May 4, 2021

To: Jon Suddarth, William Warren Group

From: Jeff Hee, Transportation Solutions

Subject: StorQuest Liggett Road Trip Generation
Town of Castle Rock, CO

This memorandum summarizes the trip generation for StorQuest a proposed self-storage at the northwest corner of Liggett Road and Kellogg Road in the Town of Castle Rock in Douglas County, CO.

Project Description

The development is proposed at approximately 2631 Liggett Road. The underlying property is zoned I-2, General Industrial. The proposal redevelops three land parcels: 2351-340-00-009 (2631 Liggett Road), 2351-340-00-035 (2583 Liggett Road), and 2351-352-00-006 (no address).[1] The existing uses include:

- 1 single-family home
- 733 square feet of office space.
- 1,526 square feet of light industrial space.
- 2,483 square feet of service garage space.
- 9,960 square feet of self-storage building space.
- 672 square feet or materials storage space.
- 220 outdoor RV storage spaces.

Figure 1 includes a vicinity map highlighting the site's location.

The proposed StorQuest includes:

- 17,900 square feet of rentable drive-up storage building area.
- 80,000 square feet of enclosed four-story self-storage building area.
- 66 covered outdoor RV storage spaces.
- 25 uncovered outdoor RV storage spaces.

The site includes 11 onsite vehicle parking spaces, with 1 accessible space and 1 space for temporary RV parking.

Figure 2 includes a conceptual site plan. Two site accesses are proposed, one off Liggett Road and one off the private road extension of Kellog Court to the west of Liggett Road. Build-out is anticipated by 2022.

Roadway Conditions

- Liggett Road is classified as a Collector Arterial between Santa Fe Drive and Front Street. Near the site the road has one lane in each direction and paved shoulders. The posted speed is 35 mph north of the site and 45 mph south of the site. At Kellog Court, Liggett Road widens to include turn lanes. Castle Rock's Master Street Plan shows Liggett Road as a future Major Arterial with a four-lane cross-section.[2]

[1] Douglas County Accessor Real Property application. https://www.douglas.co.us/assessor/maps/
[2] Town of Castle Rock Transportation Master Plan (October 2017) Figure I – Existing Roadway Function Classifications

- Santa Fe Drive, to the north of the site, is classified as an existing Minor Arterial, and the Master Street Plan shows Santa Fe Drive as a Major Arterial.[2]
- Kellog Court is oriented east-west and provides local access to the Castle Rock Water Departments and Castle Rock Self-Storage and U-Haul. Kellog Ct. includes curb and gutter and has sidewalk on the north side of the road. The posted speed is 25 mph. The development will complete the west leg of Kellog Court and Liggett Road, as a private access road.

Existing Use Trip Generation

The existing uses are being replaced by the proposed StorQuest. For this analysis, the existing site includes known buildings are uses on land parcel 2351-340-00-009 and 220 outdoor RV storage spaces on the remaining site. Credit for trips generated by existing uses is factored into the net new trips generated by the proposed redevelopment. Existing use trip generation is primarily based on data from the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition*.

The ITE manual does not include trip generation data specific to RV storage. For this analysis trip generation for the RV storage use was based on the *Trip Generation Analysis for the Proposed Self-Storage and RV Storage Facility at 3701 Pacific Place, Long Beach, California* memorandum (February 27, 2020) by LSA and review of the *Route 52 RV Traffic Impact Study, Weld County, Colorado* (August 28, 2017) by Sustainable Traffic Solutions, Inc. The LSA memorandum included weekday daily, AM peak hour and PM peak hour trip generation data obtained between November 2019 and January 2020 at an RV storage site in Desert Hot Springs, CA. The Sustainable Traffic Solutions, Inc. study included weekday PM peak hour trip generation obtained in 2017 at RV storage sites in Brighton, CO and Erie, CO. Excerpts from the California and Colorado trip generation data is attached.

Table 1 summarizes the existing use trip generation for the site. The trip generation output includes rounding.

Table 1: Existing Site Trip Generation Credits

Land Use	Inbound	Outbound	Total Trips
Weekday	(76)	(76)	(151)
AM Peak	(8)	(4)	(12)
PM Peak	(8)	(9)	(17)

Detailed trip generation calculations are attached.

StorQuest Trip Generation

StorQuest specific trip generation data was collected over nine days in August 2014 at an existing StorQuest at 5200 E Evans Ave in Denver, CO. The local site includes 102,180 SF GFA and at the time of data collection, the facility was 87.1% occupied. Site trips were recorded as visits to the storage units and leasing office. For analysis purposes one visit equals two trips, one-in and one-out. Data was collected during the site's operating hours from 6 AM to 10 PM.

Chart 1 shows the fluctuation of daily traffic at the facility. The "Raw" data shown is from the trip count based on the existing occupancy, and the "Adjusted" data represents full occupancy of the site.

Chart 2 shows the average hourly fluctuation in weekday traffic generated by the Denver location.

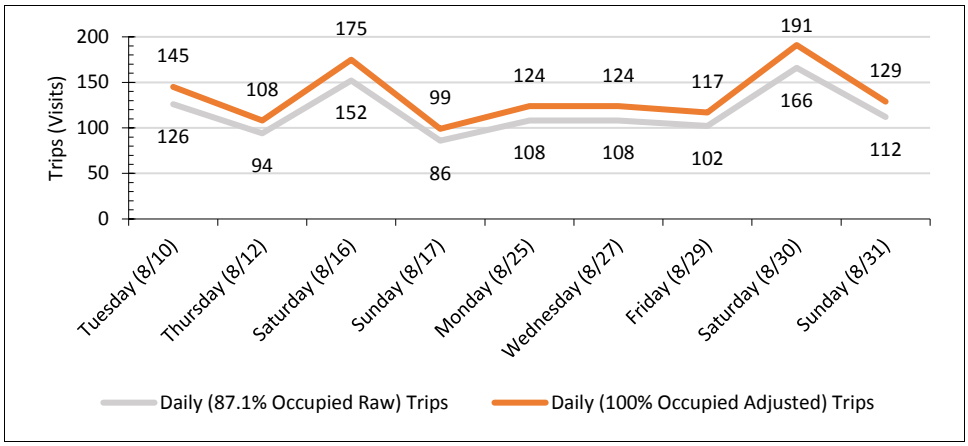


Chart 1: Daily Trips Generated; StorQuest Denver (2014)

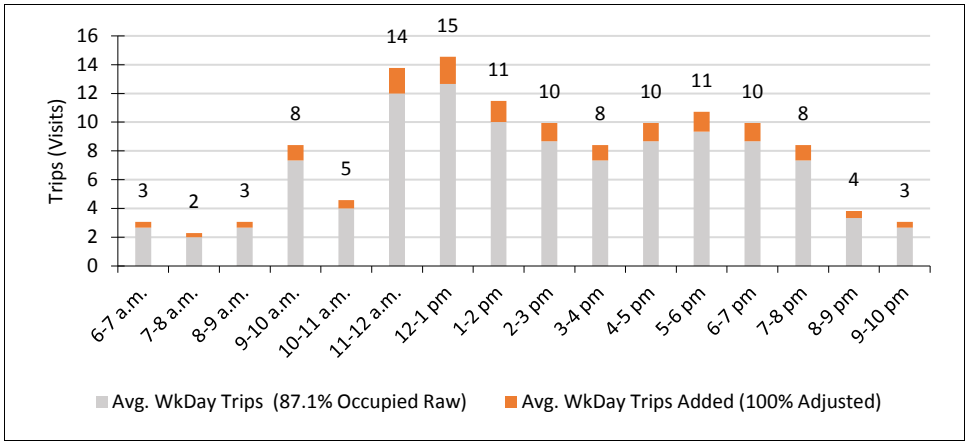


Chart 2: Hourly Trip Generation Profile; StorQuest Denver (2014)

On Tuesday, August 15, 2017, a more recent trip generation survey was collected at the same Denver site. On August 15, 2017, the storage units were full occupancy. The year 2017 weekday data showed that the existing site generated 145 daily, 8 AM peak hour and 12 PM peak hour trips. The year 2017 data is attached.

Table 2 compares the average weekday daily and AM and PM peak hour trip rates from the existing StorQuest to the mini-warehouse trip rate data from the ITE *Trip Generation Manual, 10th Edition*.

Table 2: Trip Generation Comparison (ITE and StorQuest Denver)

Land Use	Notes	Daily	AM Peak	PM Peak
Mini-Warehouse	ITE LU 151 Rate	1.51	0.10	0.17
StorQuest Denver (102,180 SF)	8/10/2014 Trips[1]	145	2	4
	8/11/2014 Trips[1]	108	2	7
	8/27/2014 Trips[1]	124	5	11
	8/15/2017 Trips[2]	145	8	12
	Average Trips	131	4	11
	Trip Rate	1.28	0.04	0.11

1. Year 2014 StorQuest trips adjusted for full occupancy.
2. Year 2017 StorQuest trips at full occupancy.

For this analysis, trip generation for the proposed StorQuest self-storage use was forecast based on the StorQuest data from Table 2 for the 97,900 square feet of total self-storage building area. The proposal's building area includes the drive-up storage building area (17,900 square feet) and enclosed four-story storage building (80,000 square feet).

The trip generation for the proposed 91 total RV storage spaces (66 covered and 25 uncovered) was forecast using the RV storage data compiled in California. The California data is shown to be higher and more conservative than the RV storage data reviewed for site's Brighton and Erie, CO; and therefore, is considered conservative for this proposed Castle Rock site.

Table 3 summarizes the trip generation forecast for the proposed development. The trip generation output includes rounding.

Table 3: StorQuest Trip Generation

Land Use	Size	%-In	%-Out	Inbound[1]	Outbound[1]	Total Trips[1]
StorQuest	1.28 / 1,000 square feet	50%	50%	62	62	125
RV Storage	17.23 / 100 RV spaces	50%	50%	8	8	16
Weekday				70	70	141
StorQuest	0.04 / 1,000 square feet	50%	50%	2	2	4
RV Storage	0.97 / 100 RV spaces	52%	48%	1	0	1
AM Peak				3	2	5
StorQuest	0.11 / 1,000 square feet	45%	55%	5	6	11
RV Storage	2.05 / 100 RV spaces	44%	56%	1	1	2
PM Peak				6	7	13

1. includes rounding

The proposed StorQuest site is forecast to generate:

- 141 weekday trips, split 50 % in and out.
- 5 AM peak hour trips, split 3 in and 2 out.
- 13 PM peak hour trips, split 6 in and 7 out.

New Trips Generated

Net new trips, accounts for the difference between the proposed development trips and trips generated by existing use of the site. Table 4 summarizes the net new trip generation. Detailed trip generation calculations are attached.

Table 4: Trip Generation StorQuest Express

Land Use	Proposed Development			Existing	New
	In	Out	Total	Trips	Trips
Weekday	70	70	141	(151)	(10)
AM Peak	3	2	5	(12)	(7)
PM Peak	6	8	14	(17)	(4)

The proposed development generates less traffic than the land uses currently occupying the site.

Peak Hour Trip Distribution and Travel Assignment

The development's PM peak hour trip impacts at local intersections is less than existing trip impacts from the site's current uses. A graphic showing the PM peak hour trip distribution and travel assignment, unadjusted for credits for existing uses on the site, is attached as Figure 3.

The trip distribution is based on review of the local area and proximity to residential uses. The trip distribution forecasts 70% of development traffic to/from the north of the site and 30% of development traffic to/from the south of the site. The PM peak hour travel assignment was forecast by multiplying the PM peak hour development-generated trips by the forecasted trip distribution percentages.

The trip distribution assumes the site access off Liggett Road is restricted to right-in and right-out only. Based on the site's trip generation, a full access will likely be able to function through year of opening and until Liggett Road is widened to four-lanes.

Summary and Conclusions

Section 7.2.1 of the Castle Rock Transportation Design Criteria Manual states; *a TIA* (Transportation Impact Analysis) *requirement may be waived if the average daily trip generation of the proposed project is less than 200 vehicles per day of the generator or by special variance approved by the Town.*

The proposed development is not forecast to generate new daily or peak hour trips to the local road network. The daily trip generation is less than City's trip threshold for preparing a formal TIA.

The proposed development is forecast to generate a negligible number of new trips during the AM and PM peak hours; and thus, the peak hour traffic impacts generated by the proposed development will be less than the traffic impacts generated by the existing uses onsite.

At year of opening, full access to Liggett Road is anticipated to be reasonable. With future widening on Liggett Road the access may be required to be restricted to right-in and right-out only. Peak hour trip impacts generated by the development regardless of the access configuration are not forecast to generate any significant adverse traffic impacts to the local traffic network.

I trust that the finding above, will support your needs. Please let me know if you or the Development Reviewer have any questions or concerns.

COLORADO LICENSED
JEFFREY HEE
58188
PROFESSIONAL ENGINEER
5/4/2021

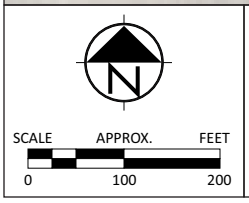
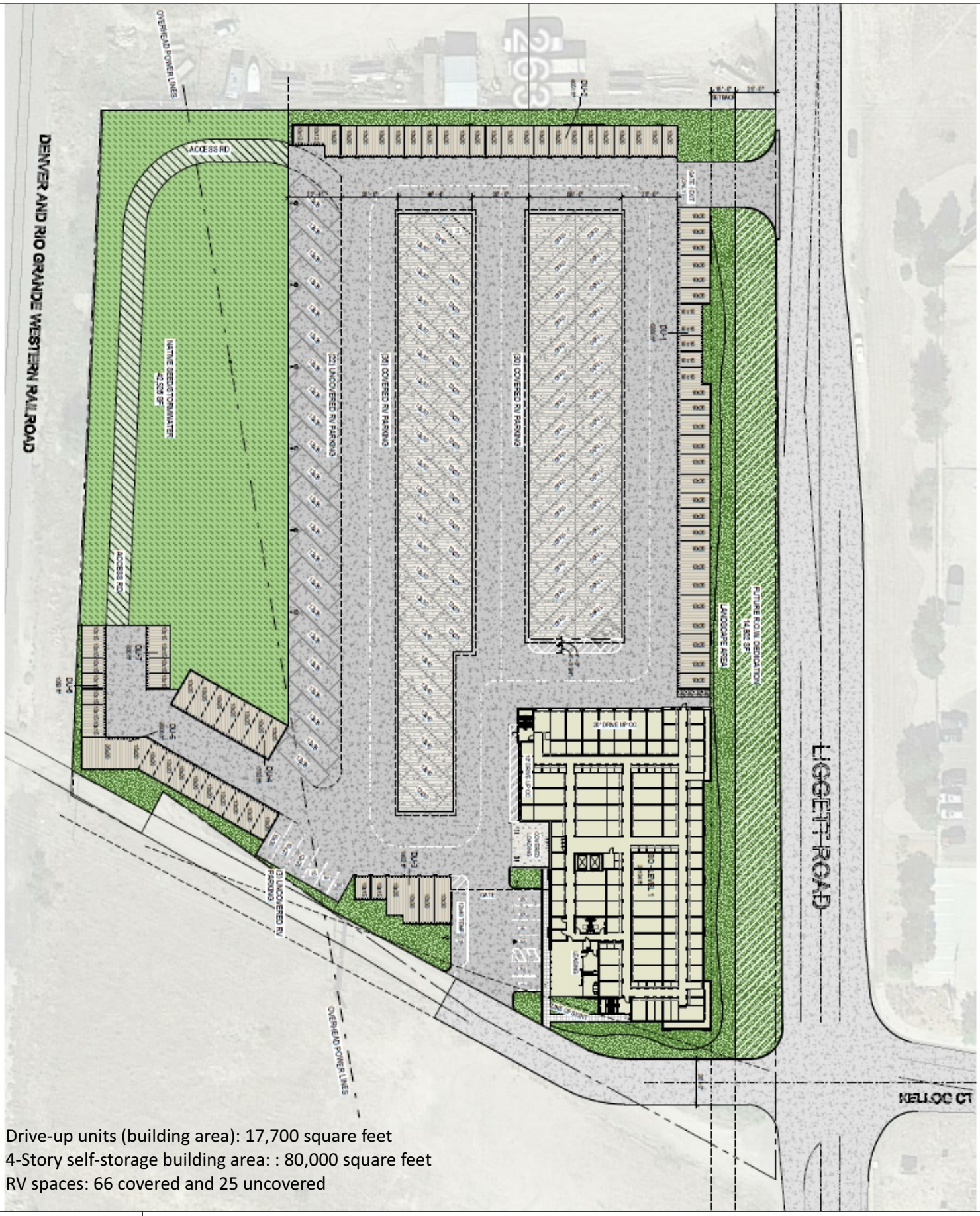


Figure 1:
Vicinity Map



Drive-up units (building area): 17,700 square feet
4-Story self-storage building area: : 80,000 square feet
RV spaces: 66 covered and 25 uncovered

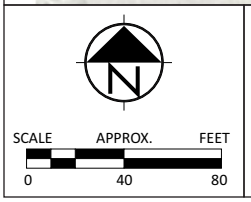
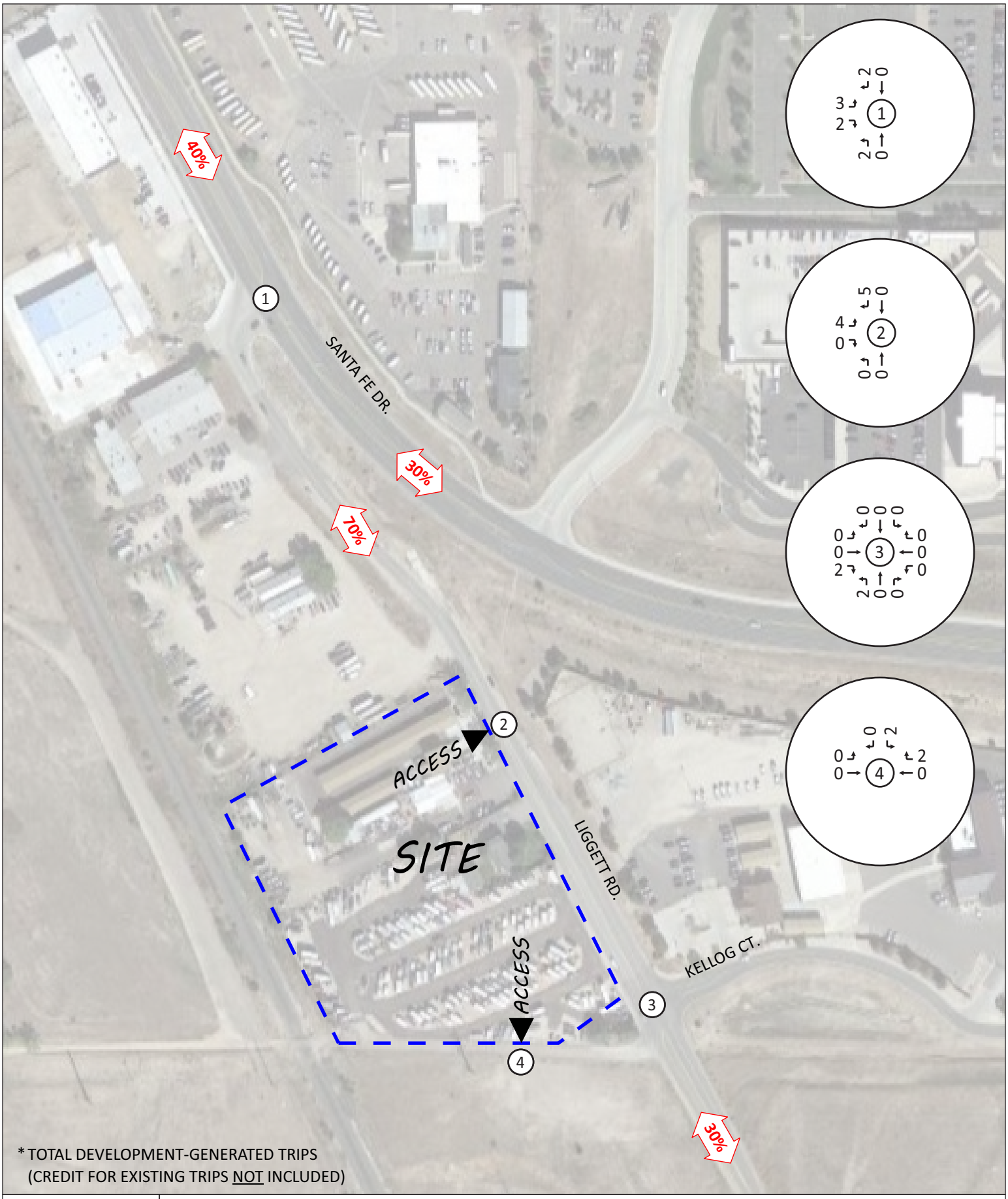


Figure 2:
Conceptual Site Plan



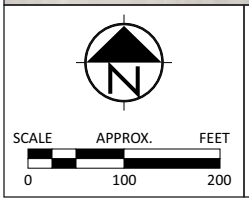


Figure 3:
PM Peak Hour Trip Distribution and Travel Assignment

ITE Code	Land Use	Size	Variable	Daily Rate		Distribution %-in	%-out	Trips Generated In	Out	Total
210	Single-Family	1	dwelling units	(9.44)	per DU	50%	50%	(4.5)	(4.5)	(9)
110	Light Industrial	2,259	square feet[1]	(4.96)	per 1,000 SF	50%	50%	(5.5)	(5.5)	(11)
942	Service Garage	2,483	square feet	(31.10)	per 1,000 SF[2]	50%	50%	(38.5)	(38.5)	(77)
151	Mini-Warehouse	9,960	square feet	(1.51)	per 1,000 SF	50%	50%	(7.5)	(7.5)	(15)
150	Storage	672	square feet	(1.74)	per 1,000 SF	50%	50%	(0.5)	(0.5)	(1)
	Existing Subtotal[3]		square feet					(57)	(57)	(113)
N/A	RV Storage	220	RV spaces	(17.23)	per 100 RV spaces[4]	50%	50%	(19.0)	(19.0)	(38)
N/A	RV Storage	220	RV spaces		per 100 RV spaces[5]			0.0	0.0	0
	Existing RV Storage[6]							(19)	(19)	(38)
	Existing Trips Total[7]							(76)	(76)	(151)
N/A	Proposed StorQuest	97,900	square feet	1.28	per 1,000 SF	50%	50%	62.5	62.5	125.0
N/A	Proposed RV Storage	91	RV spaces	17.23	per 100 RV spaces[4]	50%	50%	8.0	8.0	16.0
	Proposed Trip-Subtotal							70.5	70.5	141.0
	NEW DAILY TRIPS[8]							(5)	(5)	(10)

ITE Code	Land Use	Size	Variable	AM Rate		Distribution %-in	%-out	Trips Generated In	Out	Total
210	Single-Family	1	dwelling units	(0.74)	per DU	25%	75%	0	(1)	(1)
110	Light Industrial	2,259	square feet[1]	(0.70)	per 1,000 SF	88%	12%	(2)	0	(2)
942	Service Garage	2,483	square feet	(2.25)	per 1,000 SF	66%	34%	(4)	(2)	(6)
151	Mini-Warehouse	9,960	square feet	(0.10)	per 1,000 SF	60%	40%	(1)	0	(1)
150	Storage	672	square feet	(0.17)	per 1,000 SF	77%	23%	0	0	0
	Existing Subtotal[3]		square feet					(7)	(3)	(10)
N/A	RV Storage	220	RV spaces	(0.97)	per 100 RV spaces[4]	52%	48%	(1)	(1)	(2)
N/A	RV Storage	220	RV spaces		per 100 RV spaces[5]			0	0	0
	Existing RV Storage[6]							(1)	(1)	(2)
	Existing Trips Total[7]							(8)	(4)	(12)
N/A	Proposed StorQuest	97,900	square feet	0.04	per 1,000 SF	50%	50%	2.0	2.0	4.0
N/A	Proposed RV Storage	91	RV spaces	0.97	per 100 RV spaces[4]	52%	48%	1.0	0.0	1.0
	Proposed Trip-Subtotal							3.0	2.0	5.0
	NEW AM PEAK HOUR TRIPS[8]							(5)	(2)	(7)

ITE Code	Land Use	Size	Variable	AM Rate		Distribution %-in	%-out	Trips Generated In	Out	Total
210	Single-Family	1	dwelling units	(0.99)	per DU	63%	37%	(1)	0	(1)
110	Light Industrial	2,259	square feet[1]	(0.63)	per 1,000 SF	13%	87%	0	(1)	(1)
942	Service Garage	2,483	square feet	(3.11)	per 1,000 SF	48%	52%	(4)	(4)	(8)
151	Mini-Warehouse	9,960	square feet	(0.17)	per 1,000 SF	47%	53%	(1)	(1)	(2)
150	Storage	672	square feet	(0.19)	per 1,000 SF	27%	73%	0	0	0
	Existing Subtotal[3]		square feet					(6)	(6)	(12)
N/A	RV Storage	220	RV spaces	(2.05)	per 100 RV spaces[4]	45%	55%	(2)	(3)	(5)
N/A	RV Storage	220	RV spaces	(0.84)	per 100 RV spaces[5]	44%	56%	(1)	(1)	(2)
	Existing RV Storage[6]							(2)	(3)	(5)
	Existing Trips Total[7]							(8)	(9)	(17)
N/A	Proposed StorQuest	97,900	square feet	0.11	per 1,000 SF	42%	58%	5	6	11
N/A	Proposed RV Storage	91	RV spaces	2.05	per 100 RV spaces[4]	45%	55%	1	1	2
	Proposed Trip-Subtotal							6	7	13
	NEW PM PEAK HOUR TRIPS[8]							(2)	(2)	(4)

1 Light Industrial use square footage includes existing office and light industrial buildings areas.
2 Rate estimated 10 X "PM Peak Hour Rate", no ITE data available.
3 Trip total for uses on Land Parcel 2351-340-00-009. Does not include existing RV storage trips.
4 From data compiled in Desert Hot Springs, CA.
5 From data compiled in Brighton and Erie, CO, PM data only (data is significantly less than the data compiled in California).
6 Total RV Trips is based on the data compiled for the Desert Hot Springs, CA site only.
7 Total Existing Trips = Trip total for uses on Land Parcel 2351-340-00-009 + RV Trips.
8 New Trips = Proposed Use Trips - Total Existing Trips.

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SAN LUIS OBISPO

MEMORANDUM

DATE: February 27, 2020

TO: Annie Baek, InSite Property Group

FROM: Dean Arizabal, LSA

SUBJECT: Trip Generation Analysis for the Proposed Self-Storage and RV Storage Facility at 3701 Pacific Place, Long Beach, California

LSA has prepared this trip generation analysis for the proposed self-storage and recreational vehicle (RV) storage facility (project) in Long Beach, California. The proposed project is at 3701 Pacific Place, the former site of the Long Beach Golf Learning Center. The proposed project will construct a 150,000-gross-square-foot building with 1,100 self-storage units and 580 RV storage spaces on the currently vacant property.

The project site is north of the Interstate 405 (I-405) freeway, east of the Interstate 710 (I-710) freeway and the Los Angeles River, and west of the Los Angeles Metropolitan Transportation Authority (Metro) A Line light rail tracks and Los Cerritos Park. Access to the site is currently provided at the signalized intersection of Pacific Place/Wardlow Road and the unsignalized intersection of Pacific Place/I-405 and I-710 northbound on-ramps.

The purpose of this analysis is to identify the proposed project trip generation and determine whether the project would require a more-detailed traffic analysis according to the City of Long Beach's (City) *Traffic Impact Analysis (TIA) Guidelines*. The *TIA Guidelines* state that a TIA should be prepared for every project that would generate more than 100 vehicle trips per day. The TIA requirement can be waived by the City Traffic Engineer where impacts are deemed negligible. In addition, the *TIA Guidelines* state that intersections at which the project contributes a total of 50 or more peak-hour trips should be analyzed. As such, this trip generation analysis evaluates the proposed project against the City's two trip thresholds.

Trip Generation

The potential trip generation of the proposed project was calculated using trip generation rates from the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 10th Edition (2017) for self-storage use (Land Use Code 151: Mini-Warehouse). Although ITE does not have trip rates for RV storage use, the trip-generating characteristics of an RV storage use closely resemble those of a self-storage (mini-warehouse) use. Table A presents the trip generation estimate using the ITE (Land Use Code 151) trip rates for the proposed project of 1,100 self-storage units and 580 RV storage spaces (considered "units" for purposes of the trip generation).

Table A: Project Trip Generation (ITE Trip Rates)

Land Use	Size	Unit	ADT	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Trip Rates									
Mini-Warehouse (Self-Storage and RV Storage)[1]		100 storage units (100 RV spaces)	17.960	0.710	0.680	1.390	0.980	0.970	1.950
Project Trip Generation									
Self-Storage and RV Storage[2]	16.80	100 storage units (100 RV spaces)	302	12	11	23	17	16	33

[1] Trip rates referenced from the Institute of Transportation Engineers (ITE) *Trip Generation Manual,* 10th Edition (2017). Land Use Code (151) - Mini Warehouse

[2] Proposed project includes 1,100 self-storage units and 580 RV storage spaces (1,680 total units and spaces).

ADT = average daily traffic

RV = recreational vehicle

As Table A shows, the proposed project is estimated to generate 302 daily trips, 23 of which would occur in the a.m. peak hour and 33 of which would occur in the p.m. peak hour, using ITE trip rates.

As an alternative method to calculating trips for the self-storage and RV storage uses, LSA also applied trip rates developed from gate data (vehicle entries and exits) recorded between November 2019 and January 2020 for a self-storage facility in Moreno Valley (14150 Grant Street) and a self-storage and RV storage facility in Desert Hot Springs (15305 Little Morongo Road). The gate data is provided as an attachment. Table B presents the trip generation estimate for the proposed project using the gate trip rates for the 1,100 self-storage units and the 580 RV storage spaces.

Table B: Project Trip Generation (Gate Trip Rates)

Land Use	Size	Unit	ADT	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Trip Rates[1]									
Self-Storage		100 storage units	12.90	0.53	0.40	0.93	0.93	0.79	1.72
RV Storage		100 RV spaces	17.23	0.50	0.47	0.97	0.93	1.12	2.05
Project Trip Generation									
Self-Storage	11.00	100 storage units	142	6	4	10	10	9	19
RV Storage	5.80	100 RV spaces	100	3	3	6	5	7	12
Total			242	9	7	16	15	16	31

[1] Trip rates developed from gate data for the Moreno Valley Self Storage and Desert Hot Springs Self Storage and RV Storage facilities (November 2019 to January 2020).

ADT = average daily traffic

RV = recreational vehicle

As Table B shows, the proposed project is estimated to generate 242 daily trips, 16 of which would occur in the a.m. peak hour and 31 of which would occur in the p.m. peak hour, using trip rates developed from gate data of one existing self-storage facility and one existing self-storage and RV storage facility.

Conclusion

LSA analyzed the trip generation for the proposed project to determine whether it would require a more-detailed traffic analysis according to the City's *TIA Guidelines*. Using ITE trip rates or trip rates developed from similar facilities currently in operation, the proposed project is anticipated to generate a maximum of 302 daily trips, including a maximum of 33 trips during the peak hours.

Although the proposed project would generate more than 100 trips per day, it would generate fewer than 50 trips per peak hour. Because the proposed project would not contribute 50 or more trips per peak hour to any intersection, an intersection analysis is not required per the *TIA Guidelines*. A maximum project contribution of 33 peak-hour trips to the adjacent intersections is nominal, and the potential for an intersection impact is unlikely. As such, LSA recommends that the City Traffic Engineer waive the TIA requirement for this project.

If you have any questions, please contact me at (949) 553-0666.

Attachment: Self Storage and RV Storage Gate Data (November 2019 to January 2020)

LSA

Self Storage Trip Generation and Trip Rates (Moreno Valley and Desert Hot Springs)

Trip Generation

Day and Date	Size[1]	Daily	AM Peak Hour[2]			PM Peak Hour[3]		
			In	Out	Total	In	Out	Total
Tuesday 11/5/19		170	9	4	13	20	30	50
Wednesday 11/6/19		164	4	5	9	5	8	13
Thursday 11/7/19		194	8	6	14	10	10	20
Tuesday 11/12/19		167	9	14	23	17	10	27
Wednesday 11/13/19		209	11	9	20	17	15	32
Thursday 11/14/19		188	9	6	15	8	8	16
Tuesday 11/19/19		219	14	6	20	10	10	20
Wednesday 11/20/19		173	6	8	14	7	9	16
Thursday 11/21/19		183	15	9	24	11	12	23
Tuesday 12/3/19		182	8	7	15	21	11	32
Wednesday 12/4/19		162	9	10	19	9	8	17
Thursday 12/5/19		213	3	3	6	19	13	32
Tuesday 12/10/19		209	5	3	8	16	10	26
Wednesday 12/11/19		225	6	9	15	22	9	31
Thursday 12/12/19		206	8	4	12	19	18	37
Tuesday 12/17/19		174	13	6	19	8	7	15
Wednesday 12/18/19		242	9	7	16	16	13	29
Thursday 12/19/19		188	5	2	7	17	14	31
Tuesday 1/7/20		213	13	8	21	16	16	32
Wednesday 1/8/20		195	3	2	5	24	10	34
Thursday 1/9/20		210	5	4	9	22	7	29
Tuesday 1/14/20		202	10	11	21	13	14	27
Wednesday 1/15/20		218	13	8	21	10	13	23
Thursday 1/16/20		195	5	6	11	18	14	32
Tuesday 1/28/20		162	7	5	12	6	7	13
Wednesday 1/29/20		204	4	5	9	14	14	28
Thursday 1/30/20	**15.12**	203	6	4	10	6	11	17
Average	**15.12**	**195**	**8**	**6**	**14**	**14**	**12**	**26**

Trip Rates

Land Use Type	Size	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Self Storage	**1.00**	**12.90**	**0.53**	**0.40**	**0.93**	**0.93**	**0.79**	**1.72**

[1] Size is the total number of self storage units of the Moreno Valley and Desert Hot Springs self storage facilities (in hundreds).

[2] AM Peak Hour is the one-hour period between 7:00 and 9:00 a.m. with the highest trip generation (7:00-8:00, 7:15-8:15, 7:30-8:30, 7:45-8:45, or 8:00-9:00 a.m.).

[3] PM Peak Hour is the one-hour period between 4:00 and 6:00 a.m. with the highest trip generation (4:00-5:00, 4:15-5:15, 4:30-5:30, 4:45-5:45, or 5:00-6:00 p.m.).

LSA

RV Storage Trip Generation and Trip Rates (Desert Hot Springs)

Trip Generation

Day and Date	Size[1]	Daily	AM Peak Hour[2]			PM Peak Hour[3]		
			In	Out	Total	In	Out	Total
Tuesday 11/5/19		50	0	0	0	0	3	3
Wednesday 11/6/19		57	1	2	3	4	2	6
Thursday 11/7/19		49	1	1	2	5	5	10
Tuesday 11/12/19		37	0	0	0	3	5	8
Wednesday 11/13/19		38	1	0	1	0	0	0
Thursday 11/14/19		52	2	1	3	2	2	4
Tuesday 11/19/19		41	3	2	5	1	2	3
Wednesday 11/20/19		49	3	3	6	3	7	10
Thursday 11/21/19		55	3	3	6	4	3	7
Tuesday 12/3/19		43	1	1	2	3	3	6
Wednesday 12/4/19		24	0	0	0	0	1	1
Thursday 12/5/19		65	3	4	7	1	2	3
Tuesday 12/10/19		52	0	0	0	4	4	8
Wednesday 12/11/19		44	1	0	1	1	2	3
Thursday 12/12/19		44	2	2	4	3	5	8
Tuesday 12/17/19		38	1	1	2	2	3	5
Wednesday 12/18/19		54	1	1	2	2	3	5
Thursday 12/19/19		49	3	3	6	3	2	5
Tuesday 1/7/20		70	1	1	2	6	4	10
Wednesday 1/8/20		32	1	1	2	0	1	1
Thursday 1/9/20		35	0	0	0	2	2	4
Tuesday 1/14/20		39	2	2	4	4	3	7
Wednesday 1/15/20		58	2	2	4	5	7	12
Thursday 1/16/20		57	3	2	5	7	5	12
Tuesday 1/28/20		48	1	2	3	2	3	5
Wednesday 1/29/20		50	1	0	1	1	2	3
Thursday 1/30/20	**2.78**	63	1	1	2	2	3	5
Average	**2.78**	**48**	**1**	**1**	**3**	**3**	**3**	**6**

Trip Rates

Land Use Type	Size	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
RV Storage	**1.00**	**17.23**	**0.50**	**0.47**	**0.97**	**0.93**	**1.12**	**2.05**

[1] Size is the total number of RV storage spaces of the Desert Hot Springs RV storage facility (in hundreds).

[2] AM Peak Hour is the one-hour period between 7:00 and 9:00 a.m. with the highest trip generation (7:00-8:00, 7:15-8:15, 7:30-8:30, 7:45-8:45, or 8:00-9:00 a.m.).

[3] PM Peak Hour is the one-hour period between 4:00 and 6:00 a.m. with the highest trip generation (4:00-5:00, 4:15-5:15, 4:30-5:30, 4:45-5:45, or 5:00-6:00 p.m.).

Summary

Moreno Valley Self Storage Trip Generation

	Daily	AM Peak In	AM Peak Out	PM Peak In	PM Peak Out
Tuesday 11/5/19	116	8	3	10	4
Wednesday 11/6/19	93	2	3	3	5
Thursday 11/7/19	111	6	2	3	6
Tuesday 11/12/19	106	4	4	6	4
Wednesday 11/13/19	125	6	5	8	8
Thursday 11/14/19	108	4	4	6	6
Tuesday 11/19/19	130	13	5	5	7
Wednesday 11/20/19	110	3	5	5	7
Thursday 11/21/19	100	10	4	5	6
Tuesday 12/3/19	101	3	4	13	6
Wednesday 12/4/19	97	3	6	5	2
Thursday 12/5/19	118	2	2	5	6
Tuesday 12/10/19	109	1	1	9	4
Wednesday 12/11/19	112	2	3	14	4
Thursday 12/12/19	121	5	1	11	9
Tuesday 12/17/19	106	8	4	3	5
Wednesday 12/18/19	123	3	3	8	7
Thursday 12/19/19	101	2	1	11	9
Tuesday 1/7/20	94	8	3	9	7
Wednesday 1/8/20	107	3	2	12	5
Thursday 1/9/20	114	0	1	8	4
Tuesday 1/14/20	109	6	7	8	6
Wednesday 1/15/20	111	8	2	4	4
Thursday 1/16/20	85	1	3	5	4
Tuesday 1/28/20	97	3	2	4	4
Wednesday 1/29/20	122	2	2	4	7
Thursday 1/30/20	113	4	3	3	5

from LSA Study

Summary

Desert Hot Springs Self Storage Trip Generation

	Daily	AM Peak In	AM Peak Out	PM Peak In	PM Peak Out
Tuesday 11/5/19	54	1	1	10	26
Wednesday 11/6/19	71	2	2	2	3
Thursday 11/7/19	83	2	4	7	4
Tuesday 11/12/19	61	5	10	11	6
Wednesday 11/13/19	84	5	4	9	7
Thursday 11/14/19	80	5	2	2	2
Tuesday 11/19/19	89	1	1	5	3
Wednesday 11/20/19	63	3	3	2	2
Thursday 11/21/19	83	5	5	6	6
Tuesday 12/3/19	81	5	3	8	5
Wednesday 12/4/19	65	6	4	4	6
Thursday 12/5/19	95	1	1	14	7
Tuesday 12/10/19	100	4	2	7	6
Wednesday 12/11/19	113	4	6	8	5
Thursday 12/12/19	85	3	3	8	9
Tuesday 12/17/19	68	5	2	5	2
Wednesday 12/18/19	119	6	4	8	6
Thursday 12/19/19	87	3	1	6	5
Tuesday 1/7/20	119	5	5	7	9
Wednesday 1/8/20	88	0	0	12	5
Thursday 1/9/20	96	5	3	14	3
Tuesday 1/14/20	93	4	4	5	8
Wednesday 1/15/20	107	5	6	6	9
Thursday 1/16/20	110	4	3	13	10
Tuesday 1/28/20	65	4	3	2	3
Wednesday 1/29/20	82	2	3	10	7
Thursday 1/30/20	90	2	1	3	6

from LSA Study

Summary

Desert Hot Springs RV Storage Trip Generation

	Daily	AM Peak In	AM Peak Out	PM Peak In	PM Peak Out
Tuesday 11/5/19	50	0	0	0	3
Wednesday 11/6/19	57	1	2	4	2
Thursday 11/7/19	49	1	1	5	5
Tuesday 11/12/19	37	0	0	3	5
Wednesday 11/13/19	38	1	0	0	0
Thursday 11/14/19	52	2	1	2	2
Tuesday 11/19/19	41	3	2	1	2
Wednesday 11/20/19	49	3	3	3	7
Thursday 11/21/19	55	3	3	4	3
Tuesday 12/3/19	43	1	1	3	3
Wednesday 12/4/19	24	0	0	0	1
Thursday 12/5/19	65	3	4	1	2
Tuesday 12/10/19	52	0	0	4	4
Wednesday 12/11/19	44	1	0	1	2
Thursday 12/12/19	44	2	2	3	5
Tuesday 12/17/19	38	1	1	2	3
Wednesday 12/18/19	54	1	1	2	3
Thursday 12/19/19	49	3	3	3	2
Tuesday 1/7/20	70	1	1	6	4
Wednesday 1/8/20	32	1	1	0	1
Thursday 1/9/20	35	0	0	2	2
Tuesday 1/14/20	39	2	2	4	3
Wednesday 1/15/20	58	2	2	5	7
Thursday 1/16/20	57	3	2	7	5
Tuesday 1/28/20	48	1	2	2	3
Wednesday 1/29/20	50	1	0	1	2
Thursday 1/30/20	63	1	1	2	3

from LSA Study

Pivot Moreno Entry

Date	COUNTA of Name	SUM of Peak AM 7-8	SUM of Peak AM 7:15-8:15	SUM of Peak AM 7:30-8:30	SUM of Peak AM 7:45-8:45	SUM of Peak AM 8-9	SUM of Peak PM 4-5	SUM of Peak PM 4:15-5:15	SUM of Peak PM 4:30-5:30	SUM of Peak PM 4:45-5:45	SUM of Peak PM 5-6
11/5/2019	65	7	8	2	2	0	4	4	3	5	10
11/6/2019	45	1	0	1	2	0	2	2	2	1	3
11/7/2019	49	3	4	2	6	0	3	3	3	3	2
11/12/2019	57	4	3	2	1	0	6	4	4	1	1
11/13/2019	69	2	6	6	6	0	3	5	5	8	6
11/14/2019	55	3	3	2	4	0	4	5	4	6	5
11/19/2019	66	2	9	13	13	0	3	4	5	5	5
11/20/2019	53	3	3	2	2	0	5	5	4	3	4
11/21/2019	52	10	10	8	3	0	5	2	2	2	1
12/3/2019	50	2	2	3	2	0	13	9	9	0	0
12/4/2019	47	3	2	2	2	0	1	2	3	5	4
12/5/2019	57	2	2	2	1	0	4	5	4	4	2
12/10/2019	57	1	1	0	0	0	6	5	9	7	6
12/11/2019	56	2	2	1	1	0	5	3	4	14	13
12/12/2019	61	0	0	4	5	0	3	5	9	11	11
12/17/2019	50	7	8	3	3	0	3	2	2	0	0
12/18/2019	53	1	2	3	3	0	8	5	4	4	3
12/19/2019	50	1	0	1	2	0	11	10	4	3	4
1/7/2020	49	7	7	8	3	0	7	9	7	7	6
1/8/2020	55	1	3	3	2	0	7	7	12	8	9
1/9/2020	63	0	0	0	0	0	8	5	3	6	5
1/14/2020	57	1	1	3	6	0	8	7	8	6	6
1/15/2020	57	1	3	2	8	0	4	4	4	3	4
1/16/2020	45	1	1	1	1	0	5	5	5	1	3
1/28/2020	52	1	3	3	3	0	3	3	3	4	3
1/29/2020	67	1	1	2	1	0	4	3	3	4	4
1/30/2020	56	4	4	3	3	0	3	1	1	1	1
Grand Total	1493	71	88	82	85	0	138	124	126	122	121

from LSA Study

Pivot Moreno Exit

Date	COUNTA of Name	SUM of Peak AM 7-8	SUM of Peak AM 7:15-8:15	SUM of Peak AM 7:30-8:30	SUM of Peak AM 7:45-8:45	SUM of Peak AM 8-9	SUM of Peak PM 4-5	SUM of Peak PM 4:15-5:15	SUM of Peak PM 4:30-5:30	SUM of Peak PM 4:45-5:45	SUM of Peak PM 5-6
11/5/2019	51	2	3	2	2	0	3	2	2	3	4
11/6/2019	48	3	1	1	1	0	4	5	4	3	3
11/7/2019	62	1	2	2	2	0	2	4	6	5	6
11/12/2019	49	4	3	2	2	0	3	4	3	3	1
11/13/2019	56	2	4	5	4	0	2	4	7	7	8
11/14/2019	53	4	2	2	2	0	4	4	6	6	6
11/19/2019	64	3	4	5	4	0	4	6	6	7	6
11/20/2019	57	2	5	5	4	0	5	3	4	3	7
11/21/2019	48	2	4	3	4	0	6	6	3	2	3
12/3/2019	51	4	4	3	3	0	6	3	4	3	1
12/4/2019	50	3	4	5	6	0	1	2	2	1	2
12/5/2019	61	1	2	2	2	0	3	5	6	5	5
12/10/2019	52	0	1	1	1	0	3	4	4	3	4
12/11/2019	56	3	3	1	1	0	1	1	1	2	4
12/12/2019	60	0	0	1	1	0	8	8	9	9	4
12/17/2019	56	4	4	4	3	0	4	5	4	5	2
12/18/2019	70	1	1	2	3	0	4	5	7	7	6
12/19/2019	51	1	1	0	0	0	7	9	7	4	3
1/7/2020	45	3	3	2	3	0	7	6	4	4	4
1/8/2020	52	1	2	2	1	0	5	4	2	3	4
1/9/2020	51	1	0	0	0	0	2	4	2	2	3
1/14/2020	52	4	5	7	4	0	4	6	4	3	4
1/15/2020	54	1	1	2	2	0	2	2	3	4	4
1/16/2020	40	1	2	2	3	0	4	4	4	4	1
1/28/2020	45	1	1	2	2	0	4	4	4	3	4
1/29/2020	55	2	2	2	1	0	7	7	4	4	4
1/30/2020	57	1	3	3	3	0	5	4	2	1	3
Grand Total	1446	55	67	68	64	0	110	121	114	106	106

from LSA Study

PIVOT DHS Storage Entry

Date	COUNTA of Name	SUM of Peak AM 7-8	SUM of Peak AM 7:15-8:15	SUM of Peak AM 7:30-8:30	SUM of Peak AM 7:45-8:45	SUM of Peak AM 8-9	SUM of Peak PM 4-5	SUM of Peak PM 4:15-5:15	SUM of Peak PM 4:30-5:30	SUM of Peak PM 4:45-5:45	SUM of Peak PM 5-6
11/5/2019	28	1	0	0	1	0	9	10	10	7	2
11/6/2019	37	2	2	1	0	0	1	2	2	2	2
11/7/2019	44	2	2	1	1	0	4	3	2	3	7
11/12/2019	34	2	4	5	5	0	11	7	7	3	2
11/13/2019	43	5	3	4	4	0	9	8	3	4	2
11/14/2019	40	2	3	4	5	0	2	1	1	1	1
11/19/2019	48	0	0	0	1	0	5	1	2	4	5
11/20/2019	32	3	3	3	3	0	0	2	2	2	2
11/21/2019	43	2	5	5	4	0	6	3	3	3	2
12/3/2019	42	3	5	4	3	0	8	8	7	2	3
12/4/2019	33	6	6	5	1	0	4	4	4	4	4
12/5/2019	48	1	1	0	1	0	14	10	2	2	3
12/10/2019	50	3	3	4	2	0	7	4	4	1	1
12/11/2019	58	2	3	4	3	0	4	8	8	8	7
12/12/2019	42	2	2	1	3	0	5	7	8	7	5
12/17/2019	35	0	3	5	5	0	2	1	2	4	5
12/18/2019	61	2	3	3	6	0	8	8	8	4	4
12/19/2019	42	1	1	2	3	0	6	4	5	3	1
1/7/2020	61	5	5	4	3	0	7	6	5	6	5
1/8/2020	44	0	0	0	0	0	12	12	4	4	4
1/9/2020	50	5	4	5	4	0	2	4	4	12	14
1/14/2020	46	2	3	3	4	0	5	3	4	5	4
1/15/2020	54	5	4	4	3	0	6	4	2	4	3
1/16/2020	57	3	3	3	4	0	10	13	11	11	7
1/28/2020	32	4	4	3	3	0	2	2	2	2	2
1/29/2020	42	2	1	1	1	0	8	9	10	9	3
1/30/2020	44	1	1	0	2	0	1	1	3	3	3
Grand Total	1190	66	74	74	75	0	158	145	125	120	103

from LSA Study

PIVOT DHS Storage Exit

Date	COUNTA of Name	SUM of Peak AM 7-8	SUM of Peak AM 7:15-8:15	SUM of Peak AM 7:30-8:30	SUM of Peak AM 7:45-8:45	SUM of Peak AM 8-9	SUM of Peak PM 4-5	SUM of Peak PM 4:15-5:15	SUM of Peak PM 4:30-5:30	SUM of Peak PM 4:45-5:45	SUM of Peak PM 5-6
11/5/2019	26	1	1	0	0	0	1	16	26	26	26
11/6/2019	34	1	2	1	1	0	2	1	0	0	3
11/7/2019	39	4	4	4	1	0	4	4	3	3	1
11/12/2019	27	1	2	2	10	0	6	3	4	4	1
11/13/2019	41	4	3	3	2	0	7	6	4	4	2
11/14/2019	40	1	1	2	2	0	2	1	1	0	1
11/19/2019	41	1	0	0	1	0	3	2	2	1	1
11/20/2019	31	2	1	3	3	0	1	1	1	1	2
11/21/2019	40	1	3	5	5	0	5	6	3	2	3
12/3/2019	39	3	3	2	1	0	2	5	4	5	4
12/4/2019	32	2	4	4	2	0	6	2	1	2	2
12/5/2019	47	1	1	0	0	0	7	7	5	3	2
12/10/2019	50	0	2	2	2	0	5	6	5	4	4
12/11/2019	55	2	3	6	5	0	5	3	4	5	5
12/12/2019	43	2	2	2	3	0	6	7	8	7	9
12/17/2019	33	0	0	1	2	0	2	2	1	1	1
12/18/2019	58	2	2	2	4	0	6	5	3	4	4
12/19/2019	45	1	1	1	1	0	5	4	5	4	4
1/7/2020	58	5	5	5	2	0	9	8	5	5	5
1/8/2020	44	0	0	0	0	0	4	2	3	4	5
1/9/2020	46	3	3	2	2	0	2	1	3	3	2
1/14/2020	47	1	2	4	4	0	1	3	3	6	8
1/15/2020	53	3	6	6	5	0	9	7	6	4	1
1/16/2020	53	3	3	1	2	0	7	8	7	10	7
1/28/2020	33	2	3	3	3	0	1	0	1	2	3
1/29/2020	40	3	2	1	0	0	5	6	6	7	3
1/30/2020	46	1	1	1	1	0	1	1	5	6	5
Grand Total	1141	50	60	63	64	0	114	117	119	123	114

from LSA Study

PIVOT DHS RV Entry

Date	COUNTA of Name	SUM of Peak AM 7-8	SUM of Peak AM 7:15-8:15	SUM of Peak AM 7:30-8:30	SUM of Peak AM 7:45-8:45	SUM of Peak AM 8-9	SUM of Peak PM 4-5	SUM of Peak PM 4:15-5:15	SUM of Peak PM 4:30-5:30	SUM of Peak PM 4:45-5:45	SUM of Peak PM 5-6
11/5/2019	25	0	0	0	0	0	0	0	0	0	0
11/6/2019	29	1	1	1	0	0	3	4	3	2	3
11/7/2019	24	1	1	1	1	0	3	3	5	3	2
11/12/2019	19	0	0	0	0	0	1	3	3	3	2
11/13/2019	18	0	0	0	1	0	0	0	0	0	0
11/14/2019	26	1	1	1	2	0	2	0	0	0	0
11/19/2019	19	1	3	3	3	0	1	0	0	0	0
11/20/2019	25	3	3	2	1	0	1	3	3	2	2
11/21/2019	28	3	2	2	3	0	0	1	1	1	4
12/3/2019	22	0	0	1	1	0	3	3	3	2	1
12/4/2019	12	0	0	0	0	0	0	0	0	0	0
12/5/2019	31	3	3	2	1	0	1	0	0	0	1
12/10/2019	25	0	0	0	0	0	4	2	1	1	1
12/11/2019	22	0	0	0	1	0	1	1	1	1	1
12/12/2019	20	1	1	1	2	0	2	2	3	2	2
12/17/2019	20	1	1	1	1	0	2	2	1	1	0
12/18/2019	27	1	1	1	1	0	2	2	2	1	1
12/19/2019	26	0	1	1	3	0	3	2	1	1	1
1/7/2020	35	0	0	1	1	0	0	3	4	6	6
1/8/2020	16	0	0	1	1	0	0	0	0	0	0
1/9/2020	18	0	0	0	0	0	1	1	2	2	1
1/14/2020	18	1	1	1	2	0	2	4	2	2	2
1/15/2020	29	1	1	2	1	0	5	4	4	1	2
1/16/2020	28	3	2	2	1	0	7	2	1	1	0
1/28/2020	23	1	0	1	1	0	2	1	1	1	0
1/29/2020	26	0	0	0	1	0	0	0	1	1	1
1/30/2020	31	0	1	1	1	0	2	2	2	2	1
Grand Total	642	22	23	26	30	0	48	45	44	36	34

from LSA Study

PIVOT DHS RV Exit

Date	COUNTA of Name	SUM of Peak AM 7-8	SUM of Peak AM 7:15-8:15	SUM of Peak AM 7:30-8:30	SUM of Peak AM 7:45-8:45	SUM of Peak AM 8-9	SUM of Peak PM 4-5	SUM of Peak PM 4:15-5:15	SUM of Peak PM 4:30-5:30	SUM of Peak PM 4:45-5:45	SUM of Peak PM 5-6
11/5/2019	25	0	0	0	0	0	3	2	0	0	0
11/6/2019	28	2	2	2	2	0	1	1	2	2	2
11/7/2019	25	0	1	1	1	0	3	3	5	4	2
11/12/2019	18	0	0	0	0	0	0	2	5	5	5
11/13/2019	20	0	0	0	0	0	0	0	0	0	0
11/14/2019	26	0	1	1	1	0	2	2	0	0	0
11/19/2019	22	1	1	2	2	0	2	1	0	0	1
11/20/2019	24	3	3	2	2	0	3	6	7	6	5
11/21/2019	27	2	2	2	3	0	1	0	1	1	3
12/3/2019	21	0	0	1	1	0	3	3	2	3	1
12/4/2019	12	0	0	0	0	0	1	1	0	0	0
12/5/2019	34	3	4	4	3	0	1	0	1	1	2
12/10/2019	27	0	0	0	0	0	4	2	2	1	1
12/11/2019	22	0	0	0	0	0	2	2	1	1	1
12/12/2019	24	1	1	1	2	0	2	4	5	4	3
12/17/2019	18	1	1	1	1	0	2	2	3	2	1
12/18/2019	27	0	0	1	1	0	3	3	3	2	2
12/19/2019	23	1	1	1	3	0	2	2	2	2	1
1/7/2020	35	0	0	1	1	0	2	0	2	3	4
1/8/2020	16	0	0	0	1	0	0	1	1	1	1
1/9/2020	17	0	0	0	0	0	1	2	2	2	2
1/14/2020	21	0	1	1	2	0	2	3	3	3	2
1/15/2020	29	1	1	2	2	0	7	6	6	6	4
1/16/2020	29	2	2	2	2	0	3	4	5	3	2
1/28/2020	25	2	0	0	0	0	3	1	1	2	1
1/29/2020	24	0	0	0	0	0	0	0	1	1	2
1/30/2020	32	1	0	0	1	0	2	3	2	1	2
Grand Total	651	20	21	25	31	0	55	56	62	56	50

from LSA Study

LSA

Table B: Project Trip Generation (Gate Data)

			Weekday							Saturday							Sunday						
				AM Peak Hour			PM Peak Hour				AM Peak Hour			PM Peak Hour				AM Peak Hour			PM Peak Hour		
Land Use	**Size**	**Unit**	**ADT**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**ADT**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**ADT**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Trip Rates[1]																							
Self-Storage		100 storage units	12.90	0.53	0.40	0.93	0.93	0.79	1.72	14.09	0.80	0.66	1.46	0.92	0.93	1.85	11.04	0.33	0.20	0.53	0.86	0.73	1.59
RV Storage		100 RV spaces	17.23	0.50	0.47	0.97	0.93	1.12	2.05	16.95	0.85	0.72	1.57	0.99	1.21	2.20	14.25	0.63	0.45	1.08	0.81	1.35	2.16
Project Trip Generation																							
Self-Storage	11.00	100 storage units	142	6	4	10	10	9	19	155	9	7	16	10	10	20	121	4	2	6	9	8	17
RV Storage	5.80	100 RV spaces	100	3	3	6	5	7	12	98	5	4	9	6	7	13	83	4	3	7	5	8	13
Total			**242**	**9**	**7**	**16**	**15**	**16**	**31**	**253**	**14**	**11**	**25**	**16**	**17**	**33**	**204**	**8**	**5**	**13**	**14**	**16**	**30**

[1] Trip rates developed from gate data for the Moreno Valley Self Storage and Desert Hot Springs Self Storage and RV Storage facilities (November 2019 to January 2020).

ADT = average daily traffic

RV = recreational vehicle

Route 52 RV

Traffic Impact Study

Route 52 Storage LLC

Weld County, Colorado

August 28, 2017

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5.0 Site Generated Traffic Volumes

5.1 Trip Generation

The Institute of Transportation Engineers (ITE) Trip Generation manual[4] does not contain trip generation rates for the RV storage yard use, so STS collected peak hour count data at two similar facilities to develop trip generation rates for the weekday and Sunday evening peak hours. The facilities where the data were collected include:

- Brighton Outdoor Storage which is located at 312 County Road 19 in Brighton
- Recreational Storage Solutions which is located at 5360 County Road 6 in Erie

The independent variable used for the trip generation rates is the number of spaces to park RV's. The trip generation rates are contained in Table 2 and a summary of the data used to develop the rates are contained on the second page of Table 2.

5.2 Trip Distribution and Assignment

The trip distribution for the development was based on the existing traffic volumes. It is contained in Figure 10. The short term trip assignment for Phase I is contained in Figures 11 and 12, and the long term assignment is contained in Figures 13 and 14.

6.0 Total Traffic Volumes

The total traffic volumes were developed by combining the background traffic volumes with the trip assignment. The following figures contain the total traffic volume scenarios.

- Figures 15 and 16 contain the Year 2018 total traffic volumes. These volumes were developed by adding the background volumes contained in Figures 6 and 7 with the short term trip assignment contained in Figures 11 and 12.
- Figures 17 and 18 contain the Year 2037 total traffic volumes. These volumes were developed by adding the background volumes contained in Figures 8 and 9 with the long term trip assignment contained in Figures 13 and 14.

6.1 Level of Service Analysis

The level of service analysis shows that the intersection of SH 52 / site access is expected to continue to operate at LOS C during weekday evening peak hour and LOS B during the Sunday evening peak hour in the Year 2018 total traffic volume scenarios. However, the intersection is expected to operate at LOS D during the weekday evening peak hour and LOS C during the Sunday evening peak hour in Year 2037 total traffic volume scenarios. The level of service analysis is summarized in Table 1.

7.0 Auxiliary Lanes

The need for auxiliary lanes at the site access was determined based on the State Highway Access Code. Section 3.8 (5) describes the need for the lanes and Table

4 Trip Generation. Institute of Transportation Engineers, 9th Edition. 2012.

Table 2. Trip Generation Estimate Based on Spaces

Land Use	Size [1]	Unit	Weekday Evening Peak Hour Trips				Sunday Afternoon Peak Hour Trips			
			Rate [2]	Total	In	Out	Rate [2]	Total	In	Out
Outdoor RV Storage	18.61	100 Spaces	0.84	16	7	9	3.32	62	33	29

Notes:

1. The size of the development and the land use were provided by Bryan Haffner.

2. The trip generation rates were developed based on data collected at two existing facilities in Weld County.

Development Scenarios

Development Scenarios	Weekday Evening Peak Hour Trips				Sunday Afternoon Peak Hour Trips			
	In		Out		In		Out	
	EB	WB	EB	WB	EB	WB	EB	WB
Full Buildout	4	4	4	4	16	16	15	15
Phase 1 (55% of Full Buildout)	2	2	2	2	9	9	8	8
Phase 2 (Completion of Development)	2	2	2	2	7	7	7	7