

APPENDIX F

PROJECT COST ESTIMATES AND CONSTRAINTS INFORMATION



| Project / Corridor | Improvement | Length (miles) | lane miles / additional information | Unit Costs / Unit (lane mile, sf, lf, etc) | Total Cost | Project / Corridor Total Cost |
|--|--|------------------------------------|-------------------------------------|--|--------------|-------------------------------|
| 1. WV 705 Improvements | Widen for additional 12' lane in each direction, no work on existing pavement | 2.7 | 5.4 | \$600,000 | \$3,240,000 | \$54,978,000 |
| | Earthwork - Stewartstown Road to Willowdale Road - Moderate terrain | 0.91 | moderate | \$350,000 | \$317,055 | |
| | Earthwork - Willowdale to Monongahela Blvd. - gentle terrain | 1.79 | gentle | \$57,000 | \$102,030 | |
| | 10' sidewalk behind curb - both sides (Stewartstown Road to Willowdale Road) | 0.92 | 1.84 | \$568,000 | \$1,043,270 | |
| | 4' walk with 2' tree lawn behind curb - both sides (Willowdale Road to University Boulevard) | 1.2 | 2.40 | \$227,200 | \$545,280 | |
| | 4' walk with 2' tree lawn behind curb - north side (University Boulevard to Monongahela Boulevard) | 0.68 | | \$113,600 | \$77,089 | |
| | 4' walk with 2' tree lawn behind curb - south side (University Boulevard to Kroger Plaza) | 0.21 | | \$113,600 | \$23,710 | |
| | 8' sidewalk with 2' tree lawn behind curb - both side (Kroger Plaza to Monongahela Boulevard) | 0.46 | | \$454,500 | \$208,399 | |
| | 5' bike lane, both sides | 2.7 | | \$420,000 | \$1,134,000 | |
| | Lighting | 2.7 | | \$200,000 | \$540,000 | |
| | retaining wall - Kroger Plaza | 320' long x 6' high | 1600 | \$100 / sf | \$160,000 | |
| | Retaining wall - Van Voorhis Road to North Elementary School Entrance | 1100' long x 10' high | 11000 | \$100 / sf | \$1,100,000 | |
| | Major Corridor TSM Improvements | | 6 intersections | \$200,000 | \$1,200,000 | |
| | Utility Relocation Cost | 2.7 | | | \$1,625,200 | |
| | MOT, misc cost | 2.7 | | \$650,000 | \$1,755,000 | |
| | Drainage (for outside of roadway / widening) | 2.7 | | \$720,000 | \$1,944,000 | |
| Right-of-Way | see Right-of-Way calculation sheet | | | \$12,120,000 | | |
| 2. West Run Extension and Lazelle-Union Road (WV-100) Connection to US 19 | West Run Extension - new four-lane facility | 1.2 | 4.8 | \$520,000 | \$2,496,000 | \$70,501,000 |
| | Lazelle-Union Road (WV-100) - Widen an additional two 12' lanes in each direction, no work on existing pavement. | 1.7 | 3.4 | \$520,000 | \$1,768,000 | |
| | West Run Extension structure | 1200' long x 71' wide | 85200 | \$200 / sf | \$17,040,000 | |
| | Scotts Run Road Improvements - additional two 12' lanes in each direction, no work on existing pavement | 0.46 | 0.92 | \$520,000 | \$479,621 | |
| | Scotts Run Road structure over Scotts Run at Chaplin Hill intersection | 200' long x 50' wide | 10000 | \$200 / sf | \$2,000,000 | |
| | Earthwork - West Run Extension | 1.2 | severe | \$1,500,000 | \$1,800,000 | |
| | Earthwork - Scotts Run Road | 0.5 | severe | \$1,500,000 | \$750,000 | |
| | Earthwork - Lazelle-Union Road (WV-100) | 1.7 | gentle | \$57,000 | \$96,900 | |
| | 5' bike lanes | 3.36 | | \$420,000 | \$1,411,693 | |
| | 4' walk with 2' lawn area behind shoulder - both sides | 3.36 | | \$227,200 | \$763,659 | |
| | Retaining wall | 3050' long x 10' high | 30500 | \$100 / sf | \$3,050,000 | |
| | Drainage (for curbed roadway) | 2.9 | | \$720,000 | \$2,088,000 | |
| | MOT, misc cost | 2.9 | | \$650,000 | \$1,885,000 | |
| | Utility Relocation Cost | 1.7 | | | \$511,600 | |
| Right-of-Way | see Right-of-Way calculation sheet | | | \$34,360,000 | | |
| 3. Lazelle-Union Road (WV-100) | Resurfacing Lazelle-Union Road (WV-100) - includes 2 lane portion of Lazelle-Union within project 2. | 10.5 | 21 | \$165,000 | \$3,465,000 | \$22,421,000 |
| | 2-5' bike lanes (deduct bike lane length constructed in project 2 corridor) | 8.8 | | \$420,000 | \$3,696,000 | |
| | Reconstruct sidewalks, both sides, within Granville / Westover limits | 3.9 | | \$227,200 | \$886,080 | |
| | MOT, misc cost | 10.5 | | \$650,000 | \$6,825,000 | |
| | Utility Relocation Cost | 10.5 | | | \$2,218,000 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$5,330,000 | |
| 4. I-79 / Chaplin Hill Road / US-19 / Lazelle-Union Road Interchange Access Improvements | Grade separation of Chaplin Hill Road and University Town Center Road | | | | \$5,000,000 | \$21,535,000 |
| | I-79 interchange improvements (additional ramps, lane widening, etc) | | | | \$5,000,000 | |
| | Intersection upgrades | | 2 | \$1,000,000 | \$2,000,000 | |
| | Addition of 2 - 12' lanes | 0.63 | 1.26 | \$600,000 | \$756,000 | |
| | MOT - increased MOT unit cost to account for complexity with I-79 | 0.63 | | \$1,300,000 | \$819,000 | |
| | Utility Relocation Cost | 0.63 | | | \$189,600 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$7,770,000 | |
| 5. New I-79 Interchange at Business Park Site and Connecting Roadways | Interchange Construction | | | \$60,000,000.00 | | \$43,417,000 |
| | New I-79 pavement (reconstruciton) | 1.04 | 4.17 | \$600,000.00 | \$2,500,000 | |
| | New Ramp pavement - 16' lanes | 0.47 | 1.89 | \$800,000.00 | \$1,515,152 | |
| | New pavement for new roadway under highway - 4 - 12' lanes | 0.11 | 0.45 | \$600,000.00 | \$272,727 | |
| | 4' sidewalk with 2' tree lawn behind curb - one side | 0.11 | | \$113,600 | \$12,909 | |
| | 10' asphalt multi-use path | 0.11 | | \$300,000 | \$34,091 | |
| | Relocate Martin Hollow Road - assume 2 -12' lanes | 0.27 | 0.53 | \$600,000.00 | \$318,182 | |
| | retaining walls adjacent to I-79, assume one in each quadrant to account for terrain | 1000' long x 20' high | 80000 | \$100 / sf | \$8,000,000 | |
| | Earthwork - severe terrain | 1.89 | severe | \$3,000,000 | \$5,681,818 | |
| | Drainage (for curbed roadway) | 0.11 | | \$720,000 | \$81,818 | |
| | Structure over new roadway under highway | 500' long x 130' wide | 65000 | \$200 / sf | \$13,000,000 | |
| | MOT - increased MOT unit cost to account for complexity with I-79 | | | \$1,000,000 | \$1,000,000 | |
| Right-of-Way | see Right-of-Way calculation sheet | | | \$11,000,000 | | |

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| 6. Roadway Connection from New I-79 interchange to Monongahela Boulevard | New 4-lane roadway | 1.2 | 4.8 | \$600,000 | \$2,880,000 | \$48,555,000 |
| | 4' sidewalk with 2' tree lawn behind curb - one side | 1.2 | | \$113,600 | \$136,320 | |
| | 10' asphalt multi-use path | 1.2 | | \$300,000 | \$360,000 | |
| | Earthwork - moderate terrain | 0.73 | | \$350,000 | \$254,479 | |
| | Earthwork - severe terrain | 0.47 | severe | \$1,500,000 | \$709,375 | |
| | Drainage (for curbed roadway) | 1.2 | | \$720,000 | \$864,000 | |
| | Major Corridor TSM Improvements | 1.2 | | \$2,000,000 | \$2,400,000 | |
| | MOT, misc cost (on existing roadways) | 1.2 | | \$650,000 | \$780,000 | |
| | Structure over Monongahela River (assumes gateway design with aesthetic enhancements, plantings, etc) | 1000' long x 100' wide | 100000 | \$300 | \$30,000,000 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$10,170,000 | |
| 6B. PRT Connection New Business Park to Evansdale Campus | PRT track | 1.5 | | \$20,000,000 | \$30,000,000 | \$80,450,000 |
| | New vehicles - 7 per one mile (one way) | 1.5 | 21 | \$400,000 | \$8,400,000 | |
| | 3 stations | | 3 | \$10,000,000 | \$30,000,000 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$12,050,000 | |
| 7. Van Voorhis Road Improvements | Provide bus only lane SB | 1.4 | | \$520,000 | \$728,000 | \$14,955,000 |
| | Improve traffic lanes - pavement reconstruction, assume 6' width overall for width correction | 1.4 | | \$300,000 | \$420,000 | |
| | Improve traffic lanes - drainage - provide closed storm sewer system | 1.4 | | \$720,000 | \$1,008,000 | |
| | Two 5' bike lanes | 1.4 | | \$420,000 | \$588,000 | |
| | 4' sidewalk with 2' tree lawn behind curb - both sides | 1.4 | | \$227,200 | \$318,080 | |
| | Signal improvement at Van Voorhis Road, Chestnut Ridge Road and Burroughs Street | | 1 | \$1,250,000 | \$1,250,000 | |
| | Earthwork - mountainous | 1.4 | severe | \$1,500,000 | \$2,100,000 | |
| | MOT, misc cost | 1.4 | | \$650,000 | \$910,000 | |
| | Utility Relocation Cost | 1.4 | | | \$842,600 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$6,790,000 | |
| 7A. Van Voorhis Road Improvements - ends at West Run | Provide bus only lane SB | 0.94 | | \$520,000 | \$491,144 | \$9,706,000 |
| | Improve traffic lanes - pavement reconstruction, assume 6' width overall for width correction | 0.94 | | \$300,000 | \$283,352 | |
| | Improve traffic lanes - drainage - provide closed storm sewer system | 0.94 | | \$720,000 | \$680,045 | |
| | Two 5' bike lanes | 0.94 | | \$420,000 | \$396,693 | |
| | 4' sidewalk with 2' tree lawn behind curb - both sides | 0.94 | | \$227,200 | \$214,592 | |
| | Signal improvement at Van Voorhis Road, Chestnut Ridge Road and Burroughs Street | | 1 | \$1,250,000 | \$1,250,000 | |
| | Earthwork - mountainous | 0.94 | severe | \$1,500,000 | \$1,416,761 | |
| | MOT, misc cost | 0.94 | | \$650,000 | \$613,930 | |
| | Utility Relocation Cost | 0.94 | | | \$568,600 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$3,790,000 | |
| 8. Beechurst Avenue Improvements | Additional pavement widening - full depth pavement (10' width) | 1.2 | | \$500,000 | \$600,000 | \$7,069,000 |
| | 8' sidewalks adjacent to curbs - both sides | 0.85 | | \$454,500 | \$384,776 | |
| | 6' sidewalks adjacent to curbs - both sides | 0.35 | | \$340,000 | \$119,000 | |
| | relocation of PRT pier | | 1 | \$1,000,000 | \$1,000,000 | |
| | Retaining wall - Hough to University | 200' long x 4' high | 800 | \$100 / sf | \$80,000 | |
| | Retaining wall - south of Stalnaker | 300' long x 8' high | 2400 | \$100 / sf | \$240,000 | |
| | Retaining wall - north of Stalnaker | 450' long x 8' high | 3600 | \$100 / sf | \$360,000 | |
| | Retaining wall - several locations between 8th Street and north of Stalnaker | 500' long x 10' high | 5000 | \$100 / sf | \$500,000 | |
| | Drainage (for curbed roadway) | 1.2 | | \$720,000 | \$864,000 | |
| | MOT, misc cost | 1.2 | | \$650,000 | \$780,000 | |
| | Earthwork | 1.2 | gentle | \$57,000 | \$68,400 | |
| | Utility Relocation Cost | 1.2 | | | \$722,400 | |
| Right-of-Way | see Right-of-Way calculation sheet | | | \$1,350,000 | | |
| 9. University Avenue Improvements | 10' sidewalks adjacent to curbs - both sides | 2.7 | 5.4 | \$284,000 | \$1,533,600 | \$20,059,000 |
| | Widening for bike climbing lanes - three locations | 0.65 | | \$150,000 | \$97,727 | |
| | Bicycle Route signing and marking | 2.70 | | \$17,660 | \$47,682 | |
| | Improve pedestrian crossings throughout corridor | 2.70 | | \$100,000 | \$270,000 | |
| | Improve intersections - turn lanes, intersection improvements, pedestrian safety, sight distance. | | 5 intersections | \$1,000,000 | \$5,000,000 | |
| | Drainage (for curbed roadway) | 0.65 | | \$720,000 | \$469,091 | |
| | MOT, misc cost | 2.7 | | \$650,000 | \$1,755,000 | |
| | Earthwork - mountainous | 2.7 | severe | \$1,500,000 | \$4,050,000 | |
| | Utility Relocation Cost | 2.7 | | | \$1,625,200 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$5,210,000 | |
| 10. Burroughs Street | 10' sidewalks adjacent to curbs - both sides | 0.32 | | \$284,000 | \$90,880 | \$4,107,000 |
| | Widening for left turn lane | 0.17 | | \$600,000 | \$102,273 | |
| | MOT, misc cost | 0.32 | | \$650,000 | \$208,000 | |
| | Improve intersection capacity at Collins Ferry Road and WV-705 | | 2 | \$1,250,000 | \$2,500,000 | |
| | Drainage (for curbed roadway) | 0.32 | | \$720,000 | \$230,400 | |
| | Earthwork | 0.32 | moderate | \$350,000 | \$112,000 | |
| | Buried Utility Cost | 0.32 | | | \$192,600 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$670,000 | |

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| 11. West Run Improvements - western section | Widening for bike climbing lanes - two locations | 1.08 | | \$130,000 | \$140,341 | \$11,904,000 |
| | RT and LT turn lanes at 4 locations - 12' lane, 400' total at each location | 0.91 | | \$520,000 | \$472,727 | |
| | Intersection improvements at 4 locations | | 4 | \$1,250,000 | \$5,000,000 | |
| | Intersection improvement at Van Voorhis road | | 1 | \$1,250,000 | \$1,250,000 | |
| | MOT, misc cost | 1.8 | | \$650,000 | \$1,170,000 | |
| | Earthwork | 1.8 | moderate | \$350,000 | \$630,000 | |
| | Utility Relocation Cost | 1.8 | | | \$380,200 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$2,860,000 | |
| 12. Stewartstown Road Improvements | Widen for additional 12' lane in each direction, no work on existing pavement | 0.62 | 1.24 | \$520,000 | \$645,667 | \$12,173,000 |
| | RT turn lane at two intersections between WV-705 and West Run Road | 0.08 | | \$520,000 | \$39,394 | |
| | Potential relocation of Stewartstown Road between WV-705 and West Run Road for new intersection and access road to housing complexes on west side of roadway. | 0.27 | 0.80 | \$520,000 | \$137,879 | |
| | Widening for bike climbing lanes - two locations | 1.2 | | \$130,000 | \$156,345 | |
| | New intersections along corridor | | 3 | \$1,000,000 | \$3,000,000 | |
| | Earthwork | 1.6 | severe | \$1,500,000 | \$2,400,000 | |
| | MOT, misc cost | 1.6 | | \$650,000 | \$1,040,000 | |
| | Utility Relocation Cost | 1.6 | | | \$963,000 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$3,790,000 | |
| 13. West Run Road Improvements - Eastern Section | Widen for additional 12' lane in each direction, no work on existing pavement | 0.77 | 1.54 | \$520,000 | \$798,909 | \$6,489,000 |
| | Turn lanes at West Run Road and Point Marion Road intersections | 0.15 | | \$520,000 | \$78,788 | |
| | Widening for bike climbing lane | 0.28 | | \$130,000 | \$36,932 | |
| | New intersections along corridor | | 2 | \$1,000,000 | \$2,000,000 | |
| | Earthwork | 0.77 | moderate | \$350,000 | \$269,500 | |
| | MOT, misc cost | 0.77 | | \$650,000 | \$500,500 | |
| | Utility Relocation Cost | 0.77 | | | \$463,400 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$2,340,000 | |
| 13. West Run Road Improvements - Eastern Section | Turn lanes at West Run Road and Point Marion Road intersections | 0.15 | | \$520,000 | \$78,788 | \$2,781,000 |
| | Widening for bike climbing lane | 0.28 | | \$130,000 | \$36,932 | |
| | Improve geometry throughout corridor | 0.77 | | \$1,000,000 | \$770,000 | |
| | Earthwork (assume entire corridor to accommodate bike lanes and geometry revisions) | 0.77 | moderate | \$350,000 | \$269,500 | |
| | MOT, misc cost | 0.77 | | \$650,000 | \$500,500 | |
| | Utility Relocation Cost | 0.77 | | | \$463,400 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$661,846 | |
| 14. Cheat Road Improvements | Widen for additional 12' lane in each direction, no work on existing pavement | 0.92 | 1.83 | \$520,000 | \$951,955 | \$5,853,000 |
| | Two 5' bike lanes | 0.92 | | \$420,000 | \$386,400 | |
| | Earthwork | 0.92 | moderate | \$350,000 | \$322,000 | |
| | Improve traffic signal | 1 | | \$40,000 | \$40,000 | |
| | MOT, misc cost | 0.92 | | \$650,000 | \$598,000 | |
| | Utility Relocation Cost | 0.92 | | | \$553,800 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$3,000,000 | |
| 15. Willowdale Road Sidewalk Improvement | 8' sidewalks adjacent to curbs - both sides | 1.5 | 3 | \$227,250 | \$681,750 | \$3,882,000 |
| | earthwork | 1.5 | moderate | \$175,000 | \$262,500 | |
| | MOT, misc cost | 1.5 | | \$325,000 | \$487,500 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$2,450,000 | |
| 16. Old Cheat Road / Cheat Road Bike Lanes | Two 5' bike lanes | 3.50 | | \$420,000 | \$1,470,000 | \$6,820,000 |
| | earthwork - average | 3.5 | moderate | \$175,000 | \$612,500 | |
| | MOT, misc cost | 3.50 | | \$325,000 | \$1,137,500 | |
| | Utility Relocation Cost | 3.50 | | | \$1,478,400 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$2,121,212 | |
| 17. Fairmont Road / Holland Avenue (US-19) | Widening for bike climbing lane | 1.22 | | \$130,000 | \$158,600 | \$11,354,000 |
| | 4' walk with 2' tree lawn behind curb - both sides | 1.8 | | \$227,200 | \$408,960 | |
| | earthwork - average | 1.8 | severe | \$1,200,000 | \$2,160,000 | |
| | Major Corridor TSM Improvements | 1.8 | | \$2,000,000 | \$3,600,000 | |
| | Drainage (for curbed roadway) | 1.8 | | \$720,000 | \$1,296,000 | |
| | MOT, misc cost | 1.8 | | \$325,000 | \$585,000 | |
| | Utility Relocation Cost | 1.8 | | | \$760,400 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$2,384,242 | |
| 18. Greenbag Road Improvements | Intersection improvements at 4 locations | | 4 | \$1,250,000 | \$5,000,000 | \$14,805,000 |
| | Roadway widening to accommodate two 11' lanes and 2 - 5' shoulders | 3.5 | | \$520,000 | \$1,820,000 | |
| | Widening for bike climbing lane | 1.91 | | \$173,333 | \$331,303 | |
| | 4' walk with 2' tree lawn behind curb - both sides | 1.24 | | \$227,200 | \$281,892 | |
| | earthwork | 3.5 | moderate | \$175,000 | \$612,500 | |
| | Truck routage signing | 3.5 | | \$17,600 | \$61,600 | |
| | Drainage (for curbed roadway) | 1.24 | | \$720,000 | \$893,318 | |
| | MOT, misc cost | 3.5 | | \$325,000 | \$1,137,500 | |
| | Utility Relocation Cost | 3.5 | | | \$1,478,400 | |
| Right-of-Way | see Right-of-Way calculation sheet | | | \$3,187,672 | | |
| 19. Dorsey Avenue | 4' walk with 2' tree lawn behind curb - one side | 1.8 | | \$113,600 | \$204,480 | \$3,893,000 |
| | Drainage (for curbed roadway) | 1.8 | | \$720,000 | \$1,296,000 | |
| | MOT, misc cost | 1.8 | | \$325,000 | \$585,000 | |
| | Utility Relocation Cost | 1.8 | | | \$760,400 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$1,046,120 | |
| | Improve connections to Decker's Creek Trail | | | \$500,000 | \$500,000 | |

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| 20. Brockway Rogers / Powell Avenues (WV-7) | Complete sidewalk connections - 4' sidewalk with 2' tree lawn | 1.63 | | \$113,600 | \$184,815 | \$6,076,000 |
| | Contingency cost for repair of existing sidewalk (assume 50% of the existing sidewalk requires repair) | 0.13 | | \$113,600 | \$14,544 | |
| | Retaining wall - Deckers Creek Bridge to CR 64 | 3300' long x 5' high | 16500 | \$100 / sf | \$1,650,000 | |
| | Deckers Creek Bridge Widening | 6' wide x 290' long | 1740 | \$200 / sf | \$348,000 | |
| | Drainage (for curbed roadway) earthwork | 1.63 | moderate | \$720,000 | \$1,171,364 | |
| | MOT, misc cost | 1.63 | | \$175,000 | \$284,706 | |
| | Utility Relocation Cost | 1.0 | | \$325,000 | \$326,170 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$424,000 | |
| 21. Earl Core Road (WV-7) West of I-68 | Improve connections to Decker's Creek Trail | | | \$500,000 | \$500,000 | \$8,790,000 |
| | 4' sidewalk with 2' tree lawn, both sides, entire corridor | 1.4 | | \$227,200 | \$318,080 | |
| | Turn lanes at CR 64, Hartman Run Road, Deckers Creek Road and Sturgis Avenue intersections | 0.30 | | \$600,000 | \$181,818 | |
| | Major Corridor TSM Improvements | 1.4 | | \$2,000,000 | \$2,800,000 | |
| | Driveway consolidation / reconstruction | 1.4 | | \$500,000 | \$700,000 | |
| | Drainage (for curbed roadway) earthwork | 1.40 | | \$720,000 | \$1,008,000 | |
| | MOT, misc cost | 1.4 | | \$650,000 | \$910,000 | |
| | Utility Relocation Cost | 1.4 | | | \$591,400 | |
| Right-of-Way | see Right-of-Way calculation sheet | | | \$1,780,165 | | |
| 22. Earl Core Road (WV-7) East of I-68 | 12' lane throughout corridor (TWLTL) | 2.1 | | \$520,000 | \$1,092,000 | \$8,540,000 |
| | 4' sidewalk with 2' tree lawn, both sides, entire corridor | 2.1 | | \$227,200 | \$477,120 | |
| | Consolidate / Redesign driveways | 2.1 | | \$500,000 | \$1,050,000 | |
| | earthwork | 2.1 | gentle | \$57,000 | \$119,700 | |
| | Drainage (for curbed roadway) earthwork | 2.1 | | \$720,000 | \$1,512,000 | |
| | MOT, misc cost | 2.1 | | \$650,000 | \$1,365,000 | |
| | Utility Relocation Cost | 2.1 | | | \$887,000 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$2,036,364 | |
| 23. New Road Connection from Willey Street to Downtown Campus Area | 11' lanes - 1 in each direction | 0.68 | 1.35 | \$476,667 | \$644,222 | \$5,929,000 |
| | 10' multi use trail on one side of roadway | 0.68 | | \$300,000 | \$204,000 | |
| | signalized intersection at Willey Street and Protzman Street | | 2 | \$1,000,000 | \$2,000,000 | |
| | earthwork | 0.68 | severe | \$1,500,000 | \$1,020,000 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$2,060,560 | |
| 24. Protzman / Falling Run Pedestrian and Bicycle Connector | 4' sidewalk with 2' tree lawn, one side, entire corridor | 0.38 | | \$113,600 | \$43,030 | \$1,204,000 |
| | 10' multiuse trail on one side of roadway | 0.38 | | \$300,000 | \$114,000 | |
| | earthwork - given existing walks, earthwork should be minimal even though terrain is mountainous | 0.38 | gentle | \$57,000 | \$21,660 | |
| | Drainage (for curbed roadway) earthwork | 0.38 | | \$720,000 | \$273,600 | |
| | MOT, misc cost | 0.38 | | \$650,000 | \$247,000 | |
| | Utility Relocation Cost | 0.38 | | | \$228,800 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$275,482 | |
| 25. Willey Street Improvements Scenario 1 | 4' sidewalk, one side, entire corridor | 1.7 | | \$113,600 | \$193,120 | \$11,604,000 |
| | Widening for bike climbing lane | 1.7 | | \$200,000 | \$340,000 | |
| | Retaining wall - College Avenue to Arnold Hall | 5280' long x 4' high | 21120 | \$100 / sf | \$2,112,000 | |
| | Geometric improvements - 4 locations | | 4 | \$1,250,000 | \$5,000,000 | |
| | Drainage (for curbed roadway) earthwork | 1.7 | | \$720,000 | \$1,224,000 | |
| | MOT, misc cost | 1.7 | | \$650,000 | \$1,105,000 | |
| | Utility Relocation Cost | 1.7 | | | \$1,023,200 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$606,061 | |
| 25. Willey Street Improvements Scenario 2 | 4' sidewalk, one side, entire corridor | 1.7 | | \$113,600 | \$193,120 | \$12,428,000 |
| | Widening for bike climbing lane | 1.7 | | \$200,000 | \$340,000 | |
| | Retaining wall - College Avenue to Arnold Hall | 5280' long x 4' high | 21120 | \$100 / sf | \$2,112,000 | |
| | Geometric improvements - 4 locations | | 4 | \$1,250,000 | \$5,000,000 | |
| | Turn lanes at Hampton Avenue, College Avenue, Price Street, Monongalia Avenue, Cornell Avenue, Prospect Street (left turn only - 2 lanes at each intersection). | 0.45 | | \$600,000 | \$272,727 | |
| | Drainage (for curbed roadway) earthwork | 1.7 | | \$720,000 | \$1,224,000 | |
| | MOT, misc cost | 1.7 | | \$650,000 | \$1,105,000 | |
| | Utility Relocation Cost | 1.7 | | | \$1,023,200 | |
| Right-of-Way | see Right-of-Way calculation sheet | | | \$1,157,025 | | |
| 26. WVU Campus Bus Rapid Transit | Connection from Jones Avenue to Medical Center Drive - provide new roadway between parking lots | 0.34 | | \$600,000 | \$204,886 | \$1,140,000 |
| | Drainage (for curbed roadway) earthwork | 0.34 | | \$720,000 | \$245,864 | |
| | Bus Routing signage | 0.34 | | \$17,600 | \$6,010 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$682,955 | |
| 27. Grant Avenue Bicycle / Pedestrian Connector | 10' multi use trail | 0.25 | | \$300,000 | \$75,000 | \$905,000 |
| | earthwork | 0.25 | severe | \$1,500,000 | \$375,000 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$454,545 | |
| 28. White Park / Caperton Trail Connection | 10' multi use trail | 0.46 | | \$300,000 | \$138,000 | \$1,680,000 |
| | Structure over Don Knotts Boulevard | 150' long x 16' wide | 2400 | \$200 / sf | \$480,000 | |
| | Structure over Cobun Creek | 20' long x 16' wide | 320 | \$200 / sf | \$64,000 | |
| | earthwork | 0.46 | moderate | \$350,000 | \$161,000 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$836,364 | |
| | Two 5' bike lanes | 1.5 | | \$420,000 | \$630,000 | |
| | Add 1-12' lane to complete 4'-lane roadway | 1.4 | | \$520,000 | \$728,000 | |

| | | | | | | |
|---|---|------------------------------------|----------|---------------|--------------|-----------------|
| 29. Grafton Road (US-119) | Turn lanes at Goodyear / Star Home Center Plaza, Fawley Lane (left turn only, 1 lane at each intersection) | 0.08 | | \$520,000 | \$39,394 | \$5,459,000 |
| | Retaining wall - Don Knotts Boulevard to Fawley Lane | 4268' long x 6' high | 25608 | \$100 / sf | \$2,560,800 | |
| | earthwork | 1.5 | moderate | \$350,000 | \$525,000 | |
| | MOT, misc cost | 1.5 | | \$650,000 | \$975,000 | |
| | Utility Relocation Cost | 1.5 | | | \$902,800 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$1,866,667 | |
| 30. Stewart Street Improvements | Widening for bike climbing lane | 1.0 | | \$250,000 | \$250,000 | \$10,910,000 |
| | 4' sidewalk, 2' tree lawn, both sides | 2.20 | | \$227,200 | \$499,840 | |
| | Geometric improvements - 3 locations | | 3 | \$1,250,000 | \$3,750,000 | |
| | Drainage (for curbed roadway) | 1.0 | | \$720,000 | \$720,000 | |
| | MOT, misc cost | 1.5 | | \$650,000 | \$975,000 | |
| | Utility Relocation Cost | 1.5 | | | \$902,800 | |
| Right-of-Way | see Right-of-Way calculation sheet | | | \$3,812,121 | | |
| 31. PRT Extension from University Health Sciences to Monongalia General Hospital | PRT track | 1.3 | | \$20,000,000 | \$26,000,000 | \$57,010,000 |
| | New vehicles - 7 per one mile (one way) | 1.3 | 19 | \$400,000 | \$7,600,000 | |
| | 1 station - Monongalia Hospital | | 1 | \$10,000,000 | \$10,000,000 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$13,409,091 | |
| 32. PRT Extension from Monongalia General Hospital to Glenmark Centre | PRT track | 2.8 | | \$20,000,000 | \$56,000,000 | \$102,985,000 |
| | New vehicles - 7 per one mile (one way) | 2.8 | 40 | \$400,000 | \$16,000,000 | |
| | 2 stations - Mileground area, Glenmark Centre | | 2 | \$10,000,000 | \$20,000,000 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$10,984,848 | |
| 33. Grumbein's Island Grade Separation | Grade separate island from University Avenue | | | | \$10,000,000 | \$10,000,000 |
| 34. Riddle Street Improvement | Earthwork - widen 15' overall | 0.81 | moderate | \$ 350,000.00 | \$284,905 | \$3,617,000 |
| | Widening for bike climbing lane | 0.81 | | \$250,000 | \$203,504 | |
| | 4' sidewalk, 2' tree lawn, both sides | 0.81 | | \$227,200 | \$184,944 | |
| | MOT, misc cost | 0.81 | | \$650,000 | \$529,110 | |
| | Utility Relocation Cost | 0.81 | | | \$490,000 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$1,924,036 | |
| 35. 8th Street Bridge over Monongahela River and Roadway Connection to TIF Development Area Interchange to I-79 Scenario 3 | Structure over Monongahela River | 1200' long x 60' wide | 72000 | \$200 / sf | \$14,400,000 | \$39,401,000 |
| | Turn lanes at Monongalia Boulevard / 8th Street, Riverside Drive / WV-100, WV-100 / North Dents Road, North Dents Road / interchange connector road - assume 2 left turn lanes, 2 right turn lanes at each intersection | 0.61 | | \$600,000 | \$363,636 | |
| | Connection from North Dents Road to interchange | 0.25 | | \$600,000 | \$147,727 | |
| | Reconstructed intersection at 8th and Beechurst | | 1 | \$1,250,000 | \$1,250,000 | |
| | Earthwork - moderate terrain | 2.00 | moderate | \$350,000 | \$700,000 | |
| | New signal at 8th and Monongahela Avenue | | 1 | \$1,000,000 | \$1,000,000 | |
| | Monongahela Avenue widening - 11' | 0.33 | | \$550,000 | \$181,500 | |
| | Riverside Avenue widening - 2' | 0.5 | | \$100,000 | \$50,000 | |
| | WV-100 widening - 2' | 0.22 | | \$100,000 | \$22,000 | |
| | North Dents Road widening - 4' | 0.31 | | \$200,000 | \$62,000 | |
| | 4' sidewalks with 2' tree lawns, both sides | 2 | | \$227,200 | \$454,400 | |
| | 5' bike lanes - both sides | 2 | | \$420,000 | \$840,000 | |
| | Potential PRT impacts | | | \$7,500,000 | \$7,500,000 | |
| | Drainage (for curbed roadway) | 2.0 | | \$720,000 | \$1,440,000 | |
| | MOT, misc cost | 2.0 | | \$650,000 | \$1,300,000 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$9,688,742 | |
| 36. New Roadway Connecting from Mileground Road / WV-705 to Hartman Run Road Scenario 3 | Structure over Hartman Run | 50' long x 50' wide | 2500 | \$200 / sf | \$500,000 | \$16,463,000 |
| | New two lane, 12' lane roadway | 0.75 | 1 | \$600,000 | \$600,000 | |
| | 4' sidewalks with 2' tree lawns, both sides | 0.75 | | \$227,200 | \$170,400 | |
| | 5' bike lanes - both sides | 0.75 | | \$420,000 | \$315,000 | |
| | Drainage (for curbed roadway) | 0.75 | | \$720,000 | \$540,000 | |
| | earthwork | 0.75 | severe* | \$2,000,000 | \$1,500,000 | |
| | Reconstructed intersection at WV-705 and Mileground Road | | 1 | \$1,750,000 | \$1,750,000 | |
| | New signal at connector road and Hartman Run Road | | 1 | \$1,000,000 | \$1,000,000 | |
| | MOT, misc cost | 0.75 | | \$650,000 | \$487,500 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$9,600,000 | |
| | * Earthwork likely to be significant due to terrain | | | | | |
| 37. Airport Industrial Road extension to WV-7 Scenario 3 | New two lane, 12' lane roadway | 0.72 | 1.44 | \$520,000 | \$748,800 | \$11,800,000 |
| | widen existing roadway and provide shoulders - 8' total widening | 0.78 | | \$346,667 | \$270,400 | |
| | earthwork | 1.50 | severe | \$1,500,000 | \$2,250,000 | |
| | Reconstructed intersection at WV-7 | | 1 | \$1,250,000 | \$1,250,000 | |
| | MOT, misc cost | 1.50 | | \$650,000 | \$975,000 | |
| Right-of-Way | see Right-of-Way calculation sheet | | | \$6,305,455 | | |
| 38. Monongahela Boulevard Bike Lanes | | | | | | |
| 39. Intersection Capacity and Safety Improvement Program | Rural Intersection Improvements - add 1-12' turn lane, 200' long, 10 locations | 0.08 | 10 | \$520,000 | \$393,939 | \$36,873,000.00 |
| | Urban Intersection Improvements - add 1-11' turn lane, 200' long, 13 locations. | 0.08 | 13 | \$550,000 | \$541,667 | |
| | CBD Intersection Improvements - add 1-10' turn lane, 200' long; 1-10' thru lane, 200' long, 7 locations. | 0.08 | 7 | \$500,000 | \$265,152 | |
| | Signal Optimization / change in traffic control | | 15 | \$1,250,000 | \$18,750,000 | |
| | Geometric deficiencies corrections | | 8 | \$500,000 | \$4,000,000 | |
| | Improved pedestrian and bicycle accommodations | | 31 | \$100,000 | \$3,100,000 | |
| | Right-of-Way | see Right-of-Way calculation sheet | | | \$9,821,396 | |

| | | |
|--|--|---|
| 40. Regional Pedestrian Safety and Sidewalk Connectivity | See Morgantown Pedestrian Safety Plan: | \\Col1\projects\PR50755\doc\Previous and Existing Documents\downloaded documents\Morgantown Pedestrian Safety Plan.pdf |
|--|--|---|

| Project / Corridor | Location | Length (ft) | Additional Width to be Acquired | Area (acre) | Cost / Acre | Right-of-Way Cost | Right-of-Way Total Cost | Comments |
|--|---|-------------|---------------------------------|-------------|----------------|-------------------|-------------------------|--|
| 1. WV 705 Improvements | Stewartstown Road to Willowdale Road | 4849 | 74 | 8.24 | \$500,000.00 | \$4,118,755.74 | \$12,117,688.25 | Width assumes 2 - 12' lanes, 2 - 5' bike lanes, 2 - 10' sidewalks, 10' on each side for grading. Cost / acre lower due to less development. |
| | Willowdale Road to University Boulevard | 6336 | 46 | 6.69 | \$750,000.00 | \$5,018,181.82 | | Width assumes 2 - 12' lanes, 2 - 5' bike lanes, 2 - 4' sidewalks with a 2' tree lawn. |
| | North side - University Boulevard to Monongahela Boulevard | 3583 | 23 | 1.89 | \$750,000.00 | \$1,418,887.74 | | Width assumes 1 - 12' lane, 1 - 5' bike lane, 1 - 4' sidewalk with a 2' tree lawn. |
| | South side - University Boulevard to Kroger Plaza | 1102 | 23 | 0.58 | \$750,000.00 | \$436,398.07 | | Width assumes 1 - 12' lane, 1 - 5' bike lane, 1 - 4' sidewalk with a 2' tree lawn. |
| | South side - Kroger Plaza to monongahela Boulevard | 2421 | 27 | 1.50 | \$750,000.00 | \$1,125,464.88 | | Width assumes 1 - 12' lane, 1 - 5' bike lane, 1 - 8' sidewalk with a 2' tree lawn. |
| | West Run Extension | 14256 | 146 | 47.78 | \$500,000.00 | \$23,890,909.09 | | Width assumes 4 - 12' lanes, 2 - 8' shoulders, 2 - 5' bike lanes, 2 - 4' walks with 2' separation from roadway, 30' on either side for grading. |
| 2. West Run Extension and Lazelle Union Road (WV-100) Connection to US 19 | Scotts Run Road Improvement | 2635 | 54 | 3.27 | \$500,000.00 | \$1,633,264.46 | \$34,360,537.19 | Width assumes 2 - 12' lanes, 2 - 4' shoulders, 2 - 5' bike lanes, 2 - 4' walks with 2' separation from roadway |
| | Lazelle-Union Road (WV-100) | 14256 | 54 | 17.67 | \$500,000.00 | \$8,836,363.64 | | Width assumes 2 - 12' lanes, 2 - 4' shoulders, 2 - 5' bike lanes, 2 - 4' walks with 2' separation from roadway |
| | Lazelle-Union Road (WV-100) | 46464 | 10 | 10.67 | \$500,000.00 | \$5,333,333.33 | | Width assumes addition of 2 - 5' bike lanes; Subtract Project 2 length to account for construction of bike lanes in Project 2. |
| 4. I-79 / Chaplin Hill Road / US-19 / Lazelle-Union Road Interchange Access Improvements | | 3326 | 44 | 10.36 | \$750,000.00 | \$7,770,000.00 | \$7,770,000.00 | Width assumes 2 - 12' lanes and 10' of grading on each side. Also includes an additional 2 acres of right of way for grade separation of Chaplin Hill Road and University Town Center Road and 5 acres of right of way for any I-79 interchange improvements. |
| | | | | | \$1,000,000.00 | \$11,000,000.00 | | Assumes construction of a standard diamond interchange. Requires a total of 29 acres of right-of-way. Assume existing I-79 will encompass a portion of that right-of-way. Assume an additional 11 acres will need to be acquired. (using ADOT interchange guidelines as a guide for right-of-way requirement). |
| 5. New I-79 Interchange at Business Park Site and Connecting Roadways | | | | | | | \$10,170,075.76 | |
| | | | | | | | | |
| 6. Roadway Connection from New I-79 interchange to Monongahela Boulevard | From I-79 to Monongahela River | 3839 | 89 | 7.84 | \$500,000.00 | \$3,921,843.43 | \$12,045,454.55 | Width assumes 4 - 12' lanes, 1 - 10' multi-use path with 5' separation from roadway, 1 - 4' walks with 2' separation from roadway, 10' on either side for grading. |
| | From Monongahela River to Patteson / Monongahela Boulevard intersection | 2497 | 109 | 6.25 | \$1,000,000.00 | \$6,248,232.32 | | Width assumes 4 - 12' lanes, 1 - 10' multi-use path with 5' separation from roadway, 1 - 4' walks with 2' separation from roadway, 20' on either side for grading. |
| 6B. PRT Connection New Business Park to Evansdale Campus | | 7920 | 50 | 24.09 | \$500,000.00 | \$12,045,454.55 | \$12,045,454.55 | Assumes 50' right-of-way width for track plus additional 5 acres per station for station platform, track bypass, and access. Assumes lower right-of-way cost for University owned land since this will serve University; property may also be acquired as an easement along track, resulting in lower cost. |
| 7. Van Voorhis Road Improvements | | 7392 | 40.00 | 6.79 | \$1,000,000.00 | \$6,787,878.79 | \$6,787,878.79 | Assume 6' width for lane adjustment, 1-12' lane for bus HOV lane SB, 2-5' bike lanes, 2-4' sidewalks with 2' tree lawns. |
| 7A. Van Voorhis Road Improvements - ends at West Run | | 4987 | 40.00 | 4.58 | \$1,000,000.00 | \$4,579,430.67 | \$4,579,430.67 | Assume 6' width for lane adjustment, 1-12' lane for bus HOV lane SB, 2-5' bike lanes, 2-4' sidewalks with 2' tree lawns. |
| | | 4488 | 8 | 0.82 | \$1,250,000.00 | \$1,030,303.03 | | See Scenarios document for right-of-way assumptions. |
| 8. Beechurst Avenue Improvements | 8th Street to University Boulevard | 1848 | 6 | 0.25 | \$1,250,000.00 | \$318,181.82 | \$1,348,484.85 | |
| | University Boulevard to Foundry Street | 14256 | 12 | 3.93 | \$1,250,000.00 | \$4,909,090.91 | | Assumes 4' existing walks - widen to 10' on both sides (additional 12' of right-of-way) |
| 9. University Avenue Improvements | | 3440 | 3 | 0.24 | \$1,250,000.00 | \$296,143.25 | \$5,205,234.16 | Assumes existing traffic lanes are 12' wide - widen to 15' bicycle climbing lanes (additional 3' of right-of-way) |
| | | 1690 | 12 | 0.47 | \$1,000,000.00 | \$465,454.55 | | Assumes 4' existing walk on one side of roadway - widen to 8' walks on both sides (additional 12' of right-of-way) |
| 10. Burroughs Street | | | | | | | \$672,066.12 | |

| | | | | | | | |
|--|--|---------|----|------|----------------|----------------|--|
| 19. Dorsey Avenue | New Sidewalk - Virginia Circle to Glen Oaks Drive (Kingwood Pike area) | 3346 | 12 | 0.92 | \$500,000.00 | \$460,881.54 | Assumes additional 6' of right-of-way for construction of 4' walk and 2' treelawn. Assumes additional 6' of right-of-way for construction of 4' walk and 2' treelawn. Assumes existing traffic lanes are 11' wide - widen to 15' bicycle climbing lanes (additional 4' of right-of-way) Assumes additional 6' of right-of-way for construction of 4' walk and 2' treelawn to add a sidewalk on one side of the roadway. Does not include length of roadway from Ford Street to Hudson Street. Existing sidewalk along one side of roadway - assume minimal widening may need to be performed. Assumes additional 6' of right-of-way for construction of 4' walk and 2' treelawn. Sidewalk, where needed to complete connections Includes width to construct footer Assumes sidewalk will fit mostly within existing shoulder area. Provide 1' of width for walk construction, curb. Provide sidewalk on both sides. Assume additional right-of-way for easements throughout the corridor to reconstruct driveways or consolidate entrances. Assumes 4 turn lanes at CR 64 (LT / RT turns in both directions), RT turn lanes only at Hartman Run Road, Deckers Creek Road, and two Sturgis Avenue connectors. 12' wide lane. Assumes 4' walk, 2' tree lawn; portion of walk will be constructed within 4' existing shoulder width. Provide sidewalks, both sides. 12' lane for TWLTL, entire corridor 11' lanes - 1 in each direction 10' multiuse trail on one side of roadway Additional right-of-way for intersection construction Assumes 10' multi-use path; portion of path will be constructed within 4' existing walk width Assumes 4' walk, 2' tree lawn; portion of walk will be constructed within 4' existing walk width. Provide sidewalk on one side. |
| | New Sidewalk - from Deckers Creek Road to Rt 7 | 1135 | 12 | 0.31 | \$500,000.00 | \$156,336.09 | |
| | | 10092 | 4 | 0.93 | \$500,000.00 | \$463,360.88 | |
| 20. Brockway Rogers / Powell Avenues (WV-7) | | 7213 | 6 | 0.99 | \$1,000,000.00 | \$993,526.17 | |
| | Sidewalk, minimal widening - Ford Street to Hudson Street | 2291 | 1 | 0.05 | \$1,000,000.00 | \$52,594.12 | |
| | | 8590 | 6 | 1.18 | \$750,000.00 | \$887,396.69 | |
| 21. Earl Core Road (WV-7) West of I-68 | Deckers Creek Bridge to CR 64 | 3300 | 5 | 0.38 | \$750,000.00 | \$284,090.91 | |
| | | 7392 | 2 | 0.34 | \$1,000,000.00 | \$339,393.94 | |
| | | 1600 | 12 | 0.44 | \$1,000,000.00 | \$440,771.35 | |
| 22. Earl Core Road (WV-7) East of I-68 | Turn lanes at CR 64, Hartman Run Road, Deckers Creek Road and Sturgis Avenue intersections | 11088 | 4 | 1.02 | \$500,000.00 | \$509,090.91 | |
| | | 11088 | 12 | 3.05 | \$500,000.00 | \$1,527,272.73 | |
| | | 3568 | 22 | 1.80 | \$500,000.00 | \$901,010.10 | |
| 23. New Road Connection from Willey Street to Downtown Campus Area | | 3568 | 10 | 0.82 | \$500,000.00 | \$409,550.05 | |
| | Intersection at Willey Street and Protzman Street | | | | | \$750,000.00 | |
| | | 2000 | 6 | 0.28 | \$750,000.00 | \$206,611.57 | |
| 24. Protzman / Falling Run Pedestrian and Bicycle Connector | | 2000 | 2 | 0.09 | \$750,000.00 | \$68,870.52 | |
| | | | | | | | |
| 25. Willey Street Improvements Scenario 1 | College Avenue to Arnold Hall | 5280 | 5 | 0.61 | \$1,000,000.00 | \$606,060.61 | |
| | College Avenue to Arnold Hall | 5280 | 5 | 0.61 | \$1,000,000.00 | \$606,060.61 | |
| | Turn lanes at Hampton Avenue, College Avenue, Price Street, Monongalia Avenue, Cornell Avenue, Prospect Street (left turn only - 1 lane at each intersection). | 2400 | 10 | 0.55 | \$1,000,000.00 | \$550,964.19 | |
| 26. WVU Campus Bus Rapid Transit | Jones Avenue to Medical Drive | 1803.00 | 22 | 0.91 | \$750,000.00 | \$682,954.55 | |
| | | 1320 | 30 | 0.91 | \$500,000.00 | \$454,545.45 | |
| 27. Grant Avenue Bicycle / Pedestrian Connector | | 2429 | 30 | 1.67 | \$500,000.00 | \$836,363.64 | |
| | | | | | | | |
| 28. White Park / Caperton Trail Connection | | 7392 | 22 | 3.73 | \$500,000.00 | \$1,866,666.67 | |
| | From 0.1 mile north of Scott Avenue to Greenbag Road | | | | | | |
| 29. Grafton Road (US-119) | | 7920 | 10 | 1.82 | \$500,000.00 | \$909,090.91 | |
| | | | | | | | |

| | | | | | | | | |
|---|---|-------|----|-------|----------------|-----------------|----------------|---|
| | Turn lanes at Goodyear / Star Home Center Plaza, Fawley Lane | 400 | 12 | 0.11 | \$500,000.00 | \$55,096.42 | | Assume 200' length and 12' width. |
| 30. Stewart Street Improvements | | 5280 | 10 | 1.21 | \$1,000,000.00 | \$1,212,121.21 | | Assumes existing traffic lanes are 10' wide - widen to 15' bicycle climbing lanes (additional 5' of right-of-way) |
| | Intersection improvements - Willowdale Road, Protzman Street, Chestnut Ridge Road | | | | | \$1,000,000.00 | \$3,812,121.21 | Additional right-of-way for geometric improvements |
| 31. PRT Extension from University Health Sciences to Monongalia General Hospital | From Lorentz Street to WV-705 | 6864 | 6 | 0.95 | \$1,000,000.00 | \$945,454.55 | | Assumes 4' sidewalk and 2' tree lawn. |
| | From Van Gilder Street to WV-705 | 4752 | 6 | 0.65 | \$1,000,000.00 | \$654,545.45 | | Assumes 4' sidewalk and 2' tree lawn. |
| | | 6864 | 50 | 17.88 | \$750,000.00 | \$13,409,090.91 | | Assumes 50' right-of-way width for track plus additional 5 acres per station for station platform, track bypass, and access. Assumes lower right-of-way cost for University owned land since this will serve University; property may also be acquired as an easement along track, resulting in lower cost. |
| 32. PRT Extension from Monongalia General Hospital to Glenmark Centre | | 14784 | 50 | 21.97 | \$500,000.00 | \$10,984,848.48 | | Assumes 50' right-of-way width for track plus additional 5 acres per station for station platform, track bypass, and access. Assumes lower right-of-way cost for University owned land since this will serve University; property may also be acquired as an easement along track, resulting in lower cost. |
| 34. Riddle Street Improvement | | 4298 | 15 | 1.48 | \$750,000.00 | \$1,110,020.66 | | Assumes existing traffic lanes are 10' wide - widen to 15' bicycle climbing lanes (additional 5' of right-of-way) |
| | | 4298 | 11 | 1.09 | \$750,000.00 | \$814,015.15 | | Assumes 4' sidewalk and 2' tree lawn, 5' of grading behind walk. |
| 35. 8th Street Bridge over Monongahela River and Roadway Connection to TIF Development Area Interchange to I-79 | Turn lanes at Monongalia Boulevard / 8th Street, Riverside Drive / WV-100, WV-100 / North Dents Road, North Dents Road / interchange connector road - assume 2 left turn lanes, 2 right turn lanes at each intersection | 3200 | 12 | 8.82 | \$750,000.00 | \$6,611,570.25 | | assumes 12' lane width. |
| | New connection between North Dents Road and Interchange. | 1300 | 44 | 1.31 | \$500,000.00 | \$656,565.66 | \$9,688,741.97 | assumes 2 - 12' lanes, 10' on each side for grading. |
| Scenario 3 | | | | | | | | |
| | | 1742 | 11 | 0.44 | \$1,000,000.00 | \$440,000.00 | | |
| | Monongahela Avenue widening - 11' | 2640 | 2 | 0.12 | \$500,000.00 | \$60,606.06 | | |
| | Riverside Avenue widening - 2' | 1162 | 2 | 0.05 | \$500,000.00 | \$26,666.67 | | |
| | WV-100 widening - 2' | 1637 | 4 | 0.15 | \$500,000.00 | \$75,151.52 | | |
| | North Dents Road widening - 4' | | 12 | 0.00 | \$750,000.00 | \$0.00 | | 6' sidewalks (4' sidewalk, 2' tree lawn), both sides |
| 36. Mileground Road / WV-705 Connector to Hartman Run Road | | 10560 | 10 | 2.42 | \$750,000.00 | \$1,818,181.82 | | 5' bike lanes, both sides. |
| Scenario 3 | | 3960 | 66 | 6.00 | \$1,600,000.00 | \$9,600,000.00 | | Width assumes two 12' lanes, two 5' bike lanes, two 4' walks with 2' tree lawns, 10' of grading on either side of the roadway |
| | | | | | | | | |
| 37. Airport Industrial Road extension to WV-7 | Airport property to intersection with Wolfe Run Road | 3802 | 66 | 5.76 | \$750,000.00 | \$4,320,000.00 | | Width assumes two 12' lanes, two 2' shoulders, 10' of grading on either side of the roadway. Lower price considers land to be airport property (undeveloped, strong desire for roadway). |
| Scenario 3 | Wolfe Run Road to Dughill Road to interseccion with WV-7 | 4118 | 28 | 2.65 | \$750,000.00 | \$1,985,454.55 | | Assumes 12' turn lane |
| | Rural Locations (10 locations) | 400 | 12 | 1.10 | \$500,000.00 | \$550,964.19 | | Assumes 11' turn lane |
| 39. Intersection Capacity and Safety Improvement Program | Urban Locations (13 locations) | 400 | 11 | 1.31 | \$750,000.00 | \$984,848.48 | | Assumes 10' turn lane, 10' thru lane |
| | CBD locations (7 locations) | 400 | 20 | 1.29 | \$1,000,000.00 | \$1,285,583.10 | | Assume \$500,000 / intersection to accommodate any geometric deficiency correction |
| | Geometric Deficiency correction (14 locations) | | | 14.00 | \$500,000.00 | \$7,000,000.00 | | |

Project/Corridor**Existing Conditions / Constraints / Opportunities****Cost**

| | | | | |
|----------|--|--|--|--------------|
| 1 | WV 705 Improvements | Corridor Length: 2.7 miles Corridor classification: Urban | <p>Existing Conditions:</p> <ol style="list-style-type: none"> Predominately 4-lane roadway. Two main corridors – <ol style="list-style-type: none"> Corridor A: Stewartstown Road to Willowdale Avenue – 4-lane divided with narrow median with paved shoulders, urban with growing development Corridor B: Willowdale Avenue to Monongahela Boulevard – 4-lane divided with Two Way Left Turn Lane (TWLTL), predominately curb and gutter, urban, dense development. Corridor B enters into the Medical and Evansdale Campuses for WVU. Corridor A – no sidewalks, new commercial developments well outside of roadway right-of-way (ROW), rolling terrain. Corridor B – sidewalks adjacent to curbed roadway, dense development (primarily commercial), level terrain. Key locations access by corridor – Suncrest Towne Centre, Willowdale Road / Elmer Prince Drive / University Avenue - access to Mountaineer field, NIOSH / CDC, Monongalia Hospital, Robert C. Bryd Health Sciences, / Medical Campus, Evansdale residential complex and Evansdale campus buildings, WVU student recreation center, Suncrest Middle School, Krepps Park, WVU Coliseum <p>Constraints:</p> <ol style="list-style-type: none"> Limited ROW available without major impacts to businesses. Avoid / minimize impacts to key locations: Suncrest United Methodist Church, Erickson Alumni Center, Christian & Missionary Alliance Church, Krepps Park, Fieldcrest Hall High tension tower adjacent to Krepps Park. <p>Opportunities:</p> <ol style="list-style-type: none"> Construct wider sidewalks (8’ walk with 2’ tree lawn) along south side of Patteson Drive near Evansdale Campus area, taking advantage of adjacent property setbacks and undeveloped lawn areas. At Fine Arts Drive, shift roadway corridor to south slightly onto lawn areas adjacent to Creative Arts Center (CAC) to minimize impacts to Krepps Park and void high tension power line tower just west of Laurel Street. <p>Assumptions:</p> <ol style="list-style-type: none"> Signal upgrades at major intersections (6 total), signal timing improvement Replace retaining wall along Kroger plaza; add retaining wall along south side of WV-705 between Van Voorhis Road and North Elementary School Entrance. Corridor A – 6-lane, paved shoulder roadway with bike lanes and shoulders: <ol style="list-style-type: none"> Maintain grass median for turn lanes at intersections. Widen roadway to provide 12’ lane on each side of roadway. Provide two 5’ bike lanes. Add 10’ sidewalks on both sides or roadway Corridor B – 6-lane, curbed urban roadway with bike lanes and minimum and preferred walks: <ol style="list-style-type: none"> Maintain TWLTL to accommodate access to adjacent business. Widen 12’ on both sides of roadway to accommodate additional thru lane. Provide a 5’ bike lane on each side of the roadway, adjacent to the curb. Widen roadway to accommodate a minimum 4’ width sidewalk with a 2’ tree lawn. Right-of-way impacts due to widening will need to be reviewed to determine which side of roadway should be widened. Within the University Avenue / Monongahela Boulevard corridor (Patteson Drive), construct 8’ sidewalk with 2’ tree lawn along south side of roadway, southwest of the Kroger Plaza. Maintain 4’ sidewalks with 2’ tree lawns elsewhere. Right-of-Way impacts - <ol style="list-style-type: none"> Corridor A – assumes acquisition of 54’ of right-of-way to accommodate the travel lanes, bike lanes, and walk; acquisition of 20’ utility easement on one side of the roadway. Corridor B - assumes acquisition of 46’ to 50’ of right-of-way to accommodate the travel lanes, bike lanes, and walk. | \$51,844,000 |
| 2 | West Run Extension and Lazelle Union Road (WV-100) Connection to US 19 | Corridor Length: 3.4 miles Corridor Classification: Rural | <p>Existing Conditions – West Run:</p> <ol style="list-style-type: none"> Existing West Run at tie in is 2-lane roadway. Scotts Run Road is a two lane road. | \$65,343,000 |

2. West Run Extension and Scotts Run corridors are relatively undeveloped with mountainous terrain.
3. At river crossing, extension crosses Collins Ferry Road and several residences.

Existing Conditions – Lazelle-Union Road (WV-100)

1. 2-lane roadway.
2. Adjacent to river on east side, mountainous terrain on west side of roadway.
3. Roadway is relatively level, with some rolling terrain in the Granville / Westover area.
4. In Granville and Westover limits, roadway has minimal width existing walks on both sides and is adjacent to commercial and residential properties.
5. Key Locations within and accessed by corridor: railway siding and tipple along Lazelle-Union Road at West Run Extension crossing.

Constraints:

1. Railroad on west side of Lazelle-Union Road.
2. Tipple location (minimize impacts)
3. Terrain at West Run Extension location.

Opportunities:

1. May be able to utilize existing cut areas in the mountainside for an existing roadway near Collins Ferry Road for West Run Extension, potentially reducing excavation or embankment costs.
2. Extend work on Lazelle Union Road north to intersection with Fort Martin Road to avoid most of the residence impacts on the east side of the river and provide logical intersection with existing roadways.
3. Utilize Scotts Run Road alignment to create a tie in at the Chaplin Road / Monongahela Boulevard intersection.

Assumptions:

1. Provide 8' shoulders on West Run Extension and 4' shoulders on Lazelle-Union Road and Scotts Run Road.
2. Provide two-12' lanes on Lazelle-Union Road due to truck volume. No reconstruction of existing pavement.
3. Provide two-12' lanes on Scotts Run Road. No reconstruction of existing pavement.
4. Provide a 5' bike lane in each direction and 4' walk with a 2' lawn on each side of roadway. Roadway will be curbed.
5. Provide closed storm sewer along both roadways.
6. Right-of-Way Impacts –
 - a. Assume overhead utilities are buried within roadway right-of-way.
 - b. Minimize impacts to adjacent railroad – push most of roadway widening towards river wherever possible. Will require retaining walls.
 - c. Provide 60' additional width of right-of-way for construction of extension over mountain (15' fill average, 2:1 side slopes).

Corridor Length: 10.5 miles Corridor Classification: Rural / Urban

Existing Conditions – West Run:

1. 2-lane roadway
2. Some rolling terrain in the Granville / Westover area.
3. In Granville and Westover limits, roadway has minimal width existing walks on both sides and is adjacent to commercial and residential properties.
4. Key Locations within and accessed by corridor: tipple on northern side of Granville, Westover Post Office.

Constraints:

1. Tipple location (minimize impacts)
2. Limited ROW available without major impacts to businesses and residences in Granville and Westover.

Assumptions:

1. Maintain existing walk (will require reconstruction after roadway is widened. Assume existing walk is 5' wide.
2. Provide two-5' bike lanes.
3. Reconstruct existing pavement to repair truck damage – from PA state line on US-19 to Westover Triangle.
4. Assume overhead utilities are buried within roadway right-of-way.
5. Right-of-way assumption: provide 10' of additional right-of-way to construct bike lanes.

Corridor Length: 0.63 mile Corridor Classification: Rural / Urban

Existing Conditions –

1. 4-lane roadway with turn lanes at intersection and interchange.
2. I-79 interchange is diamond interchange with a loop ramp in the NW quadrant.
3. Rolling terrain with mountainous terrain adjacent to roadway.

3 Lazelle-Union Road (WV-100) Improvements

\$22,421,000

4 I-79 / Chaplin Hill Road / US-19 / Lazelle-Union Road Interchange Access Improvements

\$21,535,000

4. Key locations within corridor area and accessed by corridor area: University Town Center Plaza, I-79, Sheetz at intersection of Chaplin Hill Road and Monongahela Boulevard, WVU Coliseum.

Constraints:

1. Proximity of existing interchange to University Town Center
2. Terrain adjacent to roadway is mountainous.

Opportunities:

1. Some of the roadway width dedicated to turn lanes into University Town Center may be used for grade separated access roads from Chaplin Hill Road to University Town Center.

Assumptions:

1. Provide 2-12' wide lanes, one in each direction, within project limits.
2. Assume grade separation of Chaplin Hill Road and University Town Center Road will require additional right-of-way, structure, and access roadways for traffic to the University Town Center.
3. Assume upgrade to I-79 may include widening of existing ramps, signalization, new ramp(s) or ramp(s) alignment.
4. Assume overhead utilities are buried within roadway right-of-way.
5. Right-of-way assumptions:
 - a. Include 2 acres of right of way for grade separation of Chaplin Hill Road and University Town Center Road.
 - b. Include 5 acres of right of way for any I-79 interchange improvements.

Corridor Length: 0.3 mile Corridor Classification: Rural / Urban

Existing Conditions –

1. Undeveloped area except at tie in point with University Town Center Drive.
2. Mountainous terrain
3. Few right-of-way constraints
4. Key locations within corridor area and accessed by corridor area: University Town Center Plaza, I-79.

Constraints:

1. Terrain adjacent to roadway is mountainous; significant earthwork costs.
2. I-79 overpass over existing local roadway; will likely require reconstruction or widening.

Opportunities:

1. Use existing local roadway as potential alignment for traffic existing I-79 SB.

Assumptions:

1. New interchange (assume a standard diamond)
2. Cost provided by WVDOH
3. Roadway connection to University Town Center Road has a 10' multi-use path and 8' sidewalks with a 2' tree lawn.
4. Full interchange lighting

Corridor Length: 1.2 mile Corridor Classification: Rural / Urban

Existing Conditions –

1. Portions of corridor are undeveloped, other areas are developed (Granville).
2. Mountainous terrain
3. Few right-of-way constraints near University Town Center Plaza, very constrained right-of-way in Granville
4. Key locations within corridor area and accessed by corridor area (future): University Town Center Plaza, I-79, Granville, Coliseum, Evansdale Campus, Caperton Trail (multi use path)

Constraints:

1. Terrain adjacent to roadway is mountainous.
2. Core Arboretum limits and potential restrictions.
3. Railroad and Caperton Trail crossings
4. Avoid / minimize impacts at: Granville, Coliseum, Arboretum

Opportunities:

1. Adjust alignment to avoid mountainous terrain on west side of river and reduce earthwork costs.
2. Provide perpendicular crossing over River and avoid denser residential areas in and around Granville.

5

New I-79 Interchange at Business Park Site and Connecting Roadways

\$72,000,000

6

Roadway Connection from New I-79 interchange to Monongahela Boulevard

\$58,555,000

3. Provide alignment thru Granville that minimizes total takes.
4. Consider connection from new roadway to Caperton Trail along east side of the Monongahela River.

Assumptions:

1. New 4-lane roadway with 10' multi-use path and 4' sidewalks with a 2' tree lawn.
2. Curbed roadway, provide closed storm sewer system.
3. Right-of-way impacts:
 - a. Assume right-of-way cost at Coliseum and Arboretum will be high
 - b. Will cross existing overhead utility easement and railroad on west side of river

Corridor Length: 1.5 mile Corridor Classification: Rural / Urban

Existing Conditions –

1. Portions of corridor are undeveloped, other areas are developed (Granville, Evansdale Campus area).
2. Mountainous terrain
3. Few right-of-way constraints near University Town Center Plaza, very constrained right-of-way in Granville
4. Key locations within corridor area and accessed by corridor area (future): University Town Center Plaza, Evansdale Campus, Coliseum

Constraints:

5. Terrain adjacent to roadway is mountainous.
6. Portions of PRT within Evansdale Campus area must be carefully located to avoid impacts to CAC.
7. Railroad and Caperton Trail crossings
8. Avoid / minimize impacts at: Granville, Coliseum, Arboretum

Opportunities:

1. Adjust alignment to avoid mountainous terrain on west side of river and reduce earthwork costs.
2. Provide perpendicular crossing over River and avoid denser residential areas in and around Granville.
3. Provide alignment thru Granville that minimizes total takes.

Assumptions:

1. Proposed stations near Evansdale Drive / CAC, Coliseum parking lot, and I-79 interchange. Stations are \$10,000,000 each, not including right-of-way costs.
2. Assumed \$20,000,000 / mile of track.
3. Assume 50' right-of-way corridor for tracks, 5 acre area for each station to construct platform, bypass tracks, and access points. Right-of-way for tracks may be acquired as an easement.
4. Assume \$400,000 / car. PRT will require 7 cars per one mile in each direction. Total of 21 cars.

6B PRT Connection New
Business Park to Evansdale
Campus

\$80,450,000

Corridor Length: 1.4 mile Corridor Classification: Urban

Existing Conditions –

1. 2-lane roadway, no shoulders.
2. Short section of sidewalk between WV-705 and Killarney Drive; otherwise, no existing sidewalk
3. Mostly mountainous terrain, some rolling / flat terrain near intersection with WV-705.
4. Dense residential, some commercial development
5. Key locations within corridor area and accessed by corridor area (future): WV-705, Evansdale WVU campus.

Constraints:

1. Terrain adjacent to roadway is mountainous along much of corridor.
2. Dense residential developments immediately adjacent to roadway

Opportunities:

1. Wooded area on east side of roadway between White Oak Drive and District Drive – may be able to shift widening towards this area to avoid development impacts.

Assumptions:

1. Widen roadway to adjust for inadequate lane widths – assume 6' overall widening. Assume widening will incorporate curbs along roadway.
2. Provide 1 – 12' bus HOV lane
3. Provide two 5' bike lanes and 2 – 4' walks with a 2' tree lawn
4. Upgrade signal at Van Voorhis Road / Chestnut Ridge Road / Burroughs Road for HOV priority
5. Bury overhead utilities within roadway right-of-way
6. Provide closed storm sewer system

7 Van Voorhis Road
Improvements

\$14,955,000

7. Right-of-way assumptions – assumed 40' corridor to incorporate bike lanes, walks, HOV lane and lane width correction

Corridor Length: 1.2 mile Corridor Classification: Urban / Central Business District

Existing Conditions –

1. Four Corridors:

- a. Corridor A: 8th Street to Hough Street - 2-lane curbed roadway (11' per lane) with 11' TWLTL, 10' walk on one side, 8' walk on other side (average width). Overall corridor width = 51'
- b. Corridor B: Hough Street to University Avenue - 4-lane curbed roadway; one of the lanes becomes a turn lane at intersections, 11' travel lanes, 10' walk on one side, 8' walk on other side (average width). Overall corridor width = 62'
- c. Corridor C: University Avenue to Pleasant Street – 5-lane curbed roadway; middle lanes becomes turn lanes at intersections, 10' travel lanes, 8' walks. Overall corridor width = 66'.
- d. Corridor D: Pleasant Street to Foundry Street – 5-lane curbed roadway; middle lane is turn lane at intersections, TWLTL in between. 11' lanes. 8' walks. Overall corridor width = 71'.

2. Very dense residential (mainly rental), commercial and University properties adjacent to back of walk.
3. Key locations accessed by corridor: Caperton Trail and Hazel Ruby McQuain Park Access at Foundry Street, Downtown PRT station and Downtown Campus buildings between Campus Drive and Hough Street, Chestnut PRT station at Walnut Street, Westover, Evansdale Campus, Morgantown Chamber of Commerce

Constraints:

1. Limited ROW available without major impacts to businesses
2. Avoid PRT piers at Walnut Street.
3. Avoid / minimize impacts to key locations: St. Paul African Methodist Episcopal Church, Spruce Street United Methodist Church, Stansbury Hall, Hodges Hall, Brooks Hall, Eiesland Hall, Morgantown Chamber of Commerce, Bartlett House, Knapp Hall, and Monongalia County Sheriff.

Opportunities:

1. Narrow traffic lanes to minimal widths to accommodate additional lane.
2. Narrow sidewalks to smaller width to accommodate additional lane.

Assumptions:

1. Provide 1 additional 11' lane. Narrow TWLTL / turn lanes to 10'.
2. Curbed roadway – provide closed storm sewer system.
3. Assume cost will include construction of any new pavement width not currently existing, reconstructing sidewalks, constructing retaining walls where necessary, moving PRT pier, burying overhead utilities, and purchasing right-of-way.
4. Right-of-Way assumptions:
 - a. Corridor A: 3 – 11' lanes, 1 – 10' TWLTL, two 8' walks – Width = 59'. Requires additional 8' of right-of-way; assume widening to the south side to minimize total parcel takes. Will require retaining walls in several areas to eliminate earth side slope impacts.
 - b. Corridor B: 4 – 11' lanes, 1 – 10' turn lane, two 8' walks – Width = 70'. Requires additional 8' of right-of-way; widening will impact either Knapp Hall or church at 38 Beechurst Avenue.
 - c. Corridor C: 6 – 10' lanes, 2 – 6' walks – Width = 72'. Requires additional 6' of right-of-way. Major pinch point at Walnut Street – widening will likely impact support pier for PRT.
 - d. Corridor D: 5 – 11' lanes, 1-10' turn lane / TWLTL, 6' walks – Width = 77'. Requires additional 6' of right-of-way; widen to west side of roadway to avoid impact to Bartlett House.

Beechurst Avenue Improvements

8

\$7,069,000

Corridor Length: 2.7 mile Corridor Classification: Urban

Existing Conditions:

1. Two lane roadway with some turn lanes at key intersections.
2. Sidewalk (4' minimum, 6' maximum estimated) along most of the corridor. Some locations with walk on both sides; some locations with walk only on one side.
3. Roadway terrain is mountainous to rolling.
4. Commercial and residential developments adjacent to back of walk – right-of-way is constrained along most of the corridor.
5. Key locations access by corridor: provides connection between Star City / I-79, Evansdale Campus, Downtown Campus and Morgantown Central Business District.

Constraints:

1. Limited right-of-way without impacts to businesses or residences.
2. Avoid / minimize impacts to key locations: Star City Fire Station, Star City Post Office, PRT crossing at Evansdale Drive,

Opportunities:

University Avenue Improvements

9

\$20,059,000

1. Utilize width of existing sidewalk to minimize right-of-way impacts.
 2. Potentially narrow traffic lanes to support widening for bicycle climbing lanes and minimize right-of-way
- Assumptions:
1. Assume 4' sidewalks along both sides of roadway for entire corridor (some locations have only one sidewalk, other have two, some locations have two sidewalks that are wider than 4'). Widen sidewalks to 10' sidewalk.
 2. Assume existing lanes are 12' wide west and 11' wide east of the University Boulevard / Patteson Drive intersection.
 3. 15' lanes on uphill locations for bicycle climbing – widening – provide an additional 3' of pavement to support climbing lanes.
 4. Provide new storm sewer along lane widening for bicycle climbing lane.
 5. Right-of-Way assumptions: acquire additional 12' of right-of-way for sidewalks; within bicycle climbing lane areas, provide additional 11' of right of way.

Corridor Length: 0.32 mile Corridor Classification: Urban

Existing Conditions:

1. Two lane roadway, no shoulders.
2. Minimal sidewalk on south side of street.
3. Roadway terrain is rolling.
4. Commercial and residential developments adjacent to back of walk / roadway – right-of-way is constrained along most of the corridor.
5. Key locations access by corridor: provides connection between Chestnut Ridge Road and Collins Ferry Road.

Constraints:

1. Limited right-of-way without impacts to businesses or residences.
2. Avoid / minimize impacts to key locations: Calvary Baptist Church, new commercial complex at Collins Ferry Road intersection, several housing developments adjacent to roadway.

Opportunities:

1. Utilize width of existing sidewalk to minimize right-of-way impacts.
2. Potentially narrow traffic lanes to support widening for bicycle climbing lanes and minimize right-of-way

Assumptions:

1. Provide 8' sidewalks along both sides of roadway.
2. Provide closed storm sewer system.
3. Provide left turns into commercial development at Collins Ferry Road, Munsey Street / Eastern Avenue, Suncrest Place (add 1 – 10' lane, 150' long at each location – 900' total length).
4. Right-of-way assumptions: acquire additional 12' of right-of-way for proposed sidewalks. Acquire additional 10' of right-of-way over 900' for turn lanes.

Corridor Length: 1.8 mile Corridor Classification: Rural

Existing Conditions:

1. Two lane roadway, minimal shoulders.
2. Roadway terrain is rolling.
3. Residential developments near roadway – right-of-way is partially constrained.
4. Key locations access by corridor: provides connection between Van Voorhis Road and Stewartstown Road, access to several residential developments near Van Voorhis intersection, near Monongalia General Hospital.

Constraints:

1. Minimal right-of-way constraints at residential developments.
2. Geometry revisions near Van Voorhis could cause significant impact to adjacent residential developments.
3. Electrical substation at Van Voorhis Road – any intersection improvements should avoid impact to the substation.

Assumptions:

1. Provide turn lanes at 4 major residential development intersections (1 – 12' RT turn and 1 – 12' LT turn lane).
2. Widen roadway to 15' in uphill direction near Van Voorhis intersection, and from St. Clair Hill Road to Stewartstown Road.
3. Relocate existing utilities.
4. Right-of-way assumptions: Assume 12' roadway lanes – addition 3' of widening for bicycle climbing lanes, additional 12' of widening for turn lanes in 4 locations. Assume major geometric revisions at Van Voorhis Road and West Run Road intersection to improve geometry (sight distance, safety improvements, and turn lane additions) – assume an additional right-of-way cost of \$2,000,000 dollars.

\$11,904,000

10 Burroughs Street

\$4,107,000

11 West Run Road Improvements – Western Section

12 Stewartstown Road

\$12,173,000

S1 Improvement

Existing Conditions:

1. Two lane roadway, minimal shoulders, no sidewalks.
 2. Roadway terrain is rolling to mountainous.
 3. Residential and commercial developments near roadway in several locations – right-of-way is partially constrained.
 4. Key locations access by corridor: Link between US-119 and WV-705 / downtown Morgantown, Suncrest Towne Centre, Mountaineer Stadium, Ruby Memorial Hospital, Monongalia General Hospital, WVU Dairy Farm.
- Constraints:
1. Right-of-way constraints at residential developments.
- Assumptions:
1. Provide additional thru lane in each direction between WV-705 and West Run Road.
 2. Provide RT turn lanes at 2 intersections between WV-705 and West Run Road (200' in length, 12' wide).
 3. Provide 1 intersection between WV-705 and West Run Road and 2 intersections between West Run Road and Point Marion Road.
 4. Widen roadway to 15' in uphill direction between Point Marion Road and Animal Science Farm Road and between Glenmark Avenue and WV-705.
 5. Bury existing overhead utilities
 6. To address access control for apartment complex driveways between West Run Road and WV-705, propose a 20' wide service roadway along west side of roadway for ~ 1400'. Relocate Stewartstown Road to east to allow room for service road without impacts to existing residences and to provide better alignment for a proposed intersection between West Run Road and WV-705.
 7. Right-of-way assumptions: Assume 12' roadway lanes – addition 3' of widening for bicycle climbing lanes, additional 12' of widening for turn lanes in 2 locations, additional 44' of widening for a 12' lane and 10' of grading on each side of the roadway. Assume additional intersection right-of-way of 0.25 acres to accommodate minor alignment adjustments, turning lane development. Assume additional 20' for earthwork. Assume 20' width for service road.

Corridor Length: 0.77 mile Corridor Classification: Rural

Existing Conditions:

1. Two lane roadway, minimal shoulders, no sidewalks.
2. Roadway terrain is rolling.
3. Residential and commercial developments near roadway at locations within the corridor - right-of-way is partially constrained.
4. Key locations access by corridor: Link between Point Marion Road and Stewartstown Road, WVU Dairy Farm.

Constraints:

1. Right-of-way constraints at residential developments.

Assumptions:

1. Provide turn lanes at West Run Road intersection and at Point Marion Road (200' in length, 12' wide).
2. Provide 2 intersections between Stewartstown Road and Point Marion Road.
3. Widen roadway to 15' in uphill direction between Stewartstown Road and Cooper Beech Drive.
4. Bury existing overhead utilities
5. Right-of-way assumptions: Assume 12' roadway lanes – addition 3' of widening for bicycle climbing lanes, additional 12' of widening for turn lanes in 2 locations. Provide additional 12' of roadway in each direction for additional lane. Assume additional intersection right-of-way of 0.25 acres to accommodate minor alignment adjustments, turning lane development. Assume additional 20' for earthwork.

13 West Run Road

Improvements – Eastern

Section – Scenario 1

\$6,489,000

Corridor Length: 0.77 mile Corridor Classification: Rural

Existing Conditions:

1. Two lane roadway, minimal shoulders, no sidewalks.
2. Roadway terrain is rolling.
3. Residential and commercial developments near roadway at locations within the corridor - right-of-way is partially constrained.
4. Key locations access by corridor: Link between Point Marion Road and Stewartstown Road, WVU Dairy Farm.

Constraints:

1. Right-of-way constraints at residential developments.

Assumptions:

1. Provide one additional 12' lane in each direction.
2. Provide turn lanes at West Run Road intersection and at Point Marion Road (200' in length, 12' wide).
3. Widen roadway to 15' in uphill direction between Stewartstown Road and Cooper Beech Drive.

13 West Run Road

Improvements – Eastern

Section – Scenario 2

\$2,781,000

4. Bury existing overhead utilities
5. Right-of-way assumptions: Assume a 12' lane and 10' of grading in each direction. Assume 12' roadway lanes – addition 3' of widening for bicycle climbing lanes, additional 12' of widening for turn lanes in 2 locations. Assume additional right-of-way of 1 acre to accommodate any geometry revisions throughout the corridor. Assume additional 20' for earthwork.

Corridor Length: 0.92 mile Corridor Classification: Rural

Existing Conditions:

1. Four lane roadway, wide shoulders, no sidewalks.
2. Roadway terrain is rolling.
3. Commercial developments near roadway at I-68; development set back from roadway; right-of-way constraints are minimal.
4. Key locations access by corridor: Link between I-68 and Mileground, Glenmark Center, West Run Road.

Constraints:

1. Right-of-way constraints at residential developments.

Assumptions:

1. Widen roadway to provide 2 – 12' lanes in each direction.
2. Add 5' bike lane in each direction.
3. Upgrade signal at Glenmark Center.
4. Right-of-way assumptions: provide 54' of additional right-of-way for new 12' lanes and 5' bike lanes. Assume additional 20' for earthwork.

\$5,853,000

14 Cheat Road Improvements

Corridor Length: 1.5 mile Corridor Classification: Urban

Existing Conditions:

1. Varies from a four lane roadway to a two lane roadway, depending on location
2. Roadway terrain is level to mountainous.
3. Residential and commercial developments adjacent to roadway; right-of-way is constrained.
4. Existing sidewalk:
 - a. From University Avenue to Morgan Street – 4' sidewalk on both sides.
 - b. From Morgan Street to Grove Street – 4' sidewalk on west side.
 - c. From Grove Street to WV-705 – 6' sidewalk on west side.

15 Willowdale Sidewalk Improvements

5. Key locations access by corridor: Link between WV-705 and downtown, Ruby Memorial Hospital, Mountaineer Stadium Downtown WVU Campus.

Constraints:

1. Right-of-way constraints throughout most of the corridor.

Opportunities:

1. Existing sidewalk along portions of the corridor can be reconstructed to minimize right-of-way impact.

Assumptions:

1. Provide an 4' sidewalk and 2' tree lawn on both sides of the roadway.
2. Right-of-way assumptions:
 - a. From University Avenue to Morgan Street – additional 2' of right-of-way on both sides.
 - b. From Morgan Street to Grove Street – Additional 2' of right-of-way on west side, 6' of right-of-way on east side
 - c. From Grove Street to WV-705 – no additional right-of-way on west side, 6' of right-of-way on east side.

Corridor Length: 3.5 mile Corridor Classification: Rural

Existing Conditions:

1. Two lane roadway, narrow with no shoulders.
2. Overhead utilities on south side of roadway.
3. Residential developments adjacent to edge of roadway creating right-of-way constraints.
4. Terrain is level to rolling from Cheat Road to I-68; rolling to mountainous from I-68 to the lake; level along the lake.

Constraints:

1. Right-of-way constraints throughout most of the corridor.

Assumptions:

1. Provide a 5' bike lane on both sides of the roadway.
2. Relocate overhead utilities as necessary.

\$6,820,000

16 Old Cheat Road / Cheat Road Bike Lanes

3. Right-of-way assumptions: Provide an additional 5' of right-of-way on each side of the roadway for the bike lane.

Corridor Length: 1.8 mile Corridor Classification: Rural

Existing Conditions:

1. Two lane roadway, turn lanes at key intersections (western portion of corridor), narrow shoulders
2. Sidewalk along roadway within corridor – varies from one side of roadway to both sides depending on location.
3. TWLTL beginning west of Savannah Street.
4. Overhead utilities on west / south side of roadway.
5. Major right-of-way constraints due to commercial developments.
6. Terrain is mountainous to rolling.
7. Key locations accessed by corridor: Main roadway through Westover, non-highway access from Morgantown to Morgantown Mall, only river crossing directly from Morgantown to Westover.

Constraints:

1. Right-of-way constraints throughout most of the corridor.
2. Heavy commercial / residential development.

Opportunities:

1. Existing sidewalks along portions of the corridor – utilize these locations to minimize right-of-way.

Assumptions:

1. Widen roadway to 15' in uphill direction between the following locations:
 - a. River crossing to West Street (0.40 mi)
 - b. Harrison Street to Dupont Road (0.36 mi)
 - c. Maple Grove Avenue to North Dents Run Road (0.46 mi)
2. Provide closed storm sewer system.
3. Relocate overhead utilities as necessary.
4. Right-of-way assumptions: Provide an additional 3' of right-of-way on each side of the roadway on uphill sections for the bike climbing lane, provide 6' additional feet of right-of-way along roadway where walks do not currently exist for new 4' walk with 2' tree lawn. Where walks currently exist, provide additional 1' of right-of-way for minimal widening.

17 Fairmont Road / Holland Avenue (US-19)

\$11,354,000

Corridor Length: 3.5 mile Corridor Classification: Rural / Urban

Existing Conditions:

1. Two lane roadway, existing lanes approximately 10' wide.
2. Narrow shoulders, approximately 2' wide
3. Short section of four lane roadway at Mountaineer mall
4. Overhead utilities within corridor.
5. Right-of-way constraints due to commercial and residential developments.
6. Terrain is rolling to level
7. Key locations accessed by corridor: Mountaineer Mall, Sabraton, Kingwood Pike, Children's Discovery Museum, Sabraton.

Constraints:

1. Right-of-way constraints throughout most of the corridor.
2. Commercial / residential development.

Assumptions:

1. Widen roadway to 15' in uphill direction between the following locations:
 - a. Don Knotts Boulevard to east side of Cobun Creek
 - b. Virginia Circle to Lower Aaron's Creek Road
2. Widen roadway to overall width of 32' (two 11' lanes, 5' shoulders).
3. Relocate overhead utilities as necessary.
4. Provide curbed roadways with sidewalks from Don Knotts Boulevard to Mountaineer Mall and Virginia Circle to Glen Oaks Drive (Kingwood Pike area). Provide closed storm sewer system at these locations.
5. 4 intersections requiring improvement.
6. Right-of-way assumptions: Provide an additional 3' of right-of-way on each side of the roadway on uphill sections for the bike climbing lane, provide 6' additional feet of

18 Greenbag Road Improvements

\$16,399,000

right-of-way along roadway at key locations for new 4' walk with 2' tree lawn. Widen roadway additional 8' to provide two-11' lanes and two-5' shoulders.

| | |
|----|--|
| 19 | <p>Dorsey Avenue</p> <p>Corridor Length: 1.8 mile Corridor Classification: Rural / Urban</p> <p>Existing Conditions:</p> <ol style="list-style-type: none"> Two lane roadway, existing lanes approximately 10' wide, no shoulder Short sections of sidewalk from Ford Street to Hudson Street (west / south side), Ford Street to Barrickman Street (north / east side) Overhead utilities within corridor. Right-of-way constraints due to predominantly residential developments. Terrain is mountainous Key locations accessed by corridor: Oak Grove Cemetery, East Oak Grove Cemetery, White Park. <p>Constraints:</p> <ol style="list-style-type: none"> Right-of-way constraints throughout most of the corridor. Constraints at Cemeteries (do not impact) <p>Assumptions:</p> <ol style="list-style-type: none"> Provide closed storm sewer system with curbed roadway. Right-of-way assumptions: Provide 6' of right-of-way along roadway where no sidewalks exist. Where walks currently exist, provide additional 1' of right-of-way for minimal widening. <p style="text-align: right;">\$3,893,000</p> |
| 20 | <p>Brockway Rodgers / Powell Avenues (WV-7)</p> <p>Corridor Length: 1.3 mile Corridor Classification: Urban</p> <p>Existing Conditions:</p> <ol style="list-style-type: none"> Two lane roadway, sidewalk on both sides throughout part of corridor. Right-of-way constraints due to predominantly residential developments. Terrain is level to rolling with mountainous terrain adjacent to the roadway. Key locations accessed by corridor: Sabraton, Deckers Creek Trail, Downtown Morgantown. <p>Constraints:</p> <ol style="list-style-type: none"> Right-of-way constraints throughout most of the corridor. Existing bridge over Decker's Creek. Adjacent mountainous terrain near Valley Crossing intersection will require a retaining wall. <p>Assumptions:</p> <ol style="list-style-type: none"> Existing walk has adequate width, only place sidewalk where none exists. Provide / reconstruct storm sewer connections at these locations. Assume a quantity of sidewalk repair for existing walk to replace broken areas. Widening of Decker's Creek Bridge to accommodate sidewalk. Retaining wall along mountain side between eastern / northern end of Decker's Creek bridge and County Route 64. Right-of-way assumptions: Provide 6' of right-of-way along roadway where no sidewalks exist. Provide 5' of additional right-of-way for construction of retaining wall footer due to adjacent terrain. <p style="text-align: right;">\$6,076,000</p> |
| 21 | <p>Earl Core Road (WV-7) West of I-68</p> <p>Corridor Length: 1.4 mile Corridor Classification: Urban</p> <p>Existing Conditions:</p> <ol style="list-style-type: none"> Two lane roadway, with paved shoulders (~ 6' wide). Overhead utilities on both sides of the roadway. Right-of-way constraints due to residential and commercial developments. Terrain is level. TWLTl thru downtown Sabraton. Key locations accessed by corridor: Sabraton, Deckers Creek Trail, I-68. <p>Constraints:</p> <ol style="list-style-type: none"> Right-of-way constraints throughout most of the corridor. Mountainous terrain along undeveloped portions of roadway. <p>Opportunities:</p> <ol style="list-style-type: none"> Existing roadway has wide shoulders – curb roadway and use shoulder area for sidewalk to minimize right-of-way. <p>Assumptions:</p> <ol style="list-style-type: none"> Add 4' sidewalk with 2' tree lawn on both sides of roadway. Provide storm sewer system at these locations. <p style="text-align: right;">\$8,790,000</p> |

2. Provide turn lanes at the following intersections (200' in length, 12' wide):
 - a. CR 64
 - b. Hartman Run Road (NB direction only – RT turn lane)
 - c. Deckers Creek Road (SB direction only – RT turn lane)
 - d. RT turn lanes only to both intersections connecting to Sturgis Avenue.
3. Right-of-way assumptions: Provide 12' of additional right-of-way for construction of turn lanes at locations identified above. Sidewalks will fit mostly within paved shoulder – add 1' for sidewalks.

Corridor Length: 2.1 mile Corridor Classification: Urban

Existing Conditions:

1. Two lane roadway, with paved shoulders (~ 4' wide).
2. Overhead utilities on both sides of the roadway.
3. Right-of-way constraints due to residential and commercial developments in some locations
4. Terrain is level.
5. Key locations accessed by corridor: Sabraton, Deckers Creek Trail, I-68.

Constraints:

1. Right-of-way constraints throughout most of the corridor.
2. Mountainous terrain along undeveloped portions of roadway.

Opportunities:

1. Existing roadway has 4' shoulders – curb roadway and use shoulder area for sidewalk to minimize right-of-way.

Assumptions:

1. Add 4' sidewalk with 2' tree lawn on both sides of roadway. Provide storm sewer system at these locations.
2. Provide a TWLTL throughout the corridor.
3. Right-of-way assumptions: Provide 12' of additional right-of-way for construction of TWLTL. Sidewalks will fit mostly within paved shoulder – add 2' for sidewalks.

\$8,540,000

22 Earl Core Road (WV-7) East of I-68

Corridor Length: 0.68 mile Corridor Classification: Rural / Urban

Existing Conditions:

1. Terrain is mountainous.
2. Largely undeveloped, portion of property owned by WVU (Dairy farm)
3. Development near tie in at Protzman is residential (rental).

Constraints:

1. Mountainous terrain.
 2. Will cross Falling Run.
- Assumptions:
1. Two – 11' lanes, 10' multiuse path.
 2. No access points.
 3. Right-of-way assumptions: Total corridor width of 32'.

Corridor Length: 0.68 mile Corridor Classification: Rural / Urban

Existing Conditions:

1. Two lane roadway.
2. Sidewalk along east side.
3. Terrain is mountainous.
4. Residential right-of-way constraints on the northwest side of the roadway (rentals), terrain and residential constraints on the opposite side.

Constraints:

1. Mountainous terrain.
2. Right-of-way constraints

Opportunities:

1. Utilize existing sidewalk width to help minimize right-of-way impacts.

Assumptions:

1. 10' multiuse path along one side of roadway.

\$1,204,000

24 Protzman / Falling Run Pedestrian and Bicycle Connector

2. Sidewalk along opposite side.
3. Provide closed storm sewer system.
4. Retaining wall on west side from College Avenue to Arnold Hall – assume 4’ high.
5. Right-of-way assumptions: Utilize existing sidewalk width to minimize right-of-way impacts on both sides – assume existing width is 4’. Acquire 6’ of additional right-of-way.

Corridor Length: 1.7 mile Corridor Classification: Urban

Existing Conditions:

1. Two lane roadway (11’ lanes).
2. Existing shoulder, both sides, from SR 705 to Stanton Avenue (~ 4’ wide)
3. Sidewalk / graded bench along west side of roadway, sidewalk along east side of roadway for between Stanton Avenue and High Street (~ 4’ wide)
4. Terrain is mountainous.
5. Residential and terrain constraints.
6. Overhead utilities on both sides, depending on location.
7. Key access points along corridor: connects Mileground to Downtown Morgantown, Downtown WVU Campus.

Constraints:

1. Mountainous terrain – will require significantly long retaining wall (most of the west side from Stanton Avenue south has existing wall of some height).
2. Significant right-of-way constraints

Opportunities:

1. Utilize existing shoulder / sidewalk width to help minimize right-of-way impacts.

Assumptions:

1. Complete sidewalks – assume 4’ width, no tree lawn.
2. Widen lanes to 15’ for bicycle climbing lane – entire length of corridor. Provide close storm sewer system along widening.
3. Retaining wall on west side from College Avenue to Arnold Hall – assume 4’ high.
4. Improve geometry for sight distance, safety, curvature, etc. at the following locations
 - a. College Avenue – improve intersection alignment
 - b. Price Street – improve intersection sight distance for school traffic
 - c. Monongalia Avenue – improve roadway curvature, intersection alignment
 - d. Fife Street – improve intersection sight distance
5. Right-of-way assumptions: Utilize existing sidewalk width and shoulder width to minimize right-of-way impacts (no widening of right-of-way necessary for bike climbing lane). Assume cost of geometry revision includes right-of-way cost.

25 Willey Street
Improvements – Scenario 1

\$11,604,000

Corridor Length: 1.7 mile Corridor Classification: Urban

Existing Conditions:

1. Two lane roadway (11’ lanes).
2. Existing shoulder, both sides, from SR 705 to Stanton Avenue (~ 4’ wide)
3. Sidewalk / graded bench along west side of roadway, sidewalk along east side of roadway for between Stanton Avenue and High Street (~ 4’ wide)
4. Terrain is mountainous.
5. Residential right-of-way constraints on the northwest side of the roadway (rentals), terrain residential constraints on the opposite side.
6. Overhead utilities on both sides, depending on location.
7. Key access points along corridor: connects Mileground to Downtown Morgantown, Downtown WVU Campus.

Constraints:

1. Mountainous terrain – will require significantly long retaining wall (most of the west side from Stanton Avenue south has existing wall of some height).
2. Significant right-of-way constraints

Opportunities:

1. Utilize existing shoulder / sidewalk width to help minimize right-of-way impacts.

Assumptions:

1. Complete sidewalks – assume 4’ width, no tree lawn.
2. Add turn lanes at the following locations (200’ long, 10’ wide):
 - a. Hampton Avenue
 - b. College Avenue

25 Willey Street
Improvements – Scenario 2

\$12,428,000

c. Price Street

- d. Monongalia Avenue
- e. Cornell Avenue
- f. Prospect Street

3. Widen lanes to 15' for bicycle climbing lane – entire length of corridor. Provide close storm sewer system along widening.
4. Retaining wall on west side from College Avenue to Arnold Hall – assume 4' high.
5. Improve geometry for sight distance, safety, curvature, etc. at the following locations
 - a. College Avenue – improve intersection alignment
 - b. Price Street – improve intersection sight distance for school traffic
 - c. Monongalia Avenue – improve roadway curvature, intersection alignment
 - d. Fife Street – improve intersection sight distance
6. Right-of-way assumptions: Utilize existing sidewalk and shoulder width to minimize right-of-way impacts (no widening of right-of-way necessary for bike climbing lane), assume turn lanes are 10' in width to minimize right-of-way impacts. Assume cost of geometry revision includes right-of-way cost.

Corridor Length: 0.68 mile Corridor Classification: Urban

Existing Conditions:

1. Most of the existing roadways are two lane roadways.
2. Terrain is varies from level to rolling to mountainous, depending on location
3. Heavy residential and commercial areas.
4. Provides connection between Downtown, Law School, Medical and Evansdale WVU Campuses.

Assumptions:

1. Proposed path – Stewart Street to Willowdale Road to Center Street to Virginia Avenue to Jones Avenue to Medical Drive to Evansdale Drive.
2. Connection between Jones Avenue and Medical Drive is proposed two-11' lane curbed roadway. Provide closed storm sewer along new connection. Provide roadway between existing parking lots.
3. Right-of-way assumptions: acquire 22' of additional right-of-way along new connections between Jones Avenue to Medical Drive. This will allow for two-11' lanes.

26 WVU Campus Bus Rapid Transit Connector

\$1,140,000

Corridor Length: 0.25 mile Corridor Classification: Urban

Existing Conditions:

1. Existing terrain is mountainous.
2. Heavily wooded hillside.
3. Western terminus will need to thread between campus buildings.
4. Provides connection between Downtown and Evansdale WVU Campuses.

Constraints:

1. Steep terrain.
2. Dense vegetation.

Opportunities:

1. Existing cut in vegetation for utilities – may be able to parallel this corridor to minimize earthwork and clearing necessary to construct multi use path.

Assumptions:

1. Proposed path – 10' wide multi use path.
2. Right-of-way assumptions: acquire 30' of additional right-of-way along new connection to account for 10' path and 10' of grading on either side of path.

Corridor Length: 0.46 mile Corridor Classification: Urban

Existing Conditions:

1. Existing terrain is rolling.
2. Heavily wooded within park.
3. Caperton Trail provides connection to Downtown Morgantown and Evansdale Area.

Constraints:

1. Morgantown Water Supply Lake to north of trail – want to avoid crossing.
2. Cobun Creek widens as it approaches Don Knotts Boulevard.
3. South of Cobun Creek along river is water treatment plant and a coal tipple – want to avoid these properties.

Opportunities:

28 White Park / Caperton Trail Connection

\$1,680,000

1. Small swath of vegetated property on south side of Aldi / urgent care plaza – avoids crossing wider area of Cobun Creek and properties to south of Cobun Creek along river.

Assumptions:

1. Proposed path – 10' wide multi use path.
2. Assume path crosses southern end of White Park and remains on the north side of Cobun Creek. Path will tie into Caperton Trail on south side of plaza with MedExpress Urgent Care and Aldi.
3. Provide grade separation at Don Knotts Boulevard to safety of pedestrians and bicyclists.
4. Right-of-way assumptions: acquire 30' of additional right-of-way along new connection to account for 10' path and 10' of grading on either side of path.

Corridor Length: 1.5 mile Corridor Classification: Urban

Existing Conditions:

1. Four lane roadway near I-68, tapers to three lanes north of Scotts Avenue.
2. Existing shoulder, both sides.
3. Roadway is level in southern portion of corridor, mountainous in northern portion. Terrain adjacent to the roadway is mountainous.
4. Overhead utilities on both sides, depending on location.
5. Key access points along corridor: connects I-68 to Downtown Morgantown, Mountaineer Mall.

Constraints:

1. Mountainous terrain – will require long retaining wall.
2. In northern portion of corridor, grading is very steep on west side of roadway.

Opportunities:

1. Widen to east into mountain side to avoid tall retaining wall along western side (drop off) in northern section of Corridor (to Fawley Lane). Will still require a wall, but wall will be shorter.
2. South of Fawley Lane, drop off shifts to east side of roadway. Widen to west side to avoid tall retaining wall.

Assumptions:

1. Provide one-12' lane throughout corridor. Provide 5' bike lanes in both directions.
2. Provide a left turn lane at the following location (12' wide by 200' long):
 - a. Goodyear and Star Home Center
 - b. Fawley Lane (at one intersection with Fawley Lane, not both)
3. Right-of-way assumptions: Acquire 22' for 12' lane and 10' of grading, acquire 10' for two bike lanes, and acquire 12' for each turn lane location.

Corridor Length: 1.5 mile Corridor Classification: Urban

Existing Conditions:

1. Two lane roadway, 10' lanes.
2. Sidewalk along east side from University Avenue to Van Gilder Street. Sidewalk along west side from University Avenue to Lorentz Street.
3. Mountainous terrain from University Avenue to Willowdale Road, and from Kingston Drive to WV-705. Between these locations, terrain varies between level and rolling.
4. Overhead utilities.
5. Key access points along corridor: connects WV-705 to Downtown Morgantown.
6. Dense development, mainly residential (rental and privately owned).

Constraints:

1. Mountainous terrain.
2. Dense development.

Assumptions:

1. Provide 5' widening for bicycle climbing lanes along mountainous locations identified above. Replace storm sewer within these areas.
2. Complete sidewalks from Van Gilder Street to WV-705 and from Lorentz Street to WV-705. Provide 4' sidewalk with 2' tree lawn.
3. Improve geometry at the following locations:
 - a. Willowdale Road and Stewart Street – Improve sight distance
 - b. Protzman Street and Stewart Street – adjust intersection alignment to closer to 90°. May involve total take of one structure.
 - c. Chestnut Ridge Road and Stewart Street – improve sight distance and roadway curvature, provide turn lanes. May involve total take of one structure.
4. Right-of-way assumptions: Acquire 5' for bicycle climbing lanes, acquire 10' for two bike lanes, and acquire 6' for sidewalks.

29 Grafton Road (US-119)

\$5,459,000

30 Stewart Street Improvements

\$10,910,000

31 PRT Extension from University Health Sciences

Corridor Length: 1.3 mile Corridor Classification: Urban
Existing Conditions –

\$57,010,000

| | | |
|---|---|---------------|
| to Monongalia General Hospital | <ol style="list-style-type: none"> 1. Most of corridor is developed, commercial and residential development. 2. Rolling terrain 3. Many right-of-way constraints, may be concerns about aesthetics of tracks adjacent to existing buildings. 4. Key locations within corridor area and accessed by corridor area (future): Monongalia Hospital <p>Constraints:</p> <ol style="list-style-type: none"> 1. Portions of PRT within Evansdale Campus area must be carefully located to avoid impacts to hospitals, business. 2. May need to construct lowered / trenched / tunneled track at crossings and directly adjacent to buildings. <p>Opportunities:</p> <ol style="list-style-type: none"> 1. Area to the east and north of Monongalia Hospital and hospital parking lot is largely undeveloped – placing station in this location avoids clearing of existing wooded areas, impacts to adjacent business or hospital parking, and provides better alignment for PRT extension to Glenmark Centre. <p>Assumptions:</p> <ol style="list-style-type: none"> 1. Proposed station at Monongalia Hospital. Stations are \$10,000,000 each, not including right-of-way costs. 2. Assumed \$20,000,000 / mile of track. 3. Assume 50' right-of-way corridor for tracks, 5 acre area for each station to construct platform, bypass tracks, and access points. Right-of-way for tracks may be acquired as an easement. 4. Assume \$400,000 / car. PRT will require 7 cars per one mile in each direction. Total of 19 cars. | \$102,985,000 |
| <p>PRT Extension from Monongalia General Hospital to Glenmark Centre</p> <p>32</p> | <p>Corridor Length: 2.8 mile Corridor Classification: Rural</p> <p>Existing Conditions –</p> <ol style="list-style-type: none"> 1. Portions of corridor are undeveloped, other areas are developed (Evansdale Campus area, Mileground area, Glenmark area). 2. Mountainous terrain 3. Right-of-way constraints vary depending on location. 4. Key locations within corridor area and accessed by corridor area (future): Monongalia Hospital, Mileground area, Glenmark Centre, I-68 <p>Constraints:</p> <ol style="list-style-type: none"> 1. Avoid / minimize impacts at: existing residential areas, Monongalia Hospital, Glenmark Centre. <p>Opportunities:</p> <ol style="list-style-type: none"> 1. Try to follow existing roadways to minimize earthwork and property impacts. <p>Assumptions:</p> <ol style="list-style-type: none"> 1. Proposed stations at Glenmark Centre, near Mileground. Stations are \$10,000,000 each, not including right-of-way costs. 2. Assumed \$20,000,000 / mile of track. 3. Assume 50' right-of-way corridor for tracks, 5 acre area for each station to construct platform, bypass tracks, and access points. Right-of-way for tracks may be acquired as an easement. 4. Assume \$400,000 / car. PRT will require 7 cars per one mile in each direction. Total of 40 cars. | |
| <p>Grumbein's Island Grade Separation</p> <p>33</p> | <p>Grade separate island from University Avenue.</p> | \$10,000,000 |
| <p>34</p> | <p>Corridor Length: 2.8 mile Corridor Classification: Rural</p> <p>Existing Conditions –</p> <ol style="list-style-type: none"> 1. Dense residential development, some commercial development 2. Mountainous terrain 3. Extensive right-of-way constraints 4. Existing roadway width = 20'. 5. Key locations within corridor area and accessed by corridor area (future): Monongalia Hospital, WVU Stadium, Ruby Memorial Hospital <p>Constraints:</p> <ol style="list-style-type: none"> 1. Terrain 2. Proximity of residences to roadway <p>Assumptions:</p> <ol style="list-style-type: none"> 1. Assume 4' sidewalk with 2' tree lawn along one side of the roadway. 2. Provide 5' widening for bicycle climbing lanes and additional 2' of widening to provide 15' lanes overall. Bike climbing lane will be necessary in northbound direction from WV-705 to Briarwood Street, southbound direction from Briarwood Street to West Run Road. | |

3. Assume additional 7' of right-of-way for bike climbing lane, 6' for walk and tree lawn plus 5' for grading along entire corridor.

Corridor Length: 2.0 mile Corridor Classification: Urban

Existing Conditions:

1. Two lane roadways:
 - a. Monongahela Avenue: 13' overall width (0.33 mi)
 - b. Riverside Avenue: 2 – 11' lanes (0.50 mi)
 - c. WV-100 – 2 – 11' lanes (0.22 mi)
 - d. North Dents Road – 2 – 10' lanes (0.31 mi)
2. Flat terrain along river to North Dents Road, rolling to mountainous to tie in at new I-79 interchange.
3. Overhead utilities.
4. Key access points along corridor: connects Downtown Morgantown to I-79.
5. Residential / Commercial development.

Constraints:

1. Mountainous terrain.
2. Residential / commercial development.
3. Coal tipples on east side of river.
4. PRT track crossing.
5. Caperton Trail crossing

Assumptions:

1. Provide turn lanes at key intersections – 12' lane, 200' long.
2. Provide two lane structure over river - 2 – 12' lanes, 1200' long. Provide additional 6' on each side for future sidewalks.
3. Provide new 2-lane connection to I-79 interchange – 2 – 12' lanes, 1300' long.
4. Widen lanes to 12'.
5. 5' Bike lanes, 4' sidewalks with 2' tree lawns. Curbed roadway.
6. Right-of-way assumptions: Acquire additional 12' of width for turn lanes; acquire 44' for connection from North Dents Road to interchange road. Acquire additional 19' of width for lane widening (at locations broken out above), acquire 22' for bike lanes and walks.

\$39,401,000

35
8th Street Bridge over
Monongahela River and
Roadway Connection to TIF
Development Area
Interchange to I-79

Scenario 3

Corridor Length: 0.75 mile Corridor Classification: Urban / Rural

Existing Conditions:

1. Mountainous terrain.
2. Some residential development.
3. Commercial development at WV-705 intersection and at Hartman Run Road intersection.
4. Dense vegetation.

Constraints:

1. Mountainous terrain.
2. Residential / commercial development.

Opportunities:

1. Careful placement of the alignment can minimize residential and commercial structure impacts.

Assumptions:

1. Provide two-12' lanes, 5' bike lane, 4' walk with 2' tree lawn, curbed roadway with closed storm sewer system.
2. Upgrade signal at WV-705 intersection, provide new signal at Hartman Run Road intersection.
3. Small structure over Hartman Run.
4. Right-of-way assumptions: Acquire additional 46' of width for roadway, with 20' on either side for grading due to terrain.

\$16,463,000

36
Mileground Road / WV-705
Connector to Hartman Run
Road

Scenario 3

Corridor Length: 1.5 mile Corridor Classification: Urban / Rural

Existing Conditions:

1. Mountainous and rolling terrain.
2. Residential and commercial development.
3. Dense vegetation in undeveloped areas.

\$11,800,000

37
Airport Industrial Road
extension to WV-7

Scenario 3

4. Existing roadway widths = 20', no shoulders.

Constraints:

1. Mountainous terrain.
2. Residential / commercial development.

Opportunities:

1. Can use Wolfe Run Road and Dughill Road alignments within the corridor to minimize earthwork and right-of-way.

Assumptions:

1. Provide two-12' lanes with two-2' shoulders.
2. Upgrade signal at WV-7 intersection.
3. Use existing Wolfe Run Road and Dughill Road; widen roadways to provide 12' lanes and 2' shoulders.
4. Right-of-way assumptions: Acquire additional 46' of width for roadway, with 10' on either side for grading due to terrain along new portion of roadway. Along existing roadways, acquire additional 8' for widening of roadway for lanes and shoulders, and 10' on either side for grading.

of intersections: 31 Corridor Classification: Varies, see below. U = Urban, R = Rural, CBD = Central Business District

Intersections:

- Monongahela Boulevard / Patteson Drive (U)
- Patteson Drive / Laurel Street (U)
- University Avenue / Collins Ferry Road (U)
- University Avenue / Patteson Drive (U)
- Van Voorhis Road / Chestnut Ridge / Burroughs Street (U)
- Van Voorhis Road / Christy Street (U)
- Van Voorhis Road / West Run Road (U)
- Van Voorhis Road / Elmer Prince (U)
- WV-705 / Stewartstown Road (R)
- West Run Road / Stewartstown Road (R)
- Stewartstown Road / Point Marion Road (R)
- Point Marion Road / West Run Road (R)
- University Avenue / Campus Drive (U)
- University Avenue / Beechurst Avenue/Fayette Street (CBD - Morgantown)
- University Avenue / 8th Street (U)
- Beechurst Avenue / Campus Drive (U)
- Greenbag Road and Don Knotts Boulevard (U)
- Greenbag Road / Dorsey Avenue (R)
- Greenbag Road and Diamond Avenue(R)
- Greenbag Road and Earl Core Road (CBD - Sabraton)
- Tyrone Road / Tyrone Avery Road (R)
- Cheat Road / Tyrone Avery Road (R)
- Hartman Run Road / Hart Field Road (north intersection) (R – Morgantown Municipal Airport)
- Hartman Run Road / Hart Field Road (south intersection) (R – Morgantown Municipal Airport)
- Stewart Street / Hoffman Street / Van Guilder Street (U)
- Spruce Street / Walnut Street (CBD – Morgantown)
- Spruce Street / Pleasant Street (CBD – Morgantown)
- Fayette Street / High Street (CBD – Morgantown)
- High Street / Willey Street (CBD – Morgantown)
- High Street / Pleasant Street (CBD – Morgantown)
- Walnut Street / University Avenue (CBD – Morgantown)

Assumptions:

Intersection Capacity and Safety Improvement Program

1. Provide 1 additional turn lane (200' long) at each intersection in each direction (2 turn lanes total). In CBD areas, provide 1 additional thru lane (200' long).
2. Assume \$500,000 / intersection for construction and \$500,000 for additional right-of-way to correct geometric deficiencies for intersections listed below:
 - a. Stewart Street / Hoffman Street / Van Guilders Street
 - b. Hartman Run Road / Hart Field Road (south intersection)
 - c. Cheat Road / Tyrone Avery Road
 - d. Tyrone Road / Tyrone Avery Road
 - e. Greenbag Road / Diamond Avenue
 - f. Greenbag Road / Dorsey Avenue
 - g. Greenbag Road / Don Knotts Boulevard
 - h. Beechurst Avenue / Campus Drive
 - i. University Avenue / Beechurst Avenue / Fayette Street
 - j. Point Marion Road / West Run Road
 - k. Stewartstown Road / Point Marion Road
 - l. Van Voorhis Road / West Run Road
 - m. Van Voorhis Road / Elmer Prince
 - n. University Avenue / Collins Ferry Road
3. Right-of-way assumptions:
 - a. In Rural locations, acquire 12' for a turn lane
 - b. In Urban locations, acquire 11' for a turn lane
 - c. In CBD locations, acquire 10' for a turn lane, 10' for a thru lane.