



Appendix G

Phase 2 Site Evaluation

G1 PHASE 2 CRITERIA – FINAL SITE EVALUATION

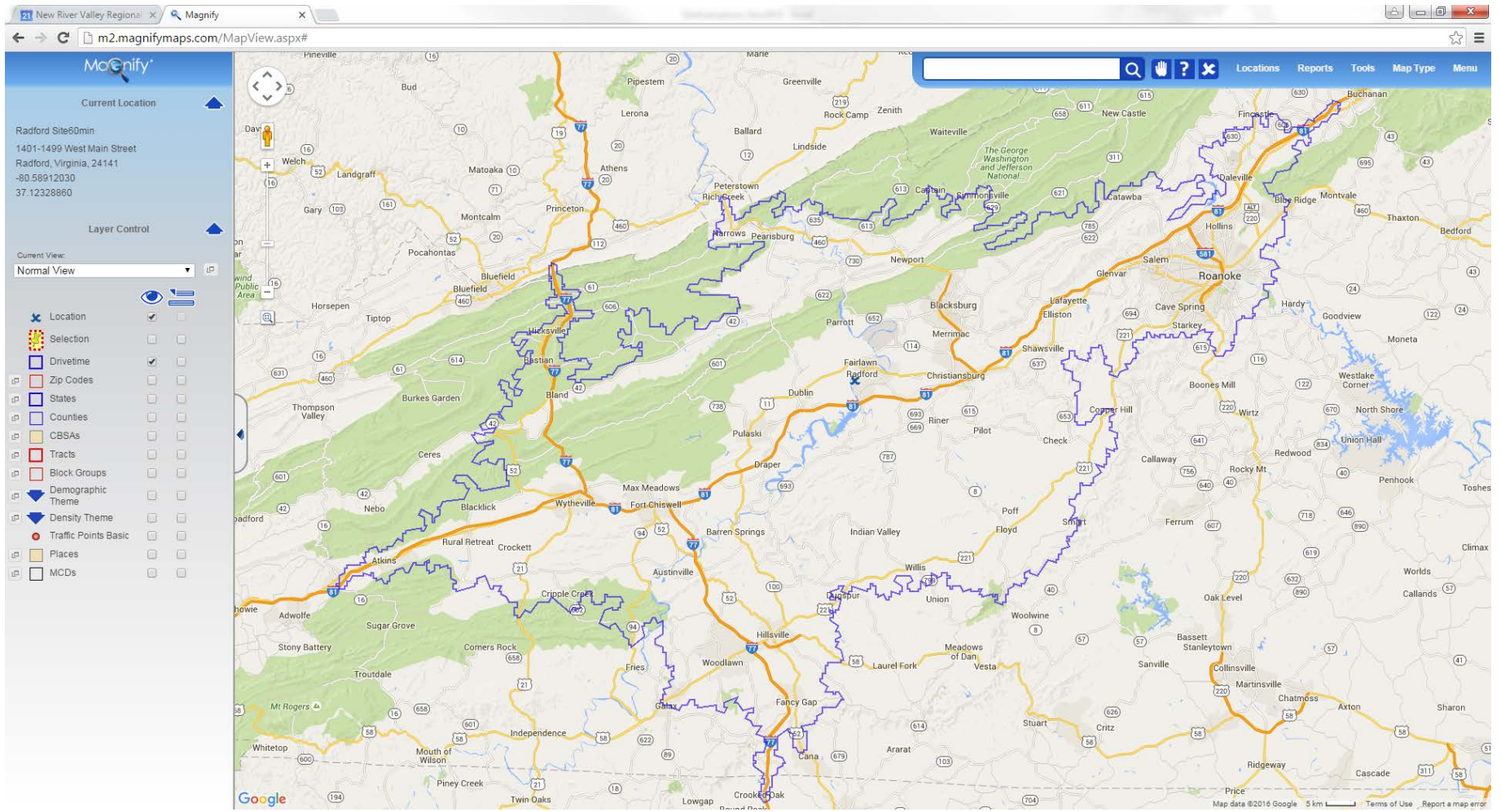
PHASE 2 (FINAL)			
CATEGORY	CRITERIA DESCRIPTION	SCORING	VALUE
Cost	Low Cost	10 points lowest cost, 10*(lowest cost/cost) otherwise	10
	Notes: Based on quantity of material estimates developed by the Commission with the assistance of Christiansburg Engineering Department staff, and local engineering firms, including: Anderson & Associates, Draper Aden, and Whitman Requardt & Associates.		
Ridership	Proximity to 750,000 potential trips	Maximum points for closest proximity to number of trips; percentage based on number of trips at same radius otherwise. Example: Site A accumulates 250,000 trips at 2.3 miles. Site B has 125,000 trips at 2.3 miles. Site A = 12 points, Site B = 6 points.	30
	Proximity to 500,000 potential trips		18
	Proximity to 250,000 potential trips		12
	Notes: NRVRC 2015. Census Block Level data edited to reflect 1,000,000 annual trips to points north. Potential trips assigned to residents, faculty/staff, and students based on 6,000+ online survey responses.		
Economic Impacts	Job accessibility within a 60-minute drive	9 points for highest score, 9*(impact/highest impact) otherwise	9
	Notes: Magnify, Employment Workers Current Year Report. 60 minute drive time, 2015 all workers 16 years and over.		
	Total commuting to points north	7.5 points for highest score, 7.5*(impact/highest impact) otherwise	7.5
	Notes: Census OnTheMap, Home Destination Report. All localities immediately adjacent to Amtrak service corridor.		
	Development potential on or immediately adjacent to property	3 points for highest score, 3*(impact/highest impact) otherwise	3
	Development potential within a 10-mile radius	3 points for highest score, 3*(impact/highest impact) otherwise	3
	Notes: VEDP, retrieved from virginiascan.yesvirginia.org.		
	Proximity to households with 1 vehicle or less	4.5 points for highest score, 4.5*(impact/highest impact) otherwise	4.5
	Notes: Magnify, Socio Economic Benchmark Report. 60 minute drive time.		
Proximity to low income households	3 points for highest score, 3*(impact/highest impact) otherwise	3	
Notes: Magnify, Socio Economic Benchmark Report. 60 minute drive time.			
Tourism	Household entertainment expenditures	20 points for highest score, 20*(impact/highest impact) otherwise	20
	Notes: Magnify, Expenditure: Leisure Report. 60 minute drive time.		
TOTALS			120

Unless otherwise noted above, site characteristic information was reviewed during 1-on-1 meetings between the Commission and local stakeholders. Phase 2 final criteria relevance, scoring value/weight, and scoring methodology were reviewed individually and approved on September 3, 2015 by the MPO Technical Advisory Committee.

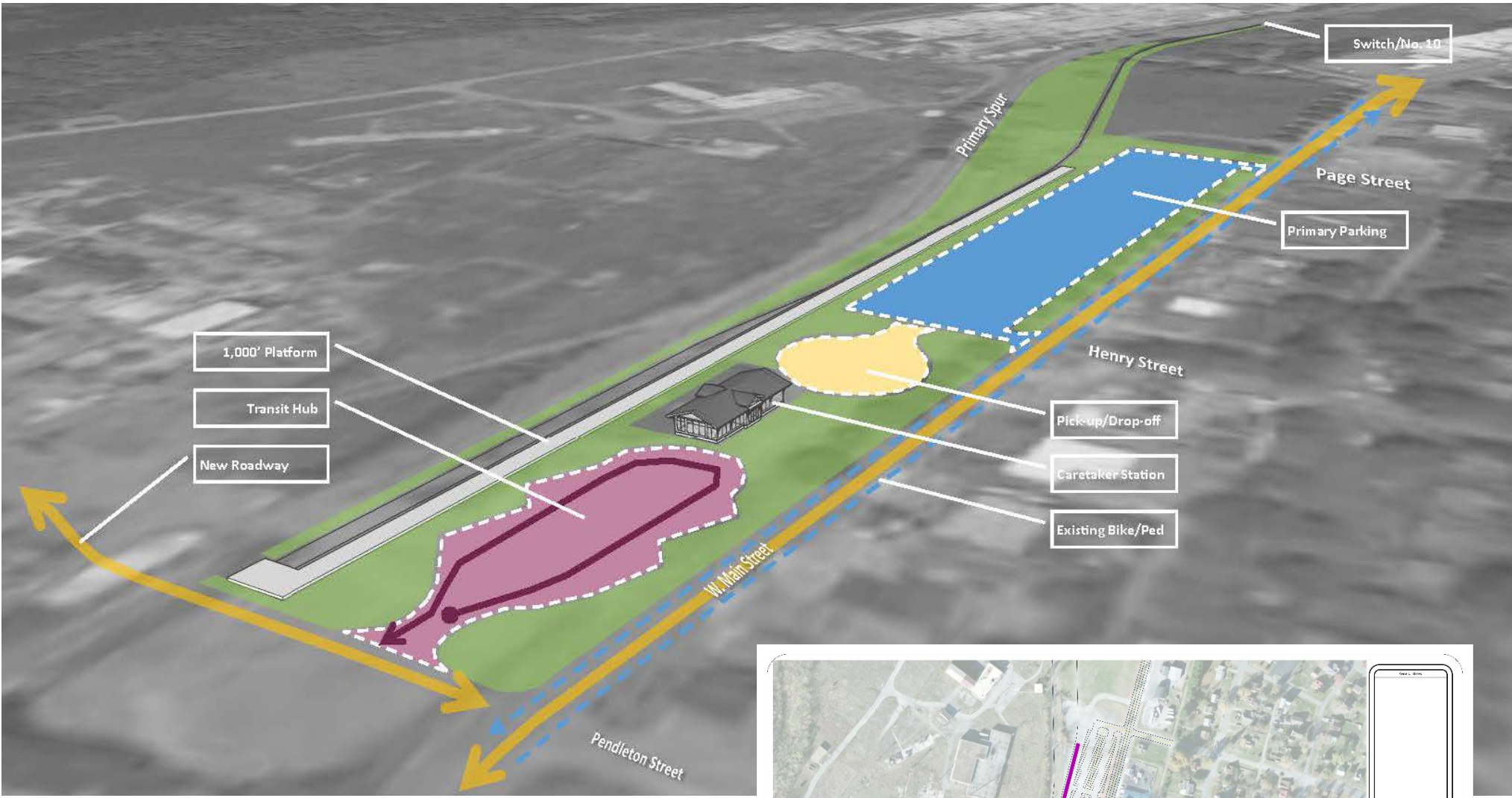
G2 SITE 4A-E: WEST MAIN OPEN – PHASE 2 SCORING



Cost						
<i>Criteria</i>	Construction	Engineering/Administration	Total Cost + 10%			
<i>Measure</i>	\$4,230,550.00	\$430,749.50	\$5,127,429.45			
<i>Score</i>	NA	NA	10.00			
Ridership						
<i>Criteria</i>	250,000	500,000	750,000			
<i>Measure</i>	182,109	208,316	350,992			
<i>Score</i>	8.71	7.50	14.04			
Economic Impacts						
<i>Criteria</i>	Job Access	North Com.	Development	10-mile Dev.	<1 Vehicle	Low Income
<i>Measure</i>	215,501	2,377	highest	33	73,675	120,074
<i>Score</i>	8.78	3.43	3.00	3.00	4.50	2.99
Tourism						
<i>Criteria</i>	2015 Households	2015 Spending per Home	2015 Household Spending			
<i>Measure</i>	191,515	\$2,459.71	\$471,071,360.70			
<i>Score</i>	NA	NA	19.60			
Site 4A-E: West Main Open – Summary						
	Low Score	High Score	Score Ranking	Site Score		
	85.55	111.11	3 rd	85.55		



<i>Socio Economic Benchmark Report</i>			<i>Expenditure: Leisure Report</i>		
<i>Average Household Income</i>	Percentage of Households	less than \$10,000	8.69%	2015 Total Households (60 minute drive time)	191,515
\$62,558		\$10,000 to \$14,999	6.27%	2015 Household Average Entertainment Expenditures	\$2,459.71
<i>80% Average Household Income Low-Moderate Income (LMI)</i>		\$15,000 to \$19,999	6.42%	2015 Examples of Household Average Expenditures:	
\$50,046		\$20,000 to \$24,999	6.10%	Fees and admissions	\$575.81
<i>Total Percentage of Households Low-Moderate Income (LMI)</i>		\$25,000 to \$29,999	5.45%	Recreation expenses, out-of-town trips	\$18.37
62.70%		\$30,000 to \$34,999	5.25%	Fees for participant sports	\$93.39
		\$35,000 to \$39,999	5.39%	Movie, other admissions, out-of-town trips	\$44.49
		\$40,000 to \$44,999	5.40%	Play, theatre, opera concert	\$37.48
		\$45,000 to \$49,999	4.96%	Admission to sporting events	\$40.29
	\$50,000 to \$59,999	8.77%	Fees for recreational lessons	\$93.35	



Conceptual Site Plan (shown above)
 CAD Estimating Drawing (shown right)



West Main Open, Radford**Passenger Rail Station Estimate**

Item Description	Quantity	Units	Price	Total
Demolition/Clearing	275000	SF	2.00	550,000.00
Grading/Earthwork	1	LS	50,000.00	50,000.00
New Sidewalk	2000	LF	80.00	160,000.00
Standard Caretaker Station	2800	SF	200.00	560,000.00
Platform (1,000'x15'x4')	1	LS	300,000.00	300,000.00
Permeable Parking Lot	80000	SF	6.50	520,000.00
Pick-up/Drop-off	16000	SF	10.00	160,000.00
Transit Hub	22000	SF	10.00	220,000.00
Architectural Style Lighting	40	Ea.	2,500.00	100,000.00
CG-12 (Detectable Warning/Ramps)	6	LS	1,500.00	9,000.00
Standard Rail/Track	2625	LF	200.00	525,000.00
Standard No. 10 Turn Out	2	LS	125,000.00	250,000.00
Pedestrian Crosswalks	3	Ea.	5,000.00	15,000.00
Landscaping	1	LS	50,000.00	50,000.00
Incidentals	1	LS	50,000.00	50,000.00
Signage	1	LS	20,000.00	20,000.00
Property Acquisition	1	LS	261,500.00	261,500.00
Sanitary Sewer/Water Connection	1	LS	50,000.00	50,000.00
Construction Contingency (10%)	1	LS	190,025.00	190,025.00
Mobilization (10% Max of Construction)	1	LS	190,025.00	190,025.00
<i>Subtotal:</i>				4,230,550.00
Engineering & Surveying	1	LS	211,527.50	211,527.50
Environmental	1	LS	50,000.00	50,000.00
Contract Administration	1	LS	84,611.00	84,611.00
Inspection	1	LS	84,611.00	84,611.00
<i>Subtotal:</i>				430,749.50
Project Total:				4,661,299.50
10% Flex:				466,129.95
Total Cost Estimate Projection:				5,127,429.45
Prepared December 2015				

Radford - West Main

Site: 4A
Size: 6.3 Acres
Number of Parcels: 1
Ownership: Private
Track Frontage: 1,021 ft.
Proximity to Rail: 1.0 mile/spur
Proximity to CoSS: 2.5 miles
Displacement: minimal
Floodplain: no
Migratory Birds: 17
Endangered Species: 0
Historical Resources: 3
Open/Conservation: no
Prime Farmland: no
Hazardous Materials: no
Local Plan Conflicts: no
Existing Transit: yes
Existing Bike/Ped: yes
Existing Water: yes
Existing Sewer: yes
Existing Power: yes
Existing Internet: yes
15-Mile Activity: 220,912
Prime Construction: 95%



Notes:



New River Valley Regional Commission
6550 Valley Center Drive
Radford, VA 24141
Tel: (540) 635-9313

New River Valley MPO
755 Roanoke Square, Suite 21
Christiansburg, VA 24073
Tel: (540) 334-2145

Site Worksheet

New River Valley
2015 Passenger Rail Study

pln

01

Radford - West Main

Conceptual Scale:

Amtrak Station:



50 Parking Spaces:

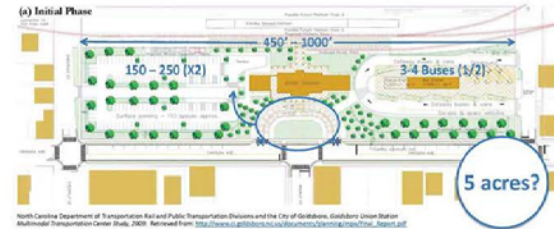


Regional Transit Hub:



Notes:

Site Planning - Concept of Scale



NRV Regional Commission
6580 Valley Center Drive
Radford, VA 24141
Tel: (540) 858-9313

New River Valley MPO
735 Roanoke Street, Suite 21
Christiansburg, VA 24073
Tel: (540) 394-2145

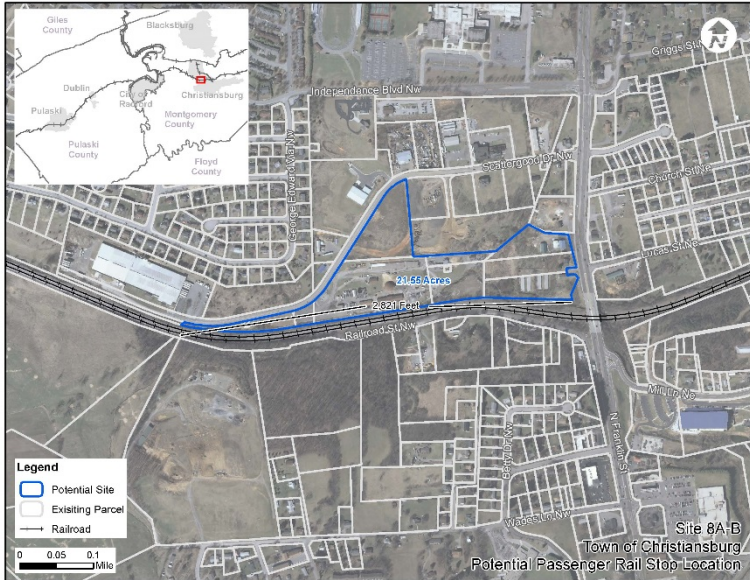
Site Worksheet

New River Valley
2015 Passenger Rail Study

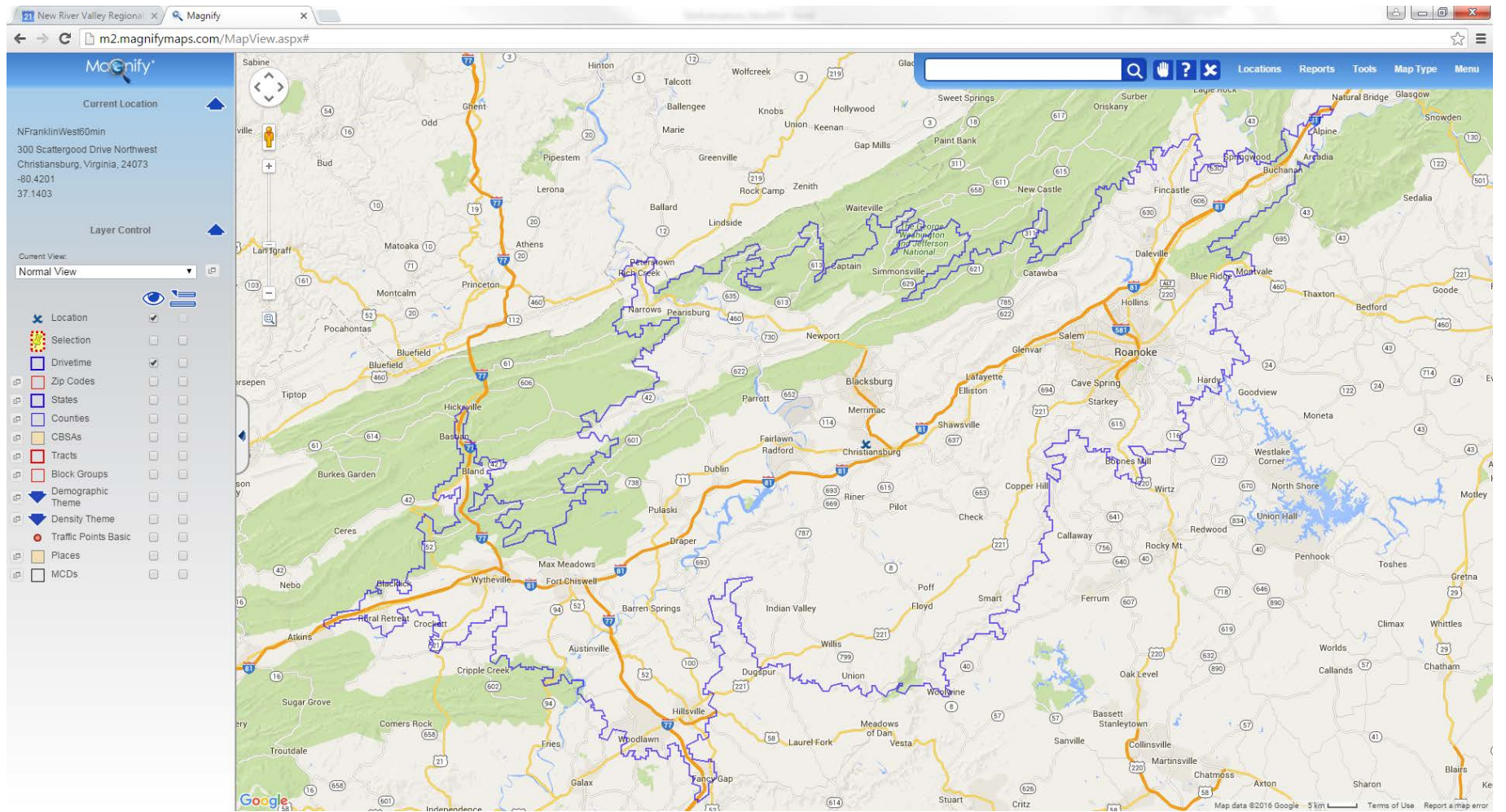
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02

G3 SITE 8A-B: NORTH FRANKLIN WEST – PHASE 2 SCORING



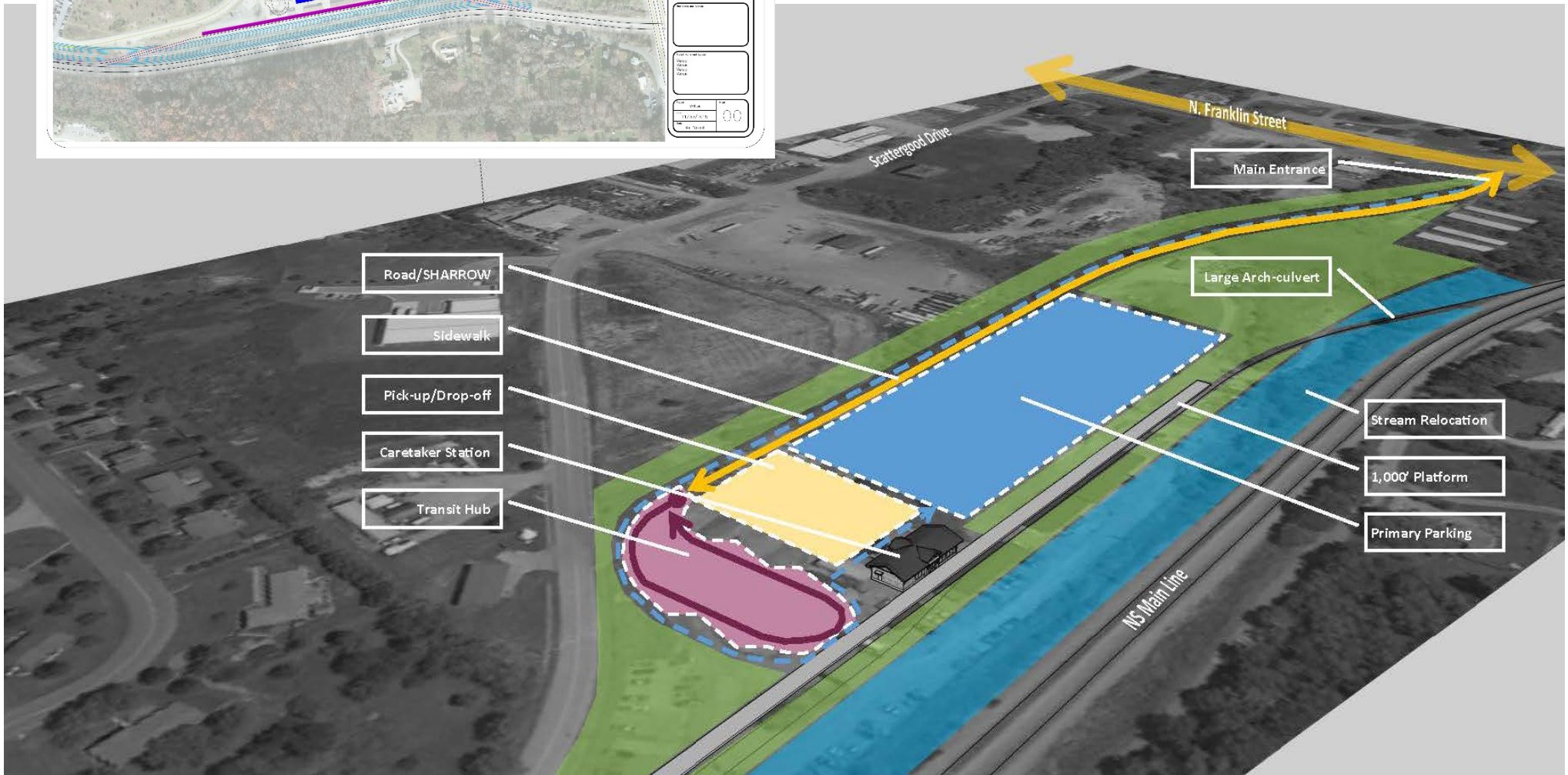
Cost						
<i>Criteria</i>	Construction	Engineering/Administration	Total Cost + 10%			
<i>Measure</i>	\$14,002,158.00	\$1,350,194.22	\$16,887,587.44			
<i>Score</i>	NA	NA	3.05			
Ridership						
<i>Criteria</i>	250,000	500,000	750,000			
<i>Measure</i>	250,857	499,755	750,173			
<i>Score</i>	12.00	18.00	30.00			
Economic Impacts						
<i>Criteria</i>	Job Access	North Com.	Development	10-mile Dev.	<1 Vehicle	Low Income
<i>Measure</i>	219,800	5,194	mid	24	72,840	119,774
<i>Score</i>	8.96	7.50	2.10	2.18	4.45	2.98
Tourism						
<i>Criteria</i>	2015 Households	2015 Spending per Home	2015 Household Spending			
<i>Measure</i>	193,508	\$2,471.24	\$478,204,709.90			
<i>Score</i>	NA	NA	19.89			
Site 8A-B: North Franklin West – Summary						
	Low Score	High Score	Score Ranking	Site Score		
	85.55	111.11	1 st	111.11		



<i>Socio Economic Benchmark Report</i>			<i>Expenditure: Leisure Report</i>		
<i>Average Household Income</i>	Percentage of Households	less than \$10,000	8.46%	2015 Total Households (60 minute drive time)	193,508
\$63,638		\$10,000 to \$14,999	6.13%	2015 Household Average Entertainment Expenditures	\$2,471.24
<i>80% Average Household Income Low-Moderate Income (LMI)</i>		\$15,000 to \$19,999	6.19%	2015 Examples of Household Average Expenditures:	
\$50,910		\$20,000 to \$24,999	5.96%	Fees and admissions	\$580.11
<i>Total Percentage of Households Low-Moderate Income (LMI)</i>		\$25,000 to \$29,999	5.41%	Recreation expenses, out-of-town trips	\$18.49
61.90%		\$30,000 to \$34,999	5.17%	Fees for participant sports	\$93.98
		\$35,000 to \$39,999	5.41%	Movie, other admissions, out-of-town trips	\$44.84
		\$40,000 to \$44,999	5.36%	Play, theatre, opera concert	\$37.76
		\$45,000 to \$49,999	4.92%	Admission to sporting events	\$40.62
	\$50,000 to \$59,999	8.89%	Fees for recreational lessons	\$94.19	



Conceptual Site Plan (shown below)
 CAD Estimating Drawing (shown left)



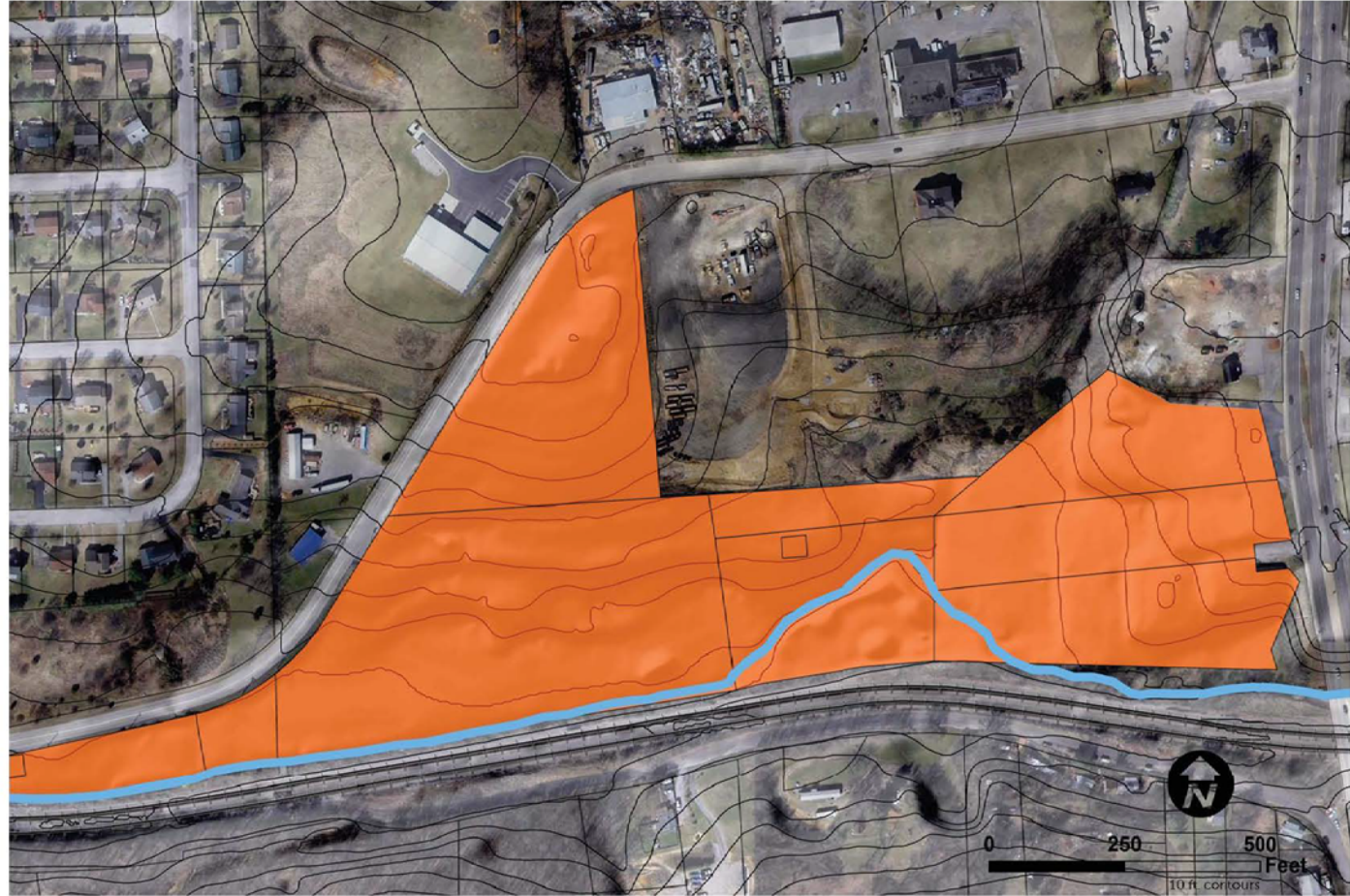
North Franklin West, C'burg

Passenger Rail Station Estimate

Item Description	Quantity	Units	Price	Total
Demolition/Clearing	500000	SF	1.00	500,000.00
Grading/Earthwork	1	LS	250,000.00	250,000.00
New Sidewalk	2550	LF	80.00	204,000.00
Standard Caretaker Station	2800	SF	200.00	560,000.00
Platform (1,000'x15'x4')	1	LS	300,000.00	300,000.00
Permeable Parking Lot	110000	SF	6.50	715,000.00
Asphalt SM 12.5D	374	TON	125.00	46,750.00
Asphalt BM 25.0	825	TON	100.00	82,500.00
Aggregate Base	3117	TON	90.00	280,530.00
Pick-up/Drop-off	17000	SF	10.00	170,000.00
Transit Hub	26600	SF	10.00	266,000.00
Stream - Self Mitigating 100-yr Flood	2400	LF	500.00	1,200,000.00
Arch Culvert (custom)	2	Ea.	800,000.00	1,600,000.00
Wetland Mitigation (road/spillway)	1	LS	100,000.00	100,000.00
Architectural Style Lighting	50	Ea.	2,500.00	125,000.00
CG-12 (Detectable Warning/Ramps)	2	LS	1,500.00	3,000.00
Standard Rail/Track	2300	LF	200.00	460,000.00
Standard No. 10 Turn Out	2	LS	125,000.00	250,000.00
Retaining Wall(s)	0	SF	200.00	0.00
CG-6 Curb and Gutter	0	LS	40,000.00	0.00
Pedestrian Crosswalks	1	Ea.	5,000.00	5,000.00
Intersection Signalization	1	LS	350,000.00	350,000.00
Landscaping	1	LS	50,000.00	50,000.00
Incidentals	1	LS	50,000.00	50,000.00
Signage	1	LS	20,000.00	20,000.00
Asset Reolocation (gravel lot)	1	LS	200,000.00	200,000.00
Asset Relocation (office buildings)	10000	SF	200.00	2,000,000.00
Asset Relocation (storage buildings)	30000	SF	35.00	1,050,000.00
Asset Relocation (land)	1	LS	300,000.00	300,000.00
Property Acquisition	1	LS	1,546,000.00	1,546,000.00
Sanitary Sewer/Water Connection	1	LS	50,000.00	50,000.00
Construction Contingency (10%)	1	LS	634,189.00	634,189.00
Mobilization (10% Max of Construction)	1	LS	634,189.00	634,189.00
<i>Subtotal:</i>				14,002,158.00
Engineering & Surveying	1	LS	700,107.90	700,107.90
Environmental	1	LS	50,000.00	50,000.00
Flood Study	1	LS	40,000.00	40,000.00
Contract Administration	1	LS	280,043.16	280,043.16
Inspection	1	LS	280,043.16	280,043.16
<i>Subtotal:</i>				1,350,194.22
Project Total:				15,352,352.22
10% Flex:				1,535,235.22
Total Cost Estimate Projection:				16,887,587.44

Christiansburg - W. Franklin

Site: 8A-B
Size: 21.55 Acres
Number of Parcels: 8
Ownership: Public/Private
Track Frontage: 2,821 ft.
Proximity to Rail: adjacent to main
Proximity to CoSS: 1.0 mile
Displacement: minimal/signatures
Floodplain: 9.4 acres/43%
Migratory Birds: 15
Endangered Species: 3/simple mit.
Historical Resources: 1
Open/Conservation: no
Prime Farmland: no
Hazardous Materials: no
Local Plan Conflicts: no
Existing Transit: yes
Existing Bike/Ped: yes
Existing Water: yes
Existing Sewer: yes
Existing Power: yes
Existing Internet: yes
15-Mile Activity: 204,449
Prime Construction: 75%



Notes:



NRVRC Regional Commission
6580 Valley Center Drive
Radford, VA 24141
Tel: (540) 639-9313

New River Valley MPO
755 Roanoke Street, Suite 21
Christiansburg, VA 24073
Tel: (540)394-2145

Site Worksheet

New River Valley
2015 Passenger Rail Study

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Christiansburg - W. Franklin

Conceptual Scale:

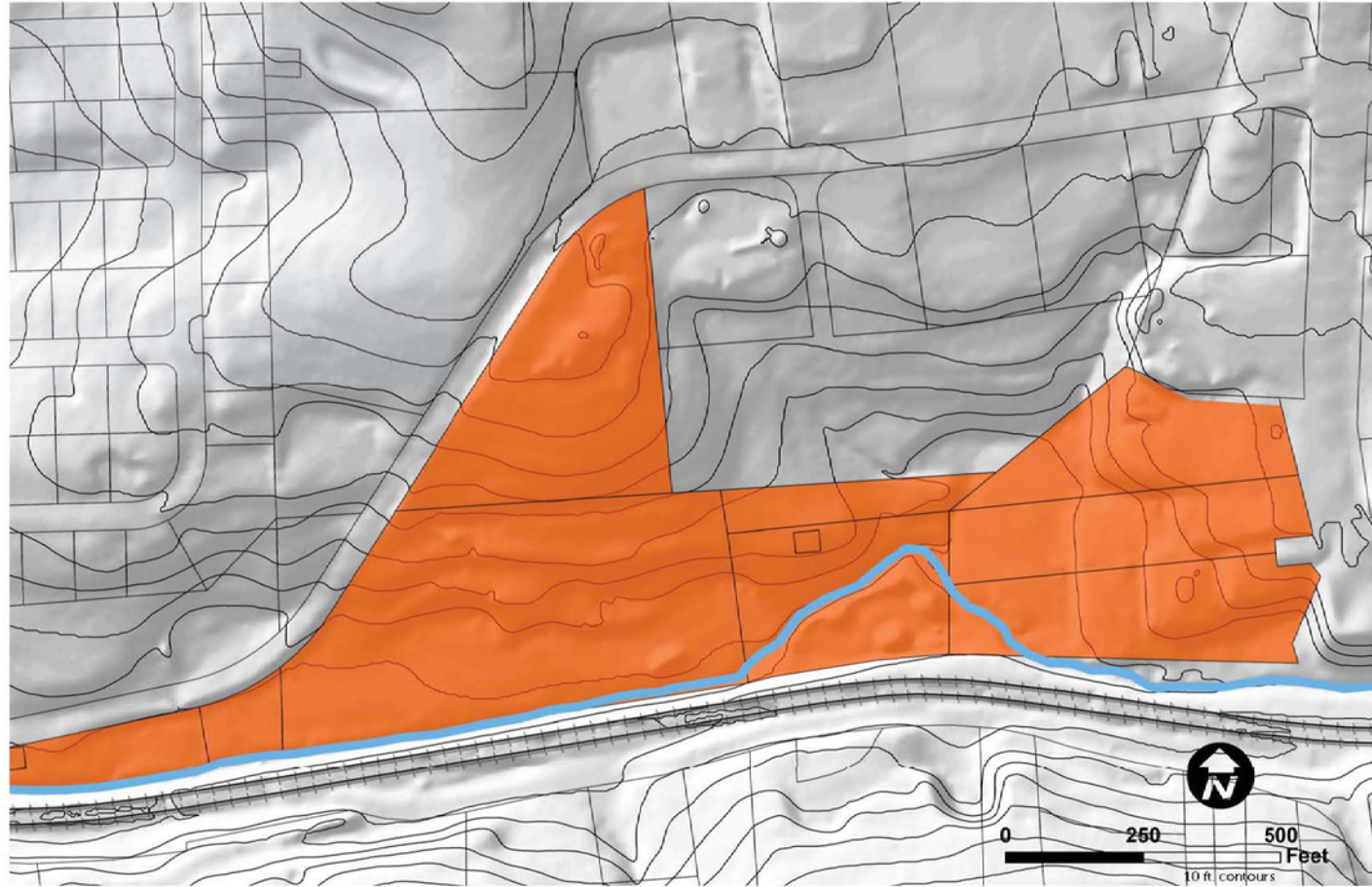
Amtrak Station:



50 Parking Spaces:

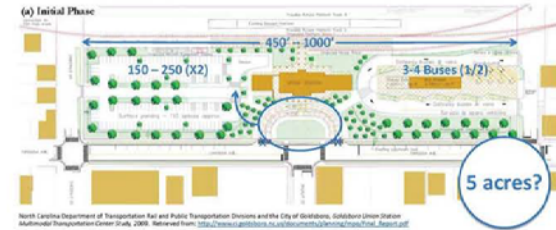


Regional Transit Hub:



Notes:

Site Planning - Concept of Scale



North Carolina Department of Transportation Rail and Public Transportation Division and the City of Goldsboro, Goldsboro Union Station Multimodal Transportation Center Study, 2010. Retrieved from: <http://www.goldsboro.org/Portals/0/Transportation/CenterStudy.pdf>



NRV Regional Commission
6580 Valley Center Drive
Piedmont, VA 24141
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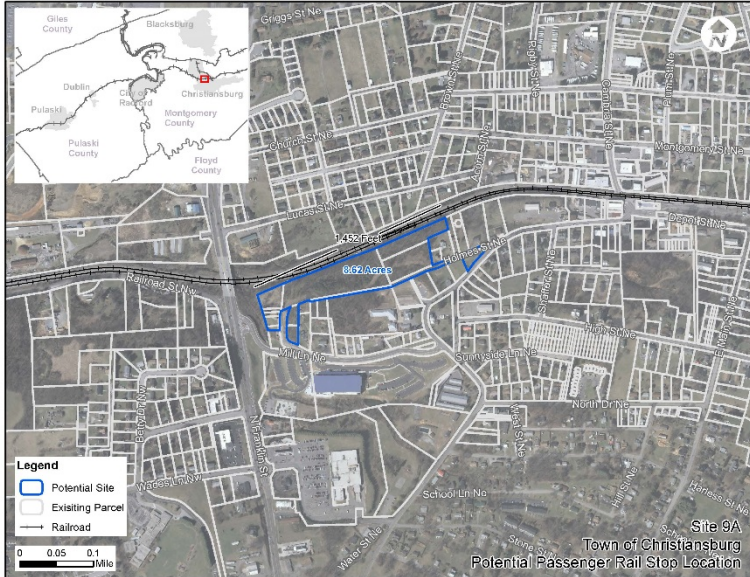
Site Worksheet

New River Valley
2015 Passenger Rail Study

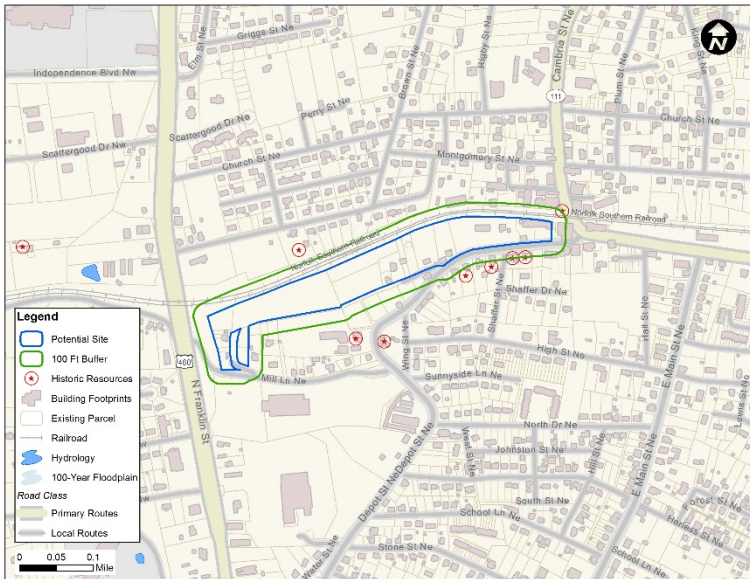
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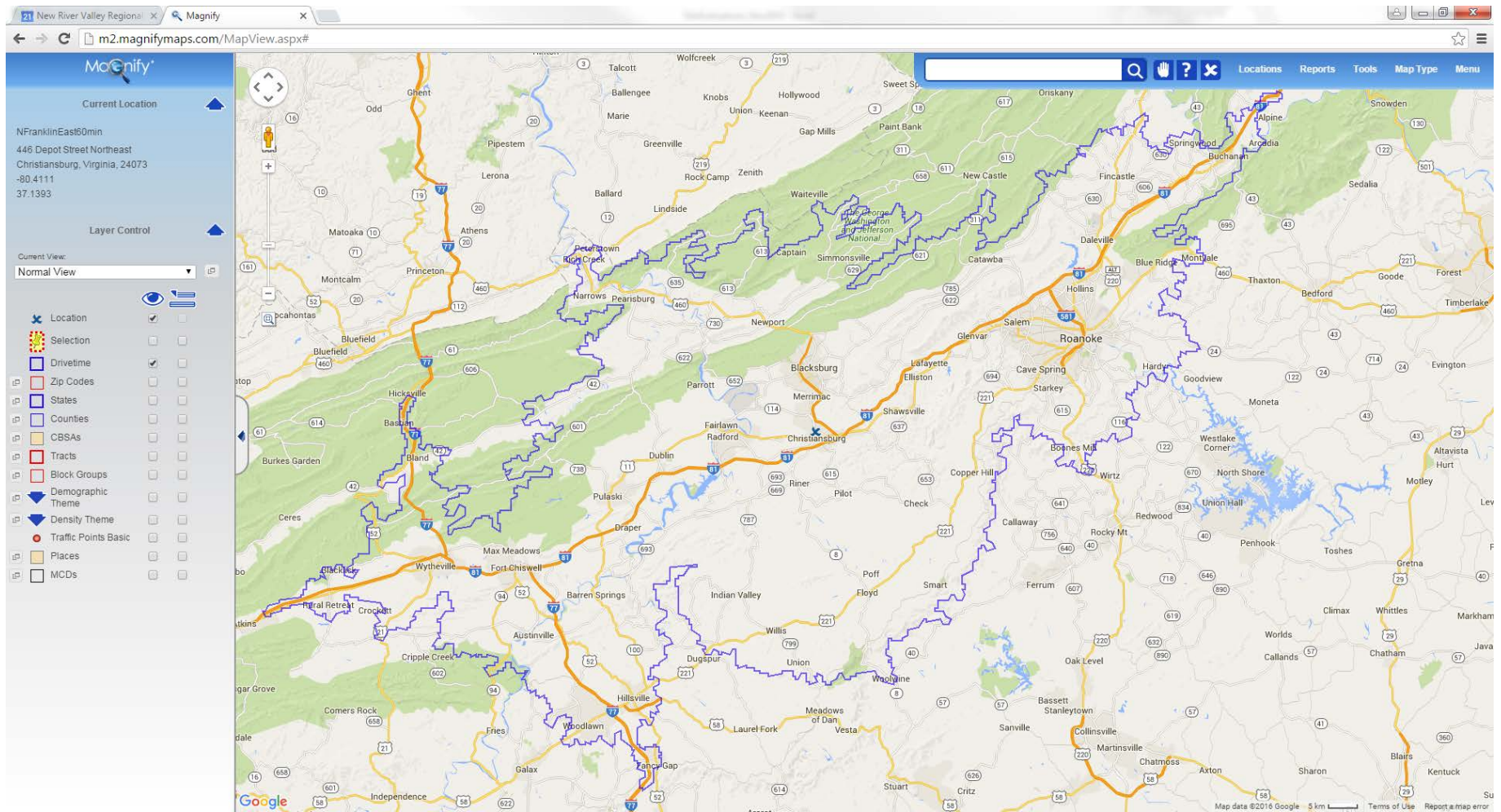
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G4 SITE 9A: NORTH FRANKLIN EAST – PHASE 2 SCORING



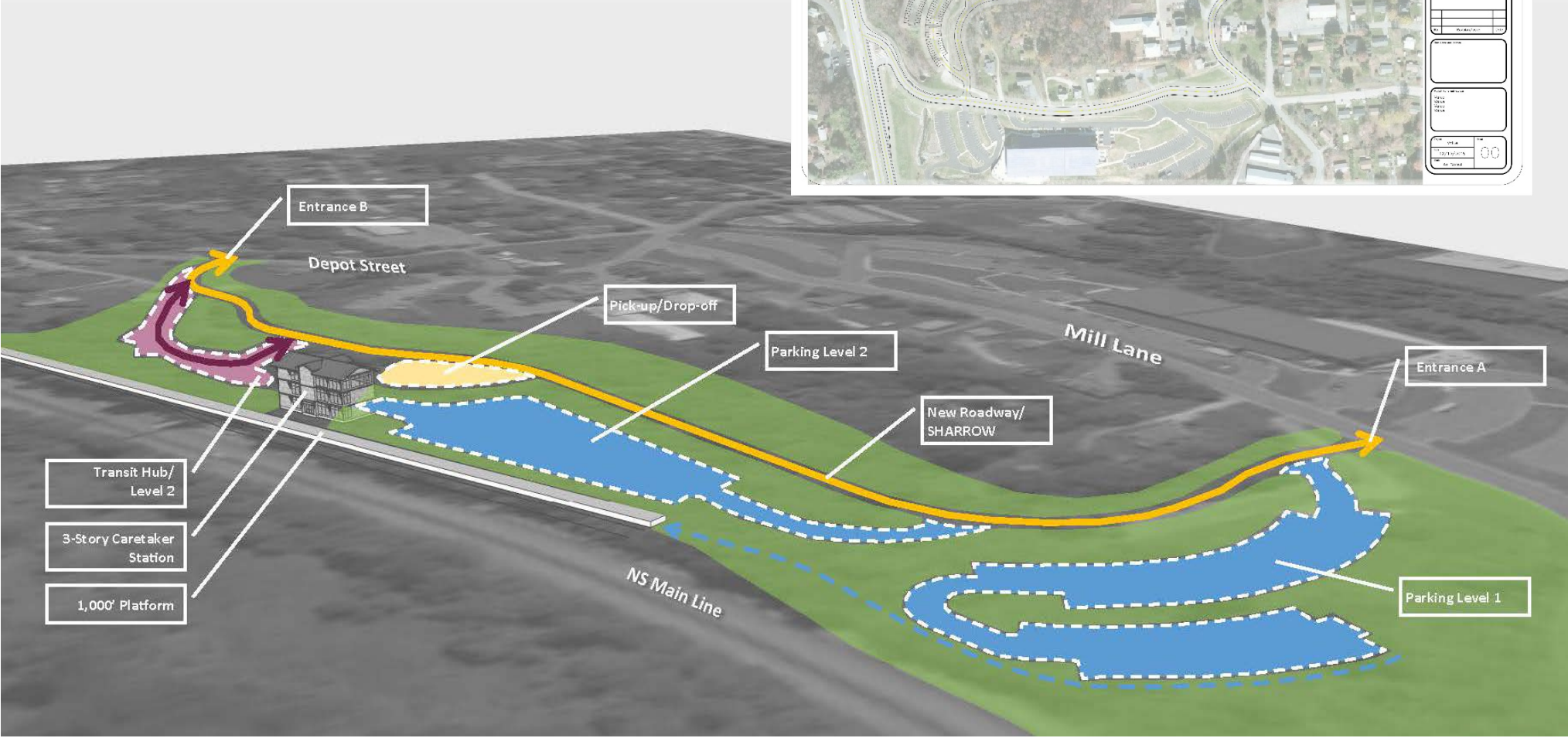
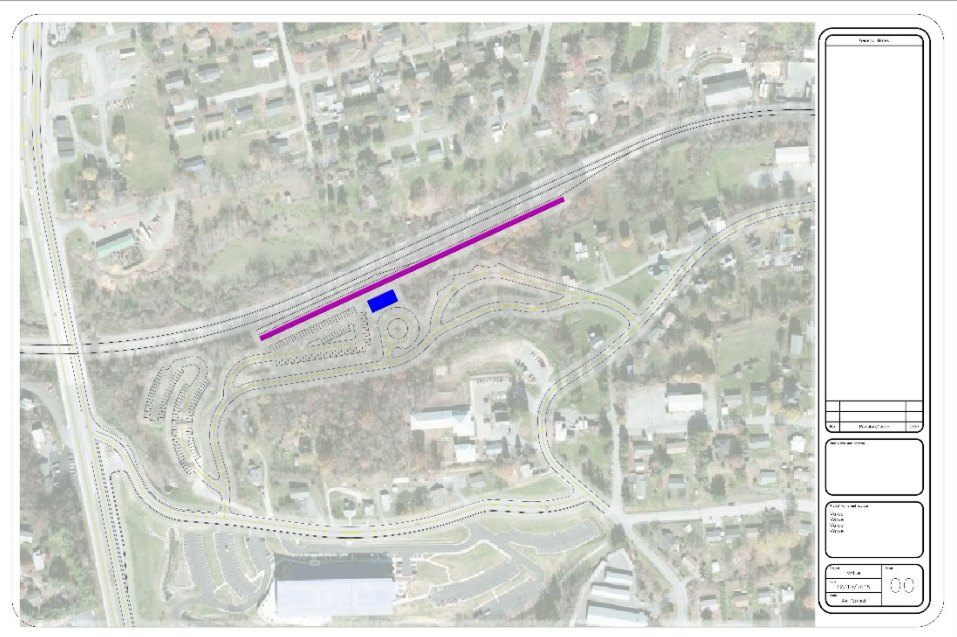
Cost						
<i>Criteria</i>	Construction	Engineering/Administration	Total Cost + 10%			
<i>Measure</i>	\$8,115,290.00	\$780,376.10	\$9,785,232.71			
<i>Score</i>	NA	NA	5.26			
Ridership						
<i>Criteria</i>	250,000	500,000	750,000			
<i>Measure</i>	209,050	481,548	749,280			
<i>Score</i>	10.00	17.34	29.96			
Economic Impacts						
<i>Criteria</i>	Job Access	North Com.	Development	10-mile Dev.	<1 Vehicle	Low Income
<i>Measure</i>	220,882	5,194	low	24	73,099	120,378
<i>Score</i>	9.00	7.50	0.90	2.18	4.46	3.00
Tourism						
<i>Criteria</i>	2015 Households	2015 Spending per Home	2015 Household Spending			
<i>Measure</i>	194,511	\$2,471.68	\$480,768,948.50			
<i>Score</i>	NA	NA	20.00			
Site 9A: North Franklin East – Summary						
	Low Score	High Score	Score Ranking	Site Score		
	85.55	111.11	2 nd	109.61		





<i>Socio Economic Benchmark Report</i>			<i>Expenditure: Leisure Report</i>		
<i>Average Household Income</i>	Percentage of Households	less than \$10,000	8.45%	2015 Total Households (60 minute drive time)	194,511
\$63,629		\$10,000 to \$14,999	6.13%	2015 Household Average Entertainment Expenditures	\$2,471.68
<i>80% Average Household Income Low-Moderate Income (LMI)</i>		\$15,000 to \$19,999	6.18%	2015 Examples of Household Average Expenditures:	
\$50,903		\$20,000 to \$24,999	5.96%	Fees and admissions	\$580.20
<i>Total Percentage of Households Low-Moderate Income (LMI)</i>		\$25,000 to \$29,999	5.41%	Recreation expenses, out-of-town trips	\$18.50
		\$30,000 to \$34,999	5.18%	Fees for participant sports	\$93.99
		\$35,000 to \$39,999	5.41%	Movie, other admissions, out-of-town trips	\$44.85
		\$40,000 to \$44,999	5.36%	Play, theatre, opera concert	\$37.77
61.89%	\$45,000 to \$49,999	4.91%	Admission to sporting events	\$40.62	
	\$50,000 to \$59,999	8.89%	Fees for recreational lessons	\$94.22	

Conceptual Site Plan (shown below)
CAD Estimating Drawing (shown right)



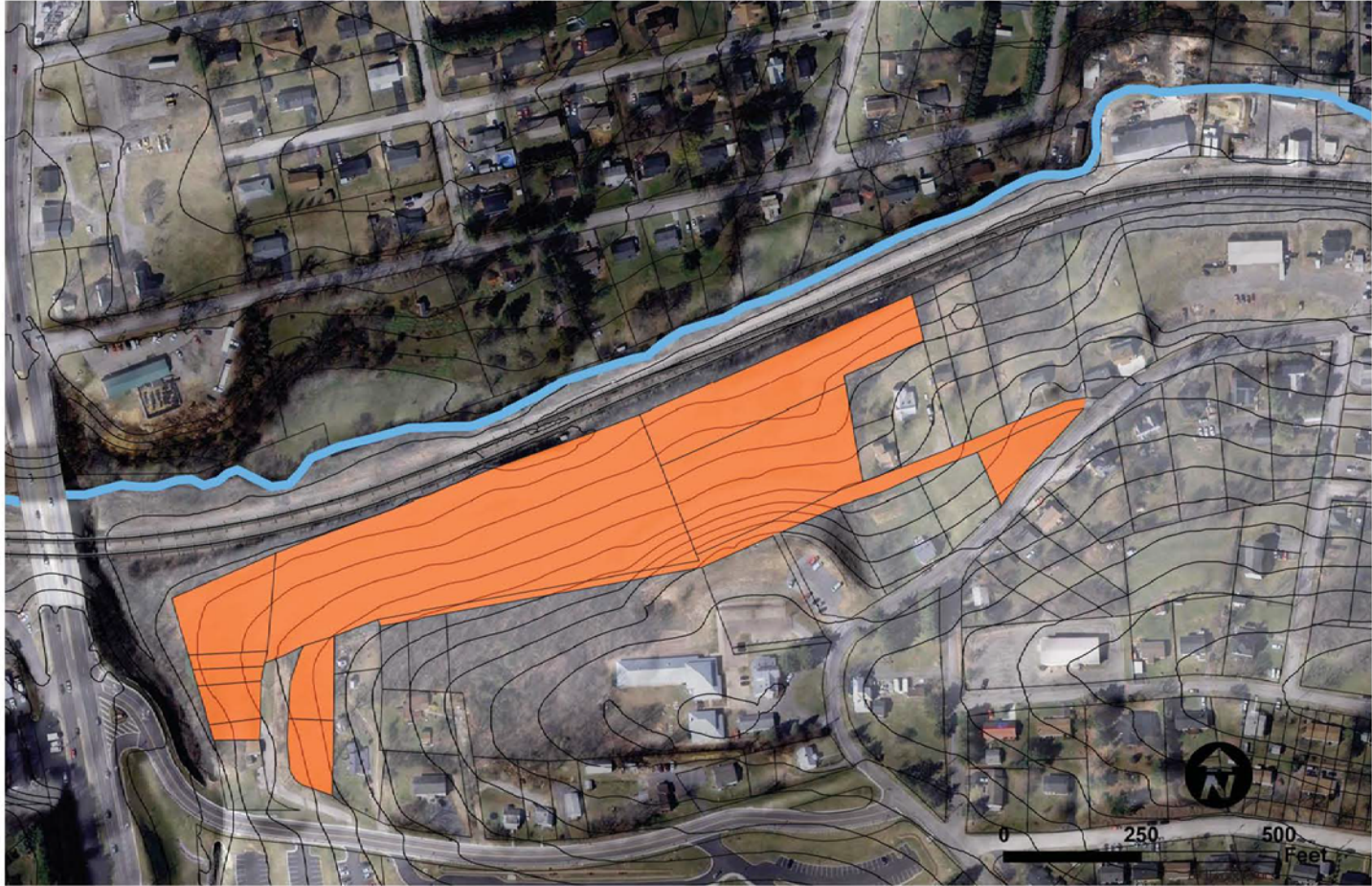
North Franklin East, C'burg

Passenger Rail Station Estimate

Item Description	Quantity	Units	Price	Total
Demolition/Clearing	400000	SF	1.00	400,000.00
Grading/Earthwork	1	LS	1,000,000.00	1,000,000.00
New Sidewalk	1500	LF	80.00	120,000.00
3-Story Caretaker Station	8400	SF	200.00	1,680,000.00
Platform (1,000'x15'x4')	1	LS	300,000.00	300,000.00
Permeable Parking Lot	80000	SF	6.50	520,000.00
Asphalt SM 12.5D	510	TON	125.00	63,750.00
Asphalt BM 25.0	1125	TON	100.00	112,500.00
Aggregate Base	4250	TON	90.00	382,500.00
Pick-up/Drop-off	14000	SF	10.00	140,000.00
Transit Hub	1575	SF	10.00	15,750.00
Watermain Relocation	1700	LF	350.00	595,000.00
Architectural Style Lighting	35	Ea.	2,500.00	87,500.00
Standard Rail/Track	2500	LF	200.00	500,000.00
Standard No. 10 Turn Out	2	LS	125,000.00	250,000.00
Retaining Wall(s)	500	SF	200.00	100,000.00
Intersection Signalization	1	LS	350,000.00	350,000.00
Landscaping	1	LS	50,000.00	50,000.00
Incidentals	1	LS	50,000.00	50,000.00
Signage	1	LS	20,000.00	20,000.00
Property Acquisition	1	LS	518,400.00	526,900.00
Sanitary Sewer/Water Connection	1	LS	125,000.00	125,000.00
Construction Contingency (10%)	1	LS	363,195.00	363,195.00
Mobilization (10% Max of Construction)	1	LS	363,195.00	363,195.00
<i>Subtotal:</i>				8,115,290.00
Engineering & Surveying	1	LS	405,764.50	405,764.50
Environmental	1	LS	50,000.00	50,000.00
Contract Administration	1	LS	162,305.80	162,305.80
Inspection	1	LS	162,305.80	162,305.80
<i>Subtotal:</i>				780,376.10
Project Total:				8,895,666.10
10% Flex:				889,566.61
Total Cost Estimate Projection:				9,785,232.71
Prepared December 2015				

Christiansburg - E. Franklin

Site: 9A
Size: 8.62 Acres
Number of Parcels: 5
Ownership: Public/Private
Track Frontage: 1,248 ft.
Proximity to Rail: adjacent to main
Proximity to CoSS: 1.0 mile
Displacement: minimal/signatures
Floodplain: yes/sliver
Migratory Birds: 15
Endangered Species: 3/simple mit.
Historical Resources: 2
Open/Conservation: no
Prime Farmland: no
Hazardous Materials: no
Local Plan Conflicts: yes/Comp
Existing Transit: yes
Existing Bike/Ped: yes
Existing Water: yes
Existing Sewer: yes
Existing Power: yes
Existing Internet: yes
15-Mile Activity: 203,368
Prime Construction: 85%



Notes:



NRV Regional Commission
6580 Valley Center Drive
Radford, VA 24141
Tel: (540) 639-5113

New River Valley MPO
755 Roanoke Street, Suite 21
Christiansburg, VA 24073
Tel: (540)394-2145

Site Worksheet

New River Valley
2015 Passenger Rail Study

pln

05

Christiansburg - E. Franklin

Conceptual Scale:

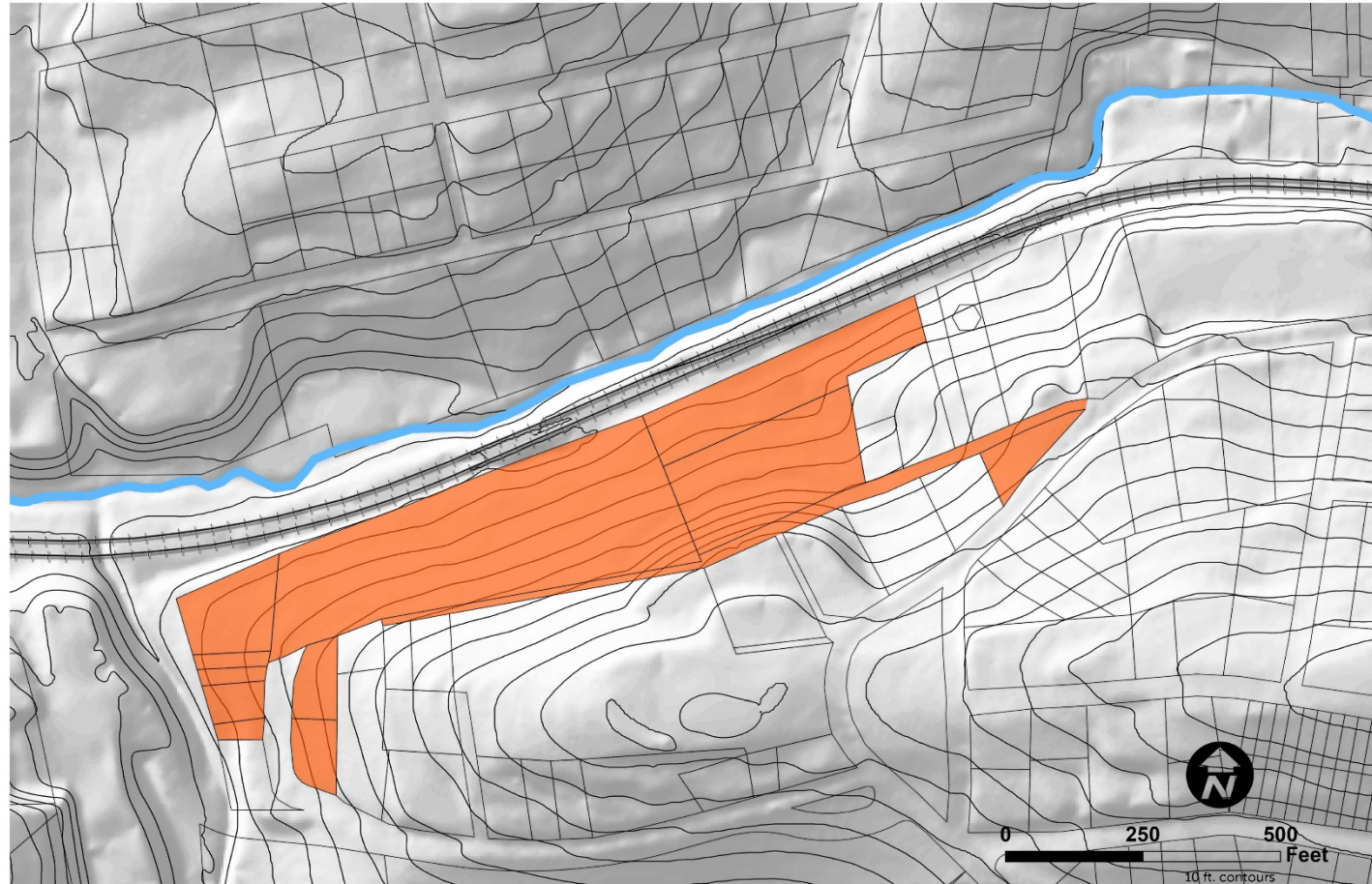
Amtrak Station:



50 Parking Spaces:

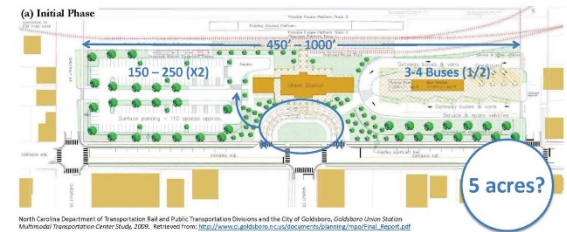


Regional Transit Hub:



Notes:

Site Planning - Concept of Scale



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Tel: (540) 659-9313

New River Valley MPO
755 Roanoke Street, Suite 21
Christiansburg, VA 24073
Tel: (540) 394-2145

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