## PHASE TIMING

| FUNCTION | PHASE 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| MINIMUM GREEN | -- | -- | – | – | -- | – | – | – |
| MAXIMUM GREEN | -- | 24.5 | 8.0 | 27.7 | -- | 24.5 | 8.0 | 27.7 |
| YELLOW CHANGE | -- | 3.7 | 3.7 | 3.7 | -- | 3.7 | 3.7 | 3.7 |
| RED CLEAR | -- | 1.9 | – | 1.8 | -- | 1.9 | – | 1.8 |
| ADDED INITIAL | -- | -- | – | – | -- | – | – | – |
| MAXIMUM INITIAL | -- | -- | – | – | -- | – | – | – |

## SERVICE/JUNCTION BOX SUMMARY

| STATION | DIST.-SIDE | BASELINE |
|---|---|---|
| | | |

## DETECTOR SUMMARY

| DETECTOR NO. | DETECTION ZONE | MODE | SIZE (LxW) | PHASE CALLED | PHASE EXTENDED | DELAY/ STRETCH TIMER | INITIAL SETTING (SEC.) |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

## BILL OF MATERIALS

| ITEM | UNIT | QUANTITY* |
|---|---|---|
| PAD MOUNTED CABINET | EACH | 0 / 1 |
| SIGNAL CONTROLLER (2070) | EACH | 0 / 1 |
| CONFLICT MONITOR (MODEL 2010 ECLip) | EACH | 0 / 1 |
| BATTERY BACKUP SYSTEM | EACH | 0 / 1 |
| TRAFFIC SIGNAL HEAD W/MOUNTING HARDWARE | EACH | 2 / 0 |
| TRAFFIC SIGNAL POLE, STEEL (SEE POLE SUMMARY) | EACH | 1 / 1 |
| TRAFFIC SIGNAL PEDESTAL ALUM. (5') | EACH | 0 / 1 |
| TRAFFIC SIGNAL PEDESTAL ALUM. (15') | EACH | 1 / 1 |
| TRAFFIC SIGNAL PEDESTAL (JOINT USE) ALUM. (35') | EACH | --- |
| LUMINAIRE POLE W/15' ARM (SEE POLE SUMMARY) | EACH | --- |
| CONCRETE CONTROLLER PAD | EACH | 0 / 1 |
| SCREW-IN FOUNDATION – PEDESTAL (5') | EACH | 0 / 1 |
| CONCRETE FOOTING – PEDESTAL (15') | EACH | 1 / 1 |
| CONCRETE FOOTING – PEDESTAL (35') | EACH | --- |
| CONCRETE FOOTING – POLE | EACH | 1 / 1 |
| CONDUIT ELBOW 90° – 2" | EACH | AS REQ'D |
| CONDUIT ELBOW 90° – 3" | EACH | AS REQ'D |
| BACK PLATE 5" 3 SECTION (2" RETROREFLECTIVE) | EACH | --- |
| BACK PLATE 5" 5 SECTION (2" RETROREFLECTIVE) | EACH | 2 / 0 |
| | | |
| TERMINAL BLOCK | EACH | 2 / 3 |
| SERVICE BOX | EACH | --- |
| JUNCTION BOX (PRE-FAB) | EACH | --- |
| GROUND ROD & CLAMP | EACH | 2 / 4 |
| PEDESTRIAN PUSHBUTTON W/SIGN ◕ | EACH | 2 / 6 |
| PEDESTRIAN INDICATIONS LED (16"x18" COMBINATION) (COUNTDOWN) | EACH | --- |
| LED TRAFFIC SIGNAL LENS (12") | EACH | 10 / 0 |
| | | |
| ENTRANCE HEAD | EACH | 0 / 1 |
| CIRCUIT BREAKER & BOX 50 AMP. | EACH | 0 / 1 |
| SURGE ARRESTOR – A.C. SERVICE | EACH | 0 / 1 |
| SURGE ARRESTOR – DETECTOR | EACH | 0 / 1 |
| | | |
| ANTENNA COMMUNICATION CABLE | LIN.FT. | 0 / 90 |
| DETECTOR LOOP WIRE NO. 14 AWG 1/c | LIN.FT. | --- |
| SHIELDED DETECTOR LEAD-IN NO.14 AWG 2/c | LIN.FT. | --- |
| MULTI-CONDUCTOR CABLE NO.14 AWG 15/c | LIN.FT. | --- |
| MULTI-CONDUCTOR CABLE NO.14 AWG 7/c | LIN.FT. | 430 / 0 |
| MULTI-CONDUCTOR CABLE NO.14 AWG 5/c | LIN.FT. | 380/1,480 |
| MULTI-CONDUCTOR CABLE NO.14 AWG 3/c | LIN.FT. | 440 / 70 |
| #8 AWG GROUND (GREEN) | LIN.FT. | 180 / 400 |
| | | |
| CONDUIT 1"(RGC) | LIN.FT. | AS REQ'D |
| CONDUIT 1 1/2"(RGC) | LIN.FT. | --- |
| CONDUIT 2"(PVC) | LIN.FT. | --- |
| CONDUIT 2"(RGC) | LIN.FT. | 11 / 13 |
| CONDUIT 3"(RGC) | LIN.FT. | 15 / 69 |
| | | |
| STREET NAME SIGN | EACH | --- |
| LEFT TURN SIGNAL (R10-10) SIGN | EACH | --- |
| LEFT TURN SIGNAL (R10-12) SIGN | EACH | 2 / 0 |
| LEFT TURN ONLY (R3-5L) SIGN | EACH | --- |
| RIGHT TURN ONLY (R3-5R) SIGN | EACH | --- |
| RADAR DETECTOR UNIT | EACH | --- |
| RADAR DETECTOR CABLE | LIN.FT. | --- |
| R3-2 BLANKOUT SIGN | EACH | 2 / 0 |

-QUANTITIES FOR INFORMATION ONLY-

NOTES: ◕ *The traffic signal pushbuttons shall be Accessible Pedestrian Signals (APS) units per City Standard Specifications.*

* = Base Bid Equipment / Alternate Bid Equipment

### *POLE AND EQUIPMENT FINISH:*

*Surface preparation*
*The exterior steel surface shall be blasted clean in accordance with the requirements outlined in the Steel Structures Painting Council Surface Preparation Specification No. 6, (SSPCSP60) utilizing a dry abrasive, closed cycle, recirculating system with centrifugal wheels and abrasive. The abrasive used shall be steel shot conforming to the Society of Automotive Engineers (SAE) Recommended Practice No. J827 with particle size meeting SAE Shot No. S280.*

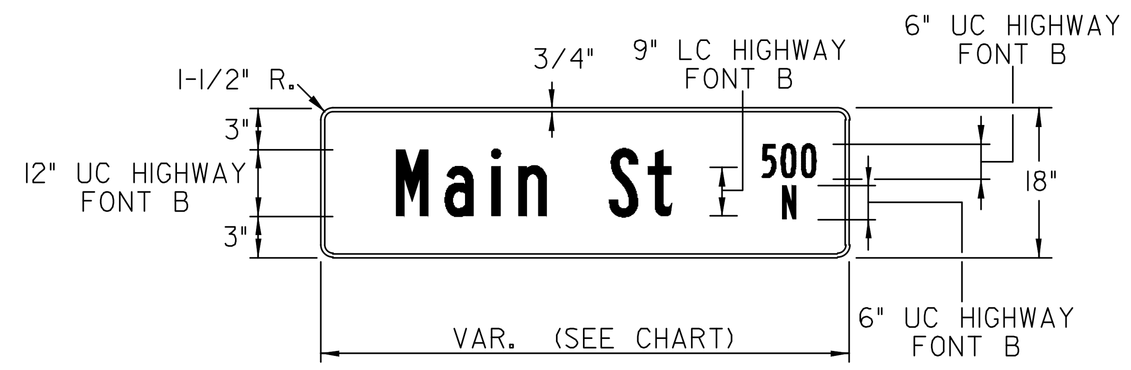
*Zinc Coating*
*The pole assembly shall be hot-dip galvanized to the requirements of either ASTM A123 (Fabricated items) or ASTM A153 (Hardware items) by immersion in a molten bath of prime western grade zinc maintained between 810°F and 850°F. Maximum aluminum content of the bath shall not exceed 0.01%.*

*Top Coat*
*All visually exposed exterior surfaces shall be coated with a urethane or triglycidyl isocyanurate (TGIC) polyester powder to a minimum dry film thickness (DFT) of 0.05mm (2.0 mils). Prior to application of the topcoat, the surface shall be mechanically etched and pre-heated to 450°F for a minimum of one hour. The coating shall be electrostatically applied and cured at a minimum temperature of 400°F and the color shall be BLACK.*

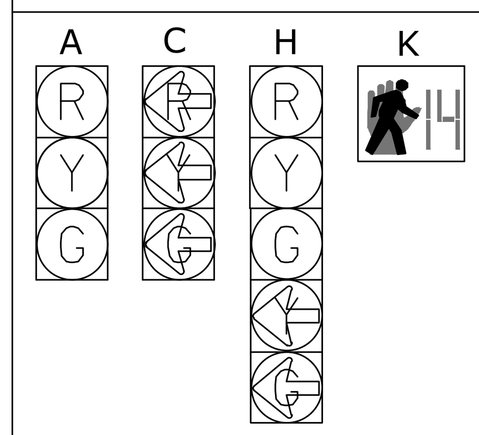
## OVERHEAD STREET NAME SIGNS

| LEGEND | LENGTH | QUANTITY |
|---|---|---|
| | | |
| | | |
| | | |
| | | |

See Sh. No. XX for more information




## TRAFFIC SIGNAL HEADS




*NOTE: ALL LENSES ARE 12" L.E.D. UNLESS OTHERWISE NOTED.*

## SUMMARY OF TRAFFIC SIGNAL HEADS

| SIGNAL FACE NUMBER | SIGNAL FACE ARRANGEMENT | NO. SECTIONS (PER FACE) | SIGNAL MOUNTING TYPE | QUANTITY |
|---|---|---|---|---|
| 3,7 | H | 5 | MAST ARM W/ BACKPLATE | 2 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| TOTAL | | | | 2 |

## TRAFFIC SIGNAL POLE SUMMARY

| POLE NO. | POLE HEIGHT | ARM HEIGHT | ARM LENGTH | NO. OF SIGNALS ON ARM | BRACKET TYPE | X1 | X2 | X3 | X4 | NO. OF SIGNALS ON POLE | BRACKET TYPE | NO.OF PUSH BUTTONS ON POLE | LUMINAIRE MOUNTING HEIGHT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 2 | --- |
| 3 | 35 | 19 | 46 | 2 | I | 45.0 | 29.0 | --- | --- | 1 | III | 1 | 35 |
| 4 | 15 | --- | --- | --- | --- | --- | --- | --- | --- | 1 | III | 1 | --- |
| 7 | 20 | 19 | 50 | 2 | I | 37.5 | 24.5 | --- | --- | 2 | III | 2 | --- |
| 9 | 15 | --- | --- | --- | --- | --- | --- | --- | --- | 3 | III | 2 | --- |

*MAST ARM LENGTHS FOR FUTURE OPERATION WITH PROTECTED LEFT-TURNS.*

## RECAPITULATION OF TRAFFIC SIGNAL QUANTITIES

| ITEM | UNIT | QUANTITY |
|---|---|---|
| TRAFFIC SIGNALIZATION (WACO AVE. & CENTRAL AVE.) | LUMP SUM | 1 |

*NOTE: The traffic signal system shall be complete and the contractor shall furnish and install all equipment and materials necessary for the satisfactory operation of electrical apparatus and for the complete operation of the traffic signal system whether specifically mentioned or not.*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14369
07/03/2019
KANSAS
PROFESSIONAL ENGINEER


# PAVING IMPROVEMENTS
WACO AVENUE FROM DOUGLAS TO CENTRAL
GARY JANZEN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 472-85496

| | |
|---|---|
| Issue: | |
| JOB NO. | 187042-006 |
| DATE | JUNE 2019 |
| PM | BMM |
| DESIGNED BY | RJS, SAC |
| DRAWN BY | CP, BJS |
| CHECKED BY | BMM |

WACO & CENTRAL
TRAFFIC SIGNAL
NOTES & QUANTITIES




Saved 6-5-2019 5:38:55 PM by SAC
Plot Scale 1:1 7-3-2019 1:43:57 PM by CARLOS PEREZ
U:\Wichita-Civil\2018\187042\006\Muni-Trans\Drawings\187042-006-31C-W-C TS NOTES