



ROAD IMPACT FEE ZONE IMPROVEMENT PLAN
JUNE 2021



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1.0 - Executive Summary

Residential development within the Town of Pendleton has been steadily increasing for the last six years. The town is the next stop along Interstate 69 for development. The Pendleton Town Council, being proactive, is looking at ways to ensure quality of life and ease of travel for the current and future residents as development continues. One of the most responsible ways is to utilize impact fees to pay for needed roadway improvements caused by added development. Banning Engineering teamed with Traffic Engineering and Traffic Impact Group to provide the necessary zone improvement plan required for determining a road impact fee for new developments.

To determine which projects are required due to development, three analysis are required: current conditions, future conditions and mitigated conditions. Levels of service (LOS), the standard way to evaluate intersections and road segments, was determined for all three scenarios. It is recommended the Town set community levels of service for intersections at D and road segments at E. Anything rated below those levels of service would require mitigation (projects).

The modelling began with the current conditions analysis. Traffic data for the current conditions analysis was gathered in August of 2020. For the future conditions analysis, anticipated developments were added to the current conditions traffic counts to obtain anticipated future traffic loading for intersections and road segments. A total of 22,300 daily trips were added due to the anticipated developments. After performing both analysis one (1) intersection was failing for the current conditions and eight (8) for the future conditions. Cost estimates were provided for five (5) projects to mitigate the failing levels of service. Only projects that are needed due to the anticipated development may be considered for the road impact fee. The intersection of State Street and Pendleton Avenue still has a failing LOS as no project was found to be feasible at this time to mitigate the issues present. Further information about the projects considered for mitigation, but not selected, can be found in the full report.

For the road impact fee, five (5) projects were considered:

Project	Estimated 2020 Project Cost
Project 1 : Heritage Way South Extension	\$3,190,773.50
Project 2 : Roundabout at 300W and US 36	\$1,327,413.00
Project 3 : Roundabout at North Pendleton Ave and SR 67	\$1,786,278.50
Project 4 : SR 67 upgrade from Huntsville Rd to Angle Rd (INDOT Des#1702936, 1802854 and 2001127)	\$3,500,000.00
Project 5 : North Heritage Way Extension	\$10,978,049.50
TOTAL 10-Year Development Roadway Impact Costs	\$20,782,514.50

NOTE : The road impact fee is determined by totaling the necessary project costs and dividing by the additional daily trips. The calculated road impact fee is \$931.95 per new daily trip, or \$8,797.61 per new single family residential structure. Further detail, assumptions, considerations, and calculations can be found in the following report and appendices.

2.0 - Project Understanding

The purpose of this project is to meet the requirements of IC-36-7-4-1318 for a zone improvement plan for Roads and Public Ways within the Town of Pendleton. The zone improvement plan will then be used as reference for the Road Impact fee Ordinance.

The intent of the zone improvement plan is to define current traffic as well as necessary improvements due to development within the next 10 years. The zone improvement plan will identify roadway capital improvements needed to effectively service the anticipated developments as well as remedy current issues. The plan will further determine road impact fees that may be applied to new developments per the Indiana Code. These fees can be used to fund necessary roadway improvements within the Town of Pendleton.

2.1 - Scope of Report

The scope of the report includes the following:

- Traffic data collection for 40 +/- intersections and segments
- Current conditions capacity analysis (level of service)
- 10 year future conditions capacity analysis (level of service)
- Report and summary to comply with requirements within Indiana Code 36-7-4-1318
- Coordination with Town of Pendleton regarding future development and existing issues
- Coordination with MCCOG, Madison County Council of Governments, and Town of Pendleton regarding thoroughfare plan update
- Coordination with Baker Tilly regarding road impact fee proposed for inclusion in report
- Typical section and intersection for proposed improvements
- Construction cost estimates for proposed improvements
- Attendance

2.2 Study Area (Impact Zone)

The area being studied is the entire area within the Town of Pendleton, located within Madison County Indiana. The Town of Pendleton is located within Fall Creek Township. A basic map of the highways and railroads within and near Pendleton is shown in Figure 2.1. Below is a summary of the major roadways within Pendleton and a listing of the responsible municipal jurisdiction.

- Interstate 69 (Indiana Department of Transportation)
- Primary Arterials
 - o State Street (Town of Pendleton)
 - o SR 67 (Indiana Department of Transportation)
 - o SR 38 (Indiana Department of Transportation)
- Secondary Arterials
 - o SR 9 (Indiana Department of Transportation)
 - o US 36 (Indiana Department of Transportation)
 - o Heritage Way (Town of Pendleton)
- Collectors and local roads (all responsibility of Town of Pendleton)

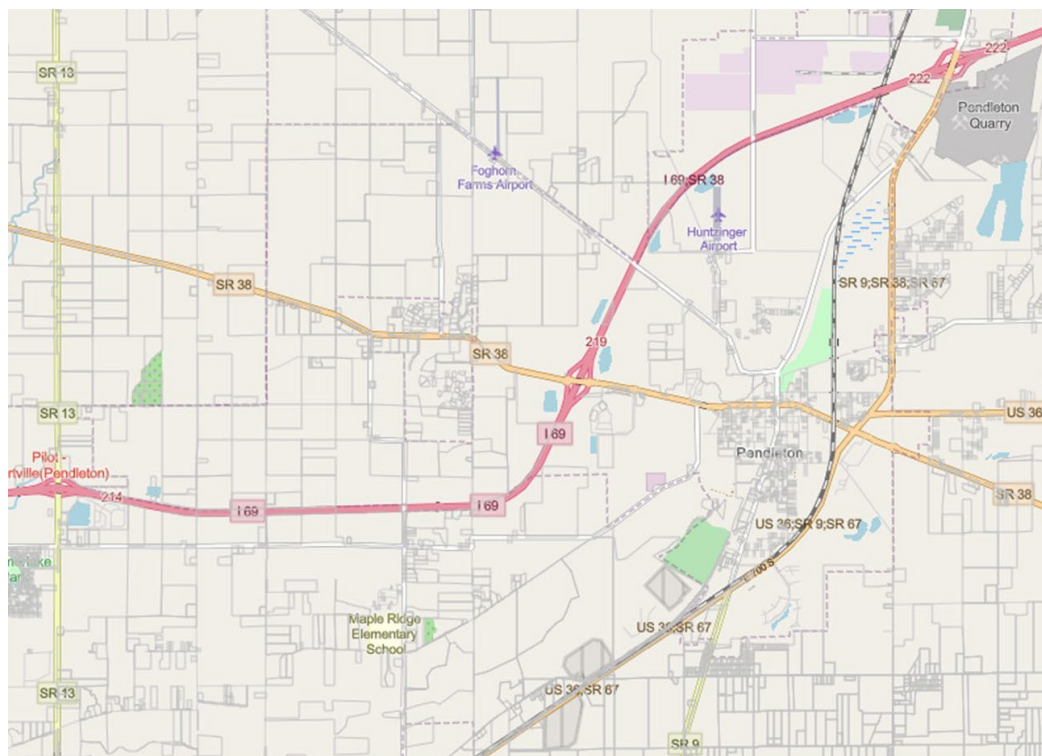


Figure 2.1 - Pendleton Highway Map

A draft thoroughfare plan for the Town of Pendleton is shown in Figure 2.2. In total, the Town of Pendleton is responsible for approximately 59 miles of roadway and hundreds of intersections. INDOT is responsible for intersections along the state and federal roads noted previously. The Town of Pendleton has a municipal footprint of 13.4 square miles. Approximately 35% is currently developed. The historic area of the Town is roughly centered at the intersection of State Street and Pendleton Avenue. This area is approximately 5 square miles and is shown as the Context Zone within Figure 2.1.

The remaining peripheral areas are predominantly zoned Agricultural, Industrial, PUD, Planned Business, and Single Family. South Madison School Corporation is the primary institution within the corporate limits of Pendleton. Pendleton Heights High school and Middle school are located at the southeast intersection of SR 38 and SR 67. Two elementary schools are located along East street just northwest of SR 67.

Complicating traffic patterns within the Town of Pendleton is a dual CSX rail line running north to south along the eastern and southern portion of the context zone shown in Figure 2.2 and represented by the dashed line in Figure 2.1. Trains on these lines operate at 55-60 miles per hour. Currently, the Town of Pendleton has 9 total crossing of the rail line. Three of these crossings are grade separated (State Street, Water Street, and Falls Park Drive). The grade separated crossings were built around 1910 and are narrow and have limited height clearances. The remaining crossings are at grade crossings.

The zone improvement area (Town of Pendleton) had a population of 4,246 in 2019. The average household size for Pendleton is 2.4. In 2020 the Town of Pendleton averaged nearly 14 residential building permits per month. This growth is expected to continue for the foreseeable future. The anticipated developments listed in section 4.1 of this report will average 17 building permits per month if fully built out in ten years. This estimate of development for residential properties appears to reasonable and attainable based on the data presently available and historical trends.

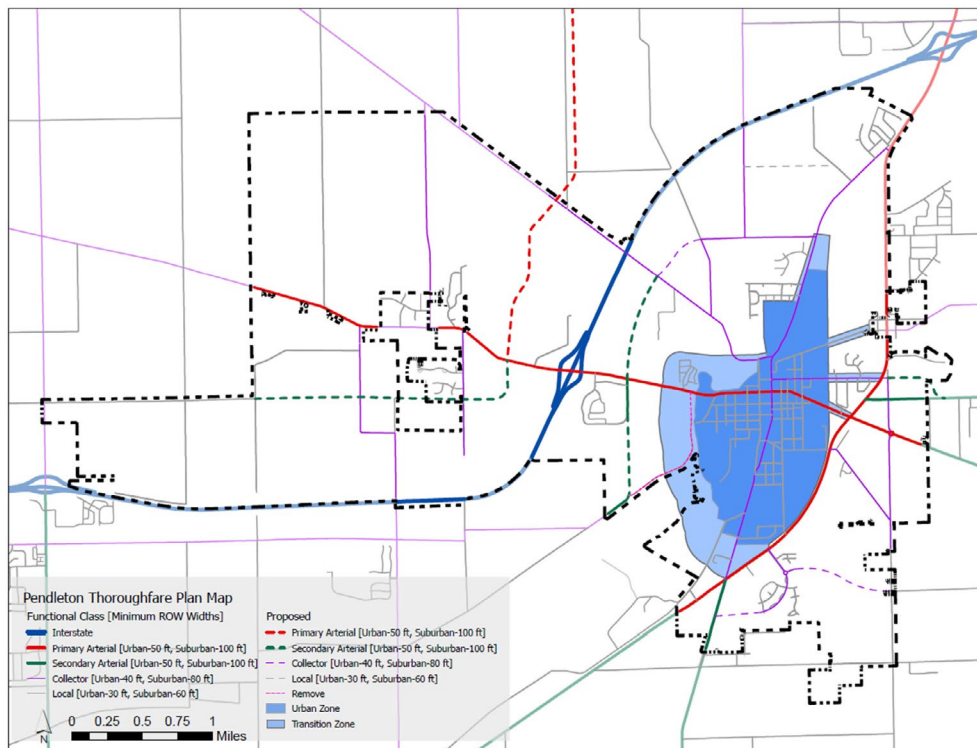


Figure 2.2 - Thoroughfare Plan

The following intersections were included:

- | | |
|--|-------------------------------|
| Main St at W High St | Main St at E State St |
| S Pendleton Ave at W High St | N Pendleton Ave at E State St |
| S Pendleton Ave at Madison Ave | East St at E State St |
| Broadway St at Madison Ave | SR 13 at W 700 S |
| S Pendleton Ave at Old Indianapolis Rd | S 750 W at W 700 S |
| SR 9 at SR 67 | S 700 W at SR 38 |
| Broadway St at SR 67 | S 600 W at SR 38 |
| SR 67 at Madison Ave | Corporation Dr at SR 38 |
| SR 67 at SR 38 | Enterprise Dr at W State St |
| N Pendleton Ave at W 600 S | Heritage Way at W State St |
| SR 67 at N Pendleton Ave | W Fall Creek Dr at W State St |
| SR 67 at S 600 W | S 525 W at Old SR 132 |
| N Pendleton Ave at Blue Spruce Dr | S 425 W at Lapel Rd |
| Main St at Fall Creek Pkwy | S 425 W at W 600 S |
| N Pendleton Ave at Fall Creek Pkwy | S 400 W at W 600 S |
| N Pendleton Ave at E Water St | |

2.5 - Community Level of Service (Intersection)

The Transportation Research Board’s Highway Capacity Manual (HCM) utilizes a term “level of service” (LOS) to measure how traffic operates in intersections. There are currently six levels of service ranging from A to F. Level of Service “A” represents the best conditions and Level of Service “F” represents the worst. Synchro software was used to determine the level of service for intersections in the study area. All worksheet reports from the analyses can be found in the Appendices.

The following table shows the control delay per vehicle associated with LOS A through F for signalized and unsignalized intersections. It is recommended a Community Level of Service for intersections be established at LOS D.

HIGHWAY CAPACITY MANUAL LEVELS of SERVICE and CONTROL DELAY			
SIGNALIZED INTERSECTION		UNSIGNALIZED INTERSECTION	
Level of Service	Control Delay per Vehicle (sec)	Level of Service	Control Delay per Vehicle (sec)
A	≤10	A	≤10
B	>10 and ≤20	B	>10 and ≤15
C	>20 and ≤35	C	>15 and ≤25
D	>35 and ≤55	D	>25 and ≤35
E	>55 and ≤80	E	>35 and ≤55
F	>80	F	>50

Table 2.1 - Intersection Level of Service Criteria (LOS)

Table 2.1 was utilized to determine the Level of Service for the existing and future intersections previously listed for either signalized or unsignalized conditions, as appropriate.

Figure 2.4 gives a visual representation of the intersection levels of service noted in Table 2.1.

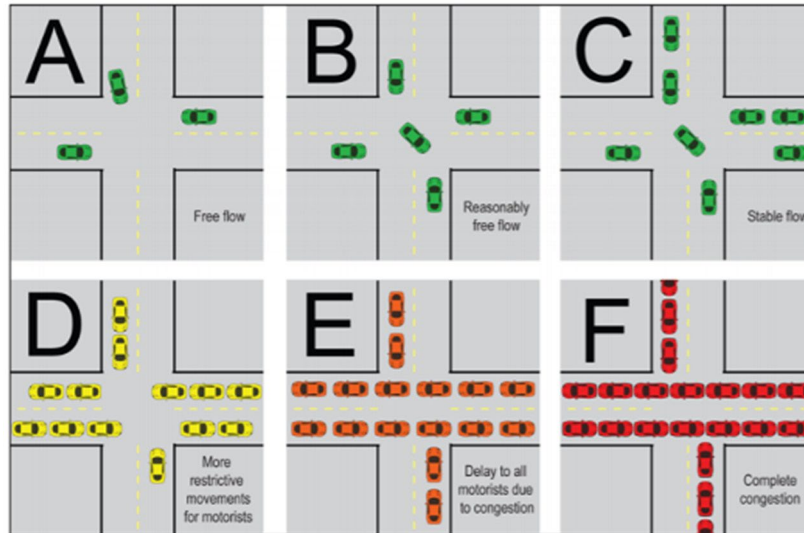


Figure 2.4 - Visual Representation of Intersection Level of Service

2.6 - Community Level of Service (Road Segments)

The Transportation Research Board’s Highway Capacity Manual (HCM) also utilizes a term “level of service” (LOS) to measure how traffic operates along roadway segments. Two-lane highways have one lane for use of traffic in each direction. The principal characteristic that distinguishes two-lane highway operation from that of other uninterrupted-flow facilities is that passing maneuvers take place in the opposing lane of traffic. Passing maneuvers are limited by the availability of gaps in the opposing traffic stream and by the availability of sufficient sight distance for a driver to discern the approach of an opposing vehicle safely. As demand flows and geometric restrictions increase, opportunities to pass decrease. This creates platoons within the traffic stream, with trailing vehicles subject to additional delay because of the inability to pass the lead vehicles.

The methodology is most directly used to determine the LOS on a uniform directional segment of two-lane highway by estimating the service measure of follower density that defines LOS. Such an analysis can also be used to determine the capacity of the directional segment or the service flow rate that can be accommodated at any given LOS.

The following table shows the follower density (followers per mile) associated with LOS A through F for two-lane roadway segments. It is recommended a Community Level of Service for roadway segments be established at LOS E.

LEVEL of SERVICE (LOS) CRITERIS for TWO-LANE HIGHWAYS			
FOLLOWER DENSITY (FOLLOWERS/MI) HIGHER-SPEED HIGHWAYS POSTED SPEED LIMIT >50 MI/HR		FOLLOWER DENSITY (FOLLOWERS/MI) LOWER-SPEED HIGHWAYS POSTED SPEED LIMIT <50 MI/HR	
Level of Service	Follower Density	Level of Service	Follower Density
A	≤2.0	A	≤2.5
B	>2.0 - 4.0	B	>2.5 - 5.0
C	>4.0 - 8.0	C	>5.0 - 10.0
D	>8.0 - 12.0	D	>10.0 - 15.0
E	>12.0	E	>15.0
F	LOS F exists when demand exceeds capacity.		

Table 2.2 - Road Segment Level of Service Criteria (LOS)

The Highway Capacity Software (HCS), Two-Lane version 7.8 by McTrans Center was utilized to determine the Level of Service (LOS) for the two-lane segment analyzed. Vehicle input data included passing constrained sections versus passing allowed zones, length of the segment, shoulder or curb width, lane width and number of access points per mile of roadway and the speed limit. Demand and capacity inputs provide the directional flow rate and opposing flow rate along with the percentage of total trucks. The peak hour factor adjusted the hourly flow rate to the peak 15-minute volume within the analysis hour. The segment capacity in vehicles per hour, was then calculated and compared to the value for free flow conditions to obtain a demand to capacity ratio. This data was then utilized to determine the average speed, follower’s density and Level of Service (LOS) for the road segment.

Table 2.2 was utilized to determine the Level of Service for the current and future two-lane roadway segment of East State Street from downtown proceeding toward Interstate 69.

3.0 - Current Conditions Analysis (2020)

The existing AM and PM peak hour traffic counts collected served as the base for the Synchro traffic modeling effort for the current conditions intersection analysis. The turning movement counts were placed into the model along with existing lane configuration and other adjustment factors such as stop sign placement, signal timing and phasing as appropriate. Together, this provides the existing level of service based on approach lane delay for the current condition intersections.

For the roadway segments analyzed the traffic counts obtained in August of 2020 for the highest peak hour were input into the Highway Capacity Software discussed in Section 2.6. The PM hour was the peak hour utilized in the calculation for existing conditions. The calculations then provided the levels of service noted in Section 3.2.

3.1 - Intersection Analysis (2020)

In the existing conditions analysis only (1) intersection, Madison Avenue and SR 67, had a level of service below the community LOS of D. This intersection had a LOS of F. Figure 3.1 shows the current LOS for all the intersections analyzed.

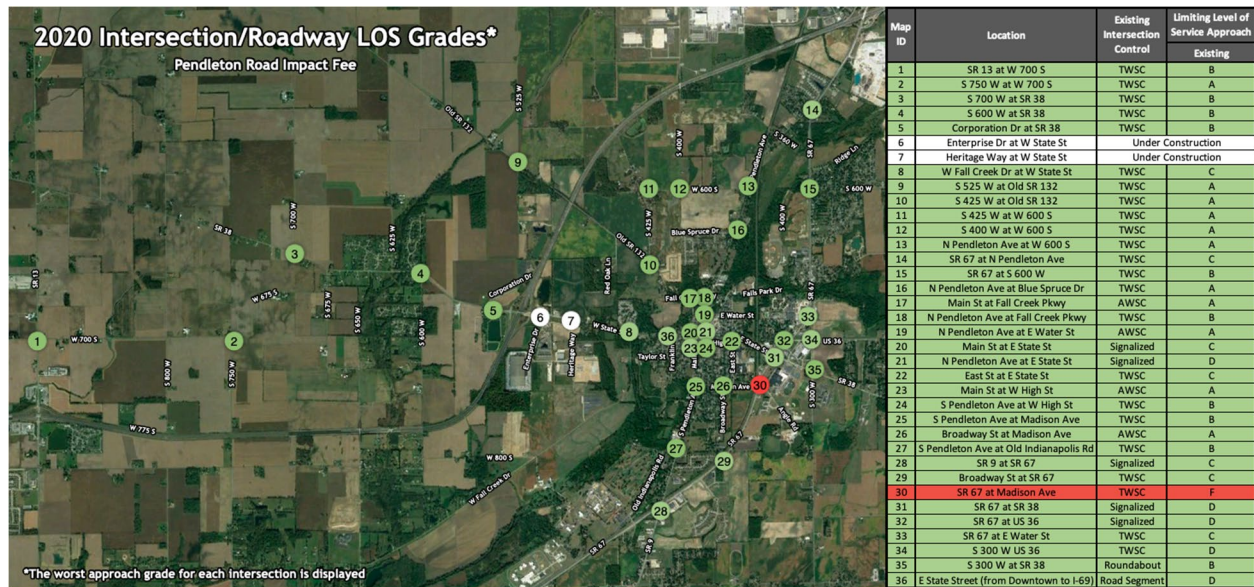


Figure 3.1 - Current Conditions Level of Service (2020)

3.2 - Road Segment Analysis (2020)

The segment of State Street, Mill Rd to I 69, analyzed shows it slightly exceeds the community level of service of LOS E. This segment is currently performing at a LOS D with 11.1 followers per mile per lane. The eastern portion of State Street is limited by and therefore analyzed by the intersection analysis. No project is being proposed to improve the LOS for this segment in the current condition's analysis.

3.3 - Road Segment Analysis (2020)

One current project was identified as part of the current conditions analysis. The east bound approach of the intersection of Madison Avenue and SR 67 has a F Level of Service rating. The intersection was also the site of a train crash recently. A separate study is being conducted relating to the safety of this intersection. Regarding the Level of Service of this approach, the only reasonable alternative to remedy the situation is to close the intersection. It is estimated closing the intersection would cost \$60,000. Closing would place barriers that would eliminate access to the public, but allow emergency vehicles access to the railroad tracks. The crossing and associated roadway pavement would not be removed. The \$60,000 project to improve the failing LOS for this intersection will not be included in the road impact fee calculation. Only improvements driven by development related level of service failures are eligible for inclusion in the road impact fee.

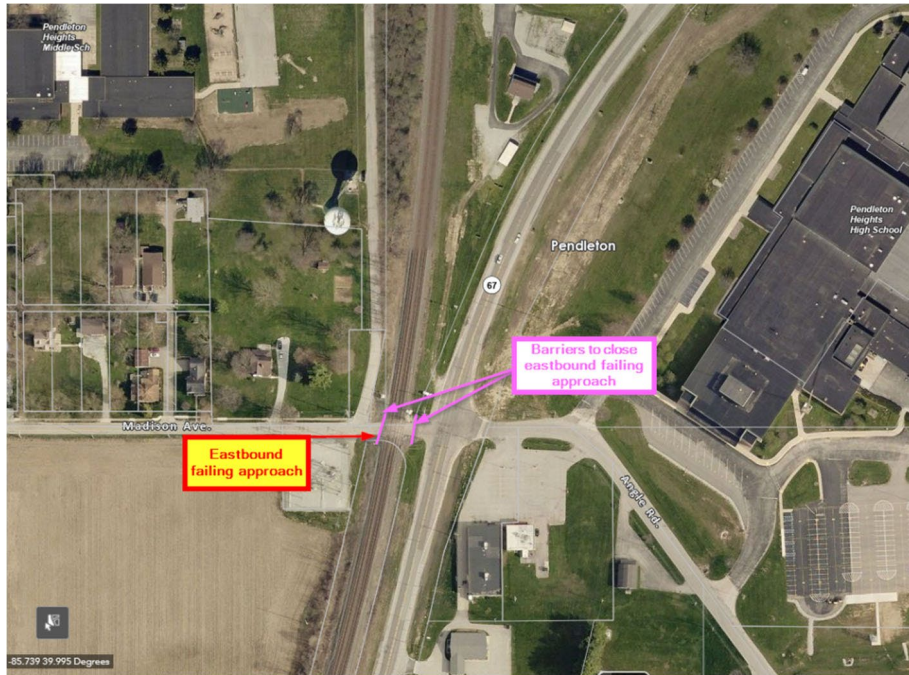


Figure 3.2 - Madison Avenue SR 67 closure location

4.0 - Future Conditions Analysis (2030)

The zone improvement plan requires a 10-year developed condition to appropriately analyze the impacts of anticipated future development. Development trends are used as well as existing zoning requirements and other regulations to help determine the anticipated additional trips due to development. Figure 4.1 shows the anticipated development within the zone improvement area for this impact study. The Institute of Transportation Engineers (ITE) Trip Generation guidelines provide entering and exiting volumes for the peak hours in the AM and PM as well as the overall daily trips generated. These peak hour trips coincide with the current conditions peak hours and were subsequently added to them for the future conditions analysis. The updated counts were put into a software program called Vistro. Vistro allows volumes to be distributed based on origin and destination modeling. An iterative process was then utilized to ensure initial assumptions of the modelling were appropriate as well as allowing for adjustments where results appear to conflict with real world scenarios. The final Vistro peak hour volumes were placed into the Synchro model from the current conditions analysis to provide the future level of service based on approach lane delay for the intersections modelled.

For the future roadway segment analyzed the current condition counts were the start. The future analysis then added in a background rate of 1 percent per year as well as the additional traffic counts obtained from the anticipated development included in the Vistro model. The calculations then provided the levels of service noted in Section 4.3.

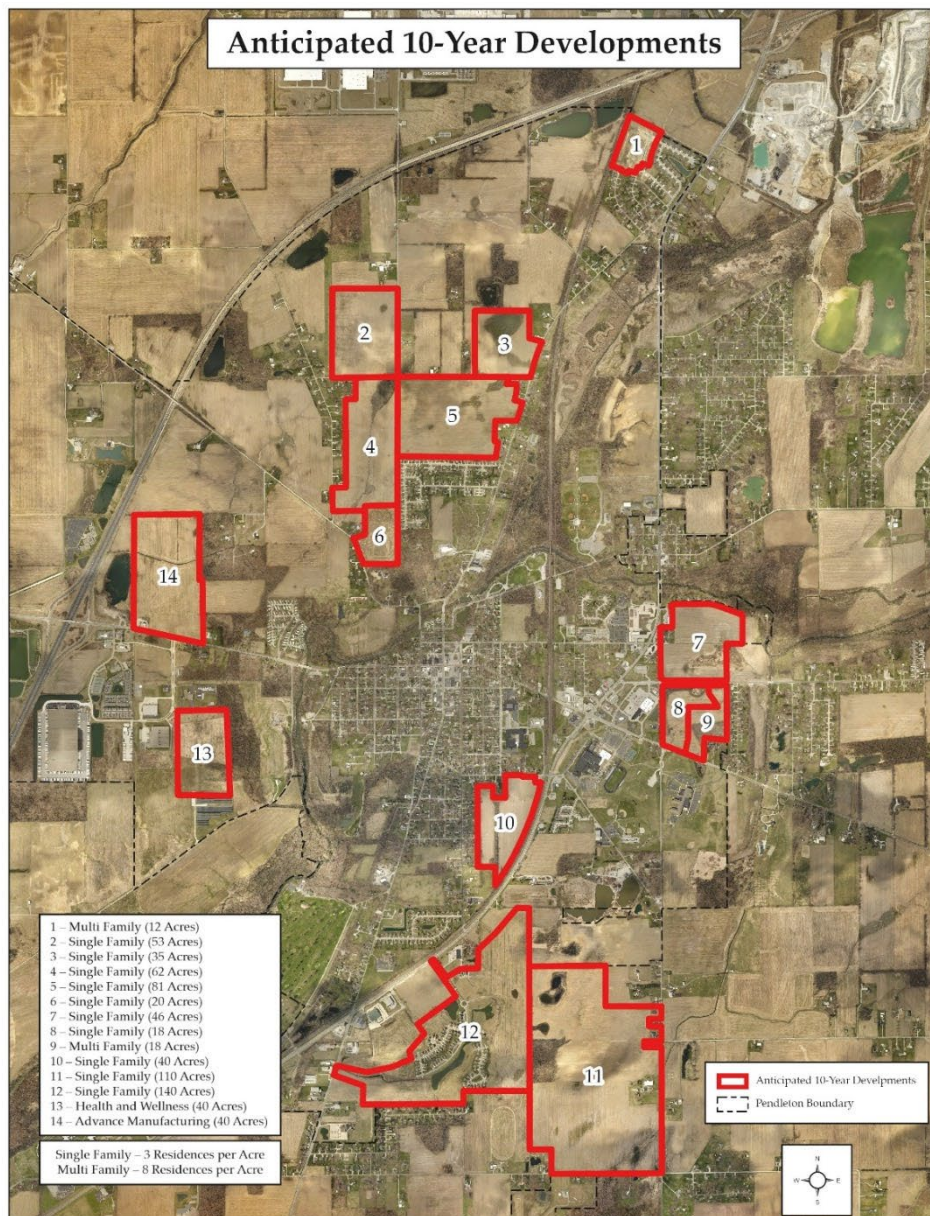


Figure 4.1 - Anticipated 10-Year Developments

4.1 - Anticipated Developments (2030)

Town Planning Staff provided the list and location of likely developments for the area zone improvement plan shown in Figure 4.1. A total of 14 likely developments over the course of the upcoming 10-years were identified. Most of these developments are single family housing, but several other land use types were accounted for as well. These additional land use types included; multi-family, advanced manufacturing, and health and wellness.

The anticipated developments are summarized in Table 4.1 below.

Development	Acres	Type
1	12	Multi-Family
9	18	Multi-Family
Total Multi-Family	30	
2	53	Single-Family
3	35	Single-Family
4	62	Single-Family
5	81	Single-Family
6	20	Single-Family
7	46	Single-Family
8	18	Single-Family
10	40	Single-Family
11	110	Single-Family
12	140	Single-Family
Total Single-Family	605	
13	40	Health and Wellness
14	40	Advanced Manufacturing

Table 4.1 - 10-Year Anticipated Development Summary

Per the zoning ordinance up to 3 single-family residences are allowed per acre. In the multifamily district up to 8 residences are allowed per acre. A ten (10) percent building footprint was estimated for the health and wellness developed area. A twenty-five (25) percent building footprint was estimated for the advanced manufacturing developed area. The ITE Trip Generation Manual was used to determine trips per land use. For the analysis, 9.44 trips were used per single-family, 7.32 per multifamily, 10.72 per 1,000 square feet of health and wellness, and 3.37 per 1,000 square feet of advanced manufacturing. Total trips per development type and total trips are show in Table 4.2.

The total trips generated in 10-years per the developed land use are shown in Table 4.2. The total daily trips added in the next 10-years due to anticipated development, 22,300, will be the denominator for the road impact fee calculation.

Type	Daily Trips Generated
Multi-Family	1,800
Single-Family	17,000
Health and Wellness	2,100
Advanced Manufacturing	1,400
Total Daily Trips Added	22,300

Table 4.2 - Future Conditions Levels of Service

4.2 - Intersection Analysis (2030)

The intersection analysis performed for the future conditions showed eight intersections with failing levels of service. The following intersections were rated LOS F in the future conditions; Fall Creek Drive and State Street, N. Pendleton Ave and SR 67, Pendleton Ave. and State Street, SR 67 and Angle Road, SR 67 and Water Street. SR 67 and Angle Road is planned to be mitigated based on current conditions, however, the opposite approach (west bound) fails in the future conditions. The following other intersections also are failing at a LOS of E; Main Street and State Street, SR 67 and SR 38, US 36 and CR 300 West. Section 5.0 discusses the planned projects to improve the failing levels of service.

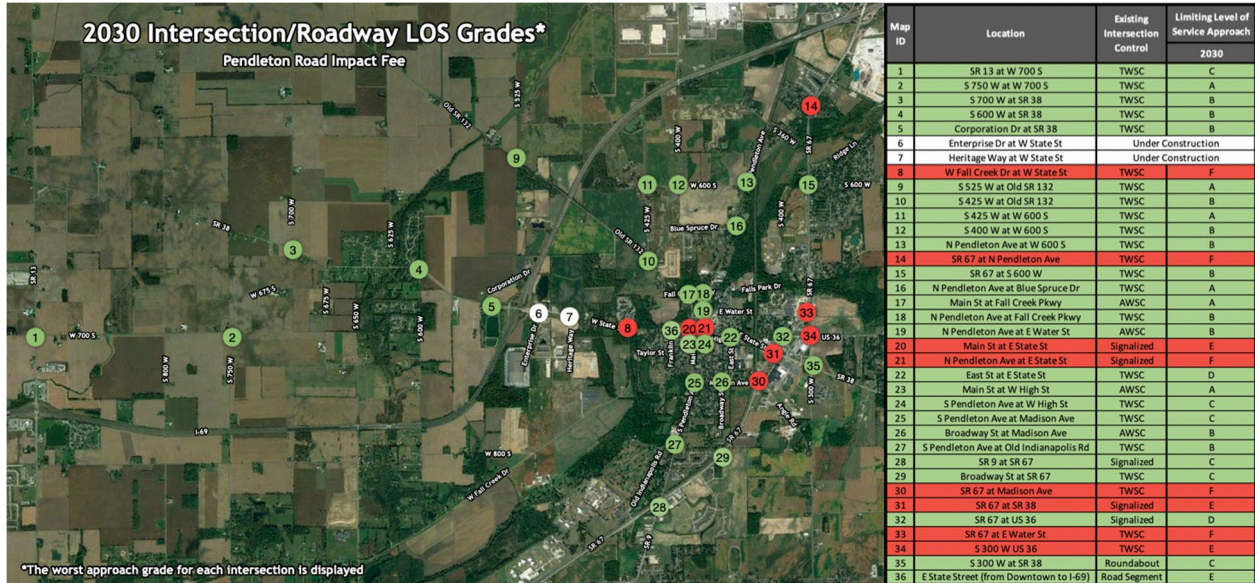


Figure 4.2 - Future Conditions Levels of Service (2030)

4.3 - Road Segment Analysis (2030)

The segment of State Street, Mill Road to I 69, analyzed showed a slight reduction in level of service. This segment went from LOS D to LOS E. The followers per mile per lane went from 11.1 in 2020 to 20.9 in 2030. At the current time, this meets the community level of service for roadway segments (LOS E) within the zone improvement area. No project is being proposed to improve the LOS for this segment at this time. In future iterations of the zone improvement plan, it can be expected for this segment to obtain a failing level of service and require a project to improve the LOS. The eastern portion of State Street is limited by and therefore analyzed by the intersection analysis.

5.0 - Future Conditions Recommended Projects (2030)

To mitigate the negative effects of future development to the level of service (LOS) several projects will be needed to upgrade intersections within the zone improvement area. The projects listed in the following sections provide mitigation that will improve the following intersections from a failing LOS (E or F) to an acceptable LOS (D or better). The intersections and approaches that are currently failing are listed in Table 5.1. The recommended projects improve the levels of service to at least the acceptable community level of service. Figure 5.1 below shows the mitigated levels of service.

Intersection	Failing Approach (s)	Proposed Project
8 - Fall Creek Drive and State Street	South	(1) Phase 1 Heritage Way Extension South
34 - 300 West and US 36	North and South	(2) Roundabout at the intersection of CR 300 West and US 36
14 - Pendleton Avenue and SR 67	West	(3) Roundabout at the intersection of N. Pendleton Ave. and SR 67
30 - SR 67 and Madison/Angle Road	East	(4) INDOT Des #2001127, 1802854, and 1702936
31 - SR 67 and SR 38	East, West, South	(4) INDOT Des #2001127, 1802854, and 1702936
33 - SR 67 and Water Street	East and West	(4) INDOT Des #2001127, 1802854, and 1702936
20 - Main Street and State Street	West	5) Heritage Way Extension North
21 - Pendleton Avenue and State Street	South and West	(6) Phase 2 Heritage Way Extension South or Added turn lanes (Neither included in impact fee costs due to high costs or significant negative impact to downtown Pendleton)

Table 5.1 - Future Conditions Projects Required

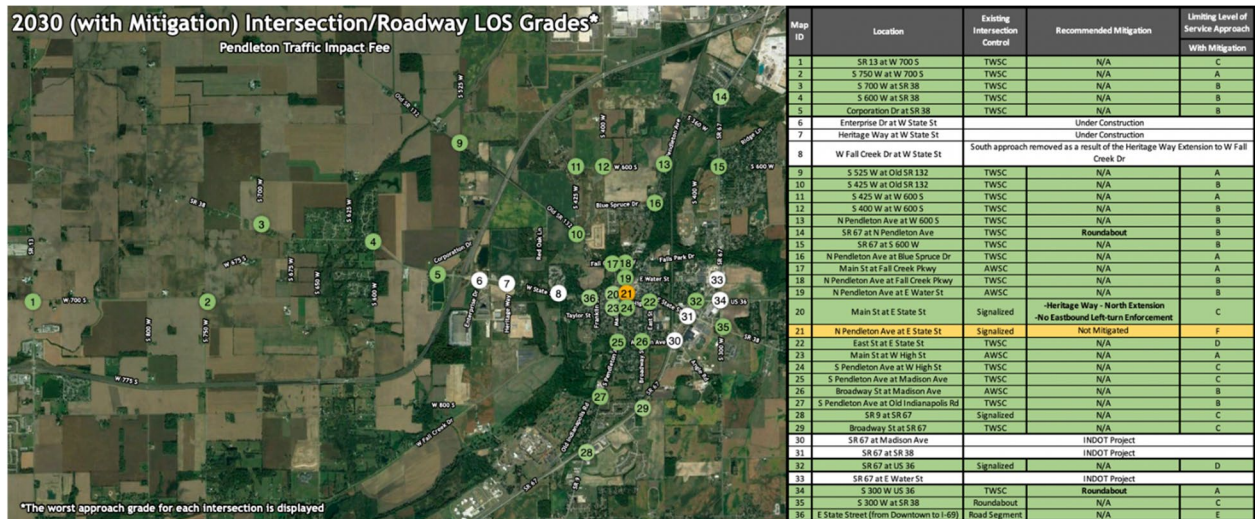


Figure 5.1 - Mitigated Levels of Service

5.1 - Intersection Improvements (2030)

Project 1 consists of extending Heritage Way south (Phase 1 extension) to Fall Creek Drive. Subsequently, Fall Creek Drive would be closed to traffic between Heritage Way South and State Street. The State Street intersection would be closed and no longer have a failing level of service. Heritage Way is shown as a secondary arterial on the most recent thoroughfare draft plan. Project 1 is shown in Figure 5.2.



Figure 5.2 - Project 1: Heritage Way South Extension

Project 2 is a roundabout at the intersection of CR 300 West and US 36. CR 300 West is a collector street and US 36 is a primary arterial per the most recent thoroughfare plan draft update. Project 2 is shown in Figure 5.3.



Figure 5.3 - Project 2: Roundabout at US 36 and CR 300 West

Project 3 is a roundabout at the intersection of N. Pendleton Ave. and SR 67. The project will mitigate an intersection that is below a D level of service in the future conditions. North Pendleton Avenue is a collector street and SR 67 is a primary arterial on the most recent draft thoroughfare plan. Several challenges are presented with this roundabout. The multiple turns and sharp angle limit the ability to maintain traffic patterns as they currently are. A portion of Pendleton Avenue is proposed to be removed as a result.

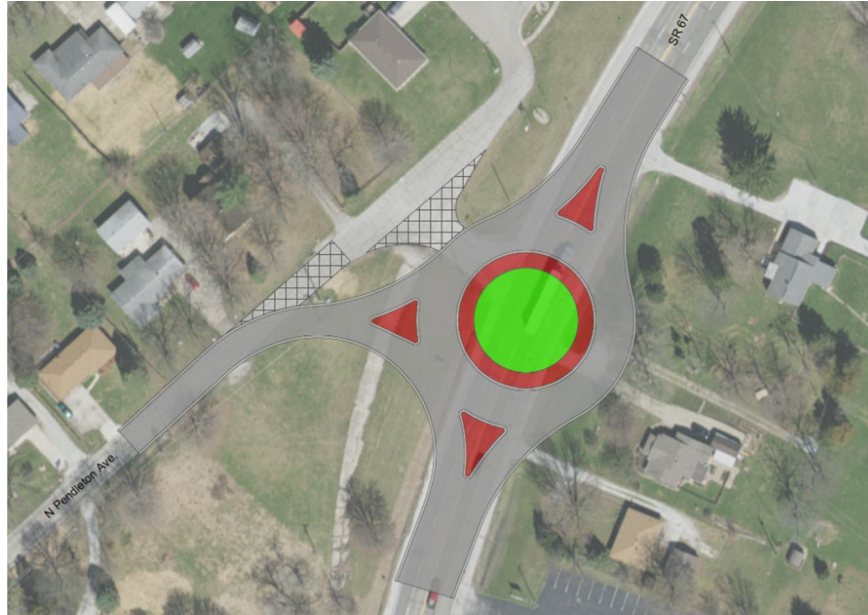


Figure 5.4 - Project 3: Roundabout at N. Pendleton Avenue and SR 67

Project 4 includes (3) INDOT projects. The designation numbers are 2001127, 1802854 and 1702936. The work is proposed from Angle Road to Huntsville Road (approximately 1 mile). The work includes added travel lanes, medians, turn lanes, and pedestrian improvements. Currently the Town of Pendleton's match for the proposed work is \$3,500,000, as reported by the design engineer.

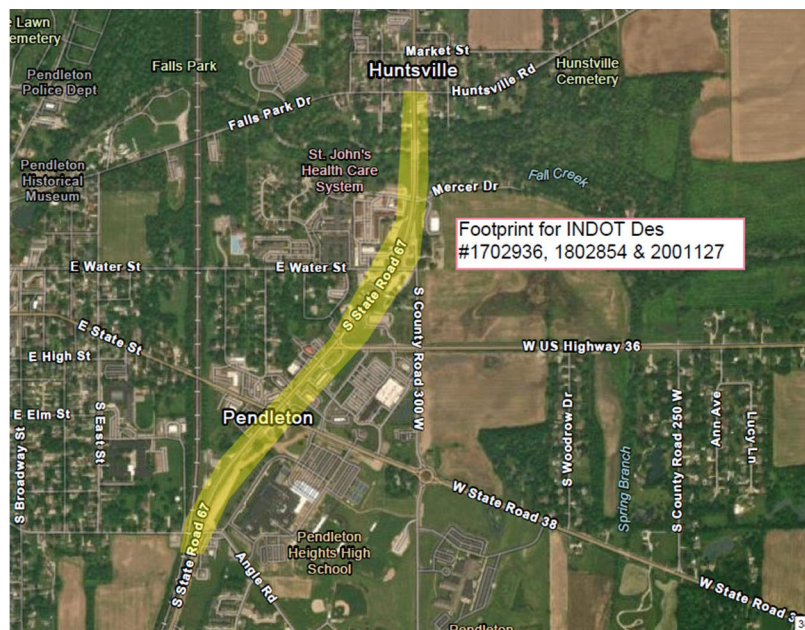


Figure 5.5 - Project 4: Improvements along SR 67

Project 5 is the addition of North Heritage Way extension to CR 600 South. This extension improves the intersection of Main Street and State Street from a LOS of E to a LOS of C. It is also critical that enforcement of a no left turn movement for eastbound State Street traffic at Main Street occur. This will allow the North Heritage Way extension to be the primary roadway for traffic existing the interstate at State Street and heading north. Per the thoroughfare plan, the 1.25 mile extension is a secondary arterial from State Street to Old SR 132, and a collector the remainder of the way to CR 600 South. Figure 5.6 shows the North Heritage Way extension.



Figure 5.6 - Project 5: Improvements along Heritage Way North

Project 6 is the Phase 2 Southern Heritage Way extension. This extension would take the Phase 1 Heritage Way South extension and head east over Fall Creek to Pendleton Avenue. Reformatory road would tee into the extension. This project would improve the LOS of the intersection of State Street and Pendleton Avenue from a F to a C. However, at this time the project is considered too costly to move forward with. The estimated costs of the phase 2 extension is approximately \$29,000,000 (2020). This cost includes a bridge over Fall Creek, a mile of roadway, adjacent path, property acquisition, design and environmental permitting.



Figure 5.7 - Project 6 Alternative: Pendleton Avenue and State Street

Project 6 alternative includes the addition of a right turn lane for the west approach (eastbound) of State Street. It also includes a left turn lane for the south approach (northbound) of Pendleton Avenue. Higher traffic volumes in the future condition causes a failing level of service for both approaches. Access to and from Interstate 69 appears to be the driving force for this project. The addition of the dedicated turn lanes will mitigate the issues and improve the level of service to an acceptable rating of D. The project will consist of adding the turn lanes, removing street parking along State street and Pendleton Ave and multiple lane shifts. Approximately 56 parking spots would be removed with this project. Project 6 is being rejected due to the high impact of lost parking spots, and decades long continued community sentiment rejecting widening State Street in historic downtown Pendleton. Project 6 Alternative is shown in Figure 5.7.

5.2 - Road Segment Improvements (2030)

The State Street future conditions analysis showed degradation to the level of service. However, the level of service is an E, and is currently acceptable per the community level of service. There was positive impact to the State Street roadway segment with the addition of the North Heritage Way extension that mitigated issues at the Main Street the State Street intersection. The followers per mile per lane went from 20.9 to 16.2, however the LOS remains at E for the mitigated conditions. Future impact studies will likely show a failing LOS for State Street. Due to the historic nature of downtown Pendleton, limited space, limited parking, and extremely high costs increasing capacity of this road segment will be exceedingly challenging. Additional east / west corridors or a new interstate interchange may be required to get traffic to SR 67 from the interstate.

5.3 - Future Conditions Project Costs

To be incorporated into the proposed roadway impact fee a project must be needed due to the anticipated 10-Year development. In total, five projects have been forwarded that mitigate failing levels of services in the future conditions. These intersections did not have a failing level of service in the current conditions, and therefore the full costs of these upgrades may be applied to the roadway impact fee calculations.

Project	Estimated 2020 Project Cost
Project 1 : Heritage Way South Extension	\$3,190,773.50
Project 2 : Roundabout at 300W and US 36	\$1,327,413.00
Project 3 : Roundabout at North Pendleton Ave and SR 67	\$1,786,278.50
Project 4 : SR 67 upgrade from Huntsville Rd to Angle Rd (INDOT Des#1702936, 1802854 and 2001127)	\$3,500,000.00
Project 5 : North Heritage Way Extension	\$10,978,049.50
Project 6: Neither project included in impact fee	
TOTAL 10-Year Development Roadway Impact Costs	\$20,782,514.50

Table 5.2 - Anticipated Road Impact Fee Zone Improvement Area 10-Year Project Costs

6.0 - Impact Fee Calculations

The zone improvement plan for the Town of Pendleton incorporates the entire corporate limits of the town. The new daily trips for the fee are 22,300. The total cost of the capital road improvements needed due to new developments by 2030 are \$20,782,514.50. This calculates cost per new daily trip for the road impact fee at \$931.95.

The cost per development type can then be determined by multiplying the dollar per new trip by the estimated number of trips. For example, a single family residence is estimated to provide 9.44 trips per day. Multiplying 9.44 trips times \$931.65 per trip yields a road impact fee for a new single family residence at \$8,797.61. The cost per multifamily residence would be \$6,821.87. Other land uses would have their road impact fee determined by the estimated number of daily trips added for that specific use.

6.1 - Potential Adjustments to Impact Fee

To potentially offset some of the costs of the impact fee other revenue streams may be used. One such revenue stream is matching funds from the Indiana Department of Transportation (INDOT). Typically, funds are matched at an 80/20 ratio. Projects 2, 3 & 4 all involve INDOT managed roadways and could receive matching funds. If matching funds were used for these three projects the road impact fee could be reduced to \$694.69 per trip. This would lower the single family residence impact fee to \$6,577.87 and the multifamily residence fee to \$5,085.13. Additionally, all of Project 1 and a significant portion of Project 5 are within the Tax Increment Financing district for the Town of Pendleton. This opens these two projects up to financial assistance from this funding source.

All costs listed in the report are 2020 costs. To keep up with the significant price increases occurring with construction labor and material costs, it is recommended the Town Council consider adding an inflation factor of 3% or 5% to the per trip per year to the road impact fee ordinance.

APPENDIX A - CONSTRUCTION COST ESTIMATES

Project One



This estimate is for construction of a new road between Heritage Way and Pendleton Ave. This estimate includes asphalt, curb & gutter, underdrain, & storm sewer improvements.

ROAD COSTS

Version: 20210521.0903

Item No.	Item Description	Unit	Quantity	Unit Cost	Extension
1	Construction Engineering	LS	1	\$ 40,000.00	\$ 40,000.00
2	Mobilization and Demobilization	LS	1	\$ 95,000.00	\$ 95,000.00
3	Excavation, Common	CYS	20000	\$ 30.00	\$ 600,000.00
4	Subgrade Treatment, Type IB	SYS	11436	\$ 15.00	\$ 171,540.00
5	Compacted Aggregate No. 53	TON	5528	\$ 30.00	\$ 165,840.00
6	Path	LS	1	\$ 60,000.00	\$ 60,000.00
7	Asphalt Roadway	LS	1	\$ 371,785.00	\$ 371,785.00
8	Asphalt for Tack Coat	TON	3	\$ 500.00	\$ 1,500.00
9	QC/QA-HMA, 3, 70, Surface, 9.5 mm	TON	777	\$ 120.00	\$ 93,240.00
10	QC/QA-HMA, 3, 64, Intermediate, 19.0 mm	TON	1295	\$ 95.00	\$ 123,025.00
11	QC/QA-HMA, 3, 64, Base, 25.0 mm	TON	1812	\$ 85.00	\$ 154,020.00
12	Curb and Gutter incl. Underdrain	LS	1	\$ 208,430.00	\$ 208,430.00
13	Curb and Gutter, Concrete, Modified	LFT	4470	\$ 25.00	\$ 111,750.00
14	Pipe, Type 4, Circular, 6 IN.	LFT	4470	\$ 12.00	\$ 53,640.00
15	Aggregate for Underdrains	CYS	571	\$ 60.00	\$ 34,260.00
16	Geotextiles for Underdrains	SYS	4390	\$ 2.00	\$ 8,780.00
17	Storm Sewer	LS	1	\$ 158,000.00	\$ 158,000.00
18	Pipe, Type 2, Circular, 12 IN.	LFT	600	\$ 55.00	\$ 33,000.00
19	Pipe, Type 2, Circular, 36 IN.	LFT	600	\$ 125.00	\$ 75,000.00
20	Catch Basin, K10	EACH	8	\$ 4,000.00	\$ 32,000.00
21	Manhole, C4	EACH	4	\$ 4,500.00	\$ 18,000.00
22	Pavement Markings & Signage	LS	1	\$ 15,000.00	\$ 15,000.00
23	Temporary Erosion & Sediment Control	LS	1	\$ 20,000.00	\$ 20,000.00
24	Maintaining Traffic	LS	1	\$ 95,000.00	\$ 95,000.00
Subtotal					\$ 2,000,595.00
30% Contingency					\$ 600,178.50
Total					\$ 2,600,773.50

Banning Engineering, P.C. created this Engineer's Estimate. The purpose of this document is to give the Owner an estimated cost of construction. The prices and costs presented in this estimate were researched, gathered and determined from due diligence, including but not limited to, prior experiences, projects, resources and sources and may not be representative of current market conditions and actual construction bids.

OTHER COSTS

Version: 20210521.0903

Item No.	Item Description	Unit	Quantity	Unit Cost	Extension
25	Engineering Fee	LS	1	\$ 270,000.00	\$ 270,000.00
26	Construction Observation	LS	1	\$ 320,000.00	\$ 320,000.00
Total					\$ 590,000.00

TOTAL \$ 3,190,773.50

Project Two



This estimate is for construction of a new roundabout at Pendleton Ave and SR 67. This estimate includes asphalt, curb & gutter, underdrain, & storm sewer improvements.

ROUNDBABOUT COSTS

Version: 20210521.0903

Item No.	Item Description	Unit	Quantity	Unit Cost	Extension
1	Construction Engineering	LS	1	\$ 16,000.00	\$ 16,000.00
2	Mobilization and Demobilization	LS	1	\$ 40,000.00	\$ 40,000.00
3	Excavation, Common	CYS	5000	\$ 30.00	\$ 150,000.00
4	Borrow	CYS	2500	\$ 15.00	\$ 37,500.00
5	Subgrade Treatment, Type IB	SYS	5912	\$ 15.00	\$ 88,680.00
6	Compacted Aggregate No. 53	TON	2431	\$ 30.00	\$ 72,930.00
7	Concrete Apron	SYS	540	\$ 80.00	\$ 43,200.00
8	Asphalt Roadway	LS	1	\$ 119,490.00	\$ 119,490.00
9	Asphalt for Tack Coat	TON	1	\$ 500.00	\$ 500.00
10	QC/QA-HMA, 3, 70, Surface, 9.5 mm	TON	250	\$ 120.00	\$ 30,000.00
11	QC/QA-HMA, 3, 64, Intermediate, 19.0 mm	TON	416	\$ 95.00	\$ 39,520.00
12	QC/QA-HMA, 3, 64, Base, 25.0 mm	TON	582	\$ 85.00	\$ 49,470.00
13	Curb and Gutter incl. Underdrain	LS	1	\$ 107,710.00	\$ 107,710.00
14	Curb and Gutter, Concrete, Modified	LFT	2310	\$ 25.00	\$ 57,750.00
15	Pipe, Type 4, Circular, 6 IN.	LFT	2310	\$ 12.00	\$ 27,720.00
16	Aggregate for Underdrains	CYS	295	\$ 60.00	\$ 17,700.00
17	Geotextiles for Underdrains	SYS	2270	\$ 2.00	\$ 4,540.00
18	Storm Sewer	LS	1	\$ 69,500.00	\$ 69,500.00
19	Pipe, Type 2, Circular, 12 IN.	LFT	500	\$ 55.00	\$ 27,500.00
20	Catch Basin, K10	EACH	6	\$ 4,000.00	\$ 24,000.00
21	Manhole, C4	EACH	4	\$ 4,500.00	\$ 18,000.00
22	Pavement Markings & Signage	LS	1	\$ 5,000.00	\$ 5,000.00
23	Temporary Erosion & Sediment Control	LS	1	\$ 8,000.00	\$ 8,000.00
24	Maintaining Traffic	LS	1	\$ 40,000.00	\$ 40,000.00
Subtotal					\$ 798,010.00
30% Contingency					\$ 239,403.00
Total					\$ 1,037,413.00

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OTHER COSTS

Version: 20210521.0903

Item No.	Item Description	Unit	Quantity	Unit Cost	Extension
25	Engineering Fee	LS	1	\$ 110,000.00	\$ 110,000.00
26	Construction Observation	LS	1	\$ 130,000.00	\$ 130,000.00
27	Land Acquisition	ACRES	0.5	\$ 100,000.00	\$ 50,000.00
Total					\$ 290,000.00

TOTAL \$ 1,327,413.00

Project Three



This estimate is for construction of a new roundabout at Pendleton Ave and SR 67. This estimate includes asphalt, curb & gutter, underdrain, & storm sewer improvements.

ROUNDABOUT COSTS

Version: 20210521.0908

Item No.	Item Description	Unit	Quantity	Unit Cost	Extension
1	Construction Engineering	LS	1	\$ 22,000.00	\$ 22,000.00
2	Mobilization and Demobilization	LS	1	\$ 55,000.00	\$ 55,000.00
3	Excavation, Common	CYS	5000	\$ 30.00	\$ 150,000.00
4	Borrow	CYS	2500	\$ 15.00	\$ 37,500.00
5	Subgrade Treatment, Type IB	SYS	6789	\$ 15.00	\$ 101,835.00
6	Compacted Aggregate No. 53	TON	3179	\$ 30.00	\$ 95,370.00
	Concrete Apron	SYS	460	\$ 80.00	\$ 36,800.00
7	Asphalt Roadway	LS	1	\$ 180,230.00	\$ 180,230.00
8	Asphalt for Tack Coat	TON	2	\$ 500.00	\$ 1,000.00
9	QC/QA-HMA, 3, 70, Surface, 9.5 mm	TON	376	\$ 120.00	\$ 45,120.00
10	QC/QA-HMA, 3, 64, Intermediate, 19.0 mm	TON	627	\$ 95.00	\$ 59,565.00
11	QC/QA-HMA, 3, 64, Base, 25.0 mm	TON	877	\$ 85.00	\$ 74,545.00
12	Curb and Gutter incl. Underdrain	LS	1	\$ 107,710.00	\$ 107,710.00
13	Curb and Gutter, Concrete, Modified	LFT	2310	\$ 25.00	\$ 57,750.00
14	Pipe, Type 4, Circular, 6 IN.	LFT	2310	\$ 12.00	\$ 27,720.00
15	Aggregate for Underdrains	CYS	295	\$ 60.00	\$ 17,700.00
16	Geotextiles for Underdrains	SYS	2270	\$ 2.00	\$ 4,540.00
17	Storm Sewer	LS	1	\$ 232,000.00	\$ 232,000.00
18	Pipe, Type 2, Circular, 12 IN.	LFT	500	\$ 55.00	\$ 27,500.00
19	Pipe, Type 2, Circular, 36 IN.	LFT	1300	\$ 125.00	\$ 162,500.00
20	Catch Basin, K10	EACH	6	\$ 4,000.00	\$ 24,000.00
21	Manhole, C4	EACH	4	\$ 4,500.00	\$ 18,000.00
22	Pavement Markings & Signage	LS	1	\$ 5,000.00	\$ 5,000.00
23	Temporary Erosion & Sediment Control	LS	1	\$ 11,000.00	\$ 11,000.00
24	Maintaining Traffic	LS	1	\$ 55,000.00	\$ 55,000.00
				Subtotal	\$ 1,089,445.00
				30% Contingency	\$ 326,833.50
				Total	\$ 1,416,278.50

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OTHER COSTS

Version: 20210521.0908

Item No.	Item Description	Unit	Quantity	Unit Cost	Extension
25	Engineering Fee	LS	1	\$ 150,000.00	\$ 150,000.00
26	Construction Observation	LS	1	\$ 170,000.00	\$ 170,000.00
27	Land Acquisition	ACRES	0.5	\$ 100,000.00	\$ 50,000.00
				Total	\$ 370,000.00

TOTAL \$ 1,786,278.50

Project Five



This estimate is for the construction of a new road extension of Heritage Way between SR 38 and W CR 600. This estimate includes asphalt, curb & gutter, underdrain, & storm sewer improvements.

ROAD COSTS

Version: 20210611.1349

Item No.	Item Description	Unit	Quantity	Unit Cost	Extension	
1	Construction Engineering	LS	1	\$ 120,000.00	\$ 120,000.00	
2	Mobilization and Demobilization	LS	1	\$ 300,000.00	\$ 300,000.00	
3	Excavation, Common	CYS	43000	\$ 30.00	\$ 1,290,000.00	
4	Subgrade Treatment, Type IB	SYS	34900	\$ 15.00	\$ 523,500.00	
5	Compacted Aggregate No. 53	TON	17019	\$ 30.00	\$ 510,570.00	
6	Path	LS	1	\$ 175,500.00	\$ 175,500.00	
7	Asphalt Roadway	LS	1	\$ 1,241,515.00	\$ 1,241,515.00	
8	Asphalt for Tack Coat	TON	8	\$ 500.00	\$ 4,000.00	
9	QC/QA-HMA, 3, 70, Surface, 9.5 mm	TON	2596	\$ 120.00	\$ 311,520.00	
10	QC/QA-HMA, 3, 64, Intermediate, 19.0 mm	TON	4327	\$ 95.00	\$ 411,065.00	
11	QC/QA-HMA, 3, 64, Base, 25.0 mm	TON	6058	\$ 85.00	\$ 514,930.00	
12	Curb and Gutter incl. Underdrain	LS	1	\$ 627,030.00	\$ 627,030.00	
13	Curb and Gutter, Concrete, Modified	LFT	13450	\$ 25.00	\$ 336,250.00	
14	Pipe, Type 4, Circular, 6 IN.	LFT	13450	\$ 12.00	\$ 161,400.00	
15	Aggregate for Underdrains	CYS	1716	\$ 60.00	\$ 102,960.00	
16	Geotextiles for Underdrains	SYS	13210	\$ 2.00	\$ 26,420.00	
17	Storm Sewer	LS	1	\$ 790,000.00	\$ 790,000.00	
18	Pipe, Type 2, Circular, 12 IN.	LFT	3000	\$ 55.00	\$ 165,000.00	
19	Pipe, Type 2, Circular, 36 IN.	LFT	3000	\$ 125.00	\$ 375,000.00	
20	Catch Basin, K10	EACH	40	\$ 4,000.00	\$ 160,000.00	
21	Manhole, C4	EACH	20	\$ 4,500.00	\$ 90,000.00	
22	Pavement Markings & Signage	LS	1	\$ 45,000.00	\$ 45,000.00	
23	Temporary Erosion & Sediment Control	LS	1	\$ 60,000.00	\$ 60,000.00	
24	Maintaining Traffic	LS	1	\$ 300,000.00	\$ 300,000.00	
					Subtotal	\$ 5,983,115.00
					30% Contingency	\$ 1,794,934.50
					Total	\$ 7,778,049.50

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OTHER COSTS

Version: 20210611.1349

Item No.	Item Description	Unit	Quantity	Unit Cost	Extension	
25	Engineering Fee	LS	1	\$ 780,000.00	\$ 780,000.00	
26	Construction Observation	LS	1	\$ 940,000.00	\$ 940,000.00	
27	Land Acquisition	ACRE	14.8	\$ 100,000.00	\$ 1,480,000.00	
					Total	\$ 3,200,000.00

TOTAL \$ 10,978,049.50

APPENDIX B - DATA COLLECTION

#1 SR 13 at W 700 S

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM	PH	3	353	2	0	1	8	1	131	4	13	1	0	517
	PHF	0.75	0.91	0.50	0.00	0.25	0.67	0.25	0.80	1.00	0.54	0.25	0.00	0.94
% Trucks		0%	8%	0%	0%	0%	0%	0%	17%	0%	0%	0%	0%	10%
PM	PH	1	229	1	1	1	6	6	340	11	15	9	2	622
	PHF	0.25	0.91	0.25	0.25	0.25	0.50	0.75	0.94	0.55	0.63	0.75	0.25	0.95
% Trucks		0%	5%	0%	0%	0%	17%	0%	6%	9%	0%	0%	0%	5%

#2 S 750 W at W 700 S

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM	PH	3	0	0	0	0	0	0	2	0	0	0	3	8
	PHF	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.75	0.67
% Trucks		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM	PH	3	2	0	0	0	0	0	2	0	0	0	18	25
	PHF	0.25	0.50	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.90	0.69
% Trucks		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

#3 S 700 W at SR 38

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM	PH	7	0	5	1	162	0	0	0	0	0	145	2	322
	PHF	0.88	0.00	0.63	0.25	0.90	0.00	0.00	0.00	0.00	0.00	0.91	0.25	0.91
% Trucks		0%	0%	20%	0%	9%	0%	0%	0%	0%	0%	6%	0%	8%
PM	PH	5	0	5	9	203	0	0	0	0	0	255	9	486
	PHF	0.63	0.00	0.31	0.56	0.88	0.00	0.00	0.00	0.00	0.00	0.95	0.75	0.96
% Trucks		0%	0%	0%	0%	4%	0%	0%	0%	0%	0%	5%	11%	5%

#4 S 600 W at SR 38

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM	PH	0	0	0	0	175	14	18	0	9	4	200	0	420
	PHF	0.00	0.00	0.00	0.00	0.86	0.88	0.56	0.00	0.56	1.00	0.91	0.00	0.95
% Trucks		0%	0%	0%	0%	7%	14%	0%	0%	22%	0%	5%	0%	6%
PM	PH	0	0	0	0	235	21	22	0	7	9	302	0	596
	PHF	0.00	0.00	0.00	0.00	0.95	0.66	0.79	0.00	0.58	0.56	0.92	0.00	0.96
% Trucks		0%	0%	0%	0%	3%	0%	0%	0%	0%	0%	1%	0%	2%

#5 Corporation Dr at SR 38

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM	PH	0	0	0	15	190	0	0	0	0	0	242	6	453
	PHF	0.00	0.00	0.00	0.63	0.93	0.00	0.00	0.00	0.00	0.00	0.95	0.50	0.97
% Trucks		0%	0%	0%	7%	2%	0%	0%	0%	0%	0%	10%	17%	7%
PM	PH	8	0	18	1	277	0	0	0	0	0	308	0	612
	PHF	0.33	0.00	0.41	0.25	0.95	0.00	0.00	0.00	0.00	0.00	0.91	0.00	0.91
% Trucks		0%	0%	6%	0%	2%	0%	0%	0%	0%	0%	3%	0%	2%

#6 Enterprise Dr at W State St

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM	PH	0	0	0	0	0	0	0	0	0	0	0	0	0
	PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
% Trucks		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM	PH	0	0	0	0	0	0	0	0	0	0	0	0	0
	PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
% Trucks		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

#7 Heritage Way at W State St

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM	PH	0	0	0	0	0	0	0	0	0	0	0	0	0
	PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
% Trucks		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM	PH	0	0	0	0	0	0	0	0	0	0	0	0	0
	PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
% Trucks		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

#8 W Fall Creek Dr at W State St

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM	PH	0	0	0	0	488	36	42	0	28	19	277	0	890
	PHF	0.00	0.00	0.00	0.00	0.88	0.56	0.58	0.00	0.41	0.59	0.92	0.00	0.92
% Trucks		0%	0%	0%	0%	4%	0%	2%	0%	32%	11%	4%	0%	5%
PM	PH	0	0	0	0	404	33	50	0	15	16	731	0	1249
	PHF	0.00	0.00	0.00	0.00	0.89	0.92	0.83	0.00	0.75	0.50	0.96	0.00	0.95
% Trucks		0%	0%	0%	0%	6%	0%	0%	0%	0%	0%	1%	0%	2%

#9 S 525 W at Old SR 132

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM	PH	0	1	8	3	76	18	9	0	6	1	59	0	181
	PHF	0.00	0.25	0.67	0.75	0.66	0.50	0.45	0.00	0.30	0.25	0.74	0.00	0.77
% Trucks		0%	0%	0%	0%	3%	0%	0%	0%	33%	0%	0%	0%	2%
PM	PH	4	1	3	10	70	2	8	1	0	4	106	0	209
	PHF	0.50	0.25	0.75	0.63	0.63	0.50	0.67	0.25	0.00	0.50	0.70	0.00	0.86
% Trucks		0%	0%	0%	0%	0%	50%	0%	0%	0%	50%	2%	0%	2%

#10 S 425 W at Lapel Rd

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM	PH	11	0	10	5	82	0	0	0	0	0	73	7	188
	PHF	0.55	0.00	0.50	0.63	0.71	0.00	0.00	0.00	0.00	0.00	0.70	0.44	0.81
% Trucks		0%	0%	10%	0%	2%	0%	0%	0%	0%	0%	0%	0%	2%
PM	PH	8	0	20	17	78	0	0	0	0	0	114	11	248
	PHF	0.50	0.00	0.63	0.61	0.78	0.00	0.00	0.00	0.00	0.00	0.81	0.69	0.93
% Trucks		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	0%	1%

#11 S 425 W at W 600 S

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM	PH	0	4	1	1	0	9	21	0	0	0	0	0	36
	PHF	0.00	0.50	0.25	0.25	0.00	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.82
% Trucks		0%	0%	0%	0%	0%	11%	5%	0%	0%	0%	0%	0%	6%
PM	PH	0	2	2	3	0	19	14	7	0	0	0	0	47
	PHF	0.00	0.50	0.50	0.38	0.00	0.95	0.58	0.44	0.00	0.00	0.00	0.00	0.84
% Trucks		0%	50%	0%	67%	0%	5%	0%	0%	0%	0%	0%	0%	9%

#12 S 400 W at W 600 S

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM	PH	5	0	42	73	3	0	0	0	0	0	14	11	148
	PHF	0.42	0.00	0.58	0.70	0.38	0.00	0.00	0.00	0.00	0.00	0.44	0.55	0.84
% Trucks		0%	0%	7%	1%	33%	0%	0%	0%	0%	0%	0%	0%	3%
PM	PH	11	0	65	58	15	0	0	0	0	0	9	5	163
	PHF	0.46	0.00	0.86	0.85	0.94	0.00	0.00	0.00	0.00	0.00	0.45	0.63	0.89
% Trucks		0%	0%	15%	17%	0%	0%	0%	0%	0%	0%	0%	0%	12%

#13 N Pendleton Ave at W 600 S

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM PH		18	41	0	0	0	0	0	45	64	41	0	10	219
	PHF	0.45	0.85	0.00	0.00	0.00	0.00	0.00	0.70	0.80	0.68	0.00	0.83	0.87
	% Trucks	0%	17%	0%	0%	0%	0%	0%	4%	3%	7%	0%	10%	7%
PM PH		21	65	0	0	0	0	0	74	30	74	0	22	286
	PHF	0.88	0.86	0.00	0.00	0.00	0.00	0.00	0.77	0.75	0.71	0.00	0.55	0.87
	% Trucks	38%	2%	0%	0%	0%	0%	0%	3%	7%	3%	0%	41%	8%

#14 SR 67 at N Pendleton Ave

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM PH		29	338	0	0	0	0	0	393	10	15	0	48	833
	PHF	0.73	0.88	0.00	0.00	0.00	0.00	0.00	0.85	0.63	0.63	0.00	0.80	0.91
	% Trucks	7%	9%	0%	0%	0%	0%	0%	9%	10%	13%	0%	10%	9%
PM PH		85	481	0	0	0	0	0	459	13	20	0	65	1123
	PHF	0.76	0.91	0.00	0.00	0.00	0.00	0.00	0.81	0.65	0.71	0.00	0.81	0.95
	% Trucks	4%	10%	0%	0%	0%	0%	0%	6%	0%	5%	0%	3%	7%

#15 SR 67 at S 600 W

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM PH		0	355	7	35	0	32	10	357	0	0	0	0	796
	PHF	0.00	0.85	0.58	0.88	0.00	0.73	0.63	0.89	0.00	0.00	0.00	0.00	0.95
	% Trucks	0%	8%	0%	3%	0%	0%	10%	10%	0%	0%	0%	0%	8%
PM PH		0	473	28	24	0	20	32	451	0	0	0	0	1028
	PHF	0.00	0.91	0.78	0.57	0.00	0.71	0.62	0.81	0.00	0.00	0.00	0.00	0.95
	% Trucks	0%	10%	0%	4%	0%	0%	3%	6%	0%	0%	0%	0%	7%

#16 N Pendleton Ave at Blue Spruce Dr

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM PH		7	78	0	0	0	0	0	93	6	11	0	8	203
	PHF	0.88	0.89	0.00	0.00	0.00	0.00	0.00	0.86	0.75	0.69	0.00	0.67	0.94
	% Trucks	14%	0%	0%	0%	0%	0%	0%	4%	0%	0%	0%	0%	2%
PM PH		9	127	0	0	0	0	0	104	15	12	0	3	270
	PHF	0.75	0.86	0.00	0.00	0.00	0.00	0.00	0.79	0.63	0.50	0.00	0.38	0.87
	% Trucks	11%	2%	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%	3%

#17 Main St at Fall Creek Pkwy

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM PH		0	0	0	0	42	14	7	0	46	58	48	0	215
	PHF	0.00	0.00	0.00	0.00	0.66	0.70	0.58	0.00	0.82	0.76	0.75	0.00	0.93
	% Trucks	0%	0%	0%	0%	10%	7%	0%	0%	0%	3%	0%	0%	3%
PM PH		0	0	0	0	50	13	11	0	47	90	74	0	285
	PHF	0.00	0.00	0.00	0.00	0.89	0.46	0.46	0.00	0.73	0.87	0.77	0.00	0.87
	% Trucks	0%	0%	0%	0%	2%	8%	0%	0%	0%	1%	0%	0%	1%

#18 N Pendleton Ave at Fall Creek Pkwy

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM PH		0	98	33	0	0	0	41	0	22	15	106	0	315
	PHF	0.00	0.84	0.83	0.00	0.00	0.00	0.68	0.00	0.79	0.63	0.88	0.00	0.98
	% Trucks	0%	2%	9%	0%	0%	0%	0%	0%	18%	20%	2%	0%	4%
PM PH		0	133	59	0	0	0	38	0	17	26	148	0	421
	PHF	0.00	0.83	0.78	0.00	0.00	0.00	0.63	0.00	0.71	0.65	0.79	0.00	0.87
	% Trucks	0%	1%	2%	0%	0%	0%	0%	0%	0%	8%	1%	0%	1%

#19 N Pendleton Ave at E Water St

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM	PH	9	139	23	20	30	12	12	104	4	13	12	5	383
	PHF	0.75	0.74	0.72	0.71	0.75	0.75	0.50	0.65	0.25	0.65	0.75	0.63	0.94
% Trucks		0%	1%	4%	10%	3%	0%	0%	6%	0%	0%	0%	0%	3%
PM	PH	16	150	43	57	35	21	11	158	7	6	28	4	536
	PHF	0.57	0.87	0.83	0.84	0.80	0.75	0.69	0.86	0.58	0.50	0.88	0.33	0.92
% Trucks		0%	1%	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%	1%

#20 Main St at E State St

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM	PH	36	23	17	14	406	5	4	15	60	21	263	18	882
	PHF	0.50	0.72	0.71	0.88	0.88	0.42	0.50	0.94	0.88	0.66	0.84	0.64	0.93
% Trucks		0%	0%	6%	0%	8%	20%	0%	0%	3%	0%	7%	0%	6%
PM	PH	36	35	25	26	328	15	20	46	43	44	637	20	1275
	PHF	0.60	0.73	0.63	0.65	0.92	0.75	0.71	0.72	0.72	0.65	0.97	0.71	0.97
% Trucks		0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	1%	0%	1%

#21 N Pendleton Ave at E State St

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM	PH	48	70	32	25	371	16	18	56	29	24	231	34	954
	PHF	0.86	0.67	0.67	0.45	0.71	0.67	0.90	0.78	0.52	0.55	0.90	0.57	0.88
% Trucks		4%	3%	0%	4%	5%	6%	6%	2%	0%	13%	6%	0%	5%
PM	PH	42	80	52	45	357	19	45	68	32	38	573	70	1421
	PHF	0.81	0.77	0.76	0.70	0.88	0.68	0.59	0.77	0.67	0.86	0.91	0.76	0.95
% Trucks		2%	3%	0%	2%	5%	0%	0%	0%	0%	3%	1%	1%	2%

#22 East St at E State St

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM	PH	8	5	5	2	446	22	16	6	6	14	299	0	829
	PHF	0.40	0.25	0.63	0.25	0.75	0.42	0.80	0.75	0.50	0.50	0.72	0.00	0.84
% Trucks		13%	0%	20%	0%	4%	0%	6%	0%	0%	7%	4%	0%	4%
PM	PH	7	2	4	8	448	9	31	2	6	10	665	0	1192
	PHF	0.58	0.50	0.50	0.50	0.80	0.45	0.78	0.50	0.75	0.63	0.92	0.00	0.93
% Trucks		0%	0%	0%	0%	5%	0%	0%	0%	0%	0%	1%	0%	3%

#23 Main St at W High St

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM	PH	4	51	6	5	4	0	3	69	3	3	6	2	156
	PHF	0.33	0.61	0.50	0.31	0.50	0.00	0.75	0.91	0.75	0.38	0.50	0.50	0.93
% Trucks		0%	4%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%
PM	PH	8	67	15	13	8	6	5	68	2	11	24	10	237
	PHF	0.50	0.80	0.42	0.65	0.67	0.50	0.63	0.85	0.25	0.69	0.75	0.63	0.91
% Trucks		0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%

#24 S Pendleton Ave at W High St

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM	PH	0	87	4	16	7	5	2	110	3	5	7	5	251
	PHF	0.00	0.78	0.50	0.50	0.44	0.63	0.25	0.74	0.75	0.63	0.44	0.63	0.79
% Trucks		0%	5%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	2%
PM	PH	0	97	10	26	9	12	11	130	6	8	12	23	344
	PHF	0.00	0.87	0.63	0.65	0.75	1.00	0.55	0.71	0.50	0.67	0.50	0.72	0.85
% Trucks		0%	4%	10%	4%	0%	0%	0%	3%	0%	0%	0%	0%	3%

#25 S Pendleton Ave at Madison Ave

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM PH		0	82	31	49	13	11	10	69	1	1	13	1	281
	PHF	0.00	0.93	0.52	0.51	0.65	0.55	0.50	0.86	0.25	0.25	0.41	0.25	0.79
	% Trucks	0%	1%	10%	0%	0%	0%	10%	0%	0%	0%	0%	0%	2%
PM PH		0	96	20	54	21	10	7	98	2	1	3	0	312
	PHF	0.00	0.67	0.38	0.54	0.53	0.50	0.44	0.72	0.50	0.25	0.25	0.00	0.77
	% Trucks	0%	2%	10%	0%	5%	0%	14%	1%	0%	0%	0%	0%	2%

#26 Broadway St at Madison Ave

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM PH		23	63	13	18	16	4	2	45	0	0	11	6	201
	PHF	0.38	0.48	0.54	0.56	0.67	0.33	0.25	0.54	0.00	0.00	0.46	0.50	0.53
	% Trucks	0%	0%	0%	0%	0%	0%	0%	9%	0%	0%	9%	0%	2%
PM PH		21	43	21	9	16	7	1	32	3	3	14	4	174
	PHF	0.48	0.43	0.75	0.45	0.50	0.35	0.25	0.40	0.38	0.75	0.58	1.00	0.74
	% Trucks	0%	0%	0%	0%	0%	0%	0%	9%	0%	0%	0%	0%	2%

#27 S Pendleton Ave at Old Indianapolis Rd

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM PH		38	114	0	0	0	0	0	99	5	0	0	21	277
	PHF	0.73	0.79	0.00	0.00	0.00	0.00	0.00	0.88	0.25	0.00	0.00	0.40	0.91
	% Trucks	0%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%	5%	1%
PM PH		73	115	0	0	0	0	0	137	1	0	0	43	369
	PHF	0.65	0.87	0.00	0.00	0.00	0.00	0.00	0.90	0.25	0.00	0.00	0.49	0.90
	% Trucks	4%	0%	0%	0%	0%	0%	0%	1%	100%	0%	0%	0%	1%

#28 SR 9 at SR 67

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM PH		39	52	16	12	324	112	147	50	40	3	256	12	1063
	PHF	0.57	0.72	0.40	0.75	0.87	0.82	0.78	0.66	0.83	0.75	0.83	0.60	0.98
	% Trucks	0%	4%	0%	8%	3%	13%	10%	0%	15%	67%	6%	0%	6%
PM PH		40	46	22	18	318	156	189	68	34	10	488	57	1446
	PHF	0.83	0.77	0.61	0.75	0.94	0.85	0.89	0.89	0.77	0.63	0.85	0.71	0.96
	% Trucks	0%	0%	0%	6%	3%	9%	11%	0%	0%	10%	3%	2%	4%

#29 Broadway St at SR 67

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM PH		8	0	19	1	508	0	0	0	0	0	417	6	959
	PHF	0.67	0.00	0.32	0.25	0.91	0.00	0.00	0.00	0.00	0.00	0.83	0.75	0.90
	% Trucks	0%	0%	0%	0%	8%	0%	0%	0%	0%	0%	10%	0%	8%
PM PH		13	0	9	12	491	0	0	0	0	0	692	13	1230
	PHF	0.81	0.00	0.56	0.75	0.85	0.00	0.00	0.00	0.00	0.00	0.94	0.65	0.93
	% Trucks	8%	0%	0%	0%	7%	0%	0%	0%	0%	0%	5%	0%	6%

#30 SR 67 at Madison Ave

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM PH		20	487	171	41	8	3	71	380	5	8	15	12	1221
	PHF	0.50	0.91	0.67	0.49	0.50	0.38	0.40	0.88	0.42	0.40	0.54	0.50	0.81
	% Trucks	0%	6%	5%	12%	0%	0%	7%	7%	0%	13%	0%	0%	6%
PM PH		32	512	68	38	13	15	76	655	6	8	19	4	1446
	PHF	0.67	0.91	0.74	0.63	0.65	0.63	0.56	0.97	0.50	0.40	0.59	0.50	0.97
	% Trucks	0%	5%	1%	0%	0%	0%	3%	4%	0%	0%	0%	0%	4%

#31 SR 67 at SR 38

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM PH		156	419	95	64	257	160	81	299	46	82	173	107	1939
	PHF	0.83	0.82	0.68	0.62	0.76	0.77	0.58	0.87	0.68	0.82	0.76	0.79	0.85
	% Trucks	4%	6%	4%	9%	4%	3%	1%	10%	2%	16%	2%	2%	6%
PM PH		160	432	158	74	188	109	109	571	54	40	327	327	2549
	PHF	0.91	0.92	0.81	0.69	0.92	0.80	0.83	0.97	0.75	0.59	0.93	0.94	0.97
	% Trucks	0%	7%	3%	1%	0%	0%	1%	4%	4%	5%	2%	2%	3%

#32 SR 67 at US 36

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM PH		0	430	36	26	0	299	96	310	0	0	0	0	1197
	PHF	0.00	0.84	0.69	0.81	0.00	0.74	0.69	0.77	0.00	0.00	0.00	0.00	0.92
	% Trucks	0%	6%	31%	4%	0%	2%	3%	11%	0%	0%	0%	0%	7%
PM PH		0	498	108	67	0	192	382	445	0	0	0	0	1692
	PHF	0.00	0.81	0.93	0.84	0.00	0.77	0.85	0.89	0.00	0.00	0.00	0.00	0.95
	% Trucks	0%	5%	0%	3%	0%	2%	3%	4%	0%	0%	0%	0%	4%

#33 SR 67 at E Water St

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM PH		7	359	16	45	19	1	0	288	34	46	8	10	833
	PHF	0.35	0.72	0.50	0.87	0.79	0.25	0.00	0.73	0.71	0.68	0.50	0.83	0.88
	% Trucks	0%	11%	0%	4%	0%	0%	0%	14%	0%	0%	0%	10%	10%
PM PH		30	512	15	38	9	0	1	448	54	76	11	27	1221
	PHF	0.68	0.84	0.75	0.86	0.56	0.00	0.25	0.90	0.79	0.76	0.46	0.84	0.94
	% Trucks	0%	6%	0%	0%	0%	0%	0%	4%	2%	0%	0%	0%	4%

#34 S 300 W US 36

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM PH		2	16	2	16	366	161	41	30	5	15	187	11	852
	PHF	0.25	0.50	0.50	0.80	0.86	0.75	0.54	0.68	0.63	0.42	0.63	0.55	0.91
	% Trucks	0%	0%	0%	0%	1%	5%	0%	3%	0%	0%	11%	0%	4%
PM PH		2	9	5	22	288	107	76	37	7	20	517	13	1103
	PHF	0.50	0.56	0.63	0.46	0.85	0.67	0.86	0.77	0.58	0.63	0.96	0.81	0.95
	% Trucks	0%	0%	0%	0%	2%	2%	0%	0%	0%	0%	2%	0%	2%

#35 S 300 W at SR 38

		Existing												
		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	Total
AM PH		109	83	4	21	337	59	8	15	42	132	120	41	971
	PHF	0.63	0.67	0.50	0.66	0.58	0.45	0.50	0.63	0.50	0.55	0.71	0.51	0.65
	% Trucks	6%	0%	0%	5%	2%	2%	0%	0%	40%	0%	1%	0%	4%
PM PH		75	51	18	19	210	22	13	68	71	127	246	42	962
	PHF	0.69	0.67	0.75	0.53	0.85	0.46	0.54	0.71	0.71	0.77	0.93	0.58	0.97
	% Trucks	1%	0%	0%	0%	3%	0%	0%	0%	1%	2%	2%	0%	2%

APPENDIX C - CURRENT CONDITIONS MODELLING (2020)

Pendleton Road Impact Fee
 Level of Service Analysis
 2020 (Existing) Scenario

SR 13 at W 700 S – AM Peak Hour

HCS7 Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	BRW							Intersection	SR 13 at W 700 S								
Agency/Co.	Traffic Engineering Inc							Jurisdiction									
Date Performed	10/7/2020							East/West Street	W 700 S								
Analysis Year	2020							North/South Street	SR 13								
Time Analyzed	AM PH - Existing							Peak Hour Factor	0.94								
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25								
Project Description	Pendleton Traffic Impact Fee																
Lanes																	
<p style="text-align: center;">Major Street North-South</p>																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		0	1	13		8	1	0		4	131	1		2	353	3	
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0			
Proportion Time Blocked																	
Percent Grade (%)		0				0											
Right Turn Channelized																	
Median Type Storage		Undivided															
Critical and Follow-up Headways																	
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1			
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10			
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2			
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20				2.20			
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)			15				10			4				2			
Capacity, c (veh/h)			651				446			1191				1455			
v/c Ratio			0.02				0.02			0.00				0.00			
95% Queue Length, Q ₉₅ (veh)			0.1				0.1			0.0				0.0			
Control Delay (s/veh)			10.7				13.2			8.0				7.5			
Level of Service (LOS)			B				B			A				A			
Approach Delay (s/veh)		10.7				13.2				8.0				7.5			
Approach LOS		B				B				A				A			



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

SR 13 at W 700 S – PM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	SR 13 at W 700 S							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/7/2020							East/West Street	W 700 S							
Analysis Year	2020							North/South Street	SR 13							
Time Analyzed	PM PH - Existing							Peak Hour Factor	0.95							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
<p style="text-align: center; font-size: small;">Major Street: North-South</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	10	11	12		7	8	9		1U	1	2	3	4U	4	5	6
Number of Lanes	0	1	0		0	1	0		0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)	2	9	15		6	1	1		11	340	6		1	229	1	
Percent Heavy Vehicles (%)	0	0	0		17	0	0		9				0			
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)	7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1			
Critical Headway (sec)	7.10	6.50	6.20		7.27	6.50	6.20		4.19				4.10			
Base Follow-Up Headway (sec)	3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2			
Follow-Up Headway (sec)	3.50	4.00	3.30		3.65	4.00	3.30		2.28				2.20			
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			27				8				12				1	
Capacity, c (veh/h)			559				379				1284				1206	
v/c Ratio			0.05				0.02				0.01				0.00	
95% Queue Length, Q ₉₅ (veh)			0.2				0.1				0.0				0.0	
Control Delay (s/veh)			11.8				14.7				7.8				8.0	
Level of Service (LOS)			B				B				A				A	
Approach Delay (s/veh)	11.8				14.7				0.3				0.0			
Approach LOS	B				B											



Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario

S 750 W at W 700 S – AM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	S 750 W at W 700 S							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/7/2020							East/West Street	W 700 S							
Analysis Year	2020							North/South Street	S 750 W							
Time Analyzed	AM PH - Existing							Peak Hour Factor	0.67							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration				LR							LT					TR
Volume (veh/h)		3		0						0	2				0	3
Percent Heavy Vehicles (%)		0		0						0						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type Storage		Undivided														
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1		6.2								4.1				
Critical Headway (sec)		6.40		6.20								4.10				
Base Follow-Up Headway (sec)		3.5		3.3								2.2				
Follow-Up Headway (sec)		3.50		3.30								2.20				
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			4									0				
Capacity, c (veh/h)			1022									1630				
v/c Ratio			0.00									0.00				
95% Queue Length, Q ₉₅ (veh)			0.0									0.0				
Control Delay (s/veh)			8.5									7.2				
Level of Service (LOS)			A									A				
Approach Delay (s/veh)		8.5								0.0						
Approach LOS		A														



Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario

S 750 W at W 700 S – PM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	S 750 W at W 700 S							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/7/2020							East/West Street	W 700 S							
Analysis Year	2020							North/South Street	S 750 W							
Time Analyzed	PM PH - Existing							Peak Hour Factor	0.69							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	10	1	2	3	4	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT					TR	
Volume (veh/h)		18		0						0	2				2	3
Percent Heavy Vehicles (%)		0		0						0						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type Storage		Undivided														
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			26							0						
Capacity, c (veh/h)			1018							1627						
v/c Ratio			0.03							0.00						
95% Queue Length, Q ₉₅ (veh)			0.1							0.0						
Control Delay (s/veh)			8.6							7.2						
Level of Service (LOS)			A							A						
Approach Delay (s/veh)		8.6								0.0						
Approach LOS		A								A						



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

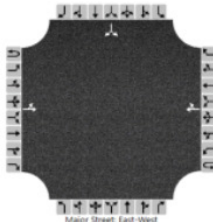
S 700 W at SR 38 – AM Peak Hour

HCS7 Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	BRW							Intersection	S 700 W at SR 38								
Agency/Co.	Traffic Engineering Inc							Jurisdiction									
Date Performed	10/7/2020							East/West Street	SR 38								
Analysis Year	2020							North/South Street	S 700 W								
Time Analyzed	AM PH - Existing							Peak Hour Factor	0.91								
Intersection Orientation	East-West							Analysis Time Period (hrs)	0.25								
Project Description	Pendleton Traffic Impact Fee																
Lanes																	
<p style="text-align: center; font-size: small;">Major Street East-West</p>																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0		0	1	0		
Configuration	LT								TR				LR				
Volume (veh/h)		2	145				162	1						5		7	
Percent Heavy Vehicles (%)		0												20		0	
Proportion Time Blocked																	
Percent Grade (%)	0																
Right Turn Channelized																	
Median Type Storage	Undivided																
Critical and Follow-up Headways																	
Base Critical Headway (sec)		4.1												7.1		6.2	
Critical Headway (sec)		4.10												6.60		6.20	
Base Follow-Up Headway (sec)		2.2												3.5		3.3	
Follow-Up Headway (sec)		2.20												3.68		3.30	
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)		2													13		
Capacity, c (veh/h)		1409													743		
v/c Ratio		0.00													0.02		
95% Queue Length, Q ₉₅ (veh)		0.0													0.1		
Control Delay (s/veh)		7.6													9.9		
Level of Service (LOS)		A													A		
Approach Delay (s/veh)		0.1												9.9			
Approach LOS		A												A			



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

S 700 W at SR 38 – PM Peak Hour

HCS7 Two-Way Stop-Control Report																	
General Information							Site Information										
Analyst	BRW						Intersection	S 700 W at SR 38									
Agency/Co.	Traffic Engineering Inc						Jurisdiction										
Date Performed	10/7/2020						East/West Street	SR 38									
Analysis Year	2020						North/South Street	S 700 W									
Time Analyzed	PM PH - Existing						Peak Hour Factor	0.94									
Intersection Orientation	East-West						Analysis Time Period (hrs)	0.25									
Project Description	Pendleton Traffic Impact Fee																
Lanes																	
																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority	1U	1	2	3	4U	4	5	6	7	8	9	9	10	11	12		
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0		
Configuration	LT								TR				LR				
Volume (veh/h)		9	255				203	9						5		5	
Percent Heavy Vehicles (%)		11												0		0	
Proportion Time Blocked																	
Percent Grade (%)														0			
Right Turn Channelized																	
Median Type Storage	Undivided																
Critical and Follow-up Headways																	
Base Critical Headway (sec)		4.1												7.1		6.2	
Critical Headway (sec)		4.21												6.40		6.20	
Base Follow-Up Headway (sec)		2.2												3.5		3.3	
Follow-Up Headway (sec)		2.30												3.50		3.30	
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)		10												11			
Capacity, c (veh/h)		1292												639			
v/c Ratio		0.01												0.02			
95% Queue Length, Q ₉₅ (veh)		0.0												0.1			
Control Delay (s/veh)		7.8												10.7			
Level of Service (LOS)		A												B			
Approach Delay (s/veh)		0.3												10.7			
Approach LOS														B			



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

S 600 W at SR 38 – AM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information							Site Information									
Analyst	BRW						Intersection	S 600 W at SR 38								
Agency/Co.	Traffic Engineering Inc						Jurisdiction									
Date Performed	10/7/2020						East/West Street	SR 38								
Analysis Year	2020						North/South Street	S 600 W								
Time Analyzed	AM PH - Existing						Peak Hour Factor	0.95								
Intersection Orientation	East-West						Analysis Time Period (hrs)	0.25								
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0	0	1	0		0	0	0	0
Configuration				TR		LT				LR						
Volume (veh/h)			200	4		14	175			9		18				
Percent Heavy Vehicles (%)						14				22		0				
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.24				6.62		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.33				3.70		3.30				
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)						15				28						
Capacity, c (veh/h)						1287				706						
v/c Ratio						0.01				0.04						
95% Queue Length, Q ₉₅ (veh)						0.0				0.1						
Control Delay (s/veh)						7.8				10.3						
Level of Service (LOS)						A				B						
Approach Delay (s/veh)	0.7															
Approach LOS	B															



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

S 600 W at SR 38 – PM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information						Site Information										
Analyst	BRW					Intersection	S 600 W at SR 38									
Agency/Co.	Traffic Engineering Inc					Jurisdiction										
Date Performed	10/7/2020					East/West Street	SR 38									
Analysis Year	2020					North/South Street	S 600 W									
Time Analyzed	PM PH - Existing					Peak Hour Factor	0.96									
Intersection Orientation	East-West					Analysis Time Period (hrs)	0.25									
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			302	9		21	235			7		22				
Percent Heavy Vehicles (%)						0				0		0				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type Storage						Undivided										
Critical and Follow-up Headways																
Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.10				6.40		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.50		3.30				
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)						22				30						
Capacity, c (veh/h)						1247				634						
v/c Ratio						0.02				0.05						
95% Queue Length, Q ₉₅ (veh)						0.1				0.1						
Control Delay (s/veh)						7.9				11.0						
Level of Service (LOS)						A				B						
Approach Delay (s/veh)						0.8				11.0						
Approach LOS										B						



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

Corporation Dr at SR 38 – AM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information							Site Information									
Analyst	BRW						Intersection	Corporation Dr at SR 38								
Agency/Co.	Traffic Engineering Inc						Jurisdiction									
Date Performed	10/7/2020						East/West Street	SR 38								
Analysis Year	2020						North/South Street	Corporation Drive								
Time Analyzed	AM PH - Existing						Peak Hour Factor	0.97								
Intersection Orientation	East-West						Analysis Time Period (hrs)	0.25								
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6	7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	0	1	1	0	0	0		1	0	1	
Configuration	LT				T R								L R			
Volume (veh/h)	6 242				190 15								0 0			
Percent Heavy Vehicles (%)	17												0 0			
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized	No															
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)	4.1												7.1 6.2			
Critical Headway (sec)	4.27												6.40 6.20			
Base Follow-Up Headway (sec)	2.2												3.5 3.3			
Follow-Up Headway (sec)	2.35												3.50 3.30			
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)	6												0 0			
Capacity, c (veh/h)	1275												562 851			
v/c Ratio	0.00												0.00 0.00			
95% Queue Length, Q ₉₅ (veh)	0.0												0.0 0.0			
Control Delay (s/veh)	7.8												11.4 9.2			
Level of Service (LOS)	A												B A			
Approach Delay (s/veh)	0.2															
Approach LOS																



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

Corporation Dr at SR 38 – PM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information							Site Information									
Analyst	BRW						Intersection	Corporation Dr at SR 38								
Agency/Co.	Traffic Engineering Inc						Jurisdiction									
Date Performed	10/7/2020						East/West Street	SR 38								
Analysis Year	2020						North/South Street	Corporation Drive								
Time Analyzed	PM PH - Existing						Peak Hour Factor	0.91								
Intersection Orientation	East-West						Analysis Time Period (hrs)	0.25								
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6	7	8	8	9	10	11	12	12
Number of Lanes	0	0	1	0	0	0	1	1	0	0	0		1	0	1	
Configuration	LT				T R				L R							
Volume (veh/h)	0	308					277	1					18		8	
Percent Heavy Vehicles (%)	0												6			
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized					No								No			
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)	4.1												7.1			
Critical Headway (sec)	4.10												6.46			
Base Follow-Up Headway (sec)	2.2												3.5			
Follow-Up Headway (sec)	2.20												3.55			
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)	0												20			
Capacity, c (veh/h)	1267												432			
v/c Ratio	0.00												0.05			
95% Queue Length, Q ₉₅ (veh)	0.0												0.1			
Control Delay (s/veh)	7.8												13.7			
Level of Service (LOS)	A												B			
Approach Delay (s/veh)	0.0													12.6		
Approach LOS														B		



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

W Fall Creek Dr at W State St – AM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	Fall Creek Dr at State St							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/7/2020							East/West Street	State Street							
Analysis Year	2020							North/South Street	W Fall Creek Drive							
Time Analyzed	AM PH - Existing							Peak Hour Factor	0.92							
Intersection Orientation	East-West							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			277	19		36	488			28		42				
Percent Heavy Vehicles (%)						0						2				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type Storage						Undivided										
Critical and Follow-up Headways																
Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.10				6.72		6.22				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.79		3.32				
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)						39				76						
Capacity, c (veh/h)						1250				418						
v/c Ratio						0.03				0.18						
95% Queue Length, Q ₉₅ (veh)						0.1				0.7						
Control Delay (s/veh)						8.0				15.5						
Level of Service (LOS)						A				C						
Approach Delay (s/veh)						0.9				15.5						
Approach LOS										C						



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

W Fall Creek Dr at W State St – PM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information						Site Information										
Analyst	BRW					Intersection	Fall Creek Dr at State St									
Agency/Co.	Traffic Engineering Inc					Jurisdiction										
Date Performed	10/7/2020					East/West Street	State Street									
Analysis Year	2020					North/South Street	W Fall Creek Drive									
Time Analyzed	PM PH - Existing					Peak Hour Factor	0.95									
Intersection Orientation	East-West					Analysis Time Period (hrs)	0.25									
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			731	16		33	404			15		50				
Percent Heavy Vehicles (%)						0				0		0				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type Storage							Undivided									
Critical and Follow-up Headways																
Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.10				6.40		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.50		3.30				
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)						35					68					
Capacity, c (veh/h)						842					309					
v/c Ratio						0.04					0.22					
95% Queue Length, Q ₉₅ (veh)						0.1					0.8					
Control Delay (s/veh)						9.5					19.9					
Level of Service (LOS)						A					C					
Approach Delay (s/veh)							1.2				19.9					
Approach LOS											C					



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

S 525 W at Old SR 132 – AM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information							Site Information									
Analyst	BRW						Intersection	S 525 W at Old SR 132								
Agency/Co.	Traffic Engineering Inc						Jurisdiction									
Date Performed	10/7/2020						East/West Street	Old SR 132								
Analysis Year	2020						North/South Street	S 525 W								
Time Analyzed	AM PH - Existing						Peak Hour Factor	0.77								
Intersection Orientation	East-West						Analysis Time Period (hrs)	0.25								
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound			Westbound			Northbound			Southbound						
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0	0	1	0		0	1	0	
Configuration			LTR				LTR				LTR					LTR
Volume (veh/h)		0	59	1		18	76	3		6	0	9		8	1	0
Percent Heavy Vehicles (%)		0				0				33	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)										0						0
Right Turn Channelized																
Median Type Storage																Undivided
Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.43	6.50	6.20		7.10	6.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.80	4.00	3.30		3.50	4.00	3.30
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		0				23				19						12
Capacity, c (veh/h)		1502				1533				825						
v/c Ratio		0.00				0.02				0.02						
95% Queue Length, Q ₉₅ (veh)		0.0				0.0				0.1						
Control Delay (s/veh)		7.4				7.4				9.5						
Level of Service (LOS)		A				A				A						
Approach Delay (s/veh)		0.0				1.5				9.5						
Approach LOS										A						



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

S 525 W at Old SR 132 – PM Peak Hour

HCS7 Two-Way Stop-Control Report																		
General Information								Site Information										
Analyst	BRW							Intersection	S 525 W at Old SR 132									
Agency/Co.	Traffic Engineering Inc							Jurisdiction										
Date Performed	10/7/2020							East/West Street	Old SR 132									
Analysis Year	2020							North/South Street	S 525 W									
Time Analyzed	PM PH - Existing							Peak Hour Factor	0.86									
Intersection Orientation	East-West							Analysis Time Period (hrs)	0.25									
Project Description	Pendleton Traffic Impact Fee																	
Lanes																		
Vehicle Volumes and Adjustments																		
Approach	Eastbound				Westbound				Northbound				Southbound					
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
Priority	1U	1	2	3	4U	4	5	6			7	8	9			10	11	12
Number of Lanes	0	0	1	0	0	0	1	0	0	1	0		0	1	0			
Configuration			LTR				LTR				LTR				LTR			
Volume (veh/h)		0	106	4		2	70	10		0	1	8		3	1	4		
Percent Heavy Vehicles (%)		0				50				0	0	0		0	0	0		
Proportion Time Blocked																		
Percent Grade (%)										0				0				
Right Turn Channelized																		
Median Type Storage							Undivided											
Critical and Follow-up Headways																		
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2		
Critical Headway (sec)		4.10				4.60				7.10	6.50	6.20		7.10	6.50	6.20		
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3		
Follow-Up Headway (sec)		2.20				2.65				3.50	4.00	3.30		3.50	4.00	3.30		
Delay, Queue Length, and Level of Service																		
Flow Rate, v (veh/h)		0				2				10				9				
Capacity, c (veh/h)		1514				1209				893				1431				
v/c Ratio		0.00				0.00				0.01				0.01				
95% Queue Length, Q ₉₅ (veh)		0.0				0.0				0.0				0.0				
Control Delay (s/veh)		7.4				8.0				9.1				7.5				
Level of Service (LOS)		A				A				A				A				
Approach Delay (s/veh)		0.0				0.2				9.1				7.5				
Approach LOS										A				A				



Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario

S 425 W at Old SR 132 – AM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information							Site Information									
Analyst	BRW						Intersection	S 425 W at Old SR 132								
Agency/Co.	Traffic Engineering Inc						Jurisdiction									
Date Performed	10/7/2020						East/West Street	Old SR 132								
Analysis Year	2020						North/South Street	S 425 W								
Time Analyzed	AM Peak Hour						Peak Hour Factor	0.81								
Intersection Orientation	East-West						Analysis Time Period (hrs)	0.25								
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6	7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0		0	1	0	
Configuration	LT								TR				LR			
Volume (veh/h)	7 73				82 5								10 11			
Percent Heavy Vehicles (%)	0												10 0			
Proportion Time Blocked																
Percent Grade (%)																
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)	4.1												7.1 6.2			
Critical Headway (sec)	4.10												6.50 6.20			
Base Follow-Up Headway (sec)	2.2												3.5 3.3			
Follow-Up Headway (sec)	2.20												3.59 3.30			
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)	9												26			
Capacity, c (veh/h)	1496												848			
v/c Ratio	0.01												0.03			
95% Queue Length, Q ₉₅ (veh)	0.0												0.1			
Control Delay (s/veh)	7.4												9.4			
Level of Service (LOS)	A												A			
Approach Delay (s/veh)	0.7												9.4			
Approach LOS													A			



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

S 425 W at Old SR 132 – PM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	S 425 W at Old SR 132							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/7/2020							East/West Street	Old SR 132							
Analysis Year	2020							North/South Street	S 425 W							
Time Analyzed	PM Peak Hour							Peak Hour Factor	0.93							
Intersection Orientation	East-West							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration	LT								TR				LR			
Volume (veh/h)		11	114				78	17						20		8
Percent Heavy Vehicles (%)		0												0		0
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)	4.1												7.1			
Critical Headway (sec)	4.10												6.40			
Base Follow-Up Headway (sec)	2.2												3.5			
Follow-Up Headway (sec)	2.20												3.50			
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)	12												30			
Capacity, c (veh/h)	1503												800			
v/c Ratio	0.01												0.04			
95% Queue Length, Q ₉₅ (veh)	0.0												0.1			
Control Delay (s/veh)	7.4												9.7			
Level of Service (LOS)	A												A			
Approach Delay (s/veh)	0.7												9.7			
Approach LOS	A												A			



Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario

S 425 W at W 600 S – AM Peak Hour

HCS7 Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	BRW							Intersection	S 425 W at W 600 S								
Agency/Co.	Traffic Engineering Inc							Jurisdiction									
Date Performed	10/7/2020							East/West Street	W 600 S								
Analysis Year	2020							North/South Street	S 425 W								
Time Analyzed	AM Peak Hour							Peak Hour Factor	0.82								
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25								
Project Description	Pendleton Traffic Impact Fee																
Lanes																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0	
Configuration								LR				TR				LT	
Volume (veh/h)						9		1			0	21			1	4	
Percent Heavy Vehicles (%)						11		0							0		
Proportion Time Blocked																	
Percent Grade (%)							0										
Right Turn Channelized																	
Median Type Storage							Undivided										
Critical and Follow-up Headways																	
Base Critical Headway (sec)						7.1		6.2							4.1		
Critical Headway (sec)						6.51		6.20							4.10		
Base Follow-Up Headway (sec)						3.5		3.3							2.2		
Follow-Up Headway (sec)						3.60		3.30							2.20		
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)								12							1		
Capacity, c (veh/h)								983							1602		
v/c Ratio								0.01							0.00		
95% Queue Length, Q ₉₅ (veh)								0.0							0.0		
Control Delay (s/veh)								8.7							7.2		
Level of Service (LOS)								A							A		
Approach Delay (s/veh)								8.7							1.5		
Approach LOS								A									



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

S 425 W at W 600 S – PM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	S 425 W at W 600 S							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/7/2020							East/West Street	W 600 S							
Analysis Year	2020							North/South Street	S 425 W							
Time Analyzed	PM Peak Hour							Peak Hour Factor	0.84							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	10	11	12		7	8	9		1U	1	2	3	4U	4	5	6
Number of Lanes	0	0	0		0	1	0		0	0	1	0	0	0	1	0
Configuration						LR						TR		LT		
Volume (veh/h)					19			3			7	14		2	2	
Percent Heavy Vehicles (%)					5			67						0		
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)					7.1			6.2					4.1			
Critical Headway (sec)					6.45			6.87					4.10			
Base Follow-Up Headway (sec)					3.5			3.3					2.2			
Follow-Up Headway (sec)					3.55			3.90					2.20			
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)					26								2			
Capacity, c (veh/h)					971								1603			
v/c Ratio					0.03								0.00			
95% Queue Length, Q ₉₅ (veh)					0.1								0.0			
Control Delay (s/veh)					8.8								7.2			
Level of Service (LOS)					A								A			
Approach Delay (s/veh)					8.8								3.6			
Approach LOS					A											



Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario

S 400 W at W 600 S – AM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	S 400 W at W 600 S							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/7/2020							East/West Street	W 600 S							
Analysis Year	2020							North/South Street	S 400 W							
Time Analyzed	AM Peak Hour							Peak Hour Factor	0.84							
Intersection Orientation	East-West							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6	7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0		0	1	0	
Configuration	LT								TR				LR			
Volume (veh/h)	11	14					3	73					42		5	
Percent Heavy Vehicles (%)	0												7		0	
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)	4.1												7.1		6.2	
Critical Headway (sec)	4.10												6.47		6.20	
Base Follow-Up Headway (sec)	2.2												3.5		3.3	
Follow-Up Headway (sec)	2.20												3.56		3.30	
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)	13												56			
Capacity, c (veh/h)	1517												903			
v/c Ratio	0.01												0.06			
95% Queue Length, Q ₉₅ (veh)	0.0												0.2			
Control Delay (s/veh)	7.4												9.2			
Level of Service (LOS)	A												A			
Approach Delay (s/veh)	3.3												9.2			
Approach LOS	A												A			



Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario

S 400 W at W 600 S – PM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	S 400 W at W 600 S							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/7/2020							East/West Street	W 600 S							
Analysis Year	2020							North/South Street	S 400 W							
Time Analyzed	PM Peak Hour							Peak Hour Factor	0.89							
Intersection Orientation	East-West							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration	LT								TR				LR			
Volume (veh/h)	5 9								15 58				65 11			
Percent Heavy Vehicles (%)	0												15 0			
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)	4.1												7.1 6.2			
Critical Headway (sec)	4.10												6.55 6.20			
Base Follow-Up Headway (sec)	2.2												3.5 3.3			
Follow-Up Headway (sec)	2.20												3.64 3.30			
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)	6												85			
Capacity, c (veh/h)	1528												915			
v/c Ratio	0.00												0.09			
95% Queue Length, Q ₉₅ (veh)	0.0												0.3			
Control Delay (s/veh)	7.4												9.3			
Level of Service (LOS)	A												A			
Approach Delay (s/veh)	2.6												9.3			
Approach LOS	A												A			



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

N Pendleton Ave at W 600 S – AM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information						Site Information										
Analyst	BRW					Intersection	N Pendleton Av at W 600 S									
Agency/Co.	Traffic Engineering Inc					Jurisdiction										
Date Performed	10/7/2020					East/West Street	W 600 S									
Analysis Year	2020					North/South Street	N Pendleton Avenue									
Time Analyzed	AM Peak Hour					Peak Hour Factor	0.87									
Intersection Orientation	North-South					Analysis Time Period (hrs)	0.25									
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	10	11	12		7	8	9		1U	1	2	3	4U	4	5	6
Number of Lanes	0	1	0		0	0	0		0	1	0		0	0	1	0
Configuration			LR								LT					TR
Volume (veh/h)	10		41						64	45					41	18
Percent Heavy Vehicles (%)	10		7						3							
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.50		6.27						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.59		3.36						2.23						
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			59							74						
Capacity, c (veh/h)			912							1527						
v/c Ratio			0.06							0.05						
95% Queue Length, Q ₉₅ (veh)			0.2							0.2						
Control Delay (s/veh)			9.2							7.5						
Level of Service (LOS)			A							A						
Approach Delay (s/veh)			9.2							4.5						
Approach LOS			A													



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

N Pendleton Ave at W 600 S – PM Peak Hour

HCS7 Two-Way Stop-Control Report															
General Information						Site Information									
Analyst	BRW					Intersection	N Pendleton Av at W 600 S								
Agency/Co.	Traffic Engineering Inc					Jurisdiction									
Date Performed	10/7/2020					East/West Street	W 600 S								
Analysis Year	2020					North/South Street	N Pendleton Avenue								
Time Analyzed	PM Peak Hour					Peak Hour Factor	0.87								
Intersection Orientation	North-South					Analysis Time Period (hrs)	0.25								
Project Description	Pendleton Traffic Impact Fee														
Lanes															
<p align="center">Major Street: North-South</p>															
Vehicle Volumes and Adjustments															
Approach	Eastbound			Westbound			Northbound			Southbound					
Movement	U	L	T	R	U	L	T	R	U	L	T	R			
Priority	10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes	0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT					TR
Volume (veh/h)	22		74						30	74				65	21
Percent Heavy Vehicles (%)	41		3						7						
Proportion Time Blocked															
Percent Grade (%)	0														
Right Turn Channelized															
Median Type Storage	Undivided														
Critical and Follow-up Headways															
Base Critical Headway (sec)	7.1		6.2						4.1						
Critical Headway (sec)	6.81		6.23						4.17						
Base Follow-Up Headway (sec)	3.5		3.3						2.2						
Follow-Up Headway (sec)	3.87		3.33						2.26						
Delay, Queue Length, and Level of Service															
Flow Rate, v (veh/h)			110						34						
Capacity, c (veh/h)			872						1463						
v/c Ratio			0.13						0.02						
95% Queue Length, Q ₉₅ (veh)			0.4						0.1						
Control Delay (s/veh)			9.7						7.5						
Level of Service (LOS)			A						A						
Approach Delay (s/veh)	9.7									2.3					
Approach LOS	A														



Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario

SR 67 at N Pendleton Ave – AM Peak Hour

HCS7 Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	BRW							Intersection	SR 67 at N Pendleton								
Agency/Co.	Traffic Engineering Inc							Jurisdiction									
Date Performed	10/12/2020							East/West Street	N Pendleton Avenue								
Analysis Year	2020							North/South Street	SR 67								
Time Analyzed	AM Peak Hour							Peak Hour Factor	0.91								
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25								
Project Description	Pendleton Traffic Impact Fee																
Lanes																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0	0	0	2	0	0	0	2	1	
Configuration				LR							LT	T				T	R
Volume (veh/h)		48		15						10	393				338	29	
Percent Heavy Vehicles (%)		10		13						10							
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized																No	
Median Type Storage		Undivided															
Critical and Follow-up Headways																	
Base Critical Headway (sec)		7.5		6.9								4.1					
Critical Headway (sec)		7.00		7.16								4.30					
Base Follow-Up Headway (sec)		3.5		3.3								2.2					
Follow-Up Headway (sec)		3.60		3.43								2.30					
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)				69								11					
Capacity, c (veh/h)				529								1097					
v/c Ratio				0.13								0.01					
95% Queue Length, Q ₉₅ (veh)				0.4								0.0					
Control Delay (s/veh)				12.8								8.3					
Level of Service (LOS)				B								A					
Approach Delay (s/veh)		12.8									0.3						
Approach LOS		B									A						



Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario

SR 67 at N Pendleton Ave – PM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	SR 67 at N Pendleton							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/12/2020							East/West Street	N Pendleton Avenue							
Analysis Year	2020							North/South Street	SR 67							
Time Analyzed	PM Peak Hour							Peak Hour Factor	0.95							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
<p style="text-align: center; font-size: small;">Major Street: North-South</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	10	1	2	3	4	4	5	6
Number of Lanes		0	1	0		0	0	0		0	2	0		0	2	1
Configuration			LR							LT	T				T	R
Volume (veh/h)			65								13	459			481	85
Percent Heavy Vehicles (%)			3								0					
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized															No	
Median Type Storage		Undivided														
Critical and Follow-up Headways																
Base Critical Headway (sec)			7.5										4.1			
Critical Headway (sec)			6.86										4.10			
Base Follow-Up Headway (sec)			3.5										2.2			
Follow-Up Headway (sec)			3.53										2.20			
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)				89									14			
Capacity, c (veh/h)				426									991			
v/c Ratio				0.21									0.01			
95% Queue Length, Q ₉₅ (veh)				0.8									0.0			
Control Delay (s/veh)				15.7									8.7			
Level of Service (LOS)				C									A			
Approach Delay (s/veh)		15.7								0.3						
Approach LOS		C								A						



Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario

SR 67 at S 600 W – AM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	SR 67 at S 600 W							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/7/2020							East/West Street	S 600 W							
Analysis Year	2020							North/South Street	SR 67							
Time Analyzed	AM Peak Hour							Peak Hour Factor	0.95							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	2	0	0	0	2	0
Configuration							LR				T	TR		LT	T	
Volume (veh/h)							32					35			7	355
Percent Heavy Vehicles (%)							0					3			0	
Proportion Time Blocked																
Percent Grade (%)							0									
Right Turn Channelized																
Median Type Storage							Undivided									
Critical and Follow-up Headways																
Base Critical Headway (sec)							7.5									4.1
Critical Headway (sec)							6.80									4.10
Base Follow-Up Headway (sec)							3.5									2.2
Follow-Up Headway (sec)							3.50									2.20
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)																7
Capacity, c (veh/h)																1183
v/c Ratio																0.01
95% Queue Length, Q ₉₅ (veh)																0.0
Control Delay (s/veh)																8.1
Level of Service (LOS)																A
Approach Delay (s/veh)																0.2
Approach LOS																A



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

SR 67 at S 600 W – PM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	SR 67 at S 600 W							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/7/2020							East/West Street	S 600 W							
Analysis Year	2020							North/South Street	SR 67							
Time Analyzed	PM Peak Hour							Peak Hour Factor	0.95							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	2	0	0	0	2	0
Configuration							LR				T	TR			LT	T
Volume (veh/h)						20		24			451	32			28	473
Percent Heavy Vehicles (%)						0		4							0	
Proportion Time Blocked																
Percent Grade (%)							0									
Right Turn Channelized																
Median Type Storage							Undivided									
Critical and Follow-up Headways																
Base Critical Headway (sec)						7.5		6.9							4.1	
Critical Headway (sec)						6.80		6.98							4.10	
Base Follow-Up Headway (sec)						3.5		3.3							2.2	
Follow-Up Headway (sec)						3.50		3.34							2.20	
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)							46								29	
Capacity, c (veh/h)							692								1067	
v/c Ratio							0.07								0.03	
95% Queue Length, Q ₉₅ (veh)							0.2								0.1	
Control Delay (s/veh)							10.6								8.5	
Level of Service (LOS)							B								A	
Approach Delay (s/veh)							10.6								0.6	
Approach LOS							B									



Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario

N Pendleton Ave at Blue Spruce Dr – AM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	Pendleton at Blue Spruce							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/7/2020							East/West Street	Blue Spruce Drive							
Analysis Year	2020							North/South Street	N Pendleton Avenue							
Time Analyzed	AM Peak Hour							Peak Hour Factor	0.94							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT					TR	
Volume (veh/h)		8		11						6	93				78	7
Percent Heavy Vehicles (%)		0		0						0						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type Storage		Undivided														
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)				20						6						
Capacity, c (veh/h)				1688						1517						
v/c Ratio				0.01						0.00						
95% Queue Length, Q ₉₅ (veh)				0.0						0.0						
Control Delay (s/veh)				7.2						7.4						
Level of Service (LOS)				A						A						
Approach Delay (s/veh)		7.2								0.5						
Approach LOS		A								A						



Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario

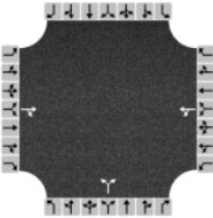
N Pendleton Ave at Blue Spruce Dr – PM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	Pendleton at Blue Spruce							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/7/2020							East/West Street	Blue Spruce Drive							
Analysis Year	2020							North/South Street	N Pendleton Avenue							
Time Analyzed	PM Peak Hour							Peak Hour Factor	0.87							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration				LR							LT					TR
Volume (veh/h)		3		12						15	104				127	9
Percent Heavy Vehicles (%)		0		0						0						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type Storage		Undivided														
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1		6.2							4.1					
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)				17							17					
Capacity, c (veh/h)				1126							1436					
v/c Ratio				0.02							0.01					
95% Queue Length, Q ₉₅ (veh)				0.0							0.0					
Control Delay (s/veh)				8.2							7.5					
Level of Service (LOS)				A							A					
Approach Delay (s/veh)		8.2									1.0					
Approach LOS		A														



Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario

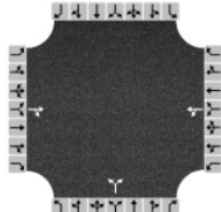
Main St at Fall Creek Pkwy – AM Peak Hour

HCS7 All-Way Stop Control Report												
General Information				Site Information								
Analyst	BRW			Intersection			Main St at Fall Creek Pkwy					
Agency/Co.	Traffic Engineering Inc			Jurisdiction								
Date Performed	10/7/2020			East/West Street			Fall Creek Parkway					
Analysis Year	2020			North/South Street			Main Street					
Analysis Time Period (hrs)	0.25			Peak Hour Factor			0.93					
Time Analyzed	AM Peak Hour											
Project Description	Pendleton Traffic Impact Fee											
Lanes												
												
Vehicle Volume and Adjustments												
Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume		48	58	14	42		46		7			
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	TR			LT			LR					
Flow Rate, v (veh/h)	114			60			57					
Percent Heavy Vehicles	2			9			0					
Departure Headway and Service Time												
Initial Departure Headway, hd (s)	3.20			3.20			3.20					
Initial Degree of Utilization, x	0.101			0.054			0.051					
Final Departure Headway, hd (s)	3.80			4.34			4.35					
Final Degree of Utilization, x	0.120			0.073			0.069					
Move-Up Time, m (s)	2.0			2.0			2.0					
Service Time, ts (s)	1.80			2.34			2.35					
Capacity, Delay and Level of Service												
Flow Rate, v (veh/h)	114			60			57					
Capacity	947			830			827					
95% Queue Length, Q ₉₅ (veh)	0.4			0.2			0.2					
Control Delay (s/veh)	7.3			7.7			7.7					
Level of Service, LOS	A			A			A					
Approach Delay (s/veh)	7.3			7.7			7.7					
Approach LOS	A			A			A					
Intersection Delay, s/veh LOS	7.5									A		



Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario

Main St at Fall Creek Pkwy – PM Peak Hour

HCS7 All-Way Stop Control Report												
General Information						Site Information						
Analyst	BRW					Intersection	Main St at Fall Creek Pkwy					
Agency/Co.	Traffic Engineering Inc					Jurisdiction						
Date Performed	10/7/2020					East/West Street	Fall Creek Parkway					
Analysis Year	2020					North/South Street	Main Street					
Analysis Time Period (hrs)	0.25					Peak Hour Factor	0.87					
Time Analyzed	PM Peak Hour											
Project Description	Pendleton Traffic Impact Fee											
Lanes												
												
Vehicle Volume and Adjustments												
Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume		74	90	13	50		47		11			
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	TR			LT			LR					
Flow Rate, v (veh/h)	189			72			67					
Percent Heavy Vehicles	1			3			0					
Departure Headway and Service Time												
Initial Departure Headway, hd (s)	3.20			3.20			3.20					
Initial Degree of Utilization, x	0.168			0.064			0.059					
Final Departure Headway, hd (s)	3.82			4.32			4.48					
Final Degree of Utilization, x	0.200			0.087			0.083					
Move-Up Time, m (s)	2.0			2.0			2.0					
Service Time, ts (s)	1.82			2.32			2.48					
Capacity, Delay and Level of Service												
Flow Rate, v (veh/h)	189			72			67					
Capacity	942			833			804					
95% Queue Length, Q ₉₅ (veh)	0.7			0.3			0.3					
Control Delay (s/veh)	7.8			7.7			7.9					
Level of Service, LOS	A			A			A					
Approach Delay (s/veh)	7.8			7.7			7.9					
Approach LOS	A			A			A					
Intersection Delay, s/veh LOS	7.8						A					



Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario

N Pendleton Ave at Fall Creek Pkwy – AM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	N Pendleton at Fall Creek							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/7/2020							East/West Street	Fall Creek Parkway							
Analysis Year	2020							North/South Street	N Pendleton Avenue							
Time Analyzed	AM Peak Hour							Peak Hour Factor	0.98							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration				LR							LT					TR
Volume (veh/h)		106		15						22	41				33	98
Percent Heavy Vehicles (%)		2		20						18						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type Storage		Undivided														
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.42		6.40						4.28						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.52		3.48						2.36						
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)				123						22						
Capacity, c (veh/h)				819						1358						
v/c Ratio				0.15						0.02						
95% Queue Length, Q ₉₅ (veh)				0.5						0.1						
Control Delay (s/veh)				10.2						7.7						
Level of Service (LOS)				B						A						
Approach Delay (s/veh)		10.2								2.8						
Approach LOS		B								A						



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

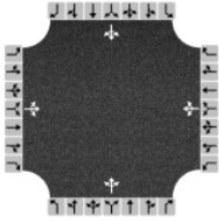
N Pendleton Ave at Fall Creek Pkwy – PM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	N Pendleton at Fall Creek							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/7/2020							East/West Street	Fall Creek Parkway							
Analysis Year	2020							North/South Street	N Pendleton Avenue							
Time Analyzed	PM Peak Hour							Peak Hour Factor	0.87							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	10	11	12		7	8	9		1U	1	2	3	4U	4	5	6
Number of Lanes	0	1	0		0	0	0		0	0	1	0	0	0	1	0
Configuration			LR								LT					TR
Volume (veh/h)	148			26						17	38				59	133
Percent Heavy Vehicles (%)	1			8						0						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)	7.1			6.2					4.1							
Critical Headway (sec)	6.41			6.28					4.10							
Base Follow-Up Headway (sec)	3.5			3.3					2.2							
Follow-Up Headway (sec)	3.51			3.37					2.20							
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			200						20							
Capacity, c (veh/h)			770						1360							
v/c Ratio			0.26						0.01							
95% Queue Length, Q ₉₅ (veh)			1.0						0.0							
Control Delay (s/veh)			11.3						7.7							
Level of Service (LOS)			B						A							
Approach Delay (s/veh)	11.3								2.5							
Approach LOS	B															



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

N Pendleton Ave at E Water St – AM Peak Hour

HCS7 All-Way Stop Control Report												
General Information						Site Information						
Analyst	BRW					Intersection	N Pendleton at E Water St					
Agency/Co.	Traffic Engineering Inc					Jurisdiction						
Date Performed	10/7/2020					East/West Street	E Water Street					
Analysis Year	2020					North/South Street	N Pendleton Avenue					
Analysis Time Period (hrs)	0.25					Peak Hour Factor	0.94					
Time Analyzed	AM Peak Hour											
Project Description	Pendleton Traffic Impact Fee											
Lanes												
												
Vehicle Volume and Adjustments												
Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	5	12	13	12	30	20	4	104	12	23	139	9
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	32			66			128			182		
Percent Heavy Vehicles	0			5			6			1		
Departure Headway and Service Time												
Initial Departure Headway, hd (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.028			0.059			0.113			0.162		
Final Departure Headway, hd (s)	4.44			4.56			4.37			4.28		
Final Degree of Utilization, x	0.039			0.083			0.155			0.217		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, ts (s)	2.44			2.56			2.37			2.28		
Capacity, Delay and Level of Service												
Flow Rate, v (veh/h)	32			66			128			182		
Capacity	810			790			824			840		
95% Queue Length, Q ₉₅ (veh)	0.1			0.3			0.5			0.8		
Control Delay (s/veh)	7.6			8.0			8.2			8.5		
Level of Service, LOS	A			A			A			A		
Approach Delay (s/veh)	7.6			8.0			8.2			8.5		
Approach LOS	A			A			A			A		
Intersection Delay, s/veh LOS	8.2			8.2			A			A		



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

N Pendleton Ave at E Water St – PM Peak Hour

HCS7 All-Way Stop Control Report												
General Information						Site Information						
Analyst	BRW					Intersection	N Pendleton at E Water St					
Agency/Co.	Traffic Engineering Inc					Jurisdiction						
Date Performed	10/7/2020					East/West Street	E Water Street					
Analysis Year	2020					North/South Street	N Pendleton Avenue					
Analysis Time Period (hrs)	0.25					Peak Hour Factor	0.92					
Time Analyzed	PM Peak Hour											
Project Description	Pendleton Traffic Impact Fee											
Lanes												
Vehicle Volume and Adjustments												
Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	4	28	6	21	35	57	7	158	11	43	150	16
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	41			123			191			227		
Percent Heavy Vehicles	0			0			3			1		
Departure Headway and Service Time												
Initial Departure Headway, hd (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.037			0.109			0.170			0.202		
Final Departure Headway, hd (s)	4.98			4.67			4.60			4.55		
Final Degree of Utilization, x	0.057			0.159			0.244			0.287		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, ts (s)	2.98			2.67			2.60			2.55		
Capacity, Delay and Level of Service												
Flow Rate, v (veh/h)	41			123			191			227		
Capacity	723			771			783			792		
95% Queue Length, Q ₉₅ (veh)	0.2			0.6			1.0			1.2		
Control Delay (s/veh)	8.3			8.6			9.1			9.4		
Level of Service, LOS	A			A			A			A		
Approach Delay (s/veh)	8.3			8.6			9.1			9.4		
Approach LOS	A			A			A			A		
Intersection Delay, s/veh LOS	9.0			9.0			9.0			9.0		



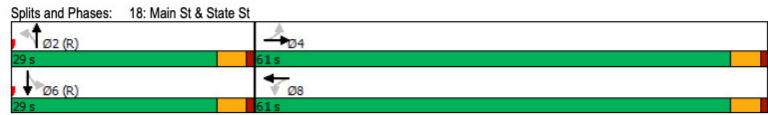
Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario

Main St at E State St – AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	18	263	21	5	406	14	60	15	4	17	23	36
Future Volume (vph)	18	263	21	5	406	14	60	15	4	17	23	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.996			0.994			0.936	
Fit Protected		0.997			0.999			0.963			0.989	
Satd. Flow (prot)	0	1688	0	0	1531	0	0	1637	0	0	1583	0
Fit Permitted		0.967			0.997			0.758			0.941	
Satd. Flow (perm)	0	1637	0	0	1528	0	0	1288	0	0	1506	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			4			3			39	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		450			460			446			462	
Travel Time (s)		10.2			10.5			10.1			10.5	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Parking (#/hr)					0							
Adj. Flow (vph)	19	283	23	5	437	15	65	16	4	18	25	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	325	0	0	457	0	0	85	0	0	82	0
Turn Type	Perm	NA	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA	NA
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	61.0	61.0		61.0	61.0		29.0	29.0		29.0	29.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Act Effect Green (s)		56.5			56.5		24.5	24.5		24.5	24.5	
Actuated g/C Ratio		0.63			0.63		0.27	0.27		0.27	0.27	
v/c Ratio		0.32			0.48		0.24	0.19		0.19	0.19	
Control Delay		8.6			7.0		26.9	16.1		16.1	16.1	
Queue Delay		0.0			0.1		0.0	0.0		0.0	0.0	
Total Delay		8.6			7.1		26.9	16.1		16.1	16.1	
LOS		A			A		C	B		B	B	
Approach Delay		8.6			7.1		26.9	16.1		16.1	16.1	
Approach LOS		A			A		C	B		B	B	
Queue Length 50th (ft)		75			69		36	18		18	18	
Queue Length 95th (ft)		121			96		76	53		53	53	
Internal Link Dist (ft)		370			380		366	382		382	382	
Turn Bay Length (ft)												
Base Capacity (vph)		1030			960		352	438		438	438	
Starvation Cap Reductn		0			72		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.32			0.51		0.24	0.19		0.19	0.19	

Intersection Summary
 Area Type: CBD
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBL and 6:SBTL, Start of Green

Control Type: Pretimed
 Maximum v/c Ratio: 0.48
 Intersection Signal Delay: 10.2
 Intersection Capacity Utilization 48.2%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service A



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

Main St at E State St – PM Peak Hour

	↖	→	↘	↙	←	↗	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	20	637	44	15	328	26	43	46	20	25	35	36
Future Volume (vph)	20	637	44	15	328	26	43	46	20	25	35	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fit		0.992			0.990			0.975			0.950	
Fit Protected		0.999			0.998			0.981			0.987	
Satd. Flow (prot)	0	1695	0	0	1521	0	0	1636	0	0	1603	0
Fit Permitted		0.985			0.970			0.859			0.912	
Satd. Flow (perm)	0	1671	0	0	1478	0	0	1432	0	0	1482	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			9			12			31	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		450			460			446			462	
Travel Time (s)		10.2			10.5			10.1			10.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Parking (#/hr)					0							
Adj. Flow (vph)	21	657	45	15	338	27	44	47	21	26	36	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	723	0	0	380	0	0	112	0	0	99	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	65.0	65.0		65.0	65.0		25.0	25.0		25.0	25.0	
Total Lost Time (s)	4.5			4.5			4.5			4.5		
Act Effct Green (s)	60.5			60.5			20.5			20.5		
Actuated g/C Ratio	0.67			0.67			0.23			0.23		
v/c Ratio	0.64			0.38			0.33			0.27		
Control Delay	11.7			5.4			29.2			22.6		
Queue Delay	0.1			0.0			0.0			0.0		
Total Delay	11.8			5.4			29.2			22.6		
LOS	B			A			C			C		
Approach Delay	11.8			5.4			29.2			22.6		
Approach LOS	B			A			C			C		
Queue Length 50th (ft)	206			57			47			31		
Queue Length 95th (ft)	317			79			96			75		
Internal Link Dist (ft)	370			380			366			382		
Turn Bay Length (ft)												
Base Capacity (vph)	1125			996			335			361		
Starvation Cap Reductn	0			0			0			0		
Spillback Cap Reductn	24			0			0			0		
Storage Cap Reductn	0			0			0			0		
Reduced v/c Ratio	0.66			0.38			0.33			0.27		

Intersection Summary

Area Type: CBD

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Control Type: Pretimed

Maximum v/c Ratio: 0.64

Intersection Signal Delay: 12.2 Intersection LOS: B

Intersection Capacity Utilization 66.7% ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 18: Main St & State St



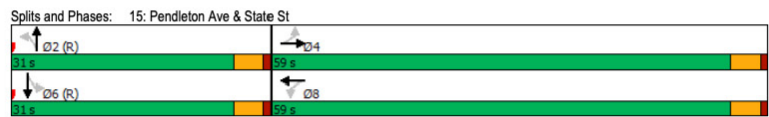
**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

N Pendleton Ave at E State St – AM Peak Hour

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	34	231	24	16	371	25	29	56	18	32	70	48
Future Volume (vph)	34	231	24	16	371	25	29	56	18	32	70	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt.		0.989			0.992			0.977			0.957	
Fit Protected		0.994			0.998			0.986			0.990	
Satd. Flow (prot)	0	1513	0	0	1524	0	0	1483	0	0	1458	0
Fit Permitted		0.917			0.983			0.891			0.924	
Satd. Flow (perm)	0	1396	0	0	1501	0	0	1340	0	0	1361	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			6			12			27	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		460			374			464			456	
Travel Time (s)		10.5			8.5			10.5			10.4	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Parking (#/hr)		0			0			0			0	
Adj. Flow (vph)	39	263	27	18	422	28	33	64	20	36	80	55
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	329	0	0	468	0	0	117	0	0	171	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases		4			8			2			6	
Total Split (s)	59.0	59.0		59.0	59.0		31.0	31.0		31.0	31.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Act Effct Green (s)	54.5	54.5		54.5	54.5		26.5	26.5		26.5	26.5	
Actuated g/C Ratio	0.61	0.61		0.61	0.61		0.29	0.29		0.29	0.29	
v/c Ratio	0.39	0.39		0.51	0.51		0.29	0.29		0.41	0.41	
Control Delay	6.0	6.0		12.5	12.5		24.3	24.3		24.8	24.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	6.0	6.0		12.5	12.5		24.3	24.3		24.8	24.8	
LOS	A	A		B	B		C	C		C	C	
Approach Delay	6.0	6.0		12.5	12.5		24.3	24.3		24.8	24.8	
Approach LOS	A	A		B	B		C	C		C	C	
Queue Length 50th (ft)	35	35		137	137		45	45		65	65	
Queue Length 95th (ft)	51	51		208	208		89	89		120	120	
Internal Link Dist (ft)	380	380		294	294		384	384		376	376	
Turn Bay Length (ft)												
Base Capacity (vph)	848	848		911	911		403	403		419	419	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.39	0.39		0.51	0.51		0.29	0.29		0.41	0.41	

Intersection Summary
 Area Type: CBD
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Control Type: Pretimed
 Maximum v/c Ratio: 0.51
 Intersection Signal Delay: 13.7 Intersection LOS: B
 Intersection Capacity Utilization 49.8% ICU Level of Service A
 Analysis Period (min) 15



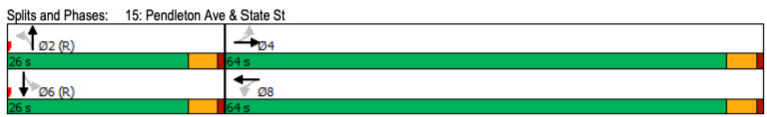
**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

N Pendleton Ave at E State St – PM Peak Hour

	↖	→	↘	↙	←	↖	↗	↘	↙	↖	↗	↘	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕			↕			↕			↕		
Traffic Volume (vph)	70	573	38	19	357	45	32	68	45	52	80	42	
Future Volume (vph)	70	573	38	19	357	45	32	68	45	52	80	42	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected		0.992			0.986			0.959			0.968		
Flt Permitted		0.995			0.998			0.989			0.985		
Satd. Flow (prot)	0	1519	0	0	1514	0	0	1460	0	0	1467	0	
Satd. Flow (perm)	0	1395	0	0	1458	0	0	1350	0	0	1302	0	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		7			14			23			17		
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		460			374			464			456		
Travel Time (s)		10.5			8.5			10.5			10.4		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Parking (#/hr)		0			0			0			0		
Adj. Flow (vph)	74	603	40	20	376	47	34	72	47	55	84	44	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	717	0	0	443	0	0	153	0	0	183	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		4			8			2			6		
Permitted Phases	4			8			2			6			
Total Split (s)	64.0	64.0		64.0	64.0		26.0	26.0		26.0	26.0		
Total Lost Time (s)		4.5			4.5			4.5			4.5		
Act Effect Green (s)		59.5			59.5			21.5			21.5		
Actuated g/C Ratio		0.66			0.66			0.24			0.24		
v/c Ratio		0.78			0.46			0.45			0.57		
Control Delay		10.4			9.0			29.6			35.1		
Queue Delay		0.0			0.0			0.0			0.0		
Total Delay		10.4			9.0			29.6			35.1		
LOS		B			A			C			D		
Approach Delay		10.4			9.0			29.6			35.1		
Approach LOS		B			A			C			D		
Queue Length 50th (ft)		75			104			63			83		
Queue Length 95th (ft)		97			167			122			153		
Internal Link Dist (ft)		380			294			384			376		
Turn Bay Length (ft)													
Base Capacity (vph)		924			968			340			323		
Starvation Cap Reductn		0			0			0			0		
Spillback Cap Reductn		0			0			0			0		
Storage Cap Reductn		0			0			0			0		
Reduced v/c Ratio		0.78			0.46			0.45			0.57		

Intersection Summary
 Area Type: CBD
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Control Type: Pretimed
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 15.0 Intersection LOS: B
 Intersection Capacity Utilization 89.2% ICU Level of Service E
 Analysis Period (min) 15



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

East St at E State St – AM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	East St at E State St							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/8/2020							East/West Street	E State Street							
Analysis Year	2020							North/South Street	East Street							
Time Analyzed	AM Peak Hour							Peak Hour Factor	0.84							
Intersection Orientation	East-West							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	299	14		22	446	2		6	6	16		5	5	8
Percent Heavy Vehicles (%)		0				0				0	0	6		20	0	13
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.10	6.50	6.26		7.30	6.50	6.33
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.00	3.35		3.68	4.00	3.42
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		0				26				33						21
Capacity, c (veh/h)		1045				1197				378						301
v/c Ratio		0.00				0.02				0.09						0.07
95% Queue Length, Q ₉₅ (veh)		0.0				0.1				0.3						0.2
Control Delay (s/veh)		8.4				8.1				15.4						17.9
Level of Service (LOS)		A				A				C						C
Approach Delay (s/veh)		0.0				0.6				15.4				17.9		
Approach LOS										C				C		



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

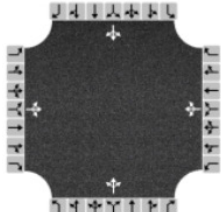
East St at E State St – PM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information						Site Information										
Analyst	BRW					Intersection	East St at E State St									
Agency/Co.	Traffic Engineering Inc					Jurisdiction										
Date Performed	10/8/2020					East/West Street	E State Street									
Analysis Year	2020					North/South Street	East Street									
Time Analyzed	PM Peak Hour					Peak Hour Factor	0.93									
Intersection Orientation	East-West					Analysis Time Period (hrs)	0.25									
Project Description	Pendleton Traffic Impact Fee															
Lanes																
<p align="center">Major Street: East-West</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6	7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	0	1	0	0	1	0		0	1	0	
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	665	10		9	448	8		6	2	31		4	2	7
Percent Heavy Vehicles (%)		0				0				0	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.10	6.50	6.20		7.10	6.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.00	3.30		3.50	4.00	3.30
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		0				10				42				14		
Capacity, c (veh/h)		1083				886				317				248		
v/c Ratio		0.00				0.01				0.13				0.06		
95% Queue Length, Q ₉₅ (veh)		0.0				0.0				0.5				0.2		
Control Delay (s/veh)		8.3				9.1				18.1				20.4		
Level of Service (LOS)		A				A				C				C		
Approach Delay (s/veh)		0.0				0.3				18.1				20.4		
Approach LOS		A				A				C				C		



Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario

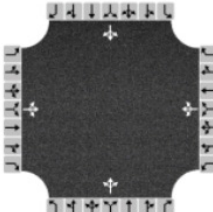
Main St at W High St – AM Peak Hour

HCS7 All-Way Stop Control Report												
General Information						Site Information						
Analyst	BRW					Intersection	Main St at W High St					
Agency/Co.	Traffic Engineering Inc					Jurisdiction						
Date Performed	10/8/2020					East/West Street	W High Street					
Analysis Year	2020					North/South Street	Main Street					
Analysis Time Period (hrs)	0.25					Peak Hour Factor	0.93					
Time Analyzed	AM Peak Hour											
Project Description	Pendleton Traffic Impact Fee											
Lanes												
												
Vehicle Volume and Adjustments												
Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	2	6	3	0	4	5	3	69	3	6	51	4
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	12			10			81			66		
Percent Heavy Vehicles	0			0			0			0		
Departure Headway and Service Time												
Initial Departure Headway, hd (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.011			0.009			0.072			0.058		
Final Departure Headway, hd (s)	4.09			3.89			3.99			4.00		
Final Degree of Utilization, x	0.013			0.010			0.089			0.073		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, ts (s)	2.09			1.89			1.99			2.00		
Capacity, Delay and Level of Service												
Flow Rate, v (veh/h)	12			10			81			66		
Capacity	880			926			902			900		
95% Queue Length, Q ₉₅ (veh)	0.0			0.0			0.3			0.2		
Control Delay (s/veh)	7.1			6.9			7.4			7.3		
Level of Service, LOS	A			A			A			A		
Approach Delay (s/veh)	7.1			6.9			7.4			7.3		
Approach LOS	A			A			A			A		
Intersection Delay, s/veh LOS	7.3						A					



Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario

Main St at W High St – PM Peak Hour

HCS7 All-Way Stop Control Report												
General Information						Site Information						
Analyst	BRW					Intersection	Main St at W High St					
Agency/Co.	Traffic Engineering Inc					Jurisdiction						
Date Performed	10/8/2020					East/West Street	W High Street					
Analysis Year	2020					North/South Street	Main Street					
Analysis Time Period (hrs)	0.25					Peak Hour Factor	0.91					
Time Analyzed	PM Peak Hour											
Project Description	Pendleton Traffic Impact Fee											
Lanes												
												
Vehicle Volume and Adjustments												
Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	10	24	11	6	8	13	2	68	5	15	67	8
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	49			30			82			99		
Percent Heavy Vehicles	0			0			0			0		
Departure Headway and Service Time												
Initial Departure Headway, hd (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.044			0.026			0.073			0.088		
Final Departure Headway, hd (s)	4.22			4.10			4.13			4.13		
Final Degree of Utilization, x	0.058			0.034			0.095			0.114		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, ts (s)	2.22			2.10			2.13			2.13		
Capacity, Delay and Level of Service												
Flow Rate, v (veh/h)	49			30			82			99		
Capacity	853			878			871			871		
95% Queue Length, Q ₉₅ (veh)	0.2			0.1			0.3			0.4		
Control Delay (s/veh)	7.5			7.2			7.6			7.7		
Level of Service, LOS	A			A			A			A		
Approach Delay (s/veh)	7.5			7.2			7.6			7.7		
Approach LOS	A			A			A			A		
Intersection Delay, s/veh LOS	7.5						A					



Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario

S Pendleton Ave at W High St – AM Peak Hour

HCS7 Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	BRW							Intersection	Pendleton Ave at High St								
Agency/Co.	Traffic Engineering Inc							Jurisdiction									
Date Performed	10/8/2020							East/West Street	W High Street								
Analysis Year	2020							North/South Street	S Pendleton Avenue								
Time Analyzed	AM Peak Hour							Peak Hour Factor	0.79								
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25								
Project Description	Pendleton Traffic Impact Fee																
Lanes																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0		0	1	0		0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		5	7	5		5	7	16		3	110	2		4	87	0	
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0			
Proportion Time Blocked																	
Percent Grade (%)		0				0											
Right Turn Channelized																	
Median Type Storage		Undivided															
Critical and Follow-up Headways																	
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1			
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10			
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2			
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20				2.20			
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)			22				35			4				5			
Capacity, c (veh/h)			709				777			1493				1454			
v/c Ratio			0.03				0.05			0.00				0.00			
95% Queue Length, Q ₉₅ (veh)			0.1				0.1			0.0				0.0			
Control Delay (s/veh)			10.2				9.9			7.4				7.5			
Level of Service (LOS)			B				A			A				A			
Approach Delay (s/veh)		10.2				9.9				0.2				0.4			
Approach LOS		B				A											



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

S Pendleton Ave at W High St – PM Peak Hour

HCS7 Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	BRW							Intersection	Pendleton Ave at High St								
Agency/Co.	Traffic Engineering Inc							Jurisdiction									
Date Performed	10/8/2020							East/West Street	W High Street								
Analysis Year	2020							North/South Street	S Pendleton Avenue								
Time Analyzed	PM Peak Hour							Peak Hour Factor	0.85								
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25								
Project Description	Pendleton Traffic Impact Fee																
Lanes																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0	
Configuration				LTR				LTR				LTR				LTR	
Volume (veh/h)		23	12	8		12	9	26		6	130	11		10	97	0	
Percent Heavy Vehicles (%)		0	0	0		0	0	4		0				10			
Proportion Time Blocked																	
Percent Grade (%)		0				0											
Right Turn Channelized																	
Median Type Storage		Undivided															
Critical and Follow-up Headways																	
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1			
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.24		4.10				4.20			
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2			
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.34		2.20				2.29			
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)			51				55			7				12			
Capacity, c (veh/h)			635				731			1488				1365			
v/c Ratio			0.08				0.08			0.00				0.01			
95% Queue Length, Q ₉₅ (veh)			0.3				0.2			0.0				0.0			
Control Delay (s/veh)			11.2				10.3			7.4				7.7			
Level of Service (LOS)			B				B			A				A			
Approach Delay (s/veh)		11.2				10.3				0.3				0.8			
Approach LOS		B				B				A				A			



Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario

S Pendleton Ave at Madison Ave – AM Peak Hour

HCS7 Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	BRW							Intersection	Pendleton at Madison								
Agency/Co.	Traffic Engineering Inc							Jurisdiction									
Date Performed	10/8/2020							East/West Street	Madison Avenue								
Analysis Year	2020							North/South Street	S Pendleton Avenue								
Time Analyzed	AM Peak Hour							Peak Hour Factor	0.79								
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25								
Project Description	Pendleton Traffic Impact Fee																
Lanes																	
<p style="text-align: center; font-size: small;">Major Street: North-South</p>																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		1	13	1		11	13	49		1	69	10		31	82	0	
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				10			
Proportion Time Blocked																	
Percent Grade (%)	0				0												
Right Turn Channelized																	
Median Type Storage	Undivided																
Critical and Follow-up Headways																	
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1			
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.20			
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2			
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20				2.29			
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)			19					92		1					39		
Capacity, c (veh/h)			622					821		1501					1444		
v/c Ratio			0.03					0.11		0.00					0.03		
95% Queue Length, Q ₉₅ (veh)			0.1					0.4		0.0					0.1		
Control Delay (s/veh)			11.0					9.9		7.4					7.6		
Level of Service (LOS)			B					A		A					A		
Approach Delay (s/veh)		11.0				9.9				0.1				2.2			
Approach LOS		B				A											



Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario

S Pendleton Ave at Madison Ave – PM Peak Hour

HCS7 Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	BRW							Intersection	Pendleton at Madison								
Agency/Co.	Traffic Engineering Inc							Jurisdiction									
Date Performed	10/8/2020							East/West Street	Madison Avenue								
Analysis Year	2020							North/South Street	S Pendleton Avenue								
Time Analyzed	PM Peak Hour							Peak Hour Factor	0.77								
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25								
Project Description	Pendleton Traffic Impact Fee																
Lanes																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		0	3	1		10	21	54		2	98	7		20	96	0	
Percent Heavy Vehicles (%)		0	0	0		0	5	0		0				10			
Proportion Time Blocked																	
Percent Grade (%)		0				0											
Right Turn Channelized																	
Median Type Storage		Undivided															
Critical and Follow-up Headways																	
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1			
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.55	6.20		4.10				4.20			
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2			
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.05	3.30		2.20				2.29			
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)			5				110			3				26			
Capacity, c (veh/h)			648				769			1475				1400			
v/c Ratio			0.01				0.14			0.00				0.02			
95% Queue Length, Q ₉₅ (veh)			0.0				0.5			0.0				0.1			
Control Delay (s/veh)			10.6				10.5			7.4				7.6			
Level of Service (LOS)			B				B			A				A			
Approach Delay (s/veh)		10.6				10.5				0.2				1.4			
Approach LOS		B				B											



Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario

Broadway St at Madison Ave – AM Peak Hour

HCS7 All-Way Stop Control Report												
General Information						Site Information						
Analyst	BRW					Intersection	Broadway and Madison					
Agency/Co.	Traffic Engineering Inc					Jurisdiction						
Date Performed	10/8/2020					East/West Street	Madison Avenue					
Analysis Year	2020					North/South Street	Broadway Street					
Analysis Time Period (hrs)	0.25					Peak Hour Factor	0.53					
Time Analyzed	AM Peak Hour											
Project Description	Pendleton Traffic Impact Fee											
Lanes												
Vehicle Volume and Adjustments												
Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	6	11	0	4	16	18	0	45	2	13	63	23
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	32			72			89			187		
Percent Heavy Vehicles	6			0			9			0		
Departure Headway and Service Time												
Initial Departure Headway, hd (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.029			0.064			0.079			0.166		
Final Departure Headway, hd (s)	4.76			4.28			4.46			4.13		
Final Degree of Utilization, x	0.042			0.085			0.110			0.214		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, ts (s)	2.76			2.28			2.46			2.13		
Capacity, Delay and Level of Service												
Flow Rate, v (veh/h)	32			72			89			187		
Capacity	757			842			808			873		
95% Queue Length, Q ₉₅ (veh)	0.1			0.3			0.4			0.8		
Control Delay (s/veh)	8.0			7.7			8.0			8.2		
Level of Service, LOS	A			A			A			A		
Approach Delay (s/veh)	8.0			7.7			8.0			8.2		
Approach LOS	A			A			A			A		
Intersection Delay, s/veh LOS	8.1			8.1			8.1			8.1		



Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario

Broadway St at Madison Ave – PM Peak Hour

HCS7 All-Way Stop Control Report												
General Information						Site Information						
Analyst	BRW					Intersection	Broadway and Madison					
Agency/Co.	Traffic Engineering Inc					Jurisdiction						
Date Performed	10/8/2020					East/West Street	Madison Avenue					
Analysis Year	2020					North/South Street	Broadway Street					
Analysis Time Period (hrs)	0.25					Peak Hour Factor	0.74					
Time Analyzed	PM Peak Hour											
Project Description	Pendleton Traffic Impact Fee											
Lanes												
Vehicle Volume and Adjustments												
Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	4	14	3	7	16	9	3	32	1	21	43	21
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	28			43			49			115		
Percent Heavy Vehicles	0			0			9			0		
Departure Headway and Service Time												
Initial Departure Headway, hd (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.025			0.038			0.043			0.102		
Final Departure Headway, hd (s)	4.25			4.16			4.32			4.01		
Final Degree of Utilization, x	0.033			0.050			0.058			0.128		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, ts (s)	2.25			2.16			2.32			2.01		
Capacity, Delay and Level of Service												
Flow Rate, v (veh/h)	28			43			49			115		
Capacity	847			866			833			898		
95% Queue Length, Q ₉₅ (veh)	0.1			0.2			0.2			0.4		
Control Delay (s/veh)	7.4			7.4			7.6			7.6		
Level of Service, LOS	A			A			A			A		
Approach Delay (s/veh)	7.4			7.4			7.6			7.6		
Approach LOS	A			A			A			A		
Intersection Delay, s/veh LOS	7.5			7.5			7.6			7.6		



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

S Pendleton Ave at Old Indianapolis Rd – AM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	Pendleton at Old Indianap							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/12/2020							East/West Street	Old Indianapolis Road							
Analysis Year	2020							North/South Street	S Pendleton Avenue							
Time Analyzed	AM Peak Hour							Peak Hour Factor	0.91							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0		0	1	0		0	1	0
Configuration			LR								LT					TR
Volume (veh/h)		21		0						5	99				114	38
Percent Heavy Vehicles (%)		5		0						0						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type Storage		Undivided														
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.45		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.55		3.30						2.20						
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			23							5						
Capacity, c (veh/h)			714							1423						
v/c Ratio			0.03							0.00						
95% Queue Length, Q ₉₅ (veh)			0.1							0.0						
Control Delay (s/veh)			10.2							7.5						
Level of Service (LOS)			B							A						
Approach Delay (s/veh)		10.2								0.4						
Approach LOS		B								A						



Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario

S Pendleton Ave at Old Indianapolis Rd – PM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	Pendleton at Old Indianap							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/12/2020							East/West Street	Old Indianapolis Road							
Analysis Year	2020							North/South Street	S Pendleton Avenue							
Time Analyzed	PM Peak Hour							Peak Hour Factor	0.90							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0		0	1	0		0	1	0
Configuration			LR								LT					TR
Volume (veh/h)		43		0						1	137				115	73
Percent Heavy Vehicles (%)		0		0						100						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type Storage		Undivided														
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						5.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						3.10						
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			48							1						
Capacity, c (veh/h)			674							944						
v/c Ratio			0.07							0.00						
95% Queue Length, Q ₉₅ (veh)			0.2							0.0						
Control Delay (s/veh)			10.7							8.8						
Level of Service (LOS)			B							A						
Approach Delay (s/veh)		10.7								0.1						
Approach LOS		B								A						

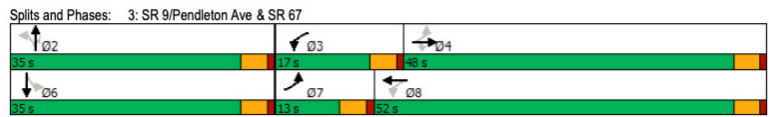


**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

SR 9 at SR 67 – AM Peak Hour

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↗	↖	↗	↖	↔	↕	↗	↖	↔	↕
Traffic Volume (vph)	12	256	3	112	324	12	40	50	147	16	52	39
Future Volume (vph)	12	256	3	112	324	12	40	50	147	16	52	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	400		0	310		0	0		360	0		0
Storage Lanes	1		1	1		0	0		1	0		0
Taper Length (ft)	25		25		25		25		25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.995				0.850		0.950	
Flt Protected	0.950			0.950				0.978			0.993	
Satd. Flow (prot)	1805	1900	1615	1805	1890	0	0	1858	1615	0	1792	0
Flt Permitted	0.527			0.359				0.870			0.966	
Satd. Flow (perm)	1001	1900	1615	682	1890	0	0	1653	1615	0	1744	0
Right Turn on Red			Yes			Yes			Yes		Yes	
Satd. Flow (RTOR)			65		2				150		30	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		846			955			805			889	
Travel Time (s)		19.2			21.7			18.3			20.2	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	12	261	3	114	331	12	41	51	150	16	53	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	12	261	3	114	343	0	0	92	150	0	109	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	Perm	Perm	NA	NA
Protected Phases	7	4		3	8			2		6		
Permitted Phases	4		4	8			2		2	6		
Total Split (s)	13.0	48.0	48.0	17.0	52.0		35.0	35.0	35.0	35.0		
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5		
Act Effct Green (s)	19.0	14.6	14.6	24.4	22.6		31.1	31.1	31.1	31.1		
Actuated g/C Ratio	0.29	0.23	0.23	0.38	0.35		0.48	0.48	0.48	0.48		
v/c Ratio	0.03	0.61	0.01	0.29	0.52		0.12	0.18	0.13	0.13		
Control Delay	11.7	30.1	0.0	14.0	20.0		12.6	3.3	9.9	9.9		
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total Delay	11.7	30.1	0.0	14.0	20.0		12.6	3.3	9.9	9.9		
LOS	B	C	A	B	C		B	A	A	A		
Approach Delay		29.0			18.5		6.8		9.9			
Approach LOS		C			B		A		A			
Queue Length 50th (ft)	3	97	0	28	97		20	0	17			
Queue Length 95th (ft)	11	171	0	56	208		54	32	52			
Internal Link Dist (ft)		766			875		725		809			
Turn Bay Length (ft)	400			310					360			
Base Capacity (vph)	432	1300	1125	484	1412		793	852	852			
Starvation Cap Reductn	0	0	0	0	0		0	0	0			
Spillback Cap Reductn	0	0	0	0	0		0	0	0			
Storage Cap Reductn	0	0	0	0	0		0	0	0			
Reduced v/c Ratio	0.03	0.20	0.00	0.24	0.24		0.12	0.18	0.13			

Intersection Summary
 Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 64.8
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.61
 Intersection Signal Delay: 17.7 Intersection LOS: B
 Intersection Capacity Utilization 45.9% ICU Level of Service A
 Analysis Period (min) 15

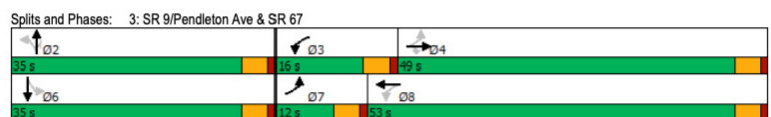


**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

SR 9 at SR 67 – PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (vph)	12	256	3	112	324	12	40	50	147	16	52	39
Future Volume (vph)	12	256	3	112	324	12	40	50	147	16	52	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	400	0	310	0	0	0	0	0	360	0	0	0
Storage Lanes	1		1	1		0	0		1	0		0
Taper Length (ft)	25		25			25			25			25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.995				0.850		0.951	
Flt Protected	0.950			0.950				0.978			0.992	
Satd. Flow (prot)	1805	1900	1615	1805	1890	0	0	1858	1615	0	1792	0
Flt Permitted	0.488			0.336				0.865			0.963	
Satd. Flow (perm)	927	1900	1615	638	1890	0	0	1644	1615	0	1740	0
Right Turn on Red			Yes			Yes			Yes		Yes	Yes
Satd. Flow (RTOR)			65		3				163		29	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		846			955			805			889	
Travel Time (s)		19.2			21.7			18.3			20.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	13	284	3	124	360	13	44	56	163	18	58	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	284	3	124	373	0	0	100	163	0	119	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4		4	8			2		2	6		
Total Split (s)	12.0	49.0	49.0	16.0	53.0		35.0	35.0	35.0	35.0	35.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Act Effct Green (s)	20.0	15.5	15.5	25.7	23.8		31.1	31.1	31.1	31.1	31.1	
Actuated g/C Ratio	0.30	0.23	0.23	0.39	0.36		0.47	0.47	0.47	0.47	0.47	
v/c Ratio	0.04	0.64	0.01	0.31	0.55		0.13	0.19	0.14		0.14	
Control Delay	11.5	30.5	0.0	14.1	20.2		13.3	3.4	10.8		10.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	11.5	30.5	0.0	14.1	20.2		13.3	3.4	10.8		10.8	
LOS	B	C	A	B	C		B	A	B		B	
Approach Delay		29.4			18.6			7.2			10.8	
Approach LOS		C			B			A			B	
Queue Length 50th (ft)	3	108	0	31	107		23	0	20		20	
Queue Length 95th (ft)	12	186	0	60	226		61	34	60		60	
Internal Link Dist (ft)		766			875			725			809	
Turn Bay Length (ft)	400			310					360			
Base Capacity (vph)	399	1306	1130	457	1417		774	847	835		835	
Starvation Cap Reductn	0	0	0	0	0		0	0	0		0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0		0	
Storage Cap Reductn	0	0	0	0	0		0	0	0		0	
Reduced v/c Ratio	0.03	0.22	0.00	0.27	0.26		0.13	0.19	0.14		0.14	

Intersection Summary
 Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 66
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.64
 Intersection Signal Delay: 18.0 Intersection LOS: B
 Intersection Capacity Utilization 45.9% ICU Level of Service A
 Analysis Period (min) 15



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

Broadway St at SR 67 – AM Peak Hour

HCS7 Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	BRW							Intersection	Broadway St at SR 67								
Agency/Co.	Traffic Engineering Inc							Jurisdiction									
Date Performed	10/8/2020							East/West Street	SR 67								
Analysis Year	2020							North/South Street	Broadway Street								
Time Analyzed	AM Peak Hour							Peak Hour Factor	0.90								
Intersection Orientation	East-West							Analysis Time Period (hrs)	0.25								
Project Description	Pendleton Traffic Impact Fee																
Lanes																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority	1U	1	2	3	4U	4	5	6	7	8	9		10	11	12		
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0		0	1	0		
Configuration	LT								TR				LR				
Volume (veh/h)	6	417					508	1						19		8	
Percent Heavy Vehicles (%)	0												0			0	
Proportion Time Blocked																	
Percent Grade (%)													0				
Right Turn Channelized																	
Median Type Storage	Undivided																
Critical and Follow-up Headways																	
Base Critical Headway (sec)		4.1												7.1		6.2	
Critical Headway (sec)		4.10												6.40		6.20	
Base Follow-Up Headway (sec)		2.2												3.5		3.3	
Follow-Up Headway (sec)		2.20												3.50		3.30	
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)		7												30			
Capacity, c (veh/h)		1016												362			
v/c Ratio		0.01												0.08			
95% Queue Length, Q ₉₅ (veh)		0.0												0.3			
Control Delay (s/veh)		8.6												15.9			
Level of Service (LOS)		A												C			
Approach Delay (s/veh)		0.2												15.9			
Approach LOS														C			



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

Broadway St at SR 67 – PM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	Broadway St at SR 67							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/8/2020							East/West Street	SR 67							
Analysis Year	2020							North/South Street	Broadway Street							
Time Analyzed	PM Peak Hour							Peak Hour Factor	0.93							
Intersection Orientation	East-West							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0		0	1	0	
Configuration	LT				TR								LR			
Volume (veh/h)		13	692				491	12						9		13
Percent Heavy Vehicles (%)		0												0		8
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)	4.1												7.1			
Critical Headway (sec)	4.10												6.40			
Base Follow-Up Headway (sec)	2.2												3.5			
Follow-Up Headway (sec)	2.20												3.50			
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)	14												24			
Capacity, c (veh/h)	1038												425			
v/c Ratio	0.01												0.06			
95% Queue Length, Q ₉₅ (veh)	0.0												0.2			
Control Delay (s/veh)	8.5												14.0			
Level of Service (LOS)	A												B			
Approach Delay (s/veh)	0.3												14.0			
Approach LOS	B												B			



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

SR 67 at Madison Ave – AM Peak Hour

HCS7 Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	BRW							Intersection	SR 67 at Madison Ave								
Agency/Co.	Traffic Engineering Inc							Jurisdiction									
Date Performed	10/8/2020							East/West Street	Madison Avenue								
Analysis Year	2020							North/South Street	SR 67								
Time Analyzed	AM Peak Hour							Peak Hour Factor	0.81								
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25								
Project Description	Pendleton Traffic Impact Fee																
Lanes																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	0	1	1	0	0	1	1	
Configuration		LTR				LTR				LT				R			
Volume (veh/h)		12	15	8		3	8	41		5	380	71		171	487	20	
Percent Heavy Vehicles (%)		0	0	13		0	0	12		0				5			
Proportion Time Blocked																	
Percent Grade (%)		0				0											
Right Turn Channelized											No						
Median Type Storage		Undivided															
Critical and Follow-up Headways																	
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1			
Critical Headway (sec)		7.10	6.50	6.33		7.10	6.50	6.32		4.10				4.15			
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2			
Follow-Up Headway (sec)		3.50	4.00	3.42		3.50	4.00	3.41		2.20				2.25			
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)			43				64			6				211			
Capacity, c (veh/h)			83				342			965				999			
v/c Ratio			0.52				0.19			0.01				0.21			
95% Queue Length, Q ₉₅ (veh)			2.2				0.7			0.0				0.8			
Control Delay (s/veh)			87.7				17.9			8.8				9.6			
Level of Service (LOS)			F				C			A				A			
Approach Delay (s/veh)		87.7				17.9				0.2				4.6			
Approach LOS		F				C											



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

SR 67 at Madison Ave – PM Peak Hour

HCS7 Two-Way Stop-Control Report																				
General Information								Site Information												
Analyst	BRW							Intersection	SR 67 at Madison Ave											
Agency/Co.	Traffic Engineering Inc							Jurisdiction												
Date Performed	10/8/2020							East/West Street	Madison Avenue											
Analysis Year	2020							North/South Street	SR 67											
Time Analyzed	PM Peak Hour							Peak Hour Factor	0.97											
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25											
Project Description	Pendleton Traffic Impact Fee																			
Lanes																				
Vehicle Volumes and Adjustments																				
Approach	Eastbound				Westbound				Northbound				Southbound							
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R				
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6				
Number of Lanes		0	1	0		0	1	0	0	0	1	1	0	0	1	1				
Configuration			LTR				LTR				LT				LT		R			
Volume (veh/h)		4	19	8		15	13	38		6	655	76			68	512	32			
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0					1					
Proportion Time Blocked																				
Percent Grade (%)		0					0													
Right Turn Channelized												No								
Median Type Storage		Undivided																		
Critical and Follow-up Headways																				
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1					4.1					
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10					4.11					
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2					2.2					
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20					2.21					
Delay, Queue Length, and Level of Service																				
Flow Rate, v (veh/h)			32				68			6					70					
Capacity, c (veh/h)			150				253			1020					861					
v/c Ratio			0.21				0.27			0.01					0.08					
95% Queue Length, Q ₉₅ (veh)			0.8				1.1			0.0					0.3					
Control Delay (s/veh)			35.3				24.4			8.5					9.6					
Level of Service (LOS)			E				C			A					A					
Approach Delay (s/veh)		35.3					24.4					0.1					2.0			
Approach LOS		E					C					A					A			

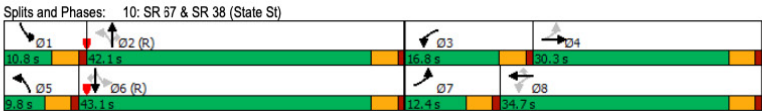


**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

SR 67 at SR 38 – AM Peak Hour

	↖	→	↘	↙	←	↖	↙	↑	↘	↙	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖
Traffic Volume (vph)	107	173	82	160	257	64	46	299	81	95	419	156
Future Volume (vph)	107	173	82	160	257	64	46	299	81	95	419	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	270		0	130		310	280		280	300		400
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr		0.952				0.850			0.850			0.850
Fit Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1809	0	1805	1900	1615	1805	1900	1615	1805	1900	1615
Fit Permitted	0.376			0.210			0.325			0.409		
Satd. Flow (perm)	714	1809	0	399	1900	1615	618	1900	1615	777	1900	1615
Right Turn on Red			Yes			Yes			Yes		Yes	
Satd. Flow (RTOR)		23				115			115			184
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		831			973			623			864	
Travel Time (s)		18.9			22.1			14.2			19.6	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	126	204	96	188	302	75	54	352	95	112	493	184
Shared Lane Traffic (%)												
Lane Group Flow (vph)	126	300	0	188	302	75	54	352	95	112	493	184
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			8	2		6		6
Total Split (s)	12.4	30.3		16.8	34.7	34.7	9.8	42.1	42.1	10.8	43.1	43.1
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Act Effect Green (s)	28.0	20.2		35.5	24.0	24.0	49.2	42.9	42.9	52.1	46.0	46.0
Actuated g/C Ratio	0.28	0.20		0.36	0.24	0.24	0.49	0.43	0.43	0.52	0.46	0.46
v/c Ratio	0.44	0.78		0.62	0.66	0.16	0.14	0.43	0.13	0.23	0.56	0.22
Control Delay	26.0	48.8		30.9	40.9	2.5	13.6	23.6	3.1	13.8	25.2	3.8
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.0	48.8		30.9	40.9	2.5	13.6	23.6	3.1	13.8	25.2	3.8
LOS	C	D		C	D	A	B	C	A	B	C	A
Approach Delay		42.0			32.5			18.6			18.6	
Approach LOS		D			C			B			B	
Queue Length 50th (ft)	53	168		82	172	0	16	161	0	34	240	0
Queue Length 95th (ft)	81	228		116	227	9	36	235	19	65	341	35
Internal Link Dist (ft)		751			893			543			784	
Turn Bay Length (ft)	270			130		310	280		280	300		400
Base Capacity (vph)	287	483		317	573	568	378	815	758	481	873	841
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.62		0.59	0.53	0.13	0.14	0.43	0.13	0.23	0.56	0.22

Intersection Summary
 Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 26.4
 Intersection LOS: C
 Intersection Capacity Utilization 64.2%
 ICU Level of Service C
 Analysis Period (min) 15

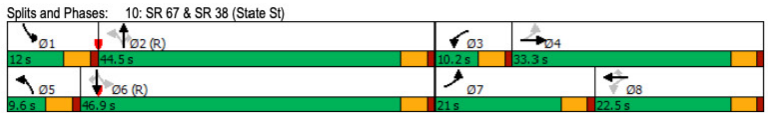


**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

SR 67 at SR 38 – PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	327	327	40	109	188	74	54	571	109	158	432	160
Future Volume (vph)	327	327	40	109	188	74	54	571	109	158	432	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	270		0	130		310	280		280	300		400
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25		25	25		25			25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.984				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1870	0	1805	1900	1615	1805	1900	1615	1805	1900	1615
Flt Permitted	0.297			0.361			0.391			0.186		
Satd. Flow (perm)	564	1870	0	686	1900	1615	743	1900	1615	353	1900	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6				164			164			165
Link Speed (mph)	30			30		30		30		30		30
Link Distance (ft)	831			973		623		864		864		864
Travel Time (s)	18.9			22.1		14.2		19.6		19.6		19.6
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	337	337	41	112	194	76	56	589	112	163	445	165
Shared Lane Traffic (%)												
Lane Group Flow (vph)	337	378	0	112	194	76	56	589	112	163	445	165
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Total Split (s)	21.0	33.3		10.2	22.5	22.5	9.6	44.5	44.5	12.0	46.9	46.9
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Act Effct Green (s)	35.5	25.3		20.5	14.8	14.8	48.7	42.9	42.9	54.0	47.2	47.2
Actuated g/C Ratio	0.36	0.25		0.20	0.15	0.15	0.49	0.43	0.43	0.54	0.47	0.47
v/c Ratio	0.84	0.79		0.55	0.69	0.20	0.13	0.72	0.14	0.53	0.50	0.19
Control Delay	45.3	46.9		34.2	53.1	1.2	12.4	31.0	1.3	18.4	22.2	3.5
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.3	46.9		34.2	53.1	1.2	12.4	31.0	1.3	18.4	22.2	3.5
LOS	D	D		C	D	A	B	C	A	B	C	A
Approach Delay	46.2			37.2		25.2		17.4				
Approach LOS	D			D		C		B				
Queue Length 50th (ft)	166	219		48	118	0	16	320	0	49	205	0
Queue Length 95th (ft)	#251	316		83	187	0	37	461	11	89	305	37
Internal Link Dist (ft)		751			893		543			784		
Turn Bay Length (ft)	270			130		310	280		280	300		400
Base Capacity (vph)	404	542		204	342	425	423	814	785	311	896	849
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.70		0.55	0.57	0.18	0.13	0.72	0.14	0.52	0.50	0.19

Intersection Summary
 Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBL and 6:SBTL, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 30.4 Intersection LOS: C
 Intersection Capacity Utilization 81.8% ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

SR 67 at US 36 – AM Peak Hour

	↙	↘	↑	↗	↖	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙		↑	↗	↖	↓
Traffic Volume (vph)	299	26	310	96	36	430
Future Volume (vph)	299	26	310	96	36	430
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		450	210	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.989			0.850		
Flt Protected	0.956				0.950	
Satd. Flow (prot)	1796	0	1900	1615	1805	1900
Flt Permitted	0.956				0.460	
Satd. Flow (perm)	1796	0	1900	1615	874	1900
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	5			104		
Link Speed (mph)	30		30			30
Link Distance (ft)	841		864			569
Travel Time (s)	19.1		19.6			12.9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	325	28	337	104	39	467
Shared Lane Traffic (%)						
Lane Group Flow (vph)	353	0	337	104	39	467
Turn Type	Prot		NA	Perm	pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases				2		6
Total Split (s)	44.0		45.0	45.0	11.0	56.0
Total Lost Time (s)	4.5		4.5	4.5	4.5	4.5
Act Effct Green (s)	20.7		45.5	45.5	51.7	51.7
Actuated g/C Ratio	0.25		0.56	0.56	0.63	0.63
v/c Ratio	0.77		0.32	0.11	0.06	0.39
Control Delay	39.2		13.3	3.4	7.3	9.4
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	39.2		13.3	3.4	7.3	9.4
LOS	D		B	A	A	A
Approach Delay	39.2		10.9			9.2
Approach LOS	D		B			A
Queue Length 50th (ft)	164		97	0	7	102
Queue Length 95th (ft)	255		191	27	22	209
Internal Link Dist (ft)	761		784			489
Turn Bay Length (ft)				450	210	
Base Capacity (vph)	876		1059	947	629	1205
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.40		0.32	0.11	0.06	0.39
Intersection Summary						
Area Type:	Other					
Cycle Length:	100					
Actuated Cycle Length:	81.5					
Control Type:	Actuated-Uncoordinated					
Maximum v/c Ratio:	0.77					
Intersection Signal Delay:	17.9			Intersection LOS: B		
Intersection Capacity Utilization:	49.9%			ICU Level of Service A		
Analysis Period (min):	15					
Splits and Phases: 8: SR 67 & US 36						

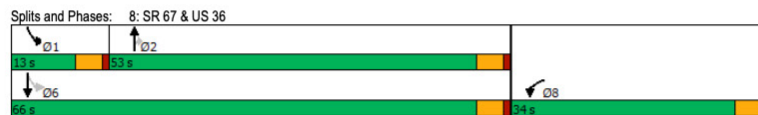


**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

SR 67 at US 36 – PM Peak Hour

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙		↑	↗	↘	↓
Traffic Volume (vph)	192	67	445	382	108	498
Future Volume (vph)	192	67	445	382	108	498
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		450	210	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.965			0.850		
Flt Protected	0.964				0.950	
Satd. Flow (prot)	1767	0	1900	1615	1805	1900
Flt Permitted	0.964				0.380	
Satd. Flow (perm)	1767	0	1900	1615	722	1900
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	18			402		
Link Speed (mph)	30		30		30	
Link Distance (ft)	841		864		569	
Travel Time (s)	19.1		19.6		12.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	202	71	468	402	114	524
Shared Lane Traffic (%)						
Lane Group Flow (vph)	273	0	468	402	114	524
Turn Type	Prot		NA	Perm	pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases				2	6	
Total Split (s)	34.0		53.0	53.0	13.0	66.0
Total Lost Time (s)	4.5		4.5	4.5	4.5	4.5
Act Effct Green (s)	18.0		52.6	52.6	62.2	62.2
Actuated g/C Ratio	0.20		0.59	0.59	0.70	0.70
v/c Ratio	0.74		0.42	0.36	0.19	0.40
Control Delay	43.2		13.4	2.3	6.1	7.5
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	43.2		13.4	2.3	6.1	7.5
LOS	D		B	A	A	A
Approach Delay	43.2		8.3			7.2
Approach LOS	D		A			A
Queue Length 50th (ft)	134		141	0	18	105
Queue Length 95th (ft)	217		265	45	45	211
Internal Link Dist (ft)	761		784			489
Turn Bay Length (ft)				450	210	
Base Capacity (vph)	597		1121	1117	606	1324
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.46		0.42	0.36	0.19	0.40

Intersection Summary
 Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 89.2
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.74
 Intersection Signal Delay: 13.3 Intersection LOS: B
 Intersection Capacity Utilization 55.4% ICU Level of Service B
 Analysis Period (min) 15



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

SR 67 at E Water St – AM Peak Hour

HCS7 Two-Way Stop-Control Report																		
General Information								Site Information										
Analyst	BRW							Intersection	SR 67 at E Water St									
Agency/Co.	Traffic Engineering Inc							Jurisdiction										
Date Performed	10/8/2020							East/West Street	E Water Street									
Analysis Year	2020							North/South Street	SR 67									
Time Analyzed	AM Peak Hour							Peak Hour Factor	0.88									
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25									
Project Description	Pendleton Traffic Impact Fee																	
Lanes																		
Vehicle Volumes and Adjustments																		
Approach	Eastbound				Westbound				Northbound				Southbound					
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6		
Number of Lanes		0	1	0		0	1	0	0	0	1	1	0	0	1	1		
Configuration			LTR				LTR				LT				LT		R	
Volume (veh/h)		10	8	46		1	19	45		34	288	0		16	359	7		
Percent Heavy Vehicles (%)		10	0	0		0	0	4		0				0				
Proportion Time Blocked																		
Percent Grade (%)		0				0												
Right Turn Channelized											No							
Median Type Storage		Undivided																
Critical and Follow-up Headways																		
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1				
Critical Headway (sec)		7.20	6.50	6.20		7.10	6.50	6.24		4.10				4.10				
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2				
Follow-Up Headway (sec)		3.59	4.00	3.30		3.50	4.00	3.34		2.20				2.20				
Delay, Queue Length, and Level of Service																		
Flow Rate, v (veh/h)			73				74			39				18				
Capacity, c (veh/h)			854				899			1154				1244				
v/c Ratio			0.09				0.08			0.03				0.01				
95% Queue Length, Q ₉₅ (veh)			0.3				0.3			0.1				0.0				
Control Delay (s/veh)			9.6				9.4			8.2				7.9				
Level of Service (LOS)			A				A			A				A				
Approach Delay (s/veh)		9.6				9.4					1.2				0.5			
Approach LOS		A				A												



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

SR 67 at E Water St – PM Peak Hour

HCS7 Two-Way Stop-Control Report												
General Information						Site Information						
Analyst	BRW					Intersection	SR 67 at E Water St					
Agency/Co.	Traffic Engineering Inc					Jurisdiction						
Date Performed	10/8/2020					East/West Street	E Water Street					
Analysis Year	2020					North/South Street	SR 67					
Time Analyzed	PM Peak Hour					Peak Hour Factor	0.94					
Intersection Orientation	North-South					Analysis Time Period (hrs)	0.25					
Project Description	Pendleton Traffic Impact Fee											
Lanes												
Vehicle Volumes and Adjustments												
Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	U	L	T	R	U	L	T	R	U	L	T	R
Priority	10	11	12		7	8	9	1U	1	2	3	4U
Number of Lanes	0	1	0		0	1	0	0	0	1	1	0
Configuration			LTR				LTR			LT		R
Volume (veh/h)		27	11	76		0	9	38		54	448	1
Percent Heavy Vehicles (%)		10	0	0		0	0	4		0		0
Proportion Time Blocked												
Percent Grade (%)	0			0								
Right Turn Channelized							No			No		
Median Type Storage	Undivided											
Critical and Follow-up Headways												
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1		4.1
Critical Headway (sec)		7.20	6.50	6.20		7.10	6.50	6.24		4.10		4.10
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2		2.2
Follow-Up Headway (sec)		3.59	4.00	3.30		3.50	4.00	3.34		2.20		2.20
Delay, Queue Length, and Level of Service												
Flow Rate, v (veh/h)			121				50			57		16
Capacity, c (veh/h)			422				723			1007		1095
v/c Ratio			0.29				0.07			0.06		0.01
95% Queue Length, Q ₉₅ (veh)			1.2				0.2			0.2		0.0
Control Delay (s/veh)			16.9				10.4			8.8		8.3
Level of Service (LOS)			C				B			A		A
Approach Delay (s/veh)	16.9			10.4			1.6			0.4		
Approach LOS	C			B			A			A		



Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario

S 300 W at US 36 – AM Peak Hour

HCS7 Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	BRW							Intersection	S 300 W at US 36								
Agency/Co.	Traffic Engineering Inc							Jurisdiction									
Date Performed	10/12/2020							East/West Street	US 36								
Analysis Year	2020							North/South Street	S 300 W								
Time Analyzed	AM Peak Hour							Peak Hour Factor	0.91								
Intersection Orientation	East-West							Analysis Time Period (hrs)	0.25								
Project Description	Pendleton Traffic Impact Fee																
Lanes																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	1	1	0		0	1	0		0	1	0	
Configuration			LTR			L	TR				LTR				LTR		
Volume (veh/h)		11	187	15		161	366	16		5	30	41		2	16	2	
Percent Heavy Vehicles (%)		0				5				0	3	0		0	0	0	
Proportion Time Blocked																	
Percent Grade (%)										0				0			
Right Turn Channelized																	
Median Type Storage						Undivided											
Critical and Follow-up Headways																	
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2	
Critical Headway (sec)		4.10				4.15				7.10	6.53	6.20		7.10	6.50	6.20	
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3	
Follow-Up Headway (sec)		2.20				2.25				3.50	4.03	3.30		3.50	4.00	3.30	
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)		12				177				84					22		
Capacity, c (veh/h)		1150				1329				340					222		
v/c Ratio		0.01				0.13				0.25					0.10		
95% Queue Length, Q ₉₅ (veh)		0.0				0.5				0.9					0.3		
Control Delay (s/veh)		8.2				8.1				19.0					23.0		
Level of Service (LOS)		A				A				C					C		
Approach Delay (s/veh)		0.5				2.4				19.0				23.0			
Approach LOS		A				A				C				C			



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

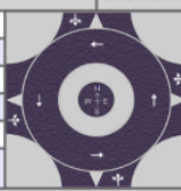
S 300 W at US 36 – PM Peak Hour

HCS7 Two-Way Stop-Control Report																			
General Information								Site Information											
Analyst	BRW							Intersection	S 300 W at US 36										
Agency/Co.	Traffic Engineering Inc							Jurisdiction											
Date Performed	10/12/2020							East/West Street	US 36										
Analysis Year	2020							North/South Street	S 300 W										
Time Analyzed	PM Peak Hour							Peak Hour Factor	0.95										
Intersection Orientation	East-West							Analysis Time Period (hrs)	0.25										
Project Description	Pendleton Traffic Impact Fee																		
Lanes																			
<p>Major Street: East-West</p>																			
Vehicle Volumes and Adjustments																			
Approach	Eastbound				Westbound				Northbound				Southbound						
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R			
Priority	1U	1	2	3	4U	4	5	6			7	8	9			10	11	12	
Number of Lanes	0	0	1	0	0	1	1	0			0	1	0			0	1	0	
Configuration			LTR			L		TR			LTR				LTR				
Volume (veh/h)		13	517	20		107	288	22			7	37	76			5	9	2	
Percent Heavy Vehicles (%)			0				2				0	0	0			0	0	0	
Proportion Time Blocked																			
Percent Grade (%)											0					0			
Right Turn Channelized																			
Median Type Storage							Undivided												
Critical and Follow-up Headways																			
Base Critical Headway (sec)			4.1					4.1				7.1	6.5	6.2			7.1	6.5	6.2
Critical Headway (sec)			4.10					4.12				7.10	6.50	6.20			7.10	6.50	6.20
Base Follow-Up Headway (sec)			2.2					2.2				3.5	4.0	3.3			3.5	4.0	3.3
Follow-Up Headway (sec)			2.20					2.22				3.50	4.00	3.30			3.50	4.00	3.30
Delay, Queue Length, and Level of Service																			
Flow Rate, v (veh/h)			14					113				126					17		
Capacity, c (veh/h)			1245					1007				305					166		
v/c Ratio			0.01					0.11				0.41					0.10		
95% Queue Length, Q ₉₅ (veh)			0.0					0.4				1.9					0.3		
Control Delay (s/veh)			7.9					9.0				24.9					29.2		
Level of Service (LOS)			A					A				C					D		
Approach Delay (s/veh)			0.3					2.3				24.9					29.2		
Approach LOS												C					D		



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

S 300 W at SR 38 – AM Peak Hour

HCS7 Roundabouts Report																
General Information							Site Information									
Analyst	BRW							Intersection		S 300 W at SR 38						
Agency or Co.	Traffic Engineering Inc							E/W Street Name		SR 38						
Date Performed	10/12/2020							N/S Street Name		S 300 W						
Analysis Year	2020							Analysis Time Period (hrs)		0.25						
Time Analyzed	AM Peak Hour							Peak Hour Factor		0.65						
Project Description	Pendleton Traffic Impact Fee							Jurisdiction								
Volume Adjustments and Site Characteristics																
Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment	LTR				LTR				LTR				LTR			
Volume (V), veh/h	0	41	120	132	0	59	337	21	0	42	15	8	0	4	83	109
Percent Heavy Vehicles, %	0	0	1	0	0	2	2	5	0	40	0	0	0	0	0	6
Flow Rate (vvc), pc/h	0	63	186	203	0	93	529	34	0	90	23	12	0	6	128	178
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1				1				1				1			
Pedestrians Crossing, p/h	0				0				0				0			
Critical and Follow-Up Headway Adjustment																
Approach	EB			WB			NB			SB						
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Critical Headway (s)		4.9763			4.9763			4.9763			4.9763					
Follow-Up Headway (s)		2.6087			2.6087			2.6087			2.6087					
Flow Computations, Capacity and v/c Ratios																
Approach	EB			WB			NB			SB						
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Entry Flow (w), pc/h		452			656			125			312					
Entry Volume, veh/h		450			642			99			302					
Circulating Flow (v), pc/h		227			176			255			712					
Exiting Flow (vw), pc/h		204			797			120			424					
Capacity (c _{max}), pc/h		1095			1153			1064			668					
Capacity (c), veh/h		1090			1129			845			646					
v/c Ratio (x)		0.41			0.57			0.12			0.47					
Delay and Level of Service																
Approach	EB			WB			NB			SB						
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Lane Control Delay (d), s/veh		7.7			10.2			5.4			12.7					
Lane LOS		A			B			A			B					
95% Queue, veh		2.1			3.7			0.4			2.5					
Approach Delay, s/veh		7.7			10.2			5.4			12.7					
Approach LOS		A			B			A			B					
Intersection Delay, s/veh LOS	9.6						A									



**Pendleton Road Impact Fee
Level of Service Analysis
2020 (Existing) Scenario**

S 300 W at SR 38 – PM Peak Hour

HCS7 Roundabouts Report																	
General Information								Site Information									
Analyst	BRW								Intersection		S 300 W at SR 38						
Agency or Co.	Traffic Engineering Inc								E/W Street Name		SR 38						
Date Performed	10/12/2020								N/S Street Name		S 300 W						
Analysis Year	2020								Analysis Time Period (hrs)		0.25						
Time Analyzed	PM Peak Hour								Peak Hour Factor		0.97						
Project Description	Pendleton Traffic Impact Fee								Jurisdiction								
Volume Adjustments and Site Characteristics																	
Approach	EB			WB			NB			SB							
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Number of Lanes (N)	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	1	0
Lane Assignment	LTR			LTR			LTR			LTR							
Volume (V), veh/h	0	42	246	127	0	22	210	19	0	71	68	13	0	18	51	75	
Percent Heavy Vehicles, %	0	0	2	2	0	0	3	0	0	1	0	0	0	0	0	1	
Flow Rate (v _{wt}), pc/h	0	43	259	134	0	23	223	20	0	74	70	13	0	19	53	78	
Right-Turn Bypass	None			None			None			None							
Conflicting Lanes	1			1			1			1							
Pedestrians Crossing, p/h	0			0			0			0							
Critical and Follow-Up Headway Adjustment																	
Approach	EB			WB			NB			SB							
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass		
Critical Headway (s)		4.9763			4.9763			4.9763			4.9763			4.9763			
Follow-Up Headway (s)		2.6087			2.6087			2.6087			2.6087			2.6087			
Flow Computations, Capacity and v/c Ratios																	
Approach	EB			WB			NB			SB							
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass		
Entry Flow (v _e), pc/h		436			266			157			150			150			
Entry Volume, veh/h		428			260			156			149			149			
Circulating Flow (v _c), pc/h		95			187			321			320						
Exiting Flow (v _e), pc/h		291			375			133			210						
Capacity (C _{sat}), pc/h		1253			1140			995			996						
Capacity (C), veh/h		1230			1113			990			991						
v/c Ratio (x)		0.35			0.23			0.16			0.15						
Delay and Level of Service																	
Approach	EB			WB			NB			SB							
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass		
Lane Control Delay (d), s/veh		6.2			5.4			5.1			5.0			5.0			
Lane LOS		A			A			A			A			A			
95% Queue, veh		1.6			0.9			0.6			0.5			0.5			
Approach Delay, s/veh		6.2			5.4			5.1			5.0			5.0			
Approach LOS		A			A			A			A			A			
Intersection Delay, s/veh LOS				5.6						A							



APPENDIX D - FUTURE CONDITIONS MODELLING (2030)

Pendleton Road Impact Fee Level of Service Analysis 2030 (Future) Scenario

SR 13 at W 700 S – AM Peak Hour

HCS7 Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	BRW							Intersection	SR 13 at W 700 S								
Agency/Co.	Traffic Engineering Inc							Jurisdiction									
Date Performed	10/7/2020							East/West Street	W 700 S								
Analysis Year	2020							North/South Street	SR 13								
Time Analyzed	AM PH - 2030							Peak Hour Factor	0.94								
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25								
Project Description	Pendleton Traffic Impact Fee																
Lanes																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		0	1	14		9	1	0		4	144	1		2	388	3	
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0			
Proportion Time Blocked																	
Percent Grade (%)		0				0											
Right Turn Channelized																	
Median Type Storage		Undivided															
Critical and Follow-up Headways																	
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1			
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10				4.10			
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2			
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20				2.20			
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)			16					11		4				2			
Capacity, c (veh/h)			621					412		1154				1438			
v/c Ratio			0.03					0.03		0.00				0.00			
95% Queue Length, Q ₉₅ (veh)			0.1					0.1		0.0				0.0			
Control Delay (s/veh)			10.9					14.0		8.1				7.5			
Level of Service (LOS)			B					B		A				A			
Approach Delay (s/veh)		10.9				14.0				0.3				0.1			
Approach LOS		B				B											



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

SR 13 at W 700 S – PM Peak Hour

HCS7 Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	BRW							Intersection	SR 13 at W 700 S								
Agency/Co.	Traffic Engineering Inc							Jurisdiction									
Date Performed	10/7/2020							East/West Street	W 700 S								
Analysis Year	2020							North/South Street	SR 13								
Time Analyzed	PM PH - 2030							Peak Hour Factor	0.95								
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25								
Project Description	Pendleton Traffic Impact Fee																
Lanes																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	10	1	2	3	4	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0	
Configuration			LTR			LTR				LTR				LTR			
Volume (veh/h)		2	10	17		7	1	1		12	374	7		1	252	1	
Percent Heavy Vehicles (%)		0	0	0		17	0	0		9				0			
Proportion Time Blocked																	
Percent Grade (%)		0				0											
Right Turn Channelized																	
Median Type Storage		Undivided															
Critical and Follow-up Headways																	
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1			
Critical Headway (sec)		7.10	6.50	6.20		7.27	6.50	6.20		4.19				4.10			
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2			
Follow-Up Headway (sec)		3.50	4.00	3.30		3.65	4.00	3.30		2.28				2.20			
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)			31				9			13				1			
Capacity, c (veh/h)			527				339			1258				1169			
v/c Ratio			0.06				0.03			0.01				0.00			
95% Queue Length, Q ₉₅ (veh)			0.2				0.1			0.0				0.0			
Control Delay (s/veh)			12.2				15.9			7.9				8.1			
Level of Service (LOS)			B				C			A				A			
Approach Delay (s/veh)		12.2				15.9				0.3				0.0			
Approach LOS		B				C											



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

S 750 W at W 700 S – AM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	S 750 W at W 700 S							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/7/2020							East/West Street	W 700 S							
Analysis Year	2020							North/South Street	S 750 W							
Time Analyzed	AM PH - 2030							Peak Hour Factor	0.67							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0		0	1	0		0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		3		0						0	2				0	3
Percent Heavy Vehicles (%)		0		0						0						
Proportion Time Blocked																
Percent Grade (%)			0													
Right Turn Channelized																
Median Type Storage					Undivided											
Critical and Follow-up Headways																
Base Critical Headway (sec)			7.1										4.1			
Critical Headway (sec)			6.40										4.10			
Base Follow-Up Headway (sec)			3.5										2.2			
Follow-Up Headway (sec)			3.50										2.20			
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			4										0			
Capacity, c (veh/h)			1022										1630			
v/c Ratio			0.00										0.00			
95% Queue Length, Q ₉₅ (veh)			0.0										0.0			
Control Delay (s/veh)			8.5										7.2			
Level of Service (LOS)			A										A			
Approach Delay (s/veh)			8.5										0.0			
Approach LOS			A													



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

S 750 W at W 700 S – PM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	S 750 W at W 700 S							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/7/2020							East/West Street	W 700 S							
Analysis Year	2020							North/South Street	S 750 W							
Time Analyzed	PM PH - 2030							Peak Hour Factor	0.69							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT					TR	
Volume (veh/h)		20		0						0	2				2	3
Percent Heavy Vehicles (%)		0		0						0						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type Storage		Undivided														
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)				29						0						
Capacity, c (veh/h)				1018						1627						
v/c Ratio				0.03						0.00						
95% Queue Length, Q ₉₅ (veh)				0.1						0.0						
Control Delay (s/veh)				8.6						7.2						
Level of Service (LOS)				A						A						
Approach Delay (s/veh)		8.6								0.0						
Approach LOS		A								A						



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

S 700 W at SR 38 – AM Peak Hour

HCS7 Two-Way Stop-Control Report																		
General Information								Site Information										
Analyst	BRW							Intersection	S 700 W at SR 38									
Agency/Co.	Traffic Engineering Inc							Jurisdiction										
Date Performed	10/7/2020							East/West Street	SR 38									
Analysis Year	2020							North/South Street	S 700 W									
Time Analyzed	AM PH - 2030							Peak Hour Factor	0.91									
Intersection Orientation	East-West							Analysis Time Period (hrs)	0.25									
Project Description	Pendleton Traffic Impact Fee																	
Lanes																		
Vehicle Volumes and Adjustments																		
Approach	Eastbound				Westbound				Northbound				Southbound					
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
Priority	1U	1	2	3	4U	4	5	6			7	8	9			10	11	12
Number of Lanes	0	0	1	0	0	0	1	0			0	0	0			0	1	0
Configuration	LT								TR				LR					
Volume (veh/h)	2				172				200				1					
Percent Heavy Vehicles (%)	0												20					
Proportion Time Blocked																		
Percent Grade (%)	0																	
Right Turn Channelized																		
Median Type Storage	Undivided																	
Critical and Follow-up Headways																		
Base Critical Headway (sec)	4.1												7.1					
Critical Headway (sec)	4.10												6.60					
Base Follow-Up Headway (sec)	2.2												3.5					
Follow-Up Headway (sec)	2.20												3.68					
Delay, Queue Length, and Level of Service																		
Flow Rate, v (veh/h)	2												15					
Capacity, c (veh/h)	1360												686					
v/c Ratio	0.00												0.02					
95% Queue Length, Q ₉₅ (veh)	0.0												0.1					
Control Delay (s/veh)	7.7												10.4					
Level of Service (LOS)	A												B					
Approach Delay (s/veh)	0.1												10.4					
Approach LOS													B					



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

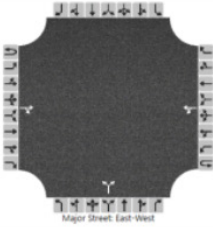
S 700 W at SR 38 – PM Peak Hour

HCS7 Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	BRW							Intersection	S 700 W at SR 38								
Agency/Co.	Traffic Engineering Inc							Jurisdiction									
Date Performed	10/7/2020							East/West Street	SR 38								
Analysis Year	2020							North/South Street	S 700 W								
Time Analyzed	PM PH - 2030							Peak Hour Factor	0.94								
Intersection Orientation	East-West							Analysis Time Period (hrs)	0.25								
Project Description	Pendleton Traffic Impact Fee																
Lanes																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority	1U	1	2	3	4U	4	5	6	7	8	9		10	11	12		
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0		0	1	0		
Configuration	LT								TR				LR				
Volume (veh/h)	10	308					238	10					6			6	
Percent Heavy Vehicles (%)	11												0			0	
Proportion Time Blocked																	
Percent Grade (%)													0				
Right Turn Channelized																	
Median Type Storage	Undivided																
Critical and Follow-up Headways																	
Base Critical Headway (sec)		4.1											7.1		6.2		
Critical Headway (sec)		4.21											6.40		6.20		
Base Follow-Up Headway (sec)		2.2											3.5		3.3		
Follow-Up Headway (sec)		2.30											3.50		3.30		
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)		11													13		
Capacity, c (veh/h)		1250													578		
v/c Ratio		0.01													0.02		
95% Queue Length, Q ₉₅ (veh)		0.0													0.1		
Control Delay (s/veh)		7.9													11.4		
Level of Service (LOS)		A													B		
Approach Delay (s/veh)		0.3												11.4			
Approach LOS		B												B			



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

S 600 W at SR 38 – AM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	S 600 W at SR 38							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/7/2020							East/West Street	SR 38							
Analysis Year	2020							North/South Street	S 600 W							
Time Analyzed	AM PH - 2030							Peak Hour Factor	0.95							
Intersection Orientation	East-West							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6	7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	0	1	0	0	1	0		0	0	0	0
Configuration	TR				LT				LR							
Volume (veh/h)	232				4				15				215			
Percent Heavy Vehicles (%)									14				22			
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)					4.1				7.1				6.2			
Critical Headway (sec)					4.24				6.62				6.20			
Base Follow-Up Headway (sec)					2.2				3.5				3.3			
Follow-Up Headway (sec)					2.33				3.70				3.30			
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)					16				32							
Capacity, c (veh/h)					1250				657							
v/c Ratio					0.01				0.05							
95% Queue Length, Q ₉₅ (veh)					0.0				0.2							
Control Delay (s/veh)					7.9				10.8							
Level of Service (LOS)					A				B							
Approach Delay (s/veh)					0.6				10.8							
Approach LOS									B							



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

S 600 W at SR 38 – PM Peak Hour

HCS7 Two-Way Stop-Control Report																		
General Information								Site Information										
Analyst	BRW							Intersection	S 600 W at SR 38									
Agency/Co.	Traffic Engineering Inc							Jurisdiction										
Date Performed	10/7/2020							East/West Street	SR 38									
Analysis Year	2020							North/South Street	S 600 W									
Time Analyzed	PM PH - 2030							Peak Hour Factor	0.96									
Intersection Orientation	East-West							Analysis Time Period (hrs)	0.25									
Project Description	Pendleton Traffic Impact Fee																	
Lanes																		
Vehicle Volumes and Adjustments																		
Approach	Eastbound				Westbound				Northbound				Southbound					
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
Priority	1U	1	2	3	4U	4	5	6			7	8	9			10	11	12
Number of Lanes	0	0	1	0	0	0	1	0			0	1	0			0	0	0
Configuration				TR				LT					LR					
Volume (veh/h)			359	10			23	274			8		24					
Percent Heavy Vehicles (%)							0				0		0					
Proportion Time Blocked																		
Percent Grade (%)											0							
Right Turn Channelized																		
Median Type Storage							Undivided											
Critical and Follow-up Headways																		
Base Critical Headway (sec)							4.1				7.1		6.2					
Critical Headway (sec)							4.10				6.40		6.20					
Base Follow-Up Headway (sec)							2.2				3.5		3.3					
Follow-Up Headway (sec)							2.20				3.50		3.30					
Delay, Queue Length, and Level of Service																		
Flow Rate, v (veh/h)							24				33							
Capacity, c (veh/h)							1185				570							
v/c Ratio							0.02				0.06							
95% Queue Length, Q ₉₅ (veh)							0.1				0.2							
Control Delay (s/veh)							8.1				11.7							
Level of Service (LOS)							A				B							
Approach Delay (s/veh)							0.8				11.7							
Approach LOS											B							



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

Corporation Dr at SR 38 – AM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	Corporation Dr at SR 38							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/7/2020							East/West Street	SR 38							
Analysis Year	2020							North/South Street	Corporation Drive							
Time Analyzed	AM PH - 2030							Peak Hour Factor	0.97							
Intersection Orientation	East-West							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6	7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	0	1	1	0	0	0		1	0	1	
Configuration	LT				T R				L R							
Volume (veh/h)	7 278				231 17								0 0			
Percent Heavy Vehicles (%)	17												0 0			
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized	No															
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)	4.1												7.1 6.2			
Critical Headway (sec)	4.27												6.40 6.20			
Base Follow-Up Headway (sec)	2.2												3.5 3.3			
Follow-Up Headway (sec)	2.35												3.50 3.30			
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)	7												0 0			
Capacity, c (veh/h)	1227												503 806			
v/c Ratio	0.01												0.00 0.00			
95% Queue Length, Q ₉₅ (veh)	0.0												0.0 0.0			
Control Delay (s/veh)	8.0												12.2 9.5			
Level of Service (LOS)	A												B A			
Approach Delay (s/veh)	0.2															
Approach LOS																



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

Corporation Dr at SR 38 – PM Peak Hour

HCS7 Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	BRW							Intersection	Corporation Dr at SR 38								
Agency/Co.	Traffic Engineering Inc							Jurisdiction									
Date Performed	10/7/2020							East/West Street	SR 38								
Analysis Year	2020							North/South Street	Corporation Drive								
Time Analyzed	PM PH - 2030							Peak Hour Factor	0.91								
Intersection Orientation	East-West							Analysis Time Period (hrs)	0.25								
Project Description	Pendleton Traffic Impact Fee																
Lanes																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority	1U	1	2	3	4U	4	5	6	7	8	9		10	11	12		
Number of Lanes	0	0	1	0	0	0	1	1	0	0	0		1	0	1		
Configuration		LT					T	R						L		R	
Volume (veh/h)		0	366				320	1						20		9	
Percent Heavy Vehicles (%)			0											6		0	
Proportion Time Blocked																	
Percent Grade (%)														0			
Right Turn Channelized							No							No			
Median Type Storage							Undivided										
Critical and Follow-up Headways																	
Base Critical Headway (sec)		4.1												7.1		6.2	
Critical Headway (sec)		4.10												6.46		6.20	
Base Follow-Up Headway (sec)		2.2												3.5		3.3	
Follow-Up Headway (sec)		2.20												3.55		3.30	
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)		0												22		10	
Capacity, c (veh/h)		1217												371		696	
v/c Ratio		0.00												0.06		0.01	
95% Queue Length, Q ₉₅ (veh)		0.0												0.2		0.0	
Control Delay (s/veh)		8.0												15.3		10.2	
Level of Service (LOS)		A												C		B	
Approach Delay (s/veh)		0.0												13.7			
Approach LOS														B			



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

W Fall Creek Dr at W State St – AM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	Fall Creek Dr at State St							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/7/2020							East/West Street	State Street							
Analysis Year	2020							North/South Street	W Fall Creek Drive							
Time Analyzed	AM PH - 2030							Peak Hour Factor	0.92							
Intersection Orientation	East-West							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6	7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	0	1	0	0	1	0		0	0	0	0
Configuration				TR			LT				LR					
Volume (veh/h)			387	99		68	775			67		58				
Percent Heavy Vehicles (%)						0				18		2				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type Storage					Undivided											
Critical and Follow-up Headways																
Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.10				6.58		6.22				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.66		3.32				
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)						74				136						
Capacity, c (veh/h)						1049				181						
v/c Ratio						0.07				0.75						
95% Queue Length, Q ₉₅ (veh)						0.2				4.9						
Control Delay (s/veh)						8.7				68.5						
Level of Service (LOS)						A				F						
Approach Delay (s/veh)							1.8				68.5					
Approach LOS											F					



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

W Fall Creek Dr at W State St – PM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	Fall Creek Dr at State St							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/7/2020							East/West Street	State Street							
Analysis Year	2020							North/South Street	W Fall Creek Drive							
Time Analyzed	PM PH - 2030							Peak Hour Factor	0.95							
Intersection Orientation	East-West							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
<p style="text-align: center; font-size: small;">Major Street: East-West</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6	7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	0	1	0	0	1	0		0	0	0	0
Configuration				TR				LT				LR				
Volume (veh/h)			1075	36			43	590			55				68	
Percent Heavy Vehicles (%)							3				3					
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type Storage							Undivided									
Critical and Follow-up Headways																
Base Critical Headway (sec)							4.1				7.1				6.2	
Critical Headway (sec)							4.13				6.43				6.23	
Base Follow-Up Headway (sec)							2.2				3.5				3.3	
Follow-Up Headway (sec)							2.23				3.53				3.33	
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)							45				129					
Capacity, c (veh/h)							594				116					
v/c Ratio							0.08				1.12					
95% Queue Length, Q ₉₅ (veh)							0.2				7.9					
Control Delay (s/veh)							11.6				191.0					
Level of Service (LOS)							B				F					
Approach Delay (s/veh)							2.0				191.0					
Approach LOS											F					



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

S 525 W at Old SR 132 – AM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	S 525 W at Old SR 132							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/7/2020							East/West Street	Old SR 132							
Analysis Year	2020							North/South Street	S 525 W							
Time Analyzed	AM PH - 2030							Peak Hour Factor	0.77							
Intersection Orientation	East-West							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
<p style="text-align: center; font-size: small;">Major Street: East-West</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR					LTR
Volume (veh/h)	0	65	1		20	84	3			7	0	10		9	1	0
Percent Heavy Vehicles (%)		0				0				33	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type Storage							Undivided									
Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.43	6.50	6.20		7.10	6.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.80	4.00	3.30		3.50	4.00	3.30
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		0				26					22				13	
Capacity, c (veh/h)		1489				1523					801					
v/c Ratio		0.00				0.02					0.03					
95% Queue Length, Q ₉₅ (veh)		0.0				0.1					0.1					
Control Delay (s/veh)		7.4				7.4					9.6					
Level of Service (LOS)		A				A					A					
Approach Delay (s/veh)		0.0				1.5				9.6						
Approach LOS		A				A				A						



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

S 525 W at Old SR 132 – PM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	S 525 W at Old SR 132							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/7/2020							East/West Street	Old SR 132							
Analysis Year	2020							North/South Street	S 525 W							
Time Analyzed	PM PH - 2030							Peak Hour Factor	0.86							
Intersection Orientation	East-West							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6	7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	0	1	0	0	1	0		0	1	0	
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	117	4		2	77	11		0	1	9		3	1	4
Percent Heavy Vehicles (%)		0				50				0	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.60				7.10	6.50	6.20		7.10	6.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.65				3.50	4.00	3.30		3.50	4.00	3.30
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		0				2				12					9	
Capacity, c (veh/h)		1502				1195				881					1385	
v/c Ratio		0.00				0.00				0.01					0.01	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0				0.0					0.0	
Control Delay (s/veh)		7.4				8.0				9.1					7.6	
Level of Service (LOS)		A				A				A					A	
Approach Delay (s/veh)		0.0				0.2				9.1				7.6		
Approach LOS		A				A				A				A		



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

S 425 W at Old SR 132 – AM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	S 425 W at Old SR 132							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/7/2020							East/West Street	Old SR 132							
Analysis Year	2020							North/South Street	S 425 W							
Time Analyzed	AM Peak Hour - 2030							Peak Hour Factor	0.81							
Intersection Orientation	East-West							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6	7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0		0	1	0	
Configuration	LT								TR				LR			
Volume (veh/h)	21 80				90 16								39 50			
Percent Heavy Vehicles (%)	0												10 0			
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)	4.1												7.1 6.2			
Critical Headway (sec)	4.10												6.50 6.20			
Base Follow-Up Headway (sec)	2.2												3.5 3.3			
Follow-Up Headway (sec)	2.20												3.59 3.30			
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)	26												110			
Capacity, c (veh/h)	1467												808			
v/c Ratio	0.02												0.14			
95% Queue Length, Q ₉₅ (veh)	0.1												0.5			
Control Delay (s/veh)	7.5												10.2			
Level of Service (LOS)	A												B			
Approach Delay (s/veh)	1.7												10.2			
Approach LOS													B			



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

S 425 W at Old SR 132 – PM Peak Hour

HCS7 Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	BRW							Intersection	S 425 W at Old SR 132								
Agency/Co.	Traffic Engineering Inc							Jurisdiction									
Date Performed	10/7/2020							East/West Street	Old SR 132								
Analysis Year	2020							North/South Street	S 425 W								
Time Analyzed	PM Peak Hour - 2030							Peak Hour Factor	0.93								
Intersection Orientation	East-West							Analysis Time Period (hrs)	0.25								
Project Description	Pendleton Traffic Impact Fee																
Lanes																	
<p style="text-align: center; font-size: small;">Major Street: East-West</p>																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority	1U	1	2	3	4U	4	5	6	7	8	9		10	11	12		
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0		0	1	0		
Configuration	LT								TR				LR				
Volume (veh/h)	55	125					86	50					39		34		
Percent Heavy Vehicles (%)	0												0				
Proportion Time Blocked																	
Percent Grade (%)													0				
Right Turn Channelized																	
Median Type Storage	Undivided																
Critical and Follow-up Headways																	
Base Critical Headway (sec)	4.1												7.1				
Critical Headway (sec)	4.10												6.40				
Base Follow-Up Headway (sec)	2.2												3.5				
Follow-Up Headway (sec)	2.20												3.50				
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)	59												78				
Capacity, c (veh/h)	1448												725				
v/c Ratio	0.04												0.11				
95% Queue Length, Q ₉₅ (veh)	0.1												0.4				
Control Delay (s/veh)	7.6												10.6				
Level of Service (LOS)	A												B				
Approach Delay (s/veh)	2.6												10.6				
Approach LOS													B				



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

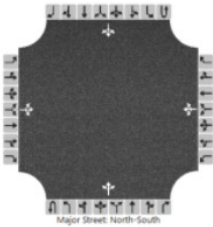
S 425 W at W 600 S – AM Peak Hour

HCS7 Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	BRW							Intersection	S 425 W at W 600 S								
Agency/Co.	Traffic Engineering Inc							Jurisdiction									
Date Performed	10/7/2020							East/West Street	W 600 S								
Analysis Year	2020							North/South Street	S 425 W								
Time Analyzed	AM Peak Hour - 2030							Peak Hour Factor	0.82								
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25								
Project Description	Pendleton Traffic Impact Fee																
Lanes																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		0	12	0		25	36	1		0	0	47		1	4	0	
Percent Heavy Vehicles (%)		0	3	0		4	3	0		0				0			
Proportion Time Blocked																	
Percent Grade (%)		0				0											
Right Turn Channelized																	
Median Type Storage		Undivided															
Critical and Follow-up Headways																	
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1			
Critical Headway (sec)		7.10	6.53	6.20		7.14	6.53	6.20		4.10				4.10			
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2			
Follow-Up Headway (sec)		3.50	4.03	3.30		3.54	4.03	3.30		2.20				2.20			
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)			15				76			0				1			
Capacity, c (veh/h)			824				890			1630				1560			
v/c Ratio			0.02				0.08			0.00				0.00			
95% Queue Length, Q ₉₅ (veh)			0.1				0.3			0.0				0.0			
Control Delay (s/veh)			9.5				9.4			7.2				7.3			
Level of Service (LOS)			A				A			A				A			
Approach Delay (s/veh)		9.5				9.4				0.0				1.5			
Approach LOS		A				A											



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

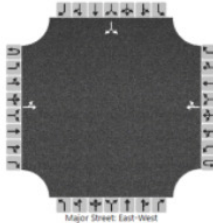
S 425 W at W 600 S – PM Peak Hour

HCS7 Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	BRW							Intersection	S 425 W at W 600 S								
Agency/Co.	Traffic Engineering Inc							Jurisdiction									
Date Performed	10/7/2020							East/West Street	W 600 S								
Analysis Year	2020							North/South Street	S 425 W								
Time Analyzed	PM Peak Hour - 2030							Peak Hour Factor	0.84								
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25								
Project Description	Pendleton Traffic Impact Fee																
Lanes																	
 <p style="text-align: center; font-size: small;">Major Street: North-South</p>																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	10	1	2	3	4	4	5	6	
Number of Lanes		0	1	0		0	1	0		0	1	0		0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		0	41	0		48	24	3		0	8	37		2	2	8	
Percent Heavy Vehicles (%)		0	3	0		5	3	67		3				0			
Proportion Time Blocked																	
Percent Grade (%)		0				0											
Right Turn Channelized																	
Median Type Storage		Undivided															
Critical and Follow-up Headways																	
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1			
Critical Headway (sec)		7.10	6.53	6.20		7.15	6.53	6.87		4.13				4.10			
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2			
Follow-Up Headway (sec)		3.50	4.03	3.30		3.55	4.03	3.90		2.23				2.20			
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)			49			89				0				2			
Capacity, c (veh/h)			822			864				1600				1565			
v/c Ratio			0.06			0.10				0.00				0.00			
95% Queue Length, Q ₉₅ (veh)			0.2			0.3				0.0				0.0			
Control Delay (s/veh)			9.7			9.6				7.2				7.3			
Level of Service (LOS)			A			A				A				A			
Approach Delay (s/veh)		9.7				9.6				0.0				1.2			
Approach LOS		A				A											



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

S 400 W at W 600 S – AM Peak Hour

HCS7 Two-Way Stop-Control Report																	
General Information							Site Information										
Analyst	BRW						Intersection	S 400 W at W 600 S									
Agency/Co.	Traffic Engineering Inc						Jurisdiction										
Date Performed	10/7/2020						East/West Street	W 600 S									
Analysis Year	2020						North/South Street	S 400 W									
Time Analyzed	AM Peak Hour - 2030						Peak Hour Factor	0.84									
Intersection Orientation	East-West						Analysis Time Period (hrs)	0.25									
Project Description	Pendleton Traffic Impact Fee																
Lanes																	
 <p style="text-align: center; font-size: small;">Major Street East-West</p>																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0	
Configuration	LT				TR								LR				
Volume (veh/h)		12	107				54	80						46		6	
Percent Heavy Vehicles (%)		0												7		0	
Proportion Time Blocked																	
Percent Grade (%)	0																
Right Turn Channelized																	
Median Type Storage	Undivided																
Critical and Follow-up Headways																	
Base Critical Headway (sec)		4.1												7.1		6.2	
Critical Headway (sec)		4.10												6.47		6.20	
Base Follow-Up Headway (sec)		2.2												3.5		3.3	
Follow-Up Headway (sec)		2.20												3.56		3.30	
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)		14												62			
Capacity, c (veh/h)		1432												725			
v/c Ratio		0.01												0.09			
95% Queue Length, Q ₉₅ (veh)		0.0												0.3			
Control Delay (s/veh)		7.5												10.4			
Level of Service (LOS)		A												B			
Approach Delay (s/veh)		0.8												10.4			
Approach LOS														B			



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

S 400 W at W 600 S – PM Peak Hour

HCS7 Two-Way Stop-Control Report																		
General Information								Site Information										
Analyst	BRW							Intersection	S 400 W at W 600 S									
Agency/Co.	Traffic Engineering Inc							Jurisdiction										
Date Performed	10/7/2020							East/West Street	W 600 S									
Analysis Year	2020							North/South Street	S 400 W									
Time Analyzed	PM Peak Hour - 2030							Peak Hour Factor	0.89									
Intersection Orientation	East-West							Analysis Time Period (hrs)	0.25									
Project Description	Pendleton Traffic Impact Fee																	
Lanes																		
Vehicle Volumes and Adjustments																		
Approach	Eastbound				Westbound				Northbound				Southbound					
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
Priority	1U	1	2	3	4U	4	5	6			7	8	9			10	11	12
Number of Lanes	0	0	1	0	0	0	1	0			0	0	0			0	1	0
Configuration			LT					TR								LR		
Volume (veh/h)		6	103					95	64							72	12	
Percent Heavy Vehicles (%)		0														15		0
Proportion Time Blocked																		
Percent Grade (%)															0			
Right Turn Channelized																		
Median Type Storage					Undivided													
Critical and Follow-up Headways																		
Base Critical Headway (sec)		4.1													7.1		6.2	
Critical Headway (sec)		4.10													6.55		6.20	
Base Follow-Up Headway (sec)		2.2													3.5		3.3	
Follow-Up Headway (sec)		2.20													3.64		3.30	
Delay, Queue Length, and Level of Service																		
Flow Rate, v (veh/h)		7													94			
Capacity, c (veh/h)		1409													712			
v/c Ratio		0.00													0.13			
95% Queue Length, Q ₉₅ (veh)		0.0													0.5			
Control Delay (s/veh)		7.6													10.8			
Level of Service (LOS)		A													B			
Approach Delay (s/veh)		0.5													10.8			
Approach LOS															B			



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

N Pendleton Ave at W 600 S – AM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	N Pendleton Av at W 600 S							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/7/2020							East/West Street	W 600 S							
Analysis Year	2020							North/South Street	N Pendleton Avenue							
Time Analyzed	AM Peak Hour - 2030							Peak Hour Factor	0.87							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		81		67						107	100				72	34
Percent Heavy Vehicles (%)		3		7						3						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.27						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.36						2.23						
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			170							123						
Capacity, c (veh/h)			639							1459						
v/c Ratio			0.27							0.08						
95% Queue Length, Q ₉₅ (veh)			1.1							0.3						
Control Delay (s/veh)			12.7							7.7						
Level of Service (LOS)			B							A						
Approach Delay (s/veh)	12.7								4.3							
Approach LOS	B								A							



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

N Pendleton Ave at W 600 S – PM Peak Hour

HCS7 Two-Way Stop-Control Report																		
General Information								Site Information										
Analyst	BRW							Intersection	N Pendleton Av at W 600 S									
Agency/Co.	Traffic Engineering Inc							Jurisdiction										
Date Performed	10/7/2020							East/West Street	W 600 S									
Analysis Year	2020							North/South Street	N Pendleton Avenue									
Time Analyzed	PM Peak Hour - 2030							Peak Hour Factor	0.87									
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25									
Project Description	Pendleton Traffic Impact Fee																	
Lanes																		
Vehicle Volumes and Adjustments																		
Approach	Eastbound				Westbound				Northbound				Southbound					
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6		
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0		
Configuration				LR								LT				TR		
Volume (veh/h)			72					126					67	127			135	67
Percent Heavy Vehicles (%)			15					3					4					
Proportion Time Blocked																		
Percent Grade (%)		0																
Right Turn Channelized																		
Median Type Storage		Undivided																
Critical and Follow-up Headways																		
Base Critical Headway (sec)		7.1		6.2									4.1					
Critical Headway (sec)		6.55		6.23									4.14					
Base Follow-Up Headway (sec)		3.5		3.3									2.2					
Follow-Up Headway (sec)		3.64		3.33									2.24					
Delay, Queue Length, and Level of Service																		
Flow Rate, v (veh/h)				228									77					
Capacity, c (veh/h)				662									1324					
v/c Ratio				0.34									0.06					
95% Queue Length, Q ₉₅ (veh)				1.5									0.2					
Control Delay (s/veh)				13.3									7.9					
Level of Service (LOS)				B									A					
Approach Delay (s/veh)		13.3											3.1					
Approach LOS		B											A					



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

SR 67 at N Pendleton Ave – AM Peak Hour

HCS7 Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	BRW							Intersection	SR 67 at N Pendleton								
Agency/Co.	Traffic Engineering Inc							Jurisdiction									
Date Performed	10/12/2020							East/West Street	N Pendleton Avenue								
Analysis Year	2020							North/South Street	SR 67								
Time Analyzed	AM Peak Hour - 2030							Peak Hour Factor	0.91								
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25								
Project Description	Pendleton Traffic Impact Fee																
Lanes																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0		0	2	0		0	2	1	
Configuration			LR								LT	T			T	R	
Volume (veh/h)		203		17						11	600				434	72	
Percent Heavy Vehicles (%)		5		13						10							
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized														No			
Median Type Storage		Undivided															
Critical and Follow-up Headways																	
Base Critical Headway (sec)		7.5		6.9						4.1							
Critical Headway (sec)		6.90		7.16						4.30							
Base Follow-Up Headway (sec)		3.5		3.3						2.2							
Follow-Up Headway (sec)		3.55		3.43						2.30							
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)			242							12							
Capacity, c (veh/h)			313							957							
v/c Ratio			0.77							0.01							
95% Queue Length, Q ₉₅ (veh)			6.1							0.0							
Control Delay (s/veh)			46.6							8.8							
Level of Service (LOS)			E							A							
Approach Delay (s/veh)		46.6								0.2							
Approach LOS		E								A							



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

SR 67 at N Pendleton Ave – PM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	SR 67 at N Pendleton							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/12/2020							East/West Street	N Pendleton Avenue							
Analysis Year	2020							North/South Street	SR 67							
Time Analyzed	PM Peak Hour - 2030							Peak Hour Factor	0.95							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0		0	2	0		0	2	1
Configuration			LR							LT	T				T	R
Volume (veh/h)			174							14	621				715	228
Percent Heavy Vehicles (%)			3								0					
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																No
Median Type Storage		Undivided														
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.5		6.9							4.1					
Critical Headway (sec)		6.86		7.00							4.10					
Base Follow-Up Headway (sec)		3.5		3.3							2.2					
Follow-Up Headway (sec)		3.53		3.35							2.20					
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			206								15					
Capacity, c (veh/h)			213								705					
v/c Ratio			0.97								0.02					
95% Queue Length, Q ₉₅ (veh)			8.4								0.1					
Control Delay (s/veh)			100.8								10.2					
Level of Service (LOS)			F								B					
Approach Delay (s/veh)		100.8								0.4						
Approach LOS		F								B						



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

SR 67 at S 600 W – AM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	SR 67 at S 600 W							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/7/2020							East/West Street	S 600 W							
Analysis Year	2020							North/South Street	SR 67							
Time Analyzed	AM Peak Hour - 2030							Peak Hour Factor	0.95							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	2	0	0	0	2	0
Configuration								LR			T	TR		LT	T	
Volume (veh/h)						35		39			561	11		8	453	
Percent Heavy Vehicles (%)						0		3						0		
Proportion Time Blocked																
Percent Grade (%)							0									
Right Turn Channelized																
Median Type Storage							Undivided									
Critical and Follow-up Headways																
Base Critical Headway (sec)						7.5		6.9						4.1		
Critical Headway (sec)						6.80		6.96						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.50		3.33						2.20		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)						78								8		
Capacity, c (veh/h)						633								985		
v/c Ratio						0.12								0.01		
95% Queue Length, Q ₉₅ (veh)						0.4								0.0		
Control Delay (s/veh)						11.5								8.7		
Level of Service (LOS)						B								A		
Approach Delay (s/veh)						11.5								0.2		
Approach LOS						B								A		



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

SR 67 at S 600 W – PM Peak Hour

HCS7 Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	BRW							Intersection	SR 67 at S 600 W								
Agency/Co.	Traffic Engineering Inc							Jurisdiction									
Date Performed	10/7/2020							East/West Street	S 600 W								
Analysis Year	2020							North/South Street	SR 67								
Time Analyzed	PM Peak Hour - 2030							Peak Hour Factor	0.95								
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25								
Project Description	Pendleton Traffic Impact Fee																
Lanes																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	0		0	1	0	0	0	2	0	0	0	2	0	
Configuration							LR				T	TR			LT	T	
Volume (veh/h)						22		26			612	35			31	706	
Percent Heavy Vehicles (%)						0		4							0		
Proportion Time Blocked																	
Percent Grade (%)							0										
Right Turn Channelized																	
Median Type Storage							Undivided										
Critical and Follow-up Headways																	
Base Critical Headway (sec)						7.5		6.9							4.1		
Critical Headway (sec)						6.80		6.98							4.10		
Base Follow-Up Headway (sec)						3.5		3.3							2.2		
Follow-Up Headway (sec)						3.50		3.34							2.20		
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)							51								33		
Capacity, c (veh/h)							430								921		
v/c Ratio							0.12								0.04		
95% Queue Length, Q ₉₅ (veh)							0.4								0.1		
Control Delay (s/veh)							14.5								9.1		
Level of Service (LOS)							B								A		
Approach Delay (s/veh)							14.5								0.6		
Approach LOS							B										



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

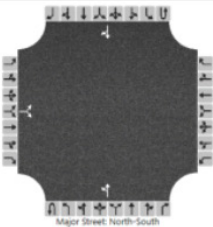
N Pendleton Ave at Blue Spruce Dr – AM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	Pendleton at Blue Spruce							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/7/2020							East/West Street	Blue Spruce Drive							
Analysis Year	2020							North/South Street	N Pendleton Avenue							
Time Analyzed	AM Peak Hour - 2030							Peak Hour Factor	0.94							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0		0	1	0		0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		9		12						7	124				138	8
Percent Heavy Vehicles (%)		0		0						0						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage					Undivided											
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1		6.2							4.1					
Critical Headway (sec)		6.40		6.20							4.10					
Base Follow-Up Headway (sec)		3.5		3.3							2.2					
Follow-Up Headway (sec)		3.50		3.30							2.20					
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)				22							7					
Capacity, c (veh/h)				1576							1437					
v/c Ratio				0.01							0.01					
95% Queue Length, Q ₉₅ (veh)				0.0							0.0					
Control Delay (s/veh)				7.3							7.5					
Level of Service (LOS)				A							A					
Approach Delay (s/veh)	7.3								0.4							
Approach LOS	A															



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

N Pendleton Ave at Blue Spruce Dr – PM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	Pendleton at Blue Spruce							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/7/2020							East/West Street	Blue Spruce Drive							
Analysis Year	2020							North/South Street	N Pendleton Avenue							
Time Analyzed	PM Peak Hour - 2030							Peak Hour Factor	0.87							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0		0	1	0		0	1	0
Configuration			LR								LT				TR	
Volume (veh/h)		3		13						17	172				184	10
Percent Heavy Vehicles (%)		0		0						0						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			18							20						
Capacity, c (veh/h)			1019							1358						
v/c Ratio			0.02							0.01						
95% Queue Length, Q ₉₅ (veh)			0.1							0.0						
Control Delay (s/veh)			8.6							7.7						
Level of Service (LOS)			A							A						
Approach Delay (s/veh)	8.6								0.8							
Approach LOS	A															



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

Main St at Fall Creek Pkwy – AM Peak Hour

HCS7 All-Way Stop Control Report												
General Information						Site Information						
Analyst	BRW					Intersection	Main St at Fall Creek Pkw					
Agency/Co.	Traffic Engineering Inc					Jurisdiction						
Date Performed	10/7/2020					East/West Street	Fall Creek Parkway					
Analysis Year	2020					North/South Street	Main Street					
Analysis Time Period (hrs)	0.25					Peak Hour Factor	0.93					
Time Analyzed	AM Peak Hour - 2030											
Project Description	Pendleton Traffic Impact Fee											
Lanes												
Vehicle Volume and Adjustments												
Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume		65	109	15	49		65		8			
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	TR			LT			LR					
Flow Rate, v (veh/h)	187			69			78					
Percent Heavy Vehicles	2			9			3					
Departure Headway and Service Time												
Initial Departure Headway, hd (s)	3.20			3.20			3.20					
Initial Degree of Utilization, x	0.166			0.061			0.070					
Final Departure Headway, hd (s)	3.82			4.46			4.59					
Final Degree of Utilization, x	0.199			0.085			0.100					
Move-Up Time, m (s)	2.0			2.0			2.0					
Service Time, ts (s)	1.82			2.46			2.59					
Capacity, Delay and Level of Service												
Flow Rate, v (veh/h)	187			69			78					
Capacity	942			807			785					
95% Queue Length, Q ₉₅ (veh)	0.7			0.3			0.3					
Control Delay (s/veh)	7.8			7.9			8.1					
Level of Service, LOS	A			A			A					
Approach Delay (s/veh)	7.8			7.9			8.1					
Approach LOS	A			A			A					
Intersection Delay, s/veh LOS	7.9						A					



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

Main St at Fall Creek Pkwy – PM Peak Hour

HCS7 All-Way Stop Control Report												
General Information						Site Information						
Analyst	BRW					Intersection			Main St at Fall Creek Plow			
Agency/Co.	Traffic Engineering Inc					Jurisdiction						
Date Performed	10/7/2020					East/West Street			Fall Creek Parkway			
Analysis Year	2020					North/South Street			Main Street			
Analysis Time Period (hrs)	0.25					Peak Hour Factor			0.87			
Time Analyzed	PM Peak Hour - 2030											
Project Description	Pendleton Traffic Impact Fee											
Lanes												
Vehicle Volume and Adjustments												
Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume		88	125	14	68		102		12			
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	TR			LT			LR					
Flow Rate, v (veh/h)	245			94			131					
Percent Heavy Vehicles	1			3			3					
Departure Headway and Service Time												
Initial Departure Headway, hd (s)	3.20			3.20			3.20					
Initial Degree of Utilization, x	0.218			0.084			0.116					
Final Departure Headway, hd (s)	4.01			4.57			4.80					
Final Degree of Utilization, x	0.273			0.120			0.175					
Move-Up Time, m (s)	2.0			2.0			2.0					
Service Time, ts (s)	2.01			2.57			2.80					
Capacity, Delay and Level of Service												
Flow Rate, v (veh/h)	245			94			131					
Capacity	897			787			750					
95% Queue Length, Q ₉₅ (veh)	1.1			0.4			0.6					
Control Delay (s/veh)	8.5			8.2			8.8					
Level of Service, LOS	A			A			A					
Approach Delay (s/veh)	8.5			8.2			8.8					
Approach LOS	A			A			A					
Intersection Delay, s/veh LOS	8.5			8.5			8.8			A		



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

N Pendleton Ave at Fall Creek Pkwy – AM Peak Hour

HCS7 Two-Way Stop-Control Report																		
General Information								Site Information										
Analyst	BRW							Intersection	N Pendleton at Fall Creek									
Agency/Co.	Traffic Engineering Inc							Jurisdiction										
Date Performed	10/7/2020							East/West Street	Fall Creek Parkway									
Analysis Year	2020							North/South Street	N Pendleton Avenue									
Time Analyzed	AM Peak Hour - 2030							Peak Hour Factor	0.98									
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25									
Project Description	Pendleton Traffic Impact Fee																	
Lanes																		
Vehicle Volumes and Adjustments																		
Approach	Eastbound				Westbound				Northbound				Southbound					
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6		
Number of Lanes		0	1	0		0	0	0		0	1	0		0	0	1		
Configuration			LR							LT						TR		
Volume (veh/h)		124		22						25	60				86	110		
Percent Heavy Vehicles (%)		2		20						18								
Proportion Time Blocked																		
Percent Grade (%)		0																
Right Turn Channelized																		
Median Type Storage		Undivided																
Critical and Follow-up Headways																		
Base Critical Headway (sec)		7.1		6.2						4.1								
Critical Headway (sec)		6.42		6.40						4.28								
Base Follow-Up Headway (sec)		3.5		3.3						2.2								
Follow-Up Headway (sec)		3.52		3.48						2.36								
Delay, Queue Length, and Level of Service																		
Flow Rate, v (veh/h)				149						26								
Capacity, c (veh/h)				736						1282								
v/c Ratio				0.20						0.02								
95% Queue Length, Q ₉₅ (veh)				0.8						0.1								
Control Delay (s/veh)				11.1						7.9								
Level of Service (LOS)				B						A								
Approach Delay (s/veh)		11.1									2.4							
Approach LOS		B									A							



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

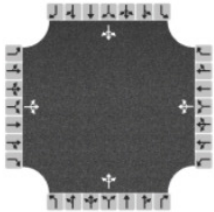
N Pendleton Ave at Fall Creek Pkwy – PM Peak Hour

HCS7 Two-Way Stop-Control Report																		
General Information								Site Information										
Analyst	BRW							Intersection	N Pendleton at Fall Creek									
Agency/Co.	Traffic Engineering Inc							Jurisdiction										
Date Performed	10/7/2020							East/West Street	Fall Creek Parkway									
Analysis Year	2020							North/South Street	N Pendleton Avenue									
Time Analyzed	PM Peak Hour - 2030							Peak Hour Factor	0.87									
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25									
Project Description	Pendleton Traffic Impact Fee																	
Lanes																		
Vehicle Volumes and Adjustments																		
Approach	Eastbound				Westbound				Northbound				Southbound					
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6		
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0		
Configuration			LR							LT						TR		
Volume (veh/h)		168		31						24	95				101	154		
Percent Heavy Vehicles (%)		1		8						3								
Proportion Time Blocked																		
Percent Grade (%)		0																
Right Turn Channelized																		
Median Type Storage		Undivided																
Critical and Follow-up Headways																		
Base Critical Headway (sec)		7.1		6.2						4.1								
Critical Headway (sec)		6.41		6.28						4.13								
Base Follow-Up Headway (sec)		3.5		3.3						2.2								
Follow-Up Headway (sec)		3.51		3.37						2.23								
Delay, Queue Length, and Level of Service																		
Flow Rate, v (veh/h)				229						28								
Capacity, c (veh/h)				643						1263								
v/c Ratio				0.36						0.02								
95% Queue Length, Q ₉₅ (veh)				1.6						0.1								
Control Delay (s/veh)				13.7						7.9								
Level of Service (LOS)				B						A								
Approach Delay (s/veh)		13.7									1.7							
Approach LOS		B									A							



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

N Pendleton Ave at E Water St – AM Peak Hour

HCS7 All-Way Stop Control Report												
General Information						Site Information						
Analyst	BRW					Intersection	N Pendleton at E Water St					
Agency/Co.	Traffic Engineering Inc					Jurisdiction						
Date Performed	10/7/2020					East/West Street	Fall Creek Parkway					
Analysis Year	2020					North/South Street	Main Street					
Analysis Time Period (hrs)	0.25					Peak Hour Factor	0.94					
Time Analyzed	AM Peak Hour - 2030											
Project Description	Pendleton Traffic Impact Fee											
Lanes												
												
Vehicle Volume and Adjustments												
Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	6	13	14	13	33	22	4	130	13	25	208	10
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	35			72			156			259		
Percent Heavy Vehicles	3			5			6			1		
Departure Headway and Service Time												
Initial Departure Headway, hd (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.031			0.064			0.139			0.230		
Final Departure Headway, hd (s)	4.78			4.82			4.51			4.36		
Final Degree of Utilization, x	0.047			0.097			0.196			0.313		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, ts (s)	2.78			2.82			2.51			2.36		
Capacity, Delay and Level of Service												
Flow Rate, v (veh/h)	35			72			156			259		
Capacity	753			747			799			826		
95% Queue Length, Q ₉₅ (veh)	0.1			0.3			0.7			1.3		
Control Delay (s/veh)	8.0			8.3			8.6			9.3		
Level of Service, LOS	A			A			A			A		
Approach Delay (s/veh)	8.0			8.3			8.6			9.3		
Approach LOS	A			A			A			A		
Intersection Delay, s/veh LOS	8.9			8.9			8.9			8.9		



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

N Pendleton Ave at E Water St – PM Peak Hour

HCS7 All-Way Stop Control Report												
General Information				Site Information								
Analyst	BRW			Intersection			N Pendleton at E Water St					
Agency/Co.	Traffic Engineering Inc			Jurisdiction			Fall Creek Parkway					
Date Performed	10/7/2020			East/West Street			Main Street					
Analysis Year	2020			North/South Street			Main Street					
Analysis Time Period (hrs)	0.25			Peak Hour Factor			0.92					
Time Analyzed	PM Peak Hour - 2030											
Project Description	Pendleton Traffic Impact Fee											
Lanes												
Vehicle Volume and Adjustments												
Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	4	31	7	23	39	63	8	232	12	47	203	18
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	46			136			274			291		
Percent Heavy Vehicles	3			3			3			1		
Departure Headway and Service Time												
Initial Departure Headway, hd (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.041			0.121			0.243			0.259		
Final Departure Headway, hd (s)	5.46			5.11			4.78			4.75		
Final Degree of Utilization, x	0.069			0.193			0.364			0.384		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, ts (s)	3.46			3.11			2.78			2.75		
Capacity, Delay and Level of Service												
Flow Rate, v (veh/h)	46			136			274			291		
Capacity	660			704			753			758		
95% Queue Length, Q ₉₅ (veh)	0.2			0.7			1.7			1.8		
Control Delay (s/veh)	8.9			9.3			10.5			10.7		
Level of Service, LOS	A			A			B			B		
Approach Delay (s/veh)	8.9			9.3			10.5			10.7		
Approach LOS	A			A			B			B		
Intersection Delay, s/veh LOS	10.3						B					



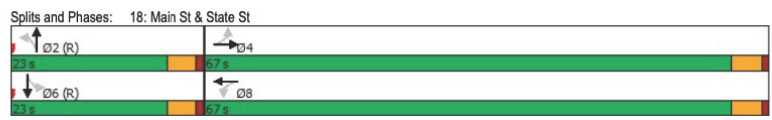
**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

Main St at E State St – AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔			↔			↔			↔		
Traffic Volume (vph)	24	376	26	13	694	23	71	19	6	41	34	54
Future Volume (vph)	24	376	26	13	694	23	71	19	6	41	34	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.996			0.992			0.944	
Flt Protected		0.997			0.999			0.964			0.984	
Satd. Flow (prot)	0	1691	0	0	1531	0	0	1635	0	0	1588	0
Flt Permitted		0.943			0.991			0.677			0.889	
Satd. Flow (perm)	0	1600	0	0	1519	0	0	1148	0	0	1435	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			4			3			36	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		450			460			446			462	
Travel Time (s)		10.2			10.5			10.1			10.5	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Parking (#/hr)					0							
Adj. Flow (vph)	26	404	28	14	746	25	76	20	6	44	37	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	458	0	0	785	0	0	102	0	0	139	0
Turn Type	Perm	NA	Perm	NA	NA	Perm	NA	NA	Perm	NA	NA	NA
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	67.0	67.0		67.0	67.0		23.0	23.0		23.0	23.0	
Total Lost Time (s)	4.5			4.5			4.5			4.5		
Act Effct Green (s)	62.5			62.5			18.5			18.5		
Actuated g/C Ratio	0.69			0.69			0.21			0.21		
v/c Ratio	0.41			0.74			0.43			0.43		
Control Delay	7.1			9.1			36.7			27.6		
Queue Delay	0.0			0.9			0.0			0.0		
Total Delay	7.1			10.0			36.7			27.6		
LOS	A			B			D			C		
Approach Delay	7.1			10.0			36.7			27.6		
Approach LOS	A			B			D			C		
Queue Length 50th (ft)	94			161			49			50		
Queue Length 95th (ft)	146			m228			99			107		
Internal Link Dist (ft)	370			380			366			382		
Turn Bay Length (ft)												
Base Capacity (vph)		1113			1056			238			323	
Starvation Cap Reductn		0			89			0			0	
Spillback Cap Reductn		26			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.42			0.81			0.43			0.43	

Intersection Summary
 Area Type: CBD
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Control Type: Pretimed
 Maximum v/c Ratio: 0.74
 Intersection Signal Delay: 12.5
 Intersection LOS: B
 Intersection Capacity Utilization 66.3%
 ICU Level of Service C
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.



Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario

Main St at E State St – PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	37	964	54	22	504	53	49	62	30	40	45	48
Future Volume (vph)	37	964	54	22	504	53	49	62	30	40	45	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.988			0.971			0.951	
Frt Protected		0.998			0.998			0.983			0.985	
Satd. Flow (prot)	0	1695	0	0	1517	0	0	1632	0	0	1602	0
Frt Permitted		0.968			0.945			0.859			0.885	
Satd. Flow (perm)	0	1644	0	0	1437	0	0	1426	0	0	1439	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			13			14			28	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		450			460			446			462	
Travel Time (s)		10.2			10.5			10.1			10.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Parking (#/hr)					0							
Adj. Flow (vph)	38	994	56	23	520	55	51	64	31	41	46	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1088	0	0	598	0	0	146	0	0	136	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Total Split (s)	67.0	67.0		67.0	67.0		23.0	23.0		23.0	23.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Act Effct Green (s)		62.5			62.5			18.5			18.5	
Actuated g/C Ratio		0.69			0.69			0.21			0.21	
v/c Ratio		0.95			0.60			0.48			0.43	
Control Delay		31.5			6.2			34.5			29.4	
Queue Delay		44.1			0.4			0.0			0.0	
Total Delay		75.6			6.6			34.5			29.4	
LOS		E			A			C			C	
Approach Delay		75.6			6.6			34.5			29.4	
Approach LOS		E			A			C			C	
Queue Length 50th (ft)		477			103			66			53	
Queue Length 95th (ft)		#859			m130			126			109	
Internal Link Dist (ft)		370			380			366			382	
Turn Bay Length (ft)												
Base Capacity (vph)		1143			1001			304			318	
Starvation Cap Reductn		0			102			0			0	
Spillback Cap Reductn		288			0			2			4	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		1.27			0.67			0.48			0.43	

Intersection Summary
 Area Type: CBD
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Control Type: Pretimed
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 48.4
 Intersection LOS: D
 Intersection Capacity Utilization 95.6%
 ICU Level of Service F
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

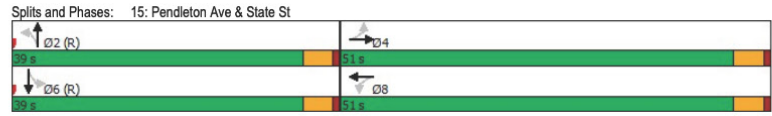
N Pendleton Ave at E State St – AM Peak Hour

	↖	→	↘	↙	←	↖	↙	↑	↘	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	37	308	86	18	551	29	164	77	20	43	124	53
Future Volume (vph)	37	308	86	18	551	29	164	77	20	43	124	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Friction		0.973			0.993			0.990			0.968	
Fit Protected		0.996			0.999			0.970			0.990	
Satd. Flow (prot)	0	1491	0	0	1527	0	0	1478	0	0	1475	0
Fit Permitted		0.914			0.981			0.625			0.895	
Satd. Flow (perm)	0	1369	0	0	1499	0	0	952	0	0	1333	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			4			5			20	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		460			374			464			456	
Travel Time (s)		10.5			8.5			10.5			10.4	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Parking (#/hr)		0			0			0			0	
Adj. Flow (vph)	42	350	98	20	626	33	186	88	23	49	141	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	490	0	0	679	0	0	297	0	0	250	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases		4			8			2			6	
Total Split (s)	51.0	51.0		51.0	51.0		39.0	39.0		39.0	39.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Act Effect Green (s)		46.5			46.5			34.5			34.5	
Actuated g/C Ratio		0.52			0.52			0.38			0.38	
v/c Ratio		0.68			0.88			0.81			0.48	
Control Delay		18.0			33.8			43.6			22.9	
Queue Delay		0.1			0.0			0.0			0.0	
Total Delay		18.2			33.8			43.6			22.9	
LOS		B			C			D			C	
Approach Delay		18.2			33.8			43.6			22.9	
Approach LOS		B			C			D			C	
Queue Length 50th (ft)		202			322			146			96	
Queue Length 95th (ft)		312			#536			#280			162	
Internal Link Dist (ft)		380			294			384			376	
Turn Bay Length (ft)												
Base Capacity (vph)		717			776			368			523	
Starvation Cap Reductn		13			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.70			0.88			0.81			0.48	

Intersection Summary

Area Type: CBD
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Control Type: Pretimed
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 29.4 Intersection LOS: C
 Intersection Capacity Utilization 83.7% ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

N Pendleton Ave at E State St – PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	77	784	187	21	490	55	121	128	50	63	120	46
Future Volume (vph)	77	784	187	21	490	55	121	128	50	63	120	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.976			0.987			0.977			0.973	
Fit Protected		0.996			0.998			0.980			0.986	
Satd. Flow (prot)	0	1496	0	0	1516	0	0	1474	0	0	1476	0
Fit Permitted		0.918			0.946			0.692			0.802	
Satd. Flow (perm)	0	1379	0	0	1437	0	0	1040	0	0	1201	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23			12			11			14	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		460			374			464			456	
Travel Time (s)		10.5			8.5			10.5			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Parking (#/hr)		0			0			0			0	
Adj. Flow (vph)	81	825	197	22	516	58	127	135	53	66	126	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1103	0	0	596	0	0	315	0	0	240	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases		4			8			2			6	
Total Split (s)	61.0	61.0		61.0	61.0		29.0	29.0		29.0	29.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Act Effect Green (s)		56.5			56.5			24.5			24.5	
Actuated g/C Ratio		0.63			0.63			0.27			0.27	
v/c Ratio		1.26			0.66			1.08			0.71	
Control Delay		137.7			14.8			109.4			41.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		137.7			14.8			109.4			41.3	
LOS		F			B			F			D	
Approach Delay		137.7			14.8			109.4			41.3	
Approach LOS		F			B			F			D	
Queue Length 50th (ft)		~786			190			~198			116	
Queue Length 95th (ft)		m#874			307			#363			#224	
Internal Link Dist (ft)		380			294			384			376	
Turn Bay Length (ft)												
Base Capacity (vph)		874			906			291			337	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		1.26			0.66			1.08			0.71	
Intersection Summary												
Area Type: CBD												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 0 (0%), Referenced to phase 2:NBL and 6:SBTL, Start of Green												
Control Type: Pretimed												
Maximum v/c Ratio: 1.26												
Intersection Signal Delay: 91.0												
Intersection Capacity Utilization 130.3%												
ICU Level of Service H												
Intersection LOS: F												
Analysis Period (min) 15												
- Volume exceeds capacity, queue is theoretically infinite.												
Queue shown is maximum after two cycles.												
# 95th percentile volume exceeds capacity, queue may be longer.												
Queue shown is maximum after two cycles.												
m Volume for 95th percentile queue is metered by upstream signal.												
Splits and Phases: 15: Pendleton Ave & State St												



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

East St at E State St – AM Peak Hour

HCS7 Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	BRW							Intersection	East St at E State St								
Agency/Co.	Traffic Engineering Inc							Jurisdiction									
Date Performed	10/8/2020							East/West Street	E State Street								
Analysis Year	2020							North/South Street	East Street								
Time Analyzed	AM Peak Hour - 2030							Peak Hour Factor	0.84								
Intersection Orientation	East-West							Analysis Time Period (hrs)	0.25								
Project Description	Pendleton Traffic Impact Fee																
Lanes																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		0	392	25		24	635	2		7	7	18		6	6	9	
Percent Heavy Vehicles (%)		3				3				0	0	6		20	0	13	
Proportion Time Blocked																	
Percent Grade (%)										0				0			
Right Turn Channelized																	
Median Type Storage						Undivided											
Critical and Follow-up Headways																	
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2	
Critical Headway (sec)		4.13				4.13				7.10	6.50	6.26		7.30	6.50	6.33	
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3	
Follow-Up Headway (sec)		2.23				2.23				3.50	4.00	3.35		3.68	4.00	3.42	
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)		0				29				38				25			
Capacity, c (veh/h)		848				1062				242				180			
v/c Ratio		0.00				0.03				0.16				0.14			
95% Queue Length, Q ₉₅ (veh)		0.0				0.1				0.5				0.5			
Control Delay (s/veh)		9.2				8.5				22.6				28.1			
Level of Service (LOS)		A				A				C				D			
Approach Delay (s/veh)		0.0				0.7				22.6				28.1			
Approach LOS										C				D			



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

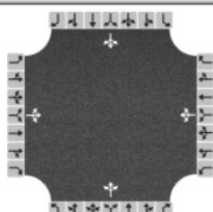
East St at E State St – PM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	East St at E State St							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/8/2020							East/West Street	E State Street							
Analysis Year	2020							North/South Street	East Street							
Time Analyzed	PM Peak Hour - 2030							Peak Hour Factor	0.93							
Intersection Orientation	East-West							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
<p style="text-align: center; font-size: small;">Major Street: East-West</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0	0	1	0		0	1	0	
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	892	11		10	595	9		7	2	34		4	2	8
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type Storage				Undivided												
Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		0				11				46				15		
Capacity, c (veh/h)		932				706				193				144		
v/c Ratio		0.00				0.02				0.24				0.10		
95% Queue Length, Q ₉₅ (veh)		0.0				0.0				0.9				0.3		
Control Delay (s/veh)		8.9				10.2				29.5				33.0		
Level of Service (LOS)		A				B				D				D		
Approach Delay (s/veh)		0.0				0.4				29.5				33.0		
Approach LOS		A				B				D				D		



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

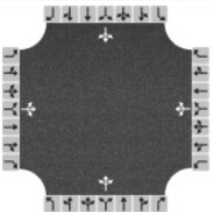
Main St at W High St – AM Peak Hour

HCS7 All-Way Stop Control Report												
General Information						Site Information						
Analyst	BRW					Intersection	Main St at W High St					
Agency/Co.	Traffic Engineering Inc					Jurisdiction						
Date Performed	10/8/2020					East/West Street	W High Street					
Analysis Year	2020					North/South Street	Main Street					
Analysis Time Period (hrs)	0.25					Peak Hour Factor	0.93					
Time Analyzed	AM Peak Hour - 2030											
Project Description	Pendleton Traffic Impact Fee											
Lanes												
												
Vehicle Volume and Adjustments												
Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	2	7	3	0	4	5	3	76	3	7	56	4
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	13			10			88			72		
Percent Heavy Vehicles	3			3			3			3		
Departure Headway and Service Time												
Initial Departure Headway, hd (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.011			0.009			0.078			0.064		
Final Departure Headway, hd (s)	4.19			3.97			4.05			4.07		
Final Degree of Utilization, x	0.015			0.011			0.099			0.081		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, ts (s)	2.19			1.97			2.05			2.07		
Capacity, Delay and Level of Service												
Flow Rate, v (veh/h)	13			10			88			72		
Capacity	860			906			888			885		
95% Queue Length, Q ₉₅ (veh)	0.0			0.0			0.3			0.3		
Control Delay (s/veh)	7.2			7.0			7.5			7.4		
Level of Service, LOS	A			A			A			A		
Approach Delay (s/veh)	7.2			7.0			7.5			7.4		
Approach LOS	A			A			A			A		
Intersection Delay, s/veh LOS	7.4			7.4			7.4			7.4		



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

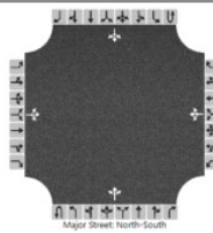
Main St at W High St – PM Peak Hour

HCS7 All-Way Stop Control Report												
General Information						Site Information						
Analyst	BRW					Intersection	Main St at W High St					
Agency/Co.	Traffic Engineering Inc					Jurisdiction						
Date Performed	10/8/2020					East/West Street	W High Street					
Analysis Year	2020					North/South Street	Main Street					
Analysis Time Period (hrs)	0.25					Peak Hour Factor	0.91					
Time Analyzed	PM Peak Hour - 2030											
Project Description	Pendleton Traffic Impact Fee											
Lanes												
												
Vehicle Volume and Adjustments												
Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	11	26	12	7	9	14	2	75	6	17	74	9
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	54			33			91			110		
Percent Heavy Vehicles	3			3			3			3		
Departure Headway and Service Time												
Initial Departure Headway, hd (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.048			0.029			0.081			0.098		
Final Departure Headway, hd (s)	4.32			4.22			4.22			4.22		
Final Degree of Utilization, x	0.065			0.039			0.107			0.129		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, ts (s)	2.32			2.22			2.22			2.22		
Capacity, Delay and Level of Service												
Flow Rate, v (veh/h)	54			33			91			110		
Capacity	832			854			853			853		
95% Queue Length, Q ₉₅ (veh)	0.2			0.1			0.4			0.4		
Control Delay (s/veh)	7.6			7.4			7.7			7.8		
Level of Service, LOS	A			A			A			A		
Approach Delay (s/veh)	7.6			7.4			7.7			7.8		
Approach LOS	A			A			A			A		
Intersection Delay, s/veh LOS	7.7						A					



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

S Pendleton Ave at W High St – AM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	Pendleton Ave at High St							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/8/2020							East/West Street	W High Street							
Analysis Year	2020							North/South Street	S Pendleton Avenue							
Time Analyzed	AM Peak Hour - 2030							Peak Hour Factor	0.79							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
 <p style="text-align: center; font-size: small;">Major Street North-South</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes	0	1	0		0	1	0		0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)	6	8	6		6	8	18		3	265	2		4	195	0	
Percent Heavy Vehicles (%)	3	3	3		3	3	3		3				3			
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			25				41			4				5		
Capacity, c (veh/h)			464				529			1313				1216		
v/c Ratio			0.05				0.08			0.00				0.00		
95% Queue Length, Q ₉₅ (veh)			0.2				0.2			0.0				0.0		
Control Delay (s/veh)			13.2				12.4			7.7				8.0		
Level of Service (LOS)			B				B			A				A		
Approach Delay (s/veh)		13.2				12.4				0.1				0.2		
Approach LOS		B				B				A				A		



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

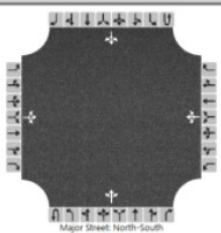
S Pendleton Ave at W High St – PM Peak Hour

HCS7 Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	BRW							Intersection	Pendleton Ave at High St								
Agency/Co.	Traffic Engineering Inc							Jurisdiction									
Date Performed	10/8/2020							East/West Street	W High Street								
Analysis Year	2020							North/South Street	S Pendleton Avenue								
Time Analyzed	PM Peak Hour - 2030							Peak Hour Factor	0.85								
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25								
Project Description	Pendleton Traffic Impact Fee																
Lanes																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0	
Configuration				LTR				LTR				LTR				LTR	
Volume (veh/h)		25	13	9		13	10	29		7	272	12		11	277	0	
Percent Heavy Vehicles (%)		3	3	3		3	3	4		3				5			
Proportion Time Blocked																	
Percent Grade (%)		0				0											
Right Turn Channelized																	
Median Type Storage		Undivided															
Critical and Follow-up Headways																	
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1			
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.24		4.13				4.15			
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2			
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.34		2.23				2.25			
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)			55				61			8				13			
Capacity, c (veh/h)			363				478			1228				1209			
v/c Ratio			0.15				0.13			0.01				0.01			
95% Queue Length, Q ₉₅ (veh)			0.5				0.4			0.0				0.0			
Control Delay (s/veh)			16.7				13.6			8.0				8.0			
Level of Service (LOS)			C				B			A				A			
Approach Delay (s/veh)		16.7				13.6				8.0				8.0			
Approach LOS		C				B				A				A			



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

S Pendleton Ave at Madison Ave – AM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	Pendleton at Madison							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/8/2020							East/West Street	Madison Avenue							
Analysis Year	2020							North/South Street	S Pendleton Avenue							
Time Analyzed	AM Peak Hour - 2030							Peak Hour Factor	0.79							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes	0	1	0	0	0	1	0	0	0	0	1	0	0	0	1	0
Configuration							LTR								LTR	
Volume (veh/h)		1	14	1		12	14	149		1	125	11			67	156
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0					10	
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1					4.1	
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.20		4.10					4.20	
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2					2.2	
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.20					2.29	
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			20				222			1					85	
Capacity, c (veh/h)			419				759			1387					1358	
v/c Ratio			0.05				0.29			0.00					0.06	
95% Queue Length, Q ₉₅ (veh)			0.2				1.2			0.0					0.2	
Control Delay (s/veh)			14.0				11.7			7.6					7.8	
Level of Service (LOS)			B				B			A					A	
Approach Delay (s/veh)	14.0				11.7				0.1				2.7			
Approach LOS	B				B											



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

S Pendleton Ave at Madison Ave – PM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	Pendleton at Madison							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/8/2020							East/West Street	Madison Avenue							
Analysis Year	2020							North/South Street	S Pendleton Avenue							
Time Analyzed	PM Peak Hour - 2030							Peak Hour Factor	0.77							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	3	1		11	23	122		2	174	8		132	166	0
Percent Heavy Vehicles (%)		0	0	0		0	5	0		0				10		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized																
Median Type Storage		Undivided														
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.55	6.20		4.10				4.20		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.05	3.30		2.20				2.29		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			5				203			3				171		
Capacity, c (veh/h)			326				563			1366				1285		
v/c Ratio			0.02				0.36			0.00				0.13		
95% Queue Length, Q ₉₅ (veh)			0.0				1.6			0.0				0.5		
Control Delay (s/veh)			16.2				14.9			7.6				8.2		
Level of Service (LOS)			C				B			A				A		
Approach Delay (s/veh)		16.2				14.9				0.1				4.3		
Approach LOS		C				B										



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

Broadway St at Madison Ave – AM Peak Hour

HCS7 All-Way Stop Control Report												
General Information						Site Information						
Analyst	BRW					Intersection	Broadway and Madison					
Agency/Co.	Traffic Engineering Inc					Jurisdiction						
Date Performed	10/8/2020					East/West Street	Madison Avenue					
Analysis Year	2020					North/South Street	Broadway Street					
Analysis Time Period (hrs)	0.25					Peak Hour Factor	0.53					
Time Analyzed	AM Peak Hour - 2030											
Project Description	Pendleton Traffic Impact Fee											
Lanes												
Vehicle Volume and Adjustments												
Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	7	12	33	4	18	20	95	50	2	14	69	24
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	98			79			277			202		
Percent Heavy Vehicles	6			3			9			3		
Departure Headway and Service Time												
Initial Departure Headway, hd (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.087			0.070			0.247			0.179		
Final Departure Headway, hd (s)	4.93			5.00			4.88			4.65		
Final Degree of Utilization, x	0.134			0.110			0.376			0.261		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, ts (s)	2.93			3.00			2.88			2.65		
Capacity, Delay and Level of Service												
Flow Rate, v (veh/h)	98			79			277			202		
Capacity	730			720			738			774		
95% Queue Length, Q ₉₅ (veh)	0.5			0.4			1.8			1.0		
Control Delay (s/veh)	8.7			8.6			10.8			9.3		
Level of Service, LOS	A			A			B			A		
Approach Delay (s/veh)	8.7			8.6			10.8			9.3		
Approach LOS	A			A			B			A		
Intersection Delay, s/veh LOS	9.8						A					



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

Broadway St at Madison Ave – PM Peak Hour

HCS7 All-Way Stop Control Report												
General Information						Site Information						
Analyst	BRW					Intersection	Broadway and Madison					
Agency/Co.	Traffic Engineering Inc					Jurisdiction						
Date Performed	10/8/2020					East/West Street	Madison Avenue					
Analysis Year	2020					North/South Street	Broadway Street					
Analysis Time Period (hrs)	0.25					Peak Hour Factor	0.74					
Time Analyzed	PM Peak Hour - 2030											
Project Description	Pendleton Traffic Impact Fee											
Lanes												
Vehicle Volume and Adjustments												
Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	4	15	113	8	18	10	66	35	1	23	47	23
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			LTR		
Flow Rate, v (veh/h)	178			49			138			126		
Percent Heavy Vehicles	3			3			9			3		
Departure Headway and Service Time												
Initial Departure Headway, hd (s)	3.20			3.20			3.20			3.20		
Initial Degree of Utilization, x	0.159			0.043			0.123			0.112		
Final Departure Headway, hd (s)	4.15			4.68			4.84			4.54		
Final Degree of Utilization, x	0.205			0.063			0.185			0.158		
Move-Up Time, m (s)	2.0			2.0			2.0			2.0		
Service Time, ts (s)	2.15			2.68			2.84			2.54		
Capacity, Delay and Level of Service												
Flow Rate, v (veh/h)	178			49			138			126		
Capacity	868			770			744			793		
95% Queue Length, Q ₉₅ (veh)	0.8			0.2			0.7			0.6		
Control Delay (s/veh)	8.2			8.0			8.9			8.4		
Level of Service, LOS	A			A			A			A		
Approach Delay (s/veh)	8.2			8.0			8.9			8.4		
Approach LOS	A			A			A			A		
Intersection Delay, s/veh LOS	8.4						A					



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

S Pendleton Ave at Old Indianapolis Rd – AM Peak Hour

HCS7 Two-Way Stop-Control Report																		
General Information								Site Information										
Analyst	BRW							Intersection	Pendleton at Old Indianap									
Agency/Co.	Traffic Engineering Inc							Jurisdiction										
Date Performed	10/12/2020							East/West Street	Old Indianapolis Road									
Analysis Year	2020							North/South Street	S Pendleton Avenue									
Time Analyzed	AM Peak Hour - 2030							Peak Hour Factor	0.91									
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25									
Project Description	Pendleton Traffic Impact Fee																	
Lanes																		
<p style="text-align: center; font-size: small;">Major Street North-South</p>																		
Vehicle Volumes and Adjustments																		
Approach	Eastbound				Westbound				Northbound				Southbound					
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6		
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0		
Configuration			LR							LT						TR		
Volume (veh/h)		23		0						6	158				191	42		
Percent Heavy Vehicles (%)		5		0						0								
Proportion Time Blocked																		
Percent Grade (%)		0																
Right Turn Channelized																		
Median Type Storage		Undivided																
Critical and Follow-up Headways																		
Base Critical Headway (sec)		7.1		6.2						4.1								
Critical Headway (sec)		6.45		6.20						4.10								
Base Follow-Up Headway (sec)		3.5		3.3						2.2								
Follow-Up Headway (sec)		3.55		3.30						2.20								
Delay, Queue Length, and Level of Service																		
Flow Rate, v (veh/h)			25							7								
Capacity, c (veh/h)			581							1321								
v/c Ratio			0.04							0.00								
95% Queue Length, Q ₉₅ (veh)			0.1							0.0								
Control Delay (s/veh)			11.5							7.7								
Level of Service (LOS)			B							A								
Approach Delay (s/veh)		11.5									0.3							
Approach LOS		B									A							



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

S Pendleton Ave at Old Indianapolis Rd – PM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	Pendleton at Old Indianap							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/12/2020							East/West Street	Old Indianapolis Road							
Analysis Year	2020							North/South Street	S Pendleton Avenue							
Time Analyzed	PM Peak Hour - 2030							Peak Hour Factor	0.90							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT					TR	
Volume (veh/h)		47		0						1	217				187	80
Percent Heavy Vehicles (%)		3		0						100						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type Storage		Undivided														
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.20						5.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.30						3.10						
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			52							1						
Capacity, c (veh/h)			531							864						
v/c Ratio			0.10							0.00						
95% Queue Length, Q ₉₅ (veh)			0.3							0.0						
Control Delay (s/veh)			12.5							9.2						
Level of Service (LOS)			B							A						
Approach Delay (s/veh)		12.5								0.1						
Approach LOS		B								A						



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

SR 9 at SR 67 – AM Peak Hour

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↑	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	53	304	3	137	423	13	44	64	166	18	68	98
Future Volume (vph)	53	304	3	137	423	13	44	64	166	18	68	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	400	0	310	0	0	0	0	360	0	0	0	0
Storage Lanes	1	1	1	0	0	0	0	1	0	0	0	0
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850		0.996			0.850		0.928			
Flt Protected	0.950		0.950				0.980		0.995			
Satd. Flow (prot)	1805	1900	1615	1805	1892	0	0	1862	1615	0	1754	0
Flt Permitted	0.349		0.325				0.847		0.974			
Satd. Flow (perm)	663	1900	1615	618	1892	0	0	1609	1615	0	1717	0
Right Turn on Red		Yes		Yes		Yes		Yes	Yes		Yes	
Satd. Flow (RTOR)		65		2				169	59			
Link Speed (mph)	30		30				30		30			
Link Distance (ft)	846		955				805		889			
Travel Time (s)	19.2		21.7				18.3		20.2			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	54	310	3	140	432	13	45	65	169	18	69	100
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	310	3	140	445	0	0	110	169	0	187	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8			2		6		
Permitted Phases	4		4	8			2		2	6		
Total Split (s)	12.0	50.0	50.0	16.0	54.0		34.0	34.0	34.0	34.0		
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5		
Act Effct Green (s)	25.3	18.6	18.6	30.7	25.3		29.9	29.9	29.9	29.9		
Actuated g/C Ratio	0.36	0.26	0.26	0.43	0.36		0.42	0.42	0.42	0.42		
v/c Ratio	0.16	0.62	0.01	0.34	0.66		0.16	0.22	0.25	0.25		
Control Delay	11.5	28.6	0.0	13.3	25.4		16.1	3.9	11.8	11.8		
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total Delay	11.5	28.6	0.0	13.3	25.4		16.1	3.9	11.8	11.8		
LOS	B	C	A	B	C		B	A	B	B		
Approach Delay		25.8		22.5			8.7		11.8			
Approach LOS		C		C			A		B			
Queue Length 50th (ft)	13	117	0	34	176		29	0	34			
Queue Length 95th (ft)	29	198	0	63	276		75	38	92			
Internal Link Dist (ft)		766		875			725		809			
Turn Bay Length (ft)	400		310				360					
Base Capacity (vph)	367	1236	1073	471	1339		678	778	758			
Starvation Cap Reductn	0	0	0	0	0		0	0	0			
Spillback Cap Reductn	0	0	0	0	0		0	0	0			
Storage Cap Reductn	0	0	0	0	0		0	0	0			
Reduced v/c Ratio	0.15	0.25	0.00	0.30	0.33		0.16	0.22	0.25			
Intersection Summary												
Area Type:	Other											
Cycle Length:	100											
Actuated Cycle Length:	70.8											
Control Type:	Actuated-Uncoordinated											
Maximum v/c Ratio:	0.66											
Intersection Signal Delay:	19.2						Intersection LOS: B					
Intersection Capacity Utilization:	55.7%						ICU Level of Service B					
Analysis Period (min):	15											
Splits and Phases: 3: SR 9/Pendleton Ave & SR 67												



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

SR 9 at SR 67 – PM Peak Hour

	↖	→	↘	↙	←	↗	↖	↗	↘	↙	↘	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↙	↖	↗	↘	↙	↖	↗	↘	↙
Traffic Volume (vph)	118	612	11	180	393	20	37	86	224	24	60	95
Future Volume (vph)	118	612	11	180	393	20	37	86	224	24	60	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	400	0	310	0	0	0	360	0	0	0	0	0
Storage Lanes	1	1	1	0	0	0	1	0	0	0	0	0
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850		0.993			0.850		0.929			
Flt Protected	0.950		0.950				0.985		0.993			
Satd. Flow (prot)	1805	1900	1615	1805	1887	0	0	1872	1615	0	1753	0
Flt Permitted	0.443		0.139				0.875		0.954			
Satd. Flow (perm)	842	1900	1615	264	1887	0	0	1662	1615	0	1684	0
Right Turn on Red		Yes		Yes		Yes		Yes		Yes		Yes
Satd. Flow (RTOR)		115		4				233		52		
Link Speed (mph)	30		30		30		30		30		30	
Link Distance (ft)	846		955		805		889		889		889	
Travel Time (s)	19.2		21.7		18.3		20.2		20.2		20.2	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	123	638	11	188	409	21	39	90	233	25	63	99
Shared Lane Traffic (%)												
Lane Group Flow (vph)	123	638	11	188	430	0	0	129	233	0	187	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4		4	8			2		2	6		
Total Split (s)	11.0	57.0	57.0	16.0	62.0		27.0	27.0	27.0	27.0	27.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Act Effct Green (s)	38.1	31.5	31.5	44.1	36.7		23.0	23.0	23.0	23.0	23.0	
Actuated g/C Ratio	0.49	0.41	0.41	0.57	0.47		0.30	0.30	0.30	0.30	0.30	
v/c Ratio	0.25	0.83	0.02	0.57	0.48		0.26	0.36	0.35			
Control Delay	8.2	30.0	0.0	15.0	15.8		26.2	5.9	20.2			
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0			
Total Delay	8.2	30.0	0.0	15.0	15.8		26.2	5.9	20.2			
LOS	A	C	A	B	B		C	A	C			
Approach Delay	26.1		15.6		13.1		20.2					
Approach LOS	C		B		B		C					
Queue Length 50th (ft)	23	261	0	37	140		47	0	49			
Queue Length 95th (ft)	42	403	0	75	209		117	58	132			
Internal Link Dist (ft)		766		875			725		809			
Turn Bay Length (ft)	400		310		360							
Base Capacity (vph)	497	1315	1153	388	1431		493	643	536			
Starvation Cap Reductn	0	0	0	0	0		0	0	0			
Spillback Cap Reductn	0	0	0	0	0		0	0	0			
Storage Cap Reductn	0	0	0	0	0		0	0	0			
Reduced v/c Ratio	0.25	0.49	0.01	0.48	0.30		0.26	0.36	0.35			
Intersection Summary												
Area Type:	Other											
Cycle Length:	100											
Actuated Cycle Length:	77.4											
Control Type:	Actuated-Uncoordinated											
Maximum v/c Ratio:	0.83											
Intersection Signal Delay:	19.8						Intersection LOS: B					
Intersection Capacity Utilization:	70.4%						ICU Level of Service C					
Analysis Period (min):	15											
Splits and Phases: 3: SR 9/Pendleton Ave & SR 67												



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

Broadway St at SR 67 – AM Peak Hour

HCS7 Two-Way Stop-Control Report																			
General Information								Site Information											
Analyst	BRW							Intersection	Broadway St at SR 67										
Agency/Co.	Traffic Engineering Inc							Jurisdiction											
Date Performed	10/8/2020							East/West Street	SR 67										
Analysis Year	2020							North/South Street	Broadway Street										
Time Analyzed	AM Peak Hour - 2030							Peak Hour Factor	0.90										
Intersection Orientation	East-West							Analysis Time Period (hrs)	0.25										
Project Description	Pendleton Traffic Impact Fee																		
Lanes																			
<p style="text-align: center; font-size: small;">Major Street: East-West</p>																			
Vehicle Volumes and Adjustments																			
Approach	Eastbound				Westbound				Northbound				Southbound						
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R			
Priority	1U	1	2	3	4U	4	5	6			7	8	9			10	11	12	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0			0	1	0			
Configuration	LT								TR				LR						
Volume (veh/h)		102	532				632	1							21		42		
Percent Heavy Vehicles (%)		3													3		3		
Proportion Time Blocked																			
Percent Grade (%)	0																		
Right Turn Channelized																			
Median Type Storage	Undivided																		
Critical and Follow-up Headways																			
Base Critical Headway (sec)	4.1												7.1						
Critical Headway (sec)	4.13												6.43						
Base Follow-Up Headway (sec)	2.2												3.5						
Follow-Up Headway (sec)	2.23												3.53						
Delay, Queue Length, and Level of Service																			
Flow Rate, v (veh/h)	113												70						
Capacity, c (veh/h)	890												316						
v/c Ratio	0.13												0.22						
95% Queue Length, Q ₉₅ (veh)	0.4												0.8						
Control Delay (s/veh)	9.6												19.6						
Level of Service (LOS)	A												C						
Approach Delay (s/veh)	3.1												19.6						
Approach LOS													C						



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

Broadway St at SR 67 – PM Peak Hour

HCS7 Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	BRW							Intersection	Broadway St at SR 67								
Agency/Co.	Traffic Engineering Inc							Jurisdiction									
Date Performed	10/8/2020							East/West Street	SR 67								
Analysis Year	2020							North/South Street	Broadway Street								
Time Analyzed	PM Peak Hour - 2030							Peak Hour Factor	0.93								
Intersection Orientation	East-West							Analysis Time Period (hrs)	0.25								
Project Description	Pendleton Traffic Impact Fee																
Lanes																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority	1U	1	2	3	4U	4	5	6			7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0			0	0	0		0	1	0
Configuration			LT					TR								LR	
Volume (veh/h)		77	858				635	13						10		124	
Percent Heavy Vehicles (%)		3												3		3	
Proportion Time Blocked																	
Percent Grade (%)														0			
Right Turn Channelized																	
Median Type Storage					Undivided												
Critical and Follow-up Headways																	
Base Critical Headway (sec)		4.1												7.1		6.2	
Critical Headway (sec)		4.13												6.43		6.23	
Base Follow-Up Headway (sec)		2.2												3.5		3.3	
Follow-Up Headway (sec)		2.23												3.53		3.33	
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)		83												144			
Capacity, c (veh/h)		895												400			
v/c Ratio		0.09												0.36			
95% Queue Length, Q ₉₅ (veh)		0.3												1.6			
Control Delay (s/veh)		9.4												19.0			
Level of Service (LOS)		A												C			
Approach Delay (s/veh)		2.4												19.0			
Approach LOS		C												C			



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

SR 67 at Madison Ave – AM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	SR 67 at Madison Ave							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/8/2020							East/West Street	Madison Avenue							
Analysis Year	2020							North/South Street	SR 67							
Time Analyzed	AM Peak Hour - 2030							Peak Hour Factor	0.81							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1		0	0	1		1	1	0
Configuration						L		R			T	R			LT	
Volume (veh/h)						25		157			525	85			224	592
Percent Heavy Vehicles (%)						0		3							3	
Proportion Time Blocked																
Percent Grade (%)							0									
Right Turn Channelized							No				No					
Median Type Storage							Undivided									
Critical and Follow-up Headways																
Base Critical Headway (sec)						7.1		6.2							4.1	
Critical Headway (sec)						6.40		6.23							4.13	
Base Follow-Up Headway (sec)						3.5		3.3							2.2	
Follow-Up Headway (sec)						3.50		3.33							2.23	
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)						31		194							277	
Capacity, c (veh/h)						33		469							852	
v/c Ratio						0.93		0.41							0.32	
95% Queue Length, Q ₉₅ (veh)						3.3		2.0							1.4	
Control Delay (s/veh)						308.8		18.0							11.2	
Level of Service (LOS)						F		C							B	
Approach Delay (s/veh)							57.9								7.5	
Approach LOS							F									



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

SR 67 at Madison Ave – PM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	SR 67 at Madison Ave							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/8/2020							East/West Street	Madison Avenue							
Analysis Year	2020							North/South Street	SR 67							
Time Analyzed	PM Peak Hour - 2030							Peak Hour Factor	0.97							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
<p style="text-align: center; font-size: small;">Major Street: North-South</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	1	1	0	0	1	0
Configuration						L		R			T	R			LT	
Volume (veh/h)						31		115			812	109			201	690
Percent Heavy Vehicles (%)						3		3							1	
Proportion Time Blocked																
Percent Grade (%)							0									
Right Turn Channelized							No				No					
Median Type Storage							Undivided									
Critical and Follow-up Headways																
Base Critical Headway (sec)						7.1		6.2							4.1	
Critical Headway (sec)						6.43		6.23							4.11	
Base Follow-Up Headway (sec)						3.5		3.3							2.2	
Follow-Up Headway (sec)						3.53		3.33							2.21	
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)						32		119							207	
Capacity, c (veh/h)						37		365							727	
v/c Ratio						0.88		0.32							0.28	
95% Queue Length, Q ₉₅ (veh)						3.2		1.4							1.2	
Control Delay (s/veh)						274.7		19.5							11.9	
Level of Service (LOS)						F		C							B	
Approach Delay (s/veh)							73.7								7.0	
Approach LOS							F									



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

SR 67 at SR 38 – AM Peak Hour

	↖	→	↘	↙	←	↗	↖	↗	↘	↙	↘	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖
Traffic Volume (vph)	136	209	115	188	317	70	130	459	99	105	516	203
Future Volume (vph)	136	209	115	188	317	70	130	459	99	105	516	203
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	270		0	130		310	280		280	300		400
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.947				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1799	0	1805	1900	1615	1805	1900	1615	1805	1900	1615
Flt Permitted	0.314			0.149			0.158			0.248		
Satd. Flow (perm)	597	1799	0	283	1900	1615	300	1900	1615	471	1900	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26				115			164			239
Link Speed (mph)	30			30			30			30		30
Link Distance (ft)	831			973			623			864		864
Travel Time (s)	18.9			22.1			14.2			19.6		19.6
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	160	246	135	221	373	82	153	540	116	124	607	239
Shared Lane Traffic (%)												
Lane Group Flow (vph)	160	381	0	221	373	82	153	540	116	124	607	239
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Total Split (s)	11.4	28.0		17.0	33.6	33.6	11.0	45.4	45.4	9.6	44.0	44.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Act Effect Green (s)	29.3	22.4		38.7	27.5	27.5	48.8	42.1	42.1	46.3	40.8	40.8
Actuated g/C Ratio	0.29	0.22		0.39	0.28	0.28	0.49	0.42	0.42	0.46	0.41	0.41
v/c Ratio	0.62	0.90		0.76	0.71	0.16	0.62	0.68	0.15	0.43	0.78	0.30
Control Delay	33.2	60.6		39.2	40.9	2.9	25.7	29.0	1.5	18.5	35.0	3.7
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.2	60.6		39.2	40.9	2.9	25.7	29.0	1.5	18.5	35.0	3.7
LOS	C	E		D	D	A	C	C	A	B	C	A
Approach Delay		52.5			35.7			24.5				25.1
Approach LOS		D			D			C				C
Queue Length 50th (ft)	65	219		94	209	0	51	278	0	40	338	0
Queue Length 95th (ft)	104	#343		#159	289	14	81	368	9	68	442	38
Internal Link Dist (ft)		751			893			543			784	
Turn Bay Length (ft)	270			130		310	280		280	300		400
Base Capacity (vph)	258	442		300	552	551	247	800	775	290	775	800
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.86		0.74	0.68	0.15	0.62	0.68	0.15	0.43	0.78	0.30

Intersection Summary

Area Type: Other
Cycle Length: 100

Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:NBL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 32.3 Intersection LOS: C
Intersection Capacity Utilization 77.8% ICU Level of Service D
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: SR 67 & SR 38 (State St)

Ø1 9.26 s	Ø2 (R) 25.0 s	Ø3 17.0 s	Ø4 28.0 s
Ø5 11.0 s	Ø6 (R) 44.0 s	Ø7 11.4 s	Ø8 33.6 s



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

SR 67 at SR 38 – PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (vph)	395	395	134	133	234	81	111	726	134	174	625	199
Future Volume (vph)	395	395	134	133	234	81	111	726	134	174	625	199
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	270		0	130		310	280		280	300		400
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.962				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1828	0	1805	1900	1615	1805	1900	1615	1805	1900	1615
Flt Permitted	0.268			0.221			0.159			0.093		
Satd. Flow (perm)	509	1828	0	420	1900	1615	302	1900	1615	177	1900	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17				164			164			205
Link Speed (mph)		30			30			30				30
Link Distance (ft)		831			973			623				864
Travel Time (s)		18.9			22.1			14.2				19.6
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	407	407	138	137	241	84	114	748	138	179	644	205
Shared Lane Traffic (%)												
Lane Group Flow (vph)	407	545	0	137	241	84	114	748	138	179	644	205
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5		2	1		6
Permitted Phases	4			8		8	2		2	6		6
Total Split (s)	20.4	33.4		9.6	22.6	22.6	9.6	45.8	45.8	11.2	47.4	47.4
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Act Effct Green (s)	38.5	28.9		23.2	18.1	18.1	46.4	41.3	41.3	49.6	42.9	42.9
Actuated g/C Ratio	0.38	0.29		0.23	0.18	0.18	0.46	0.41	0.41	0.50	0.43	0.43
v/c Ratio	1.01	1.01		0.82	0.70	0.20	0.53	0.95	0.18	0.91	0.79	0.25
Control Delay	76.0	76.7		61.2	50.7	1.0	22.0	52.4	2.5	66.6	33.2	3.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.0	76.7		61.2	50.7	1.0	22.0	52.4	2.5	66.6	33.2	3.4
LOS	E	E		E	D	A	C	D	A	E	C	A
Approach Delay		76.4			44.8			42.1				33.1
Approach LOS		E			D			D				C
Queue Length 50th (ft)	~207	~344		57	145	0	35	452	0	62	346	0
Queue Length 95th (ft)	#383	#567		#138	#244	0	64	#699	25	#192	496	40
Internal Link Dist (ft)		751			893			543				784
Turn Bay Length (ft)	270			130		310	280		280	300		400
Base Capacity (vph)	402	540		168	343	426	216	784	763	196	815	809
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.01	1.01		0.82	0.70	0.20	0.53	0.95	0.18	0.91	0.79	0.25
Intersection Summary												
Area Type:	Other											
Cycle Length:	100											
Actuated Cycle Length:	100											
Offset:	0 (0%), Referenced to phase 2:NBL and 6:SBTL, Start of Green											
Control Type:	Actuated-Coordinated											
Maximum v/c Ratio:	1.01											
Intersection Signal Delay:	49.2											
Intersection LOS:	D											
Intersection Capacity Utilization:	99.2%											
ICU Level of Service:	F											
Analysis Period (min):	15											
- Volume exceeds capacity, queue is theoretically infinite.												
Queue shown is maximum after two cycles.												
# 95th percentile volume exceeds capacity, queue may be longer.												
Queue shown is maximum after two cycles.												
Splits and Phases: 10: SR 67 & SR 38 (State St)												

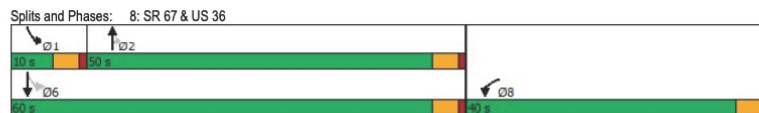


Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario

SR 67 at US 36 – AM Peak Hour

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙		↑	↗	↘	↓
Traffic Volume (vph)	339	29	472	123	40	549
Future Volume (vph)	339	29	472	123	40	549
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		450	210	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t	0.989			0.850		
Flt Protected	0.956				0.950	
Satd. Flow (prot)	1796	0	1900	1615	1805	1900
Flt Permitted	0.956				0.331	
Satd. Flow (perm)	1796	0	1900	1615	629	1900
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	5			134		
Link Speed (mph)	30		30		30	
Link Distance (ft)	841		864		569	
Travel Time (s)	19.1		19.6		12.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	368	32	513	134	43	597
Shared Lane Traffic (%)						
Lane Group Flow (vph)	400	0	513	134	43	597
Turn Type	Prot		NA	Perm	pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases			2		6	
Total Split (s)	40.0		50.0	50.0	10.0	60.0
Total Lost Time (s)	4.5		4.5	4.5	4.5	4.5
Act Effect Green (s)	24.6		50.1	50.1	55.8	55.8
Actuated g/C Ratio	0.28		0.56	0.56	0.62	0.62
v/c Ratio	0.80		0.48	0.14	0.09	0.50
Control Delay	42.6		16.5	3.1	8.8	12.3
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	42.6		16.5	3.1	8.8	12.3
LOS	D		B	A	A	B
Approach Delay	42.6		13.7			12.1
Approach LOS	D		B			B
Queue Length 50th (ft)	206		183	0	8	166
Queue Length 95th (ft)	309		340	32	27	332
Internal Link Dist (ft)	761		784			489
Turn Bay Length (ft)				450	210	
Base Capacity (vph)	719		1063	963	465	1185
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.56		0.48	0.14	0.09	0.50

Intersection Summary
 Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 89.4
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 20.0 Intersection LOS: B
 Intersection Capacity Utilization 60.8% ICU Level of Service B
 Analysis Period (min) 15



Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario

SR 67 at US 36 – PM Peak Hour

	↙	↘	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙		↑	↗	↘	↓
Traffic Volume (vph)	226	74	610	433	119	706
Future Volume (vph)	226	74	610	433	119	706
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		450	210	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.967			0.850		
Flt Protected	0.964				0.950	
Satd. Flow (prot)	1771	0	1900	1615	1805	1900
Flt Permitted	0.964				0.251	
Satd. Flow (perm)	1771	0	1900	1615	477	1900
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	17			456		
Link Speed (mph)	30		30		30	
Link Distance (ft)	841		864		569	
Travel Time (s)	19.1		19.6		12.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	238	78	642	456	125	743
Shared Lane Traffic (%)						
Lane Group Flow (vph)	316	0	642	456	125	743
Turn Type	Prot		NA	Perm	pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases				2	6	
Total Split (s)	33.0		55.6	55.6	11.4	67.0
Total Lost Time (s)	4.5		4.5	4.5	4.5	4.5
Act Effct Green (s)	20.5		51.5	51.5	62.7	62.7
Actuated g/C Ratio	0.22		0.56	0.56	0.68	0.68
v/c Ratio	0.78		0.61	0.41	0.30	0.58
Control Delay	45.4		17.8	2.5	8.0	11.0
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	45.4		17.8	2.5	8.0	11.0
LOS	D		B	A	A	B
Approach Delay	45.4		11.5			10.6
Approach LOS	D		B			B
Queue Length 50th (ft)	165		237	0	22	201
Queue Length 95th (ft)	257		415	47	52	383
Internal Link Dist (ft)	761		784			489
Turn Bay Length (ft)				450	210	
Base Capacity (vph)	560		1060	1103	423	1291
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.56		0.61	0.41	0.30	0.58

Intersection Summary
 Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 92.3
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 15.8
 Intersection Capacity Utilization 67.0%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service C



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

SR 67 at E Water St – AM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	SR 67 at E Water St							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/8/2020							East/West Street	E Water Street							
Analysis Year	2020							North/South Street	SR 67							
Time Analyzed	AM Peak Hour - 2030							Peak Hour Factor	0.88							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	1	0	0	1	1
Configuration		LTR				LTR				LT				LT		
Volume (veh/h)		11	9	51		32	21	96		37	439	9		35	440	8
Percent Heavy Vehicles (%)		10	3	3		3	3	4		3				3		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized										No				No		
Median Type Storage		Undivided														
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.20	6.53	6.23		7.13	6.53	6.24		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.59	4.03	3.33		3.53	4.03	3.34		2.23				2.23		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			81				169			42				40		
Capacity, c (veh/h)			432				398			1051				1051		
v/c Ratio			0.19				0.43			0.04				0.04		
95% Queue Length, Q ₉₅ (veh)			0.7				2.1			0.1				0.1		
Control Delay (s/veh)			15.3				20.6			8.6				8.6		
Level of Service (LOS)			C				C			A				A		
Approach Delay (s/veh)		15.3				20.6				1.1				1.0		
Approach LOS		C				C				A				A		



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

SR 67 at E Water St – PM Peak Hour

HCS7 Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	BRW							Intersection	SR 67 at E Water St								
Agency/Co.	Traffic Engineering Inc							Jurisdiction									
Date Performed	10/8/2020							East/West Street	E Water Street								
Analysis Year	2020							North/South Street	SR 67								
Time Analyzed	PM Peak Hour - 2030							Peak Hour Factor	0.94								
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25								
Project Description	Pendleton Traffic Impact Fee																
Lanes																	
<p style="text-align: center; font-size: small;">Major Street: North-South</p>																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	0	1	1	0	0	1	1	
Configuration			LTR				LTR				LT	R			LT	R	
Volume (veh/h)		30	12	84		21	10	74		59	577	37		66	700	33	
Percent Heavy Vehicles (%)		10	3	3		3	3	4		3				3			
Proportion Time Blocked																	
Percent Grade (%)		0				0											
Right Turn Channelized											No						
Median Type Storage		Undivided															
Critical and Follow-up Headways																	
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1			
Critical Headway (sec)		7.20	6.53	6.23		7.13	6.53	6.24		4.13				4.13			
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2			
Follow-Up Headway (sec)		3.59	4.03	3.33		3.53	4.03	3.34		2.23				2.23			
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)			134				112				63				70		
Capacity, c (veh/h)			130				148				833				929		
v/c Ratio			1.03				0.76				0.08				0.08		
95% Queue Length, Q ₉₅ (veh)			7.4				4.6				0.2				0.2		
Control Delay (s/veh)			154.5				80.9				9.7				9.2		
Level of Service (LOS)			F				F				A				A		
Approach Delay (s/veh)		154.5				80.9				1.8				1.8			
Approach LOS		F				F				A				A			



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

S 300 W at US 36 – AM Peak Hour

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	BRW							Intersection	S 300 W at US 36							
Agency/Co.	Traffic Engineering Inc							Jurisdiction								
Date Performed	10/12/2020							East/West Street	US 36							
Analysis Year	2020							North/South Street	S 300 W							
Time Analyzed	AM Peak Hour - 2030							Peak Hour Factor	0.91							
Intersection Orientation	East-West							Analysis Time Period (hrs)	0.25							
Project Description	Pendleton Traffic Impact Fee															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6	7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	1	1	0	0	1	0		0	1	0	
Configuration			LTR			L		TR			LTR				LTR	
Volume (veh/h)		12	223	17		179	413	18		6	57	51		4	28	2
Percent Heavy Vehicles (%)		3				5				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type Storage						Undivided										
Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.15				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.25				3.53	4.03	3.33		3.53	4.03	3.33
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		13				197				125				37		
Capacity, c (veh/h)		1083				1283				250				160		
v/c Ratio		0.01				0.15				0.50				0.23		
95% Queue Length, Q ₉₅ (veh)		0.0				0.5				2.6				0.9		
Control Delay (s/veh)		8.4				8.3				33.1				34.2		
Level of Service (LOS)		A				A				D				D		
Approach Delay (s/veh)		0.5				2.4				33.1				34.2		
Approach LOS		A				A				D				D		



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

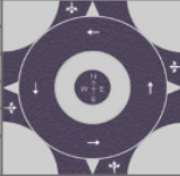
S 300 W at US 36 – PM Peak Hour

HCS7 Two-Way Stop-Control Report																	
General Information							Site Information										
Analyst	BRW						Intersection	S 300 W at US 36									
Agency/Co.	Traffic Engineering Inc						Jurisdiction										
Date Performed	10/12/2020						East/West Street	US 36									
Analysis Year	2020						North/South Street	S 300 W									
Time Analyzed	PM Peak Hour - 2030						Peak Hour Factor	0.95									
Intersection Orientation	East-West						Analysis Time Period (hrs)	0.25									
Project Description	Pendleton Traffic Impact Fee																
Lanes																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	1	1	0		0	1	0		0	1	0	
Configuration			LTR			L		TR			LTR				LTR		
Volume (veh/h)		14	582	22		124	332	27		8	59	87		7	36	2	
Percent Heavy Vehicles (%)		3				2				3	3	3		3	3	3	
Proportion Time Blocked																	
Percent Grade (%)										0				0			
Right Turn Channelized																	
Median Type Storage	Undivided																
Critical and Follow-up Headways																	
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2	
Critical Headway (sec)		4.13				4.12				7.13	6.53	6.23		7.13	6.53	6.23	
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3	
Follow-Up Headway (sec)		2.23				2.22				3.53	4.03	3.33		3.53	4.03	3.33	
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)		15				131				162						47	
Capacity, c (veh/h)		1175				948				222						118	
v/c Ratio		0.01				0.14				0.73						0.40	
95% Queue Length, Q ₉₅ (veh)		0.0				0.5				4.9						1.7	
Control Delay (s/veh)		8.1				9.4				55.5						54.5	
Level of Service (LOS)		A				A				F						F	
Approach Delay (s/veh)		0.3				2.4				55.5				54.5			
Approach LOS		A				A				F				F			



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**


S 300 W at SR 38 – AM Peak Hour

HCS7 Roundabouts Report																
General Information							Site Information									
Analyst	BRW							Intersection	S 300 W at SR 38							
Agency or Co.	Traffic Engineering Inc							E/W Street Name	SR 38							
Date Performed	10/12/2020							N/S Street Name	S 300 W							
Analysis Year	2020							Analysis Time Period (hrs)	0.25							
Time Analyzed	AM Peak Hour - 2030							Peak Hour Factor	0.65							
Project Description	Pendleton Traffic Impact Fee							Jurisdiction								
Volume Adjustments and Site Characteristics																
Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment	LTR				LTR				LTR				LTR			
Volume (V), veh/h	0	57	149	145	0	66	382	24	0	46	21	13	0	8	92	155
Percent Heavy Vehicles, %	0	0	1	0	0	2	2	5	0	40	0	0	0	0	0	6
Flow Rate (vcs), pc/h	0	88	232	223	0	104	599	39	0	99	32	20	0	12	142	253
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1				1				1				1			
Pedestrians Crossing, p/h	0				0				0				0			
Critical and Follow-Up Headway Adjustment																
Approach	EB			WB			NB			SB						
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Critical Headway (s)		4.9763			4.9763			4.9763			4.9763					
Follow-Up Headway (s)		2.6087			2.6087			2.6087			2.6087					
Flow Computations, Capacity and v/c Ratios																
Approach	EB			WB			NB			SB						
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Entry Flow (v _e), pc/h		543			742			151			407					
Entry Volume, veh/h		541			726			123			393					
Circulating Flow (v _c), pc/h		258			219			332			802					
Exiting Flow (v _e), pc/h		264			951			159			469					
Capacity (C _{av}), pc/h		1061			1104			984			609					
Capacity (c), veh/h		1056			1080			799			588					
v/c Ratio (x)		0.51			0.67			0.15			0.67					
Delay and Level of Service																
Approach	EB			WB			NB			SB						
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Lane Control Delay (d), s/veh		9.5			13.2			6.1			20.9					
Lane LOS		A			B			A			C					
95% Queue, veh		3.0			5.5			0.5			5.0					
Approach Delay, s/veh		9.5			13.2			6.1			20.9					
Approach LOS		A			B			A			C					
Intersection Delay, s/veh LOS				13.3						B						



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Future) Scenario**

S 300 W at SR 38 – PM Peak Hour

HCS7 Roundabouts Report																
General Information							Site Information									
Analyst	BRW							Intersection		S 300 W at SR 38						
Agency or Co.	Traffic Engineering Inc							E/W Street Name		SR 38						
Date Performed	10/12/2020							N/S Street Name		S 300 W						
Analysis Year	2020							Analysis Time Period (hrs)		0.25						
Time Analyzed	PM Peak Hour - 2030							Peak Hour Factor		0.97						
Project Description	Pendleton Traffic Impact Fee							Jurisdiction								
Volume Adjustments and Site Characteristics																
Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment	LTR				LTR				LTR				LTR			
Volume (V), veh/h	0	82	284	140	0	28	249	26	0	78	77	16	0	22	60	105
Percent Heavy Vehicles, %	0	0	2	2	0	0	3	0	0	1	0	0	0	0	0	1
Flow Rate (vvc), pc/h	0	85	299	147	0	29	264	27	0	81	79	16	0	23	62	109
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1				1				1				1			
Pedestrians Crossing, p/h	0				0				0				0			
Critical and Follow-Up Headway Adjustment																
Approach	EB				WB				NB				SB			
Lane	Left	Right	Bypass		Left	Right	Bypass		Left	Right	Bypass		Left	Right	Bypass	
Critical Headway (s)		4.9763				4.9763				4.9763				4.9763		
Follow-Up Headway (s)		2.6087				2.6087				2.6087				2.6087		
Flow Computations, Capacity and v/c Ratios																
Approach	EB				WB				NB				SB			
Lane	Left	Right	Bypass		Left	Right	Bypass		Left	Right	Bypass		Left	Right	Bypass	
Entry Flow (v _e), pc/h		531				320				176				194		
Entry Volume, veh/h		522				312				175				193		
Circulating Flow (v _c), pc/h		114				245				407				374		
Exiting Flow (v _e), pc/h		338				454				191				238		
Capacity (c _{max}), pc/h		1229				1075				911				942		
Capacity (c), veh/h		1208				1049				907				937		
v/c Ratio (x)		0.43				0.30				0.19				0.21		
Delay and Level of Service																
Approach	EB				WB				NB				SB			
Lane	Left	Right	Bypass		Left	Right	Bypass		Left	Right	Bypass		Left	Right	Bypass	
Lane Control Delay (d), s/veh		7.4				6.4				5.9				5.9		
Lane LOS		A				A				A				A		
95% Queue, veh		2.2				1.3				0.7				0.8		
Approach Delay, s/veh		7.4				6.4				5.9				5.9		
Approach LOS		A				A				A				A		
Intersection Delay, s/veh LOS					6.7								A			



Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	SR 13 & W 700 S	Final Base	4	131	1	2	353	3	0	1	13	8	1	0	517
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	4	144	1	2	388	3	0	1	14	9	1	0	567

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
2	W 700 S & S 750 W	Final Base	0	2	0	3	3	0	8
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	0	2	0	3	3	0	8

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	SR 38 & S 700 W	Final Base	0	0	0	5	0	7	2	145	0	0	162	1	322
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	12	0	0	22	0	34
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	0	0	0	6	0	8	2	172	0	0	200	1	389

ID	Intersection Name	Volume Type	Northbound		Eastbound		Westbound		Total Volume
			Left	Right	Thru	Right	Left	Thru	
4	SR 38 & S 600 W	Final Base	9	18	200	4	14	175	420
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	12	0	0	22	34
		Other	0	0	0	0	0	0	0
		Future Total	10	20	232	4	15	215	496

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume	
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
5	SR 38 & Corporation	Final Base	0	0	0	0	0	0	6	242	0	0	190	15	453	
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-	
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Net New Trips	0	0	0	0	0	0	0	0	12	0	0	22	0	34
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Future Total	0	0	0	0	0	0	0	7	278	0	0	231	17	533

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume	
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
6	State St & Enterprise Dr	Final Base	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-	
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Net New Trips	0	0	0	0	0	0	0	0	245	0	0	360	0	605
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Future Total	0	0	0	0	0	0	0	0	245	0	0	360	0	605

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7	State St & Heritage Way	Final Base	0	0	0	0	0	0	0	0	0	0	0	0	0
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	13	0	113	98	147	0	0	247	27	645
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	0	0	0	13	0	113	98	147	0	0	247	27	645

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
9	SR 132 & S 525 W	Final Base	6	0	9	8	1	0	0	59	1	18	76	3	181
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	7	0	10	9	1	0	0	65	1	20	84	3	200

ID	Intersection Name	Volume Type	Southbound		Eastbound		Westbound		Total Volume
			Left	Right	Left	Thru	Thru	Right	
10	SR 132 & S 425 W	Final Base	10	11	7	73	82	5	188
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	28	38	13	0	0	10	89
		Other	0	0	0	0	0	0	0
		Future Total	39	50	21	80	90	16	296

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
11	S 425 W & W 600 S	Final Base	0	0	21	1	4	0	0	0	0	9	0	1	36
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	24	0	0	0	0	12	0	15	36	0	87
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	0	0	47	1	4	0	0	12	0	25	36	1	126

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12	W 600 S & S 400 W	Final Base	0	0	0	42	0	5	11	14	0	0	3	73	148
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	92	0	0	51	0	143
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	0	0	0	46	0	6	12	107	0	0	54	80	305

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
13	Pendleton Ave & W 600 S	Final Base	64	45	41	18	10	41	219
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	37	50	27	14	70	22	220
		Other	0	0	0	0	0	0	0
		Future Total	107	100	72	34	81	67	461

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Thru	Right	
14	SR 67 & Pendleton Ae	Final Base	10	393	338	29	48	15	833
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	168	62	40	150	0	420
		Other	0	0	0	0	0	0	0
	Future Total	11	600	434	72	203	17	1337	

ID	Intersection Name	Volume Type	Northbound		Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	Left	Right	
15	SR 67 & W 600 S	Final Base	357	10	7	355	32	35	796
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	168	0	0	62	0	0	230
		Other	0	0	0	0	0	0	0
	Future Total	561	11	8	453	35	39	1107	

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
16	Pendleton Ave & Blue Spruce Dr	Final Base	6	93	78	7	8	11	203
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	22	52	0	0	0	74
		Other	0	0	0	0	0	0	0
	Future Total	7	124	138	8	9	12	298	

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
17	Fall Creek Pkwy & Main St	Final Base	46	0	7	0	0	0	0	48	58	14	42	0	215
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	14	0	0	0	0	0	0	12	45	0	3	0	74
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
	Future Total	65	0	8	0	0	0	0	65	109	15	49	0	311	

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound		Total Volume
			Left	Thru	Right	Thru	Right	Left	Right		
18	Pendleton Ave & Fall Creek Pkwy	Final Base	22	41	33	98	106	15	315		
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-		
		In Process	0	0	0	0	0	0	0		
		Net New Trips	1	15	50	2	7	5	80		
		Other	0	0	0	0	0	0	0		
		Future Total	25	60	86	110	124	22	427		

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
19	Pendleton Ave & Water St	Final Base	4	104	12	23	139	9	5	12	13	12	30	20	383
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	16	0	0	55	0	0	0	0	0	0	0	71
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	4	130	13	25	208	10	6	13	14	13	33	22	491

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
20	State St & Main St	Final Base	60	15	4	17	23	36	18	263	21	5	406	14	882
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	5	2	2	22	9	14	4	87	3	7	247	8	410
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	71	19	6	41	34	54	24	376	26	13	694	23	1381

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
21	State St & Pendleton Ave	Final Base	29	56	18	32	70	48	34	231	24	16	371	25	954
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	132	15	0	8	47	0	0	54	60	0	143	1	460
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	164	77	20	43	124	53	37	308	86	18	551	29	1510

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume	
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
22	State St & East St	Final Base	6	6	16	5	5	8	0	299	14	22	446	2	829	
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-	
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Net New Trips	0	0	0	0	0	0	0	0	62	0	0	144	0	206
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Future Total	7	7	18	6	6	9	0	391	15	24	635	2	1120		

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
23	Main St & High St	Final Base	3	69	3	6	51	4	2	6	3	0	4	5	156
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
	Future Total	3	76	3	7	56	4	2	7	3	0	4	6	171	

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
24	Pendleton Ave & High St	Final Base	3	110	2	4	87	0	5	7	5	5	7	16	251
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	144	0	0	99	0	0	0	0	0	0	0	243
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
	Future Total	3	265	2	4	195	0	6	8	6	6	8	18	521	

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
25	Pendleton Ave & Madison Ave	Final Base	1	69	10	31	82	0	1	13	1	11	13	49	281
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	49	0	33	66	0	0	0	0	0	0	95	243
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
	Future Total	1	125	11	67	156	0	1	14	1	12	14	149	551	

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume	
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
26	Madison Ave & Broadway St	Final Base	0	45	2	13	63	23	6	11	0	4	16	18	201	
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-	
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Net New Trips	95	0	0	0	0	0	0	0	0	33	0	0	0	128
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	95	50	2	14	69	25	7	12	33	4	18	20	349	

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume	
			Left	Thru	Thru	Right	Left	Right		
27	Pendleton Ave & Old Indi	Final Base	5	99	114	38	21	0	277	
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-	
		In Process	0	0	0	0	0	0	0	
		Net New Trips	0	49	66	0	0	0	0	115
		Other	0	0	0	0	0	0	0	0
		Future Total	6	158	191	42	23	0	420	

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
28	SR 67 & Pendleton Ave	Final Base	40	50	147	16	52	39	12	256	3	112	324	12	1063
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	9	4	0	11	55	40	22	0	14	67	0	222
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	44	64	166	18	68	98	53	304	3	137	423	13	1391

ID	Intersection Name	Volume Type	Southbound		Eastbound		Westbound		Total Volume
			Left	Right	Left	Thru	Thru	Right	
29	SR 67 & Broadway St	Final Base	19	8	6	417	508	1	959
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	33	95	73	73	0	274
		Other	0	0	0	0	0	0	0
		Future Total	21	42	102	532	632	1	1330

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
30	SR 67 & Madison Ave	Final Base	0	380	71	171	487	0	0	0	0	3	0	41	1153
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	107	7	36	56	0	0	0	0	22	0	112	340
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Total		0	525	85	224	592	0	0	0	0	25	0	157	1608	

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
31	SR 67 & SR 38	Final Base	46	299	81	95	419	156	107	173	82	160	257	64	1939
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	79	130	10	0	55	31	18	19	25	12	34	0	413
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Total		130	459	99	105	516	203	136	209	115	188	317	70	2547	

ID	Intersection Name	Volume Type	Northbound		Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	Left	Right	
32	SR 67 & US 36	Final Base	310	96	36	430	299	26	1197
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	131	17	0	76	10	0	234
		Other	0	0	0	0	0	0	0
Future Total		472	123	40	549	339	29	1552	

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
33	SR 67 & Water St	Final Base	34	288	0	16	359	7	10	8	46	1	19	45	833
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	122	9	17	45	0	0	0	0	31	0	46	270
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Total		37	439	9	35	440	8	11	9	51	32	21	96	1188	

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume	
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
34	US 36 & S 300 W	Final Base	5	30	41	2	16	2	11	187	15	161	366	16	852	
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-	
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Net New Trips	0	24	6	2	10	0	0	0	17	0	2	10	0	71
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	6	57	51	4	28	2	12	223	17	179	413	18	1010	

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
35	SR 38 & S 300 W	Final Base	42	15	8	4	83	109	41	120	132	59	337	21	971
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	4	4	4	1	35	12	17	0	1	11	1	90
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	46	21	13	8	92	155	57	149	145	66	382	24	1158

Vistro File: C:\...Pendleton vistro.vistro
Report File: C:\...Future PM.pdf

Scenario 2 PM
5/13/2021

Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	SR 13 & W 700 S	Final Base	11	340	6	1	229	1	2	9	15	6	1	1	622
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	12	374	7	1	252	1	2	10	17	7	1	1	685

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
2	W 700 S & S 750 W	Final Base	0	2	2	3	18	0	25
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	0	2	2	3	20	0	27

ID	Intersection Name	Volume Type	Southbound		Eastbound		Westbound		Total Volume
			Left	Right	Left	Thru	Thru	Right	
3	SR 38 & S 700 W	Final Base	5	5	9	255	203	9	486
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	27	15	0	42
		Other	0	0	0	0	0	0	0
		Future Total	6	6	10	308	238	10	578

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	SR 38 & S 600 W	Final Base	7	0	22	0	0	0	0	302	9	21	235	0	596
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	27	0	0	15	0	42
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	8	0	24	0	0	0	0	359	10	23	274	0	698

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume	
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
5	SR 38 & Corporation	Final Base	0	0	0	18	0	8	0	308	0	0	277	1	612	
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-	
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Net New Trips	0	0	0	0	0	0	0	0	27	0	0	15	0	42
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Future Total	0	0	0	20	0	9	0	366	0	0	320	1	716	

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume	
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
6	State St & Enterprise Dr	Final Base	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-	
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Net New Trips	0	0	0	0	0	0	0	0	366	0	0	315	0	681
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Future Total	0	0	0	0	0	0	0	366	0	0	315	0	681	

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7	State St & Heritage Way	Final Base	0	0	0	0	0	0	0	0	0	0	0	0	0
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	31	0	140	108	258	0	0	175	9	721
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	0	0	0	31	0	140	108	258	0	0	175	9	721

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
9	SR 132 & S 525 W	Final Base	0	1	8	3	1	4	0	106	4	2	70	10	209
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	0	1	9	3	1	4	0	117	4	2	77	11	229

ID	Intersection Name	Volume Type	Southbound		Eastbound		Westbound		Total Volume
			Left	Right	Left	Thru	Thru	Right	
10	SR 132 & S 425 W	Final Base	20	8	11	114	78	17	248
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	17	25	43	0	0	31	116
		Other	0	0	0	0	0	0	0
		Future Total	39	34	55	125	86	50	389

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
11	S 425 W & W 600 S	Final Base	0	7	14	2	2	0	0	0	0	19	0	3	47
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	22	0	0	0	0	41	0	27	24	0	114
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	0	8	37	2	2	0	0	41	0	48	24	3	165

ID	Intersection Name	Volume Type	Southbound		Eastbound		Westbound		Total Volume
			Left	Right	Left	Thru	Thru	Right	
12	W 600 S & S 400 W	Final Base	65	11	5	9	15	58	163
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	93	78	0	171
		Other	0	0	0	0	0	0	0
		Future Total	72	12	6	103	95	64	352

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
13	Pendleton Ave & W 600 S	Final Base	30	74	65	21	22	74	286
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	34	46	63	44	48	45	280
		Other	0	0	0	0	0	0	0
		Future Total	67	127	135	67	72	126	594

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Thru	Right	
14	SR 67 & Pendleton Ae	Final Base	13	459	481	85	65	20	1123
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	116	186	134	102	0	538
		Other	0	0	0	0	0	0	0
		Future Total	14	621	715	228	174	22	1774

ID	Intersection Name	Volume Type	Northbound		Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	Left	Right	
15	SR 67 & W 600 S	Final Base	451	32	28	473	20	24	1028
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	116	0	0	186	0	0	302
		Other	0	0	0	0	0	0	0
		Future Total	612	35	31	706	22	26	1432

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
16	Pendleton Ave & Blue Spruce Dr	Final Base	15	104	127	9	3	12	270
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	58	44	0	0	0	102
		Other	0	0	0	0	0	0	0
		Future Total	17	172	184	10	3	13	399

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
17	Fall Creek Pkwy & Main St	Final Base	47	0	11	0	0	0	0	74	90	13	50	0	285
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	50	0	0	0	0	0	0	7	26	0	13	0	96
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	102	0	12	0	0	0	0	88	125	14	68	0	409

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
18	Pendleton Ave & Fall Creek Pkwy	Final Base	17	38	59	133	148	26	421
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	5	53	36	8	5	2	109
		Other	0	0	0	0	0	0	0
	Future Total	24	95	101	154	168	31	573	

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
19	Pendleton Ave & Water St	Final Base	7	158	11	43	150	16	4	28	6	21	35	57	536
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	58	0	0	38	0	0	0	0	0	0	0	96
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
	Future Total	8	232	12	47	203	18	4	31	7	23	39	63	687	

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
20	State St & Main St	Final Base	43	46	20	25	35	36	20	637	44	15	328	26	1275
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	2	11	8	12	6	8	15	263	6	5	143	24	503
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
	Future Total	49	62	30	40	45	48	37	964	54	22	504	53	1908	

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
21	State St & Pendleton Ave	Final Base	32	68	45	52	80	42	70	573	38	19	357	45	1421
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	86	53	0	6	32	0	0	154	145	0	97	5	578
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
	Future Total	121	128	50	63	120	46	77	784	187	21	490	55	2142	

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume	
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
22	State St & East St	Final Base	6	2	31	4	2	7	0	665	10	9	448	8	1192	
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-	
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Net New Trips	0	0	0	0	0	0	0	0	160	0	0	102	0	262
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Future Total	7	2	34	4	2	8	0	892	11	10	595	9	1574		

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
23	Main St & High St	Final Base	2	68	5	15	67	8	10	24	11	6	8	13	237
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
	Future Total	2	75	6	17	74	9	11	26	12	7	9	14	262	

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
24	Pendleton Ave & High St	Final Base	6	130	11	10	97	0	23	12	8	12	9	26	344
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	129	0	0	170	0	0	0	0	0	0	0	299
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
	Future Total	7	272	12	11	277	0	25	13	9	13	10	29	678	

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
25	Pendleton Ave & Madison Ave	Final Base	2	98	7	20	96	0	0	3	1	10	21	54	312
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	66	0	110	60	0	0	0	0	0	0	63	299
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
	Future Total	2	174	8	132	166	0	0	3	1	11	23	122	642	

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
26	Madison Ave & Broadway St	Final Base	3	32	1	21	43	21	4	14	3	7	16	9	174
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	63	0	0	0	0	0	0	0	110	0	0	0	173
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
	Future Total	66	35	1	23	47	23	4	15	113	8	18	10	363	

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
27	Pendleton Ave & Old Indi	Final Base	1	137	115	73	43	0	369
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	66	60	0	0	0	126
		Other	0	0	0	0	0	0	0
	Future Total	1	217	187	80	47	0	532	

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
28	SR 67 & Pendleton Ave	Final Base	34	68	189	22	46	40	57	488	10	156	318	18	1446
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	11	16	0	9	51	55	75	0	8	43	0	268
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
	Future Total	37	86	224	24	60	95	118	612	11	180	393	20	1860	

ID	Intersection Name	Volume Type	Southbound		Eastbound		Westbound		Total Volume
			Left	Right	Left	Thru	Thru	Right	
29	SR 67 & Broadway St	Final Base	9	13	13	692	491	12	1230
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	110	63	97	95	0	365
		Other	0	0	0	0	0	0	0
	Future Total	10	124	77	858	635	13	1717	

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
30	SR 67 & Madison Ave	Final Base	0	655	76	68	512	0	0	0	0	15	0	38	1364
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	91	25	126	127	0	0	0	0	14	0	73	456
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
	Future Total	0	812	109	201	690	0	0	0	0	31	0	115	1958	

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
31	SR 67 & SR 38	Final Base	54	571	109	158	432	160	327	327	40	109	188	74	2549
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	52	98	14	0	150	23	35	35	90	13	27	0	537
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
	Future Total	111	726	134	174	625	199	395	395	134	133	234	81	3341	

ID	Intersection Name	Volume Type	Northbound		Southbound		Westbound		Total Volume
			Thru	Right	Left	Thru	Left	Right	
32	SR 67 & US 36	Final Base	445	382	108	498	192	67	1692
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	120	13	0	158	15	0	306
		Other	0	0	0	0	0	0	0
	Future Total	610	433	119	706	226	74	2168	

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
33	SR 67 & Water St	Final Base	54	448	1	15	512	30	27	11	76	0	9	38	1221
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	84	36	49	137	0	0	0	0	21	0	32	359
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
	Future Total	59	577	37	66	700	33	30	12	84	21	10	74	1703	

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
34	US 36 & S 300 W	Final Base	7	37	76	5	9	2	13	517	20	107	288	22	1103
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	18	3	1	26	0	0	13	0	6	15	3	85
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
	Future Total	8	59	87	7	36	2	14	582	22	124	332	27	1300	

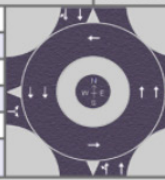
ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
35	SR 38 & S 300 W	Final Base	71	68	13	18	51	75	42	246	127	22	210	19	962
		Growth Factor	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	2	2	2	4	22	36	13	0	4	18	5	108
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
	Future Total	78	77	16	22	60	105	82	284	140	28	249	26	1167	

APPENDIX E - MITIGATED CONDITIONS MODELLING (2030) W/ PROJECTS

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Pendleton Road Impact Fee Level of Service Analysis 2030 (Mitigation) Scenario

SR 67 at N Pendleton Ave – AM Peak Hour

HCS7 Roundabouts Report																
General Information							Site Information									
Analyst	BRW							Intersection		SR 67 at N Pendleton						
Agency or Co.	TEI							E/W Street Name		N Pendleton Ave						
Date Performed	3/24/2021							N/S Street Name		SR 67						
Analysis Year	2021							Analysis Time Period (hrs)		0.25						
Time Analyzed	AM PH - 2030 Mitigation							Peak Hour Factor		0.91						
Project Description	Pendleton Traffic Impact Fee							Jurisdiction								
Volume Adjustments and Site Characteristics																
Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0
Lane Assignment	LR								LT				TR			
Volume (V), veh/h	0	203		17					0	11	600		0		434	72
Percent Heavy Vehicles, %	3	5		17					3	10	3		3		3	3
Flow Rate (v/c), pc/h	0	234		22					0	13	679		0		491	81
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	2								1				1			
Pedestrians Crossing, p/h	0								0				0			
Critical and Follow-Up Headway Adjustment																
Approach	EB				WB				NB				SB			
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	
Critical Headway (s)				4.3276						4.5436	4.5436		4.5436	4.5436		
Follow-Up Headway (s)				2.5352						2.5352	2.5352		2.5352	2.5352		
Flow Computations, Capacity and v/c Ratios																
Approach	EB				WB				NB				SB			
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	
Entry Flow (v _i), pc/h				256						325	367		269	303		
Entry Volume, veh/h				242						315	356		261	294		
Circulating Flow (v _c), pc/h				491			926			234			13			
Exiting Flow (v _e), pc/h				0			94			913			513			
Capacity (c _{req}), pc/h				935						1148	1148		1403	1403		
Capacity (c), veh/h				883						1113	1113		1362	1362		
v/c Ratio (x)				0.27						0.28	0.32		0.19	0.22		
Delay and Level of Service																
Approach	EB				WB				NB				SB			
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	
Lane Control Delay (d), s/veh				7.0						5.9	6.3		4.2	4.4		
Lane LOS				A						A	A		A	A		
95% Queue, veh				1.1						1.2	1.4		0.7	0.8		
Approach Delay, s/veh				7.0						6.1			4.3			
Approach LOS				A						A			A			
Intersection Delay, s/veh LOS				5.6							A					



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Mitigation) Scenario**

SR 67 at N Pendleton Ave – PM Peak Hour

HCS7 Roundabouts Report																
General Information						Site Information										
Analyst	BRW						Intersection	SR 67 at N Pendleton								
Agency or Co.	TEI						E/W Street Name	N Pendleton Ave								
Date Performed	3/24/2021						N/S Street Name	SR 67								
Analysis Year	2021						Analysis Time Period (hrs)	0.25								
Time Analyzed	PM PH - 2030 Mitigation						Peak Hour Factor	0.92								
Project Description	Pendleton Traffic Impact Fee						Jurisdiction									
Volume Adjustments and Site Characteristics																
Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0
Lane Assignment	LR								LT	T	T	TR				
Volume (V), veh/h	0	174		22					0	14	621		0		715	228
Percent Heavy Vehicles, %	3	3		5					3	3	3		3		3	3
Flow Rate (v/c), pc/h	0	195		25					0	16	695		0		800	255
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	2								1				1			
Pedestrians Crossing, p/h	0								0				0			
Critical and Follow-Up Headway Adjustment																
Approach	EB			WB			NB			SB						
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Critical Headway (s)							4.5436	4.5436		4.5436	4.5436					
Follow-Up Headway (s)		2.5352					2.5352	2.5352		2.5352	2.5352					
Flow Computations, Capacity and v/c Ratios																
Approach	EB			WB			NB			SB						
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Entry Flow (v _e), pc/h		220					334	377		0	1055					
Entry Volume, veh/h		213					324	366		0	1024					
Circulating Flow (v _c), pc/h		800			906			195			16					
Exiting Flow (v _e), pc/h		0			271			890			825					
Capacity (c _{max}), pc/h		719					1189	1189		1399	1399					
Capacity (c), veh/h		697					1154	1154		1359	1359					
v/c Ratio (x)		0.31					0.28	0.32		0.00	0.75					
Delay and Level of Service																
Approach	EB			WB			NB			SB						
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Lane Control Delay (d), s/veh		9.0					5.7	6.1		2.6	14.0					
Lane LOS		A					A	A		A	B					
95% Queue, veh		1.3					1.2	1.4		0.0	7.8					
Approach Delay, s/veh	9.0						6.0			14.0						
Approach LOS	A						A			B						
Intersection Delay, s/veh LOS	10.6									B						



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Mitigation) Scenario**

Main St at E State St – AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔			↔			↔			↔	
Traffic Volume (vph)	24	376	26	13	694	23	71	19	6	41	34	54
Future Volume (vph)	24	376	26	13	694	23	71	19	6	41	34	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25					25						25
Satd. Flow (prot)	1624	1693	0	0	1531	0	0	1635	0	0	1588	0
Fit Permitted	0.348				0.991			0.677			0.889	
Satd. Flow (perm)	595	1693	0	0	1519	0	0	1148	0	0	1435	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			4			3				36
Link Speed (mph)		30			30			30				30
Link Distance (ft)		450			460			446				462
Travel Time (s)		10.2			10.5			10.1				10.5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Parking (#/hr)					0							
Shared Lane Traffic (%)												
Lane Group Flow (vph)	26	432	0	0	785	0	0	102	0	0	139	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4				8			2			6	
Total Split (s)	67.0	67.0		67.0	67.0		23.0	23.0		23.0	23.0	
Total Lost Time (s)	4.5	4.5			4.5		4.5	4.5		4.5	4.5	
Act Effct Green (s)	62.5	62.5			62.5		18.5	18.5		18.5	18.5	
Actuated g/C Ratio	0.69	0.69			0.69		0.21	0.21		0.21	0.21	
v/c Ratio	0.06	0.37			0.74		0.43	0.43		0.43	0.43	
Control Delay	4.9	6.6			10.0		36.7	36.7		27.6	27.6	
Queue Delay	0.0	0.0			0.8		0.0	0.0		0.0	0.0	
Total Delay	4.9	6.6			10.8		36.7	36.7		27.6	27.6	
LOS	A	A			B		D	D		C	C	
Approach Delay		6.5			10.8		36.7	36.7		27.6	27.6	
Approach LOS		A			B		D	D		C	C	
Queue Length 50th (ft)	4	85			158		49	49		50	50	
Queue Length 95th (ft)	12	131			m246		99	99		107	107	
Internal Link Dist (ft)		370			380		366	366		382	382	
Turn Bay Length (ft)	200											
Base Capacity (vph)	413	1178			1056		238	238		323	323	
Starvation Cap Reductn	0	0			82		0	0		0	0	
Spillback Cap Reductn	0	0			0		0	0		0	0	
Storage Cap Reductn	0	0			0		0	0		0	0	
Reduced v/c Ratio	0.06	0.37			0.81		0.43	0.43		0.43	0.43	
Intersection Summary												
Area Type:	CBD											
Cycle Length:	90											
Actuated Cycle Length:	90											
Offset:	0 (0%), Referenced to phase 2:NBL and 6:SBTL, Start of Green											
Control Type:	Pretimed											
Maximum v/c Ratio:	0.74											
Intersection Signal Delay:	12.8						Intersection LOS: B					
Intersection Capacity Utilization:	73.5%						ICU Level of Service D					
Analysis Period (min):	15											
m	Volume for 95th percentile queue is metered by upstream signal.											
Splits and Phases: 18: Main St & State St												



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Mitigation) Scenario**

Main St at E State St – PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔			↔			↔			↔	↔
Traffic Volume (vph)	37	964	54	22	504	53	49	62	30	40	45	48
Future Volume (vph)	37	964	54	22	504	53	49	62	30	40	45	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992				0.988		0.971			0.951	
Flt Protected	0.950				0.998			0.983			0.985	
Satd. Flow (prot)	1624	1696	0	0	1517	0	0	1632	0	0	1602	0
Flt Permitted	0.426				0.883			0.859			0.885	
Satd. Flow (perm)	728	1696	0	0	1343	0	0	1426	0	0	1439	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			13			14			28	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		450			460			446			462	
Travel Time (s)		10.2			10.5			10.1			10.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Parking (#/hr)					0							
Adj. Flow (vph)	38	994	56	23	520	55	51	64	31	41	46	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	38	1050	0	0	598	0	0	146	0	0	136	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4							2			6	
Total Split (s)	67.0	67.0		67.0	67.0		23.0	23.0		23.0	23.0	
Total Lost Time (s)	4.5	4.5			4.5			4.5			4.5	
Act Effct Green (s)	62.5	62.5			62.5			18.5			18.5	
Actuated g/C Ratio	0.69	0.69			0.69			0.21			0.21	
v/c Ratio	0.08	0.89			0.64			0.48			0.43	
Control Delay	4.9	22.8			7.8			34.5			29.4	
Queue Delay	0.0	20.8			0.4			0.0			0.0	
Total Delay	4.9	43.6			8.2			34.5			29.4	
LOS	A	D			A			C			C	
Approach Delay		42.2			8.2			34.5			29.4	
Approach LOS		D			A			C			C	
Queue Length 50th (ft)	6	408			121			66			53	
Queue Length 95th (ft)	16	#787			161			126			109	
Internal Link Dist (ft)		370			380			366			382	
Turn Bay Length (ft)	200											
Base Capacity (vph)	505	1179			936			304			318	
Starvation Cap Reductn	0	0			74			0			0	
Spillback Cap Reductn	0	161			0			0			2	
Storage Cap Reductn	0	0			0			0			0	
Reduced v/c Ratio	0.08	1.03			0.69			0.48			0.43	
Intersection Summary												
Area Type: CBD												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 0 (0%), Referenced to phase 2:NBL and 6:SBTL, Start of Green												
Control Type: Prelimed												
Maximum v/c Ratio: 0.89												
Intersection Signal Delay: 30.4						Intersection LOS: C						
Intersection Capacity Utilization 79.6%						ICU Level of Service D						
Analysis Period (min) 15												
# 95th percentile volume exceeds capacity, queue may be longer.												
Queue shown is maximum after two cycles.												
Splits and Phases: 18: Main St & State St												



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Mitigation) Scenario**

N Pendleton Ave at E State St – AM Peak Hour

	↖	→	↘	↙	←	↗	↖	↑	↘	↙	↓	↗
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕		↕	↕			↕	↕
Traffic Volume (vph)	37	308	86	18	551	29	164	77	20	43	124	53
Future Volume (vph)	37	308	86	18	551	29	164	77	20	43	124	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	200	0	0	0	200	0	0	0	0	0
Storage Lanes	0	0	1	0	0	0	1	0	0	0	0	0
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	25
Satd. Flow (prot)	0	1531	1454	0	1527	0	1624	1491	0	0	1475	0
Fit Permitted		0.896			0.984		0.550				0.927	
Satd. Flow (perm)	0	1379	1454	0	1504	0	940	1491	0	0	1381	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			98		4			17				20
Link Speed (mph)		30			30			30				30
Link Distance (ft)		460			374			464				456
Travel Time (s)		10.5			8.5			10.5				10.4
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Parking (#/hr)		0			0			0				0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	392	98	0	679	0	186	111	0	0	250	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2				6
Permitted Phases	4		4	8			2			6		
Total Split (s)	51.0	51.0	51.0	51.0	51.0		39.0	39.0		39.0	39.0	
Total Lost Time (s)		4.5	4.5		4.5		4.5	4.5			4.5	
Act Effct Green (s)		46.5	46.5		46.5		34.5	34.5			34.5	
Actuated g/C Ratio		0.52	0.52		0.52		0.38	0.38			0.38	
v/c Ratio		0.55	0.12		0.87		0.52	0.19			0.46	
Control Delay		15.2	1.1		33.4		27.6	16.6			22.4	
Queue Delay		0.0	0.0		0.0		0.0	0.0			0.0	
Total Delay		15.2	1.1		33.4		27.6	16.6			22.4	
LOS		B	A		C		C	B			C	
Approach Delay		12.4			33.4		23.5				22.4	
Approach LOS		B			C		C				C	
Queue Length 50th (ft)		153	1		321		80	35			96	
Queue Length 95th (ft)		236	3		#534		144	69			160	
Internal Link Dist (ft)		380			294			384			376	
Turn Bay Length (ft)			200				200					
Base Capacity (vph)		712	798		779		360	582			541	
Starvation Cap Reductn		0	0		0		0	0			0	
Spillback Cap Reductn		0	0		0		0	0			0	
Storage Cap Reductn		0	0		0		0	0			0	
Reduced v/c Ratio		0.55	0.12		0.87		0.52	0.19			0.46	
Intersection Summary												
Area Type:	CBD											
Cycle Length:	90											
Actuated Cycle Length:	90											
Offset:	0 (0%), Referenced to phase 2:NBL and 6:SBTL, Start of Green											
Control Type:	Pretimed											
Maximum v/c Ratio:	0.87											
Intersection Signal Delay:	24.1						Intersection LOS: C					
Intersection Capacity Utilization:	85.2%						ICU Level of Service E					
Analysis Period (min)	15											
#	95th percentile volume exceeds capacity, queue may be longer.											
	Queue shown is maximum after two cycles.											
Splits and Phases: 15: Pendleton Ave & State St												



**Pendleton Road Impact Fee
Level of Service Analysis
2030 (Mitigation) Scenario**

N Pendleton Ave at E State St – PM Peak Hour

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕	↕	↕	↕	↕		↕	↕
Traffic Volume (vph)	77	784	187	21	490	55	121	128	50	63	120	46
Future Volume (vph)	77	784	187	21	490	55	121	128	50	63	120	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	200	0	0	0	200	0	0	0	0	0
Storage Lanes	0	0	1	0	0	0	1	0	0	0	0	0
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.987			0.958				0.973
Flt Protected		0.996			0.998		0.950				0.986	
Sald. Flow (prot)	0	1533	1454	0	1516	0	1624	1474	0	0	1476	0
Flt Permitted		0.902			0.914		0.512				0.859	
Sald. Flow (perm)	0	1388	1454	0	1388	0	876	1474	0	0	1286	0
Right Turn on Red			Yes			Yes			Yes			Yes
Sald. Flow (RTOR)			197		12			22			14	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		460			374			464			456	
Travel Time (s)		10.5			8.5			10.5			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Parking (#/hr)		0			0			0			0	
Adj. Flow (vph)	81	825	197	22	516	58	127	135	53	66	126	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	906	197	0	596	0	127	188	0	0	240	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Total Split (s)	61.0	61.0	61.0	61.0	61.0		29.0	29.0		29.0	29.0	
Total Lost Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Act Effct Green (s)		56.5	56.5		56.5		24.5	24.5		24.5	24.5	
Actuated g/C Ratio		0.63	0.63		0.63		0.27	0.27		0.27	0.27	
v/c Ratio		1.04	0.20		0.68		0.53	0.45		0.67	0.67	
Control Delay		46.3	0.8		15.7		37.5	28.0		37.8	37.8	
Queue Delay		1.7	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		48.0	0.8		15.7		37.5	28.0		37.8	37.8	
LOS		D	A		B		D	C		D	D	
Approach Delay		39.5			15.7			31.8			37.8	
Approach LOS		D			B			C			D	
Queue Length 50th (ft)		~565	0		195		61	78			114	
Queue Length 95th (ft)		m#702	m4		319		121	142			#199	
Internal Link Dist (ft)		380			294			384			376	
Turn Bay Length (ft)			200				200					
Base Capacity (vph)		871	986		875		238	417			360	
Starvation Cap Reductn		4	0		0		0	0			0	
Spillback Cap Reductn		0	0		0		0	0			0	
Storage Cap Reductn		0	0		0		0	0			0	
Reduced v/c Ratio		1.04	0.20		0.68		0.53	0.45			0.67	

Intersection Summary

Area Type: CBD

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBL and 6:SBTL, Start of Green
 Control Type: Pretimed
 Maximum v/c Ratio: 1.04
 Intersection Signal Delay: 32.0 Intersection LOS: C
 Intersection Capacity Utilization 117.2% ICU Level of Service H
 Analysis Period (min) 15

- Volume exceeds capacity, queue is theoretically infinite.
 # Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 # Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 15: Pendleton Ave & State St

