition
\$105,2	Utility Cost			5%	Utility Impact Percentage		

### Note: Value rounded up nearest \$50,000

### Notes:

- Construction Item Cost were derived from PennDOT's ECMS Items Price History using an average cost within a similar quantity range

- Contingency Ranges vary from 10% for minor, Non-Complex projects to 40% for Major, Complex Projects per PennDOT's Publication 352 Cost Estimating Guide

- Allowance item costs are a percentage of the known major construction Items cost. A percentage is assigned to the pertinent items that are expected to be part of the project but can not yet be quantified. The percentage is based on the expected project size and the complexity level based on judgment from previous projects.

- Incidental Construction = Field office, Construction Surveying, CPM Schedule, Equipment Package (2% of construction cost)





# Chapel Rd (Southbound Left Turn Lane and Realignment) Preliminary Construction Cost Estimate

Quantity	Unit	Unit Cost	Item Cos
		I	
865	CY	\$30.00	\$25,95
90	CY	\$75.00	\$6,75
1609	SY	\$25.00	\$40,22
1143	-	\$150.00	\$171,45
		\$0.50	\$1,90
			\$1,5
	LF	1 2 2 2	\$8
270	LF	\$20.00	\$5,4
1	EA	\$250.00	\$2
	Construction	n Item Sub-Total	\$254,2
		Percentage	Cost
		5%	\$12,7
			\$25,4
enance & Protecti	on of Traffic		\$12,7
1	Vobilization		\$12,7
Incidental Constru	uction Items		\$5,0
	Signing		\$7,6
			\$76,2
Constru	iction & Allow	ance Items Total	\$330,5
-	Total Escalatio	on Through 2023	\$19,8
	Consti	ruction Subtotal	\$350,3
Cor			\$105,1
	Total Co	onstruction Cost	\$455,4
Construction	Oversight @ 1	2%	\$54,6
Design En	gineering @ 1	5%	\$68,3
00	Ri	ght-of-Way Cost	\$25,000
			600.7
		Utility Cost	\$22,7
	90 1609 1143 3813 3064 40 270 1 Erosion & Sedin ge & Stormwater n enance & Protecti Incidental Construct Construct Construct	90       CY         1609       SY         1143       SY         3813       LF         3064       LF         40       LF         270       LF         1       EA         construction         ge & Stormwater management         enance & Protection of Traffic         Mobilization         Incidental Construction Items         Signing         Construction & Allow         - Total Escalation         Construction Oversight @ 1         Design Engineering @ 1	90         CY         \$75.00           1609         SY         \$25.00           1143         SY         \$150.00           3813         LF         \$0.50           3064         LF         \$0.50           40         LF         \$20.00           270         LF         \$20.00           1         EA         \$250.00           construction Item Sub-Total         Construction Item Sub-Total           Percentage         \$6           ge & Stormwater management         10%           enance & Protection of Traffic         5%           Mobilization         5%           Incidental Construction Items         2%           Signing         3%           Construction Allowances Item Sub-Total         Construction & Allowance Items Total           Construction & Allowance Items Total         Construction Subtotal           Construction Oversight @ 30%         Total Construction Cost           Construction Oversight @ 12%         12%

Notes:

- Construction Item Cost were derived from PennDOT's ECMS Items Price History using an average cost within a similar quantity range

- Contingency Ranges vary from 10% for minor, Non-Complex projects to 40% for Major, Complex Projects per PennDOT's Publication 352 Cost Estimating Guide - Allowance item costs are a percentage of the known major construction Items cost. A percentage is assigned to the pertinent items that are expected to be part of the project but can not yet be quantified. The percentage is based on the expected project size and the complexity level based on judgment from previous projects.

- Incidental Construction = Field office, Construction Surveying, CPM Schedule, Equipment Package (2% of construction cost)





# Admiral St (Multimodal Improvements) Preliminary Construction Cost Estimate

Item Description	Quantity	Unit	Unit Cost	Item Cost
Major Construction Item Quantities				
CLASS 1 EXCAVATION	95	CY	\$30.00	\$2,850
CONCRETE CURB	517	LF	\$50.00	\$25,850
CEMENT CONCRETE SIDEWALK	284	SY	\$130.00	\$36,920
MILL AND OVERLAY	498	SY	\$25.00	\$12,450
FULL DEPTH PAVEMENT	180	SY	\$150.00	\$27,00
4" WHITE PAVEMENT MARKINGS	5334	LF	\$0.50	\$2,66
4" YELLOW PAVEMENT MARKINGS	5028	LF	\$0.50	\$2,51
24" WHITE PAVEMENT MARKINGS	320	LF	\$20.00	\$6,40
WHITE THERMOPLASTIC PAVEMENT LEGEND "BUS"	2	EA	\$300.00	\$60
WHITE THERMOPLASTIC PAVEMENT LEGEND "ONLY"	2	EA	\$300.00	\$60
		Constructio	n Item Sub-Total	\$117,85
Allowances				
			Percentage	Cost
	Erosion & Sedin	nent Control	5%	\$5,89
Draina	ge & Stormwater n	nanagement	15%	\$17,67
Maint	enance & Protecti	on of Traffic	7%	\$8,25
	I	Nobilization	5%	\$5,89
	Incidental Constr	uction Items	2%	\$2,35
		Signing	1%	\$1,17
	Construct	ion Allowance	es Item Sub-Total	\$41,24
Escalation	Constru	ction & Allow	ance Items Total	\$159,09
Current year Rate Escalation duration				
2021 3% / year 2 years	-	Total Escalati	on Through 2023	\$9,54
		Const	ruction Subtotal	\$168,64
	Co	ntingency @	30%	\$50,593
		Total C	onstruction Cost	\$219,23
Other Project Costs				
	Construction	Oversight @	15%	\$32,88
	Design En	gineering @	15%	\$32,88
		0 00		
Right-of-Way Acquisition 0.10 ac ROW cost/acre \$25,00	00	R	ight-of-Way Cost	\$2,500.0
Utility Impact Percentage 7%			Utility Cost	\$15,34
e: Value rounded up nearest \$50,000 Esti	mated Project		ĆOF(	0.000

### Notes:

- Construction Item Cost were derived from PennDOT's ECMS Items Price History using an average cost within a similar quantity range

- Contingency Ranges vary from 10% for minor, Non-Complex projects to 40% for Major, Complex Projects per PennDOT's Publication 352 Cost Estimating Guide

- Allowance item costs are a percentage of the known major construction Items cost. A percentage is assigned to the pertinent items that are expected to be part of the project but can not yet be quantified. The percentage is based on the expected project size and the complexity level based on judgment from previous projects.

- Incidental Construction = Field office, Construction Surveying, CPM Schedule, Equipment Package (2% of construction cost)





# Mill St/Kennedy Blvd Alt 1A (Road Diet) Preliminary Construction Cost Estimate

Item Description	Quantity	Unit	Unit Cost	Item Cost
Major Construction Item Quantit				
CLASS 1 EXCAVATION	441	CY	\$30.00	\$13,23
TOPSOIL FURNISHED AND PLACED	42	CY	\$75.00	\$3,15
CONCRETE CURB	1623	LF	\$50.00	\$81,15
CEMENT CONCRETE SIDEWALK	1195	SY	\$130.00	\$155,35
MILL AND OVERLAY	12957	SY	\$25.00	\$323,92
FULL DEPTH PAVEMENT	489	SY	\$150.00	\$73,35
TRAFFIC SIGNAL HEAD	2	EA	\$1,500.00	\$3,00
MISCELLANEOUS TRAFFIC SIGNAL UPGRADES	1	LS	\$50,000.00	\$50,00
4" WHITE PAVEMENT MARKINGS	12531	LF	\$0.50	\$6,26
4" YELLOW PAVEMENT MARKINGS	10254	LF	\$0.50	\$5,12
24" WHITE PAVEMENT MARKINGS	1380	LF	\$20.00	\$27,60
24" YELLOW PAVEMENT MARKINGS	372	LF	\$20.00	\$7,44
WHITE THERMOPLASTIC PAVEMENT LEGEND LEFT ARROW	16	EA	\$250.00	\$4,00
WHITE THERMOPLASTIC PAVEMENT LEGEND STRAIGHT ARROW	4	EA	\$250.00	\$1,00
WHITE THERMOPLASTIC PAVEMENT LEGEND RIGHT ARROW	4	EA	\$250.00	\$1,00
		Constructio	n Item Sub-Total	\$755,58
Allowances				
			Percentage	Cost
	Erosion & Sedir	nent Control	2%	\$15,11
Drai	inage & Stormwater r	nanagement	10%	\$75,55
M	aintenance & Protect	on of Traffic	5%	\$37,77
		Vobilization	5%	\$37,77
	Incidental Constr	uction Items	2%	\$15,11
		Signing	3%	\$22,66
	Construct	ion Allowanc	es Item Sub-Total	\$204,00
Escalation	Constru	ction & Allov	vance Items Total	\$959,59
Current year Rate Escalation duration				
2021 3% / year 2 years	-	Total Escalati	on Through 2023	\$57,57
		Fotal Essentit	on modgin 2020	\$01,01
		Const	truction Subtotal	\$1.017.17
		00115		\$1,017,17
	Со	ntingency@		\$305,15.
		Total C	onstruction Cost	\$1,322,32
Other Project Costs	Construction	Ouorciaht @	1.29/	\$158.67
	Construction	oversignt @	1 ∠ /0	\$138,67
	Design Er	gineering @	15%	\$198,34
Right-of-Way Acquisition 0.20 ac ROW cost/acre \$2	5,000	R	light-of-Way Cost	\$5,000.0
	-,			
Utility Impact Percentage 7%			Utility Cost	\$92,56
Note: Value rounded up nearest \$50,000 E	Estimated Project	Total Cost	\$1,8	300,000

Notes:

- Construction Item Cost were derived from PennDOT's ECMS Items Price History using an average cost within a similar quantity range

- Contingency Ranges vary from 10% for minor, Non-Complex projects to 40% for Major, Complex Projects per PennDOT's Publication 352 Cost Estimating Guide

- Allowance item costs are a percentage of the known major construction Items cost. A percentage is assigned to the pertinent items that are expected to be part of the project but can not yet be quantified. The percentage is based on the expected project size and the complexity level based on judgment from previous projects.

- Incidental Construction = Field office, Construction Surveying, CPM Schedule, Equipment Package (2% of construction cost)





# Mill St/Kennedy Blvd Alt 1B (Road Diet) Preliminary Construction Cost Estimate

Item Description	Quantity	Unit	Unit Cost	Item Cost
Major Construction Item Quantitie	S			
CLASS 1 EXCAVATION	2267	CY	\$30.00	\$68,010
TOPSOIL FURNISHED AND PLACED	114	CY	\$75.00	\$8,550
CONCRETE CURB	6120	LF	\$50.00	\$306,00
CEMENT CONCRETE SIDEWALK	6800	SY	\$130.00	\$884,00
MILL AND OVERLAY	23460	SY	\$25.00	\$586,50
FULL DEPTH PAVEMENT	1360	SY	\$150.00	\$204,00
MISCELLANEOUS TRAFFIC SIGNAL UPGRADES	1	LS	\$75,000.00	\$75,00
4" WHITE PAVEMENT MARKINGS	24480	LF	\$0.50	\$12,24
4" YELLOW PAVEMENT MARKINGS	32640	LF	\$0.50	\$16,32
WHITE THERMOPLASTIC PAVEMENT LEGEND LEFT ARROW	40	EA	\$250.00	\$10,00
		Constructio	n Item Sub-Total	\$2,170,62
Allowances				
			Percentage	Cost
	Erosion & Sedin	nent Control	2%	\$43,41
Drain	age & Stormwater r	nanagement	10%	\$217,06
Mai	ntenance & Protecti	on of Traffic	2%	\$43,41
		Vobilization	5%	\$108,53
	Incidental Constr	uction Items	2%	\$43,41
		Signing	1%	\$21,70
	Construct	ion Allowance	es Item Sub-Total	\$477,53
Escalation	Constru	ction & Allow	ance Items Total	\$2,648,15
Current year Rate Escalation duration				
2021 3% / year 2 years	-	Total Escalati	on Through 2023	\$158.88
		Const	ruction Subtotal	\$2,807,04
	Co	ntingency @	30%	\$842,11
		5	onstruction Cost	\$3,649,16
Other Project Costs				
	Construction	Oversight @	12%	\$437,89
		<u>-</u>		
	Design En	gineering @	15%	\$547,37
ht-of-Way Acquisition 0.00 ac ROW cost/acre \$25,	000	D	ight-of-Way Cost	\$0.0
Int-or-way Acquisition 0.00 ac ROW cost/acte \$25,	000	R	ight-of-way cost	\$0.0
Utility Impact Percentage 5%			Utility Cost	\$182,45
Utility impact Percentage 5%			Utility Cost	\$182,45

Notes:

- Construction Item Cost were derived from PennDOT's ECMS Items Price History using an average cost within a similar quantity range

- Contingency Ranges vary from 10% for minor, Non-Complex projects to 40% for Major, Complex Projects per PennDOT's Publication 352 Cost Estimating Guide - Allowance item costs are a percentage of the known major construction Items cost. A percentage is assigned to the pertinent items that are expected to be part of the project but can not yet be quantified. The percentage is based on the expected project size and the complexity level based on judgment from previous projects.

- Incidental Construction = Field office, Construction Surveying, CPM Schedule, Equipment Package (2% of construction cost)





# Mill St/Kennedy Blvd - Alt 2 (Additional Turn Lanes) Preliminary Construction Cost Estimate

		Item Description		Quantity	Unit	Unit Cost	Item Cost
I		Major	r Construction Item Quantities	s	1 1	I	
CLASS 1 EX	AVATION			339	CY	\$30.00	\$10,170
TOPSOIL FL	RNISHED AND PL	ACED		36	CY	\$75.00	\$2,700
CONCRETE	CURB			1638	LF	\$50.00	\$81,900
CEMENT CO	NCRETE SIDEWA	LK		930	SY	\$130.00	\$120,900
MILL AND C	VERLAY			13972	SY	\$25.00	\$349,300
FULL DEPTH	PAVEMENT			1225	SY	\$150.00	\$183,750
TRAFFIC SIC	NAL HEAD			4	EA	\$1,500.00	\$6,00
4" WHITE P	AVEMENT MARK	INGS		14504	LF	\$0.50	\$7,25
4" YELLOW	4" YELLOW PAVEMENT MARKINGS					\$0.50	\$6,66
24" WHITE	PAVEMENT MAR	KINGS	1330	LF	\$20.00	\$26,60	
24" YELLOV	PAVEMENT MA	RKINGS	874	LF	\$20.00	\$17,48	
WHITE THE	E THERMOPLASTIC PAVEMENT LEGEND LEFT ARROW				EA	\$250.00	\$1,000
WHITE THE	RMOPLASTIC PA	/EMENT LEGEND RIGHT ARROW		4	EA	\$250.00	\$1,000
WHITE THE	RMOPLASTIC PAV	/EMENT LEGEND STRAIGHT ARROW		6	EA	\$250.00	\$1,500
					Constructio	n Item Sub-Total	\$816,21
			Allowances				
						Percentage	Cost
				Erosion & Sedin	nent Control	5%	\$40,81
			Drain	age & Stormwater r	nanagement	10%	\$81,62
			Maii	ntenance & Protecti	ion of Traffic	5%	\$40,811
					Mobilization	5%	\$40,811
				Incidental Constr	uction Items	2%	\$16,324
					Signing	3%	\$24,486
			_	Construct	tion Allowanc	es Item Sub-Total	\$244,864
	E	scalation		Constru	uction & Allow	vance Items Total	\$1,061,078
Current ye	ar Rate	Escalation duration					
2021	3% / year	2 years		-	Total Escalati	on Through 2023	\$63,665
		·	-				
					Const	truction Subtotal	\$1,124,743
				Co	ntingency @	30%	\$337,423
					Total C	onstruction Cost	\$1,462,166
							<i> </i>
			Other Project Costs				
				Construction	Oversight @	12%	\$175,460
				Design En	gineering @	15%	\$219,325
Right-of-Way Acquisi	ion 0.30 ac	ROW cost/acre	\$25,	000	F	light-of-Way Cost	\$7,500.00
		Utility Impact Percentage	10%			Utility Cost	\$146,21
		, ,					· · · ·
	arest \$50,000		Fs	timated Project	Total Cost	\$2	050,000

### Notes:

- Construction Item Cost were derived from PennDOT's ECMS Items Price History using an average cost within a similar quantity range

- Contingency Ranges vary from 10% for minor, Non-Complex projects to 40% for Major, Complex Projects per PennDOT's Publication 352 Cost Estimating Guide
 - Allowance item costs are a percentage of the known major construction Items cost. A percentage is assigned to the pertinent items that are expected to be part of the project but can not yet be quantified. The percentage is based on the expected project size and the complexity level based on judgment from previous projects.

- Incidental Construction = Field office, Construction Surveying, CPM Schedule, Equipment Package (2% of construction cost)





# 20th St (Clear Vegetation, Install Chevrons) Preliminary Construction Cost Estimate

Item Description	Quantity	Unit	Unit Cost	Item Cost
Major Construction Item Quant	ties		II	
CLEARING AND GRUBBING	1	LS	\$20,000.00	\$20,000
CLASS 1 EXCAVATION	1278	CY	\$30.00	\$38,340
TOPSOIL FURNISHED AND PLACED	135	CY	\$75.00	\$10,125
6" WHITE PAVEMENT MARKINGS	1804	LF	\$0.75	\$1,353
4" YELLOW PAVEMENT MARKINGS	3608	LF	\$0.50	\$1,804
FLASHING CHEVRON SIGN	9	EA	\$3,000.00	\$27,000
		Constructio	on Item Sub-Total	\$98,622
Allowances				
			Percentage	Cost
	Erosion & Sedir	ment Control	5%	\$4,931
Dra	ainage & Stormwater r	management	5%	\$4,931
Ν	laintenance & Protect	ion of Traffic	5%	\$4,931
		Mobilization	5%	\$4,93
	Incidental Constr	uction Items	2%	\$1,972
		Signing	3%	\$2,959
	Construct	tion Allowand	es Item Sub-Total	\$24,656
Escalation	Constru	uction & Allo	wance Items Total	\$123,278
Current year Rate Escalation duration				
2021 3% / year 2 years	-	Total Escalat	ion Through 2023	\$7,397
		Cons	truction Subtotal	\$130,674
	Co	ntingency@		\$39,202
		Total (	Construction Cost	\$169,876
Other Project Costs				
	Construction	Oversight @	15%	\$25,481
		Ŭ		
	Design Er	ngineering@	15%	\$25,481
ht-of-Way Acquisition 0.30 ac ROW cost/acre \$.	25,000	F	Right-of-Way Cost	\$7,500.00
Utility Impact Percentage 5%			Utility Cost	\$8,494
ilue rounded up nearest \$50,000	Estimated Project	<b>T</b>	\$250	000

Notes:

- Construction Item Cost were derived from PennDOT's ECMS Items Price History using an average cost within a similar quantity range

- Contingency Ranges vary from 10% for minor, Non-Complex projects to 40% for Major, Complex Projects per PennDOT's Publication 352 Cost Estimating Guide - Allowance item costs are a percentage of the known major construction Items cost. A percentage is assigned to the pertinent items that are expected to be part of the project but can not yet be quantified. The percentage is based on the expected project size and the complexity level based on judgment from previous projects.

- Incidental Construction = Field office, Construction Surveying, CPM Schedule, Equipment Package (2% of construction cost)





# Hopewell Twp School & Shopping Center Multimodal Improvements **Preliminary Construction Cost Estimate**

Item Co.	Unit Cost	Unit	Quantity		Item Description		
	I			Construction Item Quantities	Majo		
\$53,64	\$30.00	CY	1788			TION	CLASS 1 EXCAVA
\$697,3	\$130.00	SY	5364			ETE SIDEWALK	CEMENT CONCRI
\$12,80	\$20.00	LF	640		S	MENT MARKING	24" WHITE PAVE
\$101,2	\$450.00	EA	225	KING	NT LEGEND SHARED LANE MAR	PLASTIC PAVEM	WHITE THERMO
\$865,0	n Item Sub-Total	Construction	•				•
				Allowances			
Cost	Percentage						
\$17,3	2%	ent Control	Erosion & Sedin				
\$43,2	5%	anagement	& Stormwater n	Drainage			
\$43,2	5%	on of Traffic	ance & Protecti	Mainte			
\$43,2	5%	Nobilization	I				
\$17,3	2%	uction Items	cidental Constru	I			
\$25,9	3%	Signing					
\$190,3	es Item Sub-Total	ion Allowance	Construct				
\$1,055,3	Construction & Allowance Items Total			tion	Escala		
					Escalation duration	Rate	Current year
\$63,3	on Through 2023	Total Escalation	-		2 years	3% / year	2021
						-	
\$1,118,6	ruction Subtotal	Const					
\$335,58	30%	ntingency @	Сог				
\$1,454,2	onstruction Cost	Total Co					
				Other Project Costs			
\$174,5	12%	Oversight @ 1	Construction				
	-						
\$218,1	15%	gineering @ 1	Design En				
\$0.	ight-of-Way Cost	R		\$25,00	ROW cost/acre	0.00 ac	Way Acquisition
A				50/			
\$72,7	Utility Cost			5%	Utility Impact Percentage		

### Note: Value rounded up nearest \$50,000

### Notes:

- Construction Item Cost were derived from PennDOT's ECMS Items Price History using an average cost within a similar quantity range

- Contingency Ranges vary from 10% for minor, Non-Complex projects to 40% for Major, Complex Projects per PennDOT's Publication 352 Cost Estimating Guide

- Allowance item costs are a percentage of the known major construction Items cost. A percentage is assigned to the pertinent items that are expected to be part of the project but can not yet be quantified. The percentage is based on the expected project size and the complexity level based on judgment from previous projects.

- Incidental Construction = Field office, Construction Surveying, CPM Schedule, Equipment Package (2% of construction cost)





# Hopewell Shopping Center (Signal at Cherry, Internal Improvements and Streetscape) Preliminary Construction Cost Estimate

		Item Description		Quantity	Unit	Unit Cost	Item Cost
		Major	Construction Item Quantities				
CLASS 1 EX	CAVATION			687	CY	\$30.00	\$20,61
TOPSOIL F	RNISHED AND PLACE	D		307	CY	\$75.00	\$23,02
LANDSCAP	D AREA			1838	SY	\$25.00	\$45,95
TRUCK API	NO			177	SY	\$125.00	\$22,12
MOUNTAE	E CURB			141	LF	\$50.00	\$7,05
CONCRETE	CURB			1075	LF	\$50.00	\$53,75
PLAIN CEN	ENT CONCRETE			36	SY	\$110.00	\$3,96
CEMENT C	NCRETE SIDEWALK			528	SY	\$130.00	\$68,64
MILL AND	VERLAY			43387	SY	\$25.00	\$1,084,67
FULL DEPT	PAVEMENT			3694	SY	\$150.00	\$554,10
4" WHITE I	AVEMENT MARKING	S		10832	LF	\$0.50	\$5,41
4" YELLOW	PAVEMENT MARKIN	GS		10488	LF	\$0.50	\$5,24
24" WHITE	PAVEMENT MARKIN	GS		5276	LF	\$20.00	\$105,52
WHITE TH	RMOPLASTIC PAVEM	ENT LEGEND LEFT ARROW		2	EA	\$250.00	\$50
WHITE TH	RMOPLASTIC PAVEM	ENT LEGEND STRAIGHT ARROW		1	EA	\$250.00	\$25
TRAFFIC SI	INAL			1	EA	\$250,000.00	\$250,00
					Constructio	n Item Sub-Total	\$2,250,81
			Allowances			· · · · ·	
						Percentage	Cost
				Erosion & Sedin	nent Control	5%	\$112,54
			Drainage	& Stormwater n	nanagement	10%	\$225,08
			Mainten	ance & Protecti	on of Traffic	5%	\$112,54
				1	Mobilization	5%	\$112,54
			In	cidental Constru	uction Items	2%	\$45,01
					Signing	3%	\$67,52
				Construct	ion Allowand	es Item Sub-Total	\$675,24
	Esca	ation		Constru	ction & Allov	vance Items Total	\$2,926,06
Current y	ar Rate	Escalation duration					
2021	3% / year	2 years		-	Total Escalat	ion Through 2023	\$175,56
	, ,	,					, ,,,,
					Cons	truction Subtotal	\$3,101,62
						2021	
				Col	ntingency @		\$930,48
					Total G	Construction Cost	\$4,032,11
			Other Project Costs				
			Other Project Costs	C		4.29/	ć 402.05
				Construction	Oversignt @	12%	\$483,85
						4500	4000.00
				Design En	gineering @	15%	\$604,81
	0.00		405.000				41- 000 0
Right-of-Way Acquis	ion 0.60 ac	ROW cost/acre	\$25,000			Right-of-Way Cost	\$15,000.0
			501				444.5
		Utility Impact Percentage	5%			Utility Cost	\$201,60
							350,000

### Notes:

- Construction Item Cost were derived from PennDOT's ECMS Items Price History using an average cost within a similar quantity range

- Contingency Ranges vary from 10% for minor, Non-Complex projects to 40% for Major, Complex Projects per PennDOT's Publication 352 Cost Estimating Guide

- Allowance item costs are a percentage of the known major construction Items cost. A percentage is assigned to the pertinent items that are expected to be part of the project but can not yet be quantified. The percentage is based on the expected project size and the complexity level based on judgment from previous projects.

- Incidental Construction = Field office, Construction Surveying, CPM Schedule, Equipment Package (2% of construction cost)





# Tee Line Drive (Turn Lane) Preliminary Construction Cost Estimate

	Item Description		Quantity	Unit	Unit Cost	Item Cost
	Major	Construction Item Quantities		<u> </u>		
MILL AND OVERLAY			795	SY	\$25.00	\$19,875
FULL DEPTH PAVEMENT			384	SY	\$150.00	\$57,600
4" WHITE PAVEMENT MARKINGS			1274	LF	\$0.50	\$637
4" YELLOW PAVEMENT MARKINGS			1312	LF	\$0.50	\$656
24" WHITE PAVEMENT MARKINGS			20	LF	\$20.00	\$400
24" YELLOW PAVEMENT MARKINGS			72	LF	\$20.00	\$1,440
WHITE THERMOPLASTIC PAVEMENT LEG	GEND LEFT ARROW		1	EA	\$250.00	\$250
·				Constructio	n Item Sub-Total	\$80,858
		Allowances				
					Percentage	Cost
			Erosion & Sedin	nent Control	5%	\$4,043
		Drainage	& Stormwater n	nanagement	15%	\$12,129
		Mainten	ance & Protecti	on of Traffic	7%	\$5,660
			I	Mobilization	5%	\$4,043
		In	cidental Constru	uction Items	2%	\$1,617
				Signing	3%	\$2,426
			Construct	ion Allowance	es Item Sub-Total	\$29,917
Escalation			Constru	iction & Allow	ance Items Total	\$110,775
Current year Rate R	Escalation duration					
2021 3% / year	2 years		-	Total Escalati	on Through 2023	\$6,647
				Const	ruction Subtotal	\$117,422
			Сог	ntingency @	30%	\$35,227
					onstruction Cost	\$152,649
		Other Project Costs				
			Construction	Oversight @	15%	\$22,897
			Design En	gineering @	15%	\$22,897
t-of-Way Acquisition 0.10 ac	ROW cost/acre	\$25,000		R	ight-of-Way Cost	\$2,500.00
	Utility Impact Percentage	5%			Utility Cost	\$7,632
l	Utility Impact Percentage	5%			Utility Cost	\$

Note: Value rounded up nearest \$50,000

### Notes:

- Construction Item Cost were derived from PennDOT's ECMS Items Price History using an average cost within a similar quantity range

- Contingency Ranges vary from 10% for minor, Non-Complex projects to 40% for Major, Complex Projects per PennDOT's Publication 352 Cost Estimating Guide

- Allowance item costs are a percentage of the known major construction Items cost. A percentage is assigned to the pertinent items that are expected to be part of the project but can not yet be quantified. The percentage is based on the expected project size and the complexity level based on judgment from previous projects.

Estimated Project Total Cost

- Incidental Construction = Field office, Construction Surveying, CPM Schedule, Equipment Package (2% of construction cost)

- Utility Impact Percentage is a percentage of the total construction cost to account for utility impacts. This value is based on the estimated impact to the utilities



\$250,000



# Five Points Area Advance Warning Improvements and Multimodal Improvements Preliminary Construction Cost Estimate

Item Description	Quantity	Unit	Unit Cost	Item Cost
Major Construction Item Quant	ities		II	
6" WHITE PAVEMENT MARKINGS	9370	LF	\$0.75	\$7,028
4" YELLOW PAVEMENT MARKINGS	9372	LF	\$0.50	\$4,686
WHITE THERMOPLASTIC PAVEMENT LEGEND, SLOW CURVE ARROW LEFT	2	EA	\$1,100.00	\$2,200
WHITE THERMOPLASTIC PAVEMENT LEGEND, SLOW CURVE ARROW RIGHT	2	EA	\$1,100.00	\$2,200
WHITE THERMOPLASTIC PAVEMENT LEGEND SHARED LANE MARKING	193	EA	\$450.00	\$86,850
•	·	Construction	on Item Sub-Total	\$102,964
Allowances				
			Percentage	Cost
	Erosion & Sec	liment Control	0%	\$0
Dr	ainage & Stormwate	r management	0%	\$0
Ν	Aaintenance & Prote	ction of Traffic	5%	\$5,148
		Mobilization	5%	\$5,148
	Incidental Cons	truction Items	2%	\$2,059
		Signing	5%	\$5,148
	Constru	iction Allowand	es Item Sub-Total	\$17,504
Escalation	Cons	truction & Allo	wance Items Total	\$120,467
Current year Rate Escalation duration				
2021 3% / year 2 years		- Total Escalat	ion Through 2023	\$7,228
		Cons	truction Subtotal	\$127,695
	(	Contingency @	30%	\$38,309
		Total	Construction Cost	\$166,004
Other Project Costs				
	Constructio	n Oversight @	15%	\$24,901
			• •	
	Design	Engineering @	15%	\$24,901
ight-of-Way Acquisition 0.00 ac ROW cost/acre \$	25,000		Right-of-Way Cost	\$0.00
Utility Impact Percentage 0%			Utility Cost	\$0
			ettiniy bost	÷
		t Total Cost		50.000

### Notes:

- Construction Item Cost were derived from PennDOT's ECMS Items Price History using an average cost within a similar quantity range

- Contingency Ranges vary from 10% for minor, Non-Complex projects to 40% for Major, Complex Projects per PennDOT's Publication 352 Cost Estimating Guide - Allowance item costs are a percentage of the known major construction Items cost. A percentage is assigned to the pertinent items that are expected to be part of the project but can not yet be quantified. The percentage is based on the expected project size and the complexity level based on judgment from previous projects.

- Incidental Construction = Field office, Construction Surveying, CPM Schedule, Equipment Package (2% of construction cost)
 - Utility Impact Percentage is a percentage of the total construction cost to account for utility impacts. This value is based on the estimated impact to the utilities





# Bocktown Road (Sight Distance) Preliminary Construction Cost Estimate

		Item Description		Quantity	Unit	Unit Cost	Item Cos
		Major	Construction Item Quantities	<u> </u>			
CLEARING AND G	GRUBBING			1	LS	\$10,000.00	\$10,00
CLASS 1 EXCAVA	TION			643	CY	\$30.00	\$19,29
TOPSOIL FURNIS	HED AND PLACE	D		85	CY	\$75.00	\$6,37
					Constructio	on Item Sub-Total	\$35,66
			Allowances				
						Percentage	Cost
				Erosion & Sedin	nent Control	5%	\$1,78
			Drainage	& Stormwater n	nanagement	5%	\$1,78
			Mainter	nance & Protecti	on of Traffic	5%	\$1,78
				I	Mobilization	5%	\$1,78
			Ir	ncidental Constr	uction Items	2%	\$7:
					Signing	1%	\$35
				Construct	ion Allowanc	es Item Sub-Total	\$8,20
	Escala	ation		Constru	uction & Allov	wance Items Total	\$43,8
Current year	Rate	Escalation duration					
2021	3% / year	2 years		-	Total Escalat	ion Through 2023	\$2,63
					Cons	truction Subtotal	\$46,5
				Co	ntingency @	25%	\$11,6
						Construction Cost	\$58,1
							+)-
			Other Project Costs			<u> </u>	
				Construction	Oversight @	12%	\$6,9
				Design En	gineering @	15%	\$8,7
							4
Right-of-Way Acquisition	0.20 ac	ROW cost/acre	\$25,000			Right-of-Way Cost	\$5,000.
		Utility Impact Percentage	10%			Utility Cost	\$5,8
in a second s		, , , , , , , , , , , , , , , , , , , ,					
e: Value rounded up nearest	¢50.000		Estim	ated Project	Total Cost	\$1	00,000

### Notes:

- Construction Item Cost were derived from PennDOT's ECMS Items Price History using an average cost within a similar quantity range

- Contingency Ranges vary from 10% for minor, Non-Complex projects to 40% for Major, Complex Projects per PennDOT's Publication 352 Cost Estimating Guide - Allowance item costs are a percentage of the known major construction Items cost. A percentage is assigned to the pertinent items that are expected to be part of the project but can

not yet be quantified. The percentage is based on the expected project size and the complexity level based on judgment from previous projects.

- Incidental Construction = Field office, Construction Surveying, CPM Schedule, Equipment Package (2% of construction cost)





# Five Points Alt 1 (Route 151 Realignment) Preliminary Construction Cost Estimate

Item Description	Quantity	Unit	Unit Cost	Item Cos
Major Construction Item Quantit	ties			
CLASS 1 EXCAVATION	22850	CY	\$30.00	\$685,50
TOPSOIL FURNISHED AND PLACED	150	CY	\$75.00	\$11,25
CONCRETE CURB	394	LF	\$50.00	\$19,70
PLAIN CEMENT CONCRETE PAVEMENT	65	SY	\$110.00	\$7,15
MILL AND OVERLAY	9047	SY	\$25.00	\$226,17
FULL DEPTH PAVEMENT	9705	SY	\$150.00	\$1,455,75
TRAFFIC SIGNAL	1	EA	\$250,000.00	\$250,00
4" WHITE PAVEMENT MARKINGS	15593	LF	\$0.50	\$7,79
4" YELLOW PAVEMENT MARKINGS	12614	LF	\$0.50	\$6,30
24" WHITE PAVEMENT MARKINGS	1194	LF	\$20.00	\$23,88
WHITE THERMOPLASTIC PAVEMENT LEGEND LEFT ARROW	3	EA	\$250.00	\$75
WHITE THERMOPLASTIC PAVEMENT LEGEND RIGHT ARROW	3	EA	\$250.00	\$75
WHITE THERMOPLASTIC PAVEMENT LEGEND STRAIGHT ARROW	2	EA	\$250.00	\$50
WHITE THERMOPLASTIC PAVEMENT LEGEND THRU-RIGHT ARROW	1	EA	\$400.00	\$40
WHITE THERMOPLASTIC PAVEMENT LEGEND THRU-LEFT ARROW	1	EA	\$400.00	\$40
		Constructio	on Item Sub-Total	\$2,696,30
Allowances				
			Percentage	Cost
	Erosion & Sedi	ment Control	7%	\$188,74
Dra	inage & Stormwater i	management	15%	\$404,44
M	aintenance & Protect	ion of Traffic	7%	\$188,74
		Mobilization	5%	\$134,81
	Incidental Constr	ruction Items	2%	\$53,92
		Signing	3%	\$80,88
			es Item Sub-Total	\$1,051,56
Escalation	Constr	uction & Allow	wance Items Total	\$3,747,86
Current year Rate Escalation duration				
2021 3% / year 2 years	-	Total Escalat	ion Through 2023	\$224,87
		Cons	truction Subtotal	\$3,972,74
	Cc	ntingency@	40%	\$1,589,09
			Construction Cost	\$5,561,83
Other Project Costs	<u>.</u>			
	Construction	Oversight @	12%	\$667,42
	Design Er	ngineering@	25%	\$1,390,45
Right-of-Way Acquisition 5.00 ac ROW cost/acre \$2	5,000			
Commercial Acquisition 3 Each ROW cost/each \$50	0,000			
	5,000			
		F	Right-of-Way Cost	\$1,875,000.0
Utility Impact Percentage 10%			Utility Cost	\$556,18
			\$10,10	

Notes:

- Construction Item Cost were derived from PennDOT's ECMS Items Price History using an average cost within a similar quantity range

- Contingency Ranges vary from 10% for minor, Non-Complex projects to 40% for Major, Complex Projects per PennDOT's Publication 352 Cost Estimating Guide

- Allowance item costs are a percentage of the known major construction Items cost. A percentage is assigned to the pertinent items that are expected to be part of the project but can not yet be quantified. The percentage is based on the expected project size and the complexity level based on judgment from previous projects.

- Incidental Construction = Field office, Construction Surveying, CPM Schedule, Equipment Package (2% of construction cost)





# Five Points Alt 2 (Quadrant Roadway with Overpass) Preliminary Construction Cost Estimate

LASS 1 EXCAVAT							
		Major Co	onstruction Item Quantities				
	ION			12500	CY	\$30.00	\$375
OPSOIL FURNISH	ED AND PLACE	D		212	CY	\$75.00	\$15
ONCRETE CURB				394	LF	\$50.00	\$19
LAIN CEMENT CO	ONCRETE PAVE	MENT		65	SY	\$110.00	\$7
/ILL AND OVERLA				9158	SY	\$25.00	\$228
ULL DEPTH PAVE	MENT			8443	SY	\$150.00	\$1,266
RAFFIC SIGNAL				2	EA	\$250,000.00	\$500
GUIDE RAIL (PER I	PROPOSED RUN	))		4	EA	\$7,500.00	\$30
				15473	LF	\$0.50	\$7
" YELLOW PAVEN	MENT MARKIN	SS		13820	LF	\$0.50	\$6
4" WHITE PAVEN	VENT MARKING	S		320	LF	\$20.00	\$6
					LF	\$20.00	\$34
							\$1
				-			\$1
							\$1
							\$1,497
-		G)			-		\$1,000
				I			\$4,999
			Allowances		oonstructio		÷.,,,,,
						Percentage	Cost
			F	rosion & Sedin	ent Control	<b>.</b>	\$249
					_		\$749
			5		5		\$349
			Wallten				\$249
			In				\$249
			III				\$149
			Г	Construct	3 3	<b>2</b>	\$149
	Feeel	tion					\$1,649
0				CONSUL	ICTION & ANOW	ance items total	\$0,045
					T - 4 - 1 F 1 - 41	Thurson the 2002	¢ 410
2021	3% / year	2 years		-	Total Escalati	on Through 2023	\$410
							-
					Const	ruction Subtotal	\$7,260
				Сог	ntingency @	30%	\$2,178
					Total C	onstruction Cost	\$9,438
			Other Project Costs				
				Construction	Oversight @	10%	\$943
			-		-		
				Design En	gineering @	25%	\$2,359
ay Acquisition	5.00 ac	ROW cost/acre	\$25,000				
ial Acquisition	3 Each	ROW cost/each	\$500,000				
ial Acquisition	0 Each	ROW cost/each	\$125,000				
					R	ight-of-Way Cost	\$1,625,00
		Utility Impact Percentage	10%			Utility Cost	\$943
	<ul> <li>WHITE PAVEM</li> <li>YELLOW PAVEI</li> <li>YELLOW PAVEI</li> <li>YELLOW PAVI</li> <li>YELLOW PAVI</li> <li>YHITE THERMOP</li> <li>YHITE THERMOP</li> <li>YHITE THERMOP</li> <li>YHITE THERMOP</li> <li>ETAINING WALL</li> <li>TRUCTURE (INCL</li> </ul>	WHITE PAVEMENT MARKINGS     'YELLOW PAVEMENT MARKING     'YELOW PAVEMENT MARKING     'YELOW PAVEMENT MARKING     'YELOW PAVEMENT MARKING     'YELOW PAVEMENT     'YELOW PAVEMENT MARKING     'YELOW PAVEMENT      'YELOW PAVEMENT     'YELOW PAVEMENT      'YELOW P	Escalation         Escalation         Current year       Rate       Escalation duration         2021       3% / year       2 years       2         ay Acquisition       5.00 ac       ROW cost/acre       Row cost/acre         al Acquisition       3 Each       ROW cost/acre       Row cost/each         al Acquisition       0 Each       ROW cost/each       Utility Impact Percentage	* WHITE PAVEMENT MARKINGS * YELLOW PAVEMENT MARKINGS 4* WHITE PAVEMENT MARKINGS 4* WHITE PAVEMENT MARKINGS VHITE THERMOPLASTIC PAVEMENT LEGEND LEFT ARROW VHITE THERMOPLASTIC PAVEMENT LEGEND STRAIGHT ARROW FTAINING WALLS TRUCTURE (INCLUDING SHORING)  Allowances  Escalation Current year Escalation Current year Escalation Current year Strain Stra	"WHITE PAVEMENT MARKINGS       15473         "YELLOW PAVEMENT MARKINGS       13820         4" WHITE PAVEMENT MARKINGS       320         4" YELLOW PAVEMENT MARKINGS       1714         4"YELLOW PAVEMENT MARKINGS       1714         HITE THERMOPLASTIC PAVEMENT LEGEND LEFT ARROW       5         VHITE THERMOPLASTIC PAVEMENT LEGEND STRAIGHT ARROW       4         ETAINING WALLS       6655         TRUCTURE (INCLUDING SHORING)       1         Allowances       1         Construct         Construct         Current year       Rate         Escalation       Construct         Construct       Construct         2021       3% / year       2 years         Other Project Costs         Construction         Design En         Advectisition         AWW cost/each         AWW cost/each	*WHITE PAVEMENT MARKINGS       15473       LF         *YELLOW PAVEMENT MARKINGS       13820       LF         4*YELLOW PAVEMENT MARKINGS       320       LF         4*YELLOW PAVEMENT MARKINGS       320       LF         4*YELLOW PAVEMENT MARKINGS       1714       LF         *WHITE PHERMOPLASTIC PAVEMENT LEGEND RIGHT ARROW       5       EA         VHITE THERMOPLASTIC PAVEMENT LEGEND STRAIGHT ARROW       4       EA         ETAINING WALLS       6655       SF         TRUCTURE (INCLUDING SHORING)       1       LS         Construction Construction         Mailemances         Construction As endiment Control         Drainage & Stormwater management       Mailemances         Mailemance & Protection of Traffic       Mobilization         Construction Allowance       Construction Allowance         Construction Allowance       Signing         2021       3% / year       2 years         Contingency @         Contal Escalati         Constru	"WHITE PAVEMENT MARKINGS         15473         LF         \$0.50           "YELLOW PAVEMENT MARKINGS         13820         LF         \$0.50           "WHITE PAVEMENT MARKINGS         320         LF         \$20.00           "WHITE PAVEMENT MARKINGS         1714         LF         \$20.00           "WHITE PAVEMENT MARKINGS         1714         LF         \$20.00           "WHITE THEEMORPLASTIC PAVEMENT LEGEND LEFT ARROW         5         EA         \$250.00           WHITE THEEMORPLASTIC PAVEMENT LEGEND STRAIGHT ARROW         4         EA         \$250.00           WHITE THEEMORPLASTIC PAVEMENT LEGEND STRAIGHT ARROW         4         EA         \$250.00           TRUCTURE (INCLUDING SHORING)         1         LS         \$1.000.000.00           TRUCTURE (INCLUDING SHORING)         1         LS         \$1.000.000.00           Construction Item Sub-Total         5%         Drainage & Stormwater management         15%           Maintenance & Protection of Traffic         7%         Mobilization         5%           Construction Allowances Item Sub-Total         Construction Allowances Item Sub-Total         Construction Subtotal           2021         3% / year         2 years         -         Total Escalation Through 2023         -           Contingency @ 30%

### Notes:

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