APPENDIX A
DATA AND ANALYSIS METHODOLOGY
Data and Analysis Methodology

Data and Process
In order to appropriately understand existing conditions, challenges, and opportunities, a series of quantitative data was collected. Qualitative data collection included speaking with and soliciting feedback from people who live, work, visit, or otherwise travel to and around the Strip District. The effort is summarized below.

Data Collection
Working with our partners at the City, PAAC, and local data collection firm John J. Clark & Associates, Inc. the Project Team gathered and analyzed numerous data sources during the course of this planning process.

Traffic and Multimodal Counts
- **New Multimodal Counts (Spring / Summer 2019).** Daily and hourly multimodal traffic counts were collected for this Plan between May – July 2019. Data was collected using Miovision, which provides both video and automated counts by mode.
- **Prior Traffic / Multimodal Counts.** This includes data from traffic impact analyses new large scale development, such as the Produce Terminal and 3 Crossings.
- **Signal Timings.** Fall 2019.

Crash Data
- **Crash data in the Strip District (2013-2017).** The Project Team analyzed crash data available from the Western Pennsylvania Regional Data Center (WPRDC).

Travel Data
- **Intercept survey data (Spring 2019).** The Project Team conducted interviews and surveys in the field during late Spring 2019 to understand travel preferences, habits, and receptiveness to different ideas for improving mobility and safety in the Strip District. Over 400 responses were received.
- **Streetlight data (accessed 2019).** The Project Team used Streetlight data better understand through trips and origin information for trips destined to the Strip District.
- **American Community Survey (2010-2018).** Population counts, 5-year travel trends, and mode share.
- **Make My Trip Count (2018).** Regional travel survey, designed to understand how Pittsburgh commuters travel, subset of data for the Strip District.
Transit, Bicycle Facilities, and Walk Facilities

- WRPRC. PAAC ridership (2018) and bus route data.
- Open Street Map. Sidewalk coverage as of 2020.

Employment / Land Use

- Information provided by the City regarding planning development.

Parking Data

Parking Inventory

In consultation with the city, parking data was gathered to ensure that it was representative of typical Strip District parking patterns. This includes a comprehensive inventory of all on- and off-street parking spaces in May and June 2019. This was both field checked and captured by drone imagery (see Figure 1). Due to security, data collectors were unable to access some smaller garages. As a result, these parking spaces are not included in the inventory or utilization counts.

Figure 1 Sample Drone Photo

Parking Utilization

The Project Team worked to collect a representative sample of parking utilization data in the Strip District for on- and off-street facilities. Specifically, the area east of the I-579 / Veteran’s Bridge. Data was collected during the following:

- Every two hours on a weekday between 7:00 am and 7:00 pm in June 2019
- On a weekend at 10:00 am, 12:00 pm, 3:00 pm, and 6:30 pm in June 2019
- Additional garage occupancy data, May 2019

Data collection included drone photography as well as spot field counts, where the Project Team walked the Strip District to capture a snapshot of parking occupancy.
Crash Data

Table 1 below represents:

- Crash data from WPRDC, 2013-2017
- Crashes that include at least one injury ("injury_count">0) or fatality ("fatal_count">0)
- Crashes that were not assigned to bridges in the study area, as those were assumed to be outside the scope of this study.

Crashes were roughly assigned to their nearest location using ArcGIS. We note that further analysis would be required to refine this analysis.

*Table 1: Crashes by Intersection and Road Segment*

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<th>Bicyclist fatalities</th>
<th>Crashes involving pedestrians</th>
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Estimating Future Parking Demand

The Project Team compared estimates of existing land uses and parking occupancy counts to create a model of potential future parking demand in the Strip District. Based on national standards together with this local data, the model provides a look not only at peak demand but also how this demand fluctuates by time of day. This planning level analysis focused on parking patterns for the area west of 26th Street and east of 13th Street. This area is where much of the proposed development is concentrated and is generally within a less than 10-minute walk of the Core.

The general approach was to compare land use to parking demand in an area where utilization counts were collected throughout the day and where most parking was assumed to serve Strip District uses as opposed to Downtown users. This area is shown in green in Figure 2, labeled “Parking Model Analysis Area”. This comparison yields an estimate of parking demand throughout the day generated by the various land use types in the Strip District.

The Project Team then applied that parking demand rate to a future development scenario, which included some sites not in the in addition to the Parking Model Analysis Area (see "Additional Development Sites" in pink in Figure 2). Development on these sites is mostly replacing parking that was under construction or parking that mostly serves nearby Downtown uses.

Approach

The methodology for estimating parking demand is based on industry standards, which provide a baseline dataset and methodology. The Institute of Transportation Engineers (ITE) Parking
Generation Manual is the industry standard in determining parking demand. Based on data collected around the country, ITE provides standard peak parking generation rates by land use type as well as estimates of demand (expressed as a percentage of peak demand) by time of day. Much of this data is typically collected in suburban locations with stand-alone uses. A typical parking analysis would take the demand generated by a given land use, apply the ITE parking generation rate, and assume that this is the amount of parking necessary for a given land use or building throughout the day (see Figure 3).

This approach is not reflective of how the Strip District functions. In the Strip District, different establishments experience peak demand at different types of day. For example, some of the retail businesses on Penn Avenue experience peak parking demand at midday, and when residents drive to work during the middle of the day, residential demand is lower (see Figure 4).
The Strip District context also makes parking demand different than what the data collected for ITE would typically indicate. Many of the ITE parking generation rates are calculated based on data collected in more suburban locations. This means that the expected parking demand rates are likely higher than in the Strip District, where someone might take the bus to work, walk to get a cup of coffee, or ride a bike between destinations. These multimodal options reduce demand for the parking of private vehicles. This is often apparent when comparing observed occupancy to estimated peak shared demand (see Figure 6 for a generic example).
Methodology

To more accurately model Strip District parking demand, the Project Team used the industry standard ITE data together with a modeling approach adapted from the Urban Land Institute’s (ULI) Shared Parking Manual as well as the data collected as part of this Plan. The parking model uses the methodology in the ULI’s Shared Parking Manual to show overlapping peaks in demand from different land uses together with the rates provided in ITE’s Parking Generation Manual. Because this Plan included the collection of parking utilization data, it is possible to calibrate the model to parking demand that is specific to the Strip District context and accounts for reductions in demand from people taking other travel modes.

The following steps were taken to estimate existing and anticipated parking demand for the Parking Model Analysis Area.

This methodology includes the following assumptions and data sources:

- **Existing Square Footage by Land Use Type.** City-provided data based on estimates using a geospatial data of building footprints and a windshield survey of land uses.
- **Parking Utilization and Inventory.** Data collected in Spring / Summer 2019.
- **Future Development Scenario.** Estimated based on information from a variety of sources, including city documents, publicly reported development sizes, and city-required impact studies.

The following methodology describes the steps used in this effort for estimating future Strip District parking demand.

1. **Estimate existing built square footage by land use type.** The city provided this data, which was based on GIS building footprint data and a windshield survey to determine land
uses and number of stories. The Project Team reviewed and adjusted large sites as necessary based on available Allegheny County assessment data where possible or other publicly available information. Due to the nature of data collection, this data should be considered a rough, planning-level estimate of existing square footage. Table 2 provides an overview of this estimate.

**Table 2 Estimated Built Square Footage in Study Area, 2019**

<table>
<thead>
<tr>
<th>Use</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office</td>
<td>730,500 square feet</td>
</tr>
<tr>
<td>Commercial</td>
<td>460,000 square feet</td>
</tr>
<tr>
<td>Warehouse / Manufacturing</td>
<td>1,530,000 square feet</td>
</tr>
<tr>
<td>Hotel / Housing Units</td>
<td>500 units</td>
</tr>
</tbody>
</table>

Note that excluded from this estimate are sections of buildings that are inactive (used for storage) and residential buildings where data on parking utilization was not available. Figure 7 shows the buildings included for modeling purposes.

**Figure 7 Buildings included in parking demand model**

---

**Estimate actual parking demand in the Parking Model Analysis Area.** For this exercise, the Project Team estimated parking demand based on the observed parked vehicle counts in the Parking Model Analysis Area. There are approximately 130 spaces in surface lots associated with buildings in the Parking Model Analysis Area that did not have counts available. To be conservative, the Project Team assumed these spaces were fully occupied throughout the day. Peak demand in the Parking Model Analysis Area is estimated at about 2,200 vehicles at 1:00 pm. Figure 8 shows the parking facilities included in the estimate, which includes about 3,500
Figure 8 Facilities with parking utilization data included in the model

Use existing built square footage to generate a traditional estimate of parking demand. The Project Team first estimated the amount of parking that would be required using a traditional approach to analysis where each land use had its own supply of parking, based on suburban rates from ITE. Figure 9 shows that this approach would indicate that the study area requires over 5,000 parking spaces should all development come online as proposed. Currently, there are about 3,500 spaces in the study area, and the estimated peak parking demand is approximately 60%. This includes the parking on Smallman Street that was closed for construction at the time of this analysis, along with some overflow utilization observed in those parking spaces.
Use existing built square footage to generate unadjusted parking demand, including time of day factors. The next step is to apply ITE database of parking demand by time of day for different land uses to estimate an unadjusted parking demand. Figure 10 compares the results of this analysis to the estimated parking demand peak based on observed data. This estimated peak is about 40% lower than ITE would estimate.
Figure 10 Uncalibrated Model

Calibrate estimated ITE parking demand based on today’s parking demand patterns. The next step is to compare parking utilization patterns to land use by square footage in the study area to estimate a Strip District specific rate of “parking generation” per mix of land uses by time of day (see Figure 11).

It is important to note that the Parking Model Analysis Area includes several parking lots that likely serve Downtown as well as the Strip District. As a result, the observed parking demand includes some inherent demand from Downtown.
Estimate future built square footage and parking supply in development areas. Based on known and planned development, the Project Team generated a future land use scenario for an expanded area that includes several development sites along the Allegheny River (see Figure 12 and Table 3. This included an assessment of the estimated change in parking by parcel in the Parking Model Analysis Area to create an estimate of future supply.¹

Table 3 Future Land Use Scenario

<table>
<thead>
<tr>
<th>Use</th>
<th>Existing</th>
<th>Change</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office</td>
<td>705,000 sf</td>
<td>+1,700,000 sf</td>
<td>2,400,000 sf</td>
</tr>
<tr>
<td>Commercial</td>
<td>460,000 sf</td>
<td>+260,000 sf</td>
<td>740,000 sf</td>
</tr>
<tr>
<td>Warehouse / Manufacturing</td>
<td>1,530,000 sf</td>
<td>-580,000 sf</td>
<td>950,000 sf</td>
</tr>
<tr>
<td>Hotel / Housing Units</td>
<td>500 units</td>
<td>+900 units</td>
<td>1,400 units</td>
</tr>
<tr>
<td>Parking Spaces</td>
<td>5,200 spaces</td>
<td>+1,400 net new spaces</td>
<td>6,600 spaces</td>
</tr>
</tbody>
</table>

¹ Estimate based on city data, including transportation impact studies and other documents on file, as well as publicly reported development information.
(2) **Estimate future parking needs.** Figure 13 provides an overview of the parking that might be necessary if parking was provided for each individual use at traditional, suburban land-use ratios. This number is nearly 11,000 spaces.

---

*Parking changes in this diagram use Stantec data for existing, except for developments included in the Riverfront Landing TIS update. For these, the team used parking changes as estimated in the report as the understanding of parcel lines was assumed to be more accurate.*
However, it is assumed that parking demand is lower due to the Strip District’s multimodal context. Therefore, the Project Team used modeled Strip District parking generation rates to estimate future parking needs. As noted earlier, the parking generation rate included in the model includes some demand that may be attributed to people who park in the Strip District and go Downtown.

Analysis and Scenarios

The model is an order of magnitude estimate based on existing patterns and is not a perfect predictor of the future. For example, as new residents, employees, and even patrons of restaurants or retail outlets begin to travel to and from the Strip District, they may choose to travel differently than today’s patterns. Future offices may have fewer square feet per worker, generating more trips than those that are in the Strip District today. For this reason, the Project team estimated a range of possible outcomes, including an “existing” and “high” scenario.

Existing Scenario

This scenario assumes that future land uses would generate parking at approximately the same rate as existing land uses (50% of what ITE would predict). The low estimate shows that demand generated under the future scenario could be accommodated in the planned parking supply. Figure 14 shows these results compared to the projected supply, as well as the “90% reserve” line. Parking is considered functionally full at 90%, so this reserve provides
an estimate of when it may become challenging to find an available parking space.

*Figure 14 Future Demand Model Results - Low*

Estimated Future Peak - Traditional Analysis: ~11,000

- Estimated Future Area Supply: ~6,600
- 90% reserve: ~5,900
- Estimated Future Peak: ~5,400
- Underutilized parking

### High Demand Scenario

The “high” scenario assumes that parking generation rates are slightly higher, at about 65% of what ITE would predict. This estimate generates parking demand that is slightly higher than the planned supply. Figure 15 shows these results compared to the projected supply, as well as the “90% reserve” line.
Findings

As noted above, the model is not a perfect predictor of the future. Further study is needed to truly understand the impacts of each individual development in the Strip District context. For example, local restrictions by development limit supply and sharing, i.e. dedicated residential parking. However, this analysis does provide the following insights:

- Observed parking demand in the Strip District is lower than estimates based on industry standards. This is due to multiple factors, including the Strip District District’s multimodal environment and the ability to “park once” and walk to multiple destinations, as well as the change in demand by time of day for each use.

- Peak demand for today’s mix of uses is midday, generated by office and retail uses, including restaurants. Much of this demand is concentrated today in the southeastern portion of the Parking Model Analysis Area, i.e. along Penn Avenue east of 16th Street.

- In the future, demand may shift to areas where new development is planned.

- Future demand will continue to concentrate in the midday peak. However, today and in the future, there is considerable parking supply available in the “shoulders” of the day just before and after traditional working hours, which could support
uses such as evening bars, restaurants, and residential parking.

- Each development is planned with its own individual supply of parking in accordance with zoning, which depending on regulations may limit the ability of that supply from being efficient and shared between multiple developments / uses.

- Some of the proposed developments are replacing surface lots, likely for Downtown and Strip District employees. This demand provides a built-in future market for any parking that is underutilized, if the parking can be managed in a coordinated manner that maximizes its use, rather than restricting it to particular users.

- If demand from new development coupled with continued demand from active Strip District uses generates demand at a similar and / or lower rate than the uses in the Strip District today, the proposed new supply will be sufficient. To achieve this, all public and private and on- and off-street spaces should be available to potential users. Much of the available supply is located in private lots that might not be easily accessible today. As a result, the system to work effectively it will be necessary to improve access and work with private property owners to open up supply to other users.

- New demand from developments together with continued demand from active Strip District uses could exceed available parking supply if the rate of driving increases. TDM will therefore be essential to ensuring access.
Vehicular Volumes

Traffic Analysis Methodology

The Project Team developed a Synchro 10 / SimTraffic 10 model for the Strip District utilizing a combination of existing Synchro models developed for other projects as well as existing sources of traffic volume data to conduct a planning-level analysis of future traffic volumes and proposed roadway modifications. It should be noted that this model is to be considered preliminary and a planning-level only because it utilizes existing sources of data, some of which are older and were adjusted to estimate 2019 existing conditions and does not include all intersections within the study area. Because this was a planning level analysis, a more granular traffic analysis may be required to evaluate impacts of recommended modifications in a more detailed manner. This may include collecting more recent traffic data (including pedestrian and bicycle volumes), additional relevant intersections in the study area, and traffic from planned developments that were unknown at the time of this study.

The following section documents the traffic analysis methodology, including data sources, background growth rate, planned developments, and capacity analysis measures of effectiveness.

Capacity Analysis Methodology

Capacity analysis, a procedure used to estimate the traffic-carrying ability of roadway facilities over a range of defined operation conditions, was performed using Synchro 10, which is based on the methodology of the Highway Capacity Manual 6th Edition (HCM) to establish average volume to capacity (v/c) ratios, delays, and LOS for each intersection. Existing and proposed roadway geometry, signal timing, and traffic data were entered into the model.

The v/c ratio relates the demand at a particular intersection (traffic volume) to the available capacity. The available capacity for each movement varies depending on number of lanes, lane width, perception / reaction time, green time, and cycle length, among others. A v/c ratio of 1.0 means that the demand for a particular movement is equal to the capacity. A movement with a v/c ratio greater than 1.0 is considered undesirable because the movement volume exceeds the capacity and results in queuing, indicating unmet demand along that approach.

LOS is an evaluation of the quality of operation of an intersection and is a measure of the average delay a driver experiences while traveling through the intersection. LOS is dependent on a range of defined operating conditions such as traffic demand, lane geometry, and traffic signal timing and phasing.

LOS can range from A to F and is based on the average control delay per vehicle in seconds.

For a signalized intersection, LOS A indicates operations with an average control delay less than 10 seconds per vehicle while LOS F describes operations with an average control delay in excess of 80 seconds per vehicle or where the v/c ratio is greater than 1.0. For an unsignalized intersection, LOS A indicates operations with an average control delay less than 10 seconds per vehicle while LOS F describes operations with an average control delay in excess of 50 seconds per vehicle or where the v/c ratio is greater than 1.0. The HCM 6 delay criteria for signalized and
Unsignalized intersections are summarized in Table 4.

**Table 4 LOS Thresholds**

<table>
<thead>
<tr>
<th>Level of Service</th>
<th>Signalized</th>
<th>Unsignalized</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Less than 10.0</td>
<td>Less than 10.0</td>
</tr>
<tr>
<td>B</td>
<td>≥ 10.0 and &lt; 20.0</td>
<td>≥ 10.0 and &lt; 15.0</td>
</tr>
<tr>
<td>C</td>
<td>≥ 20.0 and &lt; 35.0</td>
<td>≥ 15.0 and &lt; 25.0</td>
</tr>
<tr>
<td>D</td>
<td>≥ 35.0 and &lt; 55.0</td>
<td>≥ 25.0 and &lt; 35.0</td>
</tr>
<tr>
<td>E</td>
<td>≥ 55.0 and &lt; 80.0</td>
<td>≥ 35.0 and &lt; 50.0</td>
</tr>
<tr>
<td>F</td>
<td>Greater than or equal to 80.0 or v/c greater than 1.0</td>
<td>Greater than or equal to 50.0 or v/c greater than 1.0</td>
</tr>
</tbody>
</table>


**2019 Existing Condition**

A Synchro 10 / SimTraffic 10 analysis model was developed utilizing a combination of existing Synchro models, existing sources of traffic data, and signal timing information provided by DOMI. Table 5 below lists the sources of data for each intersection as well as identifies the Synchro models that were used and their coverage areas.
Table 5 Intersection Volume Data Sources

<table>
<thead>
<tr>
<th>Location</th>
<th>Year</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>11th Street &amp; Grant Street &amp; Liberty Avenue</td>
<td>2017</td>
<td>City of Pittsburgh</td>
</tr>
<tr>
<td>11th Street &amp; Liberty Avenue</td>
<td>2011</td>
<td>City of Pittsburgh</td>
</tr>
<tr>
<td>11th Street &amp; Penn Avenue</td>
<td>2017</td>
<td>City of Pittsburgh</td>
</tr>
<tr>
<td>11th Street &amp; Smallman Street</td>
<td>2017</td>
<td>City of Pittsburgh</td>
</tr>
<tr>
<td>12th Street &amp; Penn Avenue</td>
<td>2017</td>
<td>City of Pittsburgh</td>
</tr>
<tr>
<td>12th Street &amp; Smallman Street</td>
<td>2011</td>
<td>Strip District TIS</td>
</tr>
<tr>
<td>13th Street &amp; Smallman Street</td>
<td>2011</td>
<td>Strip District TIS</td>
</tr>
<tr>
<td>15th Street &amp; Smallman Street</td>
<td>2017</td>
<td>Produce Terminal &amp; 1600 Smallman TIS</td>
</tr>
<tr>
<td>16th Street &amp; Penn Avenue</td>
<td>2017</td>
<td>Produce Terminal &amp; 1600 Smallman TIS</td>
</tr>
<tr>
<td>16th Street &amp; Liberty Avenue</td>
<td>2017</td>
<td>Produce Terminal &amp; 1600 Smallman TIS</td>
</tr>
<tr>
<td>17th Street &amp; Liberty Avenue</td>
<td>2011</td>
<td>Strip District TIS</td>
</tr>
<tr>
<td>17th Street &amp; Penn Avenue</td>
<td>2019</td>
<td>Strip District Mobility Study Counts</td>
</tr>
<tr>
<td>17th Street &amp; Smallman Street</td>
<td>2017</td>
<td>Produce Terminal &amp; 1600 Smallman TIS</td>
</tr>
<tr>
<td>18th Street &amp; Smallman Street</td>
<td>2017</td>
<td>Produce Terminal &amp; 1600 Smallman TIS</td>
</tr>
<tr>
<td>19th Street &amp; Smallman Street</td>
<td>2017</td>
<td>Produce Terminal &amp; 1600 Smallman TIS</td>
</tr>
<tr>
<td>20th Street &amp; Smallman Street</td>
<td>2017</td>
<td>Produce Terminal &amp; 1600 Smallman TIS</td>
</tr>
<tr>
<td>21st Street &amp; Liberty Avenue</td>
<td>2011</td>
<td>Strip District TIS</td>
</tr>
<tr>
<td>21st Street &amp; Penn Avenue</td>
<td>2011</td>
<td>Strip District TIS</td>
</tr>
<tr>
<td>21st Street &amp; Railroad Avenue</td>
<td>2011</td>
<td>Strip District TIS</td>
</tr>
<tr>
<td>21st Street &amp; Smallman Street</td>
<td>2017</td>
<td>Produce Terminal &amp; 1600 Smallman TIS</td>
</tr>
<tr>
<td>21st Street &amp; Spruce Way</td>
<td>2017</td>
<td>Produce Terminal &amp; 1600 Smallman TIS</td>
</tr>
<tr>
<td>26th Street &amp; Liberty Avenue</td>
<td>2019</td>
<td>Strip District Mobility Study Counts</td>
</tr>
<tr>
<td>27th Street &amp; Railroad Street</td>
<td>2019</td>
<td>3 Crossings 2.0 Master Plan TIS</td>
</tr>
<tr>
<td>27th Street &amp; Smallman Street</td>
<td>2019</td>
<td>3 Crossings 2.0 Master Plan TIS</td>
</tr>
<tr>
<td>28th Street &amp; Liberty Avenue</td>
<td>2019</td>
<td>Strip District Mobility Study Counts</td>
</tr>
<tr>
<td>28th Street &amp; Railroad Street</td>
<td>2019</td>
<td>3 Crossings 2.0 Master Plan TIS</td>
</tr>
<tr>
<td>28th Street &amp; Smallman Street</td>
<td>2019</td>
<td>3 Crossings 2.0 Master Plan TIS</td>
</tr>
<tr>
<td>29th Street &amp; Railroad Street</td>
<td>2019</td>
<td>3 Crossings 2.0 Master Plan TIS</td>
</tr>
<tr>
<td>29th Street &amp; Smallman Street</td>
<td>2019</td>
<td>Strip District Mobility Study Counts</td>
</tr>
<tr>
<td>31st Street &amp; Liberty Avenue</td>
<td>2019</td>
<td>Strip District Mobility Study Counts</td>
</tr>
<tr>
<td>31st Street &amp; Penn Avenue</td>
<td>2019</td>
<td>Strip District Mobility Study Counts</td>
</tr>
<tr>
<td>34th Street &amp; Penn Avenue / Butler Street</td>
<td>2019</td>
<td>Strip District Mobility Study Counts</td>
</tr>
<tr>
<td>Herron Avenue &amp; Liberty Avenue</td>
<td>2019</td>
<td>Strip District Mobility Study Counts</td>
</tr>
</tbody>
</table>
The Project Team combined two existing condition Synchro models that were obtained from the Produce Terminal & 1600 Smallman Traffic Impact Study (TIS) and Strip District Development from 11th to 21st Street TIS to begin developing the AM and PM peak hour existing condition models for this Plan. The models were then expanded to include intersections for which data was available from other sources. A 1% annual growth rate was applied to bring the various data sources to a 2019 existing condition level. A capacity analysis was then conducted for the 2019 existing condition, which establishes a base condition with which to compare the future demand, as well as a 2019 condition where 21st Street would become two-way (see Table 5 and Table 6).

2035 Future Horizon Year

2035 Future Horizon Year traffic volumes were estimated by applying a background growth rate and accounting for developments for which traffic impact studies were available. First, Stantec incorporated Build Condition traffic volumes obtained from the Produce Terminal & 1600 Smallman TIS, Strip District Development from 11th to 21st Street TIS, and the 3 Crossings 2.0 Master Plan TIS, into the model for the intersections that were studied in the respective TIS’s. No additional growth was applied to these intersections because a background growth rate was included in the final Build condition volumes in each of the studies.

Next, for intersections that were not included in any of the TIS’s, Stantec applied a 1% annual background growth rate. A 1% growth rate was determined through a review of background traffic growth rates utilized in the previously completed TIS’s, all of which had a growth rate around 1%. For example, in the Produce Terminal & 1600 Smallman TIS, the developer contacted the SPC and a background growth rate of 1% per year was estimated.

A capacity analysis was then conducted for the 2035 Future Horizon Year condition for the network with the existing geometry (see Table 6).

Key Findings

- Traffic flows create congestion at the base of the 16th and 31st Street bridges as well as on Liberty Avenue at 11th Street. The LOS at these intersections gets worse in the 2035 condition.

- 16th and 31st streets likely act as pinch points because they are both two-way streets that permit left-turns but do not have left-turn lanes. Vehicles waiting to make these movements can block other traffic attempting to go through. At the 31st Street Bridge, the side roads (technically both 31st Street, running alongside the bridge) require additional signal phases which can also slow traffic.

- Future development will increase congestion at locations along Smallman Street, particularly between 11th and 16th streets. Additional signalization on Smallman may be warranted, including 21st and 26th Street that line up with signals on Penn and Liberty avenues.

- Additional models will be built for large roadway projects, i.e. Liberty Avenue HSIP
## Table 6 Current and Future Network

<table>
<thead>
<tr>
<th>Location</th>
<th>AM Peak Hour</th>
<th>PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019 2035 2019 2035</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11th Street &amp; Grant Street &amp; Liberty Avenue</td>
<td>D D D E</td>
<td></td>
</tr>
<tr>
<td>11th Street &amp; Liberty Avenue</td>
<td>D D D E</td>
<td></td>
</tr>
<tr>
<td>11th Street &amp; Penn Avenue</td>
<td>B B B B</td>
<td></td>
</tr>
<tr>
<td>11th Street &amp; Smallman Street</td>
<td>A A B B</td>
<td></td>
</tr>
<tr>
<td>12th Street &amp; Penn Avenue</td>
<td>B B B C</td>
<td></td>
</tr>
<tr>
<td>12th Street &amp; Smallman Street</td>
<td>A A A B</td>
<td></td>
</tr>
<tr>
<td>13th Street &amp; Smallman Street</td>
<td>D F B D</td>
<td></td>
</tr>
<tr>
<td>15th Street &amp; Smallman Street</td>
<td>B F C F</td>
<td></td>
</tr>
<tr>
<td>16th Street &amp; Penn Avenue</td>
<td>B B B D</td>
<td></td>
</tr>
<tr>
<td>16th Street &amp; Liberty Avenue</td>
<td>E F F F</td>
<td></td>
</tr>
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</tr>
<tr>
<td>17th Street &amp; Penn Avenue</td>
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<td>17th Street &amp; Smallman Street</td>
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<td></td>
</tr>
<tr>
<td>21st Street &amp; Liberty Avenue</td>
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</tr>
<tr>
<td>21st Street &amp; Penn Avenue</td>
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<td></td>
</tr>
<tr>
<td>21st Street &amp; Railroad Street</td>
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<td>21st Street &amp; Smallman St</td>
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<td></td>
</tr>
<tr>
<td>21st Street &amp; Spruce Way</td>
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<td></td>
</tr>
<tr>
<td>28th Street &amp; Liberty Avenue</td>
<td>B B B B</td>
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</tr>
<tr>
<td>28th Street &amp; Railroad Street</td>
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</tr>
<tr>
<td>28th Street &amp; Smallman Street</td>
<td>A B B C</td>
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</tr>
<tr>
<td>29th Street &amp; Railroad Street</td>
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</tr>
<tr>
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<td></td>
</tr>
<tr>
<td>34th Street &amp; Penn Avenue / Butler Street</td>
<td>C C E F</td>
<td></td>
</tr>
<tr>
<td>Herron Avenue &amp; Liberty Avenue</td>
<td>B B C D</td>
<td></td>
</tr>
</tbody>
</table>
Travel Demand and Mode Share

Methodology

To estimate future trips, the Project Team relied on a national database of trips generated by different land uses published by ITE. Similar to parking generation, ITE provides trip rates per unit of development. For example, for every 1,000 square feet of retail, ITE estimates about 40 trips per day. These trip rates are based on data collected for many years at sites across the United States. Most of these sites are typically stand-alone uses in places that with more suburban land use patterns from a mixed use, urban core like the Strip District.

Traffic engineers typically apply a “mode share” to ITE data to estimate traffic patterns in more urban areas. In short, ITE methodology assumes that all trips made to a given site by car in a suburban, auto-oriented context, represent individuals making singular trips. Therefore, to create a baseline understanding of trips in an urban context, an analyst can apply a more urban mode share to the trip generation rate for a mix of uses.

For this exercise, the Project Team relied on data from recently submitted and proposed developments provided by the City for the Strip District, which included:

- 200,000 square feet of retail
- 70,000 square feet of restaurant space
- 1,100 residential units
- 2,260,000 square feet of office space

Table 7 provides a breakdown of two scenarios for trip-making in the Strip District. The first is based on an average of today’s mode shares for workers and residents in the Strip District. The second is an aspirational mode share based on information prepared for TISs in the Strip District, together with a slightly increased walk mode share than the TISs use. Overall, this “Future Mode Share” assumes slightly higher levels of transit, biking, and walking and lower levels of driving for new trips compared to today’s mode shares.

Table 7 Estimated New Trips by Mode from Future Development Scenario

<table>
<thead>
<tr>
<th>Mode Share</th>
<th>Today's Mode Shares</th>
<th>Estimated Daily Trips</th>
<th>Estimated PM Peak Hour Trips</th>
<th>Potential Future Mode Shares</th>
<th>Estimated Daily Trips</th>
<th>Estimated PM Peak Hour Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive</td>
<td>74%</td>
<td>35,300</td>
<td>3,900</td>
<td>Drive</td>
<td>63%</td>
<td>30,200</td>
</tr>
<tr>
<td>Transit</td>
<td>14%</td>
<td>6,500</td>
<td>700</td>
<td>Transit</td>
<td>18%</td>
<td>8,000</td>
</tr>
<tr>
<td>Bike</td>
<td>6%</td>
<td>2,600</td>
<td>300</td>
<td>Bike</td>
<td>9%</td>
<td>4,300</td>
</tr>
<tr>
<td>Walk</td>
<td>8%</td>
<td>3,600</td>
<td>400</td>
<td>Walk</td>
<td>10%</td>
<td>4,800</td>
</tr>
</tbody>
</table>

It is important to note that these are planning-level estimates to understand order of magnitude changes, particularly for walking, biking, and transit. These do not take into account any reductions from existing land uses that may be replaced by new developments nor do they account for any trips that may be “internally captured” (i.e. walking from a residence to a coffee shop) and therefore replacing a driving trip.

3 Today’s Mode Shares represents an average of residents (ACS 5-yr estimates from 2018) and those commuting into the Strip District (Make My Trip Count data, 2018)
Zoning Review

Pittsburgh’s zoning code allows for developers to reduce the amount of required vehicular parking by providing bicycle parking. The RIV district halves the amount of required parking and applies a maximum number of spaces. It also offers developers who want to offer fewer than the minimum number of off-street spaces the option of paying into a mobility improvement trust. This trust will contribute to additional services to reduce parking demand.

Below is a high-level review of the mobility elements of Pittsburgh’s zoning code, through the lens of how they may be impacting the Strip District development environment today, together with a rating as to how supportive a given characteristic is of the multimodal environment (see Table 8). Overall, the city has many best practices in place to enable flexible development and work toward achieving DOMI’s goals. Most notably, Pittsburgh needs more robust reporting and data collection methods for transportation management plans and goals aimed at reducing SOV trips. This data will be critical to be able to benchmark districtwide progress towards reducing congestion and changing the status quo.

The Strip District north of 21st Street, and between the river and Spring Way, is zoned RIV-Industrial Mixed Use (IMU). The area in the Core of the Strip District between 21st Street and the 16th Street Bridge, as well as along Liberty Avenue, is zoned Urban Industrial (UI), depicted in brown. The area south of the 16th Street bridge and between Smallman Street and Liberty Avenue, is zoned Golden Triangle, Districts B and C.
Figure 16 Strip District Zoning Coverage Map

4 From https://gis.pittsburghpa.gov/pgzhoning/, November 2020. Modified to show GT zone separately from RIV.
Table 8 Audit of Current Strip District Parking and Transportation Practices

<table>
<thead>
<tr>
<th>Zoning District / Municipal Code Section</th>
<th>Parking / Transportation Standard (bold added)</th>
<th>Assessment</th>
<th>Potential Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>RIV District 905.04.C.4., 905.04.I.1, 905.04.K.1. (^5)</td>
<td>Transportation management plan required.</td>
<td>Developers must document how they will elevate transportation options other than the private car. <em>No monitoring / reporting required, which may limit effectiveness.</em></td>
<td>Medium</td>
</tr>
<tr>
<td>Minimum parking required in RIV is 50% of minimum parking required in main zoning code.</td>
<td>Reduces parking requirements, which allows for more context-sensitive development in the Strip District.</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>Parking maximums are the minimums listed for parking provision elsewhere in the city.</td>
<td>Limits parking, which helps to reduce travel by car as well as land devoted to parking rather than active uses.</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>Contribution to a mobility improvement trust allows for additional parking reductions.</td>
<td>This option allows a developer to build less than the minimum amount of parking required by Code, which can be of assistance to infill development on smaller sites. Generally, ensures that developments contribute to the mobility environment. Allows the city to coordinate funds in support of larger projects that benefit multiple / existing developments and the community at large. Amount not specified, which may require negotiation by all parties.</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>Additional height or proximity to the river is available if parking associated with building is convertible to an active use.</td>
<td>“Future-proofs” the construction of parking, if for example technology evolves such that parking demand is greatly reduced or eliminated.</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>Additional height or proximity to the river is available if building is within a ½ mile walkshed of rapid transit service routes (defined as mostly running in its own ROW, such as the East Busway) or if there is an onsite transit station as an integral</td>
<td>Encourages denser development near transit.</td>
<td>High</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Zoning District / Municipal Code Section</th>
<th>Parking / Transportation Standard (bold added)</th>
<th>Assessment</th>
<th>Potential Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Golden Triangle District</strong> 910.01.C.4</td>
<td>Developer can exceed height restrictions in the Golden Triangle if significant transit is included in building design.</td>
<td>Encourages dense development near transit and ensures that buildings are built to incorporate transit service where available.</td>
<td><strong>High</strong></td>
</tr>
<tr>
<td><strong>General Zoning Code</strong> 914.03.B, 914.05.D, 914.07.G.2</td>
<td>Shared parking allowed in a mixed-use development. Requirements for analysis kept on file / publicly available by city.</td>
<td>Allows for the efficient construction of parking to serve multiple uses in one development. Making requirements publicly available means that they are accessible to developers, which enhances predictability.</td>
<td><strong>High</strong></td>
</tr>
<tr>
<td></td>
<td>Bicycle parking, including protected parking, is required at rates relative to building / use Size.</td>
<td>Ensures that developments will be friendly to bicycle travel.</td>
<td><strong>High</strong></td>
</tr>
<tr>
<td></td>
<td>Zoning Board can authorize alternatives to providing off-street parking if proponent can show that “the proposed plan will result in a better situation with respect to surrounding neighborhoods, citywide traffic circulation and urban design than would strict compliance with otherwise applicable off-street parking standards.”</td>
<td>Provides another opportunity for developers to reduce parking but does not clarify what should be provided in return. May create lengthy negotiation situation.</td>
<td><strong>Medium</strong></td>
</tr>
<tr>
<td></td>
<td>Parking can be provided on a remote / separate location.</td>
<td>Allows for shared and efficient use of parking, particularly where one use may have an underutilized parking supply that can support another use.</td>
<td><strong>High</strong></td>
</tr>
<tr>
<td>Zoning District / Municipal Code Section</td>
<td>Parking / Transportation Standard <em>(bold added)</em></td>
<td>Assessment</td>
<td>Potential Impact</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>-----------------------------------------------</td>
<td>------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Developer can provide a Transportation Management Plan as a way to reduce parking requirements.</td>
<td>Not a requirement. Incentive may not be enough for developers to participate. TDM plan elements not prescribed in code, which reduces predictability for developers and does not help the city get specific things it might want, such as more carshare, bikeshare, carpool spaces, specific TDM programs, etc.</td>
<td>Medium</td>
<td></td>
</tr>
<tr>
<td>Developer can incorporate transit stops (that meet certain requirements) as a way to reduce parking requirements.</td>
<td>Incentivizes developers to build transit-oriented development / contribute to the transit environment.</td>
<td>High</td>
<td></td>
</tr>
</tbody>
</table>
Considered but Dismissed

The following section describes ideas that were considered by the Project Team but ultimately not included in the recommendations chapter of this Plan.

Bicycle Connection at 34th Street

This idea was considered but dismissed due to required changes in directionality and step grades.

Bicycle Connection at Railroad Street

There are two primary reasons this idea was considered but dismissed for the near term. The first being that hurdles to implementation are too great. Typically, a railroad ROW extends 10-12 feet from railroad tracks meaning that portions of the street are actually owned by Allegheny Valley Railroad. Intensive coordination and construction would be necessary to make the corridor suitable for bicycle use.

The second reason being that Railroad Street is further from key destinations in the Core and a corridor more proximate to these locations is preferred.

Two-Way Penn Avenue

Penn Avenue is currently one-way westbound with two vehicular travel lanes and a parking lane on either side. The Project Team analyzed the current and future street network changing Penn Avenue from one-way to two-way and found that it creates no significant deterioration in LOS compared to future conditions keeping Penn Avenue one-way. However, stakeholders did not view this change favorably and it would be appropriate to see how other changes to east-west corridors through the Strip District affect the overall network before potentially revisiting this concept.

Often times, one travel lane is used informally for deliveries and customers loading vehicles after making purchases. While this Plan does not recommend a change to this condition, benefits to of such a change might include:

- Slower vehicular speeds resulting from greater “friction” of traffic traveling in opposing directions.
- Slower vehicular speeds results in a safer environment for all, especially those on foot or on a bicycle.
- Better access for customers approaching from the west and less circling the blockhunting for parking.

Change 21st Street To Two-Way Operation

It is anticipated that this recommendation would not be further evaluated until the Penn Avenue signal upgrades project advances and after the Liberty Avenue HSIP project has been implemented. At that time, the feasibility of such a change should be further evaluated and coordinated with stakeholders, many of whom did not view this recommendation favorably during engagement.
Today, the narrower north-south streets that run between Liberty Avenue and Railroad Street through the Strip District's Core lack a predictable pattern, which limits driving access. Both 20th and 21st Streets are currently one-way southbound. This means that people wanting to access Penn Avenue via Liberty Avenue must either turn on 17th or 22nd Streets. Despite extensive signage, the traffic signal and width of 21st Street means the vehicles frequently turn down it the wrong way. Meanwhile, 21st is one of the few streets in the Strip District that runs all the way from the river to Liberty Avenue.

This recommendation is to convert 21st Street to two-way travel. This would also make both 18th and 19th streets and 20th and 22nd streets respective pairs (see Figure 21). On 21st Street parking would be retained as it is today, on both sides of the street. The existing loading zone between Penn Avenue and Mulberry Way would remain. If additional loading areas are warranted, one might be created on the block between Liberty and Penn avenues on the west side where truck loading occurs today.

The Project Team analyzed future conditions assuming 21st Street is converted to two-way and noted only a slight degradation in LOS at Smallman Street and Penn Avenue.

While this Plan does not recommend a change to this condition, benefits to of such a change might include:

- Makes the network easier for drivers to understand and reduces the likelihood of wrong way that occurs today. Provides better access to businesses on Penn Avenue.
- Improves safety for all users as two-way traffic moves slower, limiting the potential for more severe crashes involving cars and other forms of travel.
- Slower vehicular speeds make the street more comfortable for pedestrians traveling to transit service on Liberty Avenue.
- Two-way traffic is also safer for people crossing the street compared to the "double threat" of two lanes of one-way traffic.
Public Engagement Summary

The recommendations set forth in this Plan included a robust public engagement process. This included:

Fact Finding: Spring-Summer 2019

- An online survey
- In-person intercept surveys with iPads to help reach those Strip District users, including those who might not typically take an online survey or have access to the Internet
- A dedicated project website, including project materials and timeline
- Multiple stakeholder meetings at the project kick-off and during a three-day visit over the summer
- Three days of interactive workshops over the summer, including:
  - Pop-up sessions where members of the public were asked to provide feedback
  - A well-attended evening session held in the 20th + Penn Market space

Checking Ideas: Winter 2019

- Roundtable meetings with stakeholder groups to share draft recommendations, including:
  - Strip District Business Association and merchants
  - SDN
  - Developers
  - Local Legislators
  - City Departments
- An online comment form for anyone to provide comment

Feedback on Recommendations: Summer 2020

- Roundtable meetings with stakeholder groups, including:
  - Strip District Business Association and merchants
  - SDN
  - Local Legislators

Continuous Coordination

Throughout the planning process, DOMI facilitated meetings with:

- PPA
- PAAC
- Stakeholders
- City departments and agency partners
- Several organizations and individuals also submitted written comments throughout the planning process.

Focus Groups: Summer 2021

In July 2021, the focus group reconvened to discuss final recommendations in the Plan, particularly identifying any changes since the last meeting. During that same week, there was also an open house for stakeholders where DOMI and PAAC staff provided information about the various ongoing projects in the neighborhood.

Additional Feedback: Winter 2021

Additional feedback on the final document collected via online form.
Sample postcard for public events.

SHARE YOUR TRANSPORTATION IDEAS!

When + Where:
PUBLIC WORKSHOP
JUNE 6th
from 6-8pm
20th + Penn Market at 5199 20th St.

PARKLET POP-UP
JUNE 8th
from 10am-2pm
address______________

Also, look for our mobile workshop roving around the Strip in the morning!

Can’t make it? Visit: http://pittsburghpa.gov/domi/stripmobility

#mystriptrip
@PghDOMI
What Do People Want to See in the Strip District?
# What People Say about Mobility in the Strip District

Through stakeholder roundtables, community workshops, and other targeted conversations, the Strip District Mobility team talked with a wide array of stakeholders. The charts in the next few pages summarize these conversations into top considerations for the future.

<table>
<thead>
<tr>
<th>Stakeholder Feedback Summary</th>
<th>Detailed Issues/Concerns</th>
<th>Feedback and Ideas</th>
</tr>
</thead>
</table>
| Limited connectivity to the Riverfront Trail. | ● Connectivity problems for recreational cyclists vs. commuting cyclists  
● Limited opportunity to improve Waterfront Place as a private street  
● Limited access to riverfront | ● Friends of the Riverfront is trying to get closed portion of trail open again  
● More green space closer to trail  
● Make connections to trail more walkable / inviting  
● Connect trail to Lawrenceville  
● Improve ADA access to and on the trail  
● Connect trail to water with steps |
| Transit is well used, but lacks amenities | ● Liberty Avenue bus stops are not safe or comfortable to use  
● Impact of Liberty Avenue road diet on transit efficiency  
Bus Route 91 is overcrowded  
● Bus stops are too close together  
● Access to Amtrak Station is bad for pedestrians because of cobblestone sidewalk and utility poles (1.5’ wide sidewalks at some points) | ● Elevate transit experience of Liberty Avenue  
Consolidate stops along Liberty Avenue and improve them, increase some sidewalk space  
● Most underutilized bus stop on the East Busway (290 rides / day) at Herron Ave but lots of opportunity  
● Flat terrain could support micromobility options  
● Many employees already take the bus  
● Reinstate ferry service |
| The Strip District is overwhelmingly dedicated to accommodating vehicle travel lanes and surface parking lots | ● Cars are biggest problem in Strip District, preventing Penn Avenue from being the “shopping street” it naturally wants to be  
● Mixed Mulberry Way street use perception (bicyclists view as a bike lane, drivers view as a shortcut route, employees view as parking, businesses view as a loading zone) | ● Create complete connections.  
● Activate Penn Station for light-rail  
● Create a modal network map, prioritize streets for different modes  
● Create a plaza on Penn Avenue |
| There is no dedicated safe east-west bicycle accommodation through the Strip District | ● People forced to walk their bikes in the network gaps because there are not safe / accessible links | ● Consider where current bike racks are when planning for bicycle connections  
● Put bicycle racks everywhere - existing racks used year round, indicating a desire for additional bicycle parking  
● Interest in two-way protected bike infrastructure on Penn Avenue. Consider parking-protected bike infrastructure  
● Buffered bicycle facility on Smallman Street  
● Turn Railroad Street into a bike path / throughway |
We asked: What are your top priorities in the Strip District?

With five votes, people at public outreach sessions chose from the below. Top priorities included bicycle connections, transit service, improving the walking environment, and maintenance.

Safer and more accessible walking environment: 36

Improved transit service: 49

Better bicycle connections: 62

Express ferry service along the Allegheny: 29

Drive through the Strip as fast as possible: 2

Improved parking system: 30

More space in Strip district devoted to parking: 32

Transportation innovation: driverless vehicles, scooters, etc.: 24

Improved streetscape and public spaces: more trees, lighting, benches & landscaping: 44

Restoration of the funicular / gondola: 22

Maintenance/Investing in Existing Infrastructure: 39

Character: Accommodate freight, wholesale, and industrial uses: 27
### Stakeholder Feedback Summary

#### Detailed Issues/Concerns

- There are no periods when streets are closed to vehicular traffic
- Not enough 4-way stops
- Sidewalks along Liberty Avenue too narrow to properly accommodate pedestrians or those with limited mobility
- Limited space for people to walk along Penn Avenue when vendors are on the sidewalks
- Merchants have a poor perception of the “Open Streets” initiative (revenue & parking loss)
- Pedestrian fatalities indicate a safety issue
- Liberty Avenue feels like a highway despite speed limit of 25
- Low curb height on Liberty Avenue causes pedestrian safety issues with vehicles able to hop the curb so easily
- Not enough sit-down spaces, public gathering areas
- Lack of soft-scape / open space makes longer journeys on foot uncomfortable
- No easy transition from the Strip District to Downtown

#### Feedback and Ideas

- Preserve under-bridge spaces for pedestrians instead of parking (immediate shelter for unexpected rain). Include bike storage, pop-up vendors, etc.
- Accommodate pedestrian movements with better lighting and infrastructure improvements
- Improved vertical access to Polish Hill and the Hill District
- Introduce more traffic calming, improve crosswalk visibility
- Potential to “railbank” Railroad Street track (i.e. agreement for city to use ROW but not lose rights to reactivate)
- Shared street / space for people walking on Penn Avenue
- Install more greenery on Smallman Street
- Recognizable improvements to pedestrian safety since painted curb extensions were installed on Penn Avenue

#### The purpose of alleys in the Strip District is unclear.

- Always littered with trash, glass and store debris.
- Alleys a bad place for “official travel” especially for bikes as each intersection is mostly blind crossings.

#### Feedback and Ideas

- Alleys need to be cleaned and maintained
- More mulberry trees on Mulberry Way

#### Both planning and communication in the Strip District are not coordinated.

- No vehicle for local entities to coordinate / advocate for change
- Frustration with Smallman Street construction

#### Feedback and Ideas

- Consider information-based parking fines as alternative
- Improve communication procedures related to street construction

#### Parts of the Strip District simply need to be brought back to a state of good repair.

- Misuse of curbs, infrastructure on Railroad Street
- Property owner responsibility for sidewalks, so inconsistent maintenance
- Underground utilities creating obstructions
- Railroad Street substandard – legacy tracks pose safety hazard
- Driving on Liberty Avenue feels unsafe

#### Feedback and Ideas

- Improve and introduce more ADA-compliant curb cuts, overall state of infrastructure such as roads and sidewalks (consider water mains are private)
- Pursue stormwater management in streets and parking lots
## Stakeholder Feedback Summary

<table>
<thead>
<tr>
<th>Detailed Issues/Concerns</th>
<th>Feedback and Ideas</th>
</tr>
</thead>
<tbody>
<tr>
<td>- On-street parking on weekends causes backups</td>
<td>- Identify appropriate management to handle shared parking district</td>
</tr>
<tr>
<td>- Any changes to vehicle parking impacts businesses</td>
<td>- Implement (free) shuttles to / from nearby lots</td>
</tr>
<tr>
<td>- Loss of parking spaces on Smallman Street during construction</td>
<td>- Consolidate street parking on Smallman Street to one side, angled</td>
</tr>
<tr>
<td>- Holiday parking is a concern</td>
<td>- Create parking availability for people in hubs / center to accommodate tourists, etc.</td>
</tr>
<tr>
<td>- Customers leave if they cannot find parking</td>
<td></td>
</tr>
<tr>
<td>- People need cars to load up from wholesalers</td>
<td></td>
</tr>
<tr>
<td>- It is cheaper to park in the Strip District than use the bus</td>
<td></td>
</tr>
<tr>
<td>- People do not want to walk to parking</td>
<td></td>
</tr>
<tr>
<td>- Plenty of private surface parking lots are underutilized during times of peak demand</td>
<td></td>
</tr>
<tr>
<td>- Limited enforcement of two-hour meters</td>
<td></td>
</tr>
<tr>
<td>- No curb organization, especially for freight</td>
<td>- Incorporate things like Amazon, one-stop lockers</td>
</tr>
<tr>
<td>- Informal hotel shuttle drop-off zone at 21st Street &amp; Penn Avenue (shuttles double park on Penn Avenue)</td>
<td>- Create a designated drop-off / loading zone for tourists &amp; hotel shuttles (during specific hours)</td>
</tr>
<tr>
<td>- Lots of double-parking</td>
<td></td>
</tr>
<tr>
<td>- Smallman Street tractor trailers load perpendicular to loading docks</td>
<td></td>
</tr>
<tr>
<td>- Some encroachment with merchant tents on</td>
<td></td>
</tr>
<tr>
<td>- Smallman Street at the Produce Terminal</td>
<td></td>
</tr>
<tr>
<td>- Acknowledging Strip District as a regional destination and that tourists are not necessarily transit users</td>
<td>- Create more gateways at Herron Avenue and 34th and 11th streets</td>
</tr>
<tr>
<td>- There is a perception that it is challenging to get to the Strip District from elsewhere</td>
<td>- Emphasize analysis of origin and destination data to see who we are trying to accommodate</td>
</tr>
</tbody>
</table>

### It often feels as though there is not enough parking in the Strip District.

- Curbside space is limited and in high demand by different user groups.
- Connections between the Strip District and surrounding neighborhoods.
Ideas for Specific Locations

People who work, visit, and live in the Strip District had a chance both online and in-person to highlight issues and opportunities. Below are some representative ideas. Overall, comments related to driving concentrate on Liberty Avenue, while those related to biking focus on Penn Avenue, Smallman Street, and the Riverfront Greenway.

- Lights along Liberty at bus stops
- Remove parking one side of Penn Avenue
- East Busway w/ better connection to Strip District
- TDM (transportation demand management) strategies for those who park here.
- Activate Penn Station as a transit hub
- Please regulate drop-off/pickup to only occur at certain designated stops. It’s chaotic.
- Increase parking fees on Penn Avenue to the point where I can always get a space.
- Trail to business district
- Make Penn transit (buses/taxis/rideshare/T) only, with car access only for business workers and residents. Otherwise, clear some of the parking space for pedestrians and bikes, especially on the weekend.
- This (Waterfront Place to Smallman Street) is the best route for biking if we could make it safe.
In general, improved bus station infrastructure (better lighting, covered stops, more benches) + more frequent routes to and from Downtown and to East End on Penn and Liberty would help incentivize increased ridership. Coupled with reduction in parking, you’d see decreased personal car use for people visiting the Strip District.

Liberty needs a road diet. The lanes are really narrow and having a left turn lane outbound would reduce weaving and crashes.

The online map for this study allowed people to draw dots and lines with their ideas for mobility in the Strip.

People could also do this in person at the workshops.
Feedback On Ideas

The team developed a preliminary list of ideas to use as a conversation point with stakeholder groups in Winter 2019. The same list was also posted on the Strip District website with a comment form that stakeholders and the general public were invited to use to comment on the proposed strategies. Below is a summary of the feedback and reactions to these ideas.

<table>
<thead>
<tr>
<th>Detailed Issues/Concern</th>
<th>Feedback and Ideas</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sensitivity to local real estate market</strong></td>
<td></td>
</tr>
</tbody>
</table>
| ● Developers want to offer the highest parking ratio that they can  
● Local developers are coordinating with bicycle groups, transit agencies | ● Consider putting curb cuts on 15th Street rather than Penn Avenue as part of the 1501 Smallman development |
| **Multimodal access** | | |
| ● Some businesses closed for the day during OpenStreetsPGH  
● Most people on foot are tourists  
● Some opposition to closing Penn Avenue on a Saturday  
● No good signage to help visitors | ● Many employees are taking rideshare, walking, and biking, indicating that these are viable options  
● Buildings are leasing, even with lower parking ratios  
● Some openness to testing a "night market" idea and closing Penn Avenue in off hours  
● Some support for closing Penn Avenue on Saturdays and beyond  
● Create a map that is not just for vehicle and bicycle parking, but also highlights benches or safe areas to rest, bus stops and other amenities. |
| **Prepping for the future** | | |
| ● Preparing for micromobility / scooters is important  
● Today's zoning is insufficiently protecting the Strip from negative impacts form development | ● Improve stormwater management |
| **Curbside access** | | |
| ● Strip District curbside parking is relatively cheap in comparison to downtown parking, which is $4/hr  
● Some deliveries happen in the alleys  
● Vendors are using the sidewalk for private property - how can they give back to the community in exchange? | ● Add designated rideshare pick up / drop off locations |
| **Communication / Construction-related issues** | | |
| ● Communication is a critical issue  
● All of the construction in the area is also very limiting when dumpsters and building materials are allowed to take up parking for months at a time as well as blocking alleyways with trucks blocking peoples ability to get to their lots or pass through to look for parking. | ● Prioritize communication with local stakeholders |
<table>
<thead>
<tr>
<th>Detailed Issues/Concern</th>
<th>Feedback and Ideas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to transit</td>
<td></td>
</tr>
<tr>
<td>1. Places to wait for the bus on Liberty Avenue are terrible</td>
<td>1. Liberty Avenue redesign should leave enough room for a sidewalk for outbound bus stops</td>
</tr>
<tr>
<td>2. People from the suburbs are not going to take the bus</td>
<td>2. Consider 21st Street for East Busway access - closer to Core, easier to access</td>
</tr>
<tr>
<td>3. Limit any stop consolidation</td>
<td>3. Provide stop amenities, including a Connect Card machine, real-time bus arrival information, etc.</td>
</tr>
<tr>
<td>4. 26th Street is not a good place for busway access due to topography and crossing the 26th Street ramp</td>
<td>4. Extend light rail from Penn Station to the Strip District</td>
</tr>
<tr>
<td>5. Transit is critical for residents and workers</td>
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<tr>
<td>Improving walkability</td>
<td></td>
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<tr>
<td>1. It should be easier and safer to walk in the Strip District</td>
<td>1. Focus on pedestrian links underneath the 16th Street / David McCullough Bridge</td>
</tr>
<tr>
<td>2. 21st Street should be a key walking/neighborhood street</td>
<td>2. 21st Street should be a key walking/neighborhood street</td>
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<tr>
<td>Increasing parking accessibility to the public</td>
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<tr>
<td>1. Parking tax stands in the way of private property owners opening their parking to the public Concerns about losing the parking lot by St. Stanislaus Cork Factory and the Hub have raised rates since the study inventory was completed</td>
<td>1. Generally need more parking</td>
</tr>
<tr>
<td>2. If meters stay the same price and time limits are removed, people will park in the Strip District and walk downtown</td>
<td>2. Carson Street is a pilot for reinvesting parking revenue locally</td>
</tr>
<tr>
<td>3. Education as to where garages are as a big problem Free resident parking is an issue</td>
<td>3. Consider building a garage between 21st and 22nd on Liberty - property owner may be open to this, City may own part of the land</td>
</tr>
<tr>
<td>4. The street parking not being metered allows for people to leave vehicles in spots for weeks at a time</td>
<td>5. Preserve access for people in cars on Penn Avenue</td>
</tr>
<tr>
<td>5. There is not enough parking close to key destinations for out of town customers who want to carry things purchased in the Strip District to their vehicle</td>
<td>6. - they are key to local businesses</td>
</tr>
<tr>
<td>6. PPG lot owner has just leased more parking - sign of more demand</td>
<td>7. PPG lot owner has just leased more parking - sign of more demand</td>
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<tr>
<td>7. Revenue control systems for garages can track real-time information</td>
<td>8. Cork Factory Garage – equipment could help track this Incorporate with Downtown parking</td>
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<tr>
<td>8. Cork Factory Garage – equipment could help track this Incorporate with Downtown parking</td>
<td>9. Not opposed to increasing meter rates</td>
</tr>
<tr>
<td>9. Extend meter limit to 5 hours but do not eliminate time limit</td>
<td>10. In future, capture duration of stay in parking data</td>
</tr>
<tr>
<td>Future data needs</td>
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<tr>
<td>1. Study did not capture how long parked cars stayed at the curb</td>
<td></td>
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<tr>
<td>Detailed Issues/Concern</td>
<td>Feedback and Ideas</td>
</tr>
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<td>----------------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td><strong>Local shuttle</strong></td>
<td>- Some local employers and hotels run shuttles into Strip District today&lt;br&gt;- One future scenario in which a circulator may be warranted would be if commuter rail is implemented on the Allegheny Valley Railroad and a bus connection would be needed to bring commuters to and from a terminus at 21st Street (or further west)&lt;br&gt;- Interest in a circulator to remote parking, Downtown, and Strip District destinations</td>
</tr>
<tr>
<td>- Would like to see a circulator concept&lt;br&gt;- A circulator in addition to the extensive transit service currently being provided in the Strip District would add extra operating costs for questionable mobility benefit.</td>
<td></td>
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<tr>
<td><strong>Two-way streets</strong></td>
<td>- Consider two-way Penn Avenue may be better for retail, safer for people traveling on Penn Avenue by foot and by bike&lt;br&gt;- Use a lighted sign to indicate to motorists that 21st Street is one way&lt;br&gt;- Keep 21st Street one direction to keep loading off of Penn Avenue&lt;br&gt;- Keep Penn Avenue one way</td>
</tr>
<tr>
<td>- On Penn Avenue, people will need to adjust to two-way&lt;br&gt;- Loading/Uber/Lyft will cause a backup if Penn Avenue is two-way&lt;br&gt;- Can Penn Avenue two-way happen even with Liberty Avenue road diet?&lt;br&gt;- Motorists go the wrong way down 21st Street frequently&lt;br&gt;- Turning from Smallman onto 21st into oncoming traffic is a blind corner, would be challenging if two-way</td>
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<tr>
<td><strong>Circulation</strong></td>
<td>- Consider a signal at 21st and Smallman&lt;br&gt;- Plaza will limit tractor trailers unloading on the right side of Smallman/21st Street&lt;br&gt;- Install wayfinding to a variety of destinations, for example public spaces, seating/rest areas, bus stops, bike share stations, and mobility hubs&lt;br&gt;- Keep a similar brand/design for all wayfinding to help create a cohesive experience for everyone.</td>
</tr>
<tr>
<td>- Need to remove railroad tracks on Railroad Street&lt;br&gt;- As Produce Terminal phases out, fewer trucks</td>
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<tr>
<td><strong>Improving biking in the Strip</strong></td>
<td>- Need stop signs on Smallman Street to slow traffic and increase bikeability&lt;br&gt;- Consider how to divert traffic from Smallman Street to make it more bicycle friendly&lt;br&gt;- Advertise private garage bicycle parking&lt;br&gt;- Consider cycletrack on Railroad Street</td>
</tr>
<tr>
<td>- If must take bicycle traffic off of Penn Avenue, make clear bicycle connection on 15th to get to Smallman Street&lt;br&gt;- Smallman Street between 15th and 34th may not be a safe place for a sharrow, protected infrastructure may be necessary&lt;br&gt;- 34th Street is a hill and a challenging climb for an inexperienced biker, 31st Street would be a better connection&lt;br&gt;- Bike facilities should be developed along our rivers for those who enjoy riding, but to try to convert city streets built for autos into this messy mix of bikes and autos is dangerous.</td>
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</tbody>
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On the comment form in Winter 2019, people had a chance to vote on different strategy ideas.

The chart to the right shows the results of that exercise.

Ideas that got the most support included:

- Develop a district-wide parking program so that all publicly available parking becomes part of one system that is easy to use and understand.
- Complete the Riverfront path to create an east-west cycle route that is comfortable for people of all ages and abilities.
- Clearly mark routes from parking to destinations to improve circulation for people driving.
- Consolidate transit stops and improve and enhance amenities such as shelters, benches, and real time travel information to increase the presence of transit in the Strip District.
- Create a transit stop at 26th Street on the East Busway to connect to rail-like service in that corridor.

People also provided open-ended comments; these are on the next page.
Open-Ended Comments, Winter 2019:

• Project to Strip The Strip out of The Strip
• There are fewer and fewer places for residents to park for free. Cork Factory monthly parking has gone from $35./month to over $100./month. I can no longer afford to park in the garage but my street options are dwindling. I should not have to pay a meter each day to park my car. Please consider resident parking in your plan. Thank you.
• The Strip District is the most popular neighborhood in Pittsburgh. People from all over flock to the strip throughout the year to shop in the locally owned small businesses. It is imperative that we make it easy and enjoyable for all customers and residents. If it ain't broke, don't fix it, leave the Strip alone!
• I think that this study has not taken some of the new development in the upper strip into consideration. The amount of businesses opening, new construction and condos is contributing to some very limited parking around the Penn and 26th area. This has been a noticeable change in the past 12 months. Parking used to be easy to find in this area and it no longer is. The hub lot often fills up. The street parking not being metered allows for people to leave vehicles in spots for weeks at a time. All of the construction in the area is also very limiting when dumpsters and building materials are allowed to take up parking for months at a time as well as blocking alleyways with trucks blocking peoples ability to get to their lots or pass through to look for parking. Condo buildings with parking lots are selling spots for crazy amounts of money, making the condo buys use street parking instead of parking in their building to save money. The following are my comments on the Slide presentation:
  • Slide 9: A circulator in addition to the of the extensive transit service currently being provided in the Strip District would add extra operating costs for questionable mobility benefit. That said, one future scenario in which an a circulator may be warranted would be if commuter rail is ever implemented on the Allegheny Valley Railroad and a bus connection would be needed to bring commuters to and from a terminus at 21st Street (or further west).
  • Slide 30: Rather than a map showing just parking, how about a multimodal map which also highlights pedestrian and bicycle paths, locations of Healthy Ride bike stations, bus routes and stops and walk paths to the Penn and Herron stations?
• Slide 40: I am assuming that the graphic represents “movements” at intersections where one bicycle, one pedestrian, one private vehicle and one transit bus are all considered equal. If this is the case, the graphic should be labeled accordingly. Given the minuscule amount of bus traffic at intersections, there should be another graphic representing people which would show that buses are relatively efficient (compared to private automobile) in moving people through the Strip District and bringing people to and from the Strip District.
• Slides 52 & 53: The graphics on both slides suggest that bus could be returned to Penn Avenue in the Strip District even if Penn Avenue is closed to other motor vehicles.
• Slide 59: While there may be merit to consolidating some Strip District bus stops, the number of eliminations shown in the graphic is higher than what we think is needed to sufficiently serve the Strip District.
• Slide 60: A line representing the East Busway with dots indicating the Penn and Herron stations should be depicted on the left map to show how East Busway service provides access to the western and eastern edges of the Strip District.
• Slide 61: “Stop” needs to be replaced with “Station” in the title. The area around 26th Street is an inferior location for a new busway station because the busway alignment is at a higher elevation in relation to Liberty Avenue than points to the west. Additionally, the 26th Street Ramp is an additional piece of infrastructure to be crossed. A new station at 21st Street would be closer to much of the Strip District’s core and be more easily accessed from Liberty Avenue. When assessing opportunities for a new busway station serving the Strip District, the potential to be integrated with a new Strip District – Hill District incline should be considered.
• What I find sad is the lack of strip district zoning restrictions. Seems like you are CHASING, rather than LEADING the issue. Zoning should have started protecting the strip years ago well before allowing some of the ugliest development to pollute our area. The strip district is the type of location one seeks out when traveling to other cities, yet you are allowing the character of this area to diminish slowly, but surely. I see it on a weekly basis. Closing car restrictions in the “Core” hurts the elderly, the handicapped and the businesses you are trying to “help”. Everyone knows that business in the strip DECREASES during Open Streets (an event I support) and here you are trying to deliver another blow to their bottom line. Your “re-balance” parking
prices, or "peak pricing during peak hours" is horrible. What are peak times in the strip? All day Saturday and Sunday I think... Strip District Transportation Manager? I nearly pee'd myself laughing. All for a few blocks? Too much work for the current one already? I really could go on and on and poke holes in such survey. In summary, you seem to be on a good path in gutting the soul of the strip. You seem to be ruining the ambiance and trying to follow a model that "worked in another city". You do not seem to be very engaged with the business owners in the strip. Are they your ally or your enemy? I am certainly available for more comments. Not a shy guy. I have been grocery shopping in the strip longer than some folks who are working on this plan. Please do not make me start shopping at Giant Eagle by ruining the strip. You seem to already be on that path...

- As a business owner, auto parking for out of town customers is of critical importance. There is simply not enough available parking in the Strip District that is easily accessible for customers, who enjoy coming to the Strip, purchasing product, and are easily able to transport the product to their vehicles. Bike lanes and in town shuttle bus services are all "nice to have," but focus much more on the local residents and students. The majority of customers who patronize Strip District businesses are from surrounding areas that drive in autos, park, shop, go to events and then go home. We have seen parking disruptions for several years during the Smallman Terminal construction, which directly impacts our business levels. We have seen bike lanes inserted along Penn Ave that further restrict auto traffic flow and eliminates parking availability. We have seen a multitude of city organized parades that close down main shopping arteries, and we have seen the City close down Penn Ave for no other reason that to close off auto traffic and allow kids to ride bikes and walk down the street during the busiest weekends of the year. When driving into the Strip, it is not clear to customers where to park. There is no good signage to help visitors. Considering how the Strip District area is a well known attractions for visitors, with many very unique shops, it seems there should be more effort to accommodate these visitors while at the same time helping the many small businesses in the Strip fighting to grow their businesses. All the plans posted here regarding transit plans seem little concerned with promoting the small businesses unique to Pittsburgh, and more concerned with just adding bike lanes and bike travel paths. Pittsburgh should not be turned into this sprawling campus for students to ride bikes, but understood more as a commercial center that has existed due to the unique offerings of the local business owners for over one hundred years. The bike lanes should be developed well along our rivers for those who enjoy riding, but to try to convert city streets built for autos into this messy mix of bikes and autos is dangerous. If you go to any of the great cities of the world, you will see they have accommodated bike riders in areas that prohibit autos. Rome, Paris, Madrid, London—they all have designated areas for bike riders, but the heart of their commercial areas are focused on providing autos with safe access to the businesses they support. You cannot continue to mix these modes of travel without constricting traffic flows, limiting commercial access, and strangling the businesses along these routes, not to mention causing safety hazards for those on bikes. There seems to be a political interest in moving Pittsburgh up the ranking in terms of bike friendly cities in our nation. This political interest is a disconnect between what the people want and need, and what the political interests crave. We all want green cities, electric vehicles, good public transportation, but going green should not mean closing down businesses because it looks good to move Pittsburgh from 12th place, to 10th in the bike rankings. Political interests seem more important than what the people need.

- Parking availability is overwhelmingly the #1 deterrent for consumers to visit the Strip District. The statistic that "+40% took bus, walked, carpool, taxi, and / or biked" is either heavily skewed by the groups of people surveyed, or if it truly an accurate representation, then it shows just how big of an issue parking is, because so many more people would visit the Strip if parking was more accessible.

- Priority should be to maintain the historic nature of the Strip. Don't sanitize it.

- Why are all the questions worded Shot Term??

- Please add a bike lane to Railroad St. in place of the tracks.

- I would not like to turn from Smallman onto 21st into oncoming traffic. It is a blind turn as it is, especially without worrying about two-way traffic
To: Dara Braitman—DOMI
From: Strip District Neighbors & Strip District Business Association
cc: Councilwoman Gross, District 7; David Huffaker, Port Authority; Andrea Lavin Kossis, DCP; Leah Friedman, Mayor’s Office
re: Mobility Planning—Various Policies & Infrastructure
Date: October 11, 2020

Thank you for your response to our letter last month regarding the design and implementation of Liberty Ave. improvements. We found this exchange productive and useful and appreciate your responsiveness to the community. Continuing in that vein, Strip District Neighbors (SDN) and Strip District Business Association (SDBA) feel that the most effective approach to communicating our shared community priorities is to coordinate on specific areas where our interests align and directly relay those priorities back to DOMI and appropriate public agencies.

The following is a summary of items on which we want to make sure DOMI is clear on the community’s perspective. Most of these have been discussed in our recent focus group sessions. It is our hope this format can serve as an organized “checklist” to keep us on the same page and facilitate future discussions. We welcome a dialogue if you feel that our positions do not align with the goals of the City, as we want to understand trade-offs and have an opportunity to provide input before decisions are made.

Liberty Redesign

We are pleased with DOMI responsiveness on this critical project and with what we have heard thus far about process and progress. Because of its size, impact, and complexity, it is important that we stay current, & also that we have opportunities to provide feedback as things unfold.

We suggest setting up a dedicated session (Zoom will be fine) expressly to discuss how the project is going and what decisions need to be made. We would have representation from SDN and SDBA that reflects a mix of leadership and constituents that are most knowledgeable on traffic, historic, and current uses. At that meeting, we can determine if and when further briefings are necessary.

21st Street Traffic Flow

We have given careful thought to the idea of converting part or all of 21st St. south of Smallman to 2-way traffic and extensively polled our constituents; it is safe to say we’re vigorously opposed. The current configuration enables unloading with uninterrupted flow to vehicular traffic, while pedestrians safely use sidewalks & crosswalks; switching to 2-way would disrupt flow and compromise safety.

- The present practice of unloading large delivery trucks on 21st St., using fork loaders & hand trucks on alleyways & Penn Ave., evolved over a long period of time and works well. No one has credibly demonstrated a viable alternative method for accommodating the shipments seen now...let alone if the volume of business grows. The merchants involved can readily demonstrate the ways in which 2-way traffic on this section of street would hamper their operations, obstruct traffic, or both.

- Commercial access to and use of 21st St. has been made more difficult by the recent conversion of a sizable portion of the street to outdoor dining (see notes below). Changing 21st St. to 2-way flow would greatly exacerbate all the traffic problems cited here and appears to require permanently discontinuing the dining use.
• The geometry of this intersection is about to change radically. When Smallman is narrowed, the acute angle may make it difficult or impossible for eastbound trucks to make a right turn onto 21st. Where this is the case, drivers can circle the block so as to be westbound on Smallman when approaching 21st St. This will only work, however, if 21st St. remains 1-way to the south; if 2-way, the intersection will be crowded and more difficult to navigate and entry may be impossible.

• We recognize the City has already made a significant investment to make the intersection signal-ready, but has expressed a strong preference not to actually put signals in place, in part due to the deleterious aesthetic impact of the necessary intrusion on the west elevation of St. Stan’s. We share that preference and believe firmly that making 21st St. 2-way would significantly boost the odds that a signal will be required at this intersection.

**Metered Street Parking—Rates**

We appreciate you educating us on options for street metering, including adjusting rates & separately extending hours, together with the potential for sharing revenue with our community.

At this time, we prefer to make no major changes, for these key reasons:

• Historically speaking, paying for street parking in the Strip happened yesterday; plenty of our current customers remember parking on Penn for free, & refer to the “new meters.”

• The sale of the large lot @ 21st & Smallman— and cancellation of the office towers planned there—relieves near-term parking concerns. McCaffery’s assurance that it will be available for transient parking, with associated improvements for both drivers & pedestrians, means we have time to observe what transpires as that lot reopens, the Terminal project is occupied and more residential projects in the area are completed.

Specifically, we request the following for now:

1. No increase in meter rates on Penn.
2. No extension of meter effective hours.
3. No reduction in max meter time. (In fact, we’re torn between maintaining the current 2-hour limit & extending to 4-hours and would like to discuss this revenue neutral option.)

**Metered Street Parking—Area**

We prefer to wait before extending metered parking on Penn, or onto other streets not currently metered, as we think further study and communication is needed. Many street spaces which would be included in a metering expansion are presently used by core Penn Ave. employees willing to walk a few blocks more than most shoppers. Discounted and/or subsidized spaces for these employees (@ 1600 Smallman, the 21st St. lot, the Hub, or elsewhere) have been discussed as a possibility to ease this transition. Conversely, some businesses want meters to discourage outside commuters parking all day in front of their businesses and then working downtown, taking away needed spaces for their customers and employees. We’ll work on a solution.

**Shuttle / Circulator**

As excited as we are at the prospect of shuttle operations within the Strip, possibly connecting to downtown and Lawrenceville, we think spending the time and resources on a pilot or demo project now is premature. Reasons include most of those cited for postponing changes to parking rates and locations. While we are monitoring changes in traffic patterns and parking habits that will accompany the continuing influx of shops and residents, we will conduct additional survey work to help us decide which user group(s) a shuttle can best
serve. We hope that it’s possible to continue to earmark the funds currently allocated for designing & testing a pilot shuttle or circulator, but would like to defer the program for 12-24 months.

**Dining Applications**

We understand the drive and need to convert sections of some public streets to outdoor dining space, simultaneously enabling struggling restaurants to function so they can pay salaries and rent, while providing a new and safe—if temporary—eating amenity for citizens. We also know that it must be difficult to process and track the necessary paperwork.

That said, it’s exceedingly awkward for SDN and SDBA to be completely in the dark about these conversions until they are already in place. At this writing, both Kaya & Pamela’s have been operating outdoors for months...yet the DOMI street modifications” page shows the full closure of 20th Street as “in review,” & the 1/2 -closure of 21st St. isn’t listed at all.

We know you want to cut red tape and help restaurants stay in business by short-circuiting normal review. It nonetheless seems unfair, particularly to neighboring businesses that may be impacted, to keep this info internal until the closure is an accomplished fact.

Please consider whether there is a way that SDN & SDBA can be notified when applications are submitted, so we can alert businesses and residents in the immediate vicinity and give them the opportunity to be heard.

**Special Events and Road Closures**

We have observed that the City’s Special Events Office tends to announce street closures without consultation with the community and often with little notice. The problems this presents are particularly challenging for the Strip District because of our narrow geography and limited arteries, further exacerbated by a wave of construction activity. Ideally, we would appreciate being consulted about discretionary closures for special events of any of our four arteries (Liberty, Penn, Smallman, Waterfront/Railroad).

In our current circumstances, we believe such a consult is imperative so our many small businesses can weigh-in or adjust accordingly, especially when closures occur on the weekend. At least until the Liberty project is completed, we ask DOMI to coordinate with the Special Events Office so that discretionary closings in the Strip will require your (and our) advance coordination/approval.

Thank you for your continued interest in, and dedication to, working with us as a community to best address our needs and goals. We look forward to the continued improvement of the community, in partnership.

Strip District Neighbors

Strip District Business Association
Dear Ms. Braitman,

I would like to thank you again for the invitation to attend a meeting on December 10th to give a status update to the Smallman Street project and to review the findings on the Strip District Parking study.

As you requested, I would like to make some personal comments on the study and its possible recommendations.

Let me start off by stating that I do not believe the parking survey taken in mid-June is an accurate representation of the needs of the visitors of the Strip business district. A one-time study during the year does in no way represent the parking needs and customer flow into the business district. It is not a significant sampling of those needs and it makes the study statistically insufficient. I think the comments by others in the meeting also expressed that opinion.

I think taking the whole approach of the entire parking availability in the Strip district neighborhood to identify the needs of just the business district is really not how reality sees the issues facing the businesses and its customers. We need more convenient and affordable parking close to the major businesses between 16th and 22nd Street. We have lost parking availability around the old terminal building and the empty lots in that area to development. That area took care of overflow parking to the business district and helped support the vitality of the area businesses. This is even more necessary since the major surges come on weekends and around the holidays. As the area moves to more residential, that will put more pressure on parking during the weekends and holiday periods.

Parking affordability is also a major component to the vitality to the business district. You have to remember that street parking used to be free. Many visitors view the Strip businesses as value retailers. We need a mix of tourists and local visitors to remain successful. It is what built the Strip Business District into one of the most advertised major destinations in Pittsburgh. The city promotes it in its tourist guides. It is this mix of tourists, locals, and regional visitors that make the area so unique and vibrant. I feel we need to protect that heritage and uniqueness.

The only practical idea I heard was from David Sunseri who suggested a parking garage on Liberty and 21st Street where he and the city own the land. He is willing to work with the city to possibly make this happen.

I hope my comments will help in developing plans to continue the historical heritage that the Strip Business District offers to the city and its visitors. Thank you for the opportunity to voice these opinions.

Sincerely,

[Signature]

Daniel Nolan

1736 Penn Avenue, Pittsburgh, PA 15222
May 4, 2020

Director Karina Ricks
Dara Braitman, Principal Planner
Department of Mobility and Infrastructure
City of Pittsburgh

Director Ricks and Ms. Braitman:

The historic Strip District is arguably the most iconic neighborhood in the City of Pittsburgh, representing the legacy of the industrial past and promise of a 21st century future. A regional destination for its legendary Penn Avenue merchant corridor with an emerging reputation as a technology and innovation hub, the Strip has been the beneficiary of significant state and local public funding and is enjoying a period of unprecedented private investment. These public-private funds have ensured the Strip is the face of the resurgence of the Pittsburgh region on a global scale.

Recent development has led to significant changes to the community, bringing new residents, offices, restaurants, and retail to areas that have been vacant for decades. These changes have altered how people experience the Strip and have brought new challenges and opportunities to the neighborhood, particularly as it relates to mobility, parking, land use, and cleanliness.

Strip District Neighbors (SDN) is a 501c3 nonprofit organization dedicated to promoting economic development and high quality of life while preserving and enhancing the integrity and character of the historic Strip District Neighborhood in the City of Pittsburgh. It is currently led by a volunteer board of directors and is comprised of members that represent merchants, property owners, developers, businesses, and residents, all heavily invested in the future of our community.

We can all agree that how people get to, around, and experience the Strip is vital to the long term economic success of the neighborhood. The future of mobility in the Strip has to find a balance that serves the dynamic needs of residents, wholesale, retail, and commuters, while maintaining the unique culture of a beloved place. SDN recognizes this process may require change and is interested in working with the City of Pittsburgh, Port Authority of Allegheny County, PennDOT, and any other stakeholders to improve access and safety while building on the vibrancy that makes the Strip special.
To that end, SDN has reviewed the draft Strip District Mobility Network & Parking Study (Study) developed by Stantec on behalf of the City of Pittsburgh’s Department of Mobility and Infrastructure (DOMI) and would like to offer the following feedback:

- The Study did not capture or organize the goals of SDN or the community, resulting in stakeholders doubting whether their voices were heard and if recommendations are reflective of the priorities and perspectives of the neighborhood.
- Data collected for this Study was flawed or limited, including incomplete parking information, mode shares from seasonal visitors, sales info from merchants that reflects highest demand times, travel demand projections from future development, and recommendations from previous plans, including the Allegheny Riverfront Vision Plan, Green Boulevard Strategic Plan, Strip District Transportation & Land Use Plan, and Liberty Ave. Road Safety Audit.
- Engagement of neighborhood stakeholders was limited to a public survey and only a limited number of invite only sessions with no transparency on process and timeline.
- The Study showed a lack of appreciation for current mobility realities and steps needed to consider a potential future state with less private vehicle or freight traffic.

Of the recommendations offered in the Study, SDN provides the following comments:

- SDN supports DOMI pursuing these proposed strategies in collaboration with the community:
  - Parking
    - Create New Shared Parking District
    - Explore pilot shuttle
    - Add hourly parking
    - Create Strip District Parking Map
  - Circulation
    - Improve wayfinding for pedestrians, vehicles, and cyclists
    - Pilot walk infrastructure improvements
    - Complete Riverfront path
    - Create Strip District stops, consolidate service
    - Explore returning some bus transit to Penn Ave
    - Add access to East Busway

- Consideration of the recommendations should include these additional comments:
  - The “Shared Parking District Map” should include all mobility options in the Strip, including transit and busway stops/routes, bike lanes/paths, Healthy Ride Stations, and walk paths.
  - Increase on-street parking limit from 2 hours to 4 hours (do not eliminate parking limits).
  - A pilot shuttle program should be developed in collaboration with SDN and merchants to determine which times/routes would meet the needs of the community
  - A pilot shuttle program should be developed in collaboration with SDN and merchants to determine which times/routes would meet the needs of the community while complimenting existing transit.
  - Identify 21st and Liberty as THE Strip District transit hub, which could include neighborhood branding, transit shelter, seating, real time data, maps, a ConnectCard machine, access to the East Busway, and potentially an incline to the Hill District.
  - 21st St from Smallman to Liberty serves as a vital loading corridor for Penn Ave merchants; SDN opposes making this section of 21st two-way at this time, pending additional consultation with the community.
- Any vehicular restrictions need to be coordinated and approved by SDN and merchants, including special events, construction, and parades, especially if they will restrict access on Saturdays.
- Bus service on Penn should be explored for in-bound past 26th St and into the business corridor as one-way pair to Liberty outbound service.
- A Strip District TMA is an interesting long-term option, but it likely will not be feasible in the short term based on SDN organizational priorities/capacity, so collaboration with the Pittsburgh Downtown Partnership TMA or identifying a community representative to serve as a mobility lead could be an immediate solution.
- We endorse re-opening of the light rail stop at the Pennsylvanian and the pursuit of extending light rail via the busway with service to the Strip District and beyond.

We recognize that there may be individual stakeholders from the neighborhood that have additional comments or concerns related to the Study and other mobility related priorities in the Strip. The comments above reflect the shared perspective of SDN and we expect the City to work in consultation and collaboration with SDN before pursuing any project that impacts the mobility of the community.

We appreciate that the City of Pittsburgh recognizes that the Strip District is at a critical time in its history that requires focus and action to address the opportunities and challenges related to transportation, parking, and placemaking in the neighborhood. We welcome additional discussions on the next steps of the Study and please let us know if you would like to schedule time for us to review further.

Respectfully,

Chris Watts
Chair, Community Development Committee
Strip District Neighbors
MOBILITY CONVERSATIONS

What: Come talk with us about a handful of mobility-related projects and initiatives in the neighborhood.

Move PGH
Liberty Avenue Safety Improvements
Personal Delivery Devices
Loading Zone Reservations
Strip District Transportation Study
Shuttle Study
Outdoor Dining
East-west Bike Connection
28th Street Bridge
Bus Stop Consolidation

Who: Stakeholders, Department of Mobility and Infrastructure, and Port Authority of Allegheny County.

When: Thursday, July 22nd from 3:00pm – 7:00pm.

Format: Open House.
There will be no formal presentations so swing in when it is convenient for you.

Location: Artisan Market, northeast corner of Penn Avenue @ 20th Street.
Focus Group Meetings

In June 2020, a self-selected group of representatives from SDN and SDBA formed a focus group and met with DOMI and DCP staff to discuss the draft recommendations identified to date. Many of the recommendations discussed were the same as those presented during larger stakeholder meetings in December 2019; however, some had been refined since that time or were new suggestions. Much of what was heard at the June 2020 meetings had been previously documented in letters from both SDN and SDBA, which are also included in this appendix.

The focus group reconvened in July 2021 to discuss updates to the recommendations and to learn about additional upcoming transportation-related projects that were to be presented at a stakeholder open house scheduled for later that same week. Many of those projects were identified as recommendations in this Plan and are being advanced (in coordination with stakeholders and the public) at the time of this writing. Given the COVID-19 pandemic, the June 2020 and July 2021 focus group meetings were conducted via Zoom.

Stakeholder Open House

The July 2021 stakeholder open house was held to reintroduce recommendations in this Plan and provide information on new or updated recommendations to the larger community. Additionally, there are numerous other transportation-related projects and initiatives that are being advanced or considered. This open house was an opportunity to provide an overview for stakeholders. It should be noted that project-specific public meetings will be held at a later date as individual projects are further evaluated. The flyer that was sent to stakeholders identifying the projects and initiatives presented at the open house is included in this appendix. The open house was held in a covered open air space in the Strip District as the first in-person transportation-related activity for the neighborhood since the COVID-19 pandemic began.

A summary of what was heard during the focus group meetings and stakeholder open house is below. It should be noted that there may be certain populations in the Strip District whose opinions and mobility needs are not reflected below; additional engagement will be necessary before advancing individual recommendations.

COVID-Related Street Modifications

Participants asked about the rapid response street modification program the City set up to help support local businesses during the COVID-19 pandemic. There was mixed support for ‘streeteries’ and questions were asked about the operation of the program. The operation of the program has changed since it was first established. At the time of this writing, to proceed with street modifications, businesses needed only to get approval from adjacent property owners, not the entire neighborhood. This process was supported by some but not all. There has been expressed interest in seeing some ‘streeteries’ that required street closures to be reopened.

Pedestrian Improvements
Participants identified pedestrian improvements as one of their primary concerns. The focus group requested that DOMI explore the feasibility of installing additional crosswalks or repainting existing ones on Penn Avenue because people are often seen jaywalking, particularly around Penn Avenue at 18th and 19th streets. They were also interested in the expanding the bump-out on Penn Avenue @ 21st Street. A participant asked about installing textured or stamped asphalt at pedestrian crossings similar to what is installed in certain areas Downtown. There was mixed interest in working with sidewalk vendors to find alternative locations for their booths to increase sidewalk space for pedestrian use.

Participants identified both Railroad and Smallman streets, as well as connections to transit service on Liberty Avenue, as problem areas. There was much conversation about the Smallman Street @ 21st Street intersection, including the delays in completing work scheduled there. There was also concern about gaps in sidewalk infrastructure on Smallman Street east of 21st Street as well as the role that parked cars and trucks play in obstructing what sidewalks do exist. These already poor conditions are expected to continue to deteriorate as density in the neighborhood increases and visits resume to pre-pandemic levels.

Transit Service West of 26th Street on Penn Avenue

Buses were moved to Liberty Avenue a number of years ago due to reliability issues caused by slow traffic on certain sections of Penn Avenue. The re-introduction of buses to Penn Avenue could require the loss of on-street parking or additional infrastructure to support loading / unloading. In the Strip District, DOMI would like to maintain Liberty Avenue as the transit street and prioritize Penn Avenue for other uses.

Transit Service on Smallman Street

Some participants expressed interest in having buses run on Smallman Street (potentially re-routing from Liberty Avenue) to support new development and amenities. Other participants expressed concern about routing buses on Smallman Street because of the planned pedestrian plaza, outdoor dining areas, and bike lane. DOMI representatives stated that Liberty Avenue is the preferred transit corridor for the Strip District. Increased wayfinding and education about transit options is desired.

Light Rail Stop at Penn Station

Participants asked about the potential restoration of light rail service at Penn Station. This was identified in PAAC’s recently completed NEXTransit report. Feasibility of this project will need to be evaluated.

East Busway Strip District Stop

There was strong support from participants about the introduction of a Strip District stop on the East Busway. The suggested location was close to 21st Street. The feasibility and location of a potential station will be evaluated by PAAC in the near term.

Circulator Shuttle
Circulator shuttle service in the Strip District has been discussed for some time. DOMI staff used time during the focus group to do some information gathering about reintroducing such service. Staff asked: What is the challenge we are trying to address? What is problem we would like to solve? Is there still interest in a shuttle?

Participants were still interested in a shuttle but were concerned that ridership during the pandemic would not be representative of true ridership. They questioned whether piloting the circulator shuttle should be delayed and wondered if people would even want to be in a shared enclosed space. DOMI staff stated that it is likely that a shuttle would not pilot until Spring 2021 at the earliest (with the preference to start during warmer months) so there is plenty of time to ensure that the needs of merchants, residents, and employers are met to the greatest extend possible.

Participants asked the following questions.

- What would be the general route of the shuttle? It should serve all users of the Strip District.
- Who will run the shuttle?
- Is it possible to adapt to market and seasonal changes?
- How will it be funded? This should not be at the expense of increased meters. Should it become a business opportunity for other people or funded locally?
- What is the nature of the funding? Is it just for a pilot or is there funding for continuing service?
- Should it be a revenue-producing business or a free amenity?

It was noted that a shuttle is not expected to be a service provided by PAAC and that it is important that any potential shuttle not create redundancy in the network but rather complement existing transit service.

The City has some money to partially fund a pilot but citywide budget uncertainties may call into question longer-term shuttle operations. The financial allocation as it currently exists will likely not support the minimum amount of time (ideally one year) that is needed to really assess the feasibility of a longer-term service. Other cities often secure funding from outside sources. Additionally, if merchants want the shuttle to be free to customers, both City and private funds will be necessary.

It was determined that the circulator shuttle conversation should be revisited at a later date / once travel patterns recalibrate as the COVID-19 pandemic fades. At that time, parking supply and demand should be revisited as well as development patterns and density.

**Parking - General**

Some participants were concerned about how many parking spaces are available within close proximity to the Core. The removal of a significant number of parking spaces to support construction activities associated with the Produce Terminal and Smallman Street reconstruction were of particular concern. Construction of both was nearing completion at the
time the focus group was convened. Since the meeting, more than 350 publicly available parking spaces have been reintroduced.

One participant suggested that parking carousels might be a good alternative to help address the parking demand near the Core. Another suggested working with parking providers to have equipment telling potential users how many parking spaces are available. Participants recognize that parking will be easier to manage in general with an organization or entity overseeing all parking in the neighborhood but it will be complex and time consuming. The question of what entity would play that role remains.

Participants felt that the uniqueness of the goods and services that people come to the Strip District to purchase are undermined with increased pricing for parking.

**Meter Pricing and Parking Meter Expansion**

There was some conversation about expanding meters east of 25th Street on Penn Avenue as well as increasing meter prices. Some participants were in support of expanded parking meters, largely because visitors to the area are unable to find parking because employees, either from the Strip District or those going Downtown, park there unregulated all day. Others were not in support of this for the exact opposite reason, saying that this would not allow employees to park for free.

There was also discussion about increased meter pricing as a way to better manage the curb. Meter prices in premier locations should generally be set to encourage higher turnover with an average occupancy of 85 percent or incrementally increased for those who wish to stay longer. Ample public parking in other nearby locations is needed to ensure the success of this approach. While a few participants were in support of increased meter prices or changes in hourly limits – either all day or during specific times – most others were not. Another suggested that meter prices further from the Core be decreased rather than the Core being increased. Others requested that there be additional enforcement to help encourage turn over instead of increased meter prices.

Participants did agree that a series of measures are needed to help improve the current parking environment, including a parking ambassador to help direct people as well as a ‘How-to-Travel’ guide that shows users where parking might be available along with transit and other mobility services. Another questioned how other similarly sized markets have adjusted their pricing in relation to the number of available spaces as possible case studies.

**Parking Enhancement District**

Staff provided an overview of the existing PED program and applicability to the Strip District. The Southside Flats is currently the only neighborhood with a PED. The municipal code as it is written would not allow a PED in the Strip District so the conversation was intended to be more of an overview of the concept and to gauge interest in exploring the feasibility further. In essence, a PED would increase meter pricing and additional revenue would be earmarked for the neighborhood to reinvest in streetscape and livability improvements of their choosing and approved by the city. For example, meters in the Strip District are currently $1.50 / hr. If the meters were increased to $2.00+ / hr, under a parking enhancement district money generated over $1.50 / hr would be funneled back to the Strip District for streetscape and livability improvements.
The Southside PED collects additional revenue from 6pm-12am on Fridays and Saturdays. In 2018, this generated approximately $210,000 after the cost of additional staff for enforcement. The Southside Forum oversees the administration of the revenue. It meets once a month and has generally elected to invest in streetscape improvements and services related to public safety.

Business activity and demand at the curb in the Strip District indicates that increased meter rates during the abovementioned hours may not be appropriate for the Strip District; an increase throughout the day may be more appropriate. The location and meter prices for a PED in the Strip District have not been determined at this time.

The majority of focus group participants were not in support of increasing meter prices, irrespective of the price, in support of a PED. Some participants were concerned about hidden costs or expenses that would be deducted prior to receiving funds and requested an estimate as to how much revenue a PED could generate in the Strip District. Parking meters in the Strip District in both 2018 and 2019 generated more than $950,000 so additional revenue from an increase could be substantial. An analysis of this kind could be conducted when revisiting the PED and its feasibility in the Strip District.

**Back-angle Parking on Smallman Street**

This is new for the Strip District so compliance is low for the moment. There needs to be more education about this. In response, DOMI installed additional street signs and made a flyer to be distributed across the neighborhood about the new parking. Nevertheless, the reopening of street parking with the completion of construction activities has been welcomed by the business community.

**Parking Validation**

There was a brief discussion about parking validation. In order for this to be successful, all parking facilities would need to have the same equipment to read validations. This would also require buy-in from merchants. Given the ongoing pandemic, asking merchants to help provide discounted parking for customers might be a hard sell. It will also presumably take a while to convert to standardized equipment. It was requested that this conversation be shelved for the time being.

**Liberty Avenue HSIP**

As described in Chapter 1, the Liberty Avenue HSIP is intended to improve safety conditions for all users. DOMI staff managing this project provided an overview to the focus group. At that time, the project was in its very earliest stages and no engineering or traffic modeling had been conducted yet. In order to achieve the goals of the project, the elimination of one travel lane is anticipated. A traffic analysis will be conducted and traffic signal upgrades will be made. Multipliers to account for traffic adjustments during COVID-19 will also be developed. Improved access to transit and potential stop consolidation will be coordinated with PAAC.

Participants stated they and the larger community (e.g. SDN, SDBA, etc.) would like to provide feedback on preliminary design and were assured they would have the opportunity to do so. One participant asked what happens to vehicular traffic that gets stuck behind a bus if there is no passing lane. DOMI staff presented updated information on this project during the July 2021
focus group meeting and stakeholder open house. A project-specific public meeting was held in September 2021. Design is ongoing.

21st Street Two-way Conversion

One of the draft recommendations included making 21st Street two way for vehicular travel. This was generally not supported by the community and was a topic of conversation throughout the focus group sessions. Participants expressed their concern about how the conversion would affect truck turning movements as well as access for loading / unloading. After numerous discussions, this was removed as a recommendation in the final report.

Despite signage, some motorists mistakenly turn onto 21st Street from Liberty Avenue. Participants asked about increasing signage at this location. Improvements associated with the Liberty Avenue HSIP would include new pavement markings or less likely concrete work to reinforce to drivers that turns are not permitted.

17th Street One-way Conversion

During the July 2021 meetings, the recommendation to make 17th Street one way from Liberty Avenue to Smallman Street was introduced. The street is currently one way from Liberty Avenue to Penn Avenue and two ways between Penn Avenue and Smallman Street. The roadway between Penn Avenue and Smallman Street is extremely narrow and often times people park or load on the sidewalk, making it impassible for pedestrians. In order to create a one-way pair with 20th Street, to make the roadway network more intuitive, and to improve pedestrian safety, this recommendation was identified. With the conversion to one way, there would be sufficient space for a dedicated parking / commercial loading lane. Of those who attended the focus group meetings or stakeholders open house, there was generally little support for the one-way conversion of 17th Street.

Automated Commercial Loading Zones

During the July 2021 focus group meeting and stakeholder open house, DOMI introduced a program for which it recently received grant funding to pilot automated commercial loading zones. Two potential locations on 17th and 21st streets off Penn Avenue were proposed for the pilot. Of those who attended the events, there was little interest in piloting this in the Strip District at this time. DOMI will continue working in other neighborhoods that do have interest in the program and will not pilot in the Strip District.

Other

Participants expressed concern about overhead street lighting in a few specific locations, primarily along corridors to further away parking facilities, along 21st Street, and portions of Penn Avenue. DOMI staff conducted a site visit with this information and made some improvements in isolated locations, as needed.
Strip District Mobility Plan

Please let us know your thoughts on "The Strip District Mobility Plan"

You are a *

- [ ] Resident of Strip
- [ ] Business of Strip
- [ ] Daily commuter through Strip
- [ ] Enthusiast
- [ ] Other: __________________________________________________________

Does the "Strip District Mobility Plan" successful to envision a transportation network that can support the current demand and able to sustain future growth of the Strip? *

some things. need to keep liberty 4 lanes and penn one way

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- Daily commuter through Strip
- Enthusiast
- Other: Port Authority of Allegheny County

Does the "Strip District Mobility Plan" successful to envision a transportation network that can support the current demand and able to sustain future growth of the Strip? *

Section 3.3 (p 57), 2nd paragraph.
Sentence “However, Herron...” instead, consider: “However, transit does not directly serve Penn Ave through most of the District, so stops could be a 3-5 minute walk from destinations.” (Herron Station is not in the District, so shouldn’t be used as a reference point)
Sentence “The route(s)...” should be eliminated. This service will be redundant per definition of transit sheds. That doesn’t mean that its not purposeful, since it presumably would have a different audience and a different market, but it will be a redundant service.
3.4 – in this section, please rephrase any references to a new Strip District Stop along the East Busway to a Strip District Station.

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- [ ] Other: Property Owner

Does the "Strip District Mobility Plan" successful to envision a transportation network that can support the current demand and able to sustain future growth of the Strip? *

NO! Not at all

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NO - very poor scope. Waste of tax payer money.

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- [ ] Other: __________________________________________________________

Does the "Strip District Mobility Plan" successful to envision a transportation network that can support the current demand and able to sustain future growth of the Strip? *

Please leave 21st Street one way. It is a major delivery zone.

__________________________________________________________________________

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- Enthusiast
- Other:
  Resident, business owner and Chair of Strip District Neighbors Community Development Committee

Does the "Strip District Mobility Plan" successful to envision a transportation network that can support the current demand and able to sustain future growth of the Strip? *

Thank you for the opportunity to provide feedback on the Strip District Mobility Plan. Strip District Neighbors (SDN) welcomes the City of Pittsburgh's efforts to plan for growth and we have appreciated the opportunity to provide substantial feedback during this process. Moving forward, we expect the City will work closely with SDN to prioritize, design and implement these (and any other new) projects. As our neighborhood continues to rapidly grow, we implore the City to consider the impact of new developments and neighboring communities when determining the scope of data analysis to inform future projects. For additional context, please review our latest State of the Strip District Report: https://www.stripdistrictneighbors.org/2021-state-of-the-strip-district-report/

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See Attached Proposal: Twin Plaza Building
From: Strip District Business Association
In regards to the Proposal from Michael Troiani on the development of the corner building at 21st and Smallman we have the following comments.

1) After our discussion yesterday, the SDBA is very concerned on the entire concept of the plaza itself. There has been no information or discussion as to the use, maintenance, and regulations that the proposed plaza requires to be a successful asset to the Strip District. The SDBA would like to see the City Planners develop and communicate the operating plan in regards to the use and ongoing upkeep and sustainability of the proposed plaza. That should be the basic guidance that should drive any alteration of the current use and design. This is important since the Plaza will reduce the available street parking and business access that is currently available and is in conflict with our Number 2 position. Also we would not support any use that would negatively impact the current businesses in the Strip who maintain commercial property and storefronts. (ie: food trucks)

2) The SDBA feels and supports that is important that building owners continue to maintain and improve their property. We support any building designs that continue to support the historical nature of the Strip District Commercial Area. (ie: overhangs)

3) Any city or community development (ie: the plaza) or program that directly effects the current building owner and tenants and impacts access, flow, and current use should be discussed and resolved as to the common good of all parties which include city, community, and building owners and tenants, before any changes are made. The current development and design was a failure of this most important concept.

4) We support the keeping of the 21st corridor as is. Keeping it one way and remain open as much as possible to facilitate street parking, and truck traffic and deliveries which are critical to other businesses in the Strip District. The turning radius from Smallman onto 21st needs to be maintained or improved so as not to create ant safety issues for traffic or pedestrians.

5) If a common solution and design cannot be agreed upon by all impacted parties then the SDBA supports the removal of the planned plaza and that the current use for street parking along with the addition of a right turn lane should be implemented.

Our proposals are of a general nature and guidance to any current or future proposed development

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- ☐ Enthusiast
- ☐ Other:_________________________________________________________________________________________________________
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See Attached survay from Businesses
To All Strip District Businesses:  Results-  24 responded

A group of Neighbors and Merchants are talking to DOMI with the city of Pittsburgh about Traffic Mobility in the Strip Neighborhood.
I would like to get your thoughts on the following question in the quick survey below. The questions are based on the traffic study done last year and presented by DOMI last November.
Please answer the follow questions as to your opinion on possible changes being considered by the City.

Meter Parking: Currently meters are $1.50 per hour with a 2 hour limit. (circle your answer)

Would you like to see meter rates increased to possibility encourage quicker turnover of street parking?
YES 3   NO 21

Should the rate be decreased?       YES 12    NO 12

If you would like rate increases per hour, How Much per hour??    $.50 4    $1.00    $1.50

Would you like to see the maximum meter time increased from 2 hours?   YES 14   NO 10

If you would like to increase meter time limits over 2 hours, By how much?  1 HRS 3    2 HRS 8    4 HRS
No Maximum 3

Would you like to see meters added past 25th St on Penn Avenue?    YES 5   NO 19

21ST Street:

Would you like to see 21st Street made into a 2 way street from Smallman to Liberty?    YES 5   NO 19

Parking Shuttle:

Do you think the Strip needs a Parking Shuttle to public lots not near the main shopping district?   YES 18   NO 6

If you think we need a shuttle, which days?  SATURDAY 3   SATURDAY AND SUNDAY 13   EVERY DAY 1

If you think we need a shuttle, would you pay to support it?    YES 12   NO 8   Maybe 4

Parking Signage and Maps:

Do you think the Strip needs improved Parking maps and signage to open parking?    YES 22   NO 1
Your Business name and Responder: ____________________________
Please Drop off at Allegheny Coffee and Tea at 2005 Penn Avenue by Monday at Noon or Sooner. Or you can Fax to: 412-471-5527 or e mail to dan_nolan57@hotmail.com
Thank You,
Dan Nolan (Strip District Merchants Association)
____________________________________________________________________________________________________

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See attached letter text to DOMI

Dara Braitman
Department of Mobility and Infrastructure
414 Grant Street
Pittsburgh, PA 15219

December 22, 2019

Dear Ms. Braitman,

I would like to thank you again for the invitation to attend a meeting on December 10th to give a status update to the Smallman Street project and to review the findings on the Strip District Parking study.

As you requested, I would like to make some comments on the study and its possible recommendations.

Let me start off by stating that I do not believe the parking survey taken in mid-June is an accurate representation of the needs of the visitors of the Strip business district. A one-time study during the year does in no way represent the parking needs and customer flow into the business district. It is not a significant sampling of those needs and it makes the study statistically insufficient. I think the comments by others in the meeting also expressed that opinion.

I think taking the whole approach of the entire parking availability in the Strip district neighborhood to identify the needs of just the business district is really not how reality sees the issues facing the businesses and its customers. We need more convenient and affordable parking close to the major businesses between 16th and 22nd Street. We have lost parking availability around the old terminal building and the empty lots in that area to development. That area took care of overflow parking to the business district and helped support the vitality of the area businesses. This is even more necessary since the major surges come on weekends and around the holidays. As the area moves to more residential, that will put more pressure on parking during the weekends and holiday periods.

Parking affordability is also a major component to the vitality to the business district. You have to remember that street parking used to be free. Many visitors view the Strip businesses as value retailers. We need a mix of tourists and local visitors to remain successful. It is what built the Strip Business District into one of the most advertised major destinations in Pittsburgh. The city promotes it in its tourist guides. It is this mix of tourists, locals, and regional visitors that make the area so unique and vibrant. I feel we need to protect that heritage and uniqueness.

The only practical idea I heard was from David Sunseri who suggested a parking garage on Liberty and 21st Street where he and the city own the land. He is willing to work with the city to possibly make this happen.

I hope my comments will help in developing plans to continue the historical heritage that the Strip Business District offers to the city and its visitors. Thank you for the opportunity to voice these opinions.

Sincerely,
Daniel Nolan
Allegheny Coffee and Tea Exchange

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- Other: Strip District Business Association

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1- Protect our Parking in the Shopping/market District. People will not walk 4 blocks !!! and use alternate garages. WE cater to alot of older city residents. Need close access to Penn and Shops.
2- During any construction Keep the Streets Open to traffic and parking
3- Keep 21st one way as it is
4- Controlled unloading areas in strip unworkable. Need flexibility. We are a market and depend on deliveries
5- Protect History and Heritage of the shopping district. Don't turn it into a strip mall !!!!!
6- Move Healthy ride bikes off 21st and Penn to the Terminal Building and Smallman
7- Make parking affordable. Don't drive our auto customers away.
8- Improve traffic flow at Penn and 16th St. Bottleneck and 16th and Liberty.
9- Better bus stops. Concern on 1 lane on Liberty each way will drive more through traffic to Penn and Smallman. Not good for walking visitors and customers shopping and browsing.

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Your Parking study was not statistically valid. Major traffic and parking concerns are focused during football season and Steeler games by locals and visitors, Pirates games, and Holidays, especially during the Christmas season, where traffic grows 3 fold. Your summer survey misses all the critical flows into the Strip Business Area. Better data is needed to create a plan. We survive on servicing visitors that arrive by cars. It also creates a revenue stream for the city. We need more investment back from these funds such as public restrooms, better and more street garbage collection, and better lights to name a few.

If you want to receive updates on this plan, please leave your email address below

________________________________________________________________________

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Sentence “The route(s) should be eliminated. This service will be redundant per definition of transit sheds. That doesn’t mean that its not purposeful, since it presumably would have a different audience and a different market, but it will be a redundant service.”

3.4 “in this section, please rephrase any references to a new Strip District Stop along the East Busway to a Strip District Station.”

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DISTRICT BASED PARKING MANAGEMENT

MANAGE ALL PARKING IN THE DISTRICT AS ONE SYSTEM

WHAT IS IT?
District-based parking management is an approach that reduces “wasted” (underutilized) parking space by bringing a majority of lots and garages into the same system. This allows for a coordinated approach to parking, including:

• Standardized signage and wayfinding
• A pricing system that makes sense with the most valuable spaces available at a higher fee and those that are farther away lower or free
• Advance planning for special events
• Information and reporting, i.e. database of available parking, and ease of monitoring utilization / adjusting management needs accordingly

In a system like this, parking ownership may still be disparate; however, a City or membership organization (such as a business improvement district (BID)) takes the lead in working with private parking owners to develop a coordinated system. This entity can provide various levels of incentive, including:

• Providing a forum for parking owners / operators to discuss issues and ideas
• Sharing of information
• Providing standardized signage
• Supporting partial or full operational need, from staffing to equipment
• Sharing of revenue

HOW WOULD THIS WORK IN THE STRIP DISTRICT?
In the Strip, an organized entity (which is one to be determined) or an eventual Strip District Transportation Management Association (TMA) could lead this effort. Through targeted coordination meetings, the lead entity would coordinate varying levels of support needed to bring private parking owners into a coordinated system. As new parking facilities become open to the public, it will be important to update Strip District wayfinding / signage and supporting information (such as online maps) so that visitors are aware of newly available parking facilities.

BENEFITS
City
• Coordinated approach to management
• Maximizes efficiency of land used for parking

Visitors
• Additional parking in system
• Easy to understand parking system

Current / Future Private Parking Owners
• Capitalize on existing parking
• Information on underutilized parking
• Potential revenue
• Shared management and maintenance

CONSIDERATIONS
City
• Additional resources needed to support this program
• Parking tax may be a barrier for participation in program

Private Parking Owners
• Liability concerns
• Concerns associated with allowing general public onto property
• Up front implementation needs, such as equipment or coordination of staff
CASE STUDIES

SAC PARK
Sacramento, CA

In Sacramento, the parking authority (SacPark) manages about 19,000 spaces in more than 40 locations. SacPark has an adopted goal of maximizing underutilized parking. SacPark has a tiered service offering in exchange for opening parking to the public, including:

- Enforcement only
- Full management
- Monthly contract management

CITY MANAGED PRIVATELY OWNED LOCATIONS

- Maximizing under-utilized parking
- Over 40 locations
- 18,992 spaces


TEMPE, AZ

The Downtown Tempe Authority acts like a Transportation management Association (TMA) that manages parking. Today, the DTA manages 18,000 spaces, reinvesting net revenue from management fees directly into the district. The majority of the spaces are privately owned, and the DTA returns much of the revenue collected on these spaces to those owners.

DTA also maintains a website where users can see a map of available parking, as well as filtering it to meet their needs, such as free parking or where monthly parking is available. DTA provides many other services in addition to parking management, such as its ground support crew, placemaking, planning, and local coordination.

Source: https://www.downtowntempe.com/get-around/parking/free-parking-available
PAY PARKING SPACES TO DISAPPEAR

WHAT IS IT?
An approach that allows developers to pay fees into a municipal parking fund in lieu of providing the parking required on site by zoning and ordinances. These fees are then used towards centralized public parking, or other transit, bicycle and pedestrian improvements.

In-lieu fees may be set as a flat rate per parking space not provided or tiered depending on the number of spaces not provided. For example, lower rates could be set if a developer was waiving a relatively low number of spaces, while a developer who waived out of building a significant number of spaces would need to contribute more to support their impact on the overall system. Tiers can be chosen based on desired outcomes - for example a lower percentage (or absolute number) of spaces waived may be a slightly cheaper rate, while larger amounts of parking could be much more expensive as it puts significant strain on the rest of the transportation system.

This approach encourages densification through infill or redevelopment in areas with historic buildings where there is not space to provide parking. It also improves efficiency by taking into account overall mobility needs of an area rather than of a single site as the fees paid into the municipal fund are reinvested more strategically than single-use parking associated with one building.

HOW WOULD THIS WORK IN THE STRIP DISTRICT?
A zoning overlay would allow the City to put this mechanism in place in the Strip District. In the interim, the City could include this in negotiations associated with specific developments. It may be helpful to keep estimates for parking construction on file, which the City can develop based on publicly available estimates such as the WGI Parking Cost Outlook as well as conversations with developers.

BENEFITS
City
- Ongoing revenue stream
- Sets a positive precedent for less car reliance in urban areas
Landowners
- Option for more flexible development, especially reuse of existing buildings
- Saves money spent on parking
- Land can be used for other amenities that attract tenants
- Easier for new developers to start small without the cost or space burden added by required parking
Visitors / Businesses
- Revenue stream for improvements to walking, biking, and transit networks

CONSIDERATIONS
City
- Process of updating ordinances to reflect new options
- Helping shift the mentality that not every unit of a residential or commercial structure owns a car or prefers driving as their primary mode
Landowners
- Challenge of leasing/renting commercial or residential space without “front-door”, dedicated parking spaces
**CASE STUDY**

Montgomery County Parking Lot Districts (PLD)
Montgomery County, MD
In a creative approach mixing in-lieu fees with a parking benefit district (PBD), Montgomery County created four PLD zones. Developments in PLDs can pay into a PLD fund, which finances parking in centrally located public garages and lots that serve multiple developments.

![Image](image1.png)

Montgomery County Parking Lot Districts (PLD)
Montgomery County, MD
In a creative approach mixing in-lieu fees with a parking benefit district (PBD), Montgomery County created four PLD zones. Developments in PLDs can pay into a PLD fund, which finances parking in centrally located public garages and lots that serve multiple developments.

Coconut Grove
Miami, FL
An in-lieu system has been in effect since 1993 for this popular area of Miami. Developers can satisfy minimum parking requirements by providing off-street parking, contracted spaces elsewhere, or paying in-lieu fees. Fees are largely used to help maintain the walkable character of the district.


<table>
<thead>
<tr>
<th>Number of spaces developers have opted out from, to date</th>
</tr>
</thead>
<tbody>
<tr>
<td>950+spaces</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Approximate revenue Generated</th>
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<tbody>
<tr>
<td>$3 million</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Fee Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pay per space per month</td>
</tr>
<tr>
<td>Pay per space permanently</td>
</tr>
</tbody>
</table>

Fee contributions have covered:
- $250,000 study for a downtown circulator
- $100,000 for a parking mitigation project, including landscaping changes and installation of traffic control devices to improve parking/pedestrian access.
PERFORMANCE-BASED PARKING MANAGEMENT

DISTRIBUTE PARKING DEMAND TO CREATE AVAILABILITY

WHAT IS IT?
The principle of this approach is based on managing supply by implementing a pricing approach that maintains a healthy level of demand. In short, desirable spaces are priced to reflect their premium value, which can specifically be during the hours of their highest demand. This encourages a higher turnover or encourages people to take alternative modes to their destinations during these periods. This improves the utilization of on-street spaces by increasing the likeliness of spaces being available in higher demand areas which serve businesses, restaurants and services that support the local economy.

HOW WOULD THIS WORK IN THE STRIP DISTRICT?
Most metered parking already reflects demand-based pricing - the meters are on during the day when things are busy and off in the evening. In the Strip District, this approach would price on-street parking at the “front door” - in the busy retail areas - at a higher rate than other available parking. This would be supported by increased signage and wayfinding as part of an information campaign that would be key to letting people know where they could find parking at different price points. Other key components of the program would be:

- Adopting an availability target (via City Council or the PPA, for example) of about 1 in every 10 spaces available per facility and block. For example, the PPA would adopt a policy noting that the regulations/price would be adjusted as necessary to achieve the availability target, which would add a layer of transparency to price or regulation adjustments.
- Adopting a price adjustment increment and time period, such as raising or lowering the price by a maximum of $0.25 quarterly
- An absolutely essential component of this would be monitoring utilization and continuing to adjust price. The Seattle example to the right shows a simple example of an approach to monitoring.
- Identifying low-cost parking options to offset any price increases, for example estreets where the price would be lowered such as side streets or those further away from the core of demand.

BENEFITS

City
- Manages demand better so the need for new facilities is reduced
- Revenues increased during times of highest demand
- No need to use land to build new, permanent facilities that only fill a short-term need during the day

Visitors / Businesses
- More spaces available in prime locations for customers/visitors

CONSIDERATIONS

City
- Constant monitoring and data collection to identify occupancy rates is important to measure success
- Up-front investment of streamlining signage and potential new methods of payment
- Requires a thorough and widespread advertisement of the approach to change driver behavior and aid in trip pre-planning
- May require extra enforcement up front

Visitors / Businesses
- Initial customer complaints
- Information campaign necessary
CASE STUDY

PERFORMANCE-BASED PARKING PRICING PROGRAM
Seattle, WA

Since 2010 the program has adjusted on-street parking rates (based on time of day) with a goal of maintaining 1-2 open spaces per block (70-80% occupancy). The 34 established paid parking sub-areas, equate to 12,000 on-street spaces. Options for payment include pay-by-phone and pay-by-plate kiosks.

To implement, the City adopted a Municipal Code and Seattle DOT collects annual occupancy data to inform rates (typically adjusted in $.50 increments). Parking signs were also created to help clarify different pricing options.

In 2018, rates for
17 time periods increased
14 time periods decreased

PERFORMANCE PARKING PILOT
Newbury Street, Boston MA

Boston’s Back Bay includes Newbury Street, one of the City’s main shopping streets. To increase availability, the City increased its on-street meter fees from $1.25 to $3.75 and monitored the results. The City found that overall, availability increased, and the average stay at a meter decreased. In addition, double-parking and illegal loading decreased, perhaps due to an increase in overall availability at the curb.

USE THE CURB FOR MORE THAN JUST VEHICLE STORAGE

WHAT IS IT?

Cities are recognizing that while parking a private vehicle is an important component of access in a given community, there are other, more efficient ways to use limited and valuable front-door space at the curb. For example, in an hour, a curbside space can serve one or two people who park a car and go run an errand, or more than 30 people using a rideshare vehicle.

For many cities, including Pittsburgh, this means carving out curb space for rideshare, valet, bike-share, scootershare (when street legal), bicycle racks, bicycle facilities such as a cycletrack, transit facilities such as a bus lane, or more space devoted to walking.

HOW WOULD THIS WORK IN THE STRIP DISTRICT?

In key locations in the Strip District, more people will be able to use curbside space and have direct access to local businesses if some of the space currently used for parking - which is storing empty vehicles - was used for a more high-occupancy transportation mode. For example:

- During off-peak hours such as 7-10a.m., some on-street spaces could become loading spaces.
- During the morning commute, on-street spaces on Smallman Street or Waterfront Place near new developments may be able to serve more people if they were used for rideshare services.

A few spaces spread out over several blocks would be designated as rideshare pick-up/drop-off zones, and the City could work with rideshare companies to require drivers and riders to use those spaces via their rideshare app.

- In months where there is fair weather, using an on-street parking space for a bicycle parking corral or bike share station can serve up to 10 people in a space normally used by one vehicle.

**BENEFITS**

- **City**
  - Overall increased access in terms of numbers of people
  - Designated areas for rideshare have been shown to reduce congestion

- **Visitors / Businesses**
  - More people able to use “front door” spaces
  - Better access for deliveries

**CONSIDERATIONS**

- **City**
  - Coordination and partnership with service providers
  - Cost and installation of signage
  - Technology hurdles to monetizing curb access for anything other than traditional parking

- **Visitors / Businesses**
  - Perception of loss of parking
CASE STUDY

DESIGNATED RIDESHARE ZONES
FT. Lauderdale, FL
The City partnered with Lyft, Uber, and Yellow Cab to offer a safe area for both drivers and users. Three zones were established and supported with an accompanying ordinance that prohibits vehicles from using the area for more than 5 minutes. Two of the zones were time-restricted, while another was available 24/7.

Sources: https://www.fortlauderdale.gov/home/showdocument?id=31059
https://www.fortlauderdale.gov/home/showdocument?id=31061

Vehicle travel delay
Decreased from
20% in 1 year
Single-vehicle driver use reduced by
12% in 1 year

CURBFLOW
Washington, DC
In DC, the City partnered with tech company CurbFlow to create and monitor pick-up and drop-off zones at nine busy locations through the City. People who need quick access to the curb, such as rideshare services, food delivery services, and larger freight carriers could register with the app, and then reserve the space when needed. Eventually, the app can charge for access to the spot.

Enforcement occurred via people on the street during this pilot.

Double parking decreased by 64%
On-demand delivery lasts 7-11 min
Rideshare drop-off lasts 2.5 minutes

Goal 2: Performance Metrics

<table>
<thead>
<tr>
<th>Goal 2: Performance Metrics</th>
<th>%Change</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. VEHICLE TRAVEL DELAY</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Andrews Avenue to SE 15th Avenue (Average weekday peak): Reduction in travel delay</td>
<td>20%</td>
<td>129 seconds</td>
<td>161 seconds</td>
</tr>
<tr>
<td>2. VEHICLE TRAVEL TIME</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Andrews Avenue to SE 15th Ave (Average weekday peak): Increase in travel time</td>
<td>19%</td>
<td>363 seconds</td>
<td>294 seconds</td>
</tr>
<tr>
<td>3. UTILIZATION BY MODE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of vehicles on Las Olas Blvd, East of SE 15th Ave (Average weekday peak)</td>
<td>-12%</td>
<td>1243/hour</td>
<td>1410/hour</td>
</tr>
<tr>
<td>Number of South-bound vehicles at Las Olas Blvd and SE 15th Ave (Average weekday peak)</td>
<td>+8%</td>
<td>453/hour</td>
<td>420/hour</td>
</tr>
<tr>
<td>Number of rideshare drop-offs/pick-ups (Average Saturday peak hours 7:00PM to 11:00PM)</td>
<td>19/hour</td>
<td>19/hour</td>
<td>n/a</td>
</tr>
<tr>
<td>Number of delivery vehicles loading/unloading per loading zone (weekday 8:00AM to 12:00PM)</td>
<td>4/hour</td>
<td>4/hour</td>
<td>n/a</td>
</tr>
<tr>
<td>On-street parking revenue (49 spaces along Las Olas Blvd demonstration project)</td>
<td>+10%</td>
<td>$67,012.94</td>
<td>$61,164.94</td>
</tr>
</tbody>
</table>

FEED LOCAL NEEDS WITH PARKING PENNIES

WHAT IS IT?
A parking benefit district (PBD) is usually a defined geographic area where parking-related revenues are reinvested in the community to fund a wide range of transportation-related improvements, including but not limited to:

- Streetscape improvements such as trees and landscaping, public seating, and curb cuts
- Salaries of parking management personnel
- Acquisition, installation, maintenance, and operation of parking meters
- Transportation improvements, including biking and walking facilities, or mass transit operations
- Informational materials related to transportation, such as maps, table tops, web materials, etc.

Typically, PBD’s are established in combination with a pricing program for parking, and often as part of a program to increase prices so that users can see where their funds are going. Broadly, the increased parking should bring the choice to drive and park in line with the choice to take other modes, and the funds from the PBD can make that choice even easier.

Funds from the PBD represent an opportunity for a local community to exercise some control of investments. A committee, working group, or established body such as a BID can create a prioritized list of investments for the PBD to fund that reflects community priorities.

HOW WOULD THIS WORK IN THE STRIP DISTRICT?

While existing parking revenues from on-street metering in the Strip District are already designated, new revenue that would be generated by extending meter times or locations could be captured in a fund that would support a Strip-specific PBD. It will be important to indicate to the public that revenue from any pricing changes will be reinvested in the Strip District. This may be publicized via signage, stickers on the meters, or printing on receipts, etc.

BENEFITS

City
- Ongoing dedicated revenue stream for public improvements
- Opportunity to increase prices while providing “something in return”

Visitors / Businesses
- De-politicizes parking
- Local business owners have a say in how funds are used
- Mobility improvements, such as better infrastructure for people walking, lighting, etc.

CONSIDERATIONS

City
- Political hurdle of redirecting revenue
- Revenue can fluctuate from year to year
- Requires additional staff time to coordinate with local interest groups
CASE STUDY

SOUTH SIDE PARKING ENHANCEMENT DISTRICT

Pittsburgh, PA

The City has an excellent example of a PBD, called a Parking Enhancement District (PED). Beginning in 2017, the City extended metering in to the evening hours. That additional revenue is reinvested in the South Side, supporting public safety, cleanliness, and infrastructure improvements.

Most recently, the PED was expecting approximately $300,000 in revenue to support these efforts. Recent projects include:

- Holiday banner production and installation
- Portable toilets for events
- A “Block by Block” clean team, who in removed about 15,000 pounds of trash in one month
- Security training


The South Side PED made $300k in 2019 to be reinvested into the neighborhood

BALLPARK DISTRICT

Washington, DC

The Department of Transportation (DDOT) completed 3 performance-based program pilot projects to help encourage higher turnover in this popular commercial area and promote non-vehicle modes. A tiered pricing structure was used with hourly rates increasing after the first hour up to a 4-hour limit.

The PBD incorporated 6,200 total spaces spread across 130 metered blocks. 80% of revenue (after expenses) was reinvested in the district and used to repave streets, enhance sidewalks, implement a bike share program, and more.

Sources: https://ddot.dc.gov/sites/default/files/dc/sites/ddot/publication/attachments/ward6_district_ballpark_2010.pdf
TRANSPORTATION DEMAND MANAGEMENT

FINDING WORK-LIFE-TRANSPORTATION BALANCE

WHAT IS IT?
An approach where employers (and developers) use incentives or benefits to “level the playing field” for employees so that walking, biking, and taking transit are just as (or more) convenient as driving and parking. Traditionally, many employers provide free or subsidized parking for employees, which is actually a significant benefit for those who drive. TDM increases those benefits to include:

- Subsidies for access to other modes, such as transit or bikeshare membership
- Distributing information on available transportation options
- Parking cash-out, where employers offer the cash equivalent of parking for employees to make their own transportation choices. For example, an employee can either have access to a parking space or take the cash equivalent of a monthly parking pass. Employees can use the cash for other transportation options or simply keep it.
- Free “guaranteed ride home” (for example, via rideshare vouchers) so that employees can get home in an emergency. This supports employees to do something other than drive because they can still get directly to home or, for example, a child’s school in case of an emergency.

The flexibility of this approach means that employers can create a tailored program or solution that best meets the particular needs of their employees. Providing these options is also often much more cost-effective than constructing / operating or paying for employee parking.

HOW WOULD THIS WORK IN THE STRIP DISTRICT?
In the Strip District, it is likely that these programs would best be administered through a TMA, so that employers and property managers could access a wide array of programs. For example, the Strip TMA could spearhead coordinating a voucher system for guaranteed ride home, and fund it using a portion of its budget via grant money or user fees.

BENEFITS

City
- Reduces congestion

Employers
- Increase range of benefits offered to employees
- Parking facilities may be converted to support other needs

Employees
- Support for additional transportation options
- Financial and health benefits of being able to choose something other than driving

CONSIDERATIONS

City
- Pressure to improve infrastructure that connects the links between biking, walking, transit
- Port Authority currently unable to issue discount transit passes

Employers
- Requires investment
- Requires shift in policies, protocol, responsibilities, etc.
- May require additional staff to execute and monitor

Employees
- Requires a behavioral shift and habits are hard to change
PITTSBURGH DOMI TDM CHECKLIST

**Programmatic Strategies**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meet with Transportation Management Association (TMA): Downtown and Oakland only</td>
<td></td>
</tr>
<tr>
<td>Set mode split goals and commitment to survey. Goals should be consistent with relevant adopted neighborhood or master plans.</td>
<td></td>
</tr>
<tr>
<td>Identify responsible party or dedicated staff assigned to administer TDM program and report on progress (this can be specific to the tenant or property manager); for speculative developments, this can be a description of how potential tenants will be made aware of TDM requirements, as well as property owner and/or tenant requirements to maintain multi-modal facilities through marketing materials, website, or other means.</td>
<td></td>
</tr>
<tr>
<td>When adding additional users and/or uses to an existing development, identify if existing parking will be shared and how it will be managed.</td>
<td></td>
</tr>
<tr>
<td>Either employee TDM Coordination or staff assignment to administer a TDM program</td>
<td></td>
</tr>
<tr>
<td>Payback incentives for using non-motorized and carpool commuters</td>
<td></td>
</tr>
<tr>
<td>Provide transit passes or subsidies to employees or residents</td>
<td></td>
</tr>
<tr>
<td>Sponsored carshare or bikeshare memberships for employees or residents (annual or intro membership)</td>
<td></td>
</tr>
<tr>
<td>Membership in the 2030 District</td>
<td></td>
</tr>
<tr>
<td>Unbundled parking, where the cost of parking is separate from lease or deed (for residential) or paid (for office)</td>
<td></td>
</tr>
<tr>
<td>Promotion of SPC Commuter Connects programs</td>
<td></td>
</tr>
<tr>
<td>Flexible work hours and/or telecommute programs for office development</td>
<td></td>
</tr>
<tr>
<td>Corporate carpool and/or ride partner programs</td>
<td></td>
</tr>
<tr>
<td>Other as appropriate to the size, use and context of the site</td>
<td></td>
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</tbody>
</table>

**Site Plan Strategies**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adequate sidewalk widths and ADA ramps along all building frontages</td>
<td></td>
</tr>
<tr>
<td>Bicycle parking consistent with zoning code and the Pittsburgh Bicycle Parking Guidelines. A mix of bicycle parking should include convenient short-term parking and secure, covered parking accessible from the ground floor (not through the driveway of a garage) for long-term bicycle parking or storage.</td>
<td></td>
</tr>
<tr>
<td>When impacting a bus stop, work with the City and Port Authority to relocate the stop during construction and restore immediately afterwards with amenities</td>
<td></td>
</tr>
<tr>
<td>Include wayfinding for public access to easements and privately owned, publically accessible open space</td>
<td></td>
</tr>
<tr>
<td>Upgrades and enhancements for pedestrian safety at site access and intersections</td>
<td></td>
</tr>
<tr>
<td>Consistency with improvements identified in City plans or policy</td>
<td></td>
</tr>
<tr>
<td>Enhancements to pedestrian facilities that address the last mile problem from transit stops and desired pedestrian paths</td>
<td></td>
</tr>
<tr>
<td>Bicycle storage facilities that exceed Zoning code requirements</td>
<td></td>
</tr>
<tr>
<td>Bikeshare station on site</td>
<td></td>
</tr>
<tr>
<td>Shower rooms or shower passes for employees who bike to work (office only)</td>
<td></td>
</tr>
<tr>
<td>Shared parking – where parking can be used by different users throughout the day so as to reduce the total number of spots provided</td>
<td></td>
</tr>
<tr>
<td>Priority parking spaces for carpool or vanpool spaces</td>
<td></td>
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<tr>
<td>Dedicated carshare parking (such as Zipcar) in a publicly accessible space</td>
<td></td>
</tr>
<tr>
<td>Real time arrival transit screens in publicly accessible space</td>
<td></td>
</tr>
<tr>
<td>Transit station enhancements or improvements</td>
<td></td>
</tr>
<tr>
<td>Pedestrian enhancements between proposed buildings and nearby transit stations, such as adding pedestrian scale lighting, emergency call boxes, street trees, and seating</td>
<td></td>
</tr>
<tr>
<td>Other as appropriate to the size, use, and context of the site</td>
<td></td>
</tr>
</tbody>
</table>

For more information, please see: https://apps.pittsburghpa.gov/redtail/images/4588_DOMI_TDM__Guidelines.pdf
A CHAMPION FOR TRANSPORTATION OPTIONS

WHAT IS IT?

A TMA is a membership-based organization, often a public-private partnership (PPP), that includes businesses, institutions and municipalities. Joined by a legal agreement, the entity provides and promotes transportation options through a variety of means and for all scales of need. TMAs may oversee transportation plans and projects, conduct public outreach to promote alternative transportation modes, and manage parking systems.

TMAs are not one-size-fits-all but always work closely with municipalities (or designated neighborhoods) and other stakeholders with a shared goal of improving local transportation access, equity, and economic vitality. A TMA can be as small as one part-time or shared dedicated staff person. Benefits of TMAs can include:

- Decreasing traffic congestion
- Developing local transportation infrastructure, services, and programs
- Streamlining parking management
- Establishing trust between the public, developers, and local decision-makers, etc.
- Streamlined communications

TMAs are typically formed based on funds from one or two large initial stakeholders, which could be a few of the new larger developments in the Strip District. Sustaining funding is typically through member dues, public grants / funding, fee-for-service offerings, and/or assessments (such as in a BID). Many TMAs incorporate as a 501c organization.

HOW WOULD THIS WORK IN THE STRIP DISTRICT?

A Strip District TMA would serve an important coordination role, particularly given the ongoing construction and lane use changes in the area. Seed money for the TMA could come from the City, a grant, revenue from expanding the area and hours of metering, and / or negotiations with new developments coming online in the Strip District. Immediate TMA duties may include initiatives like:

- Communication / coordination with the City regarding ongoing construction
- Consolidating and distributing information on local commute options to employers

BENEFITS

- City
  - Pressure is taken off limited resources of staff to address many needs
  - Neighborhood communication

- Visitors / Businesses
  - Increased/enhanced transportation options, including for employees

CONSIDERATIONS

- Businesses
  - If imposed, membership fee may be a barrier
OTMA
Oakland (Pittsburgh), PA

OTMA is a non-profit organization open to businesses, community organizations, local government agencies, and regional transportation planners and providers.

Services include:
- Facilitation of planning, development and completion of transportation construction projects
- Communication link to the public for project updates and transit or traffic alerts
- Managing parking reservations
- Representing at employee benefit fairs
- Community event planning
- Help secure state/local funding

Current programs that OTMA is overseeing:

**WALK PITTSBURGH**
Provides resources to encourage walking as a viable option and be considered in development plans

**OAKLAND FOR ALL - BEYOND ACCESSIBLE**
Campaign to eliminate physical barriers for the disabled when participating in the community

**OAKLAND SMART COMMUTE**
Encourages small businesses to support employees in using alternative commute options

Sources:
http://www.otma-pgh.org/

**OTMA Types**

1. Organizational memberships offered - businesses may pay to access services based on:
   - # of employees
   - Flat/fixed rate
   - Negotiated rates on a case-by-case basis
   - Building area

2. Indirect memberships - i.e. all organizations that are members of TMA parent organization automatically become members

3. By area - all organizations in a given area automatically eligible for TMA services (i.e. in a BID)

4. No membership offered


FY 2016-2017 revenue
$320k (including sources from grants, local matching funds)
OPTIONS WHEN ALTERNATIVE MODES AREN’T OPTIONAL

WHAT IS IT?

Traditional municipal codes regulating development require project proponents to build parking and file a transportation impact study (TIS) that details how a given development will mitigate its impact on the transportation environment - usually focused only on vehicle traffic generated. However, in a multimodal, urban environment, the municipal code should encourage development in a way that capitalizes on and adds to systems like transit, the pedestrian network, and bicycling facilities. Often a municipality and a developer negotiate the specifics during the permitting process, and developers find that funding mitigation for people biking, walking, and/or taking transit is much more cost effective than expensive vehicle-focused investments like parking or new traffic signals.

In order to create a more predictable system that meets the needs of developers, the community, and the City, new municipal codes are encouraging the integration of TDM in a variety of ways. These include, in order from least complex to most:

• Requirements such as bicycle or car-share parking spaces built into the zoning code.
• A mobility management plan required as part of the TIS process.
• Parking and Transportation Demand Management (PTDM) Monitoring requirements, where a property must submit regular reports on the number of people driving and pay a fine if it exceeds a certain amount. Required as part of the permitting process.
• A points-based system of TDM requirements, where developers can choose from a “menu” of TDM options to get to a required total number of points. Part of the TIS process.

Note that these options would apply only to developments over a certain size threshold.

HOW WOULD THIS WORK IN THE STRIP DISTRICT?

Pittsburgh already has some elements of the above built in to its permitting process. An appropriate way to encourage compliance may be to pursue PTDM monitoring, so that as the Strip District grows and evolves the City and developers alike can understand the impacts of TDM and where improvements are still needed. In addition to ongoing work to implement this system Citywide, the City can focus on the Strip District as it is an area with significant needs in the immediate future.

BENEFITS

City
• Leverages development to invest in multimodal transportation networks
• Ties development to City mode share goals
• Encourages context-sensitive development

Developers
• Predictability in the permitting process
• Some TDM elements may be more cost-effective than providing parking

CONSIDERATIONS

City
• Updates to code required
• Consider implementing citywide v. in specific geographic area

Developers
• Perception of burden of additional requirements
• Potential for additional time required for development process
CASE STUDY

PTDM Monitoring Program
Cambridge, MA

Cambridge’s PTDM program is keyed to parking provision, reflecting the fact that parking is the most powerful lever to push to limit driving demand. The program applies to owners of non-residential properties who propose to add parking above a certain amount (for a small project, this is 5-19 spaces, and for a large project this is 20 spaces).

Large project PTDM monitoring requires:

• Single-occupancy vehicle mode share commitment
• Comprehensive TDM implementation
• Annual monitoring and reporting, including counts

The mode share commitment a building must adhere to is a 10% reduction from the 1990 mode split in the relevant Census tract.

Source: https://www.cambridgema.gov/CDD/Transportation/fordevelopers/ptdm

---

Employee Transportation Survey  Company: ____________________  Location: ________________________

Unique ID: ____________________  Date: ____________________

1. What is your home zip code? ____________________

2. What time do you usually begin work in the morning?
   - Before 6 AM  □  6:00-6:59 AM  □  7:00-7:59 AM  □  8:00-8:59 AM  □  9:00-9:59 AM  □  After 10 AM
   - Before 4PM  □  4:00-4:59 PM  □  5:00-5:59 PM  □  6:00-6:59 PM  □  7:00-7:59 PM  □  After 8PM

3. What time do you usually end work in the evening?
   - Before 4PM  □  4:00-4:59 PM  □  5:00-5:59 PM  □  6:00-6:59 PM  □  7:00-7:59 PM  □  After 8PM

4. How many hours do you usually work each day?
   - Less than 2  □  2 to 5  □  5 to 7  □  7 to 8  □  8+

5. How long does it take you to travel to work on a typical day (minutes one way)?
   - 0 to 15  □  16 to 30  □  31 to 45  □  46 to 60  □  60+

6. How many miles (one way, approximately) do you travel from home to work on a typical day?
   - 0 to 10  □  11 to 20  □  21 to 30  □  31 to 40  □  41 to 50  □  51 to 60  □  61 to 70  □  71+

7. Please indicate how you commuted to work each day this week:
   (Choose one for each day)
   a) Walked the entire way □  b) Rode bike/bicycle the entire way □  c) Rode Bluebikes bikeshare the entire way □
   d) Drove alone the entire way □  e) Drove + rode bicycle (park & pedal) □
   f) Public transportation + walked □  g) Public transportation + personal bicycle □  h) Public transportation + Bluebikes bikeshare □
   i) Public transportation + drive/carpool/shuttle □  j) Private / Corporate Shuttle □  k) Carpool (two- to seven-person) □
   l) Vanpool (eight- or more-person) □  m) Took Taxi/Uber/Lyft by yourself □  n) Took Taxi/Uber/Lyft with other passengers □
   o) Worked at home □  p) Rode Bluebikes bikeshare the entire way □  q) Sick/vacation/personal time, business trip, or jury duty □
   r) Other (scooter, skateboard, etc.) □

8. If you took public transportation for all or part of your commute, which route(s) did you use?
   (Please check all used)
   □ Commuter Rail to North Station □ Commuter Rail to South Station □ Commuter Rail to Porter Sq □ Commuter Rail to North Station □ Silver Line
   □ Silver Line □ Commuter Rail to Porter Sq □ Commuter Rail to North Station □ Silver Line

9. How many times a month (on average) do you use your own car for work-related business during the day?
   □ None □ 1 to 4 □ 5 or More

10. If you drive the entire way to work, where is the vehicle usually parked?
    □ Parking lot/structure at worksite □ Parking lot/structure off-site □ On-street parking
CLOSING THE ORIGIN-DESTINATION GAP

WHAT IS IT?

A transit link for the last leg of journeys to central, high-demand locations by providing safe and secure parking adjacent to transit stops or hubs that service these areas. With transit options that bring people closer to their destinations (through coordinated bus/service scheduling and stop locations), less time is spent by drivers trying to find (and pay for) a parking space in prime areas. Additional incentives may be offered to “seal the deal” in shifting driver perceptions about the convenience of taking transit, such as:

• Free return ride to a remote parking lot or transit link from the high-demand location
• “Punch card” system for number of transit journeys taken to earn rewards from local restaurants, which in turn encourages use of the remote parking
• Covered parking with security
• Increased bus frequency between the parking facility / transit link and the activity center during peak demand periods

HOW WOULD THIS WORK IN THE STRIP DISTRICT?

There are two markets of demand that a shuttle to remote parking may best service in the Strip District:

• Visitors: With concentrated demand on weekends and for events, a shuttle between parking that is typically used for commuter parking on weekdays (between the Strip District and Downtown) and the core of Penn Avenue may be viable.
• Employees: A shuttle from remote parking options such as the Grant Street Garage may be useful for regular commuters. These commuters may also benefit from a shuttle into the core of the Strip District from the busway stop at Herron Avenue, having parked remotely (or walked / bicycled to a stop) further out on the PAAC system.

BENEFITS

City
• Reduced vehicle congestion
• Closer and easier access to transit links attracts new tenants that prefer car-free lifestyles
• Reduces potential demand/cost for building more parking facilities

Visitors / Businesses
• Opens up affordable parking options
• Limits need to search for parking

Employees:
• Potentially more affordable option
• May make commuting using Port Authority of Allegheny County services in the busway viable

CONSIDERATIONS

City
• Cost to provide
• Funding a shuttle separately from Port Authority of Allegheny County services may not be the best use of funds
• Need to provide stop infrastructure outside of Port Authority of Allegheny County service areas, for example creating shuttle stops on Penn Ave in the core of the Strip District

Employees / Visitors
• Wait times for shuttle may be a deterrent
• Potential fare may be a deterrent
CAPE ANN TRANSPORTATION AUTHORITY (CATA) SHUTTLE
Rockport, MA

To reduce pressure of peak summer tourist demand on limited parking spaces in the shopping district of this quaint, seaside town, a free shuttle service was established to connect between a park and ride lot (with 199 spaces) and downtown. The cost to ride the shuttle is $1 per person each way (0.50 for seniors, and free for children 5 and under). Service times typically run between 11:00AM - 7:00PM and extend to 11:00PM for special events.

In its first season between May - September, there were 22,000 riders, significantly reducing downtown parking pressure.

2018 CATA Shuttle Ridership

Downtown Parking Lot Meter Revenues

<table>
<thead>
<tr>
<th></th>
<th>Parking Kiosk/Meter Revenue</th>
<th>Parking Ticket Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>$229,225</td>
<td>$184,295</td>
</tr>
<tr>
<td>2018</td>
<td>$239,457</td>
<td>$116,179</td>
</tr>
</tbody>
</table>

KEY TRANSIT PLANNING PRINCIPLES

1. **Service should be simple.** Routes should operate on “clock face” headways (i.e. every 10 minutes) and travel on direct, simple alignments.
2. **Service should be direct.** Deviations for “front door” access add time and diminish the value of a route.
3. **Consistent schedules.** Frequency at regular intervals such as 10 or 15 minutes is much easier for a rider to remember.
4. **Serve major destinations.** Transit does best in areas of high density of demand, instead of long, indirect routes serving a few far-flung users.
*note: on-street utilization collected by block face east of metered zone
Weekday, 9:00 am

*note: on-street utilization collected by block face east of metered zone*
Weekday, 11:00 am

*note: on-street utilization collected by block face east of metered zone
*note: on-street utilization collected by block face east of metered zone*
Weekday, 5:00 pm

*note: on-street utilization collected by block face east of metered zone*
Weekend 10:00 am

*note: on-street utilization collected by block face east of metered zone*
Weekend 12:00 pm

*note: on-street utilization collected by block face east of metered zone
Weekend 3:00 pm

*note: on-street utilization collected by block face east of metered zone*
Weekend 6:30 pm

*note: on-street utilization collected by block face east of metered zone