

**VOLUME 2**

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Appendix I

**Plan Implementation and Recommended  
Ordinance/Code Language**

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## Recommended Code Updates to Implement TSP

The following outline provides a list of Springfield Development Code updates which may be needed to implement the Springfield 2035 TSP. After adoption of the Springfield 2035 TSP, the City will conduct an in-depth evaluation of its Development Code, including providing stakeholder and public input, to select a final set of Development Code edits. Those proposed edits will then go through a review and adoption process by the City of Springfield Planning Commission and the City Council prior to approval.

- Section 4.2-105 et seq. – Public Streets
  - Remove references to TransPlan
  - Clarify and/or re-evaluate connectivity desires
  - Adjust language regarding “existing and planned” routes
  - Consider adjusting language related to “Public Works Director” approval to “Engineering approval”
  - Reevaluate requirements for sight distance triangle
  - Consider rewording of phrases such as: “the developer” to “the applicant”; “signal” to “traffic devices”
  - Update dates referenced in Code
- 3.2-215 - Base Zone Development Standards (Residential) – Panhandle Lots / Parcels
  - Needs to be reevaluated and updated
- 3.2-315 – Base Zone Development Standards (Commercial) – Panhandle Lots / Parcels
  - Needs to be reevaluated and updated
- 3.2-420 - Base Zone Development Standards (Industrial) – Panhandle Lots / Parcels
  - Needs to be reevaluated and updated
  - Consider restricting panhandle lots on dead-end streets
- 4.2-110 – Private Streets
  - Review current law and ownership issues
- 4.2-120 – Site Access and Driveways
  - Needs to be reevaluated and updated
  - Address pervious pavement needs
- 4.2-125 – Intersections
  - Needs to be reevaluated and updated
- 4.2-130 – Vision Clearance
  - Update with current AASHTO standards
- 4.2-135 – Sidewalks
  - Needs to be reevaluated and updated
- 4.2-140 – Street Trees
  - Needs to be reevaluated and updated
- 4.2-145 – Street Lighting
  - Needs to be reevaluated and updated (use recent *Regional Bike Parking Study* for guidance)

- 4.2-150 - Bikeways
  - Needs to be reevaluated and updated
- 4.2-155 – Pedestrian Trails
  - Needs to be reevaluated and updated
  - Update Willamalane reference
  - Consider rewording “pedestrian trails”
- 4.2-160 – Accessways
  - Needs to be reevaluated and updated
  - Reevaluate phrase, “Right-of-way” versus “Easement”
- 4.6-110 – 4.6-115 – Vehicle Parking
  - Needs to be reevaluated and updated
  - Consider preference stated for 90 degree parking
  - Address requirements for residential side yard fence heights at intersections

Appendix II

# **Detailed Cost Estimates and Funding Analyses**

Revised January 21, 2020

**Roadway**

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## Springfield TSP - Estimate Summary

### ROADWAY PROJECTS ORDER OF MAGNITUDE COST ESTIMATES

Project	Estimated Cost
R-1 - North Gateway Collector - Maple Island Road/Royal Caribbean Way to International Way	\$4,300,000
R-2 - Gateway Road/International Way to UGB	\$950,000
R-3 - New collector - Game Farm Road - East to International Way	\$6,300,000
R-4 - Maple Island Road – Game Farm Road/Deadmond Ferry Road to Beltline Road	\$3,100,000
R-5 - Extend Riverbend Drive to International Way (Northeast Link)	\$1,600,000
R-6 - Improvements to serve Riverbend Area	\$10,200,000
R-8 - Mallard Avenue - Gateway Street to Game Farm Road	\$4,530,000
R-9 - Laura Street to Pioneer Parkway	\$3,300,000
R-10 - Q Street/Laura Street and Laura Street Interchange Area	\$1,600,000
R-11 - 5th Street/Q Street	\$550,000
R-12 - Franklin Boulevard Riverfront Collector	\$7,700,000
R-13 - Franklin Boulevard Multi-modal Improvements	\$35,000,000 <sup>1</sup>
R-14 - Franklin Boulevard/McVay Highway Multi-lane Roundabout	\$7,000,000
R-16 - E 17th Avenue: Glenwood Boulevard to Henderson Avenue	\$1,900,000
R-17 - Henderson Avenue – Franklin Boulevard to East 19 <sup>th</sup> Avenue	\$3,400,000
R-18 - East 19th Avenue – Henderson Avenue to Franklin Boulevard	\$3,500,000
R-19 - McVay Highway and East 19 <sup>th</sup> Avenue	\$2,500,000
R-20 - McVay Highway – East 19 <sup>th</sup> Avenue	\$47,000,000
R-24 - 19th Street - Hayden Bridge to Yolanda Avenue	\$2,400,000
R-25 - Hayden Bridge Road - 19th Street to Marcola Road	\$12,000,000
R-26 - Yolanda Avenue - 23rd Street to 31st Street	\$460,000
R-27 - Yolanda Avenue to 35 <sup>th</sup> Street	\$9,940,000
R-28 - Marcola Road to 31st Street	\$9,000,000
R-29 - 31st Street - Hayden Bridge to U Street	\$3,800,000
R-30 - Marcola Road/19th Street	\$320,000
R-31 - 28th Street/Marcola Road	\$1,900,000
R-32 - 42nd Street/Marcola Road	\$2,800,000
R-33 - Intersection Improvements at Centennial Blvd and 28th St.	\$1,800,000
R-34 - Centennial Boulevard/Industrial Avenue – 28 <sup>th</sup> Street to 35 <sup>th</sup> Street	\$9,500,000
R-36 - 42nd Street - Marcola Road to Railroad Tracks	\$6,000,000
R-37 - Commercial Avenue - 42nd Street to 48th Street, north of Main Street and North-South Connection	\$19,000,000
R-38 - South 42nd Street/Daisy Street	\$1,800,000
R-39 - Extend South 48 <sup>th</sup> Street to Daisy Street	\$3,600,000
R-40 - OR 126/52nd Street Interchange Improvements	\$40,000,000 <sup>2</sup>
R-42 - Holly Street – South 48 <sup>th</sup> Street to South 57 <sup>th</sup> Street	\$5,300,000
R-43 - OR 126/Main Street Interchange Improvements	\$50,000,000 <sup>2</sup>
R-44 - Daisy Street crossing of Bob Straub Parkway	\$2,400,000
R-45 - Improvements within the Jasper-Natron Area	\$67,000,000
R-46 – Bob Straub Parkway to Mountaingate Drive and Future Local	\$4,300,000
R-47 - Haul Road – Quartz Avenue to UGB	\$6,300,000
R-48 - Mountaingate Drive/Main Street	\$900,000
R-49 - 79th Street - Main Street to Thurston Road	\$8,200,000
R-50 - Gateway/Beltline Phase 2 Project	\$12,000,000
R-51 - Gateway Street/Harlow Road	\$2,910,000 <sup>2</sup>
R-52 – Main Street/48 <sup>th</sup> Street	\$2,400,000
US-1 - Game Farm Road South Mallard Avenue to Harlow Road	\$2,200,000
US-3 - Aspen Street – Centennial Boulevard to West D Street	\$2,200,000
US-4 - 21st Street – D Street to Main Street	\$2,300,000
US-5 - 28th Street – Centennial Boulevard to Main Street	\$4,300,000
US-6 - South 28th Street – Main Street to South F Street	\$6,000,000
US-8 - 35th Street – Olympic to Commercial Avenue	\$3,600,000
US-9 - Commercial Avenue – 35th to 42nd Street	\$4,500,000
US-10 - 36th Street – Commercial Avenue to Main Street	\$3,000,000
US-11 - Clearwater Lane – south of Jasper Road within UGB	\$470,000
US-14 - Thurston Road – Weaver Road to UGB	\$4,800,000
US-16 - 48th Street – Main Street to G Street	\$600,000
US-17 - G Street – 48th Street to 52nd Street	\$370,000
US-18 - 52nd Street – OR 126E to G Street	\$250,000

<sup>1</sup> Cost developed as part of the current Franklin Boulevard project development process; detailed cost breakdown not included here.

<sup>2</sup>\* Cost developed as part of the Regional Transportation Plan; detailed cost breakdown not included here.

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-1 - Extension From Royal Caribbean Way to International Way		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 8/5/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.35		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting, Structures					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.38	\$935,700.00	\$355,566
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Concrete	Lane-Mi.	1.48	\$595,700.00	\$881,636
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	10,000	\$7.50	\$75,000
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.35	\$260,000.00	\$91,000
13	Landscaping	Mi.	0.35	\$235,000.00	\$82,250
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$1,485,452</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$37,100
TP & DT	3.0-8.0%	8.0%	\$118,800
Mobilization	8.0-10.0%	10.0%	\$148,500
Erosion Control	0.5-2.0%	2.0%	\$29,700
Contingency	30-40%	40.0%	\$594,200
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$2,413,752</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		5.0%		\$120,688
Easements & ROW Acquisition		25.0%		\$603,438
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$724,100
Construction Engineering		15.0%		\$362,100
<b>TOTAL PROJECT COST</b>				<b>\$4,300,000</b>

### Assumptions

- Project limits from the terminus of Royal Caribbean Way to Corporate Way; L-1,875FT; 0.35mi
- 3-L urban collector (2-12' lane, 1-12' turn, 2-6' bike, 2-6' walk)
- Illumination and landscaping included
- 3' average depth earthwork over the new work area due to project footprinting in flood plain
- ROW and sensitive area impacts are assumed
- Utility impacts/relocation are not included
- Reconstruct the approach leg of the roundabout at Industrial Way (L-150', W-36')
- Roadway surfacing is assumed concrete. Actual surfacing will be determined by LCCA per City Policy

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-2 - Intersection Improvements Gateway Street at International Way		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/28/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.10		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting, Structures					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.05	\$935,700.00	\$46,785
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Asphalt	SF	12,900	\$7.00	\$90,300
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Concrete Islands	SF	2,155	\$12.00	\$25,860
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA	0.5	\$300,000.00	\$150,000
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	650	\$7.50	\$4,875
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.05	\$260,000.00	\$13,000
13	Landscaping	Mi.	0.05	\$235,000.00	\$11,750
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$342,570</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$8,600
TP & DT	3.0-8.0%	8.0%	\$27,400
Mobilization	8.0-10.0%	10.0%	\$34,300
Erosion Control	0.5-2.0%	2.0%	\$6,900
Contingency	30-40%	40.0%	\$137,000
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$556,770</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		25.0%		\$139,193
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$167,000
Construction Engineering		15.0%		\$83,500
<b>TOTAL PROJECT COST</b>				<b>\$950,000</b>

Assumptions: Next Page

## Assumptions

Project constructs improvements at International Way/Gateway Street remaining from the Revised EA as part of the Gateway/Beltline Intersection Refinement Area project

All widening is north of International Way. A full width section exists south of International Way

All widening is to the east side of Gateway Street

Length of improvements are L-530FT measured north from International way

Width of widening is assumed 40' (2-12' lanes, 1-6' bike, 1-10' sidewalk/planter)

Landscaping and Irrigation included for 1 side only (1/2 L)

Curb/drainage included for 1 side only (1/2 L)

Widening is asphalt surfacing

ROW impacts are included

Reconstruction of concrete island on south leg included. New island on the north leg is assumed

Signal reconstruction is included at 1/2 of a new signal (assumes two new poles)

No sensitive area impacts

Earthwork at 1/2 depth of new work area

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-3 - New collector; Game farm Rd. east to International Way		<b>PREPARED BY:</b> Sam Monsef		<b>DATE:</b> 2/15/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.20		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.20	\$935,700.00	\$186,077
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Concrete	Lane-Mi.	0.43	\$595,700.00	\$256,151
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	1-L Roundabout	EA	2	\$852,400.00	\$1,704,800
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	2,333	\$7.50	\$17,498
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.20	\$260,000.00	\$51,705
13	Landscaping	Mi.	0.20	\$235,000.00	\$46,733
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$2,262,963</b>

	ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE		COST
	Construction Surveying	1.0-2.5%	2.5%		\$56,600
	TP & DT	3.0-8.0%	8.0%		\$181,000
	Mobilization	8.0-10.0%	10.0%		\$226,300
	Erosion Control	0.5-2.0%	2.0%		\$45,300
	Contingency	30-40%	40.0%		\$905,200
	Escalation Rate (per year)	0.5-2.0%	2.0%		
	<i>Design Year (or Estimate Year)</i>		2013		
	<i>Construction Year</i>		2013		
					\$0
<b>TOTAL CONSTRUCTION COST</b>					<b>\$3,677,363</b>

	Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
	Railroad Crossing	EA	0	\$600,000.00	\$0
	Environmental Mitigation		0.0%		\$0
	Easements & ROW Acquisition		25.0%		\$919,341
	Indirect Costs		PERCENTAGE		COST
	Engineering, Legal/Admin, Coordinati		30.0%		\$1,103,200
	Construction Engineering		15.0%		\$551,600
<b>TOTAL PROJECT COST</b>					<b>\$6,300,000</b>

### Assumptions

- Construct to 3-lane standard collector; 3-12' lanes, 2-6' bike, 2-6' sidewalk including (curb and drainage)
- Project length is measured 1050 ft from E Game Farm Rd. to International way
- Assume 1 structures impacted.
- Landscaping needed.
- Lighting included for improvements
- Earthwork assumed at 1' total depth (cut/fill) for length. Grade is flat
- Signals, walls and bridges are not included
- No impacts to sensitive areas or railroad crossings
- Roadway surfacing is assumed concrete. Actual surfacing will be determined by LCCA per City Policy

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-4 - Maple Island Road Ext. Deadmond Ferry to Beltline		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 8/5/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.12		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting, Signals, Landscaping					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.12	\$935,700.00	\$112,284
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Concrete	Lane-Mi.	0.4	\$595,700.00	\$238,280
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS	1	\$35,000.00	\$35,000
8	New Signal	EA	1	\$300,000.00	\$300,000
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	3,200	\$7.50	\$24,000
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.12	\$260,000.00	\$31,200
13	Landscaping	Mi.	0.12	\$235,000.00	\$28,200
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$768,964</b>

	ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE		COST
	Construction Surveying	1.0-2.5%	2.5%		\$19,200
	TP & DT	3.0-8.0%	8.0%		\$61,500
	Mobilization	8.0-10.0%	10.0%		\$76,900
	Erosion Control	0.5-2.0%	2.0%		\$15,400
	Contingency	30-40%	40.0%		\$307,600
	Escalation Rate (per year)	0.5-2.0%	2.0%		
	<i>Design Year (or Estimate Year)</i>		2013		
	<i>Construction Year</i>		2013		
					\$0
<b>TOTAL CONSTRUCTION COST</b>					<b>\$1,249,564</b>

	Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
	Railroad Crossing	EA	0	\$600,000.00	\$0
	Environmental Mitigation		0.0%		\$0
	Easements & ROW Acquisition		100.0%		\$1,249,564
	Indirect Costs		PERCENTAGE		COST
	Engineering, Legal/Admin, Coordination		30.0%		\$374,900
	Construction Engineering		15.0%		\$187,400
<b>TOTAL PROJECT COST</b>					<b>\$3,100,000</b>

Assumptions: See next page

Assumptions:

Urban collector; 2-L with bike lanes. Transition to 3-L at Beltline  
Standard Tee intersection at Beltline Ave w/ new traffic signal and interconnect to adjacent signal(s)  
Roadway surfacing is assumed concrete. Actual surfacing will be determined by LCCA per City Policy  
100% new ROW between Deadmond Road and Beltline Avenue. 60' total ROW width. Easement/ROW Acq  
adjusted to account for structure impacts, new ROW, relocations, etc.  
Assume 9 structures impacted by improvements  
Length of improvements 630' measured from center of Deadmond roundabout to center of Beltline  
Earthwork assumed at 1' total depth (cut/fill) for length. Grade is flat  
No walls or bridges are assumed  
Lighting and landscaping included for improvements  
No impacts to sensitive areas or railroad crossings

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-5 - Riverbend Drive Extension		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 8/5/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.13		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting, Structures					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.13	\$935,700.00	\$121,641
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Concrete	Lane-Mi.	0.52	\$595,700.00	\$309,764
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Concrete Curb	FT	690	\$15.00	\$10,350
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	5,215	\$7.50	\$39,113
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.13	\$260,000.00	\$33,800
13	Landscaping	Mi.	0.13	\$235,000.00	\$30,550
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$545,218</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$13,600
TP & DT	3.0-8.0%	8.0%	\$43,600
Mobilization	8.0-10.0%	10.0%	\$54,500
Erosion Control	0.5-2.0%	2.0%	\$10,900
Contingency	30-40%	40.0%	\$218,100
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$885,918</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		5.0%		\$44,296
Easements & ROW Acquisition		25.0%		\$221,479
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$265,800
Construction Engineering		15.0%		\$132,900
<b>TOTAL PROJECT COST</b>				<b>\$1,600,000</b>

### Assumptions

- Project extends Riverbend Drive to Industrial Way (4-12' lane, 1-8' median, 2-1' shy, 2-6' bike, 2-4' planter, 2-6' walks)
- Extra curb length added to account for median curb
- ROW impacts are included
- No sensitive area impacts
- Roadway surface is concrete
- No signals at the intersections
- Roadway surfacing is assumed concrete. Actual surfacing will be determined by LCCA per City Policy
- 3' average depth earthwork over the new work area due to project footing in flood plain

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-6 - Improvements to Baldy View Ln & New McKenzie Loop Roadway		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 8/5/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.87		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting, Structures					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.87	\$935,700.00	\$814,059
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Concrete	Lane-Mi.	3.48	\$595,700.00	\$2,073,036
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	34,700	\$7.50	\$260,250
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.87	\$260,000.00	\$226,200
13	Landscaping	Mi.	0.87	\$235,000.00	\$204,450
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$3,577,995</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$89,400
TP & DT	3.0-8.0%	8.0%	\$286,200
Mobilization	8.0-10.0%	10.0%	\$357,800
Erosion Control	0.5-2.0%	2.0%	\$71,600
Contingency	30-40%	40.0%	\$1,431,200
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$5,814,195</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		5.0%		\$290,710
Easements & ROW Acquisition		25.0%		\$1,453,549
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$1,744,300
Construction Engineering		15.0%		\$872,100
<b>TOTAL PROJECT COST</b>				<b>\$10,200,000</b>

### Assumptions

Project improves Baldy View Ln to urban collector standards and constructs a new collector loop road (McKenzie Loop Road)

Roadway section assumed a 3-L collector (2-12' lanes, 1-12' turn, 2-6' bike, 2-10' sidewalk/planter)

Roadway surfacing is assumed concrete. Actual surfacing will be determined by LCCA per City Policy  
3' average depth earthwork over the new work area due to project footprint in flood plain

Landscaping and Illumination are included

No bridges or walls are assumed

Existing ROW width is 50' on Baldy View Lane. Assume ROW impacts on Baldy View Ln and McKenzie Loop  
Improvements to the intersection of Baldy View/Riverbed/International/Deadmond under a separate project

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-8 - Mallard Avenue Improvements: Game Farm Road to Gateway Street		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 7/16/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.48		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting, Structures					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.48	\$935,700.00	\$449,136
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Asphalt	Lane-Mi.	1.45	\$412,500.00	\$598,125
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA	2	\$300,000.00	\$600,000
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	4,560	\$7.50	\$34,200
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.48	\$260,000.00	\$124,800
13	Landscaping	Mi.	0.48	\$235,000.00	\$112,800
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$1,919,061</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$48,000
TP & DT	3.0-8.0%	8.0%	\$153,500
Mobilization	8.0-10.0%	10.0%	\$191,900
Erosion Control	0.5-2.0%	2.0%	\$38,400
Contingency	30-40%	40.0%	\$767,600
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$3,118,461</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$935,500
Construction Engineering		15.0%		\$467,800
<b>TOTAL PROJECT COST</b>				<b>\$4,530,000</b>

Assumptions: Next Page

Assumptions:

Improvements are on Mallard Avenue from Game Farm Road (GFR) to Gateway Street to construct a 2-L roadway section (2-12' lanes, 2-6' bike lanes, 2-6' sidewalks). W=48' total

Length of improvements is 2,550FT

Signals are included at the intersections of Mallard/GFR and Mallard/Gateway Street

Existing curb is assumed to be reconstructed along the existing alignment. New drainage and curb are included

All improvements are assumed at existing grade. Minor earthwork at 1' depth is included for the improvements

60' ROW exists between GFR and Oriole Street. No impacts for that segment

100% ROW need from Gateway Street to Oriole Street. Structures also assumed impacted. Assumed

ROW needs will be dedicated at time of redevelopment

No impacts to sensitive resources assumed

Illumination and landscaping are included for the length of improvements

No walls or bridge structures are assumed

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-9 - Connectivity from Laura St. to Pioneer Pkwy		<b>PREPARED BY:</b> Sam Monsef		<b>DATE:</b> 2/15/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.14		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.14	\$935,700.00	\$132,912
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Concrete	Lane-Mi.	0.57	\$595,700.00	\$338,466
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	1-L Roundabout	EA	1	\$621,600.00	\$621,600
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	1,670	\$7.50	\$12,525
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.14	\$260,000.00	\$36,932
13	Landscaping	Mi.	0.14	\$235,000.00	\$33,381
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$1,175,815</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$29,400
TP & DT	3.0-8.0%	8.0%	\$94,100
Mobilization	8.0-10.0%	10.0%	\$117,600
Erosion Control	0.5-2.0%	2.0%	\$23,500
Contingency	30-40%	40.0%	\$470,300
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$1,910,715</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		25.0%		\$477,679
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$573,200
Construction Engineering		15.0%		\$286,600
<b>TOTAL PROJECT COST</b>				<b>\$3,300,000</b>

### Assumptions

- Construct to 3-lane standard collector; 3-12' lanes, 2-6' bike, 2-6' sidewalk including (curb and drainage)
- Project length is measured 750 ft
- Assume 1 structures impacted.
- Earthwork assumed at 1' total depth (cut/fill) for length. Grade is flat
- Signals, walls and bridges are not included
- No impacts to sensitive areas or railroad crossings
- 100% ROW needed to connect Laura St. to Pioneer Pkwy
- Lighting and landscaping included for improvements
- Roadway surfacing is assumed concrete. Actual surfacing will be determined by LCCA per City Policy

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-10 - Q Street Improvements, 5th Street to Laura Street		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 2/28/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.53		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.13	\$935,700.00	\$121,641
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Asphalt	Lane-Mi.	0.25	\$412,500.00	\$103,125
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA	1	\$300,000.00	\$300,000
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.13	\$260,000.00	\$33,800
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$558,566</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$14,000
TP & DT	3.0-8.0%	8.0%	\$44,700
Mobilization	8.0-10.0%	10.0%	\$55,900
Erosion Control	0.5-2.0%	2.0%	\$11,200
Contingency	30-40%	40.0%	\$223,400
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$907,766</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		25.0%		\$226,942
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$272,300
Construction Engineering		15.0%		\$136,200
<b>TOTAL PROJECT COST</b>				<b>\$1,600,000</b>

### Assumptions

- Improvements for a new signal at Laura/Q and to widen Q Street to add a westbound through lane.
- Limits for westbound through lane are from 5th Street to west of 2nd Street; L-1,340. Overall limits is 2,800FT
- ROW impacts assumed
- 1/2 street improvements for curb/drainage for widening area
- Utility impacts/relocations are not included
- Roadway surfacing is assumed asphalt to match adjacent roadway

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-11 - Intersection Improvements at 5th Street and Q Street		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 2/28/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.02		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.02	\$935,700.00	\$18,714
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Asphalt	SF	4,000	\$7.00	\$28,000
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA	0.5	\$300,000.00	\$150,000
9	Signal Modifications	EA	0	\$75,000.00	\$0
10	Earthwork (See Note)	CY	150	\$7.50	\$1,125
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$197,839</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$4,900
TP & DT	3.0-8.0%	8.0%	\$15,800
Mobilization	8.0-10.0%	10.0%	\$19,800
Erosion Control	0.5-2.0%	2.0%	\$4,000
Contingency	30-40%	40.0%	\$79,100
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$321,439</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		25.0%		\$80,360
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$96,400
Construction Engineering		15.0%		\$48,200
<b>TOTAL PROJECT COST</b>				<b>\$550,000</b>

**Assumptions**

- Right turn pockets added to EB and NB approach legs (5' bike lane, 15' turn, 6' sidewalk)
- Signal poles on two legs impacted. Include new signal at 1/2 cost
- Length of turn pocket is assume 75' storage and 50' taper
- Impacts to private utilities are not included in the estimate
- Curb length included is for 1/2 length of total pocket improvements to account for half street improvements
- Roadway surfacing is assumed asphalt to match adjacent roadway

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-12 - Franklin Riverfront Collector		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 8/5/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.75		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.75	\$935,700.00	\$701,775
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Concrete	Lane-Mi.	2.27	\$595,700.00	\$1,352,239
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Concrete Sidewalk	SF	55440	\$5.00	\$277,200
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	9,435	\$7.50	\$70,763
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.75	\$260,000.00	\$195,000
13	Landscaping	Mi.	0.75	\$235,000.00	\$176,250
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$2,773,227</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$69,300
TP & DT	3.0-8.0%	8.0%	\$221,900
Mobilization	8.0-10.0%	10.0%	\$277,300
Erosion Control	0.5-2.0%	2.0%	\$55,500
Contingency	30-40%	40.0%	\$1,109,300
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$4,506,527</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		25.0%		\$1,126,632
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$1,352,000
Construction Engineering		15.0%		\$676,000
<b>TOTAL PROJECT COST</b>				<b>\$7,700,000</b>

Assumptions: Next Page

## Assumptions

Limits are from Franklin Blvd at Willamette Bridges to Glenwood Blvd, L-3,960FT; 0.75mi

Collector streets from Franklin to north local street (2-10' lanes, 2-8' buffered bike lane, 2-9' parking, 2-7' amenity, 2-7' walk), total 82' wide, 1,160' long

Local street from the two north/south collectors (2-10' lane, 1-9' parking, 2-7' amenity, 2-7' sidewalk) total 57' wide, 2,800' long

Assume site will be readied for development meaning leveled and buildings removed. Cleanup, environmental, etc will be completed prior and is not a part of this project

ROW included in the estimate assumes land purchas only and does not include relocations, etc.

Assume an average 1' depth of earthwork over the full improvements width and length

Intersection improvements at Franklin Blvd are not included in this project

Roadway surfacing is assumed concrete. Actual surfacing will be determined by LCCA per City Policy

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT: R-13 - Franklin Boulevard Multi-Modal Improvements</b>			<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 8/22/2013
<b>DESIGN LEVEL:</b> Preliminary			<b>LENGTH (MILE):</b> 0.97		<b>SHEET:</b> 1 of 1
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting, Structures					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalk & Drainage (Glenwood)	Mi.	0.58	\$1,150,700.00	\$667,406
2	Curb, Gutter, Sidewalk & Drainage	Mi.	0.2	\$935,700.00	\$177,783
3	New Roadway Concrete	Lane-Mi.	5.57	\$595,700.00	\$3,318,049
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	2-L Roundabout	EA	3	\$852,400.00	\$2,557,200
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	20,300	\$7.50	\$152,250
11	BRT Station (Pair)	EA	3	\$400,000.00	\$1,200,000
12	Illumination (Decorative)	Mi.	0.98	\$520,000.00	\$509,600
13	Landscaping	%	3%	\$564,038.64	\$564,039
14	RRFB (Roundabouts)	EA	2	\$160,000.00	\$320,000
15	PHB (Roundabouts)	EA	1	\$250,000.00	\$250,000
16	Trestles (Railroad)	FT	1,400	\$5,000.00	\$7,000,000
17	Bridges (Railroad)	FT	300	\$7,000.00	\$2,100,000
18	Concrete Island	SF	45,750	\$12.00	\$549,000
<b>SUBTOTAL</b>					<b>\$19,365,327</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$484,100
TP & DT	3.0-8.0%	8.0%	\$1,549,200
Mobilization	8.0-10.0%	10.0%	\$1,936,500
Erosion Control	0.5-2.0%	2.0%	\$387,300
Contingency	30-40%	40.0%	\$7,746,100
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
<b>TOTAL CONSTRUCTION COST</b>			<b>\$31,468,527</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		25.0%		\$7,867,132
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$9,440,600
Construction Engineering		15.0%		\$4,720,300
<b>TOTAL PROJECT COST</b>				<b>\$54,000,000</b>

Assumptions: Next Page

Assumptions:

Improvements are for Franklin Boulevard Multi-Modal improvements as shown in the Glenwood Area Hybrid Concept from the Franklin Boulevard Study

Project R-13

Intersection at Franklin Blvd./Mississippi Ave. & Franklin Blvd./Henderson Ave. are assumed as roundabouts  
All roundabouts are estimated as 2-L roundabouts. Roundabout at Glenwood Avenue is multi-lane. The third approach lane for the west, east, and south approaches will be added to new roadway area  
Roundabouts include construction inside the inscribed diameter as well as 250FT approaches  
Limits of improvements are from ~1,000FT west of Glenwood Avenue to the railroad tracks south of the Franklin Blvd./McVay Highway intersection  
Additional improvements are included on Glenwood Avenue south of the roundabout outside of the 250FT approach, L-150FT.  
No additional roadway improvements outside of the 250FT approach assumed on Henderson Ave. and Mississippi Ave.  
Roundabout and approaches to the Main St./A St. Bridges at the Franklin Blvd./McVay Highway intersection are included in a separate project (R-14)  
Concrete island assumed in the median of Franklin Blvd. and lane edges per Franklin project sections. Average total width of median/island added together is 49FT.  
Additional new roadway added for the EB and WB parking areas on Franklin Blvd.  
Additional concrete curb is included for the islands between the parking areas and Franklin Blvd.  
Lighting included for new work areas. Glenwood lighting assumed decorative.  
No sensitive natural resources are impacted  
Grade is flat along the improvement areas. 1FT average depth earthwork is assumed for all new work areas  
Roadway improvements on Franklin Blvd. are for a 4-L roadway with 2-6' bike lanes  
No walls or bridges are assumed  
Roadway surfacing is assumed concrete. Actual surfacing will be determined by LCCA per City Policy  
Glenwood curb, gutter, sidewalk and drainage assumes 10FT wide sidewalks  
3 BRT stations are assumed. Each installation is for platform pairs and includes concrete, shelters, electrical, lighting, ITS connections, signing, and other items to construct in place, complete.  
Pedestrian Hybrid Beacons (PHB) included for all legs of 1 roundabout  
RRFB included for all legs of 2 roundabouts.  
The railroad structure is assumed replaced over McVay Highway at the south limits of this project (E 19th). Assume the trestle will need to be reconstructed for 50' each side of a new overcrossing bridge. New bridge assumed 150FT long with a pier in the center of Franklin (McVay Hwy). To accommodate rail traffic during construction a shoofly siding is assumed with temporary trestle constructed parallel to the existing track, L-1,300FT. A new temporary bridge is also constructed for the temporary siding. Improvements do not for Railroad design/coordination or flagging. Discounts for betterment to the railroad are not included.  
Landscaping is included at 3% of construction items.

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-14 - Intersection Improvements Franklin Boulevard/McVay Highway		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 8/21/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.00		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.08	\$935,700.00	\$74,856
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Concrete	Lane-Mi.	0.47	\$595,700.00	\$279,979
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	2-L Roundabout	EA	2	\$852,400.00	\$1,704,800
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	5,600	\$7.50	\$42,000
11	RRFB (Dogbone Roundabouts)	EA	1	\$240,000.00	\$240,000
12	Illumination (Decorative)	EA	6	\$10,000.00	\$60,000
13	Landscaping	%	0.05	\$121,000.00	\$121,000
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$2,522,635</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$63,100
TP & DT	3.0-8.0%	8.0%	\$201,800
Mobilization	8.0-10.0%	10.0%	\$252,300
Erosion Control	0.5-2.0%	2.0%	\$50,500
Contingency	30-40%	40.0%	\$1,009,100
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$4,099,435</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		25.0%		\$1,024,859
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$1,229,800
Construction Engineering		15.0%		\$614,900
<b>TOTAL PROJECT COST</b>				<b>\$7,000,000</b>

Assumptions: Next Page

Assumptions:

Intersection improvements are for a 2-L average dogbone type roundabout with inscribed diameters of 150' at Franklin Blvd. and McVay Highway. Based on the Glenwood Area Hybrid Concept from the Franklin Blvd. study. Cost estimated as 2-lane roundabouts

Approach legs to the roundabout are 250' each direction

1' average depth earthwork for approach legs and roundabout proper included. Additional earthwork is anticipated for the approaches to A St. and Main St. bridges. The roadway grade will not change.

No Signals are included

Sidewalks and drainage on one side is included for the approaches to the Main St. and A St. bridges.

No impacts to sensitive areas anticipated

ROW impacts included

See "Unit Cost Breakdowns" page for additional 2-L roundabout assumptions.

Roadway surfacing is assumed concrete. Actual surfacing will be determined by LCCA per City Policy

RRFB included for all legs of the dogbone roundabout

Landscaping is included at 3% of construction items.

Lighting is included for the dogbone roundabout. 3 poles per roundabout (6 total). Decorative lighting assumed

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-16 - E 17th Ave: Glenwood to Henderson		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 2/6/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.19		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting, Structures					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.19	\$935,700.00	\$177,783
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Concrete	Lane-Mi.	0.74	\$595,700.00	\$440,818
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	2,000	\$7.50	\$15,000
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.19	\$260,000.00	\$49,400
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF	1,500	\$75.00	\$112,500
<b>SUBTOTAL</b>					<b>\$795,501</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$19,900
TP & DT	3.0-8.0%	8.0%	\$63,600
Mobilization	8.0-10.0%	10.0%	\$79,600
Erosion Control	0.5-2.0%	2.0%	\$15,900
Contingency	30-40%	40.0%	\$318,200
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$1,292,701</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$387,800
Construction Engineering		15.0%		\$193,900
<b>TOTAL PROJECT COST</b>				<b>\$1,900,000</b>

Assumptions: See next page

Assumptions:

Urban collector; 3-L with bike lanes (3-12' lanes, 2-6' bike, 2-6' sidewalk) 60' total ROW  
Existing ROW is 60'. No ROW or structure impacts are assumed  
Roadway surfacing is assumed concrete. Actual surfacing will be determined by LCCA per City Policy  
Length of improvements is 980' measured from Glenwood to Henderson  
3' average height cut and cut wall assumed for 500' feet along north ROW  
Earthwork assumed at 1' total depth (cut/fill) for length. Grade is flat  
Signals, bridges, and landscaping are not included  
Lighting included for improvements  
No impacts to sensitive areas or railroad crossings  
Existing roadway is deteriorated beyond serviceable level and full reconstruction is assumed

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-17- Henderson, East19th Ave to Franklin		<b>PREPARED BY:</b> Sam Monsef		<b>DATE:</b> 2/11/2013	
<b>DESIGN LEVEL:</b> Preliminary					
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting, Structures		<b>LENGTH (MILE):</b> 0.39		<b>SHEET:</b> 1 of 1	
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.39	\$935,700.00	\$364,923
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Concrete	Lane-Mi.	0.81	\$595,700.00	\$482,517
4	Overlay Existing Roadway	Lane-Mi.	0.74	\$89,400.00	\$66,156
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal( See note)	EA	0.25	\$300,000.00	\$75,000
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.39	\$260,000.00	\$101,400
13	Landscaping	Mi.	0.39	\$235,000.00	\$91,650
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$1,181,646</b>

	ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE		COST
	Construction Surveying	1.0-2.5%	2.5%		\$29,500
	TP & DT	3.0-8.0%	8.0%		\$94,500
	Mobilization	8.0-10.0%	10.0%		\$118,200
	Erosion Control	0.5-2.0%	2.0%		\$23,600
	Contingency	30-40%	40.0%		\$472,700
	Escalation Rate (per year)	0.5-2.0%	2.0%		
	<i>Design Year (or Estimate Year)</i>		2013		
	<i>Construction Year</i>		2013		
					\$0
<b>TOTAL CONSTRUCTION COST</b>					<b>\$1,920,146</b>

	Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
	Railroad Crossing	EA	0	\$600,000.00	\$0
	Environmental Mitigation		5.0%		\$96,007
	Easements & ROW Acquisition		25.0%		\$480,037
	Indirect Costs		PERCENTAGE		COST
	Engineering, Legal/Admin, Coordination		30.0%		\$576,000
	Construction Engineering		15.0%		\$288,000
<b>TOTAL PROJECT COST</b>					<b>\$3,400,000</b>

Assumptions: Next Page

Assumptions:

Urban collector cross section; 3-12' lanes, 2-6' bike, 2-6' sidewalk

Project length is measured 2045LF from east 19th to Franklin.

Existing roadway is in a serviceable condition however it needs 2 inch overlay.

Existing ROW is 66 ft.

New roadway should be a 3-lane standard with bike lane and side walk including curbs and drainage

1 structure impact is assumed.

1 leg of the existing 3-leg signal to be reconstructed at 1/4 the cost of a new 4-leg signal.

Widening of the intersection should occur to east or west side of the intersection on Franklin.

Lighting included for improvements

No walls or bridges are assumed

No Landscaping needed.

Roadway surfacing is assumed concrete. Actual surfacing will be determined by LCCA per City Policy

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-18 - E. 19th Street, Henderson to McVay		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/8/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.49		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.49	\$935,700.00	\$458,493
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Asphalt	Lane-Mi.	0.99	\$412,500.00	\$408,375
4	Overlay Existing Roadway	Lane-Mi.	1.0	\$89,400.00	\$88,506
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	6,600	\$7.50	\$49,500
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.49	\$260,000.00	\$127,400
13	Landscaping	Mi.	0.49	\$235,000.00	\$115,150
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$1,247,424</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$31,200
TP & DT	3.0-8.0%	8.0%	\$99,800
Mobilization	8.0-10.0%	10.0%	\$124,700
Erosion Control	0.5-2.0%	2.0%	\$24,900
Contingency	30-40%	40.0%	\$499,000
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$2,027,024</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		25.0%		\$506,756
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$608,100
Construction Engineering		15.0%		\$304,100
<b>TOTAL PROJECT COST</b>				<b>\$3,500,000</b>

Assumptions: Next Page

Assumptions:

Urban Collector, 3-L (2-12' lane, 1-12' turn, 2-6' bike, 2-6' walk), W-60FT  
Includes improvement/widening of rail crossing with signals  
ROW impacts expected. Existing ROW is 60' west of tracks, ~40' east of tracks towards McVay Hwy  
No walls assumed  
Illumination and landscaping included  
Standard tee intersection at Nugget Way (no roundabout or signal)  
19th/McVay Intersection improved by other projects  
1' average depth earthwork for new work areas  
Assume existing roadway is serviceable. Add 2" overlay (24' wide)  
Assume 24' widening (48' c-c, 24' existing)  
Assume 3' average depth earthwork (embankment) for widening at tracks, 200' each approach  
Utility impacts/relocation not included  
Length of project L-2,611 FT  
No impacts to sensitive areas assumed

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-19 - Intersection Improvements 19th Ave and Franklin Blvd.		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 8/5/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.00		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	2-L Roundabout	EA	1	\$852,400.00	\$852,400
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	2,880	\$7.50	\$21,600
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$874,000</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$21,900
TP & DT	3.0-8.0%	8.0%	\$69,900
Mobilization	8.0-10.0%	10.0%	\$87,400
Erosion Control	0.5-2.0%	2.0%	\$17,500
Contingency	30-40%	40.0%	\$349,600
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$1,420,300</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		25.0%		\$355,075
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$426,100
Construction Engineering		15.0%		\$213,000
<b>TOTAL PROJECT COST</b>				<b>\$2,500,000</b>

### Assumptions

Intersection improvements are for a 2-L roundabout with an inscribed diameter of 150' at East 19th Ave. and Frankline Blvd.

Approach legs to the roundabout are 250' each direction

1' average depth earthwork for approach legs and roundabout proper included

No impacts to sensitive areas anticipated

ROW impacts included

Improvements to the railroad trestle not included. Will be provided by separate project (R-13)

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-20 - Multimodal Improvements Franklin Blvd: 19th Ave to I-5		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/6/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 1.33		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting, Structures					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	1.08	\$935,700.00	\$1,010,556
2	New Roadway Concrete	Lane-Mi.	2.2	\$595,700.00	\$1,292,669
3	New Roadway Asphalt	Lane-Mi.	5.43	\$412,500.00	\$2,239,875
4	Overlay Existing Roadway	Lane-Mi.	2.2	\$89,400.00	\$193,998
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	2-L Roundabout	EA	2	\$852,400.00	\$1,704,800
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	56,540	\$7.50	\$424,050
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	1.33	\$260,000.00	\$345,800
13	Landscaping	Mi.	1.33	\$235,000.00	\$312,550
14	Bridges	SF	29,500	\$300.00	\$8,850,000
15	Walls	SF	1,050	\$75.00	\$78,750
<b>SUBTOTAL</b>					<b>\$16,453,048</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$411,300
TP & DT	3.0-8.0%	8.0%	\$1,316,200
Mobilization	8.0-10.0%	10.0%	\$1,645,300
Erosion Control	0.5-2.0%	2.0%	\$329,100
Contingency	30-40%	40.0%	\$6,581,200
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$26,736,148</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		5.0%		\$1,336,807
Easements & ROW Acquisition		25.0%		\$6,684,037
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$8,020,800
Construction Engineering		15.0%		\$4,010,400
<b>TOTAL PROJECT COST</b>				<b>\$47,000,000</b>

Assumptions  
See next page

Assumptions:

Limits are south of 19th Ave. intersection. 19th Ave intersection improvements completed by project R-19

Cross Section is assumed as a 6-L facility with BRT (2-L internal) and 4-12' lanes, 2-6' bike

2-6' sidewalks, and planter strips. Curb to curb width is 84'

ROW and sensitive areas assumed impacted by project

Bridge over railroad (south) reconstructed to a 88' width, 335' length. Assumes BRT narrows to one shared lane over bridge

Existing roadway width varies, 40' average. Assume 24' width is serviceable and rehabbed with overlay

Assume asphalt surfacing for traffic lanes and concrete surfacing for BRT

Landscaping and illumination included for improvements

1' average depth embankment included for new construction except for approaches (~600' each side) over railroad (south). Max height assumed 31'

Existing embankment width over railroad is approx. 40'. Proposed embankment width is 88' (48' widening)

Include 2, 2-L roundabouts, 1 at Nugget Way and one at the north approach to the embankment over the RR

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-24 - 19th Street; Hayden Bridge Road to Yolanda Avenue			<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 8/5/2013
<b>DESIGN LEVEL:</b> Preliminary			<b>LENGTH (MILE):</b> 0.25		<b>SHEET:</b> 1 of 1
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.25	\$935,700.00	\$233,925
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Concrete	Lane-Mi.	0.75	\$595,700.00	\$446,775
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	4,715	\$7.50	\$35,363
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.25	\$260,000.00	\$65,000
13	Landscaping	Mi.	0.25	\$235,000.00	\$58,750
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$839,813</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$21,000
TP & DT	3.0-8.0%	8.0%	\$67,200
Mobilization	8.0-10.0%	10.0%	\$84,000
Erosion Control	0.5-2.0%	2.0%	\$16,800
Contingency	30-40%	40.0%	\$335,900
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$1,364,713</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		25.0%		\$341,178
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$409,400
Construction Engineering		15.0%		\$204,700
<b>TOTAL PROJECT COST</b>				<b>\$2,400,000</b>

Assumptions: Next Page

Assumptions:

Local street section (2-12' lane, 2-6' bike, 2-6' walk), 48' width

Limits are from Yolanda Avenue to Hayden Bridge Road

Standard intersection at Yolanda/19th and HBR/19th. No signal or roundabouts at intersections

Existing ROW is 60' wide at Yolanda and narrows to 30' width north of Yolanda to Hayden Bridge Road.

ROW impacts assumed

Illumination included

Grade is flat but crosses flood plain. Assume 2' average depth earthwork over new work areas

No structures or wall

No impacts to sensitive areas

Roadway surfacing is assumed concrete. Actual surfacing will be determined by LCCA per City Policy

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-25 - Hayden Bridge Road; 19th Street to Marcola Road		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/9/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 1.78		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting, Structures					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	1.78	\$935,700.00	\$1,665,546
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Asphalt	Lane-Mi.	2.53	\$412,500.00	\$1,043,625
4	Overlay Existing Roadway	Lane-Mi.	2.8	\$89,400.00	\$251,214
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	14,300	\$7.50	\$107,250
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	1.78	\$260,000.00	\$462,800
13	Landscaping	Mi.	1.78	\$235,000.00	\$418,300
14	Bridges	SF		\$250.00	\$0
15	Walls	SF	2,400	\$50.00	\$120,000
<b>SUBTOTAL</b>					<b>\$4,068,735</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$101,700
TP & DT	3.0-8.0%	8.0%	\$325,500
Mobilization	8.0-10.0%	10.0%	\$406,900
Erosion Control	0.5-2.0%	2.0%	\$81,400
Contingency	30-40%	40.0%	\$1,627,500
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$6,611,735</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		25.0%		\$1,652,934
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$1,983,500
Construction Engineering		15.0%		\$991,800
<b>TOTAL PROJECT COST</b>				<b>\$12,000,000</b>

Assumptions: Next Page

Assumptions:

Improvements on Hayden Bridge Road from 19th Street to Marcola Road, L-9,400FT

Existing roadway is 20' wide average from 20th to Marcola Road. Assume 2" overlay for existing roadway

New roadway surface is asphalt

Urban local street standard (2-12' lane, 2-6' bike, 2-6' sidewalks), 48' width

Existing ROW varies. Assume an average of 40' width. ROW impacts assumed

Grade is flat except between 21st-23rd, and south of Winslow Street

Assume:

- 2' average depth for widening north between 21st and 23rd, and west of 31st (TYP), except

- 1' average depth over new work areas between 19th and 21st

- 3' average depth for north and south widening through the curves south of Winslow Street

Assume 3' average height wall along the inside curve 300' south of Winslow. L-200'

Assume 3' average height both sides through first curve from Marcola Road, L-300'

No bridges or other structures

Illumination and landscaping included

No impacts to sensitive areas

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-26 - Yolanda Avenue; 23rd Street to 31st Street		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/9/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.58		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Sidewalk, Striping					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Concrete Sidewalk	SF	35,160	\$5.00	\$175,800
7	Restriping Roadway	Lane-Mi.	2	\$8,700.00	\$15,225
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$191,025</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$4,800
TP & DT	3.0-8.0%	8.0%	\$15,300
Mobilization	8.0-10.0%	10.0%	\$19,100
Erosion Control	0.5-2.0%	2.0%	\$3,800
Contingency	30-40%	40.0%	\$76,400
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$310,425</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$93,100
Construction Engineering		15.0%		\$46,600
<b>TOTAL PROJECT COST</b>				<b>\$460,000</b>

### Assumptions

- Project restripes roadway for 2-L urban local street (2-12' lane, 2-6' bike, 2-6' sidewalk)
- Existing roadway is 36' curb to curb
- Improvements curb to curb are for restriping lanes and bike lanes only.
- Some sidewalk exists along the south side. L~250'
- No sidewalk improvements in front of Briggs Middle School. Existing sidewalk along school frontage
- No ROW or sensitive area impacts
- Existing illumination not impacted and to remain
- No landscaping included

**SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE**

<b>PROJECT: R-27 - Yolanda Avenue to 35th Street</b>			<b>PREPARED BY:</b> Madeline Klein		<b>DATE:</b> 10/25/2017
<b>DESIGN LEVEL:</b> Preliminary					
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting, Landscaping			<b>LENGTH (MILE):</b> 0.32		<b>SHEET:</b> 1 of 1
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.32	\$935,700.00	\$299,424
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Concrete	Lane-Mi.	0.48	\$595,700.00	\$285,936
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.	0.15	\$438,900.00	\$65,835
6	Concrete Sidewalk	SF		\$5.00	\$0
7	Restriping Roadway	Lane-Mi.	2	\$8,700.00	\$17,400
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	3,900	\$7.50	\$29,250
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.32	\$260,000.00	\$83,200
13	Landscaping	Mi.	0.19	\$235,000.00	\$44,650
14	Bridges	SF	11400	\$250.00	\$2,850,000
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$3,675,695</b>

	ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
	Construction Surveying	1.0-2.5%	2.50%	\$91,892.38
	TP & DT	3.0-8.0%	8.00%	\$294,055.60
	Mobilization	8.0-10.0%	10.00%	\$367,569.50
	Erosion Control	0.5-2.0%	2.00%	\$73,513.90
	Contingency	30-40%	40.00%	\$1,470,278.00
	Escalation Rate (per year)	0.5-2.0%	2.00%	
	Design Year (or Estimate Year)		2013	
	Construction Year		2013	
<b>SUBTOTAL</b>				<b>\$5,973,004</b>

	Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
	Railroad Crossing	EA	0	\$600,000.00	\$0
	Environmental Mitigation		10.00%		\$597,300
	Easements & ROW Acquisition		10.00%		\$597,300
	Indirect Costs		PERCENTAGE		COST
	Engineering, Legal/Admin, Coordination		30.00%		\$1,791,901
	Construction Engineering		15.00%		\$895,951
<b>TOTAL PROJECT COST</b>					<b>\$9,855,457</b>

Assumptions:

- Urban collector; 3-L with bike lanes (3-12' lanes, 2-6' bike, 2-6' sidewalk) (including curbs and drainage)
- From end of Yolanda across the field south to the intersection of Yolanda between 33rd St and 34th St.
- 2-L with bike lanes on existing Yolanda roadway from 34th to 35th St.
- 60 ft ROW for improvements. Minor ROW impacts assumed.
- Roadway through wetland assumed on a bridge. L-220', W-52' Assumes 2-lanes on the bridge structure
- Length of the new roadway is about 900 LF not including the bridge. Lighting included for improvements
- Landscaping needed for constructing new roadway.
- Earthwork assumed at 1' total depth (cut/fill) for length. Grade is flat
- Roadway surfacing is assumed concrete for wetland area. Actual surfacing will be determined by LCCA per City Policy
- Sensitive area impacts are assumed. Mitigation included at 10% due to high value wetland.

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-28 - New 3-L Collector; Marcola Road to 31st Street		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/9/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.61		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.61	\$935,700.00	\$570,777
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Concrete	Lane-Mi.	2.43	\$595,700.00	\$1,447,551
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	7,133	\$7.50	\$53,498
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.61	\$260,000.00	\$158,600
13	Landscaping	Mi.	0.61	\$235,000.00	\$143,350
14	Bridges	SF	5,200	\$250.00	\$1,300,000
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$3,673,776</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$91,800
TP & DT	3.0-8.0%	8.0%	\$293,900
Mobilization	8.0-10.0%	10.0%	\$367,400
Erosion Control	0.5-2.0%	2.0%	\$73,500
Contingency	30-40%	40.0%	\$1,469,500
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$5,969,876</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		5.0%		\$298,494
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$1,791,000
Construction Engineering		15.0%		\$895,500
<b>TOTAL PROJECT COST</b>				<b>\$9,000,000</b>

### Assumptions

- Improvements through open field to construct a new 3-L collector (2-12' lanes, 1-12' turn, 2-6' bike, 2-6' walks), L-3,210FT, 0.61mi
- Intersections at Marcola Road and 31st Street are standard. No roundabouts or signals included
- Sensitive area impacts are assumed
- Illumination and landscaping are included
- 1' average depth earthwork is assumed for all new work areas
- No bridges or walls are assumed
- Roadway surfacing is assumed concrete. Actual surfacing will be determined by LCCA per City Policy
- ROW is assumed dedicated at time of development.

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-29 - 31st Street; Hayden Bridge Road to U Street		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/9/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.58		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.58	\$935,700.00	\$542,706
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Asphalt	Lane-Mi.	0.83	\$412,500.00	\$342,375
4	Overlay Existing Roadway	Lane-Mi.	1.1	\$89,400.00	\$101,916
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Midblock Crossing 2-L	EA	1	\$36,100.00	\$36,100
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	3,330	\$7.50	\$24,975
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.58	\$260,000.00	\$150,800
13	Landscaping	Mi.	0.58	\$235,000.00	\$136,300
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$1,335,172</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$33,400
TP & DT	3.0-8.0%	8.0%	\$106,800
Mobilization	8.0-10.0%	10.0%	\$133,500
Erosion Control	0.5-2.0%	2.0%	\$26,700
Contingency	30-40%	40.0%	\$534,100
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$2,169,672</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		5.0%		\$108,484
Easements & ROW Acquisition		25.0%		\$542,418
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$650,900
Construction Engineering		15.0%		\$325,500
<b>TOTAL PROJECT COST</b>				<b>\$3,800,000</b>

Assumptions: Next Page

Assumptions:

Limits are from Hayden Bridge Road to U street, L-3,080FT; 0.58mi

Urban local street from HBR to Path (2-12' lane, 2-6' bike, 2-6' walks) w-48'

Urban collector for Path to U Street (2-12' lane, 1-12' turn, 2-6' bike, 2-6' walk), w-60'

Flat grade. 1' average depth earthwork over new work areas

Existing roadway width:

- HBR to path: 20', serviceable, assume 2" overlay for existing pavement

- Path to U Street: 29', serviceable, assume 2" overlay for existing pavement

Existing ROW varies:

- north of path assume 40' average

- south of path assume 50' average

Potential impacts to sensitive areas at Yolanda

No walls or bridges

Reconstruct midblock crossing at path

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-30 - Intersection Improvements at Marcola Rd/19th St.		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/20/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.00		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.02	\$935,700.00	\$18,714
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Asphalt	SF	2,250	\$7.00	\$15,750
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA	0.25	\$300,000.00	\$75,000
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	125	\$7.50	\$938
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.	0.02	\$235,000.00	\$4,700
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$115,102</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$2,900
TP & DT	3.0-8.0%	8.0%	\$9,200
Mobilization	8.0-10.0%	10.0%	\$11,500
Erosion Control	0.5-2.0%	2.0%	\$2,300
Contingency	30-40%	40.0%	\$46,000
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$187,002</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		25.0%		\$46,750
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$56,100
Construction Engineering		15.0%		\$28,100
<b>TOTAL PROJECT COST</b>				<b>\$320,000</b>

### Assumptions

Intersection improvements at Marcola Road and 19th Street, SB right turn lane from 19th Street to Marcola Rd  
Widening is 15' right turn lane, signal pole relocation, curbs and drainage revisions, and sidewalk  
Assume signal relocation is 1/4 of a new signal (only one leg impacted)  
Length of improvements are 100' for storage, 100' for the taper, and 25' for the curb return  
Impacts to ROW are anticipated including relocation/replacement of private signage and parking  
No structures or walls are assumed.  
No sensitive area impacts are assumed  
E/W is included at 1' average depth for the width/length of improvements.

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-31 - Intersection Improvements 31st St and Marcola Rd		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/21/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.00		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	1-L Roundabout	EA	1	\$621,600.00	\$621,600
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Removal	EA	1	\$25,000.00	\$25,000
10	Earthwork (See Note)	CY	1,600	\$7.50	\$12,000
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$658,600</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$16,500
TP & DT	3.0-8.0%	8.0%	\$52,700
Mobilization	8.0-10.0%	10.0%	\$65,900
Erosion Control	0.5-2.0%	2.0%	\$13,200
Contingency	30-40%	40.0%	\$263,400
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$1,070,300</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		25.0%		\$267,575
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$321,100
Construction Engineering		15.0%		\$160,500
<b>TOTAL PROJECT COST</b>				<b>\$1,900,000</b>

### Assumptions

- Intersection improvements at 31st street and Marcola road. Improvements are for 1-L roundabout
- ROW impacts are assumed
- Assume additional \$25K for removal of existing signal
- Earthwork is assumed at 1' average depth over the improvements area
- No impacts to sensitive areas assumed
- No walls or structures
- Illumination and landscaping are included in the per unit cost for the roundabout

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-32 - Intersection Improvements at 42nd Street and Marcola Road		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/22/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.00		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	2-L Roundabout	EA	1	\$852,400.00	\$852,400
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	3,510	\$7.50	\$26,325
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF	1,500	\$75.00	\$112,500
<b>SUBTOTAL</b>					<b>\$991,225</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$24,800
TP & DT	3.0-8.0%	8.0%	\$79,300
Mobilization	8.0-10.0%	10.0%	\$99,100
Erosion Control	0.5-2.0%	2.0%	\$19,800
Contingency	30-40%	40.0%	\$396,500
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$1,610,725</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		25.0%		\$402,681
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$483,200
Construction Engineering		15.0%		\$241,600
<b>TOTAL PROJECT COST</b>				<b>\$2,800,000</b>

### Assumptions

Improvements install a 2-L roundabout at the intersection of 42nd Street and Marcola Road

2-L roundabout was assumed to provide widening for capacity in the future.

ROW impacts expected in at least one quadrant.

No sensitive area impacts assumed

1' average depth earthwork is assumed over the new work areas

Assume 500LF of 3' average height retaining wall along the north edge of the improvements

Illumination and landscaping are included in the per unit cost for the roundabout

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-33 - Intersection Improvements at Centennial Blvd and 28th St.		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/22/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.00		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	1-L Roundabout	EA	1	\$621,600.00	\$621,600
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	1,560	\$7.50	\$11,700
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$633,300</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$15,800
TP & DT	3.0-8.0%	8.0%	\$50,700
Mobilization	8.0-10.0%	10.0%	\$63,300
Erosion Control	0.5-2.0%	2.0%	\$12,700
Contingency	30-40%	40.0%	\$253,300
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$1,029,100</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		25.0%		\$257,275
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$308,700
Construction Engineering		15.0%		\$154,400
<b>TOTAL PROJECT COST</b>				<b>\$1,800,000</b>

**Assumptions:**

- Project is for intersection improvements at Centennial Boulevard and 28th Street to construct a 1-L roundabout
- Grade at the intersection is flat. 1' average depth earthwork is included for new work areas
- No bridges or walls
- Illumination and landscaping are included in the per unit cost for the roundabout
- Improvements are for the intersection only and do not include approaches more than 150' from the intersection
- No impacts to the railroad crossing area assumed (east of intersection)
- ROW impacts are included

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-34 - Centennial Blvd Extension; 28th Street to 35st Street		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 8/5/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.50		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting, Structures					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.50	\$935,700.00	\$467,850
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Concrete	Lane-Mi.	1.94	\$595,700.00	\$1,155,658
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	4,710	\$7.50	\$35,325
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.50	\$260,000.00	\$130,000
13	Landscaping	Mi.	0.50	\$235,000.00	\$117,500
14	Bridges	SF	6,400	\$250.00	\$1,600,000
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$3,506,333</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$87,700
TP & DT	3.0-8.0%	8.0%	\$280,500
Mobilization	8.0-10.0%	10.0%	\$350,600
Erosion Control	0.5-2.0%	2.0%	\$70,100
Contingency	30-40%	40.0%	\$1,402,500
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$5,697,733</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	1	\$600,000.00	\$600,000
Environmental Mitigation		5.0%		\$284,887
Easements & ROW Acquisition		5.0%		\$284,887
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$1,709,300
Construction Engineering		15.0%		\$854,700
<b>TOTAL PROJECT COST</b>				<b>\$9,500,000</b>

Assumptions: Next Page

Assumptions:

Improvements for urban facility, 3-L (2-12' lanes, 1-12' turn, 2-6' bike, 2-6' walk, planters)

Roadway surfacing is assumed concrete. Actual surfacing will be determined by LCCA per City Policy

Grade is flat. Assume 1' average depth earthwork over new work areas

ROW impacts are assumed minor and included a lower (5%) than typical

Sensitive area impacts assumed.

Intersection improvements at 28th Street and Centennial not included, provided by project R42

Length of improvements, L-2,654LF

100FT length bridge, 3-L wide includes over drainage ditch/wetland west of RR tracks

Improvements include 1 at-grade rail crossing inclusive of design and construction of crossing panels, signals, gates, etc.

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-36 - 42nd Street Improvements, Marcola to RR Crossing		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 2/28/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 1.04		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	1.04	\$935,700.00	\$973,128
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Asphalt	Lane-Mi.	1.80	\$412,500.00	\$742,500
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA	1	\$300,000.00	\$300,000
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	6,630	\$7.50	\$49,725
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	1.04	\$260,000.00	\$270,400
13	Landscaping	Mi.	0.00	\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF	1,480	\$75.00	\$111,000
<b>SUBTOTAL</b>					<b>\$2,446,753</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$61,200
TP & DT	3.0-8.0%	8.0%	\$195,700
Mobilization	8.0-10.0%	10.0%	\$244,700
Erosion Control	0.5-2.0%	2.0%	\$48,900
Contingency	30-40%	40.0%	\$978,700
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$3,975,953</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		5.0%		\$198,798
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$1,192,800
Construction Engineering		15.0%		\$596,400
<b>TOTAL PROJECT COST</b>				<b>\$6,000,000</b>

Assumptions: Next Page

Assumptions:

Project limits from Marcola Road to RR tracks, L-5,498FT; 1.04mi  
Widening varies over the project, min 12' for bike lane and sidewalk each side. Assume shoulder reconstructed  
Some additional widening included for 3rd lane where 2 lane existing  
3-Lane standard included curbs and enclosed drainage  
No impacts to OR126 bridge structure  
Slope protection for OR 126 at the west abutment cut back and replaced with sidewalk and 8' height wall  
No signal impacts at Marcola Road and OR126 EB ramps  
New signal assumed at Marcola Road and OR126 WB ramps  
No ROW impacts  
No RR crossing impacts  
Widening and improvement assumed to occur to the east side of N. 42nd Street with no impacts to the drainage way/wetlands on the west side.

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-37 - Commercial Ave from 42nd St. to 48th St. north of main street			<b>PREPARED BY:</b> Sam Monsef		<b>DATE:</b> 8/15/2013
<b>DESIGN LEVEL:</b> Preliminary			<b>LENGTH (MILE):</b> 0.96		<b>SHEET:</b> 1 of 1
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting, Structures					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.96	\$935,700.00	\$898,272
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Concrete	Lane-Mi.	3.8	\$595,700.00	\$2,281,531
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	1-L Roundabout	EA	3	\$621,600.00	\$1,864,800
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	10,500	\$7.50	\$78,750
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.96	\$260,000.00	\$249,600
13	Landscaping	Mi.	0.96	\$235,000.00	\$225,600
14	Bridges	SF	3,200	\$250.00	\$800,000
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$6,398,553</b>

	ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE		COST
	Construction Surveying	1.0-2.5%	2.5%		\$160,000
	TP & DT	3.0-8.0%	8.0%		\$511,900
	Mobilization	8.0-10.0%	10.0%		\$639,900
	Erosion Control	0.5-2.0%	2.0%		\$128,000
	Contingency	30-40%	40.0%		\$2,559,400
	Escalation Rate (per year)	0.5-2.0%	2.0%		
	<i>Design Year (or Estimate Year)</i>		2013		
	<i>Construction Year</i>		2013		
<b>TOTAL CONSTRUCTION COST</b>					<b>\$10,397,753</b>

	Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
	Railroad Crossing	EA	0	\$600,000.00	\$0
	Environmental Mitigation		10.0%		\$1,039,775
	Easements & ROW Acquisition		25.0%		\$2,599,438
	Indirect Costs		PERCENTAGE		COST
	Engineering, Legal/Admin, Coordination		30.0%		\$3,119,300
	Construction Engineering		15.0%		\$1,559,700
<b>TOTAL PROJECT COST</b>					<b>\$19,000,000</b>

Assumptions: Next Page

Assumptions:

Urban collector; 3-L with bike lanes (3-12' lanes, 2-6' bike, 2-6' sidewalk) (including curbs and drainage)

Commercial Ave is extended to 48th St with a length of 3680 LF.

44th St is extended for N-S connection to main St. with a length of 1590 LF.

Intersection improvement for 43rd Pl and Commercial would be a roundabout.

Intersection improvement for 44th Street, Commercial Ave intersection assumed a roundabout.

100% ROW needed for the 44th Street Extension

ROW needed from 43rd Pl to 48th St.

Assume impact to sensitive areas.

Earthwork assumed at 1' total depth (cut/fill) for length. Grade is flat

Lighting included for improvements

Landscaping needed for constructing new roadway.

Roadway surfacing is assumed concrete. Actual surfacing will be determined by LCCA per City Policy

50FT length bridge, 3-L wide assumed across drainage ditch/wetland west and adjacent to 48th Street.

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-38 - Intersection Improvements at S. 42nd Street and Daisy Street		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/22/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.00		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	1-L Roundabout	EA	1	\$621,600.00	\$621,600
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	1,560	\$7.50	\$11,700
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$633,300</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$15,800
TP & DT	3.0-8.0%	8.0%	\$50,700
Mobilization	8.0-10.0%	10.0%	\$63,300
Erosion Control	0.5-2.0%	2.0%	\$12,700
Contingency	30-40%	40.0%	\$253,300
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$1,029,100</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		25.0%		\$257,275
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$308,700
Construction Engineering		15.0%		\$154,400
<b>TOTAL PROJECT COST</b>				<b>\$1,800,000</b>

### Assumptions

- Project to construct a 1-L roundabout at the intersection of 42nd and Daisy Street
- Grade at the intersection is flat. 1' average depth earthwork is included for new work areas
- No bridges or walls
- Illumination is included for each quadrant of the roundabout
- Improvements are for the intersection only and do not include approaches more than 150' from the intersection
- No impacts to the railroad crossing area assumed (east of intersection)
- ROW impacts are included

**SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE**

<b>PROJECT: R-39 - Extend South 48th Street to Daisy Street</b>			<b>PREPARED BY:</b> Michael Liebler		<b>DATE:</b> 11/6/2018
<b>DESIGN LEVEL:</b> Preliminary			<b>LENGTH (MILE);</b> 0.21 mi		<b>SHEET:</b> 1 of 1
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.42	\$935,700.00	\$392,994
2	Multi-use Path	Mi.	0.21	\$217,900.00	\$45,759
3	New Roadway Asphalt	Lane-Mi.	1.26	\$412,500.00	\$519,750
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	1-L Roundabout	EA	1	\$300,000.00	\$300,000
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	2,750	\$7.50	\$20,625
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.21	\$260,000.00	\$54,600
13	Landscaping	Mi.	0.21	\$235,000.00	\$49,350
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$1,383,078</b>

	ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE		COST
	Construction Surveying	1.0-2.5%	2.50%		\$34,576.95
	TP & DT	3.0-8.0%	8.00%		\$110,646.24
	Mobilization	8.0-10.0%	10.00%		\$138,307.80
	Erosion Control	0.5-2.0%	2.00%		\$27,661.56
	Contingency	30-40%	40.00%		\$553,231.20
	Escalation Rate (per year)	0.5-2.0%	2.00%		
	Design Year (or Estimate Year)		2013		
	Construction Year		2013		
<b>SUBTOTAL</b>					<b>\$2,247,502</b>

	Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
	Railroad Crossing	EA	0	\$600,000.00	\$0
	Environmental Mitigation		15.00%		\$337,125
	Easements & ROW Acquisition		0.00%		\$0.00
	Indirect Costs		PERCENTAGE		COST
	Engineering, Legal/Admin, Coordination		30.00%		\$674,251
	Construction Engineering		15.00%		\$337,125
<b>TOTAL PROJECT COST</b>					<b>\$3,596,003</b>

Assumptions:

- Improvement are 2-L collector street (2-12' lane, 12' Multi-use path) L-1109', .21mi
- Grade is relatively flat. Assumes 1.5' average depth of earthwork over new work areas.
- ROW already purchased as part of the willamalane and COS Weyerhauser Haul Road IGA
- No walls or bridges assumed
- Landscaping and illumination included
- 1-lane roundabout in residential zoning

**SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE**

<b>PROJECT:</b> R-42 - Holly Street; South 48th Street to South 57th Street			<b>PREPARED BY:</b> Michael Liebler		<b>DATE:</b> 11/6/2018
<b>DESIGN LEVEL:</b> Preliminary					
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting			<b>LENGTH (MILE);</b> 0.70 mi		<b>SHEET:</b> 1 of 1
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.7	\$935,700.00	\$654,990
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.	2.1	\$412,500.00	\$866,250
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	1-L Roundabout	EA		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	11,500	\$7.50	\$86,250
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.7	\$260,000.00	\$182,000
13	Landscaping	Mi.	0.7	\$235,000.00	\$164,500
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$1,953,990</b>

	ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE		COST
	Construction Surveying	1.0-2.5%	2.50%		\$48,849.75
	TP & DT	3.0-8.0%	8.00%		\$156,319.20
	Mobilization	8.0-10.0%	10.00%		\$195,399.00
	Erosion Control	0.5-2.0%	2.00%		\$39,079.80
	Contingency	30-40%	40.00%		\$781,596.00
	Escalation Rate (per year)	0.5-2.0%	2.00%		
	Design Year (or Estimate Year)		2013		
	Construction Year		2013		
<b>SUBTOTAL</b>					<b>\$3,175,234</b>

	Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
	Railroad Crossing	EA	0	\$600,000.00	\$0
	Environmental Mitigation		5.00%		\$158,762
	Easements & ROW Acquisition		15.00%		\$476,285.06
	Indirect Costs		PERCENTAGE		COST
	Engineering, Legal/Admin, Coordination		30.00%		\$952,570
	Construction Engineering		15.00%		\$476,285
<b>TOTAL PROJECT COST</b>					<b>\$5,239,136</b>

Assumptions:

- Improvement are 2-L local street (2-12' lane, 2-6' bike, 2-5' setback sidewalks) L-3696.00.70mi
- Grade is relatively flat. Assumes 1.5' average depth of earthwork over new work areas.
- Majority of ROW assumed to be dedicated at time of development. One single family home property at S 57th street may need to be acquired for connection.
- No walls or bridges assumed
- Landscaping and illumination included

**SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE**

<b>PROJECT: R-44 - Daisy Street crossing of Bob Straub Parkway</b>			<b>PREPARED BY:</b> Michael Liebler		<b>DATE:</b> 9/13/2019
<b>DESIGN LEVEL:</b> Preliminary					
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting, Signals, Landscaping			<b>LENGTH (MILE):</b>		<b>SHEET:</b> 1 of 1
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	2-L Roundabout	EA	1	\$852,400.00	\$852,400
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Removal	EA		\$25,000.00	\$0
10	Earthwork (See Note)	CY	1,950	\$7.50	\$14,625
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$867,025</b>

	ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE		COST
	Construction Surveying	1.0-2.5%	2.50%		\$21,675.63
	TP & DT	3.0-8.0%	8.00%		\$69,362.00
	Mobilization	8.0-10.0%	10.00%		\$86,702.50
	Erosion Control	0.5-2.0%	2.00%		\$17,340.50
	Contingency	30-40%	40.00%		\$346,810.00
	Escalation Rate (per year)	0.5-2.0%	2.00%		
	Design Year (or Estimate Year)		2013		
	Construction Year		2013		
<b>SUBTOTAL</b>					<b>\$1,408,916</b>

	Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
	Railroad Crossing	EA	0	\$600,000.00	\$0
	Environmental Mitigation		0.00%		\$0
	Easements & ROW Acquisition		25.00%		\$352,228.91
	Indirect Costs		PERCENTAGE		COST
	Engineering, Legal/Admin, Coordination		30.00%		\$422,675
	Construction Engineering		15.00%		\$211,337
<b>TOTAL PROJECT COST</b>					<b>\$2,395,157</b>

**Assumptions**

- Project is for intersection improvements at Daisy Street and Bob Straub to construct a 2-L roundabout
- Grade at the intersection is flat. 1' average depth earthwork is included for new work areas
- No bridges or walls
- Illumination and landscaping are included in the per unit cost for the roundabout
- Improvements are for the intersection only and do not include approaches more than 150' from the intersection
- ROW impacts are included
- Roundabout designed for instead of signal because signal may not be warranted.

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-45 - Jasper-Natron Area Improvements		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 8/22/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 6.12		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	6.12	\$935,700.00	\$5,726,484
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Concrete	Lane-Mi.	20.52	\$595,700.00	\$12,223,764
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	92,890	\$7.50	\$696,675
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	6.12	\$260,000.00	\$1,591,200
13	Landscaping	Mi.	6.12	\$235,000.00	\$1,438,200
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$21,676,323</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$541,900
TP & DT	3.0-8.0%	8.0%	\$1,734,100
Mobilization	8.0-10.0%	10.0%	\$2,167,600
Erosion Control	0.5-2.0%	2.0%	\$433,500
Contingency	30-40%	40.0%	\$8,670,500
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$35,223,923</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	2	\$600,000.00	\$1,200,000
Environmental Mitigation		15.0%		\$5,283,588
Easements & ROW Acquisition		25.0%		\$8,805,981
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$10,567,200
Construction Engineering		15.0%		\$5,283,600
<b>TOTAL PROJECT COST</b>				<b>\$67,000,000</b>

Assumptions: Next Page

Assumptions:

Project is for multiple roadway connections in the Jasper-Natron area between Bob Straub Parkway, Jasper Road and Mt Vernon Road

There are 14 road segments for a total length of 32,122FT

Most segments are at flat grade. Assume 1' average depth over new work areas

Segment from Bob Straub Parkway to S 69th is in hilly terrain. Assume 3' average depth earthwork, L-9,776FT

Standard intersection connections at Bob Straub Parkway. No roundabouts or signals

Illumination and landscaping included

Roadway surfacing is assumed concrete. Actual surfacing will be determined by LCCA per City Policy

Improvements are for 2-L local collector (2-12' lane, 2-6' bike, 2-6' walks)

Impacts to ROW and sensitive areas assumed. Sensitive areas are considered high value and therefore higher mitigation costs assumed

Two (2) at grade railroad crossings included

**SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE**

<b>PROJECT:</b> R-46 - Bob Straub Parkway to Mountaingate Drive and Future Local			<b>PREPARED BY:</b> Madeline Klein		<b>DATE:</b> 10/25/2017
<b>DESIGN LEVEL:</b> Preliminary					
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting, Landscaping			<b>LENGTH (MILE):</b> 0.44 mi		<b>SHEET:</b> 1 of 1
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.44	\$935,700.00	\$411,708
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.	1.5	\$412,500.00	\$618,750
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	1-L Roundabout	EA		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	17,070	\$7.50	\$128,025
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.44	\$260,000.00	\$114,400
13	Landscaping	Mi.	0.44	\$235,000.00	\$103,400
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$1,376,283</b>

	ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE		COST
	Construction Surveying	1.0-2.5%	2.50%		\$34,407.08
	TP & DT	3.0-8.0%	8.00%		\$110,102.64
	Mobilization	8.0-10.0%	10.00%		\$137,628.30
	Erosion Control	0.5-2.0%	2.00%		\$27,525.66
	Contingency	30-40%	40.00%		\$550,513.20
	Escalation Rate (per year)	0.5-2.0%	2.00%		
	Design Year (or Estimate Year)		2013		
	Construction Year		2013		
<b>SUBTOTAL</b>					<b>\$2,236,460</b>

	Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
	Railroad Crossing	EA	0	\$600,000.00	\$0
	Environmental Mitigation		7.50%		\$167,734
	Easements & ROW Acquisition		37.50%		\$838,672.45
	Indirect Costs		PERCENTAGE		COST
	Engineering, Legal/Admin, Coordination		30.00%		\$670,938
	Construction Engineering		15.00%		\$335,469
<b>TOTAL PROJECT COST</b>					<b>\$4,249,274</b>

**Assumptions:**

- Earthwork is assumed at 1' average depth over the improvements area
- Urban collector; 3-L with bike lanes (3-12' lanes, 2-6' bike, 2-6' sidewalk) (including curbs and drainage)
- 60' ROW needed for 1221 LF of the project.
- 20' ROW needed for 660 LF of the project. Serviceable roadway exist.
- Roadway surfacing assumed asphalt to match existing
- Lighting included for improvements
- Landscaping needed for constructing new roadway.
- Intersection improvements at crossing of W-E and S-N would be a roundabout. No walls or bridges are assumed
- No impacts to sensitive areas or railroad crossings
- No structure impact assumed

**SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE**

<b>PROJECT: R-47 - Haul Road - Quartz Ave to UGB</b>			<b>PREPARED BY:</b> Michael Liebler		<b>DATE:</b> 11/6/2018
<b>DESIGN LEVEL:</b> Preliminary			<b>LENGTH (MILE);</b> 1.40 mi		<b>SHEET:</b> 1 of 2
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.	4.19	\$412,500.00	\$1,728,375
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	1-L Roundabout	EA		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	21,800	\$7.50	\$163,500
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.	1.4	\$235,000.00	\$329,000
14	Bridges	SF		\$250.00	\$0
15	Walls	SF	4425	\$75.00	\$331,875
<b>SUBTOTAL</b>					<b>\$2,552,750</b>

	ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE		COST
	Construction Surveying	1.0-2.5%	2.50%		\$63,818.75
	TP & DT	3.0-8.0%	8.00%		\$204,220.00
	Mobilization	8.0-10.0%	10.00%		\$255,275.00
	Erosion Control	0.5-2.0%	2.00%		\$51,055.00
	Contingency	30-40%	40.00%		\$1,021,100.00
	Escalation Rate (per year)	0.5-2.0%	2.00%		
	Design Year (or Estimate Year)		2013		
	Construction Year		2013		
<b>SUBTOTAL</b>					<b>\$4,148,219</b>

	Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
	Railroad Crossing	EA	0	\$600,000.00	\$0
	Environmental Mitigation		5.00%		\$207,411
	Easements & ROW Acquisition		0.00%		\$0.00
	Indirect Costs		PERCENTAGE		COST
	Engineering, Legal/Admin, Coordination		30.00%		\$1,244,466
	Construction Engineering		15.00%		\$622,233
<b>TOTAL PROJECT COST</b>					<b>\$6,222,328</b>

Assumptions: Next Page

Assumptions:

Project Limits are on the existing Haul Road through the Jasper Narton area from Quartz Avenue south to the UGB line, assumed wallace creek road

Project removes the existing paved surface (which has failed) and constructs a green street section. The section assumes asphalt surfacing and shoulders, no curb or enclosed drainage and parallel swales for drainage.

Sidewalks are not included as a parallel multiuse path is assumed by project PB-46

The roadway width is assumed at 36' (2-12' lanes, 2-6' shoulders)

Landscaping is included

Illumination is excluded

Assume the proposed improvements match the existing roadway grades limiting cut and fill. Assume 1' total depth for earthwork over the roadway surfacing area.

Additional excavation is assumed for the swales at 2' depth and 6' width

The existing roadway is approximately 24' wide. 12' slope earthwork for one side.

Existing geometry assumed to remain. No improvements to curvature or grade assumed.

Existing ROW is 100' wide. No new ROW anticipated

No Bridges

Assume 20% of the length, one side to have 3' average height retaining walls

Assume impacts to sensitive areas.

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-48 - Intersection Improvements at Main Street and Mountaingate Drive		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/22/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.00		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Signals, Striping, Sidewalk					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.00	\$935,700.00	\$0
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	2-L Roundabout	EA		\$852,400.00	\$0
7	Concrete Sidewalk	SF	300	\$5.00	\$1,500
8	New Signal	EA	1	\$300,000.00	\$300,000
9	Thermoplastic Pavement Striping	SF	720	\$10.00	\$7,200
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.00	\$260,000.00	\$0
13	Landscaping	Mi.	0.00	\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$308,700</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$7,700
TP & DT	3.0-8.0%	8.0%	\$24,700
Mobilization	8.0-10.0%	10.0%	\$30,900
Erosion Control	0.5-2.0%	2.0%	\$6,200
Contingency	30-40%	40.0%	\$123,500
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$501,700</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		25.0%		\$125,425
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$150,500
Construction Engineering		15.0%		\$75,300
<b>TOTAL PROJECT COST</b>				<b>\$900,000</b>

### Assumptions

- Intersection improvements at Main Street and Mountaingate Drive are for signal installation
- ROW impacts at assume to place signal poles and foundations
- Striping included for ladder style crosswalk across Main Street (2 legs)
- Sidewalks reconstructed on the north side for pedestrian ramps at the crosswalks (6' width, 25' length each)

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-49 - 79th Street Extension; Thurston Road to Main Street			<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 8/5/2013
<b>DESIGN LEVEL:</b> Preliminary			<b>LENGTH (MILE):</b> 0.37		<b>SHEET:</b> 1 of 1
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting, Structures					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.37	\$935,700.00	\$346,209
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Concrete	Lane-Mi.	1.13	\$595,700.00	\$673,141
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	62,925	\$7.50	\$471,938
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.37	\$260,000.00	\$96,200
13	Landscaping	Mi.	0.37	\$235,000.00	\$86,950
14	Bridges	SF	4,160	\$250.00	\$1,040,000
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$2,714,438</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$67,900
TP & DT	3.0-8.0%	8.0%	\$217,200
Mobilization	8.0-10.0%	10.0%	\$271,400
Erosion Control	0.5-2.0%	2.0%	\$54,300
Contingency	30-40%	40.0%	\$1,085,800
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$4,411,038</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		15.0%		\$661,656
Easements & ROW Acquisition		25.0%		\$1,102,759
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$1,323,300
Construction Engineering		15.0%		\$661,700
<b>TOTAL PROJECT COST</b>				<b>\$8,200,000</b>

### Assumptions

Improvements are for local street standard, 2-L (2-12' lane, 2-6' bike, 2-6' walk)

Grade is flat until ~300' south of Main Street. Elevation gain is approximately 60'. Assume 1' average depth earthwork to ~1,000 feet south of main. This assume 6% max grade embankment up to Main Street

Assume 80' long, 52' wide structure over creek.

Roadway surfacing is assumed concrete. Actual surfacing will be determined by LCCA per City Policy

Illumination and landscaping included

Impacts to ROW

Length of improvements, L-1,980', 0.37mi

Prop. alignment may impact existing facilities of Bob Artz Park and also Gray Creek. 15% mitigation included

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> R-50 - Gateway/Beltline Phase 2 Improvements		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 11/12/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b>		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.49	\$935,700.00	\$458,493
2	Concrete Curb	FT	1,350	\$15.00	\$20,250
3	New Roadway Concrete	Lane-Mi.	0.86	\$595,700.00	\$512,302
4	Median Island	Lane-Mi.	0.54	\$412,500.00	\$222,750
5	Median Island	SF	11,000	\$12.00	\$132,000
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA	2	\$300,000.00	\$600,000
9	Signal Modifications	EA	2	\$75,000.00	\$150,000
10	Earthwork (See Note)	CY	3,500	\$7.50	\$26,250
11	Mid-Block Crossing 2-L	EA	1	\$36,100.00	\$36,100
12	Illumination	Mi.	0.49	\$260,000.00	\$127,400
13	Landscaping	Mi.	0.49	\$235,000.00	\$115,150
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$2,400,695</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$60,000
TP & DT	3.0-8.0%	10.0%	\$240,100
Mobilization	8.0-10.0%	10.0%	\$240,100
Erosion Control	0.5-2.0%	2.0%	\$48,000
Contingency	30-40%	40.0%	\$960,300
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$3,949,195</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition				\$6,200,000
Removal (curb/sidewalk/surfacing)		1.0%		\$39,500
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$1,184,800
Construction Engineering		15.0%		\$592,400
<b>TOTAL PROJECT COST</b>				<b>\$12,000,000</b>

Assumptions: Next Page

Assumptions:

Project limits are for work to complete the preferred project alternative for the Gateway/Beltline EA. No work within ODOT ROW is included (Gateway/Beltline Intersection West Leg to Interchange)

Improvements along Gateway south of Beltline are for curb, sidewalk and drainage only up to the curve to the couplet.

Gateway southbound curved to the couplet is 1-lane (1-12', 2-2' shoulder). Sidewalk only on one side.

The couplet (Gateway NB) is 2-lanes at the beginning to the curve from Gateway southbound, and 3-lanes north of the curve (2 or 3-12' lanes, 1-6' bike, 1-2' shoulder).

Sidewalk and Curb along Gateway eastside, south of Beltline reconstructed

Right turn pocket along Gateway extended between Beltline and Game Farm Road (GFR). L-300', W-12'

Island removed and left turn lane constructed on Gateway between Beltline and GFR

Beltline westbound widened 12' (1-lane) east of couplet to Gateway. L-1,120FT

Island median constructed approaching couplet (Hutton). L-320FT, W-12FT

Island median constructed between couplet (Hutton) and Gateway. L-430FT, W-12' (avg)

Island median constructed on Gateway between International Way and GFR. L-650FT, W-2FT

Island median constructed between Gateway, Couplet and Couplet Cross over, L-400FT, W-2FT

Island is landscaped except for 2' concrete strip at the curbline.

Remove part of island median and construct left turn lane (2nd) W-12FT, L-250FT. Curb only, no sidewalk

No improvements are included on GFR

No improvements are included on International Way

Widen Gateway from 3-L to 5-L (2-12' lanes, 24FT) north of International Way, 2-L for 200', 2-L to 1-L at I-5. L-300FT. All widening is to the eastside only (1/2 street)

1% cost total added for removal of existing curb, sidewalk and roadway surfacing (couplet, Gateway)

Signals included for Gateway/International and Beltline/Couplet (Hutton)

Signal modifications included for Gateway/GFR and Gateway/Beltline

Rapid Rectangular Flashing Beacon mid-block crossing included on Gateway at curve to couplet.

1' depth earthwork included for all new roadway areas.

Environmental impacts are not anticipated

New roadway for widenings assumed as asphalt, new roadway new alignments assumed as concrete

Costs do not include the removal of buildings

ROW costs are assumed from the 2007 estimate for EA and are for properties impacted by the Phase 2 work areas. Costs are escalated by 4% per year from 2007 to 2013 dollars.

Traffic control included at 10% due to anticipated complexity and use of flaggers.

**SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE**

<b>PROJECT:</b> R-52 - Main Street/48th Street			<b>PREPARED BY:</b> Madeline Klein		<b>DATE:</b> 10/25/2017
<b>DESIGN LEVEL:</b> Preliminary					
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting, Signals, Landscaping			<b>LENGTH (MILE):</b>		<b>SHEET:</b> 1 of 1
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	2-L Roundabout	EA	1	\$852,400.00	\$852,400
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Removal	EA		\$25,000.00	\$0
10	Earthwork (See Note)	CY	1,950	\$7.50	\$14,625
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$867,025</b>

	ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE		COST
	Construction Surveying	1.0-2.5%	2.50%		\$21,675.63
	TP & DT	3.0-8.0%	8.00%		\$69,362.00
	Mobilization	8.0-10.0%	10.00%		\$86,702.50
	Erosion Control	0.5-2.0%	2.00%		\$17,340.50
	Contingency	30-40%	40.00%		\$346,810.00
	Escalation Rate (per year)	0.5-2.0%	2.00%		
	Design Year (or Estimate Year)		2013		
	Construction Year		2013		
<b>SUBTOTAL</b>					<b>\$1,408,916</b>

	Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
	Railroad Crossing	EA	0	\$600,000.00	\$0
	Environmental Mitigation		0.00%		\$0
	Easements & ROW Acquisition		25.00%		\$352,228.91
	Indirect Costs		PERCENTAGE		COST
	Engineering, Legal/Admin, Coordination		30.00%		\$422,675
	Construction Engineering		15.00%		\$211,337
<b>TOTAL PROJECT COST</b>					<b>\$2,395,157</b>

**Assumptions**

- Project is for intersection improvements at Main Street and 48th Street to construct a 2-L roundabout
- Grade at the intersection is flat. 1' average depth earthwork is included for new work areas
- No bridges or walls
- Illumination and landscaping are included in the per unit cost for the roundabout
- Improvements are for the intersection only and do not include approaches more than 150' from the intersection
- ROW impacts are included
- Roundabout designed for instead of signal because signal may not be warranted.

**SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE**

<b>PROJECT:</b> US-1 - Game Farm Road South - Mallard Avenue to Harlow Road			<b>PREPARED BY:</b> Sophie McGinley		<b>DATE:</b> 11/1/2017
<b>DESIGN LEVEL:</b> Preliminary			<b>LENGTH (MILE)</b> 0.48		<b>SHEET:</b> 1 of 1
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.41	\$935,700.00	\$383,637
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Asphalt	Lane-Mi.	0.46	\$412,500.00	\$189,750
4	Overlay Existing Roadway	Lane-Mi.	1.14	\$89,400.00	\$101,916
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	1-L Roundabout	EA		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	2,410	\$7.50	\$18,075
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.48	\$260,000.00	\$124,800
13	Landscaping	Mi.	0.48	\$235,000.00	\$112,800
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$930,978</b>

	ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE		COST
	Construction Surveying	1.0-2.5%	2.50%		\$23,274.45
	TP & DT	3.0-8.0%	8.00%		\$74,478.24
	Mobilization	8.0-10.0%	10.00%		\$93,097.80
	Erosion Control	0.5-2.0%	2.00%		\$18,619.56
	Contingency	30-40%	40.00%		\$372,391.20
	Escalation Rate (per year)	0.5-2.0%	2.00%		
	Design Year (or Estimate Year)		2013		
	Construction Year		0		
<b>SUBTOTAL</b>					<b>\$1,512,839</b>

	Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
	Railroad Crossing	EA	0	\$600,000.00	\$0
	Environmental Mitigation		0.00%		\$0
	Easements & ROW Acquisition		0.00%		\$0.00
	Indirect Costs		PERCENTAGE		COST
	Engineering, Legal/Admin, Coordination		30.00%		\$453,852
	Construction Engineering		15.00%		\$226,926
<b>TOTAL PROJECT COST</b>					<b>\$2,193,617</b>

**Assumptions**

Urban collector cross section; 2-12' lanes, 2-6' bike, 2-6' sidewalk (curb and drainage included) Length of improvements is measured  
 2,545 LF from Mallard Avenue to Harlow Road  
 Existing ROW is 50 ft, Proposed ROW is 56' Signals and bridges are not included  
 No impacts to sensitive areas or railroad crossings  
 36 ft wide road exists for 730 ft north of Harlow Road and 25ft wide road exists north to Mallard Ave for 1815 ft which is in serviceable condition Landscaping and Illumination included No structures assumed to be impacted

**SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE**

<b>PROJECT:</b> US-3 - Aspen Street from Blvd Centennial West D Street			<b>PREPARED BY:</b> Sophie McGinley		<b>DATE:</b> 11/1/2017
<b>DESIGN LEVEL:</b> Preliminary					
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting, Landscaping			<b>LENGTH (MILE)</b> 0.45		<b>SHEET:</b> 1 of 1
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.45	\$935,700.00	\$421,065
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Asphalt	Lane-Mi.	0.45	\$412,500.00	\$185,625
4	Overlay Existing Roadway	Lane-Mi.	0.9	\$89,400.00	\$83,142
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	1-L Roundabout	EA		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.45	\$260,000.00	\$117,000
13	Landscaping	Mi.	0.45	\$235,000.00	\$105,750
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$912,582</b>

	ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE		COST
	Construction Surveying	1.0-2.5%	2.50%		\$22,814.55
	TP & DT	3.0-8.0%	8.00%		\$73,006.56
	Mobilization	8.0-10.0%	10.00%		\$91,258.20
	Erosion Control	0.5-2.0%	2.00%		\$18,251.64
	Contingency	30-40%	40.00%		\$365,032.80
	Escalation Rate (per year)	0.5-2.0%	2.00%		
	Design Year (or Estimate Year)		2013		
	Construction Year		0		
<b>SUBTOTAL</b>					<b>\$1,482,946</b>

	Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
	Railroad Crossing	EA	0	\$600,000.00	\$0
	Environmental Mitigation		0.00%		\$0
	Easements & ROW Acquisition		0.00%		\$0.00
	Indirect Costs		PERCENTAGE		COST
	Engineering, Legal/Admin, Coordination		30.00%		\$444,884
	Construction Engineering		15.00%		\$222,442
<b>TOTAL PROJECT COST</b>					<b>\$2,150,271</b>

**Assumptions**

- Urban collector cross section; 2-12' lanes, 2-6' bike, 2-6' sidewalk (Curb and drainage included) Length of improvements measured at 2350 LF
- Existing ROW is 60 ft. No additional ROW needed
- Signals and bridges are not included
- Lighting and Landscaping included for improvements. No impacts to sensitive areas or railroad crossings.
- Serviceable roadway exits however it needs overlay

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> US-4 - 21st Street; from D St. to Main St.		<b>PREPARED BY:</b> Sam Monsef		<b>DATE:</b> 2/14/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.24		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Lighting,					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks (No Drainage)	Mi.	0.24	\$483,800.00	\$116,112
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Concrete	Lane-Mi.	0.95	\$595,700.00	\$565,915
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	1,000	\$7.50	\$7,500
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.24	\$260,000.00	\$62,400
13	Landscaping	Mi.	0.24	\$235,000.00	\$56,400
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$808,327</b>

	ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE		COST
	Construction Surveying	1.0-2.5%	2.5%		\$20,200
	TP & DT	3.0-8.0%	8.0%		\$64,700
	Mobilization	8.0-10.0%	10.0%		\$80,800
	Erosion Control	0.5-2.0%	2.0%		\$16,200
	Contingency	30-40%	40.0%		\$323,300
	Escalation Rate (per year)	0.5-2.0%	2.0%		
	<i>Design Year (or Estimate Year)</i>		2013		
	<i>Construction Year</i>		2013		
					\$0
<b>TOTAL CONSTRUCTION COST</b>					<b>\$1,313,527</b>

	Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
	Railroad Crossing	EA	0	\$600,000.00	\$0
	Environmental Mitigation		0.0%		\$0
	Easements & ROW Acquisition		25.0%		\$328,382
	Indirect Costs		PERCENTAGE		COST
	Engineering, Legal/Admin, Coordination		30.0%		\$394,100
	Construction Engineering		15.0%		\$197,000
<b>TOTAL PROJECT COST</b>					<b>\$2,300,000</b>

Assumptions: Next Page

Assumptions:

Urban collector cross section; 3-12' lanes, 2-6' bike, 2-6' sidewalk

Length of improvements is measured 1317 LF from D St. to Main St.

Existing ROW is 50 ft. Additional 10 ft ROW needed.

New roadway should be a 3-lane standard with bike lane and side walk including curbs and drainage

Signals, bridges, and landscaping are not included

Lighting included for improvements

No impacts to sensitive areas or railroad crossings

Existing roadway is deteriorated beyond serviceable level and full reconstruction is assumed

No structures assumed to be impacted

Roadway surfacing is assumed concrete. Actual surfacing will be determined by LCCA per City Policy

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> US-5 - 28th Street: Centennial Boulevard to Main Street		<b>PREPARED BY:</b> Sam Monsef		<b>DATE:</b> 8/5/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.70		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Lighting					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks (No Drainage)	Mi.	0.70	\$483,800.00	\$339,027
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Asphalt	Lane-Mi.	0.70	\$412,500.00	\$288,750
4	Overlay Existing Roadway	Lane-Mi.	2.10	\$89,400.00	\$187,740
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	3,015	\$7.50	\$22,613
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.70	\$260,000.00	\$182,197
13	Landscaping	Mi.	0.70	\$235,000.00	\$164,678
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$1,185,004</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$29,600
TP & DT	3.0-8.0%	8.0%	\$94,800
Mobilization	8.0-10.0%	10.0%	\$118,500
Erosion Control	0.5-2.0%	2.0%	\$23,700
Contingency	30-40%	40.0%	\$474,000
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$1,925,604</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		75.0%		\$1,444,203
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$577,700
Construction Engineering		15.0%		\$288,800
<b>TOTAL PROJECT COST</b>				<b>\$4,300,000</b>

Assumptions: Next Page

Assumptions:

Urban arterial facility; 3-12' lanes, 2-6' bike, 2-6' sidewalk (curb and drainage included)

Length of improvements is measured 3700 LF from Centennial Blvd to Main St.

Existing ROW is 40 ft thus additional 30 ft ROW needed since road is classified as minor arterial. ROW % increased to 75% due to build out adjacent to 28th Street.

Signals and bridges are not included

Lighting included for improvements

No impacts to sensitive areas or railroad crossings

36 ft wide road exists assuming its in a serviceable condition but it needs overlay

New roadway assumed asphalt to match existing roadway

Assumed landscaping needed

No structures assumed to be impacted

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> US-6 - South 28th Street; Main St. to South F St.		<b>PREPARED BY:</b> Sam Monsef		<b>DATE:</b> 2/15/2013	
<b>DESIGN LEVEL:</b> Preliminary					
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting, Structures		<b>LENGTH (MILE):</b> 0.38		<b>SHEET:</b> 1 of 1	
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.38	\$935,700.00	\$355,566
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Concrete	Lane-Mi.	1.44	\$595,700.00	\$857,808
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	5,800	\$7.50	\$43,500
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.38	\$260,000.00	\$98,800
13	Landscaping	Mi.	0.38	\$235,000.00	\$89,300
14	Bridges	SF		\$250.00	\$0
15	Walls	SF	6,500	\$75.00	\$487,500
<b>SUBTOTAL</b>					<b>\$1,932,474</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$48,300
TP & DT	3.0-8.0%	8.0%	\$154,600
Mobilization	8.0-10.0%	10.0%	\$193,200
Erosion Control	0.5-2.0%	2.0%	\$38,600
Contingency	30-40%	40.0%	\$773,000
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$3,140,174</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	1	\$600,000.00	\$600,000
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		25.0%		\$785,044
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$942,100
Construction Engineering		15.0%		\$471,000
<b>TOTAL PROJECT COST</b>				<b>\$6,000,000</b>

### Assumptions

- Urban collector cross section; 3-12' lanes, 2-6' bike, 2-6' sidewalk (curb and drainage included)
- Length of improvements is measured 1910 LF
- Existing ROW is 40 ft therefore additional 20 ft of ROW needed
- Existing roadway is deteriorated beyond serviceable level and full reconstruction is assumed
- Roadway surfacing is assumed concrete. Actual surfacing will be determined by LCCA per City Policy
- Lighting and landscaping included for improvements
- No structures assumed to be impacted
- Assumed impact to sensitive area at rail crossing

**SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE**

<b>PROJECT:</b> US-8 - 35th Street - Olympic Street to Commercial Avenue		<b>PREPARED BY:</b> Michael Liebler		<b>DATE:</b> 11/6/2018	
<b>DESIGN LEVEL:</b> Preliminary					
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting		<b>LENGTH (MILE);</b> 0.45 mi		<b>SHEET:</b> 1 of 1	
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.45	\$935,700.00	\$421,065
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.	1.05	\$412,500.00	\$433,125
4	Overlay Existing Roadway	Lane-Mi.	0.75	\$89,400.00	\$67,050
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA	1	\$76,500.00	\$76,500
7	1-L Roundabout	EA		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	4,244	\$7.50	\$31,830
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.45	\$260,000.00	\$117,000
13	Landscaping	Mi.	0.45	\$235,000.00	\$105,750
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$1,252,320</b>

	ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE		COST
	Construction Surveying	1.0-2.5%	2.50%		\$31,308.00
	TP & DT	3.0-8.0%	8.00%		\$100,185.60
	Mobilization	8.0-10.0%	10.00%		\$125,232.00
	Erosion Control	0.5-2.0%	2.00%		\$25,046.40
	Contingency	30-40%	40.00%		\$500,928.00
	Escalation Rate (per year)	0.5-2.0%	2.00%		
	Design Year (or Estimate Year)		2013		
	Construction Year		2013		
<b>SUBTOTAL</b>					<b>\$2,035,020</b>

	Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
	Railroad Crossing	EA	1	\$600,000.00	\$600,000
	Environmental Mitigation		0.00%		\$0
	Easements & ROW Acquisition		0.00%		\$0.00
	Indirect Costs		PERCENTAGE		COST
	Engineering, Legal/Admin, Coordination		30.00%		\$610,506
	Construction Engineering		15.00%		\$305,253
<b>TOTAL PROJECT COST</b>					<b>\$3,550,779</b>

Assumptions:  
 Improvement are 3-L urban collector street (3-12' lane, 2-6' bike, 2-5' setback sidewalks) L-2376.00.45mi  
 Existing ROW is 80 feet  
 20 foot wide asphalt road exists  
 Signals and bridges are not included  
 Project includes one rail crossing  
 Roadway surface assumed to match existing asphalt  
 Earthwork assumed to be 1' of depth for only new roadway area and setback sidewalk

**SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE**

<b>PROJECT:</b> US-9 - Commercial Avenue - 35th to 42nd Street			<b>PREPARED BY:</b> Michael Liebler		<b>DATE:</b> 11/6/2018
<b>DESIGN LEVEL:</b> Preliminary			<b>LENGTH (MILE);</b> 0.79 mi		<b>SHEET:</b> 1 of 1
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.7	\$935,700.00	\$654,990
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.	1.63	\$412,500.00	\$672,375
4	Overlay Existing Roadway	Lane-Mi.	1.17	\$89,400.00	\$104,598
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA	1	\$76,500.00	\$76,500
7	1-L Roundabout	EA		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	6,570	\$7.50	\$49,275
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.7	\$260,000.00	\$182,000
13	Landscaping	Mi.	0.7	\$235,000.00	\$164,500
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$1,904,238</b>

	ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE		COST
	Construction Surveying	1.0-2.5%	2.50%		\$47,605.95
	TP & DT	3.0-8.0%	8.00%		\$152,339.04
	Mobilization	8.0-10.0%	10.00%		\$190,423.80
	Erosion Control	0.5-2.0%	2.00%		\$38,084.76
	Contingency	30-40%	40.00%		\$761,695.20
	Escalation Rate (per year)	0.5-2.0%	2.00%		
	Design Year (or Estimate Year)		2013		
	Construction Year		2013		
<b>SUBTOTAL</b>					<b>\$3,094,387</b>

	Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
	Railroad Crossing	EA	0	\$600,000.00	\$0
	Environmental Mitigation		0.00%		\$0
	Easements & ROW Acquisition		0.00%		\$0.00
	Indirect Costs		PERCENTAGE		COST
	Engineering, Legal/Admin, Coordination		30.00%		\$928,316
	Construction Engineering		15.00%		\$464,158
<b>TOTAL PROJECT COST</b>					<b>\$4,486,861</b>

Assumptions:  
 Improvement are 3-L urban collector street (3-12' lane, 2-6' bike, 2-5' setback sidewalks) L-3696.00.70mi  
 Existing ROW is 80 feet transitioning to 70 feet .09 miles before 42nd intersection  
 20 foot wide asphalt road exists  
 Signals and bridges are not included  
 .09 Miles of Roadway up to standard at the 42nd intersection heading west only requiring re-striping.  
 Roadway surface assumed to match existing asphalt  
 Earthwork assumed to be 1' of depth for only new roadway area and setback sidewalk

**SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE**

<b>PROJECT:</b> US-10 - 36th Street - Comercial Avenue to Main Street		<b>PREPARED BY:</b> Michael Liebler		<b>DATE:</b> 11/6/2018	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE);</b> 0.47 mi		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.47	\$935,700.00	\$439,779
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.	0.47	\$412,500.00	\$193,875
4	Overlay Existing Roadway	Lane-Mi.	1.41	\$89,400.00	\$126,054
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	1-L Roundabout	EA		\$350,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	2,012	\$7.50	\$15,090
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.47	\$260,000.00	\$122,200
13	Landscaping	Mi.	0.47	\$235,000.00	\$110,450
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$1,007,448</b>

	ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE		COST
	Construction Surveying	1.0-2.5%	2.50%		\$25,186.20
	TP & DT	3.0-8.0%	8.00%		\$80,595.84
	Mobilization	8.0-10.0%	10.00%		\$100,744.80
	Erosion Control	0.5-2.0%	2.00%		\$20,148.96
	Contingency	30-40%	40.00%		\$402,979.20
	Escalation Rate (per year)	0.5-2.0%	2.00%		
	Design Year (or Estimate Year)		2013		
	Construction Year		2013		
<b>SUBTOTAL</b>					<b>\$1,637,103</b>

	Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
	Railroad Crossing	EA	0	\$600,000.00	\$0
	Environmental Mitigation		0.00%		\$0
	Easements & ROW Acquisition		40.00%		\$654,841.20
	Indirect Costs		PERCENTAGE		COST
	Engineering, Legal/Admin, Coordination		30.00%		\$491,131
	Construction Engineering		15.00%		\$245,565
<b>TOTAL PROJECT COST</b>					<b>\$3,028,641</b>

Assumptions:  
 Improvement are 3-L urban collector street (3-12' lane, 2-6' bikelanes, 2-5' sidewalks) L-2470.00.47mi  
 Existing ROW is 50 feet  
 36 foot wide asphalt road exists with curbside sidewalk.  
 Signals and bridges are not included  
 Sidewalk not setback to minimize required ROW aqizition.  
 Roadway surface assumed to match existing asphalt and overlaid  
 Earthwork assumed to be 1' of depth for only new roadway area and sidewalk

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> US-11 - Clearwater Lane; Jasper Road to UGB		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 8/5/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.10		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.10	\$935,700.00	\$93,570
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.	0.10	\$412,500.00	\$41,250
4	Overlay Existing Roadway	Lane-Mi.	0.15	\$89,400.00	\$13,410
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	500	\$7.50	\$3,750
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.10	\$260,000.00	\$26,000
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF	375	\$50.00	\$18,750
<b>SUBTOTAL</b>					<b>\$196,730</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$4,900
TP & DT	3.0-8.0%	8.0%	\$15,700
Mobilization	8.0-10.0%	10.0%	\$19,700
Erosion Control	0.5-2.0%	2.0%	\$3,900
Contingency	30-40%	40.0%	\$78,700
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$319,630</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$95,900
Construction Engineering		15.0%		\$47,900
<b>TOTAL PROJECT COST</b>				<b>\$470,000</b>

### Assumptions

- Improvements are to construct roadway widening improvements to local street standards (2-12' lanes, 2-6' bike, 2-6' sidewalks) - 48' total width, L-430FT; 0.10mi
- Existing width is 22' edge to edge. Existing pavement is serviceable and 2" overlay is included
- Grade is flat. Earthwork is included 1' depth for the widening and new construction areas
- Wall included at 3' average height for 125' along the westside
- No ROW impacts assumed
- No intersection improvements at Jasper Road and Clearwater Lane
- Illumination is included

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> US-14 - Thurston from Weaver Rd. to UGB		<b>PREPARED BY:</b> Sam Monsef		<b>DATE:</b> 2/14/2013	
<b>DESIGN LEVEL:</b> Preliminary					
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting		<b>LENGTH (MILE):</b> 1.00		<b>SHEET:</b> 1 of 1	
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.82	\$935,700.00	\$935,700
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Asphalt	Lane-Mi.	0.82	\$412,500.00	\$338,250
4	Overlay Existing Roadway	Lane-Mi.	2.18	\$89,400.00	\$194,892
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	6,415	\$7.50	\$48,113
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	1.00	\$260,000.00	\$260,000
13	Landscaping	Mi.	1.00	\$235,000.00	\$235,000
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$2,011,955</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$50,300
TP & DT	3.0-8.0%	8.0%	\$161,000
Mobilization	8.0-10.0%	10.0%	\$201,200
Erosion Control	0.5-2.0%	2.0%	\$40,200
Contingency	30-40%	40.0%	\$804,800
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$3,269,455</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$980,800
Construction Engineering		15.0%		\$490,400
<b>TOTAL PROJECT COST</b>				<b>\$4,800,000</b>

Assumptions: Next Page

Assumptions:

- Urban collector cross section; 3-12' lanes, 2-6' bike, 2-6' sidewalk (curb and drainage included)
- Length of improvements is measured 5177 LF from Weaver Rd. to UGB
- Existing ROW is 60 ft
- Signals and bridges are not included
- Lighting included for improvements
- No impacts to sensitive areas or railroad crossings
- 36 ft wide road exists for 950 ft and 26ft wide road exists for 4227 ft which is in serviceable condition
- Assumed landscaping needed
- No structures assumed to be impacted
- Roadway surfacing assumed asphalt to match existing roadway

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT: US-16 - 48th Street - Main Street to G Street</b>			<b>PREPARED BY:</b> Sophie McGinley		<b>DATE:</b> 11/1/2017
<b>DESIGN LEVEL:</b> Preliminary			<b>LENGTH (MILE)</b> 0.48		<b>SHEET:</b> 1 of 1
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0	\$935,700.00	\$0
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Asphalt	Lane-Mi.	0	\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.	0.48	\$89,400.00	\$42,912
5	Reconstruct Existing Roadway	Lane-Mi.	0.48	\$438,900.00	\$210,672
6	Intersection Widening	EA		\$76,500.00	\$0
7	1-L Roundabout	EA		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	0	\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.	0	\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$253,584</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.50%	\$6,339.60
TP & DT	3.0-8.0%	8.00%	\$20,286.72
Mobilization	8.0-10.0%	10.00%	\$25,358.40
Erosion Control	0.5-2.0%	2.00%	\$5,071.68
Contingency	30-40%	40.00%	\$101,433.60
Escalation Rate (per year)	0.5-2.0%	2.00%	
Design Year (or Estimate Year)		2013	
Construction Year		0	
<b>SUBTOTAL</b>			<b>\$412,074</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.00%		\$0
Easements & ROW Acquisition		0.00%		\$0.00
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.00%		\$123,622
Construction Engineering		15.00%		\$61,811
<b>TOTAL PROJECT COST</b>				<b>\$597,507</b>

**Assumptions:**

- Improvements for urban facility, 3-L (2-12' lanes)
- Bike and Ped elements included in PB-56
- No additional ROW needed
- lighting included but landscape assumed to be included in PB-56

**SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE**

<b>PROJECT:</b> US-17 - G Street - 48th Street to 52nd Street		<b>PREPARED BY:</b> Sophie McGinley		<b>DATE:</b> 11/1/2017	
<b>DESIGN LEVEL:</b> Preliminary					
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting		<b>LENGTH (MILE)</b> 0.39		<b>SHEET:</b> 1 of 1	
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0	\$935,700.00	\$0
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Asphalt	Lane-Mi.	0	\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.	0.78	\$89,400.00	\$69,732
5	Reconstruct Existing Roadway	Lane-Mi.	0.2	\$438,900.00	\$87,780
6	Intersection Widening	EA		\$76,500.00	\$0
7	1-L Roundabout	EA		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	0	\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.	0	\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$157,512</b>

	ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE		COST
	Construction Surveying	1.0-2.5%	2.50%		\$3,937.80
	TP & DT	3.0-8.0%	8.00%		\$12,600.96
	Mobilization	8.0-10.0%	10.00%		\$15,751.20
	Erosion Control	0.5-2.0%	2.00%		\$3,150.24
	Contingency	30-40%	40.00%		\$63,004.80
	Escalation Rate (per year)	0.5-2.0%	2.00%		
	Design Year (or Estimate Year)		2013		
	Construction Year		0		
<b>SUBTOTAL</b>					<b>\$255,957</b>

	Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
	Railroad Crossing	EA	0	\$600,000.00	\$0
	Environmental Mitigation		0.00%		\$0
	Easements & ROW Acquisition		0.00%		\$0.00
	Indirect Costs		PERCENTAGE		COST
	Engineering, Legal/Admin, Coordination		30.00%		\$76,787
	Construction Engineering		15.00%		\$38,394
<b>TOTAL PROJECT COST</b>					<b>\$371,138</b>

Assumptions:

- Improvements for urban facility, 3-L (2-12' lanes)
- Bike and Ped elements included in PB-56
- No additional ROW needed
- lighting included but landscape assumed to be included in PB-56

**SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE**

<b>PROJECT:</b> US-18 - 52nd Street - OR 126E to G Street			<b>PREPARED BY:</b> Sophie McGinley		<b>DATE:</b> 11/1/2017
<b>DESIGN LEVEL:</b> Preliminary					
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting			<b>LENGTH (MILE)</b> 0.2		<b>SHEET:</b> 1 of 1
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$173,700.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.	0.2	\$89,400.00	\$17,880
5	Reconstruct Existing Roadway	Lane-Mi.	0.2	\$438,900.00	\$87,780
6	Intersection Widening	EA		\$76,500.00	\$0
7	1-L Roundabout	EA		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$105,660</b>

	ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
	Construction Surveying	1.0-2.5%	2.50%	\$2,641.50
	TP & DT	3.0-8.0%	8.00%	\$8,452.80
	Mobilization	8.0-10.0%	10.00%	\$10,566.00
	Erosion Control	0.5-2.0%	2.00%	\$2,113.20
	Contingency	30-40%	40.00%	\$42,264.00
	Escalation Rate (per year)	0.5-2.0%	2.00%	
	Design Year (or Estimate Year)		2013	
	Construction Year		0	
<b>SUBTOTAL</b>				<b>\$171,698</b>

	Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
	Railroad Crossing	EA	0	\$600,000.00	\$0
	Environmental Mitigation		0.00%		\$0
	Easements & ROW Acquisition		0.00%		\$0.00
	Indirect Costs		PERCENTAGE		COST
	Engineering, Legal/Admin, Coordination		30.00%		\$51,509
	Construction Engineering		15.00%		\$25,755
<b>TOTAL PROJECT COST</b>					<b>\$248,961</b>

Assumptions:

- Improvements for urban facility, 3-L (2-12' lanes)
- Bike and Ped elements included in PB-56
- No additional ROW needed
- lighting included but landscape assumed to be included in PB-56

**Pedestrian and Bike**

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## Springfield TSP - Estimate Summary

### PEDESTRIAN/BIKE PROJECTS ORDER OF MAGNITUDE COST ESTIMATES

Project	Estimated Cost
PB-1 - McKenzie Gateway Path – Existing Path to Maple Island Road	\$3,000,000
PB-2 - Flamingo Avenue to Gateway Street	\$70,000
PB-3 - Oakdale/Pheasant/et.al. - Game Farm Road to Gateway Road	\$80,000
PB-4 - Wayside Loop/Manor Drive to Riverbend Path	\$80,000
PB-5 - Hartman Lane/Don Street - south of Harlow Road to OR 126	\$180,000
PB-8 - Hayden Bridge Way/Grovedale Drive, Hayden Bridge Way/3 <sup>rd</sup> Street, Hayden Bridge Way/Castle Drive	\$260,000
PB-9 - EWEB Path crossings of 2 <sup>nd</sup> Street, 9 <sup>th</sup> Street, 11 <sup>th</sup> Street, Rose Blossom Drive, Debra Street, 15 <sup>th</sup> Street, 33 <sup>rd</sup> Street, and 35 <sup>th</sup> Street	\$50,000
PB-10 - 2nd Street/Q Street	\$90,000
PB-13 - Anderson Lane - By-Gully path to Centennial Boulevard	\$90,000
PB-14 - Rainbow Drive - Centennial Boulevard to West D Street	\$60,000
PB-15 - West D - Mill Street to D Street Path	\$10,000
PB-16 - West D - Aspen Street to D Street Path	\$190,000
PB-17 - Glenwood Area Willamette River Path – I-5 to Willamette River bridges	\$2,500,000
PB-18 - Glenwood Area Willamette River Path – Willamette River Bridges to UGB	\$2,900,000
PB-19 - Bridge between Downtown and Glenwood or modify Willamette River Bridges	\$10,300,000
PB-20 - Mill Street - Centennial to Main Street, south of Main Street to Mill Race Park	\$90,000
PB-21 - Pioneer Parkway at D, E and F Streets	\$80,000
PB-22 - 5th Street/Centennial Boulevard Intersection	\$560,000
PB-23 - 5th Street - Centennial Boulevard to A Street	\$50,000
PB-24 - D, E or F Street from 5th Street to 28th Street	\$190,000
PB-25 - 5th Street/D Street	\$10,000
PB-26 - A Street – 5th Street to 10th Street	\$40,000
PB-27 - South 2nd Street to Island Park	\$3,100,000
PB-28 - South 2nd Street to South B Street	\$600,000
PB-29 - Mill Race Path	\$7,100,000
PB-30 - 33rd Street - V Street to EWEB Path	\$10,000
PB-31 - Moe Mountain Path – River Heights Drive to Marcola Road	\$1,200,000
PB-32 - McKenzie River Path - McKenzie Levee Path to 52nd Street	\$3,700,000
PB-33 - Main Street - 34th Street to 35th Street	\$90,000
PB-34 - Pedestrian crossing improvement on Main Street /38th Street	\$90,000
PB-35 - Main Street/ 41st Street	\$90,000
PB-36 – Virginia Avenue and Daisy Street - South 32nd Street to Bob Straub Parkway	\$130,000
PB-37 - Booth Kelly Road - South 28th Street to South 49th Place	\$2,817,000
PB-39 - Main Street - 48th Street and 49th Street	\$90,000
PB-40 - Main Street/ 51st Street	\$10,000
PB-41 - Main Street / Chapman Lane	\$90,000
PB-42 - Main Street - 66th Street to 67th Street	\$300,000
PB-43 - Bob Straub Parkway and Daisy Street	\$90,000
PB-44 - Mountaingate Drive – Mountaingate Entrance to Dogwood Street	\$260,000
PB-45 - Mt Vernon Road/Bob Straub Parkway	\$390,000
PB-46 - Haul Road path - South 49th Place to UGB	\$3,600,000
PB-47 - Thurston Road/66th Street	\$90,000
PB-48 - Thurston Road/69th Street	\$90,000
PB-49 - South 67th Street - Ivy Street to Main Street	\$160,000
PB-50 - Ivy Street; - South 67th Street to South 70th Street	\$20,000
PB-51 - South 70th Street - Main Street to Ivy Street	\$50,000
PB-52 - City-wide Rectangular Rapid Flashing Beacons	\$4,400,000
PB-53 - 66th Street – Thurston Road to Main Street	\$25,000
PB-54 - G Street – 5th Street to 28th Street	\$75,000
PB-55 - 48 <sup>th</sup> /G/52 <sup>nd</sup> – High Banks Road to Aster Street	\$1,600,000

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-1 - McKenzie River Path; Existing Terminus to Maple Island Road		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 8/5/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 1.32		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> MUP, Earthwork, Drainage, Lighting, Landscaping					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.	1.32	\$217,900.00	\$287,628
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	4,820	\$7.50	\$36,150
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	1.32	\$260,000.00	\$343,200
13	Landscaping	Mi.	1.32	\$235,000.00	\$310,200
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$977,178</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$24,400
TP & DT	3.0-8.0%	8.0%	\$78,200
Mobilization	8.0-10.0%	10.0%	\$97,700
Erosion Control	0.5-2.0%	2.0%	\$19,500
Contingency	30-40%	40.0%	\$390,900
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$1,587,878</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		15.0%		\$238,182
Easements & ROW Acquisition		25.0%		\$396,970
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$476,400
Construction Engineering		15.0%		\$238,200
<b>TOTAL PROJECT COST</b>				<b>\$3,000,000</b>

### Assumptions

- Project is a multiuse path at the top bank of the McKenzie River from it's existing terminus near Baldy View Ln to Maple Island Road
- Path is 16' wide (12' path, 2-12' shoulders), L-6,950FT, 1.32 miles
- Landscaping and illumination included
- ROW and sensitive area impacts are assumed
- Path stays at the top of the river bank and does not go over. Earthwork is assumed through relatively flat field, 1' average depth across new work areas
- Sensitive area impact mitigation at 15% due to assumed flood plain and floodway locations

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-2 - Multiuse Path Between Flamingo Ave and Gateway St		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/6/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.28		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.	0.1	\$217,900.00	\$17,432
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Permanent Pavement Marking	EA	10	\$250.00	\$2,500
7	New Signs	EA	6	\$500.00	\$3,000
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	250	\$7.50	\$1,875
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$24,807</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$600
TP & DT	3.0-8.0%	8.0%	\$2,000
Mobilization	8.0-10.0%	10.0%	\$2,500
Erosion Control	0.5-2.0%	2.0%	\$500
Contingency	30-40%	40.0%	\$9,900
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$40,307</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		25.0%		\$10,077
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$12,100
Construction Engineering		15.0%		\$6,000
<b>TOTAL PROJECT COST</b>				<b>\$70,000</b>

**Assumptions:**

- Multiuse path from Flamingo Ave. to Gateway Street. Path is along south edge of park south to the existing neighborhood path between properties, through the neighborhood to Gateway
- Existing path connections existing in ROW between houses in neighborhood
- Length of improvements L-1,480' (400' new path, 1,080' existing path/sidewalk in neighborhood)
- 1' depth earthwork assumed for width of new work
- Signs included at 1/500'
- Markings included at 1/250'
- No impacts to sensitive areas included

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-3 - Oakdale/Pheasant/et.al. from Game Farm Road to Gateway Loop		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 2/28/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.81		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Striping, Signing					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Restripe Existing Roadway	Lane-Mi.	1.66	\$8,700.00	\$14,442
7	Permanent Pavement Marking	EA	34	\$250.00	\$8,500
8	New Sign	EA	18	\$500.00	\$9,000
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$31,942</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$800
TP & DT	3.0-8.0%	8.0%	\$2,600
Mobilization	8.0-10.0%	10.0%	\$3,200
Erosion Control	0.5-2.0%	2.0%	\$600
Contingency	30-40%	40.0%	\$12,800
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$51,942</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$15,600
Construction Engineering		15.0%		\$7,800
<b>TOTAL PROJECT COST</b>				<b>\$80,000</b>

### Assumptions

- Project limits from Game Farm Road at Mallard Ave. to Pheasant Blvd., south to Oakdale St., west to Gateway Street. Length is 4,260'
- Improvements are for signing, striping and pavement marking
- Pheasant Blvd and Mallard Ave will be signed for bike route and bike pavement markings
- Oakdale Street will be restriped with bike lanes, signed and marked for bike route
- Signs will be at 1/500'
- Markings will be at 1/250'

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJE</b>		<b>PB-4 - MUP; Riverbend Path to A Ubcf 8 f# Wayside Loop</b>		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 2/28/2013	
<b>DESIGN LEVEL:</b> Preliminary				<b>LENGTH (MILE):</b> 0.11		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting, Structures							
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST		
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0		
2	Multi-use Path	Mi.	0.11	\$217,900.00	\$24,187		
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0		
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0		
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0		
6	Intersection Widening	EA		\$76,500.00	\$0		
7	Interconnect Signal	LS		\$35,000.00	\$0		
8	New Signal	EA		\$300,000.00	\$0		
9	Signal Modifications	EA		\$75,000.00	\$0		
10	Earthwork (See Note)	CY	350	\$7.50	\$2,625		
11	Traffic Calming	5-10%		-	\$0		
12	Illumination	Mi.		\$260,000.00	\$0		
13	Landscaping	Mi.		\$235,000.00	\$0		
14	Bridges	SF		\$250.00	\$0		
15	Walls	SF		\$75.00	\$0		
<b>SUBTOTAL</b>					<b>\$26,812</b>		

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE		COST
Construction Surveying	1.0-2.5%	2.5%		\$700
TP & DT	3.0-8.0%	8.0%		\$2,100
Mobilization	8.0-10.0%	10.0%		\$2,700
Erosion Control	0.5-2.0%	2.0%		\$500
Contingency	30-40%	40.0%		\$10,700
Escalation Rate (per year)	0.5-2.0%	2.0%		
<i>Design Year (or Estimate Year)</i>		2013		
<i>Construction Year</i>		2013		
				\$0
<b>TOTAL CONSTRUCTION COST</b>				<b>\$43,512</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		25.0%		\$10,878
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$13,100
Construction Engineering		15.0%		\$6,500
<b>TOTAL PROJECT COST</b>				<b>\$80,000</b>

**Assumptions**

- Project constructs a multiuse path from Riverbend Path to Ann Ct./Wayside Ln
- ROW impacted for full length of path extension
- Path is 16' total width (12' path, 2-2' shoulders)
- 1' average depth earthwork is assumed over new work area
- Illumination and landscaping is not included
- No impacts to sensitive areas assumed

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-5 - Hartman Lane/Don Street south of Harlow Road to OR 126 with crossing of		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 2/28/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.55		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Sidewalk, Markings, Signing					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Concrete Sidewalk	SF	12,350	\$5.00	\$61,750
7	Permanent Pavement Marking	EA	24	\$250.00	\$6,000
8	New Sign	EA	12	\$500.00	\$6,000
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$73,750</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$1,800
TP & DT	3.0-8.0%	8.0%	\$5,900
Mobilization	8.0-10.0%	10.0%	\$7,400
Erosion Control	0.5-2.0%	2.0%	\$1,500
Contingency	30-40%	40.0%	\$29,500
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$119,850</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$36,000
Construction Engineering		15.0%		\$18,000
<b>TOTAL PROJECT COST</b>				<b>\$180,000</b>

### Assumptions

- Project is from Harlow Road to OR126 along Hartman Lane and Don Street - 2,880FT
- Improvements fill sidewalk gaps and provide signing and pavement markings for bike routes
- Pavement markings are at 1/250FT each way
- Bike route signs are at 1/500FT each way
- No impacts to ROW are assumed
- Signal timing should be adjusted at Harlow Road and Hartman Lane. No cost is included as this is an operations task

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-8 - Intersection Improvements Along Hayden Bridge Way		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/20/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.00		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Sidewalk, Striping, Lighting					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$7.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Mid-Block Crossing 2-L	EA	3	\$36,100.00	\$108,300
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$108,300</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$2,700
TP & DT	3.0-8.0%	8.0%	\$8,700
Mobilization	8.0-10.0%	10.0%	\$10,800
Erosion Control	0.5-2.0%	2.0%	\$2,200
Contingency	30-40%	40.0%	\$43,300
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$176,000</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$52,800
Construction Engineering		15.0%		\$26,400
<b>TOTAL PROJECT COST</b>				<b>\$260,000</b>

### Assumptions

Intersection Improvements at Hayden Bridge Wy/Castle Dr, Hayden Bridge Wy/Groverdale Dr and Hayden Bridge Wy/3rd St.

Improvements are for installation of RRFB at each intersection

Installation includes flashing beacon, signing, striping, ramps, sidewalks & concrete islands

No impacts to ROW or sensitive areas

No impacts to existing roadway surfacing

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-9 - EWEB Path Crossing Improvements: Multiple Intersections		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 7/16/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.00		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Striping, Signing					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Thermoplastic Striping (Crosswalk)	SF	1,190	\$10.00	\$11,900
6	New Signs	EA	14	\$500.00	\$7,000
7	Permanent Pavement Marking	EA		\$250.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$18,900</b>

	ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE		COST
	Construction Surveying	1.0-2.5%	2.5%		\$500
	TP & DT	3.0-8.0%	8.0%		\$1,500
	Mobilization	8.0-10.0%	10.0%		\$1,900
	Erosion Control	0.5-2.0%	2.0%		\$400
	Contingency	30-40%	40.0%		\$7,600
	Escalation Rate (per year)	0.5-2.0%	2.0%		
	<i>Design Year (or Estimate Year)</i>		2013		
	<i>Construction Year</i>		2013		
					\$0
<b>TOTAL CONSTRUCTION COST</b>					<b>\$30,800</b>

	Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
	Railroad Crossing	EA	0	\$600,000.00	\$0
	Environmental Mitigation		0.0%		\$0
	Easements & ROW Acquisition		0.0%		\$0
	Indirect Costs		PERCENTAGE		COST
	Engineering, Legal/Admin, Coordination		30.0%		\$9,200
	Construction Engineering		15.0%		\$4,600
<b>TOTAL PROJECT COST</b>					<b>\$50,000</b>

### Assumptions

Project installs crossing improvements where the EWEB path crosses 2nd St., 11th St., Rose Blossom Drive, Debra St., 15th St., 33rd St., and 35th St.

All crossings are local streets. Improvements are for signing and striping on the local street to identify the crossing.

Improvements included advance warning signs (1 each direction) and stop bars on each local street. 33rd and 35th Streets also include ladder style crosswalk markings (2' wide X 10' long) spaced at 2'. Stop bars and ladder crosswalks are assumed Thermoplastic Striping

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-10 - Intersection Improvements at 2nd Street and Q Street			<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/19/2012
<b>DESIGN LEVEL:</b> Preliminary			<b>LENGTH (MILE):</b> 0.00		<b>SHEET:</b> 1 of 1
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.00	\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$7.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Mid-block Crossing 2-L	EA	1	\$36,100.00	\$36,100
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.00	\$260,000.00	\$0
13	Landscaping	Mi.	0.00	\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$36,100</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$900
TP & DT	3.0-8.0%	8.0%	\$2,900
Mobilization	8.0-10.0%	10.0%	\$3,600
Erosion Control	0.5-2.0%	2.0%	\$700
Contingency	30-40%	40.0%	\$14,400
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$58,600</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$17,600
Construction Engineering		15.0%		\$8,800
<b>TOTAL PROJECT COST</b>				<b>\$90,000</b>

### Assumptions

- Project is for pedestrian improvements at the intersection of 2nd Street and Q Street
- Improvements are anticipated at the east approach to not affect left turn operations in the EB direction
- 1 RRFB is assumed including sidewalk/ramp improvements, striping, signing, electrical, & islands.
- No impacts to OR126 off-ramp
- No impacts to sensitive areas
- No ROW impacts

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-13 - Anderson Lane between By-Gully path and Centennial Boulevard		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 2/28/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.31		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting, Signing, Markings					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.	0.1	\$217,900.00	\$21,790
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Permanent Pavement Marking	EA	14	\$250.00	\$3,500
7	New Signs	EA	8	\$500.00	\$4,000
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$29,290</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$700
TP & DT	3.0-8.0%	8.0%	\$2,300
Mobilization	8.0-10.0%	10.0%	\$2,900
Erosion Control	0.5-2.0%	2.0%	\$600
Contingency	30-40%	40.0%	\$11,700
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$47,490</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		5.0%		\$2,375
Easements & ROW Acquisition		25.0%		\$11,873
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$14,200
Construction Engineering		15.0%		\$7,100
<b>TOTAL PROJECT COST</b>				<b>\$90,000</b>

### Assumptions

Project improvements from By-Gully Path at Anderson Road to Centennial Blvd, L-1,662FT  
 Signing and markings only from Centennial to Menlo Loop, and By-Gully path to end of W. Quinalt St  
 Multi-use path, 12' wide from end of W. Quinalt St to Menlo Loop. 2' aggregate base shoulder each side  
 Signing included at 1/500FT each way  
 Markings included at 1/250FT each way  
 Impacts to ROW and sensitive areas possible and included

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-14 - Rainbow Drive from Centennial Boulevard to West D Street		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 2/28/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.48		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Striping, Signing, Marking					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Restripe Existing Roadway	Lane-Mi.	1.7	\$8,700.00	\$14,964
6	Permanent Pavement Marking	EA	20	\$250.00	\$5,000
7	New Signs	EA	10	\$500.00	\$5,000
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$24,964</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$600
TP & DT	3.0-8.0%	8.0%	\$2,000
Mobilization	8.0-10.0%	10.0%	\$2,500
Erosion Control	0.5-2.0%	2.0%	\$500
Contingency	30-40%	40.0%	\$10,000
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$40,564</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$12,200
Construction Engineering		15.0%		\$6,100
<b>TOTAL PROJECT COST</b>				<b>\$60,000</b>

**Assumptions**

Project on Rainbow Drive from Centennial Blvd. to W. D Street, L-2,530FT; 0.48mi

Improvements are for re-striping lanes, pavement markings, and signage only

No impacts to ROW or sensitive areas assumed

Sidewalk gaps between Windsor Ct. and Marilyn Ct. exist however it is assumed they will be completed as development occurs and not by this project

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-15 - West D from Mill Street to D Street Path			<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 2/28/2013
<b>DESIGN LEVEL:</b> Preliminary			<b>LENGTH (MILE):</b> 0.13		<b>SHEET:</b> 1 of 1
<b>KIND OF WORK:</b> Markings, Signing					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Concrete Sidewalk	SF		\$5.00	\$0
7	Permanent Pavement Marking	EA	6	\$250.00	\$1,500
8	New Sign	EA	4	\$500.00	\$2,000
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$3,500</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE			COST
Construction Surveying	1.0-2.5%	2.5%			\$100
TP & DT	3.0-8.0%	8.0%			\$300
Mobilization	8.0-10.0%	10.0%			\$400
Erosion Control	0.5-2.0%	2.0%			\$100
Contingency	30-40%	40.0%			\$1,400
Escalation Rate (per year)	0.5-2.0%	2.0%			
<i>Design Year (or Estimate Year)</i>		2013			
<i>Construction Year</i>		2013			
					\$0
<b>TOTAL CONSTRUCTION COST</b>					<b>\$5,800</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$1,700
Construction Engineering		15.0%		\$900
<b>TOTAL PROJECT COST</b>				<b>\$10,000</b>

**Assumptions:**

- Project is from D Street Path to Mill St, L-760 FT
- Pavement markings are at 1/250FT each way
- Bike route signs are at 1/500FT each way
- No impacts to ROW are assumed

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-16 - West D from Aspen Street to D Street Path		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 2/28/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.71		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Sidewalk, Markings, Signing					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Concrete Sidewalk	SF	12,950	\$5.00	\$64,750
7	Permanent Pavement Marking	EA	30	\$250.00	\$7,500
8	New Sign	EA	16	\$500.00	\$8,000
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$80,250</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$2,000
TP & DT	3.0-8.0%	8.0%	\$6,400
Mobilization	8.0-10.0%	10.0%	\$8,000
Erosion Control	0.5-2.0%	2.0%	\$1,600
Contingency	30-40%	40.0%	\$32,100
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$130,350</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$39,100
Construction Engineering		15.0%		\$19,600
<b>TOTAL PROJECT COST</b>				<b>\$190,000</b>

### Assumptions

- Project is from Aspen to D Street Path (Kelly Blvd.), L-3,730 FT
- Improvements fill sidewalk gaps and provide signing and pavement markings for bike routes
- Pavement markings are at 1/250FT each way
- Bike route signs are at 1/500FT each way
- No impacts to ROW are assumed

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-17 - Glenwood Area Willamette River Path – I-5 to Willamette River bridges		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/7/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 1.10		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Path, Earthwork, Drainage					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.	1.1	\$217,900.00	\$239,690
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Mid-Block Crossing 4-L	EA	1	\$37,600.00	\$37,600
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	3,300	\$7.50	\$24,750
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	1.10	\$260,000.00	\$286,000
13	Landscaping	Mi.	1.10	\$235,000.00	\$258,500
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$846,540</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$21,200
TP & DT	3.0-8.0%	8.0%	\$67,700
Mobilization	8.0-10.0%	10.0%	\$84,700
Erosion Control	0.5-2.0%	2.0%	\$16,900
Contingency	30-40%	40.0%	\$338,600
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$1,375,640</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		5.0%		\$68,782
Easements & ROW Acquisition		25.0%		\$343,910
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$412,700
Construction Engineering		15.0%		\$206,300
<b>TOTAL PROJECT COST</b>				<b>\$2,500,000</b>

### Assumptions

- Project limits are from the Willamette River Bridges in Glenwood at the east to Jenkins Drive at the west
- Length - 5,575FT
- Midblock crossing included at Jenkins to connect to existing pathway
- Project assumes redevelopment (i.e. Glenwood Plan) occurs and space is made available for path.
- ROW impacts are still assumed for path width at the riverfront
- Impacts to sensitive areas included
- No structures or walls assumed
- Illumination and landscaping included

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-18 - Glenwood Area Willamette River Path – Willamette River Bridges to urban		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/7/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 1.37		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting, Structures					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.	1.37	\$217,900.00	\$298,523
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	4,280	\$7.50	\$32,100
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	1.37	\$260,000.00	\$356,200
13	Landscaping	Mi.	1.37	\$235,000.00	\$321,950
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$1,008,773</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$25,200
TP & DT	3.0-8.0%	8.0%	\$80,700
Mobilization	8.0-10.0%	10.0%	\$100,900
Erosion Control	0.5-2.0%	2.0%	\$20,200
Contingency	30-40%	40.0%	\$403,500
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$1,639,273</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		5.0%		\$81,964
Easements & ROW Acquisition		25.0%		\$409,818
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$491,800
Construction Engineering		15.0%		\$245,900
<b>TOTAL PROJECT COST</b>				<b>\$2,900,000</b>

### Assumptions

- Project is from Willamette River Bridges in Glenwood, south to the UGB along the Willamette River
- Path is 16' wide (12' path, 2-2' shoulders)
- Grade is flat. 1' average depth earthwork included
- ROW and sensitive area impacts included
- No structures or walls assumed

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-19 - Bridge between Downtown and Glenwood or Modify Willamette River		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/7/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.30		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Path, Earthwork, Drainage, Structures					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.	0.19	\$217,900.00	\$41,401
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	3,333	\$7.50	\$24,998
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.30	\$260,000.00	\$78,000
13	Landscaping	Mi.	0.30	\$235,000.00	\$70,500
14	Bridges	SF	9,600.0	\$350.00	\$3,360,000
15	Walls	SF	400	\$75.00	\$30,000
<b>SUBTOTAL</b>					<b>\$3,604,899</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$90,100
TP & DT	3.0-8.0%	8.0%	\$288,400
Mobilization	8.0-10.0%	10.0%	\$360,500
Erosion Control	0.5-2.0%	2.0%	\$72,100
Contingency	30-40%	40.0%	\$1,442,000
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$5,857,999</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		5.0%		\$292,900
Easements & ROW Acquisition		25.0%		\$1,464,500
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$1,757,400
Construction Engineering		15.0%		\$878,700
<b>TOTAL PROJECT COST</b>				<b>\$10,300,000</b>

### Assumptions

- New bridge assumed over Willamette River between Glenwood and Downtown Springfield
- Width of bridge is 16' (12' path, 2-2' rails). Length is estimated at 600'
- Impacts to ROW and sensitive areas included
- Height above the river assume 20'. Height above ground at abutments assumed at 10'
- 5% slope on path, assume approaches at 500' each side
- Illumination and landscaping included

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-20 - Mill Street from Centennial to Main Street, south of Main Street to Mill Race		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/5/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.83		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Striping, Signing					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Restripe Existing Roadway	Lane-Mi.	2.99	\$8,700.00	\$25,979
7	New Signs	EA	20	\$500.00	\$10,000
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$35,979</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$900
TP & DT	3.0-8.0%	8.0%	\$2,900
Mobilization	8.0-10.0%	10.0%	\$3,600
Erosion Control	0.5-2.0%	2.0%	\$700
Contingency	30-40%	40.0%	\$14,400
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$58,479</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$17,500
Construction Engineering		15.0%		\$8,800
<b>TOTAL PROJECT COST</b>				<b>\$90,000</b>

### Assumptions

- Project is for re-striping Mill Street to add bike lanes in both direction, No reconstruction of curbs is assumed
- Existing roadway width is 40' curb to curb
- Restriped roadway is for 2-11' lanes, 2-5' bike lanes and 1-8' parking lane
- Includes bike route signing at 1 sign per 500' each way

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-21 - Pioneer Parkway at D, E and F Streets		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/5/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.00		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Striping, Signing					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.00	\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Thermoplastic Striping (Crosswalk)	SF	2,720	\$10.00	\$27,200
6	New Signs	EA	12	\$500.00	\$6,000
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.00	\$260,000.00	\$0
13	Landscaping	Mi.	0.00	\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$33,200</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$800
TP & DT	3.0-8.0%	8.0%	\$2,700
Mobilization	8.0-10.0%	10.0%	\$3,300
Erosion Control	0.5-2.0%	2.0%	\$700
Contingency	30-40%	40.0%	\$13,300
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$54,000</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$16,200
Construction Engineering		15.0%		\$8,100
<b>TOTAL PROJECT COST</b>				<b>\$80,000</b>

### Assumptions

- Project installs crosswalk striping at D, E & F Street on Pioneer Parkway, each direction
- Major leg striping is ladder bar style crosswalk, 2' wide by 10' deep bars
- Minor leg striping is regular stripe style, 12" wide for the length of the crossing
- Signs included on the major leg approaching crosswalks, 1 each side

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT: PB-22 - Intersection Improvements at 5th St. and Centennial Blvd.</b>			<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/21/2013
<b>DESIGN LEVEL:</b> Preliminary			<b>LENGTH (MILE):</b> 0.04		<b>SHEET:</b> 1 of 1
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting, Structures					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.04	\$935,700.00	\$37,428
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	SF	1,800	\$7.00	\$12,600
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA	0.50	\$300,000.00	\$150,000
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	215	\$7.50	\$1,613
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.04	\$260,000.00	\$10,400
13	Landscaping	Mi.	0.04	\$235,000.00	\$9,400
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$221,441</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$5,500
TP & DT	3.0-8.0%	8.0%	\$17,700
Mobilization	8.0-10.0%	10.0%	\$22,100
Erosion Control	0.5-2.0%	2.0%	\$4,400
Contingency	30-40%	40.0%	\$88,600
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$359,741</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		10.0%		\$35,974
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$107,900
Construction Engineering		15.0%		\$54,000
<b>TOTAL PROJECT COST</b>				<b>\$560,000</b>

### Assumptions

Intersection improvements are at 5th Street and Centennial Blvd along the east leg approach  
 Project is to widen curb to curb width to allow for travel lanes and bike lanes. Existing c-c width is 39'  
 Proposed c-c width is 48' including 3-12' lanes and 2-6' bike lanes  
 Sidewalk is proposed at 6' wide with a 4' planter  
 Existing ROW width is 75' (Typ). Narrows to 65' east of intersection. Assume minor impacts at 10%  
 Improvements extend 200' east of 5th Street. Curbs, sidewalks and drainage included  
 Signal poles at NE/SE corners impacts. Assume 1/2 cost of new signal

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-23 - 5th Street; Centennial Blvd to A Street		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/5/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.64		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Striping					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Restripe Existing Roadway	Lane-Mi.	2.02	\$8,700.00	\$17,561
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$17,561</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$400
TP & DT	3.0-8.0%	8.0%	\$1,400
Mobilization	8.0-10.0%	10.0%	\$1,800
Erosion Control	0.5-2.0%	2.0%	\$400
Contingency	30-40%	40.0%	\$7,000
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$28,561</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$8,600
Construction Engineering		15.0%		\$4,300
<b>TOTAL PROJECT COST</b>				<b>\$50,000</b>

### Assumptions

Improvements to add striped bicycle lanes from Centennial Blvd to A Street

Existing roadway is 40' curb to curb from Centennial to G Street, 32' curb to curb from G Street to B Street, and 46' curb to curb from B Street to A Street

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-24 - D, E or F Street; 5th St. to 28th St.; Bike Route Improvements		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/29/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 1.67		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Signing, Striping, Markings					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Restripe Existing Roadway	Lane-Mi.	5.0	\$8,700.00	\$43,599
6	Permanent Pavement Marking	EA	72	\$250.00	\$18,000
7	New Sign	EA	36	\$500.00	\$18,000
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$79,599</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$2,000
TP & DT	3.0-8.0%	8.0%	\$6,400
Mobilization	8.0-10.0%	10.0%	\$8,000
Erosion Control	0.5-2.0%	2.0%	\$1,600
Contingency	30-40%	40.0%	\$31,800
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$129,399</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$38,800
Construction Engineering		15.0%		\$19,400
<b>TOTAL PROJECT COST</b>				<b>\$190,000</b>

### Assumptions

- Project limits are along D, E, or F Street from 5th Street to 28th Street. L-8,820FT; 1.67miles
- Project restripes roadway and adds new signs and pavement markings for bike route including bike lanes
- Assume full restriping curb to curb for full project length.
- Pavement markings are at 1/250FT each way
- Bike route signs are at 1/500FT each way
- Existing roadway is 36' curb to curb average
- No impacts to ROW or sensitive areas

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-25 - 5th Street/D Street		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/5/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.00		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Striping, Signing					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.00	\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Restripe Existing Roadway	Lane-Mi.	0.3	\$8,700.00	\$2,636
6	Permanent Pavement Marking	EA	2	\$250.00	\$500
7	New Signs	EA	2	\$500.00	\$1,000
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.00	\$260,000.00	\$0
13	Landscaping	Mi.	0.00	\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$4,136</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$100
TP & DT	3.0-8.0%	8.0%	\$300
Mobilization	8.0-10.0%	10.0%	\$400
Erosion Control	0.5-2.0%	2.0%	\$100
Contingency	30-40%	40.0%	\$1,700
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$6,736</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$2,000
Construction Engineering		15.0%		\$1,000
<b>TOTAL PROJECT COST</b>				<b>\$10,000</b>

### Assumptions

- Project is to improve visibility at the intersection of 5th and D Streets.
- Existing trees at the intersection limit sight distances to/from the major and minor roadways
- Tree in the NW corner is mature and assumed significant. Assume no trees removed
- Assume installation of pavement markings and signage to on 5th Street approaching D Street
- Assume 2 signs
- Assume 2 permanent pavement markings

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-26 - A Street from 5th Street to 10th Street		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 12/5/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.34		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Signing, Striping					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Restripe Existing Roadway	Lane-Mi.	1.3	\$8,700.00	\$11,464
6	Permanent Pavement Marking	EA	6	\$250.00	\$1,500
7	New Signs	EA	8	\$500.00	\$4,000
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$16,964</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$400
TP & DT	3.0-8.0%	8.0%	\$1,400
Mobilization	8.0-10.0%	10.0%	\$1,700
Erosion Control	0.5-2.0%	2.0%	\$300
Contingency	30-40%	40.0%	\$6,800
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$27,564</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$8,300
Construction Engineering		15.0%		\$4,100
<b>TOTAL PROJECT COST</b>				<b>\$40,000</b>

**Assumptions**

- Project is for re-striping A Street to add bike lanes in both direction from 5th to 10th Street
- Existing roadway width is 46' curb to curb
- Restriped roadway is for 2-11' lanes, 2-5' bike lanes and 2-8' parking lane
- Includes bike route signing at 1 sign per 500' each way
- Includes pavement markings for shared lanes at City Hall (~600') at 1/250' each way

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-27 - MUP, South 2nd Street to Mill Street			<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/22/2013
<b>DESIGN LEVEL:</b> Preliminary			<b>LENGTH (MILE):</b> 0.17		<b>SHEET:</b> 1 of 1
<b>KIND OF WORK:</b> MUP, Earthwork, Drainage, Lighting, Structures					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.	0.13	\$217,900.00	\$28,327
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	1,380	\$7.50	\$10,350
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.13	\$260,000.00	\$33,800
13	Landscaping	Mi.	0.13	\$235,000.00	\$30,550
14	Bridges	SF	3,200	\$300.00	\$960,000
15	Walls	SF	160	\$75.00	\$12,000
<b>SUBTOTAL</b>					<b>\$1,075,027</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$26,900
TP & DT	3.0-8.0%	8.0%	\$86,000
Mobilization	8.0-10.0%	10.0%	\$107,500
Erosion Control	0.5-2.0%	2.0%	\$21,500
Contingency	30-40%	40.0%	\$430,000
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$1,746,927</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		5.0%		\$87,346
Easements & ROW Acquisition		25.0%		\$436,732
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$524,100
Construction Engineering		15.0%		\$262,000
<b>TOTAL PROJECT COST</b>				<b>\$3,100,000</b>

**Assumptions**

- Project is a multiuse path starting at Mill Street under the Willamette River Bridges south across a creek to South 2nd Street
- Path is 16' wide (12' path, 2-2' shoulders), L-900'; 0.17miles
- Assume 5' height embankment for 200' approaching path bridge (2:1 side slopes)
- Bridge over creek assumed at L-200', W-16' (12' path, 2-2' rails)
- Grade is assumed flat south of the bridge. Earthwork is 1' average depth for new work areas
- Path ends at South 2nd street. No improvements or crossing at 2nd street
- ROW and sensitive area impacts are assumed

**SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE**

<b>PROJECT:</b> PB-28 - South 2nd Street to South B Street			<b>PREPARED BY:</b> Madeline Klein		<b>DATE:</b> 10/25/2017
<b>DESIGN LEVEL:</b> Preliminary			<b>LENGTH (MILE):</b> 0.4		<b>SHEET:</b> 1 of 1
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting,					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.	0.4	\$217,900.00	\$87,160
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	1,247	\$7.50	\$9,353
11	New Signs	EA	2	\$500.00	\$1,000
12	Thermoplastic Striping (Crosswalk)	SF	640	\$10.00	\$6,400
13	Landscaping	Mi.	0.09	\$235,000.00	\$21,150
14	Illumination	Mi.	0.4	\$260,000.00	\$104,000
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$229,063</b>

	ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE		COST
	Construction Surveying	1.0-2.5%	2.50%		\$5,726.56
	TP & DT	3.0-8.0%	8.00%		\$18,325.00
	Mobilization	8.0-10.0%	10.00%		\$22,906.25
	Erosion Control	0.5-2.0%	2.00%		\$4,581.25
	Contingency	30-40%	40.00%		\$91,625.00
	Escalation Rate (per year)	0.5-2.0%	2.00%		
	Design Year (or Estimate Year)		2013		
	Construction Year		2013		
<b>TOTAL CONSTRUCTION COST</b>					<b>\$372,227</b>

	Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
	Railroad Crossing	EA	0	\$600,000.00	\$0
	Environmental Mitigation		0.00%		\$0
	Easements & ROW Acquisition		17.50%		\$65,139.65
	<b>Indirect Costs</b>		<b>PERCENTAGE</b>		<b>COST</b>
	Engineering, Legal/Admin, Coordination		30.00%		\$111,668
	Construction Engineering		15.00%		\$55,834
<b>TOTAL PROJECT COST</b>					<b>\$604,868</b>

Assumptions:

- Project extends from Booth Kelley Path Trailhead to connection with South 2nd St.
- .40 miles multiuse path (12' path with 2-2' buffers)
- Add two stop signs at the S. 5th and S. B st.
- Add a cross walk (64' by 10')
- ROW required
- .09 Landscaping

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-29 - Mill Race Path		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/7/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 2.51		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Structures					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.	2.51	\$217,900.00	\$546,929
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	7,750	\$7.50	\$58,125
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	2.51	\$260,000.00	\$652,600
13	Landscaping	Mi.	2.51	\$235,000.00	\$589,850
14	Bridges	SF	2,560	\$250.00	\$640,000
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$2,487,504</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$62,200
TP & DT	3.0-8.0%	8.0%	\$199,000
Mobilization	8.0-10.0%	10.0%	\$248,800
Erosion Control	0.5-2.0%	2.0%	\$49,800
Contingency	30-40%	40.0%	\$995,000
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$4,042,304</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		5.0%		\$202,115
Easements & ROW Acquisition		25.0%		\$1,010,576
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$1,212,700
Construction Engineering		15.0%		\$606,300
<b>TOTAL PROJECT COST</b>				<b>\$7,100,000</b>

**Assumptions**

- MUP limits from S 2nd Street to Jasper Street. L-13,235FT; 2.51mi
- 2 bridge crossings of Mill Race included, L-80' each, 16' wide
- Assume 1' depth earthwork over all new work areas.
- ROW and sensitive area impacts included

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-30 - 33rd Street between V Street and EWEB Path		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 2/28/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.18		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Striping, Signing					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Permanent Pavement Marking	EA	8	\$250.00	\$1,900
7	New Signs	EA	4	\$500.00	\$2,000
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$3,900</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$100
TP & DT	3.0-8.0%	8.0%	\$300
Mobilization	8.0-10.0%	10.0%	\$400
Erosion Control	0.5-2.0%	2.0%	\$100
Contingency	30-40%	40.0%	\$1,600
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$6,400</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$1,900
Construction Engineering		15.0%		\$1,000
<b>TOTAL PROJECT COST</b>				<b>\$10,000</b>

**Assumptions**

- Improvements are for adding pavement markings (shared use assumed) and signing between V Street and the existing bike path, L-950'
- Signing included at 1/500FT each way
- Markings included at 1/250FT each way

**SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE**

<b>PROJECT:</b> PB-31 - Moe Mountain Path - River Heights Drive to Marcola Road			<b>PREPARED BY:</b> Michael Liebler		<b>DATE:</b> 11/5/2018
<b>DESIGN LEVEL:</b> Preliminary					
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting,			<b>LENGTH (MILE):</b> 0.4		<b>SHEET:</b> 1 of 1
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.	0.35	\$217,900.00	\$76,265
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	700	\$30.00	\$21,000
11	New Signs	EA	6	500	\$3,000
12	Thermoplastic Striping (Crosswalk)	SF		\$10.00	\$0
13	Landscaping	Mi.	0.09	\$235,000.00	\$21,150
14	Illumination	Mi.	0.35	\$260,000.00	\$91,000
15	Bridges	SF	800	\$250.00	\$200,000
<b>SUBTOTAL</b>					<b>\$412,415</b>

	ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE		COST
	Construction Surveying	1.0-2.5%	2.50%		\$10,310.38
	TP & DT	3.0-8.0%	8.00%		\$32,993.20
	Mobilization	8.0-10.0%	10.00%		\$41,241.50
	Erosion Control	0.5-2.0%	2.00%		\$8,248.30
	Contingency	30-40%	40.00%		\$164,966.00
	Escalation Rate (per year)	0.5-2.0%	2.00%		
	Design Year (or Estimate Year)		2013		
	Construction Year		2013		
<b>SUBTOTAL</b>					<b>\$670,174</b>

	Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
	Railroad Crossing	EA	0	\$600,000.00	\$0
	Environmental Mitigation		10.00%		\$67,017
	Easements & ROW Acquisition		20.00%		\$134,034.88
	<b>Indirect Costs</b>		<b>PERCENTAGE</b>		<b>COST</b>
	Engineering, Legal/Admin, Coordination		30.00%		\$201,052
	Construction Engineering		15.00%		\$100,526
<b>TOTAL PROJECT COST</b>					<b>\$1,172,805</b>

Assumptions:

- Project extends from the beginning of River Heights Drive at V street to Marcola Road
- .35 miles multiuse path (12' path with 2-2' buffers)
- Add wayfinding and path signs at the V
- New Bridge across slough L 50', W 16' (12' path, 2-2' rails)
- Earthwork includes cutting on a 2H:1V

Additional Row required from railroad to make connection to marcola

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-32 - McKenzie River Path from McKenzie Levee Path to 52nd Street		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/7/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 1.58		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Lighting, Structures					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.	1.55	\$217,900.00	\$337,745
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Handrail	FT	1,000	\$30.00	\$30,000
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	9,000	\$7.50	\$67,500
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF	2,240	\$250.00	\$560,000
15	Walls	SF	4,000	\$75.00	\$300,000
<b>SUBTOTAL</b>					<b>\$1,295,245</b>

	ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE		COST
	Construction Surveying	1.0-2.5%	2.5%		\$32,400
	TP & DT	3.0-8.0%	8.0%		\$103,600
	Mobilization	8.0-10.0%	10.0%		\$129,500
	Erosion Control	0.5-2.0%	2.0%		\$25,900
	Contingency	30-40%	40.0%		\$518,100
	Escalation Rate (per year)	0.5-2.0%	2.0%		
	<i>Design Year (or Estimate Year)</i>		2013		
	<i>Construction Year</i>		2013		
					\$0
<b>TOTAL CONSTRUCTION COST</b>					<b>\$2,104,745</b>

	Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
	Railroad Crossing	EA	0	\$600,000.00	\$0
	Environmental Mitigation		5.0%		\$105,237
	Easements & ROW Acquisition		25.0%		\$526,186
	Indirect Costs		PERCENTAGE		COST
	Engineering, Legal/Admin, Coordination		30.0%		\$631,400
	Construction Engineering		15.0%		\$315,700
<b>TOTAL PROJECT COST</b>					<b>\$3,700,000</b>

### Assumptions

Project limits from 42nd Street to 52nd Street, L-8,330 FT

Path follows existing road to midway and then hugs OR126 alignment, then High Bank Road at the east to 52nd 16' path (12' path, 2-2' shoulders).

ROW and sensitive area impacts are included

Two new bridges. 1 replaces existing structure at the west, 1 new across the creek at the east

EW included at 1' average depth except at bridge 2 and along OR126

Landscaping and Illumination are not included

Assume a 4' average height wall for 1,000FT along OR126

1,000FT of pedestrian handrail included where path is along OR126

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-33 - Main Street between 34th Street and 35th Street		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/5/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.00		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Signals, Signing, Striping					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.00	\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Mid-Block Crossing 4-L	EA	1	\$37,600.00	\$37,600
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.00	\$260,000.00	\$0
13	Landscaping	Mi.	0.00	\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$37,600</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$900
TP & DT	3.0-8.0%	8.0%	\$3,000
Mobilization	8.0-10.0%	10.0%	\$3,800
Erosion Control	0.5-2.0%	2.0%	\$800
Contingency	30-40%	40.0%	\$15,000
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$61,100</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$18,300
Construction Engineering		15.0%		\$9,200
<b>TOTAL PROJECT COST</b>				<b>\$90,000</b>

**Assumptions**

- Mid-block crossing assumes flashing yellow beacon, ladder striping, signing, islands, and ped ramps
- No impacts to ROW or access to adjacent businesses entrances is assumed

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-34 - Pedestrian crossing improvement on Main Street /38th Street			<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/5/2013
<b>DESIGN LEVEL:</b> Preliminary			<b>LENGTH (MILE):</b> 0.00		<b>SHEET:</b> 1 of 1
<b>KIND OF WORK:</b> Signals, Signing, Striping					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.00	\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Mid-Block Crossing 4-L	EA	1	\$37,600.00	\$37,600
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.00	\$260,000.00	\$0
13	Landscaping	Mi.	0.00	\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$37,600</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE			COST
Construction Surveying	1.0-2.5%	2.5%			\$900
TP & DT	3.0-8.0%	8.0%			\$3,000
Mobilization	8.0-10.0%	10.0%			\$3,800
Erosion Control	0.5-2.0%	2.0%			\$800
Contingency	30-40%	40.0%			\$15,000
Escalation Rate (per year)	0.5-2.0%	2.0%			
<i>Design Year (or Estimate Year)</i>			2013		
<i>Construction Year</i>			2013		
					\$0
<b>TOTAL CONSTRUCTION COST</b>					<b>\$61,100</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$18,300
Construction Engineering		15.0%		\$9,200
<b>TOTAL PROJECT COST</b>				<b>\$90,000</b>

**Assumptions**

- Mid-block crossing assumes flashing yellow beacon, ladder striping, signing, islands, and ped ramps
- No impacts to ROW or access to adjacent businesses entrances is assumed

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-35 - Main Street/ 41st Street		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/5/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.00		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Signals, Signing, Striping					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.00	\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Mid-Block Crossing 4-L	EA	1	\$37,600.00	\$37,600
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.00	\$260,000.00	\$0
13	Landscaping	Mi.	0.00	\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$37,600</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$900
TP & DT	3.0-8.0%	8.0%	\$3,000
Mobilization	8.0-10.0%	10.0%	\$3,800
Erosion Control	0.5-2.0%	2.0%	\$800
Contingency	30-40%	40.0%	\$15,000
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$61,100</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$18,300
Construction Engineering		15.0%		\$9,200
<b>TOTAL PROJECT COST</b>				<b>\$90,000</b>

**Assumptions**

- Mid-block crossing assumes flashing yellow beacon, ladder striping, signing, islands, and ped ramps
- No impacts to ROW or access to adjacent businesses entrances is assumed

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-36 - Virginia and Daisy streets from South 32nd Street to Bob Straub Parkway		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/5/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 2.56		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Signing, Striping					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Permanent Pavement Marking	EA	110	\$250.00	\$27,500
7	New Signs	EA	54	\$500.00	\$27,000
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$54,500</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$1,400
TP & DT	3.0-8.0%	8.0%	\$4,400
Mobilization	8.0-10.0%	10.0%	\$5,500
Erosion Control	0.5-2.0%	2.0%	\$1,100
Contingency	30-40%	40.0%	\$21,800
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$88,700</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$26,600
Construction Engineering		15.0%		\$13,300
<b>TOTAL PROJECT COST</b>				<b>\$130,000</b>

**Assumptions**

- Improvement add bike route signing and pavement markings between S 32nd Street and Bob Straub Prkwy  
L-13,540'
- Signing included at 1/500FT each way
- Markings included at 1/250FT each way
- No impacts to ROW assumed

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-37 - Booth Kelly Road from South 28th Street to South 49th Place		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 7/16/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 2.24		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Path, Earthwork, Drainage, Lighting					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.	2.24	\$217,900.00	\$488,096
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Mid-Block Crossing 2-L	EA	2	\$36,100.00	\$72,200
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	7,000	\$7.50	\$52,500
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	2.24	\$260,000.00	\$582,400
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$1,195,196</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$29,900
TP & DT	3.0-8.0%	8.0%	\$95,600
Mobilization	8.0-10.0%	10.0%	\$119,500
Erosion Control	0.5-2.0%	2.0%	\$23,900
Contingency	30-40%	40.0%	\$478,100
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$1,942,196</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$582,700
Construction Engineering		15.0%		\$291,300
<b>TOTAL PROJECT COST</b>				<b>\$2,817,000</b>

Assumptions: Next Page

Assumptions:

Project constructs a multi-use path from S. 28th Street to S. 49th Pl. along the Booth Kelly Road alignment  
Path is constructed at grade, no major profile changes. 1' average depth earthwork assumed over the  
project improvements

Mid-Block crossings including Rapid Rectangular Flashing Beacons included where the path crosses  
S. 32nd Street and S. 42nd Street.

Crossing of the railroad will require coordination with the Railroad company and ODOT Rail Division and may  
require additional crossing improvements. For the purposes of this estimate only path crossing improvements  
are included. No signals or gates are included

Path is constructed within the existing ROW for Booth Kelly Road. No ROW impacts are assumed.

Length of improvements are L-11,830 FT; L-2.24 mile

Lighting is included for the length of the improvements

No impacts to natural resources are assumed

No path construction between Holly Street and Glacier Drive. Bicycles will be on the roadway pavement and  
pedestrians will be on existing sidewalks.

Path surface is assumed asphalt.

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-39 - Main Street between 48th Street and 49th Street		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/5/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.00		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Signals, Signing, Striping					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Mid-Block Crossing 4-L	EA	1	\$37,600.00	\$37,600
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$37,600</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$900
TP & DT	3.0-8.0%	8.0%	\$3,000
Mobilization	8.0-10.0%	10.0%	\$3,800
Erosion Control	0.5-2.0%	2.0%	\$800
Contingency	30-40%	40.0%	\$15,000
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$61,100</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$18,300
Construction Engineering		15.0%		\$9,200
<b>TOTAL PROJECT COST</b>				<b>\$90,000</b>

### Assumptions

Mid-block crossing assumes flashing yellow beacon, ladder striping, signing, islands, and ped ramps  
 No impacts to ROW or access to adjacent businesses entrances is assumed

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-40 - Main Street/ 51st Street		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/5/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.00		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Striping, Signing					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Thermoplastic Striping (Crosswalk)	SF	320	\$10.00	\$3,200
6	New Signs	EA	2	\$500.00	\$1,000
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$4,200</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$100
TP & DT	3.0-8.0%	8.0%	\$300
Mobilization	8.0-10.0%	10.0%	\$400
Erosion Control	0.5-2.0%	2.0%	\$100
Contingency	30-40%	40.0%	\$1,700
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$6,800</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$2,000
Construction Engineering		15.0%		\$1,000
<b>TOTAL PROJECT COST</b>				<b>\$10,000</b>

**Assumptions**

- Project installs ladder style crosswalk striping at 51st and Main Street, east leg only
- Major leg striping is ladder bar style crosswalk, 2' wide by 10' deep bars
- Signs included on the major leg approaching crosswalks, 1 each side

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-41 - Main Street / Chapman Lane		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/5/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.00		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Signals, Signing, Striping					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Mid-Block Crossing 4-L	EA	1	\$37,600.00	\$37,600
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$37,600</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$900
TP & DT	3.0-8.0%	8.0%	\$3,000
Mobilization	8.0-10.0%	10.0%	\$3,800
Erosion Control	0.5-2.0%	2.0%	\$800
Contingency	30-40%	40.0%	\$15,000
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$61,100</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$18,300
Construction Engineering		15.0%		\$9,200
<b>TOTAL PROJECT COST</b>				<b>\$90,000</b>

**Assumptions**

- Mid-block crossing assumes flashing yellow beacon, ladder striping, signing, islands, and ped ramps
- No impacts to ROW or access to adjacent businesses entrances is assumed

**SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE**

<b>PROJECT: PB-42 - Main Street/66th Street to 67th Street</b>			<b>PREPARED BY:</b> Michael Liebler		<b>DATE:</b> 12/6/2019
<b>DESIGN LEVEL:</b> Final construction					
<b>KIND OF WORK:</b> Signal			<b>LENGTH (MILE);</b> NA		<b>SHEET:</b> 1 of 2
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Mid-Block Crossing 4-L	EA	1	\$269,498.00	\$269,498
7	1-L Roundabout	EA		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$269,498</b>

	ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE		COST
	Construction Surveying	1.0-2.5%	0.00%		\$0.00
	TP & DT	3.0-8.0%	0.00%		\$0.00
	Mobilization	8.0-10.0%	0.00%		\$0.00
	Erosion Control	0.5-2.0%	0.00%		\$0.00
	Contingency	30-40%	0.00%		\$0.00
	Escalation Rate (per year)	0.5-2.0%	2.00%		
	Design Year (or Estimate Year)		2017		
	Construction Year		2019		
<b>SUBTOTAL</b>					<b>\$269,498</b>

	Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
	Railroad Crossing	EA	0	\$600,000.00	\$0
	Environmental Mitigation		0.00%		\$0
	Easements & ROW Acquisition		10.00%		\$26,949.80
	<b>Indirect Costs</b>		<b>PERCENTAGE</b>		<b>COST</b>
	Engineering, Legal/Admin, Coordination		0.00%		\$0
	Construction Engineering		0.00%		\$0
<b>TOTAL PROJECT COST</b>					<b>\$296,448</b>

Assumptions:

Cost Estimate reflects actual bid and anticipated overall construction cost for P21142  
 Additional costs incurred for screening fencing and some easements associated with siting signal hardware and ADA facilities

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-43 - Bike/Ped Crossing Improvements; Bob Straub Prkwy and Daisy St.		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 7/16/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.00		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Sidewalk, Striping					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$7.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Mid-Block Crossing 4-L	EA	1	\$37,600.00	\$37,600
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$37,600</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$900
TP & DT	3.0-8.0%	8.0%	\$3,000
Mobilization	8.0-10.0%	10.0%	\$3,800
Erosion Control	0.5-2.0%	2.0%	\$800
Contingency	30-40%	40.0%	\$15,000
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$61,100</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$18,300
Construction Engineering		15.0%		\$9,200
<b>TOTAL PROJECT COST</b>				<b>\$90,000</b>

### Assumptions

- Intersection Improvements at Bob Straub Parkway and Daisy Street for a mid-block style crossing
- Improvements are for installation of RRFB
- Installation includes flashing beacon, signing, striping, ramps, sidewalks & concrete islands
- No impacts to ROW or sensitive areas
- No impacts to existing roadway surfacing

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-44 - Mountain Gate Drive from 57th PI to Dogwood Street			<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 8/5/2013
<b>DESIGN LEVEL:</b> Preliminary			<b>LENGTH (MILE):</b> 1.18		<b>SHEET:</b> 1 of 1
<b>KIND OF WORK:</b> Striping, Signing, Sidewalks, Drainage					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Subsurface Drainage	FT	1,400	\$20.00	\$28,000
2	Manhole/Inlet Adjust	EA	5.0	\$1,000.00	\$5,000
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Concrete Sidewalk	SF	9,600	\$5.00	\$48,000
6	Restripe Existing Roadway	Lane-Mi.		\$8,700.00	\$0
7	Permanent Pavement Marking	EA	50	\$250.00	\$12,500
8	New Sign	EA	26	\$500.00	\$13,000
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$106,500</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$2,700
TP & DT	3.0-8.0%	8.0%	\$8,500
Mobilization	8.0-10.0%	10.0%	\$10,700
Erosion Control	0.5-2.0%	2.0%	\$2,100
Contingency	30-40%	40.0%	\$42,600
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$173,100</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$51,900
Construction Engineering		15.0%		\$26,000
<b>TOTAL PROJECT COST</b>				<b>\$260,000</b>

### Assumptions

- Project is on Mountain Gate Drive from 57th Place to Dogwood Street, L-6,260FT
- Improvements are for shared use markings, corridor signing, and filling sidewalk gaps (one side only)
- Sidewalks gaps are from 57th Place to the Park. All other gaps filled by development. 6FT sidewalks assumed
- No impacts to ROW are assumed
- Signing included at 1/500FT each way
- Markings included at 1/250FT each way
- No curb reconstruction is assumed
- Existing subsurface drainage behind curb line reconstructed behind sidewalks
- Existing manholes/inlets for subsurface drainage adjusted for new subsurface drainage alignment

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-45 - Ped Crossing Improvements at Bob Straub Prkwy and Mt Vernon Road		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 9/25/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.00		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Striping, Signing, Lighting					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Thermoplastic Striping (Crosswalk)	SF	1,600	\$10.00	\$16,000
6	New Signs	EA	4	\$500.00	\$2,000
7	Mid-Block Crossing 2-L (PHB)	EA	2	\$72,600.00	\$145,200
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$163,200</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$4,100
TP & DT	3.0-8.0%	8.0%	\$13,100
Mobilization	8.0-10.0%	10.0%	\$16,300
Erosion Control	0.5-2.0%	2.0%	\$3,300
Contingency	30-40%	40.0%	\$65,300
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$265,300</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$79,600
Construction Engineering		15.0%		\$39,800
<b>TOTAL PROJECT COST</b>				<b>\$390,000</b>

### Assumptions

- Project will install crosswalk striping at 3 or 4 legs of the intersection at Bob Straub Prkwy and Mt. Vernon Road.
- For estimating purposes striping of all 4 legs of the intersection is assumed
- Striping is ladder bar style crosswalk, 2' wide by 10' deep bars
- Signs included on each leg approaching crosswalks
- No ROW impacts
- Rapid Rectangular Flashing Beacon (RRFB) or Pedestrian Hybrid Beacon (PHB) crossings may be installed at the north and south leg of the intersection. For estimating purposes PHB is assumed

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-46 - Haul Road path from South 49th Place to urban growth boundary		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/22/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 3.78		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Roadway, Earthwork, Drainage, Landscaping					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.	3.8	\$217,900.00	\$823,662
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA	1	\$75,000.00	\$75,000
10	Earthwork (See Note)	CY	13,320	\$7.50	\$99,900
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.	1.89	\$235,000.00	\$444,150
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$1,442,712</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$36,100
TP & DT	3.0-8.0%	8.0%	\$115,400
Mobilization	8.0-10.0%	10.0%	\$144,300
Erosion Control	0.5-2.0%	2.0%	\$28,900
Contingency	30-40%	40.0%	\$577,100
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$2,344,512</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		5.0%		\$117,226
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$703,400
Construction Engineering		15.0%		\$351,700
<b>TOTAL PROJECT COST</b>				<b>\$3,600,000</b>

Assumptions: Next Page

Assumptions:

Project is along an existing paved haul road from 49th Street to the south UGB line (assume Wallace Creek Rd)  
Green street improvements to be constructed from Mt. Vernon Road to UBG, included in separate project.

Assumes path would be constructed one side of the existing haul road/future green street

Existing pavement is deteriorated and not usable for a multiuse path. All new construction assumed

Existing side slopes are 1:1 or steeper in most areas and will be flattened to meet accessibility guidelines

Assume 1' average depth earthwork over new work areas plus 4:1 side slopes on one side only

Existing ROW width varies from 60'-90' however no impacts to ROW are assumed

Length of improvements is 19,975FT; 3.78 miles

Impacts to sensitive areas are assumed

Include signal modification for path crossing at Bob Starub Parkway

No walls or other structures assumed

Landscaping included at 1/2 length to account for landscaping one side only

Illumination is assumed no included

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-47 - Intersection Improvements at Thurston Road and 66th Street			<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/22/2013
<b>DESIGN LEVEL:</b> Preliminary			<b>LENGTH (MILE):</b>		<b>SHEET:</b> 1 of 1
<b>KIND OF WORK:</b> Signals, Signing, Striping					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.00	\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$7.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Mid-Block Crossing 2-L	EA	1	\$36,100.00	\$36,100
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.00	\$260,000.00	\$0
13	Landscaping	Mi.	0.00	\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$36,100</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$900
TP & DT	3.0-8.0%	8.0%	\$2,900
Mobilization	8.0-10.0%	10.0%	\$3,600
Erosion Control	0.5-2.0%	2.0%	\$700
Contingency	30-40%	40.0%	\$14,400
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$58,600</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$17,600
Construction Engineering		15.0%		\$8,800
<b>TOTAL PROJECT COST</b>				<b>\$90,000</b>

### Assumptions

Project installs RRFB at one leg of the intersection of Thurston Road and 66th Street (on Thurston Road)  
 Improvements include flashing beacons, concrete islands, electrical equipment, sidewalks, striping and signing  
 No ROW impacts assumed

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-48 - Intersection Improvements at Thurston Road and 69th Street			<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/22/2013
<b>DESIGN LEVEL:</b> Preliminary			<b>LENGTH (MILE):</b> 0.00		<b>SHEET:</b> 1 of 1
<b>KIND OF WORK:</b> Signals, Signing, Striping					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.	0.00	\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$7.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Mid-Block Crossing 2-L	EA	1	\$36,100.00	\$36,100
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	0.00	\$260,000.00	\$0
13	Landscaping	Mi.	0.00	\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$36,100</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$900
TP & DT	3.0-8.0%	8.0%	\$2,900
Mobilization	8.0-10.0%	10.0%	\$3,600
Erosion Control	0.5-2.0%	2.0%	\$700
Contingency	30-40%	40.0%	\$14,400
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$58,600</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$17,600
Construction Engineering		15.0%		\$8,800
<b>TOTAL PROJECT COST</b>				<b>\$90,000</b>

### Assumptions

Project installs RRFB at one leg of the intersection of Thurston Road and 69th Street (on Thurston Road)  
 Improvements include flashing beacons, concrete islands, electrical equipment, sidewalks, striping and signing  
 No ROW impacts assumed

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-49 - South 67th Street from Ivy Street to Main Street		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/5/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.56		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Sidewalk, Striping, Signing					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Concrete Sidewalk	SF	10,080	\$5.00	\$50,400
6	Restripe Existing Roadway	Lane-Mi.	0.56	\$8,700.00	\$4,872
7	Permanent Pavement Marking	EA	24	\$250.00	\$6,000
8	New Sign	EA	12	\$500.00	\$6,000
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$67,272</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE			COST
Construction Surveying	1.0-2.5%	2.5%			\$1,700
TP & DT	3.0-8.0%	8.0%			\$5,400
Mobilization	8.0-10.0%	10.0%			\$6,700
Erosion Control	0.5-2.0%	2.0%			\$1,300
Contingency	30-40%	40.0%			\$26,900
Escalation Rate (per year)	0.5-2.0%	2.0%			
<i>Design Year (or Estimate Year)</i>		2013			
<i>Construction Year</i>		2013			
					\$0
<b>TOTAL CONSTRUCTION COST</b>					<b>\$109,272</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$32,800
Construction Engineering		15.0%		\$16,400
<b>TOTAL PROJECT COST</b>				<b>\$160,000</b>

**Assumptions**

- Project is from Main to Ivy Street, L-2,958 FT
- Improvements fill sidewalk gaps along corridor, stripe a centerline, and add shared use markings
- 6' Sidewalk assumed
- No impacts to ROW are assumed
- Signing included at 1/500FT each way
- Markings included at 1/250FT each way

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-50 - Ivy Street; 67th Street to 70th Street		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/6/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.30		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Striping, Signing					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Concrete Sidewalk	SF		\$5.00	\$0
6	Restripe Existing Roadway	Lane-Mi.		\$8,700.00	\$0
7	Permanent Pavement Marking	EA	14	\$250.00	\$3,500
8	New Sign	EA	8	\$500.00	\$4,000
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$7,500</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE			COST
Construction Surveying	1.0-2.5%	2.5%			\$200
TP & DT	3.0-8.0%	8.0%			\$600
Mobilization	8.0-10.0%	10.0%			\$800
Erosion Control	0.5-2.0%	2.0%			\$200
Contingency	30-40%	40.0%			\$3,000
Escalation Rate (per year)	0.5-2.0%	2.0%			
<i>Design Year (or Estimate Year)</i>		2013			
<i>Construction Year</i>		2013			
					\$0
<b>TOTAL CONSTRUCTION COST</b>					<b>\$12,300</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST		COST
Railroad Crossing	EA	0	\$600,000.00		\$0
Environmental Mitigation		0.0%			\$0
Easements & ROW Acquisition		0.0%			\$0
Indirect Costs		PERCENTAGE			COST
Engineering, Legal/Admin, Coordination		30.0%			\$3,700
Construction Engineering		15.0%			\$1,800
<b>TOTAL PROJECT COST</b>					<b>\$20,000</b>

**Assumptions**

- Project is from 67th Street to 70th Street, L-1,610FT
- Improvements are for shared use markings, and corridor signing
- No impacts to ROW are assumed
- Signing included at 1/500FT each way
- Markings included at 1/250FT each way

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-51 - South 70th Street from Main Street to Ivy Street			<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/6/2013
<b>DESIGN LEVEL:</b> Preliminary			<b>LENGTH (MILE):</b> 0.60		<b>SHEET:</b> 1 of 1
<b>KIND OF WORK:</b> Striping, Signing					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Concrete Sidewalk	SF		\$5.00	\$0
6	Restripe Existing Roadway	Lane-Mi.	0.60	\$8,700.00	\$5,220
7	Permanent Pavement Marking	EA	26	\$250.00	\$6,500
8	New Sign	EA	14	\$500.00	\$7,000
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$18,720</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE			COST
Construction Surveying	1.0-2.5%	2.5%			\$500
TP & DT	3.0-8.0%	8.0%			\$1,500
Mobilization	8.0-10.0%	10.0%			\$1,900
Erosion Control	0.5-2.0%	2.0%			\$400
Contingency	30-40%	40.0%			\$7,500
Escalation Rate (per year)	0.5-2.0%	2.0%			
<i>Design Year (or Estimate Year)</i>		2013			
<i>Construction Year</i>		2013			
					\$0
<b>TOTAL CONSTRUCTION COST</b>					<b>\$30,520</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		0.0%		\$0
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$9,200
Construction Engineering		15.0%		\$4,600
<b>TOTAL PROJECT COST</b>				<b>\$50,000</b>

**Assumptions**

- Project is from Main to Ivy Street, L-3,150 FT
- Improvements stripe a centerline, add shared use markings, and corridor signing
- No impacts to ROW are assumed
- Signing included at 1/500FT each way
- Markings included at 1/250FT each way

## SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE

<b>PROJECT:</b> PB-52 - City Wide RRFB Installations		<b>PREPARED BY:</b> Darren Hippenstiel		<b>DATE:</b> 3/22/2013	
<b>DESIGN LEVEL:</b> Preliminary		<b>LENGTH (MILE):</b> 0.00		<b>SHEET:</b> 1 of 1	
<b>KIND OF WORK:</b> Signals, Signing, Striping					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Mid-Block Crossing 2-L	EA	50	\$36,100.00	\$1,805,000
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$1,805,000</b>

ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE	COST
Construction Surveying	1.0-2.5%	2.5%	\$45,100
TP & DT	3.0-8.0%	8.0%	\$144,400
Mobilization	8.0-10.0%	10.0%	\$180,500
Erosion Control	0.5-2.0%	2.0%	\$36,100
Contingency	30-40%	40.0%	\$722,000
Escalation Rate (per year)	0.5-2.0%	2.0%	
<i>Design Year (or Estimate Year)</i>		2013	
<i>Construction Year</i>		2013	
			\$0
<b>TOTAL CONSTRUCTION COST</b>			<b>\$2,933,100</b>

Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
Railroad Crossing	EA	0	\$600,000.00	\$0
Environmental Mitigation		5.0%		\$146,655
Easements & ROW Acquisition		0.0%		\$0
Indirect Costs		PERCENTAGE		COST
Engineering, Legal/Admin, Coordination		30.0%		\$879,900
Construction Engineering		15.0%		\$440,000
<b>TOTAL PROJECT COST</b>				<b>\$4,400,000</b>

### Assumptions

Project is to install up to 50 mid-block crossings City wide with Rectangular Rapid Flashing Beacons

Mid-block crossing assumes flashing yellow beacon, ladder striping, signing, islands, and ped ramps

No impacts to ROW or access to adjacent businesses entrances is assumed

Impacts to sensitive areas are included since actual locations are unknown and could exist

Crossing is assumed at 2-L width roadway. A 4-L crossing would be minimal increase in cost for additional striping

**SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE**

<b>PROJECT:</b> PB-53 - 66th Street - Thurston Road to Main Street			<b>PREPARED BY:</b> Michael Liebler		<b>DATE:</b> 11/5/2018
<b>DESIGN LEVEL:</b> Preliminary					
<b>KIND OF WORK:</b> Roadway			<b>LENGTH (MILE);</b> 0.54		<b>SHEET:</b> 1 of 1
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Concrete	Lane-Mi.		\$595,700.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Concrete Sidewalk	SF		\$5.00	\$0
7	Restriping Roadway	Lane-Mi.	0.54	\$8,700.00	\$4,698
8	Permanent Pavement Marking	EA	20	\$250.00	\$5,000
9	New Signs	EA		\$500.00	\$0
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$9,698</b>

	ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE		COST
	Construction Surveying	1.0-2.5%	2.50%		\$242.45
	TP & DT	3.0-8.0%	8.00%		\$775.84
	Mobilization	8.0-10.0%	10.00%		\$969.80
	Erosion Control	0.5-2.0%	2.00%		\$193.96
	Contingency	30-40%	40.00%		\$3,879.20
	Escalation Rate (per year)	0.5-2.0%	2.00%		
	Design Year (or Estimate Year)		2013		
	Construction Year		2013		
<b>SUBTOTAL</b>					<b>\$15,759</b>

	Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
	Railroad Crossing	EA	0	\$600,000.00	\$0
	Environmental Mitigation		0.00%		\$0
	Easements & ROW Acquisition		0.00%		\$0.00
	Indirect Costs		PERCENTAGE		COST
	Engineering, Legal/Admin, Coordination		30.00%		\$4,728
	Construction Engineering		15.00%		\$2,364
<b>TOTAL PROJECT COST</b>					<b>\$22,851</b>

Assumptions:  
 Improvements are for striping and pavement marking  
 66th Street addition of bike lanes  
 Markings will be at 1/250'

**SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE**

<b>PROJECT: PB-54 - G Street-5th Street to 28 Street</b>			<b>PREPARED BY:</b> Madeline Klein		<b>DATE:</b> 10/25/2017
<b>DESIGN LEVEL:</b> Preliminary			<b>LENGTH (MILE):</b> 1.63		<b>SHEET:</b> 1 of 1
<b>KIND OF WORK:</b> Roadway					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.		\$217,900.00	\$0
3	New Roadway Concrete	Lane-Mi.		\$595,700.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Concrete Sidewalk	SF		\$5.00	\$0
7	Restriping Roadway	Lane-Mi.	1.63	\$8,700.00	\$14,181
8	Permanent Pavement Marking	EA	34	\$250.00	\$8,500
9	New Signs	EA	17	\$500.00	\$8,500
10	Earthwork (See Note)	CY		\$7.50	\$0
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.		\$260,000.00	\$0
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$31,181</b>

	ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE		COST
	Construction Surveying	1.0-2.5%	2.50%		\$779.53
	TP & DT	3.0-8.0%	8.00%		\$2,494.48
	Mobilization	8.0-10.0%	10.00%		\$3,118.10
	Erosion Control	0.5-2.0%	2.00%		\$623.62
	Contingency	30-40%	40.00%		\$12,472.40
	Escalation Rate (per year)	0.5-2.0%	2.00%		
	Design Year (or Estimate Year)		2013		
	Construction Year		2013		
<b>SUBTOTAL</b>					<b>\$50,669</b>

	Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
	Railroad Crossing	EA	0	\$600,000.00	\$0
	Environmental Mitigation		0.00%		\$0
	Easements & ROW Acquisition		0.00%		\$0.00
	Indirect Costs		PERCENTAGE		COST
	Engineering, Legal/Admin, Coordination		30.00%		\$15,201
	Construction Engineering		15.00%		\$7,600
<b>TOTAL PROJECT COST</b>					<b>\$73,470</b>

Assumptions:

- Improvements are for signing, striping and pavement marking
- G Street will be restriped with bike lanes, signed and marked for bike route
- Signs will be at 1/500'
- Markings will be at 1/250'

**SPRINGFIELD TSP - ORDER OF MAGNITUDE ESTIMATE**

<b>PROJECT: PB-55 - 48th/G/52nd - High Banks Road to Aster Street</b>			<b>PREPARED BY:</b> Madeline Klein		<b>DATE:</b> 10/25/2017
<b>DESIGN LEVEL:</b> Preliminary			<b>LENGTH (MILE):</b> 1.11		<b>SHEET:</b> 1 of 1
<b>KIND OF WORK:</b> Roadway, Earthwork, Landscaping					
NO.	ITEM	UNIT	QUANTITY	UNIT COST	COST
1	Curb, Gutter, Sidewalks & Drainage	Mi.		\$935,700.00	\$0
2	Multi-use Path	Mi.	1.11	\$217,900.00	\$241,869
3	New Roadway Asphalt	Lane-Mi.		\$412,500.00	\$0
4	Overlay Existing Roadway	Lane-Mi.		\$89,400.00	\$0
5	Reconstruct Existing Roadway	Lane-Mi.		\$438,900.00	\$0
6	Intersection Widening	EA		\$76,500.00	\$0
7	Interconnect Signal	LS		\$35,000.00	\$0
8	New Signal	EA		\$300,000.00	\$0
9	Signal Modifications	EA		\$75,000.00	\$0
10	Earthwork (See Note)	CY	3,440	\$7.50	\$25,800
11	Traffic Calming	5-10%		-	\$0
12	Illumination	Mi.	1.11	\$260,000.00	\$288,600
13	Landscaping	Mi.		\$235,000.00	\$0
14	Bridges	SF		\$250.00	\$0
15	Walls	SF		\$75.00	\$0
<b>SUBTOTAL</b>					<b>\$556,269</b>

	ADDITIONAL CONST. COSTS	SUGGESTED	PERCENTAGE		COST
	Construction Surveying	1.0-2.5%	2.50%		\$13,906.73
	TP & DT	3.0-8.0%	8.00%		\$44,501.52
	Mobilization	8.0-10.0%	10.00%		\$55,626.90
	Erosion Control	0.5-2.0%	2.00%		\$11,125.38
	Contingency	30-40%	40.00%		\$222,507.60
	Escalation Rate (per year)	0.5-2.0%	2.00%		
	Design Year (or Estimate Year)		2013		
	Construction Year		2013		
<b>SUBTOTAL</b>					<b>\$903,937</b>

	Anticipated Items	UNIT	QUANTITY	UNIT COST	COST
	Railroad Crossing	EA	0	\$600,000.00	\$0
	Environmental Mitigation		0.00%		\$0
	Easements & ROW Acquisition		25.00%		\$225,984.28
	Indirect Costs		PERCENTAGE		COST
	Engineering, Legal/Admin, Coordination		30.00%		\$271,181
	Construction Engineering		15.00%		\$135,591
<b>TOTAL PROJECT COST</b>					<b>\$1,536,693</b>

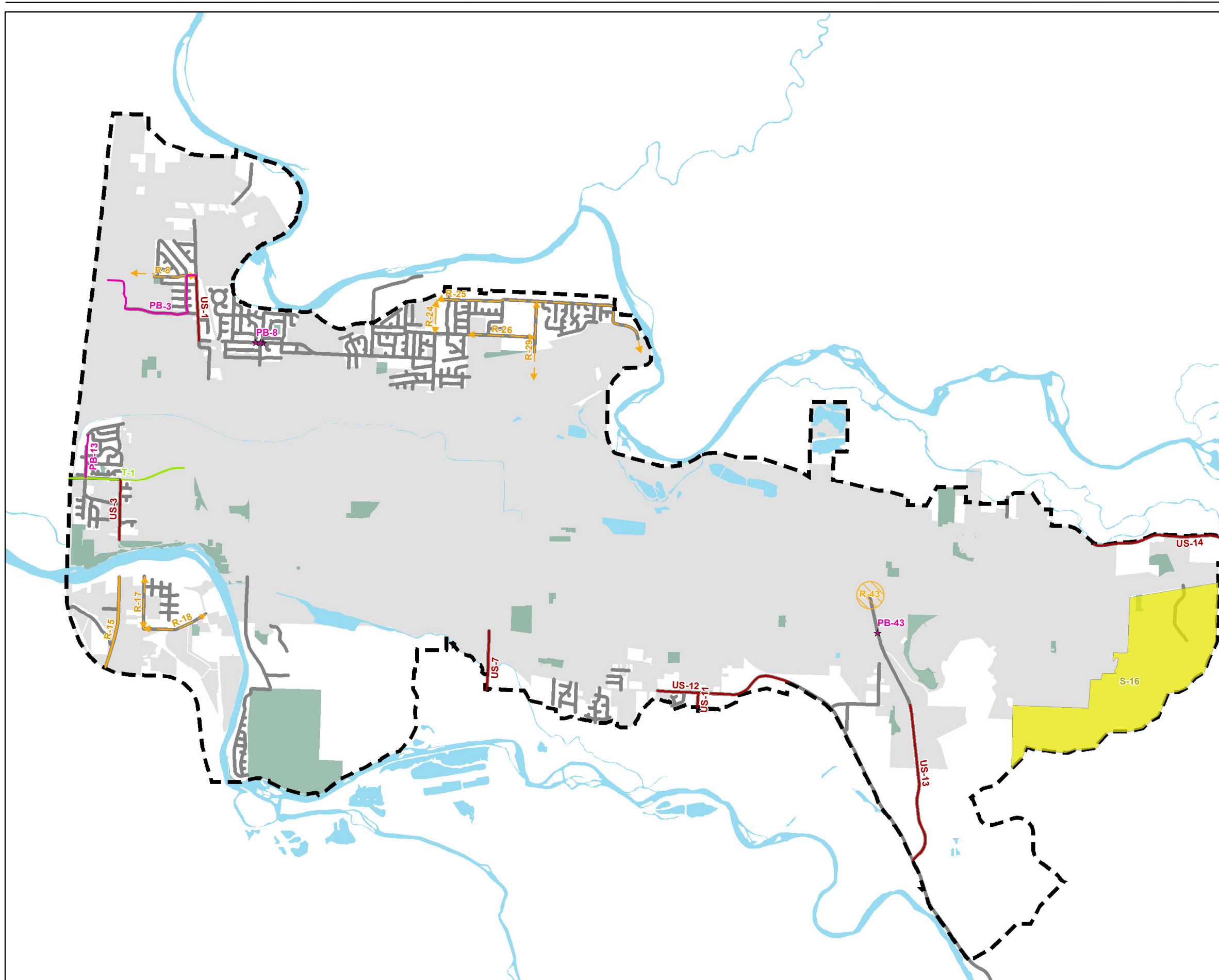
**Assumptions**

- Path assumed along the right side of the road from Main St. to High Banks Road
- ROW .25 of total project along one side needed.
- Assume 1' average depth earthwork over new work areas
- length of improvements is 1.11 miles
- Illumination is assumed not included

Appendix III

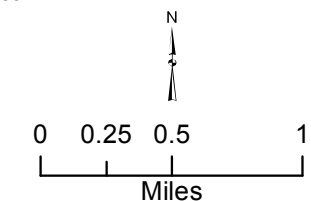
# **TSP Projects on Lane County Facilities**

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- Legend**
- ★ Roadway Project
  - Roadway Project
  - ↔ Conceptual Roadway Project
  - Urban Standards Project
  - Transit Project
  - ★ Pedestrian/Bike Project
  - Pedestrian/Bike Project
  - Study Project
  - Study Project
  - Lane County Owned Road
  - City Limits
  - Urban Growth Boundary
  - Willamalane Park and Recreation Property
  - Water Body

Note: All new alignments are conceptual. Actual alignments will be determined during project development. As development occurs projects will be identified as part of the development review process.



**FIGURE 1**  
**TSP Projects on**  
**Lane County Facilities**  
 Springfield TSP  
 Springfield, Oregon

## TSP projects located on Lane County facilities

TABLE 1  
Priority projects in the 20-year project list

Roadway projects		Cost
<b>R-43</b>	<b>OR 126/Main Street Interchange Improvements</b> (Construct a grade-separated interchange with ramps and traffic control at ramp terminals on Main Street consistent with the <i>Interchange Area Management Plan</i> ; needs further study)	\$50,000,000 <sup>2</sup>
Urban standards projects		Cost
<b>US-1</b>	<b>Game Farm Road South - Mallard Avenue to Harlow Road</b> (Modify and expand Game Farm Road South with a cross-section to include bicycle facilities)	\$4,100,000
<b>US-3</b>	<b>Aspen Street - Centennial Boulevard to West D Street</b> (Change Aspen Street to a three-lane cross-section with sidewalks and bicycle facilities)	\$2,800,000
<b>US-11</b>	<b>Clearwater Lane - south of Jasper Road within UGB</b> (Modify and expand Clearwater Lane with a cross-section to include sidewalks and bicycle facilities)	\$470,000
<b>US-14</b>	<b>Thurston Road - Weaver Road to UGB</b> (Change Thurston Road to a three-lane cross-section with sidewalks and bicycle facilities)	\$4,800,000

TABLE 2  
Opportunity projects in the 20-year project list

Pedestrian/bicycle projects (all on-street)		Cost
<b>PB-3</b>	<b>Oakdale Street/Pheasant Street/et.al. - Game Farm Road to Gateway Road</b> (Add signing and striping for bicycle facilities)	\$80,000
<b>PB-8</b>	<b>Hayden Bridge Way/Grovedale Drive, Hayden Bridge Way/3<sup>rd</sup> Street, Hayden Bridge Way/Castle Drive</b> (Add a crosswalk with a rapid rectangular flashing beacon)	\$260,000
<b>PB-13</b>	<b>Anderson Lane - By-Gully path to Centennial Boulevard</b> (Add signing and striping on Anderson Street and Quinalt Street for bicycle facilities and construct 12-foot wide multi-use path between Anderson Lane and Quinalt Street)	\$90,000
<b>PB-43</b>	<b>Bob Straub Parkway/Daisy Street</b> (Add a pedestrian/bicycle signal and crossing)	\$90,000

TABLE 3  
As development occurs projects in the 20-year project list

Roadway projects		Cost
<b>R-8</b>	<b>Mallard Avenue - Gateway Street to Game Farm Road</b> (Change Mallard Avenue to a two-lane cross-section with sidewalks and bicycle facilities and extend Mallard Avenue to Gateway Street with a two-lane cross-section with sidewalks and bicycle facilities)	\$4,530,000
<b>R-17</b>	<b>Henderson Avenue - Franklin Boulevard to East 19<sup>th</sup> Avenue</b> (Modify Henderson Avenue with a three-lane cross-section with sidewalks and bicycle facilities)	\$3,400,000

Roadway projects		Cost
<b>R-18</b>	<b>East 19<sup>th</sup> Avenue - Henderson Avenue to Franklin Boulevard</b> (Change East 19 <sup>th</sup> Avenue to a three-lane cross-section with sidewalks and bicycle facilities)	\$3,500,000
<b>R-24</b>	<b>19<sup>th</sup> Street - Hayden Bridge to Yolanda Avenue</b> (Extend 19 <sup>th</sup> Street with a two-lane cross-section with sidewalks and bicycle facilities)	\$2,400,000
<b>R-25</b>	<b>Hayden Bridge Road - 19<sup>th</sup> Street to Marcola Road</b> (Change Hayden Bridge Road to a two-lane cross-section with sidewalks and bicycle facilities)	\$12,000,000
<b>R-26</b>	<b>Yolanda Avenue - 23<sup>rd</sup> Street to 31<sup>st</sup> Street</b> (Modify Yolanda Avenue to a two-lane cross-section with sidewalks and bicycle facilities)	\$460,000
<b>R-29</b>	<b>31<sup>st</sup> Street - Hayden Bridge to U Street</b> (Change 31 <sup>st</sup> Street to a two-lane cross-section with sidewalks and bicycle facilities)	\$3,800,000

TABLE 4  
Beyond 20-year projects

Roadway projects	
<b>R-15</b>	<b>Glenwood Boulevard - I-5 to Franklin Boulevard</b> (Convert Glenwood Boulevard from three-lane to five-lane cross-section)
Urban standards projects	
<b>US-7</b>	<b>South 28<sup>th</sup> Street - F Street to UGB</b> (Modify South 28 <sup>th</sup> Street to a three-lane cross-section with sidewalks and bicycle facilities)
<b>US-12</b>	<b>Jasper Road - South 42<sup>nd</sup> Street to northwest of Mt. Vernon Road</b> (Modify Jasper Road to a three-lane cross-section with sidewalks and bicycle facilities)
<b>US-13</b>	<b>Bob Straub Parkway - Mt. Vernon Road to UGB</b> (Change Bob Straub Parkway to a three-lane cross-section with sidewalks and bicycle facilities)

TABLE 5  
Study projects

Study Projects	
<b>S-16</b>	<b>Connectivity study south of OR 126 and Jessica Street</b>

TABLE 6  
Frequent transit network projects

Transit Projects	
<b>T-1</b>	<b>Transit on Centennial Boulevard - I-5 to Mohawk Boulevard</b>

Note: These projects are included in the current *Regional Transportation System Plan*. The final transit network will be developed through the *Regional Transportation System Plan* process.