

SURV. — PLOT CADD DES. KEM DR. MCC TR. — CKD. KEM APP. SKB Last Plot—Date: 05/28/98

| FHWA<br>REGION<br>NO. | STATE  | PROJECT NO. | YEAR | SHEET<br>NO. | TOTAL<br>SHEETS |
|-----------------------|--------|-------------|------|--------------|-----------------|
| 7                     | KANSAS | 87N-0061-01 | 1998 | 55           | 91              |

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| * BILL OF MATERIALS                                                        |      |                     |
|----------------------------------------------------------------------------|------|---------------------|
| ITEM                                                                       | UNIT | APPROX.<br>QUANTITY |
| Traffic Signal Controller w/ Cabinet, as per specifications                | Ea.  | 1                   |
| Traffic Signal Pole (Joint Use) w/ Mast Arm (Steel), as per specifications | Ea.  | 4                   |
| Concrete Base for Traffic Signal Pole (See Detail)                         | Ea.  | 4                   |
| Three Section Traffic Signal Head (3 @ 300 mm) as per specifications       | Ea.  | 12                  |
| Two Section Traffic Signal Head (300 mm Pedestrian) as per specifications  | Ea.  | 8                   |
| Traffic Signal Head Mounting Bracket for Mast Arm Mount (Type I)           | Ea.  | 8                   |
| Traffic Signal Head Mounting Bracket for Side of Pole Mounting (Type II)   | Ea.  | 4                   |
| Traffic Signal Side of Pole Mounting Bracket                               | Ea.  | 4                   |
| Traffic Signal Lamp (135 W)                                                | Ea.  | 46                  |
| Ground Rod and Clamp                                                       | Ea.  | 5                   |
| Meter Box                                                                  | Ea.  | 1                   |
| Power Disconnect Box (40 Amp)                                              | Ea.  | 1                   |
| Weather Head                                                               | Ea.  | 1                   |
| Multi-Conductor Cable 6 Pair #19 AWG                                       | m    | 315                 |
| Multi-Conductor Cable 7/C #14 AWG                                          | m    | 200                 |
| Power Supply Wire (Type U.S.E.) #8 AWG                                     | m    | 100                 |
| Service Box (See Detail and Summary)                                       | Ea.  | 4                   |
| Junction Box (See Detail and Summary)                                      | Ea.  | 3                   |
| Street Name Sign with Mounting Hardware                                    | Ea.  | 4                   |
| 75 mm Conduit RGC                                                          | m    | 90                  |
| 50 mm Conduit RGC                                                          | m    | 280                 |

Contractor shall replace the following Traffic Signal Poles with Joint Use Traffic Signal Poles, as per specifications. Contractor shall drill Existing Concrete Base for installation of new 50mm PVC conduit for lighting.

| TRAFFIC SIGNAL POLE SUMMARY |          |       |      |
|-----------------------------|----------|-------|------|
| Location                    | Station  | Lt.   | Rt.  |
| Broadway                    | 22+936.2 | 8.5 m |      |
|                             | 22+958.8 | 11 m  |      |
|                             | 22+961.8 |       | 13 m |

BROADWAY AND WATERMAN

NOTE:  
A Single Conductor Stranded No. 8 Green Wire shall carry the equipment ground from the grounding lug of all signal poles to the controller cabinet and the Power disconnect box.

| STREET NAME SIGN SUMMARY |          |
|--------------------------|----------|
| LEGEND                   | QUANTITY |
| Lewis                    | 2        |
| Broadway                 | 2        |
| TOTAL                    | 4        |

| SERVICE AND JUNCTION BOX SUMMARY |           |      |              |             |
|----------------------------------|-----------|------|--------------|-------------|
| LOCATION                         | STATION   | SIDE | JUNCTION BOX | SERVICE BOX |
| Broadway                         | 22+796.5  | Rt.  |              | 1           |
|                                  | 22+793.5  | Lt.  |              | 1           |
|                                  | 22+813.3  | Rt.  |              | 1           |
|                                  | 22+815.25 | Lt.  |              | 1           |
|                                  | 22+855    | Lt.  | 1            |             |
|                                  | 22+895    | Lt.  | 1            |             |
|                                  | 23+000    | Lt.  | 1            |             |
| TOTALS                           |           |      | 3            | 4           |

| TRAFFIC SIGNAL HEAD SUMMARY |      |       |                       |          |
|-----------------------------|------|-------|-----------------------|----------|
| SIGNAL NO.                  | TYPE | SIZE  | MOUNTING BRACKET TYPE | QUANTITY |
| 2                           | A    | 3@300 | I                     | 2        |
| 2                           | A    | 3@300 | Side of Pole          | 1        |
| 4                           | A    | 3@300 | I                     | 1        |
| 4                           | A    | 3@300 | Side of Pole          | 1        |
| 6                           | A    | 3@300 | I                     | 2        |
| 6                           | A    | 3@300 | Side of Pole          | 1        |
| 8                           | A    | 3@300 | I                     | 1        |
| 8                           | A    | 3@300 | Side of Pole          | 1        |
| 2A                          | L    | 300   | II                    | 2        |
| 4A                          | L    | 300   | II                    | 2        |
| 6A                          | L    | 300   | II                    | 2        |
| 8A                          | L    | 300   | II                    | 2        |

\*\* Type 170 Traffic Signal Controller System

The system shall include the following equipment:

Model 170E Controller Unit complete with WAKS (Revision 48A or latest Revision) Traffic Program on 470i System Memory Module with 400 Modem.

One Model 336 Cabinet complete with all accessories including a Model 210P Conflict Monitor (MS or ECL), four Model 430 Transfer Relays and two Model 204 Flasher Units.

4 Model 200 Switch Packs. 2 Model 242

D-C Isolator.

1 Model 400 Stand Alone Hayes Compatible Modem.

\* For Information Only

NOTE:

The Contractor shall supply and install all necessary materials and equipment for the complete operation of the traffic signal system whether specifically mentioned or not.

Seven copies of Catalog Cuts shall be submitted to the Engineer to be forwarded to the Traffic Engineer, City of Wichita 455 N. Main, 7<sup>th</sup> Floor, Wichita Kansas 67202.

Contractor shall stockpile existing poles, signals and controller cabinet within R/W. Stockpiled poles and signals shall be removed by the City with own forces and funds.

All steel poles and bases shall be black powder coated, as per City of Wichita Specifications.

The Contractor shall drill for Credenza Fixtures as per City of Wichita Specifications.

| STREET   | POLE NO. | STATION  | SIDE | TYPE | NO. OF ARMS | LENGTH | NO. OF SIGNALS ON ARM | X 1   | OTHER EQUIP. ON ARM | NO. OF SIGNALS ON POLE |
|----------|----------|----------|------|------|-------------|--------|-----------------------|-------|---------------------|------------------------|
| Broadway | 1        | 22+815.9 | Lt.  | z1   | 1           | 9 m    | 2                     | 2.7 m | φ                   | 2-φ,1-*                |
| Broadway | 2        | 22+795.5 | Rt.  | z1   | 1           | 9 m    | 2                     | 2.7 m | φ                   | 2-φ,1-*                |
| Broadway | 3        | 22+792   | Lt.  | z1   | 1           | 10 m   | 2                     | 3.6 m | φ                   | 2-φ,1-*                |
| Broadway | 4        | 22+815.9 | Rt.  | z1   | 1           | 10 m   | 2                     | 3.6 m | φ                   | 2-φ,1-*                |

φ Pedestrian Signal with Push Button  
\$ R10-12  
φ Street Name Sign  
z Steel Pole with Mast Arm  
z1 Steel Pole with Mast Arm (Joint Use)  
\* Pole Mounted Signal

BROADWAY AND LEWIS

| RECAPITULATION OF SIGNAL QUANTITIES               |      |          |
|---------------------------------------------------|------|----------|
| ITEM                                              | UNIT | QUANTITY |
| Traffic Signal Installation (Broadway & Lewis)    | L.S. | Lump Sum |
| Traffic Signal Installation (Broadway & Waterman) | L.S. | Lump Sum |
|                                                   |      |          |
|                                                   |      |          |

| CITY OF WICHITA                                                       |      |
|-----------------------------------------------------------------------|------|
| BROADWAY AND LEWIS<br>BROADWAY AND WATERMAN<br>TRAFFIC SIGNAL SUMMARY |      |
| <b>Booker</b> ASSOCIATES INC.<br>Wichita OF KANSAS<br>Kansas          |      |
| SCALE Noted                                                           | DATE |
| DWD. NO. K9542                                                        |      |