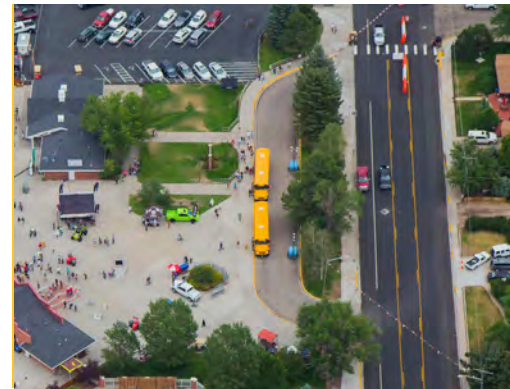


Cheyenne Frontier Days Traffic Study & Transportation Plan



Prepared for:
Cheyenne Metropolitan
Planning Organization



Draft: October 31, 2017

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AYRES
ASSOCIATES

Cheyenne Frontier Days

Traffic Study & Transportation Plan

Prepared for:

**Cheyenne Metropolitan Planning Organization (MPO)
Cheyenne Frontier Days**

2017

Cheyenne Frontier Days Traffic Study & Transportation Plan

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Steering Committee Members:

Cheyenne Frontier Days:

- Bill Berg
- Tom Hersig
- Buck Reisner
- Ron Newnum

Wyoming Dept. of Transportation

- Joel Meena
- Jeff Mellor
- Mark Wingate

Laramie County School District #1

- Merle Smith
- Nancy Nelson
- Jim Rudell
- Stephanie Ashworth
- Wesley Fuller

City of Cheyenne

- Nathan Beauheim

Cheyenne Police Department

- Lt. Howard Smith
- Sgt. John Gay

Cheyenne Transit Program

- Renae Jording

City Council

- Scott Roybal

Cheyenne MPO

- Tom Mason, Director
- James Sims

Executive Summary

Cheyenne Frontier Days (CFD) annually hosts as many as 266,000 guests including rodeo participants, carnival staff and 2,500 volunteers during the ten-day event held the last full week of July. Daily ticket sales for the rodeo, night show and gate sales can exceed 40,000 people providing an estimated impact of \$28 million on the Cheyenne economy. A major event of this magnitude puts pressure on the surrounding transportation system and parking facilities around Frontier Park, and intersections leading from the Interstate highway system to Frontier Park.

The Cheyenne Metropolitan Planning Organization and Cheyenne Frontier Days retained Ayres Associates to conduct a comprehensive transportation/parking study for the Cheyenne Frontier Day celebration. The study included observation and assessment of existing transportation services, parking, and overall operation. The transportation plan distills these observations into recommendations for short and long-term enhancements designed to increase safety, and improve transportation efficiency issues related to the event, and better achieve the goals of CFD.

Goals

The study Steering Committee agreed to the following transportation system improvement goals:

- Resolve 8th Avenue traffic/pedestrian conflict problems: Separate pedestrian, bus and traffic conflicts
- Improve key intersection traffic operation
- Reduce amount of time Cheyenne Police Department officers and Cheyenne Frontier Days volunteers are in the roadway directing traffic
- Increase overall transportation safety
- Maximize 'Park N Ride' bus operation

Process

The study process included the following different information sources:

- Steering committee meetings
- One on one interviews
- Field observations during the 2017 event
- Traffic and pedestrian counts at 15 intersections
- Aerial imagery
- Public information meeting

Key Traffic Observations

The following summarizes Ayres Associates field observations and transportation data collected during the 2017 Cheyenne Frontier Days event:

- The highest traffic volumes occurred on Wednesdays at the majority of the study intersections with only the 8th Avenue intersections with Dey Avenue and Carey Avenue experiencing significantly higher Saturday volume levels.

- The highest traffic volumes occurred at the Central Avenue intersection with Yellowstone Road (34,408 vehicles) with the next highest traffic volumes occurring at the Central Avenue intersections with 8th Avenue (22,737) and with Kennedy Road (19,440). Similar traffic pressure was counted at the Pershing Boulevard intersections with Hynds Boulevard/Randall Avenue (16,772) and Snyder Avenue (15,448) intersections.
- High intersection pedestrian activity was counted at the 8th Avenue intersections with Dey Avenue (19,527 on Wednesday and 24,126 on Saturday), Carey Avenue (17,386 – Wednesday and 18,496 - Saturday), and Snyder Avenue (4,369 - Wednesday and 3,965 – Saturday, crossing 8th and south leg of Snyder) along with the Carey Avenue intersection of Lions Park Drive - the park entrance leading to the Cheyenne Botanic Gardens.

Key Operational Observations

The following summarizes key transportation system analysis observations:

- High pedestrian / vehicle conflicts along 8th Avenue
- ‘Park N Ride’ loading / unloading area is not large enough to accommodate the number of patrons wishing to use the service. Location creates conflicts with Main Gate crowds
- Cheyenne Police Department officers and Cheyenne Frontier Days volunteers are in the roadway directing traffic at multiple times during the event, often in roadways with minimal street lighting
- At peak CFD activity times traffic congestion occurs at several key intersections including:
 - Pershing Boulevard / Randall Avenue / Hynds Boulevard
 - Pershing Boulevard / Snyder Avenue
 - 8th Avenue / Carey Avenue
 - Kennedy Road / Central Avenue
- At peak times traffic backs up onto northbound Interstate-25 from the northbound off-ramp at Randall Avenue / Pershing Boulevard
- ‘Park N Ride’ Bull Lot configuration creates pedestrian/vehicle safety conflicts
- Effective communication among key stakeholders before, after and during CFD is imperative to the success of the event and to discuss post-event ‘lessons learned.’
- Cheyenne Frontier Days smart phone app does not provide real-time alerts to users about traffic conditions or parking lot availability.

Key Short-Term Recommendations

Based on study analysis, the following short-term transportation system and parking recommendations have been developed:

- Temporarily close the segment of 8th Avenue to westbound traffic between Dey Avenue and Hynds Boulevard. 8th Avenue will remain open for a single lane of eastbound traffic.
- Relocate ‘Park N Ride’ passenger loading / unloading area. Short-term recommendation is to move this area west of its current location along 8th Avenue and to create a wider sidewalk and space for line control as patrons approach to load buses.
- ‘Park N Ride’ buses leave Frontier Park by travelling north on Hynds Boulevard to Kennedy Road and Central Avenue to access Interstate-25 at the Central Avenue interchange.
- Hynds Boulevard should be converted permanently to a one-way northbound street between Randall Avenue / Pershing Boulevard and 8th Avenue. During CFD, the segment of Hynds

Boulevard should be temporarily operated as one-way northbound from 8th Street to Gate V12 with temporarily signing on Kennedy Avenue that 'Access Restricted to XXX Golf Club and CFD Participants at Gate V12'.

- Install portable temporary traffic signals, with pedestrian indication signal heads, at the 8th Avenue intersection with Carey Avenue and the Kennedy Road intersection with Central Avenue.
- Provide temporary street lighting, particularly at the intersections of 8th Avenue and Carey Avenue and 8th Avenue and Dey Avenue.
- Allow Cheyenne Police Department officers to utilize manual control equipment for the traffic signals at the Pershing Boulevard/Randall Avenue/Hynds Boulevard and the Pershing Boulevard/Snyder Avenue Intersections. The Pershing Boulevard signals at Randall Avenue/Hynds Boulevard are planned to be upgraded prior to the 2018 Cheyenne Frontier Days event while the Pershing Boulevard signals will require City of Cheyenne action; upgrades will allow for push-button officer control.
- During each Cheyenne Frontier Days event, increase the green time for the Interstate-25 northbound off-ramp during peak hours: 5:00 p.m. – 8:00 p.m. and 11:00 p.m. to 1:00 a.m. at its intersection with Pershing Boulevard. This adjustment will need to be made annually during the event.
- Reconfigure the 'Park N Ride' Bull Lot operation so that pedestrians do not have to walk in front of buses. Provide a dedicated pathway area for pedestrians as they approach and leave the bus pick-up/drop-off area.
- Conduct annual CFD kick-off and debriefing meetings and with City of Cheyenne Engineering/Traffic/Event staff, Cheyenne Police Department staff, Cheyenne Frontier Days staff/volunteers, Wyoming Department of Transportation staff, Cheyenne Transit Program staff, and Laramie County School District Number 1 transit staff.
- Create a full-time staffed Traffic Control Communications Center within Frontier Park for communications of real time traffic/pedestrian control and parking availability information to Cheyenne Police Department, Cheyenne Frontier Days, City Engineering and Traffic, Wyoming Department of Transportation and Cheyenne Transit Programs.
 - Utilize the Traffic Control Communications Center to ensure that updates to dynamic message signs are made accurately and timely.
 - Utilize the Traffic Control Communications Center to ensure that traffic controls which change throughout the day to accommodate ingress and egress traffic is in place and removed consistently and according to plan each day of the event.
- Utilize the Cheyenne Frontier Day smart phone app for traffic conditions and control updates to provide alerts to CFD patrons. Add a parking option and/or 'Park N Ride'/Cowboy Triangle Maps to the 'Maps' tab on the app.
- Close Randall Avenue to westbound traffic between Pershing Boulevard and McComb Avenue with CPD squad cars during CFD evening show egress times to improve Pershing Boulevard traffic operation.

Key Long-Term Recommendations

In addition to the above short-term improvement recommendations a set of longer term recommendations are summarized below:

1. Construct a permanent relocated 'Park N Ride' bus passenger drop-off/pick-up area accessed from Hynds Boulevard that involves relocation of the Buckin' A Saloon tent within Frontier Park

and an enhanced bus access road between the carnival area and carnival parking lot that allows buses to exit Frontier Park via Gate V12 to proceed north on Hynds Boulevard. (This is a change from the CFD Master Plan).

2. Widen Kennedy Road to maintain a westbound Frontier Park access lane for emergency responders and accommodate an eastbound 'Park N Ride' bus express lane. Kennedy Road should be widened between Central Avenue and Martin Esquibel Drive to match the roadway width between Carey Avenue and Martin Esquibel Drive.
3. Upgrade and/or install LED street lighting around Frontier Park, particularly along 8th Avenue, Carey Avenue and Hynds Boulevard.
4. Identify and pave a permanent 'Park N Ride' lot to replace the Bull Lot. Stripe the parking spaces and internal circulation system in this lot to maximize parking efficiency.

Conclusions

In summary, this study evaluated traffic and pedestrian count data, intersection traffic operating conditions, existing transit operation and key stakeholder concerns and operational practices, and observations of existing transportation system performance to develop a set of short and long-term transportation improvement recommendations. The most important recommendation improvements are focused on separating pedestrian and traffic conflicts at the Main Gate to Frontier Park, reducing patron traffic delays at the start and end of the major rodeo and evening shows, and enhancing Park and Ride service.

Communication before, during and after CFD was identified as critical to operation of the transportation services for CFD. Two key recommendations involve development of a CFD kick-off meeting with all stakeholders such as transit service providers, city and WYDOT engineering, police and CFD to finalize event operating details and routes along with a follow-up debriefing meeting a week after the completion of CFD with the second key recommendation involves development of a central on-site transportation control center where all stakeholder managers can communicate real-time transportation control changes and react to changing conditions and problems.

The longer-term recommendation related to the CFD Master Plan moves the planned 'Park N Ride' passenger drop-off/pick-up area from Carey Avenue to a new location accessed from Hynds Boulevard. This change is considered to minimize traffic congestion and safety conflicts along Carey Avenue to maximize 'Park N Ride' bus operation.

Many of the recommendations can be undertaken in time for the 2018 Frontier Days event while other recommendations involve funding considerations and construction plan development such as widening Kennedy Road, constructing sidewalk around the perimeter of Frontier Park and installing upgraded LED street lighting improvements particularly along the 8th Avenue and Carey Avenue corridors. A series of potential new 'Park N Ride' lot sites have been evaluated and provided to CFD officials for use as they consider the potential relocation of the Bull parking lot.

About Cheyenne Frontier Days

Cheyenne Frontier Days (CFD) began as a small rodeo competition in 1897 and has grown into the largest outdoor rodeo in the United States. The main portion of the event is a 10-day stretch over the last two weekends in July each year. Activities include parades (Saturday, Tuesday, Thursday, Saturday), pancake breakfasts (Monday, Wednesday, Friday), a carnival at Frontier Park, an Indian Village, Old Frontier Town vendors area, a Chuckwagon cookoff, rodeo events daily, and concerts or large events in the grandstands nearly every night. Cheyenne Frontier Days draws visitors from all over the world. With all this activity is no wonder it's called "The Daddy of 'Em All!" It is said that the grounds at Frontier Park are the second largest city in the state of Wyoming during a sold-out night show. While Frontier Park is only 83 acres, the impacts of the visitors to CFD are felt all around Cheyenne with the additional traffic on the roads in and around town.

The Cheyenne Frontier Days website indicates that there are 2,500 volunteers who work year-round to ensure the Show is a success each year. During the event, City staff including Cheyenne Police Department and Cheyenne Transit Program is used extensively, as well as additional employees contracted with for the ten-day event including Laramie County School Districts 1 and 2 and security staff at pay to park parking lots. Similarly, WYDOT prepares and installs temporary signage along Interstates 80 and 25 and updated the dynamic message boards that direct vehicular traffic to available CFD parking areas.

Per the CFD Box Office Manager, the seating capacity for a rodeo is approximately 15,000. The standing room only area for the evening night shows has a maximum capacity of approximately 12,200 people. Evening night shows only utilize the west stands for seating, along with the standing room only area, which results in a maximum event crowd of 25,000 people.

Cheyenne Frontier Days periodically completes an economic impact study to quantify the economic benefits generated from visitors outside of Laramie County and the City of Cheyenne and Laramie County. According to this study, completed by Dean Runyan Associates, of Portland, Oregon, the economic impacts resulting from direct visitor spending surrounding the 2015 event totaled approximately \$28 million, which is up from \$25 million in 2012.

Cheyenne Frontier Days, 2017

Study Area

The study encompasses not only the Frontier Park area, but also key intersections, routes, and outlying areas affected by the traffic and transportation operations during the events.



Figure 1: Overview Map of Western Cheyenne

Existing Conditions, 2017

Events at CFD follow generally the same schedule each year: pancake breakfasts on Monday, Wednesday and Friday; parades on Saturday, Tuesday, Thursday, Saturday; Air Guard open house and Thunderbirds air show on Wednesday; Fort D.A. Russell Days on the first weekend; PRCA rodeo daily; and daily evening concerts and events just to name a few. According to *The Hooey*, the Official Newsletter of Cheyenne Frontier Days, September 2017 issue, the combined attendance at all CFD events in 2017 was over 520,000. This equates to an estimated 266,000 guests at the 2017 CFD event.

Table 1: CFD Event Start Times

EVENT	START TIME
Pancake Breakfast	7:00 a.m.
Grand Parade	9:00 a.m.
Carnival / Midway	Opens at 10:30 a.m.
Indian Village	Opens at 10:30 a.m.
Old Frontier Town and the Western Experience	Opens at 10:00 a.m.
Rodeo Grand Entry	12:15 p.m.
Frontier Nights Concert / Event	8:00 p.m.

Quantifying the number of people at Frontier Park is difficult in that not every person at the Park must purchase an entry ticket. The Park offers many attractions which do not require a ticket such as The Western Experience, Indian Village, and Old Frontier Town. Other people at the Park include vendors, carnival employees, contestants and support staff. Additionally, it is estimated that there are approximately 230 CFD volunteers at the Park at any one time. While attendance at the events varies each year, a snapshot of event attendance is provided for 2017 – the study year.

- On Saturday July 29, 13,563 tickets were sold for the afternoon rodeo: the highest rodeo ticket sales for 2017.
- On Saturday July 22, 6,558 gate tickets were sold: the highest daily gate sales count for 2017.
- On Saturday July 29, 19,660 tickets were sold for the night show: the highest night show sales for 2017.

CFD provided ticket and gate sales counts from 2012 – 2017. This information is tabulated in Table 2. While 2017 had the highest ticket sales for the rodeo over the past five years, it did not have the highest ticket sales over the last five years for the night show or gate ticket sales. A comparison of the rodeo and night show attendance data indicates the 2017 traffic data and field observations were equal to or slightly higher than average attendance figures since 2012.

Table 2: CFD Attendance Record Data

Rodeo							
Day of Week	2017	2016	2015	2014	2013	2012	Average
Friday	3,144	4,278	3,800	3,684	--	--	
Saturday	11,933	11,736	13,923	11,588	11,187	12,496	
Sunday	8,146	8,146	7,977	8,905	7,514	7,677	
Monday	13,001	12,374	12,284	6,092	6,170	5,603	
Tuesday	6,107	6,007	5,864	5,489	5,276	5,320	
Wednesday	9,571	10,758	10,033	9,565	9,270	8,498	9,616
Thursday	8,188	7,193	7,839	7,717	8,420	6,656	
Friday	8,110	8,110	7,967	8,927	8,436	10,075	
Saturday	13,563	13,312	13,412	14,342	13,435	11,506	13,262
Sunday	12,419	12,419	11,636	13,385	12,883	11,903	
Total	94,182	94,182	93,238	98,392	87,310	83,413	

Night Show							
Day of Week	2017	2016	2015	2014	2013	2012	Average
Friday	9,524	16,617	18,438	8,239	11,777	20,690	
Saturday	12,830	13,270	15,310	19,302	11,451	17,457	
Sunday	10,593	12,277	12,167	10,114	11,405	8,331	
Monday	5,673	5,802	5,109	5,327	4,676	4,964	
Tuesday	7,596	7,526	6,845	6,559	5,988	6,051	
Wednesday	18,561	18,093	19,197	17,870	20,052	11,519	17,549
Thursday	14,174	8,422	11,886	10,716	14,393	16,399	
Friday	8,834	11,105	16,856	14,604	25,000	8,639	
Saturday	19,660	25,011	23,221	16,890	15,472	17,505	19,738
Sunday	--	--	--	--	--	--	
Total	107,445	118,123	129,029	109,621	120,214	111,555	

Total							
Day of Week	2017	2016	2015	2014	2013	2012	Average
Friday	17,708	23,858	25,865	15,262	15,878	24,750	
Saturday	31,321	31,054	40,172	33,079	27,939	35,221	
Sunday	24,223	24,727	23,765	23,973	23,884	20,901	
Monday	21,260	21,053	20,706	14,397	13,805	14,107	
Tuesday	15,959	16,359	14,831	15,694	14,524	14,377	
Wednesday	34,566	36,641	37,784	36,679	36,271	29,692	35,413
Thursday	25,772	18,773	22,776	23,717	27,266	27,739	
Friday	21,223	23,262	28,578	30,422	40,005	20,657	
Saturday	38,286	44,799	37,383	44,886	35,792	36,258	39,823
Sunday	17,074	12,965	14,715	14,499	13,130	12,753	
Total	247,392	253,491	266,575	252,608	248,494	236,455	

Traffic Data

In order to analyze existing transportation system operation and identify improvements it is necessary to collect traffic and pedestrian count data at key intersections impacted by Cheyenne Frontier Days patrons. Traffic counts were collected of vehicular traffic, pedestrian and bicycle volumes at the 10 study area intersections identified on Figure 2. Traffic counts were collected from 11 a.m. to 1 a.m. on Wednesday, July 26 and Saturday, July 29. The exception to these counting times were: counts at the intersection of CFD Gate V7 (the exit to parking lot C off of Carey Avenue) were taken from 3 p.m. to 1 a.m. and counts at the intersection of CFD Gate V8 (the entrance to parking lot C off of Carey Avenue) were taken from 11 a.m. to 7 p.m. Traffic count data collected by Ayres was supplemented with traffic counts at 5 additional intersections, shown on Figure 3, that were collected by WYDOT from 8 a.m. to 1 a.m. on Saturday July 22, Wednesday, July 26, Friday July 28 and Saturday July 29.

Table 3 summarizes the total number of vehicles and pedestrians that entered each study intersection.

Table 3: 14-Hour Total Intersection Combined Entering Traffic / Pedestrian Volumes

Intersection	11 am to 1 am Wed, July 26 Total	11 am to 1 am Sat, Jul 29 Total
Dey & 8th Ave	28,091	33,518
Hynds & 8th Ave	8,041	8,831
Pershing & Snyder	15,448	14,046
Snyder & 8th Ave	13,656	13,623
Carey & Kennedy	9,180	10,129
Central & Kennedy	19,440	18,916
Carey & Gate V7 EXIT ONLY (3 PM to 1 AM)	4,465	4,967
Carey & Gate V8 ENTER ONLY (11 AM to 7 PM)	4,246	4,563
Carey & 8th Ave	29,387	31,338
Central & 8th Ave	22,737	20,369
Warren & 8th	20,206	17,002
I-25 NB Ramp & Central	19,066	13,937
I-25 SB Ramp & Central	13,072	13,535*
Central & Yellowstone	34,408	30,899
I-25 NB Ramp/Pershing & Randall	16,722	16,355

*Fri, July 28



Figure 2: Traffic Count Location Map - Ayres Associates



Figure 3: Traffic Count Location Map - WYDOT

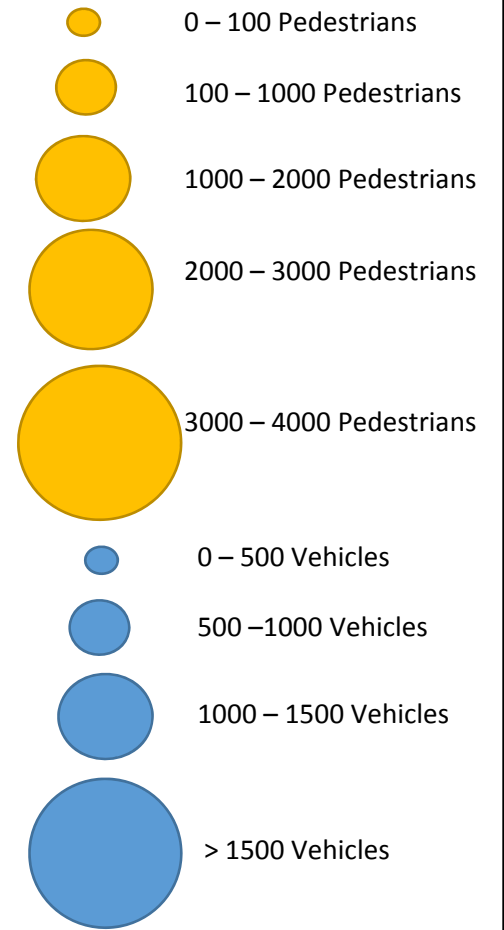
Figure 4 depicts the total number of vehicles and pedestrians that entered each of the study intersections from the data shown in Table 3. As shown on Figure 4, the highest traffic volumes occurred on Wednesday at the majority of study intersections with only the 8th Avenue intersections at Dey Avenue and Carey Avenue experiencing significantly higher Saturday volume levels. The highest traffic volumes occurred at the Central Avenue intersection with Yellowstone Road (34,408) with the next highest traffic volumes occurring at the Central Avenue intersections with 8th Avenue (22,737) and with Kennedy Road (19,440). Similar traffic pressure was counted at the Pershing Boulevard intersections with Hynds Boulevard/Randall Avenue (16,772) and Snyder Avenue (15,448).

It is important to note from Figure 4 and Table 4, that high intersection pedestrian activity was counted at the 8th Avenue intersections with Dey Avenue (19,527 on Wednesday and 24,126 on Saturday), Carey Avenue (17,386 – Wednesday and 18,496 - Saturday), and Snyder Avenue (4,369 - Wednesday and 3,965 – Saturday, crossing 8th and south leg of Snyder) along with the Carey Avenue intersection of Lions Park Drive - the park entrance leading to the Cheyenne Botanic Gardens. From this intersection activity data, it is concluded that Central Avenue and Pershing Boulevard carry the highest traffic volumes and that the highest pedestrian volumes occur at the 8th Avenue intersections, particularly at the 8th Avenue intersections with Dey Avenue and Carey Avenue.

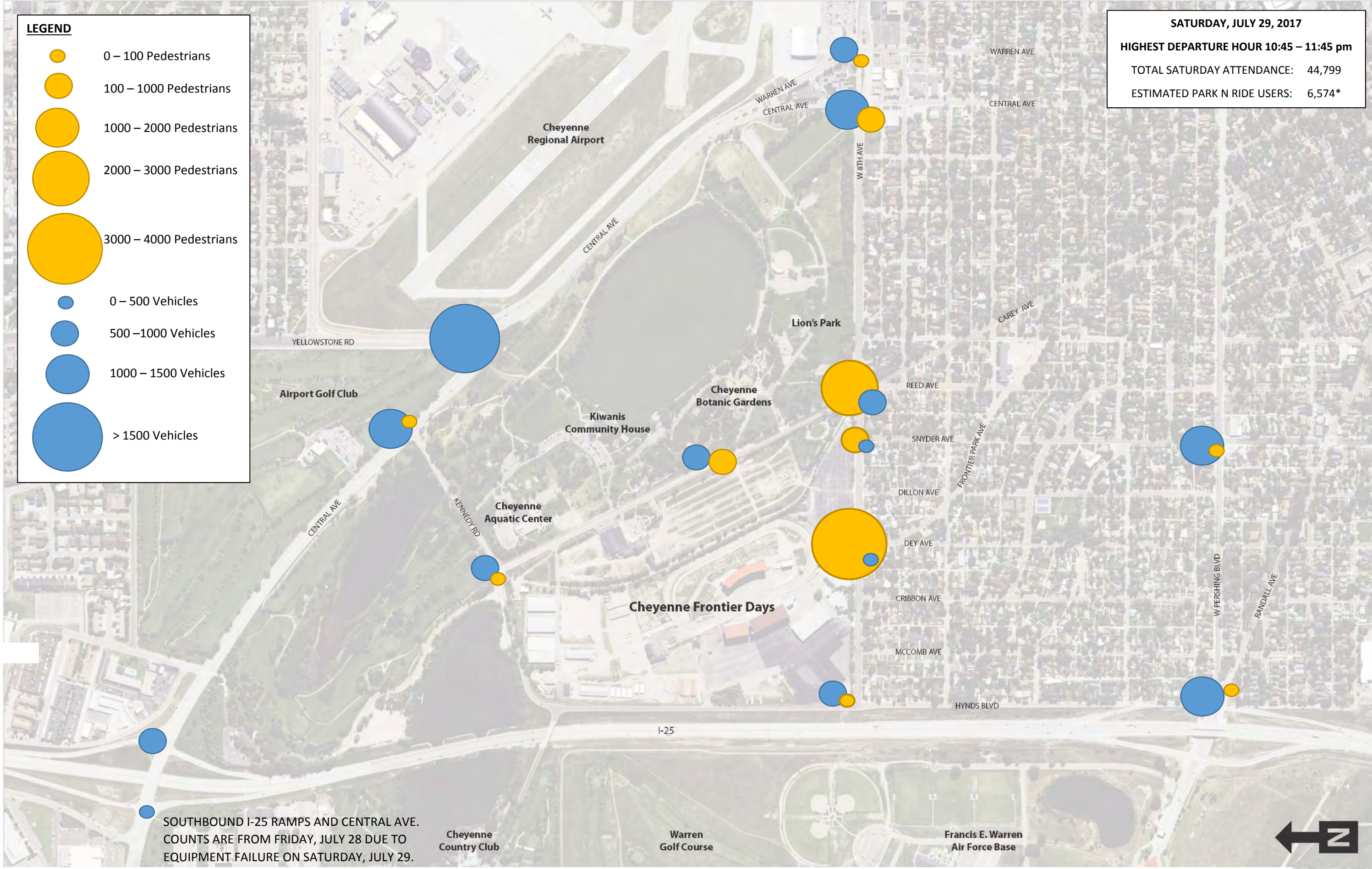
Table 4: 14-Hour Total Intersection Pedestrian Volumes

INTERSECTION	WEDNESDAY	SATURDAY
8 th Avenue & Dey Avenue	19,527	24,126
8 th Avenue & Carey Avenue	17,386	18,496
8 th Avenue & Snyder Avenue	4,369	3,965

LEGEND



SATURDAY, JULY 29, 2017
HIGHEST DEPARTURE HOUR 10:45 – 11:45 pm
 TOTAL SATURDAY ATTENDANCE: 44,799
 ESTIMATED PARK N RIDE USERS: 6,574*



SOUTHBOUND I-25 RAMPS AND CENTRAL AVE.
 COUNTS ARE FROM FRIDAY, JULY 28 DUE TO
 EQUIPMENT FAILURE ON SATURDAY, JULY 29.

* Park N Ride estimate is based on the assumption of 3 passengers per vehicle in the Bull Lot for each vehicle entering the Bull Lot after 3:00 p.m. on Saturday. Vehicles parked prior to 3:00 p.m. are not included in this count of 2,364.

Appendix A contains a series of graphs showing the 15-minute count distribution entering each of the study intersections. Several of the intersection graphs demonstrate high peaking volumes that occur between the 4:00 and 10:30 p.m. time periods such as at the 8th Avenue intersections with Dey Avenue, Figure 5, with a peak pedestrian activity reaching 601 pedestrians at 4:00 p.m. and 923 pedestrians at 10:30 p.m. Carey Avenue at 8th Avenue also demonstrates a high peak pedestrian activity approaching 945 pedestrians at 4:00 p.m. and 1,145 pedestrians at 10:30 p.m. as seen in Figure 6. Vehicular traffic at these two intersections is relatively constant throughout the day at about 200 vehicles per 15-minute time period at Dey Avenue and at 250 vehicles at Carey Avenue. In comparison, the Pershing Boulevard intersections demonstrate high vehicular traffic pressure at the 4:00 p.m. and 10:30 p.m. time periods, as seen in Figure 7 and Figure 8.

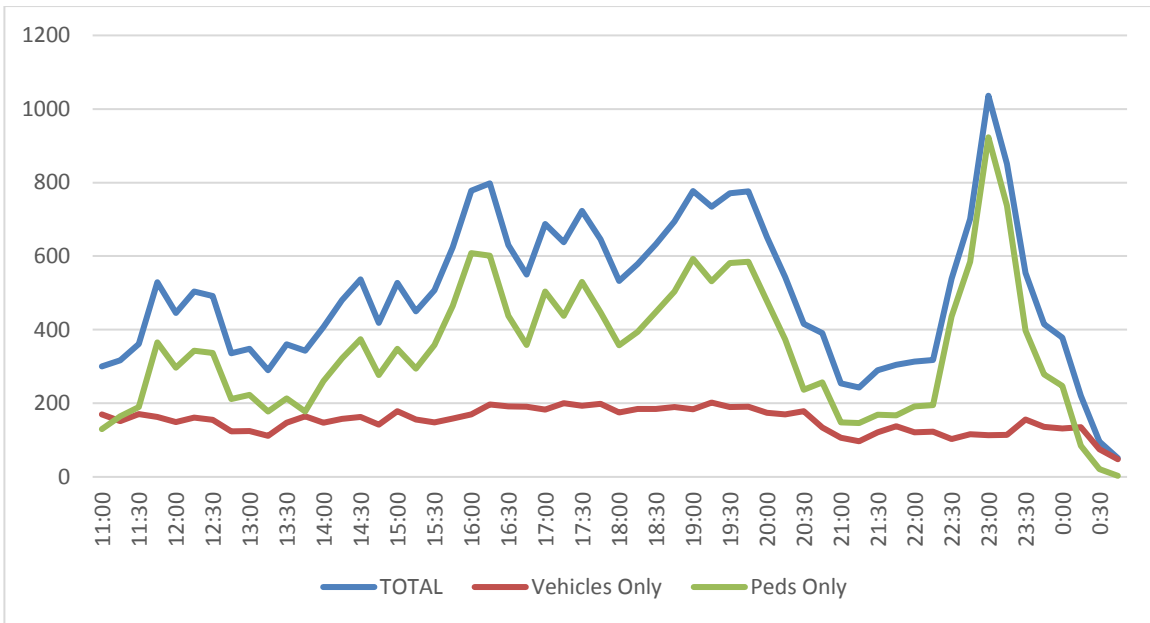


Figure 5: Dey & 8th Avenue Counts - Wednesday, July 26

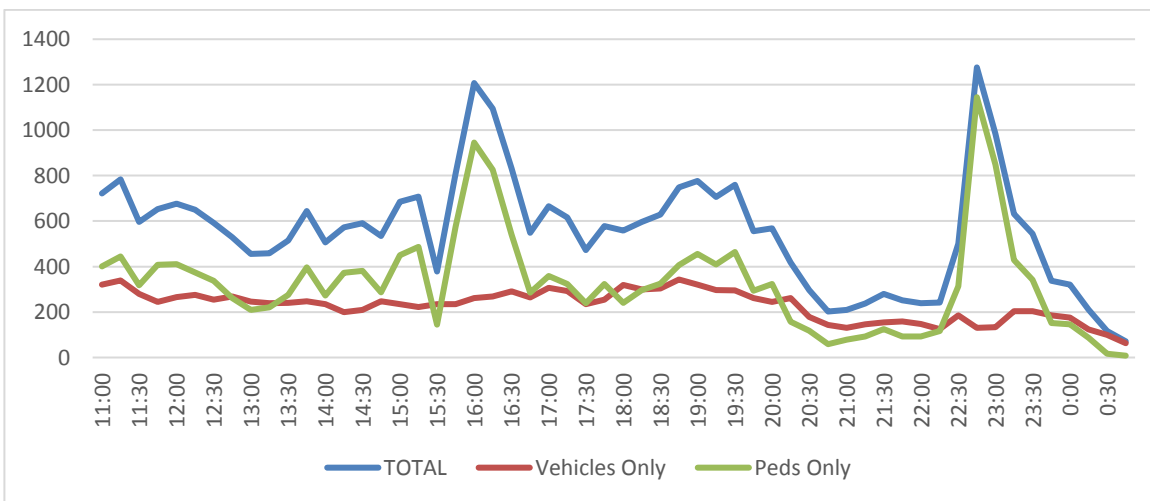


Figure 6: Carey and 8th Avenue Counts - Saturday, July 29

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

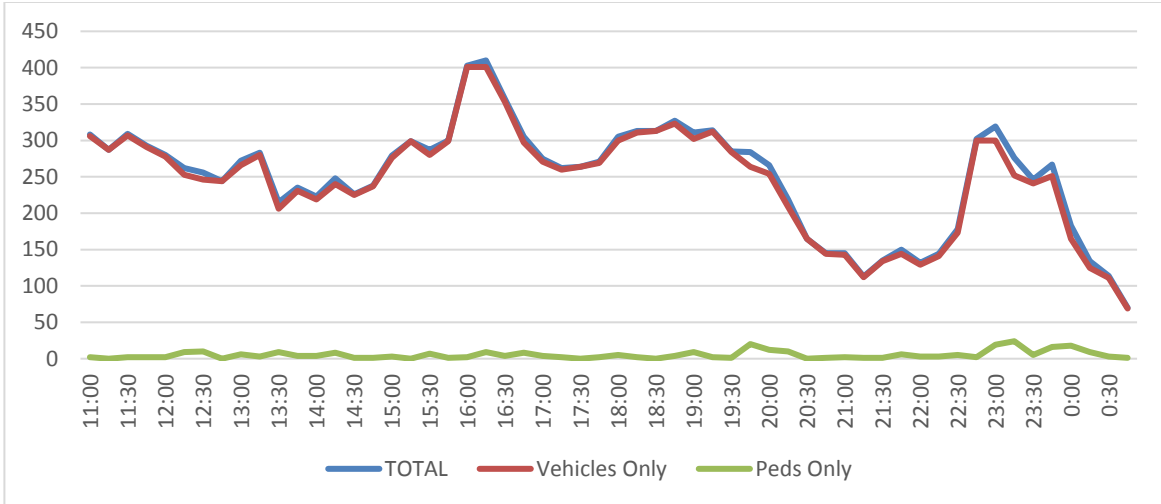


Figure 7: Pershing and Snyder Counts – Saturday, July 29

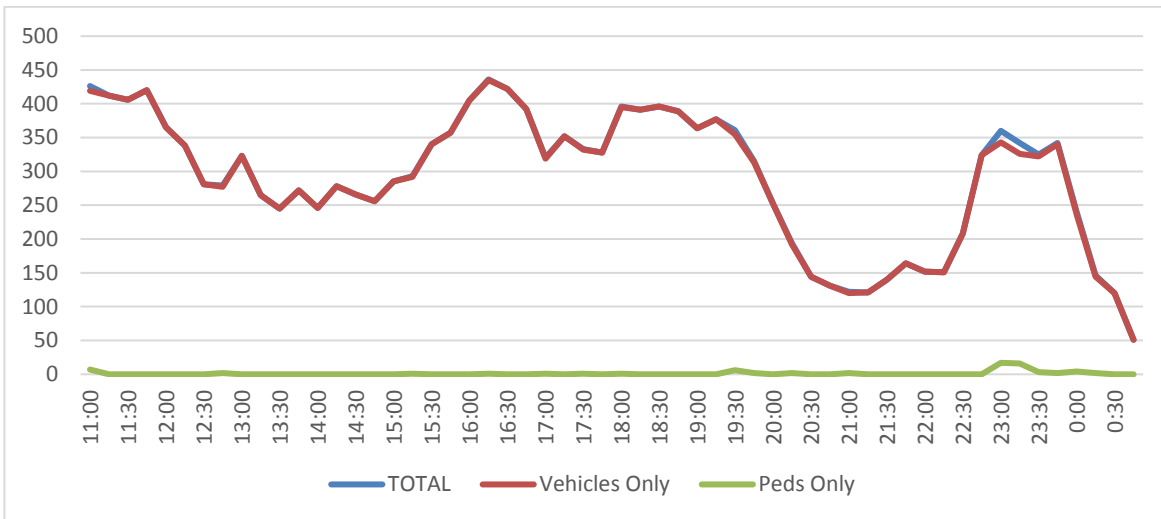


Figure 8: I-25 Northbound Ramp / Pershing /Randall & Hynds Counts – Saturday, July 29

Interestingly, the highest traffic activity intersection at Central Avenue and Yellowstone Road carries a constantly high volume of nearly 700 to 900 vehicles per 15-minute time period that slowly decreases after 4:00 p.m. without demonstrating a sharp 10:30 p.m. volume peak, as seen in Figure 9. The final 15-minute volume activity information provided by the graphs in Appendix A is that the 8th Avenue intersection with Warren Avenue steady decreases after 11:00 a.m. on Wednesday, July 26, see Figure 10. Traffic activity is relatively constant at the Kennedy Road intersections with both Central Avenue and Carey Avenue; approximately 400 and 250 vehicles per 15-minute time period, respectively, until 7:00 p.m. when volumes rapidly decrease until they sharply peak again at 11:00 p.m., see Figure 11.

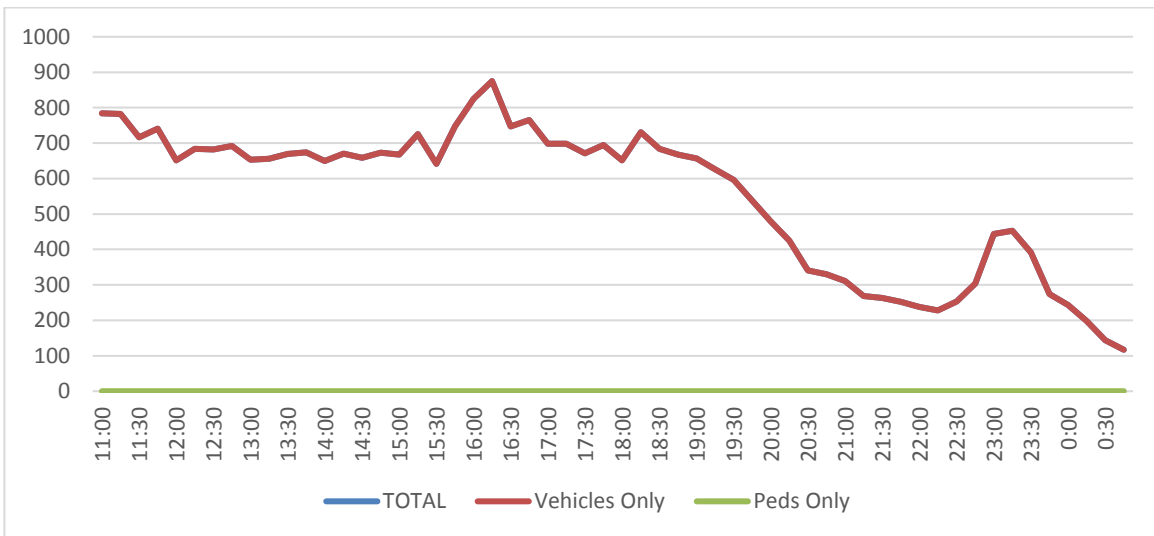


Figure 9: Central and Yellowstone Counts – Saturday, July 29

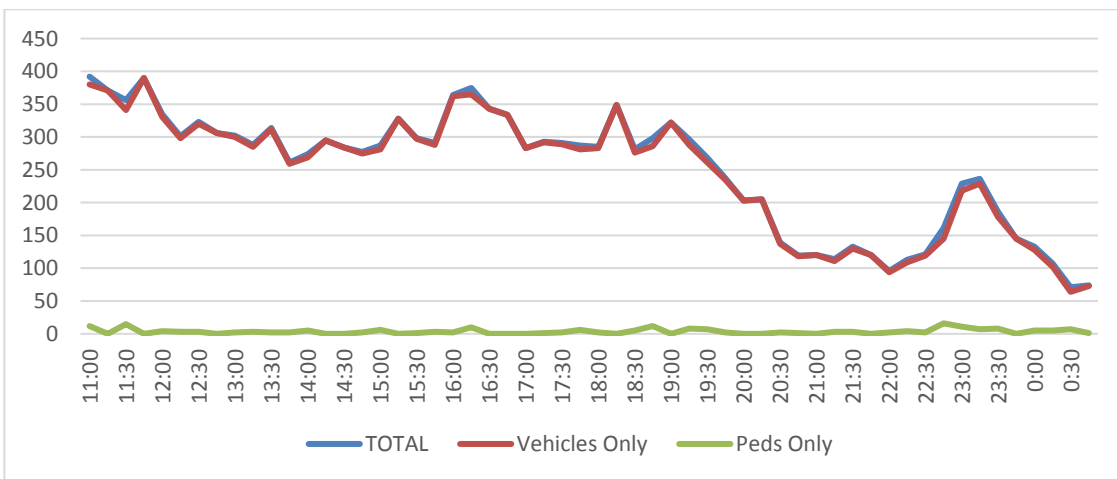


Figure 10: Warren and 8th Avenue Counts - Wednesday, July 26

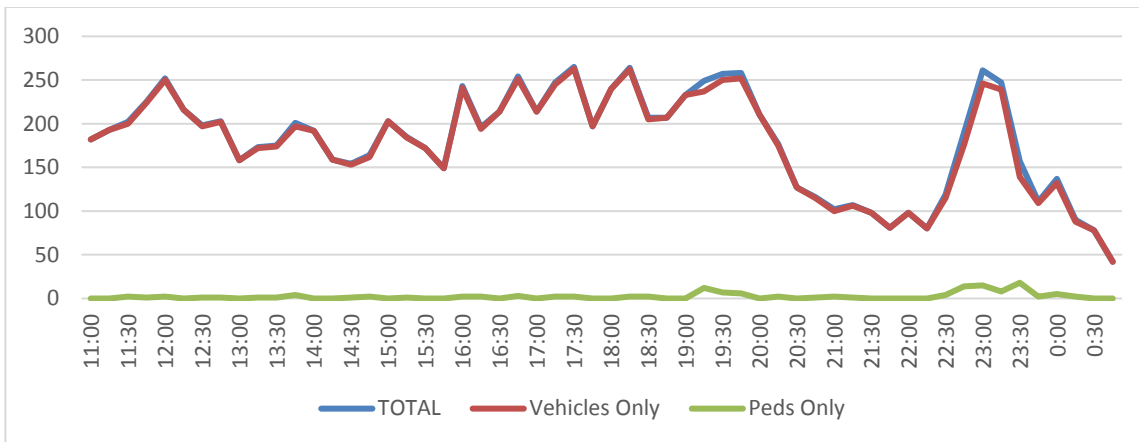


Figure 11: Carey and Kennedy Counts - Saturday, July 29

Some of the primary conclusions from the traffic and pedestrian count data collected at the study area intersections is that:

- 1) 8th Avenue experiences high pedestrian activity between Carey and Dey Avenues which peaks during the 4:00 p.m. and 10:30 p.m. time periods while experiencing low constant traffic demand throughout the day.
- 2) There are high traffic peaks at the Pershing Boulevard intersections with Snyder Avenue and the Hynds Boulevard/Randall Avenue at 4:00 p.m. and 10:30 p.m.
- 3) Traffic at the Kennedy Road intersections with the Carey Avenue and Central Avenue intersections is relatively constant throughout the day with high exiting traffic at 11:00 p.m.

Traffic Routing and Operations

Prior to the start of Frontier Days wayfinding and traffic information signage is installed along with roadway travel lane controls to accommodate visitors and additional traffic generated by CFD. This effort extends beyond the area around Frontier Park and encompasses Interstates 80 and 25 and virtually all collector and arterial streets leading to Frontier Park and the ‘Park N Ride’ lot. Ayres Associates had four staff members observing CFD operations at various times throughout the event. These observations were done in and around Frontier Park, including along all main traffic routes to and from the Park. A brief summary of these observations is included. Many of these observations reference CFD numbered gates and parking lots, which are shown in Figure 12.



Figure 12: Frontier Park Map

8th Avenue

8th Avenue is the southern boundary of Frontier Park. A traffic barrier is placed in 8th Avenue from just west of Dey Avenue to halfway between Dillon and Snyder Avenues. This barrier prevents vehicles from making left turns from 8th Avenue onto Dey and Dillon Avenues as well as preventing vehicles leaving Lot B from making a left turn onto 8th Avenue. This barrier also directs pedestrians to cross the street at the crosswalk at Dey Avenue. 8th Avenue sees heavy vehicle and pedestrian traffic each day of CFD. The residential neighborhood south of Frontier Park, known as “The Avenues,” is heavily utilized for on-street parking with patrons walking across 8th Avenue to access the Park. During CFD parking on 8th Avenue, adjacent to Frontier Park, where on-street parking is allowed it is restricted to short term pick-up and drop-off parking only. Parking is allowed on the north side of 8th Avenue adjacent to Lions Park, which is located east of Frontier Park.



Figure 13: 8th Ave. Traffic Barrier (Image from Friday, July 28, 12:30 p.m.)

The ‘Park N Ride’ pickup/drop off location is in an existing bus loop on the north side of 8th Avenue, west of Dey Avenue. Staging for ‘Park N Ride’ buses during egress is on the south side of 8th Avenue between Hynds Boulevard and McComb Avenue. ‘Park N Ride’ operations will be discussed in detail in the ‘Park N Ride’ Service section of this report beginning on page 39. The intersection of 8th Avenue and Carey Avenue is extremely busy with both pedestrian and vehicular traffic during CFD. This intersection is two-way stop controlled with stop signs on Carey Avenue. During peak traffic times, this intersection is controlled by CPD officers to facilitate traffic and pedestrian safety. Peak times are approximately 3:15 p.m. to 5:00 p.m., during rodeo egress, and 10:30 p.m. to 12:00 p.m., during night show egress. Depending on traffic load, officers may remain outside these peak times to assist and direct. CPD officers direct vehicular traffic flow as needed to keep the vehicles moving. The officers will stop all vehicular at intervals to allow pedestrians traffic to safely cross the intersection. At these intervals pedestrians are permitted to cross all legs of the intersections including walking diagonally across the intersection.



Figure 14: 8th and Carey Ave.- Looking Southeast

The *8th Avenue Corridor Plan*, Felsburg, Holt & Ullevig, May 2013 explored the warrants for traffic signals at the intersection of 8th Avenue and Carey Avenue. The corridor plan states: "...current traffic conditions fail to satisfy the eight-hour, four-hour and peak hour volume warrants, the combination of pedestrian and traffic volumes fails to satisfy the pedestrian volume warrant, and the average number of accidents at the intersection over a five-year period is lower than the threshold that would suggest the need for a signal for safety-based reasons."

During evening egress, eastbound 8th Avenue traffic is required to turn right, to travel south on Snyder Avenue. This turning movement is forced by placing a Type III barricade in the traffic lane, signed with a 'Right Turn Only Arrow'. This restriction limits the number of eastbound vehicles at the crowded intersection of Carey and 8th Avenues.



Figure 15: 8th and Snyder Ave.-Looking Southeast



Figure 16: Intersection of 8th, Central and Warren Avenues

During heavy traffic times, vehicular traffic on 8th Avenue can impact the intersections of 8th Avenue and Central/Warren Avenues (a one-way couplet shown in Figure 16.) When traffic is backed up on westbound 8th Avenue it can impact southbound traffic on Central Avenue. Figure 17 shows the free right turn from southbound Central Avenue onto westbound 8th Avenue.

At the intersection of 8th Avenue and Warren Avenue vehicles desiring to head northbound have a dedicated turn lane at this signalized intersection. The left turn lane for eastbound traffic is very short and vehicles often stack up further than the length of the turn lane into the eastbound through lane. The intersection signal does not have a left turn arrow for this movement; vehicles are expected to wait for a gap in traffic prior to making the turn. While there are two northbound lanes on Warren Avenue, frequently vehicles making the left turn will not proceed until the westbound right turn lane has cleared. This can be seen in Figure 18, where eastbound traffic is waiting for traffic in the westbound lane.



Figure 17: 8th and Central Ave. Intersection



Figure 18: 8th Ave. at Warren Ave.

8th Avenue Conclusions:

- 1. Officers hand control the intersection of 8th Avenue and Carey Avenue during peak ingress and egress time periods.**
- 2. Heavy pedestrian traffic results in conflicts between pedestrians and vehicles.**
- 3. Lack of street lighting along entire corridor from Central Avenue to Hynds Boulevard.**

Carey Avenue

Carey Avenue is the eastern boundary of Frontier Park. During Frontier Days only right turns are permitted along Carey Avenue adjacent to Frontier Park and Lions Park. This is accomplished by placing traffic barriers down Carey Avenue to create one northbound travel lane and two southbound travel lanes. Left turns are blocked by the barrier system.



Figure 19: Carey Ave. Traffic Barrier (Image from Wednesday, July 26, 4:15 p.m.)

Public parking is available in Lot C, in Frontier Park, as well as inside Lions Park. Gate V10 is located north of Lot C along Carey Avenue. Gate V10 is heavily used by CFD pass holders, namely contestants. Gate V10 is also utilized by the dedicated CFD volunteer ‘Park N Ride’ bus. Between Kennedy Road and Gate V10 southbound Carey Avenue is configured to provide one travel lane during CFD. Just past Gate V10 traffic cones are used to create two southbound lanes with the right lane signed for vehicles parking in Lot C with the left lane signed for through traffic, headed toward 8th Avenue.

During heavy ingress times, traffic on southbound Carey Avenue is backed up from Gate V8, the entrance to Lot C, to Kennedy Road and along Kennedy Road nearly to the interchange with I-25. This will further be discussed in the Kennedy Road section of this report, beginning on page 25.

Southbound Carey Avenue is striped for two lanes as vehicles approach 8th Avenue. The right lane operates as a shared right turn/through lane while the left lane operates as a dedicated left turn only lane. The northwest quadrant of the intersection of 8th Avenue and Carey Avenue was reconstructed in the summer of 2017. The reconstruction eliminated the free right turn lane, which had been identified in the *8th Avenue Corridor Plan*, Felsburg, Holt & Ullevig, May 2013, as a desired improvement to

increase pedestrian safety and queuing space. The reconstruction of the corner resulted in a curb radius that is too small to allow larger vehicles and vehicles pulling trailers to make the right turn while staying within their travel lane. According to City of Cheyenne staff, the curb radius was designed as large as possible while maintaining safe sight distance between southbound vehicles and pedestrians on this corner. Sight distance is restricted in this area by the existing large decorative entrance column located at the curb line, as shown in Figure 21: Carey Ave. Looking North from 8th Ave. During CFD a variable message sign was placed in the 8th Avenue median to notify vehicles with trailers not to turn right onto 8th Avenue. Despite the variable message sign and turning restrictions, CPD issued several tickets to vehicles with trailers making this illegal turn during CFD. Because these larger vehicles cannot make the turn while remaining in their travel lane they effect traffic in the entire intersection.



Figure 20: Carey Ave. Variable Message Sign



Figure 21: Carey Ave. Looking North from 8th Ave.

Carey Avenue Conclusions:

4. Traffic backs up on southbound Carey Avenue extending along Kennedy and Central Avenues during peak ingress times with vehicles accessing Lot C.
5. Vehicles with trailers cannot make the right turn from Carey Avenue onto 8th Avenue and remain in their travel lane.

Kennedy Road



Figure 22: Kennedy Road

Kennedy Road is the northern boundary of Frontier Park, ending to the east as a T-intersection with Central Avenue. During CFD traffic cones are shifted during different parts of the day along Kennedy between Carey Avenue and Central Avenue to configure lanes differently during egress. At egress time, vehicles are prohibited from making a right turn from Central Avenue onto Kennedy Road. During egress Central Avenue, which typically operates as a four-lane road, with two lanes in each direction, is restricted to one lane in each direction with police officer control. This change allows eastbound traffic on Kennedy Road to turn directly left or right into an open travel lane on Central Avenue.

This stretch of Kennedy Road, between Carey Avenue and Central Avenue is critical to moving traffic in and out of Frontier Park efficiently. As such, the traffic cone pattern changes several times during the

day to accommodate changing traffic demand patterns. During the 2017 event, the traffic cone pattern and lane configuration was not consistent from day to day.

For the duration of CFD northwest bound left turns from Central Avenue onto Kennedy Road are prohibited. While many vehicles on Central Avenue will make a U-turn after the raised center median ends to the northwest, Cheyenne Police Department (CPD) officers indicated that the U-turns don't seem to be a traffic safety problem.

During peak ingress times, specifically after the parade and before the rodeo, traffic coming to Frontier Park from Central Avenue gets backed up such that the right through lane of traffic on Central Avenue is at a standstill with queuing extending along eastbound Central Avenue nearly to its interchange with I-25. This is caused by the number of vehicles trying to go southbound on Carey Avenue to access Gates V10 and V8. Figure 23: Eastbound Central Ave., west of Kennedy Road, shows the traffic backed up in the eastbound through lane on Central Avenue.



Figure 23: Eastbound Central Ave., west of Kennedy Road

On-street parking is permitted on the south side of Kennedy Road between Carey Avenue and Martin Esquibel Street, the road into Lions Park. Between Martin Esquibel Street and Central Avenue the roadway narrows and on-street parking is prohibited. Kennedy Road does not have sidewalk on either side. Pedestrians often walk in the street or just at the back of curb as shown on Figure 24 and Figure 25.



Figure 24: Kennedy Road looking North - Pedestrians walking without sidewalk and traffic backed up to Central Avenue during rodeo ingress



Figure 25: Kennedy Road Looking West - Pedestrians walking in the street

Kennedy Road Conclusions:

6. Officers hand control the intersection of Kennedy Road and Central Avenue during peak egress.
7. Lane configuration and closures were not consistently done each day at the same time or in the same setup.
8. Significant traffic back ups after parades and before rodeo.
9. No sidewalks or pedestrian paths along Kennedy Road.

Hynds Boulevard

Hynds Boulevard is the western border of Frontier Park. Along Frontier Park, Hynds Blvd. has one travel lane in each direction with no shoulders. There is a deceleration/turn lane to enter Gate V12. Gate V12 is restricted to CFD pass holders including volunteers and contestants. At peak ingress times traffic was often backed up on Hynds Boulevard as visitors who were not authorized to enter Gate V12 were trying to find a place to park and were talking with the gate attendant for directions on where to go.

Hynds Boulevard does not have sidewalk but does experience pedestrian traffic walking at the back of curb during CFD. These pedestrians appear to have parked at the Cheyenne Country Club or at Lake Absaraca and are trying to access Frontier Park.

Hynds Boulevard south of 8th Avenue is a residential street with parking permitted on the east side of the road and prohibited, year-round, on the west side of the road. This narrow roadway becomes congested during CFD with larger vehicles pulling trailers trying to access Gate V12, residents accessing their homes, visitors trying to find on-street parking, and the 'Park N Ride' buses.

Hynds Boulevard Observation:

- 10. Ingress- Traffic backed up on Hynds Boulevard at Gate V12.**
- 11. No sidewalks or pedestrian paths along Hynds Boulevard.**

Central Avenue

There is an interchange at I-25 and Central Avenue, which causes Central Avenue to be heavily used by visitors accessing Frontier Park. The northbound off-ramp is a signalized intersection with sensors to detect vehicles on the off-ramp as they approach Central Avenue. These sensors allow the signal green cycle to extend to help traffic clear the ramp. The southbound off-ramp is stop sign controlled. Finding a gap in traffic for the left turn from the southbound off-ramp to Central Avenue can be challenging at times, but it did not appear that this delay was causing traffic to back up onto the interstate during CFD. The Central Avenue and I-25 interchange intersection operated with minimal delays and queuing during CFD.

Pershing Boulevard, Randall Avenue and Hynds Boulevard Intersection

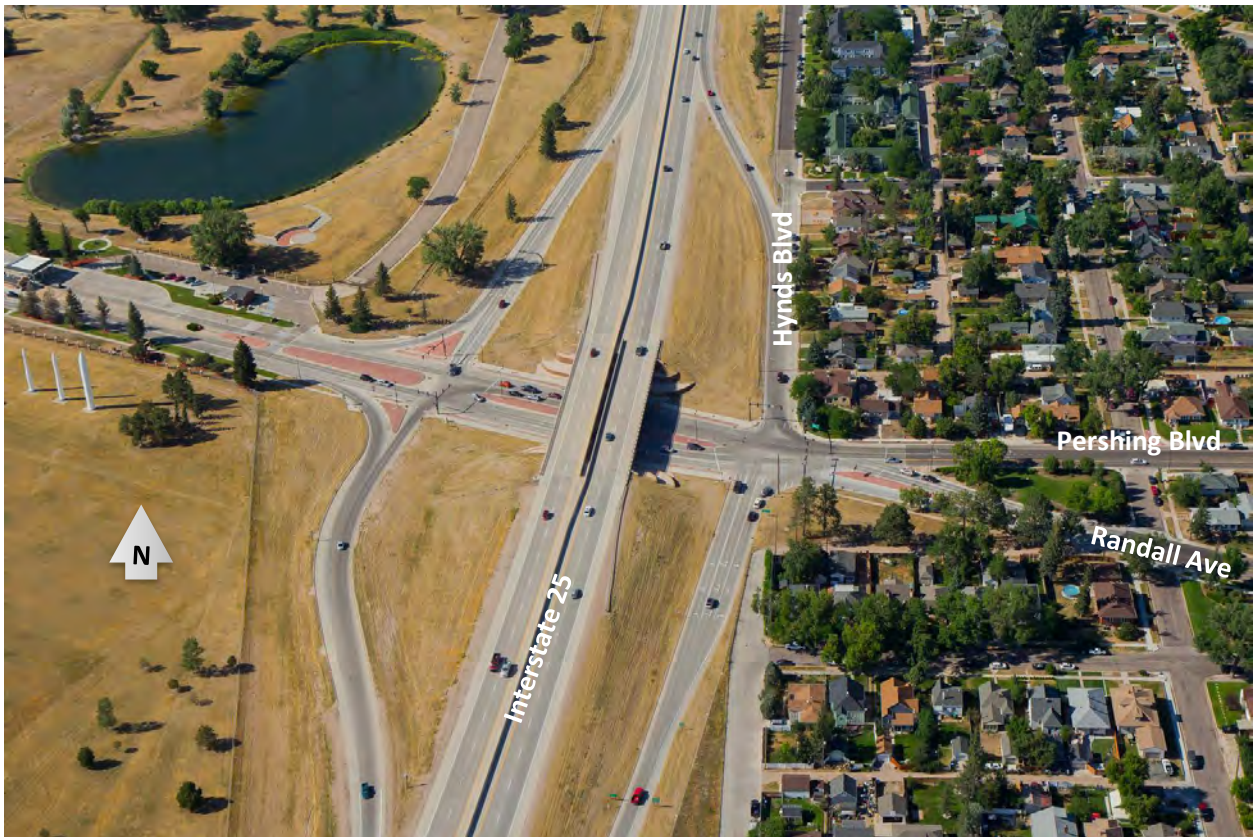


Figure 26: Intersection of Pershing/Randall/Hynds (Image from Friday, July 28, 4:45 p.m.)

The intersection of Pershing Boulevard, Randall Avenue and Hynds Boulevard is heavily used during CFD because it is the interstate interchange closest to the south side of Frontier Park. Many visitors use Pershing Boulevard to access the interstate at egress times. Additionally, 'Park N Ride' buses use this interchange both coming from and going to the 'Park N Ride' lot. There are existing traffic signals at both the northbound and southbound interstate ramps at this location. The intersection on the east side of the interstate is a 5-leg intersection as Pershing Boulevard and Randall Avenue intersect with the I-25 Northbound off-ramp and Hynds Boulevard at this intersection. CPD hand controls this intersection during heavy egress times when they see that traffic starts to gridlock Pershing Boulevard operation.

During the 2017 CFD event, WYDOT increased the green signal time for the northbound off-ramp during peak hours: 5:00 p.m. to 8:00 p.m. and 11:00 p.m. to 1:00 a.m. to allow additional time for 'Park N Ride' buses to proceed through the intersection toward Hynds Boulevard. This signal timing change worked well for the 5:00 p.m. to 8:00 p.m. night show ingress. However, at night show egress on both Wednesday, July 26th and Saturday, July 29th, the 'Park N Ride' bus drivers reported that vehicles were backed up on the off-ramp all the way from the intersection of Pershing/Randall/Hynds onto northbound I- 25. It is unclear whether these backups happened while the intersection was under CPD officer control or signal operation.

WYDOT staff has indicated that this signal is scheduled to be upgraded before the 2018 CFD. The upgrades will include better real-time communication on failed intersections so that WYDOT can alert the City, who is responsible for maintaining the signals. Additionally, signals which are elevated to

“critical” within the WYDOT system will have the capacity to be controlled by police officers with a manual push button from the signal control box.

Pershing Boulevard / Randall Avenue / Hynds Boulevard Intersection Conclusions:

- 12. Officers hand control the intersection during peak egress.**
- 13. Intersection management is complicated by the 5-leg intersection creating excessive delays.**
- 14. Vehicle traffic backs up onto the Interstate at the northbound off-ramp.**

Snyder Avenue and Pershing Boulevard Intersection

The intersection of Snyder Avenue and Pershing Boulevard is signalized. CPD officers control this intersection by hand during heavy CFD egress times to keep traffic moving. As a main roadway out of the “Avenues” neighborhood this intersection sees very heavy traffic during egress. Often traffic on westbound Pershing Boulevard is backed up from I-25 to the intersection with Snyder Avenue. This signal is also slated to be upgraded prior to the 2018 CFD.

Snyder Avenue and Pershing Boulevard Intersection Conclusions:

- 15. Officers hand control the intersection during peak egress due to heavy traffic exiting the Avenues Neighborhood.**

Frontier Park

Many pedestrians access Frontier Park via a sidewalk at the northwest corner of Carey Avenue and 8th Avenue, passing in front of the Indian Village. This sidewalk is 10 feet wide except for in one location directly under the entrance sign. In this location the sidewalk narrows to 6 feet to accommodate landscaping, but restricts pedestrian movement.



Figure 27 : Sidewalk Narrows at Park Entrance

Frontier Park lacks bicycle parking accommodations. Providing bicycle racks and lighting near these racks could encourage this method of travel to reduce automobile traffic volumes.



Figure 28: Dedicated Bicycle Parking is Not Provided

Frontier Park Conclusions:

- 16. Sidewalk narrows at Park entrance near 8th and Carey Avenues.**
- 17. There are no bicycle parking accommodations inside or around the Park**

Lions Park

Lions Park is located on the east side of Frontier Park. Many CFD visitors utilize free parking inside Lions Park because of its close proximity to Frontier Park. Three parking areas inside Lions Park are monitored and reserved for specific uses. These include: several spaces dedicated to Putt Hutt mini golf patrons, the entire parking lot adjacent to the Cheyenne Aquatic Center for pool patrons, and a lot reserved as a “Tow Lot” for vehicles that get towed from the areas around Frontier Park for violating parking rules. For future CFD events it is anticipated that the parking lot adjacent to the Botanic Gardens will be reserved for visitors to the Grand Conservatory. There are 365 public parking spots available inside Lions Park during CFD. According to the City Deputy Director of Community Recreation and Events, the largest problem for Lions Park is keeping vehicles from parking on the turf areas. Signs, such as those shown in Figure 29 are placed in and around Lions Park during CFD but many vehicles, up to 30 per day, are still towed for parking in non-designated areas.



Figure 29: No Parking Sign Inside Lions Park

Many of the streets through Lions Park are narrow and wind around the park areas. In one location, at the northwest end of the median north of the Putt Hutt, there is no 'Keep Right' sign in the median. As Martin Esquibel Street curves in this location a sign here would help to keep southbound traffic on the correct side of this median.



Figure 30: 'Keep Right' Sign Needed

Lions Park Conclusions:

18. 'Keep Right' sign missing from median north of Putt Hutt and Kiwanis Community House.

CFD Parking & Transportation Alternatives

Cheyenne Frontier Days (CFD) welcomes many visitors to the area. The development of efficient transportation alternatives is necessary to creating an environment people enjoy using and want to return to again. Many major event operators claim the memory that lingers most for many people about an event is the experience arriving or leaving the venue. With the alternatives for transportation ranging from walking, biking, ridesharing, busing, and personal vehicle, there's plenty to choose from with CFD.

On-Site Park Parking

The Frontier Park grounds is the main stage for Cheyenne Frontier Days events. Figure 31: CFD Frontier Park Map shows the range of activity centers within the park. Parking areas on the grounds include a variety of uses –headquarters and volunteer parking, carnival staging, contestant parking, stock barns and pens, parade staging, VIP parking, ADA parking, and paid parking for non-pass holders. The space fills up quickly, leaving little room remaining for patrons in the B and C lots, the two lots which are available for CFD sponsors, participants and public pay-to-park parking.



Figure 31: CFD Frontier Park Map

Figure 32, a labeled aerial image taken Friday, July 28th at 12:30p.m. shows what the area looks like during CFD. During the event the B and C lots were highly utilized. However, C lot is a dirt surface lot, making delineating parking difficult which creates a less efficient parking area that could accommodate

additional vehicles. Adding to some of the issue in C lot is that larger vehicles with trailers are parking in this area, as well. Lot C has 1,000 available parking spaces and Lot B has 366 available spaces. Parking is available to the general public in these two lots for \$20 per vehicle.

During the events, the V7 & V8 gates backed up traffic on Carey Avenue (going south). There were a high number of patrons trying to access these lots, being turned away because of cost or space issues, and then unloading passengers partially or fully in the line of traffic before leaving the gate area and continuing south to find alternative parking solutions.



Figure 32: Labeled Aerial Image of Frontier Park (Image from Friday, July 28, 12:30 p.m.)

Frontier Park Parking Conclusions:

- 19. Cashiering at Gate V8, the entrance to C Lot created vehicle back ups onto Carey Avenue; at peak ingress times these backups extended onto Central Avenue.

Lions Park Parking

Lions Park has 365 parking spaces available to the public during CFD. Many CFD visitors utilize this free parking because of its close proximity to Frontier Park. As previously mentioned, there are three parking lots inside Lion’s Park which have parking restrictions during CFD. These include dedicated spaces at the Putt Hutt miniature golf business, parking for Aquatics Center patrons only, and parking for Botanic Gardens Grand Conservatory visitors. All other paved parking spaces in the Park are available for public parking. Despite signage, each year during CFD many vehicles are towed because of illegally parking inside Lions Park. Figure 33 shows the various public parking lots and spaces available in both Frontier Park and Lions Park. Public parking spaces available in Lions Park during CFD are shown in purple.



Figure 33: Parking Lots In and Around Frontier Park

CFD operates a Pay to Park lot known as Lot E on the east side of Carey Avenue, opposite the ‘Old West’ Museum. This parking area is not paved; patrons park on non-irrigated park lands and walk across Carey Avenue to access Frontier Park. The cost to park in this lot is \$20 with room for about 130 vehicles. City Community Recreation and Events staff indicated that the Department would be willing to provide an additional ‘Pay to Park’ lot for CFD use in the southeast portion of Lions Park on non-irrigated park land, if that lot were operated by CFD staff for the during the event. This lot, as shown below in Figure 34 is 2.1 acres and could accommodate approximately 160 vehicles, whereas Lot E is 1.7 acres. It is further away from Frontier Park than Lot E and may be a less desirable location for patron parking, but would provide additional parking opportunities should CFD choose to operate this available space as a parking lot.



Figure 34: Lions Park Aerial Image

The ‘Tow’ Lot is also located inside Lions Park. For the 2017 event it was located north of the Children’s Village on the west side of Sloans Lake. This lot is reserved for vehicles which are towed from the area surrounding Frontier Park for violating parking rules. Vehicle owners must pay to remove their vehicle from this lot.

Lake Absarraca Parking

Lake Absarraca Recreation Area is owned by the City of Cheyenne and maintained by the Parks Division. The City leases this land to CFD to provide overnight camping from the Sunday preceding the CFD event through the Monday after CFD ends. Overnight camping is \$40. Additional rodeo and night show overflow event parking is permitted in this area for \$20 per vehicle. A limited number of hook up sites, for water and electricity, are available for CFD contestants only. Horse trailers are not permitted overnight in this lot.



Figure 35: Lake Absarraca Parking Area. Image from Wednesday, July 26, 1:45 p.m.

On Street / Avenues Parking

The Avenues is the neighborhood directly to the south of Frontier and Lions Park, and north of Pershing Boulevard. It is one of the core neighborhoods in Cheyenne and highly desirable. A majority of the homes were built between the early to mid- 1900s. The age of the neighborhood provides the backdrop for some of the current constraints: limited street lighting, narrow sidewalks, as well as smaller garages (typically 1-car).

Given the proximity to the park and free on-street parking many patrons of Frontier Days choose to park in this area and walk to the park. In addition to on-street parking, many homes within a couple blocks of the park also sell spaces for vehicles to park on their front lawn and/or driveway.

To gauge the number of vehicles utilizing on-street parking within the Avenues neighborhood aerial imagery of the area was taken during the afternoon of Cheyenne Day, Wednesday, July 26, 2017, at 1:45 p.m. Cheyenne Day is particularly highly attended by local residents with many of the offices in Cheyenne closing at noon. The rodeo started at 12:15 p.m. that day at Frontier Park. Following the flight, vehicles were counted from the images and compared to a Google Earth flight from Wednesday, September 7, 2016 during daylight hours.

The parked vehicle count area included all of 8th Avenue, Hynds Boulevard, to the centerline of Central Avenue, and north of Pershing Boulevard, as shows in Figure 36. While the Avenues neighborhood includes area all the way to Evans Avenue to the east, Central Avenue and Warren Avenue create a natural barrier through the neighborhood with heavier traffic loads and higher speeds; therefore, this area tends to be less Frontier Days related traffic and was not included in the count. Also, note this count only included on-street vehicles (not in driveways or off-street parking areas).



Figure 36: Avenues Neighborhood Aerial Image

During the July 26th Frontier Days flight, the total number of vehicles in this area was counted at 1,635. The same area showed 465 vehicles during a standard weekday based on historic Google Earth imagery. The increase is more than three and a half times more vehicles within the less than half a mile area that sees the biggest impact from the event. During large night show events, pedestrians are often seen crossing Pershing Boulevard to vehicles parked beyond the Avenues parking count area.

The congestion of traffic, pedestrians, limited street lighting and narrow sidewalks creates large opportunities for conflict within the neighborhood. In addition, the Frontier Days bus routes running through the neighborhood can be delayed by the large number of vehicles on the roadway. Often bus turning movements are restricted because of vehicles parking too close to the intersections to allow for the buses to turn and stay within their travel lane.

The Avenues on-street parking opportunities will continue to be a desirable option for many CFD patrons. Should CFD get larger, so will the traffic, parking and pedestrian safety conflicts and congestion within the neighborhood. Helping patrons understand the other opportunities, such as 'Park N Ride', can be a way to alleviate some of the pressure on the neighborhood and reduce conflicts and congestion for Frontier Days operations.

Public Parking Availability

Public parking in and around Frontier Park is limited when compared to the capacity of a sold-out night show which can accommodate 25,000 visitors.

Table 5: Public Parking Availability near Frontier Park

LOCATION	AVAILABLE SPACES
Frontier Park Lot C	1,000
Frontier Park Lot B	366
Lions Park Lot E	130
Lions Park – Parking Lots	365
Avenues Neighborhood *	1,170

*Avenues parking count area is bordered by Hynds Boulevard, 8th Avenue, Central Avenue and Pershing Boulevard. On Wednesday, July 26th the total number of vehicles parked on-street in this area was counted at 1,635. The same area showed 465 vehicles during a standard weekday based on historic Google Earth imagery. The assumption is that 1,170 CFD visitors can park in the Avenues on-street. This number does not consider vehicles which are parked in driveways or on private residential lots where space for parking is sold to visitors.

‘Park N Ride’ Service

A major study goal is to increase utilization of the ‘Park N Ride’ system – a special shuttle bus service for Frontier Days patrons. Frontier Park is landlocked and cannot expand beyond its current size. As more Frontier Days exhibits and activities are added to the Park, land that has historically been used for parking will be converted to make room for these additions. Therefore, the growth of CFD depends on a robust, user friendly ‘Park N Ride’ system.

‘Park N Ride’ is a system designed to decrease the traffic activity and the number of vehicles parking in or near Frontier Park. Frontier Days partners with Laramie County School District Number 1 (LCSD#1) to provide shuttle bus transportation service between a designated parking lot (Bull Lot) and Frontier Park throughout the day and into the evening until 12:30 a.m. The system is highly utilized by visiting patrons, as well as locals, going to Frontier Days events. The cost to park in the Bull Lot is \$10 per vehicle with the advantage of providing all riders with free Frontier Park admission.



Figure 37 : Bull Lot Location Map

The current Bull Lot is located on property leased from Warren Air Force Base. The Bull Lot, just under 17 acres in size, is located in the southwest quadrant of the Happy Jack Road/ Missile Drive and I-25 interchange, approximately 1.25 miles from Frontier Park, as the crow flies. CFD is investigating the feasibility of alternative sites as the Air Force has indicated they are not planning on renewing the CFD lease to use the Bull Lot.

Going to Frontier Park, buses travel east on Happy Jack / Missile Drive, turning north onto I-25 to the Pershing Boulevard Exit where they head north on Hynds Boulevard. Buses then turn right onto 8th Avenue and make a left U-turn into the bus loop at the Frontier Park Main Gate. A CFD volunteer stops westbound 8th Avenue traffic to allow the buses to turn into the bus loop. The bus loop can currently accommodate up to five standard LCSD#1 yellow buses, but a maximum of four buses were concurrently in the bus loop during the 2017 event. Once loaded, a CFD volunteer stops both eastbound and westbound traffic on 8th Avenue to allow the buses to turn left from the bus loop to head east on 8th Avenue to Snyder Avenue where they turn right and travel south to Pershing Boulevard and west to the I-25 interchange. Once on I-25 the buses continue one exit and travel to Happy Jack Road and into the Bull Lot, completing the shuttle loop. During rodeo and night show departure times buses will stage on the south curb line of 8th Avenue between McComb and Cribbon Avenues so they can quickly turn into the bus loop when the proceeding buses have exited the loop.



Figure 38: Bus Entering Bus Loop



Figure 39: Bus Exiting Bus Loop

Alternative return routes are available to 'Park N Ride' buses should the Pershing Boulevard / I-25 interchange become too congested or backed up. The first alternative route has the buses staying on Snyder Avenue past Pershing Boulevard all the way south to West 24th Street before turning west along 24th to Missile Drive, under I-25, and onto Happy Jack Road where the Bull Lot is located. The second alternative route, should Snyder Avenue become congested due to excess traffic or a traffic crash, is for the buses to travel south on Carey Avenue rather than Snyder Avenue. LCSD#1 buses are a contracted CFD service and as such must follow the prescribed routes. While alternate routes are available, LCSD#1 'Park N Ride' supervisors must get permission from CFD to change the bus routes. Generally, this can happen fairly quickly, as the bus drivers radio to the LCSD#1 'Park N Ride' supervisor to alert them of traffic problems and then the supervisor can request permission from CFD. Real time route improvements to this system can be enhanced by creating a staffed Traffic Control Center inside Frontier Park to facilitate real-time updates and changes to all traffic operations including 'Park N Ride' bus routes, CPD and CFD volunteers.

Figure 40 and Figure 41 contain maps showing the 'Park N Ride' routes the LSCD#1 yellow buses take.



Figure 40: 'Park N Ride' Bull Lot Route Map

A handicapped accessible “special needs” bus that runs on an as-needed basis with calls for service radioed to the driver connects the Bull Lot to and from Frontier Park. The route this bus takes is similar to the other routes, but drops passengers off on the north side of 8th Avenue east of Gate V3. See Figure 41 for full details of this route.

The ‘special needs’ LCSD#1 bus drivers occasionally used their ‘stop arms’ and flashing lights when loading and unloading passengers along 8th Avenue. This resulted in traffic delays as vehicles traveling on 8th Avenue would stop and wait for the bus while their flashers were activated. CPD reports that they would flag traffic past these buses when traffic on 8th Avenue was being impacted.

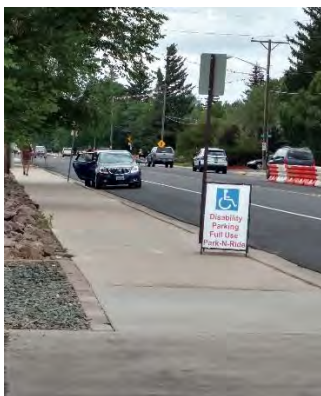


Figure 42: Special Needs Bus Pick-up/Drop-off on 8th Ave.



Figure 41: ‘Park N Ride’/Special Needs ADA Bus Route Map

The location of the current bus loop is not ideal for the large crowds in the area during rodeo and night show egress times. As the loop is directly in front of the Main Gate to Frontier Park, large crowds exit the gate at egress. Many people in these crowds are waiting to get on 'Park N Ride' buses while many people are also trying to get to 8th Avenue and the Avenues Neighborhood area to access their parked vehicles or other transportation options. This creates high safety conflict and queuing problems between pedestrians, buses and vehicles on 8th Avenue and the areas adjacent to the Main Gate. The problem is compounded because of the lack of street lighting on 8th Avenue and the sheer number of pedestrians, vehicles, and buses in this area at the same time. During rodeo egress the 'Park N Ride' bus loading area is crowded with patrons waiting for a bus at the same time that patrons are waiting in line at the Main Gate bag check. This creates further confusion as this undersized area is being used to simultaneously accommodate both groups of people.



Figure 43: Rodeo Egress at Main Gate



Figure 44: Pedestrian/Bus Conflicts within Bus Loop



Figure 45: 'Park N Ride' Bus Entering Bus Loop Delayed Due to Pedestrians



Figure 46: Crowds at Egress between Main Gate and Bus Loop



Figure 47: Crowds at Egress Between Main Gate and Bus Loop

'Park N Ride' operators, LCSD#1 Transportation Staff, utilize metal fences to create four passenger lines for bus loading. These fences are moved into place prior to heavy crowd egress times. The gates work well to channelize patrons adjacent to the bus loop, but only extend about 50 feet back from the bus loop. The remainder of the crowd stands in the mass of people waiting to get on a bus. Two of the four bus loading lines are located south of the ticket building and are generally blocked from view by patrons exiting the Main Gate. These two lines tend to be underutilized because they cannot be seen. 'Park N Ride' passengers complained about the lack of order during event egress and stated that many people were cutting in line as the lines are not clearly defined.

Ayres Associates staff observed 'Park N Ride' bus operation at the Frontier Park bus loop on both Saturday, July 22 and Saturday, July 29 during night show egress and on Tuesday, July 25 at rodeo egress time. Additionally, Ayres Associates staff observed 'Park N Ride' bus operations at the Bull Lot. At Frontier Park four buses were in the bus loop at one time during peak egress times. It took less than four minutes for the buses to enter the bus loop, load with 48 passengers each, and exit onto 8th Avenue.

On July 22 there were 22 LCSD#1 buses running on the Bull Lot 'Park N Ride' loop. Just as the night concert was ending, the first buses to leave the bus loop were able to make the round trip in 20 minutes from the bus loop to the Bull Lot and back into the bus loop. The longest round trip the buses made took just over 27 minutes. The additional seven minutes is attributed to high traffic congestion conditions at the Pershing/Randall/Hynds intersection and the Snyder/Pershing intersection. The total number of vehicles entering the Bull Lot on July 22 after 3:00 p.m. was 735.

On July 29 there were 23 LCSD#1 buses running on the Bull Lot 'Park N Ride' loop. Just as the evening concert was ending, the first bus to leave the bus loop completed the round trip in just under 30 minutes. The longest round trip took just over 43 minutes to complete. Several factors impacted the 'Park N Ride' bus system on July 29, including: a concert patron fight that blocked buses from exiting the bus loop which began at about 11:15 p.m. and took 11 minutes to clear for normal operations to resume; heavy delays at the Pershing/Randall/Hynds intersection which resulted in the buses rerouting to the Snyder Avenue to 24th Street route; and a traffic crash on Snyder Avenue which necessitated the buses to use Carey Avenue rather than Snyder Avenue. The total number of vehicles entering the Bull Lot on Saturday after 3:00 p.m. was 788.

On Tuesday, July 25 at rodeo egress the fastest round-trip bus loop was completed in 21 minutes. The longest round-trip bus loop was completed in 30 minutes. Buses would arrive at the Bull Lot, stop near the pay booth and unload passengers, then return to Frontier Park. It is noted that 'Park N Ride' service is also provided from the Bull Lot to Downtown as part of the Cowboy Triangle. On Tuesday, July 25th the Cowboy Triangle bus would leave and generally return to the Bull Lot within 15 minutes.



Figure 48: 'Park N Ride' Frontier Park Bus Loading Lines

To promote use of the Park N Ride' system, CFD sends all rodeo and night show ticket holders an email prior to the event that includes a Bull Lot location map and user information for the 'Park N Ride', as shown in Figure 49. Additionally, both WYDOT and CFD create and install variable message signs along I-25 that direct travelers to the 'Park N Ride' lot.



Figure 49: Email from CFD to Ticket Holders

PARK-N-RIDE

Parking on Frontier Park will be at capacity during Frontier Nights®. We encourage you take advantage of our 'Park N Ride' service! Buses travel between the "Bull" lot and Frontier Park all day long. A quick five minute bus ride directly to the celebration!

Park-n-Ride is located at I-25 and Happy Jack.

Hours: July 22-29 10:30 a.m.–12:30 a.m.

'Park N Ride' Bus Conclusions:

20. Pedestrian, vehicle and bus conflicts on 8th Avenue is a safety concern and creates delay for the 'Park N Ride' bus route travel times.
21. Buses were often stuck in traffic congestion at heavy egress times.
22. LCSD#1 Special Needs buses using the swing out pedestrian arms and stop flashers while loading and unloading passengers is causing confusion and delay to vehicular traffic on 8th Avenue.
23. Buses have conflicts completing turns at some street corners due to on-street parked vehicles encroaching on the corner radius.
24. Traffic conflicts occur along Hynds Boulevard as the street is very narrow and does not allow enough room for on-street parking and two through traffic lanes.

'Park N Ride' System Signage Conclusions:

25. Westbound Interstate 80 lacks 'Park N Ride' lot signage. Current signage directs visitors to exit at I-180/North Greeley Highway to access Frontier Park. Trailblazing guide signs lead visitors to the intersection of 8th Avenue with Warren Avenue and then westbound on 8th Avenue.
26. 'Park N Ride' passengers commented that they did not know which bus to get on to get to their destination, either Frontier Park, Downtown, or the Bull Lot.

Bull Lot 'Park N Ride' Lot

Currently the City of Cheyenne leases the land known as Bull Lot from the United States Department of the Air Force which authorizes CFD to use this land to provide parking for transportation services during Frontier Days. Figure 50 shows the Bull Lot parking/circulation pattern. This lot is situated to provide designated parking for vehicles with handicap placards, passenger cars, larger pickup trucks, campers, and vehicles with trailers. Throughout the ten-day 2017 CFD event 12,220 vehicles paid to park in this lot. The total lot capacity is around 1,500 vehicles. The lot is unpaved, but does have a layer of compacted asphalt millings which allows for a more stable surface than natural ground. Parking stalls are not painted or delineated, which reduces the number of vehicles that can park in this lot. Permanent improvements have been limited to parking lot lighting since this land is leased and not owned by CFD. There are no permanent structures onsite. Tents are provided for bus driver breaks and parking lot security employees. There are also no permanent signs on the lot with parking aisle delineation done with temporary T-post stakes and flagging. Similarly, bus loading areas and pay stations are designated with T-post stakes and signage installed prior to the start of Frontier Days.

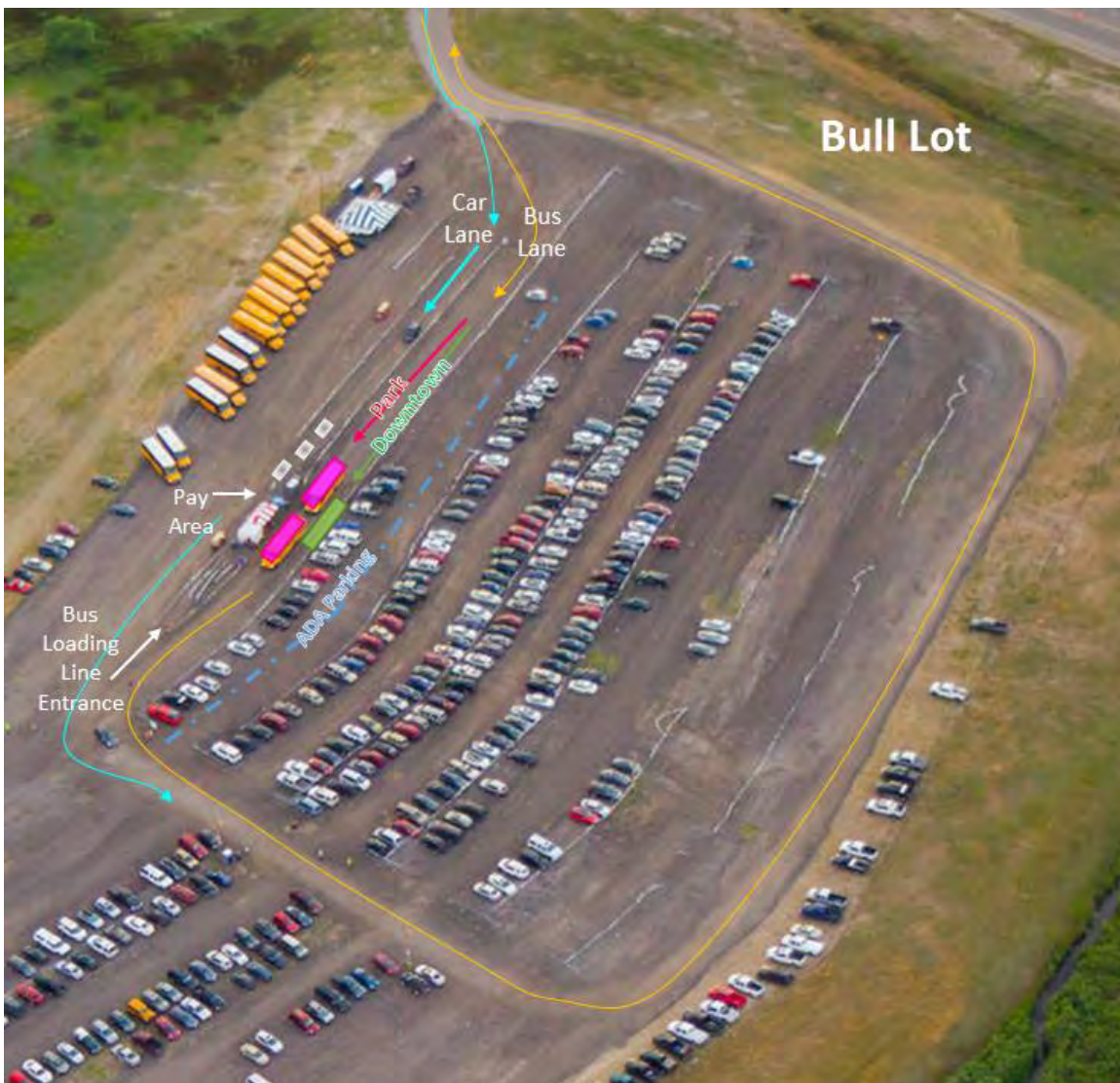


Figure 50: Bull Lot Parking/Circulation Configuration

'Park N Ride' passengers enter the Bull Lot and proceed to the pay tent. The attendant takes their payment and directs them to proceed to a parking place identified by lot attendants/flaggers. After parking the passengers walk to the bus loading area, receive a stamp from a LCSD#1 Transportation employee and board the bus. This stamp allows for entrance to Frontier Park without requiring a gate ticket. Patrons can board a bus for Frontier Park or Downtown. Golf carts are on hand to assist passengers who may have trouble walking across the unpaved lot.

The configuration of the Bull Lot requires passengers getting off a bus to walk directly in front of the bus to return to their vehicles. Ayres Associates staff interviewed 'Park N Ride' patrons with this pedestrian/bus conflict being their number one safety concern. Passengers also expressed concern over pedestrian/vehicle conflicts as there were no designated walk areas to the buses for pedestrians. Some visitors expressed confusion in navigating the lot, not knowing where to go to get on the buses or how to exit the lot. Other comments included a desire for more than one pick up location.



Figure 51: 'Park N Ride' Passengers Walking in Front of Buses



Figure 52: 'Park N Ride' bull Lot Bus Loading Area



Figure 53: Signage at Bull Lot

'Park N Ride' Bull Lot Conclusions:

- 27. Passengers were concerned with the pedestrian/vehicle conflicts at the Bull Lot. The current lot configuration forces passengers unloading from a bus to walk in front of the bus to access their vehicles. Similarly, the lot lacks a dedicated pedestrian pathway to the bus loading area.**

'Park N Ride' – Volunteer Service

CFD provides a 'Park N Ride' service for CFD Volunteers. Because there is limited parking at Frontier Park a volunteer only 'Park N Ride' lot is located at Cheyenne Central High School to accommodate the hundreds of volunteers that are at Frontier Park each day throughout the event. This lot offers free parking to volunteers and dedicated LCSD#1 buses to complete the routes shown in Figure 54 and Figure 55. The route from Central High School to Frontier Park varies depending on the time of day. During evening show egress, vehicles cannot make a right turn from Central Avenue onto Kennedy Road. Therefore, the Volunteer 'Park N Ride' bus takes a different route during evening show egress times. The standard route has the bus entering Frontier Park at Gate V8 along Carey Avenue; the egress route has the bus entering Frontier Park at Gate V12 along Hynds Boulevard.

The volunteer lot at Central High School has 394 available parking spots. As this isn't a 'pay to park' lot, statistics are not kept on how many vehicles use the Volunteer 'Park N Ride' lot. Some volunteers have

told Ayres Associates staff that they prefer to use the Bull Lot for 'Park N Ride' rather than the dedicated volunteer lot because it is closer to their home.

The Volunteer 'Park N Ride' bus can make multiple stops inside Frontier Park, depending on where volunteers are waiting to be picked up or dropped off. Bus drivers have reported that they can get stopped along the internal Frontier Park roads, north of the arena, because of vehicles blocking the roads. Contestants frequently pull in and idle their trucks on these narrow back roads while they register for events. During heavy ingress times the Volunteer 'Park N Ride' bus can get caught in traffic congestion on Kennedy Road and Carey Avenue as it tries to enter Frontier Park via Gate V8.



Figure 54: Volunteer 'Park N Ride' Standard Route



Figure 55: Volunteer 'Park N Ride' Egress Route

Volunteer 'Park N Ride' Conclusions:

- 28. Traffic congestion entering Gate V8 can delay buses getting to Frontier Park.
- 29. Interior Frontier Park roads can get blocked with idling vehicles causing restricted bus movement through the north section of the Park.

Cowboy Triangle

A key piece of CFD patron transportation options during Cheyenne Frontier Days is called the Cowboy Triangle. The triangle is comprised of three legs between the downtown parking garage, Frontier Park, and the Bull Lot. Figure 56 shows an approximate overview of the Cowboy Triangle. The Cowboy Triangle provides a parking advantage as it allows CFD patrons to park in Downtown Cheyenne and ride a bus to Frontier Park.



Figure 56: Cowboy Triangle Aerial Overview

The south and west legs of the triangle – connecting downtown and the Bull Lot and Bull Lot to Frontier Park – are operated by LCSD#1 with yellow buses. The west leg – downtown to Frontier Park – is operated as a special route by the Cheyenne Transit Program.

Cheyenne Transit Program Service

For the 2017 CFD the Cheyenne Transit Program (CTP) operated a route that goes from the downtown parking garage to Frontier Park. In previous years CTP provided three to four buses to the Cowboy Triangle. In previous years additional routes were provided including the Ice and Events Center to Frontier Park and Triumph High School to Frontier Park. These alternative routes provided additional ‘Park N Ride’ opportunities for patrons in lots that may be more convenient than the Bull Lot and Downtown. In 2017 CTP was only able to provide one bus for the Cowboy Triangle routes due to ‘out-of-service’ bus reductions for vehicle maintenance. Some Cowboy Triangle route signage was not updated to reflect this change. Signs were placed at Triumph High School and the Ice and Events Center notifying potential patrons of this change.

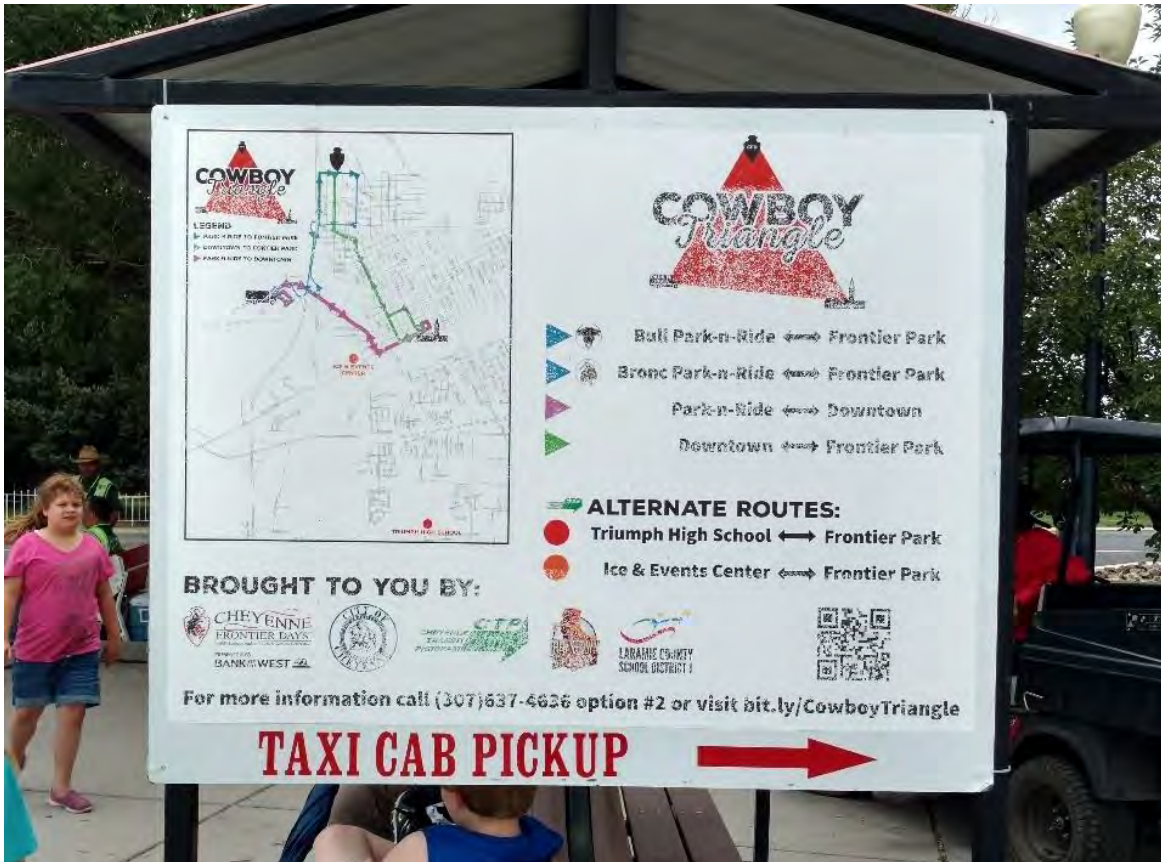


Figure 57: Cowboy Triangle Sign at Frontier Park



Figure 58: CTP Sign at Frontier Park Bus Loop Exit on 8th Avenue

Downtown passenger loading and unloading for the Cowboy Triangle route takes place along the west curb of Pioneer Avenue. The CTP bus(es) are located closer to the North end of the block with the Yellow buses to the Bull Lot located at mid-block.



Figure 59: Downtown Cowboy Triangle Bus Stop Map



Figure 60: Buses at Downtown Cowboy Triangle Bus Stop

Because CTP is partially federally funded, they are required to charge for the service. It costs \$1.50 per passenger for a single direction trip. Figure 61 shows the routes generally used in 2017 for the Downtown to Frontier Park and return trip as part of the Cowboy Triangle. CTP buses can change their routes as needed without obtaining permission from CFD because there is no contract in place between CPD and CFD for this service.



Figure 61: CTP Cowboy Triangle Route - Downtown to Frontier Park

The Downtown to Frontier Park leg of the Cowboy Triangle provided 1,830 rides during the 2017 CFD event. Wednesday, July 26 saw the highest ridership at 361 total riders. Peak times for ridership were from 10 a.m. to 1 p.m., 4 p.m. to 9 p.m. and 10 p.m. to 12 a.m. Appendix C contains a breakdown of CTP ridership by date and time.

CTP buses are smaller than the LCSD#1 buses. Each bus can accommodate 20 seated riders with additional room for people to stand. Frequently, during peak times, the buses are overcrowded. CTP buses are not structurally designed for large capacity loads. Overcrowding on the buses causes maintenance issues and wear on the buses.

Cowboy Triangle Conclusions:

- 30. Some sign information for the Cowboy Triangle and 'Park N Ride' routes were not updated for the 2017 routes.**
- 31. Variability in fleet availability of CTP buses makes it unreliable year to year for Cowboy Triangle support, leading to inconsistency in routes.**

Other Transportation Opportunities

Ride Share: Uber, Lyft and Taxi

During the 2017 CFD, Uber, a company which utilizes a mobile-phone application to connect Uber drivers with passengers who need a ride, was an event sponsor. As a sponsor, there were signs directing visitors to the Uber ride short-term parking at 8th Avenue and the email blast generated by CFD for ticket holders included an ad for Uber. Short-term passenger pick up and drop off locations along the curb in various blocks of 8th Avenue were identified with signage during the event. All available short-term curb parking spaces were in high demand at various times throughout the day, but especially at evening show egress times. Many local residents utilized these locations to pick up and drop off visitors to the Park. The Uber ride-share was heavily used during CFD with reports that Uber corporate called in additional drivers from surrounding communities to be available to service the CFD demand.



Figure 62: Uber Signage at North Side of Lot B



Figure 63: Short-Term Parking Along South Side of 8th Avenue

Private Buses

Numerous private companies operate their own tour buses or vans, bringing visitors to CFD. Some of these companies bring visitors from out-of-town and some are local such as shuttle vans from Cheyenne area campgrounds and hotels. These buses compete for short-term curb parking along 8th Avenue with the other ride share services and private vehicles. CFD Volunteers are given strict instructions not to allow any vehicles, except LCSD#1 buses into the bus loop on 8th Avenue. Several times a day private tour buses and vans attempt to access the bus loop and are denied, causing traffic delays as they block traffic on 8th Avenue for both the designated 'Park N Ride' buses as well as through vehicular traffic.



Figure 64: Private Tour Bus Blocking Traffic on 8th Ave.

Pedi-Cabs

Pedi-Cabs are pedal driven bicycle frame vehicles which serve as taxis. During the 2017 CFD event 13 pedal cabs and their operators were licensed to operate from July 20 to July 30. Both the pedi-cab vehicle and its operator must be licensed through the City of Cheyenne. To qualify as an operator, the applicant must pass a CFD background check. 2017 is the second year pedi-cabs have been operating in Cheyenne during CFD. Pedi-cab are considered a vehicle and must operate as a car, following the same traffic rules as motor vehicles. Pedi-cabs were instructed to stage along the north side of 8th Avenue between Gate V3 and the entrance to the bus loop, opposite Dey Avenue. Cheyenne CPD indicated that pedi-cab operators were seen riding on sidewalks, running red lights and in other ways violating traffic laws. Cheyenne Police indicated they had several conversations with the owner of the pedi-cab company about the rules for operating a pedi-cab and expectations of the operators. CPD further stated that in the future the pedi-cab operators will receive citations for violating traffic rules.



Figure 65: Pedi-Cab Staged on 8th Avenue Opposite Dey Ave.

Traffic Related Communications

Since there are numerous public and private transportation service providers and agencies involved in CFD operations communication is very important to coordinate day to day activities. Over the past several City of Cheyenne Administrations, the Mayor has held planning meetings in preparation for CFD, starting just after the first of each year. These meetings involved the various City Departments including Traffic Engineering, Parks, Special Events and Cheyenne Police Departments. In some years the Cheyenne Transit Program has been involved. Additionally, CFD Security Committee coordinates directly with LCSD#1 to finalize plans for 'Park N Ride' bus routes. For the 2017 event, the CFD Security Committee coordinated with WYDOT to request access to the closed Missile Drive interstate off ramp for 'Park N Ride' buses.

As part of this study, a Steering Committee meeting was held on July 13, 2017, with a second meeting immediately following CFD on August 3rd. Attendance at the meetings included representatives from the following organizations: CFD, Cheyenne MPO, Cheyenne Transit Program, WYDOT Traffic, WYDOT Planning, and LCSD#1 Transportation. These meetings proved very beneficial in having all parties together to discuss operations just prior to and after the 2017 event. It is essential that all parties understand the ingress and egress traffic operations as well as planned 'Park N Ride' bus operation.

Real-time communication between City Engineering, CPD, Cheyenne Transit Program, LCSD#1, WYDOT and CFD is essential to keeping vehicular and pedestrian traffic moving around Frontier Park. Current communication between these entities has generally been limited to word-of-mouth and phone calls. A

staffed Traffic Control Operation Center within Frontier Park would assist with coordinating real time transportation communications. This control center would serve many functions:

- Ensure that lane closures and lane delineation, such as along Kennedy Road at Central Avenue, happens at the same time and in the same manner each day of the event.
- Receive alerts from the various entities of traffic or pedestrian crashes or other operations issues that would require bus re-routing.
- Receive alerts from the various entities of parking lot capacity and push this information out to parking lot staff to redirect vehicles.
- Provide real-time messages on I-25 related to 'Park N Ride' lot use and traffic route congestion problems.
- Coordinate real time traffic control information between CFD, its volunteers and City Police.

Communication Conclusions:

- 32. Cheyenne City Transit Program wasn't involved in the City of Cheyenne pre-CFD planning meetings in 2017.**
- 33. At the CFD Study Steering Committee Meeting in June 2017 there was confusion about the planned routes for the 'Park N Ride' buses.**
- 34. During peak egress and ingress all parties are working to meet their responsibilities, whether it be 'Park N Ride', traffic flow and/or safety. However, these parties are not always in communication with each other.**

Technology for Communications

CFD has created a smart phone app to communicate event information to patrons. These types of apps can be programmed to push traffic and parking alerts out to app users. Updates to this app could include real time traffic alerts and parking updates to CFD patrons. While the app has a 'Maps' tab, it did not contain maps for the 'Park N Ride' / Cowboy Triangle parking options.

WYDOT maintains several permanent dynamic message signs along Interstates 80 and 25. These Dynamic Message Signs (DMS) can be programmed to provide real time information to drivers. WYDOT also assists CFD traffic operations by providing five trailer mounted Portable Dynamic Message Signs (PDMS), the Wyoroad.info website, 511 phone system, text and email alerts, and the Highway Advisory Radio. The permanent DMS are set up according to the programs included in Appendix E. CFD Scenario A is set up for parade days (Saturday, Tuesday, Thursday, Saturday). The goal is to inform public of increase traffic at the parking lots at Frontier Park. The Second Phase informs the public to the alternative of 'Park N Ride'. CFD Scenario B is set up for non-parade days. The messaging is set to inform of the alternative of 'Park N Ride'. CFD scenario C is when the parking lots at Frontier Park are full and the only available parking is at the 'Park N Ride'. CFD Security Committee personnel will monitor parking lot capacity and notify WYDOT to engage CFD scenario C when the public parking lots at Frontier Park reach 75% capacity.

In 2017 two PDMSs were placed on College Dr., one south of the Interstate-80 interchange and the other east of US85. These were used for the closures of College Dr. for the Thunderbird Airshow. Additionally, two PDMSs were placed on WY210 (Missile Drive / Happy Jack Road) for 'Park N Ride' lots. These were turned on when the 'Park N Ride' was open and turned off an hour before parking closes. One PDMS was placed on Interstate-25 northbound south of Exit 12 (Central Avenue). This PDMS is used to inform travelers of heavy event traffic that regularly occurs at Exit 12.

Additional variable message signs are located throughout Cheyenne - on routes to Frontier Park, which provide information to visitors. Some of these variable message signs are owned and operated by CPD and some are owned and operated by the City of Cheyenne. The City variable message signs will need to be upgraded with real-time communication equipment to provide active message change capabilities., a system can be put in place to push parking lot space availability and travel information to these dynamic message signs which will provide additional guidance to visitors.

Technology Conclusions:

- 35. Communication between all traffic related CFD operations is not utilizing available technology for real time communication to assist with traffic management.**
- 36. Information about parking availability is not communicated directly to patrons in real time except at the WYDOT variable message signs along the Interstates.**

Increasing 'Park N Ride' Usage

As Cheyenne Frontier Days attendance grows the demand for parking will continue to increase while available space at Frontier Park for parking will decrease as the event facilities expand. Parking adjacent to Frontier Park, both in the Avenues Neighborhood and in Lions Park is at capacity. The growth of Frontier Days is dependent on the growth of the 'Park N Ride' system to meet customer parking demands. This will be accomplished by making the 'Park N Ride' service more attractive to customers by minimizing shuttle bus travel times between Frontier Park and 'Park N Ride' lots.

Monetary Incentives

Currently patrons that pay for parking at the Bull Lot receive free gate admission for every person in their vehicle. Bull Lot parking costs \$10 per vehicle and saves each person in that vehicle the \$3 Frontier Park gate admission fee. Bull Lot users who have tickets to that days' rodeo or night show are required to also pay \$10 to park, but as their rodeo or night show ticket grants them free gate admission, they do not have the same monetary incentive to use the 'Park N Ride' system as non-ticket holders. CFD should consider including the Park N Ride fee in the rodeo and night show tickets to encourage use of the system. The \$10 parking fee is required of all vehicles each time they enter the parking lot. By making this a daily rate, rather than a per use fee, patrons who wish to visit the park multiple times in one day may choose to use 'Park N Ride' over other parking opportunities.

Reduce Wait Time to Increase Ridership

At night show egress time 'Park N Ride' passengers can wait in line for up to an hour at Frontier Park to board a bus to return to the Bull Lot. This wait time can be very discouraging for would be 'Park N Ride' passengers. Relocating the bus loading/unloading area at Frontier Park can reduce this wait time by:

- Allowing more buses to load simultaneously
- Providing a dedicated loading area with sufficient boarding room for line delineation to reduce the confusion and line cutting by those waiting to board the buses and away from the high pedestrian demand leaving Frontier Park to access their vehicles parked in the Avenues Neighborhood
- Providing a different egress bus route to get buses away from the congested intersections along Pershing Boulevard

Several options for a relocated 'Park N Ride' loading area at Frontier Park were explored and can be seen in Appendix D. The long-term Frontier Park Master Plan indicates a relocated bus loop along Carey Avenue between the entrance and exit drives to Lot C. A need exists to provide a short-term solution to improve 'Park N Ride' bus loading and travel time to/from the Bull Lot. The recommended option for next year is shown on Figure 66 and temporarily relocates the 'Park N Ride' Frontier Park passenger loading and discharge area west of its existing location with a separate gate adjacent to the Frontier Park Gardens area. This will require sidewalk widening to accommodate passenger loading needs during rodeo and night show egress times.

The recommended longer-term improvement involves relocating the 'Park N Ride' passenger drop-off/pick-up location along Hynds Boulevard. The recommended improvement locating the passenger drop-off/pick-up area in place of the Buckin' A Saloon Tent as shown in Figure 68. This preferred option creates a new CFD entrance that will require aesthetic improvements and a new service road between the carnival activity and carnival parking lot area. This option clearly separates pedestrian conflicts from the Main Gate area and improves traffic safety along 8th Avenue. Buses leaving CFD can travel north on Hynds Boulevard to reduce existing bus traffic congestion delays encountered along Snyder Avenue and Pershing Boulevard.

It is Ayres Associates professional opinion that the Master Plan bus loop on Carey Avenue can create smaller inefficient parking operation areas for Lot C, and does not provide opportunities to improve 'Park N Ride' bus travel times between Frontier Park and a 'Park N Ride' lot.

Figure 66: 8th Avenue Short-Term Recommendation for 'Park N Ride' and One-Way Hynds to Dey



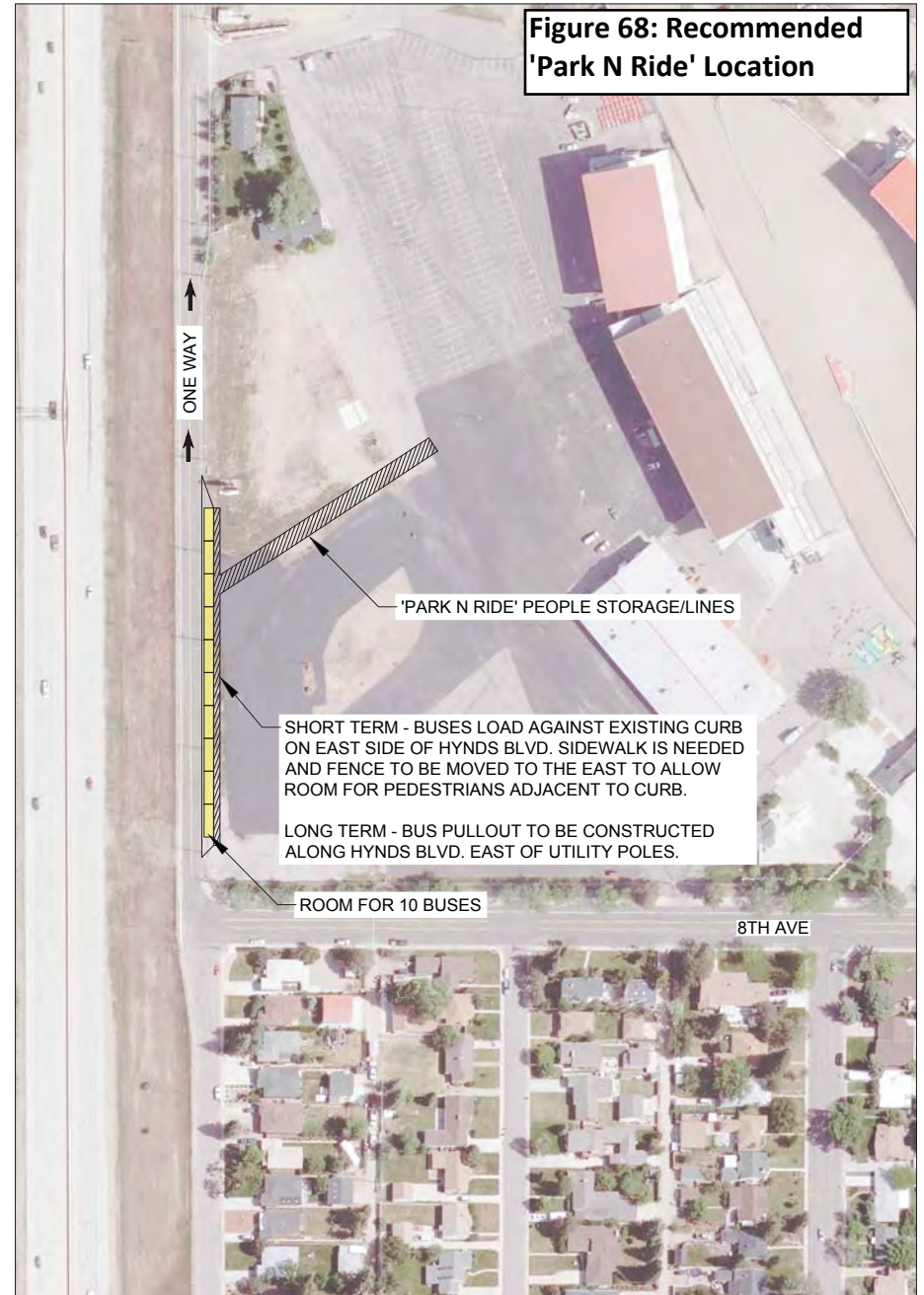
Figure 67: 8th Avenue Mid-Term Recommendation for 'Park N Ride' and One-Way Hynds to Dey





BUS LOADING AREA CONTINUES SOUTH ON HYNDS BLVD.

Figure 68: Recommended 'Park N Ride' Location



Short-Term CFD Recommendations

The previous section of this report identified transportation conclusions based on Steering Committee interviews, field observations and data collected by Ayres Associates during the 2017 Cheyenne Frontier Days. The following is a list of recommendations correlated to the numbered conclusions previously listed in this study.

1. Install portable temporary traffic signals, with pedestrian indication signal heads, at the 8th Avenue intersection with Carey Avenue. Product data sheets for temporary signals have been placed in Appendix F following the October 11, 2017 Steering Committee notes.
2. Temporarily close the segment of 8th Avenue to westbound traffic between Dey Avenue and Hynds Boulevard. 8th Avenue will remain open for a single lane of eastbound traffic throughout the corridor. Refer to Figure 66 on page 66 and Figure 67 on page 67. Figure 66 indicates 'Park N Ride' buses utilizing the existing north curb line of 8th Avenue for passenger loading / unloading. Figure 67 indicates a dedicated 'Park N Ride' bus loop constructed west of the existing bus loop.
 - a. Access to Lot B at Gate V4 will remain open opposite of Dillon Avenue.
 - b. Access to 15 Minute Ticket Pick up Parking will remain open opposite of Dey Avenue at Gate V3.
 - c. Tour bus, taxi, Uber and Lyft curb side short-term parking would be permitted on the south side of 8th Avenue from Hynds Boulevard to Dey Avenue, and on the north side of 8th Avenue from Carey Avenue to Dillon Avenue.
3. Provide temporary street lighting, particularly at the intersection of 8th and Carey Avenues and 8th and Dey Avenues.
4. Increase number of cashiers at Gate V8 entrance to Lot C to reduce park vehicles more efficiently and egress queuing on Carey Avenue, Kennedy Road and Central Avenue. This includes relocating the CFD service vehicle location for exiting Lot C to a location closer to the 'Old West' Museum to reduce conflicts and delays as vehicles enter the parking rows of Lot C and CFD service vehicles compete for space. Refer to Figure 72: V8 Cashiering Diagram on page 75.
5. Install temporary signage at the exit to Lot C (Gate V7) instructing vehicles with trailers not to turn right onto Carey Avenue but to proceed to 6th Avenue to Hynds Boulevard to access Gate V12.
6. Install portable temporary traffic signals at Kennedy Road intersection with Central Avenue. Product data sheets for temporary signals have been placed in Appendix F following the October 11, 2017 Steering Committee notes.
7. Roadway lane configuration and closure plans will be developed and utilized by CPD and CFD Security Committee Volunteers for each days ingress and egress times. Refer to Figure 71 on page 74 for recommended configuration in the Kennedy Road / Carey Avenue / Central Avenue area.

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

- a. Establish a central on-site Traffic Control Communications Center with the responsibility of verifying lane configuration and closure plan was implemented each ingress / egress period,
 - b. Coordinate police, WYDOT and Volunteer traffic control in response to crashes and congestion problems,
 - c. Notify CFD patrons of travel routes to CFD, 'Park N Ride' lots and Frontier Park parking availability.
8. Consider moving the start time of the parade earlier to allow more time for parade participants such as riders, horses, and wagons to return to the park before rodeo ingress begins.
 9. Construct sidewalks along Kennedy Road from Central Avenue to Carey Avenue. Pedestrian facilities should continue along Carey Avenue to 8th Avenue provide access to Frontier Park.
 10. Install signage along Hynds Boulevard, north of 8th Avenue stating that Gate V12 is for pass holders only and directing traffic toward Kennedy Road for parking.
 11. Construct sidewalk along Hynds Boulevard from 8th Avenue to Kennedy Road.
 12. Elevate the traffic signal status at Pershing Boulevard / Randall Avenue / Hynds Boulevard to "Critical" and train CPD officers in manual push button signal control protocol.
 13. Close Randall Avenue to westbound traffic between Pershing Boulevard and McComb Avenue during CFD evening show egress period to improve Pershing Boulevard traffic operation. During CFD increase the green time for the I-25 northbound off-ramp during peak hours: 5:00 p.m. – 8:00 p.m. and 11:00 p.m. to 1:00 a.m.

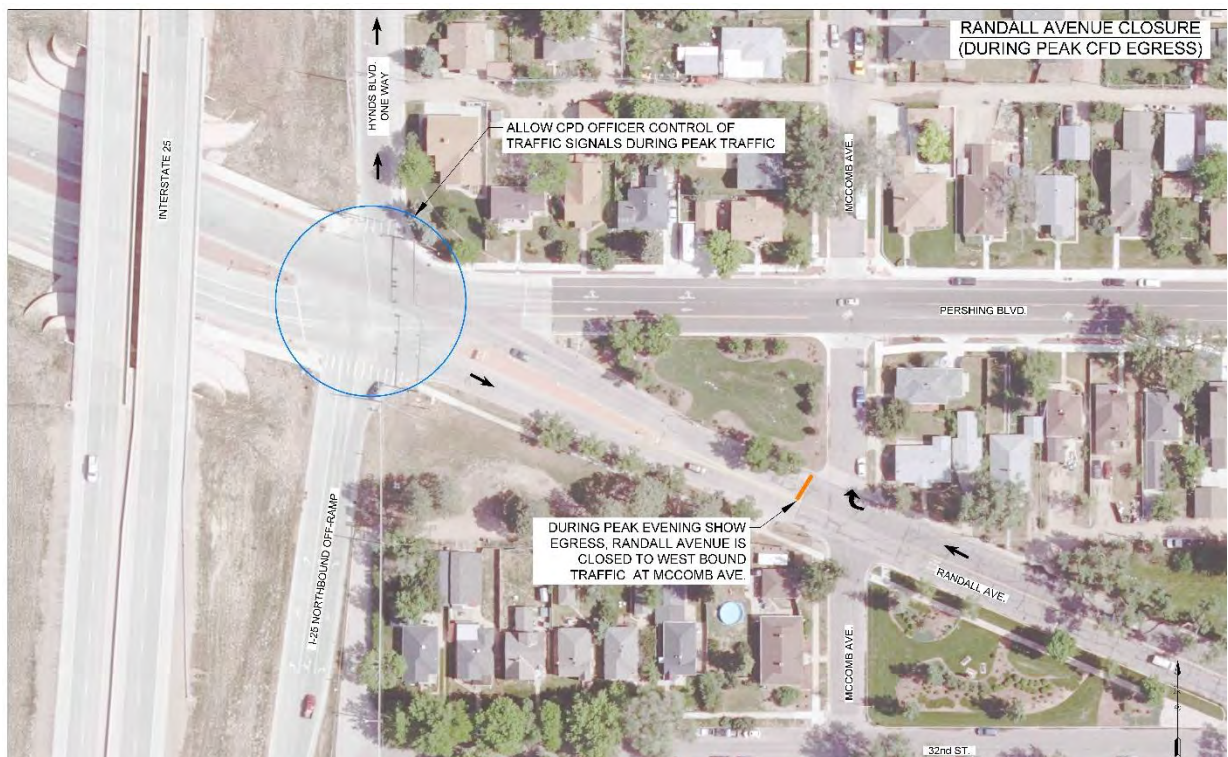


Figure 69: Randall Avenue Westbound Closure

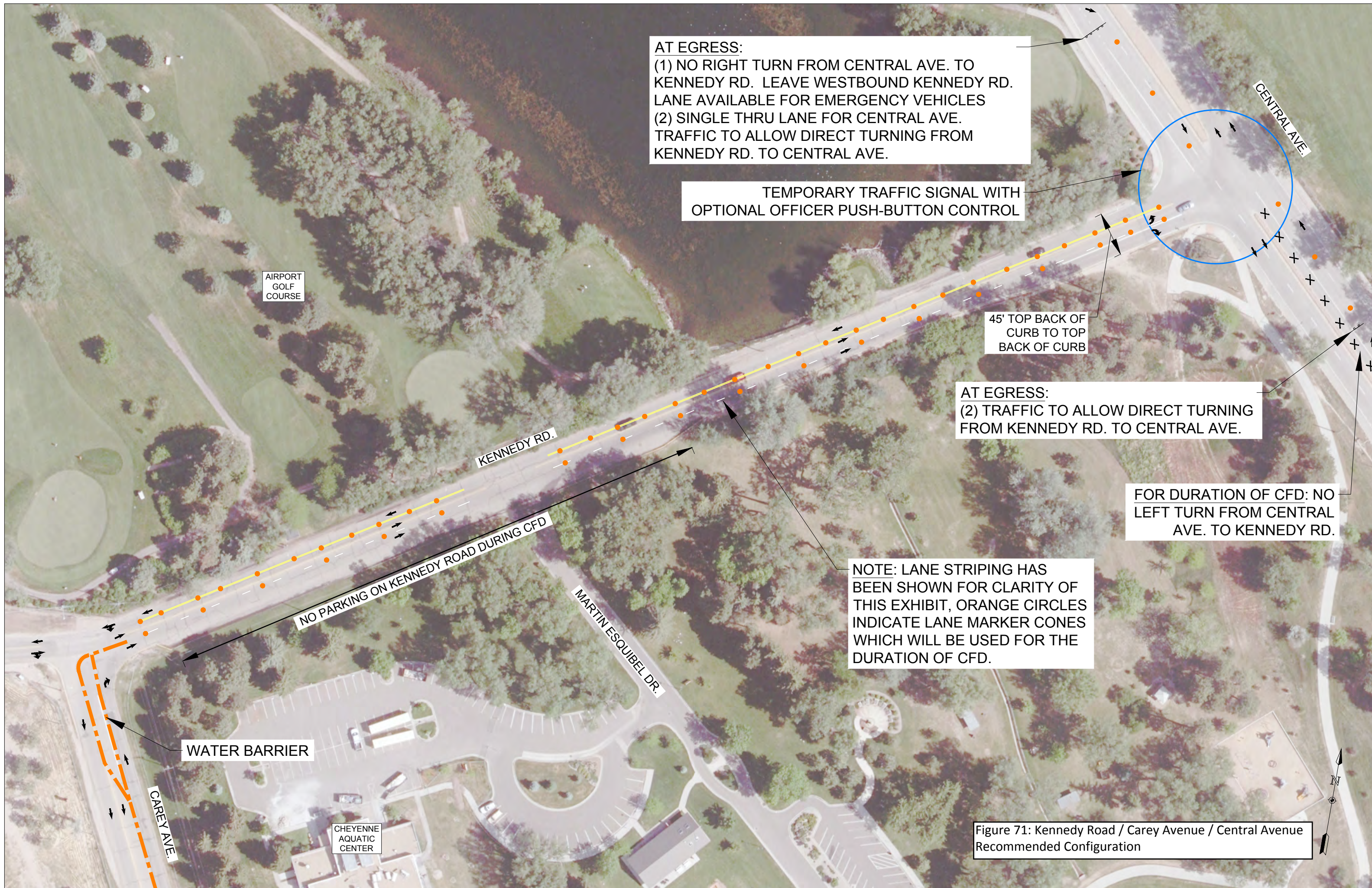
14. Elevate the traffic signal status at Snyder Avenue and Pershing Boulevard to “Critical” and train CPD officers in manual push button signal control protocol.
15. Reconstruct narrow section of sidewalk at southeast Frontier Park entrance to eliminate pedestrian obstruction.
16. Provided numerous bicycle racks on Frontier Park to encourage bicycle travel to and from the Park.
17. Install a ‘Keep Right’ sign on median north of Putt Hutt and Kiwanis Community House for southbound traffic.
18. Reconfigure Gate V8 entrance and cashiering operation to reduce traffic backups on Carey Avenue, Kennedy Road and Central Avenue. Refer to Figure 72: V8 Cashiering Diagram on page 75.
19. Relocate ‘Park N Ride’ passenger loading/unloading area at Frontier Park. Appendix D contains concepts and discussions about alternate ‘Park N Ride’ areas at Frontier Park. The short-term recommendation is to move the ‘Park N Ride’ loading/unloading area west of the Main Gate as shown in Figure 66 on page 66.
 - a. Hynds Boulevard will be converted permanently to a one-way northbound street from Pershing Boulevard to 8th Avenue and during CFD operate temporarily as a one-way northbound street between 8th Avenue and Gate V12.
20. Utilize bus preemption detectors at traffic signals to provide priority to ‘Park N Ride’ buses. This will require the installation of bus priority emitters on each ‘Park N Ride’ bus and receivers for selected traffic signal controllers.
21. LCSD#1 buses are not required to use their red flashing lights and pedestrian arms when contracted for non-school activities. Prior to CFD, LCSD#1 drivers should be briefed about this regulation.
22. At all streets, adjacent to 8th Avenue - where on street parking is permitted continue to stripe and sign the corners 5’ back from the radius as ‘No Parking’ to accommodate bus turning movements. It may be necessary to increase the ‘No Parking’ area for buses turning south onto Snyder Avenue.
23. Permanently change Hynds Boulevard to a one-way, northbound street between Pershing Boulevard and Kennedy Road.
24. Place wayfinding signage along westbound Interstate 80 to direct visitors to the ‘Park N Ride’ lot.
25. Increase the size of the magnet that covers the “school bus” sign on the side of the LCSD#1 buses. The magnet covers identify bus routes for the “CFD-Bull Lot” or “CFD-Downtown.”

26. Reconfigure the Bull Lot so that pedestrians do not have to walk in front of the ‘Park N Ride’ buses. Provide a dedicated pathway area for pedestrians as they approach and leave the bus. Figure 73 provides a reconfigured parking/circulation layout for the Bull Lot.
27. Cashiering operation at Gate V8 can be modified to increase parking efficiency and reduce internal operating conflicts as well as reduce backups on Kennedy Road, which can extend to Central Avenue. Refer to Figure 72: V8 Cashiering Diagram.
28. CFD on-grounds parking is highly desirable for volunteers and contestants, but more space is needed in the north part of the Park for operations. Additional space is needed for contestants to temporarily park their trucks and trailers to register for rodeo events. Similarly, night show acts continue to grow and require more space for the many trucks that accompany each performer. Reducing the amount of vehicle parking spaces in the northern part of the Park will allow for additional room necessary for the daily event operation. E Lot (the parking lot inside Lions Park) on the east side of Carey Avenue is a ‘pay to park’ lot operated by CFD during the event. Consider this lot as parking for contestants to free up 1.7 acres of land on the north side of Frontier Park for operations.
29. Ensure all maps display correct information for the ‘Park N Ride’ and Cowboy Triangle bus routes.
 - a. Utilize the existing Downtown kiosks to display Cowboy Triangle information for CFD visitors with alternate transportation options to Frontier Park.
30. CTP buses, which are all equipped with handicap lifts, should be used for the “Special Needs” ‘Park N Ride’ service only, and not for Cowboy Triangle support, to maintain consistency among available routes and parking locations.
 - a. CFD should provide ride tokens to special needs riders to be submitted as payment to the CTP bus driver.



Figure 70: Cheyenne Transit Program Bus with Wheelchair Lift

31. Conduct annual CFD kick-off meeting(s) with City of Cheyenne Engineering/Traffic/Event staff, CPD staff, CFD staff/volunteers, WYDOT staff, CTP staff, and LCSD#1 Transit staff to ensure all parties are prepared for the upcoming event.
32. Pre-Event meetings shall include clearly defined bus routes for CTP and LCSD#1 buses. This will become particularly important if the Bull Lot is relocated and a new route is required.
33. Create a full-time staffed Traffic Control Communications Center within Frontier Park for communications of real time traffic/pedestrian control information to CPD, CFD, City Engineering, WYDOT and Cheyenne Transit Programs.
 - a. Utilize the Traffic Control Communications Center to ensure that updates to dynamic message signs are made accurately and timely.
 - b. Utilize the Traffic Control Communications Center to ensure that traffic control that varies throughout the day to accommodate ingress and egress traffic is in place and removed consistently and according to plan each day of the event.
 - c. As temporary variable message signs used for CFD are to be replaced, upgrade them to models that allow for message text to be updated remotely such that they can provide real-time parking and traffic information.
 - d. Conduct annual CFD debriefing meetings after CFD with City of Cheyenne Engineering/Traffic/Event staff, CPD staff, CFD staff/volunteers, WYDOT staff, CTP staff, and LCSD#1 Transit staff.
34. Create a CFD traffic communications smartphone app for internal use by CPD, City personnel and CFD Volunteers with real-time bus location information. LCSD#1 buses are already equipped with GPS location software. This app would allow all parties to know where the buses are and allow them to be re-routed on the fly if there is a traffic issue that is impacting the buses. CPD officers would be alerted to the change in real time to better anticipate the needs of the intersection they are controlling.
35. Utilize the CFD App for traffic conditions and control updates to provide alerts to CFD patrons.
 - a. Add a parking option and/or 'Park N Ride'/Cowboy Triangle Maps to the 'Maps' tab on the CFD App.



AT EGRESS:
(1) NO RIGHT TURN FROM CENTRAL AVE. TO KENNEDY RD. LEAVE WESTBOUND KENNEDY RD. LANE AVAILABLE FOR EMERGENCY VEHICLES
(2) SINGLE THRU LANE FOR CENTRAL AVE. TRAFFIC TO ALLOW DIRECT TURNING FROM KENNEDY RD. TO CENTRAL AVE.

TEMPORARY TRAFFIC SIGNAL WITH OPTIONAL OFFICER PUSH-BUTTON CONTROL

45' TOP BACK OF CURB TO TOP BACK OF CURB

AT EGRESS:
(2) TRAFFIC TO ALLOW DIRECT TURNING FROM KENNEDY RD. TO CENTRAL AVE.

FOR DURATION OF CFD: NO LEFT TURN FROM CENTRAL AVE. TO KENNEDY RD.

NOTE: LANE STRIPING HAS BEEN SHOWN FOR CLARITY OF THIS EXHIBIT, ORANGE CIRCLES INDICATE LANE MARKER CONES WHICH WILL BE USED FOR THE DURATION OF CFD.

AIRPORT GOLF COURSE

KENNEDY RD.

NO PARKING ON KENNEDY ROAD DURING CFD

MARTIN ESQUIBEL DR.

WATER BARRIER

CAREY AVE.

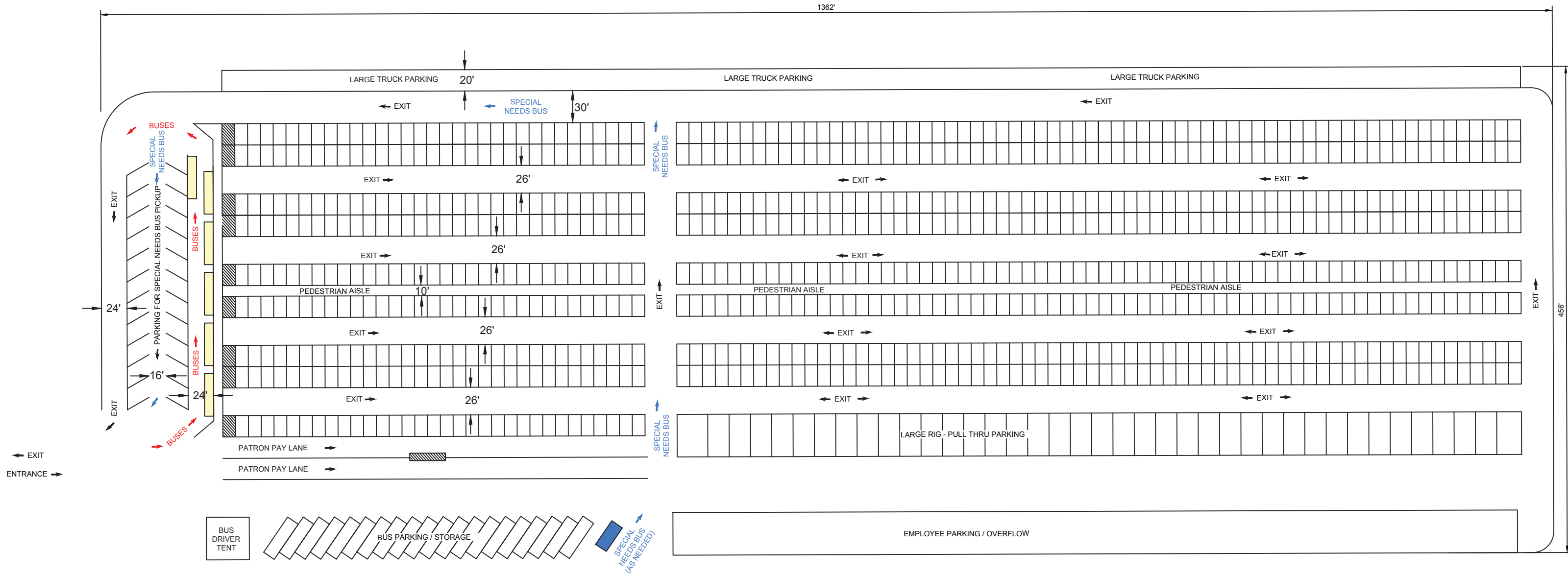
CHEYENNE AQUATIC CENTER

Figure 71: Kennedy Road / Carey Avenue / Central Avenue Recommended Configuration



Figure 72: V8 Cashiering Diagram

Figure 73: Bull Lot Reconfiguration



LOT ACCOMMODATES:

- 22 LARGE HANDICAP PARKING SPACES FOR SPECIAL NEEDS BUS PICK UP
- 39 LARGE RIG / PULL-THRU PARKING SPACES
- 824 STANDARD PARKING SPACES (DRAWN AT 20'x12' TO ACCOUNT FOR NO STRIPING/FILL IN PARKING LAYOUT)
- LARGE TRUCK PARKING IS 1220' LONG, LIKELY PROVIDE PARKING FOR 60-70 TRUCKS.

BENEFITS:

- PROVIDES A PEDESTRIAN AISLE TO PROVIDE SEPARATE SPACE FOR PEDESTRIANS AWAY FROM VEHICLES AS THEY WALK TO/FROM BUSES.
- PATRONS LOAD AND EXIT BUSES SUCH THAT THEY ARE NOT WALKING IN FRONT OF BUSES TO LOAD OR UNLOAD.
- PROVIDES 2 LANES FOR VEHICLES TO PAY CASHIER DURING HEAVY INGRESS TIMES.

SPECIAL NEEDS:

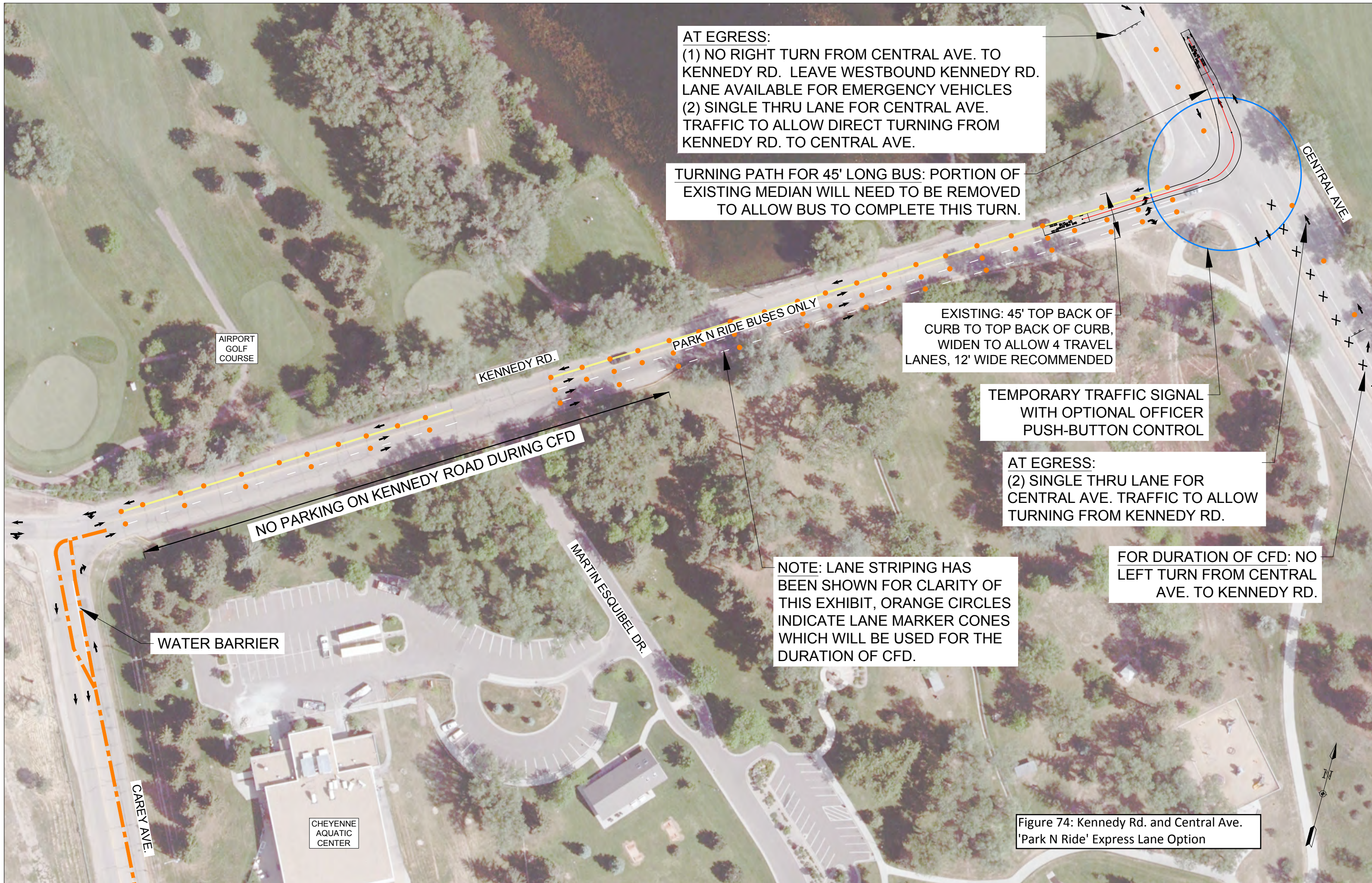
- PATRONS NOTIFY CASHEIR OF NEED FOR SPECIAL NEEDS BUS. CASHEIR DIRECTS VEHICLE TO SPECIAL NEEDS PARKING AREA.
- SPECIAL NEEDS BUS COMES DIRECTLY TO SPECIAL NEEDS PARKING AREA TO PICK UP PATRONS.

OPERATIONAL CONSIDERATION:

- BUS LOOP EXIT REQUIRES AN ATTENDANT TO STOP VEHICLE TRAFFIC TO ALLOW BUSES TO TURN OUT OF LOOP TO EXIT LOT.
- WHEN LOT CLOSEST TO DESIGNATED BUS LOADING AREA IS PARKED FULL, BUSES COULD MOVE TO NEXT AISLE AREA FOR LOADING TO REDUCE NEED FOR PATRONS TO WALK SO FAR TO LOAD BUSES.
- ALL BUSES SHALL UNLOAD AT DESIGNATED AREA SO PATRONS ARE NOT WALKING IN FRONT OF BUSES TO RETURN TO THEIR VEHICLES.

Long-Term CFD Recommendations

1. Construct a relocated enhanced 'Park N Ride' bus passenger drop-off/pick-up area accessed from Hynds Boulevard that involves relocation of the Buckin' A Saloon tent within Frontier Park and a bus access road between the carnival area and carnival parking lot that allows buses to exit Frontier Park via Gate V12.
2. Widen Kennedy Road to accommodate an eastbound 'Park N Ride' bus express lane as shown in Figure 74 on page 77. Kennedy Road should be widened between Central Avenue and Martin Esquibel Drive to match the roadway width between Carey Avenue and Martin Esquibel Drive.
3. Construct adequate width sidewalks along the entire perimeter of Frontier Park.
4. Construct a sidewalk along Kennedy Road.
5. Construct a sidewalk along Carey Avenue adjacent to Frontier Park and Lions Park to direct pedestrians from the Avenues Neighborhood to the relocated Main Gate along Carey Avenue.
6. Upgrade and/or install street lighting around Frontier Park, particularly along 8th Avenue, Carey Avenue and Hynds Boulevard.
7. Identify and pave a permanent 'Park N Ride' lot to replace the Bull Lot. Stripe the parking spaced in this lot to allow for more vehicle capacity.



AT EGRESS:
(1) NO RIGHT TURN FROM CENTRAL AVE. TO KENNEDY RD. LEAVE WESTBOUND KENNEDY RD. LANE AVAILABLE FOR EMERGENCY VEHICLES
(2) SINGLE THRU LANE FOR CENTRAL AVE. TRAFFIC TO ALLOW DIRECT TURNING FROM KENNEDY RD. TO CENTRAL AVE.

TURNING PATH FOR 45' LONG BUS: PORTION OF EXISTING MEDIAN WILL NEED TO BE REMOVED TO ALLOW BUS TO COMPLETE THIS TURN.

EXISTING: 45' TOP BACK OF CURB TO TOP BACK OF CURB, WIDEN TO ALLOW 4 TRAVEL LANES, 12' WIDE RECOMMENDED

TEMPORARY TRAFFIC SIGNAL WITH OPTIONAL OFFICER PUSH-BUTTON CONTROL

AT EGRESS:
(2) SINGLE THRU LANE FOR CENTRAL AVE. TRAFFIC TO ALLOW TURNING FROM KENNEDY RD.

FOR DURATION OF CFD: NO LEFT TURN FROM CENTRAL AVE. TO KENNEDY RD.

NOTE: LANE STRIPING HAS BEEN SHOWN FOR CLARITY OF THIS EXHIBIT, ORANGE CIRCLES INDICATE LANE MARKER CONES WHICH WILL BE USED FOR THE DURATION OF CFD.

AIRPORT GOLF COURSE

KENNEDY RD.

PARK N RIDE BUSES ONLY

NO PARKING ON KENNEDY ROAD DURING CFD

MARTIN ESQUIBEL DR.

WATER BARRIER

CAREY AVE.

CHEYENNE AQUATIC CENTER

Figure 74: Kennedy Rd. and Central Ave. 'Park N Ride' Express Lane Option



Conclusions

In summary, this study evaluated traffic and pedestrian count data, intersection traffic operating conditions, existing transit operation and key stakeholder concerns and operational practices, and observations of existing transportation system performance to develop a set of short and long-term transportation improvement recommendations. The most important recommendation improvements are focused on separating pedestrian and traffic conflicts at the Main Gate to Frontier Park, reducing patron traffic delays at the start and end of the major rodeo and evening shows, and enhancing 'Park N Ride' service.

Communication before, during and after CFD was identified as critical to operation of the transportation services for CFD. Two key recommendations involve development of a CFD kick-off meeting with all stakeholders such as transit service providers, city and WYDOT engineering, police and CFD to finalize event operating details and routes along with a follow-up debriefing meeting a week after the completion of CFD with the second key recommendation involves development of a central on-site transportation control center where all stakeholder managers can communicate real-time transportation control changes and react to changing conditions and problems.

The longer-term recommendation related to the CFD Master Plan moves the planned 'Park N Ride' passenger drop-off/pick-up area from Carey Avenue to a new location accessed from Hynds Boulevard. This change is considered to minimize traffic congestion and safety conflicts along Carey Avenue in order to maximize 'Park N Ride' bus operation.

Many of the recommendations can be undertaken in time for the 2018 Frontier Days event while other recommendations involve funding considerations and construction plan development such as widening Kennedy Road, constructing sidewalk around the perimeter of Frontier Park and installing upgraded LED street lighting improvements particularly along the 8th Avenue and Carey Avenue corridors. A series of potential new park and ride lot sites have been evaluated and provided to CFD officials for use as they consider the potential relocation of the Bull parking lot.

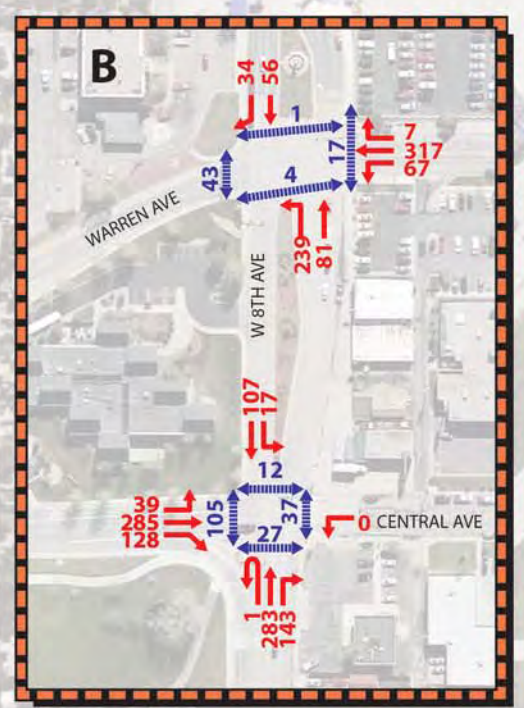
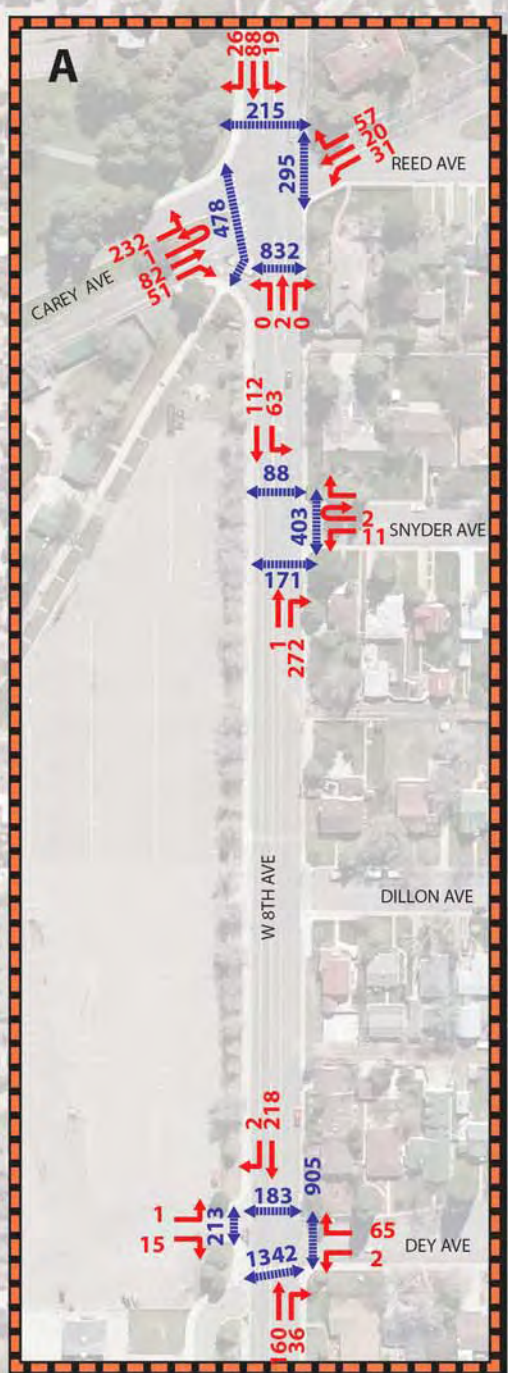
Appendix A:
Traffic Data

Cheyenne Frontier Days Traffic Study & Transportation Plan

Wednesday July 26, 2017
Highest Departure Hour
10:45-11:45 pm

Legend

- 100 → Vehicular Traffic Count
- 100 ⇄ Pedestrian Movement Count

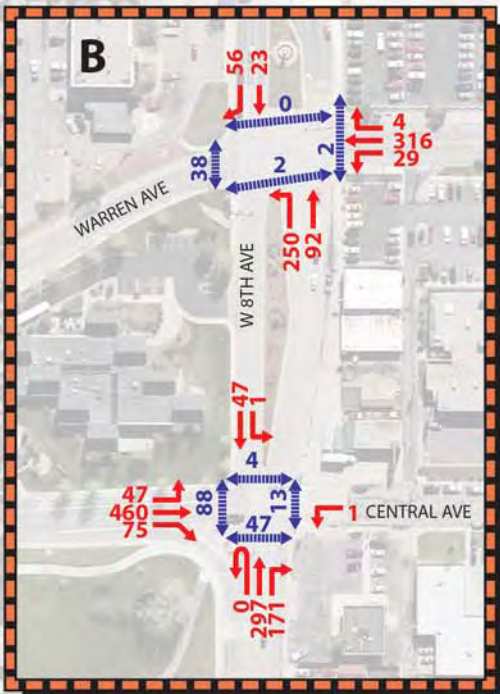
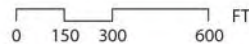


Cheyenne Frontier Days Traffic Study & Transportation Plan

Saturday July 29, 2017
Highest Departure Hour
10:45-11:45 pm

Legend

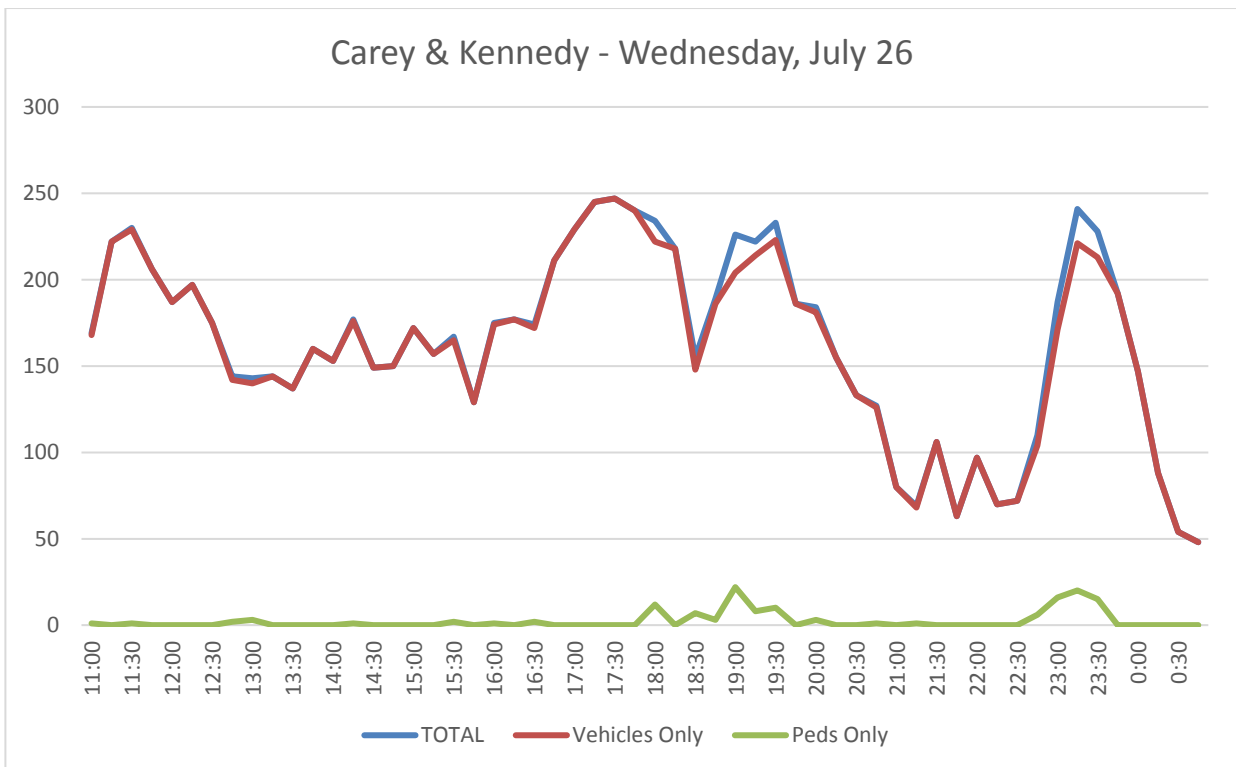
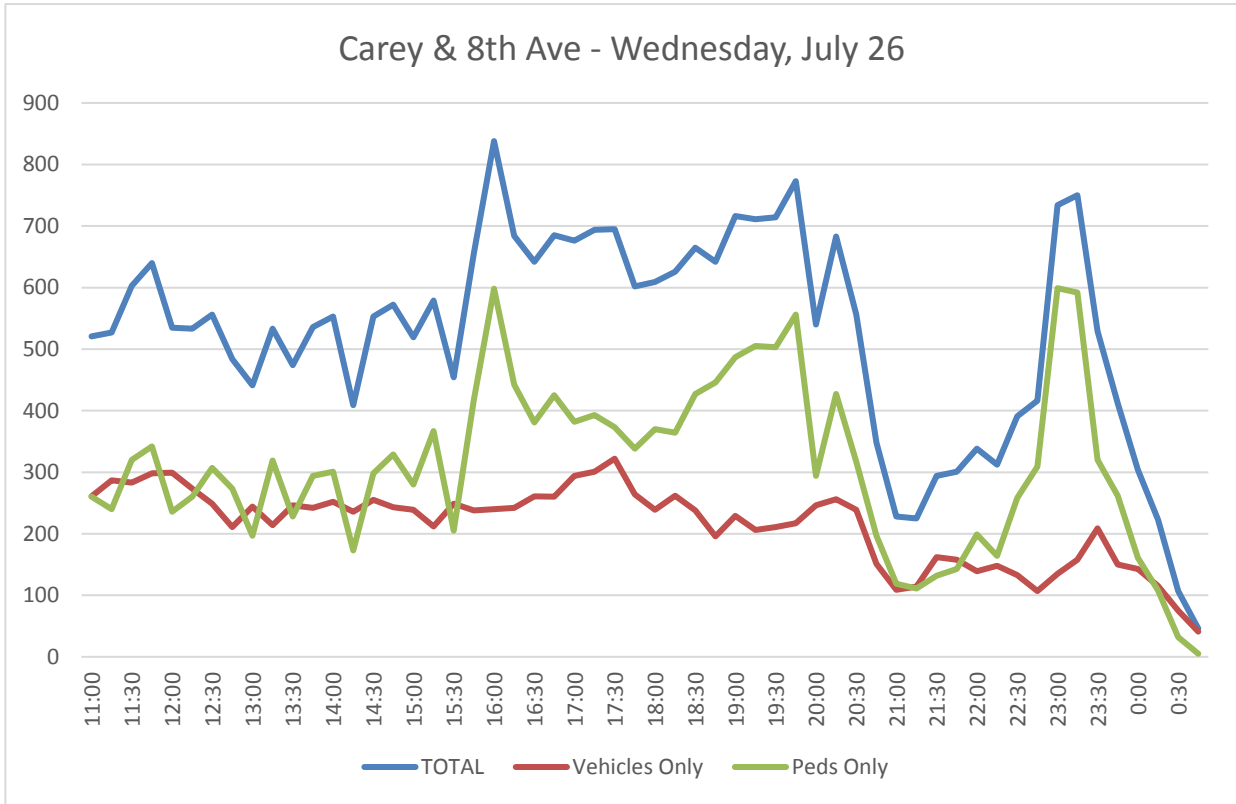
- 100 → Vehicular Traffic Count
- 100 ⇄ Pedestrian Movement Count



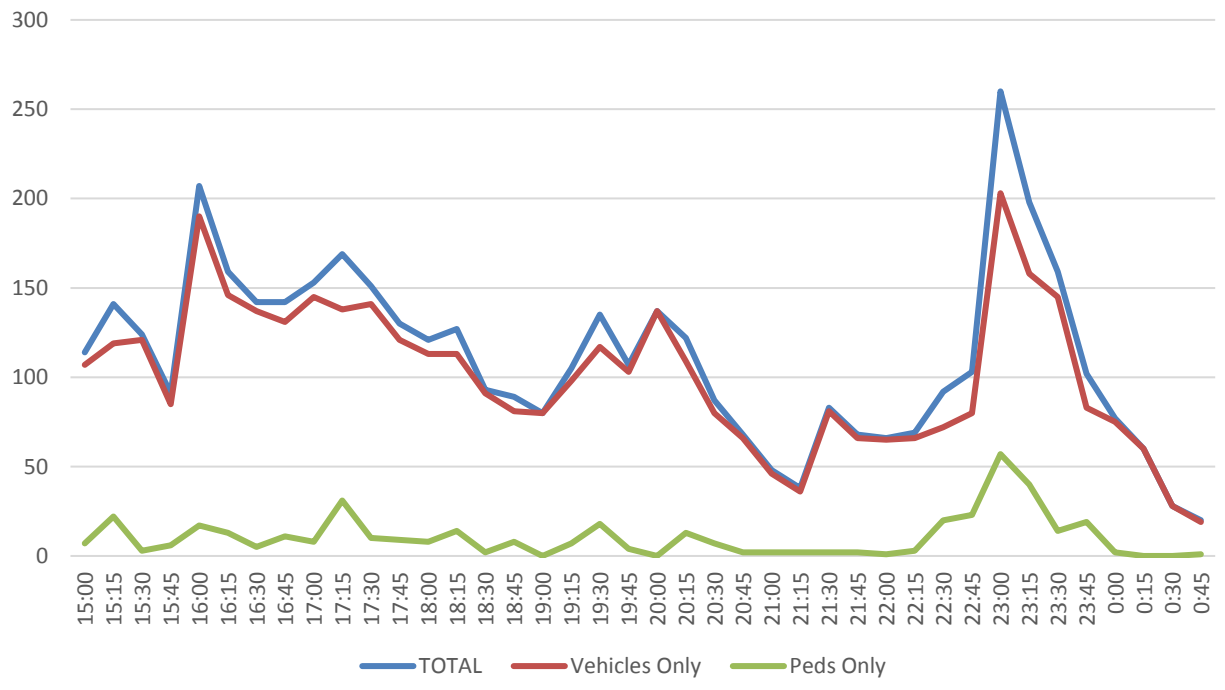
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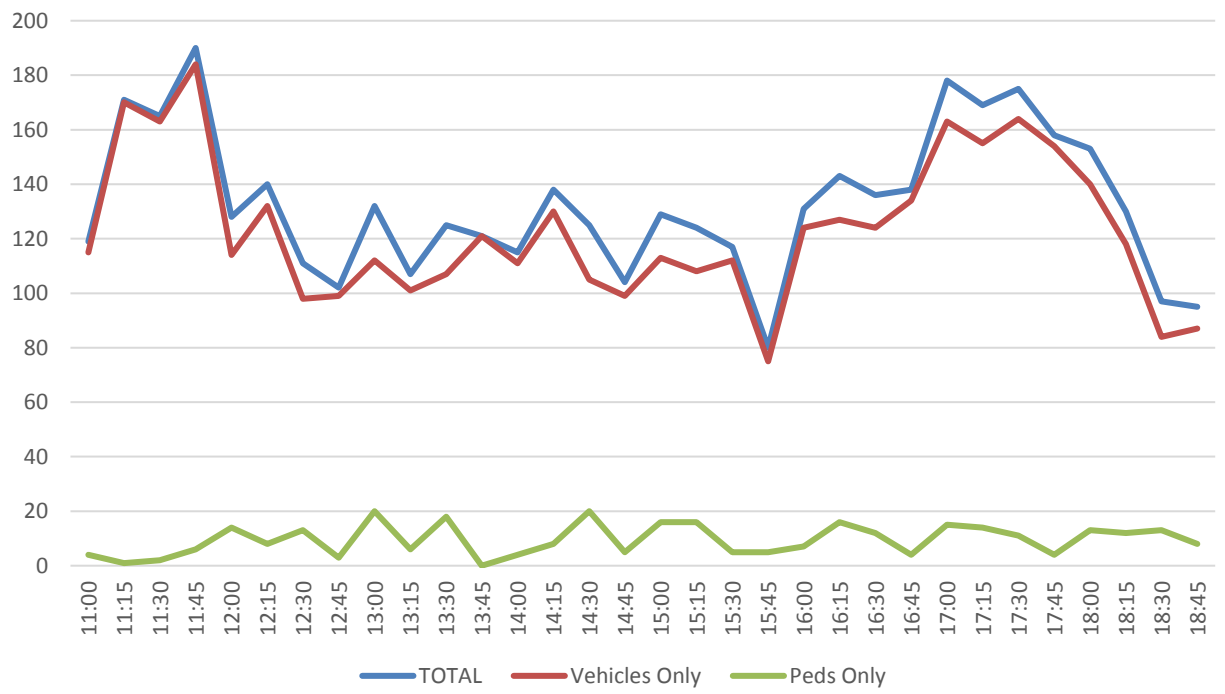
TRAFFIC VOLUME PROFILES DURING CFD – WEDNESDAY, JULY 26TH, 2017

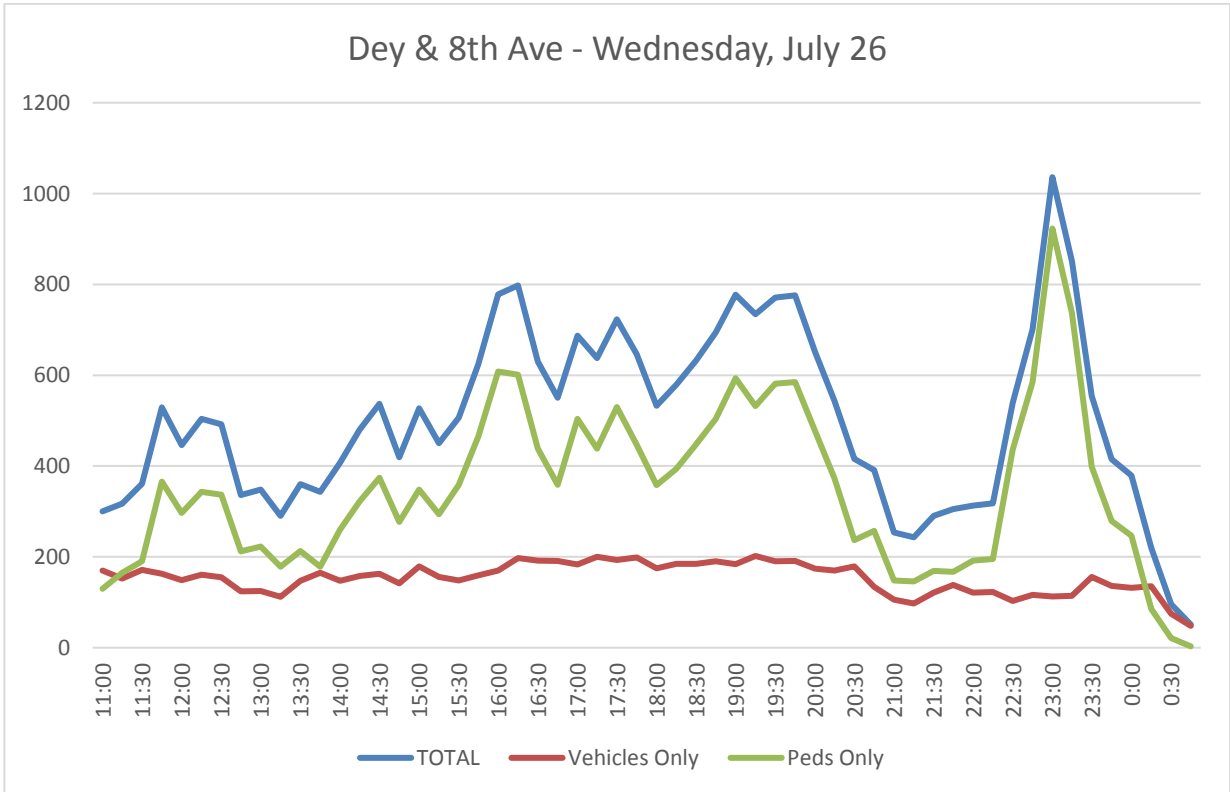
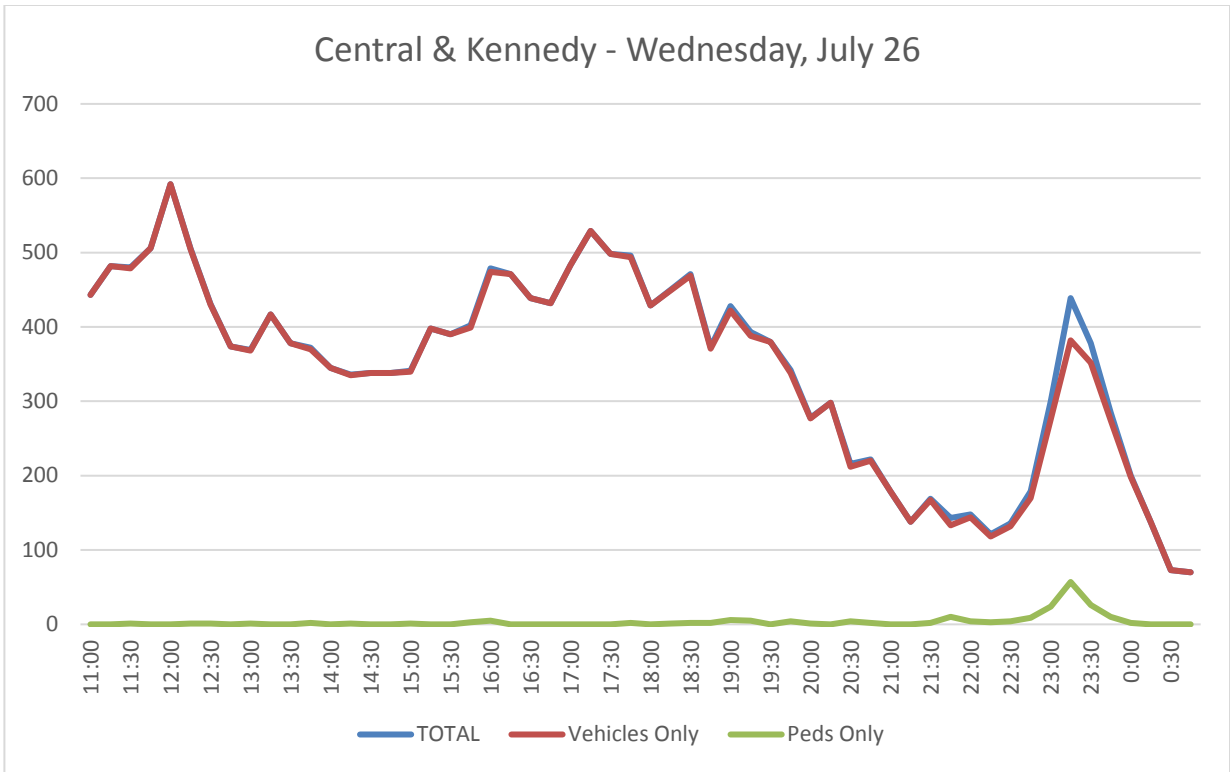


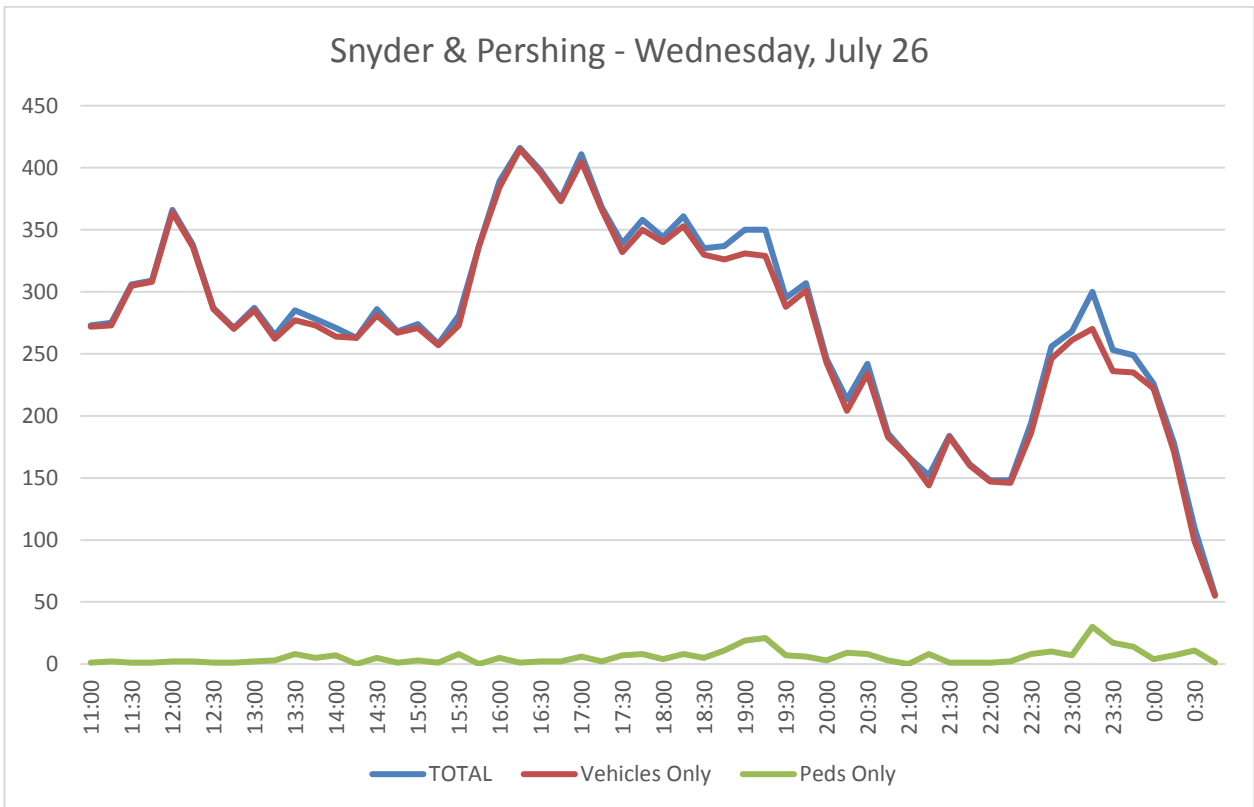
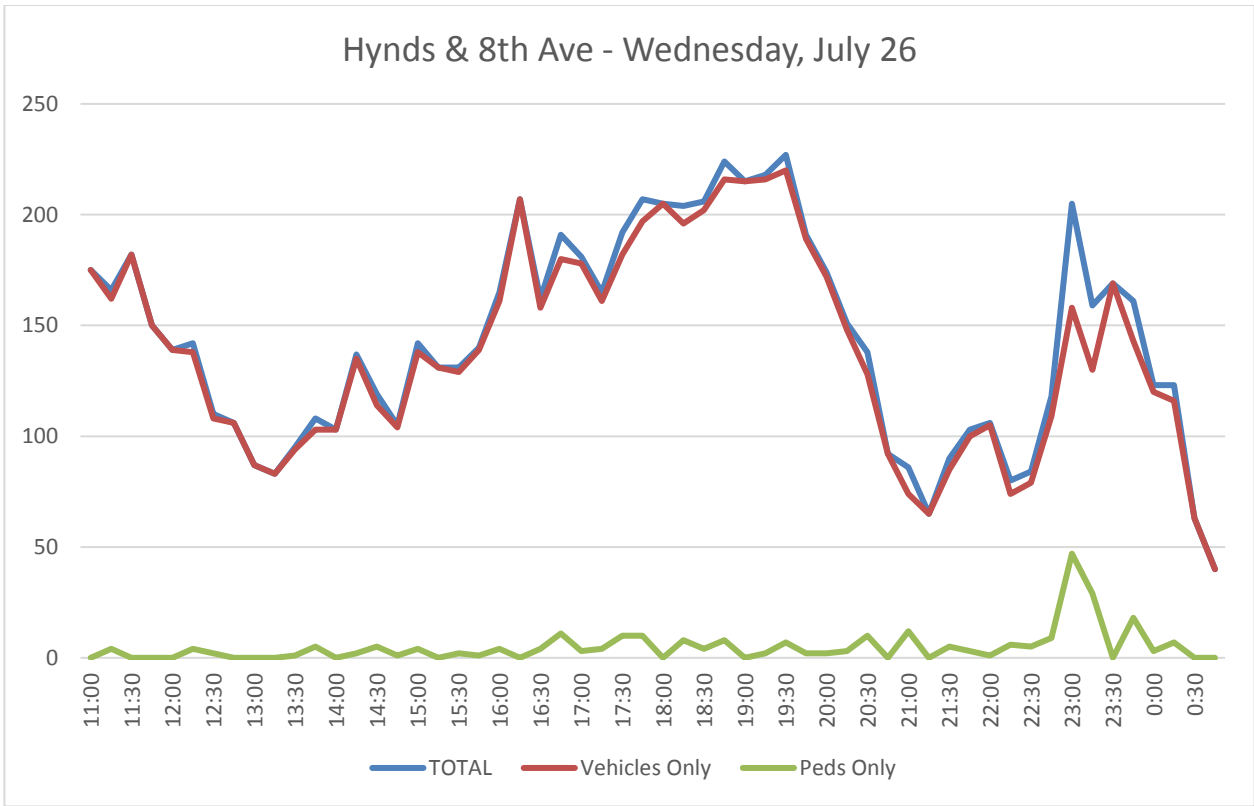
Carey & Gate V7 - Wednesday, July 26

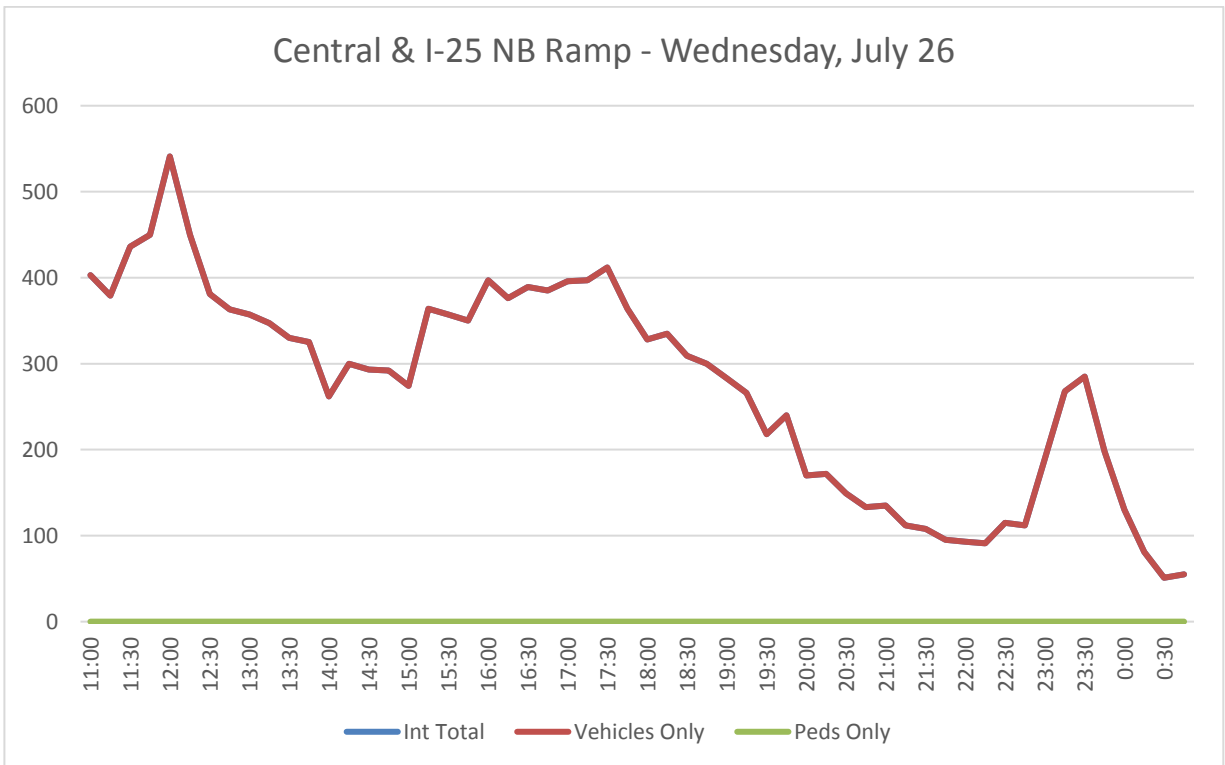
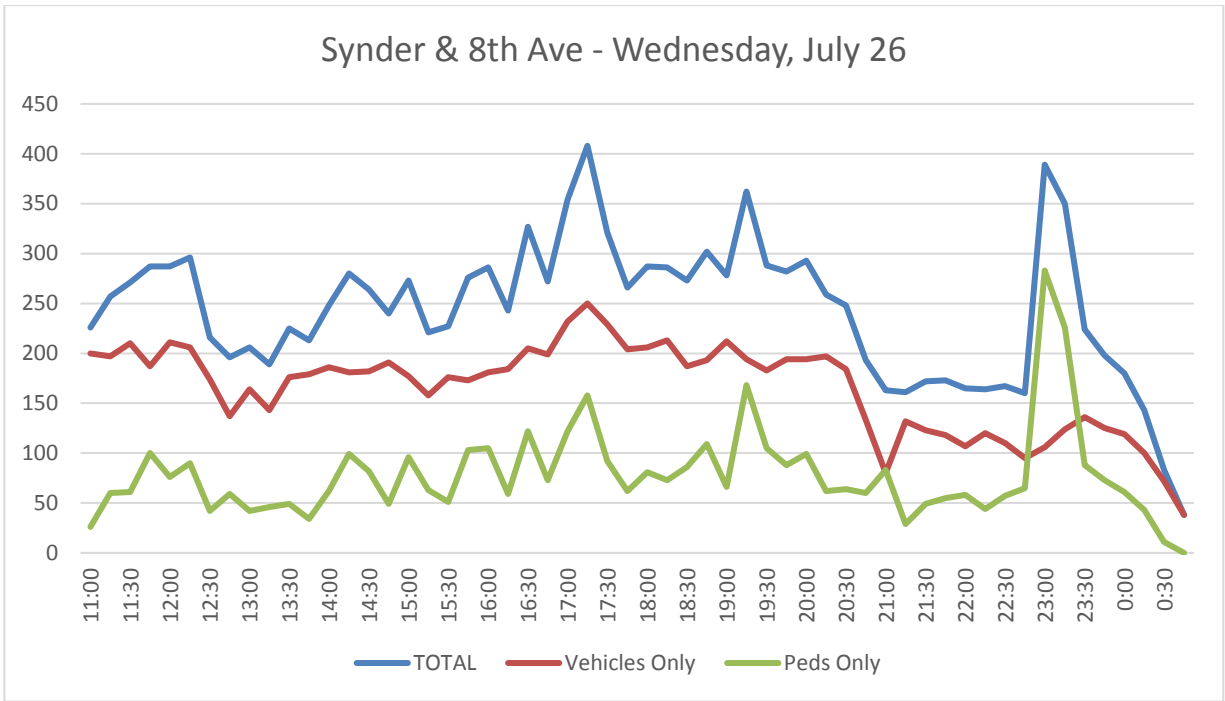


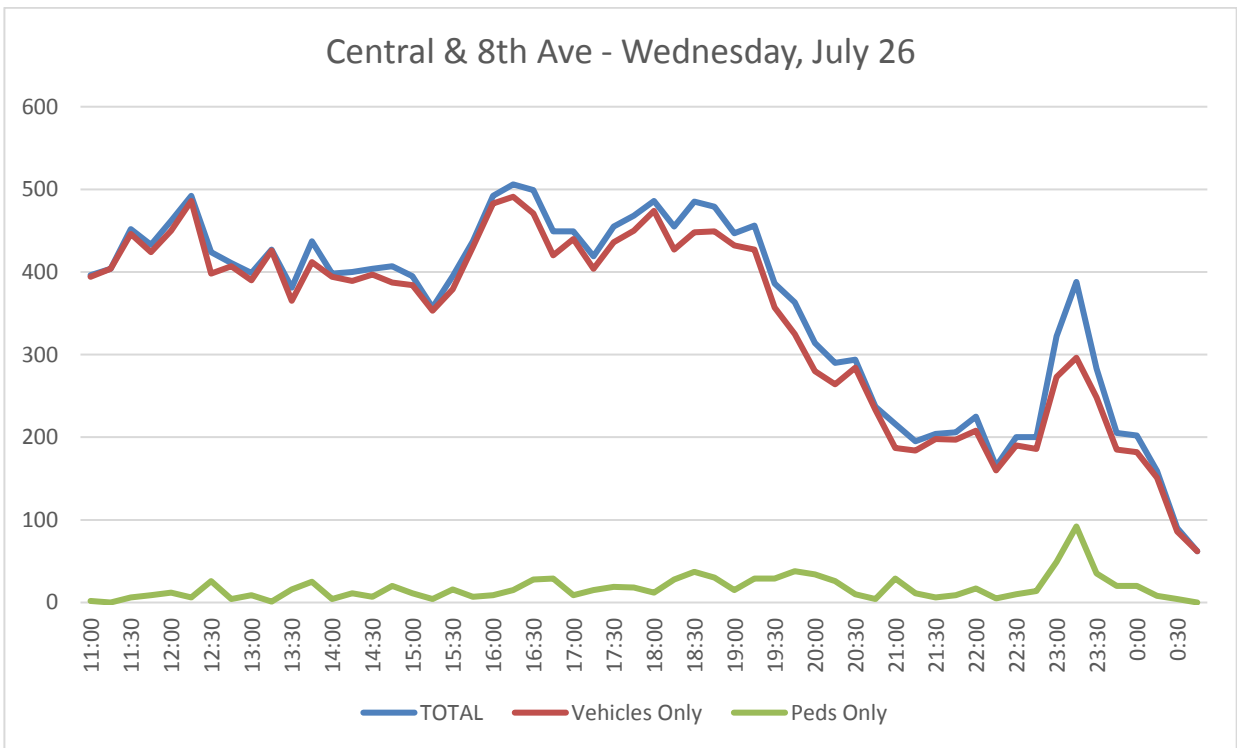
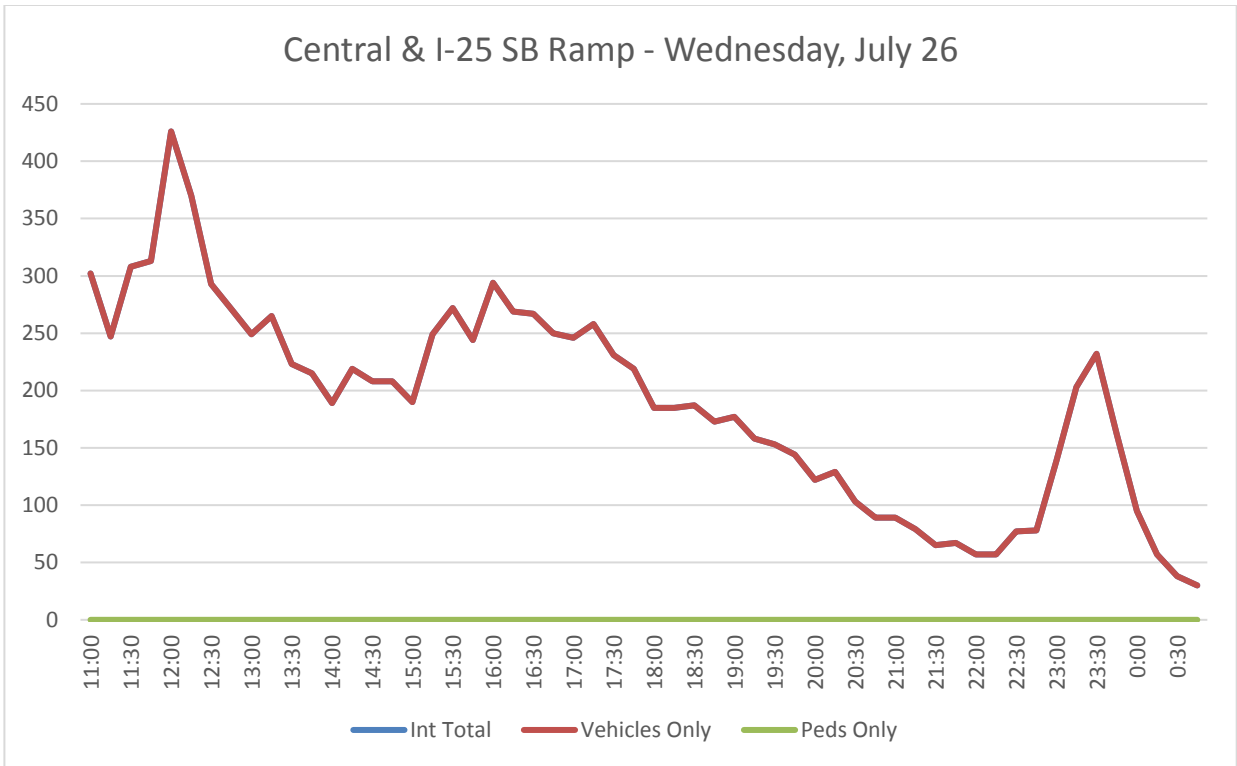
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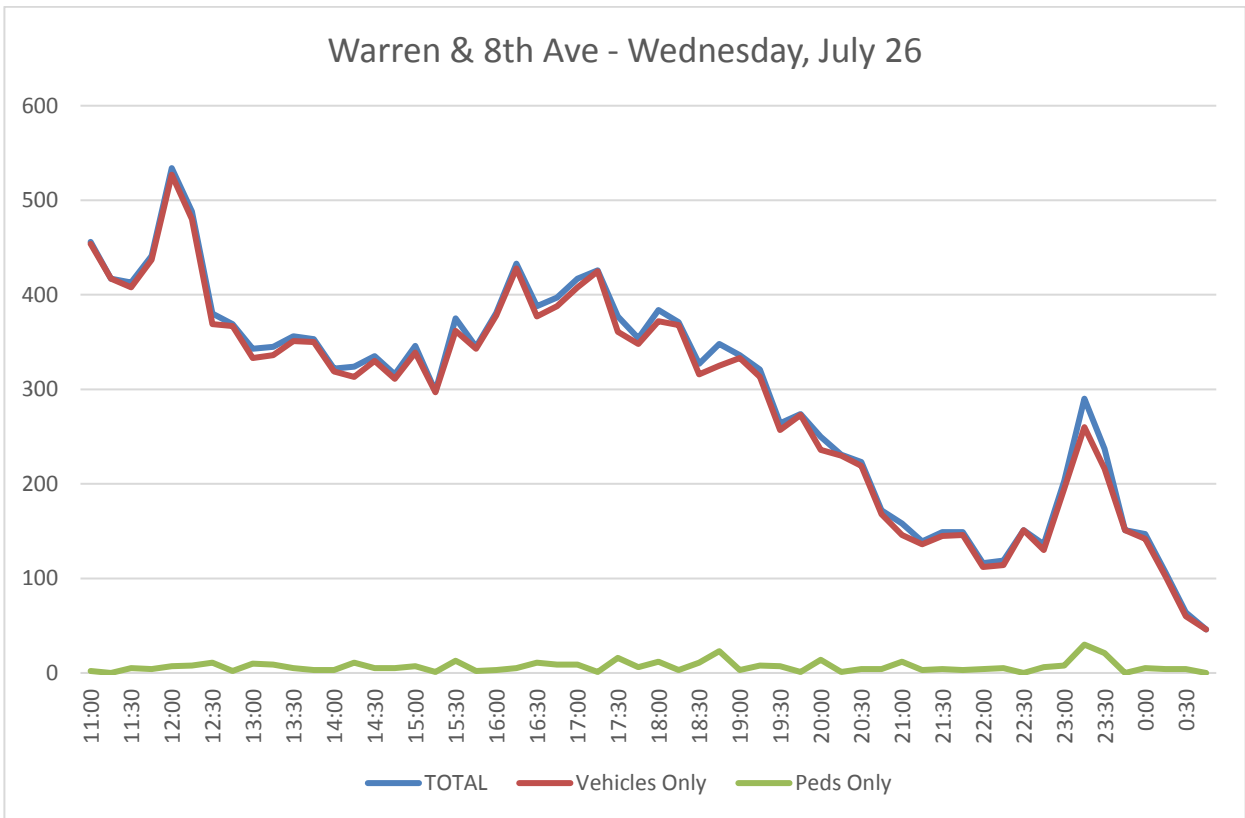
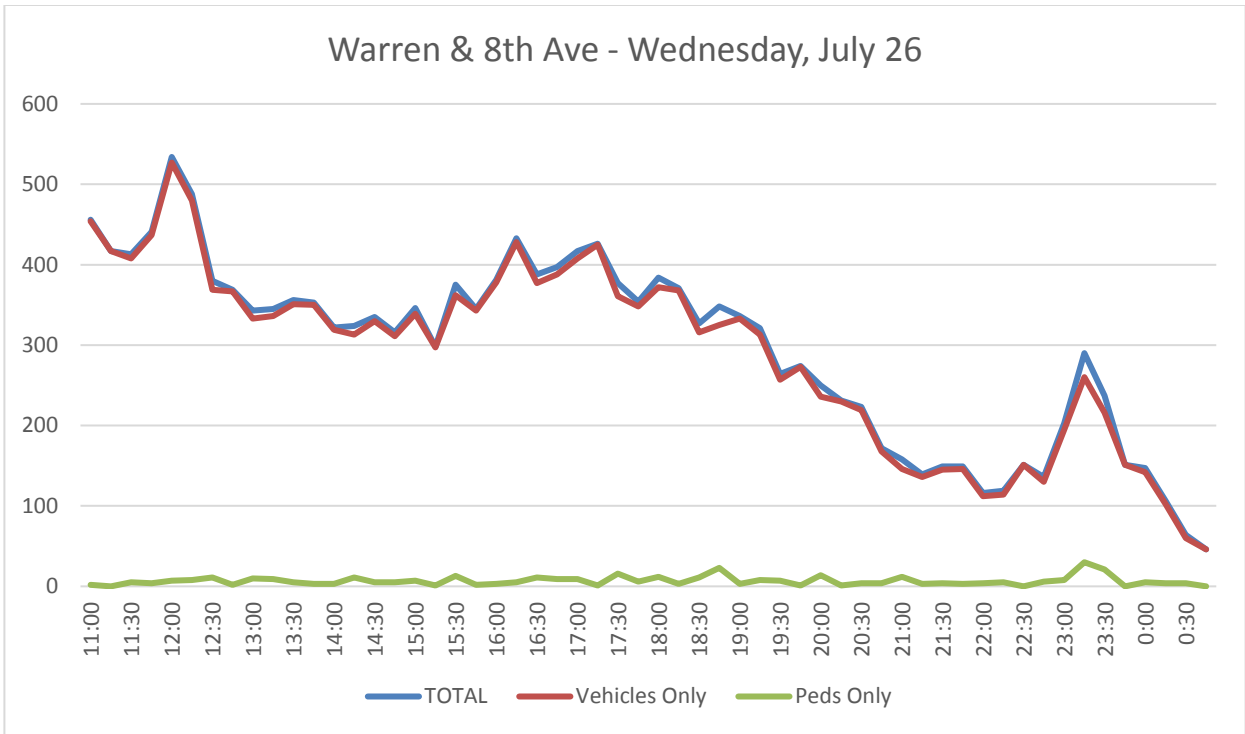




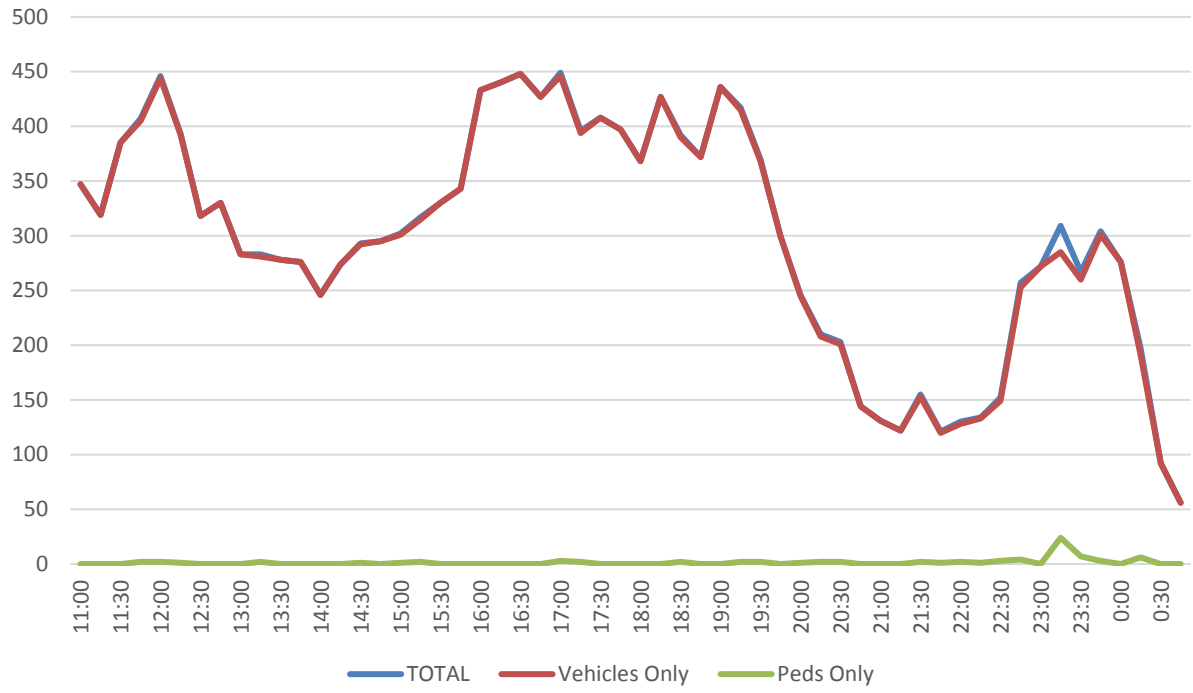




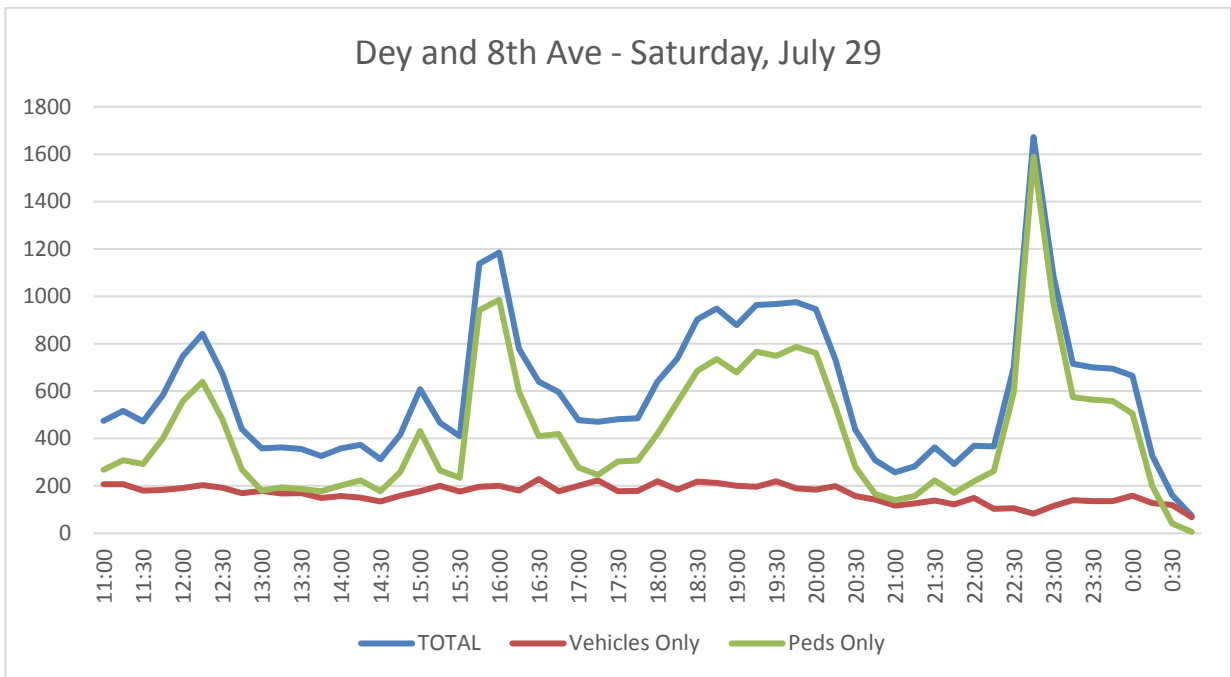
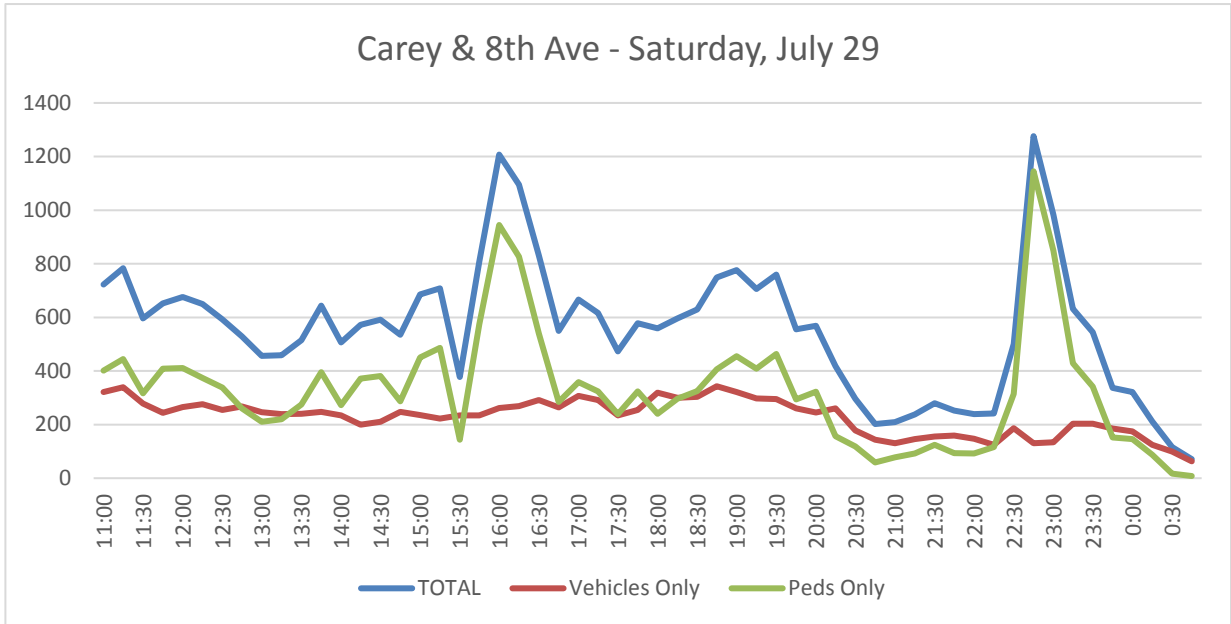




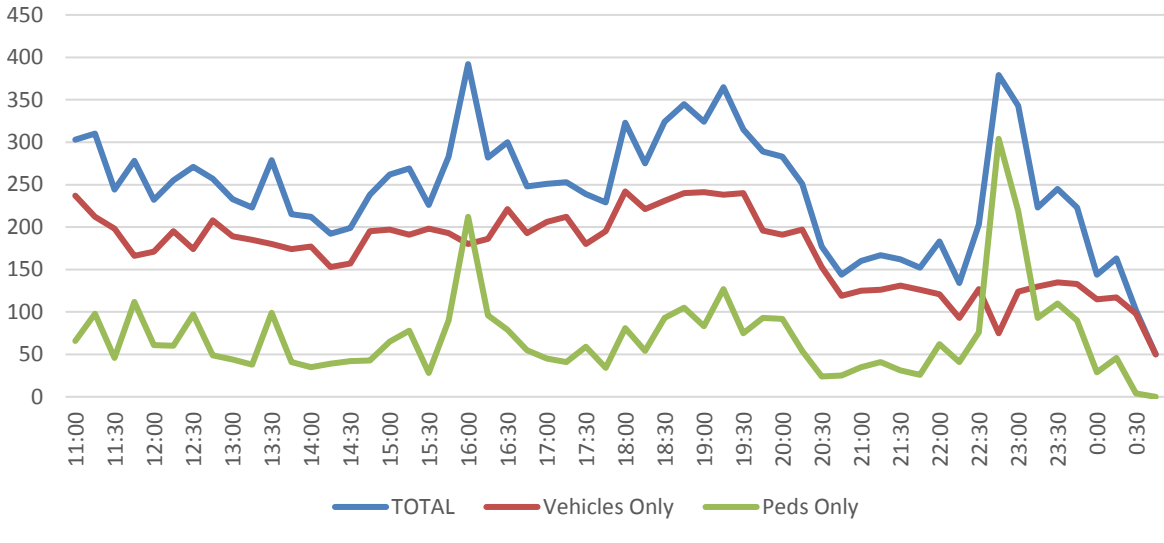
Hynds/I-25 NB Ramp, Pershing & Randall - Wednesday, July 26



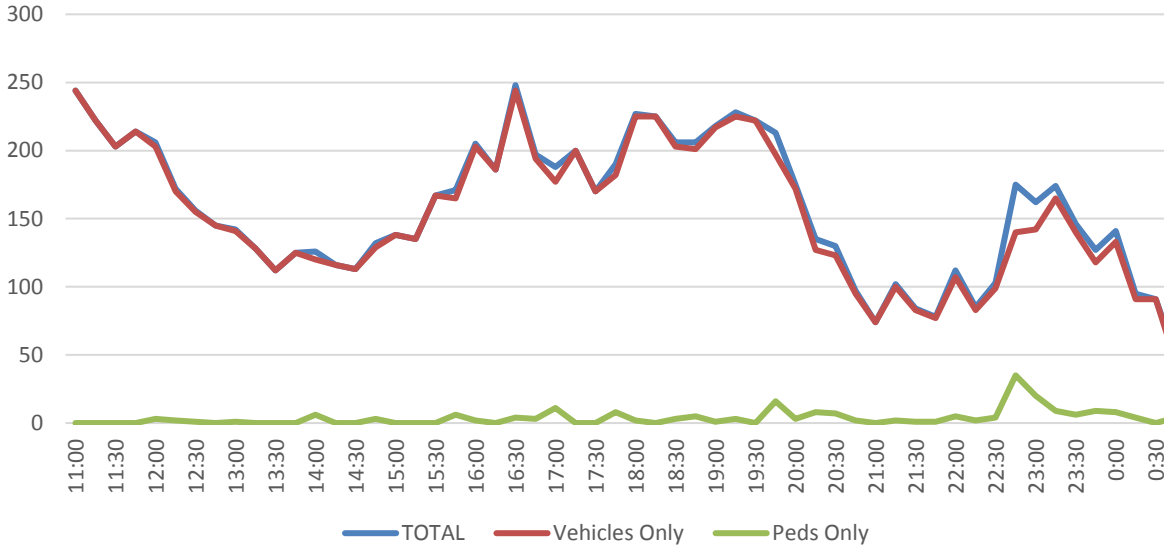
TRAFFIC VOLUME PROFILES DURING CFD – SATURDAY, JULY 29TH, 2017

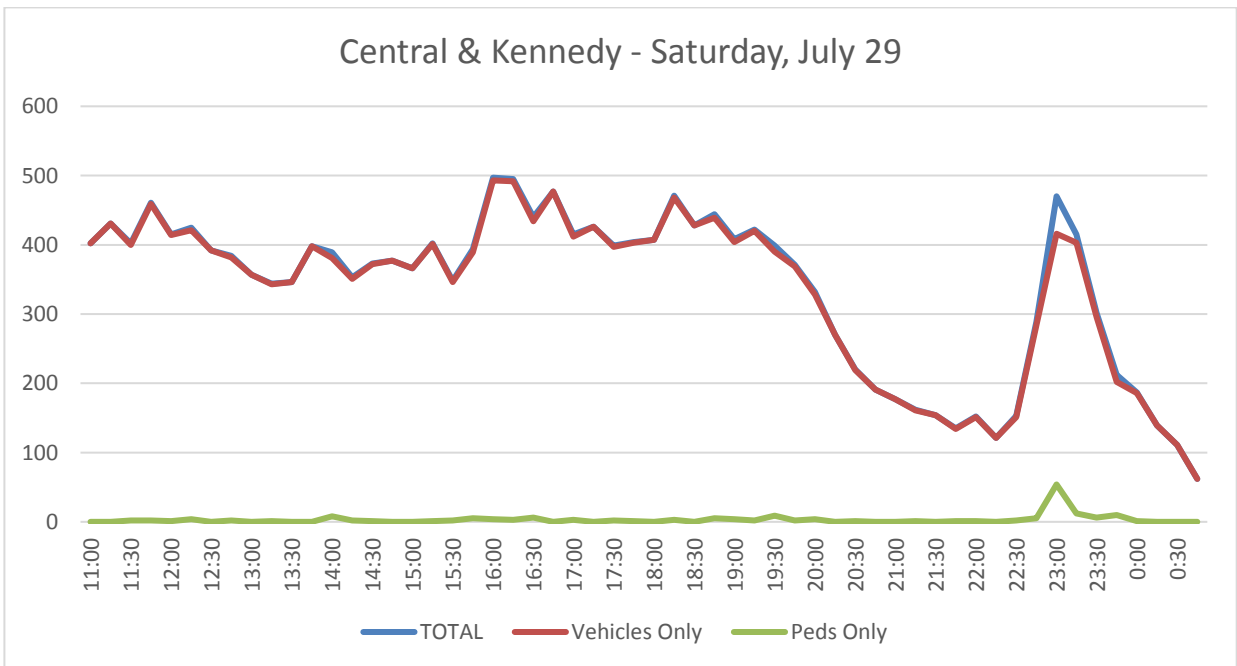
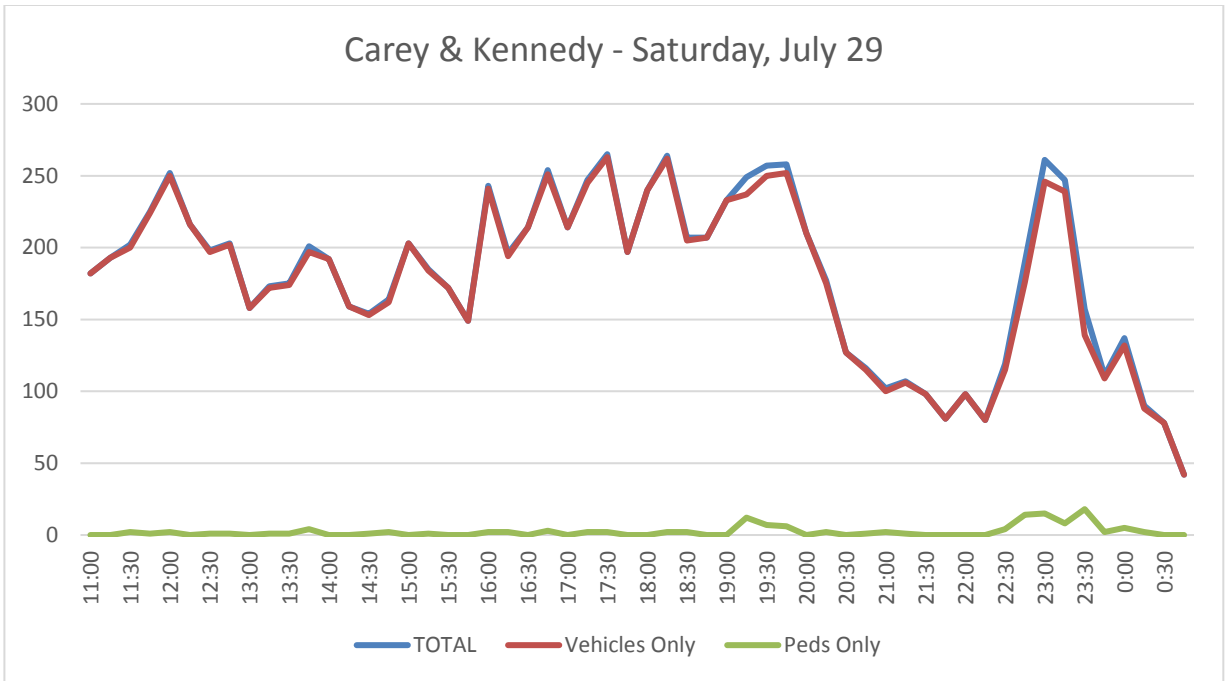


Snyder & 8th Ave - Saturday, July 29



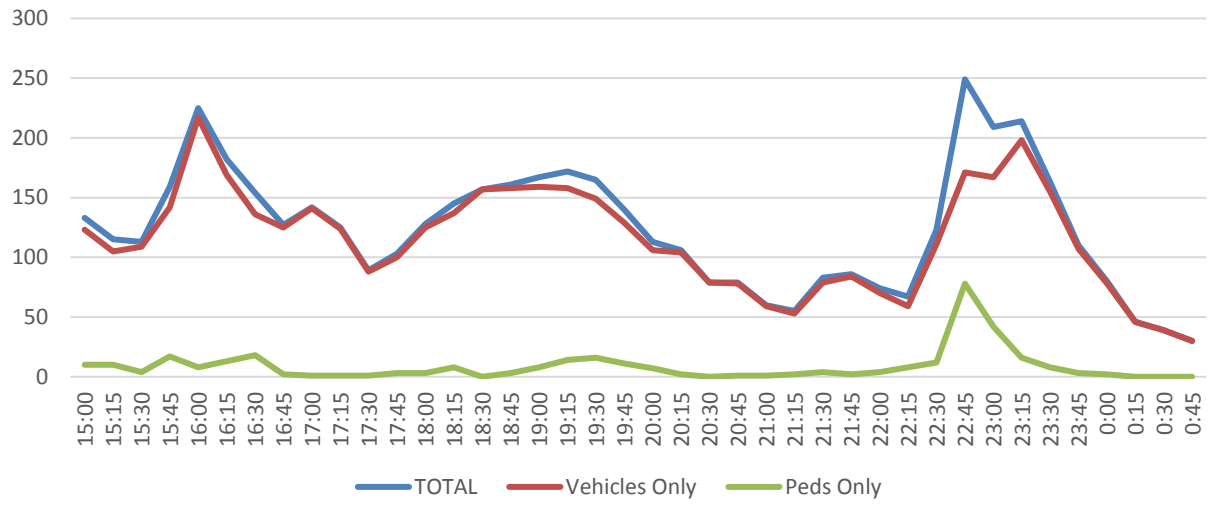
Hynds & 8th Ave - Saturday, July 29





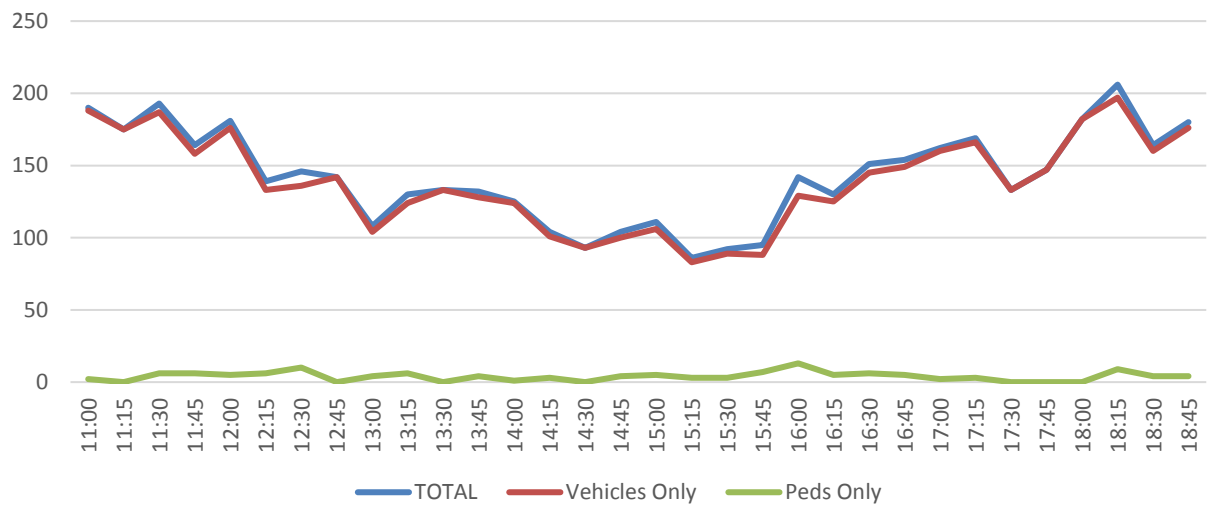
Carey & Gate V7 - Saturday, July 29

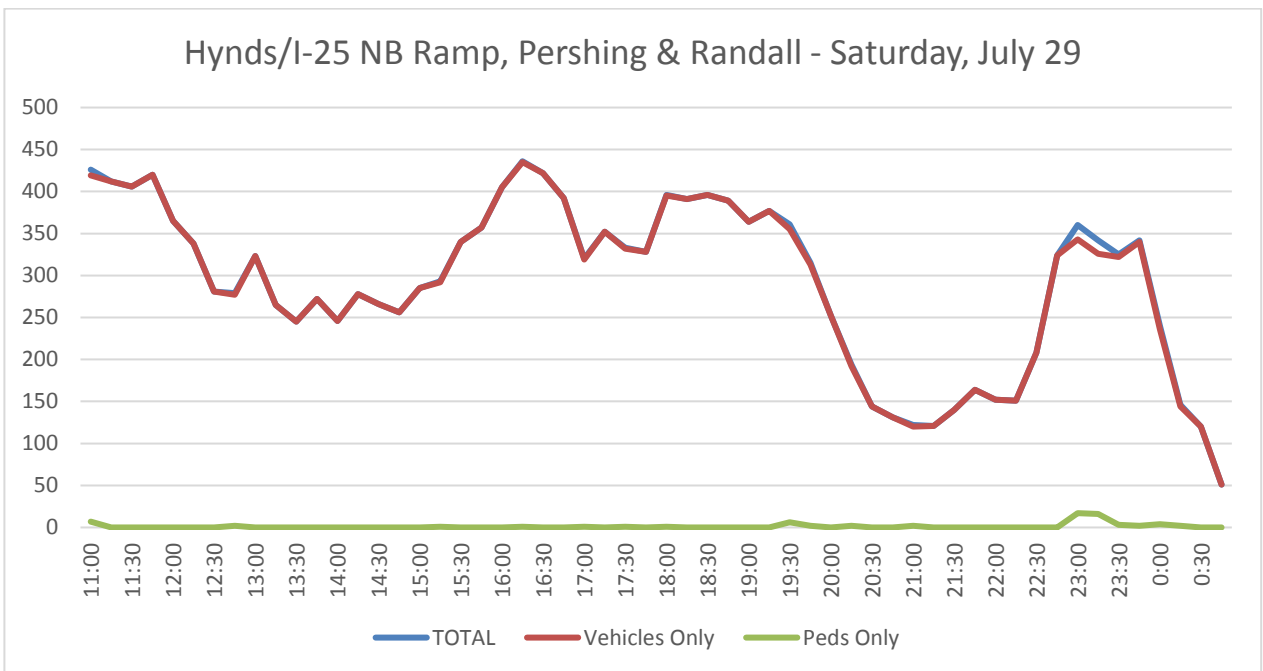
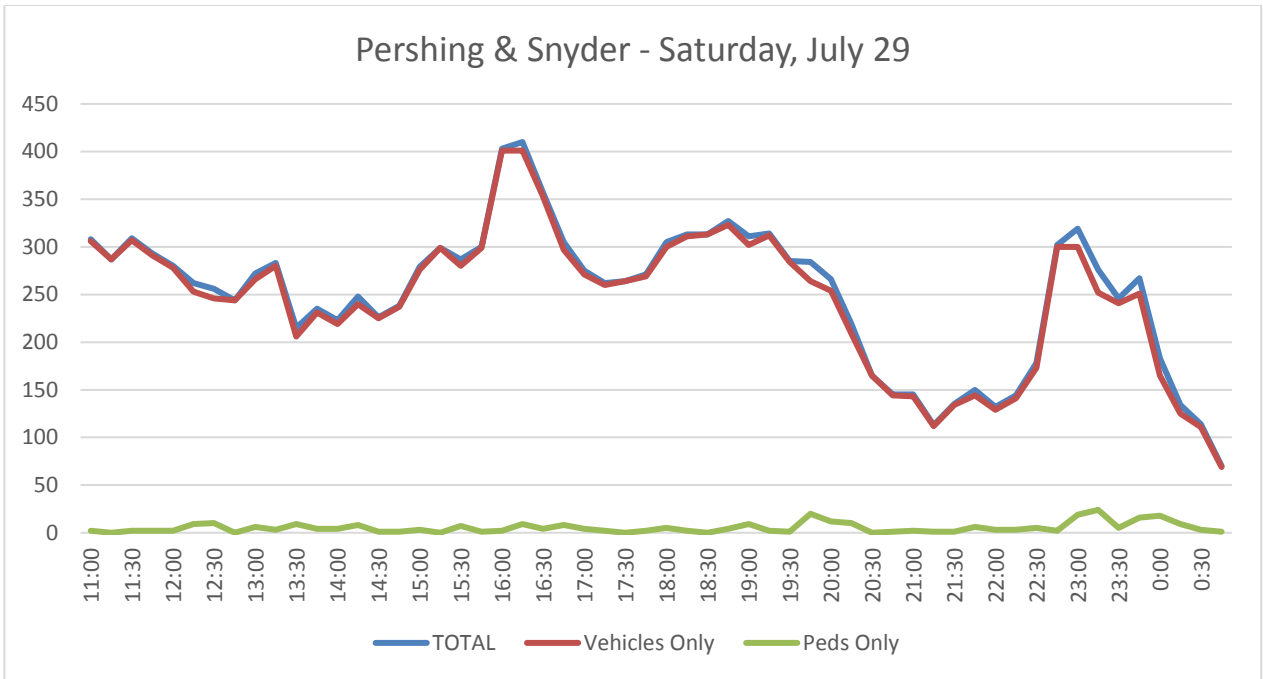
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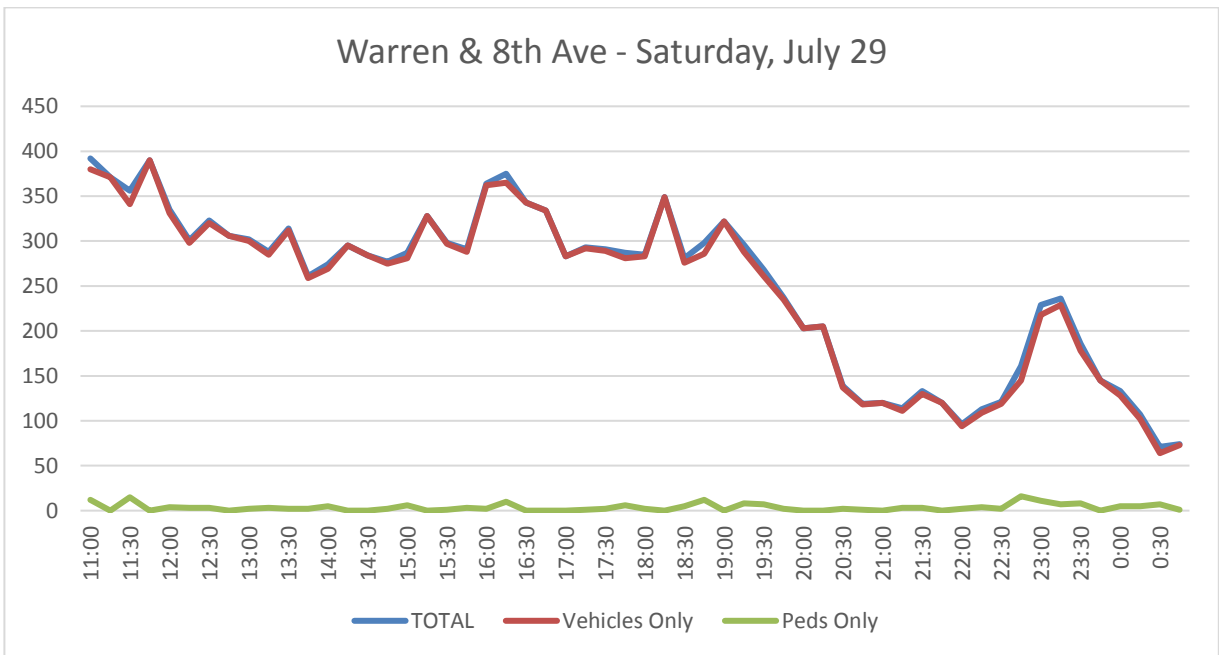
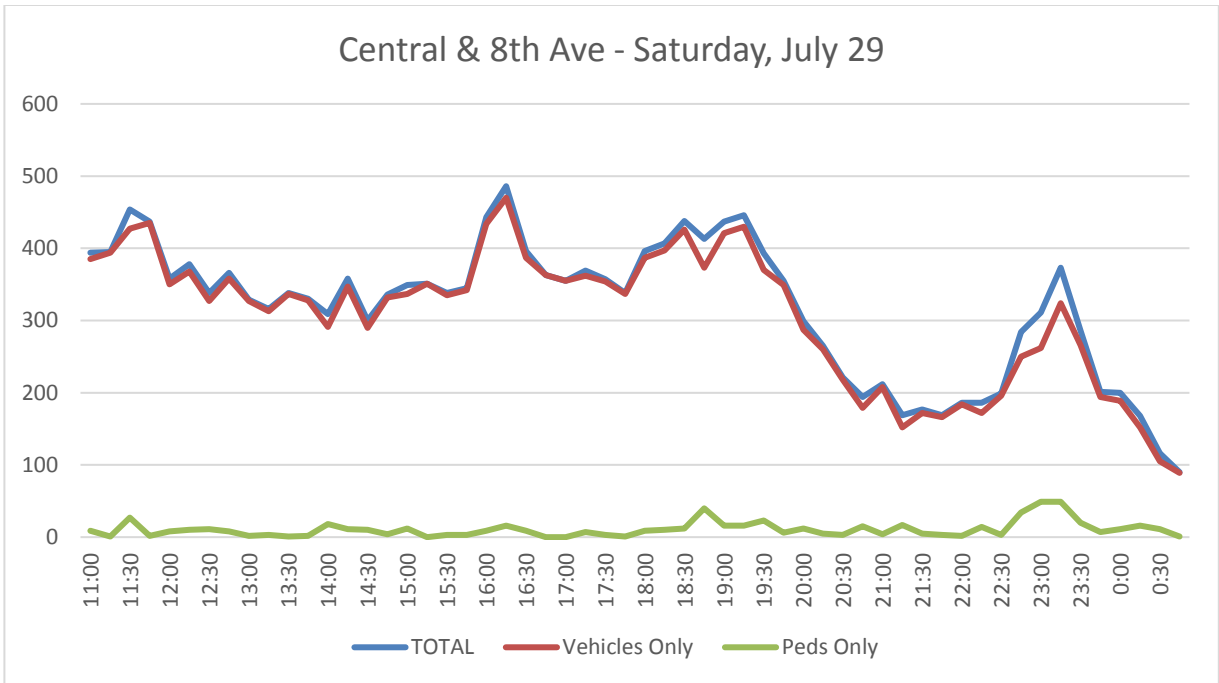


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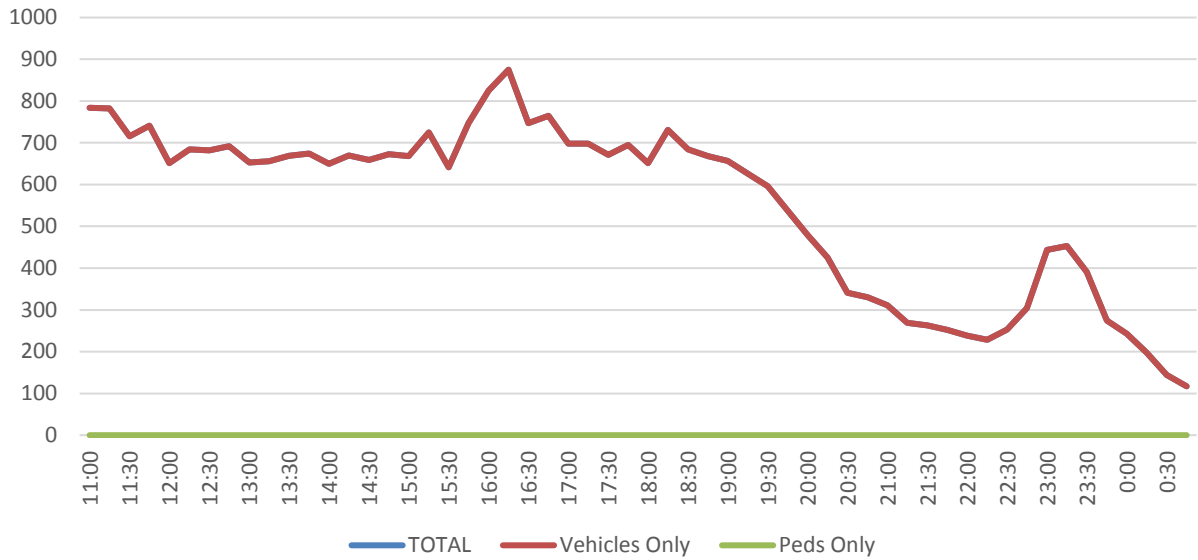
Entrance Only



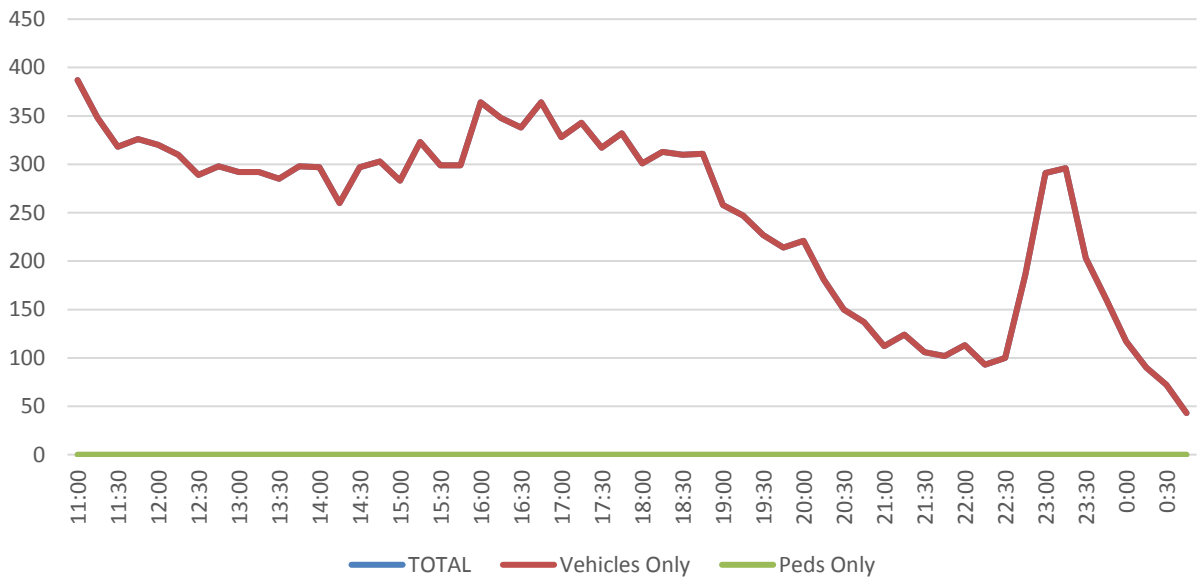




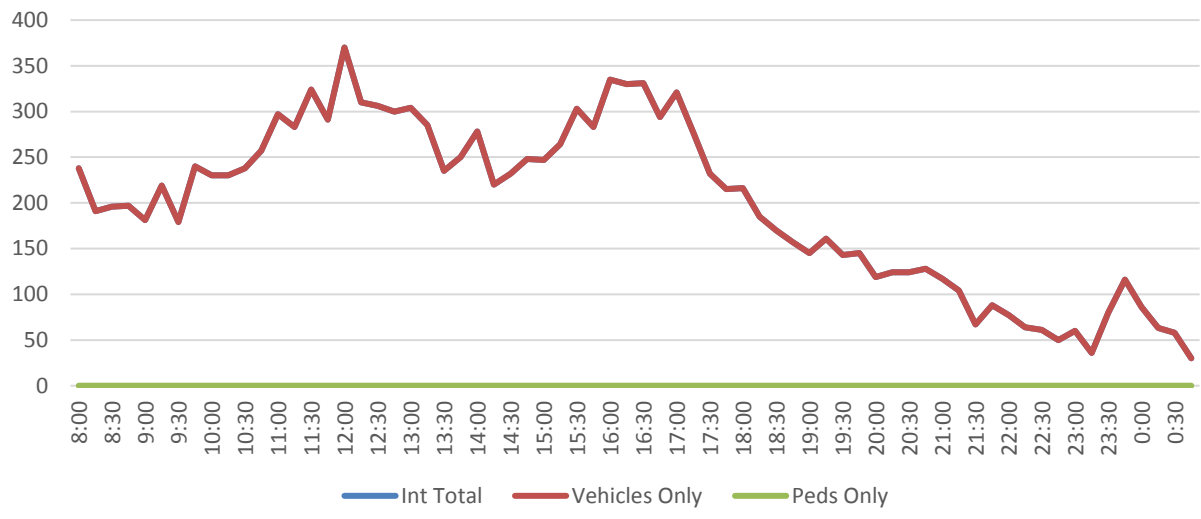
Central & Yellowstone - Saturday, July 29



I-25 NB Ramp & Central - Saturday, July 29



I-25 SB Ramp & Central - Friday, July 28 (Data not available for July 29)

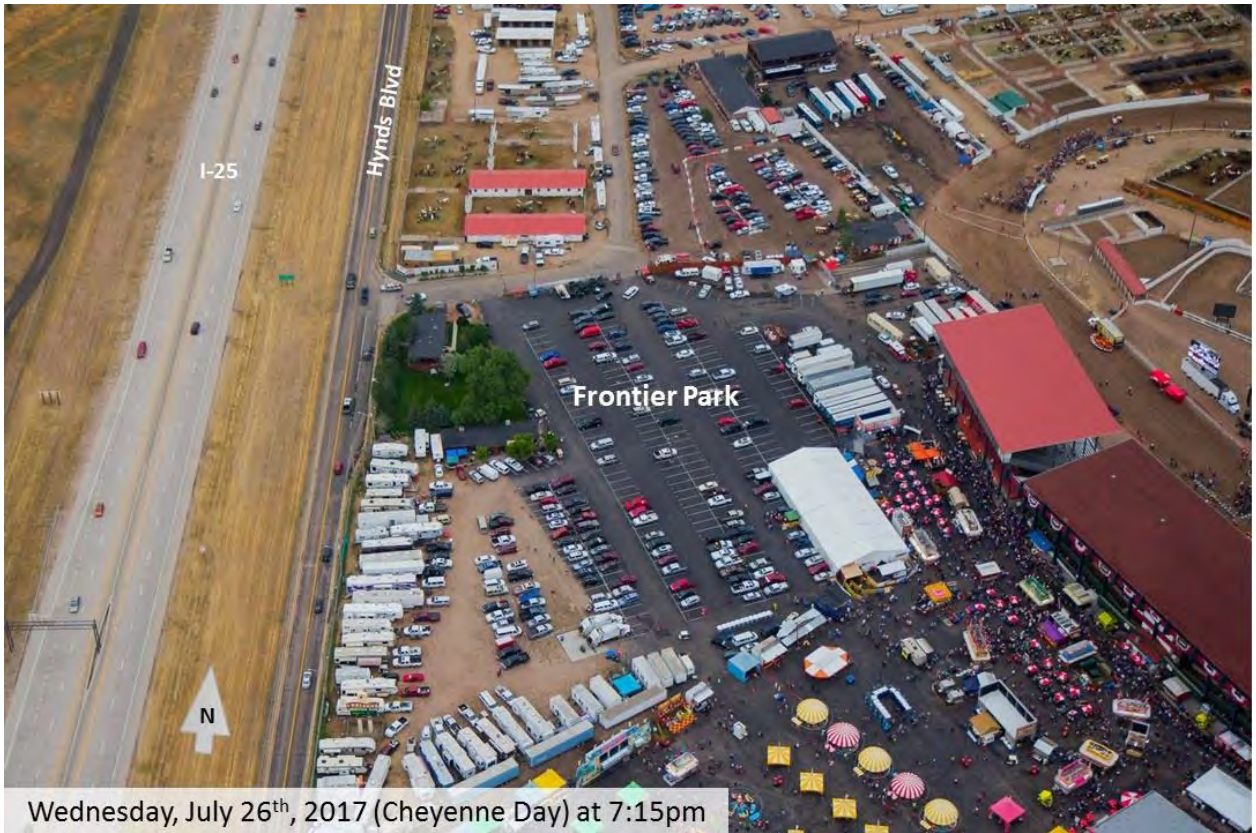


Appendix B:
Aerial Images









Wednesday, July 26th, 2017 (Cheyenne Day) at 7:15pm



Wednesday, July 26th, 2017 (Cheyenne Day) at 7:15pm











Saturday, July 28th, 2017 at 4:45pm



Saturday, July 28th, 2017 at 4:45pm





Appendix C:
'Park N Ride' Bus Service Data

CHEYENNE TRANSIT PROGRAM

TRANSIT PROVIDED: 1 BUS

TOTAL EMPLOYEE HOURS: 153.75

TOTAL MILES DRIVEN: 1,000

PERSONS AT STOPS – 2017											
	7/21	7/22	7/23	7/24	7/25	7/26	7/27	7/28	7/29	7/30	TOTAL
STOP	FRI	SAT	SUN	MON	TUES	WED	THURS	FRI	SAT	SUN	
FRONTIER PARK	58	104		105	163	142	71	56	145		844
DOWNTOWN	62	160		133	76	219	128	76	132		986
TOTAL	120	264	0	238	239	361	199	132	277		1830

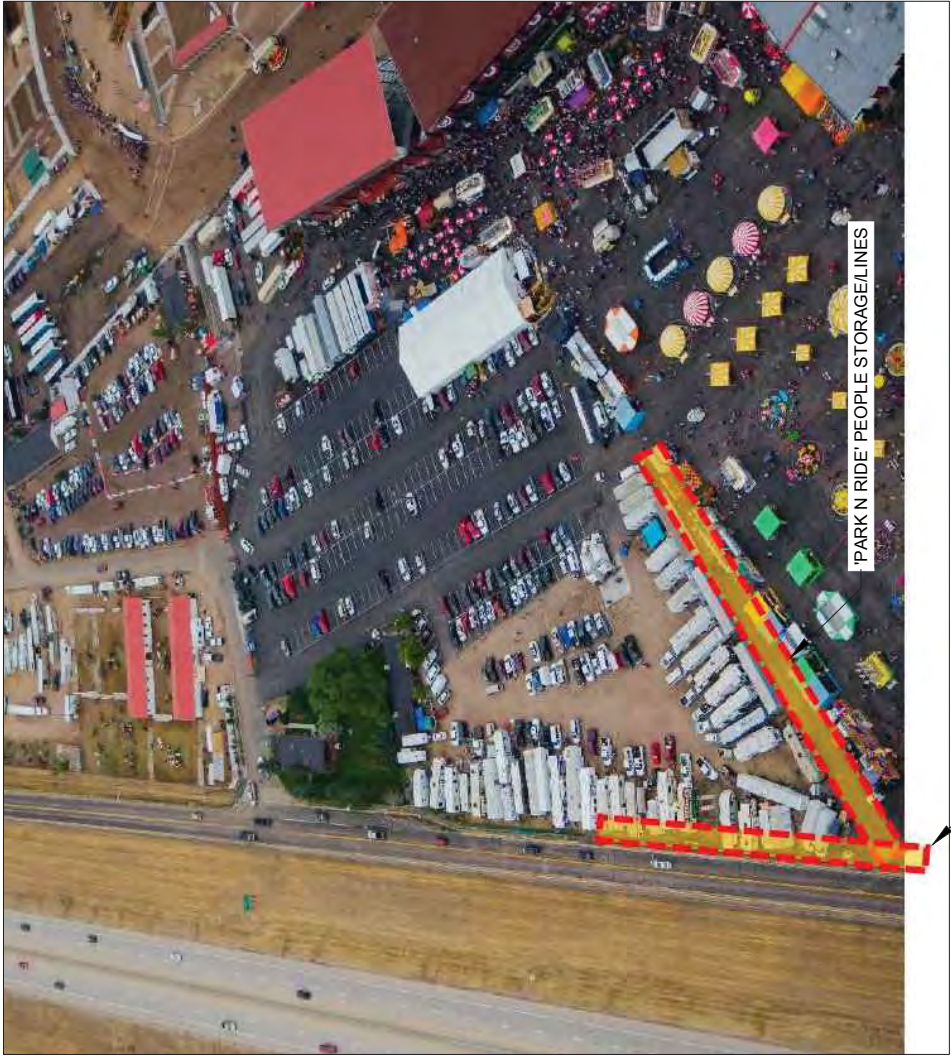
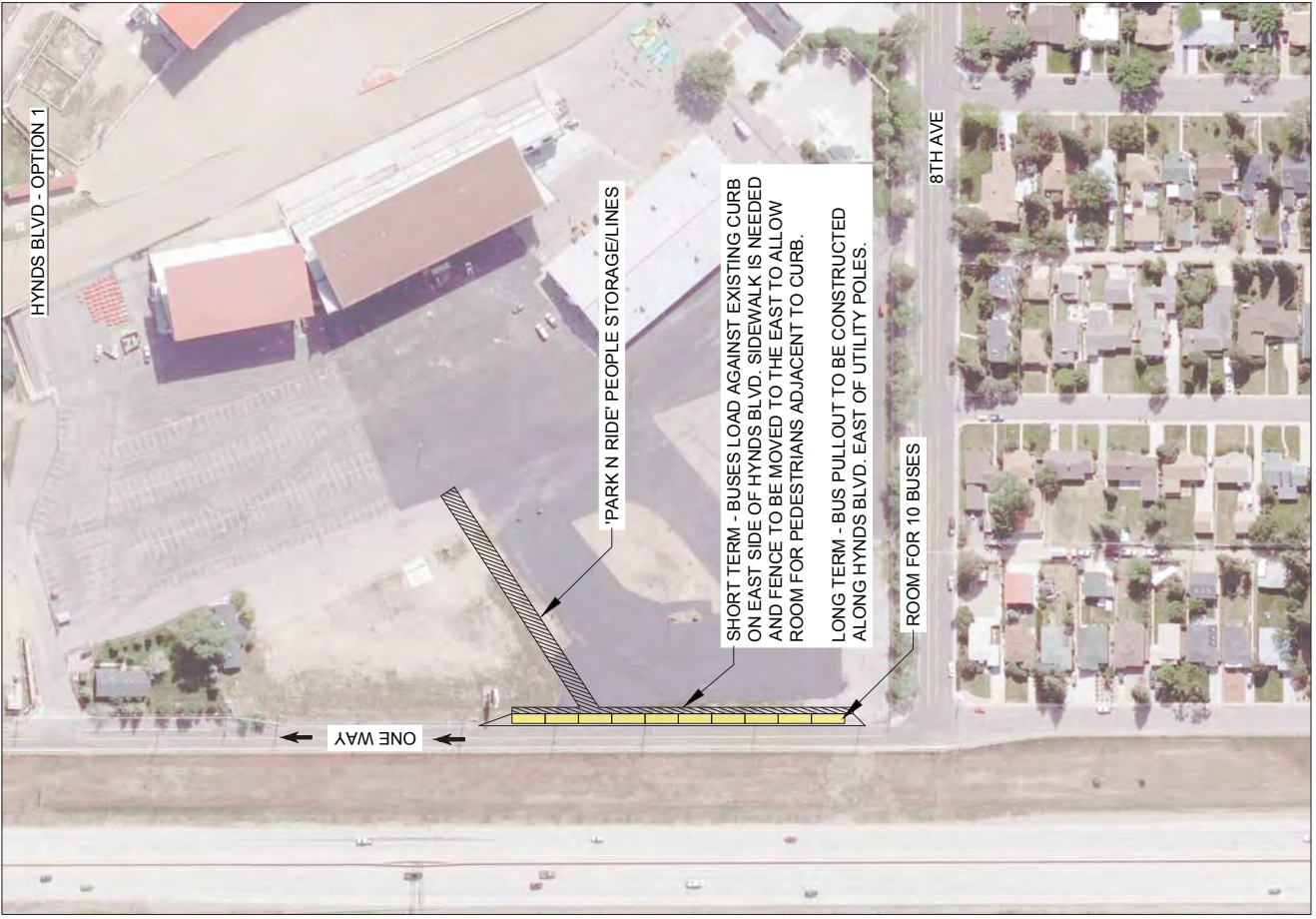
RIDES PER HOUR – 2017																	
	8 A.M.- 9 A.M.	9 A.M.- 10 A.M.	10 A.M.- 11 A.M.	11 A.M.- 12 P.M.	12 P.M.- 1 P.M.	1 P.M.- 2 P.M.	2 P.M.- 3 P.M.	3 P.M.- 4 P.M.	4 P.M.- 5 P.M.	5 P.M.- 6 P.M.	6 P.M.- 7 P.M.	7 P.M.- 8 P.M.	8 P.M.- 9 P.M.	9 P.M.- 10 P.M.	10 P.M.- 11 P.M.	11 P.M.- 12 A.M.	12 A.M.-
ALL 10 DAYS	22	57	155	160	120	53	99	85	170	177	155	184	49	47	114	161	22
GRAND TOTAL ALL DAYS																1830	

LARAMIE COUNTY SCHOOL DISTRICT No. 1

TOTAL MILES (BUSES): 24,247

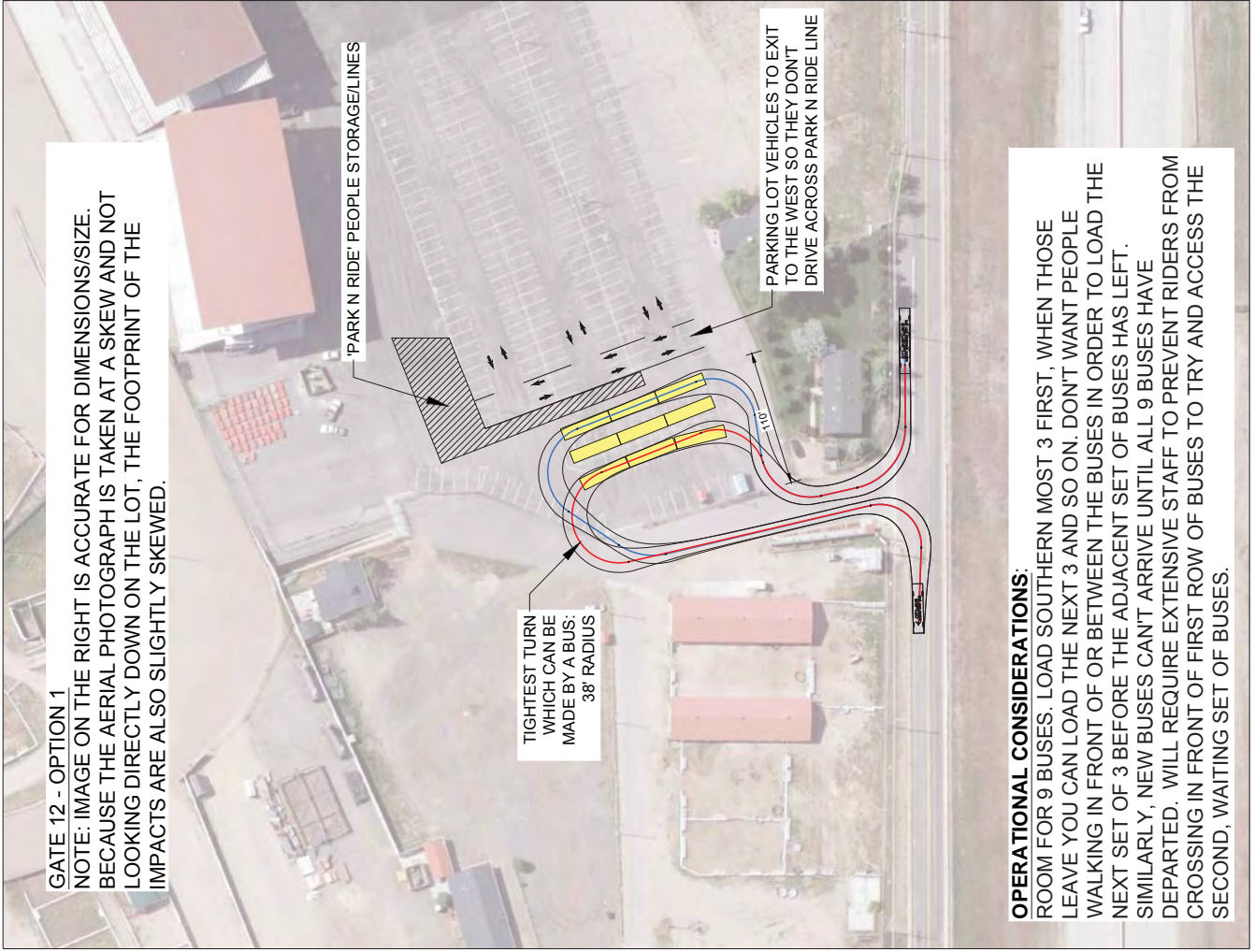
TOTAL MILES (SUBURBANS): 2,536

Appendix D:
'Park N Ride' Alternative On-Park Locations



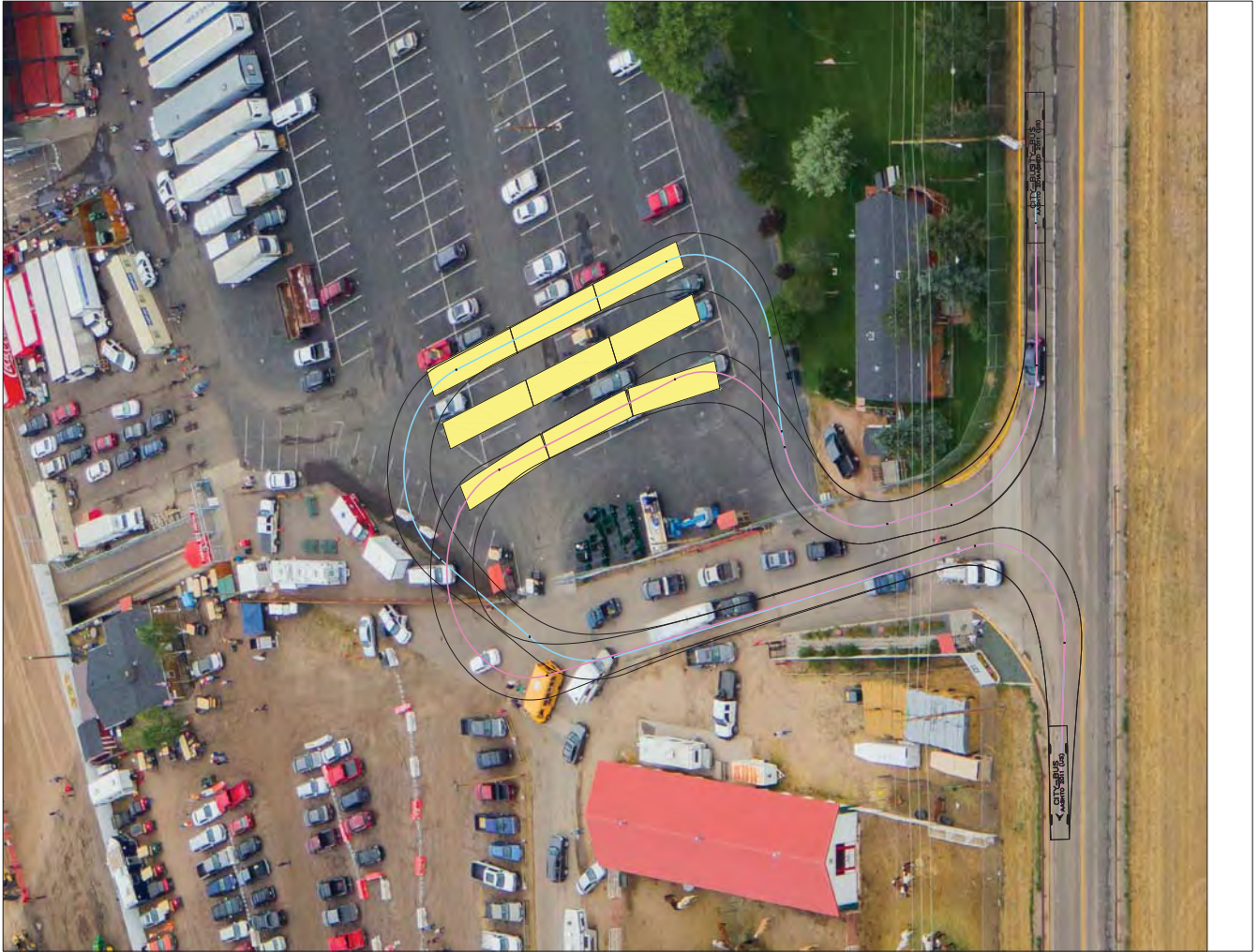
GATE 12 - OPTION 1

NOTE: IMAGE ON THE RIGHT IS ACCURATE FOR DIMENSIONS/SIZE. BECAUSE THE AERIAL PHOTOGRAPH IS TAKEN AT A SKEW AND NOT LOOKING DIRECTLY DOWN ON THE LOT, THE FOOTPRINT OF THE IMPACTS ARE ALSO SLIGHTLY SKEWED.



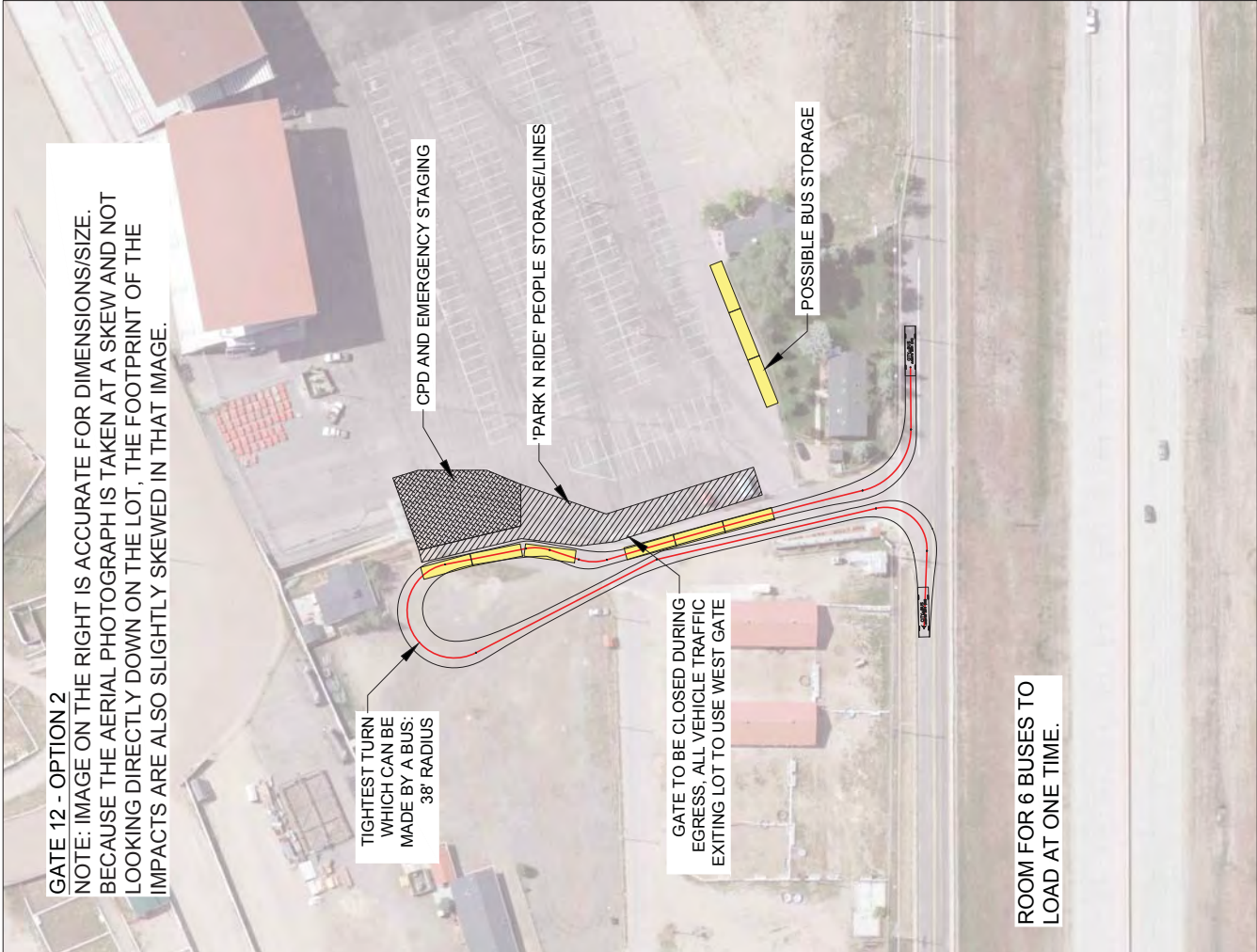
OPERATIONAL CONSIDERATIONS:

ROOM FOR 9 BUSES. LOAD SOUTHERN MOST 3 FIRST, WHEN THOSE LEAVE YOU CAN LOAD THE NEXT 3 AND SO ON. DON'T WANT PEOPLE WALKING IN FRONT OF OR BETWEEN THE BUSES IN ORDER TO LOAD THE NEXT SET OF 3 BEFORE THE ADJACENT SET OF BUSES HAS LEFT. SIMILARLY, NEW BUSES CAN'T ARRIVE UNTIL ALL 9 BUSES HAVE DEPARTED. WILL REQUIRE EXTENSIVE STAFF TO PREVENT RIDERS FROM CROSSING IN FRONT OF FIRST ROW OF BUSES TO TRY AND ACCESS THE SECOND, WAITING SET OF BUSES.

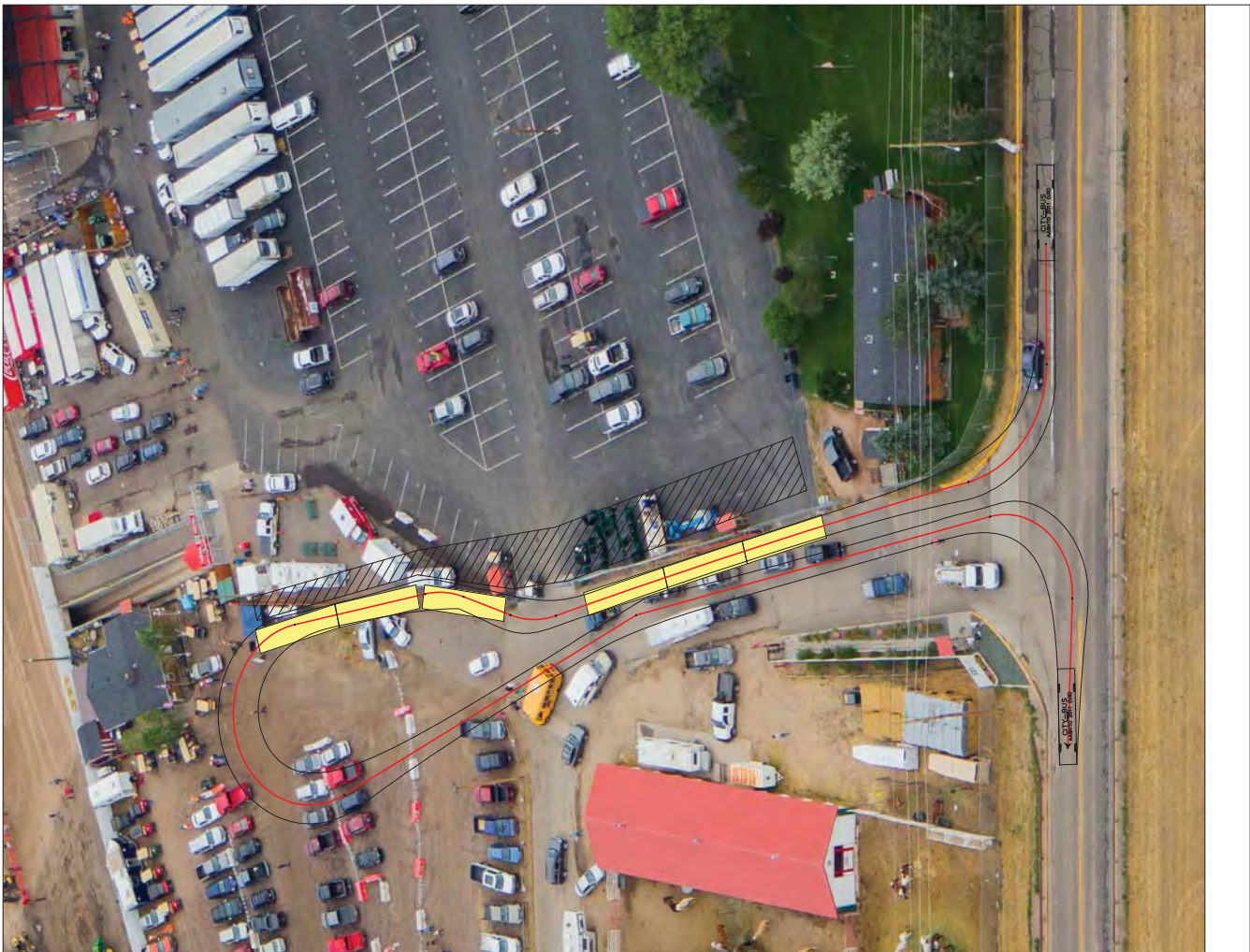


GATE 12 - OPTION 2

NOTE: IMAGE ON THE RIGHT IS ACCURATE FOR DIMENSIONS/SIZE. BECAUSE THE AERIAL PHOTOGRAPH IS TAKEN AT A SKEW AND NOT LOOKING DIRECTLY DOWN ON THE LOT, THE FOOTPRINT OF THE IMPACTS ARE ALSO SLIGHTLY SKEWED IN THAT IMAGE.



ROOM FOR 6 BUSES TO LOAD AT ONE TIME.

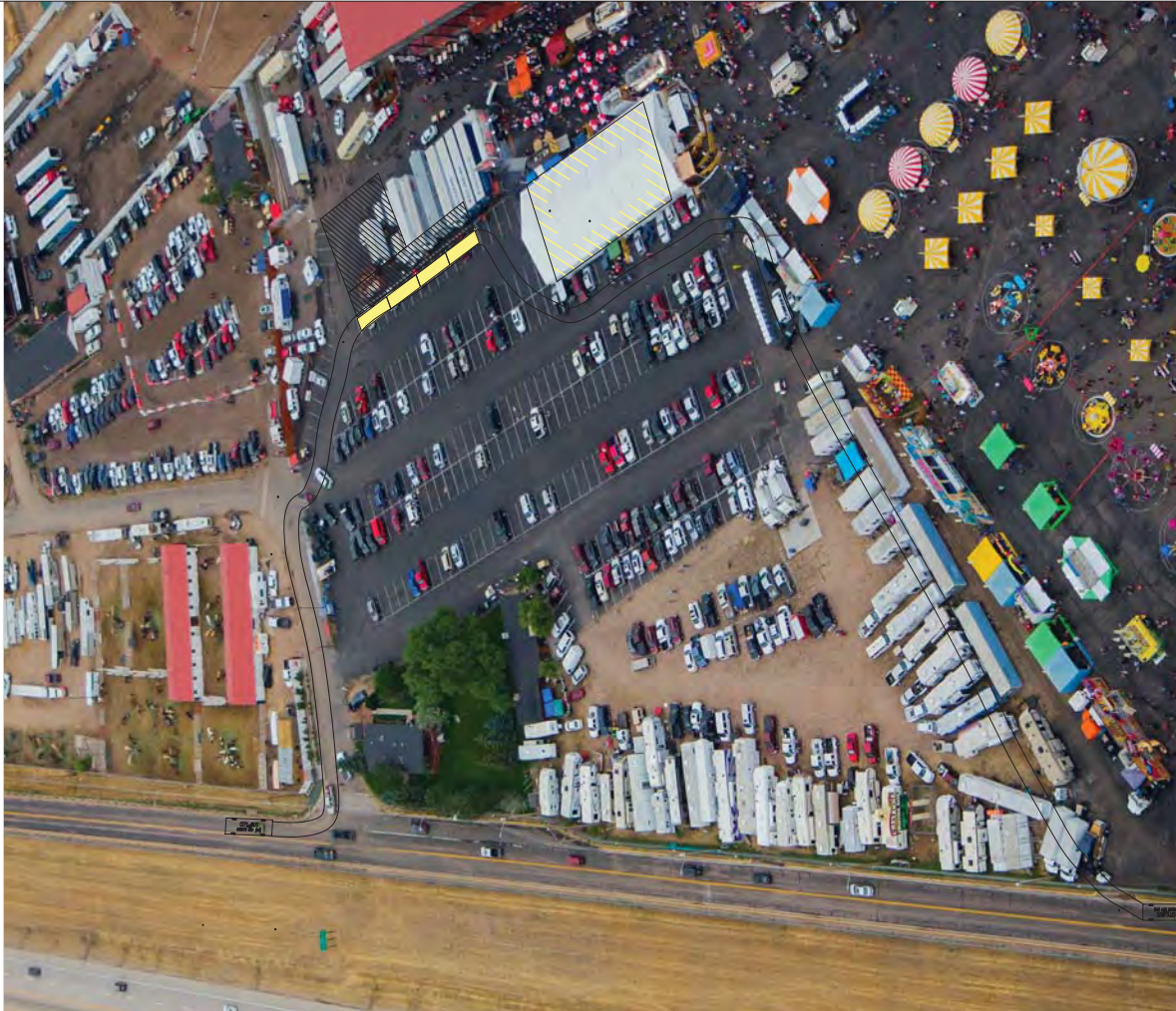


GATE 12 - OPTION 3A

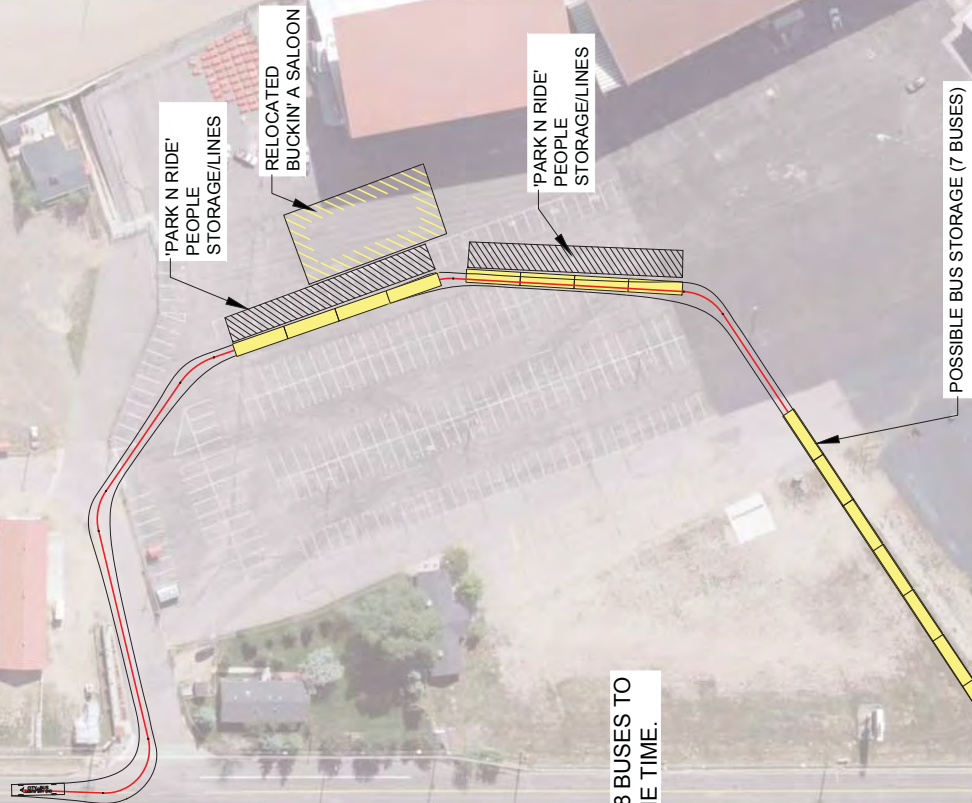
NOTE: IMAGE ON THE RIGHT IS ACCURATE FOR DIMENSIONS/SIZE. BECAUSE THE AERIAL PHOTOGRAPH IS TAKEN AT A SKEW AND NOT LOOKING DIRECTLY DOWN ON THE LOT, THE FOOTPRINT OF THE IMPACTS ARE ALSO SLIGHTLY SKEWED IN THAT IMAGE.



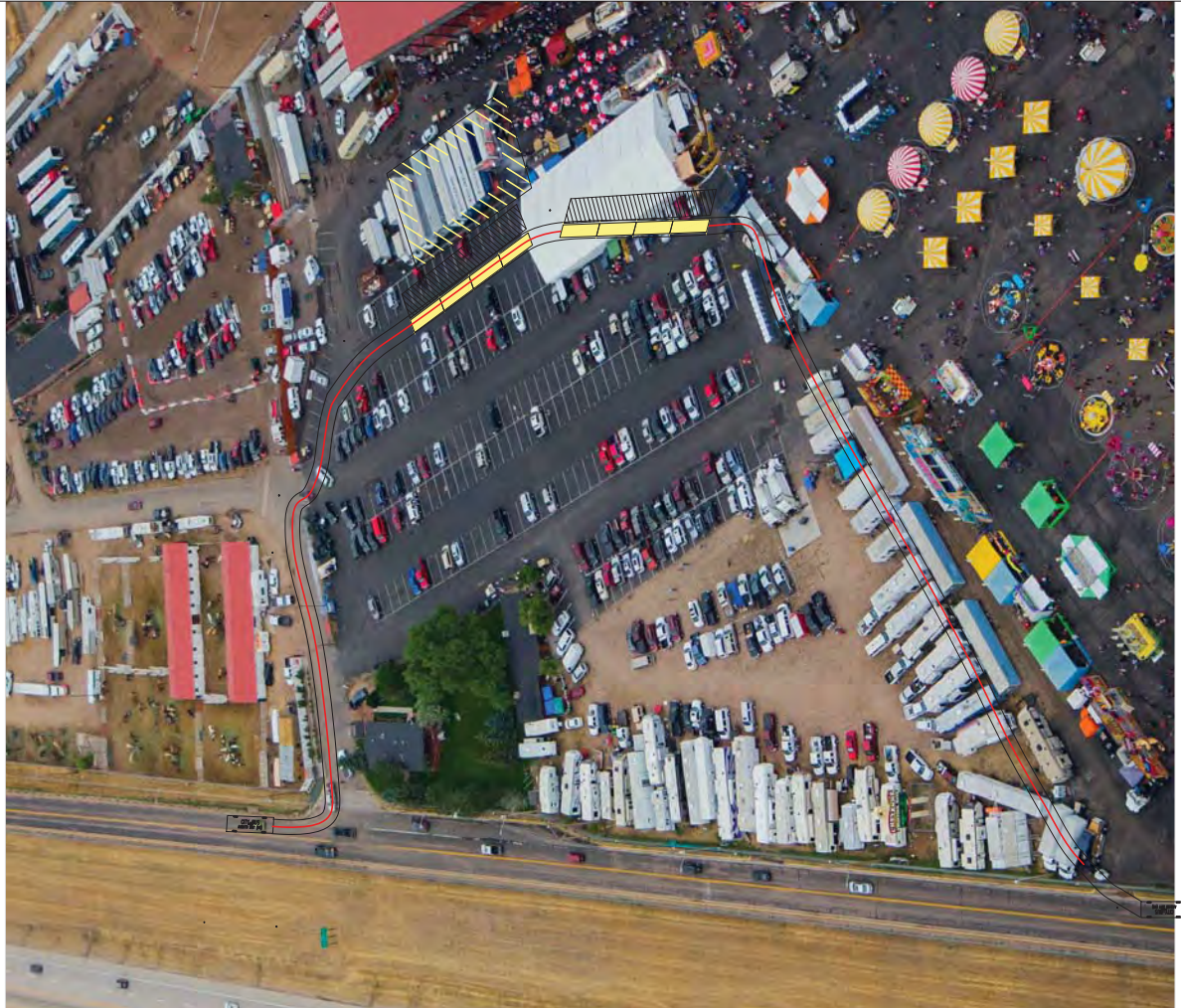
ROOM FOR 4 BUSES TO LOAD AT ONE TIME.



GATE 12 - OPTION 3b - RELOCATED BUCKIN-A SALOON
NOTE: IMAGE ON THE RIGHT IS ACCURATE FOR DIMENSIONS/SIZE. BECAUSE THE AERIAL PHOTOGRAPH IS TAKEN AT A SKEW AND NOT LOOKING DIRECTLY DOWN ON THE LOT, THE FOOTPRINT OF THE IMPACTS ARE ALSO SLIGHTLY SKEWED IN THAT IMAGE.

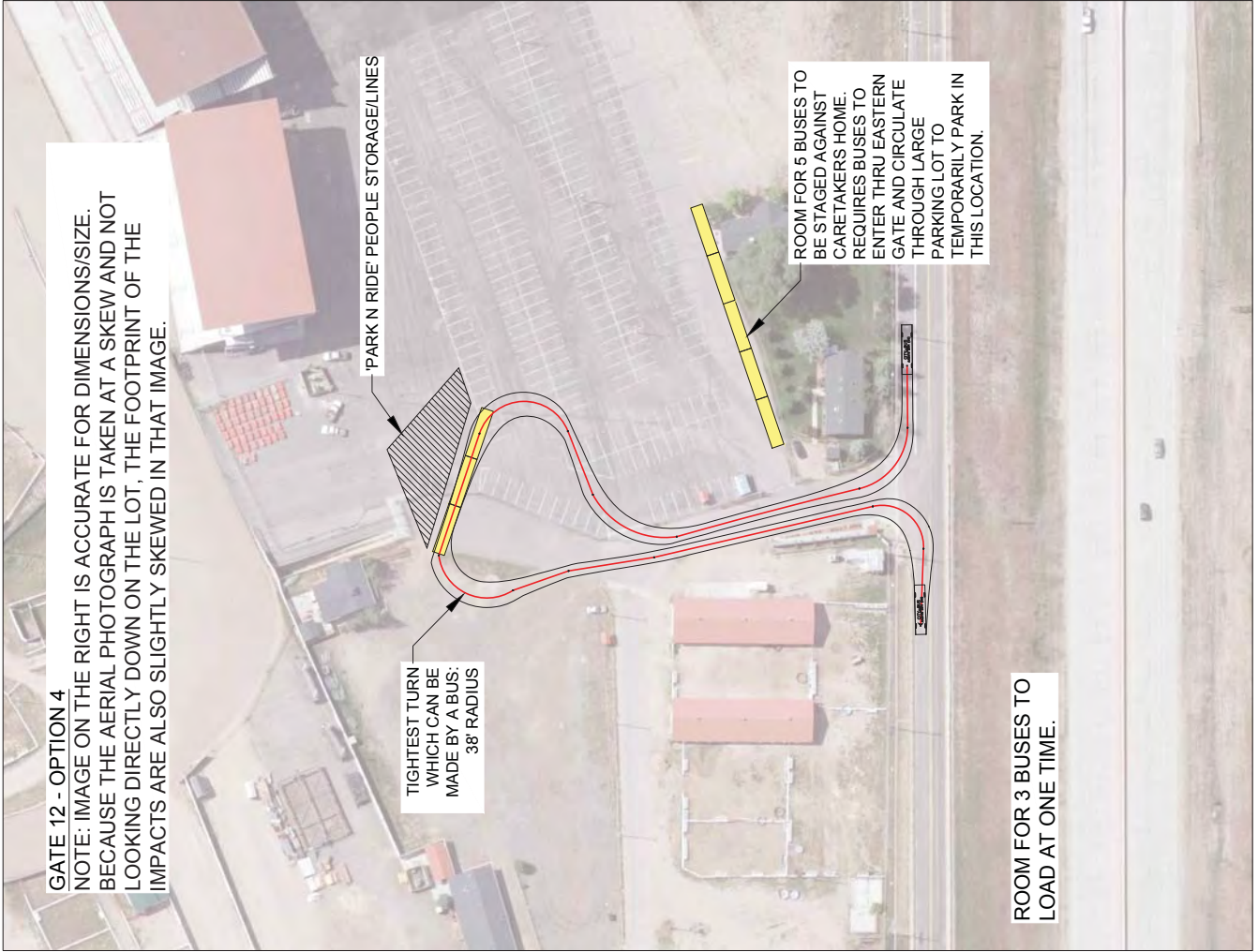


ROOM FOR 8 BUSES TO LOAD AT ONE TIME.



GATE 12 - OPTION 4

NOTE: IMAGE ON THE RIGHT IS ACCURATE FOR DIMENSIONS/SIZE. BECAUSE THE AERIAL PHOTOGRAPH IS TAKEN AT A SKEW AND NOT LOOKING DIRECTLY DOWN ON THE LOT, THE FOOTPRINT OF THE IMPACTS ARE ALSO SLIGHTLY SKEWED IN THAT IMAGE.

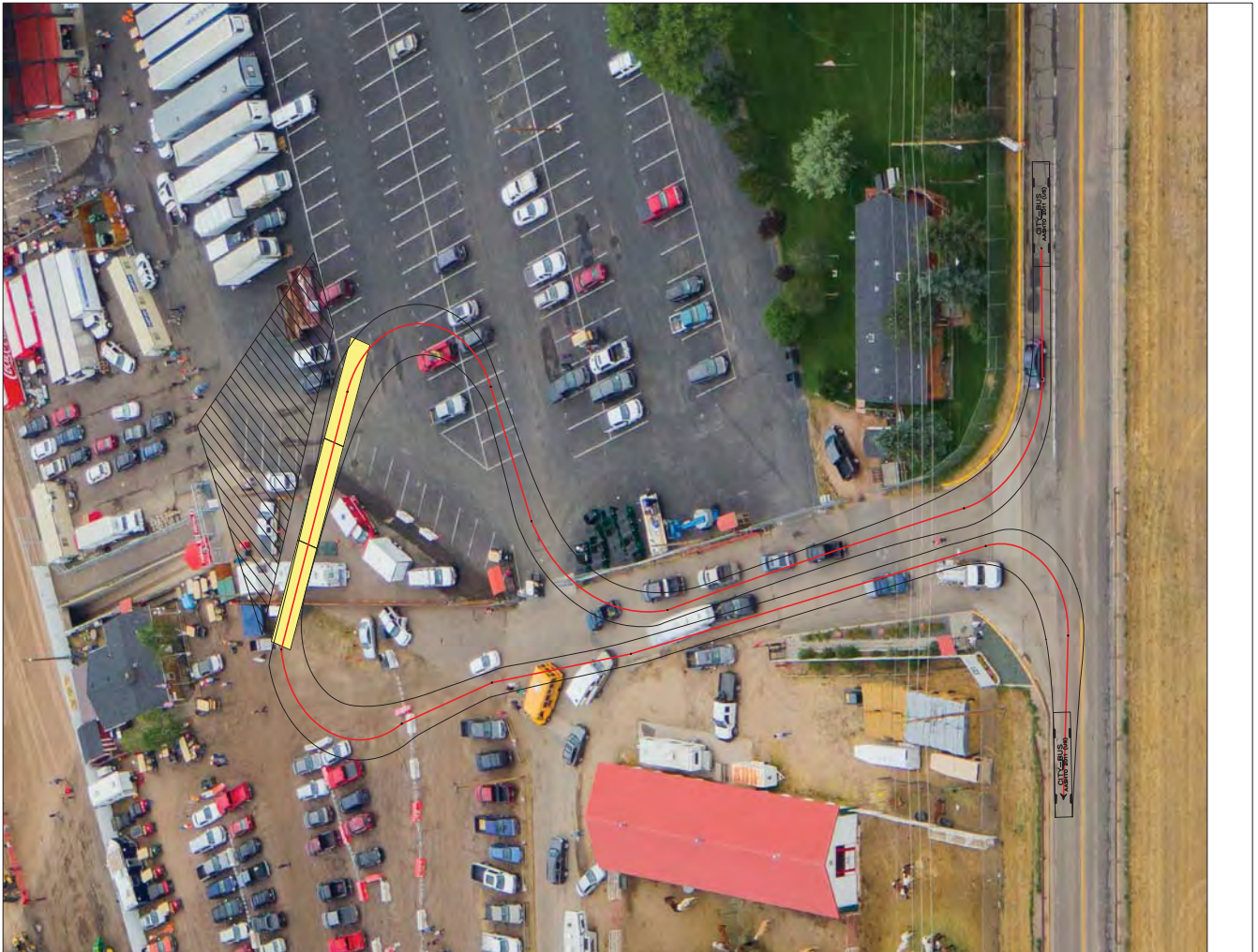


'PARK N RIDE' PEOPLE STORAGE/LINES

TIGHTEST TURN WHICH CAN BE MADE BY A BUS: 38' RADIUS

ROOM FOR 5 BUSES TO BE STAGED AGAINST CARETAKERS HOME. REQUIRES BUSES TO ENTER THRU EASTERN GATE AND CIRCULATE THROUGH LARGE PARKING LOT TO TEMPORARILY PARK IN THIS LOCATION.

ROOM FOR 3 BUSES TO LOAD AT ONE TIME.



'PARK N RIDE' PEOPLE STORAGE/LINES

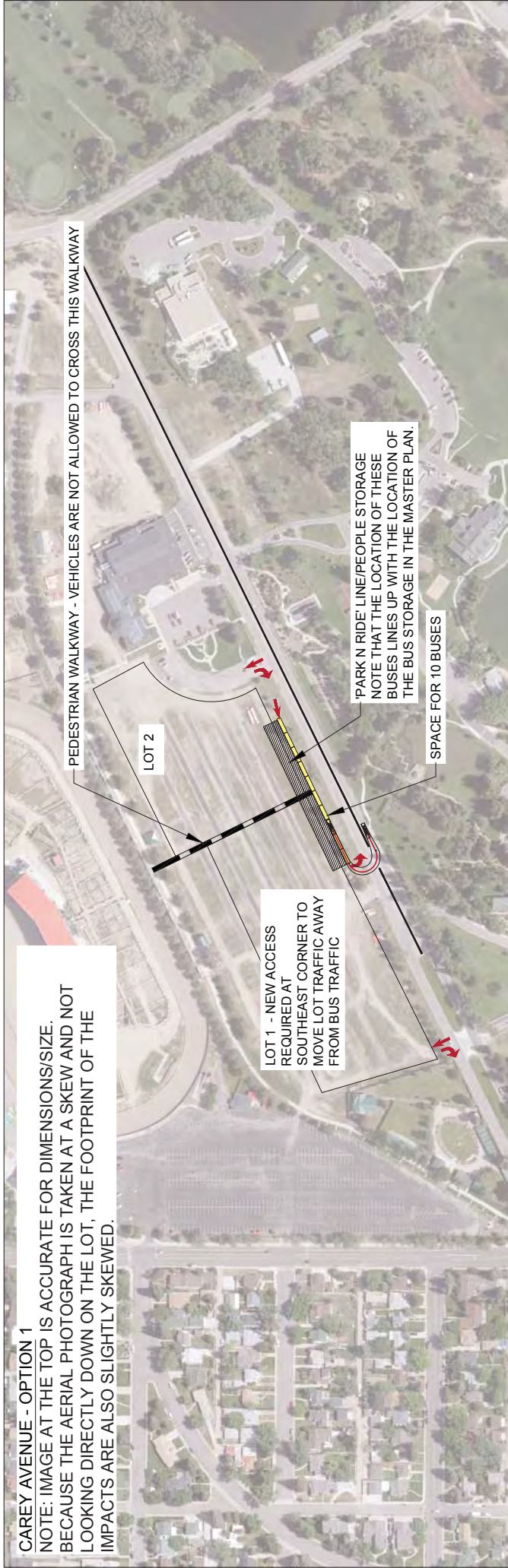
TIGHTEST TURN WHICH CAN BE MADE BY A BUS: 38' RADIUS

ROOM FOR 5 BUSES TO BE STAGED AGAINST CARETAKERS HOME. REQUIRES BUSES TO ENTER THRU EASTERN GATE AND CIRCULATE THROUGH LARGE PARKING LOT TO TEMPORARILY PARK IN THIS LOCATION.

ROOM FOR 3 BUSES TO LOAD AT ONE TIME.

CAREY AVENUE - OPTION 1

NOTE: IMAGE AT THE TOP IS ACCURATE FOR DIMENSIONS/SIZE. BECAUSE THE AERIAL PHOTOGRAPH IS TAKEN AT A SKEW AND NOT LOOKING DIRECTLY DOWN ON THE LOT, THE FOOTPRINT OF THE IMPACTS ARE ALSO SLIGHTLY SKEWED.





OPTIONAL CONSIDERATIONS - EXISTING BUS LOOP WILL NOT BE USED. BUSES NEED TO STAY OUT OF THE EXISTING BUS LOOP TO REDUCE CONFLICTS BETWEEN THE LARGE AMOUNTS OF PEDESTRIANS IN THIS AREA. PASSENGERS NEED TO WALK TO THE WESTERN-MOST BUS FOR BOARDING AND LOAD THAT BUS FIRST.

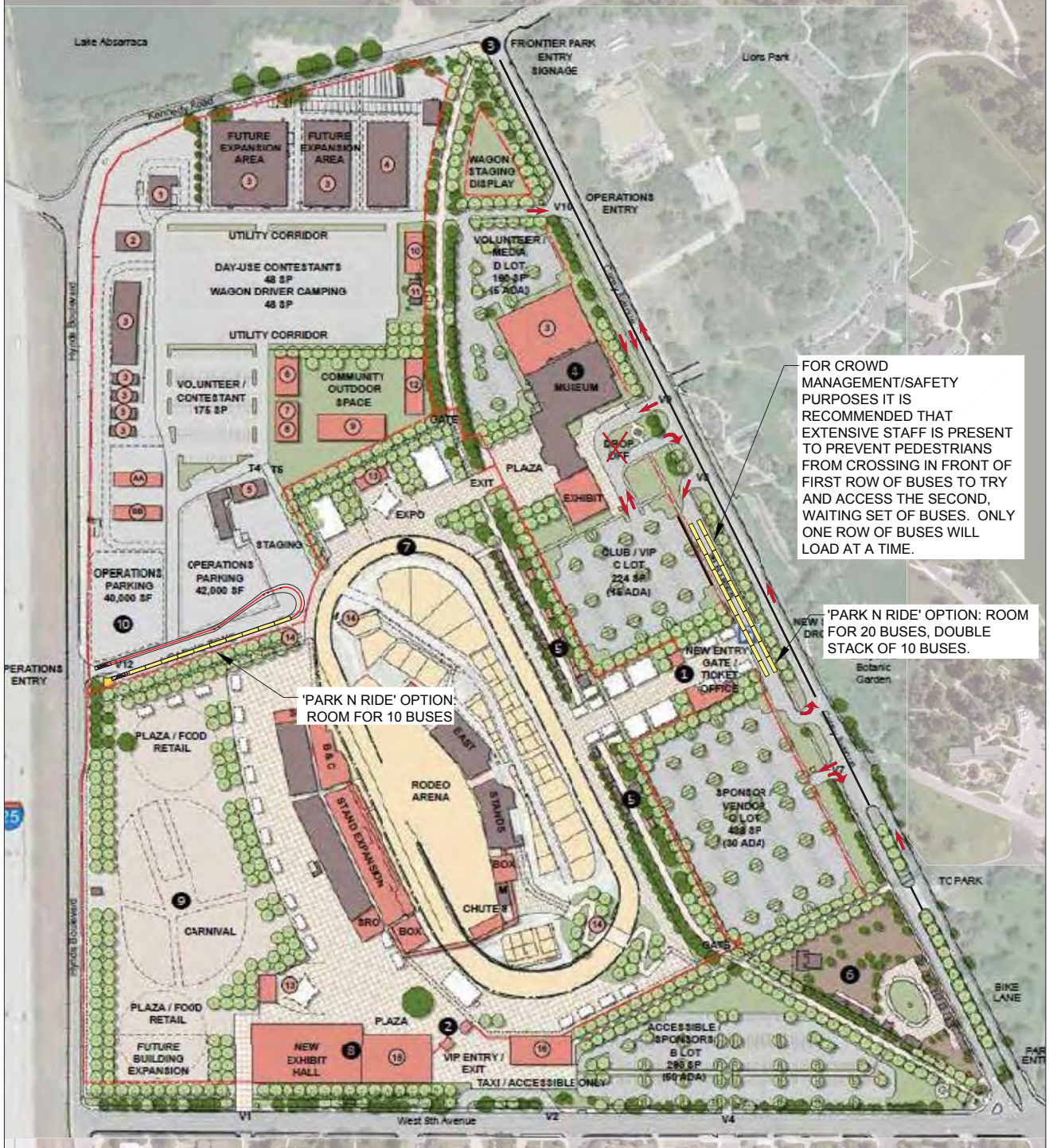
OPTIONAL SHORT TERM CONSIDERATION - 8TH AVENUE IS NOT WIDE ENOUGH FOR BUSES TO MAKE A U-TURN. UNTIL BUS LOOP IS CONSTRUCTED PARK N RIDE BUSES WILL PROCEED NORTH ON HYNDS TO 6TH AVENUE, THEN EAST TO CRIBBON AVENUE AND NORTH TO 8TH AVENUE WHERE THE WILL TURN LEFT ONTO 8TH AVENUE. LOADING WILL OCCUR ALONG EXISTING NORTH 8TH AVENUE CURB LINE. THIS WILL REQUIRE FULL TIME EVENT STAFF AT CRIBBON TO STOP TRAFFIC FOR BUSES TO TURN LEFT.

COWBOY TRIANGLE BUSES WILL LOAD/UNLOAD ON THE NORTH SIDE OF 8TH AVENUE, EAST OF THE PARK N RIDE LOOP.

SIDEWALK ALONG 8TH WILL NEED TO BE WIDENED BY REMOVING LANDSCAPING..

THINKING TOWARD THE MASTER PLAN

- THE MASTER PLAN HAD A "LOADING AREA" OFF OF V12. THIS LOADING AREA WOULD ACCOMMODATE PARK N RIDE BUSES NICELY. WITH THE MASTER PLAN THE IDEA WAS TO CREATE A PEDESTRIAN/VISITOR EXPERIENCE ALL THE WAY AROUND THE TRACK. THIS PARK N RIDE BUS LOCATION WOULD DROP FOLKS OFF NEAR THE PLANNED EXPO AREA.
- THE MASTER PLAN HAS A PARK N RIDE DROP OFF ALONG CAREY AVE. FOR THIS LOCATION TO WORK FOR A PARK N RIDE AREA THE FOLLOWING CONSIDERATIONS SHALL BE MADE:
 - TRAFFIC ON SOUTHBOUND CAREY WILL NEED TO BE RESTRICTED TO ONLY PASS HOLDERS AND BUSES. FULL TIME STAFF WILL BE REQUIRED AT THE INTERSECTION OF KENNEDY AND CAREY TO ENSURE THAT ONLY THOSE FOLKS CAN TRAVEL SOUTH ON CAREY.
 - CONTESTANTS, PARADE WAGONS, ETC. WILL NEED TO USE GATE V12, SUGGEST THAT GATE V10 BE CLOSED OR USED AS AN EXIT ONLY GATE.
 - FULL TIME STAFF WILL BE REQUIRED AT THE BUS LOOP EXIT TO ALLOW BUSES TO TURN LEFT ONTO CAREY. THE INTERSECTION OF 8TH AND CAREY IS TOO BUSY TO ACCOMMODATE PARK N RIDE BUSES IN A TIMELY FASHION.
 - PARENT DROP OFF, SHUTTLE BUSES, TOUR BUSES, UBER AND LYFT WILL BE RESTRICTED TO 8TH AVENUE.



Appendix E:
WYDOT Dynamic Message Signs 2017 Program

SCENARIO PARADE A (JUL 22, 25, 27,29)

GovDelivery- will be sent automatically at 9:00am- please make sure that it went out

Subject:

Frontier Park - Parking Information

Text message:

Frontier park has major parking delays, use Park-N-Ride \$10/car. I-25 Exit 10D. Parking fee includes park entrance. "Timestamp"

E-mail:

Expect major delays at Frontier Parking lots due to the parade. To avoid delays, use Park-N-Ride, located off I-25 Exit 10D. \$10 parking fee includes entrance into the park.

Park-n-Ride Shuttle Hours

- July 21-29: 09:00 a.m. - 12:30 a.m.
- July 30: 09:00 a.m. – 6:00 p.m. "TIMESTAMP"

Website

Expect major delays at Frontier Parking lots. To avoid delays, use Park-N-Ride, located off I-25 Exit 10D. \$10 parking fee includes entrance into the park.

Park-n-Ride Shuttle Hours

- July 21-29: 09:00 a.m. - 12:30 a.m.
- July 30: 09:00 a.m. – 6:00 p.m.

511 Floodgate

Expect major delays at Frontier Parking lots. To avoid delays, use Park-N-Ride, located off I-25 Exit 10D. \$10 parking fee includes entrance into the park.

HAR

Expect major delays at Frontier Parking lots. To avoid delays, use Park-N-Ride, located off I-25 Exit 10D. \$10 parking fee includes entrance into the park.

DMS:

I-25 NB MP 1.25 :

FRONTIER DAYS PARK-N-RIDE
MAIN PARKING LOTS EXIT 10D
MAJOR DELAYS

I-25 SB MP 14.7:

FRONTIER DAYS PARK-N-RIDE
MAIN PARKING LOTS EXIT 10D
MAJOR DELAYS

I-80 WB MP 373:

FRONTIER DAYS PARK-N-RIDE
MAIN PARKING LOTS TAKE I-25 NORTH
MAJOR DELAYS TO EXIT 10D

I-80 EB MP 356.7:

FRONTIER DAYS PARK-N-RIDE
MAIN PARKING LOTS TAKE I-25 NORTH
MAJOR DELAYS TO EXIT 10D

PDMS

LOCATION DEPENDANT UPON

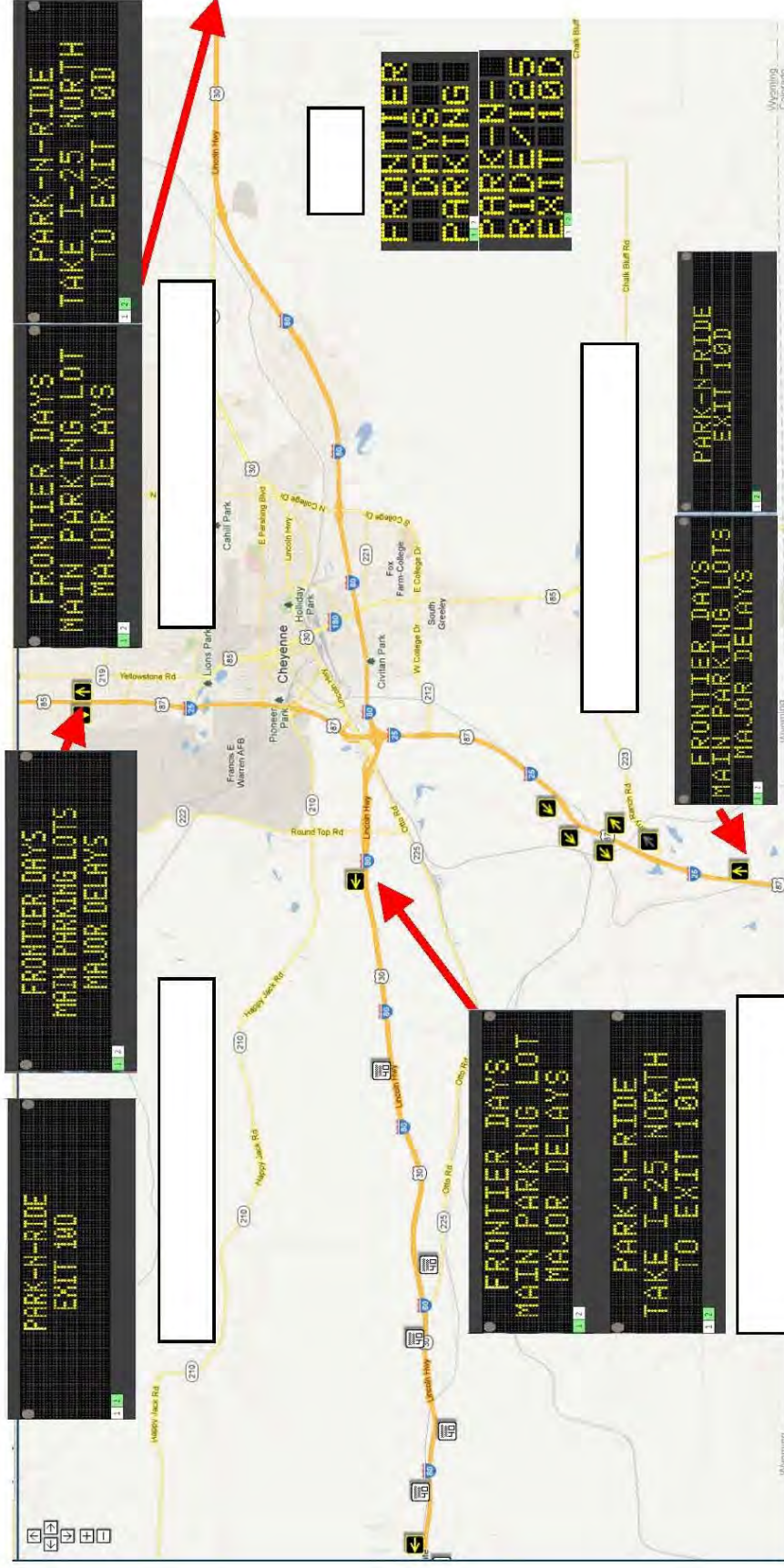
AVAILABILITY :

FRONTIER	PARK-N-
DAYS	RIDE/I25
PARKING	EXIT 10D

Scenario A may be deactivated by a Parking Manager at any time...go to the scenario that they request.

Contacts: Dave ("Skip") Skipper: 307- 630-3463, Roy Sommers 286-4118, Shawn Varland 640-4938 and Bernie Kushnir 631-6283.

Scenario Parade (A): used from 09:00 to 22:00 on: July 22(Sat), 25(Tues), 27(Thur), and 29(Sat)



- Hazard alert Radio:** Expect major delays at ~~Frontier~~ Parking lots. To avoid delays, use Park-N-Ride, located off I-25 Exit 10D. \$10 parking fee includes entrance to the park.
- 511 Floodgate:** Expect major delays at Frontier Parking lots due to the parade. To avoid delays, use Park-N-Ride, located off I-25 Exit 10D. \$10 parking fee includes entrance into the park.
- Website:** Expect major delays at Frontier Parking lots due to the parade. To avoid delays, use Park-N-Ride, located off I-25 Exit 10D. \$10 parking fee includes entrance into the park. **Park-n-Ride Shuttle Hours: July 21-29: 09:00 a.m. - 12:30 a.m July 30: 09:00 a.m. - 6:00 p.m.**

SCENARIO [WEEKDAYS] B (JUL 21, 23, 24, 26, 28 AND 29)

GovDelivery-(automatically sent at 9:00 am every day-please check to see that it was sent)

Subject:

Frontier Park – Parking Open

E-mail:

Parking for Frontier Days is open. To avoid main lot traffic use Park-n-Ride located just off Interstate 25 and Happy Jack Road (Wyoming 210) south of Frontier Park. On I-25, take exit 10D. Parking is \$10/car and includes park entry. Handicap services available.

Park-n-Ride Shuttle Hours

- **July 21-29:** 09:00 a.m. - 12:30 a.m.
- **July 30:** 09:00 a.m. – 6:00 p.m. **"TIMESTAMP"**

Text message:

Avoid main lot traffic use Park-N-Ride. I-25 Exit 10D. Handicap spots open. \$10/car includes park entry. **"TIMESTAMP"**

DMS

I-25 NB MP 1.25:

FRONTIER DAYS
PARK-N-RIDE
USE EXIT 10D

I-80 EB MP 356.7:

FRONTIER DAYS TAKE I-25 NORTH TO
PARK-N-RIDE EXIT 10D

I-25 SB MP 14.7:

FRONTIER DAYS
PARK-N-RIDE
USE EXIT 10D

I-80 WB MP 373.0:

FRONTIER DAYS TAKE I-25 NORTH TO
PARK-N-RIDE EXIT 10D

PDMS

LOCATION DEPENDANT UPON AVAILABILITY:

FRONTIER	PARK-N-
DAYS	RIDE/I25
PARKING	EXIT 10D

Website

Parking for Frontier Days is open. To avoid main lot traffic use Park-n-Ride located just off Interstate 25 and Happy Jack Road (Wyoming 210) south of Frontier Park. On I-25, take exit 10D, \$10/car, includes entrance into the park.

Park-n-Ride Shuttle Hours

- July 21-29:** 09:00 a.m. - 12:30 a.m.
- July 30:** 09:00 a.m. – 6:00 p.m.

511 Floodgate

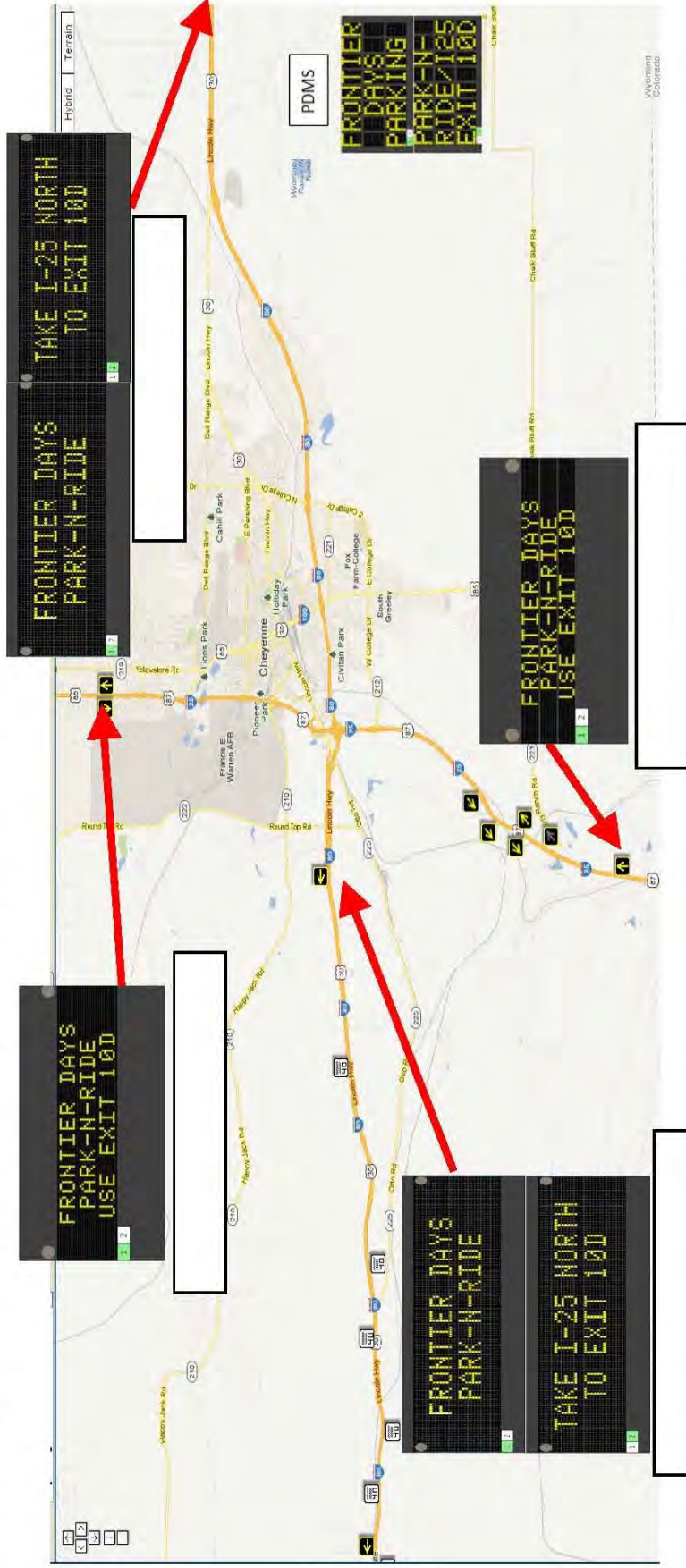
Parking for Frontier Days is open. To avoid main lot traffic use Park-n-Ride located just off Interstate 25 and Happy Jack Road (Wyoming 210) south of Frontier Park. On I-25, take exit 10D, \$10/car, includes entrance into the park.

HAR

Parking for Frontier Days is open. To avoid main lot traffic use Park and Ride located just off Interstate 25 and Happy Jack Road (Wyoming 210) south of Frontier Park. On I-25, take exit 10D. Parking costs 10 dollars per car, and includes entrance into the park.

Contacts: Dave ("Skip") Skipper 630-3463, Roy Sommers 286-4118, Shawn Varland 640-4938 and Bernie Kushnir 631-6283

Scenario[Weekdays] B: used from 09:00 to 22:00: July 21(Fri), 23(Sun), 24(Mon), 26(Wed), 28(Fri) and 30 (Sun)



Hazard alert Radio: Parking for Frontier Days is open. To avoid main lot traffic use Park and Ride located just off Interstate 25 and Happy Jack Road (Wyoming 210) south of Frontier Park. On I-25, take exit 10D. Parking costs 10 dollars per car, and includes entrance into the park.

511 Floodgate: Parking for Frontier Days is open. To avoid main lot traffic use Park-n-Ride located just off Interstate 25 and Happy Jack Road (Wyoming 210) south of Frontier Park. On I-25, take exit 10D, \$10/car, includes entrance into the park.

Website: Parking for Frontier Days is open. To avoid main lot traffic use Park-n-Ride located just off Interstate 25 and Happy Jack Road (Wyoming 210) south of Frontier Park. On I-25, take exit 10D, \$10/car, includes entrance into the park. **Park-n-Ride Shuttle Hours: July 21-29:** 09:00 a.m. - 12:30 a.m **July 30:** 09:00 a.m. - 6:00 p.m.

SCENARIO C

All main CFD lots are closed, everyone must use Park-N-Ride

Update devices for Scenario C only when a Parking Manager calls

Contacts: Dave ("Skip") Skipper 630-3463, Roy Sommers 286-4118, Shawn [Varland 640-4938](#) and Bernie Kushnir: 631-6283

GovDelivery-manually sent

Subject:

Frontier Park – Parking Full

E-mail:

Frontier Park public parking lots are FULL. Use Park-n-Ride located just off Interstate 25 and Happy Jack Road (Wyoming 210) south of Frontier Park. On I-25, take exit 10D. \$10/car.

Park-n-Ride Shuttle Hours

- July 21-29: 09:00 a.m. - 12:30 a.m.
- July 30: 09:00 a.m. – 6:30 p.m. "TIMESTAMP"

Text message:

Main CFD lots FULL, use Park-n-Ride \$10/car. I-25 Exit 10D. "TIMESTAMP"

DMS

I-25 NB MP 1.25:

FRONTIER DAYS PARK-N-RIDE
MAIN LOTS FULL EXIT 10D
USE PARK-N-RIDE

I-80 EB MP 356. 7:

FRONTIER DAYS PARK-N-RIDE
MAIN LOTS FULL TAKE I-25 NORTH TO
USE PARK-N-RIDE EXIT 10D

I-25 SB MP 14.7:

FRONTIER DAYS PARK-N-RIDE
MAIN LOTS FULL EXIT 10D
USE PARK-N-RIDE

I-80 WB MP 373.0:

FRONTIER DAYS PARK-N-RIDE
MAIN LOTS FULL TAKE I-25 NORTH TO
USE PARK-N-RIDE EXIT 10D

Website

Frontier Park public parking lots are FULL. Use Park-n-Ride located just off Interstate 25 and Happy Jack Road (Wyoming 210) south of Frontier Park. On I-25, take exit 10D. Parking is \$10/car.

Park-n-Ride Shuttle Hours

- July 21-29: 09:00 a.m. - 12:30 a.m.
- July 30: 09:00 a.m. – 6:00 p.m.

511 Floodgate

Frontier Park public parking lots are FULL. Use Park-n-Ride located just off Interstate 25 and Happy Jack Road (Wyoming 210) south of Frontier Park. On I-25, take exit 10D. Parking is \$10/car.

HAR

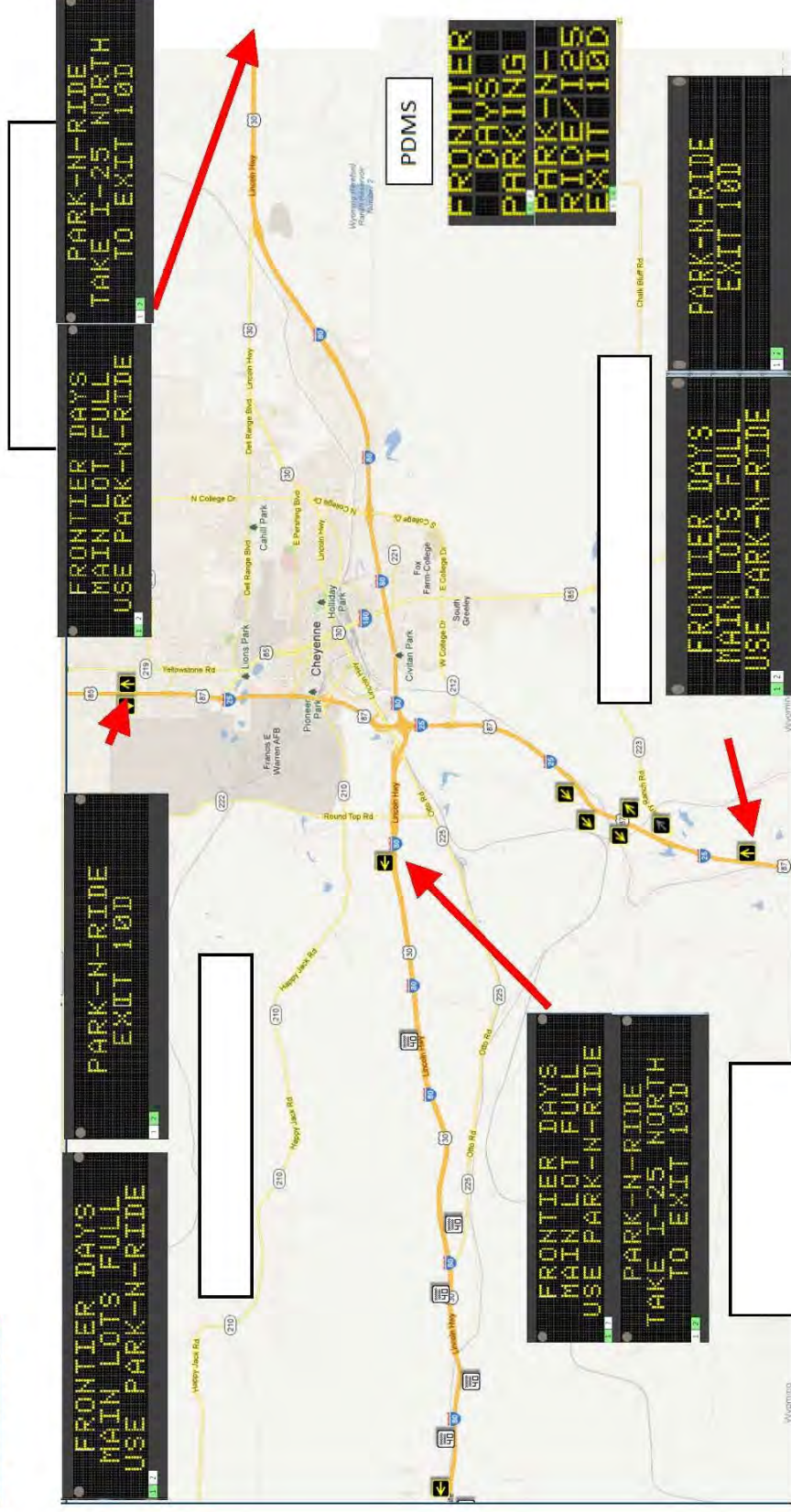
Frontier Park public parking lots are FULL. Use Park and Ride located just off Interstate 25 and Happy Jack Road (Wyoming 210) south of Frontier Park. On I-25, take exit 10D. Parking is \$10/car.

PDMS

LOCATION DEPENDANT UPON AVAILABILITY:

FRONTIER	<u> </u>	PARK-N-
DAYS		RIDE/I25
PARKING		EXIT 10D

Scenario C:



Hazard Alert Radio: Frontier Park public parking lots are FULL. Use Park and Ride located just off Interstate 25 and Happy Jack Road (Wyoming 210) south of Frontier Park. On I-25, take exit 10D. Parking is \$10/car.

511 Floodgate: Frontier Park public parking lots are FULL. Use Park-n-Ride located just off Interstate 25 and Happy Jack Road (Wyoming 210) south of Frontier Park. On I-25, take exit 10D. Parking is \$10/car.

Website: Frontier Park public parking lots are FULL. Use Park-n-Ride located just off Interstate 25 and Happy Jack Road (Wyoming 210) south of Frontier Park. On I-25, take exit 10D. Parking is \$10/car. **Park-n-Ride Shuttle Hours: July 21-29:** 09:00 a.m. - 12:30 a.m **July 30:** 09:00 a.m. - 6:00 p.m.

Appendix F:
Meeting Notes

STEERING COMMITTEE MEETINGS

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

STEERING COMMITTEE KICKOFF SUMMARY

KICK-OFF MEETING MINUTES – JULY 13, 2017

1. Introductions

CFD – Ron Newnum, Security Chair; Tom Hersig, CEO; Buck Reisner, Security Committee

Cheyenne Transit – Renae Jording

LCSD#1 – Merle Smith, Nancy Nelson, Wesley Fuller

Cheyenne Police Dept. – Howard Smith

WYDOT – Joel Meena, State Traffic Engineer; Mark Wingate, Systems Planning Engineer

MPO – Tom Mason, Director; James Sims

Ayres – Ken Voigt, Darci Hendon, John Davis (via video conference)

2. Steering Committee Role

- a. To serve as a sounding board on study activities, provide input on study recommendations and review public meeting materials.
- b. To assist in coordinating CFD transportation management plan recommendations.

3. Steering Committee Project Expectations

Tom Hersig – Enhance Park-n-ride to reduce pedestrian conflicts and future parking on-site needs, make the Park-n-ride more robust for customers and help the City by putting less traffic and parking off of 8th Ave. Wants the best possible customer experience.

Joel Meena – WYDOT will open the closed southbound off-ramp at the old Missile Drive Ramp at I-25 interchange which isn't ideal but will work this year for the Bull lot. Kennedy and Central Ave. has always been an issue. WYDOT has studied a signal warrant at that location and it isn't warranted. WYDOT does do temporary signals at other locations, such as at Devil's Tower for the motorcycle rally, so it is a possibility. Need to keep people/vehicles safe.

Howard Smith – Customer service and safety is a priority. Usually this is a pretty smooth 10 day event with some interesting challenges. Make it safe.

Merle Smith – LSCD role is to help maximize passenger service. Need to eliminate the dents in the LCSD#1 buses from golf carts collisions / limit damage to buses. A bus priority system would be very helpful. Wants to help in the most efficient and effective way. Customer service.

Nancy Nelson – (Park-n-ride supervisor) Hynds Street is narrow, especially when buses and large trucks with mirrors are trying to both be on that road. Wants Hynds Street to operate one-way during CFD. Randall and Pershing – the green time needs to be longer, only 2 buses can get thru now to get off the off-ramp and onto Hynds Street.

Buck Reisner - Would like to minimize 'red shirt' (security committee) and Cheyenne police officer time in the streets (directing traffic).

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

STEERING COMMITTEE KICKOFF SUMMARY

Renaë Jording - Being stuck in traffic is the largest concern for City Transit. Renaë indicated that CFD puts a heavy strain on their transit buses, which are not designed for over capacity passenger loading and perhaps they can help in a different way. CFD Park-n-ride is hard on their smaller buses.

Mark Wingate – Will support Joel Meena

Ron Newnum – Wants to improve customer service. If there is a better way, then let's do it.

4. Review of Project Scope of Services

- a. Match-up with expectations
- b. Review of Daily Data Collection Plans – The group indicated that the last Saturday is by far the busiest day and that data should be collected on that day and that Ayres should be making field observations on that day rather than the first Saturday. The night show crowd could be 25,000 on the last Saturday, plus 10,000 at the park.

5. Next steps/schedule

- a. “Before” one-on-one interviews with Steering Committee - Completed July 12, 2017, interview notes will be sent to each entity for review prior to sending out to the steering committee.
- b. Data collection and observations during Frontier Days
 - i. Intersection traffic counts – Joel indicated he considers it “a necessity” to have both during and after counts CFD intersection counts at Kennedy/Central and Pershing/Randall/Hynds to show what the traffic increase is at these locations is during CFD to allow WYDOT to justify improvements.
 - ii. Aerial photography – will be flown to document parking, traffic and pedestrian conditions at noon, 4:30 and before dusk on Wednesday and Friday.
 - iii. Field interviews – Per Tom Hersig, CFD has CFD sponsors that do surveys just outside the front gate. Tom H. does not want the patrons to get overloaded with surveys. At the Steering Committee meeting it was agreed that Ayres will not do on-site surveys of patrons, just surveys at the Park-n-ride lot. In a follow up email discussion between Tom and Darci it was decided to try and do one night of interviews AFTER the concert let out of patrons waiting in the Park-n-ride line. The concern is that after the night show, people who get off the bus at the Park-n-ride lot will be only interested in getting to their cars and leaving, not answering survey questions.)

Ayres will interview patrons at the Park-n-ride lot after the rodeo on one day and at the Park-n-ride line at Frontier Park after one night show.

CFD will provide Ayres with the previous years' survey results as some questions were previously asked about Park-n-ride. CFD agreed to add some of the Ayres survey questions to their customer surveys.

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

STEERING COMMITTEE KICKOFF SUMMARY

- iv. **Listening Log** – CFD already does an e-mail blast to all ticket holders at the end of show with marketing questions. Darci will get with Tom Hersig right after the Steering Committee meeting to have him add a few of our Park-n-ride questions to his survey.
- c. **Debriefing meeting with stakeholders** – this has been set for August 3, at 9:00 a.m. at the CFD Headquarters conference room. It will be one large group meeting, not one-on-one debriefs. Tom Mason will send out a meeting invitation. Ken and John will participate by video conference.
- d. **Interim recommendations to CFD Board**
- e. **Second steering committee meeting** – September
- f. **Public information meeting** – late September/early October
- g. **MPO TAC Meeting** – November 15th
- h. **Final recommendations for existing Park configuration and Master Plan Park configuration** submitted end of November
- i. **Review of recommendations by steering committee** - December
- j. **Presentations to Plan Commission, City Council**

Discussions:

More green time needed: LCSD#1 indicated that they need more green time at two locations (1) Pershing and Snyder and (2) Pershing/Randall/Hynds. Joel Meena said that he can make that happen this year for the Pershing/Randall/Hynds intersection. It was discussed that the time frame for extending the green should be 5:00 – 8:00 p.m. and 11:00 p.m. to 1:00 a.m. each night of CFD.

{In subsequent discussions following the Steering Committee meeting, Joel forwarded this information to the Ayres team: “We determined there is a pre-empt loop that appears to be working properly, so we enabled PE 4 and tested it in the field, and it appears to be working properly. While there, I removed red lock from phase 8 as it appeared to be calling that phase unnecessarily. I also enabled MOE logging so we can better determine how the intersection is operating and I also verified that it is logging preemptions as well.” – Lee Roadifer, WYDOT Signal Systems Engineer. Joel Meena said, “We {WYDOT} plan to have more green time as requested for the ramp. When traffic stacks half way up the ramp a special routine will kick in to clear the ramp traffic queue.”

Bus Transponders: Joel Meena said that we ought to look at a bus priority system for the Park-n-ride route. This would require each bus to have a bus transponder. Perhaps it could be implemented next year. Joel recommended we ask the FHWA to fund an evaluation experiment as a potential funding source.

Travel Times for Buses: Ken would like a summary of travel times for buses to and from the Park-n-ride.

Egress on Carey Avenue: After the night show, approximately 10:30 pm, the Security Team moves traffic cones on Carey to provide 2 “bump out lanes.”

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

STEERING COMMITTEE KICKOFF SUMMARY

SUMMARY OF DATA COLLECTION CHANGES BASED ON STEERING COMMITTEE DISCUSSIONS:

- Traffic data will be collected by WYDOT at the following 5 intersections:
 1. Central and Yellowstone
 2. I-25 Central Exit NB Off-Ramp (WYDOT exit)
 3. I-25 Central Exit SB Off-Ramp (WYDOT exit)
 4. 8th Avenue and Central Avenue
 5. 8th Avenue and Warren Avenue.

WYDOT will collect this data on Sat. 22nd, Wed. 26th, Fri. 28th, and Sat. 29th for 24 hours at each location.

WYDOT will collect this data again once CFD is over to identify a traffic baseline. WYDOT will process these counts via Miovision and provide the data to Ayres.

- Ayres will collect traffic data at the 10 intersections indicated on the attached map on Wed. 26th and Sat. 29th at the times indicated on the map. This is a change to collect traffic data on the final, busiest, Saturday of CFD.
- Ayres traffic engineers will be doing onsite observations on Wed. 26th and Sat. 29th. This is a change to collect data on the final, busiest, Saturday of CFD.

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

STEERING COMMITTEE DEBRIEF MEETING SUMMARY

CFD DEBRIEF MEETING – 8/3/17

Steering Committee –

Tom Hersig – CFD CEO

Buck Reisner – Incoming CFD Security Chair

Ron Newmun – Current/ Outgoing CFD Security Chair

Renaë Jording – City Transit (CTP)

Nathan Beauheim – City Traffic Engineer

Joel Meena – WYDOT State Traffic Engineer

LCSD1 –Merle Smith, Nancy Nelson, Stephanie Ashworth, and Jim Rudell

James Sims – Metropolitan Planning Office (MPO)

Cheyenne Police Dept. – Lt. Howard Smith & Lt John Gay

Ayres staff – Darci & Barbara; Via Video: John & Ken

AROUND THE ROOM – WHAT WORKED & WHAT TO IMPROVE

Nathan Beauheim–

- good: traffic control at Central & Kennedy. Had 4 officers there to make it work. Generally happy with traffic plan and implementation.
- N/S signal timing at Pershing & Central were changed, but perhaps wasn't needed as the signal logs indicated they were only implemented a few times.
- Improve: Randall & I-25 signal issues (timed out).
- Communications – both making a decision and getting the word out. Communications – specifically, how to get the message out that lots on park are full. He did see messages on I-25 saying the lot was full and directing to park n ride.

Discussion

Ron – has not used but has an option for radio station.

Lt.Gay – thought about suggested using the app for 'Real' time blasts. Ron – discussed that it could be an option going forward.

Tom – park n ride was utilized perhaps more than in the past. They send email blasts 2 days before the day about park n ride. Could look at app ad beacon system, especially to the north, to be able to ping people.

Ron – this was on the list for this year but didn't get that far for a beacon system blast to get information out about parking.

Darci – looked like the only email on park n ride was with concerts...? Tom – might double check other items, patrons should have received a first blast before-hand, then a follow up before the night shows.

LCSD - Stephanie Ashworth

- Good – The ability to change the bus route from using Pershing/Randall to using Snyder-24th-Missile when there were issues. Having that plan in place was good.

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

STEERING COMMITTEE DEBRIEF MEETING SUMMARY

- Hardest – right turn movement at corner of Snyder and 8th because of cars parked at intersection. They had one incident with a bus clipping an SUV on the corner and couldn't make the turn because a large truck was headed north. Even 5 more feet of 'no parking' would help the buses.

Discussion

Lt. Gay- consider doing a traffic pattern only at egress where vehicles can't come north all the way to 8th Avenue, they would have to turn east or west on 6th and/or 7th Street. This would require more manpower to stop traffic from continuing north and getting to 8th Avenue.

Jim Rudell – conflict problem with cars turning left onto 8th from Snyder and cars turning left from Snyder onto 8th - buses need the center turn lane or an extra 5' on both sides of Snyder (push parking on Snyder south by 5') to make the turns easier.

James Sims–

- Issue – took an hour and half to get off property at park n ride on Wednesday. ... unsure on exact time but it took a while to empty it.

Discussion

Ron – Wednesday is normal for those lines to be longer because people aren't staying at the park property longer after the concert.

Tom – why does it takes so long # buses or loading?

LCSD – Big thing was loading all four buses and pulling out with new buses following them in all at once so they reduce pedestrian conflicts. Also being stuck in traffic can be an issue.

James – maybe there's a way to load 8 buses instead of just 4 at a time....?

LCSD- that could be dangerous at current location, cannot fit that many buses in the loop but unsure about... loading buses on Dillon? Would that speed it up or actually slow it down? Plus it could increase pedestrian conflicts.

James – if people are waiting minutes and hour in line people aren't going to use it next year.

Tom – might need to rethink where the buses are. Let's come up with potential changes to get people out of the Avenues because there are so many issues in the Avenues.

Ken – look at opportunities that will help in the long run and not create a snowball effect somewhere else. Look at overall solution, not just tweaks.

Ron – concern with street loading because of other vehicles that are loading in that same location (taxis, Uber and generally lots of people on the sidewalks. Keep that in mind.

Ken – overall, doing a good job using limited resources at crunch time.

Lt. John Gay –

- By and large things went smoothly. During daytime they had good luck to have extra officers that were given traffic control training right before the event. This may not be the case in the future.
- Didn't work – rodeo exiting traffic volume getting them away from the park. There were conflicts with buses stopping with the arm out and flashing red lights, which means "do not pass". This caused delays as vehicles didn't know if they ought to pass the bus. [Following the meeting Merle Smith confirmed that LCSD buses do not have to use lights and arm when they are being contracted out for non-school activities. Next year they will not use the lights and arms when loading buses on the curb.]

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

STEERING COMMITTEE DEBRIEF MEETING SUMMARY

- If there was a smoother constant rotation between buses going in and out and a few cars at a time that would be better. Example – Wednesday night he was out there pushing as many cars through as many as possible, then moving the buses to keep a steadier flow. Might have added a little time on buses but not much. If 8th gets backed up with cars then nothing can move, so sometimes the cars need to take precedence over the buses. Priority is clearing traffic, at egress we need continuous movement.
- Communication with bus locations could help.

Discussion

Nancy (LCSD) - they're trying to get that smoother movement but buses get stuck in traffic, etc.

Lt. Gay- need to communicate priorities to everyone so everyone is on the same page.

Darci – pedi cabs, how did that go this year?

Lt. Gay – better, but need to communicate again. They need to stay off grass and sidewalks.

Need to follow traffic rules and operate as a car.

Nancy – on the corner of Dey & 8th she saw pedi cabs coming up Dey and parking on the left side of road coming in front of traffic and was concerned for safety.

Lt. Gay- he sent an email to the owner and gave them an alternative location so they could try to remove the conflict.

Ken- saw one go thru a red light.

Lt. Gay- need to explain the rules again. The next go around they'll start giving tickets.

James- Were there vehicle crashes?

Lt. Gay- a couple of disabling accidents further down in the Avenues, none that he was aware about on 8th Ave. Carey & 8th (turning from Carey onto 8th going west). Restricted right hand turn there for trailers because they have to take 2 lanes of traffic to get their trailers to go around the corner. They had to issue a number of tickets there. Trucks and trailers there affected other traffic.

Ron – they were encouraged to go out on Hynds but they didn't listen.

Tom – think they forgot signage at C lot telling them which way to get out and go to C lot.

Darci – also saw that with buses and Coca Cola truck trying to make that turn.

Nathan – when they rebuilt that intersection they tried to make it better for pedestrian visibility – pillars are in the way of seeing a pedestrian on the corner. Made the radius as big as they could but still keeping pedestrian visibility.

Lt. Gay – not sure what the solution is there. Pedestrians west of the bus circle people were jumping out into traffic to get across 8th Ave. The pedestrians jumping out there are causing back-ups and ripple effect, when one pedestrian goes across the road many more follow. Need to either make a restriction or get more security team keeping pedestrians on sidewalk until directed to cross the street.

LCSD, Jim Rudell –

- During the day it worked pretty well.
- At egress it bottlenecked.
- Hynds would be nice to load from and exit without turns. But unsure how that would work...
- Pedi-cabs caused conflicts in the Avenues by pulling out in front of buses.
- They had security directing buses and in one instance they were directing people in between buses which was a concern.

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

STEERING COMMITTEE DEBRIEF MEETING SUMMARY

Discussion

Ron – they'll address that conflict because they don't want that to happen.

Jim – in the circle it only happened a couple times that pedestrians crossed between buses. But on the road it was concerning.

- On Wednesday when Pershing was shut down to one lane at I-25/Randall they had to go down to 24th. Why was Pershing down to one lane?

Discussion

Howard – gridlock because of Pershing south traffic, too much traffic at the light/intersection, people were parking on the roads all the way to Randall.

Jim – got stuck at that off-ramp while driving a bus. Perhaps better communication would help.

Howard – could have done better telling officers at the intersection that buses were a priority and needed to be moved through.

Ken – observed that and the whole thing was gridlocked with no place to move.

Jim – could have pushed buses first then let everyone else move might have helped a bit.

James – when that went into gridlock for minutes/hour that was the only place he saw gridlocked, all other roads seemed to be working fine. Maybe change bus route?

Howard – they were there not just because of the signal timing issue, but more because of the amount of people leaving the Avenues. Officers were in place directing traffic there before the signal malfunction.

Jim – exiting the bus loop was phenomenal. The only thing we could see improved a bit would be shutting down traffic on 8th to get buses into the loop was a bit quick, sometimes the buses hadn't turned the corner from Hynds to 8th and they were shutting down cars on 8th. Officers could wait to close traffic off until the busses are queued up to pull into the loop.

Joel Meena –

- Saw quite a few cars following the buses onto Missile Drive/I-25 SB off-ramp. Maybe add some signage.

Discussion

Nancy - informed drivers that that might occur.

Jim – backfill that area on the end of the U-turn, even 5' area, to avoid breaking that concrete (off I-25 onto Missile Drive ...).

Joel – watched the light at Pershing/Randall/Hynds on Friday night and didn't see issues but that was earlier in the evening. He was aware of equipment failures. They are upgrading signals city-wide and those will be running by next years CFD. That'll have better communications on failed intersections right away so they can be fixed. City maintains the signals, the TFC will be able to communicate to WYDOT and they can contact the City to fix. He didn't witness stacking on the interstate.

Nancy - buses were backed up all the way to the interstate on the I-25 NB off-ramp at Pershing/Randall/Hynds on Wednesday and Saturday (29th) at night show egress times.

Joel – need to stop traffic ahead of time so there's no stopping/ backing up on interstate.

Joel – FLAG for WYDOT to be on the hook to avoid that, backups onto the interstate are a failure and unacceptable.

Jim – could possibly help traffic to move to other routes.

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

STEERING COMMITTEE DEBRIEF MEETING SUMMARY

Nancy – getting stuck on Pershing can be an issue. Buses using 24th Street were making the loop faster than buses using Pershing, but you never know about trains coming and slowing that route down.

Jim – look at a new route altogether.

Joel – DMS signs were not showing correct messages. Need to ensure they're good messages and direct people to park n ride.

Ron – correct to have people to park n ride instead of no parking in park. Joel – what didn't work will be addressed sooner than later because they will be replacing and upgrading those signal systems.

Lt. Gay – will the signals have opportunities for remote operations? Joel – yes, WYDOT can give access to City. Lt. Gay – that would be very helpful!

Lt. Gay – Would like a traffic signal control panel, with an officer to change the signal.

Joel – Central/Yellowstone, Central and Warren/8th, could be good spots for officer control buttons. CPD should list places where they want to do it, and then WYDOT could elevate those signals to be critical and set it up and do training, etc for those locations ahead of time.

Nathan – on his to-do list it would be good to do surveillance and communications out there at park n ride. Right now the com. almost nearly works on a good day.

Joel – almost have to look at another route, maybe with a portable DMS saying 'fastest route' etc. to move people. If Pershing/Randall/Hynds is an issue get a variable message board to direct people a different way to get to I-25 instead of using the Pershing/Randall/Hynds intersection.

Nancy – tried to tell people directions to get out of Park N Ride lot quicker by directing them left (west) out of Park N Ride lot to Roundtop Road interchange with I-25.

Joel – need enhancement of on-street traffic controls and message boards.

Tom Hersig –

- Danger areas for CFD – he leaves at the end of every night show and tries different routes. He liked that the Avenues traffic flows all the way south to 24th Street instead of Pershing to get to I-25.
- Need to get ahold of people coming out of C lot and direct them to go east as soon as they leave the park as traffic on Central is much better (avoid the Avenues). Going down Central east has no traffic!
- Most people only come to one night show so you have new drivers each night, they aren't learning from the previous night.
- He also is very concerned with the lack of street lighting on 8th Avenue and can't see pedestrians or police officers, that is a major safety concern.
- Want to figure out a robust shuttle service. They will continue to have higher demand for parking.

Discussion

Lt. Gay – Uber drivers were directed by police officers on to 8th but also let them be in places so they were able to keep moving.

Tom – that's a good system. Uber brought additional drivers from Fort Collins to help meet demand. Traffic on 8th coming west – where were they going? CPD- parents picking kids up from the park.

Ken – there were a lot of people on 8th waiting to be picked up.

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

STEERING COMMITTEE DEBRIEF MEETING SUMMARY

CPD- caused additional confusion for traffic. Sidewalks were full on 8th.

Tom – need to figure out how to remove traffic from Avenues, or at least not add any additional.

- Other concern at the park – sponsor lot needs a priority to get out of lot and onto 8th since they are paying for the show. They need a person to help them get out of the lot (that’s the lot with ADA on 8th Avenue.)
- Uber was a sponsor, they coordinated with them beforehand as to where to park along the curb. They also coordinated with security.

Lt. Gay – long term, if we could funnel peds further to the east (Central/8th) for pick up/drop off for other people and parents that could help, move people so they aren’t all right in front of the park at egress.

Howard –

- Great event!
- Concerns – every night pedestrians crossed into street because sidewalks are too small. He would do an island for buses, Uber, etc. and put a boulevard area for pedestrians along 8th Avenue. Big concern with people walking out on the street and bus conflicts.
- Overall really good job though! Very few problems for CPD. Communications could be improved.

Discussion

Ron – there’s a sketch/notes from the recent master plan discussions regarding that option of a larger pick up lane on the north side of 8th.

Howard – the (ADA/sponsor) parking lot was never completely full when he saw it.

Buck –

- Received several complaints on rodeo egress at Central/Kennedy. The right lane to turn from Central to Kennedy wasn’t blocked off. Timing could have been part of it. Need a defined cone pattern on Kennedy.

Discussion

Lt. Gay – they do split traffic there on Central but have openings and can have people jumping in and out. Could be helpful to have an additional messaging sign there.

James – V10 gate guard was pushing vans out left to go against traffic going north on Carey when there weren’t supposed to be any left turns onto Carey. Might have been a tour bus...

Lt. Gay – Kennedy was a one-way every night for egress. If you came out of V12 you had to go north. After rodeos that took a little longer to get people out. 8th & Carey was quicker. But everything was done by 4:30/4:45 at the latest each day. At night it should have been an identical traffic pattern as rodeo egress or added a 3rd lane going out (right only, either, left only).

Tom – could that intersection have absorbed C lot traffic if that was directed north to Kennedy rather than south to 8th?

Lt. Gay – if C lot was sent north it would increase time and make it a lot more congested. This year going south out of C was quickest.

Ron – did Ayres look at Carey/Kennedy and Kennedy/Central?

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

STEERING COMMITTEE DEBRIEF MEETING SUMMARY

Ken – traffic was backed up on Kennedy, change to one-way worked really well. CPD had it under control.

Ron – keep 3 lanes full length instead of 2-3-2 lanes.

Ken – noticed some weaving under current condition. Need to look how that would work from a safety standpoint as well as getting onto Central.

Ron – might be simpler to have the 3 lanes all the way thru. The east curb line on Kennedy isn't consistent and people park on the east side. Maybe the curb line could be changed to help out?

Ken – never saw 3 lanes where center was forced to make a left or right. It made a lot of sense the way it was being operated. Kennedy moved pretty well with the number of vehicles.

Ron – the only question is whether they change Carey, if patterns on Carey change they may need to change Kennedy patterns also.

Ken – Carey was operating pretty efficiently. Saw officer at 8th and Carey making N/S the priority.

Darci – Are U-turns an issue by golf course on Central (heading west) to get onto Kennedy? Was that an accident area?

Lt. Gay – he doesn't think they've had issues, they've allowed/encouraged that U turn away from the intersection.

Ken – studies show that U-turns are safer than a left turn.

Ron –

- Covered most of things he was going to bring up. Looking forward to the perfect solution.

Nancy –

- Securitas did fantastic at Bull parking lot. Also, guys stopping pedestrian traffic to allow buses to get out across 8th was great. Years ago – used to load special needs inside the sponsor lot and would be an option to get them off the street, but getting them out of the lot was the issue and why they moved back to the street.

Rena –

- This year was the best for them but only had one bus. Security assisted so that the bus could get out on the street. No complaints.

Merle (LCSD) –

- CFD contracts services for the buses. Ron has done a really good job debriefing after CFD, but would very much encourage this scale of debrief in the future (all parties at the table).
- They will continue to do changes (test runs) each year but go thru an entire CFD knowing there's an issue but have to wait till after the 10 days to make the change for the next years show. Could they consider a mini-brief / meeting during CFD if they need to make a tweak?

Ron –

- nobody's brought up the volunteer lot (Central High School).

Discussion

Darci – no issues that she saw at Central lot, but saw jams and Kennedy, Carey, Hynds at end of parade and saw volunteer buses stuck in that. They would have needed to bypass that and go onto Hynds and drop off in front instead after parade maybe.

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

STEERING COMMITTEE DEBRIEF MEETING SUMMARY

Nancy – double parking by horse barns and trailers made it so sometimes the buses couldn't get thru back there. Maybe have a little more security in that lot to help keep that area clear (by registration).

Ron – contestants stop to register, double park their trailers, then unload their horses, then leave.

Tom – should they make things more compartmentalized to keep people on one route? Thinks it might be beneficial to shut down roads within the park.

Ken – probably would help eliminate conflicts within the park.

NEXT STEPS – Committee members should review the one-on-one comments and get us feedback. We'll refine our top observation list and work on short-term improvement recommendations. We'll send the aerial photos on Monday (8/7). Joel will get the WYDOT camera counts to us next week. Ayres won't have intersection traffic count data available for 2 weeks.

MISCELLANEOUS COMMENTS BEFORE & AFTER –

Renea – AB campground bought an old City bus and was running from there to park for 2 days – then the bus broke down, that is why Ayres saw two white buses. Next year the CTP busses will be purple and more easily identifiable as a City Transit bus.



Ron – look at opportunity to create pick up/drop off at Lions Park for year-round use.

Cheyenne Frontier Days Transportation Study

Steering Committee Meeting Notes
October 11, 2017 at 9 AM
CFD Board Room at CFD Headquarters

Mark Wingate, WYDOT
Jeff Mellor, WYDOT
John Gay, CPD
Lt. Howard Smith, CPD
Tom Mason, MPO
Nathan Beauheim, City of Cheyenne
Buck Reisner, CFD
Nancy Nelson, LCSD#1
Jim Rudell, LCSD#1
Tom Hersig, CFD
Bill Berg, CFD

Staff – Barbara & Darci, via video: John (JD) & Ken

1. Opening

Ken - Current project status. Review of visuals. Peak pedestrian and vehicle movement charts. Basic rule of thumb is to separate conflict points. Need to get busses away from main gate but still make it convenient for users. Main recommendation is to move Park n Ride off of 8th and on to Hynds.

Tom M – Parking spaces table handout: these numbers show available spaces, correct? Darci – the table lists total number of available spaces. All the aerials show availability in every lot during all flights, but it's likely difficult to see on the ground. Avenues is mostly full. Bull lot lists 1,500 available spaces but could add more if it were striped. Tom M. – are we discussing ways to maximize the parking usage in these lots? Bill – C lot has a little overflow on south end reserved for sponsors so some nights it isn't full. John – is there data available? Bill – no. Tom H doesn't think anyone has ever been turned away. Buck – no one was turned away from C Lot this year because it was full, it was never full.

Ken – can look at two things – how cars are parked and how to direct people into open spaces when people leave. Need to provide information to people on capacity. Could communicate via app, three-way message board – anything that is real-time information. This is where the command center comes into play. Need a communication protocol with a command center. Tom H – they are trying to train people to use park n ride. They want to be careful encouraging people to park on property so they leave room for expansion. On park parking is not a big goal of CFD. Ken – new people will want to park as close to front gate as possible. If we can convey parking lots are full (or full to CFD's comfort level) they might be willing to go to park n ride. Tom H – concern with staffing for command center. Maybe thinking about pre-paid parking only for C lot. Darci – the command center is more to make sure things are happening properly on schedule (i.e. moving barriers and cones on Kennedy). Buck – most of the Kennedy changes are

up to the City to do, not CFD. John – happy to make changes if needed; it does seem to change day by day as needed. He acts as the command post during the day and makes sure officers have what they need and that the traffic control gets set up properly.

2. Discussion of areas for improvements

a. 8th Street Pedestrian/Vehicle Conflicts

Ken – look at recommendation of closing off Dey – Hynds section of 8th Ave.

Tom H – CFD was looking at the Hynds bus drop off. They are willing to look at it but right now it's not a good short-term solution. Bill – all grass, overhead power lines, camping for carnival, generators located in this area, etc. make it a very ugly spot to let customers off.

Ken – looking at master plan with bus loop on Carey. They already have major conflicts. Unsure if this is the best plan. Mid-term might be better looking at Hynds because of fewer conflicts and efficiency. Could also look at relocating bus loop on 8th further west. (8th ave option 7) would have staging along 8th near the gardens. No one will walk as far down 8th as Hynds, but moving buses to the west will at least separate people from going into the neighborhood and bus loop. Bill – this is a good option they hadn't explored previously. Clarification: The park n ride riders would leave the park via gate V1. Darci – also suggesting Hynds go north one-way only from Pershing -8th to make sure we're not limiting too much. Tom H – horse trailers are not allowed to enter V12, they go to V10. Making Hynds one way all the way from Pershing to Kennedy would work for CFD. Bill – thinks this could be a good solution, but would they want to make Hynds one-way all year. Nathan – his preference would be to make it year-round rather than one week a year to help people and the training curve. Bill – changing to one way wouldn't be a huge issue since they can only park on east side and have to come north anyway. Nathan – need to do an ordinance change to make that happen. Would McComb be then a one-way going south? People closer to 2nd would support the one-way, unsure about others further away. Tom M – could current loop be utilized for something? Jim – that would ideal spot for special needs buses. Ken – keep in mind primary recommendation is to close portion of 8th. Special Needs bus would come north on Hynds and east on 8th and turn left into the existing bus loop to load/unload. John – would this closure of 8th be for all of CFD or just egress? Ken – the whole event otherwise it would be too confusing. They would still have access for buses and have one lane circulating to allow people out of the neighborhood by making right turns onto 8th. Ken – at least with this option you half the pedestrian conflict. Bill – likes that this would put guests closer to front of house than the Hynds option.

Ken – we'll put some detailed drawings of operations for that. Temporary / permanent solution.

b. Kennedy Road operations

Ken – other items: May look at widening Kennedy where it narrows for the no parking between the park access and Central Avenue. This would allow for three lanes out with one lane dedicated to buses. John – could cause conflict to have left lane bus turn lane

because the turning radius of bus vs. vehicles on the right (proposed middle lane). Ken – we'll look at the radius. John – look at center lane being the bus lane since there is additional space there. But then buses have to get back into left lane to get onto I25. Nathan – may need to shorten the median there to allow for the dual left.

c. Intersection operations

Ken – other recommendation was with temporary signals. Central & Kennedy in particular. JD – costs taken from company that does it for Sturgis was approximately \$10,000 per week per intersection. Darci – recommended for two places: Kennedy & Central and Carey & 8th. Jeff – Montana company does heads over both lanes, but might be more expensive. JD – price quoted includes ped heads and detection. Tom H – may be a lot of money.

Ken – Randall Ave: closure of one way at the intersection of pershing/hynds for additional efficiency. Tom M – blocked off for peak? Ken – recommend full 10 days. Nathan – thinks this will cause issues other times of the day especially from people coming to work and going home downtown. Bill – thinks it's just one-block. Tom M – people going westbound on Randall could turn on Snyder, Dillion.... Ken – huge gridlock issue right now. Nathan – can mitigate all of it with money.

Cashiering at lots – could improve efficiency. Cashier in single lane with multiple people at one time at vehicles so they don't have to go two lanes back to one and keep the flow moving. Some fine tuning would help avoid back ups. This occurred at mid-day. Bill – during parade days it backs up because they have to close Carey to allow horse & carriages back in. Bill – looking at moving rodeo ahead ½ hour to 1pm start (12:30 start now). John – could cause more issues with post-rodeo pre-show traffic egress and night show ingress issues for police. Darci – what about creating separate gate on Kennedy to allow wagons back into the park opposite of the Absaraca entrance and keep those folks off of Carey. John – look at who is least inconvenienced by the changes. Bill – traffic was not considered with moving of rodeo time. It was more for downtown businesses so people can stay downtown and have lunch before coming up to the park and allow rodeo people to stay on park and maybe have dinner at park before leaving. Years ago had 1pm start time. John – more of a learning curve for the public then. Tom H – if they did move them closer together and have people stay an extra hour but now leave once night show is parked. Nathan – but if they don't need the huge outbound rush traffic plan they can keep both directions on Kennedy. Buck – still going to get people into the lots. Bill – just need people directing to fill in empty spots.

d. Transit and Park N Ride operations

Ken – WYDOT made some signal timing changes that seemed to help. Another consideration would be to use 'pre-empt' on the buses. Each bus would need transponders. Nathan – do buses have AVL? Jim – they use Zonar for GPS, looking at changing it over to a new company. Nathan – leading edge system is getting AVL to talk to signals so the buses would geofence. This would be done by communicating with central signal command and not require equipment on each signal. Jim – system might be capable, but haven't explored it. Need to look at cost per bus to activate the

additional use. Tom M – could it be set up for the 10 days instead of permanent? Jim – probably. Jim – if there was central command that would be great to view where buses are. Darci – could be really helpful to see them and move the buses on routes when there is congestion rather than have to radio and wait. Bill – looking at only a couple traffic signal lights right now that would need the capability. Big concern is more with mass exodus at night egress.

Ken – new operations for Bull Lot (diagram) would remove some of the pedestrian and bus conflicts. Darci – the new configuration would keep people away from walking in front of buses. Survey respondents also want multiple loading spots and pedestrian corridor. This configuration will work even at a different park and ride lot. Nancy – need Securitas at end of lane so buses can get out and make that turn at egress. Jim – during the day TA's (LCSD#1 staff) can assist at lot, but at major egress additional bodies would be needed, such as Securitas or CFD volunteers.

e. Communications

f. Alternative site for Park N Ride – **Confidential**

g. Cowboy Triangle –

Darci – Transit buses are small but have equipment for ADA. Consider moving school district buses to handle cowboy triangle and have CTP be ADA only. Also can't rely on CTP fleet capacity. Rene Jording was in favor of that plan. Nancy – if they don't need special needs bus they could potentially put that driver in a bus on the triangle. LCSD#1 dedicates 36 buses to CFD. Darci – also opportunities to share information on kiosks, etc. Tom H – could alleviate some of the tokens issue. Darci – would need to buy tokens for CTP ADA buses only. Darci – need for cash available was an issue for park n ride lot and CTP buses. Jim – need to share information with people about the air show because there was confusion as to where to park to get on a bus to get to the airshow.

Nathan – on cowboy triangle, depending on how buses come downtown they could potentially use the Cox parking garage since it isn't highly utilized in evenings (mostly during the day parking). 900 vehicle capacity.

h. Other –

Ken - Gateway sidewalk to frontier park at 8th/Carey should be widened because of bottleneck. Street lighting at 8th & Carey and along Kennedy needed. Many people walking in the grass or in the street along Carey, Kennedy and Hynds. Need to make some improvements.

Darci – spoke with CLFP and they will only upgrade street lighting to LED when lights burn out and need to be replaced. Nathan – might also be an opportunity to do a demo / experiment for the 8th Ave. corridor. Darci – temporary lights priced out as well. These high mast lights with generators are used by CFD at the bus loop and at Bull Lot. We need more of them.

Darci – she was surprised how many people were crossing Kennedy and Central intersection and no sidewalks or crosswalks there.

Darci – dashed striping at warren & 8th possible? Nathan – won't work. Tom M – would work for 95% of people. John – constant problem for them.

Ken– survey: 49% of respondents were first time visitors. 25% stayed overnight. Tom H – ticketed is around 200,000 which is the better number to use as totaling counts from all activities (parade pancake breakfast, etc results in double counting). Ken - \$28 million dollar impact.

Darci – who makes the call on WYDOT signs to switch to saying all lots full use park and ride? Buck – security does and calls WyDot to make the change. CFD will place that call when lots are not full but approaching full as cars are still coming while that change happens. John – maybe additional signs could be added before people get on to carey to get people out of that flow (sign to be placed on central). If CPD gets an additional message board they might be able to use it there during the event. Potentially place by the ramp or by governors mansion.

Darci – are all portable signs rented or someone has them? Nathan – they are using ones they already own. But they do not have the ability to change the message remotely.

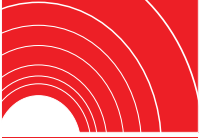
i. Schedule

Ken – we have an aggressive schedule. Looking at draft to the MPO on 20th. Need comments back on the 27th. Public information meeting on November 1st at Kiwanis Community House. November 15th technical advisory committee meeting. Tom M – open house format from 5:30 – 7pm. Darci – thought about playing some videos from traffic cams during the event. Tom M – displays need to be approved by CFD and MPO.

3. Next Steps

- Draft report to be submitted to Steering Committee around October 20th
- Public Open House on November 1, 2017 at Kiwanis Community House, 5:30 – 7:00 p.m.

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SIGNAL
TECHNOLOGIES

SQ3TS[®] System

PORTABLE TRAFFIC SIGNAL SYSTEMS



NEMA TS-5 TYPE TR1 PORTABLE TRAFFIC SIGNAL SYSTEM

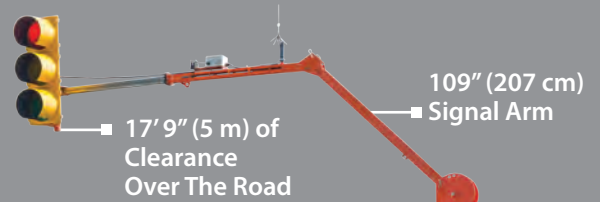
The SQ3TS Portable Traffic Signal System combines fast efficient setup with highly reliable performance. The multitude of modular add-on components makes the SQ3TS the most versatile portable traffic signal system available today. The SQ3TS is the smart choice for a wide variety of short and long term traffic control applications. From a simple one lane bridge repair project to complete intersection control, the SQ3TS has the attributes to provide safe efficient traffic control.

The Sq3TS Portable Traffic Signal meets and exceeds NEMA TS-5 specifications for Type TR1 PTS.

SQ3TS® Portable Traffic Signal

SPECIFICATIONS

Signal Lamp	12" (300 mm) diameter LED
Signal Arm Extension	68 to 109" (173 to 277 cm)
Solar Charge	440W min
Power Source	12V / (16) 6V batteries
Tow Height	89" (226 cm)
Trailer Width	85" (216 cm)
Trailer Weight	3000 lb. (1361 kg)



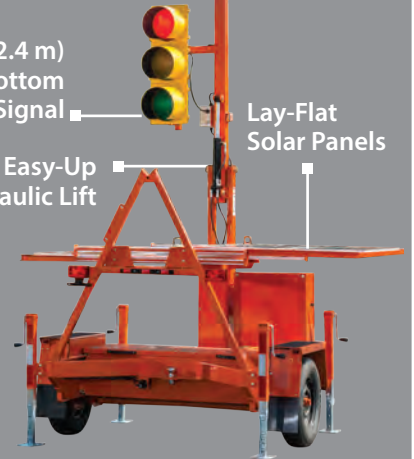
SQ3TS PTS FEATURES

- Bulletproof 900 MHZ radio communication
- True green time extensions
- Conflict monitoring
- Fast efficient setup
- Tandem tow signal trailers
- Highly visible 12" (30.5 cm) LED lights
- Adjustable overhead mast arm
- 180° rotating signal heads
- Fixed time, traffic actuated and manual operation options
- Controls up to seven traffic phases with eight signals
- Battery powered with solar & 110 volt charging
- Meets NEMA TS-5 specifications for Type TR1 PTS.

8' (2.4 m) to Bottom of Signal

Easy-Up Hydraulic Lift

Lay-Flat Solar Panels



AVAILABLE OPTIONS

Remote Management System Provides information on location, operating status, battery voltage, etc.

Interface Module Allows signal to operate in conjunction with a standard street corner control cabinet.

Pre-emption System Recognizes emergency vehicles and changes signal status as programmed.

Back Plates Provide an additional background around the signal head to enhance visibility.

Traffic Actuators Facilitates traffic actuation via motion sensor or true presence video detection.

Flagger/Pilot Car Module Allows flagger or driver to control signal status with built in safeguards.

EASY TO DEPLOY

The SQ3TS Portable Traffic Signal is equipped with a one-touch, easy-up hydraulic lifting system to make deployments simple.

7' 6" (2 m) Transport Height

NEMA 4 Cabinet Enclosure



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SQ3TS[®] System

OPERATING POSITION

Signal Heads per Trailer	2
Stabilizers per Trailer	4
Solar Panel Orientation	flat
Indication Type	12" LED
Signal Trailer Footprint	85" x 85"
Upper Signal Arm Extension	68" - 109" (measured from end of trailer)
Signal Height (Lower)	96" from bottom of green to road surface (per MUTCD)
Signal Height (Upper)	213" from bottom of green to road surface (per MUTCD)

TOW POSITION

Tow Length	279 ¼"
Tow Height	88 ¼"
Trailer Width	85"
Trailer Weight	2995 lbs. per trailer
Tire Size	ST205/75R15 LRC
Trailer Brakes	standard
Tandem tow	yes

SIGNAL SETUP

Signal Head Type	Aluminum
Visor Type	Poly (black)
Face Color Options	standard black / optional yellow
Lamp Size / Type	12" LED
	<i>back plate option</i>

POWER SUPPLY / SETUP

Operating Power Source	12 VDC (16 6-volt batteries)
Battery Capacity	30 days of continuous use @ 72 °
Charge	110-volt on board charger
Solar	minimum 440 watts solar collection
Lift Type	hydraulic

AVAILABLE OPTIONS

Remote Monitoring System | provides location, operating status, and battery voltage.

Wireless Knockdown | Allows the system to operate with a standard street corner controller.

Back Plates | Provides an additional background around the signal head for enhanced visibility.

Flagger / Pilot Car Module | Allows the flagger or pilot car driver to control the signal system with built-in safeguards.

Traffic Actuators | Facilitates traffic actuation through motion sensors.

Intrusion Alarm | Provides an audible alert in the event a vehicle violates a red indication.

SQ3TS® System

Programming Options

Communication Type	radio - quartz - cable	fixed time - quartz	cable - hardwire	radio
Actuation Option Available	N/A	no	yes	yes
Actuation Method	N/A	N/A	microwave sensor / video detection	microwave sensor / video detection
Min / Max green time available	N/A	no	yes	yes
Dayphase option available	N/A	yes	yes	yes
Green time extensions available	N/A	no	yes	yes
Maximum number of signals per setup	8	8	8	8
Maximum number of phases per setup	7	7	7	7
Hand controller option available	yes	yes	yes	yes
Data logger	yes	yes	yes	yes

Applications

Communication Type	radio - quartz - cable	fixed time - quartz	cable - hardwire	radio
Flagger Applications	yes	yes	yes	yes
Roadside Utility Repair	yes	yes	yes	yes
Construction Projects	yes	yes	yes	yes
Disaster Relief	yes	yes	yes	yes
Parking Lot Access	yes	yes	yes	yes
Sporting Events	yes	yes	yes	yes
Fairs and Festival Traffic Control	yes	yes	yes	yes

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SQ3TS[®] Component Options



MESSAGE BOARD INTERFACE SYSTEM

Horizon Signal Systems can wirelessly interface with most major brands of message board to provide motorists with an advanced warning of upcoming traffic signals. Customized messages such as "Red Signal Ahead" are activated by signal status and indication changes.



ADVANCED REMOTE MONITORING SYSTEM

The Advanced Remote Monitoring (ARM) System allows an authorized user to monitor an entire fleet of Horizon Portable Traffic Signals for location, battery voltage, operating hours and system status. The ARM system will send alerts if a signal is moved, battery voltage is low, or a system fault is detected.



WIRELESS KNOCKDOWN SYSTEM

The Wireless Knockdown System allows the SQ3TS System to be wirelessly operated from a street corner controller. The System allows for easy signal substitution of a permanent signal in the event of a knockdown or traffic pattern reconfiguration.



CLEARANCE TIME EXTENSION

The Clearance Time Extension System ensures all vehicles have cleared the zone before allowing the next programmed green interval. If traffic has not cleared the zone, the Clearance Time Extension System will increase the programmed red time until all vehicles are clear.



GENERATOR ENCLOSURE

The Generator Enclosure provides backup power for Portable Signal Systems operating in areas with limited solar collection capabilities. The unit features a lockable coupler to allow for storage on the rear of the SQ3TS Trailer to keep the unit out of sight. The enclosure is designed to be used with the Honda EU2000i generator.



RAILROAD PRE-EMPTION

The Railroad Pre-emption System preempts the active signal program in the event of a train intersecting the work zone. The system is activated by the railroad crossing gate controls via a hard-wired or wireless connection. All signals within the system revert to a solid red indication at the same time the railroad gates are activated.



WAIT TIME / FAULT DISPLAY

This dual-purpose component displays current wait time until the next green indication, and also displays an alert message in the event of a signal fault. A small changeable message sign is installed on the SQ3TS trailer and interfaces directly with the Horizon multi-phase controller to display data in real-time.



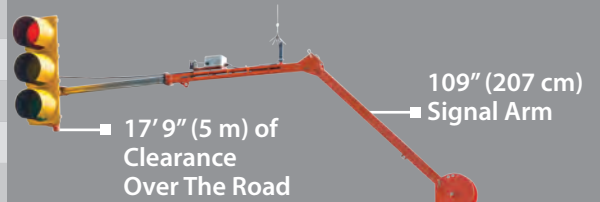
TURN ARROW SIGNAL HEAD

MUTCD compliant turn arrows can be added to the SQ3TS Portable Traffic Signal System. This addition makes for easy, safe traffic flow through intersections during construction, annual events and seasonal traffic.

SQ3TS® System

SPECIFICATIONS

Signal Lamp	Type 12" (300 mm) dia LED
Signal Arm Extension	68 to 109" (173 to 277 cm)
Solar Charge	440W min
Power Source	12V / (16) 6V batteries
Tow Height	89" (226 cm)
Trailer Width	85" (216 cm)
Trailer Weight	3000 lb. (1361 kg)

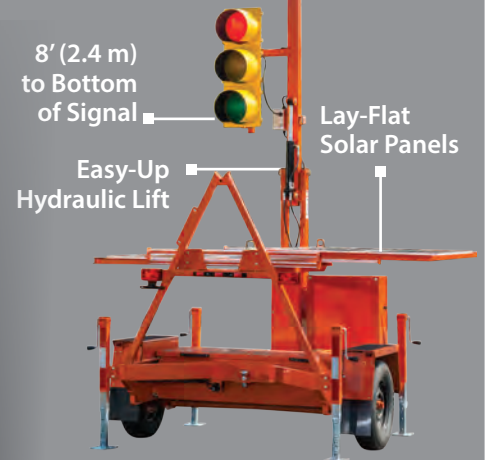


CUSTOM SIGNAL HEAD LOCATIONS
 Horizon Signal Technologies can mount signal heads in a variety of configurations to meet guidelines and local codes. Signal Heads can be ordered in yellow or black and with or without blockouts.

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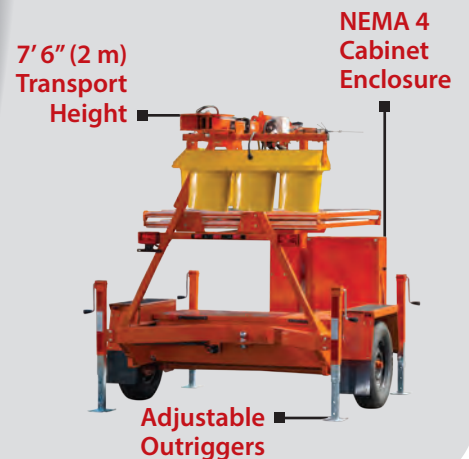


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EASY TO DEPLOY

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ONE ON ONE INTERVIEWS

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

STEERING COMMITTEE INTERVIEW DISCUSSION SUMMARY

Interviews occurred prior to the 2017 event with the following parties:

FRONTIER DAYS – RON NEWNUM AND TOM HERSIG

CHEYENNE PARKS DEPARTMENT – JASON SANCHEZ

CHEYENNE TRANSIT PROGRAM - RENAE JORDING

CITY TRAFFIC ENGINEERING – NATHAN BEAUHEIM

CHEYENNE POLICE DEPARTMENT – LT. HOWARD SMITH

LARAMIE COUNTY SCHOOL DISTRICT #1 – MERLE SMITH AND NANCY NELSON

CHEYENNE LARAMIE COUNTY GIS COOPERATIVE – JORDAN EVANS

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

STEERING COMMITTEE INTERVIEW DISCUSSION SUMMARY

FRONTIER DAYS – RON NEWNUM AND TOM HERSIG

1. Traffic jam problems at Park-n-Ride location & leaving lots, especially after rodeos and night shows
2. Intersection & heavy traffic congestion issues beyond the immediate park area. Key locations include Carey and 8th Ave, Kennedy at Central.
3. Carey Ave. was made a one-way adjacent to the park last year for CFD. Tell us about that and what worked/didn't work about that change.
This maybe helped ingress but not egress. (just to 8th Ave).
4. Undertrained staffing issues for controlling traffic/pedestrian movement conflicts
5. Lack of street lighting
Especially an issue at 8th & Carey – pedestrians are very difficult to see at night.
 - Do you have any suggestions for a new Park and Ride lot location?
Note: several people asked for this information to be kept confidential as it might affect future negotiations.
 - What keeps you up at night?
Traffic; - combination of all different modes of transportation and keeping them all safe – super busy intersections, especially when everyone (all modes) dump out onto 8th Ave and the Avenues neighborhood.
 - need to come up with a consistent traffic control program. Need ingress & egress so you can help open the flow of people, especially at big crowd events.
 - priority needs to be provided for the shuttle busses and making that efficient so people choose to use that mode.*Terrorism concern – need to secure the park better. Eventual goal will be to fence the entire park; that could assist long-term goals with master plan where main gate will change.*
 - If you were king for a day what would you change?
Park n ride with a tram system.
Or have a location on other side of I-25 (WAFB) and a new pedestrian bridge over into the park.
Bottom line, have all the customers park somewhere off-site and get them to the park efficiently.
 - Is it possible to separate pedestrian and bus drop-off/pick-up gates?
Nothing should be 'off limits'.
 - Side Notes:
 - CFD has 10 years' worth of customer survey data that should be reviewed
 - Use MPO's 8th Avenue Corridor Plan for recommendations on enhancements

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

STEERING COMMITTEE INTERVIEW DISCUSSION SUMMARY

- Changes to lot layouts, routes, etc. included in CFD Master Plan

Park n ride busses get stuck in traffic and cause major delays for getting the buses out of the park. Tom thinks buses should go North on Hynds, even if it takes another 2 minutes (10-15 total) it makes sense because they're moving and not bottle necked. People are less upset if they sense they are moving, similar to Disney philosophy. Could turn buses going north; temporary stoplight at Kennedy in place usually.

people parking in avenues regularly – he has some data on this he can share with us for modes.

Look at separating conflicts; can look at options for

No transportation options would be considered forbidden; clean slate.

Barriers are not moved during CFD days.

New park n ride locations –

Several locations were discussed. This information is confidential and therefore not included in the public meeting notes.

Bicycle parking – limited, not really for the public

Motorcycle parking – yes, kickstand pads

This year vs. previous years – crosswalk at Cribbon & 8th is new; Uber will be using pickup drop-off lot by Dey & depart south onto Dey, but they 'may' go east along 8th if they want. Carey will be blocked off at Lions Park drives blocking left turns – they can only go north now. No left turns will be allowed onto Carey. Gates V10/V7 will only be allowed to exit as right turns south on Carey. Lions Park exits will be restricted to northbound/right turns.

700 people coming from Denver post train will be dropped off around same time as parade coming back in on 1st Saturday. Hoping they can move the train to Sunday next year to avoid this conflict.

Cowboy triangle scaled down on City side due to lack of buses. CFD dropped Sundays off because there generally isn't anything going on Sundays. Also, stopping service from park n ride to downtown at 8pm. They're picking up Triumph and Ice Center lots and getting pushed to park and ride since the city is cutting that out.

(park n ride note: city is downtown to park; CFD has 2 legs: downtown to park n ride lot & park n ride lot to CFD park)

CFD is still running 2 busses to volunteer/vendor lot at Central High School (NE lot), running when needed.

How do you communicate with people about traffic/ park n ride.

- Currently send emails a few days ahead with ticket sales.

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

STEERING COMMITTEE INTERVIEW DISCUSSION SUMMARY

- Permanent WYDOT ITS signage. Temporary park n ride signage.
- CFD Smart Phone App.

Police Communication –

Police contact phone number provided for a day shift and night shift person if more people needed. Parking crew and leads call security office (command center) 6am-1am through CFD. They have radios to broadcast. Doubt they'll have an officer at park; super shorthanded. But CFD can use dispatcher phone number if there's an incident.

Next year – Buck Reisner – will be the CFD security chair.

While Ken & John are on site – what's best way to get around?

Bike could work.

Ron will look at renting a golf cart for Ken/John.

Ron will have CFD badges for Ayres staff.

Short term / long range –

Prioritizing phases for master land use plan implementation hasn't been finalized and will depend upon funding availability. Fencing the park will likely be a higher priority level item. East side entrance may be longer term. Grandstands maybe have 20 years of life left before they need to be replaced.

If they could make Carey & Kennedy 3-lane outbound that would help immensely. Have to clean up the roadway curb.

No. 1 issue – Carey & 8th; 8th Ave pedestrian /cars/bus conflicts

No. 2 issue – Avenues bus delays. Try to make Hynds one-way northbound for 10 days. Now it's 30mph (used to be 20mph).

Bus drivers get worn out. bringing 3 supervisors on board for 8 hr shifts instead of 12 hr shifts will help (they are School District employees (D1 & 2) D2 handles the Denver post train people & Thunderbird air show.

Would like to look at amount of travel minutes, peak flows, etc. so they can take consider a private contractor as an option in the future. CFD estimate previously of \$600,000 to have private company do it. Need to identify the most efficient approach?

Lions Park – not regulated for the most park. E lot & Absaraca lot is controlled by CFD but nothing else. City will try to avoid people parking on grass though, 30-35 cars are issued tickets and towed on busy nights from Park for illegal parking.

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

INTERVIEW DISCUSSION SUMMARY

CHEYENNE PARKS DEPARTMENT – JASON SANCHEZ

1. What issues are you having in Lions Park during CFD?
 - Crossing 8th Avenue is always an issue but that is amplified during CFD.
 - Vehicles parking on the turf is always an issue. Made NO PARKING signs in house and placed them on T-posts around the edge of the curb, namely on the southern drive into the park. Have two large metal NO PARKING signs at the south and north park entrances off of Carey Ave.
 - Vehicles were parking on the turf in the same area the vendors park in for SuperDay. These vehicles were towed.
 - In previous years vehicles have parked on the path that goes around the lake, near the softball field and also in the drive area around the softball field, these have to be towed.

2. Would you consider allowing a pay to park parking lot on the grass in the SuperDay vendor location?
 - This area isn't irrigated, so if CFD manned it and kept vehicles off of the irrigated grass, that would be acceptable.

3. Does the City get a share of the money collected by CFD for allowing them to park the "E" Lot (lot off of Carey, just northwest of Putt Hutt)?
 - Yes, each year it is about \$5,000. The contract states that the money has to be used in the park. Currently \$1000± of it is used to pay for the portable toilets for the 4th of July show.

Other items?

- Parks reserves the Kiwanis Community House for CFD for all 10 days of the Show. Parks loses money on that because CFD does not pay for using that building and Parks can not rent it out to any paying customers.
- Have to have an additional staff member on for each shift so they can man the parking lot near the Aquatic Center to keep that lot open for Aquatic Center patrons only.
- Putt Hutt has some reserved parking spaces. If people violate that then they get towed to the tow lot, which is also on Lions Park property in an asphalt parking lot.
- After most of the night shows the restrooms in the old community house location are damaged or vandalized.
- Parking next year may be a little harder for Parks to manage because the new botanic gardens conservatory will be open. This year that lot was blocked off for construction vehicles only. Next year not sure how they'll keep that lot open to people wanting to go to the conservatory.
- There have been some coordination meetings this year since the beginning of the year with Jason Sanchez (City), Nathan Beauheim (City), Steve McDonald (City), Nathan Buesic (CPD), Howard Smith (CPD), John Gay (CPD), Ron Newnum (CFD) and Tom Hersig (CFD).

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

STEERING COMMITTEE INTERVIEW DISCUSSION SUMMARY

CHEYENNE TRANSIT PROGRAM - RENA E JORDING

1. High demand on Cheyenne Transit during CFD, even with additional school district routes
2. Fleet reductions may lead to reduction of services Normally they provide 3-4 buses but because of their own fleet issues, they only have 1 available this year. They need 12 buses just to run their normal routes. If one of those buses is damaged during CFD they'll have to pull the one they were going to use for the Cowboy Triangle to take over regular route service.
3. Officers stop traffic on 8th for school district buses but not Cheyenne Transit buses - Renae said that this year Ron Newnum says he will ask "red shirts" to stop vehicles for transit buses at Dey.

(Side Note: \$1.50 cost per ride to user)

- Do you have any suggestions for a new Park and Ride lot location? – Further north somewhere. There is some vacant land on College Drive, between Parsley and Triumph High School, if the owner could be identified that would be a great spot. There is also a large lot for sale on College Drive, just east of S. Greeley.
- What keeps you up at night? - 8th Ave. is dangerous for pedestrians. Doing park-n-ride for CFD is really hard on the transit buses. They aren't robust enough buses to handle the passengers. These buses seat 20 and people can also stand. CFD is hard on buses and hard on transit staff. Their normal transit ridership doesn't change during CFD, so the staff is extra busy handling the CFD route in addition to normal routes. Transit would like to get out of the park-n-ride business if possible and help in other ways.
- If you were king for a day what would you change? Provide a transit only route, no parking or other vehicles allowed on that street. And 8th Ave. would be closed to all traffic, except buses, from Cribbon to Dey.
- Is it possible to separate pedestrian and bus drop-off/pick-up gates?

This year they will run the Cowboy Triangle route where they go from 17th and west of Pioneer to Frontier Park. This is about 20 minutes there and 20 minutes back. (LCSD buses handle the other legs of the Cowboy Triangle, which is the downtown to the park-n-ride and park-n-ride to Frontier Park. They have 2 dedicated buses for those legs.)

If it gets too busy then CFD will provide 1 small school bus to help. They will radio in when they need help.

Monday, Wednesday and Friday they run this route from 6 a.m. to 12:30 a.m. Other days they run 8 a.m. to 12:30 a.m.

Moving the drop-off/pick-up to Hynds would be "great, as long as it was safe for people to get to and for us to drop them off."

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

STEERING COMMITTEE INTERVIEW DISCUSSION SUMMARY

Last year 9,000 people rode the transit busses. Transit provided Ayres with the following 2016 rider log summary.

2016 Persons at Stops												
STOP	7/22 Fri	7/23 Sat	7/24 Sun	7/25 Mon	7/26 Tue	7/27 Wed	7/28 Thu	7/29 Fri	7/30 Sat	7/31 Sun	Extra ?	Total
												0
Triumph High	64	136	133	118	106	336	139	102	300	57		1491
Ice & Events Ctr	132	204	123	117	147	294	150	179	464	43		1853
Frontier Park	402	581	376	348	352	892	523	332	982	120		4908
Downtown	110	269	124	199	219	393	172	134	279	33		1932
Other		22		5								27
												0
												0
TOTAL	708	1212	756	787	824	1915	984	747	2025	253	0	10211
Diff LY/TY	-38%	-48%	-17%	-39%	-30%	-5%	-45%	-65%	-9%	-45%	0%	-34%
2015	1136	2353	913	1298	1178	2021	1774	2129	2217	464	0	15483
2014	684	2084	1061	1103	1204	1651	1688	2090	2774	449	0	14788
2013	669	1565	918	895	814	1516	1444	2207	1768	321	0	12117
2012	1441	1986	849	779	686	1083	1129	1558	1024	370	0	10905
2011	1854	3148	867	1051	944	1092	1113	2906	2933	314		16222
2010	750	2859	907	1284	1123	819	1247	1677	2334	263	0	13263
2009	336	3017	1185	1200	1250	1342	2496	1918	2194	354	813	16105
2008	236	2419	1502	1216	1295	1132	1272	1717	1210	369	0	12368
2007	944	1482	1028	1146	1284	1010	1031	1389	1346	286	0	10946
2006	280	1540	1313	1145	1010	851	834	1256	1296	399	0	9924
2005	211	1477	1181	768	794	843	858	900	1228	233	96	8589
2004	987	1084	634	1018	1036	716	718	840	1429	296	62	8820
2003	103	1075		983	856	888	929	1072	901	240		7474
2002	231	1112	537	868	1218	1103	723	915	1140	228		8075
2001	207	945	407	608	624	834	591	902	1100	340		6558
2000	220	876	632	711	867	880	899	743	1165	278		7271
1999	320	1196	720	879	882	756	743	964	813	207		7480
1998	255	884	473	684	1002	650	693	747	784	283		6455
1997	348	771	517	453	544	394	510	518	517	102		4674
1996	287	960	713	659	926	758	779	604	759	212		6657
1995	240	972	589	805	820	762	872	781	797	218		6856
1994	240	731	634	560	521	764	547	525	491	174		5187
1993	99	468	437	648	565	526	554	401	415	134		4247

Last year Transit also handled the Triumph High School and Ice and Events Center lots for transfer to Frontier Park. This year those lots won't be used because of lack of buses.

Transit busses can use whatever route they want to get to and from park, because they don't have any stops in between. They will take the route that has the easiest traffic, but generally Snyder to Frontier Park Avenue to Dey to 8th. Then Cribbon across Pershing to Randall to Pioneer to 17th Street. This year they'll stick to Dey Ave. because that is where "red shirts" will be stopping stop traffic for them.

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

STEERING COMMITTEE INTERVIEW DISCUSSION SUMMARY

CITY TRAFFIC ENGINEERING – NATHAN BEAUHEIM

1. Uber / Lyft & Pedi-Cabs
2. High occupancy vehicles (park & ride) preference
3. Queues to enter parking at Frontier Park became so long that they spilled onto I-25 from the Central interchange
4. Disjointed and fragmented communications issues
5. Low-Cost alternatives needed
6. At capacity City items, including: law enforcement, buses (all owners), barricades, message boards, and public works personnel
7. New technology – WYDOT purchased new signal program (not operational yet). WYDOT ITS resources, especially dynamic message signs, are being utilized to direct drivers from the south to the Park-n-Ride lot. There used to be (and probably still is) a protocol in place for CFD to request a change in message if the Park-n-Ride lot is filled to capacity.
New central control software – need one that actually works. Either NASTAQ or INTEL software. WYDOT also wants to do a Cheyenne area signal upgrade.

There is still communication between CFD and WYDOT for the large overhead message signs on the interstate – the signs can be updated.

- Do you have any suggestions for a new Park and Ride lot location?
As close as possible.
Previously (pre 9/11) he thought it was off Gate 5. Had to move to current location after that due to security reasons.
City park n ride – they have to go right by Cox garage, maybe utilize that with their route for CFD.
Cowboy triangle pick up this year (yellow busses) will pick up by Rib and Chop House restaurant (same spot as last year).
- What keeps you up at night?
No major concerns, it is what it is.
- If you were king for a day what would you change?
Stronger command & control communication system for event / traffic.
Communications issues – too many different chiefs, moving parts, could be better coordinated. Master control center – not just police station, more integrated.
Cameras, hot spot monitoring...
Command structure changes year to year... police sergeants have a lot of discretion in how they want to run things – even sometimes between shifts. Need to get on the same page with each other.

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

STEERING COMMITTEE INTERVIEW DISCUSSION SUMMARY

Unsure about the debrief – seems like individual group debriefs occur, but mostly silo-ed. Integrated with all the supervisors together could be helpful.

- Is it possible to separate pedestrian and bus drop-off/pick-up gates?
Move the buses to pick up drop off on Hynds instead? From a traffic perspective fine, but CFD won't like it.... don't want to bring people in the back door.

8th St being a pedestrian mall - ?

It has been talked about. If they move the main gate to Carey side with park and ride buses moved to Carey then it might be feasible. But he doesn't think it works now.

Hot Spots –

Randall intersection has always been tough from a signal timing perspective. Those are WYDOT signals. Heavy E/W traffic with the busses. They didn't have main line detection on the signal for the Pershing leg.

Central Interchange backs up on occasion. Backs up with people trying to get into the park and ride lot.

Communications issue again letting people know that lots are full. Maybe look at different locations for signage on the ITS signs and for temporary signage to make things run smoother. Cost is the biggest downside of adding additional temporary signs out there (incl full lot, etc.) and communication chain of command.

Street lighting issue at Carey & 8th –

Cheyenne Light Fuel & Power is supposed to do an LED lighting tariff... if they do Nathan will request they do that corridor with LEDs instead to brighten it up.

Signals/ flagging /pushbuttons –

Even with officers the regular signal lights continue. 2 full flagged intersections & one as needed. Can modify the system program but not 'on the fly.'

CPD has requested pushbuttons but the signals aren't set up for it.

One-Way streets for CFD –

Benefits to traffic flow. Drawbacks would be the public learning curve. Concern that people would be confused, especially for 10 days of the year. Police do make Kennedy outbound one-way after night shows. If you could move buses to Hynds and make it one-way northbound, then it might make sense. City doesn't have the manpower to make it one-way this year.

City feels that Carey one-way from Kennedy to the botanic gardens southbound didn't work – issue may have been more with the intermittent execution. Confirmed this year's plan to operate Carey as 2-way but with right turns only onto it.

City crews/public works support –

Street sweeping, haul manure, trash pickup, traffic control for pancake breakfast & parades, CFD moves their own barriers – own & set up.

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

STEERING COMMITTEE INTERVIEW DISCUSSION SUMMARY

Avenues Parking –

Enforcement of inappropriate parking has to go thru police then to get a tow truck. Unsure if they're using extra volunteers to assist.

Most homes have 1 car parking in that area, many alley loaded garages. People sell parking on their lawn and in driveways. People have tried to “save” spots on the street – they have to enforce that issue.

Lions Park parking –

Only piece that could be added is the dry spot by baseball fields. To reduce confusion about allowable parking they are going to make a point to say ‘no parking on grass is allowed’. Adding signage to that effect. No parking along the roads in Lions Park because they're too narrow.

Sidewalks -

There should be ROW available to widen sidewalks, cost is an issue.

Other discussion / changes –

Talked about parking restrictions in the Avenues. Want to see results of this plan before looking more at that. Enforcement staffing may be an issue.

Need to establish a solid plan that shows the full workings so things aren't being modified the week prior every time.

It's been a long time since they've gotten together and got on board with the game plan.

Other things – EMA will stand up the unit for the eclipse. They also have a mobile command center for pancake breakfasts... efficient system. May be something to look at.

City contractor license & qualified supervisor with a no-cost ROW permit is needed to set up Miovision for traffic counts. They have pulled these permits before and may still be good from last year.

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

STEERING COMMITTEE INTERVIEW DISCUSSION SUMMARY

CHEYENNE POLICE DEPARTMENT – LT. HOWARD SMITH

1. Recommend officer controlled signals
2. Pedestrian movement concerns (not crossing at designated crossings, too small of sidewalks and/or poor sidewalk condition) –It forces people to walk in the street.
3. Pedi-Cabs regulation

(Side Note: 20-person staff efficiencies)

- Do you have any suggestions for a new Park and Ride lot location? – On the base where the golf course and baseball fields are. Then add a ped bridge over the interstate to Frontier Park. Need an off/on ramp from the interstate to Stinner Road.
 - What keeps you up at night? - keeping pedestrians and traffic separated at 8th and Carey. How do we get the peds across 8th and also move traffic, not only at 8th and Carey but ultimately all the way to Pershing.
 - If you were king for a day what would you change?
 - Not allow parking in the Avenues, put parking in Lions Park. This likely would be a large parking garage. This would keep pedestrians and vehicles separated and safe.
 - Large overhead signs on 8th for west bound traffic which tells vehicles which lane to be in. Currently the variable message boards are hard to see, they are placed on the shoulder. The far right lane is for right turns only onto Carey and one person in the wrong lane messes up traffic and ends up having lots of other vehicles following that same person.
 - Need one LARGE metal sign that says “don’t park on grass in the Park or you will be towed.” Lots of vehicles are towed because they park on the grass in Lions Park. Current small signs are hard to see and fall off the posts.
 - Placing removable bollards on 8th Ave. to stop traffic during CFD.
 - Would it be possible to consider separating pedestrian and bus drop-off/pick-up gates?
4. Capacity concerns, are there enough officers to manage traffic issues and other CPD activities during CFD?

Cheyenne PD has lots of projects going on all over town during CFD.

CPD directs traffic by hand, they do have traffic signal control (push button).

For egress (about 10:30 pm) there is a barrier across the eastbound lane of 8th Avenue so that they can’t continue on 8th past Snyder. They are forced south on Snyder.

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

STEERING COMMITTEE INTERVIEW DISCUSSION SUMMARY

“Street Patrol” covers the traffic signal at Snyder and Pershing. They will only direct traffic if they see it backing up and causing a problem. Otherwise they stay in their car and out of the middle of traffic.

CPD “keeps yellow buses moving. City buses are on a different route, so they don’t stop traffic for them.”

If the bus drop-off is on Hynds you’d have to have another bag check at that location. Currently this happens only at the main gate off of 8th Ave.

The only openings in the water barrier on 8th are at Carey, Snyder and Dey.

Problem – the cowboys who show up at 10:30 pm during egress and want to get into the park “right now.”

Problem – CPD doesn’t know when the handicap lot is full so they keep directing people there. Would like a variable message sign that can be updated when the lot is full.

Problem – poor lighting on 8th and Carey and all the way up and down Carey and 8th.

Anti-Terrorism: Lt. Smith says CFD has done a good job. There is a fence around the park. Ayres to send a map of the traffic counter locations to Lt. Smith so he can let his force know where to expect to see the counters. {Note- Darci did send this information and also noted that the TRA traffic counting field tech would be wearing a yellow safety vest.}

With the elimination of the free right turn movement from southbound Carey onto 8th, PD has a concern that large trucks/rigs will not be able to make that turn.

After the night show an officer at Kennedy and Central can keep traffic moving pretty well.

From 4:00 p.m. to 12:30 a.m. he’ll have 11 – 20 officers available in the park. These officers don’t handle traffic, they are in the park to deal with park issues.

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

STEERING COMMITTEE INTERVIEW DISCUSSION SUMMARY

LARAMIE COUNTY SCHOOL DISTRICT #1 – MERLE SMITH AND NANCY NELSON

1. Multiple bus routes & large staff coordination
2. Obstructions on 8th Ave
3. Triangle traffic signal timing
4. Left turns from the I-25 south bound off ramp issues
5. Traffic congestion issues on Snyder & Pershing & at I-25 intersection
6. Modify signal timing at Randall/Pershing and I-25
7. Recommend changing Hynds to one-way during CFD (one-way headed north) This would be beneficial. Hynds is narrow and the large trucks with the large mirrors make it difficult for the buses to use the road. If this is done then the buses could turn right onto Kennedy and need help with a “red shirt” (Security Committee) to make a left turn from Kennedy to Central Ave. in order to get to the interstate interchange.
8. Buses leaving the Park could go south on Cribbon instead of going south on Snyder to reduce car & pedestrian conflicts
9. Entrance to Bull Lot backs up causing blockage for buses turning left onto Happy Jack
 - Do you have any suggestions for a new Park and Ride lot location?
 - What keeps you up at night? – Worrying about a phone call in the night saying there was an accident with a bus which occur from buses hitting signs, cars, concrete barriers. They’ve also had their buses run into by golf carts (carts are used on-site to transport less abled people and also security team uses them to get around.) Recently a bus driver hit a bump at the Park-n-Ride and a passenger was hurt because they were tossed out of their seat. Transit does not want their buses damaged from CFD operation.
 - If you were king for a day what would you change? – Separating people and vehicle conflicts.
 - Is it possible to separate pedestrian and bus drop-off/pick-up gates? This would be “monumental” if it could be done.

Making Snyder a one-way is a good idea, but it would be more beneficial to make Hynds one-way.

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

STEERING COMMITTEE INTERVIEW DISCUSSION SUMMARY

For park egress (after night show, starting at 10:30 or 11:00) the buses line up on the south side of 8th Ave, facing east. They can fit 4 buses in the bus loop, the rest of them wait until there is space and then another 4 will pull in. They also stage on 8th Ave when rodeo lets out between 3:00 and 4:00.

A problem is pedestrians jumping over the water barrier on 8th Ave to cross the street. (Particularly a problem during egress when it is dark and people have been drinking.)

48 people can be on a bus at a time for LCSD. There are 25 seats with 2 adults per seat.

33 LCSD#1 buses are used during CFD.

Availability of bus drivers is the issue. Many of the drivers don't want to work for 10 days and the required late or weekend hours.

Usually shut down 12:30 – 1:00 a.m. Every car has to be out of the volunteer parking lot (at Central High School) before they can shut down that route. They will quit when the Bull Lot has 10 or so cars left and no one is getting on the buses at the Park.

Turning southbound on Snyder from 8th can be a problem if people are parked right at that corner. The buses then can't make the turn. Nancy indicated that the Cheyenne PD watches this pretty closely, but it is sometimes an issue. It is marked as a 'No Parking' area during CFD.

There is a problem with bottlenecks on Snyder closer to Pershing. Sometimes there are Cheyenne PD officers at Snyder and Pershing and sometimes there are not.

Nancy indicated that LCSD#1 buses are not allowed to deviate from the route set for them.

Nancy explained the route from the CFD to the park-n-ride. {NOTE – the route has been modified for this year. She said train delays/conflicts are usually not a problem. The Burlington Northern spur track doesn't get used all that often. If there is a train the bus driver can radio out and let the buses following know to continue south on Snyder to Lincolnway.

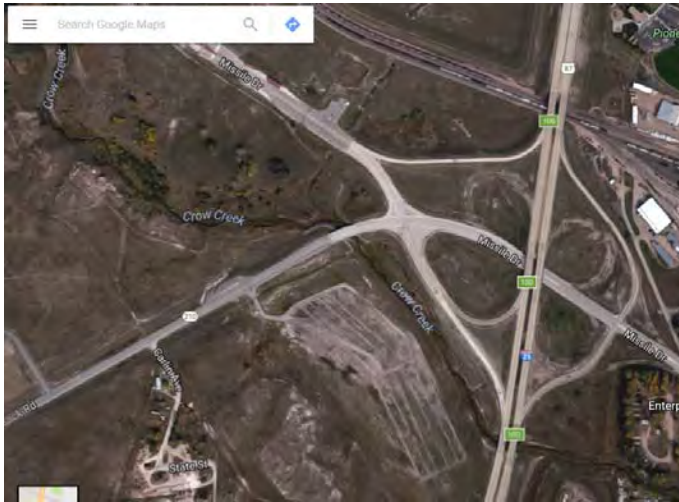
Places the buses have issues:

1. The light at the northbound off-ramp at I-25 and Pershing/Randall. That light has a short green time. They are lucky to get 2 buses thru.
2. Pershing and Snyder
3. Left turn at Missile Drive and the off ramp - Often buses have to wait a long time to turn west (left) from the southbound Missile Drive off-ramp onto Missile Drive to get to the Park-n-ride lot. The buses also sometimes have a hard time turning into the park-n-ride lot because of heavy east-bound traffic on Happy Jack Road. If this becomes an issue they can use the paved pull off at the historic marker to turn the buses around and enter the park-n-ride from the west.

Transit feel the interstate would be a faster route than thru town on Snyder if they could get a temporary light at the Missile Dr. off-ramp.

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

STEERING COMMITTEE INTERVIEW DISCUSSION SUMMARY



Nancy indicated that next year she believed that the Thunderbird air show will move from LCCC to Swan Ranch.

LCSD#1 also runs buses for the Thunderbird air show and the Air Guard open house. The open house is on Wednesday, starting after the air show is done. It is at the airport off of Dell Range. They run this route from 10am -3pm on Wednesday. They pick up people at Chili's (on Dell Range) and at Frontier Park.

Which route would you prefer? Ideally: Bull lot to Hynds. Hynds is a one-way and people get dropped off on Hynds, at the west side of Frontier Park. Perhaps buses go into Gate 12 and turn around in there to reduce the walking distance a little.

LCSD#1 operates 2 "Special Needs" buses during CFD. These buses are handicap accessible with lifts. They are smaller buses. These buses follow a different route. They continue north on Hynds, right (east) on Kennedy, right (south) on Carey, right (west) on 8th and enter the "B" parking lot off of 8th to drop off passengers. Parking Lot B is paved.

It was suggested to keep the special needs buses following the current path at 8th, where they could use the bus drop-off loop – if the regular buses were moved to the Hynds Ave. side for pick-up / drop-off.

CFD TRAFFIC STUDY & TRANSPORTATION PLAN

INTERVIEW DISCUSSION SUMMARY

CHEYENNE LARAMIE COUNTY GIS COOPERATIVE – JORDAN EVANS

1. Who is producing current maps?

It appears the maps being used are used were not created with GIS.

- Chris Hault – LCSD1 Mapping Contact
- Jennifer Corso – MPO Mapping Contact
- Joe Fisher – Other City Maps Contact

2. Are there opportunities for the GIS cooperative to assist in future mapping?

Generally, yes. For new strategies he's the main point of contact.

- There are opportunities for producing static maps, like the bus routes or alternative transportation options, for posters and signs.
- Interactive mapping may be an option, also. Question on whether buses are equipped with AVL. If so, there's an opportunity to create an app that would track busses live (like Uber) and provide real time information to route coordinators or users. To do that the request needs to include details for functionality, features and user details.
- Sketches of any map ideas are helpful.

3. What format should data be in that we are creating for use with GIS cooperative mapping?

- KMZ files from Google Earth
- ESRI files
- Open source GIS files