



DATE: July 12, 2017

TO: Michael O. Geisel, P.E.
City Administrator

FROM: James A. Eckrich, P.E.
Public Works Director / City Engineer

RE: Schoettler Road Left Turn Lanes

*Jim:
Please forward to
PPW for disposition
mew
7/17/2017*

As you will recall, in early 2017 the Planning and Public Works Committee directed City Staff to pursue the design of a center / left turn lane at Georgetown Road, and incorporate said costs into the 2018 Budget for City Council consideration. After reviewing this matter in detail, City Engineering Staff has concluded that an isolated turn lane at Georgetown Road will create another bend in Schoettler Road and will not be positively received by area motorists. The proper way to construct a center / left turn lane in this area is to extend the existing left turn lane at Schoettler Grove to the north, through the intersection with Georgetown Road. This has the added benefit of also addressing the lack of a center / left turn lane at Westerley Drive. For additional details on this recommendation, please see the attached memorandum from Civil Engineer Todd Ohmes.

The benefit of expanding the turn lane is a more consistent road geometry and improvement to the intersections of both Westerley Drive and Georgetown Road. The drawback is that construction of a center / left turn lane in this area will necessitate the acquisition of right of way and easements from the property owner at 2290 Schoettler Road. As you know, this property owner has been contacted regarding right of way acquisition in the past, and has indicated that she is unwilling to consider any property conveyance for road improvement purposes. **Accordingly, if the City of Chesterfield is to pursue this project, the use of eminent domain will most certainly be required.**

The extension of the project from Georgetown Road to Schoettler Grove leads one to question whether the nearby planned construction of an additional southbound lane on Schoettler Road for traffic turning westbound onto Clayton Road should be considered as part of this project. Currently, as motorists traveling southbound on Schoettler Road approach the Clayton Road intersection they either enter one of the two left turn lanes or the shared right / through lane. Vehicles making the through movement have to wait for a green signal, while vehicles desiring to turn right (west) could lawfully do so if they could reach the intersection. However, during times of heavy traffic vehicles can frequently not reach the intersection due to the traffic que for southbound motorists. This problem can be eliminated by the construction of an additional southbound lane for traffic desiring to turn right (west) onto Clayton Road. The future construction of this lane was planned as part of the Schoettler Grove project, and the necessary right of way was acquired at that time. Accordingly, there is no need for additional property acquisition in this area.

After a comprehensive review of this section of Schoettler Road, it is my recommendation that both projects be constructed at the same time, and be considered as one project (see attached Exhibit). This will avoid multiple disruptions to area motorists, provide some "value of scale" for design and construction, and ensure the roadway is designed and constructed in a consistent manner. The total costs for this project, which are described in further detail in the memorandum from Mr. Ohmes, are as follows:

Engineering Design	\$100,000
Right of Way (including attorney fees for condemnation)	\$120,000
Construction	\$730,000
Signal Modification	\$70,000
TOTAL PROJECT COST	\$1,020,000

Please be advised that these costs are preliminary estimates at this stage, and would be further refined as part of the budgetary process.

At this time the City Engineering Staff would like direction from the Planning and Public Works Committee regarding its submittal for the 2018 Budget. Specifically, should the Public Works Department include a request for \$100,000 for engineering design and \$120,000 for right of way acquisition in the 2018 Capital Projects Budget for the above-described Schoettler Road improvements? This is the recommended manner in which to proceed, but will ultimately require the use of eminent domain for the 2290 Schoettler Road property, and the future expenditure of an estimated \$800,000 for project construction. If construction were to occur in 2019, it will likely require a supplement from the General Fund – Fund Reserves. If construction were postponed until 2020 such a transfer would not be necessary due to the debt service retirement in the Capital Projects Fund.

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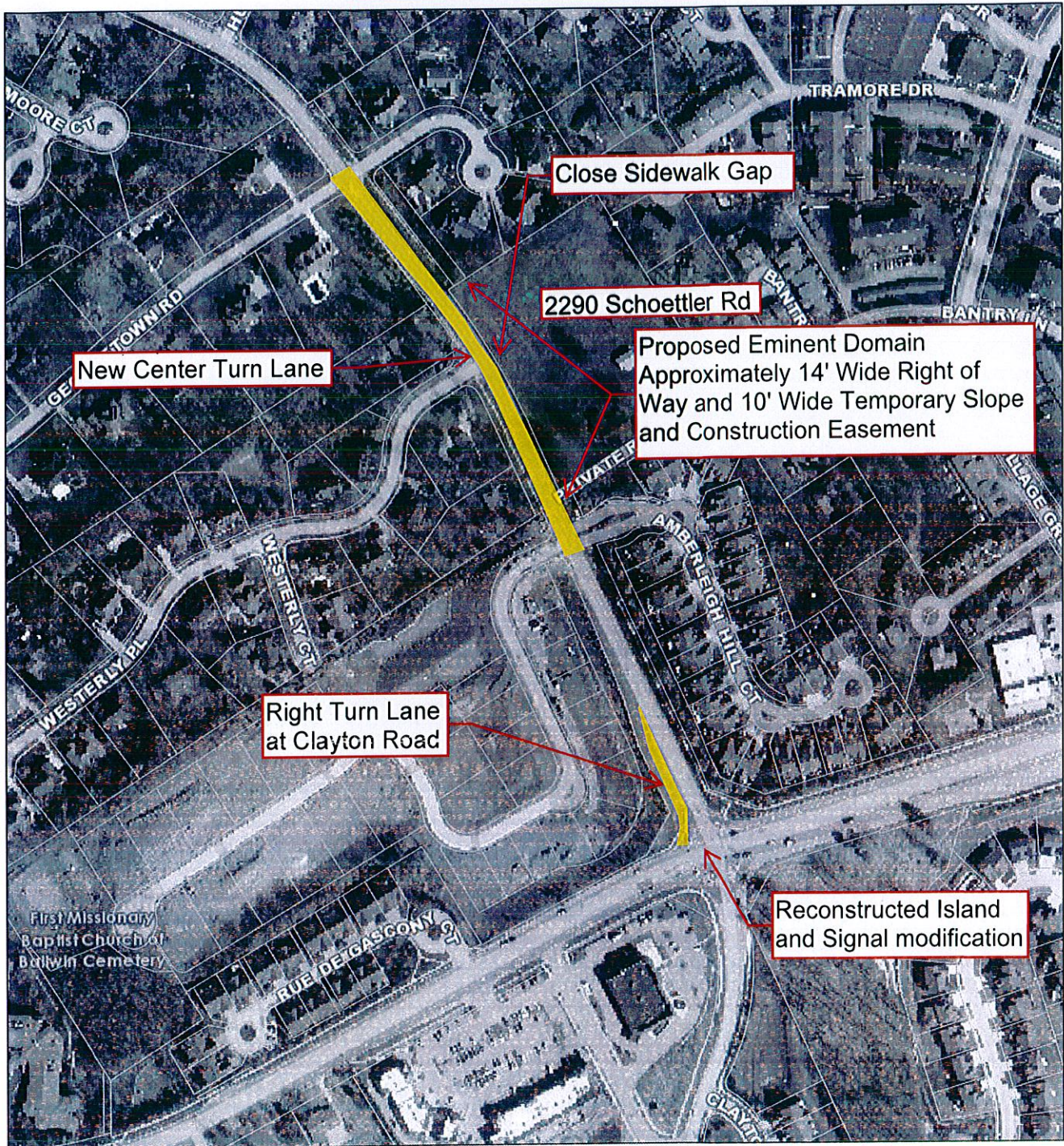
Action Recommended

This matter should be forwarded to the Planning and Public Works Committee for consideration. Should the Committee desire to pursue the center turn lane from Georgetown Road to Schoettler Grove and the right turn lane onto Clayton Road, it should instruct Staff to include the necessary funding in the 2018 Budget Submittal. Otherwise, Staff will exclude this project from the 2018 Budget Submittal. Please be advised that this decision does not need to be forwarded to City Council at this time, as Council will formally act upon the project when it considers the 2018 Capital Projects Budget in its entirety.

Budget for design & ROW acquisition in 2018 \$220,000

RECOMMEND CONSTRUCTION in 2020 ~ \$800,000 with Capital projects funding

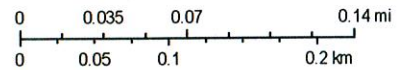
Schoettler Road Improvements



July 13, 2017

Parcels

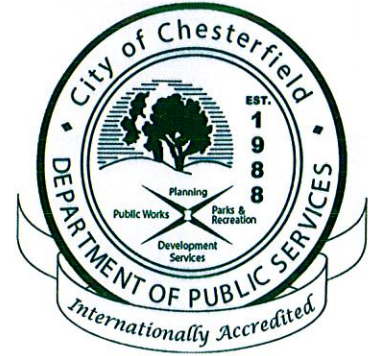
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Esri, Inc., City of Chesterfield, Missouri

Memorandum

Department of Public Services



TO: James Eckrich, Public Works Director

FROM: Todd Ohmes, Civil Engineer TAO

DATE: July 12, 2017

RE: Schoettler Road Left Turn Lanes

As you are aware, in early 2017 the Planning and Public Works Committee discussed desired improvements to Schoettler Road. At that time Staff provided a presentation detailing the recent history of Schoettler Road, including the transfer of Schoettler Road from St. Louis County to the City of Chesterfield in 2010, and the creation of the Schoettler Road Concept Plan by HR Green in 2013. The Concept Plan included the complete reconstruction of Schoettler Road with the addition of a center driving lane, bike lanes, and sidewalks on both sides of the street. The total cost of implementation of the Concept Plan was \$24 million. As detailed during that presentation, implementation of the Concept Plan without grant funding is fiscally impractical, and, based upon previous grant submittals, the City Staff believes there is no likelihood of a Surface Transportation Program (STP) grant being successful in the near future. At that time the PPW Committee accepted the Staff's recommendation that the City begin to look at ways to incrementally improve Schoettler Road. This included grant submittals to construct sidewalk in areas where no sidewalk exists, and to design center / left turn lanes at intersections where none exist.

The first two steps in improving Schoettler Road have been implemented. This includes the reconstruction of the structurally deficient bridge, and the submittal of a grant application to construct sidewalk where none exists between Greenleaf Valley Drive and Windsor Valley Court. The Schoettler Road Bridge reconstruction will be funded (eighty percent) through the BRM program, and construction is scheduled to commence later this year. The City of Chesterfield submitted a grant application for the above-described missing section of sidewalk through the Transportation Alternatives Program (TAP). We expect to learn whether that grant application was successful in August.

The next step to improve Schoettler Road will be the construction of center / left turn lanes where none exist. As presented to the PPW Committee earlier this year, four such intersections were investigated: Westerley Drive, Georgetown Road, Highcroft Drive, and Chesterfield Trails. As detailed within that presentation, only the turn lane at Georgetown Road can be constructed without the acquisition of additional right of way. Accordingly, at that time the PPW Committee directed that Staff begin the design of a center / left turn lane on Schoettler Road at Georgetown Road, for incorporation into the 2018 Budget.

City Engineering Staff has studied this intersection in depth, and has verified that a turn lane on Schoettler Road at Georgetown can be constructed within the existing right of way.

However, this will create an additional bend in Schoettler Road, just north of the bend created due to the turn lane for Schoettler Grove. It is the engineering Staff's opinion that an additional bend in this location will not be positively received by motorists utilizing Schoettler Road. After further review, the City Staff believes it would be more prudent to consider the extension of the center / left turn lane from Schoettler Grove to Georgetown Road, including Westerley Drive. While this will require the acquisition of right of way, it is the Staff's opinion that an incremental improvement at Georgetown will not substantively improve the roadway, and that the proper way to construct a turn lane at Georgetown is to extend the existing turn lane at Schoettler Grove.

The creation of a center / left turn lane from Schoettler Grove to Georgetown Road will necessitate the acquisition of right of way from the property owner at 2290 Schoettler Road. This property owner has been contacted in the past, including earlier this year, and has indicated that she is not willing to convey right of way to the City of Chesterfield for this purpose. Accordingly, in order to improve the roadway in this area, it appears condemnation will be required. This would include the acquisition of right of way and temporary slope and construction easement along the entire frontage of the property at 2290 Schoettler Road, allowing a continuous center / left turn lane to be constructed from Schoettler Grove to Georgetown Road. This would alleviate the "jog" currently experienced by northbound Schoettler Road motorists just north of Schoettler Grove. Sidewalk would also be constructed to close a gap on the east side of Schoettler Road. See Exhibit 1 for a depiction of the turn lane construction and sidewalk addition through 2290 Schoettler Road. It is estimated that approximately 7,000 square feet of right of way and 5,000 square feet of temporary slope and construction easement would be required in order to construct the proposed improvement.

If the Planning and Public Works Committee concurs that this is the proper approach, design and right of way funding could be incorporated into the 2018 Budget. Again, the City Staff does not believe that this project would qualify for any grant funding, so the project would be exclusively funded through the City of Chesterfield. The following budget allocations would be necessary (See Exhibit 2 for a cost breakdown):

2018 Budget

Roadway Design (including survey and easement exhibits)	\$75,000
Right of Way Acquisition (including attorney fees)	\$120,000

2019 Budget

Construction (including utility relocation and inspection)	\$550,000
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If the City of Chesterfield were to proceed in improving this section of Schoettler Road, I think one would logically question whether it makes sense to implement all planned improvements between Georgetown Road and Clayton Road. This would include the planned, but not yet implemented improvement of an additional southbound lane to facilitate motorists desiring to make a right turn onto Clayton Road. Currently, if more than one car is waiting at the stoplight to continue south on Schoettler Road, cars are unable to make a right turn on Clayton Road, and must wait for a green light to clear the queued vehicles. To address this problem, a dedicated right turn lane could be constructed on Schoettler Road that would allow vehicles to continue turning onto Clayton Road when more than one vehicle is waiting at the stoplight to make a thru movement. (See Exhibit 3). Right of way for this purpose was dedicated as part of the Schoettler Grove development. However, the traffic signal at the intersection of Schoettler Road and Clayton Road is maintained by the St. Louis County

Department of Transportation. Therefore, any work at this intersection would require review and permits from that agency.

Should the Committee determine that it is appropriate to include improvements near the Clayton Road intersection to the above-described project, the estimate cost increases are as follows (See Exhibit 4 for a cost breakdown):

2018 Budget

Increase Engineering Design costs	\$25,000	(\$100,000 Total)
Increase Right of Way costs	\$0	(\$120,000 Total)

2019 Budget

Increase Construction Costs	\$180,000	
Signal Modification Costs*	\$ 70,000	(\$800,000 Total)

*Note, signal costs have been separated as these costs will be entirely dependent upon requirements from St. Louis County Department of Transportation.

Action Recommended

After further analysis, it is the Engineering Staff's opinion that construction of an isolated turn lane at Georgetown Road is not an appropriate means to improve the safety of Schoettler Road. The proper way to improve that section of Schoettler Road is to construct a center / left turn lane from Schoettler Grove to Georgetown Road. This will necessitate the acquisition of right of way and easements from the property at 2290 Schoettler Road. The estimated total project cost is \$745,000, including design, right of way, and construction costs. Should City Council elect to expand the project to include improvements at Clayton Road, the total estimated project cost would increase to \$1,020,000.

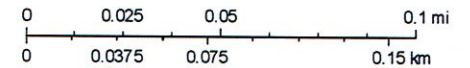
Center Turn Lane from Schoettler Grove to Georgetown Road



July 10, 2017

□ Parcels

1:2,006



Esri, Inc., City of Chesterfield, Missouri

EXHIBIT 2

Schoettler Road Center Turn Lane at Georgetown Road and Westerly Place

Schoettler Manor Court to Amberleigh Hill Court

Cost Estimate

11-Jul-17

Item No.	Description	Unit	Price	Quantity	Total
201-20.10	CLEARING AND GRUBBING	LS	\$ 15,000.00	1	\$ 15,000.00
202-20.10	REMOVAL OF IMPROVEMENTS	LS	\$ 5,000.00	1	\$ 5,000.00
202-30.00	REMOVAL OF RIGID PAVEMENT	SY	\$ 40.00	135	\$ 5,400.00
203-10.00	CLASS "A" EXCAVATION	CY	\$ 30.00	1,000	\$ 30,000.00
304-05.04	TYPE 5 AGGREGATE BASE (4 IN. THICK)	SY	\$ 8.00	1,520	\$ 12,160.00
405-30.10	TYPE "C" BITUMINOUS CONCRETE (PAVEMENT)	TON	\$ 110.00	150	\$ 16,500.00
405-30.30	TYPE "X" BITUMINOUS CONCRETE (BASE)	TON	\$ 95.00	595	\$ 56,525.00
407-10.27	TACK-EMULSIFIED ASPHALT (SS-1H)	GAL	\$ 5.00	240	\$ 1,200.00
408-10.15	PRIME-LIQUID ASPHALT (MC30)	GAL	\$ 6.00	180	\$ 1,080.00
	PAVED APPROACH (6")	SY	\$ 70.00	145	\$ 10,150.00
608-50.07	PAVED APPROACH (7")	SY	\$ 75.00	135	\$ 10,125.00
608-60.04	CONCRETE SIDEWALK (4" THICK)	SY	\$ 50.00	350.0	\$ 17,500.00
	CONCRETE SIDEWALK (6" THICK)	SY	\$ 65.00	20.0	\$ 1,300.00
608-60.08	CONCRETE SIDEWALK, CURB RAMP	EA	\$ 3,000.00	2	\$ 6,000.00
609-20.11	INTEGRAL CURB (6" HEIGHT AND UNDER)	LF	\$ 22.00	100	\$ 2,200.00
612-30.15	TRAFFIC CONTROL	LS	\$ 12,000.00	1	\$ 12,000.00
613-10.14	FULL DEPTH SAWCUTTING	LF	\$ 6.50	1,200	\$ 7,800.00
619-00.00	MOBILIZATION	LS	\$ 32,000.00	1	\$ 32,000.00
619-10.00	PAVEMENT EDGE TREATMENT	LF	\$ 10.00	820	\$ 8,200.00
620-70.01	PAVEMENT MARKING REMOVAL	LF	\$ 2.50	1,900	\$ 4,750.00
621-20.10	PERMANENT YELLOW PAVEMENT STRIPING, PAINT	LF	\$ 1.50	2,500	\$ 3,750.00
621-20.11	PERMANENT WHITE PAVEMENT STRIPING, PAINT	LF	\$ 1.50	850	\$ 1,275.00
621-20.15	PERMANENT PAVEMENT MARKING ARROWS	EACH	\$ 250.00	6	\$ 1,500.00
803-10.00	SODDING	SY	\$ 24.00	1,000	\$ 24,000.00
806-55.00	STORM WATER POLLUTION PREVENTION PLAN (SWPPP)	LS	\$ 5,000.00	1	\$ 5,000.00
903-10.00	SIGNS	EACH	\$ 2,000.00	1	\$ 2,000.00
	RELOCATE GRATED INLET NEAR AMBERLEIGH HILLS	LS	\$ 15,000.00	1	\$ 15,000.00
	CULVERT	EACH	\$ 3,000.00	2	\$ 6,000.00
	WATER QUALITY	LS	\$ 15,000.00	1	\$ 15,000.00
	REESTABLISH VEGATATIVE BUFFER	LS	\$ 6,000.00	1	\$ 6,000.00
	RETAINING WALL	SF	\$ 35.00	1,000	\$ 35,000.00
	REPAIR IRRIGATION	LS	\$ 5,000.00	1	\$ 5,000.00

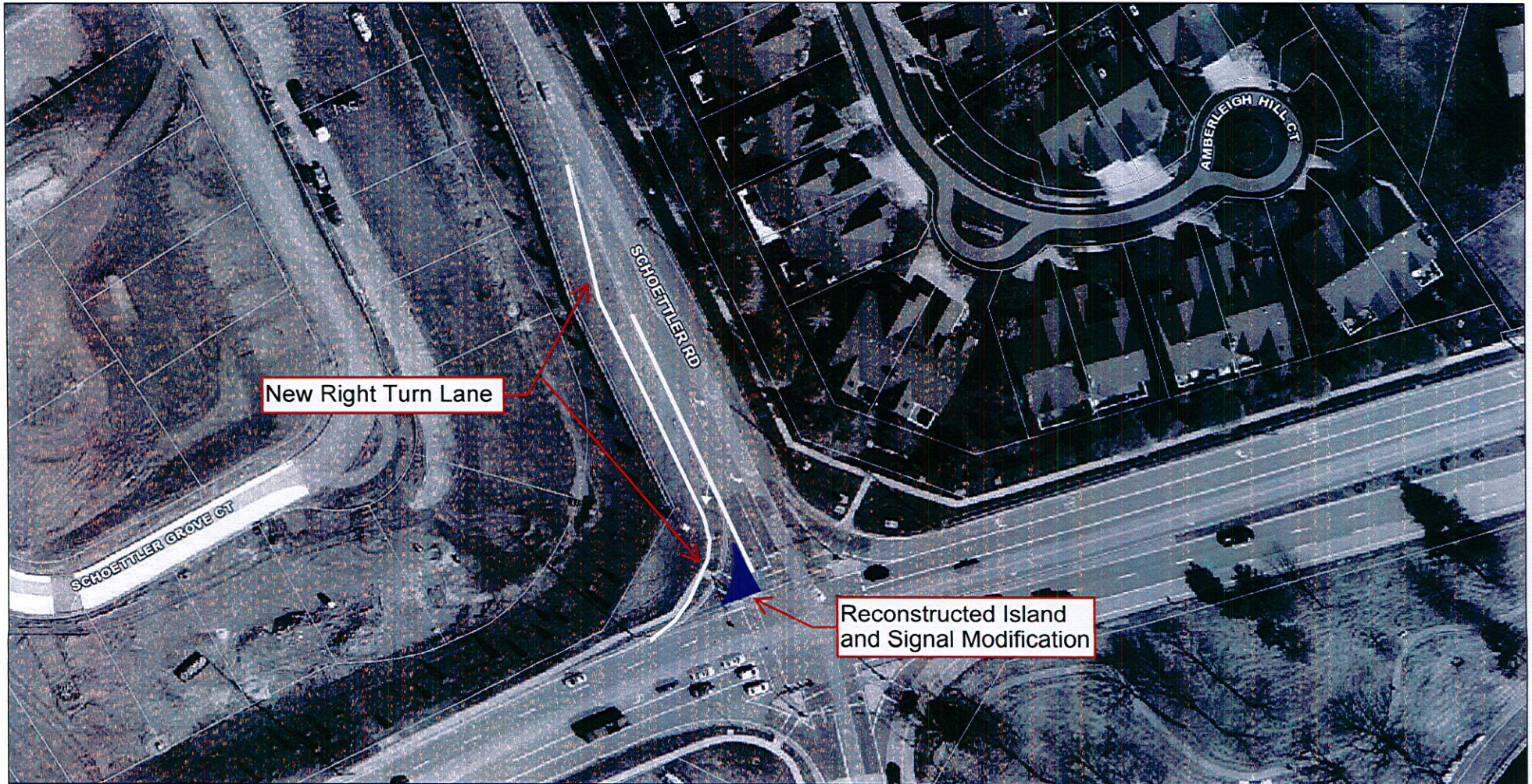
Sub Totals:	\$ 374,415.00
Contingency (10%)	\$ 37,441.50
Utility Relocates (Possibly)	\$ 50,000.00
2019 Construction Inflation (3%/yr)	\$ 24,711.39
2019 Construction Engineering (15%)	\$ 61,778.48
TOTAL (rounded)	\$ 550,000.00

2018 Design \$ 75,000.00

ROW Acquisition 14'x490'	6860 sf	\$10.00/sf	\$ 68,600.00
Temporary Construction Easement 10'x490'	4900 sf	\$1.00/sf	\$ 4,900.00
		Attorney Fees	\$ 45,000.00
		ROW Total (rounded)	\$ 120,000.00

Exhibit 3

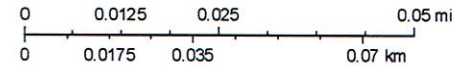
Right Turn Lane at Clayton Road



July 10, 2017

Parcels

1:1,003



Esri, Inc., City of Chesterfield, Missouri

This Map has been prepared from the most reliable information obtainable. We cannot, however, due to circumstances beyond our control, guarantee complete accuracy. Any errors or omissions brought to our attention will be appreciated and will be corrected in subsequent updates.

EXHIBIT 41

Schoettler Road Right Turn Lane at Clayton Road

Cost Estimate

11-Jul-17

Item No.	Description	Unit	Price	Quantity	Total
201-20.10	CLEARING AND GRUBBING	LS	\$ 3,000.00	1	\$ 3,000.00
202-20.10	REMOVAL OF IMPROVEMENTS	LS	\$ 5,000.00	1	\$ 5,000.00
202-30.00	REMOVAL OF RIGID PAVEMENT	SY	\$ 40.00	22	\$ 880.00
203-10.00	CLASS "A" EXCAVATION	CY	\$ 30.00	220	\$ 6,600.00
304-05.04	TYPE 5 AGGREGATE BASE (4 IN. THICK)	SY	\$ 8.00	440	\$ 3,520.00
405-30.10	TYPE "C" BITUMINOUS CONCRETE (PAVEMENT)	TON	\$ 110.00	50	\$ 5,500.00
405-30.30	TYPE "X" BITUMINOUS CONCRETE (BASE)	TON	\$ 95.00	200	\$ 19,000.00
407-10.27	TACK-EMULSIFIED ASPHALT (SS-1H)	GAL	\$ 5.00	80	\$ 400.00
408-10.15	PRIME-LIQUID ASPHALT (MC30)	GAL	\$ 6.00	60	\$ 360.00
608-60.04	CONCRETE SIDEWALK (4" THICK)	SY	\$ 50.00	40.0	\$ 2,000.00
608-60.08	CONCRETE SIDEWALK, CURB RAMP	EA	\$ 3,000.00	4	\$ 12,000.00
	MEDIAN ISLAND	LS	\$ 10,000.00	1	\$ 10,000.00
	CURB AND GUTTER	LF	\$ 35.00	90	\$ 3,150.00
612-30.15	TRAFFIC CONTROL	LS	\$ 5,000.00	1	\$ 5,000.00
613-10.14	FULL DEPTH SAWCUTTING	LF	\$ 6.50	400	\$ 2,600.00
619-00.00	MOBILIZATION	LS	\$ 15,000.00	1	\$ 15,000.00
619-10.00	PAVEMENT EDGE TREATMENT	LF	\$ 10.00	350	\$ 3,500.00
620-70.01	PAVEMENT MARKING REMOVAL	LF	\$ 2.50	450	\$ 1,125.00
621-20.11	PERMANENT WHITE PAVEMENT STRIPING, PAINT	LF	\$ 1.50	600	\$ 900.00
621-20.15	PERMANENT PAVEMENT MARKING ARROWS	EACH	\$ 250.00	4	\$ 1,000.00
803-10.00	SODDING	SY	\$ 24.00	525	\$ 12,600.00
806-55.00	STORM WATER POLLUTION PREVENTION PLAN (SWPPP)	LS	\$ 2,500.00	1	\$ 2,500.00
903-10.00	SIGNS	EACH	\$ 1,000.00	1	\$ 1,000.00
	RELOCATE GRATED INLET, SEWER WORK	LS	\$ 10,000.00	1	\$ 10,000.00
	WATER QUALITY	LS	\$ 5,000.00	1	\$ 5,000.00
	REPAIR IRRIGATION	LS	\$ 5,000.00	1	\$ 5,000.00

Sub Totals:	\$ 136,635.00
Contingency (10%)	\$ 13,663.50
2019 Construction Inflation (3%/yr)	\$ 9,017.91
2019 Construction Engineering (15%)	\$ 22,544.78
TOTAL (rounded)	\$ 180,000.00

Signal Cost \$ 70,000.00

Design \$ 25,000.00