

# COUNTY EMERGENCY MEDICAL SERVICES

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**2013 AUIR SUMMARY**  
**EMERGENCY MEDICAL SERVICES**  
**FACILITIES**

**Facility Type:** Emergency Medical Services (Category B)

**Level of Service Standard (LOSS):** Approximately 1 unit (vehicle, equipment, station space) per 16,400/population, or 0.000061/capita <sup>(1)</sup>

The Advanced Life Support (ALS) response time goal is 8 minutes travel time 90% of the time (urban) and 12 minutes travel time 90% of the time (rural).

**Unit Cost:** \$1,748,576 per new vehicle & equipment, and \$1,063,451 per new co-located vehicle & equipment <sup>(2)</sup>

Using the Countywide Peak Season population, the following is set forth:

|                                       | <u>Units</u> | <u>Value/Cost</u>                  |
|---------------------------------------|--------------|------------------------------------|
| Available Inventory 9/30/13           | 24.5         | \$21,282,008 <sup>(3)</sup>        |
| Required Inventory 9/30/18            | 27.2         | \$25,325,892                       |
| Proposed AUIR FY 2013/14 – FY 2017/18 | <u>2.0</u>   | <u>\$ 2,744,256 <sup>(4)</sup></u> |
| 5-Year Surplus or (Deficit)           | (0.7)        | (\$ 1,048,415)                     |

Options

|                                                    | <u>Station<br/>Construction</u> | <u>Add Ambulance<br/>&amp; Equipment</u> |
|----------------------------------------------------|---------------------------------|------------------------------------------|
| <b><u>Expenditures</u></b>                         |                                 |                                          |
| Debt Service Payments for 2013 Bond                | \$ 600,070                      | \$ 600,070                               |
| Debt Service Payments for 2010 & 2011 Bonds        | \$ 1,851,085                    | \$ 1,851,085                             |
| Proposed AUIR FY 2013/14 – FY 2017/18 Acquisitions | \$ 2,660,411                    | \$ 495,640                               |
| <b>Total Expenditures</b>                          | <b>\$ 5,111,566</b>             | <b>\$ 2,946,795</b>                      |

**Revenues**

|                                                  |                               |                             |
|--------------------------------------------------|-------------------------------|-----------------------------|
| Impact Fees                                      | \$ 997,499                    | \$ 997,499                  |
| Interest/Misc.                                   | \$ 7,000                      | \$ 7,000                    |
| Carry Forward (Unspent Cash as of 9/30/13)       | \$ 200,600                    | \$ 200,600                  |
| Loan from Countywide Capital Projects (Gen Fund) | \$ <u>1,246,056</u>           | \$ <u>1,246,056</u>         |
| <b>Total Revenues</b>                            | <b>\$ <u>2,451,155</u></b>    | <b>\$ <u>2,451,155</u></b>  |
| Surplus or (Deficit) Revenues                    | (\$ 2,660,411) <sup>(5)</sup> | (\$ 495,640) <sup>(5)</sup> |
| Additional Revenues Required or LOSS Reduction   | \$ 2,660,411 <sup>(5)</sup>   | \$ 495,640 <sup>(5)</sup>   |

**Recommendation:**

That the CCPC forward a recommendation of approval to the BCC for the proposed "Emergency Medical Services AUIR for FY 2013/14 – FY 2017/18" capital improvement projects.

*Notes:*

While an ambulance and equipment is shown as an option above, this method was field tested for six months and it was determined that there was minimal improvement to the targeted zone, while the adjacent zones experienced significant adverse impact. The challenge being there is no near station to the target zone.

*(1) The LOSS was changed from 1/15,000 population to 1/16,400 population along with the ALS response time goal of 8 minutes travel time countywide to 8 minutes travel time 90% of the time urban and 12 minutes travel time 89% of the time rural. These changes were approved by the BCC on 11/5/07 at the 2007 AUIR. The FY 11/12 response time data reflected that this goal was accomplished 90% of the time urban and 89% of the time rural.*

*The on-scene time goal for med flight is 15 minutes 85% of the time. FY 12/13 data indicates this objective was achieved 88% of the time and the goal of 100% of completed flights without a safety issue (mechanical or operational) was met 100% of the time. These statistics, of course, are applicable to those times when med flight is in service.*

*A LOSS of .000029 units per capita or 1 unit/34,652 population is the Impact Fee Study level of service and the basis for the collection of impact fees, which is based on only the EMS stations owned by the County.*

*(2) Emergency Medical Services Department Unit Values*

*(1.0) Unit = 24 hour advance life support emergency ground transport apparatus with station/building.*

*(0.5) Unit = 12 hour advanced life support emergency ground transport apparatus using existing ambulance, staffed with overtime personnel.*

*(3) Calculated based 7 owned stations, 4 co-located stations and on 13.5 units equipment only.*

*(4) Calculated based on construction and equipment costs only for station at Vanderbilt/Logan and station in East Naples (location TBD). Land has already been purchased or has been committed by developer.*

*(5) Sources of funding for revenue deficit could include a loan from the General Fund, additional user fee categories, reduction of service level, or other sources not yet identified.*

While peak population indicates a requirement of an additional unit in the fiscal years 2015-16, and 2017-18, response times indicate an immediate need for both of these zones. As indicated above and on the Response Percent Comparison, a six month test resulted in a 1% improvement for one zone, but a 3% - 20% reduction in bordering zones. Additionally, another zones' response times are also well below target, however an ALS Agreement is pending with East Naples Fire Department and that impact on response times will be measured to determine positioning of an additional unit for the FY 17-18 proposed station. Should the Board decide to escalate the addition of the Vanderbilt/Logan location, it is anticipated that the capital to construct and order ambulance and equipment would be necessary in FY14-15 and that unit would be fully functional by FY15-16, when staff would be added.

There are numerous circumstances which may affect response times. For example:

- Call location
- Travel times to and from rural/remote locations
- Treatment times
- Call volume
- Concurrent calls
- Treatment times
- Hospital “off load” times
- Road construction
- Traffic
- Weather
- Restocking supplies

2013 AUIR  
(Peak Season)

EMS UNITS

LOSS: 1 Unit / 16,400 Population (0.000061)

LOSS of 1 Unit/16,400 Population reflects an 8 minute response time for Urban and 12 minute for Rural and factors in ALS Engine response.

| FISCAL YEAR                      | POPULATION CO-WIDE | EMS UNITS REQUIRED 0.000061 | EMS UNITS PLANNED AUIR | EMS UNITS AVAILABLE** | SURPLUS/ (DEFICIENCY) | VALUE OR (COST) SURPLUS/(DEFICIENCY)* |
|----------------------------------|--------------------|-----------------------------|------------------------|-----------------------|-----------------------|---------------------------------------|
| 2012-13                          | 405,876            | 25.2                        | 0                      | 24.5                  | (0.7)                 | (\$1,048,415)                         |
| 2013-14                          | 412,713            | 25.6                        | 0                      | 24.5                  | (1.1)                 | (\$1,647,509)                         |
| 2014-15                          | 420,355            | 25.6                        | 1                      | 25.5                  | (0.1)                 | (\$149,774)                           |
| 2015-16                          | 428,831            | 26.2                        | 0                      | 25.5                  | (0.7)                 | (\$1,048,415)                         |
| 2016-17                          | 437,477            | 26.7                        | 1                      | 26.5                  | (0.2)                 | (\$299,547)                           |
| 2017-18                          | 446,297            | 27.2                        | 0                      | 26.5                  | (0.7)                 | (\$1,048,415)                         |
| 1st 5-Year Growth (2014-2018)    | 40,421             | 2.0                         | 2                      |                       |                       |                                       |
| 2018-19                          | 455,296            | 27.8                        | 1                      | 27.5                  | (0.3)                 | (\$449,321)                           |
| 2019-20                          | 463,782            | 28.3                        | 0                      | 27.5                  | (0.8)                 | (\$1,198,188)                         |
| 2020-21                          | 471,735            | 28.8                        | 1                      | 28.5                  | (0.3)                 | (\$449,321)                           |
| 2021-22                          | 479,824            | 29.3                        | 0                      | 28.5                  | (0.8)                 | (\$1,198,188)                         |
| 2022-23                          | 488,051            | 29.8                        | 1                      | 29.5                  | (0.3)                 | (\$449,321)                           |
| 2nd 5-Year Growth (2019-2023)    | 41,754             | 2.6                         | 3                      |                       |                       |                                       |
| Total 10-Year Growth (2014-2023) | 82,175             | 4.6                         | 5                      |                       |                       |                                       |

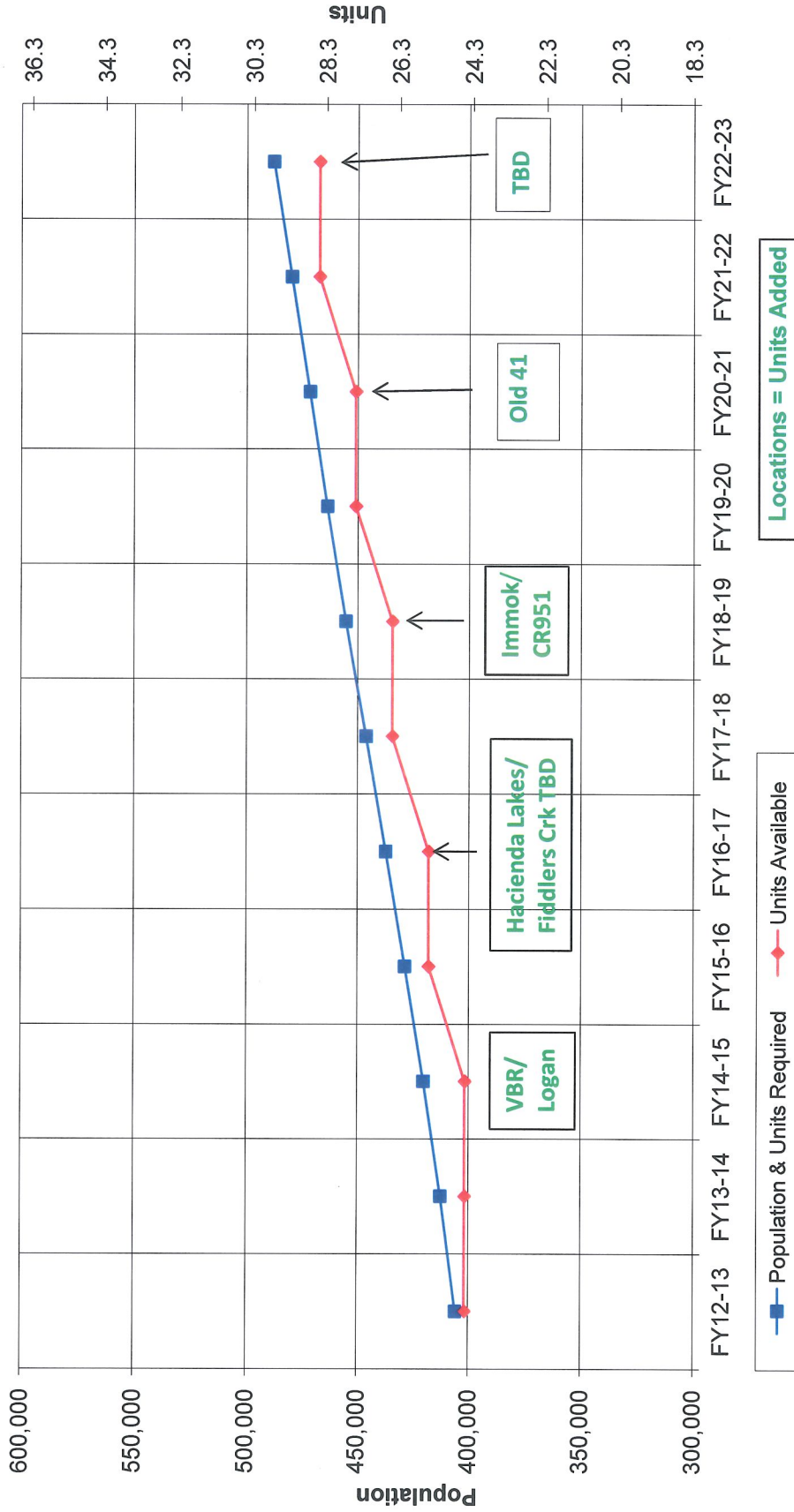
\*It has not yet been determined which units will be owned and which will be co-located. Therefore, the values above represent a blended cost of owned and co-located units at a rate of two-thirds owned (\$1,722,735) and one-third co-located (\$1,047,735), which equals \$1,497,735.

Deficiencies are based on peak season population and do not reflect actual response time deficiencies.

# 2012-2013 AUIR Emergency Medical Services

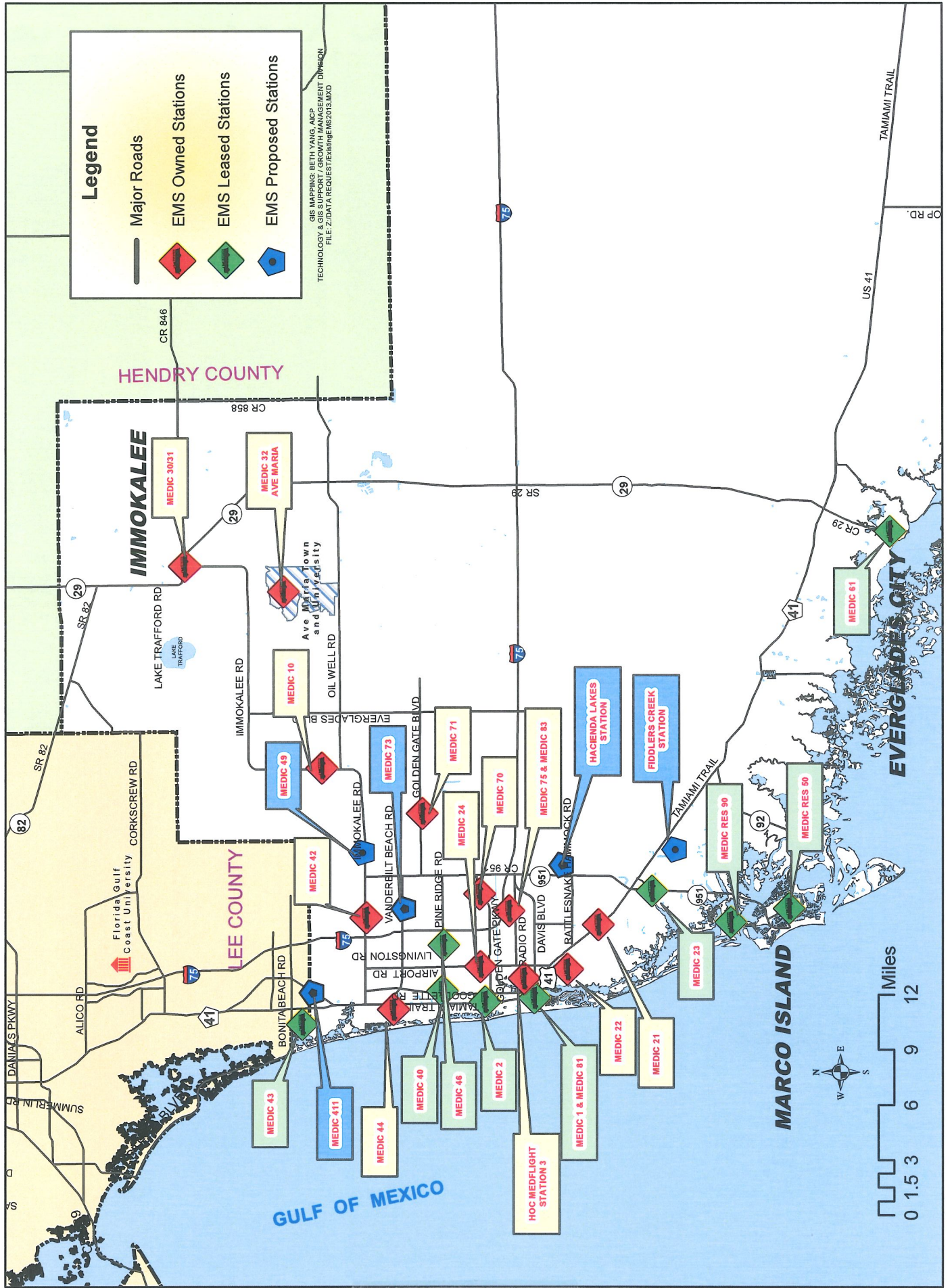
(Peak Season)

LOSS: 0.000061 Units / Capita



Proposed timing of new units based on Peak Population and do not necessarily reflect existing response time deficiencies.

# 2013 EMS STATIONS - EXISTING, LEASED, PLANNED AND PROPOSED INVENTORY



## 2013 EXISTING EMS STATIONS

| NAME                          | STATION NO. | ADDRESS                                | TYPE     |
|-------------------------------|-------------|----------------------------------------|----------|
| MEDIC 1/MEDIC 81              | 1           | 801 8th Ave South, Naples 34102        | Leased   |
| MEDIC 2                       | 2           | 977 26th Ave North, Naples 34103       | Leased   |
| HOC Medflight                 | 3           | 2375 Tower Drive                       | Owned    |
| MEDIC 10                      | 10          | 14756 Immokalee Rd                     | Owned    |
| MEDIC 21                      | 21          | 11121 Tamiami Trail East, Naples 34113 | Owned    |
| MEDIC 22                      | 22          | 4375 Bayshore Dr                       | Owned    |
| MEDIC 23                      | 23          | 6055 Collier Blvd                      | Leased * |
| MEDIC 24                      | 24          | 2795 Airport Road North                | Owned    |
| MEDIC 30/31                   | 30          | 112 South 1st St.                      | Owned    |
| MEDIC 32 (Temporary Facility) | 32          | 4819 Ave Maria Blvd, Ave Maria 34142   | Owned    |
| MEDIC 40                      | 40          | 1441 Pine Ridge Rd, Naples 34109       | Leased * |
| MEDIC 42                      | 42          | 7010 Immokalee Rd, Naples 34119        | Owned    |
| MEDIC 43                      | 43          | 16325 Vanderbilt Dr, Naples 34134      | Leased * |
| MEDIC 44                      | 44          | 766 Vanderbilt Beach Rd                | Owned    |
| MEDIC 46                      | 46          | 3410 Pine Ridge Rd, Naples 34105       | Leased   |
| Medic Res 50                  | 50          | 1280 San Marco Rd                      | Leased * |
| MEDIC 61                      | 61          | 201 Buckner Ave, Everglades            | Leased * |
| MEDIC 70                      | 70          | 4741 Golden Gate Parkway               | Owned    |
| MEDIC 71                      | 71          | 95 13th St SW, Naples 34117            | Owned    |
| MEDIC 75/MEDIC 83             | 75          | 4590 Santa Barbara Blvd 34104          | Owned    |
| Medic Res 90                  | 90          | 175 Isle of Capri Blvd, Naples 34113   | Leased * |

| PROPOSED THRU FY17-18 | STATION NO. | ADDRESS                           | TYPE |
|-----------------------|-------------|-----------------------------------|------|
| MEDIC 73              | 73          | Vanderbilt Beach Road/Logan Blvd. | EMS  |
| MEDIC # TBD           | TBD         | Fiddlers Creek                    | EMS  |

| PROPOSED THRU FY 19-23 | STATION NO. | ADDRESS                             | TYPE |
|------------------------|-------------|-------------------------------------|------|
| MEDIC 49               | 49          | Immokalee Road/CR951 - Heritage Bay | EMS  |
| MEDIC 411              | 411         | Old 41                              | EMS  |

\* For these stations, no rent is paid but rather a fixed monthly utility charge.

## EMS Equipment Replacement Costs

| Description                                        | Useful Life<br>(Years) | Units | Unit Cost | Total<br>Replacement<br>Cost |
|----------------------------------------------------|------------------------|-------|-----------|------------------------------|
| <b>EMS Equipment</b>                               |                        |       |           |                              |
| Portable Radios                                    | 7                      | 73    | \$2,500   | \$182,500                    |
| Laptops, accessories and peripherals               | 3                      | 29    | \$3,500   | \$101,500                    |
| Mobile Radios                                      | 7                      | 98    | \$4,500   | \$441,000                    |
| UHF Radio Ambulance                                | 7                      | 40    | \$2,800   | \$112,000                    |
| Pager with accessories                             | 7                      | 72    | \$550     | \$39,600                     |
| Cascade System                                     |                        | 3     | \$2,623   | \$7,869                      |
| <b>Total Equipment Cost</b>                        |                        |       |           | <b>\$884,469</b>             |
| <b>Vehicles</b>                                    |                        |       |           |                              |
| ALS Ambulance <sup>(1)</sup>                       | 8                      | 33    | \$231,000 | \$7,623,000                  |
| Expedition                                         | 4                      | 1     | \$44,000  | \$44,000                     |
| Explorers                                          | 4                      | 5     | \$36,000  | \$180,000                    |
| Crown Victoria                                     | 4                      | 5     | \$30,000  | \$150,000                    |
| Econo Van                                          | 4                      | 1     | \$26,000  | \$26,000                     |
| Hazmat Trailer                                     | 7                      | 1     | \$29,534  | \$29,534                     |
| Boat and Boat Trailer                              | 5                      | 1     | \$84,000  | \$84,000                     |
| Chevrolet C4500                                    | 4                      | 1     | \$63,500  | \$63,500                     |
| Ford F-350                                         | 4                      | 1     | \$42,000  | \$42,000                     |
| Haulmark                                           | 7                      | 1     | \$5,500   | \$5,500                      |
| <b>Total Vehicle Cost</b>                          |                        |       |           | <b>\$8,247,534</b>           |
| <b>Total Vehicle and Equipment Cost</b>            |                        |       |           | <b>\$9,132,003</b>           |
| <b>Number of Units</b>                             |                        |       |           | <b>24.5</b>                  |
| <b>Average Equipment Replacement Cost per Unit</b> |                        |       |           | <b>\$372,735</b>             |

(1) Cost includes the vehicle cost of \$190,000 in addition to the equipment used, including Stretchers, Monitor, Auto Pulse etc. valued at \$41,000 per ambulance.

Source: EMS

**Collier County EMS Cost Per Owned Station**

| <b>Description</b>                               | <b>Cost</b>        | <b>Percent of Total</b> |
|--------------------------------------------------|--------------------|-------------------------|
| Building Replacement Cost per Station *          | \$1,100,000        | 64%                     |
| Land Replacement Cost per Station *              | \$250,000          | 14%                     |
| Equipment & Vehicle Replacement Cost per Unit ** | \$372,735          | 22%                     |
| <b>Total Cost per Station</b>                    | <b>\$1,722,735</b> | <b>100%</b>             |
| <b>Total Adjusted for Indexing (-1.6%)</b>       | <b>\$1,695,171</b> |                         |

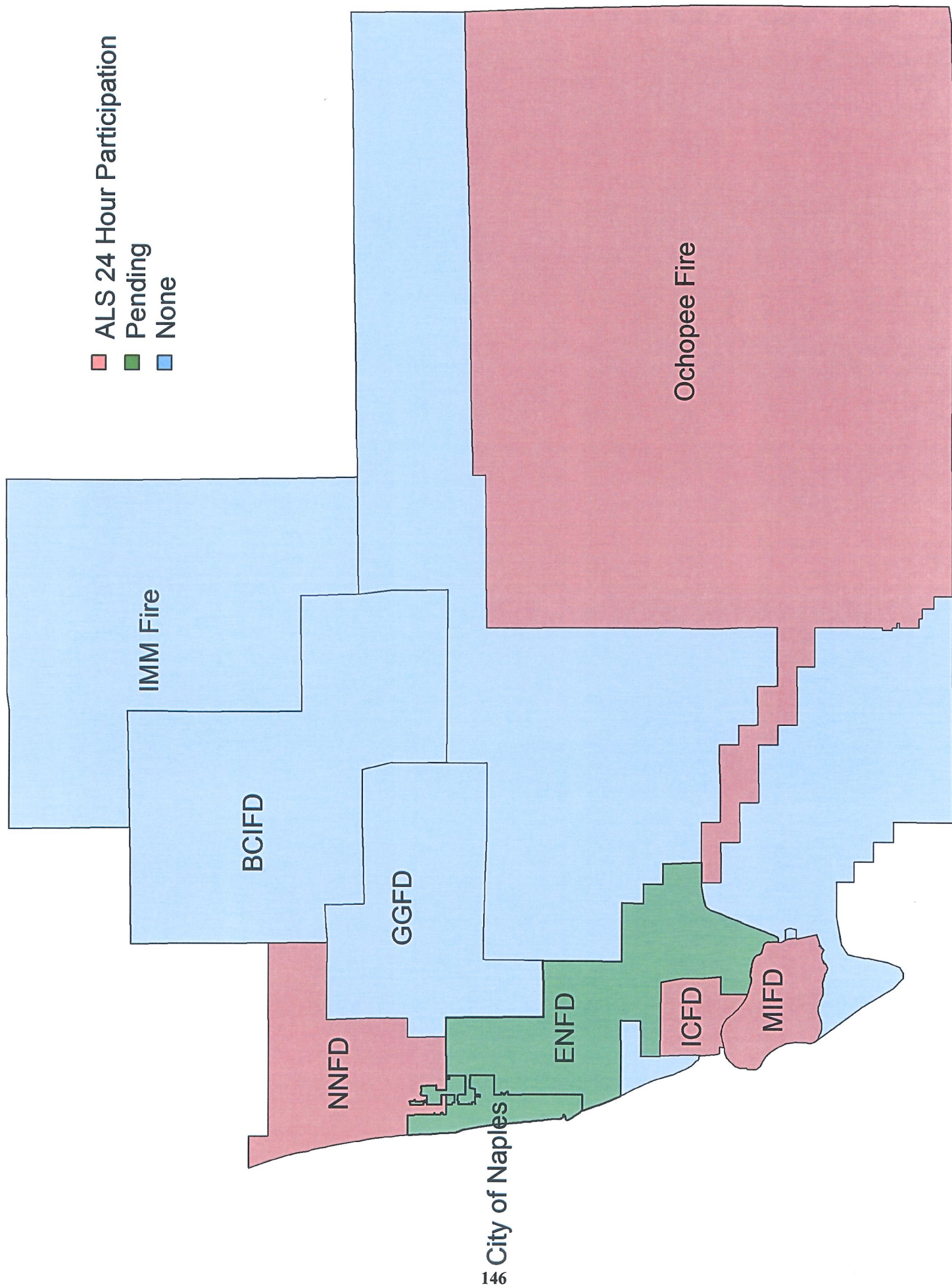
**Collier County EMS Cost Per Shared Station**

| <b>Description</b>                               | <b>Cost</b>        | <b>Percent of Total</b> |
|--------------------------------------------------|--------------------|-------------------------|
| Building Replacement Cost per Station *          | \$550,000          | 53%                     |
| Land Replacement Cost per Station *              | \$125,000          | 12%                     |
| Equipment & Vehicle Replacement Cost per Unit ** | \$372,735          | 36%                     |
| <b>Total Cost per Station</b>                    | <b>\$1,047,735</b> | <b>100%</b>             |
| <b>Total Adjusted for Indexing (-1.6%)</b>       | <b>\$1,030,971</b> |                         |

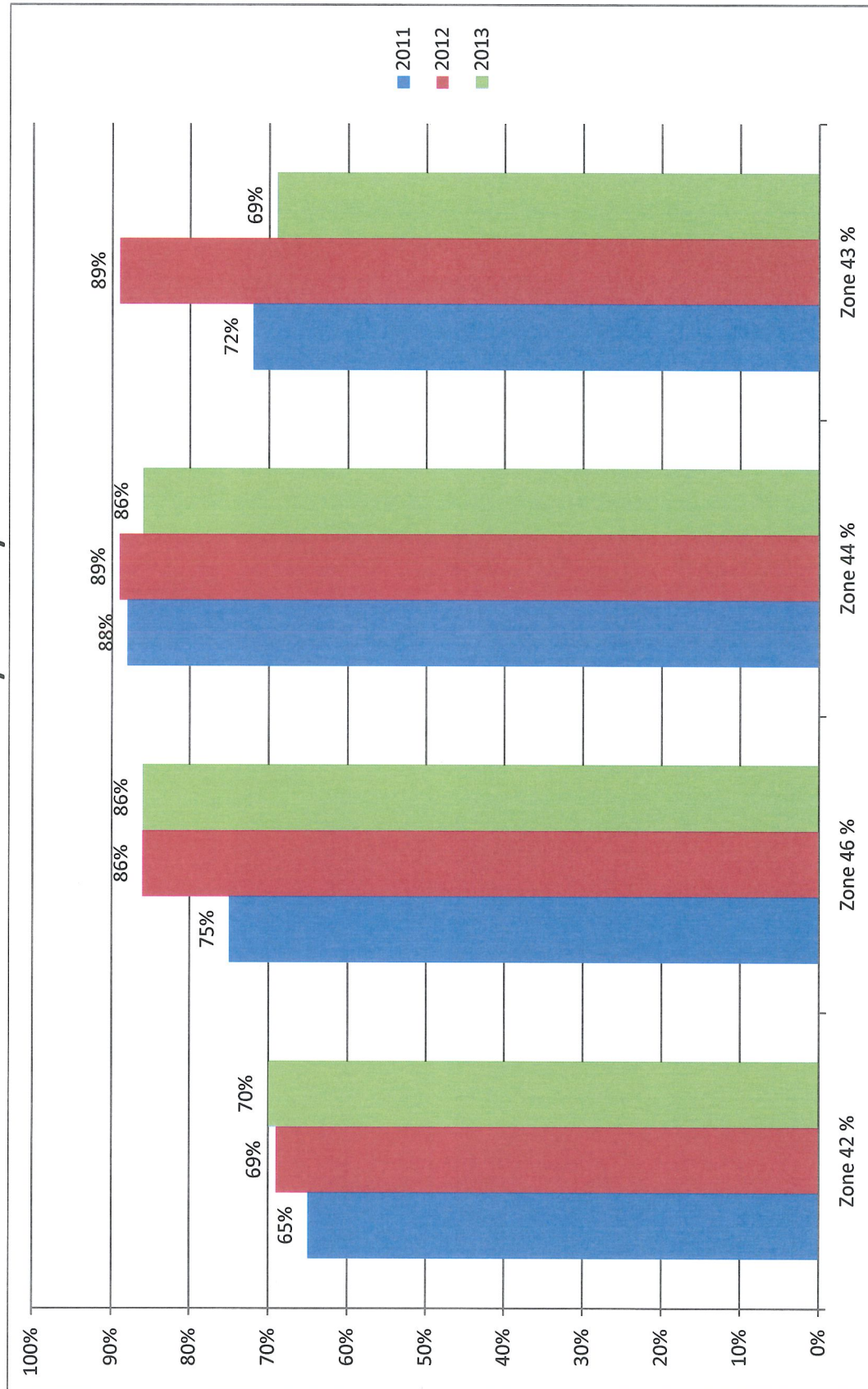
\* Source: Impact Fee Study

\*\* Source: EMS

- ALS 24 Hour Participation
- Pending
- None



# Response Percent (8 minutes or less) Travel Time Comparison 2011 – 2013 February – May



# Period 07/01/11 to 06/30/12

## Emergency Medical Services

Travel Time- Time Enroute to Time Arrive on Scene

| Zone | Under 4 | Under 5 | Under 6 | Under 7 | Under 8 | Under 9 | Under 10 | Under 11 | Under 12 | Over 12 |
|------|---------|---------|---------|---------|---------|---------|----------|----------|----------|---------|
| 1    | 66.70   | 80.92   | 89.83   | 94.24   | 96.49   | 97.57   | 97.93    | 98.02    | 98.11    | 1.89    |
| 2    | 61.11   | 81.27   | 91.52   | 95.44   | 96.98   | 98.04   | 98.40    | 98.64    | 98.87    | 1.13    |
| 21   | 40.07   | 51.86   | 66.61   | 80.84   | 90.18   | 95.12   | 96.92    | 97.93    | 98.46    | 1.54    |
| 22   | 34.42   | 58.20   | 76.61   | 88.11   | 93.91   | 96.45   | 97.94    | 98.85    | 99.09    | 0.91    |
| 23   | 20.83   | 32.45   | 43.47   | 56.30   | 67.09   | 76.68   | 83.62    | 89.36    | 92.08    | 7.92    |
| 24   | 36.56   | 58.24   | 75.99   | 86.92   | 91.76   | 94.80   | 96.24    | 97.13    | 97.67    | 2.33    |
| 40   | 44.92   | 65.39   | 82.69   | 91.95   | 95.53   | 97.26   | 98.11    | 98.63    | 98.95    | 1.05    |
| 42   | 28.07   | 43.72   | 61.16   | 73.15   | 82.08   | 88.45   | 92.94    | 95.77    | 97.21    | 2.79    |
| 43   | 22.68   | 42.15   | 64.52   | 80.38   | 89.40   | 94.43   | 96.86    | 98.43    | 98.90    | 1.10    |
| 44   | 44.15   | 60.47   | 75.21   | 86.27   | 91.82   | 94.61   | 96.52    | 97.61    | 98.22    | 1.78    |
| 46   | 36.64   | 53.91   | 69.09   | 82.18   | 88.82   | 92.55   | 95.18    | 96.45    | 97.09    | 2.91    |
| 50   | 51.47   | 69.29   | 82.91   | 89.52   | 92.73   | 94.63   | 96.27    | 97.31    | 97.77    | 2.23    |
| 70   | 45.51   | 66.65   | 81.59   | 89.11   | 93.11   | 95.95   | 97.45    | 98.15    | 98.38    | 1.62    |
| 75   | 30.60   | 51.55   | 71.52   | 84.59   | 91.26   | 95.31   | 97.03    | 98.15    | 98.69    | 1.31    |
| 90   | 54.39   | 59.65   | 73.68   | 84.21   | 94.74   | 95.61   | 97.37    | 99.12    | 99.12    | 0.88    |
| 10   | 8.91    | 17.27   | 27.30   | 37.47   | 46.80   | 55.71   | 65.46    | 74.23    | 81.89    | 18.11   |
| 30   | 37.49   | 51.01   | 64.53   | 75.23   | 84.09   | 89.92   | 93.95    | 96.01    | 97.10    | 2.90    |
| 32   | 26.14   | 38.64   | 47.73   | 59.09   | 64.77   | 70.45   | 75.00    | 79.55    | 82.95    | 17.05   |
| 60   | 34.12   | 41.71   | 47.39   | 52.13   | 59.24   | 64.45   | 68.25    | 72.51    | 75.83    | 24.17   |
| 71   | 18.05   | 27.54   | 39.44   | 47.86   | 58.02   | 66.18   | 71.12    | 77.94    | 84.63    | 15.37   |

### Criteria -

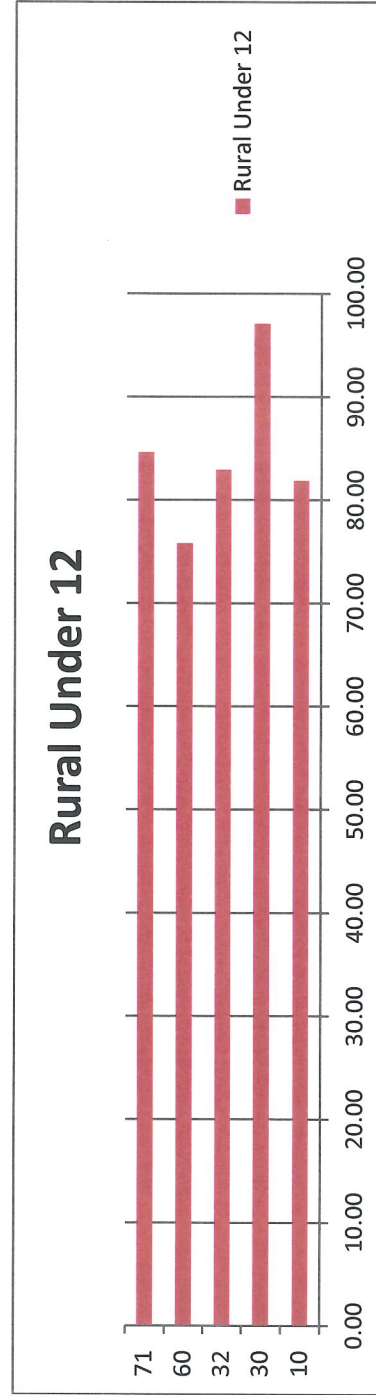
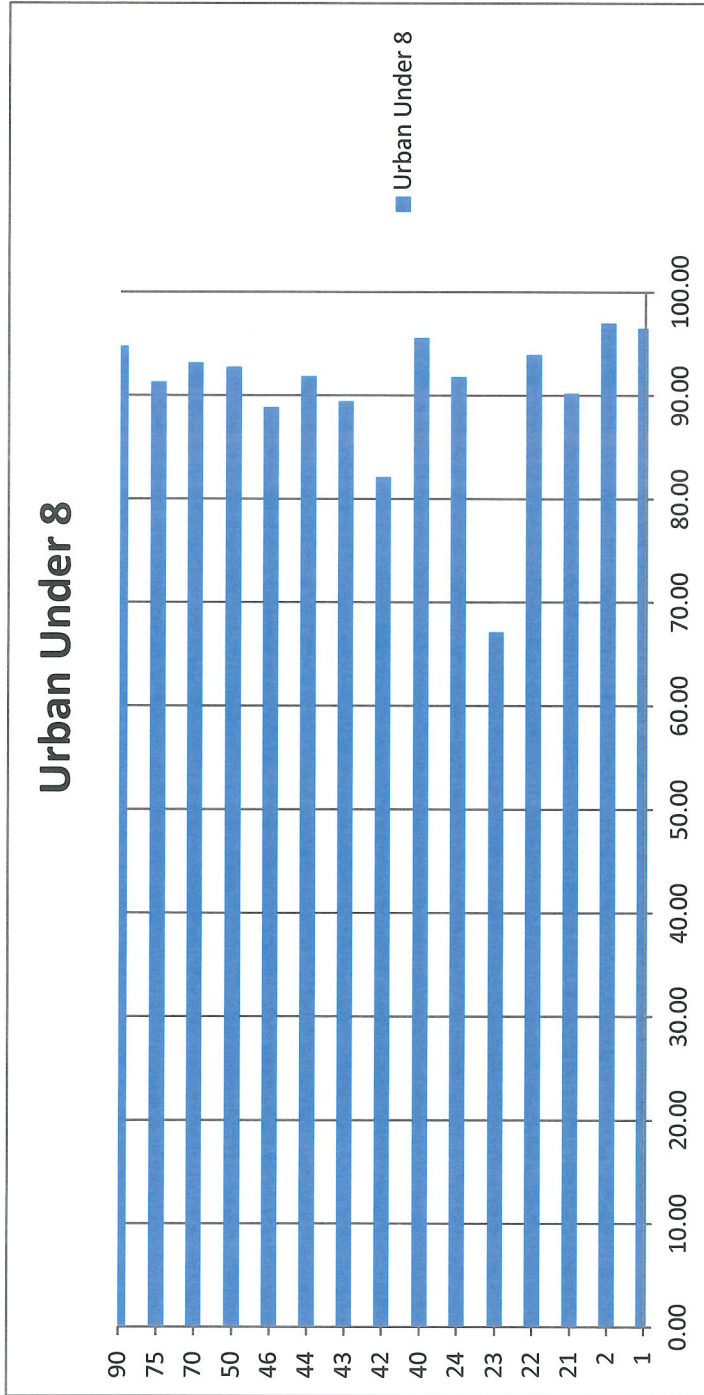
Emergency Calls Only. As defined and adopted from the consultant study.

Fastest Arriving Unit Only. Responses from other arriving units are not considered.

Must have an Enroute and Arrival Timestamp.

Interval is the difference of Enroute to Arrival times by the second.

Includes ALS Engines.





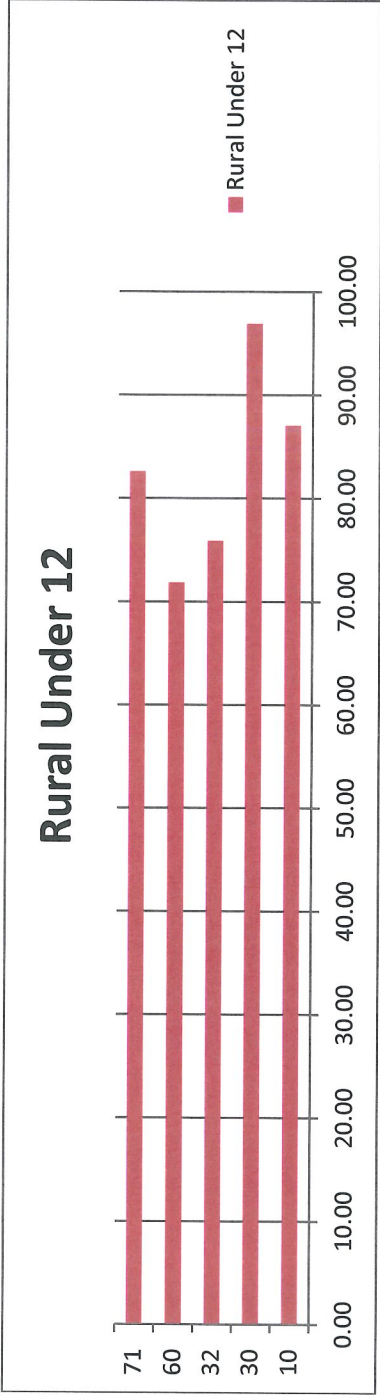
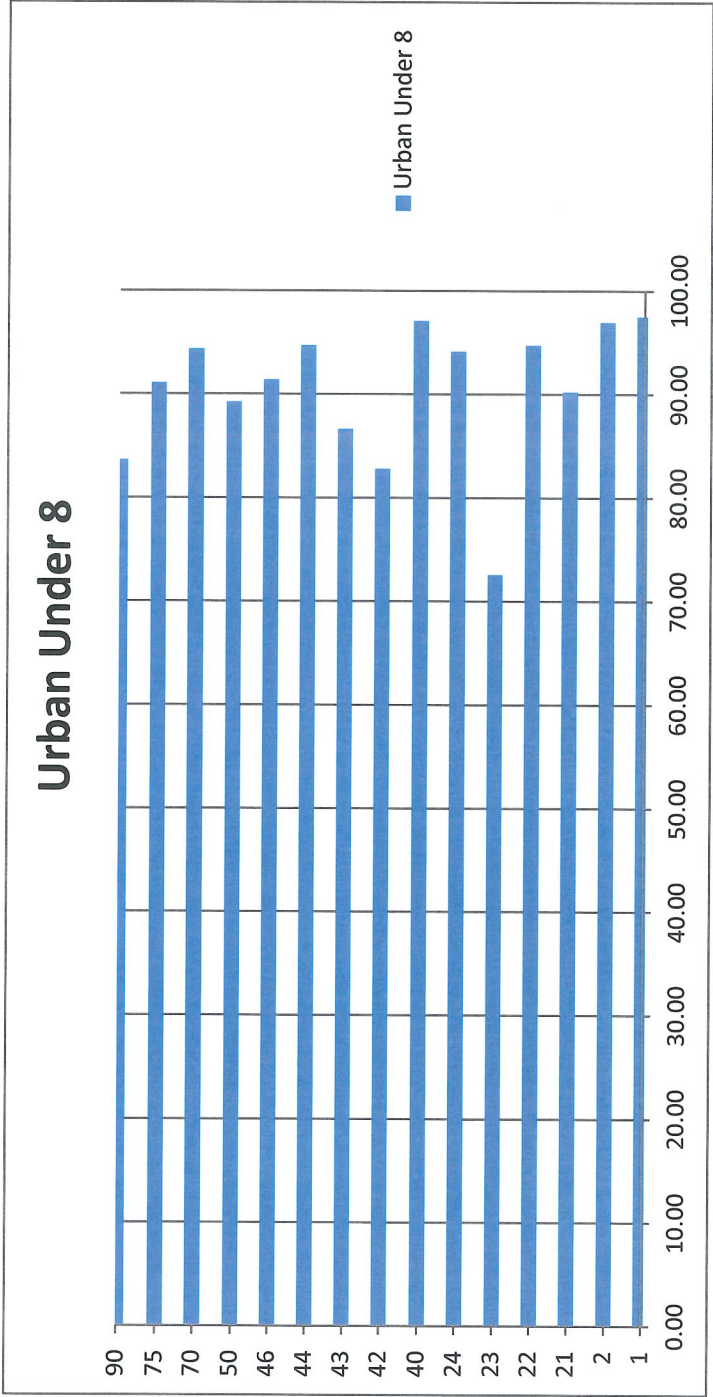
Emergency Medical Services

Travel Time- Time Enroute to Time Arrive on Scene

| Zone | Under 4 | Under 5 | Under 6 | Under 7 | Under 8 | Under 9 | Under 10 | Under 11 | Under 12 | Over 12 |
|------|---------|---------|---------|---------|---------|---------|----------|----------|----------|---------|
| 1    | 70.08   | 87.06   | 92.72   | 96.05   | 97.48   | 98.20   | 98.65    | 98.83    | 99.01    | 0.99    |
| 2    | 57.71   | 80.56   | 90.78   | 95.36   | 96.93   | 97.99   | 98.38    | 98.60    | 98.72    | 1.28    |
| 21   | 36.81   | 49.31   | 63.56   | 79.89   | 90.21   | 94.57   | 96.97    | 97.82    | 98.40    | 1.60    |
| 22   | 33.48   | 56.74   | 75.81   | 87.41   | 94.69   | 97.05   | 98.48    | 99.07    | 99.07    | 0.93    |
| 23   | 18.87   | 32.41   | 46.95   | 59.09   | 72.54   | 81.90   | 88.24    | 92.65    | 94.74    | 5.26    |
| 24   | 37.77   | 62.23   | 79.26   | 90.39   | 94.10   | 95.78   | 97.47    | 98.48    | 98.99    | 1.01    |
| 40   | 46.52   | 67.04   | 83.65   | 93.81   | 97.06   | 98.25   | 98.87    | 99.07    | 99.23    | 0.77    |
| 42   | 27.43   | 42.42   | 60.48   | 74.10   | 82.79   | 89.49   | 93.90    | 96.20    | 97.86    | 2.14    |
| 43   | 21.30   | 42.42   | 62.21   | 76.77   | 86.62   | 92.68   | 95.54    | 96.89    | 97.98    | 2.02    |
| 44   | 43.74   | 61.64   | 77.43   | 88.96   | 94.67   | 97.77   | 98.68    | 99.26    | 99.50    | 0.50    |
| 46   | 39.01   | 58.66   | 73.54   | 83.27   | 91.34   | 95.72   | 96.98    | 97.86    | 98.15    | 1.85    |
| 50   | 51.83   | 65.77   | 76.84   | 84.08   | 89.23   | 92.76   | 95.27    | 96.71    | 97.25    | 2.75    |
| 70   | 49.11   | 71.39   | 84.10   | 91.02   | 94.32   | 96.43   | 97.51    | 98.38    | 98.49    | 1.51    |
| 75   | 29.76   | 50.69   | 71.05   | 84.19   | 91.05   | 94.79   | 96.53    | 97.82    | 98.40    | 1.60    |
| 90   | 43.44   | 53.28   | 57.38   | 76.23   | 83.61   | 87.70   | 90.16    | 91.80    | 92.62    | 7.38    |
| 10   | 8.71    | 17.90   | 27.42   | 36.94   | 49.52   | 62.26   | 71.77    | 79.35    | 87.10    | 12.90   |
| 30   | 36.66   | 52.49   | 66.34   | 76.75   | 84.52   | 91.05   | 94.57    | 95.99    | 96.91    | 3.09    |
| 32   | 20.48   | 30.12   | 36.14   | 46.99   | 53.01   | 61.45   | 66.27    | 73.49    | 75.90    | 24.10   |
| 60   | 21.21   | 28.57   | 41.99   | 51.08   | 57.58   | 62.77   | 65.80    | 69.26    | 71.86    | 28.14   |
| 71   | 17.39   | 29.07   | 38.11   | 48.54   | 57.44   | 64.67   | 73.30    | 79.28    | 82.61    | 17.39   |

Criteria -

Emergency Calls Only. As defined and adopted from the consultant study.  
 Fastest Arriving Unit Only. Responses from other arriving units are not considered.  
 Must have an Enroute and Arrival Timestamp.  
 Interval is the difference of Enroute to Arrival times by the second.  
 Includes ALS Engines.



## Existing EMS Zones

