SHEET NO.	TOTAL SHEETS
1	8

CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E., ACTING CITY ENGINEER

TRAFFIC SIGNAL IMPROVEMENTS

FOR

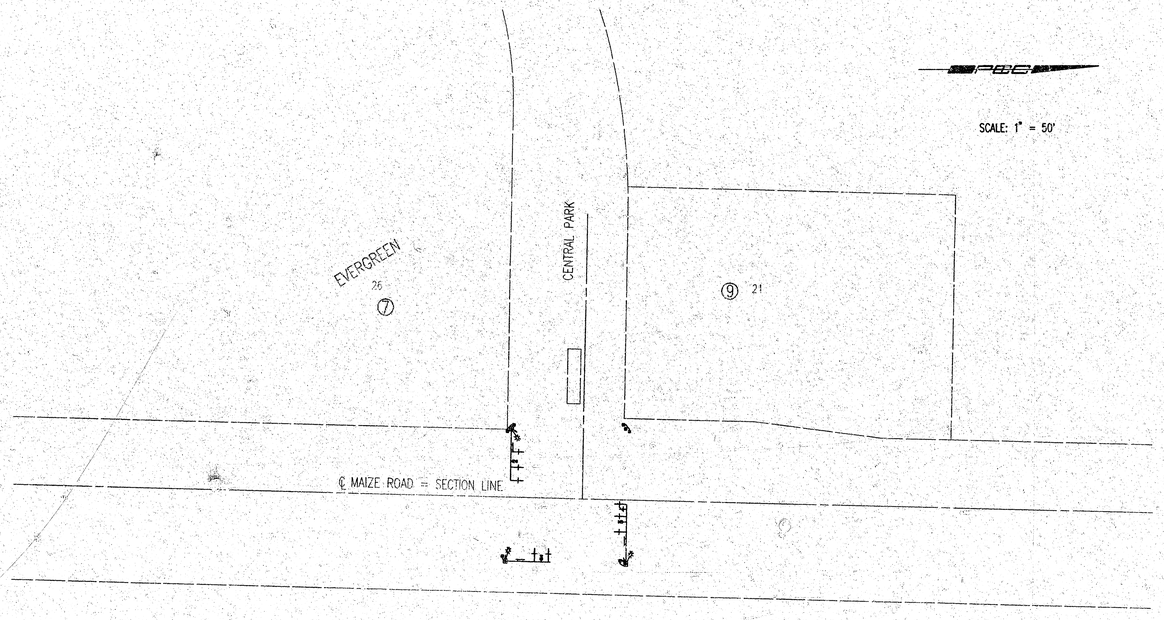
MAIZE ROAD AND CENTRAL PARK

CITY OF WICHITA PROJECT NO. 472-83957

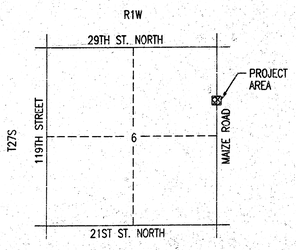
OCA NO. 765858

INDEX OF SHEETS

1. TITLE SHEET
2. BENEFIT DISTRICT
3. TRAFFIC SIGNAL PLAN
4. TRAFFIC SIGNAL BILL OF MATERIALS
5. MARKING PLAN
6-9. TRAFFIC SIGNAL DETAILS



SCALE: 1" = 50'



VICINITY MAP

MARCH 2004

PLANS PREPARED BY

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

GENERAL NOTES

UNDERGROUND UTILITY SERVICE LINES AND OVERHEAD UTILITY POLE LINES ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE PLANS SPECIFICALLY CALL FOR THEIR ADJUSTMENT BY THE CONTRACTOR. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.

TREES AND SHRUBS IN PUBLIC RIGHT-OF-WAY WHICH ARE IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE REMOVED BY THE CONTRACTOR WITH THE ENGINEER'S APPROVAL. TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE SAVED AND PROTECTED FROM DAMAGE.

RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES SHALL BE DISPOSED OF ON SITES TO BE PROVIDED BY THE CONTRACTOR AND APPROVED AS NOTED BELOW.

ALL DISPOSAL SITES MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT. MATERIAL EITHER STOCKPILED OR DISPOSED OF IN A FLOOD PLAIN WOULD REQUIRE A KANSAS STATE BOARD OF AGRICULTURE PERMIT. ANY MATERIAL DUMPED IN WATERS OF THE UNITED STATES OR WETLANDS IS SUBJECT TO U.S. CORPS OF ENGINEERS PERMITTING REGULATIONS. ANY MATERIAL BURIED OR STOCKPILED BEYOND APPROVED CONSTRUCTION LIMITS WOULD REQUIRE ADDITIONAL ARCHEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION.

CONTRACTOR SHALL SATISFY HIMSELF OF SURFACE AND SUBSURFACE CONDITIONS PRIOR TO BIDDING.

CONTRACTOR SHALL PROVIDE A MINIMUM FORTY-EIGHT (48) HOUR ADVANCE NOTICE (EXCLUDING WEEKENDS AND HOLIDAYS) PRIOR TO BEGINNING ANY EXCAVATION, TO KANSAS ONE-CALL SYSTEM, A UTILITY LOCATION SERVICE, AT (316) 687-2470 TO REQUEST THE FOLLOWING UTILITY COMPANIES TO LOCATE ALL EXISTING LINES WITHIN THE PROJECT AREA: AQUILA NETWORK, WESTAR ENERGY, KANSAS GAS SERVICE COX COMMUNICATIONS, SBC, CITY OF WICHITA SEWER MAINTENANCE AND CITY OF WICHITA WATER DEPARTMENT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR WILL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.

THE WATER DEPARTMENT SHALL FIELD LOCATE WATER VALVES ONE TIME DURING CONSTRUCTION WHEN REQUESTED BY THE CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PRESERVE SUCH FIELD LOCATIONS DURING THE CONSTRUCTION PROCESS. WATER VALVES, WATER VALVE BOXES OR FIRE HYDRANTS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.

THE CONTRACTOR SHALL ADJUST WATER VALVE BOXES AS DIRECTED BY THE ENGINEER. THIS WORK TO BE SUBSIDIARY TO OTHER BID ITEMS.

THE CONTRACTOR SHALL INSTALL CONDUIT UNDER EXISTING PAVEMENT USING DIRECTIONAL BORING METHODS. THE CONTRACTOR SHALL COORDINATE W/WESTAR FOR INSTALLATION AND LOCATION OF THE POWER FEED AND METER. ALL COSTS FOR THE INSTALLATION OF THE POWER FEED, INCLUDING SERVICE AND INSPECTION FEES SHALL BE BORNE BY THE CONTRACTOR.

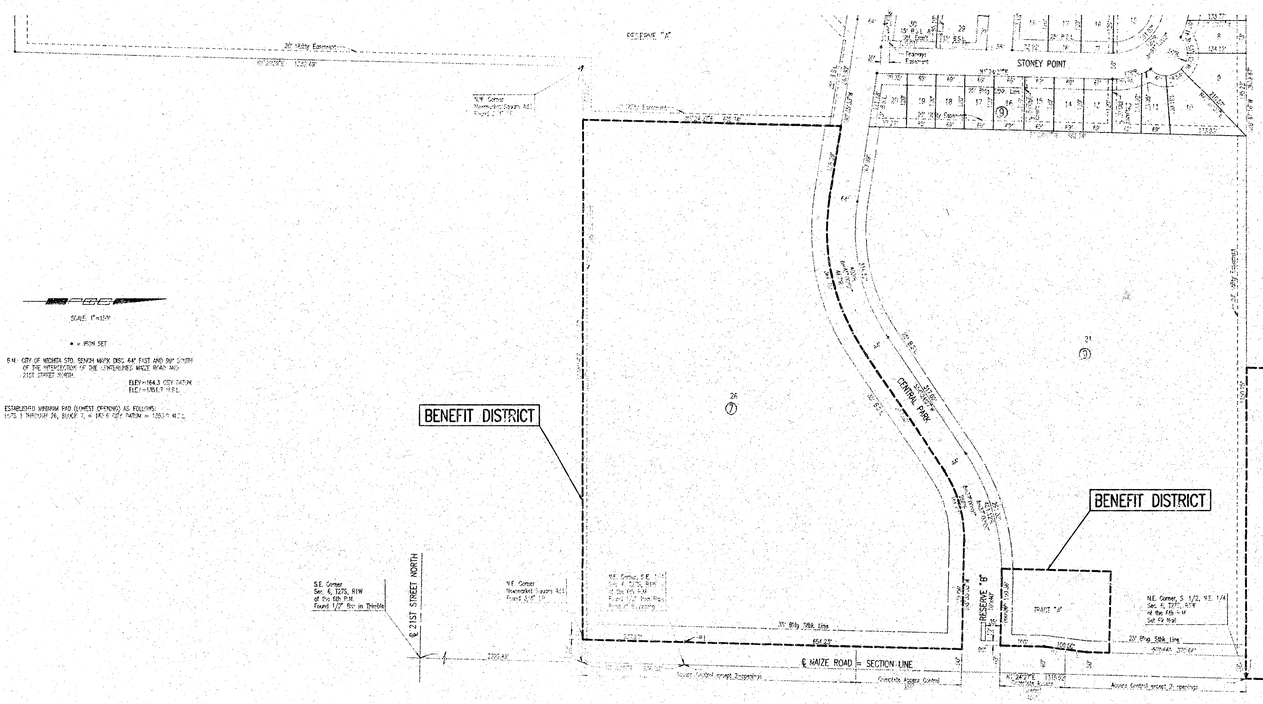
EXISTING STOP SIGN SHALL REMAIN IN PLACE. CONTRACTOR SHALL REMOVE STOP SIGN AT THE TIME THE TRAFFIC SIGNAL IS FULLY FUNCTIONAL.

ROBERT C. REMSBERG — 9168 — 5-10-04 — KANSAS — PROFESSIONAL ENGINEER

DSNR: BER OPER: CSL SCALE: 1=50.00
Q:\2004\04094\TITLE 03-10-2004 03:21:41 pm

EXHIBIT A

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS



SCALE: 1"=150'

● = IRON SET

B.M.: CITY OF WICHITA STD. SEVEN MARK DISC 44' EAST AND 90' SOUTH OF THE INTERSECTION OF THE CENTERLINES MAIZE ROAD AND 21ST STREET NORTH.

ELEV.=1164.3 CITY DATUM
ELEV.=1068.7 M.S.L.

ESTABLISHED MONUMENT AND OFFSETS AS FOLLOWS:
(NOT) 1 THROUGH 26, BLOCK 1, = 1ST. P. CITY DATUM = 1057.0 M.S.L.

No.	Revision	By	Date

CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E.- ACTING CITY ENGINEER
21ST STREET BOX EXTENSION

BENEFIT DISTRICT

CITY OF WICHITA PROJECT NO. 472-83957

Professional Engineering Consultants, P.A.
303 S. TOPEKA • WICHITA, KANSAS 67202
316-262-2691 • FAX 316-262-3003

Designed by BER	Job No. 35-04094-042	Sht. 2 of 9
Drawn by	Date FEBRUARY 2004	

CONF: BER (35-04094-042) SCALE: 1=150.00

PROJECT NO.	SHEET NO.	TOTAL SHEETS
472-83957	3	9

CONTROLLER DESCRIPTION

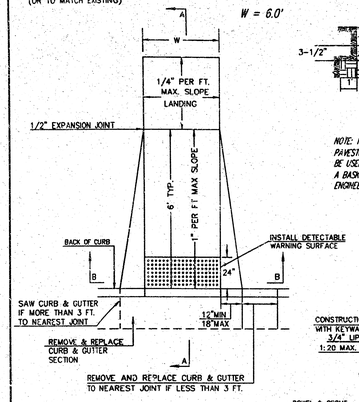
The Traffic Signal Controller shall comply with the requirements defined in the Specifications for a Type 170E Controller with 412b2 prom module and a 400 modem. It shall be furnished and installed with a Model 332 cabinet, 3-type 242 isolator units, 1 video detection unit, 6 switch packs, 2-type 204 flashers, 4 flash transfer relay, and a Model 210P conflict monitor MS or or ECL. The Controller shall also be furnished with W4IKS Verson 58

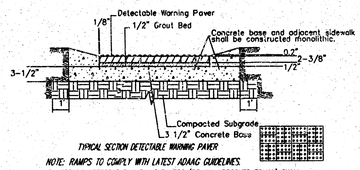
LEGEND

- Traffic Signal Pole with Mast Arm
- Traffic Signal Pedestal
- Traffic Signal Camera
- Traffic Signal Camera
- Luminaire with Arm
- Traffic Signal Head
- Traffic Signal Head with Backplate
- Pedestrian Signal Head
- Controller with pad
- Service Box (Pre-Fab)
- D(PHASE)-# Detector Zone
- Detector Zone
- R10-12 Sign
- Conduit
- (2) Signal Phase
- Signal Pole Reference Number
- Street Name Sign
- Construct Std. Wheelchair Ramp
- Concrete Removal
- Curb and Gutter Removal

W= 4'0" FOR STANDARD RAMP
W= 5'0" FOR RAMPS AT SCHOOL CROSSWALKS
(OR TO MATCH EXISTING)

W = 6.0'

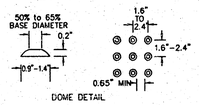




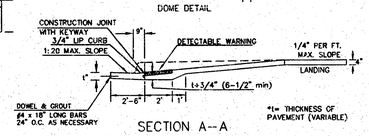
TYPICAL SECTION DETECTABLE WARNING PAVER

NOTE: RAMPS TO COMPLY WITH LATEST ADAAG GUIDELINES. PAVESTONE DETECTABLE WARNING PAVERS (OR AN APPROVED EQUAL) SHALL BE USED IN ALL WHEELCHAIR RAMPS. THE RED PAVER SHALL BE INSTALLED USING A BASKET WEAVE/PARQUET PATTERN. OTHER PATTERNS MAY BE USED WITH APPROVAL OF ENGINEER. SAND FILL JOINTS. ALIGN DOMES IN THE DIRECTION OF PEDESTRIAN TRAVEL.

SECTION B–B



DOME DETAIL

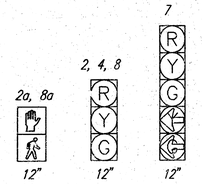


*t= THICKNESS OF PAVEMENT (VARIABLE)

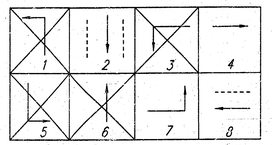
SECTION A--A

(TYPE A) STANDARD WHEELCHAIR RAMP

WITH DETECTABLE WARNING
CONSTRUCTION DETAIL FOR STREETS
WITH COMBINED CURB & GUTTER



SIGNAL HEAD ARRANGEMENT



PHASE DIAGRAM

CENTRAL PARK AND MAIZE ROAD	PHASE							
	1	2	3	4	5	6	7	8
MAX. I	–	30	–	80	–	–	30	80
MAX. II/HFDW	–	30	–	80	–	–	30	80
WALK	–	8	–	–	–	–	–	8
FLASH DW	–	25	–	–	–	–	–	20
MAX. INITIAL	–	8.0	–	8.0	–	–	6.0	8.0
MIN. GREEN	–	10.0	–	10.0	–	–	8.0	10.0
T B R	–	–	–	25	–	–	1.0	–
T T R	–	–	–	15	–	–	1.0	–
OBSERVE GAP	–	–	–	–	–	–	–	–
PASSAGE	–	1.0	–	2.0	–	–	1.0	2.0
MIN. GAP	–	1.0	–	1.0	–	–	1.0	1.0
ADDED ACTUATION	–	2.0	–	2.0	–	–	1.0	2.0
YELLOW	–	3.5	–	4.0	–	–	3.0	4.0
RED CLEAR	–	2.0	–	2.0	–	–	1.0	2.0
RED REVERT	–	–	–	–	–	–	–	–
WALK II	–	–	–	–	–	–	–	–

The signal shall dwell green in Φ4 & Φ8.

FUNCTION TABLE	PHASE							
FUNCTION	1	2	3	4	5	6	7	8
VEHICLE RECALL	–	–	–	X	–	–	–	X
PED RECALL	–	–	–	–	–	–	–	–
RED LOCK	–	–	–	–	–	–	–	–
YELLOW LOCK	–	X	–	–	–	–	X	–
PERMIT	–	X	–	X	–	–	X	X
PED PHASES	–	X	–	–	–	–	–	X
LEAD PHASES	X	–	X	–	X	–	X	–
DOUBLE ENTRY	–	–	–	X	–	–	–	X
SEQUENTIAL TIMING	–	–	–	–	–	–	–	–
START-UP YELLOW	–	X	–	–	–	–	–	–
OVERLAP A	–	–	–	–	–	–	–	–
OVERLAP B	–	–	–	–	–	–	–	–
OVERLAP C	–	–	–	–	–	–	–	–
OVERLAP D	–	–	–	–	–	–	–	–
EXCLUSIVE	–	–	–	–	–	–	–	–
SIMULTANEOUS GAP	–	–	–	–	–	–	–	–

DETECTOR SUMMARY							
CAMERA NO.	DETECTION ZONE	MODE	SIZE (LxW)	PHASE CALLED	PHASE EXTENDED	DELAY/ STRETCH TIMER	INITIAL SETTING (SEC.)
1	D7-1	PRESENCE	60x6	7	7	–	–
1	D4-11o4	PULSE	6x6	4	4	S	1.0
1	D4-5&6	PRESENCE	60x6	4	4	–	–
2	D2-1	PRESENCE	60x6	2	2	–	–
2	D2-2	PRESENCE	60x6	2	2	D	3.0
3	D8-11o4	PULSE	6x6	8	8	S	1.0
3	D8-5&6	PRESENCE	60x6	8	8	–	–
3	D8-7	PRESENCE	60x6	8	8	D	3.0

SEE SHEET NO. 4 FOR WIRING DIAGRAM

CENTRAL PARK AND MAIZE ROAD

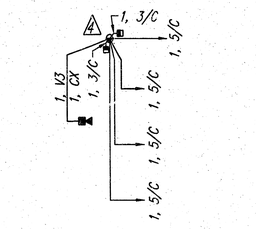
TRAFFIC SIGNAL PLAN

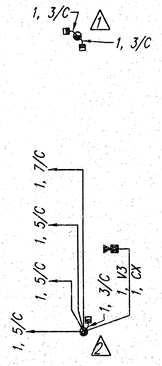
Professional Engineering Consultants, P.A.
303 S. TOPEKA • WICHITA, KANSAS 67202
316-262-2691 • FAX 316-262-3003

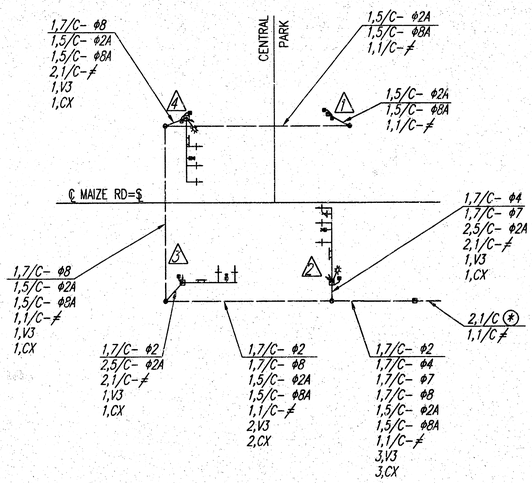
Designed by	BER	Checked by	
Drawn by	CSL	Date FEBRUARY 2004	Job No. 04094

DSNR: BER OPER: CSL SCALE: 1=20.00
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PROJECT NO.	SHEET NO.	TOTAL SHEETS
472-83957	4	9







Maize Rd	Pole 3
Central Park	Pole 2 & 4

Street Name Sign Legends
use 6" series EM lettering
8" Uppercase
6" Lowercase

≠ #8AWG Equipment Ground (Green)

℗ Power Supply

V3 Video Power Cable

CX Video Coax Cable

△ Signal Pole Reference Number

All splices to be in pole base, no splices permitted within servce box.

POLE WIRING DIAGRAMS

Note: Pushbutton to be wired with 2,1/C to pole base connection

TRAFFIC SIGNAL POLE SUMMARY

POLE NO	TYPE①	ARM LENGTH	NO.OF SIGNALS ON ARM	BRACKET TYPE	X1	X2	X3	NO.OF SIGNALS ON POLE	BRACKET TYPE	NO.OF PUSH BUTTONS ON POLE	REMARKS
1	A	–	–	–	–	–	–	2	II	2	
2	C	44'	3	I	44	35	24	2	II & III	2	
3	B	34'	2	I	34	22	–	3	II & III	1	
4	C	38'	3	I	38	28	17	3	II & III	1	

① A–15'Pedestal (Alum.)
B–20'Steel with Mast Arm(s)
C–35'Steel (Joint Use) with Mast Arm(s)
D–40'Steel with Mast Arm

Top Coat Finish for Traffic Signal Poles & Controller Cabinet

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 2.0 mils. Prior to application of the top coat, the surface shall be mechanically etched and pre-heated to 450 degrees F for a minimum of one hour. The coating shall be electro-statically applied and cured at a minimum temperature of 400 degrees F. The finished color for the poles shall be black and approved by the Engineer prior to application on the basis of color chip submittals.

Special Finish for Traffic Signal Equipment

The traffic signal, mounting brackets, signal head backs, sign backs, meter box, disconnect box, and miscellaneous hardware shall be shop painted with an aerosol lacquor celulose ester to match the traffic signal pole color. The Contractor shall submit two copies of the proposed coating system to the Engineer for approval prior to application. In addition to the requirements stipulated in the Standard Specifications, banding material shall be coated with ethylene-vinly-alcohol (EVA) copolymer. The color shall be black.

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

SUMMARY OF TRAFFIC SIGNAL HEADS

NUMBER	TYPE	SIZE	QUANTITY
7	I	12"	1
4	A	12"	3
8	A	12"	4
2	A	12"	3
2A	K	12"	4
8A	K	12"	2
TOTAL			17

SERVICE BOX SUMMARY

STATION	DIST.–SIDE
42+80	47' LT.
42+80	58' RT.
43+83	58' RT.
43+95	45' LT.

RECAPITULATION OF TRAFFIC SIGNAL QUANTITIES

ITEM	UNIT	QUANTITY
TRAFFIC SIGNAL INSTALLATION (Maize Rd. & Central Park)	LUMP SUM	LUMP SUM
	1	1

BILL OF MATERIALS

ITEM	UNIT	QUANTITY
PAD MOUNTED CONTROLLER & CABINET	EACH	1
TRAFFIC SIGNAL HEAD W/MOUNTING HARDWARE	EACH	17
TRAFFIC SIGNAL POLE STEEL (20')	EACH	1
TRAFFIC SIGNAL POLE (JOINT USE) STEEL (35')	EACH	2
TRAFFIC SIGNAL PEDESTAL (15')	EACH	1
CONCRETE CONTROLLER PAD	EACH	1
CONCRETE FOOTING – PEDESTAL	EACH	1
CONCRETE FOOTING – POLE	EACH	3
CONDUIT ELBOW 90° 2"	EACH	AS REQ'D
CONDUIT ELBOW 90° 3"	EACH	AS REQ'D
BACK PLATE 5" 3 SECTION	EACH	7
BACK PLATE 5" 5 SECTION	EACH	1
TERMINAL BLOCK	EACH	–
SERVICE BOX	EACH	4
JUNCTION BOX (PRE-FAB)	EACH	–
GROUND ROD & CLAMP	EACH	6
PEDESTRIAN INDICATIONS LED (12" COMBINATION)	EACH	6
LED TRAFFIC SIGNAL LENS	EACH	35
ENTRANCE HEAD	EACH	1
CIRCUIT BREAKER & BOX 50 AMP.	EACH	1
SURGE ARRESTOR – A.C.SERVICE	EACH	1
SURGE ARRESTOR – DETECTOR	EACH	–
PEDESTRIAN PUSHBUTTON W/SIGN	EACH	6
6 PR. COMMUNICATION CABLE	LIN.FT.	–
DETECTOR LOOP WIRE NO. 14 AWG 1/c	LIN.FT.	–
LEAD-IN WIRE NO.6 AWG 1/c	LIN.FT.	250
MULTI-CONDUCTOR CABLE NO.14 AWG 7/c	LIN.FT.	700
MULTI-CONDUCTOR CABLE NO.14 AWG 5/c	LIN.FT.	1550
MULTI-CONDUCTOR CABLE NO.14 AWG 3/c	LIN.FT.	100
SHEILDED DETECTOR LEAD-IN NO.14 AWG 2/c	LIN.FT.	–
CONDUIT 1"(PVC)	LIN.FT.	–
CONDUIT 1 1/2"(RGC)	LIN.FT.	100
CONDUIT 2"(PVC)	LIN.FT.	250
CONDUIT 2"(RGC)	LIN.FT.	51
CONDUIT 3"(RGC)	LIN.FT.	371
#8 AWG GROUND (GREEN)	LIN.FT.	600
STREET NAME SIGN	EACH	3
R10-12 SIGN	EACH	1
VIDEO DETECTION CAMERA (VANTAGE OZ2), MOUNTING HARDWARE	EACH	3
VIDEO DETECTION UNIT (VANTAGE EDGE MODULE)	EACH	1 ℗
VIDEO POWER CABLE #16 A.W.G. 3/C	LIN.FT.	800
VIDEO CABLE 75 OHM COAXIAL (BELDON #8281 OR APPROVED EQUAL)	LIN.FT.	800
TV MONITOR	EACH	1
ITERIS LENS ADJUSTMENT UNIT	EACH	–
VIDEO SYSTEM PROGRAMMING UNIT	EACH	–

℗ 3 Modules required

–QUANTITIES FOR INFORMATION ONLY–

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.

DSNR: BER OPER: SAW SCALE: 1=40.00
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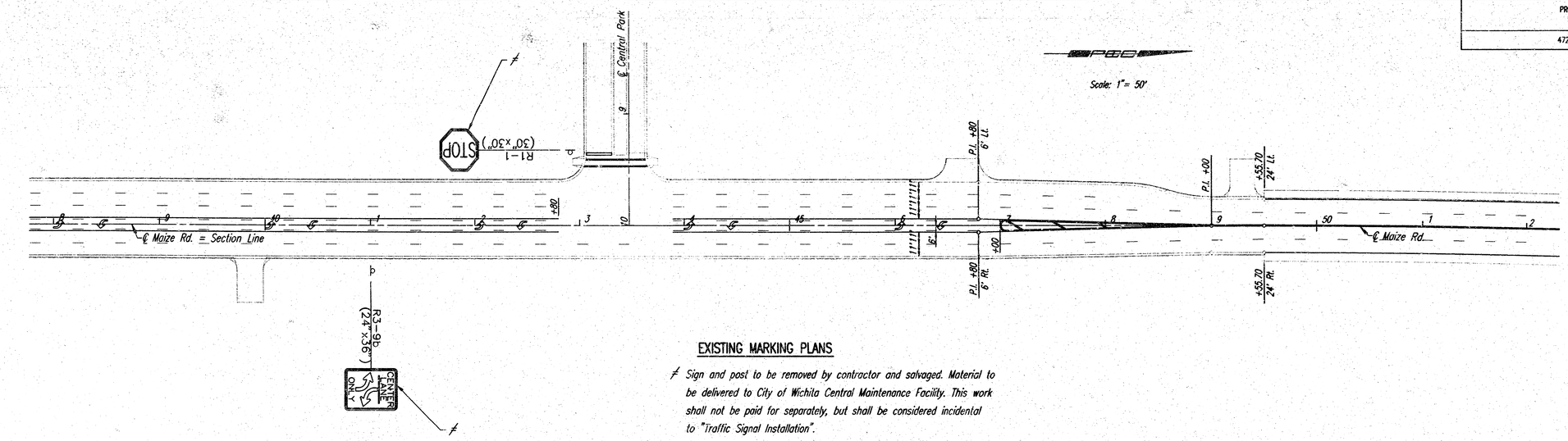
CENTRAL PARK AND MAIZE ROAD

TRAFFIC SIGNAL WIRING AND QUANTITIES

Professional Engineering Consultants, P.A.
303 S. TOPEKA • WICHITA, KANSAS 67202
316-262-2691 • FAX 316-262-3003

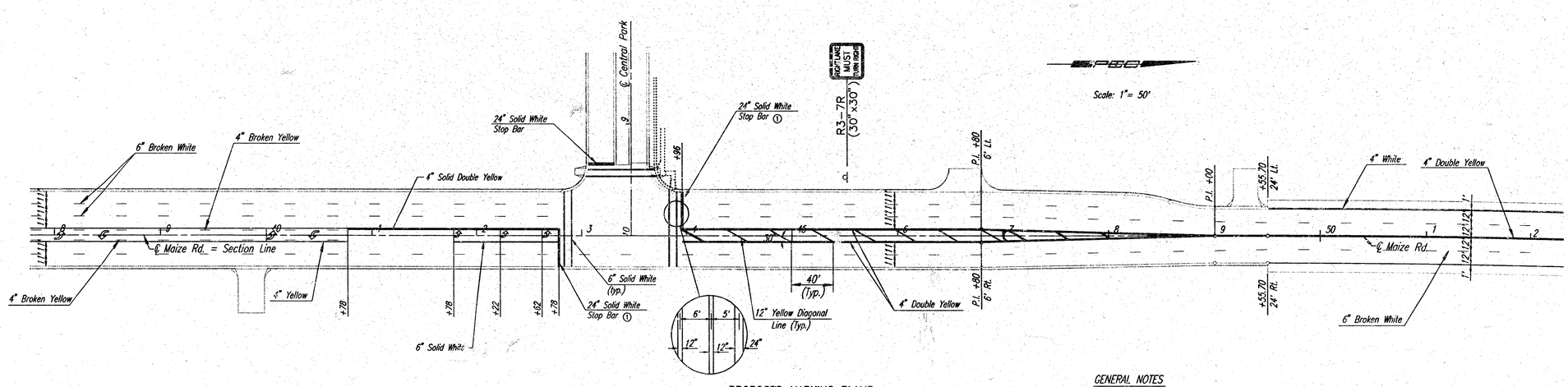
Designed by	BER	Checked by	
Drawn by	CSL	Date FEBRUARY 2004	Job No. 04096

PROJECT NO.	SHEET NO.	TOTAL SHEETS
472-83957	5	9



EXISTING MARKING PLANS

≠ *Sign and post to be removed by contractor and salvaged. Material to be delivered to City of Wichita Central Maintenance Facility. This work shall not be paid for separately, but shall be considered incidental to "Traffic Signal Installation".*

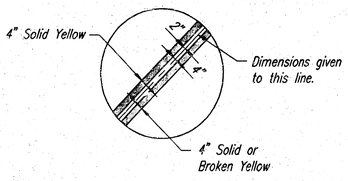


PROPOSED MARKING PLANS

SUMMARY OF PAVEMENT MARKINGS		
ITEMS	TOTAL	UNITS
PAVEMENT MARKING (THERMOPLASTIC) (WHITE) (8")	539	LIN. FT.
PAVEMENT MARKING (THERMOPLASTIC) (YELLOW) (4")	1524	LIN. FT.
PAVEMENT MARKING (THERMOPLASTIC) (YELLOW) (12")	176	LIN. FT.
PAVEMENT MARKING SYMBOL (THERMOPLASTIC) (WHITE LEFT ARROWS)	3	EACH
PAVEMENT MARKING (THERMOPLASTIC) (WHITE) (12")	-	LIN. FT.
① PAVEMENT MARKING (THERMOPLASTIC) (WHITE) (24")	67	LIN. FT.

FOR INFORMATION ONLY - BID ITEM "PAVEMENT MARKING" IS PAID AS LUMP SUM.

① THE CONTRACTOR SHALL COORDINATE THE PLACEMENT OF THE 24" WHITE STOP BARS WITH THE TRAFFIC SIGNAL CONTRACTOR. THE 24" WHITE STOP BARS SHALL NOT BE PLACED UNTIL THE TRAFFIC SIGNAL IS INSTALLED AND FUNCTIONING.



DETAIL OF DOUBLE YELLOW STRIPING

GENERAL NOTES

Striping dimensions are from centerline of stripe to centerline of stripe.

All single line dimensions are to centerline of stripe.

All double line dimensions are to center of space between stripes. (See Detail)

Existing markings consistent with the proposed marking plan shall remain. Existing marking which conflict with the proposed marking plan shall be completely removed. Removal methods shall be approved by the Engineer. Removal of existing markings shall be subsidiary.

* *All markings on Bituminous Pavement shall be Thermoplastic Pavement Marking except as noted below.*

** *All symbols and all markings on Concrete Pavement shall be Heat-fused Preformed Thermoplastic Pavement Marking.*

Heat-fused Preformed Thermoplastic Pavement Marking placed over a joint line in concrete pavement shall be sliced and removed along the joint edges after placement.

CENTRAL PARK AND MAIZE ROAD

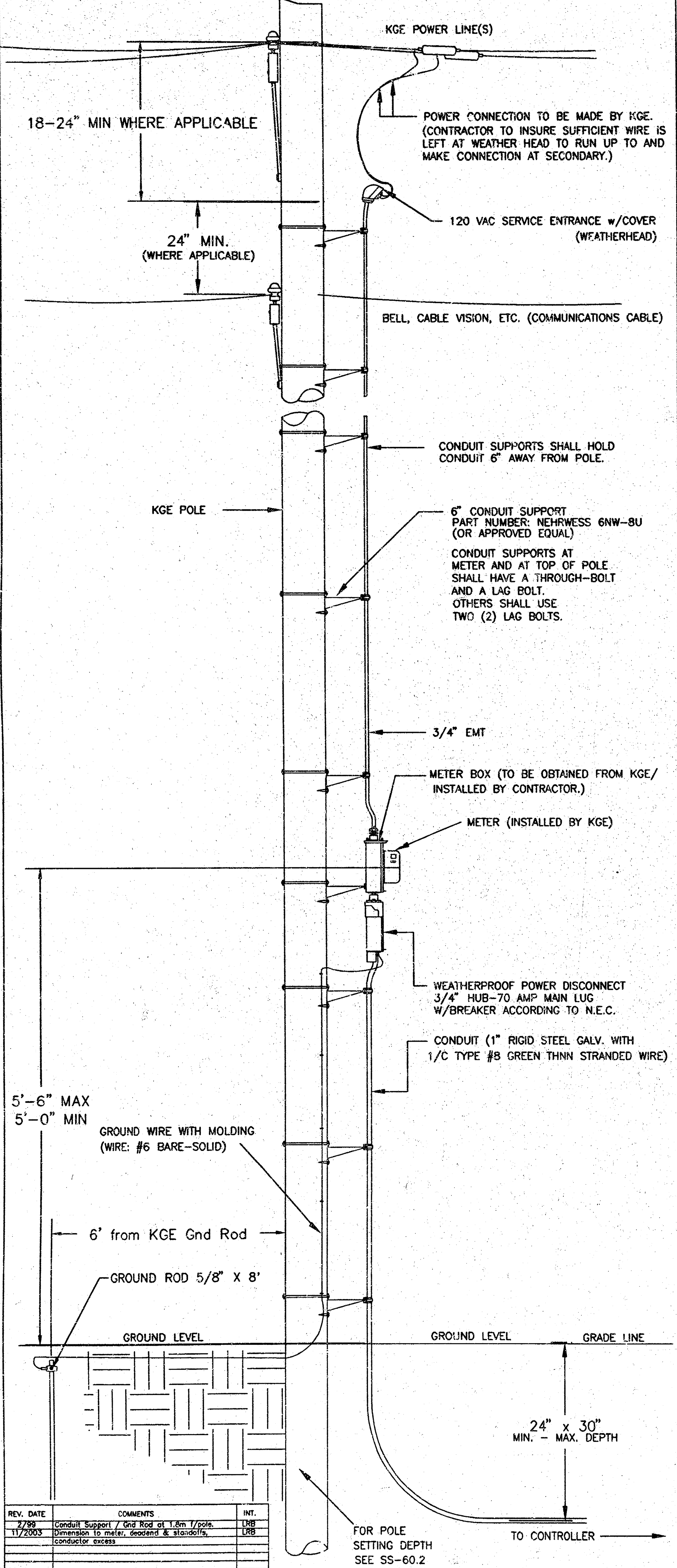
MARKING PLAN

Professional Engineering Consultants, P.A.
303 S. TOPEKA • WICHITA, KANSAS 67202
316-262-2691 • FAX 316-262-3003

Designed by	BER	Checked by	
Drawn by	CSL	Date FEBRUARY 2004	Job No. 35-04094

DGN: BER DPR: CSL SCALE: 1=50.00
03-10-2004 04:04 MarkingPlan 03-10-2004 02:36:17 pm

POWER POLE DETAILS

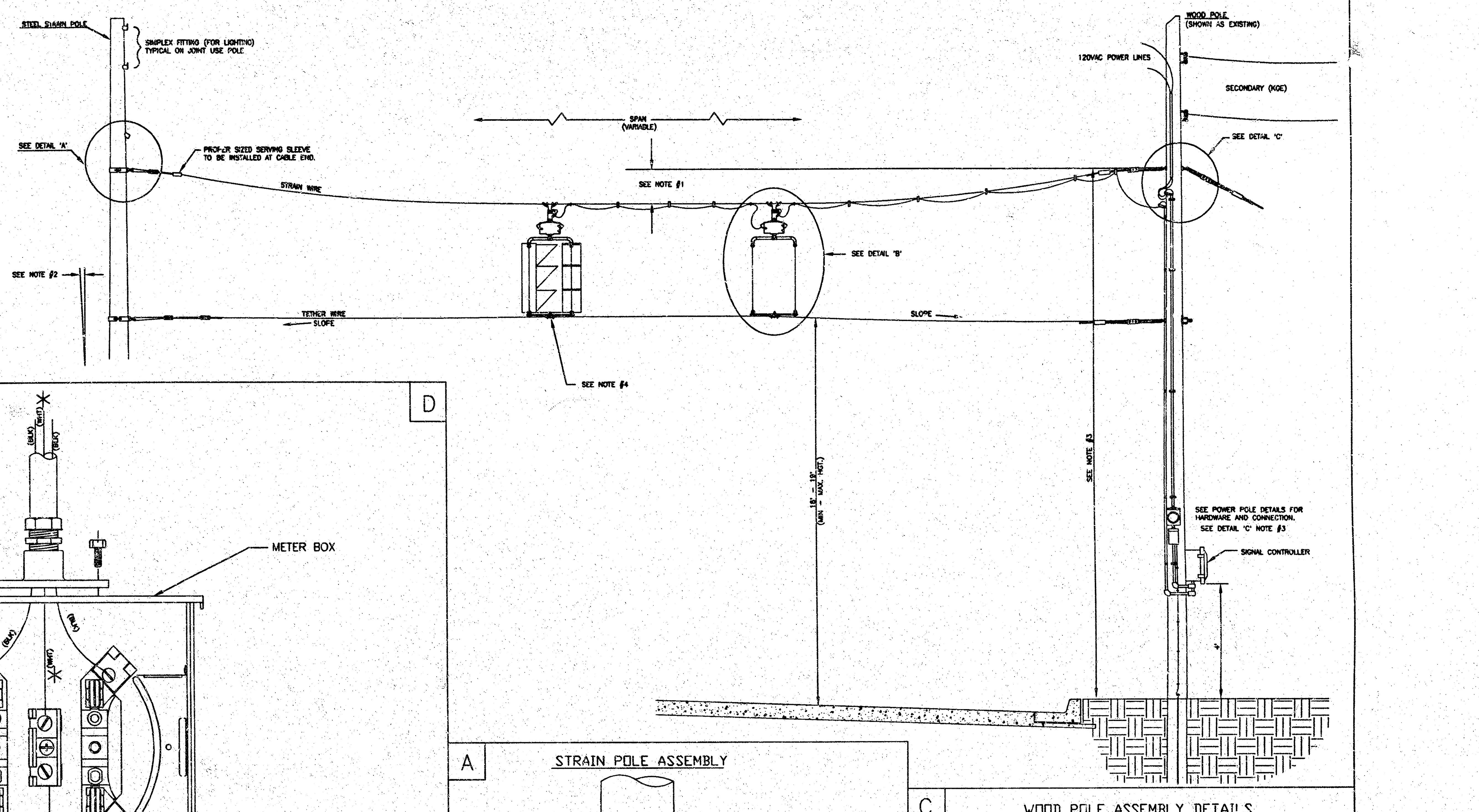


REV. DATE	COMMENTS	INT.
2/99	Conduit Support / Gnd Rod at 1.8m f/pole.	LRB
11/2003	Dimension to meter, deadend & standoffs,	LRB
	conductor excess	

USNR. BER. OPER. CSL. SCALE: 1=1.00
0:\2004\04094\POWP-SP 03-10-2004 02:37:54 pm

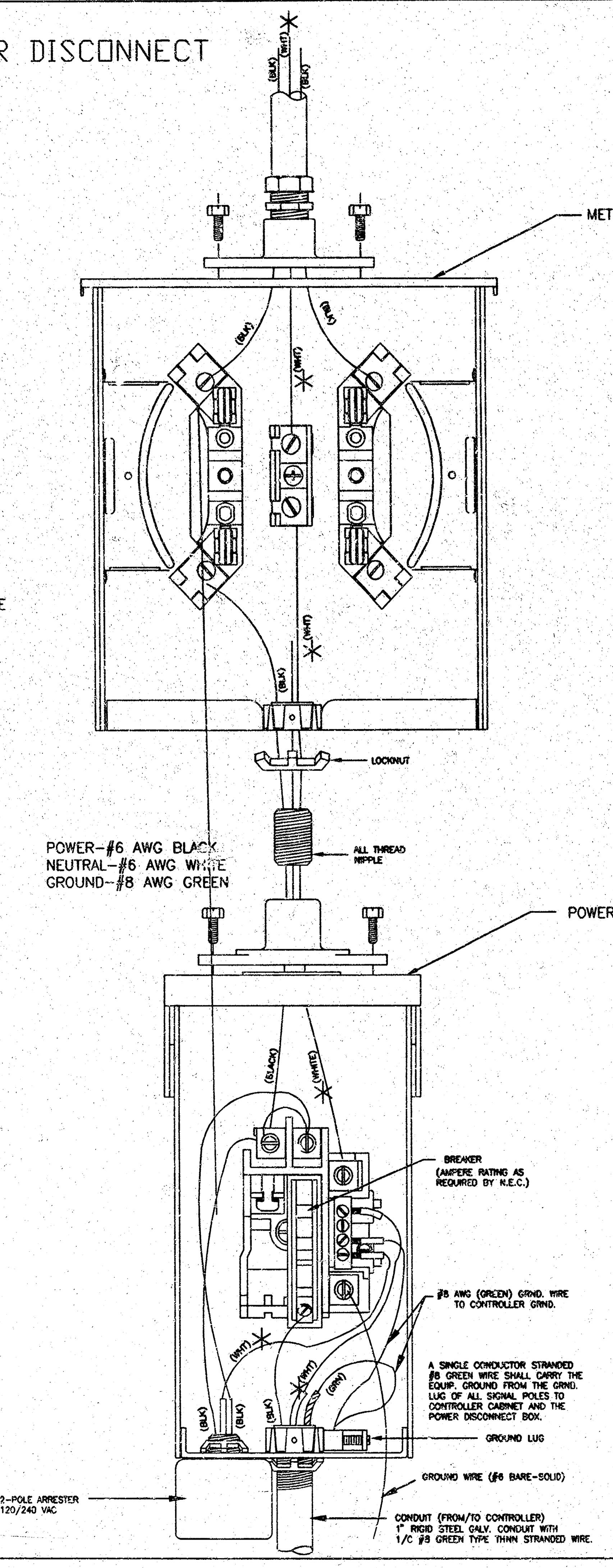
SPANWIRE ASSEMBLY DETAILS

1. MAX. SAG = 5% OF SPAN.
2. STANDARD BACKRAKE = 1.5℄
3. HEIGHT OF STRAIN WIRE HOOK-UP TO BE DETERMINED BY FIELD ENGINEER. TRAFFIC SIGNAL CABLE TO BE SECURED TO STRAIN (SPAN) WIRE WEATHERABLE NYLON CABLE HANGERS (12" CTR.) DETAIL 'B'
4. TETHER CLAMP TO BE DESIGNED TO RELEASE UNDER 'HIGH WIND LOAD' TO PERMINT SIGNAL 'FREE SWING'.



METER BOX & POWER DISCONNECT DETAILS

D



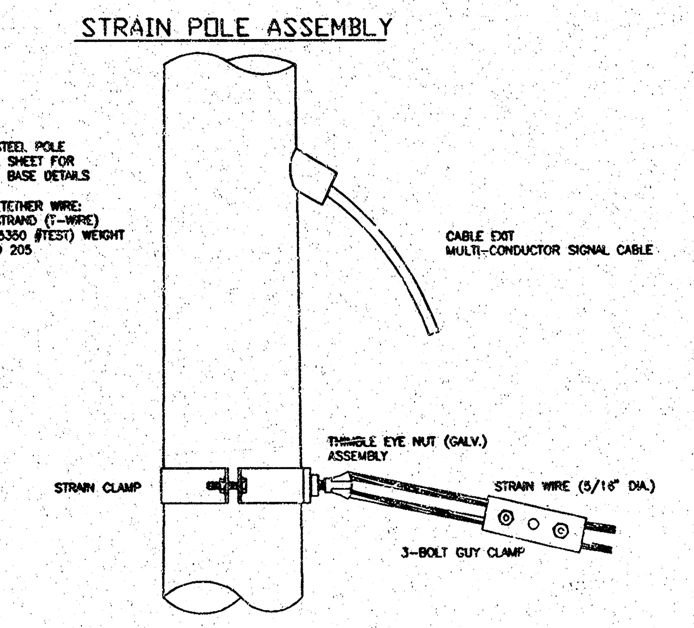
NOTE:

*TO BE MARKED WITH WHITE TAPE

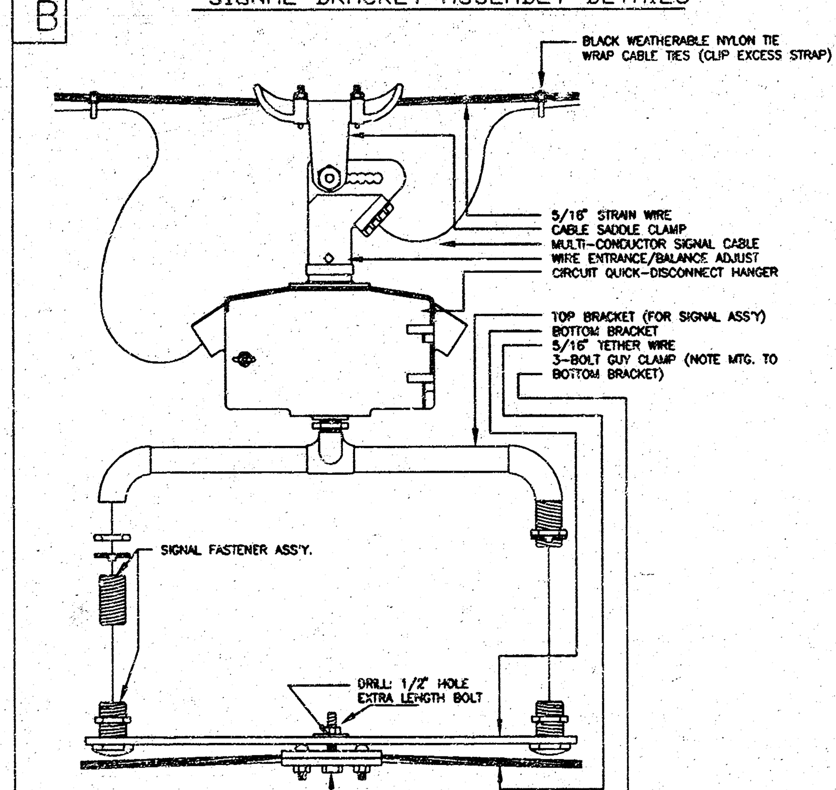
A — STRAIN POLE ASSEMBLY

NOTE: SEE STEEL POLE ASS'Y DETAIL SHEET FOR STRAIN POLE BASE DETAILS

STRAIN AND TETHER WIRE: GALV. GUY STRAND (T-WIRE) 5/16" SM (5350 #TEST) WEIGHT PER 1000 @ 205

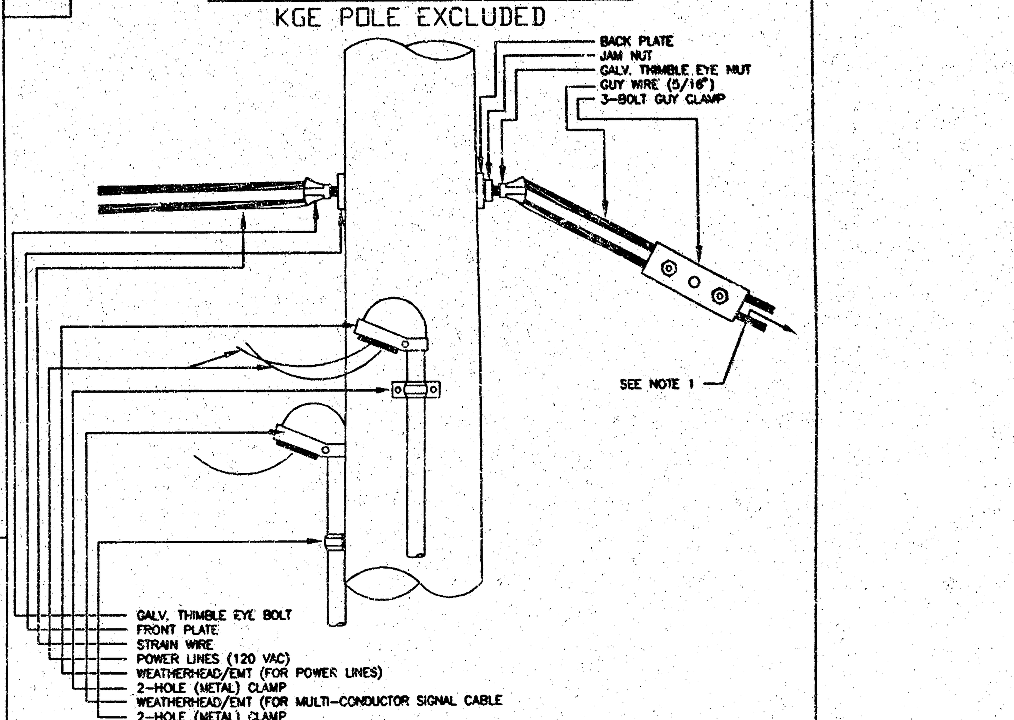


B — SIGNAL BRACKET ASSEMBLY DETAILS



C — WOOD POLE ASSEMBLY DETAILS

KGE POLE EXCLUDED



NOTE:

1. GALV. THIMBLE EYE ANCHOR BOLT AND EXPANDING ANCHOR (NOT SHOWN) TO STABILIZE WOOD POLE (WHERE APPLICABLE)
2. ANY COMBINATION OF ROUND/THIMBLE EYE BOLTS AND NUTS MAY BE UTILIZED AS APPLICATION MAY VARY. FIELD ENGINEER TO DETERMINE TYPE OF HARDWARE USED.
3. HARDWARE SHOWN IS TRANSFERRABLE TO STEEL POLE IN WHOLE OF PART WHERE STEEL STRAIN POLE IS USED. (POWER; SIGNAL CABLE; METER, ETC.) FIELD ENGINEER TO MAKE DETERMINATION. STEEL STRAIN POLE APPLICATIONS MAY VARY AS TO MOUNTING ON POLE: USE OF CLAMPS, BANDED BRACKETS, ETC. ARE STD. – FIELD ENGINEER TO DETERMINE BEST TYPE APPLICATIONS.

CENTRAL PARK AND MAIZE ROAD

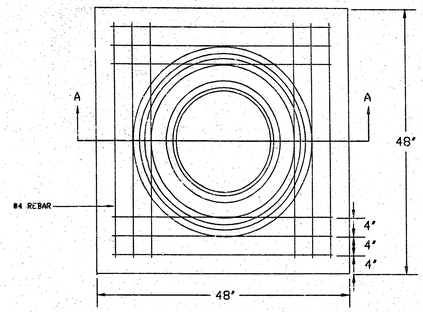
POWER POLE AND SPAN POLE ASSEMBLY DETAILS

PROJECT NUMBER 472-83957		
DRAWN BY: T.M.	SCALE	REVISED BY: L. B.
DATE: FEB. 96	NO SCALE	DATE: 2/26/99

CITY OF WICHITA
DEPARTMENT OF PUBLIC WORKS

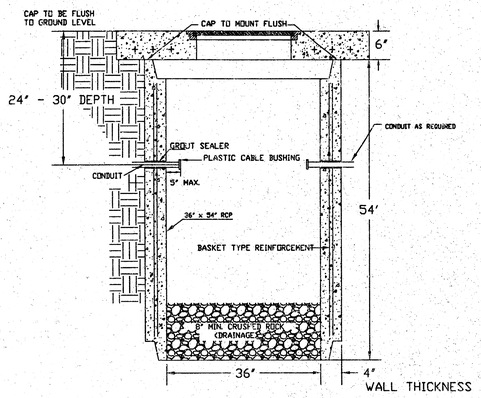
DIVISION OF TRAFFIC ENGINEERING
WM. G. McKINLEY P.E. TRAFFIC ENGINEER

SERVICE BOX CONSTRUCTION/INSTALLATION DETAILS

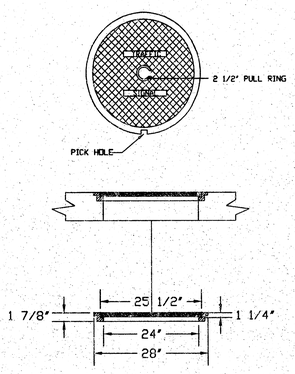


PRE-CAST CONCRETE
SERVICE BOX

(36" I.D. X 54" RCP)
with 6" CAP

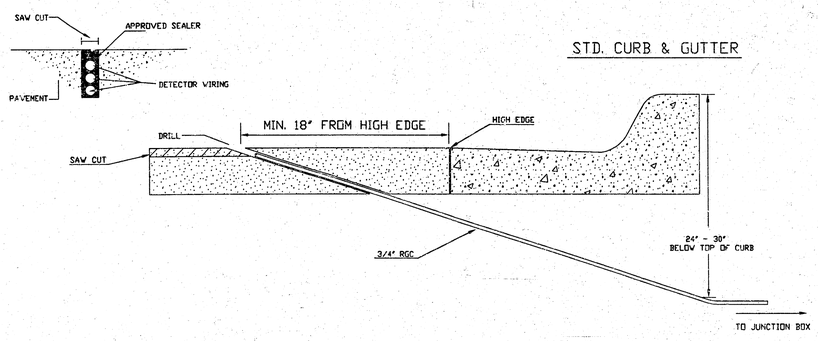


SECTION A-A



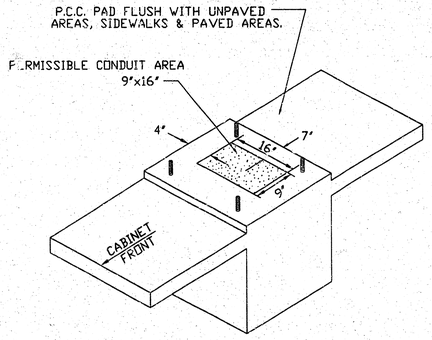
RING & COVER DETAIL

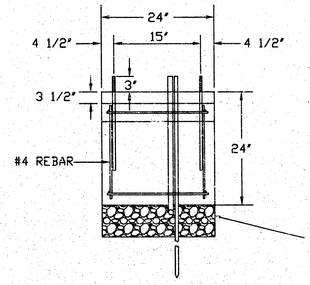
CONDUIT/DETECTOR WIRE INSTALLATION DETAILS

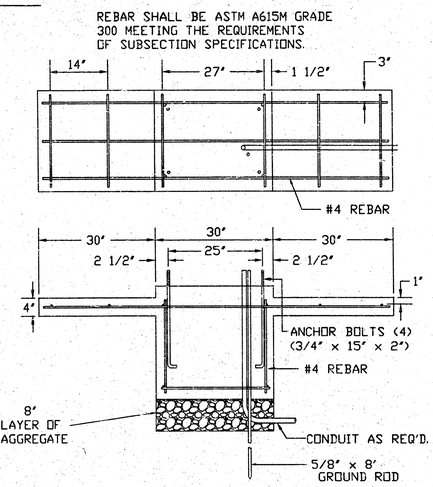


STD. CURB & GUTTER

170 CONTROLLER PAD DETAILS

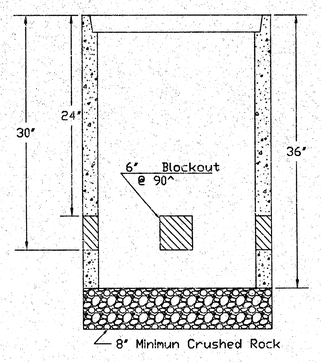




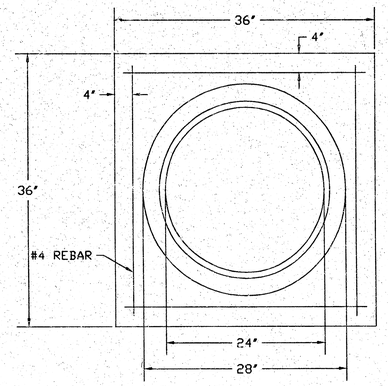


JUNCTION BOX DETAILS

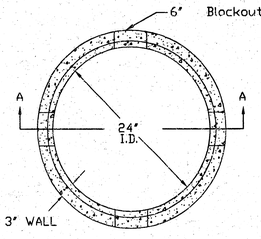
PRE-FAB Junction Box
(24" I.D. X 36" R.C.P.)



SECTION A-A



JUNCTION BOX CAP
36" x 36" x 6"
TOP OF CAP TO BE FLUSH WITH GROUND LEVEL.



**SEE SERVICE BOX INSTALLATION FOR RING & COVER DETAILS.

NOTES:

SERVICE & JUNCTION BOX:

1. CONDUIT CONNECTION TO BE FLUSH TO WITHIN 125 mm OF INSIDE FACE OF SIDE WALL, CONDUIT TO DRAIN INTO SERVICE BOX.
2. CONDUIT CONNECTIONS TO SERVICE BOX SHALL BE TERMINATED WITH PLASTIC CABLE BUSHING.
3. CONDUIT SHALL BE SEALED WITH APPROVED SEALER AT INSIDE WALL FACE.
4. ALL SERVICE & JUNCTION BOXES TO HAVE 200 mm OF CRUSHED ROCK.

TRENCHING:

1. DEPTH TO BE 30" MINIMUM WITH ROCK & STUBBLE FREE BACKFILL TO SERVE AS BEDDING MATERIAL. MAINTAIN MINIMUM CONDUIT DEPTH IN TRENCH.
2. BACKFILL TO BE COMPACTED IN 6" LOOSE LIFTS BY HAND OR MECHANICAL TAMPING TO A 95% STANDARD DENSITY.

CONDUIT:

1. SLOPE CONDUIT TO DRAIN AS DIRECTED BY THE ENGINEER.
2. 3" RIGID STEEL CONDUIT BTWN. SERVICE BOXES.
   1 1/4" " " " BTWN. SERVICE & JUNCTION BOXES.
   3/4" " " " BTWN. JUNCTION BOXES.
   3/4" " " " BTWN. JUNCTION BOX & DETECTOR LOOP SAW CUT

SERVICE/JUNCTION BOX, CONTROLLER PAD CONSTRUCTION/INSTALLATION DETAILS

REV. DATE	COMMENTS	INT

THE CITY OF WICHITA

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4501
(316) 268-4114 FAX

CENTRAL PARK AND MAIZE ROAD

SERVICE/JUNCTION BOX, CONTROLLER PAD CONSTRUCTION/INSTALLATION DETAILS

PROJECT NUMBER 472-83957

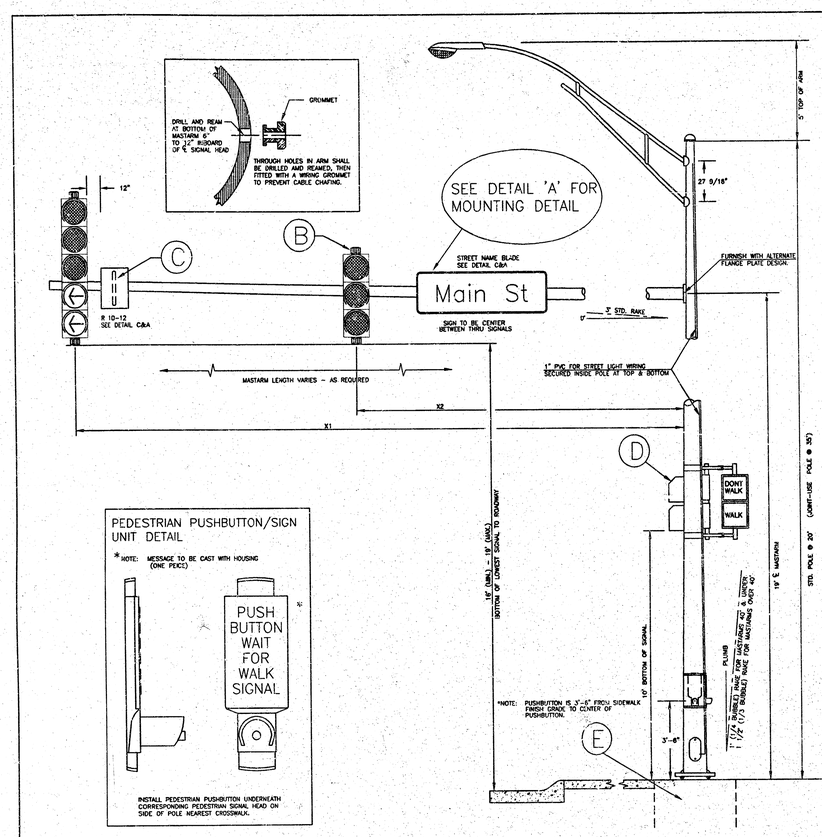
DRAWN BY: T.M.	SCALE: NO SCALE	REVISED BY:
DATE: MAY 97		DATE:

CITY OF WICHITA
DEPARTMENT OF PUBLIC WORKS

DIVISION OF TRAFFIC ENGINEERING
WM. G. McKINLEY P.E. TRAFFIC ENGINEER

SHEET 7 OF 9

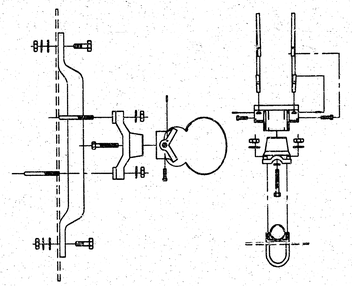
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PEDESTRIAN PUSHBUTTON/SIGN UNIT DETAIL

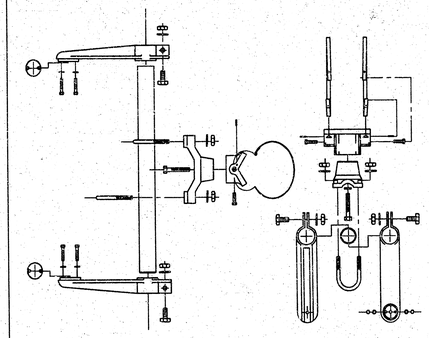
INSTALL PEDESTRIAN PUSHBUTTON UNDERNEATH CORRESPONDING PEDESTRIAN SIGNAL HEAD ON SIDE OF POLE NEAREST CROSSWALK.

BANDED SIGN MOUNTING BRACKET DETAIL



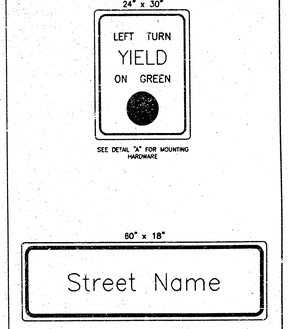
A

TYPE I SIGNAL MOUNTING BRACKET ASSEMBLY DETAIL



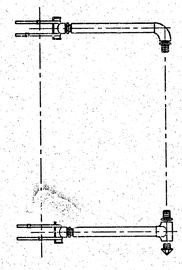
B

STANDARD SIGNING



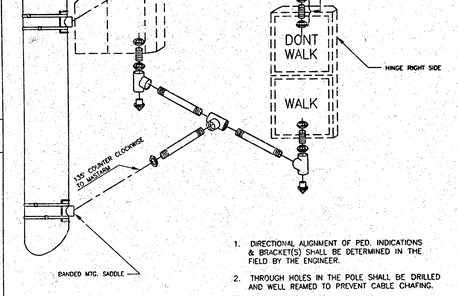
C

TYPE III SIDE-OF-POLE MOUNTING BRACKET ASSEMBLY



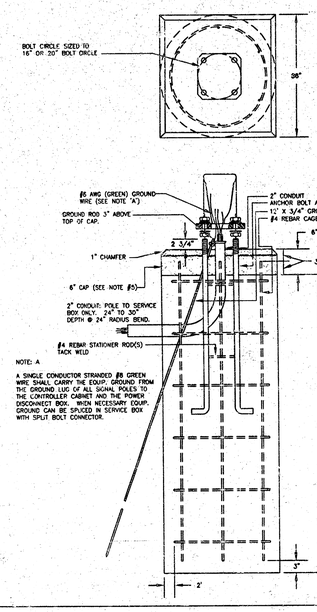
F

TYPE II SIGNAL MOUNTING BRACKET ASSEMBLY (SIDE-OF-POLE)



1. DIRECTIONAL ALIGNMENT OF PED. INDICATIONS & BRACKET(S) SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. THROUGH HOLES IN THE POLE SHALL BE DRILLED AND WELL REAMED TO PREVENT CABLE CHAFING.
3. HINGE PEDESTRIAN SIGNAL DOORS AWAY FROM POLE.

D



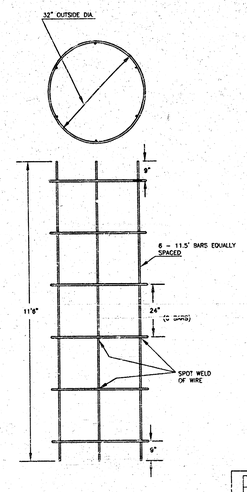
NOTE: A

A SINGLE CONDUCTOR STRANDED #6 GREEN WIRE SHALL CARRY THE EQUIP. GROUND FROM THE GROUND LUG OF ALL SIGNAL POLES TO THE CONTROLLER CABINET AND THE POWER DISCONNECT BOX. WHEN NECESSARY EQUIP. GROUND CAN BE SPLICED IN SERVICE BOX WITH SPLIT BOLT CONNECTOR.

NOTE:

1. THE ANCHOR BOLTS FOR THE SIGNAL POLE SHALL BE TACK WELDED TOGETHER IN A 18" OR 20" DIA. BOLT PATTERN (ON CENTERS AS SHOWN) TO MAINTAIN REQUIRED BOLT CONFIGURATION PATTERN AND TO AID IN VERTICAL POSITIONING WHILE CONCRETE BASE IS POURED.
2. USE ANTI-SEIZE COMPOUND ON ALL THREADS.
3. 12' x 3/4" GROUND ROD TO BE POSITIONED BEFORE POURING BASE.
4. CLASS 'A' CONCRETE SHALL BE USED TO CONSTRUCT BASE.
5. CONSTRUCT A 8" THICK x 36" SQUARE CONCRETE CAP AFTER POLE HAS BEEN ERECTED & PLUMBED. CHAMFER EDGE 1". MUST BE APPROVED BY ENG. BEFORE POURED.
6. CONDUIT SHALL HAVE PLASTIC (OR METAL) BUSHING (ABOVE BASE) TO PREVENT CABLE CHAFING.
7. USE #6 BARE COPPER GROUND CONDUCTOR FROM CLAMP TO GROUND BOLT IN ACCESS HOLE.

REBAR CAGE



E

CENTRAL PARK AND MAIZE ROAD

STEEL SIGNAL POLE ASSEMBLY DETAILS

PROJECT NUMBER 472-83957		
DRAWN BY: T.M.	SCALE	REVISED BY: L. B.
DATE: FEB. 96	NO SCALE	DATE: 2/26/99

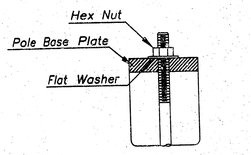
CITY OF WICHITA
DEPARTMENT OF PUBLIC WORKS

DIVISION OF TRAFFIC ENGINEERING
WM. G. McKINLEY P.E. TRAFFIC ENGINEER

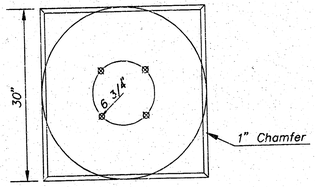
SHEET 8 OF 9

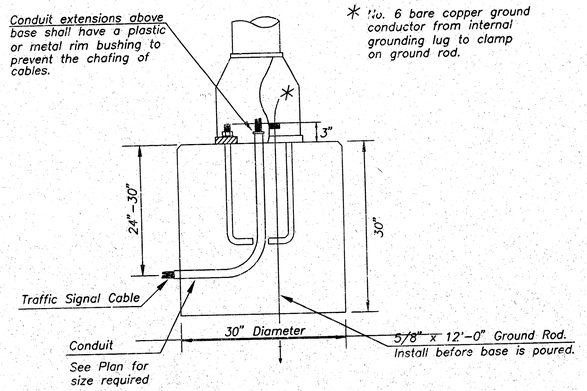
DSNR: BER OPER: CSL SCALE: 1=1.00
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Use Keystone "No-Weld Number 1 Anti-Seize Compound" on all bolts & nuts.

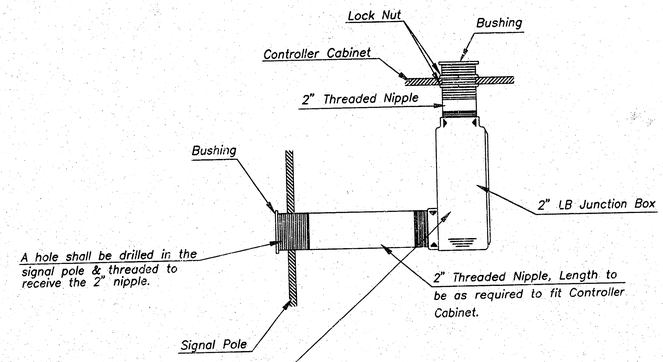


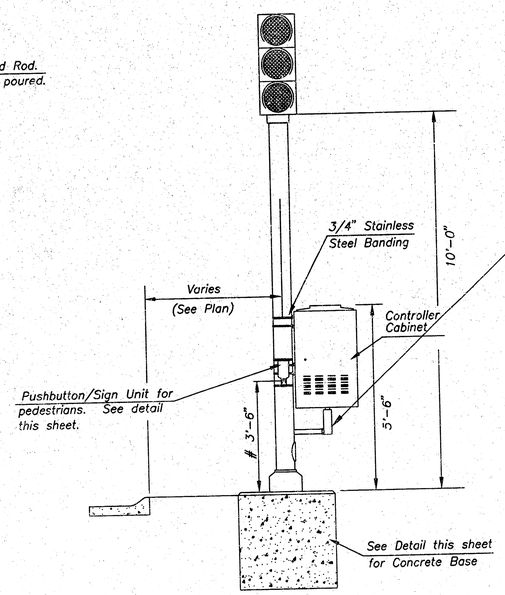
ANCHOR BOLT DETAIL





CONCRETE BASE DETAIL



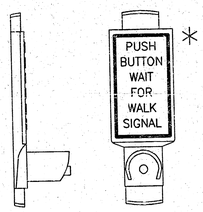


From Sidewalk Finish Grade to Center of Pushbutton.

TRAFFIC SIGNAL PEDESTAL

*NOTE: MESSAGE TO BE CAST WITH HOUSING (ONE PIECE)

INSTALL PEDESTRIAN PUSHBUTTON UNDERNEATH CORRESPONDING PEDESTRIAN SIGNAL HEAD ON SIDE OF POLE NEAREST CROSSWALK. UNIT SHALL BE FIRMLY ATTACHED TO THE SIDE OF POLE WITH 3/4" STEEL BANDS. SHARP ENDS SHALL BE FOLDED UNDER TO PREVENT INJURY TO PEDESTRIANS.



PEDESTRIAN PUSHBUTTON/SIGN UNIT DETAIL

DSNR: BER OPER: GSL SCALE: 1=1.00
Q:\2004\04094\PEDESTAL 03-10-2004 02:36:58 pm

THE CITY OF WICHITA

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4501
(316) 268-4114 FAX

CENTRAL PARK AND MAZE ROAD

TRAFFIC SIGNAL PEDESTAL & CONCRETE BASE DETAIL SHEET

PROJECT NUMBER 472-83957

DRAWN BY: T.M.	SCALE: NO SCALE	REVISED BY:
DATE: MAY 97		DATE:

CITY OF WICHITA
DEPARTMENT OF PUBLIC WORKS

DIVISION OF TRAFFIC ENGINEERING
Wm. C. McKINLEY P.E. TRAFFIC ENGINEER

SHEET 9 OF 9

10-08-03-01