



Mount Joy Borough
Established 1851 in Lancaster County, PA



MOUNT JOY

Parking Utilization Study

APRIL 2019

PREPARED BY:

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Established 1851 in Lancaster County, PA

Borough of Mount Joy

Mount Joy Parking Utilization Study

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Table of Contents

Introduction.....	1
Methodology/Approach.....	2
Study Area Profile	3
Roadway and Parking Facility Descriptions	5
Existing Study Area Conditions	11
Data Collection	11
Parking Utilization.....	11
Parking Distribution	18
Future Study Area Conditions.....	19
Future Parking Demand	20
Future Parking Utilization	22
Existing & Future Parking Utilization Analysis Findings	27
Existing Parking Utilization.....	27
Future Parking Utilization	29
Findings	30
Review of Potential Strategies.....	33
Overview	33
Strategy 1: Time-of-Day Residential Permit Parking.....	35
Strategy 2: Off-peak Train Station Parking.....	36
Strategy 3: Cooperative Agreements with Downtown Businesses.....	38
Strategy 4: Parking Garage at St. Mark's United Methodist Church	40
Strategy 5: Land Acquisition/Negotiation.....	42
Overall Parking Strategy.....	42
Appendix A – Existing Parking Utilization	
Appendix B – Strategy Evaluation Matrix	

Introduction

The Mount Joy Amtrak Station, currently located along Henry Street between Market Street and Marietta Avenue (SR 772) in the Borough of Mount Joy, is undergoing a reconstruction to be more accommodating to passengers. This reconstruction includes additional parking, covered/illuminated walkways, and improved platforms. In an effort to improve station amenities, the Borough of Mount Joy, in conjunction with the Pennsylvania Department of Transportation (PennDOT) Bureau of Public Transportation (BPT), sought to maximize the function and use of existing and future parking as well as balancing the parking demand between Amtrak train station patrons, residents, and businesses throughout key state roadways, local roadways, and select parking lots.

To this end, Michael Baker International (MBI) was tasked with developing a parking utilization study of parking facilities within the Borough, reflective of both existing conditions and for future conditions that incorporate reconstruction of the train station and other planned developments within the Borough. The study area consisted of state roadways, local roadways, and existing nearby parking facilities centered around the Mount Joy Amtrak Station and the central downtown portion of the Borough. The study area boundaries were New Haven Street to the west, Jacob Street to the east, Frank Street to the north, and Columbia Avenue to the south.

Field observations of the study area facilities were performed to estimate the existing parking demand by user group over three separate weekday time periods. The user groups included Amtrak train station users, business-related users, and residents of the Borough. The field observations were conducted during a typical weekday to focus on a particular user group. Items noted during the observations included prevailing parking restrictions, presence of pavement markings, and the number of parking stalls available. The existing parking availability and utilization was then summarized. A future parking utilization analysis of the study area was then performed to account for the changes in parking demand availability and demand associated with the reconstructed train station and its parking lots, and addressed changes in parking availability and other changes/growth within the Borough.

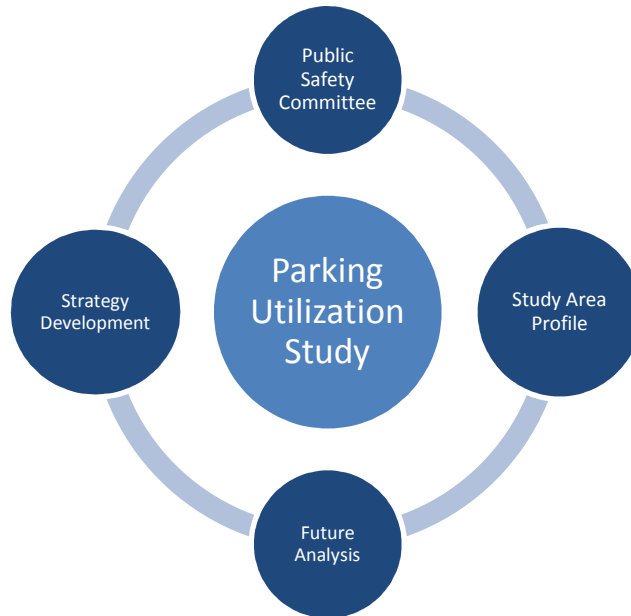
Based on the existing and future parking utilization analyses, potential strategies were developed to provide sufficient capacity and organization of parking utilization by user group.



Methodology/Approach

The study process followed the following primary tasks, as illustrated in Figure 1.

Figure 1: Mount Joy Parking Utilization Study Methodology



Public Safety Committee – The Borough of Mount Joy Public Safety Committee was involved to guide the study process at the onset of the study. The committee met three times over the course of the study process to provide input on draft study products and offer guidance on study findings.

Study Area Profile – The study report includes a detailed baseline of data and information regarding parking utilization and distribution within the study area. MBI conducted field observations of the study area facilities at three separate weekday time periods, where each respective time period focused on an isolated time of day to target different user group parking demands and interactions.

Future Analysis – A parking utilization analysis of the study area under future conditions was conducted reflective of the train station platform and parking lot construction, as well as latent future growth within the Borough of Mount Joy.

Strategy Development – Based on input gathered from the public safety committee and findings from the study area profile analyses, strategies were developed to provide sufficient capacity and organized utilization of parking by user group under both existing and future conditions.

The following report summarizes the findings of this study process. More detailed information documenting the existing and future parking utilization analyses are included in the appendix.

Study Area Profile

The study area consisted of Borough roads and existing nearby parking facilities centered around the Mount Joy Amtrak Station and the central portion of the Borough. The roadways that are the boundaries of the study area were New Haven Street to the west, Jacob Street to the east, Frank Street to the north, and Columbia Avenue to the south. A map of the study area, along with study area facilities, is provided in **Figure 2**. A list of the study area, roadway and parking lot facilities, including their extents and ownership, is provided in **Table 1** on the following page.

Figure 2: Study Area Map





Mount Joy Borough

Established 1851 in Lancaster County, PA

Table 1: Study Area Roadway and Parking Facility Listing

#	Facility Name	Capacity (Stalls)	Ownership	Begin Location	End Location	Length (mi.)
1	Henry Street	23	Mount Joy	New Haven Street (SR 4002)	Marietta Ave (SR 772)	0.29
2	Market Street	65	Mount Joy	Columbia Ave	Frank Street	0.32
3	Main Street (230)	161	PennDOT	Manheim Street (SR 772)	Jacob Street	0.58
4	Donegal Street	71	Mount Joy	New Haven Street (SR 4002)	Marietta Ave (SR 772)	0.23
5	Delta Street	26	Mount Joy	Main Street (230)	Columbia Ave	0.12
6	Marietta Avenue (772)	26	PennDOT	Poplar Street	Main Street (SR 230)	0.31
7	Barbara Street	8	Mount Joy	Mount Joy Street	Sassafras Alley	0.16
8	High Street	21	Mount Joy	Appletree Alley	Sassafras Alley	0.08
9	Jacob Street	29	Mount Joy	Appletree Alley	Sassafras Alley	0.08
10	Northwest Parking Lot	60	Northwest	Near Mount Joy/ Barbara Intersection	Near Mount Joy/ Barbara Intersection	N/A
11	D.C. Gohn Parking Lot	32	D.C. Gohn Associates	Near Mount Joy/ Barbara Intersection	Near Mount Joy/ Barbara Intersection	N/A
12	Trinity Lutheran Church Parking Lot	100	Trinity Lutheran Church	"Weeping Alley"	"Weeping Alley"	N/A
13	Train Station Parking Lot (Market & Marietta)	32	PennDOT	Market Street	Marietta Ave (772)	N/A
14	Train Station Parking Lot (Delta & Henry)	19	Mount Joy	Delta Street/ Henry Street Intersection	Delta Street/ Henry Street Intersection	N/A
15	St. Mark's Church Parking Lot	132	Mount Joy/ St. Mark's Church	Between Appletree Alley and Mount Joy Street	Between Appletree Alley and Mount Joy Street	N/A
16	Hetrick Center Parking Lot	23	The Hetrick Center	Near Mount Joy/ Barbara Intersection	Near Mount Joy/ Barbara Intersection	N/A
17	Sassafras Alley Parking	25	Mount Joy	Barbara Street	High Street	N/A
18	R&R Automotive Lot	12	PennDOT	Delta Street/ Henry Street Intersection	Delta Street/ Henry Street Intersection	N/A
TOTALS		865				2.17

Mount Joy Parking Utilization Study

Roadway and Parking Facility Descriptions

A description of each study area facility is provided below, as well as a description of the surrounding area and any prevailing parking restrictions. Facility extents and existing parking restrictions are also provided in **Appendix A**.

Facility 1. Henry Street

Description: Henry Street is a two-lane, two-way local road running east-west within the study area limits between New Haven Street (SR 4002) and Marietta Avenue (SR 772).

Surrounding Area: The area around Henry Street is a mixture of train station, business, and residential land uses. Angled parking is partially available between New Haven Street (SR 4002) and Market Street.

Parking Restrictions: None.

Facility 2. Market Street

Description: Market Street is a two-lane, two-way local road running north-south within the study area limits between Columbia Avenue and Frank Street.

Surrounding Area: The area around Market Street, north of Henry Street, is a mixture of business and residential, while the area south of Henry Street is entirely residential. On-street parking is available along most of Market Street.

Parking Restrictions: No parking restrictions are present on the west side of Market Street between Appletree Alley and Main Street (SR 230), while the east side of Market Street in this section has 10-minute parking restrictions from Monday through Friday (8:00 A.M. – 5:00 P.M.) and on Saturday (8:00 A.M. – 12:00 P.M.) for the post office.

Facility 3. Main Street (SR 230)

Description: Main Street (SR 230) is a two-lane, two-way PennDOT minor arterial roadway running east-west within the study area limits between Manheim Street (SR 772) and Jacob Street.

Surrounding Area: The area around Main Street (SR 230) is mostly businesses with some residential areas mixed in throughout. On-street parking is available on the north side and south side of Main Street (SR 230), with parking stalls delineated via pavement markings.

Parking Restrictions: Two-hour parking restrictions are posted throughout Main Street (SR 230) within the study area. Parking restriction are in place Monday through Saturday from 8:00 A.M. – 8:00 P.M. In addition, there are four handicapped stalls available and two stalls with 30-minute parking restrictions. The 30-minute parking restrictions are located on the south side of Main Street (SR 230) between High Street and Jacob Street and is effective Monday through Saturday from 8:00 A.M. – 6:00 P.M.



Facility 4. Donegal Street

Description: Donegal Street is a two-lane, two-way local road running east-west with the study area limits between New Haven Street (SR 4002) and Marietta Avenue (SR 772).

Surrounding Area: The area around Donegal Street is entirely residential and on-street parking is available throughout all of Donegal Street within the study limits. Eight angled parking stalls are available on the north side of Donegal Street between Market Street & Marietta Avenue (SR 772), while the rest of the available parking is parallel parking.

Parking Restrictions: None.

Facility 5. Delta Street

Description: Delta Street is a two-lane, two-way local road running north-south with the study area limits between Main Street (SR 230) and Columbia Avenue.

Surrounding Area: The area around Delta Street between Henry Street and Main Street (SR 230) is business-oriented, as well as train station-oriented as it is located next to the Mount Joy Amtrak Station and parking areas. The area around Delta Street between Marietta Avenue (SR 772) and Columbia Avenue is residential and borders Memorial Park.

Parking Restrictions: None.

Facility 6. Marietta Avenue (SR 772)

Description: Marietta Avenue (SR 772) is a two-lane, two-way PennDOT minor arterial roadway running north-south with the study area limits between Poplar Street and Main Street (SR 230).

Surrounding Area: The area around Marietta Avenue (SR 772) north of Henry Street is a mixture of business and residential, while the area south of Henry Street and the railroad tracks is residential. On-street parking is sparse and limited.

Parking Restrictions: No parking is allowed along the west side of Marietta Avenue (SR 772) between Main Street (SR 230) and Market Street and no parking is allowed on the east side of Marietta Avenue (SR 772) between Henry Street and Poplar Street.

Facility 7. Barbara Street

Description: Barbara Street is a two-lane, two-way local road running north-south with the study area limits between Mount Joy Street and Sassafras Alley.

Surrounding Area: The area around Barbara Street is a mixture of business and residential and on-street parking is sparse and limited.

Mount Joy Parking Utilization Study

Parking Restrictions: No parking is allowed along the entire east side of Barbara Street within the study area, and no parking is allowed on the west side of Barbara Street between Appletree Alley and Main Street (SR 230).

Facility 8. High Street

Description: High Street is a two-lane, two-way local road running north-south with the study area limits between Appletree Alley and Sassafras Alley.

Surrounding Area: The area around High Street north of Main Street (SR 230) is residential, while the area south of Main Street (SR 230) is a mix of residential and business.

Parking Restrictions: None.

Facility 9. Jacob Street

Description: Jacob Street is a two-lane, two-way local road running north-south with the study area limits between Appletree Alley and Sassafras Alley.

Surrounding Area: The area around Jacob Street north of Main Street (SR 230) is residential, while the area south of Main Street (SR 230) is a mix of residential and business, as Harvey's Main Street Bar-BQ is located at the intersection of Main Street (SR 230) and Jacob Street. On-street parking is available along most of Jacob Street.

Parking Restrictions: No parking is allowed along the west side of Jacob Street between Appletree Alley and Main Street (SR 230).

Facility 10. Northwest Parking Lot

Description: The Northwest parking lot is two separate privately-owned paved parking lots located at the intersection of Mount Joy Street and Barbara Street. The capacity of the parking lot located immediately around the bank is 31 vehicles, while the parking lot to the east of the bank is 29 vehicles. The eastern parking lot can be viewed in **Figure 3**.

Surrounding Area: The immediate area around the bank is residential, but the parking lot is located close to Main Street (SR 230) and the businesses located there.

Parking Restrictions: Signs in both parking lots indicate that parking is for bank customers only. In addition, there is a single parking spot reserved for horse and buggy. The bank hours fluctuate throughout the week, but most days it is open from 8:30 A.M. – 4:00 P.M. On Fridays the bank is open from 8:30 A.M. – 6:00 P.M.



Figure 3: Parking Facility 10, Northwest, Eastern Parking Lot



Facility 11. D.C. Gohn Parking Lot

Description: The D.C. Gohn parking lot is a paved parking lot located on the south side of Mount Joy Street near the intersection of Barbara Street and Mount Joy Street.

Surrounding Area: The immediate area around the business is residential, but the parking lot is located close to Main Street (SR 230) and the businesses located there.

Parking Restrictions: Signs indicate that the parking area is private property only. The business hours for D.C. Gohn are from 7:00 A.M. – 4:00 P.M. Monday through Friday.

Facility 12. Trinity Lutheran Church Parking Lot

Description: The Trinity Lutheran Church parking lot is two separate paved parking lots located along Main Street (SR 230) between New Haven Street (SR 4002) and Comfort Alley. The parking lots are owned by Trinity Lutheran Church. The capacity of the parking lot located on the north side of Main Street (SR 230) is 63 vehicles, while the capacity of the parking lot located on the south side of Main Street (SR 230) is 37 vehicles.

Surrounding Area: Businesses and restaurants surround the parking lots.

Parking Restrictions: These parking lots are restricted to church parking only on Sundays from 2:30 A.M. – 12:00 P.M. All other days there is no parking from 2:30 A.M. – 8:00 A.M. Parking is available for the public at all other times.

Mount Joy Parking Utilization Study

Facility 13. Train Station Parking Lot (Between Market Street & Marietta Street)

Description: The train station parking lot located on the south side of Henry Street between Market Street and Marietta Avenue (SR 772) is a paved parking lot owned by PennDOT. The total capacity of the parking lot is 48 vehicles, but only 32 stalls were available during data collection due to ongoing Mount Joy Amtrak Station construction.

Surrounding Area: The parking lot immediately borders the Mount Joy Amtrak Station.

Parking Restrictions: There are two handicapped parking stalls available and parking is signed for train station users only.

Facility 14. Train Station Parking Lot (Delta Street/Henry Street Intersection)

Description: The train station parking lot located at the intersection of Henry Street and Delta Street is a brick parking lot owned by PennDOT. The capacity of the parking lot is 17 vehicles, with an additional two parking stalls available along Delta Street.

Surrounding Area: The parking lot is located near the Mount Joy Amtrak Station as well as various businesses along Main Street (SR 230).

Parking Restrictions: The two additional parking stalls are restricted to two-hour parking from 6:00 A.M. – 9:00 P.M. There are no parking restrictions for the main parking area and the lot is labeled as public parking.

Facility 15. St. Mark's United Methodist Church Parking Lot

Description: The St. Mark's United Methodist Church parking lot is a paved parking lot located on the north side of Appletree Alley between Market Street and Mount Joy Street and is co-owned by Mount Joy and St. Mark's United Methodist Church.

Surrounding Area: The immediate area around the parking lot is business-related, located behind various businesses along Main Street (SR 230).

Parking Restrictions: Parking restrictions are in place that separate lot users. 83 white-lined parking stalls are available for St. Mark's United Methodist Church only. Additionally, there are four white-lined stalls for handicapped users only. Yellow-lined parking stalls are public parking stalls and are available from 5:00 A.M. – 10:00 P.M. Monday through Friday and on Saturday from 5:00 A.M. – 5:00 P.M. All other times the parking is intended for St. Mark's United Methodist Church. There is a total of 49 yellow-lined parking stalls. The posted sign restrictions are seen in **Figure 4**.



Figure 4: Parking Facility 15, St. Mark's United Methodist Church, Parking Restrictions



Facility 16. Hetrick Center Parking Lot

Description: The Hetrick Center parking lot is a paved parking lot located at the intersection of Barbara Street and Appletree Alley, across the street from Northwest.

Surrounding Area: The immediate area around the business is residential, but the parking lot is located close to Main Street (SR 230) and the businesses located there.

Parking Restrictions: Signs indicate that the parking lot is for the Hetrick Center building only and that all others will be towed. There is one parking stall for handicapped users. The business hours for the Hetrick Center are from 8:00 A.M. – 9:00 P.M. Monday through Friday and from 8:00 A.M. – 2:00 P.M. on Saturday.

Facility 17. Sassafras Alley Parking Area

Description: The Sassafras Alley parking area is a gravel parking lot located on the south side of Sassafras Alley located between Barbara Street and High Street.

Surrounding Area: The parking lot is located behind various Main Street businesses.

Parking Restrictions: None.

Existing Study Area Conditions

Data Collection

A field visit to the study area was conducted to determine the existing parking demand by user group (train station-related, residential-related, and business-related) within each study area parking facility. Data collection took place on Friday, October 12, 2018 to capture parking demand representing peak business, residential, and train station interaction. The utilization of available parking for each study area parking facility was observed and recorded during the following observation periods:

- **Period 1:** 12:00 P.M. – 2:00 P.M. to determine the overlap in train station and business parking demand (minimal residential activity).
- **Period 2:** 4:30 P.M. – 6:30 P.M. to determine the overlap in residential parking, evening hour business parking, and train station parking demand.
- **Period 3:** 9:00 P.M. – 10:00 P.M. to isolate residential parking demand after most businesses are closed.

Multiple recordings took place during these three time periods to capture any change in the number of or the location of parked vehicles within the timeframes.

During each observation period, parking utilization was recorded on a percent full basis. Existing parking capacity was determined based on parking restriction conditions, pavement markings, parking lot stall counts, and assumed length of acceptable parking stall length for locations in which parking is permitted but pavement markings are not present (conservatively estimated at 25 feet/stall).

In addition to determining existing parking demand, existing parking restrictions (time-of-day restrictions, user group restrictions, etc.) were also recorded.

Parking Utilization

Flysheets incorporating the existing parking utilization were created for each of the 17 study area parking facilities listed in **Table 1**. These flysheets provide the existing parking capacity of each facility and existing parking demand broken up by time period and recording number. In addition, the flysheets incorporate the existing parking utilization by time period and recording number, as well as average utilization throughout the day. Observation notes are also provided. The flysheets have been provided under **Appendix A**.

A summary of the existing parking utilization is provided in **Table 2**. The average parking utilization for each time period is provided, as well as parking capacity and the user group(s) utilizing the facility based on field observations and parking demand.



Table 2: Existing Parking Facility Capacity and Utilization

	Facility Name	Capacity (Stalls)	Average Parking Utilization (%)			User Groups	
			Period 1	Period 2	Period 3	Primary	Secondary
1	Henry Street	23	18.8	13.0	30.4	Train Station	Business
2	Market Street	65	34.4	22.1	35.4	Business	Residential
3	Main Street (230)	161	51.8	42.7	44.7	Business	Residential
4	Donegal Street	71	40.4	50.7	64.1	Residential	-
5	Delta Street	26	44.9	64.4	65.4	Residential	Train Station
6	Marietta Avenue (772)	26	16.7	37.5	46.2	Residential	Business
7	Barbara Street	8	54.2	56.3	62.5	Business	Residential
8	High Street	21	46.0	67.9	83.3	Residential	-
9	Jacob Street	29	46.0	55.2	19.0	Business	Residential
10	Northwest Parking Lot	60	31.1	13.3	14.2	Business	-
11	D.C. Gohn Parking Lot	32	40.6	11.5	7.8	Business	-
12	Trinity Lutheran Church Parking Lot	100	20.0	21.0	32.0	Business	Train Station
13	Train Station Parking Lot (Market & Marietta)	32	99.0	45.8	3.1	Train Station	-
14	Train Station Parking Lot (Delta/Henry)	19	87.7	35.1	26.3	Train Station	-
15	St. Mark's Church Parking Lot	132	34.1	13.6	2.7	Business	Train Station
16	Hetrick Center Parking Lot	23	18.8	1.1	0.0	Business	-
17	Sassafras Alley Parking	25	41.3	45.0	48.0	Business	-

Field observation notes and an analysis of existing conditions for each parking facility is provided below:

Facility 1. Henry Street

Due to the ongoing Mount Joy train station construction project, parking along Henry Street was fairly limited. There were a few vehicles parked in the new parking area between New Haven Street (SR 4002) and Market Street, but the utilization remained low. The average utilization during the 12:00 P.M. – 2:00 P.M. collection time was 18.8% and decreased to 13.0% during the 4:30 P.M. – 6:30 P.M. collection time. During the 9:00 P.M. – 10:00 P.M. collection time, the average utilization increased

Mount Joy Parking Utilization Study

to 30.4%. Most of this utilization came as a result of construction parking. It can be anticipated that demand and utilization will dramatically increase once construction is complete. Parking demand and utilization for the train station parking lots are included separately.

Facility 2. Market Street

The parking demand along Market Street shifts at Henry Street due to the difference in areas north and south. The area along Market Street north of Henry Street is more commercial oriented, while the area south of Henry Street is residential. During the 12:00 P.M. – 2:00 P.M. collection time, the average utilization of Market Street was 34.4%, which decreased to 22.1% during the 4:30 P.M. – 6:30 P.M. collection time. The 9:00 P.M. – 10:00 P.M. collection time had an average utilization of 35.4%. North of Henry Street, parking utilization was spread out, with the highest demand occurring between Frank Street and Old Market Street. Due to the strict parking restrictions, not much utilization occurred along the east side of Market Street between Appletree Alley and Main Street (SR 230). Parking along Market Street between Frank Street and Henry Street appeared to be commercial and business use as turnover was frequent between each collection period. South of Henry Street there is little available parking between Henry Street and Marietta Avenue, but most of it was being utilized throughout the day. The highest parking capacity in this area is between Marietta Avenue (SR 772) and Columbia Avenue, with approximately 650 feet of parking available. Most of the utilization here occurred along the west side of Market Street. Parking along Market Street south of Henry Street appeared to be mostly residential as there was little vehicle turnover and the utilization remained the same within each collection period. Due to the limited available parking stalls within this area, utilization was spread out.

Facility 3. Main Street (SR 230)

Due to the presence of businesses and restaurants, as well as being the central street through the Borough, Main Street (SR 230) experienced a frequent turnover of vehicles. The average utilization during the 4:30 P.M. – 6:30 P.M. collection period dropped to 42.7%, which can be attributed to some non-restaurant businesses closing for the day. During the 9:00 P.M. – 10:00 P.M. collection time, the average utilization was 44.7% and the demand did not fluctuate much within this time period, as the two-hour parking restrictions ended at 8:00 P.M. Due to the frequent vehicle turnover and two hour parking restrictions in place for most of the day, it can be determined that the majority of demand along Main Street (SR 230) is business-related. Due to observations and the presence of a few residences along the facility, a small proportion of demand can be considered residential-related. The demand and utilization were higher along Main Street east of Marietta Avenue (SR 772) compared to west of Marietta Avenue (SR 772). This can be attributed to the higher number of businesses and restaurants open later in the evening, as well as fewer nearby parking options.

Facility 4. Donegal Street

Street parking is abundant along Donegal Street and there are no parking restrictions within this area. The average parking utilization increased throughout the day, from 40.4% during the 12:00 P.M. – 2:00 P.M. collection time to 50.7% during the 4:30 P.M. – 6:30 P.M collection time to 64.1% during



Mount Joy Borough

Established 1851 in Lancaster County, PA

the 9:00 P.M. – 10:00 P.M. collection time. Due to the parking utilization and location of the facility, it was determined that parking consisted of residential use. Parking utilization did not change much within each collection period and the same vehicles were observed throughout the day. The eight angled parking available on the north side of Donegal Street between Market Street & Marietta Avenue (SR 772) were observed to be residential-related, as it was noted that people were entering and leaving the nearby residences from this parking area.

Facility 5. Delta Street

Parking is only available along Delta Street between Marietta Avenue (SR 772) and Columbia Avenue. During the 12:00 P.M. – 2:00 P.M. collection time, the average parking utilization along the street was 44.9%, with the most utilization occurring along the west side of Delta Street between Marietta Avenue (SR 772) and Oak Alley, next to Memorial Park. The average parking utilization then increased and remained constant between the evening and night collection times, as the average utilization hovered around 65%. During these collection times, the demand and utilization along the west side of Delta Street between Marietta Avenue (SR 772) and Oak Alley decreased, while the street parking utilization increased along the rest of Delta Street. Due to this and the high average utilization during the 12:00 P.M. – 2:00 P.M. collection time, it is believed that a proportion of the utilization is train station-related, while the majority is residential-related. During the data collection, the presence of the same vehicles throughout the day was noted. The average utilization increasing along Delta Street during the evening hours also indicates that the majority of demand is residential-related, as people return home from work.

Facility 6. Marietta Avenue (SR 772)

Due to parking restrictions in place along Marietta Avenue (SR 772), parking within the study area is limited to street parking on the northern side of Marietta Avenue (SR 772) between Market Street and Poplar Street, and on the southern side of Marietta Avenue (SR 772) between Main Street (SR 230) and Henry Street. The parking between Main Street (SR 230) and Henry Street is limited to 12 parking stalls, while the parking between Market Street and Poplar Street is unmarked. The average parking utilization along Marietta Avenue (SR 772) increased throughout the day, from 16.7% during the afternoon to 46.2% during the night time period. Parking on the southern side of Marietta Avenue (SR 772) between Main Street (SR 230) and Henry Street was fairly utilized throughout the day and appeared to be a mixture of commercial and residential parking, as some of the same vehicles were noted throughout the day. Parking on the north side of Marietta Avenue (SR 772) between Market Street and Poplar Street was not heavily utilized but remained relatively consistent throughout the entire day. The parked vehicles were for residential use due to the location and presence throughout the day.

Facility 7. Barbara Street

Due to parking restrictions in place along Barbara Street, parking within the study area is limited to street parking on the west side of Barbara Street between Mount Joy Street and Appletree Alley, as

Mount Joy Parking Utilization Study

well as between Main Street (SR 230) and Sassafras Alley. The parking between Main Street (SR 230) and Sassafras Alley is limited to three parking stalls, which remained occupied by the same three vehicles during the entire day and appeared to be for the residential building at the same location. Since the only fluctuation between parking utilization occurred in the parking area between Mount Joy Street and Appletree Alley, the parking utilization did not experience much change. Between the three time periods, the average parking utilization fluctuated from 54.2% to 62.5%. Parking between Mount Joy Street and Appletree Alley appeared to be a mix of residential and business use, as there was frequent turnover of vehicles during the data collection iterations within the same time period.

Facility 8. High Street

Overall High Street experienced high demand and utilization throughout the day. During the 12:00 P.M. – 2:00 P.M. collection time the average parking utilization was 46.0% and the number of vehicles did not change at all along High Street within this collection time. Utilization increased dramatically during the evening and night collection times as a result of business-related and resident-related demand. The highest average utilization during these two periods was 83.3% during the 9:00 P.M. – 10:00 P.M. collection time. Parking between Appletree Alley and Main Street (SR 230) appeared to be residential as the same vehicles were noted throughout the day and the number remained consistent within each collection period. Parking between Main Street (SR 230) and Sassafras Alley contained vehicles parked for commercial/restaurant use, as the utilization in this section increased during the afternoon and evening collection periods. Notable businesses open during these time periods that would account for this demand include Mosby's Pub and CrafterHours.

Facility 9. Jacob Street

Parking between Appletree Alley and Main Street (SR 230) appeared to be residential as the same vehicles were noted throughout the day and the utilization remained consistently low for all three collection periods. Demand and utilization between Main Street (SR 230) and Sassafras Alley was higher due to the presence of additional restaurants and businesses, particularly Harvey's Main Street Bar-BQ. Employees for the restaurant were parked at the southern end of Jacob Street in between Sassafras Alley and the railroad tracks, in front of the closed bridge. Parking utilization within this section increased during the 4:30PM-6:30PM collection period to 55.2% on Jacob Street, with vehicles parking within the yellow "No Parking" sections on the south side of Main Street (SR 230). Parking was almost exclusively for the restaurant as observations were made of drivers parking and entering the restaurant. Utilization substantially dropped off during the 9:00PM-10:00PM collection period to 19.0% on Jacob Street as the local businesses closed for the night. Harvey's Main Street Bar-BQ closed at 9:00PM. Utilization at this time period can be attributed to resident-related demand as well as employees of the restaurant.

Facility 10. Northwest Parking Lot

While the Northwest parking lot contains two separate parking areas, analysis was done breaking up the parking lot into three sections: The parking area to the east of the drive-thru section of the bank, the parking area south of the bank, and the parking area east of the bank. The drive-thru parking area



experienced little utilization during business hours, but parking was utilized during the 9:00 P.M. – 10:00 P.M. collection period after the bank closed. This utilization can be attributed to business-related demand. The parking area south of the bank experienced high utilization during business hours, as most of the stalls were occupied during the 12:00 P.M. – 2:00 P.M. collection period. The 4:30 P.M. – 6:30 P.M. collection period saw a steady decline in utilization as customer demand waned and the bank closing time arrived. During this time period it was observed that there were vehicles parking in the northern parking lot of the Northwest parking lot on the south side of Appletree Alley, parallel to the southern parking lot on the north side of Appletree Alley. The parking area east of the bank saw consistent demand and utilization throughout all three collection times. While the utilization during the 12:00 P.M. – 2:00 P.M. and 4:30 P.M. – 6:30 P.M. collection times can be attributed to bank parking, the utilization during the 9:00 P.M. – 10:00 P.M. collection time can be attributed to business-related demand for the nearby restaurants and evening activities. Overall the bank parking lot saw little utilization throughout the day, as the highest average utilization was 31.1%, which occurred during the 12:00 P.M. – 2:00 P.M. collection time.

Facility 11. D.C. Gohn Parking Lot

During the 12:00 P.M. - 2:00 P.M. collection period, D.C. Gohn was open and all parking was for business use. During this time, approximately 40.6% of the available parking was being utilized. During the 4:30 P.M. – 6:30 P.M. collection period, the utilization of the parking lot decreased dramatically as the business closed, with an average utilization of 11.5%. This utilization dropped even further during the 9:00 P.M. – 10:00 P.M. collection period, as the average utilization reached only 7.8%. Due to the presence of private property signs, this parking lot is not highly utilized during off-business hours.

Facility 12. Trinity Lutheran Church Parking Lot

While the Trinity Lutheran Church parking lot contains two separate parking areas, analysis was done breaking up the parking lot into three sections: The parking area between the church and Appletree Alley, the parking area east of the church, and the parking area south of Main Street (SR 230) along Weeping Alley. The parking area between the church and Appletree Alley had low demand and utilization during all three collection periods, but the other two parking areas experienced demand that became heavier at times. The parking area east of the church had consistent demand and utilization throughout the day, with the highest utilization occurring during the 12:00 P.M. – 2:00 P.M. collection period. Parking utilization in this area appeared to be exclusively for church parking. The southern parking area experienced low utilization during the 12:00 P.M. – 2:00 P.M. collection time, but it increased dramatically during the evening and night collection times as the utilization jumped to 72.0% during the 9:00 P.M. – 10:00 P.M. collection time. This increase in utilization can be attributed to the nearby restaurants, such as Beanie's Bar & Grill and Joy's Tavern, that are open until 2:00 A.M. It was observed that vehicles parking in this area were visiting these restaurants. Overall, the average utilization percentage for the entire Trinity Church parking area was very low during all

Mount Joy Parking Utilization Study

three collection periods, with the highest being 32.0% during the 9:00 P.M. – 10:00 P.M. collection time.

Facility 13. Train Station Parking Lot (Between Market Street & Marietta Street)

During the 12:00 P.M. – 2:00 P.M. collection period, this parking lot experienced an average parking utilization of 99.0% as nearly every stall was occupied. Utilization dropped dramatically during the 4:30 P.M. – 6:30 P.M. collection period, as the average parking utilization dropped to 45.8%. This reduction can be attributed to the train arrivals from Harrisburg and commuters returning home from work via the train. The utilization dropped even further during the 9:00 P.M. – 10:00 P.M. collection period as the parking lot was nearly empty. The average utilization during this time period was 3.1%. Due to the low utilization for the parking lot during the evening and evening collection periods, it can be determined that all parking is from train station parking demand.

Facility 14. Train Station Parking Lot (Delta Street/Henry Street Intersection)

During the 12:00 P.M. – 2:00 P.M. collection period, this parking lot experienced an average parking utilization of 87.7% as nearly every stall was occupied, and little fluctuation occurred during this time period. Similar to the other train station parking lot, utilization dropped dramatically during the 4:30 P.M. – 6:30 P.M. collection period, as the average parking utilization dropped to 35.1%. This reduction can also be attributed to the train arrivals from Harrisburg and commuters returning home from work via the train. The utilization dropped even further during the 9:00 P.M. – 10:00 P.M. collection period as the average utilization dropped to 26.3%. Even though the parking lot is labeled as "Public Parking", utilization indicates that the majority of existing parking demand is train station-related. The remaining utilization during the 9:00 P.M. – 10:00 P.M. collection period and fluctuation in the demand during the 12:00 P.M. – 2:00 P.M. collection period can be attributed to business-related demand.

Facility 15. St. Mark's United Methodist Church Parking Lot

During the 12:00 P.M. - 2:00 P.M. collection period, the parking lot was fairly utilized, as the average utilization for the entire parking lot averaged 34.1%. However, approximately 48% of the public parking stalls (yellow-lined) were utilized. Utilization decreased dramatically over the rest of the day as only 13.6% of the parking lot was utilized during the 4:30 P.M. – 6:30 P.M. collection period and only 2.7% of the parking was utilized during the 9:00 P.M. – 10:00 P.M. collection period. The sharp utilization drop-off between the 12:00 P.M. – 2:00 P.M. and 4:30 P.M. – 6:30 P.M. collection periods indicate that parking is being utilized for business and train station purposes, whether that is employees working within the Borough of Mount Joy or utilizing the train station. Comparing the utilization to the train station parking lots provides an indication that there is a heavier proportion of business-related demand compared to train station-related demand, as the utilization and demand in this parking lot remained higher in the evening compared to the train station parking lots. Demand between public parking and church parking remained relatively equal throughout the day, although the utilization of the public parking stalls (yellow-lined) was higher than the utilization of the church parking (white-lined) due to the additional capacity of the church parking.



Facility 16. Hetrick Center Parking Lot

The parking lot had a low utilization rate during the 12:00 P.M. – 2:00 P.M., with an average utilization rate of 18.8%. This continued to drop during the 4:30 P.M. – 6:30 P.M. collection period and had a utilization rate of 0% during the 9:00 P.M. – 10:00 P.M. collection period. Very few vehicles were parked in the parking stalls during business hours and no vehicles were parked after business hours at night. All demand can be attributed to the Hetrick Center business. Additional capacity was consistently available throughout the entire day.

Facility 17. Sassafras Alley Parking Area

Parking utilization remained relatively consistent throughout the day, as the average utilization fluctuated from 40% to 50% with additional capacity always available. The 12:00 P.M. - 2:00 P.M. collection time saw little change over the collection period as the vehicles appeared to belong to employees of local businesses in the immediate area. The 4:30 P.M. – 6:30 P.M. collection time saw vehicle turnover as businesses closed and people started arriving to the nearby restaurants. This remained true for the 9:00 P.M. – 10:00 P.M. time period. It was observed that vehicles were parking at this facility for Rosie's Tavola restaurant.

Parking Distribution

To develop the future parking utilization, the existing parking utilization values were grown at an annual growth rate, which differed depending on the user group. To address the different user groups (train station-related parking, business-related parking, and residential-related parking), the existing parking utilization was broken up by the three user groups and an average existing parking distribution was generated for the study area.

An average existing parking distribution was generated for each of the study area facilities for each of the three user groups (train station-related parking, business-related parking, and residential-related parking). The parking distributions were derived based on the parking capacity of each study area facility and the average parking utilization. This information coupled with field observations and notes, were used to distribute which user group most likely was parking in which parking spaces, per parking facility, per time of day. **Table 3** provides the existing parking distribution for train station-related (Train), business-related (Bus.), and residential-related (Res.) parking user groups.

Mount Joy Parking Utilization Study

Table 3: Existing Parking Facility Distribution by User Group (2018) – Number of Parking Stalls Occupied on Average

Facility Name		12:00 P.M. – 2:00 P.M.			4:30 P.M. – 6:30 P.M.			9:00 P.M. – 10:00 P.M.		
		Train	Bus.	Res.	Train	Bus.	Res.	Train	Bus.	Res.
1	Henry Street	4	0	0	2	1	0	1	6	0
2	Market Street	2	9	11	1	6	7	0	9	14
3	Main Street (SR 230)	0	79	4	0	55	14	0	50	22
4	Donegal Street	1	0	27	0	0	36	0	0	46
5	Delta Street	4	0	8	2	0	15	0	0	17
6	Marietta Avenue (SR 772)	0	1	3	0	2	8	0	1	11
7	Barbara Street	0	2	3	0	2	3	0	2	4
8	High Street	0	2	7	0	5	9	0	8	10
9	Jacob Street	0	11	3	0	13	3	0	4	1
10	Northwest Parking Lot	0	19	0	0	8	0	0	9	0
11	D.C. Gohn Parking Lot	0	13	0	0	4	0	0	2	0
12	Trinity Lutheran Church Parking Lot	4	16	0	2	19	0	0	32	0
13	Train Station Parking Lot (Market & Marietta)	32	0	0	15	0	0	1	0	0
14	Train Station Parking Lot (Delta/Henry)	15	2	0	5	2	0	3	2	0
15	St. Mark's Church Parking Lot	14	32	0	4	14	0	0	3	0
16	Hetrick Center Parking Lot	0	4	0	0	0	0	0	0	0
17	Sassafras Alley Parking Lot	0	10	0	0	11	0	0	12	0
TOTALS		76	200	66	29	143	95	5	141	123

Future Study Area Conditions

The following future conditions within the study area were accounted for in the analysis. The conditions are expected to either provide additional parking capacity or will likely alter the use of parking facilities in the future.

- Reconstruction of the existing train station parking lot along Henry Street (south side of road) between South Market Street and Marietta Avenue (SR 772). This increased the parking capacity to a total of 54 parking stalls.
- Construction of a new train station parking lot along Henry Street (south side of road) between South Market Street and New Haven Street (SR 772). The full capacity of the new parking lot is 62 parking stalls, an increase of 23 parking stalls.



Mount Joy Borough

Established 1851 in Lancaster County, PA

- Relocation of the Mount Joy Amtrak Station platform and platform access points. The current platform and platform access points are located along Henry Street between South Market Street and Marietta Avenue (SR 772). The relocated train station platform will be situated along Henry Street just west of South Market Street, with platform access provided on the east and west sides of South Market Street. A shift in parking demand was assumed due to this change. A rendering of the relocated train station platform and platform access is provided in **Figure 5**.

Figure 5: Rendering of New Station's Parking, Access Points, and Platforms



- Redevelopment of R&R Automotive parcel at the intersection of Delta Street and Henry Street for surface parking. This surface lot will provide approximately 12 parking stalls.

Completion of the train station parking lot construction and redevelopment of the R&R Automotive parcel adds an additional 73 parking stalls and increases the total number of available parking stalls in the study area from 853 to 926 stalls.

Future Parking Demand

Future year parking demand was projected by applying future growth for both train station parking demand, as well as background parking demand growth for the Borough of Mount Joy to account for latent growth in and around Mount Joy. The Mount Joy Amtrak Station ridership growth trend was calculated using yearly station ridership statistics between 2015 and 2016, with an average annual growth rate of 5% calculated. Future year parking demand for background growth was projected by applying the annual growth rate from the PennDOT Bureau of Planning and Research, Growth Factors for August 2018 to July 2019 table, for an urban non-interstate roadway within Lancaster County. For the Borough of Mount Joy background parking demand growth, an annual growth rate of 1.14% was used.

Mount Joy Parking Utilization Study

An analysis period of eight (8) years was used for the future parking utilization analysis as it represented the point in which the future year study area capacity/demand ratio equaled the existing study area capacity/demand ratio. Therefore, the subsequent analysis performed is for future year 2026 conditions.

The existing parking distribution values from **Table 3** were grown and projected to 2026 using the previously presented growth rates and then redistributed to the various parking facilities to account for the relocation of the new Mount Joy Amtrak Station and access points. It was assumed that train station-related demand would first occupy and fill the new train station parking lots along Henry Street between South Market Street and New Haven Street (SR 772) due to the close proximity to the relocated train station and easier rider access. The secondary study area facility to be occupied was assumed to be the reconstructed existing train station parking lot along Henry Street between Market Street and Marietta Avenue (SR 772) (Facility 13) due to its proximity to the train station and high capacity. Any additional train station-related parking demand would then utilize the existing train station parking lot at the intersection of Delta Street & Henry Street (Facility 14) and the new R&R Automotive Parking Lot (Facility 18).

Table 4 provides the future (2026) parking distribution for train station-related (Train), business-related (Bus.), and residential-related (Res.) user groups.

Table 4: Future Parking Facility Distribution by User Group (2026) – Number of Parking Stalls Occupied on Average

Facility Name		12:00 – 2:00 P.M.			4:30 – 6:30 P.M.			9:00 – 10:00 P.M.		
		Train	Bus.	Res.	Train	Bus.	Res.	Train	Bus.	Res.
1	Henry Street	62	0	0	29	0	0	10	0	0
2	Market Street	0	10	13	0	7	9	0	10	13
3	Main Street (SR 230)	0	87	5	0	72	4	0	75	4
4	Donegal Street	0	0	30	0	0	39	0	0	47
5	Delta Street	0	0	10	0	2	17	0	0	13
6	Marietta Avenue (SR 772)	0	1	3	0	3	7	0	4	9
7	Barbara Street	0	2	3	0	2	3	0	2	3
8	High Street	0	3	8	0	4	12	0	5	14
9	Jacob Street	0	12	3	0	14	4	0	5	1
10	Northwest Parking Lot	0	20	0	0	9	0	0	9	0
11	D.C. Gohn Parking Lot	0	14	0	0	4	0	0	3	0
12	Trinity Lutheran Church Parking Lot	0	19	0	0	24	0	0	28	0
13	Train Station Parking Lot (Market & Marietta)	32	0	0	22	0	0	1	0	0
14	Train Station Parking Lot (Delta/Henry)	0	2	0	0	1	0	0	1	0
15	St. Mark's Church Parking Lot	0	38	0	0	15	0	0	3	0



Mount Joy Borough

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Facility Name		12:00 – 2:00 P.M.			4:30 – 6:30 P.M.			9:00 – 10:00 P.M.		
		Train	Bus.	Res.	Train	Bus.	Res.	Train	Bus.	Res.
16	Hetrick Center Parking Lot	0	5	0	0	0	0	0	0	0
17	Sassafras Alley Parking Lot	0	11	0	0	12	0	0	13	0
18	R&R Automotive Parking Lot	0	0	0	0	0	0	0	0	0
TOTALS		94	224	75	51	169	95	11	157	105

Future Parking Utilization

The future parking utilization percentages for each of the study area facilities under the three data collection periods is provided in **Table 5**. The existing parking utilization percentages are also provided for comparison.

Table 5: Future Parking Facility Distribution by User Group (2026) – Percentage of Parking Stalls Occupied on Average

Facility Name		Average Utilization (%)					
		12:00 – 2:00 P.M.		4:30 – 6:30 P.M.		9:00 – 10:00 P.M.	
		2018	2026	2018	2026	2018	2026
1	Henry Street	18.8	100	13.0	46.8	30.4	16.8
	(1A) West of Weeping Alley	18.8	100	13.0	17.4	30.4	43.5
	(1B) East of Weeping Alley	0.0	100	0.0	64.1	0.0	0.0
2	Market Street	34.4	39.0	22.1	24.6	35.4	38.8
	(2A) North of Main Street (SR 230)	31.7	34.7	9.5	10.4	57.1	62.6
	(2B) South of Main Street (SR 230)	35.6	40.4	28.0	31.2	25.0	27.4
3	Main Street (SR 230)	51.8	56.7	42.7	46.8	44.7	49.0
	(3A) West of Marietta Ave (SR 772)	46.5	50.9	33.3	36.5	26.9	29.5
	(3B) East of Marietta Ave (SR 772)	58.6	64.2	65.7	60.2	67.9	74.4
4	Donegal Street	40.4	45.1	50.7	55.5	64.1	70.2
5	Delta Street	44.9	54.5	64.4	73.1	65.4	71.6
6	Marietta Avenue (SR 772)	16.7	18.3	37.5	41.1	46.2	50.6
	(6A) North of Donegal Street	16.7	18.3	39.6	43.4	41.7	45.7
	(6B) South of Donegal Street	16.7	18.3	35.7	39.1	50.0	54.8
7	Barbara Street	54.2	59.4	56.3	61.7	62.5	68.5
8	High Street	46.0	50.4	67.9	74.4	83.3	91.3
9	Jacob Street	46.0	50.4	55.2	60.5	19.0	20.8
10	Northwest Parking Lot	31.1	34.1	13.3	14.6	14.2	15.6
11	D.C. Gohn Parking Lot	40.6	44.5	11.5	12.6	7.8	8.5
12	Trinity Lutheran Church Parking Lot	20.0	23.5	21.0	23.8	32.0	35.1
13	Train Station Parking Lot (Market & Marietta)	99.0	98.0	45.8	40.1	3.1	2.7

Mount Joy Parking Utilization Study

Facility Name		Average Utilization (%)					
		12:00 – 2:00 P.M.		4:30 – 6:30 P.M.		9:00 – 10:00 P.M.	
		2018	2026	2018	2026	2018	2026
14	Train Station Parking Lot (Delta/Henry)	87.7	90.0	35.1	48.2	26.3	35.1
15	St. Mark's Church Parking Lot	34.1	41.4	13.6	16.0	2.7	3.1
16	Hetrick Center Parking Lot	18.8	20.6	1.1	1.2	0.0	0.0
17	Sassafras Alley Parking	41.3	45.2	45.0	49.3	48.0	52.6
18	R&R Automotive Parking lot	0.0	0.0	0.0	0.0	0.0	8.3
TOTALS		40.1	48.0	31.3	35.5	31.5	32.4

Under 2026 conditions, it is expected that the 12:00 P.M. – 2:00 P.M. analysis period will experience a higher parking utilization growth compared to the other two time periods due to the high increase in train station-related parking demand for this time period. The 4:30 P.M. – 6:30 P.M. and 9:00 P.M. – 10:00 P.M. time periods remain at a relatively equal utilization percentage under 2026 conditions. An analysis of 2026 conditions for each individual parking facility is provided below:

Facility 1. Henry Street

Due to the close proximity to the relocated Mount Joy Amtrak Station, the parking demand along Henry Street was assumed to be exclusively train station-related and it was assumed that train station-related demand would first occupy and fill the new train station parking lot along Henry Street between South Market Street and New Haven Street (SR 772) due to the close proximity to the relocated train station and easier rider access. Under 2026 conditions, the average utilization at this study area facility greatly increased. The average utilization during the 12:00 P.M. – 2:00 P.M. collection period increased 81.2% and the average utilization increased 33.8% during the 4:30 P.M. – 6:30 P.M. collection period. The 9:00 P.M. – 10:00 P.M. collection period saw the average utilization decrease 13.6% under the future conditions as a result of the additional capacity available in the future conditions.

Facility 2. Market Street

During the data collection period, it was observed that the parking demand along Market Street consisted of residential and business-related demand. The background parking demand growth for the Borough of Mount Joy was used to grow the parking demand for the future analysis. Under 2026 conditions, parking utilization along Delta Street increased throughout the three data collection periods, with an average parking utilization between 24.6% and 39.0%. The average utilization during the 12:00 P.M. – 2:00 P.M. collection period increased 4.6% and the average utilization increased 2.5% during the 4:30 P.M. – 6:30 P.M. collection period. The 9:00 P.M. – 10:00 P.M. collection period saw the average utilization increase 3.4% under the future conditions.



Facility 3. Main Street (SR 230)

During the data collection period, it was observed that the parking demand along Main Street (SR 230) consisted of residential and business-related demand. Growing the existing parking demand to account for future growth caused a slight growth in the parking demand along Main Street (SR 230). The average utilization during the 12:00 P.M. – 2:00 P.M. collection period increased 4.9% and the average utilization increased 4.1% during the 4:30 P.M. – 6:30 P.M. collection period. The 9:00 P.M. – 10:00 P.M. collection period saw the average utilization increase 4.3% under the future conditions.

Facility 4. Donegal Street

Donegal Street was determined to be utilized for residential use based on the surrounding area and observations from the field visit. Growing the existing parking demand to account for future growth caused a slight growth in the parking demand along Donegal Street. The average utilization during the 12:00 P.M. – 2:00 P.M. collection period increased 4.7% and the average utilization increased 4.8% during the 4:30 P.M. – 6:30 P.M. collection period. The 9:00 P.M. – 10:00 P.M. collection period saw the average utilization increase 6.1% under the future conditions.

Facility 5. Delta Street

During the data collection period, it was observed that the vast majority of the parking demand along Delta Street was residential-related. The background parking demand growth for the Borough of Mount Joy was used to grow the parking demand for the future analysis. Under 2026 conditions, parking utilization along Delta Street increased throughout the three data collection periods. Under 2026 conditions the 12:00 P.M. – 2:00 P.M. collection period saw a 9.6% utilization increase as a result of the background parking demand growth. The 4:30 P.M. – 6:30 P.M. and 9:00 P.M. – 10:00 P.M. collection periods saw an average utilization increase of 8.7% and 6.2%, respectively.

Facility 6. Marietta Avenue (SR 772)

Utilization along Marietta Avenue (SR 772) was observed to consist of business and residential users during the data collection periods. Under 2026 conditions, the demand increased steadily throughout the day. The average parking utilization increased 1.6% during the 12:00 P.M. – 2:00 P.M. collection period and 3.6% during the 4:30 P.M. – 6:30 P.M. collection period. The average utilization increased during the 9:00 P.M. – 10:00 P.M. collection period by 4.4%.

Facility 7. Barbara Street

Barbara Street was determined to be utilized for residential and business use based on field observations and the surrounding area. As a result, the parking growth within this parking facility was increased using the background parking demand growth for the Borough of Mount Joy. Under 2026 conditions parking utilization increased, with the average parking utilization increasing 5.2% during the 12:00 P.M. – 2:00 P.M. collection period. The 4:30 P.M. – 6:30 P.M. and 9:00 P.M. – 10:00 P.M. collection periods saw an average utilization increase of 5.4% and 6.0%, respectively.

Mount Joy Parking Utilization Study

Facility 8. High Street

Similar to Barbara Street, High Street was also determined to be utilized for residential and business use based on field observations recorded. The background parking demand growth for the Borough of Mount Joy was used to grow the parking demand at this parking facility. Under 2026 conditions parking utilization increased, with the average parking utilization increasing 4.4% during the 12:00 P.M. – 2:00 P.M. collection period. The 4:30 P.M. – 6:30 P.M. and 9:00 P.M. – 10:00 P.M. collection periods saw an average utilization increase of 6.5% and 8.0%, respectively.

Facility 9. Jacob Street

Utilization along Jacob Street was observed to consist of business and residential users during the data collection period. The background parking demand growth for the Borough of Mount Joy was used to grow the parking demand at this parking facility. Under 2026 conditions, the parking utilization increased 4.4% during the 12:00 P.M. – 2:00 P.M. collection period and 5.3% during the 4:30 P.M. – 6:30 P.M. collection period. The average parking utilization increased during the 9:00 P.M. – 10:00 P.M. collection period by 1.8%.

Facility 10. Northwest Parking Lot

Under 2026 conditions, parking utilization did not dramatically increase at the Northwest parking lot. The 12:00 P.M. – 2:00 P.M. collection period saw a parking utilization increase of 3.0% as a result of the background parking demand growth. This utilization can be attributed to business-related demand due to the period taking place during bank business hours. The 4:30 P.M. – 6:30 P.M. and 9:00 P.M. – 10:00 P.M. collection periods saw an average utilization increase of 1.3% and 1.4%, respectively. As a result of the low utilization at this study area facility throughout the day, this parking area serves as an opportunity to relieve demand at other parking facilities within the Borough.

Facility 11. D.C. Gohn Parking Lot

All parking demand at the D.C. Gohn parking lot was assumed to be business-related due to the parking lot belonging to a local business. Under 2026 conditions the 12:00 P.M. – 2:00 P.M. collection period saw a parking utilization increase of 3.9% as a result of the background parking demand growth. The 4:30 P.M. – 6:30 P.M. and 9:00 P.M. – 10:00 P.M. collection periods saw an average utilization increase of 1.1% and 0.7%, respectively. As a result of the low utilization at this study area facility throughout the day, this parking area also serves as an opportunity to relieve demand at other parking facilities within the Borough.

Facility 12. Trinity Lutheran Church Parking Lot

Similar to the other parking lots, parking utilization at the Trinity Lutheran Church parking lot did not heavily increase under the future conditions. As this parking lot is a private parking area with restrictions in place, it was assumed that all parking demand was business-related. Under 2026 conditions the average parking utilization ranged between 23.5% during the 12:00 P.M. – 2:00 P.M. collection period and 35.1% during the 9:00 P.M. – 10:00 P.M. collection period. The parking



utilization increased 3.5%, 2.8%, and 3.1% during the 12:00 P.M. – 2:00 P.M., 4:30 – 6:30 P.M., and 9:00 – 10:00 P.M. collection times, respectively.

Facility 13. Train Station Parking Lot (Between Market Street & Marietta Avenue)

Due to field observations and the close proximity to the Mount Joy Amtrak station, it was assumed that all parking demand at the parking lot between Market Street & Marietta Avenue was train station-related. As a result of the additional parking along Henry Street and the R&R Automotive parking lot, the demand at the train station parking lot between Market Street and Marietta Avenue decreased slightly under future conditions. Under 2026 conditions the average utilization during the 12:00 P.M. – 2:00 P.M. collection period decreased 1.0% and the average utilization decreased 5.7% during the 4:30 P.M. – 6:30 P.M. collection period. The 9:00 P.M. – 10:00 P.M. collection period saw the average utilization decrease 0.4% under the future conditions.

Facility 14. Train Station Parking Lot (Delta Street/Henry Street Intersection)

The parking lot at the Delta Street/Henry Street intersection was assumed to consist solely of train station-related parking demand due to the field observations recorded during the data collection period and close proximity to the Mount Joy Amtrak station. Under 2026 conditions the average utilization during the 12:00 P.M. – 2:00 P.M. collection period saw a slight increase in parking utilization by 2.3% and the average utilization increased 13.1% during the 4:30 P.M. – 6:30 P.M. collection period. The 9:00 P.M. – 10:00 P.M. collection period saw the average utilization increase 8.8% under the future conditions.

Facility 15. St. Mark's United Methodist Church Parking Lot

The St. Mark's United Methodist Church parking lot was determined to be utilized for business use based on field observations and the surrounding area. As a result, the parking growth within this parking facility was increased using the background parking demand growth for the Borough of Mount Joy. Under 2026 conditions, parking utilization in the parking lot increased throughout the three data collection periods. The 12:00 P.M. – 2:00 P.M. and 4:30 P.M. – 6:30 P.M. collection periods saw an increase in average utilization of 7.3% and 2.4%, respectively. The average parking utilization during the 9:00 P.M. – 10:00 P.M. collection period saw a slight increase in parking utilization by 0.4%. As a result of the low utilization at this study area facility throughout the day and high capacity, this parking area also serves as an opportunity to relieve demand at other parking facilities within the Borough, particularly train station-related demand.

Facility 16. Hetrick Center Parking Lot

All parking demand at the Hetrick Center parking lot was assumed to be business-related due to the parking lot belonging to a local business. Under 2026 conditions the 12:00 P.M. – 2:00 P.M. collection period saw a 1.8% increase in parking utilization as a result of the background parking demand growth. The 4:30 P.M. – 6:30 P.M. and 9:00 P.M. – 10:00 P.M. collection periods saw an average utilization

Mount Joy Parking Utilization Study

increase of 0.1% and 0.0%, respectively. All demand can be attributed to the Hetrick Center business. As a result of the low utilization at this study area facility throughout the day, this parking area also serves as an opportunity to relieve demand at other parking facilities within the Borough.

Facility 17. Sassafras Alley Parking Area

The demand at the Sassafras Alley parking area was assumed to be business-related based on the close proximity to nearby businesses and field observations indicating vehicles were parking for Rosie's Tavola restaurant. Under 2026 conditions the 12:00 P.M. – 2:00 P.M. collection period saw a 3.9% utilization increase as a result of the background parking demand growth. The 4:30 P.M. – 6:30 P.M. and 9:00 P.M. – 10:00 P.M. collection periods saw an average utilization increase of 4.3% and 4.6%, respectively.

Facility 18. R&R Automotive Parking Lot

It was assumed that the R&R Automotive parking lot demand would consist mostly of train station-related demand due to the close proximity to the Mount Joy Amtrak station and other train station parking facilities. Due to the additional parking capacity being constructed within this area, no parking demand was found for this study area facility under 2026 conditions. Assuming a constant train station demand growth rate, however, it can be anticipated that demand and utilization at this study facility will increase dramatically. Similar to the train station parking lot at the Delta Street/Henry Street intersection, it was assumed that this parking facility would be used for business-related demand during the evening hours.

Existing & Future Parking Utilization Analysis Findings

Existing Parking Utilization

Based on the findings of the existing parking utilization analysis, at no point during any of the three time periods were any parking area facilities completely occupied. Under existing conditions, the majority of parking facilities had an average utilization of less than 50%. While certain facilities experience heavier demand than others at different points in the day, there is still parking available to satisfy current demand. A breakdown of the parking facilities experiencing the highest utilizations during each of the three study periods under existing conditions is provided below.

During the 12:00 P.M. – 2:00 P.M. time period, the following parking facilities experienced an average utilization greater than or equal to 50%:

- Facility 3: Main Street (SR 230) – 51.8% utilization
- Facility 7: Barbara Street – 54.2% utilization
- Facility 13: Train Station Parking Lot (Market Street & Marietta Avenue) – 99.0% utilization
- Facility 14: Train Station Parking Lot (Delta Street & Henry Street) – 87.7% utilization



Mount Joy Borough

Established 1851 in Lancaster County, PA

Due to local residents commuting to work via train, the highest utilization for any parking facility at any point in the day took place at facilities 13 and 14 (the train station parking lots) during this time period. While Main Street (SR 230) experienced an average utilization of 51.8% during this time period, the eastern portion of the facility (between Marietta Avenue and Jacob Street) experienced the heavier demand, as it averaged a parking utilization of 58.6%, while the western portion of the facility (between New Haven Street and Marietta Avenue) averaged a parking utilization of 46.5%. The higher utilization along Barbara Street is a result of the small parking capacity along this facility, as parking is only available on the western side of the road between Mount Joy Street and Appletree Alley, and between Main Street (SR 230) and Sassafras Alley.

During the 4:30 P.M. – 6:30 P.M. time period, the following parking facilities experienced an average utilization greater than or equal to 50%:

- Facility 3: Main Street (East of Marietta Avenue) – 65.7% utilization
- Facility 4: Donegal Street – 50.7% utilization
- Facility 5: Delta Street – 64.4% utilization
- Facility 7: Barbara Street – 56.3% utilization
- Facility 8: High Street – 67.9% utilization
- Facility 9: Jacob Street – 55.2% utilization

While Facility 3 (Main Street – East of Marietta Avenue) and Facility 7 (Barbara Street) remained at an average utilization over 50.0% from the 12:00 P.M. – 2:00 P.M. collection period, Facilities 13 and 14 (the train station parking lots) did not as local residents returned from work. As a result of the end of the work day, parking facilities located along businesses (Facility 9) and residential areas (Facilities 4, 5, and 7) increased. Even with this increase in traffic during this time period, parking is widely available at these parking facilities and across the study area. During this time period the eastern portion of the study area experiences the highest utilization, particularly the area surrounding Main Street (SR 230) between Marietta Avenue (SR 772) and Jacob Street.

During the 9:00 P.M. – 10:00 P.M. time period, the following parking facilities experienced an average utilization greater than or equal to 50%:

- Facility 2: Market Street (North of Main Street) – 57.1% utilization
- Facility 3: Main Street (East of Marietta Avenue) – 67.9% utilization
- Facility 4: Donegal Street – 64.1% utilization
- Facility 5: Delta Street – 65.4% utilization
- Facility 6: Marietta Avenue (South of Donegal Street) – 50.0% utilization
- Facility 7: Barbara Street – 62.5% utilization
- Facility 8: High Street – 83.3% utilization

All parking facilities with a utilization of 50.0% or greater from the 4:30 P.M. – 6:30 P.M. collection period are also included in this time period, with the exception being Facility 9 (Jacob Street). All facilities, with

Mount Joy Parking Utilization Study

the exception of Facility 7 (Barbara Street) also experience a higher parking utilization during this time period compared to the 4:30 P.M. – 6:30 P.M. time period. In addition, Facilities 2 (Market Street) and 6 (Marietta Avenue) also experience a parking utilization of 50.0% or greater during this time period. The northern portion of Market Street (between Main Street and Frank Street) experiences the highest utilization at this facility, with the highest utilization occurring on both sides of Market Street between Frank Street and Old Market Street. This high utilization can be attributed to Bube's Brewery, which is located in this area. The parking utilization increase at Facility 6 (Marietta Avenue) can be attributed to residents between Donegal Street and Poplar Street returning home for the evening.

Future Parking Utilization

As a result of the latent background Borough growth and train station ridership growth, parking utilization within the study area increased, even with the increased parking capacity as a result of the train station parking lot construction. While it was estimated that only a single parking facility within one time period would be completely occupied, there are certain parking facilities that indicate possible strategies would be required if the assumed growth rates hold constant. A breakdown of the parking facilities experiencing the highest utilizations during each of the three study periods under future conditions is provided below.

During the 12:00 P.M. – 2:00 P.M. time period, the following parking facilities experienced an average utilization greater than or equal to 50%:

- Facility 1: Henry Street – 100% utilization
- Facility 3: Main Street (SR 230) – 56.7% utilization
- Facility 5: Delta Street – 54.5% utilization
- Facility 7: Barbara Street – 59.4% utilization
- Facility 8: High Street – 50.4% utilization
- Facility 9: Jacob Street – 50.4% utilization
- Facility 13: Train Station Parking Lot (Market & Marietta) – 98.0% utilization
- Facility 14: Train Station Parking Lot (Delta/Henry) – 90.0% utilization

Compared to the 12:00 P.M. – 2:00 P.M. time period under existing conditions, Facilities 1 (Henry Street), 5 (Delta Street), 8 (High Street), and 9 (Jacob Street) are now included under the future conditions. Due to the facility's proximity to the new train station platform, it was assumed that train station-related parking demand would first utilize Henry Street, which is the reason for its 100% utilization. With the additional parking capacity at Henry Street, utilization at Facility 13 (train station parking lot between Market Street and Marietta Avenue) decreased slightly. The increase in utilization at Facilities 5, 8, and 9 (Delta Street, High Street, and Jacob Street) can be attributed to background growth in the Borough. Of this group, Facilities 1 (Henry Street) and 13 (train station parking lot between Market Street and Marietta Avenue) experience the highest utilization at 100% and 98.0%, respectively.

During the 4:30 P.M. – 6:30 P.M. time period, the following parking facilities experienced an average utilization greater than or equal to 50%:



Mount Joy Borough

Established 1851 in Lancaster County, PA

- Facility 3: Main Street (East of Marietta Avenue) – 60.2% utilization
- Facility 4: Donegal Street – 55.5% utilization
- Facility 5: Delta Street – 73.1% utilization
- Facility 7: Barbara Street – 61.7% utilization
- Facility 8: High Street – 74.4% utilization
- Facility 9: Jacob Street – 60.5% utilization

The same parking facilities with an average utilization of 50.0% or greater under existing conditions during this time period remain under the future conditions as well, albeit with higher utilizations. Of this group, Facility 8 (High Street) experiences the highest utilization at 74.4%.

During the 9:00 P.M. – 10:00 P.M. time period, the following parking facilities experienced an average utilization of greater than or equal to 50%:

- Facility 2: Market Street (North of Main Street) – 62.6% utilization
- Facility 3: Main Street (East of Marietta Avenue) – 74.4% utilization
- Facility 4: Donegal Street – 70.2% utilization
- Facility 5: Delta Street – 71.6% utilization
- Facility 6: Marietta Avenue (SR 772) – 50.6% utilization
- Facility 7: Barbara Street – 68.5% utilization
- Facility 8: High Street – 91.3% utilization
- Facility 17: Sassafras Alley Parking – 52.6% utilization

The parking facilities with an average utilization of 50.0% or greater under existing conditions during this time period remain under the future conditions as well, albeit with higher utilizations. Facility 17 (Sassafras Alley Parking) was also added to this group under future conditions. Parking at this facility is the result of business-related demand at surrounding restaurants, such as Rosie's Tavola. Within this time period, Facility 8 (High Street) experiences the highest parking utilization at 91.3%.

Findings

Based on the findings of the parking utilization analyses, existing conditions indicate that parking capacity within the study area is readily available, as at no point is one parking facility completely utilized and most utilization percentages are under 50% during all three time periods. However, there are certain parking facilities within the study area that experience a higher parking utilization that may require strategic improvements in the future as a result of latent background growth within the Borough and train station ridership growth. The parking facilities that have a high utilization (> 70%) during any of the three time periods under future conditions, and may require strategic improvements, include the following:

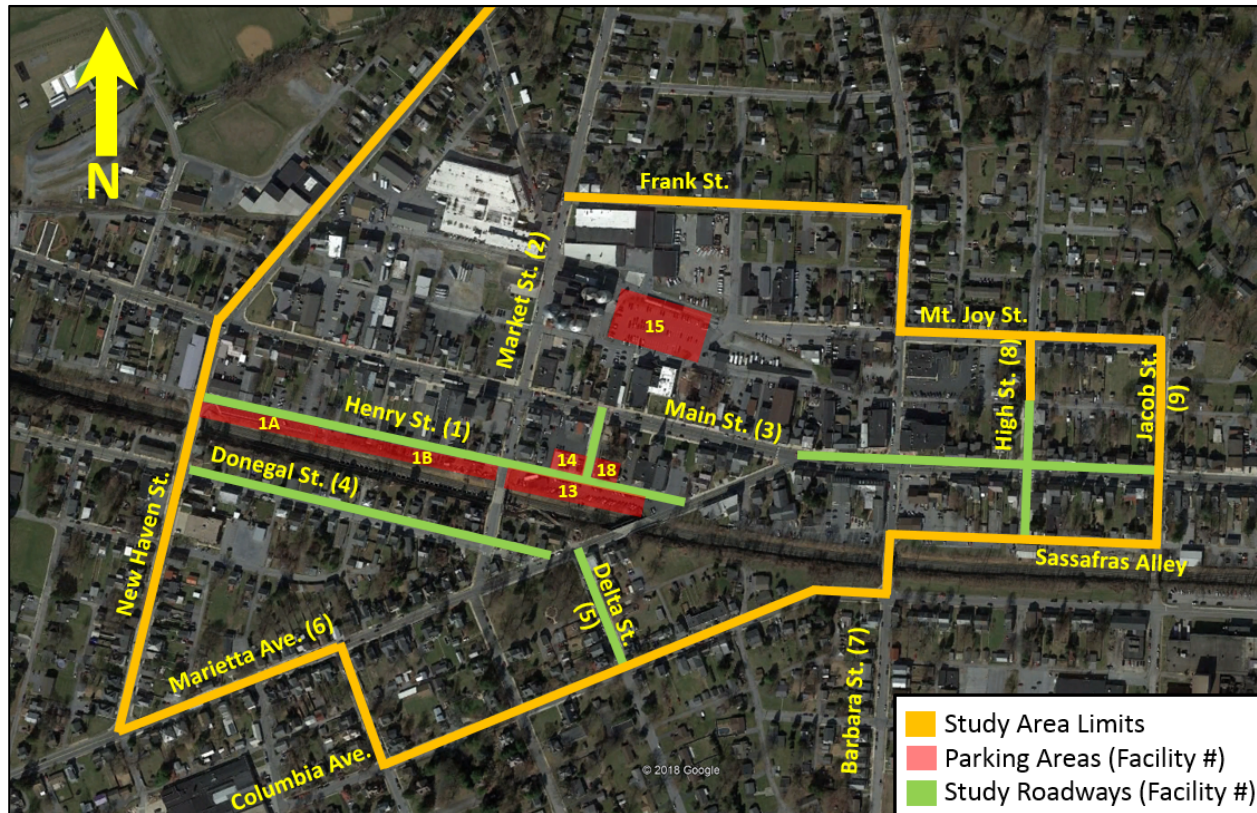
- Facility 3: Main Street (SR 230) between Marietta Avenue (SR 772) and Jacob Street
- Facility 4: Donegal Street
- Facility 5: Delta Street

Mount Joy Parking Utilization Study

- Facility 8: High Street
- Train Station Area Parking Demand (Facilities 1, 13, 14, 15, and 18)

A map highlighting the parking facilities that have a high utilization under future conditions and may require strategic improvements is provided in **Figure 6**.

Figure 6: Study Area Parking Facilities May Requiring Future Strategic Improvement



Facility 3: Main Street (SR 230) between Marietta Avenue (SR 772) and Jacob Street

With local businesses such as Harvey's Main Street Bar-BQ, Mosby's Pub, Rosie's Tavola, and CrafterHours being popular during the evening hours and located in close proximity to one another, Main Street (SR 230) between Marietta Avenue (SR 772) and Jacob Street experiences a high parking demand. Not only is this demand heavy, but it is also long-lasting, as the average parking demand stayed relatively constant between the 4:30 P.M. – 6:30 P.M. time period and 9:00 P.M. – 10:00 P.M. time period. While this demand can be satisfied under existing conditions, the future conditions indicate strategies may be required to provide additional capacity to this area if assumed growth rates hold constant.

Facility 4: Donegal Street

Assuming a growth rate of 1.14%, parking utilization along Donegal Street is expected to increase to 55.5% and 70.2% during the 4:30 P.M. – 6:30 P.M. and 9:00 P.M. – 10:00 P.M. collection periods, respectively.



Mount Joy Borough

Established 1851 in Lancaster County, PA

A portion of this high utilization can be attributed to the street's proximity to the Mount Joy Amtrak Station. The location of the train station is such that it is in close proximity to both the residential and business areas of the Borough. Field observations indicated that some parking along residential streets near the train station (such as Donegal Street) was being used by train station-related users, either due to a lack of parking at the train station at the time, or to make it easier entering/exiting the train station. As a result, possible strategies can be established to produce a more organized utilization of parking to provide additional capacity to residential users.

Facility 5: Delta Street

Assuming a growth rate of 1.14%, parking utilization along Delta Street is expected to increase to 73.1% and 71.6% during the 4:30 P.M. – 6:30 P.M. and 9:00 P.M. – 10:00 P.M. collection periods, respectively. Similar to Donegal Street, Delta Street is another residential road that experienced some train station-related utilization, based on field observations. As a result, possible strategies can be established to produce a more organized utilization of parking to provide additional capacity to residential users.

Facility 8: High Street

Assuming a growth rate of 1.14%, parking utilization along High Street is expected to increase to 74.4% and 91.3% during the 4:30 P.M. – 6:30 P.M. and 9:00 P.M. – 10:00 P.M. collection periods, respectively. High Street is located north and south of Main Street and serves both business-related and residential-related parking demand. Most of High Street consists of residential homes and it was observed that business-related parking demand was parking at this facility. While this demand can be satisfied under existing conditions, the future conditions indicate strategies may be required to provide additional capacity to this area or separate out users to ensure residential-related parking demand is satisfied if assumed growth rates hold constant.

Train Station Area Parking Demand

Based on the future study area conditions, completion of the train station parking lot construction and redevelopment of the R&R Automotive parcel adds an additional 73 parking stalls around the station that could potentially be utilized for train station-related parking demand. While this additional capacity addresses the current high train station-related parking demand, future parking demand may require even more additional capacity. Assuming a constant ridership growth rate of 5%, parking demand for train station-related users can be expected to reach capacity in 2027.

Review of Potential Strategies

Overview

When developing potential strategies for the study area, the following two drivers were used to vet and yield strategies to consider moving forward:

1. Provide sufficient capacity at all study facilities within the Borough; and
2. Organize the parking utilization fairly between business, residential, and train station user groups.

To fulfill these two study drivers, a total of five strategies were initially developed and presented to the public safety committee for consideration. The five strategies created are as followed:

- Strategy 1 – Time-of-Day Residential Permit Parking
- Strategy 2 – Off-peak Train Station Parking
- Strategy 3 – Cooperative Agreements with Downtown Businesses
- Strategy 4 – Parking Garage at St. Mark's United Methodist Church
- Strategy 5 – Land Acquisition/Negotiation

Strategy 1 – Time-of-Day Residential Permit Parking

Due to the high parking demand related to the Mount Joy Amtrak Station, it was observed that train station-related parking was occurring in residential areas of the Borough, such as Donegal Street and Delta Street. As a result of this additional demand, the parking utilization of these predominately residential roads increased. An opportunity to address this mixed-use parking and ensure residents have access near their homes is to investigate the use of time-of-day residential-only permit parking within certain sections of the study area. Permit parking would be a lower-cost alternative to organize the utilization of parking by user groups to ensure demand is being satisfied for residential and train station parking user groups. A challenge involved in this strategy is the enforcement required to ensure restrictions are being followed.

Strategy 2 – Off-peak Train Station Parking

The eastern portion of Main Street (SR 230) within the study area (between Marietta Avenue and Jacob Street) experiences heavy parking utilization during the evening hours, both under existing and future conditions. Additional capacity within this area may be required in the future. An opportunity to increase capacity is to allow the public to utilize Facility 13 (train station parking lot between Market Street and Marietta Avenue) during certain times of the day. As part of the Mount Joy Rail Enhancement Project, improvements were made to this parking facility with the possibility of it being converted to a fee-based parking lot. Based on the field observations, the parking demand for train-station users decreases dramatically at the end of the work day. At Facility 13, the existing parking utilization during the early evening hours was 45.8%. Opening this parking lot to the public would provide additional capacity for business-related parking demand. An opportunity to serve both train station and business-related parking demand would involve a parking fee in the morning hours and open parking thereafter until early the following morning.



Strategy 3 – Cooperative Agreements with Downtown Businesses

Another opportunity to provide additional parking capacity along the eastern portion of Main Street (SR 230) within the study area (between Marietta Avenue and Jacob Street) is sharing parking lot access with downtown businesses along Main Street (SR 230) during non-business hours. This strategy would involve forming cooperative agreements between the Borough and various businesses, similar to the cooperative agreement between the Borough and St. Mark's Church, to share the parking lot to increase parking capacity during certain hours of the day. Parking facilities that would greatly increase parking capacity for business-related parking demand along this section of Main Street (SR 230) include the parking facilities owned by Northwest (Facility 10), D.C. Gohn (Facility 11), and the Hetrick Center (Facility 16). When discussing the cooperative agreements, prioritization should be given to forming agreements with parking facilities along Barbara Street, such as the Hetrick Center (Facility 16) and Northwest (Facility 10) due to the close proximity to Twisted Bine Beer Co., a major evening business.

Strategy 4 – Parking Garage at St. Mark's United Methodist Church

The St. Mark's United Methodist Church parking lot is located between Appletree Alley and Mount Joy Street, behind St. Mark's and the Mount Joy Borough Office. The parking lot is currently owned by St. Mark's but a cooperative agreement was made between the Church, the Borough, and PennDOT to share certain parking spaces during certain hours and days. This strategy would see the development of a parking garage at the current location of the St. Mark's United Methodist Church parking lot. This option would be the most expensive strategy due to the construction required, but its location within the Borough would provide a centralized parking location to serve a large portion of the Borough. Providing additional parking capacity to the Borough would open up the area to additional development and growth. The increased capacity would also serve as an outlet for train station-related parking, as the demand is high and ridership growth is anticipated to increase once the new train station platform is complete. An additional challenge this strategy raises is coordinating with St. Mark's Church, as the parking lot is owned by the church.

Strategy 5 – Land Acquisition/Negotiation

An additional opportunity to provide parking capacity along the eastern portion of Main Street (SR 230) within the study area would involve accessing opportunities to acquire land as the opportunities arise with the intention of developing parking facilities.

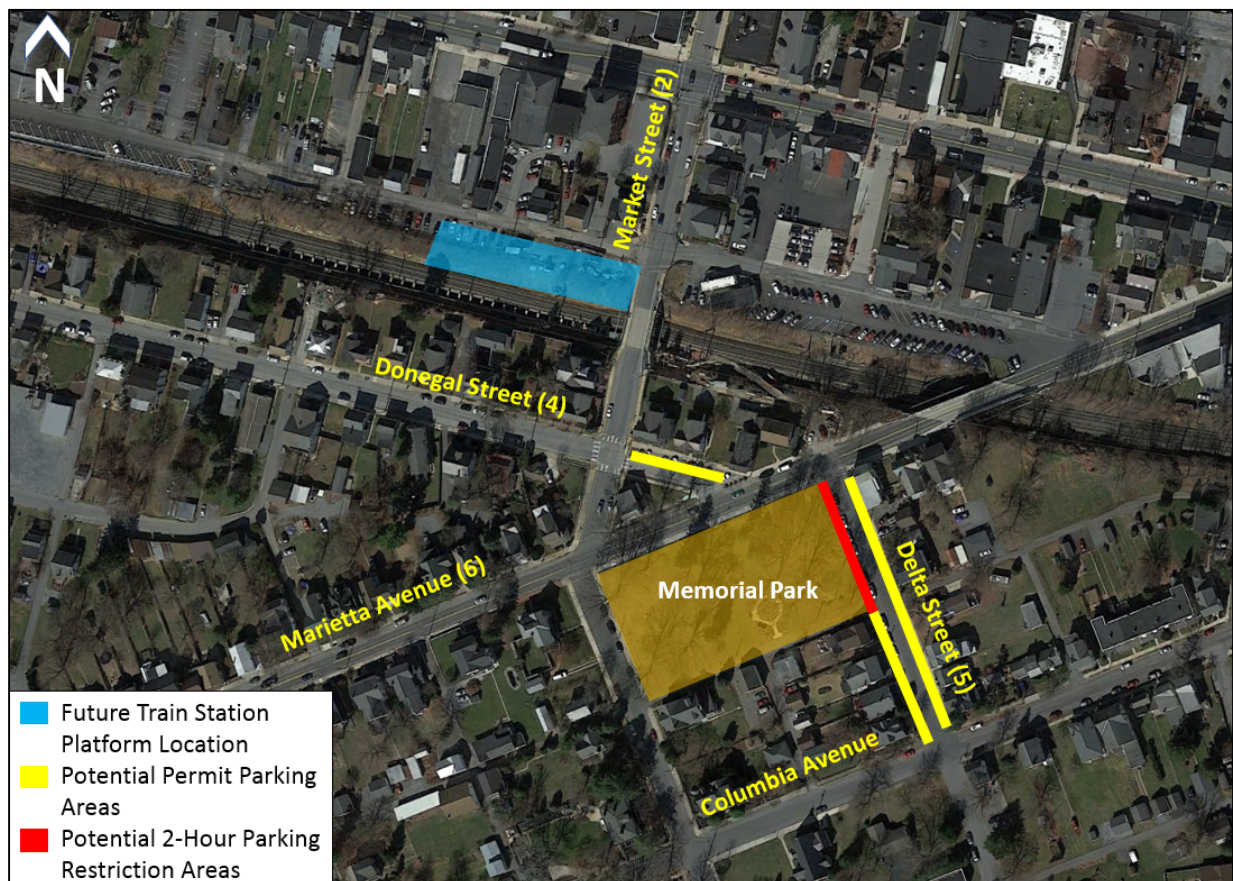
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Strategy 1: Time-of-Day Residential Permit Parking

Two of the parking facilities that have a high utilization under future conditions during the evening hours and may require strategic improvements include Delta Street and Donegal Street. These two residential streets are located just south of the Mount Joy Amtrak Station and a portion of this high utilization can be attributed to their proximity to the train station. Field observations indicated that some parking along residential streets near the train was being used by train station-related users, either due to a lack of parking at the train station at the time, or to make it easier entering/exiting the train station. To better organize parking utilization and ensure residential parking capacity is available, the Borough has the opportunity to introduce permit parking for residents through the issue of an ordinance.

Permit parking would better separate and organize the utilization of parking for residential and train station-related parking by providing residential parking a dedicated space to utilize and separate out from other users. The sections of Delta Street and Donegal Street that would most benefit from permit parking would be Delta Street between Marietta Avenue (SR 772) and Columbia Avenue, and Donegal Street between Market Street and Marietta Avenue (SR 772). As the peak parking demand for the train station is during weekday morning hours, permit parking could be implemented for weekdays only from 7:00 A.M. – 5:00 P.M. **Figure 7** provides the approximate areas of residential permitted parking.

Figure 7: Potential Residential Permit Parking Potential Areas





While permit parking would be beneficial to Delta Street between Marietta Avenue (SR 772) and Columbia Avenue, parking on the west side of Delta Street between Marietta Avenue (SR 772) and Oak Alley would need to remain public parking to allow parking for Memorial Park and events held at this location. To discourage train station-related parking from utilizing this section of on-street parking, 2-hour parking restrictions could be implemented with the same enforcement hours as those posted for Main Street (8:00 A.M. – 8:00 P.M.).

While this strategy option is intended for residential streets south of Henry Street and the train station, this strategy could be applied to other residential roads in the future, such as Barbara Street, High Street, and Jacob Street, that are a mixture of both residential and business-related parking.

Cost for this strategy option may be more expensive than others; there is a cost for enforcement in the area as well as the cost for the permit parking signage. Public support may be mixed; while residents in the area may be in favor of permitted parking, train station-related users may not be as supportive if they utilize these roads for train station-related parking.

Strategy 2: Off-peak Train Station Parking

One of the parking facilities that has a high utilization under future conditions during the evening hours and may require strategic improvements includes the eastern portion of Main Street (SR 230) between Marietta Avenue and Jacob Street. This portion of Main Street (SR 230) contains many popular evening restaurants and businesses, such as Harvey's Main Street Bar-BQ and Mosby's Pub. Currently the only nearby parking in this area is on-street parking along Main Street (SR 230) and its side streets, such as Barbara Street, High Street, and Jacob Street. While parking is available along these side streets, it is frequently full with residential parking.

An opportunity to mitigate the high parking utilization along this section of Main Street (SR 230) is to allow the public to utilize Facility 13 (train station parking lot between Market Street and Marietta Avenue) during certain times of the day and days of the week. An aerial view of the parking facility is provided in **Figure 8**.

Mount Joy Parking Utilization Study

Figure 8: Parking Facility 13 – Train Station Parking Lot between Market St & Marietta Ave



The Mount Joy Rail Enhancement Project, currently underway within the Borough, saw improvements made to the train station parking lot between Market Street and Marietta Avenue (SR 772), with conversations ongoing to determine the final condition of the parking lot. Discussions were had regarding the possibility of converting the facility into a fee-based parking lot, together with Facilities 1B (Henry Street east of Weeping Alley) and 18 (R&R Automotive Lot). Converting these parking facilities (or a combination of them) into paid parking facilities will help to decrease train station-related parking demand, as train station riders may choose to park at another free parking facility within the Borough (such as St. Mark's United Methodist Church) or at another train station. Additionally, the fees generated from the parking facilities can help offset the charges of upkeep for these facilities. A central kiosk located near the train station would be appropriate to serve these fee-based parking facilities.

Implementing this strategy together with Strategy 1 would also discourage train station riders from finding residential streets to park at instead. While the parking facility is in close proximity to the Mount Joy Amtrak Station, parking at this facility should not be restricted to only train station-related parking. If Facilities 1B, 13, and 18 are converted to fee-based parking lots, then adding a 2-hour parking restriction to Facility 14 (the train station parking lot between Delta Street and Henry Street) would be appropriate to ensure the parking facility is open to other users. Facility 1A (Henry Street west of Weeping Alley) can remain a free parking facility as it is located further away from the train station and in close proximity to popular businesses.

Based on the field observations, the parking demand for train-station users decreases dramatically at the end of the work day. At Facility 13, the average parking demand during the 4:30 P.M. – 6:30 P.M. collection period was 45.8%. This decreased even further during the 9:00 P.M. – 10:00 P.M. collection period, down to 3.1% utilization. As business-related parking demand increases during the evening hours



and train station-related parking demand dramatically decreases, opening up this parking facility to the public would increase parking capacity around Main Street (SR 230) for the various businesses. The businesses around this parking facility and the general public are likely to benefit as a result of the increased capacity. While this parking facility is owned by PennDOT, the Borough maintains it, allowing for additional changes to the facility. To give train station riders the priority to park at this facility, an hours restriction for business-related parking demand can be implemented. Since the majority of outbound trains depart by noon, the hours in which this parking facility can be used by the entire public can be from 12:00 P.M. into the overnight hours.

Strategy 3: Cooperative Agreements with Downtown Businesses

One of the parking facilities that has a high utilization under future conditions during the evening hours and could benefit from increased capacity includes the eastern portion of Main Street (SR 230) between Marietta Avenue and Jacob Street. Utilization of existing parking facilities belonging to downtown businesses, such as Northwest, D.C. Gohn, and the Hetrick Center is an opportunity increase parking capacity along the eastern portion of Main Street (SR 230). These businesses are located between Appletree Alley and Mount Joy Street on the east and west sides of Barbara Street, in close proximity to the eastern portion of Main Street (SR 230). Field observations noted that the Northwest parking facility (Facility 10) is being utilized during evening hours after the bank is closed, even though signs indicate parking is for bank customers only.

The total capacity of the Northwest, D.C. Gohn, and Hetrick Center parking facilities is 60 stalls, 32 stalls, and 23 stalls, respectively. An aerial view of the parking facilities is provided in **Figure 9**.

Mount Joy Parking Utilization Study

Figure 9: Parking Facilities 10, 11, and 16 – Northwest, D.C. Gohn, and the Hetrick Center



Located between Appletree Alley and Mount Joy Street, these parking facilities are located near popular businesses along Main Street (SR 230), such as Twisted Bine Beer Company. Parking restrictions are in place at each of these facilities, as parking is reserved for customers/employees only. The business hours for each of these facilities differ between the three, but field observations indicated all three businesses were closed beginning in the latter part of the 4:30 P.M. – 6:30 P.M. collection period.

As these parking facilities are privately owned, a cooperative agreement would need to be made between the businesses and the Borough to share the parking lot, similar to the one established between the Borough and St. Mark's United Methodist Church. An agreement can be made that would allow the public to utilize the various parking facilities during non-business hours, as these businesses close during the early evening. In exchange for the public being able to utilize the parking facility during certain hours of the day, the Borough could assume specific maintenance responsibilities of the parking lot.

The public is likely to support this strategy as it would greatly increase the parking capacity of the Borough during the peak evening periods. Traffic operations may also improve as fewer people would need to utilize on-street parking. The economic development within the area is likely to benefit as well due to the increased parking capacity. A potential concern involving this strategy option is developing the cooperative agreement. The owners of the parking facility, Northwest or another owner, may not be open to sharing.



Strategy 4: Parking Garage at St. Mark's United Methodist Church

Located between Appletree Alley and Mount Joy Street, the St. Mark's United Methodist Church parking lot is owned by St. Mark's Church. The capacity of the public portion of the parking lot is 49 parking stalls and the parking lot can be accessed via Appletree Alley and Mount Joy Street. Although the parking lot is owned by St. Mark's Church, parking at this facility is available to the public during certain hours and days of the week. Currently 49 of the 132 total parking stalls are indicated as public parking during the following hours: 5:00 A.M. – 10:00 P.M. Monday through Friday and 5:00 A.M. – 5:00 P.M. on Saturdays.

A cooperative agreement was established between the Borough of Mount Joy, PennDOT, and St. Mark's Church as a part of the Mount Joy Rail Enhancement Project. In exchange for making improvements to the parking lot, St. Mark's Church agreed to open part of the parking lot to the public during certain hours of the day to add additional parking capacity to the Borough for train station-related and business-related users. In the agreement, improvements were made to the parking lot by PennDOT, while the Borough maintains the parking lot.

Under future conditions, assuming a 5% annual growth rate in train ridership, train station-related demand will meet the capacity of train station-related parking, including parking at Henry Street, the train station parking lot between Delta Street and Henry Street, the train station parking lot between Market Street and Marietta Avenue, and the R&R Parking Lot. To continue to satisfy train station parking demand, parking capacity within the Borough will need to increase at a location in close proximity to the train station. An opportunity to greatly increase capacity within the Borough would be converting the St. Mark's United Methodist Church surface parking lot into a parking garage.

Under the cooperative agreement formed between the Borough, PennDOT, and St. Mark's Church, sidewalks, covered awnings, and improved crosswalks were built between the parking lot and the train station to persuade train station-related parking to utilize the St. Mark's Church parking lot and make it convenient to walk to and from the train station. These pedestrian improvements made between the train station and the parking area would continue to attract demand to the parking garage. The location of the St. Mark's Church parking lot and potential site of a parking garage is shown in **Figure 10**.

Mount Joy Parking Utilization Study

Figure 10: Potential Site of St. Mark's Church Parking Garage (Parking Facility 15)



A parking garage would greatly increase the parking capacity within the Borough. Not only would the parking garage address capacity concerns for train station-related parking demand, it would also increase capacity for business-related parking demand. Main Street (SR 230), located one block to the south of the St. Mark's Church parking lot, is a minor arterial roadway that has business storefront located north and south of the road. These businesses, particularly the restaurants, generate a large amount of parking demand and 2-hour parking restrictions are in place from 8:00 A.M. – 8:00 P.M. A parking garage would provide additional capacity for these businesses and improve the economic development of the Borough.

The St. Mark's Church parking facility is approximately one acre. The parking capacity of a parking garage with a footprint of one acre can be estimated to 90 stalls per level. Therefore a two-three story parking garage can have a capacity of approximately 180-270 parking stalls.

To provide more access to the parking garage, two access points in to and out of the parking garage could be available along Appletree Alley and Mount Joy Street. Having two access points would improve traffic operations in and around the garage, as generated traffic would not overwhelm one particular road. Traffic operations on surrounding roads, such as Main Street (SR 230) and Market Street may improve as vehicles may no longer search for on-street parking.

A concern involving the parking garage strategy would be the initial development plan. The parking lot is currently owned by St. Mark's United Methodist Church and efforts would need to be made to either purchase the parking lot land from St. Mark's Church or to establish another cooperative agreement that



would see both sides utilizing the parking garage. In addition, cost and timeliness of the project would also be a factor, as this strategy option would be the most expensive, and time to plan and construct the parking garage would be much longer than the other potential strategies. For a two-level parking garage, the estimated cost of construction would be approximately \$5 million, with an additional annual maintenance cost of around \$50,000.

Strategy 5: Land Acquisition/Negotiation

An additional opportunity to provide parking capacity along the eastern portion of Main Street (SR 230) between Marietta Avenue (SR 772) and Jacob Street would involve acquiring additional land around this area when it becomes available with the intention of converting the land into another parking facility. If cooperative agreements with various local businesses cannot be formed to utilize their parking facility, then buying land in the same area would be the next way to add additional capacity to the eastern portion of Main Street. The ideal location for a new parking facility around this portion of Main Street would be between Sassafras Alley and Appletree Alley, where users would be able to quickly access local businesses.

An example of an opportunity to explore acquiring land would be acquiring the business of Wilbur W. Nissly & Son, Inc. at the intersection of High Street and Sassafras Alley, next to the Sassafras Alley parking facility.

Overall Parking Strategy

Of the five strategies presented to the public safety committee, all were identified as viable opportunities to provide sufficient capacity at all study facilities within the Borough and to organize parking utilization fairly between business, residential, and train station user groups. The five strategies were broken up into short-term and long-term implementations based on cost and timeliness of implementation.

Strategies identified as achievable in the short-term included Strategies 1 and 2 (time-of-day residential permit parking and off-peak train station). As Facility 13 (Train Station Parking Lot between Market Street and Marietta Avenue) is undergoing reconstruction as part of the Mount Joy Rail Enhancement Project, there exists an opportunity to open the parking lot to the public during off-peak train station hours once construction is completed. As the permit parking areas identified are small, enactment of permit parking can be done in the short-term. Additionally, Strategies 1 and 2 complement each other to ensure an organized parking utilization between the different user groups. The implementation of a paid parking lot may encourage train station and business-related users to utilize residential areas for their parking needs to avoid paying to park. The implementation of permit parking along certain residential roads during certain weekday hours would prevent this from happening.

Strategies identified as goals to strive towards in the long-term are Strategies 3, 4, and 5 (forming cooperative agreements with downtown businesses, parking garage at St. Mark's United Methodist Church, and land acquisition). Conversations with local businesses to utilize their parking facilities during evening off-hours have and continue to take place. Utilizing these existing parking facilities would allow

Mount Joy Parking Utilization Study

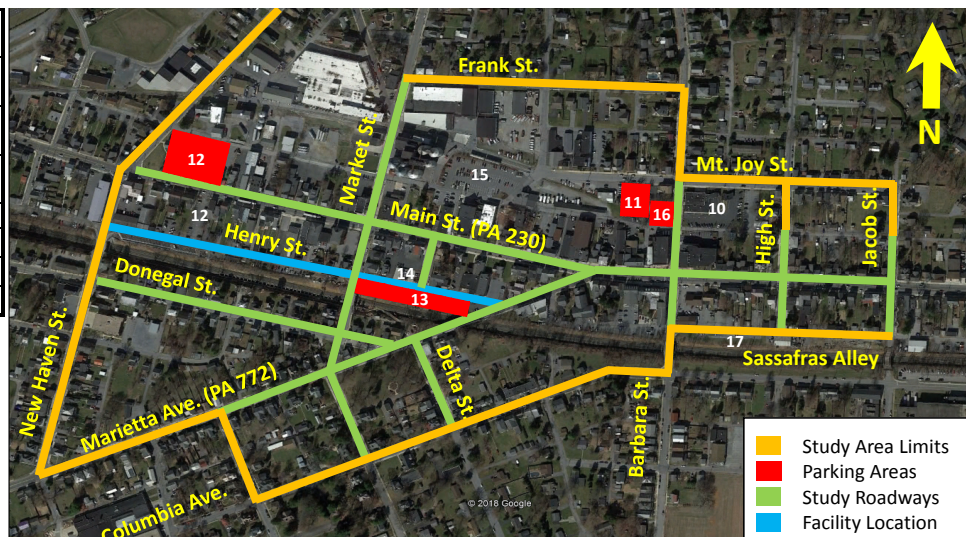
the Borough to increase parking capacity without the need for constructing new facilities. The parking garage concept is a longer-term project goal that should be considered and evaluated for the future to provide the Borough with a centralized parking area that provides easy access to the Main Street (SR 230) businesses and Mount Joy Amtrak Station. The land acquisition strategy serves as a parallel opportunity for the Borough to evaluate the possibility of acquiring land with the intent of converting it into a parking facility whenever land becomes available.

An evaluation scoring matrix was developed to compare each strategy option against one another to determine validity. Evaluation criteria were established such as cost to implement, timeliness of implementation, and breadth of stakeholder beneficiaries so as to compare and contrast the strategies. The resultant evaluation scoring matrix can be viewed in **Table 6**, located in **Appendix B**.

APPENDIX A

Existing Parking Utilization

Facility Name:	Henry Street
Begin Location:	New Haven Street (SR 4002)
End Location:	Marietta Avenue (SR 772)
Collected By:	DR
Weather:	Sun, Wind
Collection Times:	12:00 PM - 2:00 PM 4:30 PM - 6:30 PM 9:00 PM - 10:00 PM



EXISTING PARKING DEMAND

###

Total Number of Parking Spaces
[EACH]

#

Parking Observation within
Collection Period

#

12:00PM-2:00PM Parking Spaces
Utilized [EACH]

#

4:30PM-6:30PM Parking Spaces
Utilized [EACH]

#

9:00PM-10:00PM Parking Spaces
Utilized [EACH]

Parking Restrictions

New Haven Street (SR 4002)

A	B	C	D
5	4	4	N/A
3	4	2	N/A
5	9	N/A	N/A

23

Market Street

A	B	C	D
0	0	0	N/A
0	0	0	N/A
0	0	N/A	N/A

0

Marietta Avenue (SR 772)

A	B	C	D
0	0	0	N/A
0	0	0	N/A
0	0	N/A	N/A

0

Parking Restrictions

New Haven Street (SR 4002)

A	B	C	D
0	0	0	N/A
0	0	0	N/A
0	0	N/A	N/A

0

Market Street

A	B	C	D
0	0	0	N/A
0	0	0	N/A
0	0	N/A	N/A

0

Delta Street

A	B	C	D
0	0	0	N/A
0	0	0	N/A
0	0	N/A	N/A

0

Marietta Avenue (SR 772)

A	B	C	D
0	0	0	N/A
0	0	0	N/A
0	0	N/A	N/A

0

EXISTING PARKING UTILIZATION SUMMARY

SUMMARY					
Total Capacity [EACH]:	23				
Data Record	A	B	C	D	Average Utilization
12:00PM-2:00PM Utilization:	21.7%	17.4%	17.4%	N/A	18.8%
4:30PM-6:30PM Utilization:	13.0%	17.4%	8.7%	N/A	13.0%
9:00PM-10:00PM Utilization:	21.7%	39.1%	N/A	N/A	30.4%
Average Utilization (Entire Day):	18.8%	24.6%	13.0%	N/A	

Notes: Due to the ongoing Mt. Joy train station construction project, parking along Henry Street was fairly limited. There were a few vehicles parked in the new parking area between New Haven Street (SR 4002) and Market Street, but the utilization remained low. The average utilization during the 12:00 P.M. – 2:00 P.M. collection time was 18.8% and decreased to 13.0% during the 4:30 P.M. – 6:30 P.M. collection time. During the 9:00 P.M. – 10:00 P.M. collection time, the average utilization increased to 30.4%. Most of this utilization came as a result of construction parking. It can be anticipated that demand and utilization will dramatically increase once construction is complete. Parking demand and utilization for the train station parking lots are included separately.

Facility Name:	Market Street
Begin Location:	Columbia Avenue
End Location:	Frank Street
Collected By:	DR
Weather:	Sun, Wind
Collection Times:	12:00 PM - 2:00 PM 4:30 PM - 6:30 PM 9:00 PM - 10:00 PM



EXISTING PARKING DEMAND

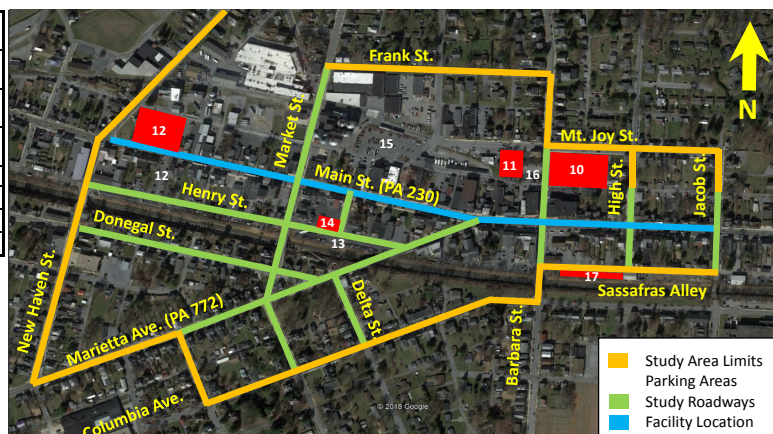
Parking Restrictions		Parking Restrictions	
<div> <div>###</div> Total Number of Parking Spaces [EACH] </div> <div> <div>#</div> Parking Observation within Collection Period </div> <div> <div>#</div> 12:00PM-2:00PM Parking Spaces Utilized [EACH] </div> <div> <div>#</div> 4:30PM-6:30PM Parking Spaces Utilized [EACH] </div> <div> <div>#</div> 9:00PM-10:00PM Parking Spaces Utilized [EACH] </div>		<div> <div>###</div> Total Number of Parking Spaces [EACH] </div> <div> <div>#</div> Parking Observation within Collection Period </div> <div> <div>#</div> 12:00PM-2:00PM Parking Spaces Utilized [EACH] </div> <div> <div>#</div> 4:30PM-6:30PM Parking Spaces Utilized [EACH] </div> <div> <div>#</div> 9:00PM-10:00PM Parking Spaces Utilized [EACH] </div>	
<div> <div>Frank Street</div> <div> <div>A</div><div>B</div><div>C</div><div>D</div> <div>2</div><div>4</div><div>2</div><div>N/A</div> <div>2</div><div>1</div><div>3</div><div>N/A</div> <div>5</div><div>6</div><div>N/A</div><div>N/A</div> </div> <div>4</div> </div>		<div> <div>Frank Street</div> <div> <div>A</div><div>B</div><div>C</div><div>D</div> <div>0</div><div>1</div><div>1</div><div>N/A</div> <div>0</div><div>0</div><div>0</div><div>N/A</div> <div>5</div><div>5</div><div>N/A</div><div>N/A</div> </div> <div>5</div> </div>	
<div> <div>Old Market Street</div> <div> <div>A</div><div>B</div><div>C</div><div>D</div> <div>1</div><div>1</div><div>1</div><div>N/A</div> <div>0</div><div>0</div><div>0</div><div>N/A</div> <div>0</div><div>1</div><div>N/A</div><div>N/A</div> </div> <div>5</div> </div>		<div> <div>Old Market Street</div> <div> <div>A</div><div>B</div><div>C</div><div>D</div> <div>2</div><div>1</div><div>1</div><div>N/A</div> <div>0</div><div>0</div><div>0</div><div>N/A</div> <div>0</div><div>0</div><div>N/A</div><div>N/A</div> </div> <div>4</div> </div>	
<div> <div>Appletree Alley</div> <div> <div>A</div><div>B</div><div>C</div><div>D</div> <div>0</div><div>0</div><div>0</div><div>N/A</div> <div>0</div><div>0</div><div>0</div><div>N/A</div> <div>0</div><div>0</div><div>N/A</div><div>N/A</div> </div> <div>0</div> </div>		<div> <div>Appletree Alley</div> <div> <div>A</div><div>B</div><div>C</div><div>D</div> <div>0</div><div>1</div><div>2</div><div>N/A</div> <div>0</div><div>0</div><div>0</div><div>N/A</div> <div>1</div><div>1</div><div>N/A</div><div>N/A</div> </div> <div>3</div> </div>	
<div> <div>Main Street (SR 230)</div> <div> <div>A</div><div>B</div><div>C</div><div>D</div> <div>3</div><div>3</div><div>3</div><div>N/A</div> <div>3</div><div>3</div><div>1</div><div>N/A</div> <div>2</div><div>2</div><div>N/A</div><div>N/A</div> </div> <div>5</div> </div>		<div> <div>Main Street (SR 230)</div> <div> <div>A</div><div>B</div><div>C</div><div>D</div> <div>1</div><div>2</div><div>2</div><div>N/A</div> <div>3</div><div>2</div><div>2</div><div>N/A</div> <div>2</div><div>2</div><div>N/A</div><div>N/A</div> </div> <div>4</div> </div>	
<div> <div>Henry Street</div> <div> <div>A</div><div>B</div><div>C</div><div>D</div> <div>2</div><div>2</div><div>2</div><div>N/A</div> <div>2</div><div>0</div><div>0</div><div>N/A</div> <div>0</div><div>0</div><div>N/A</div><div>N/A</div> </div> <div>3</div> </div>		<div> <div>Henry Street</div> <div> <div>A</div><div>B</div><div>C</div><div>D</div> <div>1</div><div>1</div><div>0</div><div>N/A</div> <div>0</div><div>0</div><div>0</div><div>N/A</div> <div>0</div><div>0</div><div>N/A</div><div>N/A</div> </div> <div>3</div> </div>	
<div> <div>Donegal Street</div> <div> <div>A</div><div>B</div><div>C</div><div>D</div> <div>1</div><div>1</div><div>1</div><div>N/A</div> <div>1</div><div>0</div><div>0</div><div>N/A</div> <div>0</div><div>0</div><div>N/A</div><div>N/A</div> </div> <div>2</div> </div>		<div> <div>Donegal Street</div> <div> <div>A</div><div>B</div><div>C</div><div>D</div> <div>0</div><div>0</div><div>0</div><div>N/A</div> <div>0</div><div>0</div><div>0</div><div>N/A</div> <div>0</div><div>0</div><div>N/A</div><div>N/A</div> </div> <div>1</div> </div>	
<div> <div>Marietta Ave (SR 772)</div> <div> <div>A</div><div>B</div><div>C</div><div>D</div> <div>4</div><div>4</div><div>4</div><div>N/A</div> <div>6</div><div>5</div><div>6</div><div>N/A</div> <div>7</div><div>7</div><div>N/A</div><div>N/A</div> </div> <div>13</div> </div>		<div> <div>Marietta Ave (SR 772)</div> <div> <div>A</div><div>B</div><div>C</div><div>D</div> <div>4</div><div>3</div><div>3</div><div>N/A</div> <div>3</div><div>2</div><div>1</div><div>N/A</div> <div>0</div><div>0</div><div>N/A</div><div>N/A</div> </div> <div>13</div> </div>	
<div> <div>Columbia Avenue</div> <div> <div>A</div><div>B</div><div>C</div><div>D</div> <div>4</div><div>4</div><div>4</div><div>N/A</div> <div>6</div><div>5</div><div>6</div><div>N/A</div> <div>7</div><div>7</div><div>N/A</div><div>N/A</div> </div> <div>13</div> </div>		<div> <div>Columbia Avenue</div> <div> <div>A</div><div>B</div><div>C</div><div>D</div> <div>4</div><div>3</div><div>3</div><div>N/A</div> <div>3</div><div>2</div><div>1</div><div>N/A</div> <div>0</div><div>0</div><div>N/A</div><div>N/A</div> </div> <div>13</div> </div>	

EXISTING PARKING UTILIZATION SUMMARY

SUMMARY					
Parking Space Length [FT]:	25				
Total Capacity [EACH]:	65				
Data Record	A	B	C	D	Average Utilization
12:00PM-2:00PM Utilization:	32.3%	36.9%	33.8%	N/A	34.4%
4:30PM-6:30PM Utilization:	29.2%	16.9%	20.0%	N/A	22.1%
9:00PM-10:00PM Utilization:	33.8%	36.9%	N/A	N/A	35.4%
Average Utilization (Entire Day):	31.8%	30.3%	26.9%	N/A	

Notes: The parking demand along Market Street shifts between Henry Street due to the difference in areas north and south. The area along Market Street north of Henry Street is more commercial oriented, while the area south of Henry Street is residential. During the 12:00 P.M. – 2:00 P.M. collection time, the average utilization of Market Street was 34.4%, which decreased to 22.1% during the 4:30 P.M. – 6:30 P.M. collection time. The 9:00 P.M. – 10:00 P.M. collection time had an average utilization of 35.4%. North of Henry Street, parking utilization was spread out, with the highest demand occurring between Frank Street and Old Market Street. Due to the strict parking restrictions, not much utilization occurred along the east side of Market Street between Appletree Alley and Main Street (SR 230). Parking along Market Street between Frank Street and Henry Street appeared to be commercial and business use as turnover was frequent between each collection period. South of Henry Street there is little available parking between Henry Street and Marietta Avenue, but most of it was being utilized throughout the day. The highest parking capacity in this area is between Marietta Avenue (SR 772) and Columbia Avenue, with approximately 650 feet of parking available. Most of the utilization here occurred along the west side of Market Street. Parking along Market Street south of Henry Street appeared to be mostly residential as there was little vehicle turnover and the utilization remained the same within each collection period. Due to the limited available parking stalls within this area, utilization was spread out.

Facility Name:	Main Street (SR 230)
Begin Location:	Manheim Street (SR 772)
End Location:	Jacob Street
Collected By:	PEM & DR
Weather:	Sun, Wind
Collection Times:	12:00 PM - 2:00 PM 4:30 PM - 6:30 PM 9:00 PM - 10:00 PM



EXISTING PARKING DEMAND

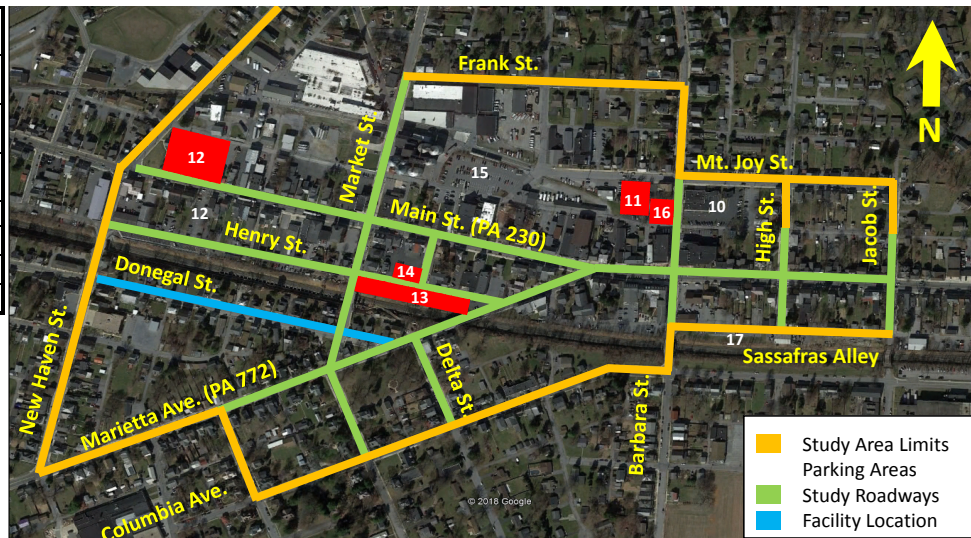
Parking Restrictions		Parking Restrictions																																	
Manheim Street (SR 772)		Manheim Street (SR 772)																																	
2 Hour Parking M-SAT 8:00AM-8:00PM	<table><tr><th>A</th><th>B</th><th>C</th><th>D</th></tr><tr><td>4</td><td>2</td><td>3</td><td>N/A</td></tr><tr><td>5</td><td>3</td><td>5</td><td>N/A</td></tr><tr><td>5</td><td>6</td><td>N/A</td><td>N/A</td></tr></table> 8	A	B	C	D	4	2	3	N/A	5	3	5	N/A	5	6	N/A	N/A	<table><tr><th>A</th><th>B</th><th>C</th><th>D</th></tr><tr><td>2</td><td>2</td><td>2</td><td>N/A</td></tr><tr><td>4</td><td>1</td><td>3</td><td>N/A</td></tr><tr><td>3</td><td>1</td><td>N/A</td><td>N/A</td></tr></table> 6	A	B	C	D	2	2	2	N/A	4	1	3	N/A	3	1	N/A	N/A	2 Hour Parking M-SAT 8:00AM-8:00PM
A	B	C	D																																
4	2	3	N/A																																
5	3	5	N/A																																
5	6	N/A	N/A																																
A	B	C	D																																
2	2	2	N/A																																
4	1	3	N/A																																
3	1	N/A	N/A																																
Comfort Alley		Comfort Alley																																	
2 Hour Parking M-SAT 8:00AM-8:00PM	<table><tr><th>A</th><th>B</th><th>C</th><th>D</th></tr><tr><td>8</td><td>6</td><td>7</td><td>N/A</td></tr><tr><td>3</td><td>4</td><td>6</td><td>N/A</td></tr><tr><td>2</td><td>3</td><td>N/A</td><td>N/A</td></tr></table> 13	A	B	C	D	8	6	7	N/A	3	4	6	N/A	2	3	N/A	N/A	<table><tr><th>A</th><th>B</th><th>C</th><th>D</th></tr><tr><td>6</td><td>6</td><td>8</td><td>N/A</td></tr><tr><td>3</td><td>2</td><td>4</td><td>N/A</td></tr><tr><td>3</td><td>2</td><td>N/A</td><td>N/A</td></tr></table> 12	A	B	C	D	6	6	8	N/A	3	2	4	N/A	3	2	N/A	N/A	2 Hour Parking M-SAT 8:00AM-8:00PM
A	B	C	D																																
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2 Hour Parking M-SAT 8:00AM-8:00PM	<table><tr><th>A</th><th>B</th><th>C</th><th>D</th></tr><tr><td>4</td><td>5</td><td>4</td><td>N/A</td></tr><tr><td>2</td><td>3</td><td>2</td><td>N/A</td></tr><tr><td>1</td><td>1</td><td>N/A</td><td>N/A</td></tr></table> 6	A	B	C	D	4	5	4	N/A	2	3	2	N/A	1	1	N/A	N/A	<table><tr><th>A</th><th>B</th><th>C</th><th>D</th></tr><tr><td>0</td><td>2</td><td>0</td><td>N/A</td></tr><tr><td>0</td><td>0</td><td>0</td><td>N/A</td></tr><tr><td>0</td><td>2</td><td>N/A</td><td>N/A</td></tr></table> 4	A	B	C	D	0	2	0	N/A	0	0	0	N/A	0	2	N/A	N/A	2 Hour Parking M-SAT 8:00AM-8:00PM
A	B	C	D																																
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2 Hour Parking M-SAT 8:00AM-8:00PM	<table><tr><th>A</th><th>B</th><th>C</th><th>D</th></tr><tr><td>12</td><td>11</td><td>11</td><td>N/A</td></tr><tr><td>10</td><td>10</td><td>9</td><td>N/A</td></tr><tr><td>7</td><td>8</td><td>N/A</td><td>N/A</td></tr></table> 21	A	B	C	D	12	11	11	N/A	10	10	9	N/A	7	8	N/A	N/A	<table><tr><th>A</th><th>B</th><th>C</th><th>D</th></tr><tr><td>9</td><td>7</td><td>6</td><td>N/A</td></tr><tr><td>4</td><td>4</td><td>4</td><td>N/A</td></tr><tr><td>2</td><td>3</td><td>N/A</td><td>N/A</td></tr></table> 21	A	B	C	D	9	7	6	N/A	4	4	4	N/A	2	3	N/A	N/A	2 Hour Parking M-SAT 8:00AM-8:00PM
A	B	C	D																																
12	11	11	N/A																																
10	10	9	N/A																																
7	8	N/A	N/A																																
A	B	C	D																																
9	7	6	N/A																																
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2	3	N/A	N/A																																
Marietta Avenue (SR 772)		Marietta Avenue (SR 772)																																	
2 Hour Parking M-SAT 8:00AM-8:00PM	<table><tr><th>A</th><th>B</th><th>C</th><th>D</th></tr><tr><td>7</td><td>10</td><td>7</td><td>N/A</td></tr><tr><td>8</td><td>7</td><td>7</td><td>9</td></tr><tr><td>9</td><td>8</td><td>N/A</td><td>N/A</td></tr></table> 10	A	B	C	D	7	10	7	N/A	8	7	7	9	9	8	N/A	N/A	<table><tr><th>A</th><th>B</th><th>C</th><th>D</th></tr><tr><td>7</td><td>7</td><td>5</td><td>N/A</td></tr><tr><td>9</td><td>7</td><td>6</td><td>9</td></tr><tr><td>7</td><td>7</td><td>N/A</td><td>N/A</td></tr></table> 10	A	B	C	D	7	7	5	N/A	9	7	6	9	7	7	N/A	N/A	2 Hour Parking M-SAT 8:00AM-8:00PM
A	B	C	D																																
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A	B	C	D																																
7	7	5	N/A																																
9	7	6	9																																
7	7	N/A	N/A																																
Barbara Street		Barbara Street																																	
2 Hour Parking M-SAT 8:00AM-8:00PM	<table><tr><th>A</th><th>B</th><th>C</th><th>D</th></tr><tr><td>4</td><td>5</td><td>3</td><td>N/A</td></tr><tr><td>3</td><td>3</td><td>7</td><td>10</td></tr><tr><td>7</td><td>5</td><td>N/A</td><td>N/A</td></tr></table> 12	A	B	C	D	4	5	3	N/A	3	3	7	10	7	5	N/A	N/A	<table><tr><th>A</th><th>B</th><th>C</th><th>D</th></tr><tr><td>4</td><td>6</td><td>6</td><td>N/A</td></tr><tr><td>7</td><td>6</td><td>8</td><td>9</td></tr><tr><td>7</td><td>7</td><td>N/A</td><td>N/A</td></tr></table> 10	A	B	C	D	4	6	6	N/A	7	6	8	9	7	7	N/A	N/A	2 Hour Parking M-SAT 8:00AM-8:00PM
A	B	C	D																																
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A	B	C	D																																
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7	6	8	9																																
7	7	N/A	N/A																																
High Street		High Street																																	
2 Hour Parking M-SAT 8:00AM-8:00PM	<table><tr><th>A</th><th>B</th><th>C</th><th>D</th></tr><tr><td>10</td><td>12</td><td>6</td><td>N/A</td></tr><tr><td>6</td><td>6</td><td>7</td><td>13</td></tr><tr><td>8</td><td>9</td><td>N/A</td><td>N/A</td></tr></table> 14	A	B	C	D	10	12	6	N/A	6	6	7	13	8	9	N/A	N/A	<table><tr><th>A</th><th>B</th><th>C</th><th>D</th></tr><tr><td>8</td><td>9</td><td>7</td><td>N/A</td></tr><tr><td>7</td><td>6</td><td>11</td><td>13</td></tr><tr><td>10</td><td>11</td><td>N/A</td><td>N/A</td></tr></table> 14	A	B	C	D	8	9	7	N/A	7	6	11	13	10	11	N/A	N/A	2 Hour Parking M-SAT 8:00AM-8:00PM
A	B	C	D																																
10	12	6	N/A																																
6	6	7	13																																
8	9	N/A	N/A																																
A	B	C	D																																
8	9	7	N/A																																
7	6	11	13																																
10	11	N/A	N/A																																
Jacob Street		Jacob Street																																	

EXISTING PARKING UTILIZATION SUMMARY

SUMMARY					
Total Capacity [EACH]:	161				
Data Record	A	B	C	D	Average Utilization
12:00PM-2:00PM Utilization:	52.8%	55.9%	46.6%	N/A	51.8%
4:30PM-6:30PM Utilization:	44.1%	38.5%	49.1%	39.1%	42.7%
9:00PM-10:00PM Utilization:	44.1%	45.3%	N/A	N/A	44.7%
Average Utilization	47.0%	46.6%	47.8%	39.1%	

Notes: Due to the presence of businesses and restaurants, as well as being the central street through the borough, Main Street (SR 230) experienced a frequent turnover of vehicles. The average utilization during the 4:30 P.M. – 6:30 P.M. collection period dropped to 42.7%, which can be attributed to some non-restaurant businesses closing for the day. During the 9:00 P.M. – 10:00 P.M. collection time, the average utilization was 44.7% and the demand did not fluctuate much within this time period, as the two hour parking restrictions ended at 8:00 P.M. Due to the frequent vehicle turnover and two hour parking restrictions in place for most of the day, it can be determined that the majority of demand along Main Street (SR 230) is business-related. Due to observations and the presence of a few residences along the facility, a small proportion of demand can be considered residential-related. The demand and utilization was higher along Main Street east of Marietta Avenue (SR 772) compared to west of Marietta Avenue (SR 772). This can be attributed to the higher number of businesses and restaurants open later in the evening, as well as fewer nearby parking options.

Facility Name:	Donegal Street
Begin Location:	New Haven Street (SR 4002)
End Location:	Marietta Avenue (SR 772)
Collected By:	DR
Weather:	Sun, Wind
Collection Times:	12:00 PM - 2:00 PM 4:30 PM - 6:30 PM 9:00 PM - 10:00 PM



EXISTING PARKING DEMAND

###

Total Number of Parking Spaces
[EACH]

#

Parking Observation within
Collection Period

#

12:00PM-2:00PM Parking Spaces
Utilized [EACH]

#

4:30PM-6:30PM Parking Spaces
Utilized [EACH]

#

9:00PM-10:00PM Parking Spaces
Utilized [EACH]

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C

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EXISTING PARKING UTILIZATION SUMMARY

SUMMARY					
Parking Space Length [FT]:	25				
Total Capacity [EACH]:	71				
Data Record	A	B	C	D	Average Utilization
12:00PM-2:00PM Utilization:	40.8%	40.8%	39.4%	N/A	40.4%
4:30PM-6:30PM Utilization:	49.3%	53.5%	49.3%	N/A	50.7%
9:00PM-10:00PM Utilization:	60.6%	67.6%	N/A	N/A	64.1%
Average Utilization (Entire Day):	50.2%	54.0%	44.4%	N/A	

Notes: Street parking is abundant along Donegal Street and there are no parking restrictions within this area. The average parking utilization increased throughout the day, from 40.4% during the 12:00 P.M. – 2:00 P.M. collection time to 50.7% during the 4:30 P.M. – 6:30 P.M collection time to 64.1% during the 9:00 P.M. – 10:00 P.M. collection time. Due to the parking utilization and location of the facility, it was determined that parking consisted of residential use. Parking utilization did not change much within each collection period and the same vehicles were observed throughout the day. The 8 angled parking available on the north side of Donegal Street between Market Street & Marietta Avenue (SR 772) were observed to be residential-related, as it was noted that people were entering and leaving the nearby residences from this parking area.

Facility Name:	Delta Street
Begin Location:	Main Street (SR 230)
End Location:	Columbia Avenue
Collected By:	PEM
Weather:	Sun, Wind
Collection Times:	12:00 PM - 2:00 PM 4:30 PM - 6:30 PM 9:00 PM - 10:00 PM



EXISTING PARKING DEMAND

###

Total Number of Parking Spaces
[EACH]

#

Parking Observation within
Collection Period

#

12:00PM-2:00PM Parking Spaces
Utilized [EACH]

#

4:30PM-6:30PM Parking Spaces
Utilized [EACH]

#

9:00PM-10:00PM Parking Spaces
Utilized [EACH]

Parking Restrictions

Main Street (SR 230)

A	B	C	D
0	0	0	N/A
0	0	0	0
0	0	N/A	N/A

0

Henry Street

Marietta Avenue (SR 772)

A	B	C	D
7	5	5	N/A
6	6	5	5
4	4	N/A	N/A

7

Oak Alley

A	B	C	D
1	1	1	N/A
3	5	5	5
5	5	N/A	N/A

7

Columbia Avenue

Parking Restrictions

Main Street (SR 230)

A	B	C	D
0	0	0	N/A
0	0	0	0
0	0	N/A	N/A

0

Henry Street

Marietta Avenue (SR 772)

A	B	C	D
3	4	4	N/A
4	3	5	5
6	6	N/A	N/A

5

Oak Alley

A	B	C	D
2	1	1	N/A
2	2	3	3
2	2	N/A	N/A

7

Columbia Avenue

EXISTING PARKING UTILIZATION SUMMARY

SUMMARY					
Parking Space Length [FT]:	25				
Total Capacity [EACH]:	26				
Data Record	A	B	C	D	Average Utilization
12:00PM-2:00PM Utilization:	50.0%	42.3%	42.3%	N/A	44.9%
4:30PM-6:30PM Utilization:	57.7%	61.5%	69.2%	69.2%	64.4%
9:00PM-10:00PM Utilization:	65.4%	65.4%	N/A	N/A	65.4%
Average Utilization (Entire Day):	57.7%	56.4%	55.8%	69.2%	

Notes: Parking is only available along Delta Street between Marietta Avenue (SR 772) and Columbia Avenue. During the 12:00 P.M. – 2:00 P.M. collection time, the average parking utilization along the street was 44.9%, with the most utilization occurring along the west side of Delta Street between Marietta Avenue (SR 772) and Oak Alley, next to Memorial Park. The average parking utilization then increased and remained constant between the evening and night collection times, as the average utilization hovered around 65%. During these collection times, the demand and utilization along the west side of Delta Street between Marietta Avenue (SR 772) and Oak Alley decreased, while the street parking utilization increased along the rest of Delta Street. Due to this and the high average utilization during the 12:00 P.M. – 2:00 P.M. collection time, it is believed that a proportion of the utilization is train station-related, while the majority is residential-related. During the data collection, the presence of the same vehicles throughout the day was noted. The average utilization increasing along Delta Street during the evening hours also indicates that the majority of demand is residential-related, as people return home from work.



EXISTING PARKING DEMAND

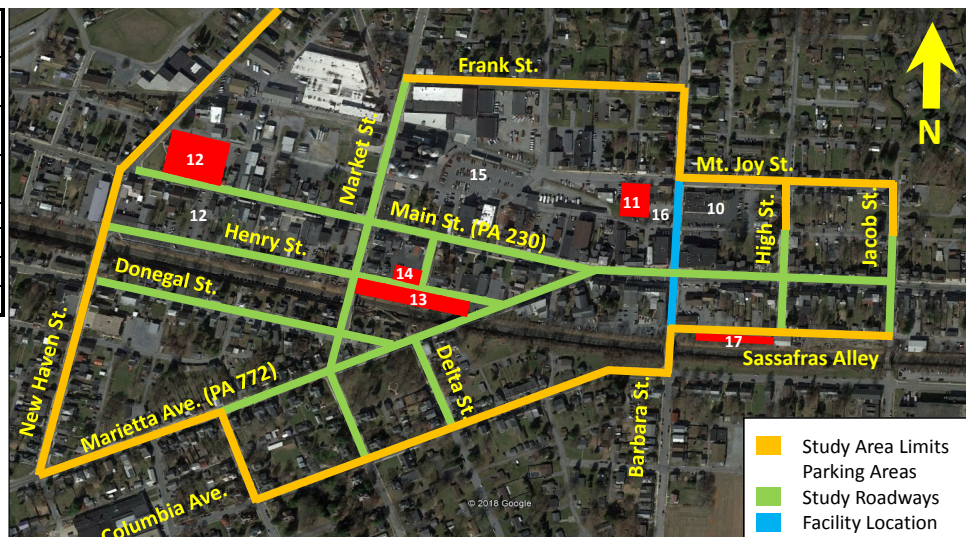
Parking Restrictions		Parking Restrictions																																										
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EXISTING PARKING UTILIZATION SUMMARY

SUMMARY					
Parking Space Length [FT]:	25				
Total Capacity [EACH]:	26				
Data Record	A	B	C	D	Average Utilization
12:00PM-2:00PM Utilization:	19.2%	19.2%	11.5%	N/A	16.7%
4:30PM-6:30PM Utilization:	42.3%	42.3%	34.6%	30.8%	37.5%
9:00PM-10:00PM Utilization:	46.2%	46.2%	N/A	N/A	46.2%
Average Utilization (Entire Day):	35.9%	35.9%	23.1%	30.8%	

Notes: Due to parking restrictions in place along Marietta Avenue (SR 772), parking within the study area is limited to street parking on the northern side of Marietta Avenue (SR 772) between Market Street and Poplar Street, and on the southern side of Marietta Avenue (SR 772) between Main Street (SR 230) and Henry Street. The parking between Main Street (SR 230) and Henry Street is limited to 12 parking stalls, while the parking between Market Street and Poplar Street is unmarked. The average parking utilization along Marietta Avenue (SR 772) increased throughout the day, from 16.7% during the afternoon to 46.2% during the night time period. Parking on the southern side of Marietta Avenue (SR 772) between Main Street (SR 230) and Henry Street was fairly utilized throughout the day and appeared to be a mixture of commercial and residential parking, as some of the same vehicles were noted throughout the day. Parking on the north side of Marietta Avenue (SR 772) between Market Street and Poplar Street was not heavily utilized, but remained relatively consistent throughout the entire day. The parked vehicles were for residential use due to the location and presence throughout the day.

Facility Name:	Barbara Street
Begin Location:	Mount Joy Street
End Location:	Sassafras Alley
Collected By:	PEM
Weather:	Sun, Wind
Collection Times:	12:00 PM - 2:00 PM 4:30 PM - 6:30 PM 9:00 PM - 10:00 PM



EXISTING PARKING DEMAND

###

Total Number of Parking Spaces [EACH]

#

Parking Observation within Collection Period

#

12:00PM-2:00PM Parking Spaces Utilized [EACH]

#

4:30PM-6:30PM Parking Spaces Utilized [EACH]

#

9:00PM-10:00PM Parking Spaces Utilized [EACH]

Parking Restrictions

Mt. Joy Street

A	B	C	D
1	3	0	N/A
1	2	2	1
2	2	N/A	N/A

5

Appletree Alley

A	B	C	D
0	0	0	N/A
0	0	0	0
0	0	N/A	N/A

0

Main Street (SR 230)

A	B	C	D
3	3	3	N/A
3	3	3	3
3	3	N/A	N/A

3

Sassafras Alley

Parking Restrictions

Mt. Joy Street

A	B	C	D
0	0	0	N/A
0	0	0	0
0	0	N/A	N/A

0

Appletree Alley

A	B	C	D
0	0	0	N/A
0	0	0	0
0	0	N/A	N/A

0

Main Street (SR 230)

A	B	C	D
0	0	0	N/A
0	0	0	0
0	0	N/A	N/A

0

Sassafras Alley

No Parking

No Parking

No Parking

###	Total Number of Parking Spaces [EACH]
#	Parking Observation within Collection Period
#	12:00PM-2:00PM Parking Spaces Utilized [EACH]
#	4:30PM-6:30PM Parking Spaces Utilized [EACH]
#	9:00PM-10:00PM Parking Spaces Utilized [EACH]

No Parking

No Parking

No Parking

No Parking

EXISTING PARKING UTILIZATION SUMMARY

SUMMARY					
Parking Space Length [FT]:	25				
Total Capacity [EACH]:	8				
Data Record	A	B	C	D	Average Utilization
12:00PM-2:00PM Utilization:	50.0%	75.0%	37.5%	N/A	54.2%
4:30PM-6:30PM Utilization:	50.0%	62.5%	62.5%	50.0%	56.3%
9:00PM-10:00PM Utilization:	62.5%	62.5%	N/A	N/A	62.5%
Average Utilization (Entire Day):	54.2%	66.7%	50.0%	50.0%	

Notes: Due to parking restrictions in place along Barbara Street, parking within the study area is limited to street parking on the west side of Barbara Street between Mount Joy Street and Appletree Alley, as well as between Main Street (SR 230) and Sassafras Alley. The parking between Main Street (SR 230) and Sassafras Alley is limited to three parking stalls, which remained occupied by the same three vehicles during the entire day and appeared to be for the residential building at the same location. Since the only fluctuation between parking utilization occurred in the parking area between Mount Joy Street and Appletree Alley, the parking utilization did not experience much change. Between the three time periods, the average parking utilization fluctuated from 54.2% to 62.5%. Parking between Mt. Joy Street and Appletree Alley appeared to be a mix of residential and business use, as there was frequent turnover of vehicles during the data collection iterations within the same time period.

Facility Name:	High Street
Begin Location:	Appletree Alley
End Location:	Sassafras Alley
Collected By:	PEM
Weather:	Sun, Wind
Collection Times:	12:00 PM - 2:00 PM 4:30 PM - 6:30 PM 9:00 PM - 10:00 PM



EXISTING PARKING DEMAND

###

Total Number of Parking Spaces
[EACH]

#

Parking Observation within
Collection Period

#

12:00PM-2:00PM Parking Spaces
Utilized [EACH]

#

4:30PM-6:30PM Parking Spaces
Utilized [EACH]

#

9:00PM-10:00PM Parking Spaces
Utilized [EACH]

Parking Restrictions

Appletree Alley

A	B	C	D
2	2	2	N/A
3	3	4	4
4	4	N/A	N/A

4

Main Street (SR 230)

A	B	C	D
4	3	3	N/A
5	4	4	5
5	4	N/A	N/A

6

Sassafras Alley

Parking Restrictions

Appletree Alley

A	B	C	D
1	1	1	N/A
3	2	3	4
3	5	N/A	N/A

5

Main Street (SR 230)

A	B	C	D
4	3	3	N/A
2	3	4	4
5	5	N/A	N/A

6

Sassafras Alley

EXISTING PARKING UTILIZATION SUMMARY

SUMMARY					
Parking Space Length [FT]:	25				
Total Capacity [EACH]:	21				
Data Record	A	B	C	D	Average Utilization
12:00PM-2:00PM Utilization:	52.4%	42.9%	42.9%	N/A	46.0%
4:30PM-6:30PM Utilization:	61.9%	57.1%	71.4%	81.0%	67.9%
9:00PM-10:00PM Utilization:	81.0%	85.7%	N/A	N/A	83.3%
Average Utilization (Entire Day):	65.1%	61.9%	57.1%	81.0%	

Notes: Overall High Street experienced high demand and utilization throughout the day. During the 12:00 P.M. – 2:00 P.M. collection time the average parking utilization was 46.0% and the number of vehicles did not change at all along High Street within this collection time. Utilization increased dramatically during the evening and night collection times as a result of business-related and resident-related demand. The highest average utilization during these two periods was 83.3% during the 9:00 P.M. – 10:00 P.M. collection time. Parking between Appletree Alley and Main Street (SR 230) appeared to be residential as the same vehicles were noted throughout the day and the number remained consistent within each collection period. Parking between Main Street (SR 230) and Sassafras Alley contained vehicles parked for commercial/restaurant use, as the utilization in this section increased during the afternoon and evening collection periods. Notable businesses open during these time periods that would account for this demand include Mosby's Pub and CrafterHours.

This aerial map illustrates the study area in Harrisburg, PA, with various streets and landmarks labeled. The map includes a legend, a north arrow, and a copyright notice.

Legend:

- Study Area Limits (Yellow outline)
- Parking Areas (Red rectangles)
- Study Roadways (Green lines)
- Facility Location (Blue line)

Streets and Landmarks:

- Frank St.
- Market St.
- Mt. Joy St.
- High St.
- Jacob St.
- Sassafras Alley
- Barbara St.
- Delta St.
- Donegal St.
- Henry St.
- Marietta Ave. (PA 772)
- Columbia Ave.
- New Haven St.

Other Labels:

- 12 (two locations)
- 13
- 14
- 15
- 16
- 17
- Main St. (PA 230)

Map Information:

- © 2018 Google
- North Arrow (Yellow arrow pointing up)

Legend:

- ### Total Number of Parking Spaces [EACH]
- # Parking Observation within Collection Period
- # 12:00PM-2:00PM Parking Spaces Utilized [EACH]
- # 4:30PM-6:30PM Parking Spaces Utilized [EACH]
- # 9:00PM-10:00PM Parking Spaces Utilized [EACH]

Parking Restrictions

Appletree Alley

A	B	C	D
0	0	0	N/A
0	0	1	0
0	0	N/A	N/A

0

Main Street (SR 230)

A	B	C	D
2	4	2	N/A
3	5	7	5
1	0	N/A	N/A

5

Sassafras Alley

A	B	C	D
5	6	7	N/A
4	5	5	5
2	1	N/A	N/A

12

Parking Restrictions

Appletree Alley

A	B	C	D
1	2	1	N/A
2	2	1	2
1	1	N/A	N/A

6

Main Street (SR 230)

A	B	C	D
4	5	1	N/A
3	3	6	5
3	2	N/A	N/A

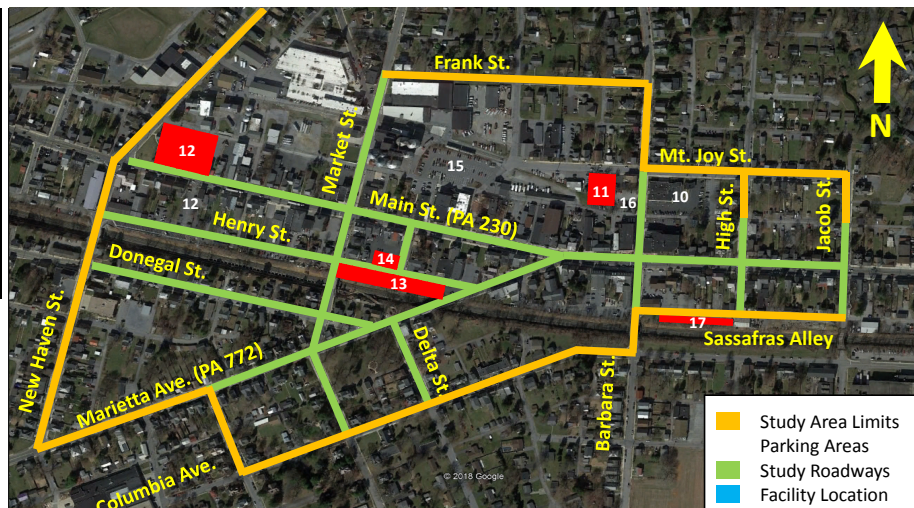
6

Sassafras Alley

SUMMARY					
Parking Space Length [FT]:	25				
Total Capacity [EACH]:	29				
Data Record	A	B	C	D	Average Utilization
12:00PM-2:00PM Utilization:	41.4%	58.6%	37.9%	N/A	46.0%
4:30PM-6:30PM Utilization:	41.4%	51.7%	69.0%	58.6%	55.2%
9:00PM-10:00PM Utilization:	24.1%	13.8%	N/A	N/A	19.0%
Average Utilization (Entire Day):	35.6%	41.4%	53.4%	58.6%	

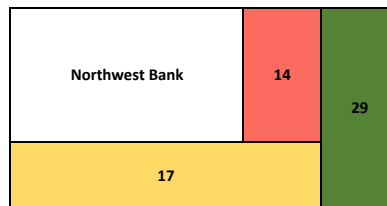
Notes: Parking between Appletree Alley and Main Street (SR 230) appeared to be residential as the same vehicles were noted throughout the day and the utilization remained consistently low for all three collection periods. Demand and utilization between Main Street (SR 230) and Sassafras Alley was higher due to the presence of additional restaurants and businesses, particularly Harvey's Main Street Bar-BQ. Employees for the restaurant were parked at the southern end of Jacob Street in between Sassafras Alley and the railroad tracks, in front of the closed bridge. Parking utilization within this section increased during the 4:30PM-6:30PM collection period to 55.2% on Jacob Street, with vehicles parking within the yellow "No Parking" sections on the south side of Main Street (SR 230). Parking was almost exclusively for the restaurant as observations were made of drivers parking and entering the restaurant. Utilization substantially dropped off during the 9:00PM-10:00PM collection period to 19.0% on Jacob Street as the local businesses closed for the night. Harvey's Main Street Bar-BQ closed at 9:00PM. Utilization at this time period can be attributed to resident-related demand as well as employees of the restaurant.

Facility	Northwest Bank
Name:	Parking Lot
Begin	Mt. Joy/Barbara
Location:	Intersection
End	Mt. Joy/Barbara
Location:	Intersection
Collected	PEM
By:	
Weather:	Sun, Wind
Collection	12:00 PM - 2:00 PM
Times:	4:30 PM - 6:30 PM
	9:00 PM - 10:00 PM



EXISTING PARKING DEMAND

<div></div>	Facility
<div>#</div>	Parking Observation within Collection Period
<div>#</div>	12:00PM-2:00PM Parking Spaces Utilized [EACH]
<div>#</div>	4:30PM-6:30PM Parking Spaces Utilized [EACH]
<div>#</div>	9:00PM-10:00PM Parking Spaces Utilized [EACH]
<div>#</div>	Northwest Bank Drive-Thru Parking Lot (Spaces Available)
<div>#</div>	Northwest Bank South Parking Lot (Spaces Available)
<div>#</div>	Northwest Bank East Parking Lot (Spaces Available)



Parking Restrictions

Business Hours: 8:30AM-6:00PM
 Parking for Bank Customers Only
 Reserved for Horse & Buggy (1 spot)

Northwest Bank Drive-Thru Parking Lot			
A	B	C	D
1	1	1	N/A
0	0	0	0
6	4	N/A	N/A

Northwest Bank South Parking Lot			
A	B	C	D
14	11	14	N/A
10	4	6	1
0	0	N/A	N/A

Northwest Bank East Parking Lot			
A	B	C	D
5	5	4	N/A
3	2	3	3
4	3	N/A	N/A

EXISTING PARKING UTILIZATION SUMMARY

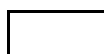
SUMMARY					
Data Record	A	B	C	D	Average Utilization
12:00PM-2:00PM Utilization:	33.3%	28.3%	31.7%	N/A	31.1%
4:30PM-6:30PM Utilization:	21.7%	10.0%	15.0%	6.7%	13.3%
9:00PM-10:00PM Utilization:	16.7%	11.7%	N/A	N/A	14.2%
Average Utilization (Entire Day):	23.9%	16.7%	23.3%	6.7%	

Notes: While the Northwest Bank parking lot contains two separate parking areas, analysis was done breaking up the parking lot into three sections: The parking area to the east of the drive-thru section of the bank, the parking area south of the bank, and the parking area east of the bank. The drive-thru parking area experienced little utilization during business hours, but parking was utilized during the 9:00 P.M. – 10:00 P.M. collection period after the bank closed. This utilization can be attributed to business-related demand. The parking area south of the bank experienced high utilization during business hours, as most of the stalls were occupied during the 12:00 P.M. – 2:00 P.M. collection period. The 4:30 P.M. – 6:30 P.M. collection period saw a steady decline in utilization as customer demand waned and the bank closing time arrived. During this time period it was observed that there were vehicles parking in the northern parking lot of the Union Community Bank parking lot on the south side of Appletree Alley, parallel to the southern parking lot on the north side of Appletree Alley. The parking area east of the bank saw consistent demand and utilization throughout all three collection times. While the utilization during the 12:00 P.M. – 2:00 P.M. and 4:30 P.M. – 6:30 P.M. collection times can be attributed to bank parking, the utilization during the 9:00 P.M. – 10:00 P.M. collection time can be attributed to business-related demand for the nearby restaurants and evening activities. Overall the bank parking lot saw little utilization throughout the day, as the highest average utilization was 31.1%, which occurred during the 12:00 P.M. – 2:00 P.M. collection time.

Facility Name:	D.C. Gohn Parking Lot
Begin:	Mt. Joy/Barbara
Location:	Intersection
End:	Mt. Joy/Barbara
Location:	Intersection
Collected By:	DR
Weather:	Sun, Wind
Collection Times:	12:00 PM - 2:00 PM
	4:30 PM - 6:30 PM
	9:00 PM - 10:00 PM



EXISTING PARKING DEMAND



Facility



Parking Observation within
Collection Period



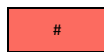
12:00PM-2:00PM Parking Spaces
Utilized [EACH]



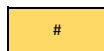
4:30PM-6:30PM Parking Spaces
Utilized [EACH]



9:00PM-10:00PM Parking Spaces
Utilized [EACH]



DC Gohn North Parking Lot
(Spaces Available)



DC Gohn South Parking Lot
(Spaces Available)

23
DC Gohn
9

Parking Restrictions

Business Hours: 7:00AM-4:00PM
Private Property Only

DC Gohn North Parking Lot			
A	B	C	D
12	9	12	N/A
3	1	1	N/A
1	1	N/A	N/A

DC Gohn South Parking Lot			
A	B	C	D
2	2	2	N/A
2	2	2	N/A
3	0	N/A	N/A

EXISTING PARKING UTILIZATION SUMMARY

SUMMARY					
Data Record	A	B	C	D	Average Utilization
12:00PM-2:00PM Utilization:	43.8%	34.4%	43.8%	N/A	40.6%
4:30PM-6:30PM Utilization:	15.6%	9.4%	9.4%	N/A	11.5%
9:00PM-10:00PM Utilization:	12.5%	3.1%	N/A	N/A	7.8%
Average Utilization (Entire Day):	24.0%	15.6%	26.6%	N/A	

Notes: During the 12:00 P.M. - 2:00 P.M. collection period, DC Gohn was open and all parking was for business use. During this time, approximately 40.6% of the available parking was being utilized. During the 4:30 P.M. - 6:30 P.M. collection period, the utilization of the parking lot decreased dramatically as the business closed, with an average utilization of 11.5%. This utilization dropped even further during the 9:00 P.M. - 10:00 P.M. collection period, as the average utilization reached only 7.8%. Due to the presence of private property signs, this parking lot is not highly utilized during off-business hours.

Facility Name:	Trinity Lutheran Church
Begin Location:	"Weeping Alley"
End Location:	"Weeping Alley"
Collected By:	DR
Weather:	Sun, Wind
Collection Times:	12:00 PM - 2:00 PM 4:30 PM - 6:30 PM 9:00 PM - 10:00 PM



EXISTING PARKING DEMAND

	Facility
--	----------

#	Parking Observation within Collection Period
---	--

#	12:00PM-2:00PM Parking Spaces Utilized [EACH]
---	---

#	4:30PM-6:30PM Parking Spaces Utilized [EACH]
---	--

#	9:00PM-10:00PM Parking Spaces Utilized [EACH]
---	---

#	Appletree Alley Parking Lot (Spaces Available)
---	--

#	Trinity Lutheran North Parking Lot (Spaces Available)
---	---

#	Trinity Lutheran South Parking Lot (Spaces Available)
---	---

26	
Trinity Lutheran Church	37
	37

Parking Restrictions

Church Parking Only Sunday 2:30AM-12:00PM
All Other Days No Parking 2:30AM-8:00AM

Appletree Alley Parking Lot			
A	B	C	D
1	2	3	N/A
3	0	0	N/A
0	0	N/A	N/A

Trinity Lutheran North Parking Lot			
A	B	C	D
9	11	12	N/A
5	5	4	N/A
6	5	N/A	N/A

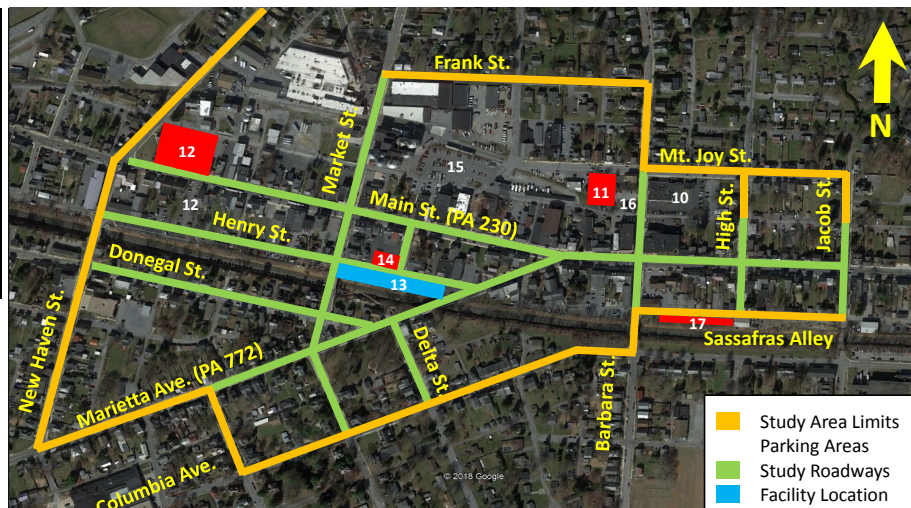
Trinity Lutheran South Parking Lot			
A	B	C	D
8	11	7	N/A
10	16	20	N/A
23	30	N/A	N/A

EXISTING PARKING UTILIZATION SUMMARY

SUMMARY					
Data Record	A	B	C	D	Average Utilization
12:00PM-2:00PM Utilization:	18.0%	20.0%	22.0%	N/A	20.0%
4:30PM-6:30PM Utilization:	18.0%	21.0%	24.0%	N/A	21.0%
9:00PM-10:00PM Utilization:	29.0%	35.0%	N/A	N/A	32.0%
Average Utilization (Entire Day):	21.7%	25.3%	23.0%	N/A	

Notes: While the Trinity Lutheran Church parking lot contains two separate parking areas, analysis was done breaking up the parking lot into three sections: The parking area between the church and Appletree Alley, the parking area east of the church, and the parking area south of Main Street (SR 230) along Weeping Alley. The parking area between the church and Appletree Alley had low demand and utilization during all three collection periods, but the other two parking areas experienced demand that became heavier at times. The parking area east of the church had consistent demand and utilization throughout the day, with the highest utilization occurring during the 12:00 P.M. – 2:00 P.M. collection period. Parking utilization in this area appeared to be exclusively for church parking. The southern parking area experienced low utilization during the 12:00 P.M. – 2:00 P.M. collection time, but it increased dramatically during the evening and night collection times as the utilization jumped to 72.0% during the 9:00 P.M. – 10:00 P.M. collection time. This increase in utilization can be attributed to the nearby restaurants, such as Beanie's Bar & Grill and Joy's Tavern, that are open until 2:00 A.M. It was observed that vehicles parking in this area were visiting these restaurants. Overall, the average utilization percentage for the entire Trinity Church parking area was very low during all three collection periods, with the highest being 32.0% during the 9:00 P.M. – 10:00 P.M. collection time.

Facility	Existing Train Station
Name:	Parking Lot
Begin	Market Street
Location:	
End:	Marietta Avenue (SR 772)
Location:	772)
Collected	DR
By:	
Weather:	Sun, Wind
Collection	12:00 PM - 2:00 PM
Times:	4:30 PM - 6:30 PM
	9:00 PM - 10:00 PM



EXISTING PARKING DEMAND

	Facility				
#	Parking Observation within Collection Period				
#	12:00PM-2:00PM Parking Spaces Utilized [EACH]				
#	4:30PM-6:30PM Parking Spaces Utilized [EACH]				
#	9:00PM-10:00PM Parking Spaces Utilized [EACH]				
#	Train Station Parking Lot (Spaces Available)				

Parking Restrictions

None
16 additional parking spaces were not available due to train station construction

Train Station Parking Lot			
A	B	C	D
31	32	32	N/A
13	15	16	N/A
1	1	N/A	N/A

EXISTING PARKING UTILIZATION SUMMARY

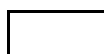
SUMMARY					
Data Record	A	B	C	D	Average Utilization
12:00PM-2:00PM Utilization:	96.9%	100.0%	100.0%	N/A	99.0%
4:30PM-6:30PM Utilization:	40.6%	46.9%	50.0%	N/A	45.8%
9:00PM-10:00PM Utilization:	3.1%	3.1%	N/A	N/A	3.1%
Average Utilization (Entire Day):	46.9%	50.0%	75.0%	N/A	

Notes: During the 12:00 P.M. – 2:00 P.M. collection period, this parking lot experienced an average parking utilization of 99.0% as nearly every stall was occupied. Utilization dropped dramatically during the 4:30 P.M. – 6:30 P.M. collection period, as the average parking utilization dropped to 45.8%. This reduction can be attributed to the train arrivals from Harrisburg and commuters returning home from work via the train. The utilization dropped even further during the 9:00 P.M. – 10:00 P.M. collection period as the parking lot was nearly empty. The average utilization during this time period was 3.1%. Due to the low utilization for the parking lot during the evening and evening collection periods, it can be determined that all parking is from train station parking demand.

Facility	Existing Train Station
Name:	Parking Lot
Begin	Delta St/Henry St
Location:	Intersection
End	Delta St/Henry St
Location:	Intersection
Collected	By: DR
Weather:	Sun, Wind
Collection	12:00 PM - 2:00 PM
Times:	4:30 PM - 6:30 PM
	9:00 PM - 10:00 PM



EXISTING PARKING DEMAND



Facility



Parking Observation within
Collection Period



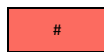
12:00PM-2:00PM Parking Spaces
Utilized [EACH]



4:30PM-6:30PM Parking Spaces
Utilized [EACH]



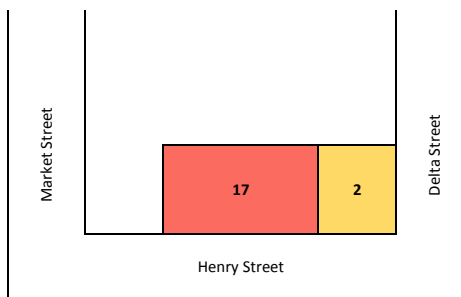
9:00PM-10:00PM Parking Spaces
Utilized [EACH]



Train Station Parking Lot (Spaces
Available)



Train Station Pick-up/Drop-off
Area (Spaces Available)



Parking Restrictions

Pick-up/Drop-off Area: 2 Hr. Parking 6:00AM-9:00PM
Public Parking

Train Station Parking Lot			
A	B	C	D
16	15	15	N/A
6	6	5	N/A
4	4	N/A	N/A

Train Station Pick-up/Drop-off Area			
A	B	C	D
2	1	1	N/A
1	1	1	N/A
1	1	N/A	N/A

EXISTING PARKING UTILIZATION SUMMARY

SUMMARY					
Data Record	A	B	C	D	Average Utilization
12:00PM-2:00PM Utilization:	94.7%	84.2%	84.2%	N/A	87.7%
4:30PM-6:30PM Utilization:	36.8%	36.8%	31.6%	N/A	35.1%
9:00PM-10:00PM Utilization:	26.3%	26.3%	N/A	N/A	26.3%
Average Utilization (Entire Day):	52.6%	49.1%	57.9%	N/A	

Notes: During the 12:00 P.M. – 2:00 P.M. collection period, this parking lot experienced an average parking utilization of 87.7% as nearly every stall was occupied, and little fluctuation occurred during this time period. Similar to the other train station parking lot, utilization dropped dramatically during the 4:30 P.M. – 6:30 P.M. collection period, as the average parking utilization dropped to 35.1%. This reduction can also be attributed to the train arrivals from Harrisburg and commuters returning home from work via the train. The utilization dropped even further during the 9:00 P.M. – 10:00 P.M. collection period as the average utilization dropped to 26.3%. Even though the parking lot is labeled as "Public Parking", utilization indicates that the majority of existing parking demand is train station-related. The remaining utilization during the 9:00 P.M. – 10:00 P.M. collection period and fluctuation in the demand during the 12:00 P.M. – 2:00 P.M. collection period can be attributed to business-related demand.

Facility	PennDOT/St. Marks
Name:	Methodist Church
Begin	At Delta St/Henry St
Location:	Intersection
End	At Delta St/Henry St
Location:	Intersection
Collected	By: DR
Weather:	Sun, Wind
Collection	12:00 PM - 2:00 PM
Times:	4:30 PM - 6:30 PM
	9:00 PM - 10:00 PM



EXISTING PARKING DEMAND

	Facility
--	----------

#	Parking Observation within Collection Period
---	--

#	12:00PM-2:00PM Parking Spaces Utilized [EACH]
---	---

#	4:30PM-6:30PM Parking Spaces Utilized [EACH]
---	--

#	9:00PM-10:00PM Parking Spaces Utilized [EACH]
---	---

#	Yellow Lined Spaces Parking (Spaces Available)
---	--

#	White Lined Spaces Parking (Spaces Available)
---	---

49	83
St. Marks United Methodist Church	

Parking Restrictions

Yellow Lined Spaces: Public Parking

M-F 5:00AM-10:00PM

SAT 5:00AM-5:00PM

All Other Times Church Parking

White Lined Spaces: St. Marks Church Parking

Yellow Lined Spaces			
A	B	C	D
26	19	25	N/A
14	4	4	N/A
2	2	N/A	N/A

White Lined Spaces			
A	B	C	D
24	19	22	N/A
13	10	9	N/A
2	1	N/A	N/A

EXISTING PARKING UTILIZATION SUMMARY

SUMMARY					
Data Record	A	B	C	D	Average Utilization
12:00PM-2:00PM Utilization:	37.9%	28.8%	35.6%	N/A	34.1%
4:30PM-6:30PM Utilization:	20.5%	10.6%	9.8%	N/A	13.6%
9:00PM-10:00PM Utilization:	3.0%	2.3%	N/A	N/A	2.7%
Average Utilization (Entire Day):	20.5%	13.9%	22.7%	N/A	

Notes: During the 12:00PM-2:00PM collection period, the parking lot was fairly utilized, as the average utilization for the entire parking lot averaged 34.1%. However, approximately 48% of the public parking stalls (yellow-lined) were utilized. Utilization decreased dramatically over the rest of the day as only 13.6% of the parking lot was utilized during the 4:30 P.M. – 6:30 P.M. collection period and only 2.7% of the parking was utilized during the 9:00 P.M. – 10:00 P.M. collection period. The sharp utilization drop-off between the 12:00 P.M. – 2:00 P.M. and 4:30 P.M. – 6:30 P.M. collection periods indicate that parking is being utilized for business and train station purposes, whether that is employees working within Mount Joy Borough or utilizing the train station. Comparing the utilization to the train station parking lots provides an indication that there is a heavier proportion of business-related demand compared to train station-related demand, as the utilization and demand in this parking lot remained higher in the evening compared to the train station parking lots. Demand between public parking and church parking remained relatively equal throughout the day, although the utilization of the public parking stalls (yellow-lined) was higher than the utilization of the church parking (white-lined) due to the additional capacity of the church parking.

Facility	Hetrick Center
Name:	Parking Lot
Begin	Mt. Joy/Barbara
Location:	Intersection
End	Mt. Joy/Barbara
Location:	Intersection
Collected	DR
By:	
Weather:	Sun, Wind
Collection	12:00 PM - 2:00 PM
Times:	4:30 PM - 6:30 PM
	9:00 PM - 10:00 PM



EXISTING PARKING DEMAND

	Facility
--	----------

#	Parking Observation within Collection Period
---	--

#	12:00PM-2:00PM Parking Spaces Utilized [EACH]
---	---

#	4:30PM-6:30PM Parking Spaces Utilized [EACH]
---	--

#	9:00PM-10:00PM Parking Spaces Utilized [EACH]
---	---

#	Hetrick Center North Parking Lot (Spaces Available)
---	---

#	Hetrick Center South Parking Lot (Spaces Available)
---	---

19
Hetrick Center
4

Parking Restrictions

Business Hours: 8:00AM-9:00PM
Parking for Hetrick Center Building Only

Hetrick Center North Parking Lot			
A	B	C	D
4	4	5	N/A
1	0	0	0
0	0	N/A	N/A

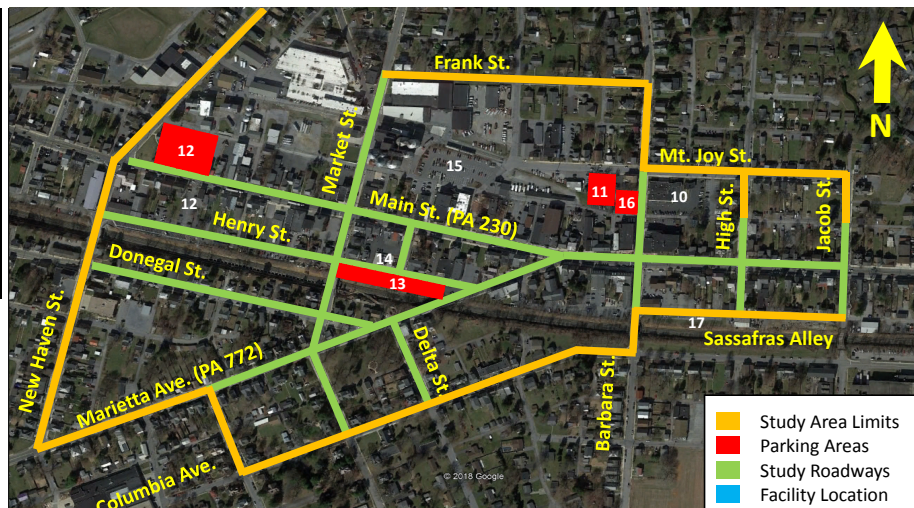
Hetrick Center South Parking Lot			
A	B	C	D
0	0	0	N/A
0	0	0	0
0	0	N/A	N/A

EXISTING PARKING UTILIZATION SUMMARY

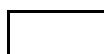
SUMMARY					
Data Record	A	B	C	D	Average Utilization
12:00PM-2:00PM Utilization:	17.4%	17.4%	21.7%	N/A	18.8%
4:30PM-6:30PM Utilization:	4.3%	0.0%	0.0%	0.0%	1.1%
9:00PM-10:00PM Utilization:	0.0%	0.0%	N/A	N/A	0.0%
Average Utilization (Entire Day):	7.2%	5.8%	10.9%	0.0%	

Notes: The parking lot had a low utilization rate during the 12:00 P.M. – 2:00 P.M., with an average utilization rate of 18.8%. This continued to drop during the 4:30 P.M. – 6:30 P.M. collection period and had a utilization rate of 0% during the 9:00 P.M. – 10:00 P.M. collection period. Very few vehicles were parked in the parking stalls during business hours and no vehicles were parked after business hours at night. All demand can be attributed to the Hetrick Center business. Additional capacity was consistently available throughout the entire day.

Facility Name:	Sassafras Alley Parking Lot
Begin Location:	Barbara Street
End Location:	High Street
Collected By:	PEM
Weather:	Sun, Wind
Collection Times:	12:00 PM - 2:00 PM 4:30 PM - 6:30 PM 9:00 PM - 10:00 PM



EXISTING PARKING DEMAND



Facility



Parking Observation within Collection Period



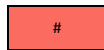
12:00PM-2:00PM Parking Spaces Utilized [EACH]



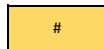
4:30PM-6:30PM Parking Spaces Utilized [EACH]



9:00PM-10:00PM Parking Spaces Utilized [EACH]



Sassafras Alley West Parking Lot (Spaces Available)



Sassafras Alley East Parking Lot (Spaces Available)

Parking Restrictions

None

Sassafras Alley West Parking Lot			
A	B	C	D
2	2	2	N/A
5	5	3	3
5	5	N/A	N/A

Sassafras Alley East Parking Lot			
A	B	C	D
8	8	9	N/A
9	7	6	7
7	7	N/A	N/A

EXISTING PARKING UTILIZATION SUMMARY

SUMMARY					
Data Record	A	B	C	D	Average Utilization
12:00PM-2:00PM Utilization:	40.0%	40.0%	44.0%	N/A	41.3%
4:30PM-6:30PM Utilization:	56.0%	48.0%	36.0%	40.0%	45.0%
9:00PM-10:00PM Utilization:	48.0%	48.0%	N/A	N/A	48.0%
Average Utilization (Entire Day):	48.0%	45.3%	40.0%	40.0%	

Notes: Parking utilization remained relatively consistent throughout the day, as the average utilization fluctuated from 40% to 50% with additional capacity always available. The 12:00 P.M. - 2:00 P.M. collection time saw little change over the collection period as the vehicles appeared to belong to employees of local businesses in the immediate area. The 4:30 P.M. - 6:30 P.M. collection time saw vehicle turnover as businesses closed and people started arriving to the nearby restaurants. This remained true for the 9:00 P.M. - 10:00 P.M. time period. It was observed that vehicles were parking at this facility for Rosie's Tavola restaurant.

APPENDIX B

Strategy Evaluation Matrix

Mount Joy Parking Utilization Study

Table 6: Strategy Evaluation Matrix

Strategy		Cost	Public Support	Government Acceptance	Timeliness of Implementation	Traffic Operations/ Safety	Economic Development Potential
1	Time-of-Day Residential Permit Parking	++	+	O	+	O	O
2	Off-peak Train Station Parking	++	++	++	++	+	+
3	Cooperative Agreements	+	O	++	--	+	+
4	Parking Garage at St. Mark's Church	---	++	O	---	++	+++
5	Land Acquisition/ Negotiation	--	O	-	--	+	+++

O: The strategy is anticipated to have neither a net negative or positive effect

+: The strategy is anticipated to have a net positive effect

-: The strategy is anticipated to have a net negative effect

The quality of + or – icons represent the magnitude of anticipated positive or negative effect, i.e., somewhat positive, positive, and very positive.