

| FHWA REGION NO. | STATE  | PROJECT NUMBER | FISCAL YEAR | SHEET NUMBER | TOTAL SHEETS |
|-----------------|--------|----------------|-------------|--------------|--------------|
| 7               | KANSAS | 87N-0080-01    | 1997        | 94           | 162          |

**INTERCONNECTION SYSTEM**

**BILL OF MATERIALS**

| ITEM                                     | UNIT  | QUANTITY |
|--|-------|----------|
| Junction Box                             | Each  | 30       |
| 50 mm Conduit (Rigid Galvanized Conduit) | Meter | 1509.0   |
| 6PR Shielded Comm. Cable #19 AWG         | Meter | 1555.0   |

**SUMMARY OF SERVICE AND JUNCTION BOXES**

| STATION  | OFFSET    | SERVICE BOX | JUNCTION BOX |
|----------|-----------|-------------|--------------|
| 0+093.04 | 6 69 Lt.  |             | X            |
| 0+136.56 | 6 69 Lt.  |             | X            |
| 0+183.06 | 6 69 Lt.  |             | X            |
| 0+228.60 | 12 78 Lt. |             | X            |
| 0+269.50 | 12 78 Lt. |             | X            |
| 0+317.90 | 12 78 Lt. |             | X            |
| 0+443.39 | 6 69 Lt.  |             | X            |
| 0+493.33 | 6 69 Lt.  |             | X            |
| 0+541.73 | 6 69 Lt.  |             | X            |
| 0+593.39 | 6 69 Lt.  |             | X            |
| 0+645.36 | 6 10 Lt.  |             | X            |
| 0+693.39 | 6 10 Lt.  |             | X            |
| 0+743.36 | 6 10 Lt.  |             | X            |
| 0+818.13 | 7 94 Rt.  |             | X            |
| 0+850.06 | 6 88 Rt.  |             | X            |
| 0+900.43 | 6 69 Rt.  |             | X            |
| 0+953.41 | 6 69 Rt.  |             | X            |
| 1+006.41 | 6 69 Rt.  |             | X            |
| 1+059.42 | 6 69 Rt.  |             | X            |
| 1+112.42 | 6 69 Rt.  |             | X            |
| 1+165.42 | 6 69 Rt.  |             | X            |
| 1+215.77 | 6 69 Rt.  |             | X            |
| 1+268.56 | 6 69 Rt.  |             | X            |
| 1+318.56 | 6 69 Rt.  |             | X            |
| 1+363.38 | 7 65 Rt.  |             | X            |
| 1+405.73 | 7 65 Rt.  |             | X            |
| 1+451.18 | 8 85 Rt.  |             | X            |
| 1+474.43 | 9 63 Rt.  |             | X            |
| 1+490.41 | 18 24 Rt. |             | X            |
| 1+534.63 | 47 59 Rt. |             | X            |

Junction boxes between station 0+046.54 and station 0+309.21 connect Maple and Douglas. (Max. Spacing 53.3)

Junction boxes between station 0+443.39 and station 0+743.36 connect Douglas and 2nd Street. (Max Spacing 53.3)

Junction boxes between station 0+818.11 and station 1+534.63 connect Maple and Douglas. (Max Spacing 53.3)

**BILL OF MATERIALS**


| ITEM                                     | UNIT  | QUANTITY |
|--|-------|----------|
| Junction Box                             | Each  | 2        |
| 32 mm Conduit (Rigid Galvanized Conduit) | Meter | 3.5      |
| 19 mm Conduit (Rigid Galvanized Conduit) | Meter | 43.4     |
| Shielded Loop Feeder Cable 2C #14 AWG    | Meter | 50.4     |
| Loop Detector Wire (Type THHN) #14 AWG   | Meter | 56.8     |

**SUMMARY OF SERVICE AND JUNCTION BOXES**

| STATION  | OFFSET    | SERVICE BOX | JUNCTION BOX |
|----------|-----------|-------------|--------------|
| 0+047.36 | 4.30m Lt. |             | X            |
| 0+090.76 | 4.30m Lt. |             | X            |

**MERIDIAN & MAPLE**

(See Sheets )

|   |  |
|---|--|
| <b>TRAFFIC SIGNAL QUANTITIES<br/>MERIDIAN IMPROVEMENTS</b>                            |  |
|  | 924 NORTH MAIN<br>WICHITA, KANSAS 67203<br>http://www.srb.com/ks |
| 316-284-8008<br>FAX 316-284-8821<br>E-Mail: srb@srbl.com                              | REVISION<br>94   |
| <b>SAVOY, RUGGLES &amp; BOHM, P.A.</b><br>ENGINEERING & SURVEYING                     |  |
| PROJECT NUMBER<br><b>472-76-245-82740-000-000-001</b>                                 |  |
| DRAWN<br>KWL  | DESIGNED<br>KWL  |
| REVISION<br>JCR   | DATE<br>Jan. 11, 1999  |
| UTILITY   | SHEET NO.<br>539T  |
| TOTAL SHEETS<br>162   |  |

**BILL OF MATERIALS**

| ITEM   | UNIT  | QUANTITY |
|--|-------|----------|
| Model 170 Controller System                    | Each  | 1        |
| Concrete Base for Controller Cabinet           | Each  | 1        |
| Traffic Signal Pole                            | Each  | 4        |
| Mast Arm                                       | Each  | 4        |
| Concrete Base for Traffic Signal Pole/Pedestal | Each  | 4        |
| Traffic Signal Head (Type A)                   | Each  | 8        |
| Traffic Signal Head (Type I)                   | Each  | 2        |
| Traffic Signal Head (Type L)                   | Each  | 8        |
| Mounting Bracket (Type I)                      | Each  | 9        |
| Mounting Bracket (Type II)                     | Each  | 1        |
| Mounting Bracket (Type III)                    | Each  | 1        |
| Traffic Signal Lamp*                           | Each  | 50       |
| Pedestrian Push Button (One piece with sign)   | Each  | 8        |
| Ground Rod and Clamp                           | Each  | 6        |
| Meter Enclosure (Meter by K.G.&E.)             | Each  | 1        |
| Power Disconnect                               | Each  | 1        |
| Service Box                                    | Each  | 4        |
| Junction Box                                   | Each  | 10       |
| Backplates                                     | Each  | 10       |
| 76mm Conduit (Rigid Galvanized Conduit)        | Meter | 121.0    |
| 50mm Conduit (Rigid Galvanized Conduit)        | Meter | 18.3     |
| 32mm Conduit (Rigid Galvanized Conduit)        | Meter | 133.9    |
| 25mm Conduit (Rigid Galvanized Conduit)        | Meter | 32.1     |
| 19mm Conduit (Rigid Galvanized Conduit)        | Meter | 184.3    |
| Multi Conductor Cable 2C #14 AWG               | Meter | 8.5      |
| Multi Conductor Cable 5C #14 AWG               | Meter | 221.9    |
| Multi Conductor Cable 7C #14 AWG               | Meter | 256.1    |
| 6PR Shielded Comm. Cable #19 AWG               | Meter | 113.0    |
| Ground Wire (Type THHN Stranded) #8 AWG        | Meter | 130.7    |
| Shielded Loop Feeder Cable 2C #14 AWG          | Meter | 1057.9   |
| Loop Detector Wire (Type THHN) #14 AWG         | Meter | 818.2    |
| Power Lead-in Wire (Type USE) #6 AWG           | Meter | 70       |
| Left Turn Yield on "Green Ball" Sign (R10-12)  | Each  | 2        |
| Sign Mounting Bracket                          | Each  | 2        |
| Street Name Sign and Brackets                  | Each  | 4        |

\* TRAFFIC SIGNAL LAMPS SHALL BE 130 VOLT, 8000 HOUR RATING

**TRAFFIC SIGNAL POLE SUMMARY**

| STATION  | OFFSET    | MAST ARM LENGTH | NO. OF SIGNALS ON MAST ARM | BRACKET TYPE | NO. OF SIGNALS ON POLE | BRACKET TYPE | NO. OF PUSH BUTTONS ON POLE | REMARKS                          |
|----------|-----------|-----------------|----------------------------|--------------|------------------------|--------------|-----------------------------|----------------------------------|
| 0+369.15 | 10 69 Lt. | 12 m            | 3                          | I            | 2                      | II           | 2                           | S.N.S. and R10-12 mounted on arm |
| 0+391.67 | 10 99 Lt. | 7 m             | 2                          | I            | 2                      | II           | 2                           | S.N.S. mounted on arm            |
| 0+397.66 | 11 56 Rt. | 8 m             | 2                          | I            | 3                      | II & III     | 2                           | S.N.S. and R10-12 mounted on arm |
| 0+372.92 | 13 69 Rt. | 9 m             | 2                          | I            | 2                      | II           | 2                           | S.N.S. mounted on arm            |

**MERIDIAN & DOUGLAS**

**BILL OF MATERIALS**

| ITEM   | UNIT  | QUANTITY |
|--|-------|----------|
| Model 170 Controller System                    | Each  | 1        |
| Concrete Base for Controller Cabinet           | Each  | 1        |
| Traffic Signal Pole                            | Each  | 4        |
| Mast Arm                                       | Each  | 4        |
| Concrete Base for Traffic Signal Pole/Pedestal | Each  | 4        |
| Traffic Signal Head (Type A)                   | Each  | 8        |
| Traffic Signal Head (Type I)                   | Each  | 4        |
| Traffic Signal Head (Type L)                   | Each  | 8        |
| Mounting Bracket (Type I)                      | Each  | 8        |
| Mounting Bracket (Type II)                     | Each  | 4        |
| Mounting Bracket (Type III)                    | Each  | 4        |
| Traffic Signal Lamp*                           | Each  | 60       |
| Pedestrian Push Button (One piece with sign)   | Each  | 8        |
| Ground Rod and Clamp                           | Each  | 5        |
| Meter Enclosure (Meter by K.G.&E.)             | Each  | 1        |
| Power Disconnect                               | Each  | 1        |
| Service Box                                    | Each  | 4        |
| Junction Box                                   | Each  | 12       |
| Backplate                                      | Each  | 12       |
| 76 mm Conduit (Rigid Galvanized Conduit)       | Meter | 80.6     |
| 50 mm Conduit (Rigid Galvanized Conduit)       | Meter | 10.8     |
| 32 mm Conduit (Rigid Galvanized Conduit)       | Meter | 142.8    |
| 25 mm Conduit (Rigid Galvanized Conduit)       | Meter | 6.7      |
| 19 mm Conduit (Rigid Galvanized Conduit)       | Meter | 174.4    |
| Multi Conductor Cable 2C #14 AWG               | Meter | 8.5      |
| Multi Conductor Cable 5C #14 AWG               | Meter | 108.4    |
| Multi Conductor Cable 7C #14 AWG               | Meter | 228.6    |
| 6PR Shielded Comm. Cable #19 AWG               | Meter | 71.6     |
| Ground Wire (Type THHN Stranded) #8 AWG        | Meter | 33.1     |
| Shielded Loop Feeder Cable 2C #14 AWG          | Meter | 937.0    |
| Loop Detector Wire (Type THHN) #14 AWG         | Meter | 1007.6   |
| Power Lead-in Wire (Type USE) #6 AWG           | Meter | 19.4     |
| Left Turn Yield on "Green Ball" Sign (R10-12)  | Each  | 4        |
| Sign Mounting Bracket                          | Each  | 4        |
| Street Name Sign and Brackets                  | Each  | 4        |

\* TRAFFIC SIGNAL LAMPS SHALL BE 130 VOLT, 8000 HOUR RATING

**TRAFFIC SIGNAL POLE SUMMARY**

| STATION  | OFFSET    | MAST ARM LENGTH | NO. OF SIGNALS ON MAST ARM | BRACKET TYPE | NO. OF SIGNALS ON POLE | BRACKET TYPE | NO. OF PUSH BUTTONS ON POLE | REMARKS                          |
|----------|-----------|-----------------|----------------------------|--------------|------------------------|--------------|-----------------------------|----------------------------------|
| 0+792.59 | 6 67 Lt.  | 8 m             | 2                          | I            | 3                      | II & III     | 2                           | S.N.S. and R10-12 mounted on arm |
| 0+794.54 | 13 75 Rt. | 7 m             | 2                          | I            | 3                      | II & III     | 2                           | S.N.S. and R10-12 mounted on arm |
| 0+813.51 | 8 69 Rt.  | 7 m             | 2                          | I            | 3                      | II & III     | 2                           | S.N.S. and R10-12 mounted on arm |
| 0+814.39 | 9 87 Rt.  | 7 m             | 2                          | I            | 3                      | II & III     | 2                           | S.N.S. and R10-12 mounted on arm |

**MERIDIAN & 2ND STREET**

**SUMMARY OF SERVICE AND JUNCTION BOXES**

| STATION  | OFFSET    | SERVICE BOX | JUNCTION BOX |
|----------|-----------|-------------|--------------|
| 0+287.73 | 9 49 Rt.  |             | X            |
| 0+338.28 | 9 06 Rt.  |             | X            |
| 0+389.02 | 9 07 Rt.  |             | X            |
| 0+374.44 | 12 69 Rt. | X           |              |
| 0+393.39 | 6 54 Lt.  | X           |              |
| 0+427.06 | 5 40 Lt.  |             | X            |
| 0+471.23 | 5 40 Lt.  |             | X            |
| 0+370.86 | 12 61 Lt. | X           |              |
| 0+412.00 | 6 89 Rt.  |             | X            |
| 0+446.05 | 6 82 Rt.  |             | X            |
| 0+477.83 | 6 82 Rt.  |             | X            |
| 0+394.36 | 12 57 Lt. | X           |              |
| 0+544.53 | 8 50 Lt.  |             | X            |
| 0+589.42 | 8 50 Lt.  |             | X            |

\* Douglas Street Stationing