ENGINEERING AND TRAFFIC SURVEY FOR SPEED LIMITS

CITY OF DESERT HOT SPRINGS

NOVEMBER 2018

PREPARED FOR:

CITY OF DESERT HOT SPRINGS
65950 PIERSON BOULEVARD
DESERT HOT SPRINGS, CALIFORNIA 92240

PREPARED BY:

HARTZOG & CRABILL, INC.
17852 EAST 17TH STREET, SUITE 101
TUSTIN, CALIFORNIA 92680
(714) 731-9455

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CERTIFICATION

I, Gerald Stock, do hereby certify that this 2018 Engineering & Traffic Survey of 36 street segments for the City of Desert Hot Springs was performed under my supervision and is accurate and complete. I certify that I am both experienced in performing surveys of this type and duly registered in the State of California as a professional Traffic Engineer.

Gerald J. Stock
RTE # 2049

REGISTERED PROFESSIONAL ENGINEER
GERALD J. STOCK
NO. 2049
TRAFFIC
STATE OF CALIFORNIA

File: DHS Radar Rpt 2018.doc

CITY OF DESERT HOT SPRINGS
ENGINEERING AND TRAFFIC SURVEY FOR SPEED LIMITS

Introduction

In accordance with procedures established by the State of California, this Engineering and Traffic Survey has been developed for the City of Desert Hot Springs as the basis for the establishment and enforcement of speed limits for selected streets within the City. The work provided herein was authorized by the City and was performed by the engineering consulting firm of Hartzog & Crabill. The goal of the review was two-fold. The first was to review new roadway segments to determine if speed limit postings should be recommended. The second involved a determination as to whether changes in pre-existing conditions have occurred where older speed limits should be modified.

The requirement to perform Engineering and Traffic surveys for speed limits is based on the California Vehicle Code (CVC). CVC Section 40802 states that at least once every five (5), seven (7) or ten (10) years, States and local agencies should re-evaluate non-statuary speed limits on segments of their roadways. Engineering and Traffic Surveys must be performed with the use of radar or other approved electronic devices if the use of radar is to be employed to enforce speed limits. If such a survey is not performed within five years (or seven years, or ten years as stated previously) of the date of the preceding survey, then the new data and its use will constitute a speed trap. Hence, evidence using such would not be admissible in court. From the Vehicle Code, a "speed trap" is either of the following:

(a) A particular section of a highway measured as to distance and with boundaries marked, designated, or otherwise determined in order that the speed of a vehicle may be calculated by securing the time it takes the vehicle to travel the known distance.

(b) A particular section of a highway with a prima facie speed limit provided by this code or by local ordinance under sub-paragraph (A) of paragraph (2) of subdivision (a) of Section 22352, or established pursuant to Section 22354, 22357, 22358, or 22358.3 if that prima facie speed limit is not justified by an engineering and traffic survey conducted within five years prior to the date of the alleged violation, and where enforcement involves the use of radar or other electronic devices that measures the speed of moving objects. This paragraph does not apply to a local street, road, or school zone.

The definition of a Traffic and Engineering Survey is contained in Section 627 of the Vehicle Code and is as follows:

Engineering and Traffic survey, as used in this code, means a survey of highway and traffic conditions in accordance with methods determined by the California Department of Transportation (Caltrans) for use by State and local authorities. An engineering and traffic survey shall include, among other requirements deemed necessary by the department, consideration of the following:

(a) Prevailing speeds as determined by traffic engineering measurements.
(b) Accident records.
(c) Highway, traffic and roadside conditions not readily apparent to the driver.

The California Vehicle code has set certain regulations regarding the posting and enforcement of speed zones. These regulations generally reflect the viewpoint that speed zoning should be based on traffic conditions and natural driver behavior and not because of an arbitrary response to a traffic event or occurrence. Therefore, it is important to have a general understanding of the "Basic Speed Law", "Prima Facie Speed Limits" and "Intermediate Speed Zones".

Basic Speed Law (CVC 22350)

All fifty states base their speed regulations on the Basic Speed Law. In California, CVC 22350 defines the basic speed law as:

"No Person shall drive a vehicle upon a highway at a speed greater than is reasonable or prudent having due regard for weather, visibility, the traffic on, and the surface and width of the highway, and in no event at a speed which endangers the safety of persons or property."

This law recognizes that driving conditions vary widely from time-to-time and place-to-place and, therefore, no set of fixed driving rules will adequately serve all conditions. The motorist will constantly adjust their driving behavior to fit the conditions encountered, and must learn to do this with a minimum of assistance from the police. The Basic Speed Law is founded on the belief that a majority of motorists are able to modify their driving behavior properly, as long as they are aware of the conditions around them.

Prima Facie Speed Limits (CVC 22352)

All other speed limits are prima facie limits which, "on the face of it", are reasonable and prudent under normal conditions. Certain prima facie limits are automatically established by law (CVC 22352), including a 15 mph limit in alleys, blind intersections, blind railroad crossing, and the 25 mph limit in business and residence districts. There is also a part time 25 mph limit in school zones when children are present in route to or from school.

Business and residence districts are defined in the Vehicle Code as specific areas meeting a specified minimum density of roadside development. CVC Sections 235 and 515 define these regulations. A count of houses or active businesses facing on a highway must be made to determine whether or not a valid business or residence district exists. The law does not require posting these prima facie limits that are readily apparent.

Residence District (CVC 515)

A "residence district" is that portion of a highway and the property contiguous thereto, other than a business district, (a) upon one side of which highway, within a distance of a quarter of a mile, the contiguous property fronting thereon is occupied by 13 or more separate dwelling houses or business structures, or (b) upon both sides of which highway, collectively, within a distance of a quarter of a mile, the contiguous property fronting thereon is occupied by 16 or more separate dwelling houses or business structures. A residence district may be longer than one-quarter of a mile if the above ratio of separate dwelling houses or business structures to the length of the highway exists.

Business District (CVC 235)

A "business district" is that portion of a highway and the property contiguous thereto (a) upon one side of which highway, for a distance of 600 feet, 50 percent or more of the contiguous property fronting thereon is occupied by buildings in use for business, or (b) upon both sides of which highway, collectively, for a distance of 300 feet, 50 percent or more of the contiguous property fronting thereon is so occupied. A business district may be longer than the distances specified in this section if the above ratio of business in use for business to the length of the highway exists.

Establishment of Speed Zones

The reason that speed limit areas and their required postings are done is to guard reasonable drivers from the unreasonable behavior of reckless, unreliable, or otherwise dangerous drivers. As with other similar laws, the limits identified are based on the consensus of the majority of those who drive the highway as to what speed is reasonable and safe. It is this type of information that is reflected in the analysis section of this report. Namely, posted speed limits are a reflection of that speed which most people deemed to be safe as opposed to a minority of drivers who do not drive in a reasonable manner.

Speed zones are also established to advise drivers of road conditions or hazards that may not be readily apparent to a reasonable driver. For that reason, a field review of related road/traffic variables is conducted which considers the analytical data and accident history of a particular roadway segment to determine a safe and reasonable speed limit.

Data Collection Procedures

Speed evaluation data was collected at 36 different roadway segments on 11 different roadways in the Community of Desert Hot Springs. These areas and the number of segments on each are described as follows:

1. Desert View Ave (1)
2. Hacienda Ave (6)
3. Indian Canyon Dr (2)
4. Little Morongo Rd (3)
5. Miracle Hill Rd (1)
6. Mission Lakes Bl (2)
7. Mountain View Rd (1)
8. Palm Dr (8)
9. Pierson Bl (7)
10. Two Bunch Palms Trail (3)
11. West Dr (2)

As described in various traffic engineering documents - including information provided by the State of California, the individual locations on which radar data collection procedures were used involved considerations for the following:

a. Stop sign or traffic signal locations;

b. Visibility issues;

c. Traffic flow at intersections, cross-traffic, major driveways, crosswalks, railroad crossings and unusual turning movements;

d. The influence of other traffic factors on the speed of cars: such as on street parking, roadway features, adjacent land uses, and lighting.

Speed Zoning Methodology

The California Manual on Uniform Traffic Control Devices (CA. MUTCD) specifies a "short method of determining speed limits on City and County through Highways, Arterial and Collector Roads Procedures.

Introduction - This short method of speed zoning is based on the premise that the reasonable speed limit is one that conforms to the actual behavior of the majority of motorists, and that by measuring motorist's speeds, one will be able to select a speed limit that is both reasonable and effective. Other factors that need to be considered include, but are not limited to: the most recent two-year collision record, roadway design speed, safe stopping sight distance, super-elevation, shoulder conditions, profile conditions, intersection spacing and offsets, commercial driveway characteristics, pedestrian traffic in the roadway without sidewalks.

Speed Zone Survey

- Only one person is required for the fieldwork. Speeds can be read directly from a radar speed meter.

- A section of road should be selected with representative operating speeds. If speeds vary on a given road, additional surveys should be conducted. In this case, it may be necessary to establish additional speed zones with different speed limits. The section selected should be straight and should have no traffic signal, stop sign or intersection with a major cross street.

- Speed measurements should be taken during off-peak hours on weekdays. The weather should be fair with no unusual conditions prevailing. It is important that the surveyor and his equipment be so inconspicuous as not to affect traffic speeds. For this reason, an unmarked car is recommended, with the radar speed meter located as inconspicuously as possible. It should be placed so as to be able to survey traffic in both directions, and should not make an angle greater than 15 degrees with the roadway centerline.

- The survey should have a minimum sample of 100 automobiles in each survey. This may result in excessive survey periods for low-volume roads. Under these conditions, the survey should be conducted for a minimum of two hours, but in no case should the sample for any survey contain less than 50 automobiles.

- The California MUTCD states that speed limits are established at or near the 85th percentile speed, which is defined as that speed at or below which 85 percent of the traffic is moving. This speed can be selected directly from the data sheet. However, roadway conditions not readily apparent to the motorist or other roadway conditions that may impact sight distance may result in a further reduction of 5 mph in the recommended speed limit.

- As a check on the validity of the proposed speed limit, an analysis should be made of the two-year accident record for the section of roadway under consideration. If this record shows an abnormally high percentage of accidents normally associated with excessive speeds, the

proposed speed limit should be further reduced. This is a judgment situation, and will not usually be a factor,

- Short speed zones of less than half a mile should be avoided, except in transition areas.

- Speed zone changes should be coordinated with changes in roadway conditions or roadway development.

- Speed zoning in 5 mile per hour increments should be avoided if possible. A 10-mile per hour increment is preferable.

- Speed zoning should be coordinated between adjacent jurisdictions.

Local Street Exemptions (CVC 40802)

Many streets are designated as "Local" streets per CVC 40802. These streets are exempt from the radar study. Therefore, the speed limit for these streets does not require an Engineering and Traffic Survey. The code is as follows:

"For the purpose of this section, local streets and roads shall be defined by the latest California Road System Maps as approved by the Federal Highway Administration. When these streets do not appear on the California Road System Maps, the following definition shall be used: A local street or road primarily provides access to abutting residential property and shall meet the following three conditions:

1. Roadway width of not more than 40 feet.
2. Not more than one half mile of uninterrupted length.
3. Not more than one traffic lane in each direction.

Other Considerations

Every street should be inspected for unusual traffic, roadway and roadside conditions not readily apparent to a motorist. A check should be made of the adequacy of traffic control devices, roadway alignment, width surface conditions, accident history and any unique traffic hazards that may exist. Any of these conditions may warrant the selection of a speed lower than the 85th percentile speed for speed zoning.

Radar Collection Time Frames

The hours of radar operation were restricted to off-peak periods for heavily traveled streets and to uncongested peak periods on lightly traveled streets. All surveys were conducted in fair weather.

The radar unit was mounted at the top of the front dash of an unmarked vehicle with the meter-reading unit sustained inside the vehicle. The radar unit's calibration was checked periodically using a tuning fork.

The radar operator and assistant recorded the speed meter readings for each location on Radar Speed Survey Field Sheets included in the appendix of this report. A representative sampling of at least 50 vehicles were surveyed in each direction or a cumulative sample of 100 vehicles for both directions where possible. On low volume roads, where a total sample of 100 vehicles would result in an excessive time period, sampling was continued until a representative bell-shaped frequency distribution was attained.

Analysis Factors

Several factors were used as input to our recommendations for speed limits. These include the 85th Percentile, the 10 MPH Pace and others. These are described in detail below.

1. The **CRITICAL SPEED**, or the 85th percentile is defined as that speed at or below which 85 percent of the traffic is moving. From experience, traffic engineers have found that this is one of the most reliable factors in determining appropriate speed limits.

   Hence, the accepted practice, and one that has been used in this case is to set the speed limit at or near the critical speed. This recognizes that other factors could be present where the above may not be appropriate. When this procedure is used, it not only conforms to that required by the State but it also provides a strong base for law enforcement personnel to properly enforce speed limits.

2. The **10 MPH PACE** is that continuous 10 mph incremental range of speeds in which the largest number of recorded vehicles is contained. It is a measure of the dispersion of speeds within the sample surveyed. For this element, the accepted practice to the greatest extent possible is to try and keep the recommended speed limit within the 10 mph pace after considering the critical speed and any factors requiring a speed lower than the critical speed.

3. The **MEDIAN (MIDDLE) SPEED**, or 50th percentile speed, represents the mid-point value within the range of recorded speeds for a particular roadway location. In other words, 50% of the vehicles travel faster, and 50% travel slower than the median speeds. This value is another measure of the central tendency of the vehicle speed distribution.

4. The **15th PERCENTILE SPEED** is that speed at or below which 15% of the vehicles are traveling. This value is important in determining the minimum allowable speed limit, given that the vehicles traveling below this speed tend to obstruct the flow of traffic, thereby increasing the accident potential.

5. **MODAL SPEED**: The modal speed is the speed, which occurs most frequently in the distribution (the most). It serves as another useful measure in verifying the correct recommendation for speed limits.

6. **STANDARD DEVIATION**: This is a mathematical element, which relates to measures of dispersion of data. It is used to assist in describing the center of speed distribution information around the arithmetic mean or the time mean speed. It also is used in the

overall review of recommended speed limits and serves to verify the level of confidence of data used in making recommendations.

7. The **MEAN (AVERAGE)** is the sum of the speeds of the samples divided by the number of samples.

The numerical values of the above factors are derived from the speed distribution curves calculated for each survey location. These distribution curves represent a method of graphic analysis that compares the cumulative percentage of vehicles to the speed at which the vehicles are traveling.

Field Review

In addition to the availability of the above statistical data, a significant aspect of speed limit recommendations is based on the field review. Its importance is that existing conditions may warrant a lower speed than is actually indicated by the application of survey data. Examples of the field data collected for the purposes of analyzing related roadway characteristics as they pertain to the determination of appropriate speed limits are listed below:

1. Segment length, width and alignment
2. Level of pedestrian activity
3. Traffic flow characteristics
4. Vertical and/or horizontal curves.
5. Driver sight distance constraints.
6. Adjacent residential/commercial/industrial etc. zoning.
7. Number of lanes and other channelization/striping factors
8. Frequency of intersections, driveways and on street parking;
9. Location of stop signs, traffic signals, and other regulatory traffic control devices;
10. Roadway conditions, bumps and dips;
11. Obstructions to pedestrian visibility;
12. Land use and proximity of schools;
13. Uniformity with existing speed zones to/with adjacent jurisdictions;
14. Any other unusual conditions not readily apparent to the driver.

The results of the field review of related road/traffic variables are summarized on the Engineering and Traffic Survey forms found in the Appendix of this report.

Accident History

The Engineering and Traffic Survey forms summarize the available two-year accident information for the subject streets. The accident information includes the total number of accidents within each street segment and of those accidents, the number that are speed-related. This information was obtained from the California Statewide Integrated Traffic Records System (SWITRS) for the City of Desert Hot Springs. The annual accident rate figures represent the number of speed-related accidents divided by years of accident records. The evaluation of accidents is useful as a check on the accuracy of recommended or existing speed limits. Should this review show a high percentage of accidents associated with excessive speeds, consideration

based on professional traffic engineering judgment should be directed toward reducing the posted or recommended speed limit.

Results and Recommendations

The following Summaries: No Speed Limit Changes, New Speed Limit Postings, Speed Limit Increases, Speed Limit Reductions, Conflicting Speed Limit Signs, and the Summary of Recommendations presents the results of the radar survey for the selected 38 locations. As shown, the Summary of Recommendations chart presents the necessary analysis elements that in addition to the field review of a registered traffic engineer led to the recommendations indicated.

Locations of "No Speed Limit Changes"

The Summary indicates that 31 of the 36 segments studied are recommended for no speed limit changes. The reason centers mostly on the fact that the newly measured values of the 85th percentile and the 10 MPH pace are still within the parameters of the existing speed limits. Additional factors such as the presence of horizontal or vertical curves reducing sight distance form the basis in some instances of our recommendation. Therefore, the current postings should remain as is. At eleven of these locations, only one direction of travel is posted and is listed for no change in the speed limit. Hence, the other direction should be posted for consistency. These segments noted as "install", as well as the segments recommended for "No Change" are listed below:

Desert View Avenue	
Miracle Hill Rd to Mountain View Rd	Remain posted at 35 mph
Hacienda Avenue	
Octillo Rd to Verbena Dr	Remain posted at 40 mph
Verbena Dr to Miracle Hill Rd	Remain posted at 40 mph
Miracle Hill Rd to Mountain View Rd	Remain posted at 40 mph
Mountain View Rd to East City Limit	Remain posted at 40 mph
Indian Canyon Drive	
North City Limits to Mission Lakes Bl	Install northbound 55 mph
Mission Lakes Bl to Pierson Bl	Install southbound 55 mph
Little Morongo Road	
Pierson Bl to Two Bunch Palms Trail	Remain posted at 55 mph
Two Bunch Palms Trail to South City Limits	Remain posted at 55 mph
Mission Lakes Boulevard	
Indian Canyon Dr to Little Morongo Rd	Remain posted at 50 mph
Little Morongo Rd to West Dr	Remain posted at 45 mph
Mountain View Road	
Hacienda Ave to South City Limit	Remain posted at 35 mph

Palm Drive

Mission Lakes Bl to 8th St	Remain posted at 35 mph
8th St to Pierson Bl	Remain posted at 35 mph
Pierson Bl to Hacienda Ave	Remain posted at 35 mph
Hacienda Ave to Two Bunch Palms Trail	Remain posted at 35 mph
Two Bunch Palms Trail to Camino Campanero	Remain posted at 40 mph
Camino Campanero to Camino Aventura	Remain posted at 45 mph
Camino Aventura to Dillon Rd (SB only)	Remain posted at 55 mph
Dillon Rd to South City Limit	Remain posted at 60 mph

Pierson Boulevard

Hwy 62 to Skyborne Dr	Install westbound 55 mph
Skyborne Dr to Indian Canyon Dr	Install eastbound 55 mph
Indian Canyon Dr to Little Morongo Rd	Remain posted at 50 mph
Little Morongo Rd to Atlantic/Golden Eagle	Remain posted at 50 mph
Atlantic/Golden Eagle to West Dr	Remain posted at 45 mph
West Dr to Palm Dr	Remain posted at 35 mph
Palm Dr to Miracle Hill Rd	Remain posted at 35 mph

Two Bunch Palms Trail

West Dr to Palm Dr	Remain posted at 40 mph
Palm Dr to Miracle Hill Rd	Install westbound at 35 mph

West Drive

Mission Lakes Bl to Pierson Bl	Remain posted at 30 mph
Pierson Bl to Two Bunch Palms Trail	Remain posted at 35 mph

Support Explanations for "No Speed Limit Changes"

The following are support explanations for those segments listed as "No Speed Limit Changes" where the recommended speed limit is more than 5 mph lower than the newly measured 85th percentile speed and/or the segments that have a speed limit sign posted in one direction only and requiring the installation of an appropriate speed sign in the other direction. The various reasons for the recommendations are provided below.

Indian Canyon Drive

North City Limit to Mission Lakes Boulevard

The recommended 55 mph speed limit is within 3.8 mph of the 85th percentile speed and meets CVC standards. For enforcement, a similar speed sign should be installed northbound north of Mission Lakes Boulevard.

Mission Lakes Boulevard to Pierson Boulevard

The recommended 55 mph speed limit is within 4.1 mph of the 85th percentile speed and meets CVC standards. For enforcement, a 55 mph speed sign should be installed for the southbound direction.

Pierson Boulevard

Highway 62 to Skyborne Drive

The recommended 55 mph speed limit is within 1.9 mph of the 85th percentile speed and meets CVC standards. For enforcement, it is recommended that a 55 mph speed sign be posted for the westbound direction west of Skyborne Drive.

Skyborne Drive to Indian Canyon Drive

This section of Pierson Boulevard is a two lane roadway with slight up-down grades. A 55 mph speed sign is posted westbound only. The recommended 55 mph speed limit is within 0.2 miles of 85th percentile speed and meets CVC standards. Also for enforcement, a 55 mph speed sign should be installed eastbound east Skyborne Drive.

Two Bunch Palms Trail

Palm Drive to Miracle Hill Road

This section of Two Bunch Palms Trail is a two lane roadway. The adjacent land uses are residential, a middle school, a resort spa and commercial. The roadway has slight up-down grades with a dip at Mark Drive and a sweeping "S" curve east of Verbena Drive. With the speed data showing an 85th percentile speed of 39.7 mph, it is recommended that the existing 35 mph speed limit remain. For enforcement, a 35 mph speed sign should be posted for the westbound direction west of Miracle Hill Road.

West Drive

Mission Lakes Boulevard to Pierson Boulevard

This portion of West Drive is a two lane roadway. The current speed limit is 30 mph with a 25 mph speed when children present in the school zone. Field observations include many crosswalks near elementary school, heavy school age pedestrian and bicycle traffic, heavy cross streets, no parking anytime, painted bike lanes, slight to gradual up and downhill grades, areas of limited sight distance at grades, and a steep dip at 8th Street. Although the speed data may suggest a higher speed but with the characteristics of area and areas of limited sight distance due to the roadway grades and dips, it is recommended that the existing 30 mph speed limit be maintained.

Locations of "Conflicting Speed Postings"

At one location of the thirty-eight segments studied has conflicting speed limit signs posted within the segment boundaries. This roadway segment has one direction or a portion of the survey segment recommended for "No Change" of the existing speed limit and is recommended for removal of the conflicting sign and/or replacement of the appropriate speed sign in the other direction. This segment and the reason for the recommendation is listed below:

Two Bunch Palms Trail	
Little Morongo Rd to West Dr	Remain posted at 45 mph, and Remove 35 mph postings westbound

Support Explanations for "Conflicting Speed Postings"

Two Bunch Palms Trail

Little Morongo Road to West Drive

This portion of Two Bunch Palms Trail is a two lane roadway. It has a conflicting speed limit signs posted westbound with 35 mph and 45 mph. Adjacent land uses are industrial and business. With the speed survey results showing an 85th percentile speed of 47.9 mph and a 10 mph pace range of 41 to 50 mph, it is recommended that the existing 45 mph be maintained and the 35 mph sign be removed westbound.

Locations of "Residence District"

One roadway segment listed in the 2018 E & T Speed Study falls under the California Vehicle Code 515, "Resident District Speed Limit." Explanations and requirements for Resident District are on Page 2. The CVC states that prima facie roadways are not required to be posted. Therefore, the City may choose to remove existing speed signs or leave them alone. These roadway segments are not required to be included in further speed studies and are listed below:

Miracle Hill Road

Pierson Bl to Hacienda Ave	2013 E & T, Established as Resident District – 25 mph

Support Explanations for "Resident District"

Miracle Hill Road

Pierson Boulevard to Hacienda Avenue

Miracle Hill Road is a two lane residential roadway. Field observations include single family residential with heavy direct driveways, areas of undeveloped land, and the roadway has a slight upgrade northbound. The need to retain the CVC defined lower speed is based on the fact that 17 single-family dwellings with direct driveways exist within a 0.25 mile section between Desert View Avenue and Hacienda Avenue. This segment meets the requirement for the CVC 515 "Resident District". Therefore with these factors, it is recommended that the City establish this segment of Miracle Hill Road a "Resident District". This segment does not require continued speed surveys.

Locations of "New Speed Limit Postings"

One of the 36 roadway segments is currently unposted, with no speed signs posted for either direction of the roadway. Again, the newly measured values of the 85th percentile speeds and the 10 mph pace range were factors used to make these recommendations. It is noted that for each case, the recommendation to post is necessary to enhance the enforcement of the recommended safe speed limit. These segments are shown in the Summary of Recommendations beginning on page 13 and are as follows:

Hacienda Avenue

Palm Dr to Octillo Rd	Install New Posting of 35 mph

Support Explanations for "New Speed Limit Postings"

Hacienda Avenue

Palm Drive to Octillo Road

This section of Hacienda Avenue is a short 0.13 mile segment with two lanes per direction. Currently, there is no speed limit signs posted within the segment. The adjacent land uses are commercial (south-side) and residential (north-side). With the speed survey resulting with an 85th percentile speed of 37.0 mph and a 10 mph pace range of 29 to 38 mph, it is recommended that a 35 mph speed limit be established and posted for this section.

Locations of Speed Limit Reductions

At one location, the Engineering and Traffic survey data indicates a need for a speed limit reduction. This segment and reasons for the recommendation are explained below:

Hacienda Avenue	
West Dr to Palm Dr	Reduce from 45 mph to 40 mph

Support Explanations for "Speed Limit Reductions"

Hacienda Avenue

West Drive to Palm Drive

This section of Hacienda Avenue is a two lane roadway with a 45 mph speed limit. The adjacent land use is residential (fronting) and commercial at Palm Drive. Field observations are slight downhill grade eastbound, painted bike lane westbound only and partial dirt shoulders. With the speed survey resulting with an 85th percentile of 42.4 mph, a 10 mph pace range of 32 to 41 mph, it is recommended that the existing 45 mph be reduced to 40 mph.

Locations of "Speed Limit Increases"

With the combination of the speed data's 85th percentile speed and 10mph pace range, our field review and 2 year accident history, one segment is recommended for a speed limit increase and is listed below:

Little Morongo Road	
Mission Lakes Bl to Pierson Bl	Increase speed from 45 mph to 50 mph

Support Explanations of "Speed Limit Increases"

Little Morongo Road

Mission Lakes Boulevard to Pierson Boulevard

This section of Little Morongo Road is a two lane rural roadway. Field observations include several up/downhill grades, a narrow roadway with dirt shoulders, residential non-fronting and commercial s/o Mission Lakes. The speed study results revealed an 85th percentile speed of 55.7 mph, and a 10 mph pace range of 46 to 55 mph. With the roadway grades and areas of limited sight distance, it is recommended that the existing 45 mph be increased to 50 mph (falls mid-range of 10 mph pace) rather than 55 mph that the speed data may suggest.

SUMMARY OF RECOMMENDATIONS – E & T STUDY 2018

STREET LOCATION	EXISTING SPEED LIMIT	RECOMMENDED SPEED LIMIT	85TH PERCENTILE SPEED	AVERAGE SPEED	10 MPH PACE RANGE	PERCENT OF VEHICLES IN PACE	JUSTIFICATION / COMMENTS
DESERT VIEW AVENUE							
MIRACLE HILL RD TO MOUNTAIN VIEW RD	35	**35**	38.1	34.4	31-40	82.3	NO CHANGE – 85TH PERCENTILE
HACIENDA AVENUE							
WEST DR TO PALM DR	45	**40**	42.4	36.5	32-41	64.4	REDUCE – 85TH PERCENTILE
PALM DR TO OCTILLO RD	NP	**35**	37.0	32.5	29-38	77.1	NEW POSTING – 85TH PERCENTILE
OCTILLO RD TO VERBENA DR	40	**40**	42.7	38.6	35-44	84.8	NO CHANGE – 85TH PERCENTILE
VERBENA DR TO MIRACLE HILL RD	40	**40**	44.9	40.5	36-45	78.7	NO CHANGE – 85TH PERCENTILE
MIRACLE HILL RD TO MOUNTAIN VIEW RD	40	**40**	40.1	35.8	32-41	79.1	NO CHANGE – 85TH PERCENTILE
MOUNTAIN VIEW RD TO EAST CITY LIMITS	40 / 25*	**40**	44.9	39.1	33-42	65.8	NO CHANGE – 85TH PERCENTILE
INDIAN CANYON DRIVE							
NORTH CITY LIMITS TO MISSION LAKES BL	55 SB	**55**	58.8	54.9	51-60	67.1	NO CHANGE – 85TH PERCENTILE – POST NB
MISSION LAKES BL TO PIERSON BL	55 NB	**55**	59.1	54.8	51-60	63.9	NO CHANGE – 85TH PERCENTILE – POST SB
LITTLE MORONGO ROAD							
MISSION LAKES BL TO PIERSON BL	45	**50**	55.7	50.9	46-55	75.0	INCREASE – 85TH PERCENTILE / LIMITED SIGHT DISTANCE
PIERSON BL TO TWO BUNCH PALMS TR	55	**55**	57.3	53.3	49-58	70.9	NO CHANGE – 85TH PERCENTILE
TWO BUNCH PALMS TR TO SOUTH CITY LIMITS	55	**55**	57.5	52.7	51-60	62.0	NO CHANGE – 85TH PERCENTILE

*25 mph When Children Present
NB = Northbound
SB = Southbound

NP = Not Posted
EB = Eastbound
WB = Westbound

STREET LOCATION	EXISTING SPEED LIMIT	RECOMMENDED SPEED LIMIT	85TH PERCENTILE SPEED	AVERAGE SPEED	10 MPH PACE RANGE	PERCENT OF VEHICLES IN PACE	JUSTIFICATION / COMMENTS
MIRACLE HILL ROAD							
PIERSON BL TO HACIENDA AVE	30	**25**	33.5	29.2	27-36	77.9	ESTABLISH AS "RESIDENT DISTRICT" CVC 515
MISSION LAKES BOULEVARD							
INDIAN CANYON DR TO LITTLE MORONGO RD	50	**50**	51.9	48.0	44-53	79.5	NO CHANGE – 85TH PERCENTILE
LITTLE MORONGO RD TO WEST DR	45	**45**	49.9	45.0	41-50	79.5	NO CHANGE – 85TH PERCENTILE
MOUNTAIN VIEW ROAD							
HACIENDA AVE TO SOUTH CITY LIMITS	35	**35**	38.9	35.3	32-41	85.8	NO CHANGE – 85TH PERCENTILE
PALM DRIVE							
MISSION LAKES BL TO 8TH ST	35	**35**	38.4	35.3	31-40	89.0	NO CHANGE – 85TH PERCENTILE
8TH ST TO PIERSON BL	35	**35**	38.6	35.6	31-40	92.3	NO CHANGE – 85TH PERCENTILE
PIERSON BL TO HACIENDA AVE	35	**35**	39.9	36.5	32-41	88.5	NO CHANGE – 85TH PERCENTILE
HACIENDA AVE TO TWO BUNCH PALMS TR	35	**35**	37.9	35.2	32-41	93.6	NO CHANGE – 85TH PERCENTILE
TWO BUNCH PALMS TR TO CAMINO CAMPANERO	40	**40**	42.2	39.2	36-45	91.8	NO CHANGE – 85TH PERCENTILE
CAMINO CAMPANERO TO CAMINO AVENTURA	45	**45**	46.3	44.3	40-49	95.5	NO CHANGE – 85TH PERCENTILE
CAMINO AVENTURA TO DILLON RD (SB only within City)	55	**55**	56.8	53.0	49-58	76.9	NO CHANGE – 85TH PERCENTILE
DILLON RD TO SCL (SB only within City s./o 18th)	60	**60**	64.7	59.8	55-64	75.6	NO CHANGE – 85TH PERCENTILE

NOTE: RESIDENT DISTRICT- CVC 515 DOES NOT REQUIRE FUTURE SPEED STUDY

STREET LOCATION	EXISTING SPEED LIMIT	RECOMMENDED SPEED LIMIT	85TH PERCENTILE SPEED	AVERAGE SPEED	10 MPH PACE RANGE	PERCENT OF VEHICLES IN PACE	JUSTIFICATION / COMMENTS
PIERSON BOULEVARD							
HWY 62 TO SKYBORNE DR	55 EB	**55**	56.9	51.2	50-59	59.0	NO CHANGE – 85TH PERCENTILE – POST WB
SKYBORNE DR TO INDIAN CANYON DR	55 WB	**55**	55.2	50.1	48-57	76.3	NO CHANGE – 85TH PERCENTILE – POST EB
INDIAN CANYON DR TO LITTLE MORONGO DR	50	**50**	54.0	47.9	42-51	66.4	NO CHANGE – 85TH PERCENTILE
LITTLE MORONGO DR TO ATLANTIC / GOLDEN EAGLE RD	50 / *25	**50**	51.6	46.5	44-53	74.3	NO CHANGE – 85TH PERCENTILE
ATLANTIC / GOLDEN EAGLE TO WEST DR	45 / *25	**45**	46.1	41.8	37-46	79.1	NO CHANGE – 85TH PERCENTILE
WEST DR TO PALM DR	35	**35**	37.1	32.9	29-38	81.8	NO CHANGE – 85TH PERCENTILE
PALM DR TO MIRACLE HILL RD	35	**35**	35.9	32.9	28-37	92.7	NO CHANGE – 85TH PERCENTILE
TWO BUNCH PALMS TRAIL							
LIL MORONGO RD TO WEST DR	35 / 45	**45**	47.9	43.9	41-50	78.1	CONFLICTING SPEEDS RETAIN 45 MPH – 85TH PERCENTILE, REMOVE 35 WB
WEST DR TO PALM DR	40 / 25*	**40**	41.0	36.8	32-41	81.4	NO CHANGE – 85TH PERCENTILE
PALM DR TO MIRACLE HILL RD	35 EB / *25	**35**	39.7	34.7	31-40	80.0	NO CHANGE – 85TH PERCENTILE - POST WB
WEST DRIVE							
MISSION LAKES BL TO PIERSON BL	30 / 25*	**30**	35.6	31.5	28-37	87.0	NO CHANGE – LIMITED SIGHT DISTANCE
PIERSON BL TO TWO BUNCH PALMS TR	35 / 25*	**35**	38.3	35.3	32-41	89.1	NO CHANGE – 85TH PERCENTILE

*25 mph When Children Present
WB = Westbound
NP = Not Posted
EB + Eastbound

APPENDIX A

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

DESERT VIEW AVENUE — **MIRACLE HILL RD TO MOUNTAIN VIEW RD**

DATE: 9/7/2018 — SURVEY BY: C. BUENDIA

TIME: 1:00 PM - 1:30 PM — CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	WEST OF MOUNTAIN VIEW
DATE OF SURVEY	9/7/2018
85th PERCENTILE	38.1 MPH
10 MPH PACE	31 - 40 MPH
PERCENT IN PACE	82.3 %
POSTED SPEED LIMIT	35 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	0
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	2,100
LANE CONFIGURATION	1 LANE PER DIRECTION
TRAFFIC CONTROLS	STOP - MIRACLE HILL / REPOSO
CROSSWALKS	NONE
PEDESTRIAN/BICYCLES	NO / NO
TRUCK TRAFFIC	NO
ON-STREET PARKING	NO PARKING ANYTIME
OTHER	"SLOW" and "DO NOT PASS" SIGNS POSTED ALONG ROADWAY SUGGEST ADVISORY CURVE AHEAD SIGN AT MOUNTAIN VIEW

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.50
VERTICAL CURVE	MODERATE UP/DOWNHILL GRADES
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	LIMITED SIGHT DISTANCE (areas of)
ROAD CONDITIONS	GOOD
SIDEWALKS/DRIVEWAYS	PARTIAL / NO
STREET LIGHTING	YES
DRIVEWAY DENSITY	LIGHT
OTHER	DIRTSHOULDERS / AREAS OF NO SHOULDERS SOLID DBL YELLOW CENTERLINE / NARROW ROADWAY

ADJACENT LAND USE	RESIDENTIAL / OPEN

RECOMMENDED SPEED LIMIT	35 MPH

SPEED LIMIT CHANGE	NO CHANGE

JUSTIFICATION:

The recommended 35 mph is within 3.1 mph of the 85th percentile speed and meets CVC standards.

File: Desert View 2018-01

RADAR SPEED DISTRIBUTION SHEET

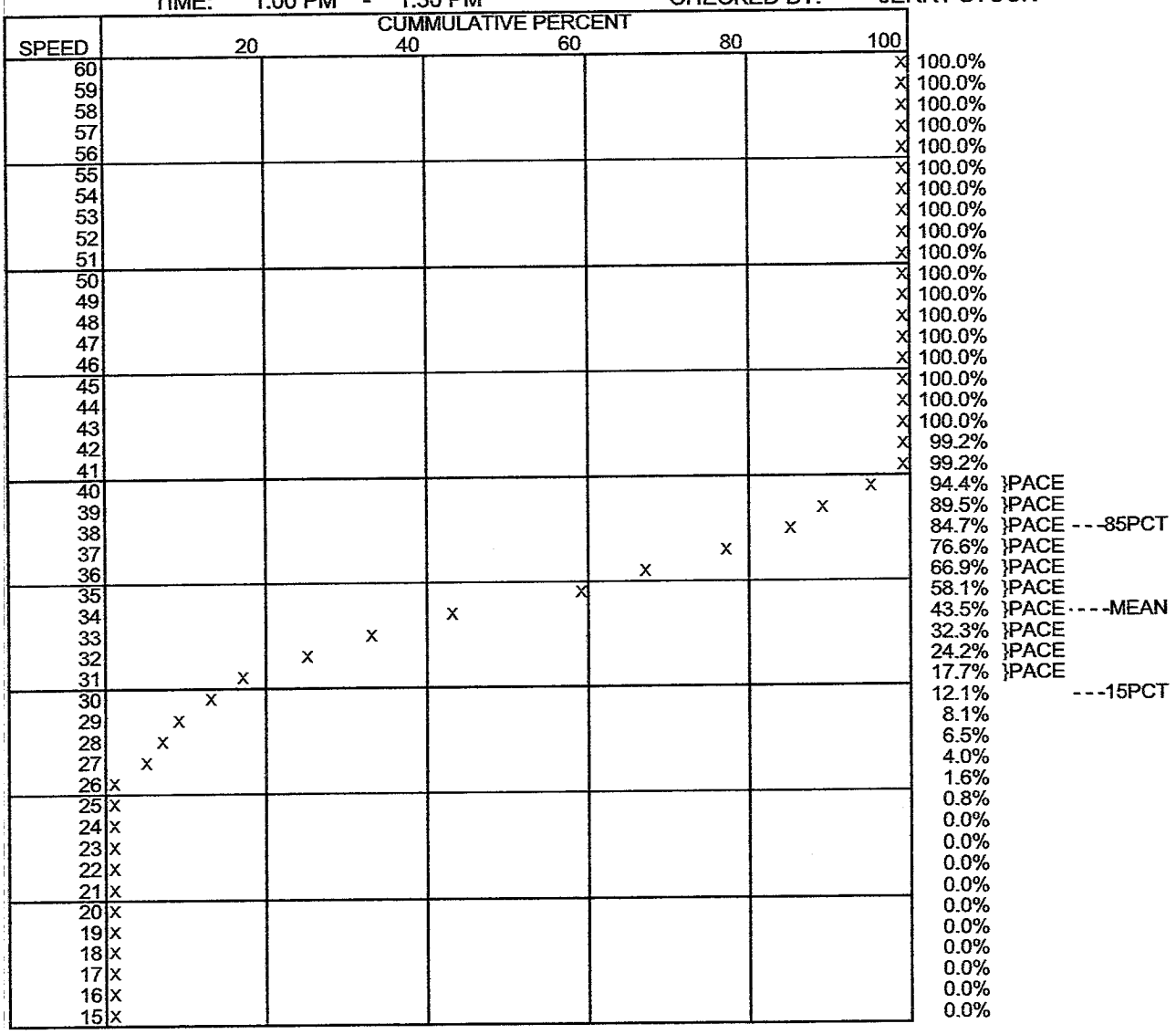
HCI

CITY OF DESERT HOT SPRINGS

DESERT VIEW AVENUE — MIRACLE HILL RD TO MOUNTAIN VIEW RD

DATE: 9/7/2018 — SURVEY BY: C. BUENDIA

TIME: 1:00 PM - 1:30 PM — CHECKED BY: JERRY STOCK



UPPER LIMIT 10 MPH PACE:	40	MPH
LOWER LIMIT 10 MPH PACE:	31	MPH
PERCENT OVER PACE:	5.6	%
PERCENT IN PACE:	82.3	%
PERCENT UNDER PACE:	12.1	%

85th PERCENTILE SPEED:	38.1	MPH
MEDIAN SPEED:	34.4	MPH
15th PERCENTILE SPEED:	30.5	MPH

Desert View 2018-01

$SPD-HCI.dwg

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd, Suite 122 Tustin CA 92680
(714) 731-9455

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: DESERT VIEW AVENUE
LOCATION: MIRACLE HILL RD TO MOUNTAIN VIEW RD

WEATHER: SUNNY
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 9-7-18
START TIME: 1:00 PM
END TIME: 1:30 PM VAL

DIRECTION: EASTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		
59		
58		
57		
56		
55		
54		
53		
52		
51		
50		
49		
48		
47		
46		
45		
44		
43		
42		
41		
40	/	1
39	/	
38	///	3
37	////	5
36	//// /	6
35	//// ///	9
34	//// ////	8
33	//// ///	7
32	//// /	5
31	//	2
30	//	3
29	/	1
28	///	3
27	///	3
26	/	1
25	/	1
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

DIRECTION: WESTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL	MPH
60				60
59				59
58				58
57				57
56				56
55				55
54				54
53				53
52				52
51				51
50				50
49				49
48				48
47				47
46				46
45				45
44				44
43	/	1	1	43
42		0	0	42
41	///// /	6	6	41
40	/////	5	6	40
39	//// /	5	6	39
38	//// //	7	10	38
37	//// //	7	12	37
36	//// //	5	17	36
35	//// ///	9	18	35
34	//// //	6	14	34
33	///	3	10	33
32	///	3	8	32
31	//// /	5	7	31
30	//	2	5	30
29	/	1	2	29
28			3	28
27			3	27
26			1	26
25			1	25
24				24
23				23
22				22
21				21
20				20
19				19
18				18
17				17
16				16
15				15

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

HACIENDA AVENUE **WEST DR TO PALM DR**

DATE: 8/30/2018 SURVEY BY: C. BUENDIA

TIME: 9:00 AM - 9:45 AM CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	EAST OF CYUAMACA
DATE OF SURVEY	8/30/2018
85th PERCENTILE	42.4 MPH
10 MPH PACE	32 - 41 MPH
PERCENT IN PACE	64.4 %
POSTED SPEED LIMIT	45 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	2
TOTAL ACCIDENTS	6
ANNUAL ACCIDENT RATE	1.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	1.19 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	4,600
LANE CONFIGURATION	1 LANE PER DIRECTION
TRAFFIC CONTROLS	SIGNAL - PALM / STOP - WEST
CROSSWALKS	AT PALM / WEST
PEDESTRIAN/BICYCLES	FEW / YES
TRUCK TRAFFIC	NO
ON-STREET PARKING	YES
OTHER	DESIGNATED BIKE LANE (WB only)

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.50
VERTICAL CURVE	SLIGHT DOWNHILL GRADE EB
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	FAIR
SIDEWALKS/DRIVEWAYS	YES / YES (WB) - NO / NO (EB Curb only-no sidewalk)
STREET LIGHTING	YES
DRIVEWAY DENSITY	MEDIUM
OTHER	SOLID DBL YELLOW CENTERLINE PARTIAL DIRT SHOULDERS EB

ADJACENT LAND USE	RESIDENTIAL (F) / COMMERCIAL AT PALM

RECOMMENDED SPEED LIMIT	40 MPH

SPEED LIMIT CHANGE	REDUCE

JUSTIFICATION:

This section of Hacienda Avenue is a two lane roadway with a 45 mph speed limit. The adjacent land use is residential (fronting) and commercial at Palm Drive. Field observations are slight downhill grade eastbound, painted bike lane westbound only and partial dirt shoulders. With the speed survey resulting with an 85th percentile of 42.4 mph, a 10 mph pace range of 32 to 41 mph, it is recommended that the existing 45 mph be reduced to 40 mph.

File: Hacienda 2018-02

RADAR SPEED DISTRIBUTION SHEET

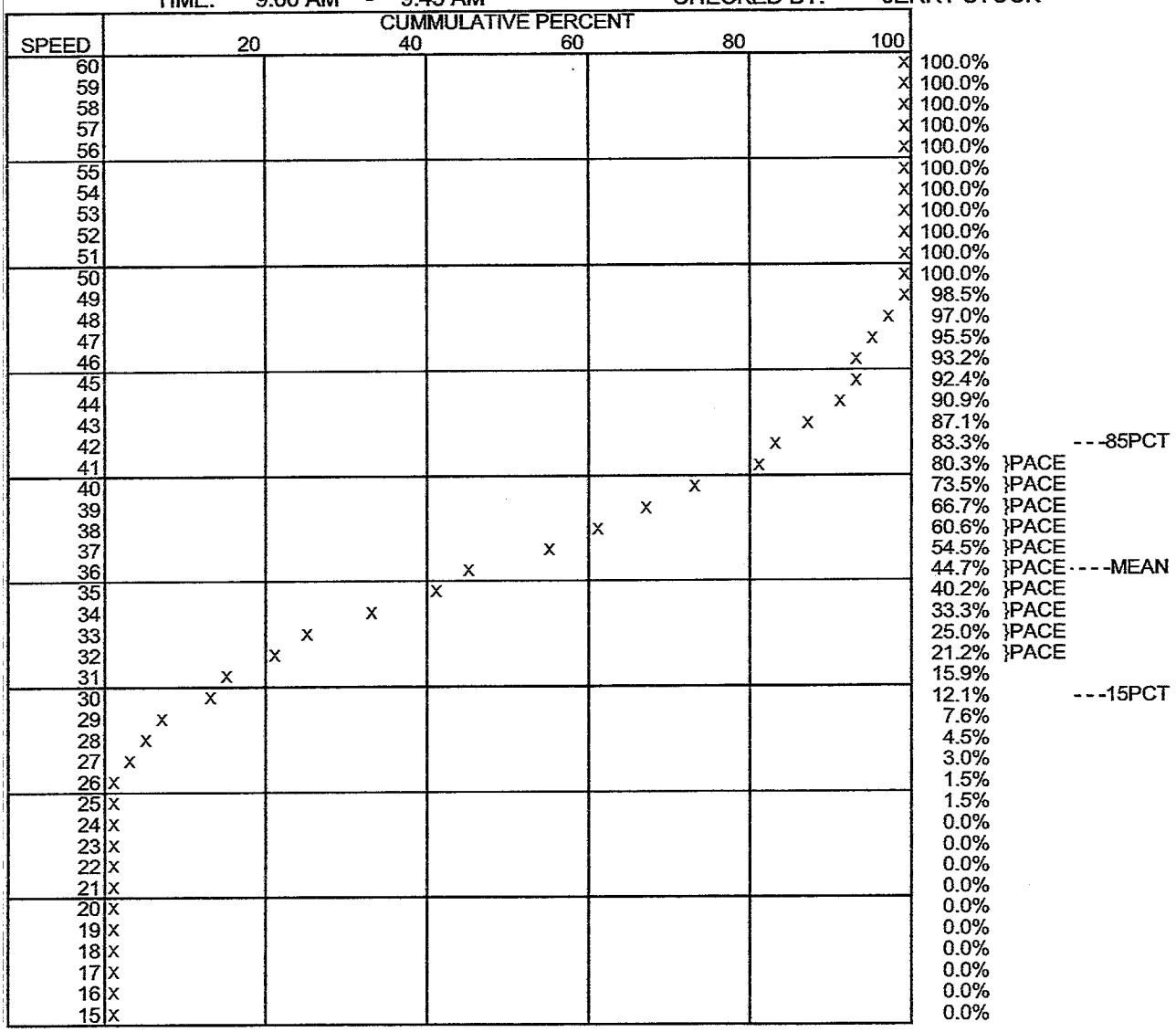
HCI

CITY OF DESERT HOT SPRINGS

HACIENDA AVENUE — WEST DR TO PALM DR

DATE: 8/30/2018 — SURVEY BY: C. BUENDIA

TIME: 9:00 AM - 9:45 AM — CHECKED BY: JERRY STOCK



UPPER LIMIT 10 MPH PACE:	41	MPH
LOWER LIMIT 10 MPH PACE:	32	MPH
PERCENT OVER PACE:	19.7	%
PERCENT IN PACE:	64.4	%
PERCENT UNDER PACE:	15.9	%

85th PERCENTILE SPEED:	42.4	MPH
MEDIAN SPEED:	36.5	MPH
15th PERCENTILE SPEED:	30.8	MPH

Hacienda 2018-02

$SPD-HCI.dwg

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122 Tustin CA. 92680
(714) 731-9455

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: HACIENDA AVENUE
LOCATION: WEST DR. TO PALM DR

WEATHER: SUNNY / HOT
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 8-30-18
START TIME: 9:00 AM
END TIME: 9:45 AM

DIRECTION: WESTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		
59		
58		
57		
56		
55		
54		
53		
52		
51		
50	//	2
49	/	1
48	/	1
47	/	1
46		0
45	//	2
44	//	2
43	///	3
42	////	4
41	/////	5
40	////////	8
39	/////	5
38	////	4
37	////////	8
36	////	4
35	//////	6
34	///	3
33	/	1
32	/	1
31	/////	5
30	///	3
29	/	1
28	//	2
27		
26		
25		
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

DIRECTION: EASTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL
60			
59			
58			
57			
56			
55			
54			
53			
52			
51			
50			2
49	/	1	2
48	/	1	2
47	//	2	3
46	/	1	1
45		0	2
44	///	3	5
43	//	3	5
42		0	4
41	////	4	9
40	/	1	9
39	///	3	8
38	///	4	8
37	/////	5	13
36	//	2	6
35	////////	9	9
34	////////	8	11
33	////	4	5
32	//////	6	7
31		8	5
30	///	3	6
29	///	3	4
28		0	2
27	//	2	2
26		0	0
25	//	2	2
24			
23			
22			
21			
20			
19			
18			
17			
16			
15			

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

HACIENDA AVENUE — **PALM DR TO OCOTILLO RD**

DATE: 8/30/2018 — SURVEY BY: C. BUENDIA

TIME: 10:30 AM - 11:10 AM — CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	EAST OF PALM DR
DATE OF SURVEY	8/30/2018
85th PERCENTILE	37.0 MPH
10 MPH PACE	29 - 38 MPH
PERCENT IN PACE	77.1 %
POSTED SPEED LIMIT	NOT POSTED

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	3
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	7,200
LANE CONFIGURATION	2 LANES PER DIRECTION (Drop lane both directions)
TRAFFIC CONTROLS	SIGNAL - PALM
CROSSWALKS	AT PALM / OCTILLO (sch)
PEDESTRIAN/BICYCLES	FEW / FEW
TRUCK TRAFFIC	NO
ON-STREET PARKING	NO PARKING AT ANYTIME
OTHER	BUS STOPS

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.13
VERTICAL CURVE	NONE
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	GOOD
SIDEWALKS/DRIVEWAYS	NO / FEW (WB) - YES / FEW (EB)
STREET LIGHTING	YES
DRIVEWAY DENSITY	LIGHT
OTHER	RAISED MEDIAN ISLAND (at Palm) SHORT SEGMENT, SURVEYED ON GREEN LIGHT

ADJACENT LAND USE	COMMERCIAL / RESIDENTIAL

RECOMMENDED SPEED LIMIT	35 MPH

SPEED LIMIT CHANGE	POST

JUSTIFICATION:

This section of Hacienda Avenue is a short 0.13 mile segment with two lanes per direction. Currently, there is no speed limit signs posted within the segment. The adjacent land uses are commercial (south-side) and residential (north-side). With the speed survey resulting with an 85th percentile speed of 37.0 mph and a 10 mph pace range of 29 to 38 mph, it is recommended that a 35 mph speed limit be established and posted for this section.

File: Hacienda 2018-03 3A

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

HACIENDA AVENUE — PALM DR TO OCOTILLO RD

DATE: 8/30/2018 — SURVEY BY: C. BUENDIA

TIME: 10:30 AM - 11:10 AM — CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)		
60		100.0%	
59		100.0%	
58		100.0%	
57		100.0%	
56		100.0%	
55		100.0%	
54		100.0%	
53		100.0%	
52		100.0%	
51		100.0%	
50		100.0%	
49		100.0%	
48		100.0%	
47		100.0%	
46		100.0%	
45		100.0%	
44		100.0%	
43		100.0%	
42		100.0%	
41		100.0%	
40		98.6%	
39		95.7%	
38		92.1%	}PACE
37		85.0%	}PACE ---85PCT
36		80.0%	}PACE
35		75.7%	}PACE
34		62.9%	}PACE
33		52.9%	}PACE
32		47.1%	}PACE ----MEAN
31		35.0%	}PACE
30		29.3%	}PACE
29		19.3%	}PACE
28		15.0%	---15PCT
27		10.0%	
26		5.7%	
25		4.3%	
24		2.1%	
23		2.1%	
22		0.7%	
21		0.7%	
20		0.7%	
19		0.0%	
18		0.0%	
17		0.0%	
16		0.0%	
15		0.0%	

UPPER LIMIT 10 MPH PACE:	38	MPH
LOWER LIMIT 10 MPH PACE:	29	MPH
PERCENT OVER PACE:	7.9	%
PERCENT IN PACE:	77.1	%
PERCENT UNDER PACE:	15.0	%

85th PERCENTILE SPEED:	37.0	MPH
MEDIAN SPEED:	32.5	MPH
15th PERCENTILE SPEED:	28.0	MPH

Hacienda 2018-03 3A

$SPD-HCI.dwg

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122 Tustin CA 92680
(714) 731-9455

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: HACIENDA AVENUE
LOCATION: PALM DR TO OCTILLO

WEATHER: SUNNY - HOT
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 8-30-18
START TIME: 10:30 AM
END TIME: 11:10 AM VLM

DIRECTION: EASTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		
59		
58		
57		
56		
55		
54		
53		
52		
51		
50		
49		
48		
47		
46		
45		
44		
43		
42		
41	/	1
40	/	1
39	/	1
38	/ / / /	4
37	/ /	2
36	/ /	2
35	/ / / / / / / /	9
34	/ / / / / /	7
33	/ / / / / /	7
32	/ / / / / / /	8
31	/ / / /	4
30	/ / / / / /	6
29	/ /	2
28	/ / / / /	5
27	/ / /	3
26	/	1
25	/ /	2
24		0
23	/ /	2
22		0
21		0
20	/	1
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

DIRECTION: WESTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL
60			
59			
58			
57			
56			
55			
54			
53			
52			
51			
50			
49			
48			
47			
46			
45			
44			
43			
42			
41	/	1	2
40	/ / /	3	4
39	/ / / /	4	5
38	/ / / / / /	6	10
37	/ / / / /	5	7
36	/ / / /	4	6
35	/ / / / / / / / /	9	18
34	/ / / / / / /	7	14
33	/ / / / / /	4	8
32	/ / / / / / / / /	9	17
31	/ / / / / /	4	8
30	/ / / / / / / /	8	14
29	/ / / /	4	6
28	/ /	2	7
27	/ / /	3	6
26	/	1	2
25	/	1	3
24			0
23			2
22			0
21			0
20			1
19			
18			
17			
16			
15			

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

HACIENDA AVENUE — **OCTILLO RD TO VERBENA DR**

DATE: 8/30/2018 — SURVEY BY: C. BUENDIA

TIME: 9:50 AM - 10:30 AM — CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	WEST OF VERBENA
DATE OF SURVEY	8/30/2018
85th PERCENTILE	42.7 MPH
10 MPH PACE	35 - 44 MPH
PERCENT IN PACE	84.8 %
POSTED SPEED LIMIT	40 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	2
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	7,200
LANE CONFIGURATION	1 LANE PER DIRECTION
TRAFFIC CONTROLS	STOP - MESQUITE
CROSSWALKS	AT OCTILLO (sch) / MESQUITE / VERBENA (sch)
PEDESTRIAN/BICYCLES	YES / YES
TRUCK TRAFFIC	NO
ON-STREET PARKING	YES
OTHER	NOT RESTRICTED, NONE OBSERVED

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.37
VERTICAL CURVE	NONE
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	GOOD
SIDEWALKS/DRIVEWAYS	NO / YES (WB) - YES / YES (EB)
STREET LIGHTING	YES
DRIVEWAY DENSITY	LIGHT
OTHER	2 WAY LEFT TURN CENTERLANE BUS STOPS

ADJACENT LAND USE	RESIDENTIAL / OPEN
RECOMMENDED SPEED LIMIT	40 MPH
SPEED LIMIT CHANGE	NO CHANGE

JUSTIFICATION:

The recommended 40 mph speed is within 2.7 mph of the 85th percentile speed and meets CVC standards.

File: Hacienda 2018-04 (3b)

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

HACIENDA AVENUE — OCTILLO RD TO VERBENA DR

DATE: 8/30/2018 — SURVEY BY: C. BUENDIA

TIME: 9:50 AM - 10:30 AM — CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)		
60	X	100.0%	
59	X	100.0%	
58	X	100.0%	
57	X	100.0%	
56	X	100.0%	
55	X	100.0%	
54	X	100.0%	
53	X	100.0%	
52	X	100.0%	
51	X	100.0%	
50	X	100.0%	
49	X	100.0%	
48	X	100.0%	
47	X	98.6%	
46	X	97.8%	
45	X	94.2%	
44	X	92.0%	}PACE
43	X	88.4%	}PACE
42	X	78.3%	}PACE - - -85PCT
41	X	71.7%	}PACE
40	X	65.9%	}PACE
39	X	53.6%	}PACE
38	X	44.2%	}PACE - - - -MEAN
37	X	29.0%	}PACE
36	X	20.3%	}PACE
35	X	14.5%	}PACE - - -15PCT
34	X	7.2%	
33	X	6.5%	
32	X	4.3%	
31	X	3.6%	
30	X	1.4%	
29	X	0.7%	
28	X	0.7%	
27	X	0.0%	
26	X	0.0%	
25	X	0.0%	
24	X	0.0%	
23	X	0.0%	
22	X	0.0%	
21	X	0.0%	
20	X	0.0%	
19	X	0.0%	
18	X	0.0%	
17	X	0.0%	
16	X	0.0%	
15	X	0.0%	

UPPER LIMIT 10 MPH PACE:	44	MPH
LOWER LIMIT 10 MPH PACE:	35	MPH
PERCENT OVER PACE:	8.0	%
PERCENT IN PACE:	84.8	%
PERCENT UNDER PACE:	7.2	%

85th PERCENTILE SPEED:	42.7	MPH
MEDIAN SPEED:	38.6	MPH
15th PERCENTILE SPEED:	35.1	MPH

Hacienda 2018-04 (3b)

$SPD-HCI.dwg

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122 Tustin CA. 92680
(714) 731-9455

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: HACIENDA AVENUE
LOCATION: PALM DR. TO VERBENA DR (COCTILLO)

WEATHER: SUNNY / HOT
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 8-30-18
START TIME: 9:50 AM
END TIME: 10:30 AM VAL

DIRECTION: EASTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		
59		
58		
57		
56		
55		
54		
53		
52		
51		
50		
49		
48		
47		
46	/	1
45	///	3
44	/	1
43	///	6
42	///	4
41	//	2
40	///	8
39	///	7
38	///	12
37	///	6
36	///	3
35	///	3
34		0
33	/	1
32	/	1
31	//	2
30		0
29		0
28	/	1
27		
26		
25		
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

DIRECTION: WESTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL	MPH
60				60
59				59
58				58
57				57
56				56
55				55
54				54
53				53
52				52
51				51
50				50
49				49
48	//	2	2	48
47	/	1	1	47
46	////	4	5	46
45		0	3	45
44	////	4	5	44
43	////////	8	14	43
42	/////	5	9	42
41	//////	6	8	41
40	////////	9	17	40
39	//////	6	13	39
38	////////	9	21	38
37	//////	6	12	37
36	/////	5	8	36
35	///	3	10	35
34	/	1	1	34
33	//	2	3	33
32		0	1	32
31	/	1	3	31
30	/	1	1	30
29			0	29
28			1	28
27				27
26				26
25				25
24				24
23				23
22				22
21				21
20				20
19				19
18				18
17				17
16				16
15				15

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

(4) 3B

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

HACIENDA AVENUE **VERBENA DR TO MIRACLE HILL RD**

DATE: 8/30/2018 SURVEY BY: C. BUENDIA

TIME: 11:15 AM - 11:45 AM CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	WEST OF MIRACLE HILL
DATE OF SURVEY	8/30/2018
85th PERCENTILE	44.9 MPH
10 MPH PACE	36 - 45 MPH
PERCENT IN PACE	78.7 %
POSTED SPEED LIMIT	40 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	4
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	7,200
LANE CONFIGURATION	1 LANE PER DIRECTION
TRAFFIC CONTROLS	NONE
CROSSWALKS	NONE
PEDESTRIAN/BICYCLES	NO / YES
TRUCK TRAFFIC	NO
ON-STREET PARKING	AREAS OF NO PARKING ANYTIME
OTHER	SOLID DBL YELLOW CENTERLINE
	BUS STOPS

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.50
VERTICAL CURVE	SLIGHT-GRADUAL UP/DOWNHILL GRADES
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	GOOD
SIDEWALKS/DRIVEWAYS	PARTIAL / FEW
STREET LIGHTING	YES
DRIVEWAY DENSITY	LIGHT
OTHER	AREAS OF NARROW / WIDE ROADWAY

ADJACENT LAND USE	RESIDENTIAL (rural) / MOTEL (out of business) / OPEN

RECOMMENDED SPEED LIMIT	40 MPH

SPEED LIMIT CHANGE	NO CHANGE

JUSTIFICATION:

The recommended 40 mph speed limit is within 4.9 mph of the 85th percentile speed and meets CVC standards.

File: Hacienda 2018-05

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

HACIENDA AVENUE — VERBENA DR TO MIRACLE HILL RD

DATE: 8/30/2018 — SURVEY BY: C. BUENDIA

TIME: 11:15 AM - 11:45 AM — CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)		
60		100.0%	
59		100.0%	
58		100.0%	
57		100.0%	
56		100.0%	
55		100.0%	
54		100.0%	
53		100.0%	
52		100.0%	
51		100.0%	
50		100.0%	
49		97.8%	
48		96.3%	
47		94.1%	
46		90.4%	
45		85.3%	}PACE
44		81.6%	}PACE - - -85PCT
43		75.7%	}PACE
42		66.2%	}PACE
41		53.7%	}PACE
40		46.3%	}PACE - - -MEAN
39		35.3%	}PACE
38		25.0%	}PACE
37		20.6%	}PACE
36		13.2%	}PACE - - -15PCT
35		6.6%	
34		5.9%	
33		3.7%	
32		2.2%	
31		1.5%	
30		1.5%	
29		0.7%	
28		0.0%	
27		0.0%	
26		0.0%	
25		0.0%	
24		0.0%	
23		0.0%	
22		0.0%	
21		0.0%	
20		0.0%	
19		0.0%	
18		0.0%	
17		0.0%	
16		0.0%	
15		0.0%	

UPPER LIMIT 10 MPH PACE:	45	MPH
LOWER LIMIT 10 MPH PACE:	36	MPH
PERCENT OVER PACE:	14.7	%
PERCENT IN PACE:	78.7	%
PERCENT UNDER PACE:	6.6	%

85th PERCENTILE SPEED:	44.9	MPH
MEDIAN SPEED:	40.5	MPH
15th PERCENTILE SPEED:	36.2	MPH

Hacienda 2018-05

$SPD-HCI.dwg

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122 Tustin CA 92680
(714) 731-9455

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: HACIENDA AVENUE
LOCATION: VERBENA DR TO MIRACLE HILL RD

WEATHER: SUNNY - HOT
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 8-30-18
START TIME: 11:15 AM
END TIME: 11:45 AM

DIRECTION: WESTB

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		
59		
58		
57		
56		
55		
54		
53		
52		
51		
50		
49		
48		2
47		3
46		5
45		3
44		5
43		7
42		13
41		6
40		5
39		6
38		3
37		5
36		4
35		1
34		1
33		1
32		
31		
30		
29		
28		
27		
26		
25		
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

DIRECTION: EASTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL
60			
59			
58			
57			
56			
55			
54			
53			
52			
51			
50		3	3
49		2	2
48		1	3
47		2	5
46		2	7
45		2	5
44		3	8
43		6	13
42		4	17
41		4	10
40		10	15
39		8	14
38		3	6
37		5	10
36		5	9
35		0	1
34		2	3
33		1	2
32		1	1
31		0	0
30		1	1
29		1	1
28			
27			
26			
25			
24			
23			
22			
21			
20			
19			
18			
17			
16			
15			

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

HACIENDA AVENUE — **MIRACLE HILL RD TO MOUNTAIN VIEW RD**

DATE: 8/30/2018 — SURVEY BY: C. BUENDIA

TIME: 11:50 AM - 12:20 PM — CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	WEST OF MOUNTAIN VIEW
DATE OF SURVEY	8/30/2018
85th PERCENTILE	40.1 MPH
10 MPH PACE	32 - 41 MPH
PERCENT IN PACE	79.1 %
POSTED SPEED LIMIT	40 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	2
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	9,400
LANE CONFIGURATION	1 LANE PER DIRECTION
TRAFFIC CONTROLS	SIGNAL - MOUNTAIN VIEW / STOP-CUANDO
CROSSWALKS	AT MOUNTAIN VIEW
PEDESTRIAN/BICYCLES	NO / FEW
TRUCK TRAFFIC	NO
ON-STREET PARKING	NO PARKING AT ANYTIME
OTHER	SOLID DBL YELLOW CENTERLINE BUS STOPS

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.50
VERTICAL CURVE	SLIGHT-GRADUAL UP/DOWNHILL GRADES
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	FAIR
SIDEWALKS/DRIVEWAYS	NO / YES (WB) - PARTIAL / YES (EB)
STREET LIGHTING	YES
DRIVEWAY DENSITY	LIGHT
OTHER	AREAS OF NO SHOULDERS

ADJACENT LAND USE	RESIDENTIAL / BUSINESS (sparse)
RECOMMENDED SPEED LIMIT	40 MPH
SPEED LIMIT CHANGE	NO CHANGE

JUSTIFICATION:

The recommended 40 mph speed is within 0.1 mph above the 85th percentile speed and meets CVC standards.

File: Hacienda 2018-06

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

HACIENDA AVENUE — MIRACLE HILL RD TO MOUNTAIN VIEW RD

DATE: 8/30/2018 — SURVEY BY: C. BUENDIA

TIME: 11:50 AM - 12:20 PM — CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)						
60						100.0%	
59						100.0%	
58						100.0%	
57						100.0%	
56						100.0%	
55						100.0%	
54						100.0%	
53						100.0%	
52						100.0%	
51						100.0%	
50						100.0%	
49						100.0%	
48						100.0%	
47						100.0%	
46						100.0%	
45						98.0%	
44						95.9%	
43						94.6%	
42						91.9%	
41						89.2%	}PACE
40						84.5%	}PACE - - -85PCT
39						77.0%	}PACE
38						68.9%	}PACE
37						60.8%	}PACE
36						52.0%	}PACE
35						42.6%	}PACE - - - -MEAN
34						27.7%	}PACE
33						20.3%	}PACE
32						14.9%	}PACE - - -15PCT
31						10.1%	
30						8.1%	
29						2.7%	
28						2.0%	
27						0.7%	
26						0.0%	
25						0.0%	
24						0.0%	
23						0.0%	
22						0.0%	
21						0.0%	
20						0.0%	
19						0.0%	
18						0.0%	
17						0.0%	
16						0.0%	
15						0.0%	

UPPER LIMIT 10 MPH PACE:	41	MPH
LOWER LIMIT 10 MPH PACE:	32	MPH
PERCENT OVER PACE:	10.8	%
PERCENT IN PACE:	79.1	%
PERCENT UNDER PACE:	10.1	%

85th PERCENTILE SPEED:	40.1	MPH
MEDIAN SPEED:	35.8	MPH
15th PERCENTILE SPEED:	32.0	MPH

Hacienda 2018-06

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122 Tustin CA 92680
(714) 731-9455

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: HACIENDA AVENUE
LOCATION: MIRACE HILL RD TO MOUNTAIN VIEW RD

WEATHER: SUNNY
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 8-30-18
START TIME: 11:50 AM
END TIME: 12:20 PM

DIRECTION: EASTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		
59		
58		
57		
56		
55		
54		
53		
52		
51		
50		
49		
48		
47		
46					3
45		1
44		0
43				2
42		0
41						4
40							5
39								7
38				3
37								7
36												11
35												11
34								6
33								6
32						4
31					3
30						4
29		0
28				2
27		1
26		
25		
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

DIRECTION: WESTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL	MPH
60				60
59				59
58				58
57				57
56				56
55				55
54				54
53				53
52				52
51				51
50				50
49				49
48				48
47				47
46			3	46
45				2	3	45
44				2	2	44
43				2	4	43
42						4	4	42
41					3	7	41
40								6	11	40
39							5	12	39
38										9	12	38
37								6	13	37
36					3	14	36
35												1	22	35
34							5	11	34
33				2	8	33
32					3	7	32
31		0	3	31
30						4	8	30
29		1	1	29
28			2	28
27			1	27
26				26
25				25
24				24
23				23
22				22
21				21
20				20
19				19
18				18
17				17
16				16
15				15

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

HACIENDA AVENUE — **MOUNTAIN VIEW RD TO EAST CITY LIMITS**

DATE: 8/30/2018 — SURVEY BY: C. BUENDIA

TIME: 12:45 PM - 1:40 PM — CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	EAST OF McGARVER
DATE OF SURVEY	8/30/2018
85th PERCENTILE	44.9 MPH
10 MPH PACE	33 - 42 MPH
PERCENT IN PACE	65.8 %
POSTED SPEED LIMIT	40 MPH / 25 MPH*

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	6
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	4,250
LANE CONFIGURATION	1 LANE PER DIRECTION
TRAFFIC CONTROLS	SIGNAL - MOUNTAIN VIEW / FLASHING BEACON AT SCHOOL
CROSSWALKS	AT MOUNTAIN VIEW / MID-BLK AT SCHOOL
PEDESTRIAN/BICYCLES	YES / YES
TRUCK TRAFFIC	NO
ON-STREET PARKING	NO PARKING AT ANYTIME (Areas of)
OTHER	SOLID DBL YELLOW CENTERLINE

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	1.10
VERTICAL CURVE	SLIGHT-GRADUAL UP/DOWNHILL GRADES
HORIZONTAL CURVE	SLIGHT BEND AT CALLE AMAPOLA
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	GOOD
SIDEWALKS/DRIVEWAYS	PARTIAL / YES
STREET LIGHTING	YES
DRIVEWAY DENSITY	LIGHT
OTHER	BUS STOPS

ADJACENT LAND USE	RESIDENTIAL (Single+Multi-Family) / SCHOOL / OPEN
RECOMMENDED SPEED LIMIT	40 MPH
SPEED LIMIT CHANGE	NO CHANGE

JUSTIFICATION:

The recommended 40 mph speed limit is within 4.9 mph of 85th percentile speed and meets CVC standards.

* 25 mph When Children Present, School Zone

File: Hacienda 2018-07

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

HACIENDA AVENUE — MOUNTAIN VIEW RD TO EAST CITY LIMITS

DATE: 8/30/2018 — SURVEY BY: C. BUENDIA

TIME: 12:45 PM - 1:40 PM — CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)		
60		100.0%	
59		100.0%	
58		100.0%	
57		100.0%	
56		100.0%	
55		100.0%	
54		100.0%	
53		100.0%	
52		100.0%	
51		100.0%	
50		100.0%	
49		100.0%	
48		98.6%	
47		95.2%	
46		90.4%	
45		85.6%	
44		79.5%	---85PCT
43		78.8%	
42		75.3%	}PACE
41		68.5%	}PACE
40		59.6%	}PACE
39		48.6%	}PACE----MEAN
38		44.5%	}PACE
37		37.7%	}PACE
36		32.9%	}PACE
35		28.1%	}PACE
34		18.5%	}PACE
33		15.1%	}PACE
32		9.6%	---15PCT
31		4.8%	
30		3.4%	
29		2.1%	
28		1.4%	
27		0.0%	
26		0.0%	
25		0.0%	
24		0.0%	
23		0.0%	
22		0.0%	
21		0.0%	
20		0.0%	
19		0.0%	
18		0.0%	
17		0.0%	
16		0.0%	
15		0.0%	

UPPER LIMIT 10 MPH PACE:	42	MPH
LOWER LIMIT 10 MPH PACE:	33	MPH
PERCENT OVER PACE:	24.7	%
PERCENT IN PACE:	65.8	%
PERCENT UNDER PACE:	9.6	%

85th PERCENTILE SPEED:	44.9	MPH
MEDIAN SPEED:	39.1	MPH
15th PERCENTILE SPEED:	33.0	MPH

Hacienda 2018-07

$SPD-HCI.dwg

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122 Tustin CA. 92680
(714) 731-9455

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: HACIENDA AVENUE
LOCATION: MOUNTAIN VIEW RD TO EAST CITY LIMITS

WEATHER: SUNNY - HOT
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 8-30-18
START TIME: 12:45 PM
END TIME: 1:40 PM VAL

DIRECTION: WESTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		
59		
58		
57		
56		
55		
54		
53		
52		
51		
50		
49		
48	//	2
47	////	4
46	////	3
45	////	5
44	/	1
43	/	1
42	////	5
41	////////	8
40	////////	8
39		0
38	////////	6
37	/	1
36	////	4
35	////////	8
34	////	5
33	/	2
32	///	3
31	/	1
30	/	1
29		0
28	/	1
27		
26		
25		
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

DIRECTION: EASTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL
60			
59			
58			
57			
56			
55			
54			
53			
52			
51			
50			
49	//	2	2
48	///	3	5
47	///	3	7
46	////	4	7
45	////	4	9
44		0	1
43	////	4	5
42	/////	5	10
41	/////	5	13
40	////////////	10	16
39	//////////	6	16
38	////	4	10
37	//////	6	7
36	///	3	7
35	//////	6	14
34		0	5
33	//////	6	8
32	////	4	7
31	/	1	2
30	/	1	2
29	/	1	1
28	/	1	2
27			
26			
25			
24			
23			
22			
21			
20			
19			
18			
17			
16			
15			

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

INDIAN CANYON DRIVE — **NORTH CITY LIMITS TO MISSION LAKES BL**

DATE: 9/7/2018 — SURVEY BY: C. BUENDIA

TIME: 1:45 PM - 2:10 PM — CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	NORTH OF MISSION LAKES
DATE OF SURVEY	9/7/2018
85th PERCENTILE	58.8 MPH
10 MPH PACE	51 - 60 MPH
PERCENT IN PACE	67.1 %
POSTED SPEED LIMIT	55 MPH (SB)

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	0
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	5,400
LANE CONFIGURATION	1 LANE PER DIRECTION
TRAFFIC CONTROLS	SIGNAL - MISSION LAKES
CROSSWALKS	NONE
PEDESTRIAN/BICYCLES	NONE
TRUCK TRAFFIC	YES
ON-STREET PARKING	NOT RESTRICTED, NONE OBSERVED
OTHER	SOLID DBL YELLOW CENTERLINE

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	1.10
VERTICAL CURVE	SLIGHT UP/DOWNHILL GRADES
HORIZONTAL CURVE	GRADUAL "C" CURVE
LATERAL VISIBILITY	LIMITED SIGHT DISTANCE (at "C" curve)
ROAD CONDITIONS	FAIR
SIDEWALKS/DRIVEWAYS	NO / NO
STREET LIGHTING	NO
DRIVEWAY DENSITY	NONE
OTHER	DIRT SHOULDERS

ADJACENT LAND USE	OPEN - UNDEVELOPED
RECOMMENDED SPEED LIMIT	55 MPH
SPEED LIMIT CHANGE	NO CHANGE - POST NB

JUSTIFICATION:

The recommended 55 mph speed limit is within 3.8 mph of the 85th percentile speed and meets CVC standards. For enforcement, a similar speed sign should be installed northbound north of Mission Lakes.Boulevard.

File: Indian Canyon 2018-08

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

INDIAN CANYON DRIVE — NORTH CITY LIMITS TO MISSION LAKES BL

DATE: 9/7/2018 — SURVEY BY: C. BUENDIA

TIME: 1:45 PM - 2:10 PM — CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)						
60						X	100.0% }PACE
59					X		86.7% }PACE
58					X		77.2% }PACE ---85PCT
57				X			67.7% }PACE
56			X				59.5% }PACE
55			X				51.3% }PACE
54		X					40.5% }PACE ---MEAN
53		X					32.3% }PACE
52	X						23.4% }PACE
51	X						19.0% }PACE
50	X						12.7% ---15PCT
49	X						8.2%
48	X						3.8%
47	X						0.6%
46	X						0.0%
45	X						0.0%
44	X						0.0%
43	X						0.0%
42	X						0.0%
41	X						0.0%
40	X						0.0%
39	X						0.0%
38	X						0.0%
37	X						0.0%
36	X						0.0%
35	X						0.0%
34	X						0.0%
33	X						0.0%
32	X						0.0%
31	X						0.0%
30	X						0.0%
29	X						0.0%
28	X						0.0%
27	X						0.0%
26	X						0.0%
25	X						0.0%
24	X						0.0%
23	X						0.0%
22	X						0.0%
21	X						0.0%
20	X						0.0%
19	X						0.0%
18	X						0.0%
17	X						0.0%
16	X						0.0%
15	X						0.0%

UPPER LIMIT 10 MPH PACE:	60	MPH
LOWER LIMIT 10 MPH PACE:	51	MPH
PERCENT OVER PACE:	0.0	%
PERCENT IN PACE:	67.1	%
PERCENT UNDER PACE:	0.0	%

85th PERCENTILE SPEED:	58.8	MPH
MEDIAN SPEED:	54.9	MPH
15th PERCENTILE SPEED:	50.4	MPH

Indian Canyon 2018-08

$SPD-HCI.dwg

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122 Tustin CA 92680
(714) 731-9455

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: INDIAN CANYON DRIVE
LOCATION: NORTH CITY LIMITS TO MISSION LAKES BL

WEATHER: SUNNY - HOT
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 9-7-18
START TIME: 1:45 PM
END TIME: 2:10 PM

DIRECTION: SOUTHBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		8
59		6
58		8
57		6
56		8
55		8
54		8
53		7
52		4
51		5
50		3
49		4
48		2
47		
46		
45		
44		
43		
42		
41		
40		
39		
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18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

DIRECTION: NORTHBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL	MPH
60		13	21	60
59		9	15	59
58		7	15	58
57		7	13	57
56		5	13	56
55		9	17	55
54		5	13	54
53		7	14	53
52		3	7	52
51		5	10	51
50		4	7	50
49		3	7	49
48		3	5	48
47		1	1	47
46				46
45				45
44				44
43				43
42				42
41				41
40				40
39				39
38				38
37				37
36				36
35				35
34				34
33				33
32				32
31				31
30				30
29				29
28				28
27				27
26				26
25				25
24				24
23				23
22				22
21				21
20				20
19				19
18				18
17				17
16				16
15				15

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

INDIAN CANYON DRIVE — **MISSION LAKES BL TO PIERSON BL**

DATE: 9/7/2018 — SURVEY BY: C. BUENDIA

TIME: 2:10 PM - 2:35 PM — CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	**NORTH OF PIERSON**
DATE OF SURVEY	9/7/2018
85th PERCENTILE	59.1 MPH
10 MPH PACE	51 - 60 MPH
PERCENT IN PACE	63.9 %
POSTED SPEED LIMIT	55 MPH (NB)

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	1
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	6,750
LANE CONFIGURATION	1 LANE PER DIRECTION
TRAFFIC CONTROLS	SIGNAL - MISSION LAKES / STOP - PIERSON
CROSSWALKS	NONE
PEDESTRIAN/BICYCLES	NONE
TRUCK TRAFFIC	YES
ON-STREET PARKING	NOT RESTRICTED, NONE OBSERVED
OTHER	SOLID DBL YELLOW CENTERLINE

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	1.01
VERTICAL CURVE	SEVERAL SLIGHT UP/DOWNHILL GRADES
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	FAIR
SIDEWALKS/DRIVEWAYS	NO / NO
STREET LIGHTING	NO
DRIVEWAY DENSITY	NONE
OTHER	DIRT SHOULDERS SUBJECT TO FLOODING SIGNS POSTED

ADJACENT LAND USE	OPEN
RECOMMENDED SPEED LIMIT	55 MPH
SPEED LIMIT CHANGE	NO CHANGE - POST SB

JUSTIFICATION:

The recommended 55 mph speed limit is within 4.1 mph of the 85th percentile speed and meets CVC standards. For enforcement, a 55 mph speed sign should be installed for the southbound direction.

File: Indian Canyon 2018-09

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

INDIAN CANYON DRIVE — MISSION LAKES BL TO PIERSON BL

DATE: 9/7/2018 — SURVEY BY: C. BUENDIA

TIME: 2:10 PM - 2:35 PM — CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)						
60						X	100.0% }PACE
59					X		83.9% }PACE ---85PCT
58				X			73.5% }PACE
57				X			65.8% }PACE
56			X				57.4% }PACE
55			X				51.6% }PACE
54			X				43.2% }PACE ----MEAN
53		X					34.8% }PACE
52		X					28.4% }PACE
51	X						19.4% }PACE
50	X						10.3% ---15PCT
49	X						7.1%
48	X						3.2%
47	X						1.9%
46	X						1.3%
45	X						0.6%
44	X						0.6%
43	X						0.0%
42	X						0.0%
41	X						0.0%
40	X						0.0%
39	X						0.0%
38	X						0.0%
37	X						0.0%
36	X						0.0%
35	X						0.0%
34	X						0.0%
33	X						0.0%
32	X						0.0%
31	X						0.0%
30	X						0.0%
29	X						0.0%
28	X						0.0%
27	X						0.0%
26	X						0.0%
25	X						0.0%
24	X						0.0%
23	X						0.0%
22	X						0.0%
21	X						0.0%
20	X						0.0%
19	X						0.0%
18	X						0.0%
17	X						0.0%
16	X						0.0%
15	X						0.0%

UPPER LIMIT 10 MPH PACE:	60	MPH
LOWER LIMIT 10 MPH PACE:	51	MPH
PERCENT OVER PACE:	0.0	%
PERCENT IN PACE:	63.9	%
PERCENT UNDER PACE:	0.0	%

85th PERCENTILE SPEED:	59.1	MPH
MEDIAN SPEED:	54.8	MPH
15th PERCENTILE SPEED:	50.5	MPH

$SPD--HCI.dwg

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122 Tustin CA. 92680
(714) 731-9455

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: INDIAN CANYON DRIVE
LOCATION: MISSION LAKES BL TO PIERSON BL

WEATHER: SUNNY
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 9-7-18
START TIME: 2:10 PM
END TIME: 2:35 PM VCR

DIRECTION: SOUTHBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		3
59		6
58		6
57		7
56		6
55		5
54		9
53		6
52		6
51		6
50		2
49		3
48		1
47		
46		
45		
44		
43		
42		
41		
40		
39		
38		
37		
36		
35		
34		
33		
32		
31		
30		
29		
28		
27		
26		
25		
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

DIRECTION: NORTHBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL
60		12	25
59		10	16
58		6	12
57		6	13
56		3	9
55		8	13
54		4	13
53		4	10
52		8	14
51		8	14
50		3	5
49		3	6
48		1	2
47		1	1
46		1	1
45		0	0
44		1	1
43			
42			
41			
40			
39			
38			
37			
36			
35			
34			
33			
32			
31			
30			
29			
28			
27			
26			
25			
24			
23			
22			
21			
20			
19			
18			
17			
16			
15			

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

LITTLE MORONGO ROAD — **MISSION LAKES BL TO PIERSON BL**

DATE: 9/6/2018 — SURVEY BY: C. BUENDIA

TIME: 3:10 PM - 3:45 PM — CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	NORTH OF PIERSON
DATE OF SURVEY	9/6/2018
85th PERCENTILE	55.7 MPH
10 MPH PACE	46 - 55 MPH
PERCENT IN PACE	75.0 %
POSTED SPEED LIMIT	45 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	0
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	4,250
LANE CONFIGURATION	1 LANE PER DIRECTION
TRAFFIC CONTROLS	STOP - MISSION LAKES / PIERSON
CROSSWALKS	AT MISSION LAKES
PEDESTRIAN/BICYCLES	NO / NO
TRUCK TRAFFIC	YES
ON-STREET PARKING	NOT RESTRICTED, NONE OBSERVED
OTHER	SINGLE DASHED CENTERLINE

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	1.00
VERTICAL CURVE	SEVERAL SLIGHT UP/DOWNHILL GRADES
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	LIMITED SIGHT DISTANCE (Areas of)
ROAD CONDITIONS	GOOD
SIDEWALKS/DRIVEWAYS	NO / NO (except small section in front of commercial center)
STREET LIGHTING	NO
DRIVEWAY DENSITY	FEW
OTHER	DIRT SHOULDERS NARROW ROADWAY

ADJACENT LAND USE	RESIDENTIAL / OPEN-UNDEVELOPED / BUSINESS (at Mission Lakes)
RECOMMENDED SPEED LIMIT	50 MPH
SPEED LIMIT CHANGE	INCREASE

JUSTIFICATION:

This section of Little Morongo Road is a two lane rural roadway. It has a 45 mph speed limit. Field observations include several up/downhill grades, a narrow roadway with dirt shoulders, residential non-fronting and commercial s/o Mission Lakes. The speed study results revealed an 85th percentile speed of 55.7 mph, and a 10 mph pace range of 46 to 55 mph. With the roadway grades and areas of limited sight distance, it is recommended that the existing 45 mph be increased to 50 mph (falls mid-range of 10 mph pace) rather than 55 mph that the speed data may suggest.

File: Little Morongo 2018-10

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

LITTLE MORONGO ROAD — MISSION LAKES BL TO PIERSON BL

DATE: 9/6/2018 — SURVEY BY: C. BUENDIA

TIME: 3:10 PM - 3:45 PM — CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)		
60		100.0%	
59		99.1%	
58		95.4%	
57		90.7%	
56		86.1%	
55		82.4%	}PACE - - -85PCT
54		73.1%	}PACE
53		66.7%	}PACE
52		57.4%	}PACE
51		50.9%	}PACE
50		42.6%	}PACE - - - -MEAN
49		28.7%	}PACE
48		23.1%	}PACE
47		19.4%	}PACE
46		13.9%	}PACE - - -15PCT
45		7.4%	
44		5.6%	
43		3.7%	
42		0.9%	
41		0.0%	
40		0.0%	
39		0.0%	
38		0.0%	
37		0.0%	
36		0.0%	
35		0.0%	
34		0.0%	
33		0.0%	
32		0.0%	
31		0.0%	
30		0.0%	
29		0.0%	
28		0.0%	
27		0.0%	
26		0.0%	
25		0.0%	
24		0.0%	
23		0.0%	
22		0.0%	
21		0.0%	
20		0.0%	
19		0.0%	
18		0.0%	
17		0.0%	
16		0.0%	
15		0.0%	

UPPER LIMIT 10 MPH PACE:	55	MPH
LOWER LIMIT 10 MPH PACE:	46	MPH
PERCENT OVER PACE:	17.6	%
PERCENT IN PACE:	75.0	%
PERCENT UNDER PACE:	7.4	%

85th PERCENTILE SPEED:	55.7	MPH
MEDIAN SPEED:	50.9	MPH
15th PERCENTILE SPEED:	46.2	MPH

Little Morongo 2018-10

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122 Tustin CA 92680
(714) 731-9455

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: LITTLE MORONGO ROAD
LOCATION: MISSION LAKES BL TO PIERSON BL

WEATHER: SUNNY
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 9-6-18
START TIME: 3:10 PM
END TIME: 3:45 PM

DIRECTION: SOUTHBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60	/	1
59	//	2
58	/	1
57	//	2
56	//	2
55	////	4
54	///	3
53	///////	8
52	////	5
51	////	4
50	//////	6
49	////	4
48	/	1
47	///	3
46	///	3
45	///	
44	//	
43	/	
42		
41		
40		
39		
38		
37		
36		
35		
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23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

DIRECTION: NORTHBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL
60			1
59	//	2	4
58	////	4	5
57	///	3	5
56	//	2	4
55	//////	6	10
54	////	4	7
53	//	2	10
52	//	2	7
51	/////	5	9
50	////////	9	15
49	//	2	6
48	///	3	4
47	///	3	6
46	////	4	7
45	//	2	5
44	//	2	2
43	///	3	3
42	/	1	1
41			
40			
39			
38			
37			
36			
35			
34			
33			
32			
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27			
26			
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24			
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15			

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

LITTLE MORONGO ROAD — **PIERSON BL TO TWO BUNCH PALMS TRAIL**

DATE: 9/6/2018 — SURVEY BY: C. BUENDIA

TIME: 2:20 PM - 2:50 PM — CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	SOUTH OF PIERSON
DATE OF SURVEY	9/6/2018
85th PERCENTILE	57.3 MPH
10 MPH PACE	49 - 58 MPH
PERCENT IN PACE	70.9 %
POSTED SPEED LIMIT	55 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	0
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	6,800
LANE CONFIGURATION	1 LANE PER DIRECTION
TRAFFIC CONTROLS	STOP - PIERSON / TWO BUNCH PALMS
CROSSWALKS	NONE
PEDESTRIAN/BICYCLES	NO / NO
TRUCK TRAFFIC	YES
ON-STREET PARKING	NO PARKING AT ANYTIME
OTHER	

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	1.02
VERTICAL CURVE	VERY SLIGHT UP/DOWNHILL GRADES
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	FAIR
SIDEWALKS/DRIVEWAYS	NO / FEW
STREET LIGHTING	NO
DRIVEWAY DENSITY	FEW
OTHER	DIRT SHOULDERS
	SOLID DBL YELLOW & SINGLE DASHED

ADJACENT LAND USE	RESIDENTIAL / COMMERCIAL / CHURCH / OPEN-UNDEVELOPED

RECOMMENDED SPEED LIMIT	55 MPH

SPEED LIMIT CHANGE	NO CHANGE

JUSTIFICATION:

The recommended 55 mph speed limit is within 2.3 mph of the 85th percentile speed and meets CVC standards.

File: Little Morongo 2018-11

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

LITTLE MORONGO ROAD — PIERSON BL TO TWO BUNCH PALMS TRAIL

DATE: 9/6/2018 — SURVEY BY: C. BUENDIA

TIME: 2:20 PM - 2:50 PM — CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)						
60						X	100.0%
59						X	96.2%
58					X		91.1% }PACE
57					X		82.9% }PACE ---85PCT
56				X			75.3% }PACE
55				X			67.7% }PACE
54			X				55.7% }PACE
53			X				47.5% }PACE ----MEAN
52			X				41.1% }PACE
51		X					36.1% }PACE
50		X					29.7% }PACE
49		X					22.8% }PACE
48	X						15.2%
47	X						12.0% ---15PCT
46	X						9.5%
45	X						7.0%
44	X						2.5%
43	X						1.3%
42	X						1.3%
41	X						0.0%
40	X						0.0%
39	X						0.0%
38	X						0.0%
37	X						0.0%
36	X						0.0%
35	X						0.0%
34	X						0.0%
33	X						0.0%
32	X						0.0%
31	X						0.0%
30	X						0.0%
29	X						0.0%
28	X						0.0%
27	X						0.0%
26	X						0.0%
25	X						0.0%
24	X						0.0%
23	X						0.0%
22	X						0.0%
21	X						0.0%
20	X						0.0%
19	X						0.0%
18	X						0.0%
17	X						0.0%
16	X						0.0%
15	X						0.0%

UPPER LIMIT 10 MPH PACE:	58	MPH
LOWER LIMIT 10 MPH PACE:	49	MPH
PERCENT OVER PACE:	8.9	%
PERCENT IN PACE:	70.9	%
PERCENT UNDER PACE:	0.0	%

85th PERCENTILE SPEED:	57.3	MPH
MEDIAN SPEED:	53.3	MPH
15th PERCENTILE SPEED:	47.9	MPH

Little Morongo 2018-11

$SPD-HCI.dwg

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122 Tustin CA 92680
(714) 731-9455

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: LITTLE MORONGO
LOCATION: PIERSON BL TO TWO BUNCH PALMS TRAIL

WEATHER: SUNNY
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 9-6-18
START TIME: 2:20 PM
END TIME: 2:50 PM VCL

DIRECTION: SOUTHBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		3
59		4
58		7
57		4
56		5
55		11
54		7
53		4
52		3
51		7
50		8
49		7
48		3
47		2
46		2
45		3
44		1
43		0
42		1
41		
40		
39		
38		
37		
36		
35		
34		
33		
32		
31		
30		
29		
28		
27		
26		
25		
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

DIRECTION: NORTHBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL	MPH
60		3	6	60
59		4	8	59
58		6	13	58
57		8	12	57
56		7	12	56
55		8	19	55
54		6	13	54
53		6	10	53
52		5	8	52
51		3	10	51
50		3	11	50
49		5	12	49
48		2	5	48
47		2	4	47
46		2	4	46
45		4	7	45
44		1	2	44
43		0	0	43
42		1	2	42
41				41
40				40
39				39
38				38
37				37
36				36
35				35
34				34
33				33
32				32
31				31
30				30
29				29
28				28
27				27
26				26
25				25
24				24
23				23
22				22
21				21
20				20
19				19
18				18
17				17
16				16
15				15

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

LITTLE MORONGO ROAD **TWO BUNCH PALMS TRAIL TO SOUTH CITY LIMITS**

DATE: 9/6/2018 SURVEY BY: C. BUENDIA

TIME: 1:45 PM - 25:20 PM CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	SOUTH OF TWO BUNCH PALMS
DATE OF SURVEY	9/6/2018
85th PERCENTILE	57.5 MPH
10 MPH PACE	51 - 60 MPH
PERCENT IN PACE	62.0 %
POSTED SPEED LIMIT	55 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	2
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	4,550
LANE CONFIGURATION	1 LANE PER DIRECTION
TRAFFIC CONTROLS	STOP - TWO BUNCH PALMS
CROSSWALKS	NONE
PEDESTRIAN/BICYCLES	NO / YES
TRUCK TRAFFIC	YES
ON-STREET PARKING	NO PARKING AT ANYTIME
OTHER	

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.62
VERTICAL CURVE	SLIGHT UP/DOWNHILL GRADES
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	FAIR
SIDEWALKS/DRIVEWAYS	NO / NO
STREET LIGHTING	NO
DRIVEWAY DENSITY	NONE
OTHER	DIRT SHOULDERS SOLID DBL YELLOW CENTERLINE

ADJACENT LAND USE	BUSINESS / OPEN

RECOMMENDED SPEED LIMIT	55 MPH

SPEED LIMIT CHANGE	NO CHANGE

JUSTIFICATION:

The recommended 55 mph speed limit is within 2.5 mph of the 85th percentile speed and meets CVC standards.

File: Little Morongo 2018-12

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

LITTLE MORONGO ROAD — TWO BUNCH PALMS TRAIL TO SOUTH CITY LIMITS

DATE: 9/6/2018 — SURVEY BY: C. BUENDIA

TIME: 1:45 PM - 25:20 PM — CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)						
60						100.0%	}PACE
59						92.6%	}PACE
58						87.1%	}PACE
57						82.8%	}PACE ---85PCT
56						76.7%	}PACE
55						68.1%	}PACE
54						59.5%	}PACE
53						52.1%	}PACE
52						44.8%	}PACE ----MEAN
51						39.9%	}PACE
50						36.8%	
49						32.5%	
48						25.8%	
47						20.9%	
46						14.7%	---15PCT
45						9.2%	
44						5.5%	
43						2.5%	
42						1.8%	
41						0.0%	
40						0.0%	
39						0.0%	
38						0.0%	
37						0.0%	
36						0.0%	
35						0.0%	
34						0.0%	
33						0.0%	
32						0.0%	
31						0.0%	
30						0.0%	
29						0.0%	
28						0.0%	
27						0.0%	
26						0.0%	
25						0.0%	
24						0.0%	
23						0.0%	
22						0.0%	
21						0.0%	
20						0.0%	
19						0.0%	
18						0.0%	
17						0.0%	
16						0.0%	
15						0.0%	

UPPER LIMIT 10 MPH PACE:	60	MPH
LOWER LIMIT 10 MPH PACE:	51	MPH
PERCENT OVER PACE:	0.0	%
PERCENT IN PACE:	62.0	%
PERCENT UNDER PACE:	0.0	%

85th PERCENTILE SPEED:	57.5	MPH
MEDIAN SPEED:	52.7	MPH
15th PERCENTILE SPEED:	46.0	MPH

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HARTZOG-AND-CRABILL-INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122 Tustin CA. 92680
(714) 731-9455

Radar Speed Survey Field Sheet

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: LITTLE MORONGO ROAD
LOCATION: TWO BUNCH PALM TRAIL TO SOUTH CITY LIMIT

WEATHER: SUNNY
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 9-6-18
START TIME: 1:45 PM
END TIME: 2:20 PM

DIRECTION: SOUTHBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		6
59		5
58		3
57		4
56		6
55		8
54		6
53		5
52		3
51		2
50		3
49		4
48		7
47		6
46		4
45		3
44		3
43		1
42		2
41		
40		
39		
38		
37		
36		
35		
34		
33		
32		
31		
30		
29		
28		
27		
26		
25		
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

DIRECTION: NORTHBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL	MPH
60		6	12	60
59		4	9	59
58		4	7	58
57		6	10	57
56		8	14	56
55		6	14	55
54		6	12	54
53		7	12	53
52		5	8	52
51		3	5	51
50		4	7	50
49		7	11	49
48		6	8	48
47		4	10	47
46		5	9	46
45		3	6	45
44		2	5	44
43		0	1	43
42		1	3	42
41				41
40				40
39				39
38				38
37				37
36				36
35				35
34				34
33				33
32				32
31				31
30				30
29				29
28				28
27				27
26				26
25				25
24				24
23				23
22				22
21				21
20				20
19				19
18				18
17				17
16				16
15				15

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

MIRACLE HILL ROAD — **PIERSON BL TO HACIENDA AVE**

DATE: 8/30/2018 — SURVEY BY: C. BUENDIA

TIME: 3:30 PM - 5:30 PM — CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	**NORTH OF HACIENDA**
DATE OF SURVEY	8/30/2018
85th PERCENTILE	33.5 MPH
10 MPH PACE	27 - 36 MPH
PERCENT IN PACE	77.9 %
POSTED SPEED LIMIT	30 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	0
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	1,000
LANE CONFIGURATION	1 LANE PER DIRECTION
TRAFFIC CONTROLS	STOP - DESERT VIEW / HACIENDA
CROSSWALKS	NONE
PEDESTRIAN/BICYCLES	NO / NO
TRUCK TRAFFIC	NO
ON-STREET PARKING	FEW
OTHER	SCHOOL BUSES IN AREA

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.49
VERTICAL CURVE	SLIGHT UPHILL (NB) TO DESERT HILL
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	GOOD
SIDEWALKS/DRIVEWAYS	NO / YES (CURB ONLY)
STREET LIGHTING	NO
DRIVEWAY DENSITY	MEDIUM
OTHER	SOLID DBL YELLOW CENTERLINE NARROW ROADWAY

ADJACENT LAND USE	RESIDENTIAL (FACING) / OPEN-UNDEVELOPED
RECOMMENDED SPEED LIMIT	25 MPH
SPEED LIMIT CHANGE	ESTABLISH AS RESIDENT DISTRICT - CVC 515

JUSTIFICATION:

Miracle Hill Road is a two lane residential roadway. Field observations include single family residential with heavy direct driveways, areas of undeveloped land, and the roadway has a slight upgrade northbound. The need to retain the CVC defined lower speed is based on the fact that 17 single-family dwellings with direct driveways exist within a 0.25 mile section between Desert View Avenue and Hacienda Avenue. This segment meets the requirement for the CVC 515 "Resident District". Therefore with these factors, it is recommended that the City establish this segment of Miracle Hill Road a "Resident District". This segment does not require continued speed surveys.

File: Miracle Hill 2018-13

RADAR SPEED DISTRIBUTION SHEET

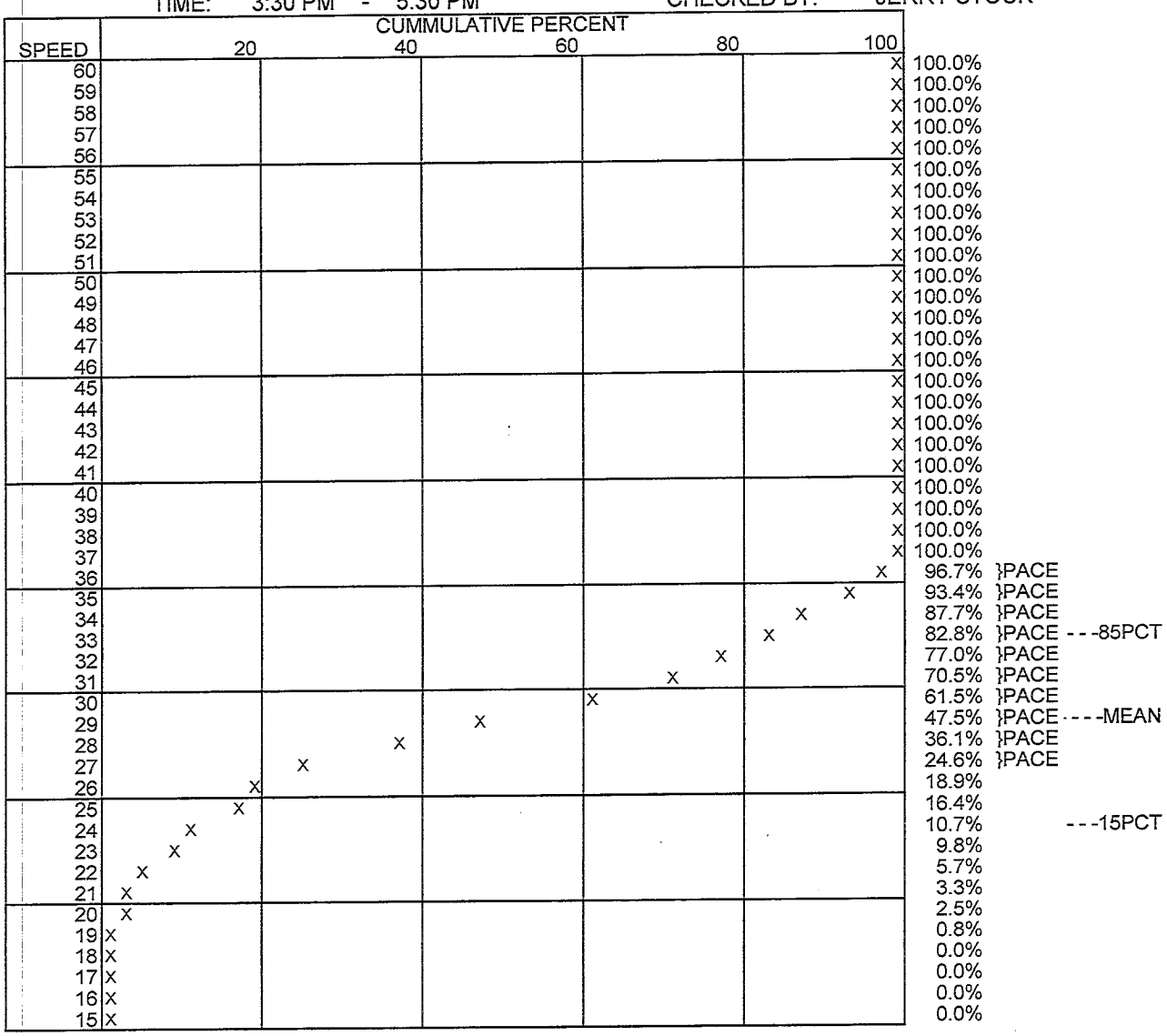
HCI

CITY OF DESERT HOT SPRINGS

MIRACLE HILL ROAD — PIERSON BL TO HACIENDA AVE

DATE: 8/30/2018 — SURVEY BY: C. BUENDIA

TIME: 3:30 PM - 5:30 PM — CHECKED BY: JERRY STOCK



UPPER LIMIT 10 MPH PACE:	36	MPH
LOWER LIMIT 10 MPH PACE:	27	MPH
PERCENT OVER PACE:	3.3	%
PERCENT IN PACE:	77.9	%
PERCENT UNDER PACE:	18.9	%

85th PERCENTILE SPEED:	33.5	MPH
MEDIAN SPEED:	29.2	MPH
15th PERCENTILE SPEED:	24.8	MPH

Miracle Hill 2018-13

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

MIRACLE HILL ROAD — PIERSON BL TO HACIENDA AVE

DATE: 8/30/2018 — SURVEY BY: C. BUENDIA

TIME: 3:30 PM - 5:30 PM — CHECKED BY: JERRY STOCK

SPEED	NUMBER OF VEHICLES (5 / 10 / 15 / 20 / 25)	VEH.	PCT.	CUM. PCT.
60				100.0%
				100.0%
				100.0%
				100.0%
				100.0%
55				100.0%
				100.0%
				100.0%
				100.0%
				100.0%
50				100.0%
				100.0%
				100.0%
				100.0%
				100.0%
45				100.0%
				100.0%
				100.0%
				100.0%
				100.0%
40				100.0%
				100.0%
				100.0%
	X X X X	4	3.3%	100.0%
	X X X X	4	3.3%	96.7%
35	X X X X X X X	7	5.7%	93.4%
	X X X X X X	6	4.9%	87.7%
	X X X X X X X	7	5.7%	82.8%
	X X X X X X X X	8	6.6%	77.0%
	X X X X X X X X X X X	11	9.0%	70.5%
30	X X X X X X X X X X X X X X X X X	17	13.9%	61.5%
	X X X X X X X X X X X X X X	14	11.5%	47.5%
	X X X X X X X X X X X X X X	14	11.5%	36.1%
	X X X X X X X	7	5.7%	24.6%
	X X X	3	2.5%	18.9%
25	X X X X X X X	7	5.7%	16.4%
	X	1	0.8%	10.7%
	X X X X X	5	4.1%	9.8%
	X X X	3	2.5%	5.7%
	X	1	0.8%	3.3%
20	X X	2	1.6%	2.5%
	X	1	0.8%	0.8%
				0.0%
				0.0%
				0.0%
15				0.0%
	TOTAL VEHICLES	122		

UPPER LIMIT 10 MPH PACE:	36	MPH
LOWER LIMIT 10 MPH PACE:	27	MPH
PERCENT OVER PACE:	3.3	%
PERCENT IN PACE:	77.9	%
PERCENT UNDER PACE:	18.9	%

85th PERCENTILE SPEED:	33.5	MPH
MEDIAN SPEED:	29.2	MPH
15th PERCENTILE SPEED:	24.8	MPH

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

MISSION LAKES BOULEVARD — **INDIAN CANYON DR TO LITTLE MORONGO RD**

DATE: 9/7/2018
TIME: 9:00 AM - 9:30 AM

SURVEY BY: C. BUENDIA
CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	**EAST OF INDIAN CANYON**
DATE OF SURVEY	9/7/2018
85th PERCENTILE	51.9 MPH
10 MPH PACE	44 - 53 MPH
PERCENT IN PACE	79.5 %
POSTED SPEED LIMIT	50 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	0
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	4,400
LANE CONFIGURATION	1 LANE PER DIRECTION
TRAFFIC CONTROLS	SIGNAL - INDIAN CYN / STOP - LIL MORONGO
CROSSWALKS	AT INDIAN CYN
PEDESTRIAN/BICYCLES	NO / NO
TRUCK TRAFFIC	NO
ON-STREET PARKING	NOT RESTRICTED, NONE OBSERVED
OTHER	BIKE LANES

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	1.00
VERTICAL CURVE	SEVERAL GRADUAL UP/DOWNHILL GRADES
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	LIMITED SIGHT DISTANCE
ROAD CONDITIONS	POOR
SIDEWALKS/DRIVEWAYS	NO / FEW
STREET LIGHTING	YES
DRIVEWAY DENSITY	FEW (near Little Morongo)
OTHER	SINGLE DASHED - SOLID DBL YELLOW CENTERLINE - 2 WAY LEFT DIRT SHOULDERS

ADJACENT LAND USE	RESIDENTIAL / BUSINESS / OPEN
RECOMMENDED SPEED LIMIT	50 MPH
SPEED LIMIT CHANGE	NO CHANGE

JUSTIFICATION:

The recommended 50 mph speed limit is within 1.9 mph of the 85th percentile speed and meets CVC standards.

File: Mission Lakes 2018-15

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

MISSION LAKES BOULEVARD — INDIAN CANYON DR TO LITTLE MORONGO RD

DATE: 9/7/2018 — SURVEY BY: C. BUENDIA

TIME: 9:00 AM - 9:30 AM — CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)		
60			100.0%
59			100.0%
58			99.2%
57			98.4%
56			98.4%
55			96.1%
54			93.7%
53			91.3% }PACE
52			85.8% }PACE
51			79.5% }PACE ---85PCT
50			72.4% }PACE
49			63.0% }PACE
48			50.4% }PACE
47			39.4% }PACE ----MEAN
46			29.9% }PACE
45			22.0% }PACE
44			15.7% }PACE
43			11.8% ---15PCT
42			8.7%
41			7.9%
40			5.5%
39			2.4%
38			2.4%
37			0.8%
36			0.0%
35			0.0%
34			0.0%
33			0.0%
32			0.0%
31			0.0%
30			0.0%
29			0.0%
28			0.0%
27			0.0%
26			0.0%
25			0.0%
24			0.0%
23			0.0%
22			0.0%
21			0.0%
20			0.0%
19			0.0%
18			0.0%
17			0.0%
16			0.0%
15			0.0%

UPPER LIMIT 10 MPH PACE:	53	MPH
LOWER LIMIT 10 MPH PACE:	44	MPH
PERCENT OVER PACE:	8.7	%
PERCENT IN PACE:	79.5	%
PERCENT UNDER PACE:	11.8	%

85th PERCENTILE SPEED:	51.9	MPH
MEDIAN SPEED:	48.0	MPH
15th PERCENTILE SPEED:	43.8	MPH

Mission Lakes 2018-15

$SPD-HCI.dwg

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122 Tustin CA. 92680
(714) 731-9455

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: MISSION LAKES BOULEVARD
LOCATION: INDIAN CANYON DR TO LITTLE MORONGO RD

WEATHER: SUNNY
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 9-7-18
START TIME: 9:00 AM
END TIME: 9:30 AM

DIRECTION: WESTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		
59		
58		
57		
56	/	1
55	//	2
54	//	2
53	////	4
52	///	3
51	////	4
50	//////	6
49	//////	8
48	//////	6
47	//////	7
46	////	5
45	////	4
44	///	3
43	///	3
42	/	1
41	//	2
40	//	2
39		0
38	//	2
37	/	1
36		
35		
34		
33		
32		
31		
30		
29		
28		
27		
26		
25		
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

DIRECTION: EASTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL	MPH
60				60
59	/	1	1	59
58	/	1	1	58
57		0	0	57
56	//	2	3	56
55	/	1	3	55
54	/	1	3	54
53	///	3	7	53
52	////	5	8	52
51	////	5	9	51
50	/////	6	12	50
49	//////	8	16	49
48	//////	8	14	48
47	////	5	12	47
46	////	5	10	46
45	////	4	8	45
44	//	2	5	44
43	/	1	4	43
42		0	1	42
41	/	1	3	41
40	//	2	4	40
39			0	39
38			2	38
37			1	37
36				36
35				35
34				34
33				33
32				32
31				31
30				30
29				29
28				28
27				27
26				26
25				25
24				24
23				23
22				22
21				21
20				20
19				19
18				18
17				17
16				16
15				15

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

MISSION LAKES BOULEVARD **LITTLE MORONGO RD TO WEST DR**

DATE: 9/7/2018 SURVEY BY: C. BUENDIA

TIME: 9:40 AM - 10:10 AM CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	**WEST OF WEST DR**
DATE OF SURVEY	9/7/2018
85th PERCENTILE	49.9 MPH
10 MPH PACE	41 - 50 MPH
PERCENT IN PACE	79.5 %
POSTED SPEED LIMIT	45 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	1
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	4,400
LANE CONFIGURATION	1 LANE (2 LANES WB - LITTLE MORONGO TO ROLLING HILLS)
TRAFFIC CONTROLS	STOP - WEST / LI'L MORONGO
CROSSWALKS	AT WEST / LI'L MORONGO
PEDESTRIAN/BICYCLES	YES / YES
TRUCK TRAFFIC	NO
ON-STREET PARKING	YES
OTHER	

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.99
VERTICAL CURVE	SEVERAL GRADUAL UP/DOWNHILL GRADES
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	FAIR
SIDEWALKS/DRIVEWAYS	PARTIAL / FEW
STREET LIGHTING	YES
DRIVEWAY DENSITY	LIGHT
OTHER	VERY WIDE ROADWAY
	SOLID DBL YELLOW CENTERLINE

ADJACENT LAND USE	RESIDENTIAL / OPEN

RECOMMENDED SPEED LIMIT	45 MPH

SPEED LIMIT CHANGE	NO CHANGE

JUSTIFICATION:

The recommended 45 mph speed limit is within 4.9 mph of the 85th percentile speed and meets CVC standards.

File: Mission Lakes 2018-16

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

MISSION LAKES BOULEVARD — LITTLE MORONGO RD TO WEST DR

DATE: 9/7/2018 — SURVEY BY: C. BUENDIA

TIME: 9:40 AM - 10:10 AM — CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)						
60						X	100.0%
59						X	100.0%
58						X	100.0%
57						X	100.0%
56						X	100.0%
55						X	98.5%
54						X	95.5%
53						X	94.7%
52					X		91.7%
51					X		90.2%
50					X		85.6% }PACE
49					X		80.3% }PACE - - -85PCT
48				X			75.0% }PACE
47				X			65.2% }PACE
46				X			57.6% }PACE
45			X				50.0% }PACE - - - -MEAN
44			X				37.9% }PACE
43		X					28.0% }PACE
42	X						18.9% }PACE
41	X						12.1% }PACE - - -15PCT
40	X						6.1%
39	X						3.8%
38	X						2.3%
37	X						0.0%
36	X						0.0%
35	X						0.0%
34	X						0.0%
33	X						0.0%
32	X						0.0%
31	X						0.0%
30	X						0.0%
29	X						0.0%
28	X						0.0%
27	X						0.0%
26	X						0.0%
25	X						0.0%
24	X						0.0%
23	X						0.0%
22	X						0.0%
21	X						0.0%
20	X						0.0%
19	X						0.0%
18	X						0.0%
17	X						0.0%
16	X						0.0%
15	X						0.0%

UPPER LIMIT 10 MPH PACE:	50	MPH			
LOWER LIMIT 10 MPH PACE:	41	MPH	85th PERCENTILE SPEED:	49.9	MPH
PERCENT OVER PACE:	14.4	%	MEDIAN SPEED:	45.0	MPH
PERCENT IN PACE:	79.5	%	15th PERCENTILE SPEED:	41.4	MPH
PERCENT UNDER PACE:	6.1	%			

$SPD-HCI.dwg

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122 Tustin CA. 92680
(714) 731-9455

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: MISSION LAKES BOULEVARD
LOCATION: LITTLE MORONGO RD TO WEST DR

WEATHER: SUNNY
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 9-7-16
START TIME: 9:40 AM
END TIME: 10:10 AM VAL

DIRECTION: WESTBOUND

MPH	5	10	15	20	25	30	TOTAL
60							
59							
58							
57							
56							
55							
54							
53	/						1
52	//						2
51	///						3
50	/						1
49	////						5
48	////	/					6
47	////	//					6
46	////	/					5
45	////	///					8
44	////	///	/				10
43	////	//					7
42	////						3
41	////						4
40	/						
39	/						1
38	//						2
37							
36							
35							
34							
33							
32							
31							
30							
29							
28							
27							
26							
25							
24							
23							
22							
21							
20							
19							
18							
17							
16							
15							

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

DIRECTION: EASTBOUND

MPH	5	10	15	20	25	30	TOTAL	CUMULATIVE TOTAL	MPH
60									60
59									59
58									58
57									57
56	//						2	2	56
55	////						4	4	55
54	/						1	1	54
53	///						3	4	53
52							0	2	52
51	///						3	6	51
50	/////						6	7	50
49	///						3	7	49
48	//////						7	13	48
47	///						3	10	47
46	////						5	10	46
45	//////						8	16	45
44	///						3	13	44
43	////						5	12	43
42	/////						6	9	42
41	////						4	8	41
40	//						2	3	40
39	/						1	2	39
38	/						1	3	38
37									37
36									36
35									35
34									34
33									33
32									32
31									31
30									30
29									29
28									28
27									27
26									26
25									25
24									24
23									23
22									22
21									21
20									20
19									19
18									18
17									17
16									16
15									15

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

MOUNTAIN VIEW ROAD — **HACIENDA AVE TO SOUTH CITY LIMITS**

DATE: 8/31/2018 — SURVEY BY: C. BUENDIA

TIME: 2:45 PM - 3:30 PM — CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	**SOUTH OF HACIENDA**
DATE OF SURVEY	8/31/2018
85th PERCENTILE	38.9 MPH
10 MPH PACE	32 - 41 MPH
PERCENT IN PACE	85.8 %
POSTED SPEED LIMIT	35 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	0
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	-
AVERAGE DAILY TRAFFIC	6,750
LANE CONFIGURATION	1 LANE PER DIRECTION
TRAFFIC CONTROLS	SIGNAL - HACIENDA
CROSSWALKS	AT HACIENDA
PEDESTRIAN/BICYCLES	NO / NO
TRUCK TRAFFIC	NO
ON-STREET PARKING	NO PARKING ANYTIME (SB)
OTHER	

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.50
VERTICAL CURVE	SLIGHT UP/DOWNHILL GRADES
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	FAIR
SIDEWALKS/DRIVEWAYS	NO / YES (NB) - PARTIAL / YES (SB)
STREET LIGHTING	YES
DRIVEWAY DENSITY	HEAVY
OTHER	SOLID DBL YELLOW CENTERLINE

ADJACENT LAND USE	RESIDENTIAL (facing) / LODGE-MOTEL
RECOMMENDED SPEED LIMIT	35 MPH
SPEED LIMIT CHANGE	NO CHANGE

JUSTIFICATION:

The recommended 35 mph speed limit is within 3.9 mph of the 85th percentile speed and meets CVC standards.

File: Mtn View 2018-18

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

MOUNTAIN VIEW ROAD — HACIENDA AVE TO SOUTH CITY LIMITS

DATE: 8/31/2018 — SURVEY BY: C. BUENDIA

TIME: 2:45 PM - 3:30 PM — CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)		
60		100.0%	
59		100.0%	
58		100.0%	
57		100.0%	
56		100.0%	
55		100.0%	
54		100.0%	
53		100.0%	
52		100.0%	
51		100.0%	
50		100.0%	
49		100.0%	
48		100.0%	
47		100.0%	
46		100.0%	
45		100.0%	
44		100.0%	
43		99.3%	
42		98.5%	
41		94.8%	}PACE
40		90.3%	}PACE
39		85.8%	}PACE
38		79.9%	}PACE - - -85PCT
37		70.1%	}PACE
36		56.7%	}PACE
35		47.8%	}PACE - - - -MEAN
34		32.1%	}PACE
33		23.1%	}PACE
32		15.7%	}PACE
31		9.0%	- - -15PCT
30		6.7%	
29		5.2%	
28		3.7%	
27		2.2%	
26		0.7%	
25		0.7%	
24		0.0%	
23		0.0%	
22		0.0%	
21		0.0%	
20		0.0%	
19		0.0%	
18		0.0%	
17		0.0%	
16		0.0%	
15		0.0%	

UPPER LIMIT 10 MPH PACE:	41	MPH
LOWER LIMIT 10 MPH PACE:	32	MPH
PERCENT OVER PACE:	5.2	%
PERCENT IN PACE:	85.8	%
PERCENT UNDER PACE:	9.0	%

85th PERCENTILE SPEED:	38.9	MPH
MEDIAN SPEED:	35.3	MPH
15th PERCENTILE SPEED:	31.9	MPH

Mtn View 2018-18

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HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 132 Tustin CA 92680
(714) 731-9455

Radar Speed Survey Field Sheet

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: MOUNTAIN VIEW ROAD
LOCATION: HACIENDA AVE TO SOUTH CITY LIMITS

WEATHER: SUNNY
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 8-31-18
START TIME: 2:45 PM
END TIME: 3:30 PM VIAL

DIRECTION: NORTHBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		
59		
58		
57		
56		
55		
54		
53		
52		
51		
50		
49		
48		
47		
46		
45		
44	/	1
43	/	1
42	///	3
41	///	5
40	///	3
39	///	6
38	///	4
37	///	7
36	///	6
35	///	10
34	///	6
33	///	6
32	///	3
31	//	2
30		0
29	/	1
28	//	2
27	/	1
26		0
25	/	1
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

DIRECTION: SOUTHBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL	MPH
60				60
59				59
58				58
57				57
56				56
55				55
54				54
53				53
52				52
51				51
50				50
49				49
48				48
47				47
46				46
45				45
44			1	44
43			1	43
42	//	2	5	42
41	/	1	6	41
40	///	3	6	40
39	//	2	8	39
38	////////	9	3	38
37	//////////	11	8	37
36	////////	8	12	36
35	//////////	11	21	35
34	//////	8	12	34
33	////	4	10	33
32	////	6	9	32
31	/	1	3	31
30	//	2	2	30
29	/	1	2	29
28		0	2	28
27	/	1	2	27
26			0	26
25			1	25
24				24
23				23
22				22
21				21
20				20
19				19
18				18
17				17
16				16
15				15

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

PALM DRIVE — **MISSION LAKES BL TO 8TH ST**

DATE: 9/6/2018 — SURVEY BY: C. BUENDIA

TIME: 10:00 AM - 10:30 AM — CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	**NORTH OF 8TH**
DATE OF SURVEY	9/6/2018
85th PERCENTILE	38.4 MPH
10 MPH PACE	31 - 40 MPH
PERCENT IN PACE	89.0 %
POSTED SPEED LIMIT	35 MPH 15 MPH AT DIP

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	3
TOTAL ACCIDENTS	4
ANNUAL ACCIDENT RATE	1.50 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.70 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	11,500
LANE CONFIGURATION	2 LANES PER DIRECTION
TRAFFIC CONTROLS	STOP - 8TH / MISSION LAKES
CROSSWALKS	AT 8TH / MISSION LAKES
PEDESTRIAN/BICYCLES	FEW / FEW
TRUCK TRAFFIC	FEW
ON-STREET PARKING	AREAS OF NO PARKING ANYTIME
OTHER	BUS STOPS BIKE LANES

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.51
VERTICAL CURVE	SLIGHT UP/DOWNHILL GRADES
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	POOR
SIDEWALKS/DRIVEWAYS	PARTIAL / YES
STREET LIGHTING	YES
DRIVEWAY DENSITY	LIGHT
OTHER	2 WAY LEFT TURN LANE

ADJACENT LAND USE	RESIDENTIAL / DESERT HOT SPRINGS SPA HOTEL / VETERANS MEMORIAL PARK
RECOMMENDED SPEED LIMIT	35 MPH
SPEED LIMIT CHANGE	NO CHANGE

JUSTIFICATION:

The recommended 35 mph speed limit is within 3.4 mph of the 85th percentile speed and meets CVC standards.

File: Palm 2018-19

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

PALM DRIVE — MISSION LAKES BL TO 8TH ST

DATE: 9/6/2018 — SURVEY BY: C. BUENDIA

TIME: 10:00 AM - 10:30 AM — CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)		
60	X	100.0%	
59	X	100.0%	
58	X	100.0%	
57	X	100.0%	
56	X	100.0%	
55	X	100.0%	
54	X	100.0%	
53	X	100.0%	
52	X	100.0%	
51	X	100.0%	
50	X	100.0%	
49	X	100.0%	
48	X	100.0%	
47	X	100.0%	
46	X	100.0%	
45	X	100.0%	
44	X	100.0%	
43	X	100.0%	
42	X	98.7%	
41	X	98.1%	
40	X	95.5%	}PACE
39	X	91.6%	}PACE
38	X	81.3%	}PACE - - -85PCT
37	X	70.3%	}PACE
36	X	60.0%	}PACE
35	X	46.5%	}PACE - - - -MEAN
34	X	34.2%	}PACE
33	X	23.2%	}PACE
32	X	15.5%	}PACE
31	X	11.0%	}PACE - - -15PCT
30	X	6.5%	
29	X	2.6%	
28	X	1.3%	
27	X	0.0%	
26	X	0.0%	
25	X	0.0%	
24	X	0.0%	
23	X	0.0%	
22	X	0.0%	
21	X	0.0%	
20	X	0.0%	
19	X	0.0%	
18	X	0.0%	
17	X	0.0%	
16	X	0.0%	
15	X	0.0%	

UPPER LIMIT 10 MPH PACE:	40	MPH
LOWER LIMIT 10 MPH PACE:	31	MPH
PERCENT OVER PACE:	8.4	%
PERCENT IN PACE:	89.0	%
PERCENT UNDER PACE:	6.5	%

85th PERCENTILE SPEED:	38.4	MPH
MEDIAN SPEED:	35.3	MPH
15th PERCENTILE SPEED:	31.9	MPH

$SPD-HCI.dwg

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122 Tustin CA. 92680
(714) 731-9455

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: PALM DRIVES
LOCATION: MISSION LAKES BL TO 8TH ST

WEATHER: SUNNY
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 9-6-18
START TIME: 10:00 AM
END TIME: 10:30 AM VGL

DIRECTION: SOUTHBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		
59		
58		
57		
56		
55		
54		
53		
52		
51		
50		
49		
48		
47		
46		
45		
44		
43	//	2
42	/	1
41	/	1
40	///	3
39	///////	11
38	///////	10
37	///////	9
36	///////	11
35	///////	10
34	///////	10
33	///////	6
32	//	2
31	/	1
30	/	1
29		
28		
27		
26		
25		
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

DIRECTION: NORTHBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL	MPH
60				60
59				59
58				58
57				57
56				56
55				55
54				54
53				53
52				52
51				51
50				50
49				49
48				48
47				47
46				46
45				45
44				44
43			2	43
42			1	42
41	///	3	4	41
40	///	3	16	40
39	/////	5	16	39
38	//////	7	17	38
37	//////	7	16	37
36	//////////	10	21	36
35	//////////	9	19	35
34	//////	7	17	34
33	//////	6	12	33
32	/////	5	7	32
31	//////	6	7	31
30	/////	5	6	30
29	//	2	2	29
28	//	2	2	28
27				27
26				26
25				25
24				24
23				23
22				22
21				21
20				20
19				19
18				18
17				17
16				16
15				15

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

PALM DRIVE — **8TH STREET TO PIERSON BOULVARD**

DATE: 9/6/2018 — SURVEY BY: C. BUENDIA

TIME: 9:35 AM - 10:00 AM — CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	**NORTH OF PIERSON**
DATE OF SURVEY	9/6/2018
85th PERCENTILE	38.6 MPH
10 MPH PACE	31 - 40 MPH
PERCENT IN PACE	92.3 %
POSTED SPEED LIMIT	35 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	2
TOTAL ACCIDENTS	8
ANNUAL ACCIDENT RATE	1.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.47 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	11,550
LANE CONFIGURATION	2 LANES PER DIRECTION
TRAFFIC CONTROLS	SIGNAL - PIERSON / STOP - 8TH
CROSSWALKS	AT PIERSON / 8TH
PEDESTRIAN/BICYCLES	FEW / FEW
TRUCK TRAFFIC	FEW
ON-STREET PARKING	YES
OTHER	BUS STOPS / BIKE ROUTE

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.50
VERTICAL CURVE	SLIGHT DOWNHILL GRADE (SB)
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	POOR
SIDEWALKS/DRIVEWAYS	PARTIAL / FEW
STREET LIGHTING	YES
DRIVEWAY DENSITY	LIGHT
OTHER	RASIDED MEDIAN ISLAND (at Pierson) / TWO WAY LEFT LANE

ADJACENT LAND USE	COMMERCIAL / BUSINESS / MOTEL / CHURCH / RESIDENTIAL
RECOMMENDED SPEED LIMIT	35 MPH
SPEED LIMIT CHANGE	NO CHANGE

JUSTIFICATION:

The recommended 35 mph speed limit is within 3.6 mph of the 85th percentile speed and meets CVC standards.

File: Palm 2018-20

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

PALM DRIVE — 8TH STREET TO PIERSON BOULVARD

DATE: 9/6/2018 — SURVEY BY: C. BUENDIA

TIME: 9:35 AM - 10:00 AM — CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)		
60	X	100.0%	
59	X	100.0%	
58	X	100.0%	
57	X	100.0%	
56	X	100.0%	
55	X	100.0%	
54	X	100.0%	
53	X	100.0%	
52	X	100.0%	
51	X	100.0%	
50	X	100.0%	
49	X	100.0%	
48	X	100.0%	
47	X	100.0%	
46	X	100.0%	
45	X	99.3%	
44	X	98.6%	
43	X	98.6%	
42	X	96.5%	
41	X	95.1%	
40	X	93.0%	}PACE
39	X	88.1%	}PACE
38	X	79.7%	}PACE - - -85PCT
37	X	72.7%	}PACE
36	X	57.3%	}PACE
35	X	38.5%	}PACE - - - -MEAN
34	X	23.1%	}PACE
33	X	12.6%	}PACE - - -15PCT
32	X	7.7%	}PACE
31	X	3.5%	}PACE
30	X	0.7%	
29	X	0.0%	
28	X	0.0%	
27	X	0.0%	
26	X	0.0%	
25	X	0.0%	
24	X	0.0%	
23	X	0.0%	
22	X	0.0%	
21	X	0.0%	
20	X	0.0%	
19	X	0.0%	
18	X	0.0%	
17	X	0.0%	
16	X	0.0%	
15	X	0.0%	

UPPER LIMIT 10 MPH PACE:	40	MPH
LOWER LIMIT 10 MPH PACE:	31	MPH
PERCENT OVER PACE:	7.0	%
PERCENT IN PACE:	92.3	%
PERCENT UNDER PACE:	0.7	%

85th PERCENTILE SPEED:	38.6	MPH
MEDIAN SPEED:	35.6	MPH
15th PERCENTILE SPEED:	33.2	MPH

Palm 2018-20

$SPD-HCI.dwg

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122 Tustin CA 92680
(714) 731-9455

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: PALM DRIVE
LOCATION: 8TH ST TO PIERSON BL

WEATHER: SUNNY
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 9-6-18
START TIME: 9:35 AM
END TIME: 10:00 AM VAL

DIRECTION: SOUTHBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		
59		
58		
57		
56		
55		
54		
53		
52		
51		
50		
49		
48		
47		
46		
45		
44		
43	/	1
42	/	1
41	//	2
40	///	3
39	////	4
38	////	5
37	////////	10
36	////////////	12
35	////////////	13
34	////////	8
33	///	3
32	///	3
31	//	2
30		
29		
28		
27		
26		
25		
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

DIRECTION: NORTHBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL	MPH
60				60
59				59
58				58
57				57
56				56
55				55
54				54
53				53
52				52
51				51
50				50
49				49
48				48
47				47
46	/	1	1	46
45	/	1	1	45
44		0	0	44
43	//	2	3	43
42	/	1	3	42
41	/	1	3	41
40	////	4	7	40
39	//////	6	12	39
38	//////	5	10	38
37	//////////	12	22	37
36	//////////	11	27	36
35	//////////	9	22	35
34	//////////	7	15	34
33	////////	4	7	33
32	///	3	6	32
31	//	2	4	31
30	/	1	1	30
29				29
28				28
27				27
26				26
25				25
24				24
23				23
22				22
21				21
20				20
19				19
18				18
17				17
16				16
15				15

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

PALM DRIVE — **PIERSON BOULVARD TO HACIENDA AVE**

DATE: 9/6/2018 — SURVEY BY: C. BUENDIA

TIME: 9:00 AM - 9:30 AM — CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	NORTH OF ESTRELLA
DATE OF SURVEY	9/6/2018
85th PERCENTILE	39.9 MPH
10 MPH PACE	32 - 41 MPH
PERCENT IN PACE	88.5 %
POSTED SPEED LIMIT	35 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	6
TOTAL ACCIDENTS	17
ANNUAL ACCIDENT RATE	3.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.77 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	20,850
LANE CONFIGURATION	2 LANES PER DIRECTION
TRAFFIC CONTROLS	SIGNAL - PIERSON / HACIENDA
CROSSWALKS	AT PIERSON / HACIENDA
PEDESTRIAN/BICYCLES	YES / FEW
TRUCK TRAFFIC	FEW
ON-STREET PARKING	YES
OTHER	BUS STOPS / BIKE ROUTE PARRALLEL PARKING BOLS (s/o Pierson)

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.51
VERTICAL CURVE	SLIGHT UPHILL NORTHBOUND
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	POOR
SIDEWALKS/DRIVEWAYS	YES/ YES
STREET LIGHTING	YES
DRIVEWAY DENSITY	FEW
OTHER	RAISED MEDIAN ISLAND (at Hacienda & Pierson) / 2 WAY LEFT TURN LANE "SAFETY CORRIDOR" SIGNS

ADJACENT LAND USE	COMMERCIAL

RECOMMENDED SPEED LIMIT	35 MPH

SPEED LIMIT CHANGE	NO CHANGE

JUSTIFICATION:

The recommended 35 mph speed limit it within 4.9 mph of the 85th percentile speed and meets CVC standards.

File: Palm 2018-21

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

PALM DRIVE — PIERSON BOULVARD TO HACIENDA AVE

DATE: 9/6/2018 — SURVEY BY: C. BUENDIA

TIME: 9:00 AM - 9:30 AM — CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)		
60			100.0%
59			100.0%
58			100.0%
57			100.0%
56			100.0%
55			100.0%
54			100.0%
53			100.0%
52			100.0%
51			100.0%
50			100.0%
49			100.0%
48			100.0%
47			100.0%
46			99.4%
45			98.2%
44			98.2%
43			96.4%
42			94.5%
41			91.5% }PACE
40			86.1% }PACE
39			75.2% }PACE - - -85PCT
38			66.1% }PACE
37			55.2% }PACE
36			44.2% }PACE - - - -MEAN
35			32.7% }PACE
34			23.0% }PACE
33			13.3% }PACE - - -15PCT
32			7.3% }PACE
31			3.0%
30			2.4%
29			0.6%
28			0.0%
27			0.0%
26			0.0%
25			0.0%
24			0.0%
23			0.0%
22			0.0%
21			0.0%
20			0.0%
19			0.0%
18			0.0%
17			0.0%
16			0.0%
15			0.0%

UPPER LIMIT 10 MPH PACE:	41	MPH
LOWER LIMIT 10 MPH PACE:	32	MPH
PERCENT OVER PACE:	8.5	%
PERCENT IN PACE:	88.5	%
PERCENT UNDER PACE:	3.0	%

85th PERCENTILE SPEED:	39.9	MPH
MEDIAN SPEED:	36.5	MPH
15th PERCENTILE SPEED:	33.2	MPH

Palm 2018-21

$SPD-HCI.dwg

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122 Tustin CA. 92680
(714) 731-9453

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: PALM DRIVE
LOCATION: PIERSON BL TO HACIENDA

WEATHER: SUNNY
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 9-06-18
START TIME: 9:00 AM
END TIME: 9:30 AM VAL

DIRECTION: SOUTHBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		
59		
58		
57		
56		
55		
54		
53		
52		
51		
50		
49		
48		
47		
46	/	1
45		0
44	/	1
43	/ /	2
42		0
41	/ / /	3
40	/ / / / / / / /	8
39	/ / / / / / /	7
38	/ / / / / / / / / / / /	12
37	/ / / / / / / / / / /	11
36	/ / / / / / / / / / / /	12
35	/ / / / / / / / / /	10
34	/ / / / / / / / / / /	11
33	/ / / / / / /	7
32	/ / / / / /	6
31	/	1
30	/ / /	3
29	/	1
28		
27		
26		
25		
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

DIRECTION: NORTHBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL	MPH
60				60
59				59
58				58
57				57
56				56
55				55
54				54
53				53
52				52
51				51
50				50
49				49
48				48
47	/	1	1	47
46	/	1	2	46
45		0	0	45
44	/ /	2	3	44
43	/	3	5	43
42	/ / / / /	5	5	42
41	/ / / / / /	6	9	41
40	/ / / / / / / /	9	18	40
39	/ / / / / / / /	8	15	39
38	/ / / / / /	6	18	38
37	/ / / / / /	7	18	37
36	/ / / / / /	7	19	36
35	/ / / / / /	6	16	35
34	/ / / / /	5	16	34
33	/ / /	3	10	33
32	/	1	7	32
31			1	31
30			3	30
29			1	29
28				28
27				27
26				26
25				25
24				24
23				23
22				22
21				21
20				20
19				19
18				18
17				17
16				16
15				15

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

PALM DRIVE — **HACIENDA AVE TO TWO BUNCH PALMS TRAIL**

DATE: 9/6/2018 — SURVEY BY: C. BUENDIA

TIME: 10:30 AM - 11:00 AM — CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	**SOUTH OF HACIENDA**
DATE OF SURVEY	9/6/2018
85th PERCENTILE	37.9 MPH
10 MPH PACE	32 - 41 MPH
PERCENT IN PACE	93.6 %
POSTED SPEED LIMIT	35 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	6
TOTAL ACCIDENTS	20
ANNUAL ACCIDENT RATE	3.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	696.54 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	24
LANE CONFIGURATION	2 LANES PER DIRECTION
TRAFFIC CONTROLS	SIGNAL - HACIENDA / IRONWOOD / TWO BUNCH PALM TRAIL
CROSSWALKS	AT HACIENDA / IRONWOOD / TWO BUNCH PALM TRAIL
PEDESTRIAN/BICYCLES	YES / YES
TRUCK TRAFFIC	YES
ON-STREET PARKING	NO
OTHER	BUS STOPS "SAFETY CORRIDOR" SIGNS

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.50
VERTICAL CURVE	VERY SLIGHT UP/DOWNHILL GRADES
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	GOOD
SIDEWALKS/DRIVEWAYS	YES / YES
STREET LIGHTING	YES
DRIVEWAY DENSITY	HEAVY
OTHER	RAISED MEDIAN ISLAND and 2 WAY LEFT TURN LANE

ADJACENT LAND USE	COMMERCIAL / OPEN
RECOMMENDED SPEED LIMIT	35 MPH
SPEED LIMIT CHANGE	NO CHANGE

JUSTIFICATION:

The recommended 35 mph speed limit is within 2.9 mph of the 85th percentile speed and meets CVC standards.

File: Palm 2018-22

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

PALM DRIVE — HACIENDA AVE TO TWO BUNCH PALMS TRAIL

DATE: 9/6/2018 — SURVEY BY: C. BUENDIA

TIME: 10:30 AM - 11:00 AM — CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)		
60		100.0%	
59		100.0%	
58		100.0%	
57		100.0%	
56		100.0%	
55		100.0%	
54		100.0%	
53		100.0%	
52		100.0%	
51		100.0%	
50		100.0%	
49		100.0%	
48		100.0%	
47		100.0%	
46		100.0%	
45		100.0%	
44		100.0%	
43		100.0%	
42		99.4%	
41		98.2%	}PACE
40		96.5%	}PACE
39		93.0%	}PACE
38		86.0%	}PACE
37		72.5%	}PACE - - -85PCT
36		60.2%	}PACE
35		46.8%	}PACE - - - -MEAN
34		31.6%	}PACE
33		18.7%	}PACE
32		9.4%	}PACE - - -15PCT
31		4.7%	
30		2.9%	
29		2.3%	
28		1.8%	
27		0.6%	
26		0.0%	
25		0.0%	
24		0.0%	
23		0.0%	
22		0.0%	
21		0.0%	
20		0.0%	
19		0.0%	
18		0.0%	
17		0.0%	
16		0.0%	
15		0.0%	

UPPER LIMIT 10 MPH PACE:	41	MPH
LOWER LIMIT 10 MPH PACE:	32	MPH
PERCENT OVER PACE:	3.5	%
PERCENT IN PACE:	93.6	%
PERCENT UNDER PACE:	4.7	%

85th PERCENTILE SPEED:	37.9	MPH
MEDIAN SPEED:	35.2	MPH
15th PERCENTILE SPEED:	32.6	MPH

Palm 2018-22

$SPD-HCI.dwg

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122 Tustin CA 92680
(714) 731-9456

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: PALM DRIVE
LOCATION: HACIENDA AVE TO TWO BUNCH PALMS TRAIL

WEATHER: SUNNY
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 9-6-18
START TIME: 10:30 AM
END TIME: 11:00 AM

DIRECTION: NORTHBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		
59		
58		
57		
56		
55		
54		
53		
52		
51		
50		
49		
48		
47		
46		
45		
44		
43		
42		
41	/	1
40	///	3
39	////	5
38	////////	11
37	////////	10
36	////////	10
35	////////	14
34	////////	13
33	////////	7
32	//	2
31	/	1
30		
29		
28		
27		
26		
25		
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

DIRECTION: SOUTHBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL
60			
59			
58			
57			
56			
55			
54			
53			
52			
51			
50			
49			
48			
47			
46			
45			
44			
43	/	1	1
42	//	2	2
41	//	2	3
40	///	3	6
39	////////	7	12
38	////////	11	23
37	////////	11	21
36	////////	13	23
35	////////	12	26
34	////////	9	22
33	////////	9	16
32	////////	8	8
31	////	2	3
30	/	1	1
29	/	1	1
28	//	2	2
27	/	1	1
26			
25			
24			
23			
22			
21			
20			
19			
18			
17			
16			
15			

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

PALM DRIVE — **TWO BUNCH PALMS TRAIL TO CAMINO CAMPANERO**

DATE: 9/6/2018 — SURVEY BY: C. BUENDIA

TIME: 11:00 AM - 11:30 AM — CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	**SOUTH OF TWO BUNCH PALMS**
DATE OF SURVEY	9/6/2018
85th PERCENTILE	42.2 MPH
10 MPH PACE	36 - 45 MPH
PERCENT IN PACE	91.8 %
POSTED SPEED LIMIT	40 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	4
TOTAL ACCIDENTS	8
ANNUAL ACCIDENT RATE	2.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.25 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	28,750
LANE CONFIGURATION	2 LANES PER DIRECTION
TRAFFIC CONTROLS	SIGNAL - TWO BUNCH PALM TRAIL / CAMINO CAPANERO
CROSSWALKS	AT TWO BUNCH PALM TRAIL / CAMINO CAPANERO
PEDESTRIAN/BICYCLES	YES / YES
TRUCK TRAFFIC	YES
ON-STREET PARKING	NO PARKING ANYTIME
OTHER	BIKE LANES / BUS STOPS "SAFETY CORRIDOR" SIGNS

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.75
VERTICAL CURVE	NONE
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	FAIR
SIDEWALKS/DRIVEWAYS	YES / YES
STREET LIGHTING	YES
DRIVEWAY DENSITY	MEDIUM
OTHER	PARTIAL RAISED MEDIAN ISLAND (at Two Bunch Palms)

ADJACENT LAND USE	MOBILE HOME PARK / COMMERCIAL / OPEN / MOTEL
RECOMMENDED SPEED LIMIT	40 MPH
SPEED LIMIT CHANGE	NO CHANGE

JUSTIFICATION:

The recommended 40 mph speed limit is within 2.2 mph of the 85th percentile speed and meets CVC standards.

File: Palm 2018-23

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

PALM DRIVE — TWO BUNCH PALMS TRAIL TO CAMINO CAMPANEF

DATE: 9/6/2018 — SURVEY BY: C. BUENDIA

TIME: 11:00 AM - 11:30 AM — CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)		
60		X	100.0%
59		X	100.0%
58		X	100.0%
57		X	100.0%
56		X	100.0%
55		X	100.0%
54		X	100.0%
53		X	100.0%
52		X	100.0%
51		X	100.0%
50		X	100.0%
49		X	100.0%
48		X	100.0%
47		X	100.0%
46		X	99.0%
45		X	97.1% }PACE
44		X	94.7% }PACE
43		X	92.8% }PACE
42		X	83.2% }PACE ---85PCT
41		X	73.1% }PACE
40	X		62.0% }PACE
39	X		46.6% }PACE----MEAN
38	X		32.2% }PACE
37	X		22.1% }PACE
36	X		12.0% }PACE ---15PCT
35	X		5.3%
34	X		3.4%
33	X		1.4%
32	X		1.0%
31	X		0.0%
30	X		0.0%
29	X		0.0%
28	X		0.0%
27	X		0.0%
26	X		0.0%
25	X		0.0%
24	X		0.0%
23	X		0.0%
22	X		0.0%
21	X		0.0%
20	X		0.0%
19	X		0.0%
18	X		0.0%
17	X		0.0%
16	X		0.0%
15	X		0.0%

UPPER LIMIT 10 MPH PACE:	45	MPH
LOWER LIMIT 10 MPH PACE:	36	MPH
PERCENT OVER PACE:	2.9	%
PERCENT IN PACE:	91.8	%
PERCENT UNDER PACE:	5.3	%

85th PERCENTILE SPEED:	42.2	MPH
MEDIAN SPEED:	39.2	MPH
15th PERCENTILE SPEED:	36.3	MPH

Palm 2018-23

$SPD-HCI.dwg

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122 Tustin CA. 92680
(714) 731-9455

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: PALM DRIVE
LOCATION: TWO BUNCH PALMS TR TO CAM. CAMPANERO

WEATHER: SUNNY
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 9-6-18
START TIME: 11:00 AM
END TIME: 11:30 AM VCAL

DIRECTION: SOUTHBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		
59		
58		
57		
56		
55		
54		
53		
52		
51		
50		
49		
48		
47	1	1
46	2	2
45	3	3
44	2	2
43	8	8
42	10	10
41	13	13
40	18	18
39	17	17
38	14	14
37	13	13
36	7	7
35	3	3
34	2	2
33	0	0
32	1	1
31		
30		
29		
28		
27		
26		
25		
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

DIRECTION: NORTHBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL
60			
59			
58			
57			
56			
55			
54			
53			
52			
51			
50			
49			
48			
47	1	1	2
46	2	2	4
45	2	2	5
44	2	2	4
43	12	12	20
42	11	11	21
41	10	10	23
40	14	14	32
39	13	13	30
38	7	7	21
37	8	8	21
36	7	7	14
35	1	1	4
34	2	2	4
33	1	1	1
32	1	1	2
31			
30			
29			
28			
27			
26			
25			
24			
23			
22			
21			
20			
19			
18			
17			
16			
15			

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

PALM DRIVE — **CAMINO CAMPANERO TO CAMINO AVENTURA**

DATE: 9/6/2018 — SURVEY BY: C. BUENDIA

TIME: 11:30 AM - 12:00 PM — CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	SOUTH OF CAMINO CAMPANERO
DATE OF SURVEY	9/6/2018
85th PERCENTILE	46.3 MPH
10 MPH PACE	40 - 49 MPH
PERCENT IN PACE	95.5 %
POSTED SPEED LIMIT	45 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	1
TOTAL ACCIDENTS	5
ANNUAL ACCIDENT RATE	0.50 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.09 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	29,000
LANE CONFIGURATION	2 LANES PER DIRECTION
TRAFFIC CONTROLS	SIGNAL - CAMINO CAMPANERO
CROSSWALKS	AT CAMINO CAMPANERO
PEDESTRIAN/BICYCLES	FEW / YES
TRUCK TRAFFIC	FEW
ON-STREET PARKING	NO PARKING ANYTIME
OTHER	BIKE LANES / BUS STOPS

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.50
VERTICAL CURVE	NONE
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	FAIR
SIDEWALKS/DRIVEWAYS	PARTIAL / FEW
STREET LIGHTING	NO
DRIVEWAY DENSITY	LIGHT
OTHER	2 WAY LEFT TURN LANE

ADJACENT LAND USE	MOBILE HOME PARK / RESIDENTIAL / OPEN
RECOMMENDED SPEED LIMIT	45 MPH
SPEED LIMIT CHANGE	NO CHANGE

JUSTIFICATION:

The recommended 45 mph speed limit is within 1.3 mph of the 85th percentile speed and meets CVC standards.

File: Palm 2018-24

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

PALM DRIVE — CAMINO CAMPANERO TO CAMINO AVENTURA

DATE: 9/6/2018
TIME: 11:30 AM - 12:00 PM

SURVEY BY: C. BUENDIA
CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)						
60						X	100.0%
59						X	100.0%
58						X	100.0%
57						X	100.0%
56						X	100.0%
55						X	100.0%
54						X	100.0%
53						X	100.0%
52						X	100.0%
51						X	100.0%
50						X	100.0%
49						X	100.0%
48						X	99.4% }PACE
47						X	97.8% }PACE
46					X		92.2% }PACE
45					X		81.6% }PACE ---85PCT
44				X			62.6% }PACE
43			X				45.3% }PACE ----MEAN
42		X					31.3% }PACE
41	X						19.6% }PACE
40	X						12.3% }PACE ---15PCT
39	X						6.7% }PACE
38	X						3.9%
37	X						2.2%
36	X						1.7%
35	X						1.1%
34	X						0.0%
33	X						0.0%
32	X						0.0%
31	X						0.0%
30	X						0.0%
29	X						0.0%
28	X						0.0%
27	X						0.0%
26	X						0.0%
25	X						0.0%
24	X						0.0%
23	X						0.0%
22	X						0.0%
21	X						0.0%
20	X						0.0%
19	X						0.0%
18	X						0.0%
17	X						0.0%
16	X						0.0%
15	X						0.0%

UPPER LIMIT 10 MPH PACE:	49	MPH
LOWER LIMIT 10 MPH PACE:	40	MPH
PERCENT OVER PACE:	2.2	%
PERCENT IN PACE:	95.5	%
PERCENT UNDER PACE:	3.9	%

85th PERCENTILE SPEED:	46.3	MPH
MEDIAN SPEED:	44.3	MPH
15th PERCENTILE SPEED:	41.4	MPH

Palm 2018-24

$SPD-HCI.dwg

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122 Tustin CA 92680
(714) 731-9455

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: PALM DRIVE
LOCATION: CAMINO CAMPANERO TO CAMINO AVENTUKA

WEATHER: SUNNY
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 9-6-18
START TIME: 11:30 AM
END TIME: 12:00 PM VCR

DIRECTION: SOUTHBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		
59		
58		
57		
56		
55		
54		
53		
52		
51		
50		
49		1
48		3
47		6
46		8
45		20
44		18
43		16
42		12
41		8
40		7
39		2
38		
37		
36		
35		
34		
33		
32		
31		
30		
29		
28		
27		
26		
25		
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

DIRECTION: NORTHBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL
60			
59			
58			
57			
56			
55			
54			
53			
52			
51			
50			
49			1
48		4	3
47		1	10
46		14	9
45		13	24
44		9	31
43		8	25
42		5	21
41		3	13
40		3	10
39		3	5
38		2	3
37			1
36		2	2
35			
34			
33			
32			
31			
30			
29			
28			
27			
26			
25			
24			
23			
22			
21			
20			
19			
18			
17			
16			
15			

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

PALM DRIVE		**CAMINO AVENTURA TO DILLON RD**	
DATE:	9/13/2018	SURVEY BY:	C. BUENDIA
TIME:	10:00 AM - 10:20 AM	CHECKED BY:	JERRY STOCK

PREVAILING SPEED DATA	**SOUTHBOUND ONLY**
LOCATION OF SURVEY	SOUTH OF CAMINO AVENTURA
DATE OF SURVEY	9/13/2018
85th PERCENTILE	56.8 MPH
10 MPH PACE	49 - 58 MPH
PERCENT IN PACE	76.9 %
POSTED SPEED LIMIT	55 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	3
TOTAL ACCIDENTS	3
ANNUAL ACCIDENT RATE	1.50 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.15 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	.
AVERAGE DAILY TRAFFIC	29,000
LANE CONFIGURATION	2 LANES PER DIRECTION
TRAFFIC CONTROLS	SIGNAL - DILLON
CROSSWALKS	AT DILLON
PEDESTRIAN/BICYCLES	FEW / YES
TRUCK TRAFFIC	FEW
ON-STREET PARKING	NO PARKING ANYTIME
OTHER	BIKE LANES / BUS STOPS

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.92
VERTICAL CURVE	NONE
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	FAIR
SIDEWALKS/DRIVEWAYS	PARTIAL / NO (curbs only -SB only)
STREET LIGHTING	NO
DRIVEWAY DENSITY	LIGHT
OTHER	2 WAY LEFT TURN LANE

ADJACENT LAND USE	COMMERCIAL / OPEN

RECOMMENDED SPEED LIMIT	55 MPH

SPEED LIMIT CHANGE	NO CHANGE

JUSTIFICATION:

The recommended 55 mph speed limit is within 1.8 mph of the 85th percentile speed and meets CVC standards.

****NOTE: SOUTHBOUND ONLY IS IN JURISDICTION OF CITY OF DHS**

File: Palm 2018-25

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

PALM DRIVE — CAMINO AVENTURA TO DILLON RD

DATE: 9/13/2018 — SURVEY BY: C. BUENDIA

TIME: 10:00 AM - 10:20 AM — CHECKED BY: JERRY STOCK

SOUTHBOUND ONLY

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)		
60		100.0%	
59		98.1%	
58		94.2%	PACE
57		86.5%	PACE
56		76.9%	PACE ---85PCT
55		68.3%	PACE
54		59.6%	PACE
53		50.0%	PACE ----MEAN
52		41.3%	PACE
51		32.7%	PACE
50		25.0%	PACE
49		19.2%	PACE
48		14.4%	---15PCT
47		9.6%	
46		5.8%	
45		2.9%	
44		1.0%	
43		0.0%	
42		0.0%	
41		0.0%	
40		0.0%	
39		0.0%	
38		0.0%	
37		0.0%	
36		0.0%	
35		0.0%	
34		0.0%	
33		0.0%	
32		0.0%	
31		0.0%	
30		0.0%	
29		0.0%	
28		0.0%	
27		0.0%	
26		0.0%	
25		0.0%	
24		0.0%	
23		0.0%	
22		0.0%	
21		0.0%	
20		0.0%	
19		0.0%	
18		0.0%	
17		0.0%	
16		0.0%	
15		0.0%	

UPPER LIMIT 10 MPH PACE:	58	MPH
LOWER LIMIT 10 MPH PACE:	49	MPH
PERCENT OVER PACE:	5.8	%
PERCENT IN PACE:	76.9	%
PERCENT UNDER PACE:	0.0	%

85th PERCENTILE SPEED:	56.8	MPH
MEDIAN SPEED:	53.0	MPH
15th PERCENTILE SPEED:	48.1	MPH

Palm 2018-25

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: PALM DRIVE
LOCATION: CAMINO AVENTURA TO DILLION RD

WEATHER: SUNNY
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 9-13-18
START TIME: 10:00 AM
END TIME: 10:20 AM

DIRECTION:

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		
59		
58		
57		
56		
55		
54		
53		
52		
51		
50		
49		
48		
47		
46		
45		
44		
43		
42		
41		
40		
39		
38		
37		
36		
35		
34		
33		
32		
31		
30		
29		
28		
27		
26		
25		
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

DIRECTION: SOUTHBOUND ONLY

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL	MPH
60		2	2	60
59		4	4	59
58		8	8	58
57		10	10	57
56		9	9	56
55		9	9	55
54		10	10	54
53		9	9	53
52		9	9	52
51		8	8	51
50		6	6	50
49		5	5	49
48		5	5	48
47		4	4	47
46		3	3	46
45		2	2	45
44		1	1	44
43				43
42				42
41				41
40				40
39				39
38				38
37				37
36				36
35				35
34				34
33				33
32				32
31				31
30				30
29				29
28				28
27				27
26				26
25				25
24				24
23				23
22				22
21				21
20				20
19				19
18				18
17				17
16				16
15				15

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

S/O CAM AVENTURA

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

PALM DRIVE — **DILLON RD TO SOUTH CITY LIMITS (SALVIA RD)**

DATE: 9/13/2018 — SURVEY BY: C. BUENDIA

TIME: 10:30 AM - 10:55 AM — CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	**SOUTHBOUND ONLY** (BTWN 18TH TO SCL)
LOCATION OF SURVEY	SOUTH OF DILLON
DATE OF SURVEY	9/13/2018
85th PERCENTILE	64.7 MPH
10 MPH PACE	55 - 64 MPH
PERCENT IN PACE	75.6 %
POSTED SPEED LIMIT	60 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	7
TOTAL ACCIDENTS	15
ANNUAL ACCIDENT RATE	3.50 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.10 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	.
AVERAGE DAILY TRAFFIC	29,000
LANE CONFIGURATION	2 LANES PER DIRECTION
TRAFFIC CONTROLS	SIGNAL - DILLON / PAUL / I-10 FWY WB & EB RAMPS
CROSSWALKS	AT DILLON
PEDESTRIAN/BICYCLES	NO / YES
TRUCK TRAFFIC	YES
ON-STREET PARKING	NO PARKING ANYTIME
OTHER	BIKE LANES

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	3.35
VERTICAL CURVE	NONE
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	FAIR to POOR
SIDEWALKS/DRIVEWAYS	PARTIAL / NO (curbs only-sb only)
STREET LIGHTING	NO
DRIVEWAY DENSITY	LIGHT
OTHER	2 WAY LEFT TURN LANE

ADJACENT LAND USE	COMMERCIAL / OPEN

RECOMMENDED SPEED LIMIT	60 MPH

SPEED LIMIT CHANGE	NO CHANGE

JUSTIFICATION:

The City of Desert Hot Springs and City of North Palm Springs share the jurisdiction for this segment. The section from Dillon Road to 18th Street both north and south directions are within DHS city limits, and from 18th Street to the south city limit only the southbound direction is within DHS jurisdiction. The posted speed limit for this area is 60 mph. This roadway has one lane of travel per direction. The adjacent land uses are commercial, open undeveloped land, and the I-10 freeway with ramps. With the speed data showing an 85th percentile speed of 64.7 mph, it is recommended that the existing speed 60 mph be maintained.

**** NOTE: 18TH ST TO SCL - SOUTHBOUND ONLY IS IN JURISDICTION OF CITY DHS**

File: Palm 2018-26

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

PALM DRIVE — DILLON RD TO SOUTH CITY LIMITS (SALVIA RD)

DATE: 9/13/2018 — SURVEY BY: C. BUENDIA

TIME: 10:30 AM - 10:55 AM — CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT 20	40	60	80	100		
75						157.1%	
74						157.1%	
73						157.1%	
72						157.1%	
71						157.1%	
70						157.1%	
69						157.1%	
68					x|	157.1%	
67						151.1%	
66				x		146.6%	
65						139.8%	
64				x		133.8%	}PACE ---85PCT
63						126.3%	}PACE
62			x			121.1%	}PACE
61						112.0%	}PACE
60		x				100.0%	}PACE
59		x				78.9%	}PACE----MEAN
58						61.7%	}PACE
57	x					43.6%	}PACE
56						31.6%	}PACE
55	x					21.8%	}PACE ---15PCT
54	x					15.0%	
53						9.0%	
52						3.8%	
51	x					0.8%	
50	x					0.0%	
49	x					0.0%	
48	x					0.0%	
47	x					0.0%	
46	x					0.0%	
45	x					0.0%	
44	x					0.0%	
43	x					0.0%	
42	x					0.0%	
41	x					0.0%	
40	x					0.0%	
39	x					0.0%	
38	x					0.0%	
37	x					0.0%	
36	x					0.0%	
35	x					0.0%	
34	x					0.0%	
33	x					0.0%	
32	x					0.0%	
31	x					0.0%	
30	x					0.0%	
29	x					0.0%	
28	x					0.0%	
27	x					0.0%	
26	x					0.0%	
25	x					0.0%	
24	x					0.0%	
23	x					0.0%	
22	x					0.0%	
21	x					0.0%	
20	x					0.0%	
19	x					0.0%	
18	x					0.0%	
17	x					0.0%	
16	x					0.0%	
15	x					0.0%	

UPPER LIMIT 10 MPH PACE:	64	MPH
LOWER LIMIT 10 MPH PACE:	55	MPH
PERCENT OVER PACE:	14.8	%
PERCENT IN PACE:	75.6	%
PERCENT UNDER PACE:	9.6	%

85th PERCENTILE SPEED:	64.7	MPH
MEDIAN SPEED:	59.8	MPH
15th PERCENTILE SPEED:	55.3	MPH

$SPD-HCI.dwg

Radar Speed Survey Field Sheet

Hartzog & Crabill, Inc.
Consulting Traffic Engineers
17452 E. 17th Street, Suite 101
Tustin, California 92780
714.731.9455 fax: 714.731.9558
www.hartzog-crabill.com

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: PALM DRIVE
LOCATION: DILLON RD TO SOUTH CITY LIMIT

WEATHER: SUNNY
ROAD CONDITION: DRY
OBSERVER: Cathy Buendia

DATE: 9-13-18
START TIME: 10:30 AM
END TIME: 10:55 AM

DIRECTION: NORTHBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
70		
69		
68		6
67		3
66		6
65		3
64		4
63		4
62		6
61		8
60		16
59		14
58		4
57		10
56		7
55		6
54		5
53		5
52		3
51		1
50		
49		
48		
47		
46		
45		
44		
43		
42		
41		
40		
39		
38		
37		
36		
35		
34		
33		
32		
31		
30		
29		
28		
27		
26		
25		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

DIRECTION: SOUTHBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL
70			
69			
68		2	8
67		3	6
66		3	9
65		5	8
64		6	10
63		3	7
62		6	12
61		8	16
60		13	28
59		9	23
58		10	24
57		6	16
56		6	13
55		4	9
54		3	8
53		2	7
52		1	4
51			1
50			
49			
48			
47			
46			
45			
44			
43			
42			
41			
40			
39			
38			
37			
36			
35			
34			
33			
32			
31			
30			
29			
28			
27			
26			
25			

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

209

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

PIERSON BOULEVARD — **HWY 62 TO SKYBORNE DR**

DATE: 8/31/2018 — SURVEY BY: C. BUENDIA

TIME: 9:00 AM - 10:30 AM — CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	**EAST OF HWY 62 (Twenty-nine Palms)**
DATE OF SURVEY	8/31/2018
85th PERCENTILE	56.9 MPH
10 MPH PACE	50 - 59 MPH
PERCENT IN PACE	59.0 %
POSTED SPEED LIMIT	55 MPH (EB)

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	0
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	2,700
LANE CONFIGURATION	1 LANE (EB) / 2 LANES (WB)
TRAFFIC CONTROLS	SIGNAL - SKYBORNE / STOP - HWY 62
CROSSWALKS	AT SKYBORNE
PEDESTRIAN/BICYCLES	NO / NO
TRUCK TRAFFIC	FEW
ON-STREET PARKING	NO STOPPING ANYTIME
OTHER	

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	1.02
VERTICAL CURVE	SEVERAL SLIGHT UP/DOWNHILL GRADES
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	LIMITED SIGHT DISTANCE (areas of slight)
ROAD CONDITIONS	GOOD
SIDEWALKS/DRIVEWAYS	NO / NO (EB) - PARTIAL / NO (WB)
STREET LIGHTING	YES (northside)
DRIVEWAY DENSITY	NONE
OTHER	SOLID DBL YELLOW CENTERLINE DIRT SHOULDERS (EB)

ADJACENT LAND USE	RESIDENTIAL (NF) / OPEN

RECOMMENDED SPEED LIMIT	55 MPH

SPEED LIMIT CHANGE	NO CHANGE - POST WB

JUSTIFICATION:

The recommended 55 mph speed limit is within 1.9 mph of the 85th percentile speed and meets CVC standards. For enforcement, it is recommended that a 55 mph speed sign be posted for the westbound direction west of Skyborne Drive.

NF = NON FRONTING TO ROADWAY

File: Pierson 2018-27

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

PIERSON BOULEVARD — HWY 62 TO SKYBORNE DR

DATE: 8/31/2018 — SURVEY BY: C. BUENDIA

TIME: 9:00 AM - 10:30 AM — CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)		
60		100.0%	
59		93.8%	}PACE
58		88.8%	}PACE
57		85.7%	}PACE
56		80.1%	}PACE - - -85PCT
55		75.2%	}PACE
54		64.6%	}PACE
53		60.2%	}PACE
52		55.3%	}PACE
51		49.1%	}PACE - - - -MEAN
50		44.1%	}PACE
49		34.2%	
48		31.7%	
47		26.7%	
46		22.4%	
45		16.8%	
44		11.2%	- - -15PCT
43		9.3%	
42		7.5%	
41		7.5%	
40		4.3%	
39		3.1%	
38		1.9%	
37		1.2%	
36		0.6%	
35		0.6%	
34		0.0%	
33		0.0%	
32		0.0%	
31		0.0%	
30		0.0%	
29		0.0%	
28		0.0%	
27		0.0%	
26		0.0%	
25		0.0%	
24		0.0%	
23		0.0%	
22		0.0%	
21		0.0%	
20		0.0%	
19		0.0%	
18		0.0%	
17		0.0%	
16		0.0%	
15		0.0%	

UPPER LIMIT 10 MPH PACE:	59	MPH
LOWER LIMIT 10 MPH PACE:	50	MPH
PERCENT OVER PACE:	0.0	%
PERCENT IN PACE:	59.0	%
PERCENT UNDER PACE:	0.0	%

85th PERCENTILE SPEED:	56.9	MPH
MEDIAN SPEED:	51.2	MPH
15th PERCENTILE SPEED:	44.7	MPH

Pierson 2018-27

BSPD-HCL.dwg

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17532 Irvine Blvd., Suite 122 Tustin CA 92680
(714) 731-9455

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: PIERSON BOULEVARD
LOCATION: HWY 62 TO SKYBORNE DR

WEATHER: SUNNY
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 8-31-18
START TIME: 9:00 AM
END TIME: 10:30 AM VQZ

DIRECTION: WESTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		4
59		3
58		2
57		4
56		8
55		9
54		4
53		4
52		5
51		4
50		8
49		2
48		4
47		3
46		3
45		4
44		1
43		1
42		0
41		1
40		2
39		
38		
37		
36		
35		
34		
33		
32		
31		
30		
29		
28		
27		
26		
25		
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

DIRECTION: EASTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL	MPH
60		6	10	60
59		5	8	59
58		3	5	58
57		5	9	57
56		0	8	56
55		8	17	55
54		3	7	54
53		4	8	53
52		5	10	52
51		4	8	51
50		8	16	50
49		2	4	49
48		4	8	48
47		4	7	47
46		6	9	46
45		5	9	45
44		2	3	44
43		2	3	43
42		0	0	42
41		4	5	41
40		0	2	40
39		2	2	39
38		1	1	38
37		1	1	37
36		0	0	36
35		1	1	35
34				34
33				33
32				32
31				31
30				30
29				29
28				28
27				27
26				26
25				25
24				24
23				23
22				22
21				21
20				20
19				19
18				18
17				17
16				16
15				15

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

PIERSON BOULEVARD — **SKYBORNE DR TO INDIAN CANYON DR**

DATE: 8/31/2018 — SURVEY BY: C. BUENDIA

TIME: 10:30 AM - 11:20 AM — CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	WEST OF INDIAN CANYON
DATE OF SURVEY	8/31/2018
85th PERCENTILE	55.2 MPH
10 MPH PACE	48 - 57 MPH
PERCENT IN PACE	76.3 %
POSTED SPEED LIMIT	55 MPH (WB)

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	0
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	.
AVERAGE DAILY TRAFFIC	2,650
LANE CONFIGURATION	1 LANE PER DIRECTION
TRAFFIC CONTROLS	SIGNAL - SKYBORNE / KAREN - STOP - INDIAN CANYON
CROSSWALKS	AT SKYBORNE / KAREN
PEDESTRIAN/BICYCLES	NO / FEW
TRUCK TRAFFIC	NO
ON-STREET PARKING	NO STOPPING ANYTIME (Karen to Skyborne)
OTHER	

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	1.60
VERTICAL CURVE	SEVERAL SLIGHT UP/DOWNHILL GRADES
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	LIMITED SIGHT DISTANCE (areas of slight)
ROAD CONDITIONS	FAIR
SIDEWALKS/DRIVEWAYS	NO / NO (EB) - PARTIAL / NO (WB)
STREET LIGHTING	YES (north-side)
DRIVEWAY DENSITY	NONE
OTHER	PAINTED ISLAND / SINGLE DASHED CENTERLINE DIRT SHOULDERS (curb-sidewalk wb Karen to Skyborne)

ADJACENT LAND USE	RESIDENTIAL (NF) / BUSINESS / OPEN

RECOMMENDED SPEED LIMIT	55 MPH

SPEED LIMIT CHANGE	NO CHANGE - POST EB

JUSTIFICATION:

This section of Pierson Boulevard is a two lane roadway with slight up-down grades. A 55 mph speed sign is posted westbound only. The recommended 55 mph speed limit is within 0.2 miles of 85th percentile speed and meets CVC standards. Also for enforcement, a 55 mph speed sign should be installed eastbound east Skyborne Drive.

NF = NON FRONTING TO ROADWAY

File: Pierson 2018-28

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

PIERSON BOULEVARD — SKYBORNE DR TO INDIAN CANYON DR

DATE: 8/31/2018 — SURVEY BY: C. BUENDIA

TIME: 10:30 AM - 11:20 AM — CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)		
60		100.0%	
59		99.3%	
58		96.3%	
57		92.6%	}PACE
56		88.1%	}PACE
55		84.4%	}PACE - - -85PCT
54		79.3%	}PACE
53		73.3%	}PACE
52		69.6%	}PACE
51		58.5%	}PACE
50		48.9%	}PACE - - - -MEAN
49		34.1%	}PACE
48		25.9%	}PACE
47		16.3%	
46		11.9%	- - -15PCT
45		10.4%	
44		5.2%	
43		4.4%	
42		2.2%	
41		0.7%	
40		0.7%	
39		0.0%	
38		0.0%	
37		0.0%	
36		0.0%	
35		0.0%	
34		0.0%	
33		0.0%	
32		0.0%	
31		0.0%	
30		0.0%	
29		0.0%	
28		0.0%	
27		0.0%	
26		0.0%	
25		0.0%	
24		0.0%	
23		0.0%	
22		0.0%	
21		0.0%	
20		0.0%	
19		0.0%	
18		0.0%	
17		0.0%	
16		0.0%	
15		0.0%	

UPPER LIMIT 10 MPH PACE:	57	MPH
LOWER LIMIT 10 MPH PACE:	48	MPH
PERCENT OVER PACE:	11.9	%
PERCENT IN PACE:	76.3	%
PERCENT UNDER PACE:	11.9	%

85th PERCENTILE SPEED:	55.2	MPH
MEDIAN SPEED:	50.1	MPH
15th PERCENTILE SPEED:	46.7	MPH

Pierson 2018-28

$SPD-HCI.dwg

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122 Tustin CA. 92680
(714) 731-9455

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: PIERSON BOULEVARD
LOCATION: SKYBORNE DR. TO INDIAN CANYON DR

WEATHER: SUNNY
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 8-31-18
START TIME: 10:30 AM
END TIME: 11:20 AM

DIRECTION: WESTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60	/	1
59	//	2
58	//	2
57	///	3
56	//	2
55	///	3
54	////	4
53	///	3
52	//////////	9
51	//////////	9
50	//////////	10
49	////	4
48	/////	5
47	//	2
46	/	1
45	///	3
44		0
43		0
42	/	1
41		
40		
39	//	
38		
37	/	
36		
35	/	
34		
33	/	
32		
31		
30		
29		
28		
27		
26		
25		
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

DIRECTION: EASTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL
60			1
59	//	2	4
58	///	3	5
57	///	3	6
56	///	3	5
55	////	4	7
54	////	4	8
53	//	2	5
52	//////	6	5
51	//////	6	13
50	//////////	10	20
49	//////	7	11
48	//////	8	13
47	////	4	6
46	/	1	2
45	////	4	7
44	/	1	1
43	///	3	3
42	/	1	2
41		0	0
40	/	1	1
39			
38			
37			
36			
35			
34			
33			
32			
31			
30			
29			
28			
27			
26			
25			
24			
23			
22			
21			
20			
19			
18			
17			
16			
15			

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

PIERSON BOULEVARD — **INDIAN CANYON DR TO LITLLE MORONGO RD**

DATE: 8/31/2018 — SURVEY BY: C. BUENDIA

TIME: 11:30 AM - 12:10 PM — CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	WEST OF LITTLE MORONGO
DATE OF SURVEY	8/31/2018
85th PERCENTILE	54.0 MPH
10 MPH PACE	42 - 51 MPH
PERCENT IN PACE	66.4 %
POSTED SPEED LIMIT	50 MPH (50 mph Advisory at curve)

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	1
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	6,700
LANE CONFIGURATION	1 LANE PER DIRECTION
TRAFFIC CONTROLS	STOP - INDIAN CANYON / LITTLE MORONGO
CROSSWALKS	NONE
PEDESTRIAN/BICYCLES	NO / YES
TRUCK TRAFFIC	NO
ON-STREET PARKING	NOT RESTRICTED, NONE OBSERVED
OTHER	AREAS OF NARROW AND WIDE ROADWAY

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	1.00
VERTICAL CURVE	GRADUAL UP/DOWNHILL GRADES (over bridge/wash)
HORIZONTAL CURVE	GRADUAL "S" CURVE
LATERAL VISIBILITY	LIMITED SIGHT DISTANCE (areas of slight)
ROAD CONDITIONS	FAIR
SIDEWALKS/DRIVEWAYS	NO / YES (WB) - NO / NO (EB)
STREET LIGHTING	YES
DRIVEWAY DENSITY	FEW
OTHER	LITTLE SECTION OF SIDEWALK WB SOLID DBL YELLOW CENTERLINE / DIRT SHOULDERS

ADJACENT LAND USE	MOBILE HOME PARK / CHURCH / OPEN
RECOMMENDED SPEED LIMIT	50 MPH
SPEED LIMIT CHANGE	NO CHANGE

JUSTIFICATION:

The recommended 50 mph speed limit is within 4.0 mph of the 85th percentile speed and meets CVC standards.

File: Pierson 2018-29

RADAR SPEED DISTRIBUTION SHEET

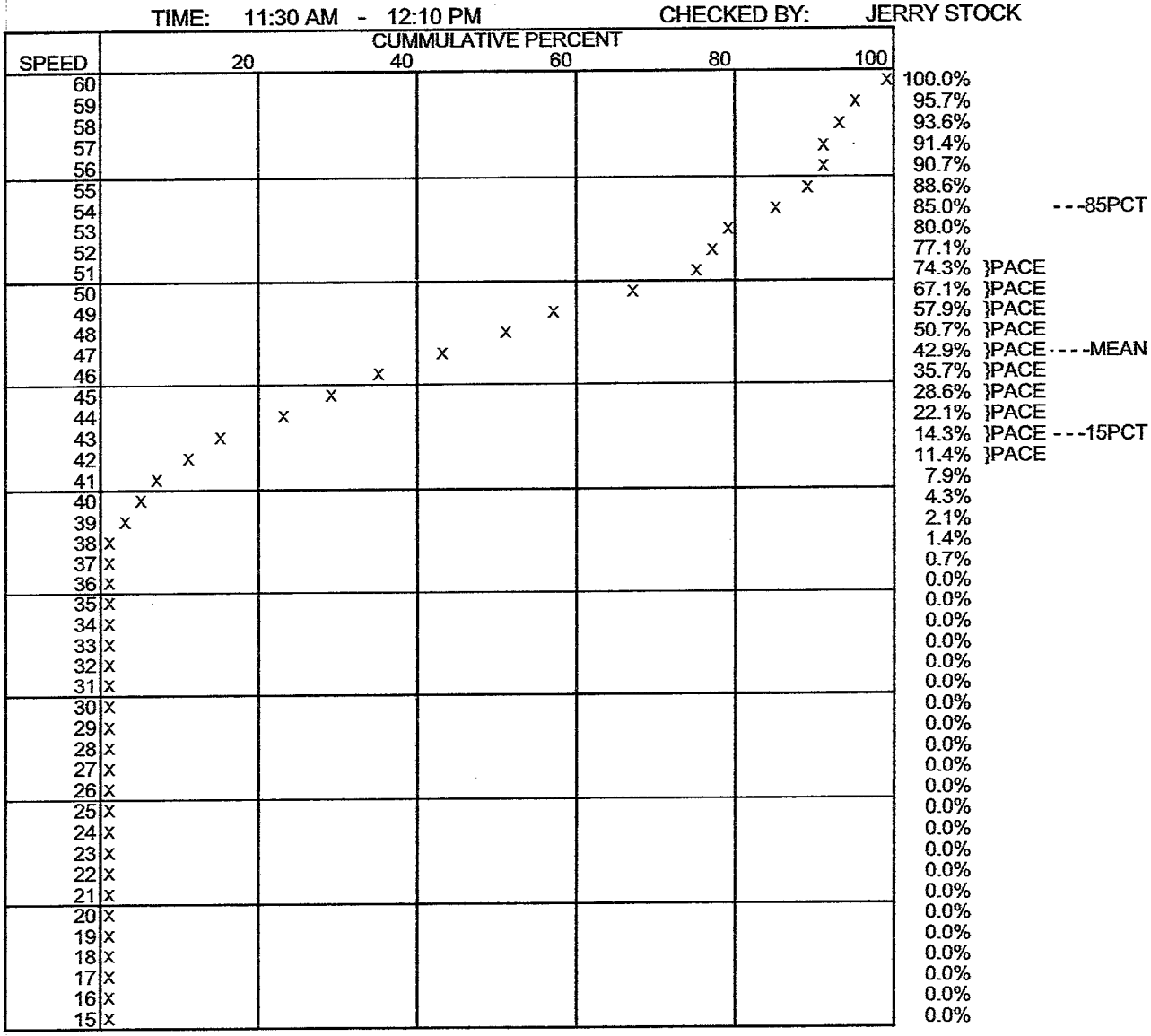
HCI

CITY OF DESERT HOT SPRINGS

PIERSON BOULEVARD — INDIAN CANYON DR TO LITLLE MORONGO RD

DATE: 8/31/2018 — SURVEY BY: C. BUENDIA

TIME: 11:30 AM - 12:10 PM — CHECKED BY: JERRY STOCK



UPPER LIMIT 10 MPH PACE:	51	MPH
LOWER LIMIT 10 MPH PACE:	42	MPH
PERCENT OVER PACE:	25.7	%
PERCENT IN PACE:	66.4	%
PERCENT UNDER PACE:	7.9	%

85th PERCENTILE SPEED:	54.0	MPH
MEDIAN SPEED:	47.9	MPH
15th PERCENTILE SPEED:	43.1	MPH

Pierson 2018-29

$SPD-HCI.dwg

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122 Tustin CA 92680
(714) 731-9455

AGENCY: CITY OF DESERT
STREET: PIERSON BOULEVARD
LOCATION: INDIAN CANYON DR TO LITTLE MORONGO

WEATHER: SUNNY
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 8-31-18
START TIME: 11:30 AM
END TIME: 12:10 PM

DIRECTION: WESTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		2
59		1
58		2
57		1
56		0
55		3
54		3
53		3
52		1
51		7
50		5
49		5
48		9
47		4
46		3
45		6
44		6
43		2
42		3
41		2
40		3
39		0
38		0
37		1
36		
35		
34		
33		
32		
31		
30		
29		
28		
27		
26		
25		
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

DIRECTION: EASTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL	MPH
60		4	6	60
59		2	3	59
58			3	58
57		0	1	57
56		3	3	56
55		2	5	55
54		4	7	54
53		1	4	53
52			4	52
51		3	10	51
50		8	13	50
49		5	10	49
48		2	11	48
47		6	10	47
46		7	10	46
45		3	9	45
44		5	11	44
43		2	4	43
42		2	5	42
41		3	5	41
40		0	3	40
39		1	1	39
38		1	1	38
37				37
36				36
35				35
34				34
33				33
32				32
31				31
30				30
29				29
28				28
27				27
26				26
25				25
24				24
23				23
22				22
21				21
20				20
19				19
18				18
17				17
16				16
15				15

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

PIERSON BOULEVARD **LITTLE MORONGO RD TO ATLANTIC / GOLDEN EAGLE**

DATE: 8/31/2018 SURVEY BY: C. BUENDIA

TIME: 12:15 PM - 12:55 PM CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	WEST OF GOLDEN EAGLE
DATE OF SURVEY	8/31/2018
85th PERCENTILE	51.6 MPH
10 MPH PACE	44 - 53 MPH
PERCENT IN PACE	74.3 %
POSTED SPEED LIMIT	50 MPH / *25 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	0
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	7,200
LANE CONFIGURATION	2 LANES PER DIRECTION (drop lane near Lil Morongo)
TRAFFIC CONTROLS	SIGNAL - ATLANTIC-GOLDEN EAGLE / STOP - LITTLE MORONGO
CROSSWALKS	AT GOLDEN EAGLE
PEDESTRIAN/BICYCLES	NO / YES
TRUCK TRAFFIC	FEW
ON-STREET PARKING	NO PARKING ANYTIME
OTHER	

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.51
VERTICAL CURVE	SLIGHT UP/DOWNHILL GRADES
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	LIMITED SIGHT DISTANCE (Areas of)
ROAD CONDITIONS	GOOD
SIDEWALKS/DRIVEWAYS	NO / NO
STREET LIGHTING	YES
DRIVEWAY DENSITY	NONE
OTHER	SOLID DBL YELLOW CENTERLINE / PAINTED ISLAND

ADJACENT LAND USE	MOBILE HOME PARK / ELEM SCH / OPEN
RECOMMENDED SPEED LIMIT	50 MPH
SPEED LIMIT CHANGE	NO CHANGE

JUSTIFICATION:

The recommended 50 mph speed limit is within 1.6 mph of the 85th percentile speed and meets CVC standards.

* 25 mph When Children Present, School Zone

File: Pierson 2018-30

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

PIERSON BOULEVARD — LITTLE MORONGO RD TO ATLANTIC / GOLDEN EAGLE

DATE: 8/31/2018 — SURVEY BY: C. BUENDIA

TIME: 12:15 PM - 12:55 PM — CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)		
60		100.0%	
59		98.0%	
58		96.1%	
57		96.1%	
56		94.7%	
55		92.1%	
54		91.4%	
53		90.8%	}PACE
52		86.2%	}PACE
51		82.9%	}PACE - - -85PCT
50		78.9%	}PACE
49		69.1%	}PACE
48		64.5%	}PACE
47		56.6%	}PACE
46		43.4%	}PACE - - - -MEAN
45		31.6%	}PACE
44		22.4%	}PACE
43		16.4%	
42		13.2%	- - -15PCT
41		8.6%	
40		6.6%	
39		3.3%	
38		2.0%	
37		1.3%	
36		1.3%	
35		0.7%	
34		0.0%	
33		0.0%	
32		0.0%	
31		0.0%	
30		0.0%	
29		0.0%	
28		0.0%	
27		0.0%	
26		0.0%	
25		0.0%	
24		0.0%	
23		0.0%	
22		0.0%	
21		0.0%	
20		0.0%	
19		0.0%	
18		0.0%	
17		0.0%	
16		0.0%	
15		0.0%	

UPPER LIMIT 10 MPH PACE:	53	MPH
LOWER LIMIT 10 MPH PACE:	44	MPH
PERCENT OVER PACE:	17.1	%
PERCENT IN PACE:	74.3	%
PERCENT UNDER PACE:	16.4	%

85th PERCENTILE SPEED:	51.6	MPH
MEDIAN SPEED:	46.5	MPH
15th PERCENTILE SPEED:	42.6	MPH

Pierson 2018-30

$SPD-HCI.dwg

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122 Tustin CA 92680
(714) 731-9455

AGENCY: CITY OF DE
STREET: PIERSON BOULEVARD
LOCATION: LITTLE MORONGO RD TO ATLANTIC - GOLDEN EAGLE

WEATHER: SUNNY
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 8-31-18
START TIME: 12:15
END TIME: 12:55 PM var

DIRECTION: EASTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		
59		
58		
57		
56	/	1
55	/	1
54		
53	/ / / /	4
52	/ /	2
51	/	1
50	/ / / / / /	7
49	/ / / /	3
48	/ / / / /	5
47	/ / / / / / / / / /	10
46	/ / / / / / / / / /	10
45	/ / / / / /	6
44	/ / / / /	5
43	/ / /	3
42	/ / / / /	5
41	/ /	2
40	/ / /	3
39	/	1
38	/	1
37		
36		0
35	/	1
34		
33		
32		
31		
30		
29		
28		
27		
26		
25		
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

DIRECTION: WESTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL
60	/ / /	3	3
59	/ / /	3	3
58		0	0
57	/ /	2	2
56	/ / /	3	4
55		0	
54	/	1	1
53	/ / /	3	7
52	/ / /	3	5
51	/ / / / /	5	6
50	/ / / / / / /	8	15
49	/ / / /	4	7
48	/ / / / / /	7	12
47	/ / / / / / / / / /	10	20
46	/ / / / / / / /	8	18
45	/ / / / / / /	8	14
44	/ / / /	4	9
43	/ /	2	5
42	/ /	2	7
41	/	1	3
40	/ /	2	5
39	/	1	2
38		0	1
37		0	0
36	/	1	1
35			1
34			
33			
32			
31			
30			
29			
28			
27			
26			
25			
24			
23			
22			
21			
20			
19			
18			
17			
16			
15			

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

PIERSON BOULEVARD — **ATLANTIC / GOLDEN EAGLE TO WEST DR**

DATE: 8/31/2018 — SURVEY BY: C. BUENDIA

TIME: 1:00 PM - 1:45 PM — CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	WEST OF WEST DR
DATE OF SURVEY	8/31/2018
85th PERCENTILE	46.1 MPH
10 MPH PACE	37 - 46 MPH
PERCENT IN PACE	79.1 %
POSTED SPEED LIMIT	45 MPH / *25 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	4
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	-
AVERAGE DAILY TRAFFIC	7,450
LANE CONFIGURATION	2 LANES PER DIRECTION
TRAFFIC CONTROLS	SIGNAL - WEST / ATLANTIC-GOLDEN EAGLE
CROSSWALKS	AT WEST / CHOLLA (sch) / ATLANTIC-GOLDEN EAGLE (sch)
PEDESTRIAN/BICYCLES	YES / YES
TRUCK TRAFFIC	FEW
ON-STREET PARKING	NO STOPPING ANYTIME
OTHER	BIKE LANES

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.51
VERTICAL CURVE	VERY SLIGHT UP/DOWNHILL GRADES
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	GOOD
SIDEWALKS/DRIVEWAYS	YES / YES
STREET LIGHTING	YES
DRIVEWAY DENSITY	LIGHT
OTHER	RAISED MEDIAN ISLAND / 2 WAY LEFT TURN CENTERLANE

ADJACENT LAND USE	SHERIFF / COUNTY OF RIVERSIDE / FIRE STN / RESIDENTIAL / HIGH SCH / COMMERCIAL
RECOMMENDED SPEED LIMIT	45 MPH
SPEED LIMIT CHANGE	NO CHANGE

JUSTIFICATION:

The recommended 45 mph speed limit is within 1.1 mph of the 85th percentile speed and meets CVC standards.

* 25 mph When Children Present, School Zone

File: Pierson 2018-31

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

PIERSON BOULEVARD — ATLANTIC / GOLDEN EAGLE TO WEST DR

DATE: 8/31/2018 — SURVEY BY: C. BUENDIA

TIME: 1:00 PM - 1:45 PM — CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)		
60		100.0%	
59		100.0%	
58		100.0%	
57		100.0%	
56		100.0%	
55		100.0%	
54		100.0%	
53		100.0%	
52		99.4%	
51		98.7%	
50		96.2%	
49		94.3%	
48		91.8%	
47		88.6%	
46		84.8%	}PACE - - -85PCT
45		76.6%	}PACE
44		65.8%	}PACE
43		58.2%	}PACE
42		51.9%	}PACE
41		43.7%	}PACE - - - -MEAN
40		35.4%	}PACE
39		22.8%	}PACE
38		14.6%	}PACE - - -15PCT
37		11.4%	}PACE
36		5.7%	
35		4.4%	
34		1.9%	
33		0.6%	
32		0.6%	
31		0.0%	
30		0.0%	
29		0.0%	
28		0.0%	
27		0.0%	
26		0.0%	
25		0.0%	
24		0.0%	
23		0.0%	
22		0.0%	
21		0.0%	
20		0.0%	
19		0.0%	
18		0.0%	
17		0.0%	
16		0.0%	
15		0.0%	

UPPER LIMIT 10 MPH PACE:	46	MPH
LOWER LIMIT 10 MPH PACE:	37	MPH
PERCENT OVER PACE:	15.2	%
PERCENT IN PACE:	79.1	%
PERCENT UNDER PACE:	5.7	%

85th PERCENTILE SPEED:	46.1	MPH
MEDIAN SPEED:	41.8	MPH
15th PERCENTILE SPEED:	38.1	MPH

$SPD-HCI.dwg

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122 Tustin CA. 92680
(714) 731-9455

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: PIERSON BOULEVARD
LOCATION: ATLANTIC - GOLDEN EAGLE TO WEST DR

WEATHER: SUNNY
ROAD CONDITION: HOT
OBSERVER: CATHY BUENDIA

DATE: 8-31-18
START TIME: 1:00 PM
END TIME: 1:45 PM

DIRECTION: WESTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		
59		
58		
57		
56		
55		
54		
53	/	1
52	/	1
51	//	2
50	//	2
49	/	1
48	//	2
47	////	4
46	/////	5
45	//////	8
44	/////	6
43	/////	5
42	/////	5
41	//////	6
40	//////////	10
39	//////////	8
38	///	3
37	////	4
36	//	2
35	///	3
34	//	2
33		0
32	/	1
31		
30		
29		
28		
27		
26		
25		
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

DIRECTION: EASTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL
60			
59			
58			
57			
56			
55			
54			
53			1
52			1
51	//	2	4
50	/	1	3
49	///	3	4
48	///	3	5
47	//	2	6
46	////////	8	13
45	/////////	9	17
44	//////	6	12
43	/////	5	10
42	////////	8	13
41	//////	7	13
40	//////////	9	20
39	/////	5	13
38	//	2	5
37	/////	5	9
36		0	2
35	/	1	4
34			2
33			0
32			1
31			
30			
29			
28			
27			
26			
25			
24			
23			
22			
21			
20			
19			
18			
17			
16			
15			

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

PIERSON BOULEVARD **WEST DR TO PALM DR**

DATE: 9/7/2018 SURVEY BY: C. BUENDIA

TIME: 11:30 AM - 12:00 PM CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	WEST OF PALM
DATE OF SURVEY	9/7/218
85th PERCENTILE	37.1 MPH
10 MPH PACE	29 - 38 MPH
PERCENT IN PACE	81.8 %
POSTED SPEED LIMIT	35 MPH
	35 MPH LEGEND ONLY (WB)

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	6
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	7,400
LANE CONFIGURATION	2 LANES PER DIRECTION
TRAFFIC CONTROLS	SIGNAL - WEST / PALM, STOP - CACUTUS
CROSSWALKS	AT WEST / CACTUS / PALM
PEDESTRIAN/BICYCLES	FEW / YES
TRUCK TRAFFIC	YES
ON-STREET PARKING	YES
OTHER	BUS STOPS
	SEVERAL AREAS OF RED CURB

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.51
VERTICAL CURVE	NONE
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	GOOD
SIDEWALKS/DRIVEWAYS	YES / YES
STREET LIGHTING	YES
DRIVEWAY DENSITY	MODERTE
OTHER	PARTIAL RAISED MEIDAN ISLAND & 2 WAY LEFTS

ADJACENT LAND USE	COMMERCIAL / BUSINESS

RECOMMENDED SPEED LIMIT	35 MPH

SPEED LIMIT CHANGE	NO CHANGE

JUSTIFICATION:

The recommended 35 mph speed limit is within 2.1 mph of the 85th percentile speed and meets CVC standards.

File: Pierson 2018-32

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

PIERSON BOULEVARD — WEST DR TO PALM DR

DATE: 9/7/218 — SURVEY BY: C. BUENDIA

TIME: 11:30 AM - 12:00 PM — CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)		
60	X	100.0%	
59	X	100.0%	
58	X	100.0%	
57	X	100.0%	
56	X	100.0%	
55	X	100.0%	
54	X	100.0%	
53	X	100.0%	
52	X	100.0%	
51	X	100.0%	
50	X	100.0%	
49	X	100.0%	
48	X	100.0%	
47	X	100.0%	
46	X	100.0%	
45	X	100.0%	
44	X	100.0%	
43	X	100.0%	
42	X	99.3%	
41	X	98.6%	
40	X	97.9%	
39	X	93.0%	
38	X	90.2%	}PACE
37	X	84.6%	}PACE - - -85PCT
36	X	79.7%	}PACE
35	X	72.0%	}PACE
34	X	61.5%	}PACE
33	X	51.0%	}PACE
32	X	39.2%	}PACE - - - -MEAN
31	X	27.3%	}PACE
30	X	18.2%	}PACE
29	X	13.3%	}PACE - - -15PCT
28	X	8.4%	
27	X	3.5%	
26	X	0.7%	
25	X	0.7%	
24	X	0.0%	
23	X	0.0%	
22	X	0.0%	
21	X	0.0%	
20	X	0.0%	
19	X	0.0%	
18	X	0.0%	
17	X	0.0%	
16	X	0.0%	
15	X	0.0%	

UPPER LIMIT 10 MPH PACE:	38	MPH
LOWER LIMIT 10 MPH PACE:	29	MPH
PERCENT OVER PACE:	9.8	%
PERCENT IN PACE:	81.8	%
PERCENT UNDER PACE:	8.4	%

85th PERCENTILE SPEED:	37.1	MPH
MEDIAN SPEED:	32.9	MPH
15th PERCENTILE SPEED:	29.4	MPH

Pierson 2018-32

$SPD-HCI.dwg

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122 Tustin CA 92680
(714) 731-9455

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: PIERSON BOULEVARD
LOCATION: WEST DR TO PALM DR

WEATHER: SUNNY
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 9-7-18
START TIME: 11:30 AM
END TIME: 12:00 PM

DIRECTION: WESTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		
59		
58		
57		
56		
55		
54		
53		
52		
51		
50		
49		
48		
47		
46		
45		
44		
43		
42		
41		
40		3
39		2
38		4
37		5
36		6
35		8
34		9
33		11
32		7
31		7
30		3
29		3
28		3
27		1
26		
25		
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

DIRECTION: EASTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL	MPH
60				60
59				59
58				58
57				57
56				56
55				55
54				54
53				53
52				52
51				51
50				50
49				49
48				48
47				47
46				46
45				45
44				44
43		1	1	43
42		1	1	42
41		1	1	41
40		4	7	40
39		2	4	39
38		4	8	38
37		2	7	37
36		5	11	36
35		7	15	35
34		6	15	34
33		6	17	33
32		10	17	32
31		6	13	31
30		4	7	30
29		4	7	29
28		4	7	28
27		3	4	27
26		0	0	26
25		1	1	25
24				24
23				23
22				22
21				21
20				20
19				19
18				18
17				17
16				16
15				15

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

PIERSON BOULEVARD — **PALM DR TO MIRACLE HILL RD**

DATE: 9/7/2018 — SURVEY BY: C. BUENDIA

TIME: 12:10 PM - 12:45 PM — CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	EAST OF PALM
DATE OF SURVEY	9/7/2018
85th PERCENTILE	35.9 MPH
10 MPH PACE	28 - 37 MPH
PERCENT IN PACE	92.7 %
POSTED SPEED LIMIT	35 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	2
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	2,600
LANE CONFIGURATION	2 LANES PER DIRECTION / 1 LANE EAST OF VERBENA
TRAFFIC CONTROLS	SIGNAL - PALM / STOP - OCOTILLO / MESQUITE / VERBENA
CROSSWALKS	AT PALM / OCOTILLO / MESQUITE / VERBENA
PEDESTRIAN/BICYCLES	YES / YES
TRUCK TRAFFIC	NO
ON-STREET PARKING	YES
OTHER	PARKING CUT-OUTS (Palm-Ocotillo)

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.98
VERTICAL CURVE	SLIGHT UP/DOWNHILL GRADES
HORIZONTAL CURVE	NONE (bend on to Miracle Hill - EB)
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	GOOD
SIDEWALKS/DRIVEWAYS	YES / YES
STREET LIGHTING	YES
DRIVEWAY DENSITY	MEDIUM
OTHER	PARTIAL RAISED MEDIAN ISLAND -2 WAY LEFTS - SOLID DBL YELLOW

ADJACENT LAND USE	SMALL STORES & SHOPS (Palm-Mesquite) / RESIDENTIAL/ CHURCHES
RECOMMENDED SPEED LIMIT	35 MPH
SPEED LIMIT CHANGE	NO CHANGE

JUSTIFICATION:

The recommended 35 mph speed is 0.9 mph of the 85th percentile speed and meets CVC standards.

File: Pierson 2018-33

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

PIERSON BOULEVARD — PALM DR TO MIRACLE HILL RD

DATE: 9/7/2018 — SURVEY BY: C. BUENDIA

TIME: 12:10 PM - 12:45 PM — CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)		
60		100.0%	
59		100.0%	
58		100.0%	
57		100.0%	
56		100.0%	
55		100.0%	
54		100.0%	
53		100.0%	
52		100.0%	
51		100.0%	
50		100.0%	
49		100.0%	
48		100.0%	
47		100.0%	
46		100.0%	
45		100.0%	
44		100.0%	
43		100.0%	
42		100.0%	
41		100.0%	
40		100.0%	
39		100.0%	
38		98.7%	
37		95.3%	}PACE
36		86.0%	}PACE
35		77.3%	}PACE - - -85PCT
34		62.7%	}PACE
33		50.7%	}PACE
32		41.3%	}PACE - - - -MEAN
31		30.7%	}PACE
30		20.7%	}PACE
29		12.7%	}PACE - - -15PCT
28		6.7%	}PACE
27		2.7%	
26		0.7%	
25		0.0%	
24		0.0%	
23		0.0%	
22		0.0%	
21		0.0%	
20		0.0%	
19		0.0%	
18		0.0%	
17		0.0%	
16		0.0%	
15		0.0%	

UPPER LIMIT 10 MPH PACE:	37	MPH
LOWER LIMIT 10 MPH PACE:	28	MPH
PERCENT OVER PACE:	4.7	%
PERCENT IN PACE:	92.7	%
PERCENT UNDER PACE:	2.7	%

85th PERCENTILE SPEED:	35.9	MPH
MEDIAN SPEED:	32.9	MPH
15th PERCENTILE SPEED:	29.3	MPH

Pierson 2018-33

$SPD-HCI.dwg

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL, INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 123 Tustin CA 92680
(714) 731-9455

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: PIERSON BOULEVARD
LOCATION: PALM DR TO MIRACLE HILL RD

WEATHER: SUNNY
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 9-7-18
START TIME: 12:10 PM
END TIME: 12:45 PM

DIRECTION: WESTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		
59		
58		
57		
56		
55		
54		
53		
52		
51		
50		
49		
48		
47		
46		
45		
44		
43		
42		
41		
40		
39	/	1
38	///	3
37	///////	7
36	///////	8
35	///////////	12
34	///////////	9
33	///////////	8
32	///////////	10
31	///////////	8
30	///////	6
29	///////	5
28	///////	4
27	/	1
26		
25		
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

DIRECTION: EASTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL
60			
59			
58			
57			
56			
55			
54			
53			
52			
51			
50			
49			
48			
47			
46			
45			
44			
43			
42			
41			
40			
39	/	1	2
38	//	2	5
37	//////	7	14
36	/////	5	13
35	//////////	10	22
34	//////////	9	18
33	/////////	9	14
32	//////	6	16
31	//////	6	15
30	//////	6	12
29	////	4	9
28	//	2	6
27	//	2	3
26	/	1	1
25			
24			
23			
22			
21			
20			
19			
18			
17			
16			
15			

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

TWO BUNCH PALMS TRAIL — **LITTLE MORONGO RD TO WEST DR**

DATE: 9/13/2018 — SURVEY BY: C. BUENDIA

TIME: 11:45 AM - 12:20 PM — CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	EAST OF LIL MORONGO
DATE OF SURVEY	9/13/2018
85th PERCENTILE	47.9 MPH
10 MPH PACE	41 - 50 MPH
PERCENT IN PACE	78.1 %
POSTED SPEED LIMIT	35 / 45 MPH (WB) - 45 (EB)

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	0
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	3,750
LANE CONFIGURATION	1 LANE PER DIRECTION
TRAFFIC CONTROLS	STOP - LI'L MORONGO / WEST
CROSSWALKS	AT WEST
PEDESTRIAN/BICYCLES	NO / NO
TRUCK TRAFFIC	FEW
ON-STREET PARKING	YES
OTHER	

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	1.00
VERTICAL CURVE	SLIGHT UP/DOWNHILL GRADES
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	LIMITED SIGHT DISTANCE (at grades)
ROAD CONDITIONS	FAIR
SIDEWALKS/DRIVEWAYS	PARTIAL / FEW
STREET LIGHTING	YES
DRIVEWAY DENSITY	LIGHT
OTHER	NAROW + WIDE ROADWAY "SUBJECT TO FLOODING" SIGNS

ADJACENT LAND USE	INDUSTRIAL / BUSINESS / OPEN
RECOMMENDED SPEED LIMIT	45 MPH
SPEED LIMIT CHANGE	CONFLICTING SPEEDS - REMOVE 35 MPH

JUSTIFICATION:

This portion of Two Bunch Palms Trail is a two lane roadway. It has a conflicting speed limit signs posted westbound with 35 mph and 45 mph. Adjacent land uses are industrial and business. With the speed survey results showing an 85th percentile speed of 47.9 mph and a 10 mph pace range of 41 to 50 mph, it is recommended that the existing 45 mph be maintained and the 35 mph sign be removed westbound.

NOTE: This segment not in previous Speed Survey 2010

File: Two Bunch Palm 2018-34

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

TWO BUNCH PALMS TRAIL — LITTLE MORONGO RD TO WEST DR

DATE: 9/13/2018 — SURVEY BY: C. BUENDIA

TIME: 11:45 AM - 12:20 PM — CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)		
60		100.0%	
59		100.0%	
58		100.0%	
57		100.0%	
56		100.0%	
55		100.0%	
54		100.0%	
53		100.0%	
52		100.0%	
51		98.5%	
50		97.8%	}PACE
49		90.5%	}PACE
48		85.4%	}PACE
47		79.6%	}PACE ---85PCT
46		71.5%	}PACE
45		65.0%	}PACE
44		51.1%	}PACE
43		43.1%	}PACE ----MEAN
42		31.4%	}PACE
41		26.3%	}PACE
40		19.7%	
39		14.6%	---15PCT
38		11.7%	
37		8.0%	
36		6.6%	
35		5.1%	
34		3.6%	
33		3.6%	
32		2.9%	
31		2.2%	
30		1.5%	
29		0.0%	
28		0.0%	
27		0.0%	
26		0.0%	
25		0.0%	
24		0.0%	
23		0.0%	
22		0.0%	
21		0.0%	
20		0.0%	
19		0.0%	
18		0.0%	
17		0.0%	
16		0.0%	
15		0.0%	

UPPER LIMIT 10 MPH PACE:	50	MPH
LOWER LIMIT 10 MPH PACE:	41	MPH
PERCENT OVER PACE:	2.2	%
PERCENT IN PACE:	78.1	%
PERCENT UNDER PACE:	19.7	%

85th PERCENTILE SPEED:	47.9	MPH
MEDIAN SPEED:	43.9	MPH
15th PERCENTILE SPEED:	39.1	MPH

wo Bunch Palm 2018-34

$SPD-HCI.dwg

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122 Tustin CA. 92680
(714) 731-9455

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: TWO BUNCH PALMS TRAIL
LOCATION: LITTLE MORONGO RD TO WEST DR

WEATHER: SUNNY
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 9-13-18
START TIME: 11:45 AM
END TIME: 12:20 AM

DIRECTION: WESTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		
59		
58		
57		
56		
55		
54		
53		
52		
51	/	1
50	/ / / /	4
49	/	1
48	/ / / / / /	6
47	/ / / / / /	6
46	/ / / / / /	6
45	/ / / / / / / /	8
44	/ / / / /	5
43	/ / / / / / / /	8
42	/ / / /	4
41	/ / /	3
40	/ / / /	4
39	/ /	2
38	/	1
37		0
36	/	1
35	/	1
34		0
33		0
32	/	1
31		0
30	/	1
29		
28		
27		
26		
25		
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

DIRECTION: EASTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL
60			
59			
58			
57			
56			
55			
54			
53			
52	/ /	2	2
51		0	2
50	/ / / / /	8	10
49	/ / / / / /	6	16
48	/ /	2	18
47	/ / / / /	5	23
46	/ / / /	4	27
45	/ / / / / / / / / /	10	37
44	/ / / / / /	6	43
43	/ / / / / / /	8	51
42	/ / /	3	54
41	/ / / / / /	6	60
40	/ / /	3	63
39	/ /	2	65
38	/ / / /	4	69
37	/ /	2	71
36	/	1	72
35	/	1	73
34		0	73
33	/	1	74
32		0	74
31	/	1	75
30	/	1	76
29			
28			
27			
26			
25			
24			
23			
22			
21			
20			
19			
18			
17			
16			
15			

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

TWO BUNCH PALMS TRAIL — **WEST DR TO PALM DR**

DATE: 8/30/2018 — SURVEY BY: C. BUENDIA

TIME: 2:35 PM - 3:15 PM — CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	**WEST OF PALM**
DATE OF SURVEY	8/30/2018
85th PERCENTILE	41.0 MPH
10 MPH PACE	32 - 41 MPH
PERCENT IN PACE	81.4 %
POSTED SPEED LIMIT	40 MPH / *25 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	2
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	3,750
LANE CONFIGURATION	2 LANES PER DIRECTION
TRAFFIC CONTROLS	SIGNAL - PALM / STOP - CACTUS / WEST
CROSSWALKS	AT PALM / CACTUS (sch) / WEST (sch)
PEDESTRIAN/BICYCLES	FEW / NO
TRUCK TRAFFIC	NO
ON-STREET PARKING	NO
OTHER	BIKE ROUTE (WB)

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	0.50
VERTICAL CURVE	SLIGHT UP/DOWNHILL GRADES
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	GOOD
SIDEWALKS/DRIVEWAYS	YES / YES
STREET LIGHTING	YES
DRIVEWAY DENSITY	LIGHT
OTHER	WIDE ROADWAY / 2 WAY LEFT TURN CENTERLANE BUS STOPS

ADJACENT LAND USE	RESIDENTAIL (NF) / POST OFFICE / COMMERCIAL (at Palm) / SCHOOL
RECOMMENDED SPEED LIMIT	40 MPH
SPEED LIMIT CHANGE	NO CHANGE

JUSTIFICATION:

The recommended 40 mph speed limit is within 1.0 mph of the 85th percentile speed and meets CVC standards.

*25 MPH When Children Present, School Zone

NF = Non-Fronting

File: Two Bunch Palm 2018-35

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

TWO BUNCH PALMS TRAIL — WEST DR TO PALM DR

DATE: 8/30/2018 — SURVEY BY: C. BUENDIA

TIME: 2:35 PM - 3:15 PM — CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)		
60	X	100.0%	
59	X	100.0%	
58	X	100.0%	
57	X	100.0%	
56	X	100.0%	
55	X	100.0%	
54	X	100.0%	
53	X	100.0%	
52	X	100.0%	
51	X	100.0%	
50	X	100.0%	
49	X	100.0%	
48	X	100.0%	
47	X	100.0%	
46	X	100.0%	
45	X	98.8%	
44	X	97.1%	
43	X	92.4%	
42	X	87.8%	
41	X	84.9%	}PACE - - -85PCT
40	X	79.1%	}PACE
39	X	69.8%	}PACE
38	X	61.0%	}PACE
37	X	52.3%	}PACE
36	X	43.0%	}PACE - - - -MEAN
35	X	33.7%	}PACE
34	X	23.8%	}PACE
33	X	15.1%	}PACE
32	X	8.1%	}PACE - - -15PCT
31	X	3.5%	
30	X	2.3%	
29	X	0.0%	
28	X	0.0%	
27	X	0.0%	
26	X	0.0%	
25	X	0.0%	
24	X	0.0%	
23	X	0.0%	
22	X	0.0%	
21	X	0.0%	
20	X	0.0%	
19	X	0.0%	
18	X	0.0%	
17	X	0.0%	
16	X	0.0%	
15	X	0.0%	

UPPER LIMIT 10 MPH PACE:	41	MPH
LOWER LIMIT 10 MPH PACE:	32	MPH
PERCENT OVER PACE:	15.1	%
PERCENT IN PACE:	81.4	%
PERCENT UNDER PACE:	3.5	%

85th PERCENTILE SPEED:	41.0	MPH
MEDIAN SPEED:	36.8	MPH
15th PERCENTILE SPEED:	33.0	MPH

Two Bunch Palm 2018-35

$SPD-HCI.dwg

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 132 Tustin CA 92680
(714) 731-9455

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: TWO BUNCH PALMS TRAIL
LOCATION: WEST DR TO PALM DR

WEATHER: SUNNY
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 8-30-18
START TIME: 2:35 PM
END TIME: 3:15 PM

DIRECTION: WESTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		
59		
58		
57		
56		
55		
54		
53		
52		
51		
50		
49		
48		
47		
46		
45	/	1
44	////	4
43	//	2
42	//	2
41	///	3
40	//////	6
39	//////	6
38	//////	6
37	//////	6
36	//////	5
35	//////	6
34	//////	7
33	//////	6
32	//////	6
31	/	5
30	///	3
29		
28		
27		
26		
25		
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

DIRECTION: EASTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL
60			
59			
58			
57			
56			
55			
54			
53			
52			
51			
50			
49			
48			
47			
46	//	2	2
45	//	2	3
44	////	4	8
43	/////	6	8
42	////	3	5
41	//////	7	10
40	//////////	10	16
39	//////	6	15
38	//////	7	15
37	//////////	11	16
36	//////	5	16
35	//////////	10	17
34	//////	7	15
33	////	4	12
32	///	3	8
31		0	2
30	/	1	4
29			
28			
27			
26			
25			
24			
23			
22			
21			
20			
19			
18			
17			
16			
15			

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

TWO BUNCH PALMS TRAIL — **PALM DR TO MIRACLE HILL RD**

DATE: 8/30/2018 — SURVEY BY: C. BUENDIA

TIME: 1:50 AM - 2:30 AM — CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	WEST OF VERBENA
DATE OF SURVEY	8/30/2018
85th PERCENTILE	39.7 MPH
10 MPH PACE	31 - 40 MPH
PERCENT IN PACE	80.0 %
POSTED SPEED LIMIT	35 MPH (EB) / *25 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	3
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	3,300
LANE CONFIGURATION	1 LANE PER DIRECTION
TRAFFIC CONTROLS	SIGNAL - PALM / STOP - OCOTILLO w/FLASHING BEACON
CROSSWALKS	AT PALM / OCOTILLO (sch)
PEDESTRIAN/BICYCLES	YES / YES
TRUCK TRAFFIC	NO
ON-STREET PARKING	YES
OTHER	BUS STOPS / BIKE LANES ON-STREET PARKING HEAVY AT SCHOOL RELEASE

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	1.07
VERTICAL CURVE	GRADUAL UP/DOWNHILL GRADES (DIP AT MARK DR)
HORIZONTAL CURVE	SWEEPING "S" EAST OF VERBENA
LATERAL VISIBILITY	LIMITED SIGHT DISTANCE (east of Verbena)
ROAD CONDITIONS	GOOD
SIDEWALKS/DRIVEWAYS	YES / YES
STREET LIGHTING	NO
DRIVEWAY DENSITY	LIGHT
OTHER	WIDE ROADWAY SOLID DBL YELLOW CENTERLINE

ADJACENT LAND USE	RESIDENTIAL / MIDDLE SCHOOL / RESORT-SPA / OPEN / COMMERCIAL (at Palm)
RECOMMENDED SPEED LIMIT	35 MPH
SPEED LIMIT CHANGE	NO CHANGE - POST WESTBOUND

JUSTIFICATION:

This section of Two Bunch Palms Trail is a two lane roadway. The adjacent land uses are residential, a middle school , a resort spa and commercial. The roadway has slight up-down grades with a dip at Mark Drive and a sweeping "S" curve east of Verbena Drive. With the speed data showing an 85th percentile speed of 39.7 mph, it is recommended that the existing 35 mph speed limit remain. For enforcement, a 35 mph speed sign should be posted for the westbound direction west of Miracle Hill Road.

*25 MPH When Children Present, School Zone

File: Two Bunch Palm 2018-36

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

TWO BUNCH PALMS TRAIL — PALM DR TO MIRACLE HILL RD

DATE: 8/30/2018 — SURVEY BY: C. BUENDIA

TIME: 1:50 AM - 2:30 AM — CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)		
60		100.0%	
59		100.0%	
58		100.0%	
57		100.0%	
56		100.0%	
55		100.0%	
54		100.0%	
53		100.0%	
52		100.0%	
51		100.0%	
50		100.0%	
49		100.0%	
48		100.0%	
47		100.0%	
46		100.0%	
45		100.0%	
44		100.0%	
43		97.9%	
42		94.5%	
41		90.3%	
40		86.9%	}PACE
39		80.0%	}PACE - - -85PCT
38		76.6%	}PACE
37		73.8%	}PACE
36		64.1%	}PACE
35		54.5%	}PACE
34		40.0%	}PACE - - - -MEAN
33		29.7%	}PACE
32		24.1%	}PACE
31		13.8%	}PACE - - -15PCT
30		6.9%	
29		4.1%	
28		2.1%	
27		1.4%	
26		0.0%	
25		0.0%	
24		0.0%	
23		0.0%	
22		0.0%	
21		0.0%	
20		0.0%	
19		0.0%	
18		0.0%	
17		0.0%	
16		0.0%	
15		0.0%	

UPPER LIMIT 10 MPH PACE:	40	MPH
LOWER LIMIT 10 MPH PACE:	31	MPH
PERCENT OVER PACE:	13.1	%
PERCENT IN PACE:	80.0	%
PERCENT UNDER PACE:	6.9	%

85th PERCENTILE SPEED:	39.7	MPH
MEDIAN SPEED:	34.7	MPH
15th PERCENTILE SPEED:	31.1	MPH

Two Bunch Palm 2018-36

$SPD-HCI.dwg

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122 Tustin CA. 92680
(714) 731-9455

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: TWO BUNCH PALMS TRAIL
LOCATION: PALM DR TO MIRACLE HILL RD

WEATHER: SUNNY
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 8-30-18
START TIME: 1:50 PM
END TIME: 2:30 PM VCAL

DIRECTION: WESTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		
59		
58		
57		
56		
55		
54		
53		
52		
51		
50		
49		
48		
47		
46		
45		
44		3
43		4
42		4
41		3
40		5
39		2
38		1
37		7
36		7
35		11
34		9
33		4
32		9
31		4
30		3
29		2
28		0
27		1
26		
25		
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

DIRECTION: EASTBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL	MPH
60				60
59				59
58				58
57				57
56				56
55				55
54				54
53				53
52				52
51				51
50				50
49				49
48				48
47				47
46				46
45				45
44			3	44
43		1	5	43
42		2	12	42
41		2	5	41
40		5	10	40
39		3	5	39
38		3	4	38
37		7	14	37
36		7	14	36
35		10	21	35
34		6	15	34
33		4	8	33
32		6	15	32
31		6	10	31
30		1	4	30
29		1	3	29
28		1	1	28
27		1	2	27
26				26
25				25
24				24
23				23
22				22
21				21
20				20
19				19
18				18
17				17
16				16
15				15

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

WEST DRIVE — **MISSION LAKES BL TO PIERSON BL**

DATE: 9/7/2018 — SURVEY BY: C. BUENDIA

TIME: 10:20 AM - 10:50 AM — CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	SOUTH OF 6TH ST
DATE OF SURVEY	9/7/2018
85th PERCENTILE	35.6 MPH
10 MPH PACE	28 - 37 MPH
PERCENT IN PACE	87.0 %
POSTED SPEED LIMIT	30 MPH / *25 MPH

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	0
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	3,750
LANE CONFIGURATION	1 LANE PER DIRECTION
TRAFFIC CONTROLS	SIGNAL - PIERSON / STOP - 4TH (FLASHING BEACON) / 8TH / MISSION LAKES
CROSSWALKS	AT PIERSON / 2ND (sch) / 3RD (sch) / 4TH (sch) / MISSION LAKES
PEDESTRIAN/BICYCLES	YES / YES
TRUCK TRAFFIC	NO
ON-STREET PARKING	NO PARKING ANYTIME
OTHER	BUS STOPS DESIGNATED BIKE LANES

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	1.01
VERTICAL CURVE	SLIGHT - GRADUAL UP/DOWNHILL GRADES
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	LIMITED SIGHT DISTANCE (areas of)
ROAD CONDITIONS	FAIR
SIDEWALKS/DRIVEWAYS	YES / YES
STREET LIGHTING	YES
DRIVEWAY DENSITY	MEDIUM
OTHER	SOLID DBL YELLOW CENTERLINE MANY CROSS STREETS

ADJACENT LAND USE	RESIDENTIAL (NF) / WENZLAFF ELEM SCH / LIBRARY / SKATE PARK / PRE SCH
RECOMMENDED SPEED LIMIT	30 MPH
SPEED LIMIT CHANGE	NO CHANGE

JUSTIFICATION:

This portion of West Drive is a two lane roadway. The current speed limit is 30 mph with a 25 mph speed when children present in the school zone. Field observations include many crosswalks near elementary school, heavy school age pedestrian and bicycle traffic, heavy cross streets, no parking anytime, painted bike lanes, slight to gradual up and downhill grades, areas of limited sight distance at grades, and a steep dip at 8th Street. Although the speed data may suggest a higher speed but with the characteristics of area and areas of limited sight distance due to the roadway grades and dips, it is recommended that the existing 30 mph speed limit be maintained.

*25 MPH When Children Present, School Zone

NF = non-fronting to roadway

File: West 2018-37

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

WEST DRIVE — MISSION LAKES BL TO PIERSON BL

DATE: 9/7/2018 — SURVEY BY: C. BUENDIA

TIME: 10:20 AM - 10:50 AM — CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)		
60		100.0%	
59		100.0%	
58		100.0%	
57		100.0%	
56		100.0%	
55		100.0%	
54		100.0%	
53		100.0%	
52		100.0%	
51		100.0%	
50		100.0%	
49		100.0%	
48		100.0%	
47		100.0%	
46		100.0%	
45		100.0%	
44		100.0%	
43		100.0%	
42		100.0%	
41		100.0%	
40		100.0%	
39		100.0%	
38		97.8%	
37		94.2%	}PACE
36		88.4%	}PACE
35		79.0%	}PACE - - -85PCT
34		73.2%	}PACE
33		67.4%	}PACE
32		57.2%	}PACE
31		42.8%	}PACE - - - -MEAN
30		32.6%	}PACE
29		21.7%	}PACE
28		13.8%	}PACE - - -15PCT
27		7.2%	
26		4.3%	
25		2.2%	
24		0.0%	
23		0.0%	
22		0.0%	
21		0.0%	
20		0.0%	
19		0.0%	
18		0.0%	
17		0.0%	
16		0.0%	
15		0.0%	

UPPER LIMIT 10 MPH PACE:	37	MPH
LOWER LIMIT 10 MPH PACE:	28	MPH
PERCENT OVER PACE:	5.8	%
PERCENT IN PACE:	87.0	%
PERCENT UNDER PACE:	7.2	%

85th PERCENTILE SPEED:	35.6	MPH
MEDIAN SPEED:	31.5	MPH
15th PERCENTILE SPEED:	28.2	MPH

West 2018-37

$SPD-HCI.dwg

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122 Tustin CA 92680
(714) 731-9455

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: WEST DRIVE
LOCATION: MISSION LAKES BL TO PIERSON BL

WEATHER: SUNNY
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 9-7-18
START TIME: 10:20 AM
END TIME: 10:50 AM VMC

DIRECTION: SOUTHBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		
59		
58		
57		
56		
55		
54		
53		
52		
51		
50		
49		
48		
47		
46		
45		
44		
43		
42		
41		
40		
39		3
38		3
37		5
36		6
35		4
34		5
33		7
32		10
31		8
30		8
29		6
28		5
27		2
26		
25		1
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

DIRECTION: NORTHBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL	MPH
60				60
59				59
58				58
57				57
56				56
55				55
54				54
53				53
52				52
51				51
50				50
49				49
48				48
47				47
46				46
45				45
44				44
43				43
42				42
41				41
40				40
39			3	39
38		2	5	38
37		3	8	37
36		7	13	36
35		4	8	35
34		3	8	34
33		7	14	33
32		10	20	32
31		6	14	31
30		7	15	30
29		5	11	29
28		4	9	28
27		2	4	27
26		2	3	26
25		2	3	25
24				24
23				23
22				22
21				21
20				20
19				19
18				18
17				17
16				16
15				15

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

ENGINEERING AND TRAFFIC SURVEY

CITY OF DESERT HOT SPRINGS

HCI

WEST DRIVE — **PIERSON BL TO TWO BUNCH PALMS TRAIL**

DATE: 9/6/2018 — SURVEY BY: C. BUENDIA

TIME: 12:45 PM - 1:30 PM — CHECKED BY: JERRY STOCK

PREVAILING SPEED DATA	
LOCATION OF SURVEY	SOUTH OF PIERSON
DATE OF SURVEY	9/6/2018
85th PERCENTILE	38.3 MPH
10 MPH PACE	32 - 41 MPH
PERCENT IN PACE	89.1 %
POSTED SPEED LIMIT	35 MPH / 25 MPH*

ACCIDENT HISTORY	
NO. OF MONTHS OBSERVED	24
SPEED-RELATED ACCIDENTS	0
TOTAL ACCIDENTS	3
ANNUAL ACCIDENT RATE	0.00 ACCIDENTS PER YEAR (SPEED RELATED ONLY)
ACC./MILLION VEH. MILES	0.00 ACCIDENTS PER MVM (SPEED RELATED ONLY)

TRAFFIC FACTORS	
AVERAGE DAILY TRAFFIC	3,300
LANE CONFIGURATION	1 LANE PER DIRECTION
TRAFFIC CONTROLS	SIGNAL - PIERSON / STOP - TWO BUNCH PALMS / IRONWOOD / HACIENDA
CROSSWALKS	AT PIERSON /TWO BUNCH PALMS (sch) / IRONWOOD (sch) / HACIENDA
PEDESTRIAN/BICYCLES	FEW / FEW
TRUCK TRAFFIC	NO
ON-STREET PARKING	YES
OTHER	BUS STOPS BIKE ROUTE

ROADWAY FACTORS	
LENGTH OF SEGMENT (MILES)	1.01
VERTICAL CURVE	SLIGHT UP/DOWNHILL GRADES
HORIZONTAL CURVE	NONE
LATERAL VISIBILITY	GOOD
ROAD CONDITIONS	GOOD
SIDEWALKS/DRIVEWAYS	YES / YES
STREET LIGHTING	YES
DRIVEWAY DENSITY	HEAVY
OTHER	"DO NOT PASS" SIGNS POSTED ALONG ROADWAY SOLID DBL YELLOW CENTERLINE

ADJACENT LAND USE	RESIDENTIAL (facing) / CHURCH

RECOMMENDED SPEED LIMIT	35 MPH

SPEED LIMIT CHANGE	NO CHANGE

JUSTIFICATION:

The recommended 35 mph speed limit is within 3.3 mph of the 85th percentile speed and meets CVC standards.

*25 MPH When Children Present, School Zone

File: West 2018-38

RADAR SPEED DISTRIBUTION SHEET

HCI

CITY OF DESERT HOT SPRINGS

WEST DRIVE — PIERSON BL TO TWO BUNCH PALMS TRAIL

DATE: 9/6/2018 — SURVEY BY: C. BUENDIA

TIME: 12:45 PM - 1:30 PM — CHECKED BY: JERRY STOCK

SPEED	CUMMULATIVE PERCENT (20 / 40 / 60 / 80 / 100)		
60		100.0%	
59		100.0%	
58		100.0%	
57		100.0%	
56		100.0%	
55		100.0%	
54		100.0%	
53		100.0%	
52		100.0%	
51		100.0%	
50		100.0%	
49		100.0%	
48		100.0%	
47		100.0%	
46		100.0%	
45		100.0%	
44		100.0%	
43		100.0%	
42		98.4%	
41		96.1%	}PACE
40		93.0%	}PACE
39		89.9%	}PACE
38		82.9%	}PACE - - -85PCT
37		71.3%	}PACE
36		58.1%	}PACE
35		45.7%	}PACE - - - -MEAN
34		31.0%	}PACE
33		17.8%	}PACE
32		10.9%	}PACE - - -15PCT
31		7.0%	
30		5.4%	
29		3.1%	
28		1.6%	
27		0.0%	
26		0.0%	
25		0.0%	
24		0.0%	
23		0.0%	
22		0.0%	
21		0.0%	
20		0.0%	
19		0.0%	
18		0.0%	
17		0.0%	
16		0.0%	
15		0.0%	

UPPER LIMIT 10 MPH PACE:	41	MPH
LOWER LIMIT 10 MPH PACE:	32	MPH
PERCENT OVER PACE:	3.9	%
PERCENT IN PACE:	89.1	%
PERCENT UNDER PACE:	7.0	%

85th PERCENTILE SPEED:	38.3	MPH
MEDIAN SPEED:	35.3	MPH
15th PERCENTILE SPEED:	32.6	MPH

West 2018-38

$SPD-HCI.dwg

Radar Speed Survey Field Sheet

HARTZOG AND CRABILL INC.
Consulting Traffic Engineers
17592 Irvine Blvd., Suite 122 Tustin CA. 92680
(714) 731-9455

AGENCY: CITY OF DESERT HOT SPRINGS
STREET: WEST DRIVE
LOCATION: PIERSON BL TO TWO BUNCH PALMS TRAIL

WEATHER: SUNNY
ROAD CONDITION: DRY
OBSERVER: CATHY BUENDIA

DATE: 9-6-18
START TIME: 12:45 PM
END TIME: 1:30 PM

DIRECTION: SOUTHBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL
60		
59		
58		
57		
56		
55		
54		
53		
52		
51		
50		
49		
48		
47		
46		
45		
44		
43	//	2
42	//	2
41	////	4
40	///	3
39	////	4
38	//////	6
37	//////	6
36	//////	6
35	//////	6
34	//////	7
33	////	4
32	///	3
31	/	1
30	/	1
29	//	2
28	/	1
27		
26		
25		
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

CUMULATIVE (BOTH DIRECTIONS) _____

DIRECTION: NORTHBOUND

MPH	NUMBER OF VEHICLES (5, 10, 15, 20, 25, 30)	TOTAL	CUMULATIVE TOTAL
60			
59			
58			
57			
56			
55			
54			
53			
52			
51			
50			
49			
48			
47			
46			
45			
44			
43			2
42	/	1	3
41		0	4
40	/	1	4
39	////	5	9
38	////////	9	15
37	////////	10	15
36	////////	7	17
35	////////	12	16
34	////////	10	19
33	////	5	17
32	//	2	9
31	/	1	5
30	//	2	2
29		0	2
28	/	1	2
27			
26			
25			
24			
23			
22			
21			
20			
19			
18			
17			
16			
15			

AVERAGE SPEED: _____ CRITICAL SPEED: _____ PACE SPEED: _____

APPENDIX B

RHF Inc.
Radar Repair

TRAFFIC RADAR CERTIFICATION

TESTED TO NHTSA SPECIFICATIONS / IACP CRITICAL PERFORMANCE STANDARDS
(NHTSA) National Highway and Traffic Safety Administration.
(IACP) International Association of Chiefs of Police.

16202 Keats Circle
Westminster, Calif. 92683

R.H.F. is a certified independent testing and repair facility.

1	TEST ID	Date Received 7-23-18	Certification Number 73150				
2	DEVICE ID	Make **Applied Concepts**	Model **Stalker-Dual SL or ~~DSR~~**	Type (1-IV) **IV**	Directional radar ☐ Yes ☒ No	Same direction ☒ Yes ☐ No	
		Counting unit S/N 040482	Antenna-1 S/N 026727		Antenna-2 S/N 033539		
3	§ 2.4 / § 5.4 TUNING FORK CALIBRATION	Low speed fork S/N 248728	Last date calib.	Freq. (Hz)	Speed (mph) 40	Measured (Hz) 2609	PASS / FAIL
		High speed fork S/N 400111	Last date calib.	Freq. (Hz)	Speed (mph) 55	Measured (Hz) 5717	
4	§ 2.5 / § 5.5 RADAR DEVICE TUNING FORK TESTS			Lo fork	High fork	PASS / FAIL	
		Stationary mode	Fork speed (mph)	25	40		
			Disp. Speed (mph)	25	40		
		Moving mode Opposite Direction	TARGET SPEED (Hi fork – Lo fork)	Expected. (mph) 15	Displayed. (mph) 15		
		Moving mode Same Direction	TARGET SPEED Hi fork + Lo fork Hi fork - Lo fork	Expected. (mph) 65 15	Displayed. (mph) 65 15		
5	§ 2.6.1. / § 5.6.1 TRANSMISSION FREQUENCY STABILITY	Standard supply Voltage (V) **13.6 V**	Antenna 1 Freq. GHz 34.712	Antenna 2 Freq. GHz 34.715	PASS / FAIL		
		Standard supply Voltage – 20% (V) **10.8 V**	Antenna 1 Freq. GHz 34.712	Antenna 2 Freq. GHz 34.715			
		Standard supply voltage + 20% (V) **16.3 V**	Antenna 1 Freq. GHz 34.712	Antenna 2 Freq. GHz N/A 34.715			
6	§ 2.6.5 / § 5.6.5 POWER DENSITY	Mfg. Spec. (max mW/cm) **≤ 2**	Antenna 1 Power (mW/cm) .54	Antenna 2 Power (mW/cm) .40	PASS / FAIL		
7	§ 2.8 / § 5.8 LOW VOLTAGE	Mfg. spec. (V) **≤ 10.8**	LVA activates (V) 8.3 V	LVA deactivates (V) 9.4 V	PASS / FAIL		
8	§ 2.9.1 / § 5.9.1 DOPPLER AUDIO	A. Audio tone correlates with received Doppler signal		☒ Yes ☐ No	PASS / FAIL		
		B. Functioning audio volume-adjustment control		☒ Yes ☐ No			
9	§ 2.12.4 / § 5.12.4 INTERNAL CIRCUIT	Mfg. Spec. **PASS**	Test results PASS		PASS / FAIL		
10	§ 2.12.6.5 / § 5.12.6.5 DIRECTIONAL	A. Selects only targets moving towards radar		☐ Yes ☐ No ☒ N.A.	PASS / FAIL		
		B. Selects only targets moving away from radar		☐ Yes ☐ No ☒ N.A.			
11	§ 2.12.7 / § 2.12.8 / 5.12.7 / 5.12.8 LOW AND HIGH SPEED DISPLAY TEST	Stationary mode: target channel (mph)	Low speed spec. **12**	Lo speed disp. 12	PASS / FAIL		
			Hi speed spec. **200**	Hi speed disp. 200			
		Moving Mode target channel (mph)	Low speed spec. **20**	Lo speed disp. 20			
			Hi speed spec. **200(C)**	Hi speed disp. 200			
		Moving Mode: patrol channel (mph)	Low speed spec. **15**	Lo speed disp. 15			
			Hi speed spec. **79**	Hi speed disp. 79			
12	§ 2.13 / § 5.13 RFI TEST				PASS / FAIL		
13	LABORATORY COMMENTS						
14	NHTSA/IACP CERTIFICATION	***This radar device meets or exceeds the minimal operational standards of the National Traffic Highway Safety Administration. California Vehicle Code Section 40802*** ☒ **PASS** ☐ **FAIL**					
		Certified by: Robert Friesen		**Date:** 7-23-2018			
15	INVENTORY	☒ Fork Cert ☒ Manual ☒ 2nd Ant. ☒ Remote ☐ Battery ☐ Carrying Case ☐ Other: (please list)					

Radar Certification

Certificate of Completion and Competency
DOPPLER RADAR OPERATION

Name & Title: Cathy Buendia
Technician

Department: Transportation

has successfully completed a course of instruction in the operation of Moving Car and Stationary Doppler Radar and is deemed competent to utilize the same Doppler Radar to determine the velocity of motor vehicles.

7/23/91
Date

Instructor

Subsidiaries of MPD, Inc.

316 East Ninth Street
Owensboro, KY 42301
(502) 685-6200