



COUNTY OF SAN LUIS OBISPO

Avila Circulation Study & Traffic Impact Fee Update

Monday, August 12, 2019

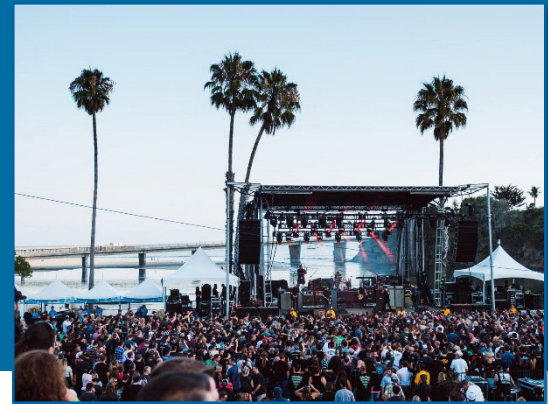


Photo credits: GHD, Avila Beach Golf Resort

Overview

- LOS Capacity Metric and Policy Recommendation (5 min)
- Special Events & Travel Demand Management (5 min)
- Capital Improvements Program & Impact Fee Update (5 min)



2nd Week of May Policy

Previous County Policy for Avila Beach Drive:

- **Avila Beach Drive and San Luis Bay Drive Level of Service.** Reserve a portion of the Avila Beach Drive road capacity to serve coastal dependent uses and do not subject Avila Beach Drive to traffic levels exceeding Level of Service (LOS) “C” overall. The LOS for Avila Beach Drive and San Luis Bay Drive shall be based on the average hourly weekday two-way 3:00 p.m. to 6:00 p.m. traffic counts to be conducted during the second week in May of each year. [Added 1995, Ord. 2702]; *San Luis Bay Coastal Area Plan*

July 2016



**Board directs County PWD to
replace 2nd Week of May Policy**

LOS Policy Assessment

- **Utilize Permanent Count Station** to assess 2nd Week of May relative to annual traffic patterns
- **Assess** and quantify extent and frequency of summer peak and event-related traffic impacts
- **Determine** appropriate LOS threshold that prevents further service level degradation
- **Propose** an approach that is implementable, defensible, and consistent with Community goals



Volume Capacity Thresholds

Adopted Avila Peak Hour Volume Thresholds

| | Level of Service | Service Flow (Peak Direction) | Estimated 2-Way Flow | Estimated Travel Speed |
|------------------------|------------------|-------------------------------|----------------------|------------------------|
| Average Summer Weekend | A | < 670 | < 985 | > 43 mph |
| | B | 670 -770 | 985 – 1,130 | 37 – 43 mph |
| | C | 770 – 870 | 1,130 – 1,280 | 30 – 37 mph |
| | D | 870 – 980 | 1,280 – 1,440 | 23 – 30 mph |
| | E | 980 – 1,100 | 1,440 – 1,615 | 15 – 23 mph |
| | F | > 1,100 | > 1,615 | < 15 mph |

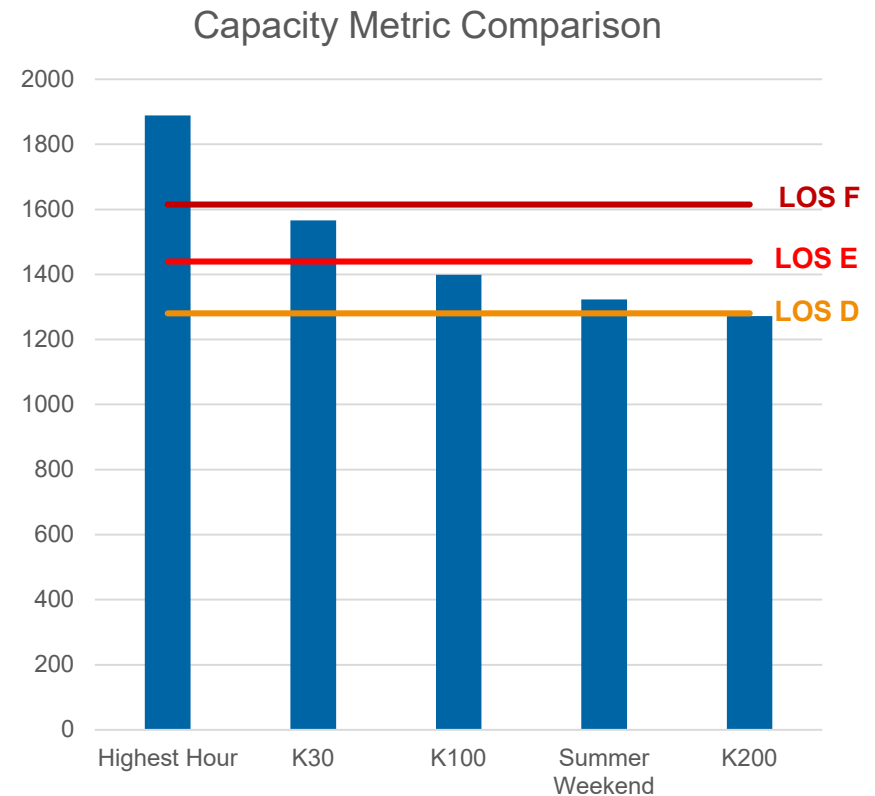
Avila Beach Drive experiences a ~32%-68% directional split during PM Peak Hour

Existing Conditions (2015):

- 2nd Week of May much lower than March, April, and June
- Lower effective capacity due to the higher directionality factor
- LOS largely acceptable on Weekdays

Capacity Metric Evaluation for Avila Beach Drive

- Average Daily Traffic
- Key Intersection Operations
- “K” Factors, or Peaking Factors
 - 30th highest hour (K30, design hour factor)
 - 100th highest hour (K100, planning analysis factor)
 - 200th highest hour (K200)
 - 345th highest hour (K345)
- Specific days
 - (Friday, Summer Weekends)



100th Highest Hour (K100)

2015 – 1,415 vph

2016 – 1,347 vph

2017 – 1,436 vph

LOS D Conditions

Representative of “shoulders” of peak season including May, August, and September

K100 is 100th highest hourly volume over an entire year

Pros

- Used for planning analysis
- Compromise between design hour and typical driver’s perception
- Represents transition between lower off-peak season and higher peak summer volumes
- Establishes LOS D conditions during “shoulder” months as “baseline”

Cons

- Requires period refinement based on updated annual traffic counts
- Accepts LOS E/F conditions during outlier peak hours
- May insufficiently address local concerns about “peak” conditions during <100th highest hours.

Policy Recommendations for Avila Beach Drive

Recommended Policy: LOS D shall be the standard for roadway and intersection operations along Avila Beach Drive. LOS D shall be maintained for the K100 volume, based on the 3-year average traffic census, updated annually, and collected on Avila Beach Drive west of San Luis Bay Drive.

Recommended Goal: On Avila Beach Drive, strive to maintain LOS D or better conditions, and strive to maintain or reduce frequency of LOS E conditions, especially during special events or the peak summer season.

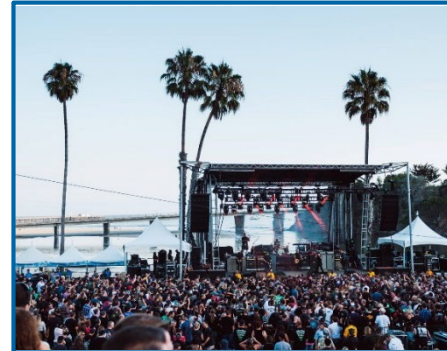
Implementation Strategies

Recommended Implementation #1:

Continue to collect and monitor the permanent count station on Avila Beach Drive west of San Luis Bay Drive in order to measure, establish, and annually update the 3-year average 100th highest hour volume (K100). Take steps to improve reliability of the permanent count station, including but not limited to increased maintenance and hardware upgrades as appropriate.

Recommended Implementation #2:

- Traffic data collection is recommended to be conducted during the shoulders of the summer peaks (May, August, or September),
- Ensure consistency with the established K100 volume, for all capacity, safety, impact, or operational findings in a traffic study.
- Collected data outside of the shoulders of the summer peak will require adjustment to ensure consistency with the established K100 volume.
- Analysis to include at minimum the intersection of Avila Beach Drive at San Luis Bay Drive, key intersections in Town, and US 101 ramp terminals.



Special Events, Parking & Travel Demand Management

Avila Valley Circulation Study (2009)

Special Events:

Goal 2: To ensure that special events in the Avila Valley provide adequate access management.

Objective 1: Obtain relevant information about past and scheduled future events and, upon consultation with pertinent entities, formulate any necessary recommendations for reduced impacts.

Impact of Special Events

Special Events + summer beachgoer traffic = too much congestion

- Average Weekend daily volumes on Avila Beach Drive
 - 28% higher during concerts
 - 15% higher during festivals
- Lower volumes during Off-Peak Season
 - Less impact on traffic with events compared to summer
- Parking Study (completed July 2019)
 - Vehicles circulating to find parking, creates more congestion

Recommended TDM Measures

1. Event Parking

- Continue practice of including in event entrance cost

2. Schedule larger events during off-peak season

- Limit number of events with attendance >2,000 during peak summer

3. Large events during the summer should start after 4 pm; avoid Friday Farmer's Market

Recommended TDM Measures

4. Consider shuttle bus service from satellite/remote parking lots

- Advance charge for parking on-site (golf course) OR Free Shuttle Buses
- CalPoly campus, Expand Bob Jones Trailhead P&R, Avila Beach Drive at Shell Beach Road, Bellevue-Santa Fe School street parking
- Buses for special events for >2,000 attendance during Peak Season, and >3,000 attendance during Off-Peak Season

5. Changeable message signs / parking wayfinding

- Near US 101 (Avila Beach Drive & San Luis Bay Drive)
- “Event Parking” directional signage to satellite lots
- Parking Occupancy in Town
- Work with Resort Owner on site parking circulation plan to reduce queues on Avila beach Drive

Recommended TDM Measures

6. Other Considerations

- Secondary access to Golf Course special event parking
 - San Miguel with traffic signal (in CIP)
 - Cave Landing Road
- Widen Avila Beach Drive – 2 Lanes Eastbound (out), 1 Lane Westbound (in), between San Luis Street and San Luis Bay Drive
- Provide/enhance bus service between Avila, Pismo, and SLO
- Complete Class II Bike Lanes along Avila Beach Drive

Capital Improvements Program & Impact Fee Update

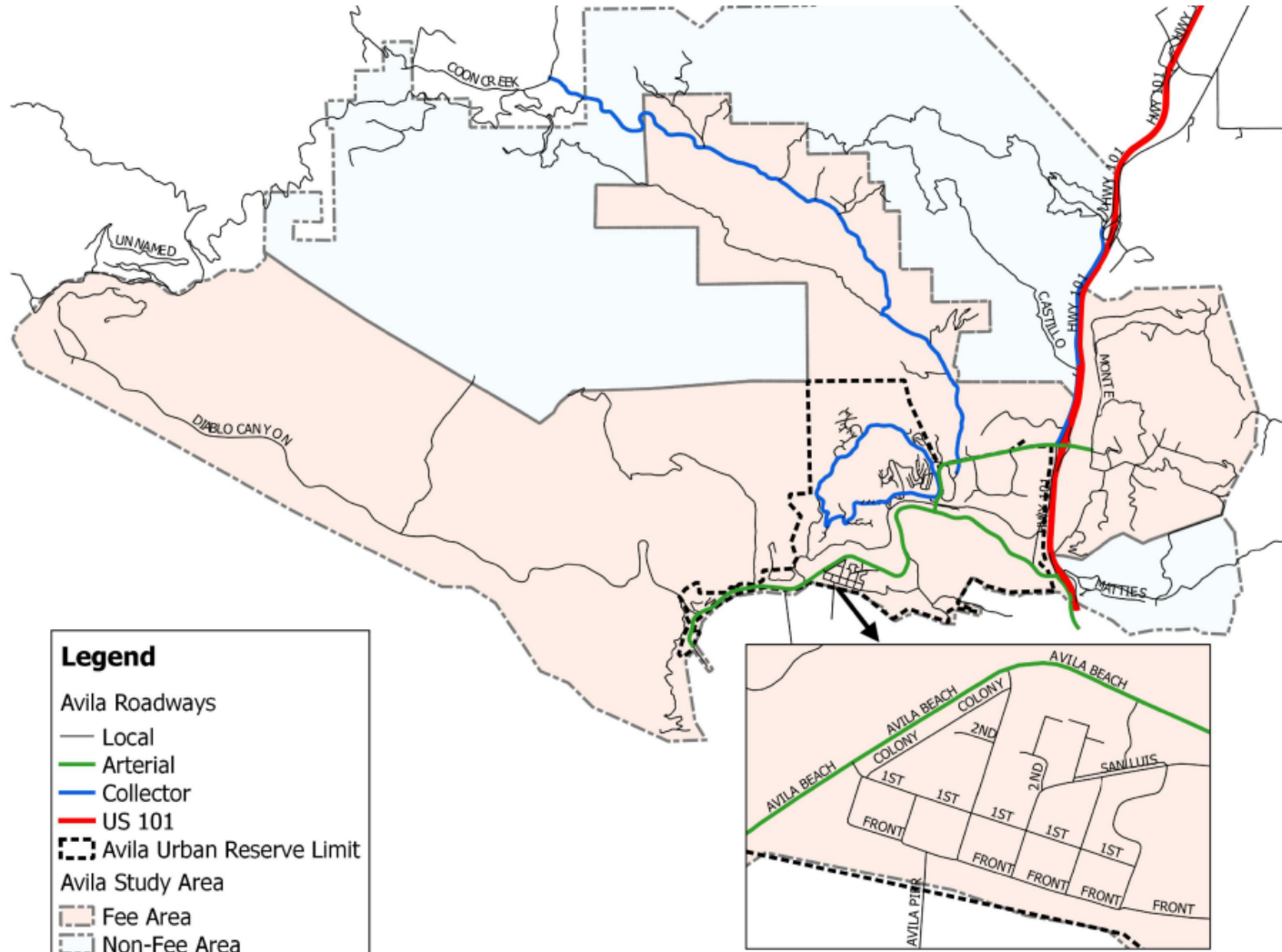


Photo credit: June 18, 2010; The Tribune

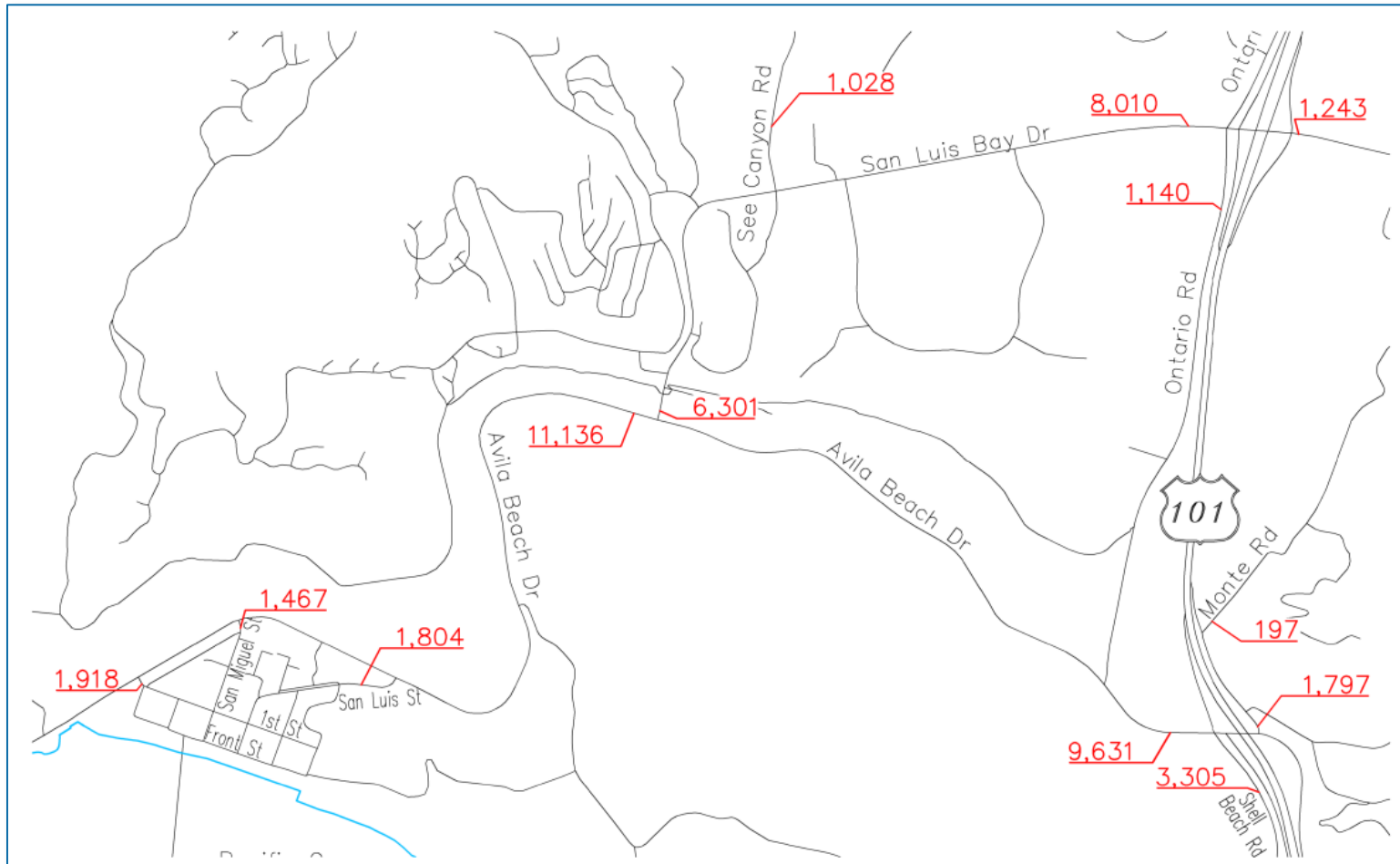
Update Circulation Study & Impact Fees Process

- Develop Avila Travel Demand Model
 - Calibrated to 2015 Existing Conditions
 - Model build-out of Avila Community Plan (2035 horizon)
 - Identify & cost improvements for CIP update
 - Establish improvement “nexus” to growth
 - Calculate RIF allocation
- Community Input
 - Meetings with AVAC Land Use committee over the years
 - Utilizes 2007 Circulation Study Goals and Objectives

Avila Fee Area Map



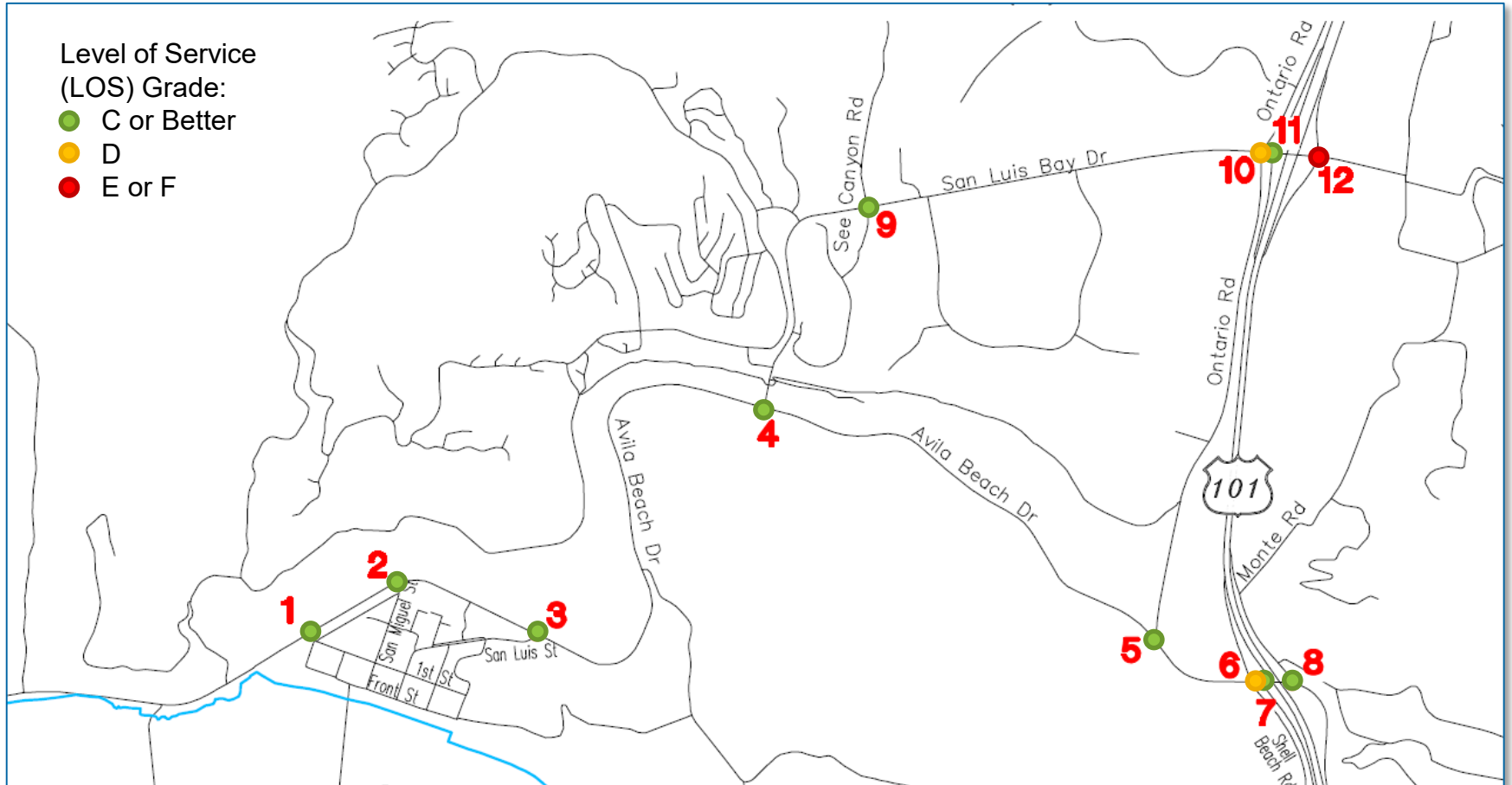
Existing Daily Traffic Volumes (2015)



Counts taken September 2014

Hourly Volume on Avila Beach Drive west of San Luis Bay Drive is **1,316 vph / LOS D** (Sept.), 1,092 vph / LOS B (May), and **1,399 / LOS D** (K100)

Existing Intersection Peak Hour LOS (2015)



Land Use Growth

| Land Use | Avila Fee Area | | | Non-Fee Area (in model) | | |
|-----------------------|----------------|------------|-----------|----------------------------|-------|-----------|
| | Existing | Added | Build-out | Existing | Added | Build-out |
| Residential (DU) | 1,228 | 160 | 1,388 | 55 | 0 | 55 |
| Non-Residential (ksf) | 370,300 | 657 | 370,957 | 166,260 | 0 | 166,260 |
| Estimated Employment | 1,896 | 148 | 2,044 | 35 | 0 | 35 |

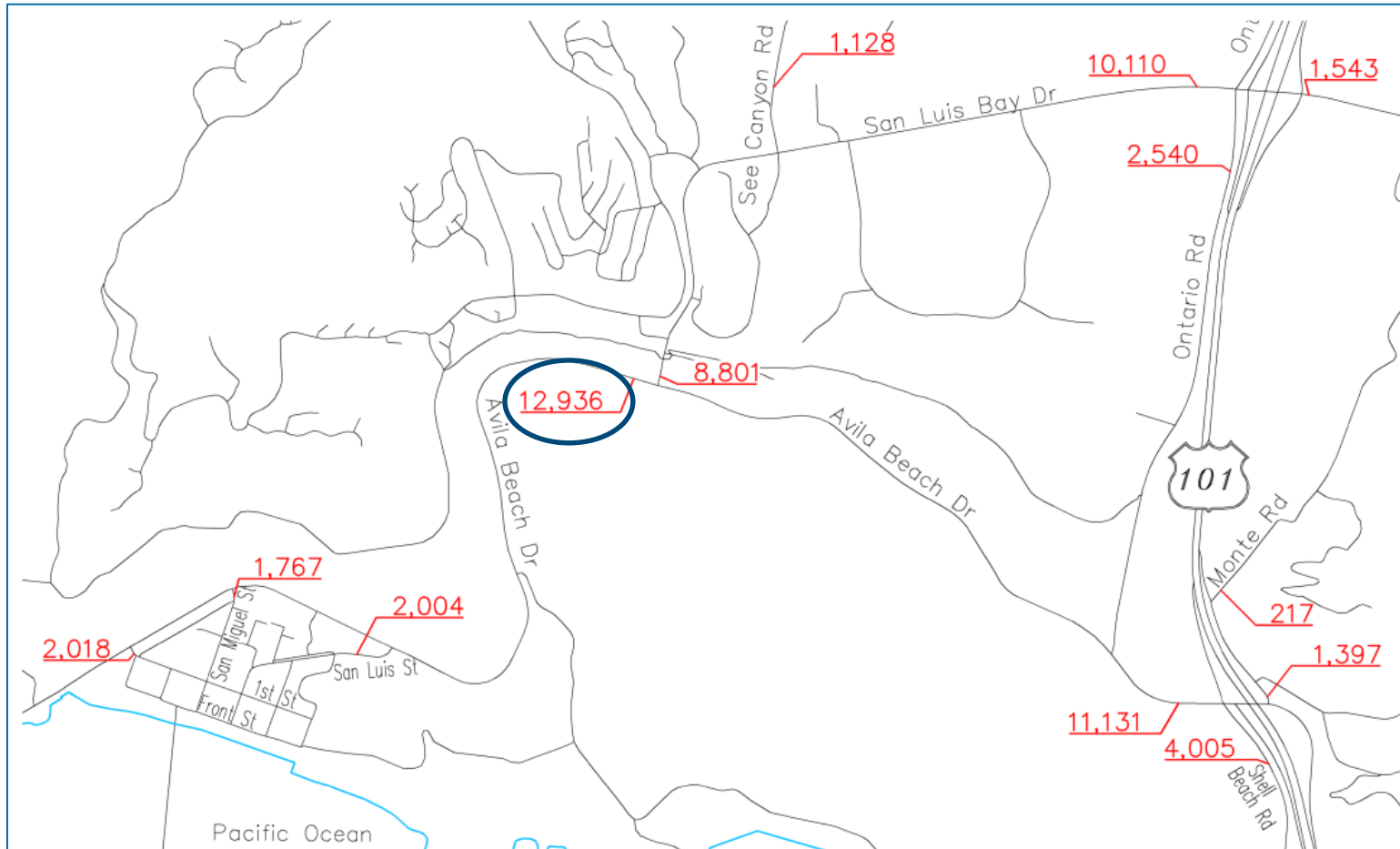
Non-Fee Area consists of area within Avila Travel Demand Model outside of Fee Area

Utilize ITE Trip Generation Manual to calculate Growth in PM Peak Hour Trips (PHT) for Impact Fee update



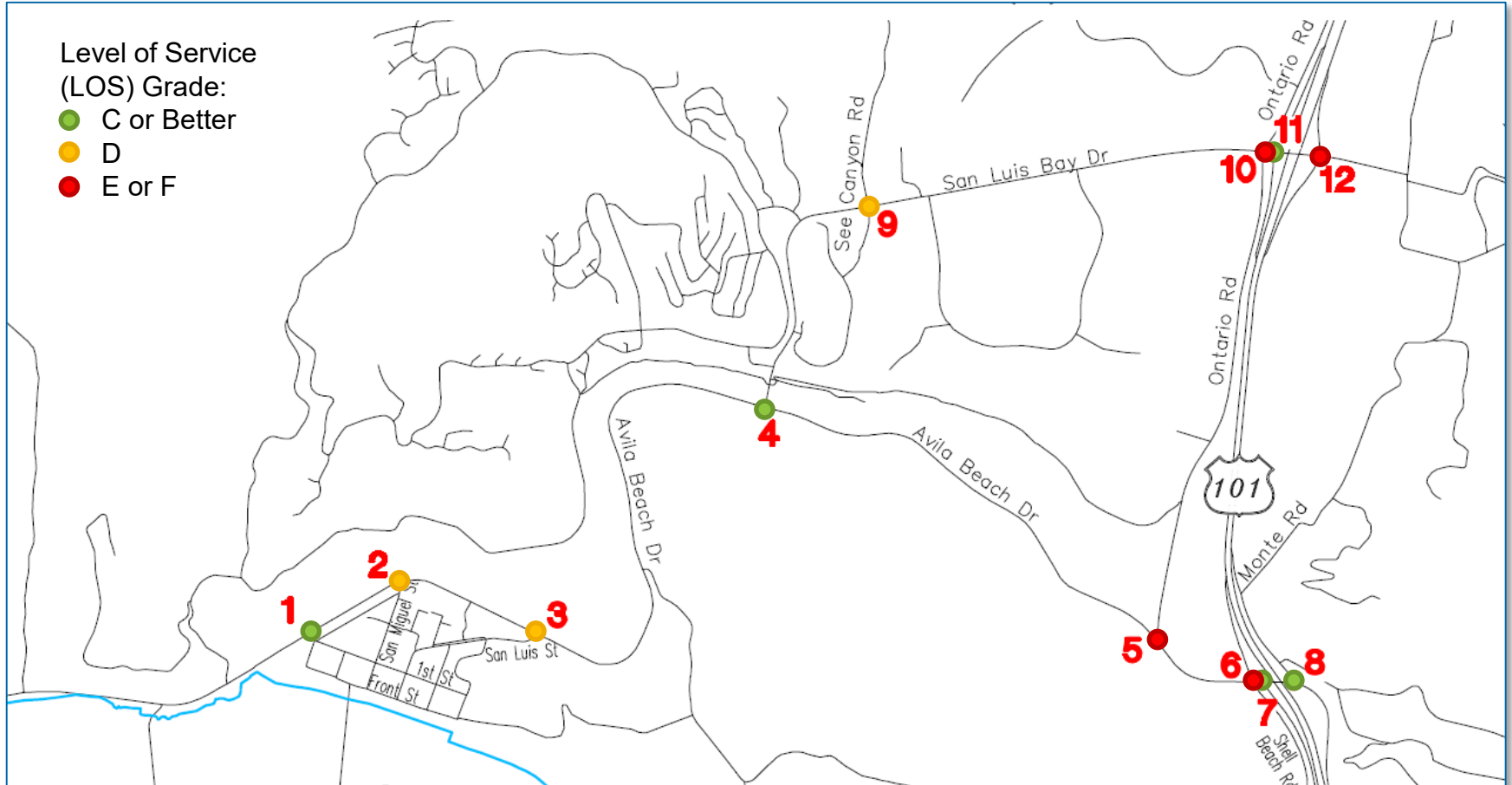
150 PM PHT for Residential,
610 PM PHT for Non-residential

Build-out Daily Traffic Volumes (2035)

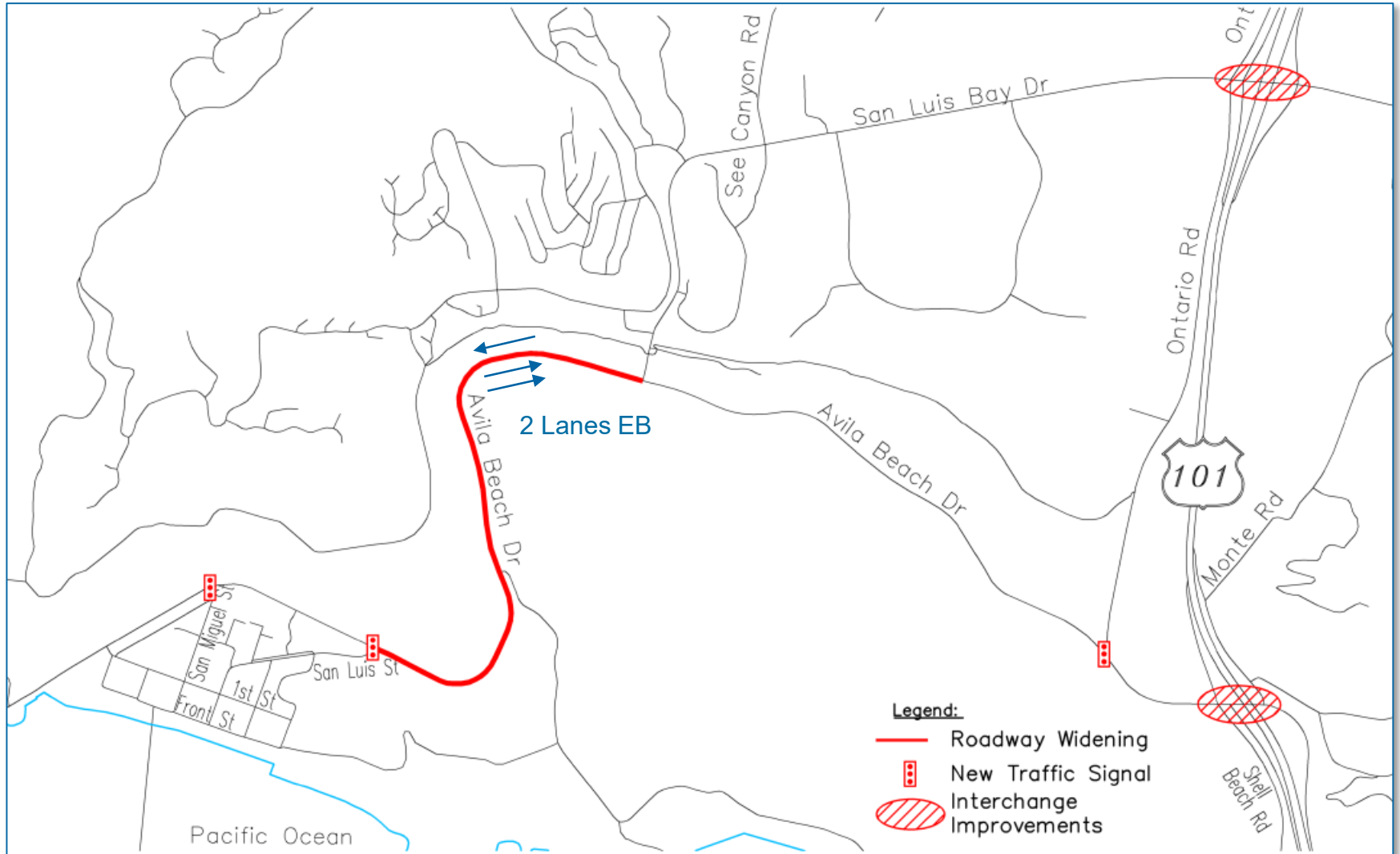


Hourly Volume on Avila Beach Drive west of San Luis Bay Drive is **1,660 vph / LOS E** (2035 weekday), **1,436 vph / LOS D** (potential 2nd Week May in 2035), and **1,743 / LOS F** (potential K100 in 2035)

Build-out Intersection Peak Hour LOS (2035)



Capital Improvement Program (CIP) Update



Capital Improvement Program (CIP) Update (Road Improvement Fee Projects)

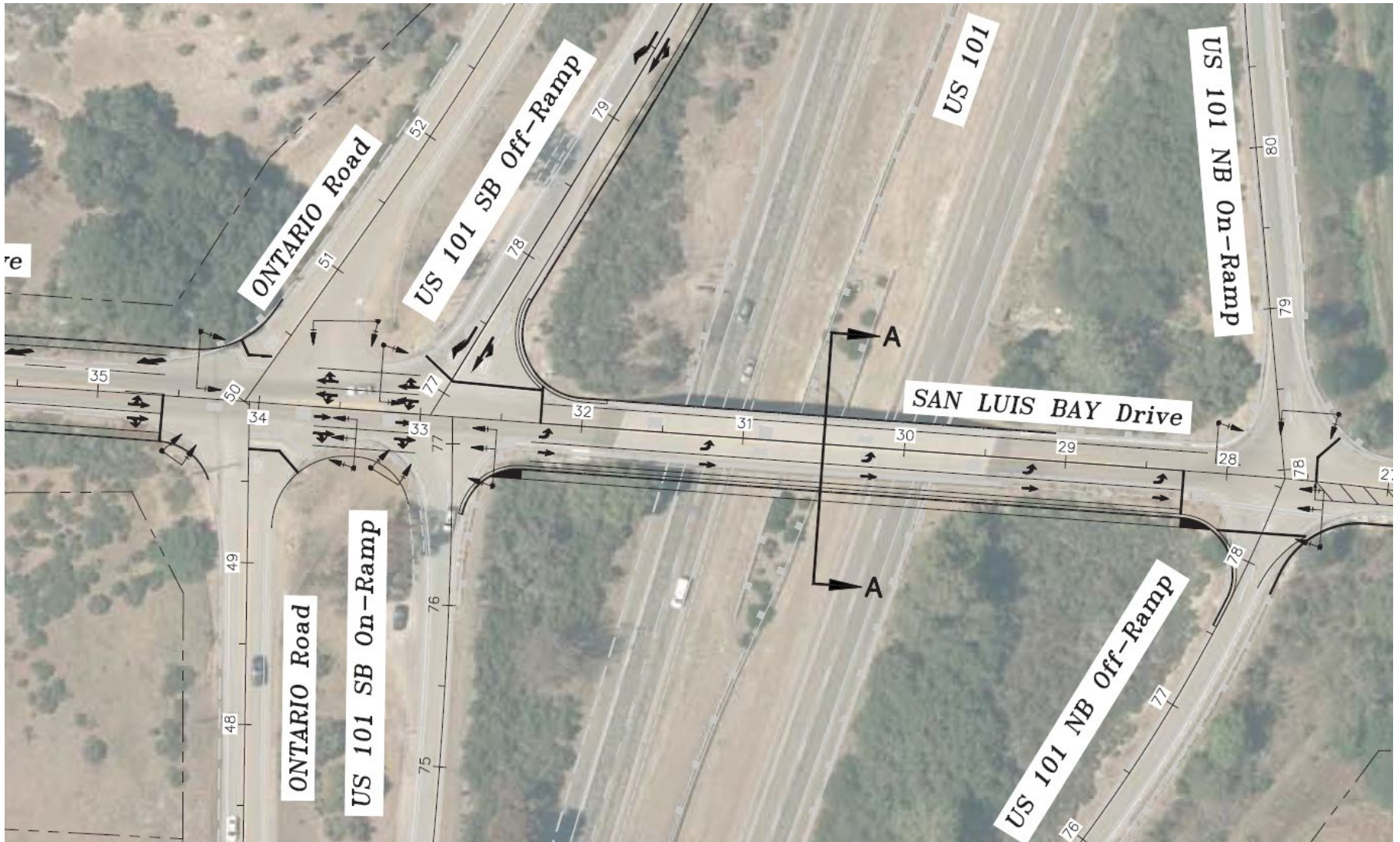
| Type | Road | To/From | Recommended Improvement | Estimated Total Project Costs 2016 | FUNDING | | % TIF | RIF spent (as of 6/30/19) | Expected Const. |
|--------------------------------------|--------------------|---------------------------------------|---|------------------------------------|---------------|-------------|-------|---------------------------|-----------------|
| | | | | | Other Sources | Impact Fees | | | |
| Road Improvement Fee Projects | | | | | | | | | |
| Interchange Improvements | Avila Beach Drive | Shell Beach Road to Monte Road | Roundabout and/or other intersection improvements | \$7,920,000 | \$3,960,000 | \$3,960,000 | 50% | \$179,087 | 2020 |
| Road Widening | Avila Beach Drive | San Luis Street to San Luis Bay Drive | Two (2) eastbound lanes, one (1) westbound lane, turn lanes at intersections and bike lanes | \$4,000,000 | \$2,960,000 | \$1,040,000 | 26% | | 2035 |
| Signal Installation | Avila Beach Drive | at San Luis Street | Signalization and intersection improvements | \$450,000 | \$225,000 | \$225,000 | 50% | | 2025 |
| Signal Installation | Avila Beach Drive | at San Miguel Street | Signalization and intersection improvements | \$450,000 | \$225,000 | \$225,000 | 50% | \$673 | 2025 |
| Signal Installation | Avila Beach Drive | at Ontario Road | Signalization and intersection improvements | \$450,000 | \$225,000 | \$225,000 | 50% | | 2025 |
| Interchange Improvements | San Luis Bay Drive | Ontario Road to Monte Road | Widen overcrossing, add turn lane, signalize | \$4,800,000 | \$2,400,000 | \$2,400,000 | 50% | \$63,153 | 2035 |
| Circulation Study | | | Circulation Study Updates thru 2035 | \$500,000 | \$0 | \$500,000 | 100% | \$187,428 | |



Capital Improvement Program (CIP) Update

| Type | Road | To/From | Recommended Improvement | Estimated Total Project Costs 2016 | FUNDING | | % TIF | RIF spent (as of 6/30/19) |
|--|-------------------------|---------------------------------------|--|------------------------------------|-----------------------------------|-------------|-------|---------------------------|
| | | | | | Other Sources | Impact Fees | | |
| Discretionary Projects | | | | | | | | |
| Road Widening | Avila Beach Drive | First Street to San Luis Street | Widening for bike lanes | \$1,000,000 | \$1,000,000 | \$0 | 0% | |
| Road Widening | Avila Beach Drive | San Luis Bay Drive to Ontario Road | Widening for bike lanes | \$3,000,000 | \$3,000,000 | \$0 | 0% | |
| Parking Lot | Avila Beach Drive | | 60 stall intercept parking lot | \$1,093,178 | \$1,093,178 | \$0 | 0% | |
| Pedestrian Improvements | Avila Beach Drive | Port San Luis to Unocal Pier | Pedestrian Walkway (Study Only) | \$300,000 | \$300,000 | \$0 | 0% | |
| Trail | Cave Landing Road | Avila Beach to Pismo Beach | Construct trail in existing easement | \$379,000 | \$379,000 | \$0 | 0% | |
| Road Widening | San Luis Bay Drive | Avila Beach Drive to Bay Laurel Place | Widening for bike lanes | \$822,824 | \$822,824 | \$0 | 0% | |
| Parking Structure | Harbor District Lot | at 1st Street | 2nd Deck | \$12,250,000 | \$12,250,000 | \$0 | 0% | |
| Parking | Parking Management Plan | | | \$60,000 | \$48,000 | \$12,000 | 20% | |
| Completed Projects | | | | | | | | |
| Bridge Widening | San Luis Bay Drive | Avila Valley Drive to Ontario Road | Bridge Replacement and Widening to three (3) lanes | \$6,785,310 | \$5,185,470 | \$1,599,840 | 24% | \$1,599,840 |
| Signal Installation | Avila Beach Drive | at First Street | Signalization and intersection improvements | \$245,602 | \$245,602 | \$0 | 0% | \$0 |
| Road Widening | Avila Beach Drive | at Cave Landing Road | Intersection Improvements | \$50,000 | \$0 | \$50,000 | 100% | \$50,000 |
| Road Widening | Ontario Road | Higuera Street to Bob Jones Trailhead | Widening for bike lanes | \$650,600 | \$650,600 | \$0 | 0% | \$0 |
| TOTAL CIP (All projects) | | | | \$45,206,514 | | | | |
| TOTAL CIP (uncompleted projects) | | | | \$37,475,002 | | | | |
| TOTAL RIF (uncompleted projects, less amount spent) | | | | \$8,156,659 | (used for fee calculation) | | | |

San Luis Bay Drive ICE (Step I)



Traffic Impact Fees Update

Table 7.3 Avila Project Costs and Area Trip Share

| | Total Required Funding From Impact Fees | Fund Balance (As of 6/30/2019) | Net Funding Required From Impact Fees |
|------------------|---|--------------------------------|---------------------------------------|
| Fee Area Total | \$8,156,659 | \$325,687 | \$7,830,972 |
| Peak Hour Trips: | 760 | Cost per/PHT: | \$10,304 |

Table 7.4 Recommended Fee per Peak Hour Trip

| Type | 2014 Fee | Proposed Fee | Fee Increase |
|-------------|----------|--------------|--------------|
| Retail | \$3,846 | \$10,304 | \$6,458 |
| Residential | \$3,846 | \$10,304 | \$6,458 |
| Other | \$3,846 | \$10,304 | \$6,458 |

Questions?



www.ghd.com

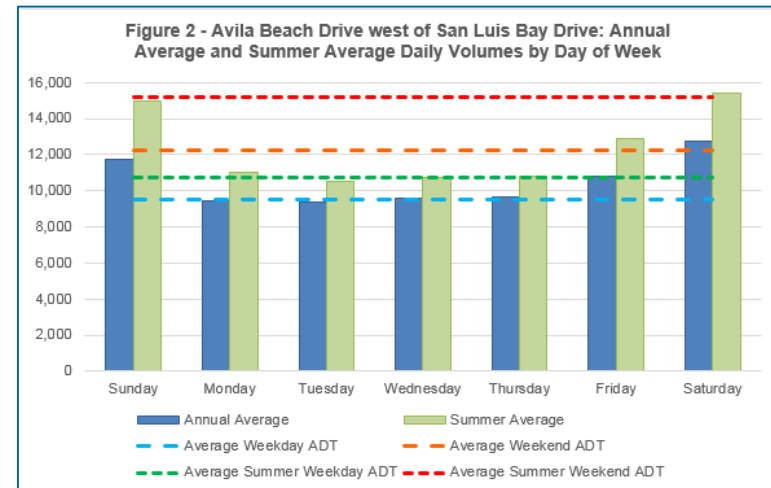
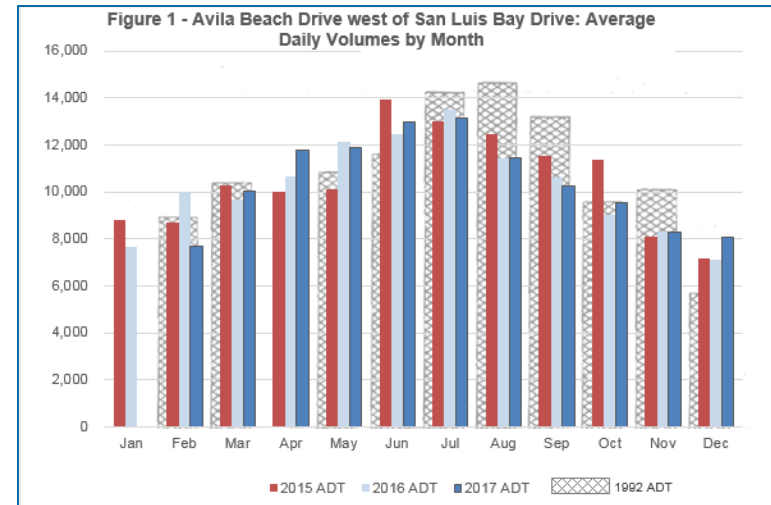
Technical Analysis: Permanent Count Station Data

Seasonal and Weekly Variations

- Weekend Traffic 24% higher during summer
- Monthly Average ranges from 8,000 to 14,000 daily volume

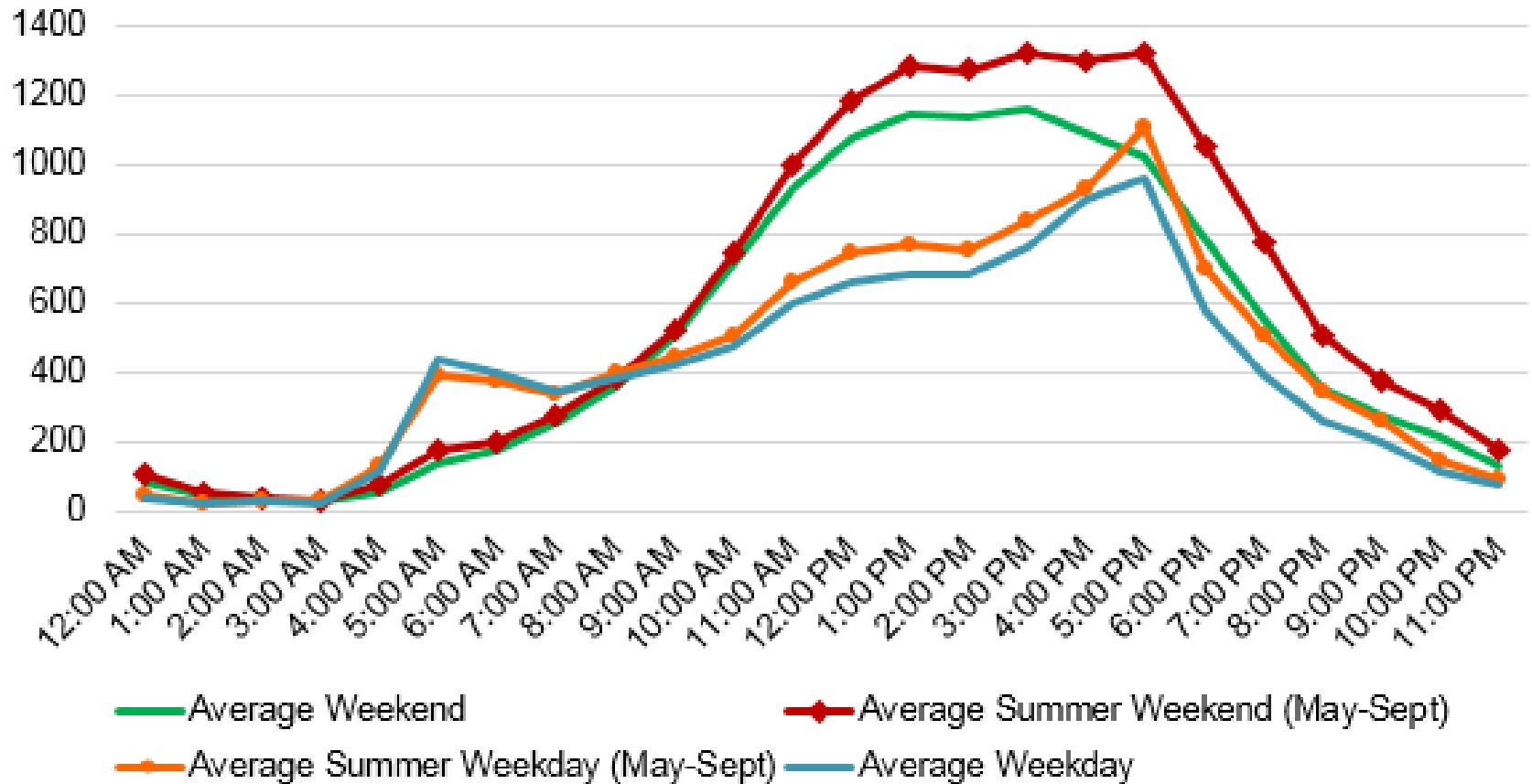
Specific Travel Factors

- Diablo Canyon commuters
- Prevailing weather conditions
- Beachgoer and tourists during summer/holidays
- Special Events
- Port San Luis Pier, Farmers Market



RECAP Permanent Count Station Data

Figure 4 - 2017 Seasonal, Weekend, and Weekday Hourly Comparison



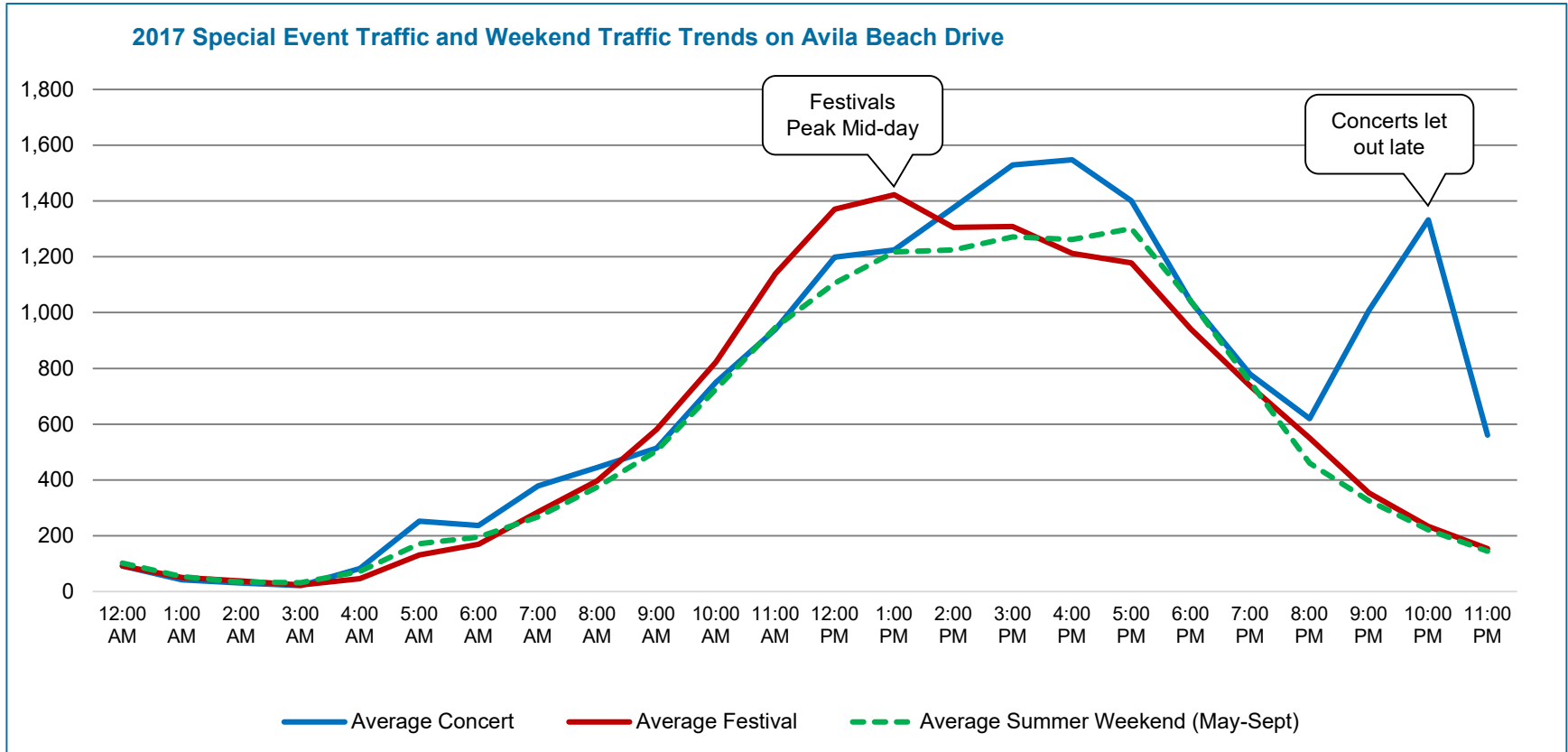
Average Monthly Conditions (2016-2017)

| Month | Tues-Thurs | LOS | Friday | LOS | Weekend | LOS |
|-----------|------------|-----|--------|-----|---------|-----|
| January | 921 | A | 865 | A | 821 | A |
| February | 903 | A | 716 | A | 1,170 | C |
| March | 994 | B | 894 | A | 1,111 | B |
| April | 1,131 | C | 1,014 | B | 1,270 | C |
| May | 1,062 | B | 1,242 | C | 1,357 | D |
| June | 1,104 | B | 1,072 | B | 1,486 | E |
| July | 1,208 | C | 1,211 | C | 1,473 | E |
| August | 1,068 | B | 1,085 | B | 1,365 | D |
| September | 969 | A | 889 | A | 1,331 | D |
| October | 908 | A | 836 | A | 1,109 | B |
| November | 824 | A | 1,065 | B | 965 | A |
| December | 826 | A | 679 | A | 736 | A |

Peak “Shoulder” Months

County policy LOS “C” for rural areas and LOS “D” for urban areas

Special Event Traffic Trends



Festival attendance ranged from 1,000-3,500 people

Concert attendance ranged from 2,000-5,000 people