

SHEET NO.	TOTAL SHEETS
1	3

CITY OF WICHITA, KANSAS

MICHAEL E. LINDEBAK, P.E., CITY ENGINEER

TRAFFIC SIGNAL IMPROVEMENTS

FOR
21ST STREET NORTH AND BRADLEY FAIR PARKWAY

CITY OF WICHITA PROJECT NO. 472-83251

OCA NO. 765658

INDEX OF SHEETS

1. TITLE SHEET
2. BENEFIT DISTRICT
3. TRAFFIC SIGNAL PLAN
4. TRAFFIC SIGNAL BILL OF MATERIALS
- 5-8. TRAFFIC SIGNAL DETAILS

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.

TEMPORARY SURFACING MATERIAL (ROCK, ASPHALT, ETC.) MAY HAVE BEEN PLACED WITHIN STREET RIGHTS-OF-WAY FOR HAUL ROADS AND TEMPORARY ACCESS. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS TO DETERMINE EXTENT, IF ANY, OF SUCH SURFACING. CONTRACTOR SHALL REMOVE SAID TEMPORARY SURFACING IN THE SAME MANNER AS NOTED ABOVE FOR RUBBLE. THIS REMOVAL SHALL BE SUBSIDIARY TO EXCAVATION.

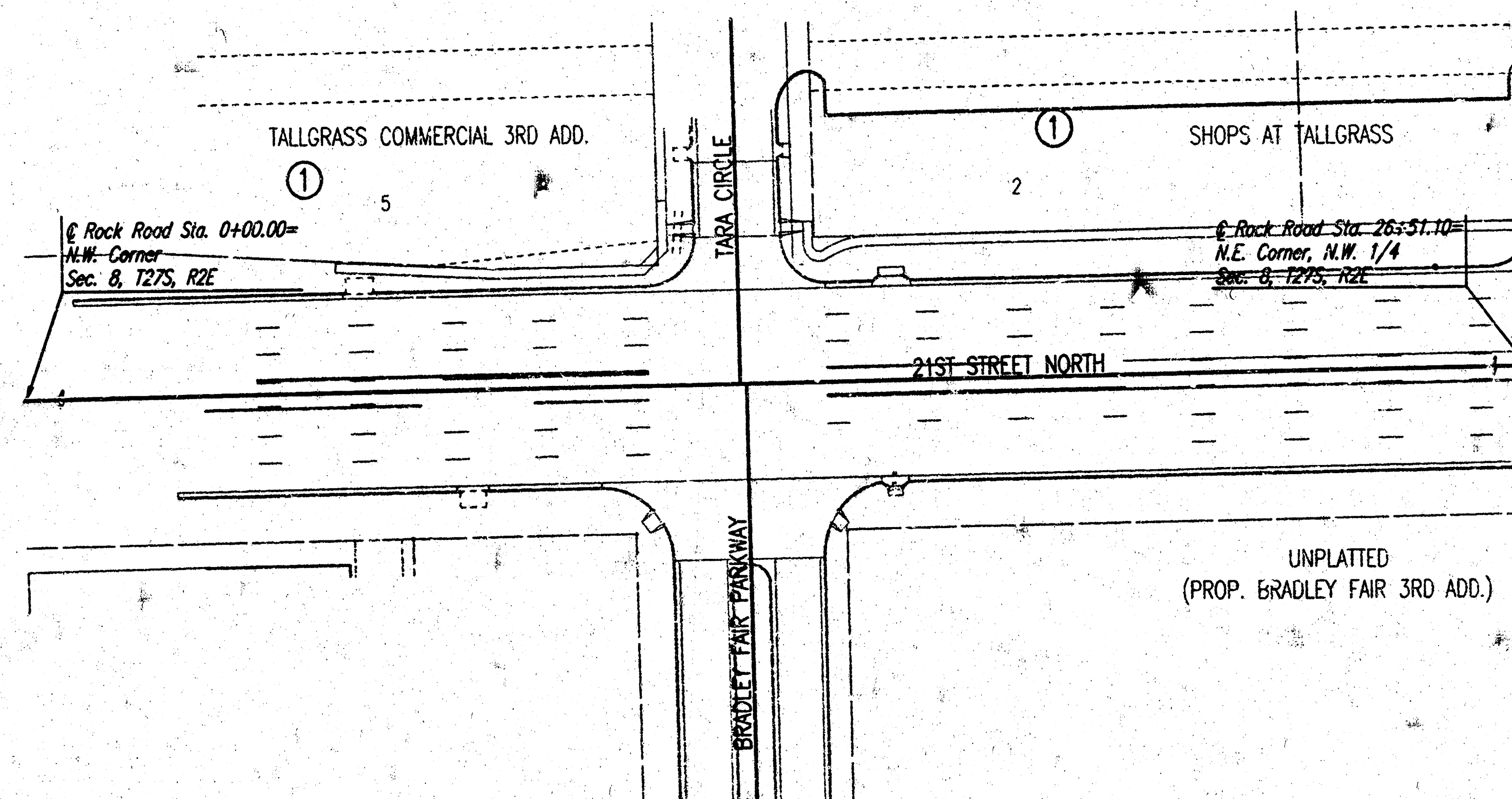
CONTRACTOR SHALL PROVIDE A MINIMUM FORTY-EIGHT (48) HOUR ADVANCE NOTICE (EXCLUDING WEEKENDS AND HOLIDAYS) PRIOR TO BEGINNING ANY EXCAVATION, TO KANSAS ONE-CALL SYSTEM, A UTILITY LOCATION SERVICE, AT (316) 687-2470. TO REQUEST THE FOLLOWING UTILITY COMPANIES TO LOCATE ALL EXISTING LINES WITHIN THE PROJECT AREA: K.G.S. GAS, PEOPLES NATURAL GAS, K.G.E. ELECTRIC, SOUTHWESTERN BELL TELEPHONE, COX COMMUNICATIONS, 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.

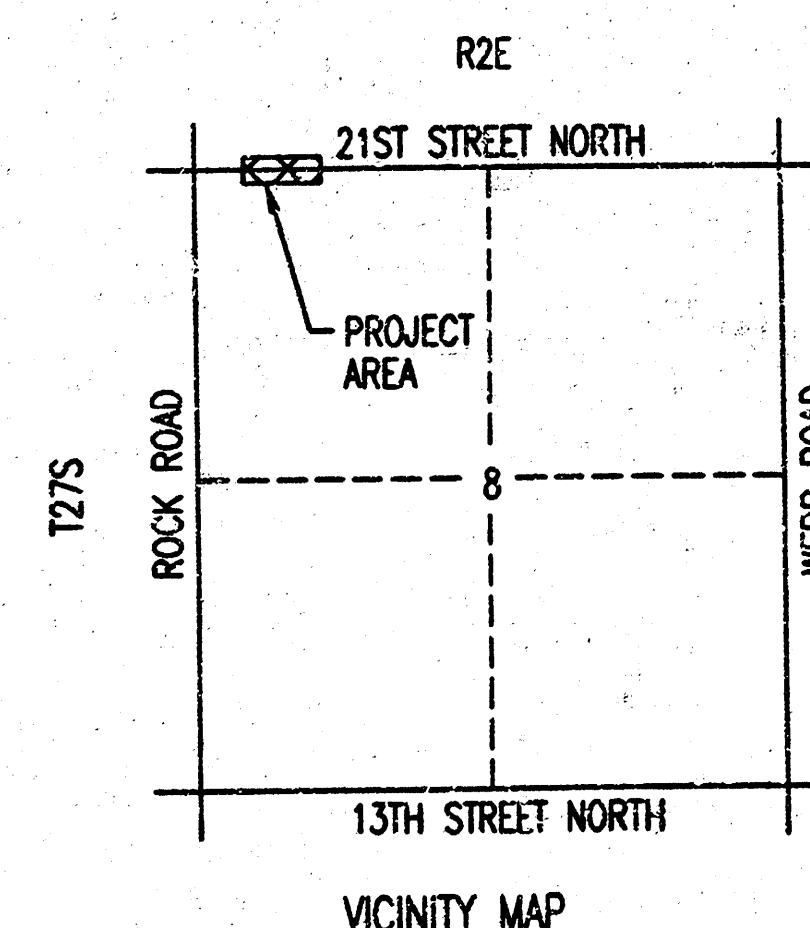
THE WATER DEPARTMENT SHALL FIELD LOCATE WATER VALVES ONE TIME DURING CONSTRUCTION WHEN REQUESTED BY THE CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PRESERVE SUCH FIELD LOCATIONS DURING THE CONSTRUCTION PROCESS. WATER VALVES, WATER VALVE BOXES OR FIRE HYDRANTS DAMAGED DURING CONSTRUCTION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



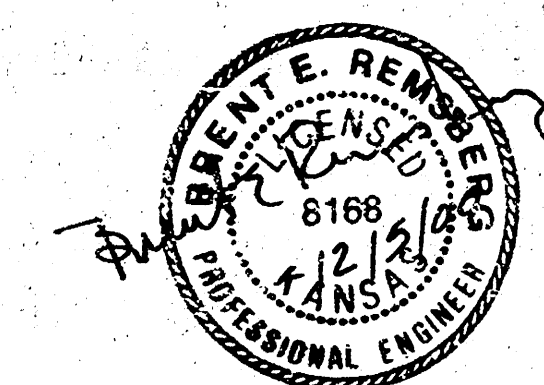
SCALE: 1" = 50'



NOVEMBER, 2000

PLANS PREPARED BY

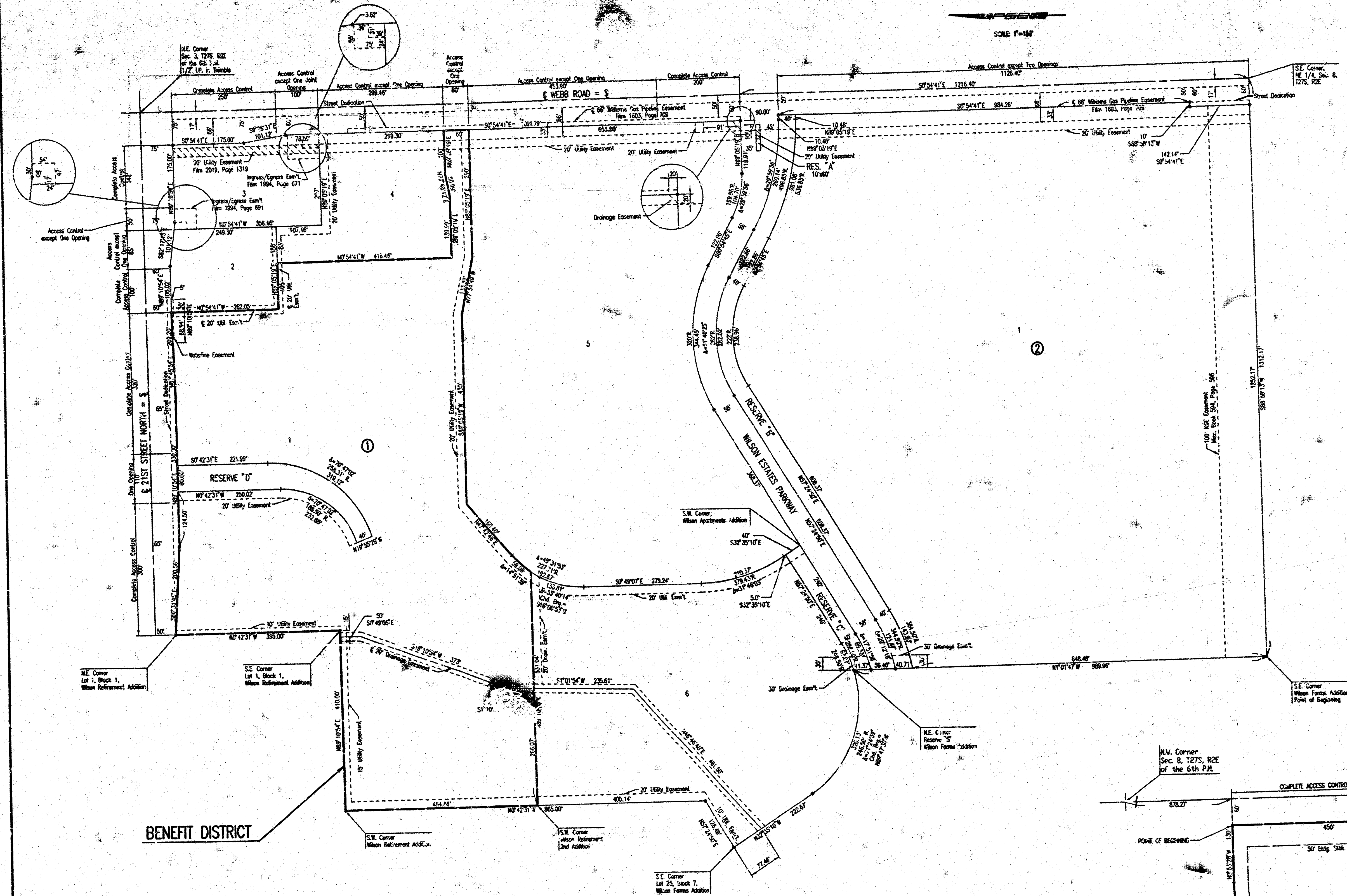
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS



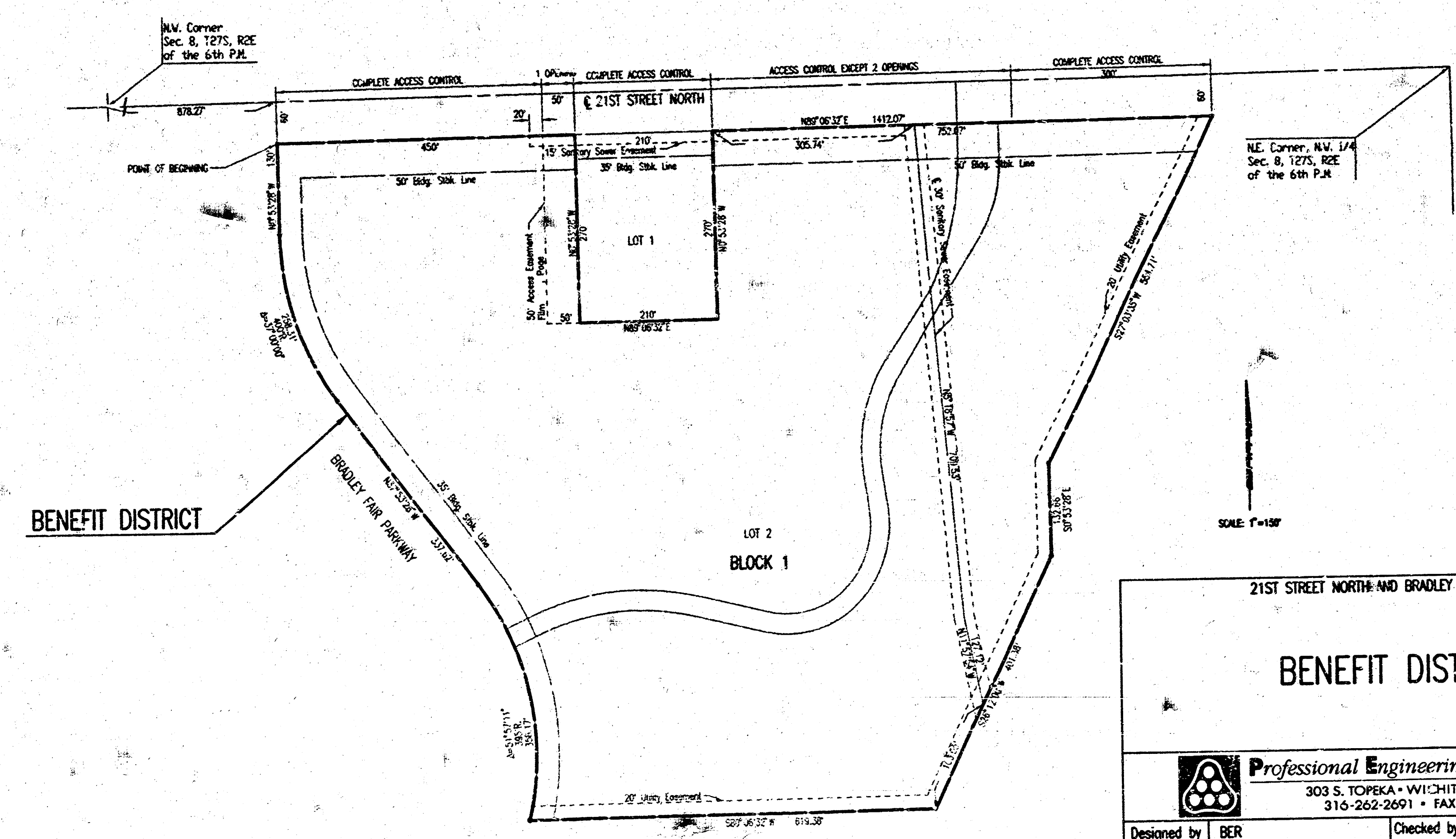
PSNR, REF, OPER, DEP, SCALE, 1=50.00
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LEGACY PARK WILSON ESTATES ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

PROJECT NO.	SHEET NO.	TOTAL SHEETS
472-83251	2	8



BRADLEY FAIR 3RD ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS



DSNR, BER, OPER. ILS, SCALE: 1"=150.00
OCT 12-05-2000 03:48:03 pm
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21ST STREET NORTH AND BRADLEY FAIR PARKWAY

BENEFIT DISTRICT

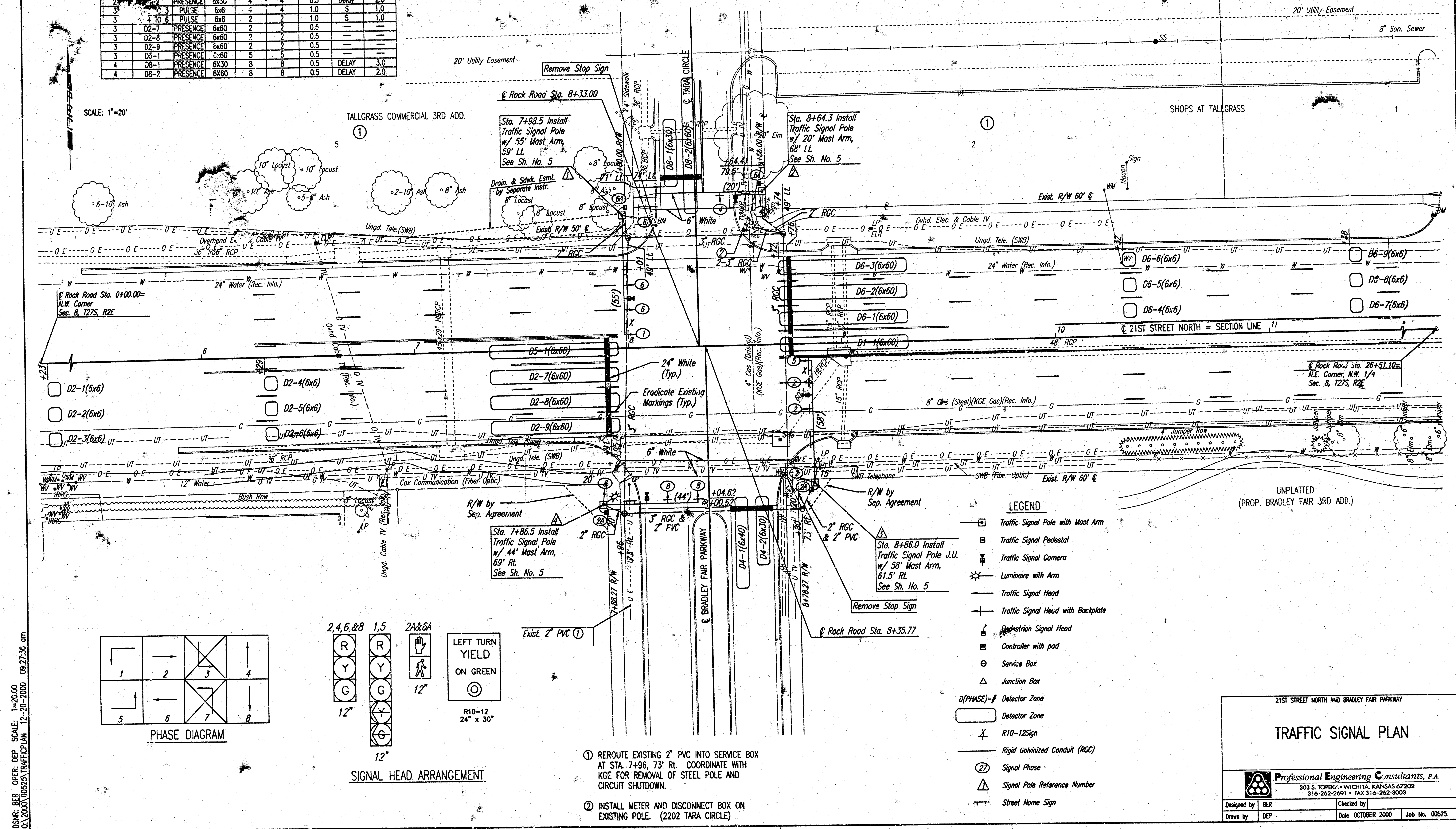
Professional Engineering Consultants, P.A.
303 S. TOPEKA • WICHITA, KANSAS 67202
316-262-2691 • FAX 316-262-3003

Designed by	BER	Checked by	
Drawn by	DEP	Date	OCTOBER 2000
		Job No.	00525

DETECTOR SUMMARY									
CAMERA NO.	DETECTION ZONE	MODE	SIZE (LxW)	PHASE CALLED	PHASE EXTENDED	UNIT EXTENSION	DELAY/STRETCH THIER	INITIAL SETTING (SEC.)	
1	D1-1	PRESENCE	6x60	1	1	0.5			
1	D6-1	PRESENCE	6x60	6	6	0.5			
1	D6-2	PRESENCE	6x60	6	6	0.5			
1	D6-3	PRESENCE	6x60	6	6	0.5			
1	D6-4 TO 6	PULSE	6x6	6	6	1.0	S	1.0	
1	D6-7 TO 9	PULSE	6x6	6	6	1.0	S	1.0	
2	D4-1	PRESENCE	6x40	4	4	0.5	Delay	2.0	
2	D4-2	PRESENCE	6x40	4	4	0.5	Delay	2.0	
3	D3-1	PULSE	6x6	3	3	1.0	S	1.0	
3	D3-2	PULSE	6x6	3	3	1.0	S	1.0	
3	D2-7	PRESENCE	6x60	2	2	0.5			
3	D2-8	PRESENCE	6x60	2	2	0.5			
3	D2-9	PRESENCE	6x60	2	2	0.5			
3	D3-1	PRESENCE	6x60	3	3	0.5			
4	D8-1	PRESENCE	6x30	8	8	0.5	DELAY	3.0	
4	D8-2	PRESENCE	6x30	8	8	0.5	DELAY	2.0	

CONTROLLER DESCRIPTION
 The Traffic Signal Controller shall comply with the requirements defined in the Specifications for a Type 170E Controller with Motorola 68HC11 processor chip, 256K prom module and a 400 modem. It shall be furnished and installed with a Model 332 cabinet, 2-type 242 isolator units, 1 detection unit, 10 switch packs, 2-type 204 flashers, 4 flash transfer relay, and a Model 210P conflict monitor MS or ECL. The Controller shall also be furnished with MAKS Version 5.3A or latest version of software developed by NAPIIT MICRO SYSTEMS.

PROJECT NO.	SHEET NO.	TOTAL SHEETS
472-83251	3	8



DNR, EEP, OPER. DEP. SCALE: 1"=20.00'
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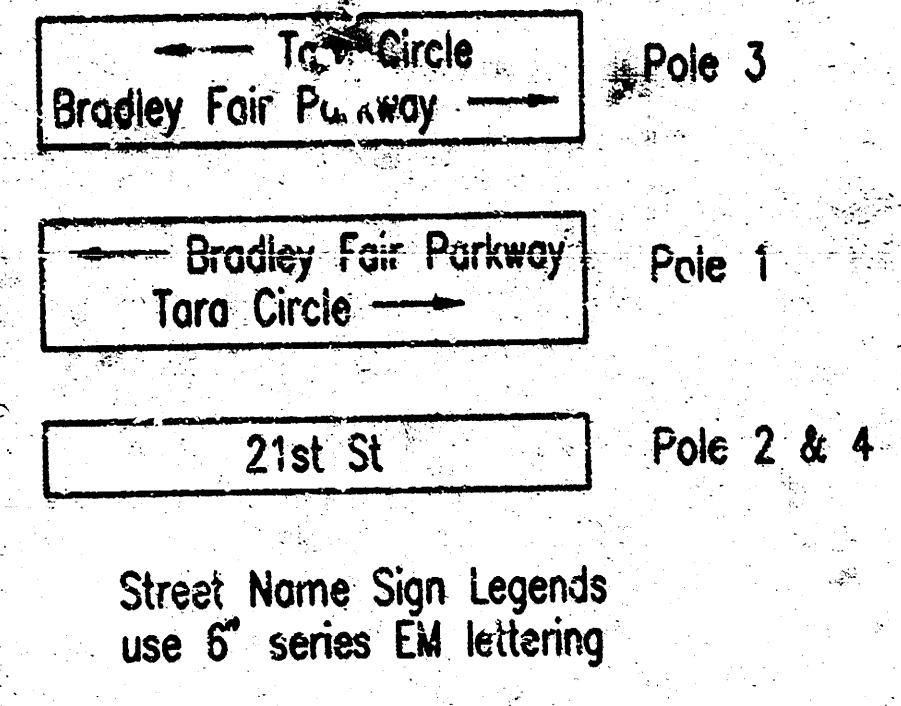
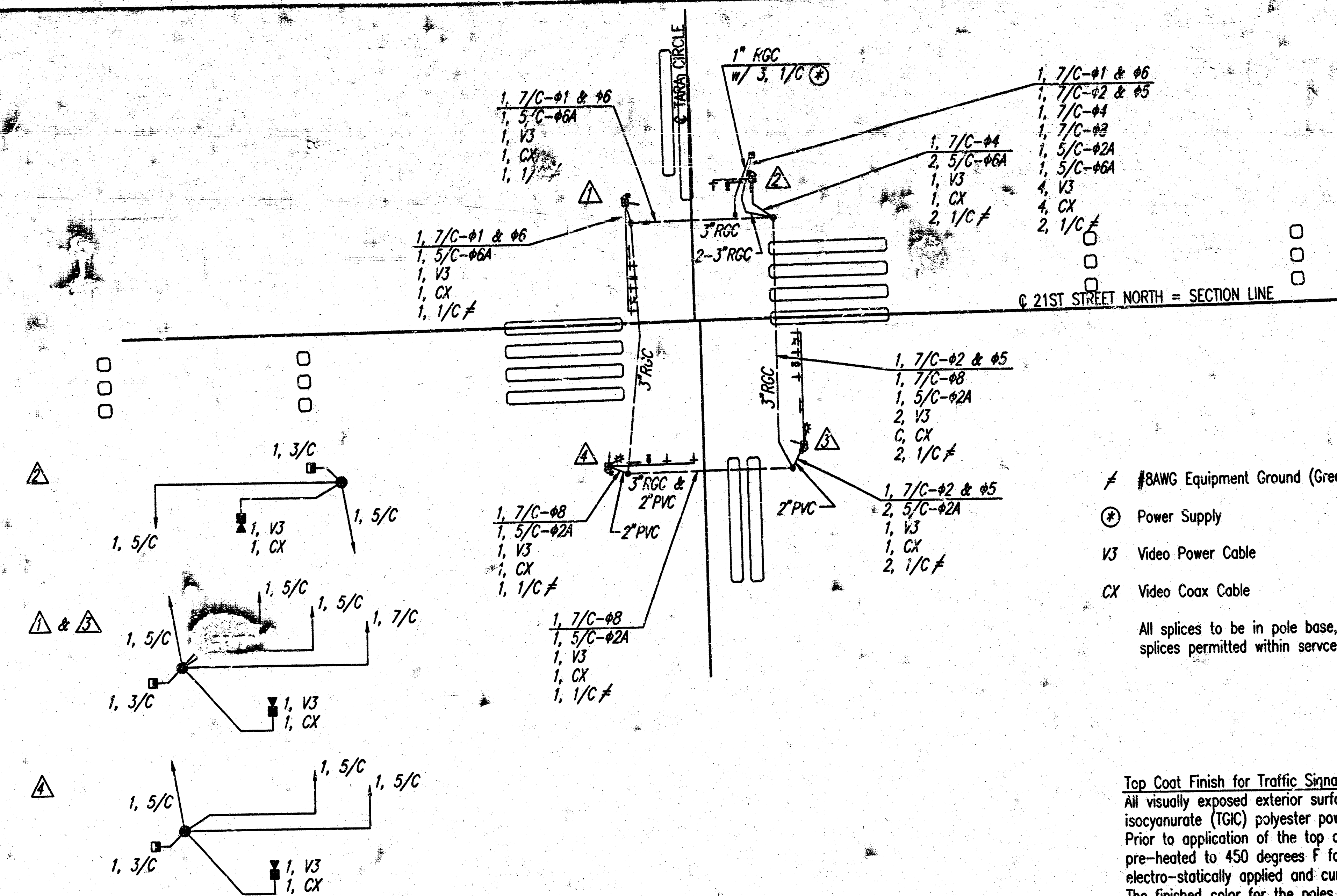
21ST STREET NORTH AND BRADLEY FAIR PARKWAY

TRAFFIC SIGNAL PLAN

Professional Engineering Consultants, P.A.
 303 S. TOPEKA, WICHITA, KANSAS 67202
 316-262-2691 • FAX 316-262-3033

Designed by: BLR
 Drawn by: DEP
 Checked by:
 Date: OCTOBER 2000 Job No. 00525

DSR: BER OPER DEP SCALE: 1"=40'00'
Q:\2000\00025\WIRING.DWG 12-19-2000 10:10:20 am



- #8AWG Equipment Ground (Green)
- ⊕ Power Supply
- V3 Video Power Cable
- CX Video Coax Cable

Top Coat Finish for Traffic Signal Poles
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 chart submittals.

Special Finish for Traffic Signal Equipment
The traffic signal controller cabinet, mounting brackets, signal head backs, sign backs, meter box, disconnect box, and miscellaneous hardware shall be shop painted with an aerosol lacquer cellulose 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-vinyl-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.

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	B	55	3	I	55	45	34	2	II	1	
2	B	20	1	I	20			2	II	1	
3	C	58	3	I	58	46	35	2	II	1	
4	C	44	2	I	42	30		2	II	1	

- ① A-10' Pedestal (Alum.)
- B-20' Steel with Mast Arm(s)
- C-35' Steel (Joint Use) with Mast Arm(s)
- D-40' Steel with Mast Arm

TYPE 170 CONTROLLER SETTINGS								
INTERVAL	PHASE							
	1	2	3	4	5	6	7	8
MAX	30	80		80	30	80		80
MAX 2	30	80		80	30	80		80
WALK		8				8		
FLASH DW		18				10		
MAX. INITIAL	10.0	25		25	10.0	25		25
MIN. GREEN	5.0	8		8	5.0	8		8
T B R	1.0	15		15	1.0	15		15
T T R	1.0	25		25	1.0	25		25
PASSAGE	1	4.0		4.0	1	4.0		4.0
MIN. GAP	1	2.0		2.0	1	2.0		2.0
ADDED ACTUATION	1	2.3		2.3	1	2.3		2.3
YELLOW	3.0	4.0		3.0	3.0	4.0		3.0
RED CLEAR	1.0	1.5		2.0	1.0	1.5		2.0
RED REVERT								

SUMMARY OF TRAFFIC SIGNAL HEADS				
NUMBER	TYPE	SIZE	QUANTITY	
1	I	12"	1	
2	A	12"	3	
4	A	12"	2	
5	I	12"	1	
6	A	12"	3	
8	A	12"	3	
2A	K	12"	2	
6A	K	12"	2	
TOTAL			17	

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

SERVICE BOX SUMMARY	
STATION	DIST.-SIDE
7+96	73' RT.
8+01	49' LT.
8+74	49' LT.
8+80	73' RT.

RECAPITULATION OF TRAFFIC SIGNAL QUANTITIES		
ITEM	UNIT	QUANTITY
TRAFFIC SIGNAL INSTALLATION (21st & Bradley Fair Parkway)	LUMP SUM	LUMP SUM

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	2
TRAFFIC SIGNAL POLE (JOINT USE) STEEL (35')	EACH	2
CONCRETE CONTROLLER PAD	EACH	1
CONCRETE FOOTING - PEDESTAL	EACH	-
CONCRETE FOOTING - POLE	EACH	4
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	2
TERMINAL BLOCK	EACH	-
SERVICE BOX	EACH	4
JUNCTION BOX (PRE-FAB)	EACH	-
GROUND ROD & CLAMP	EACH	6
TRAFFIC SIGNAL LAMP 135 WATT	EACH	38
RED LED	EACH	13
ENTRANCE HEAD	EACH	1
CIRCUIT BREAKER & BOX 50 AMP.	EACH	1
SURGE ARRESTOR - A.C.SERVICE	EACH	-
SURGE ARRESTOR - DETECTOR	EACH	-
PEDESTRIAN PUSHBUTTON W/SIGN	EACH	4
6 PR. COMMUNICATION CABLE	LIN.FT.	400
DETECTOR LOOP WIRE NO. 14 AWG 1/c	LIN.FT.	-
LEAD-IN WIRE NO.6 AWG 1/c	LIN.FT.	-
MULTI-CONDUCTOR CABLE NO.14 AWG 7/c	LIN.FT.	1500
MULTI-CONDUCTOR CABLE NO.14 AWG 5/c	LIN.FT.	1000
MULTI-CONDUCTOR CABLE NO.14 AWG 3/c	LIN.FT.	100
SHIELDED DETECTOR LEAD-IN NO.14 AWG 2/c	LIN.FT.	-
CONDUIT 3/4"(RGC)	LIN.FT.	-
CONDUIT 1"(RGC)	LIN.FT.	50
CONDUIT 2"(PVC)	LIN.FT.	110
CONDUIT 2"(RGC)	LIN.FT.	50
CONDUIT 3"(RGC)	LIN.FT.	500
#8 AWG GROUND (GREEN)	LIN.FT.	500
STREET NAME SIGN	EACH	4
VIDEO DETECTION CAMERA (VANTAGE OZ2), MOUNTING HARDWARE	EACH	4
VIDEO DETECTION UNIT (VANTAGE EDGE MODULE)	EACH	4
VIDEO POWER CABLE #16 A.W.G. 3/C	LIN.FT.	1000
VIDEO CABLE 75 OHM COAXIAL (BELDON #8281 OR APPROVED EQUAL)	LIN.FT.	1000
TV MONITOR	EACH	1

-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.

NOTE: Permanent pavement marking shall be accomplished with patterned cold plastic pavement marking material as specified in KDOT Sec. 2204, 1990 Ed.

Pavement marking shall not be for separately, but shall be considered subsidiary to Traffic Signal Installation.

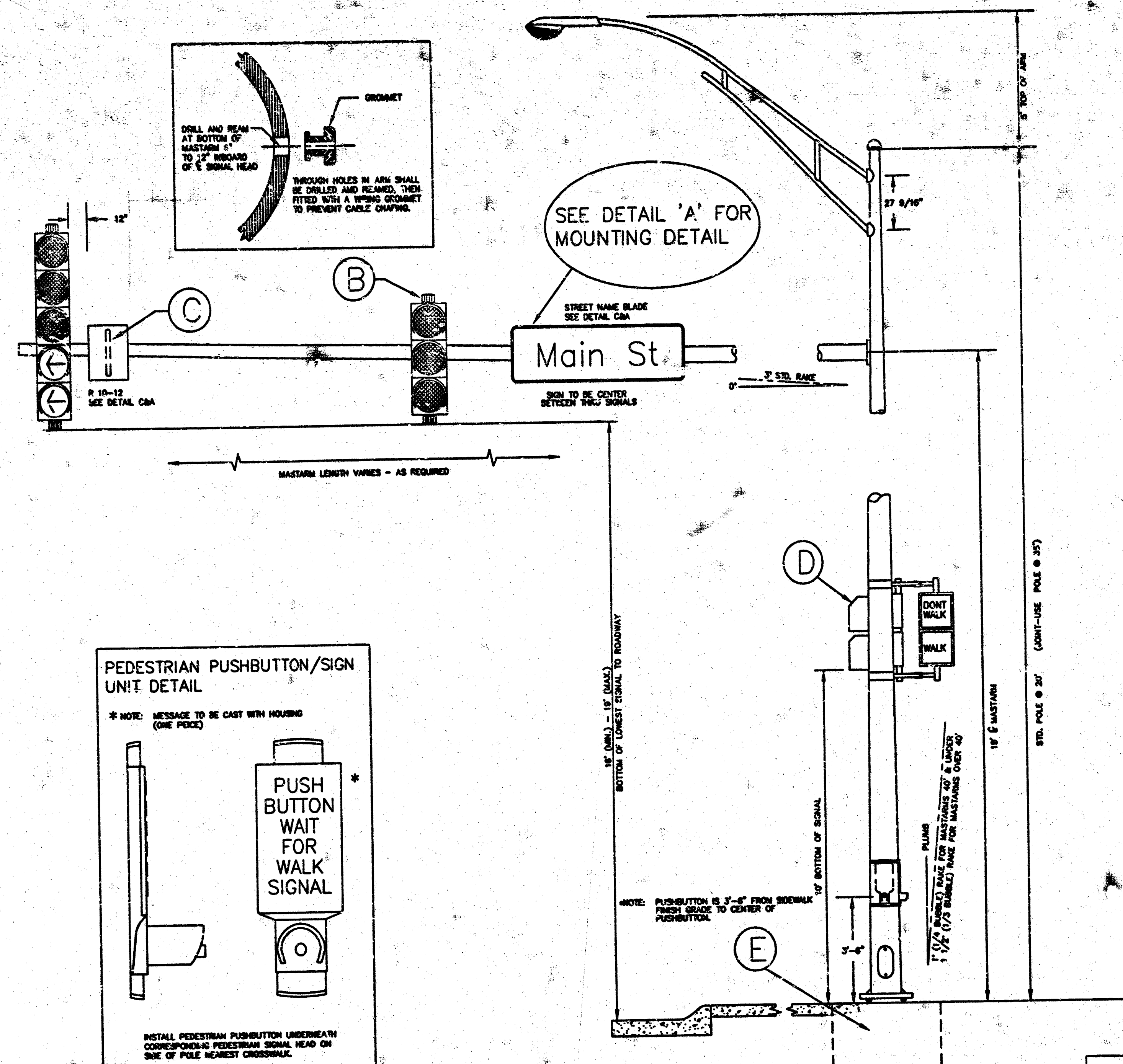
21ST STREET NORTH AND BRADLEY FAIR PARKWAY

TRAFFIC SIGNAL WIRING AND QUANTITIES

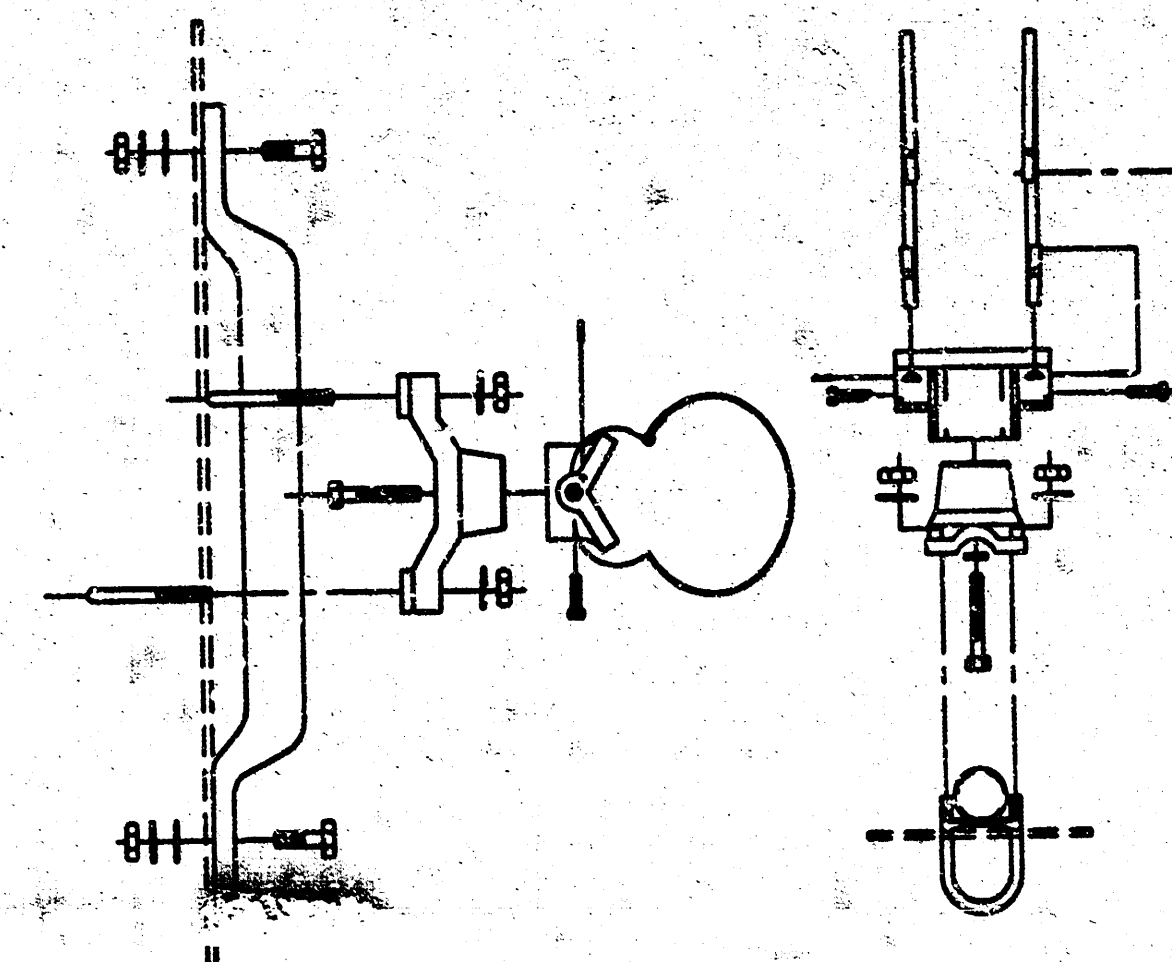
Professional Engineering Consultants, P.A.
303 S. TOPSKA • WICHITA, KANSAS 67202
316-262-2691 • FAX 316-262-3003

Designed by: BER
Drawn by: DEP
Checked by:
Date: OCTOBER 2000 Job No. 00525

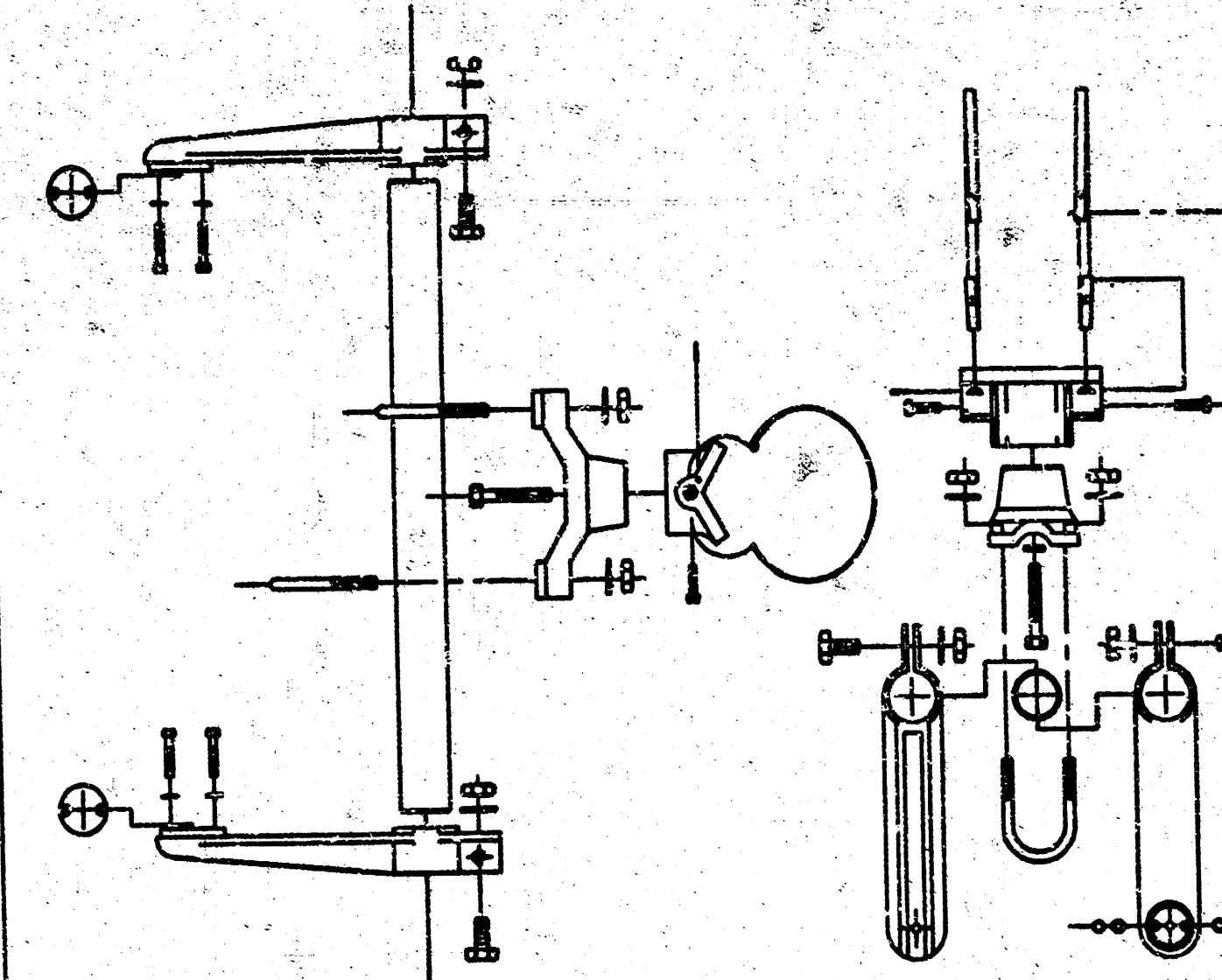
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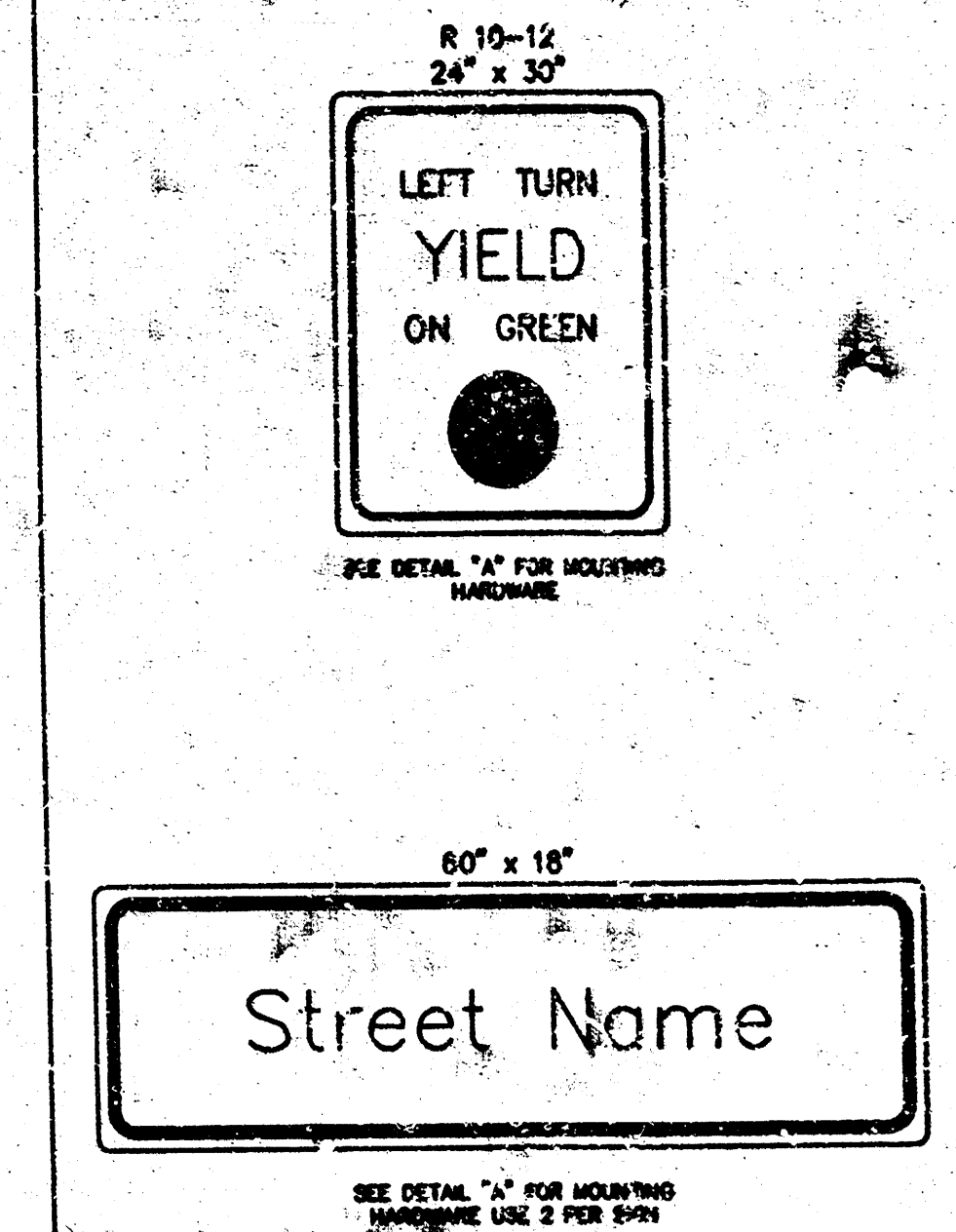
BANDIED SIGN MOUNTING BRACKET DETAIL



TYPE I SIGNAL MOUNTING BRACKET ASSEMBLY DETAIL



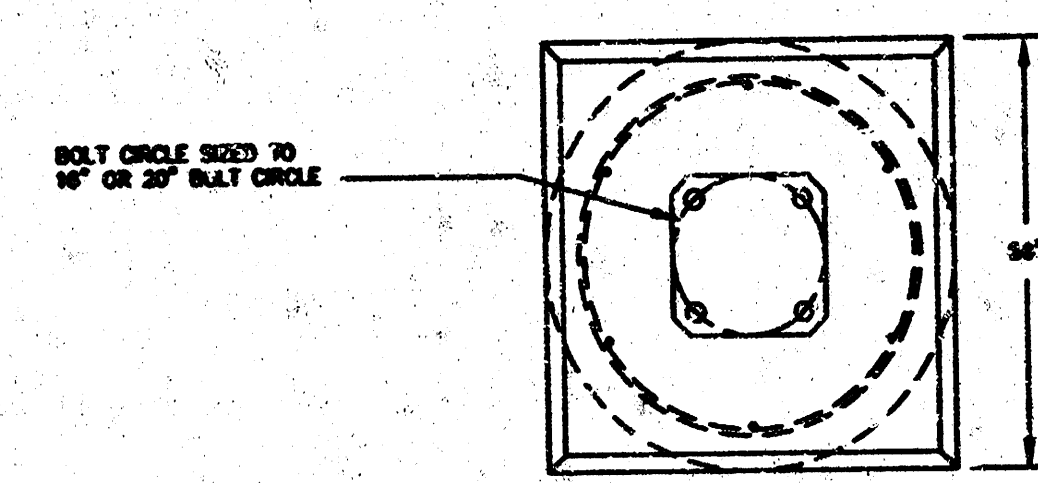
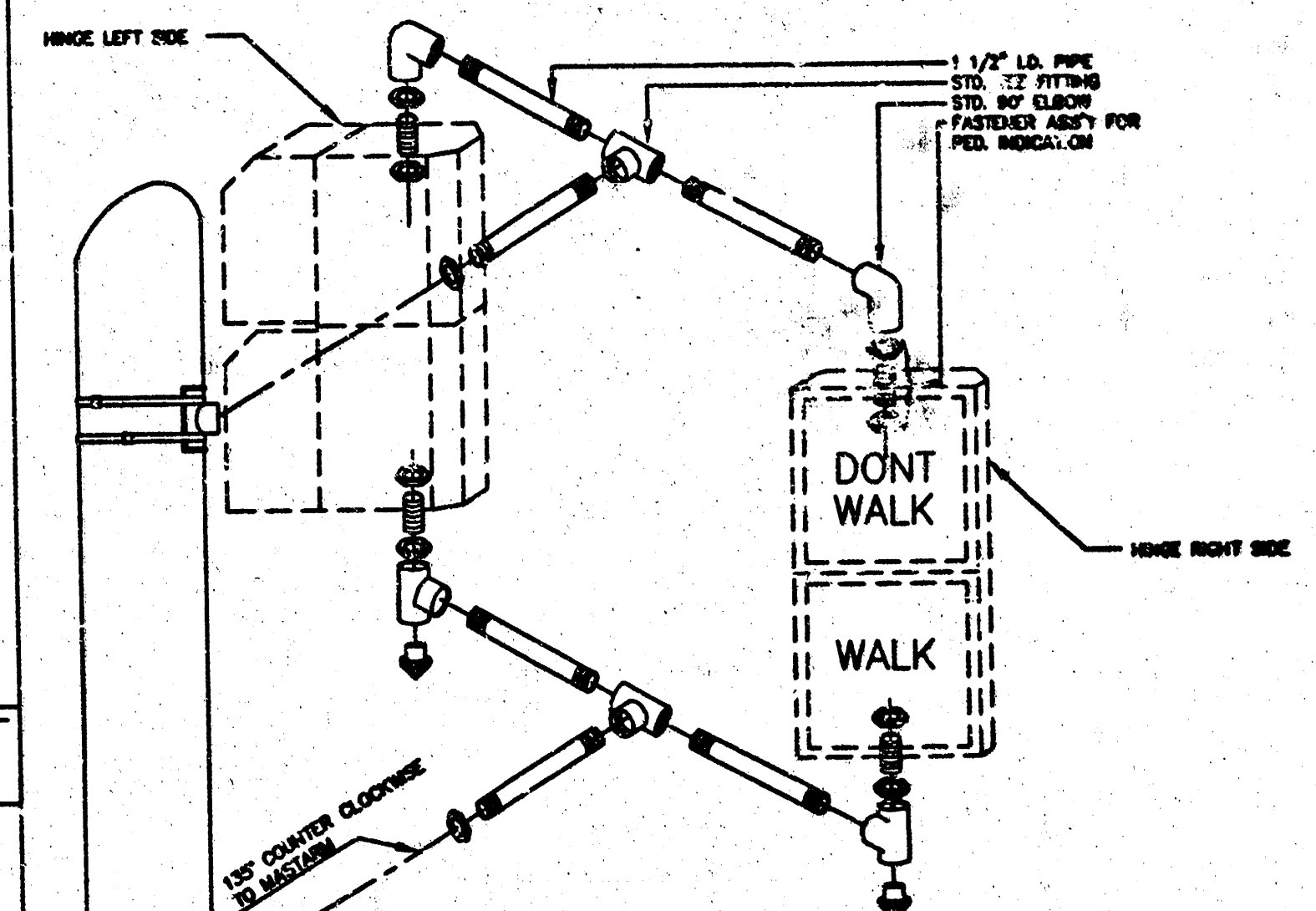
STANDARD SIGNING



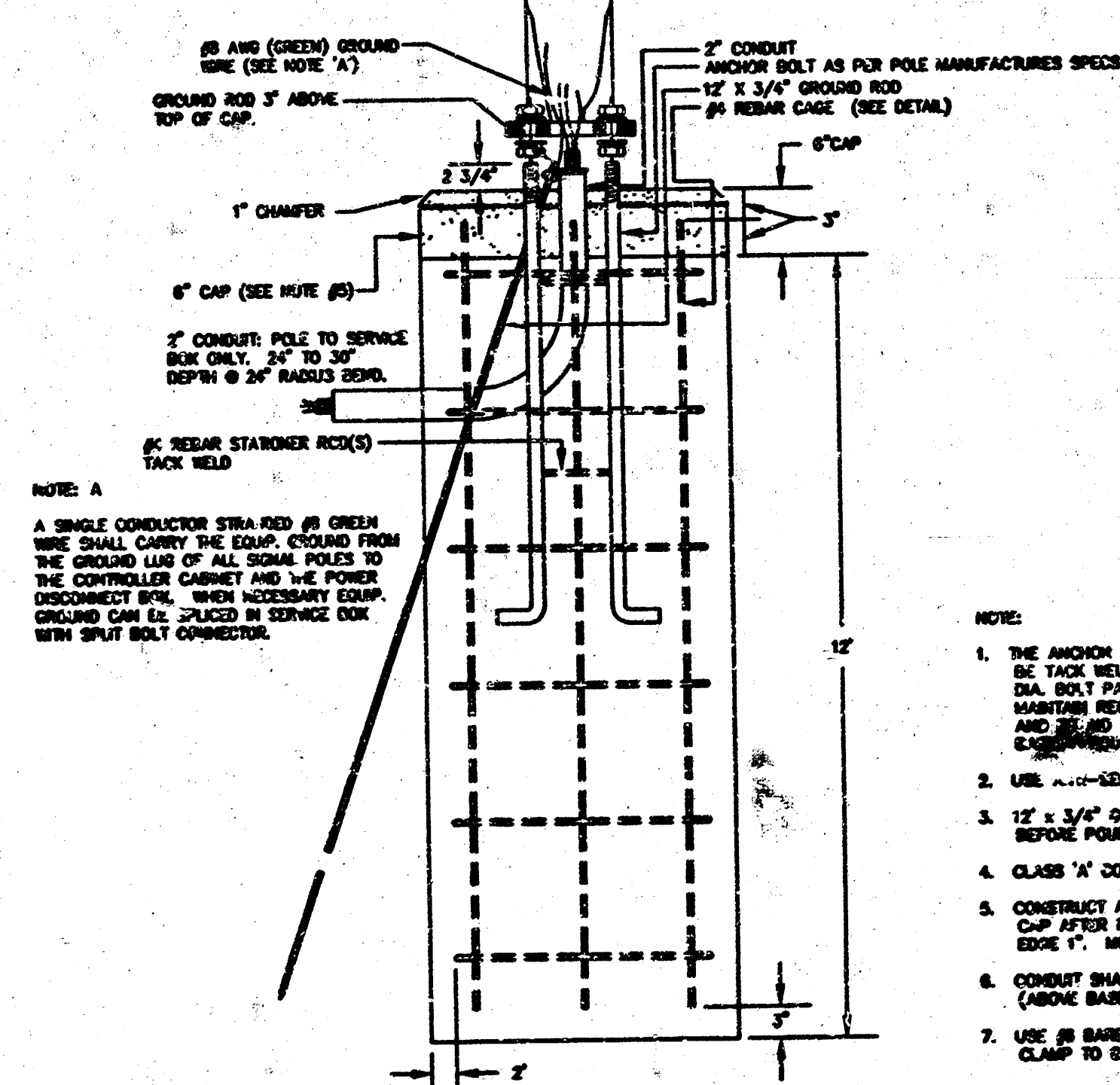
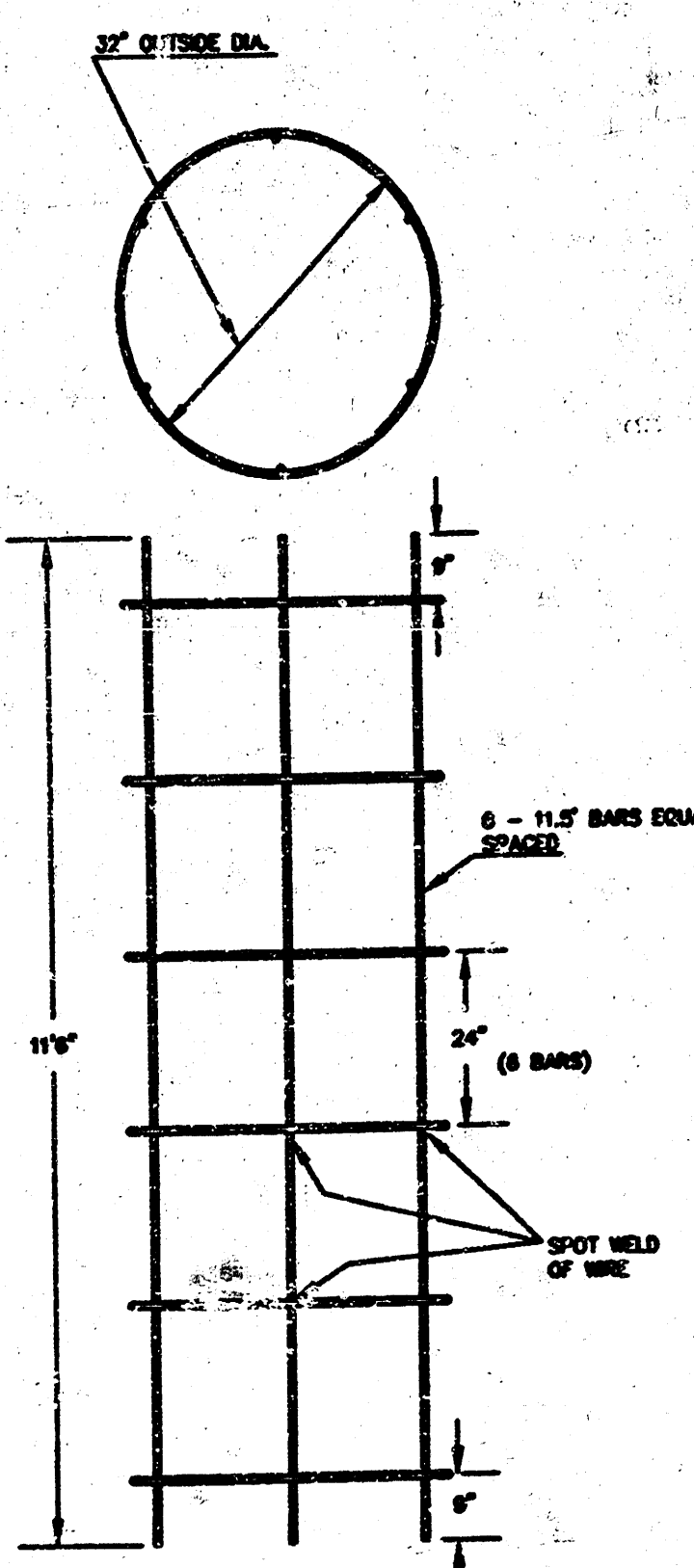
TYPE II SIDE-OF-POLE MOUNTING BRACKET ASSEMBLY



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



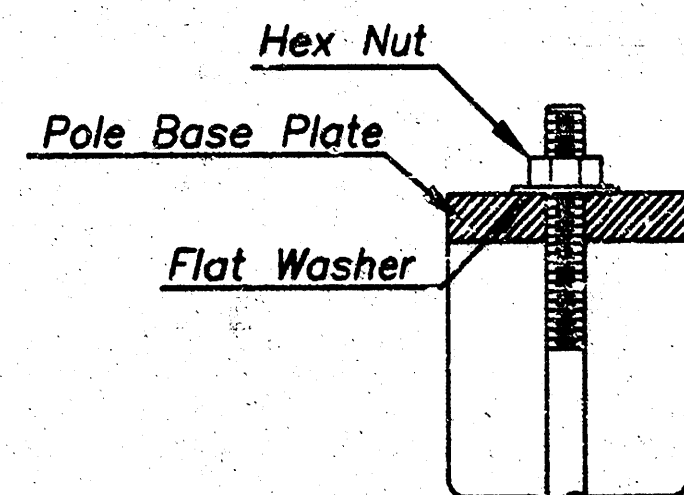
REBAR CAGE



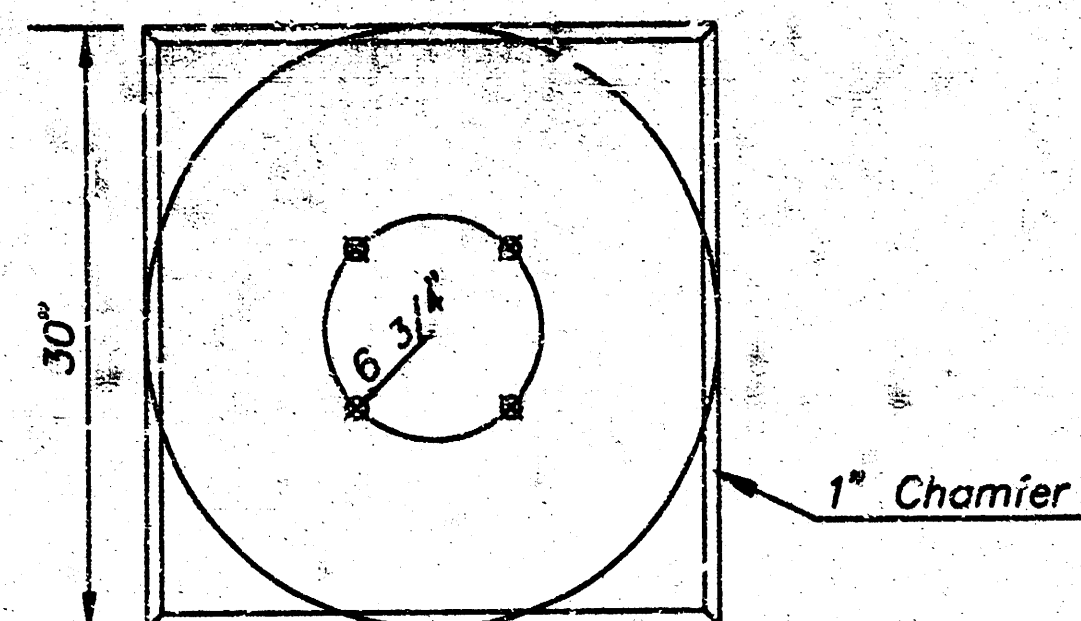
- NOTE:
1. THE ANCHOR BOLTS FOR THE SIGNAL POLE SHALL BE TACK WELDED TOGETHER IN A 14" X 20" DIA. BOLT PATTERN (ON CENTERS AS SHOWN) TO MAINTAIN REQUIRED BOLT CONFIGURATION PATTERN AND BE SET IN VERTICAL POSITIONING WHILE CONCRETE IS POURING.
 2. USE 1/2" DIA. COMPOND ON ALL THREADS.
 3. 12" X 3/4" GROUND ROD TO BE PORTIONED BEFORE POURING BASE.
 4. CLASS 'A' CONCRETE SHALL BE USED TO CONSTRUCT BASE.
 5. CONSTRUCT A 6" THICK X 36" SQUARE CONCRETE CAP AFTER POLE HAS BEEN ERECTED & PLUMBED. CHAMFER EDGE 1". MUST BE APPROVED BY ENG. BEFORE POURING.
 6. CONDUIT SHALL HAVE PLASTIC (OR METAL) BUSHING (AND/OR BUSH) TO PREVENT CABLE CHAFING.
 7. USE #8 BARE COPPER GROUND CONDUCTOR FROM CLAMP TO GROUND BOLT IN ACCESS HOLE.

PROJECT DESCRIPTION			
STEEL SIGNAL POLE ASSEMBLY DETAILS			
PROJECT NUMBER			
472-76-245-83251-000-001			
DRAWN BY: T.M.	SCALE	REVISED BY: L.B.	
DATE: FEB. 95	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 5 OF 8	

Use Keystone "No-Weld
Number 1 Anti-Seize
Compound" on all
bolts & nuts.

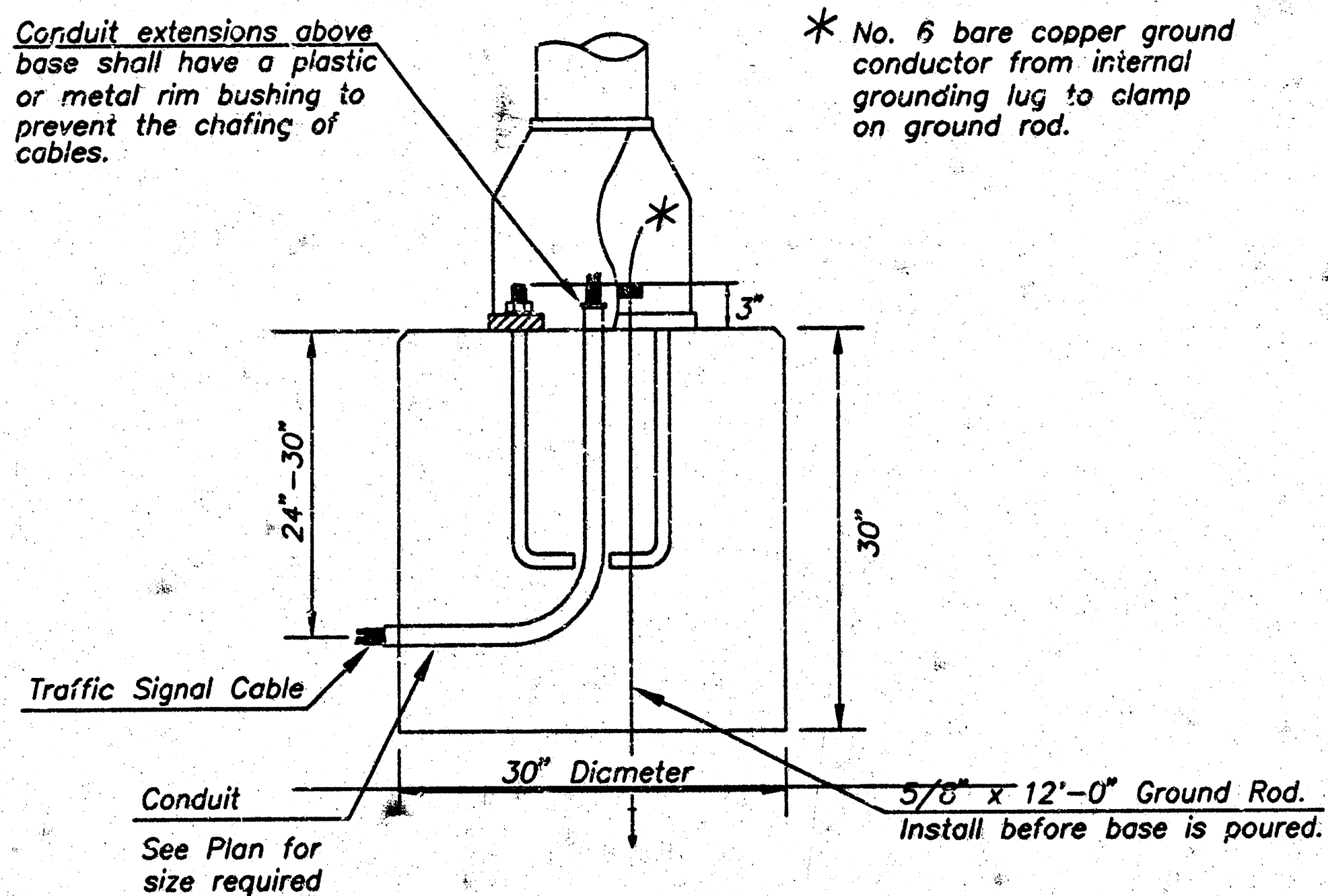


ANCHOR BOLT DETAIL



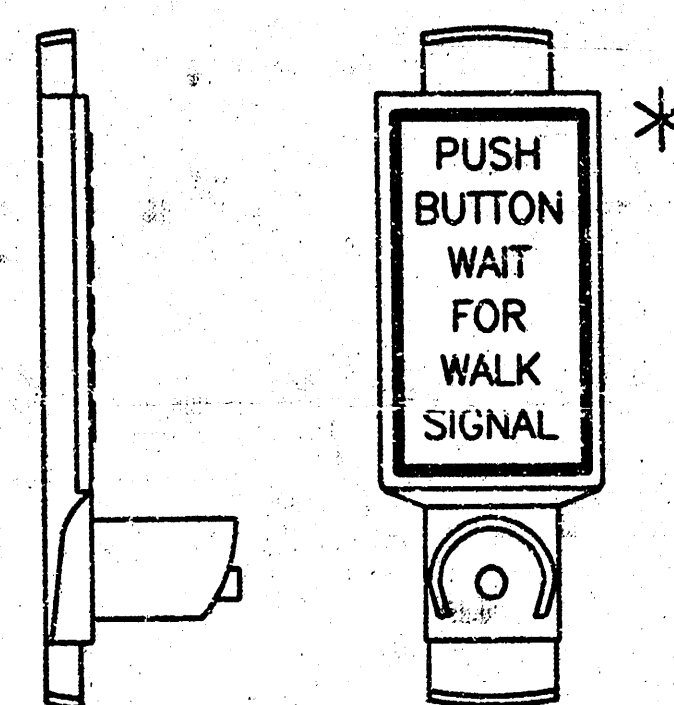
Conduit extensions above
base shall have a plastic
or metal rim bushing to
prevent the chafing of
cables.

* No. 6 bare copper ground
conductor from internal
grounding lug to clamp
on ground rod.



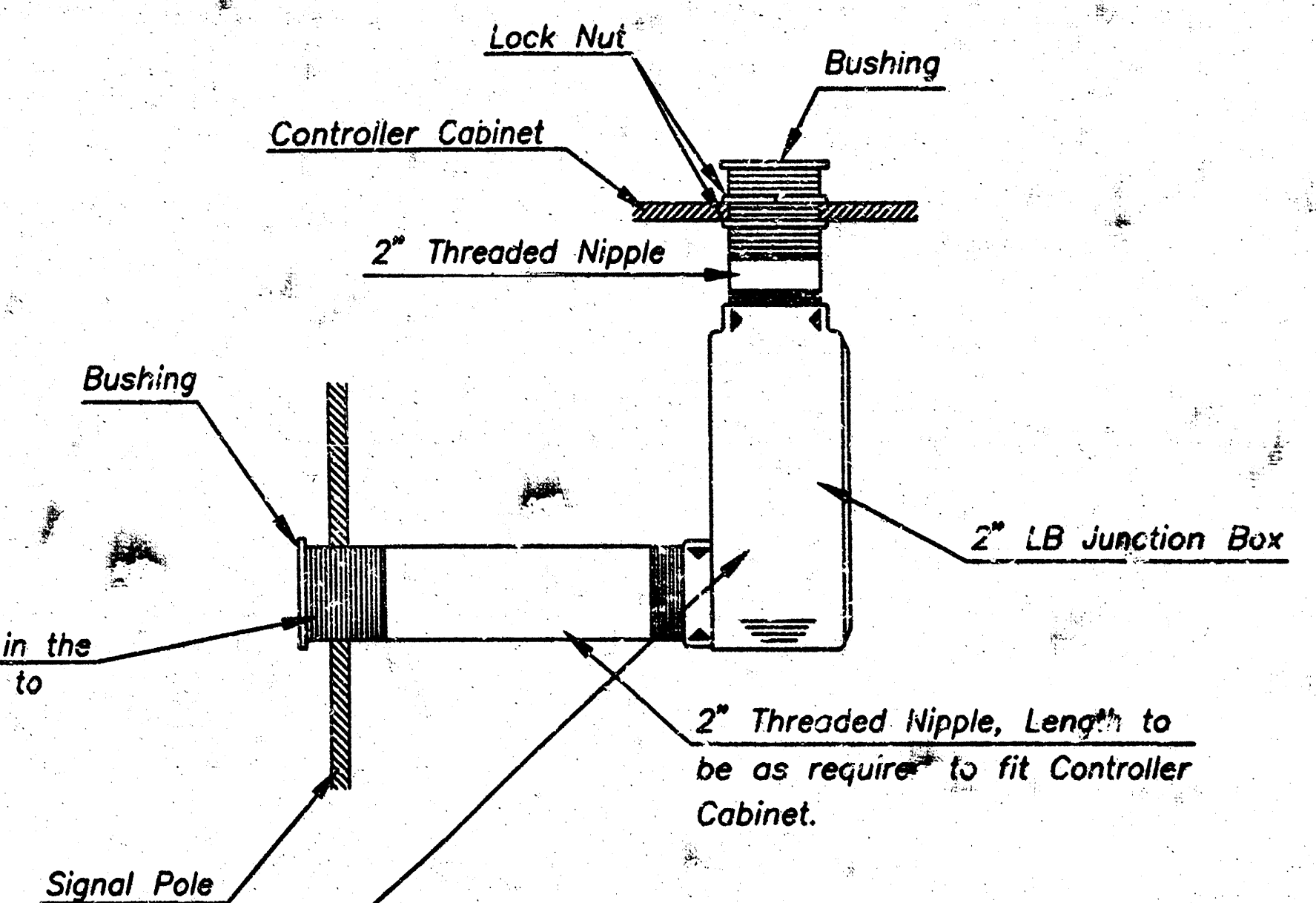
CONCRETE BASE DETAIL

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



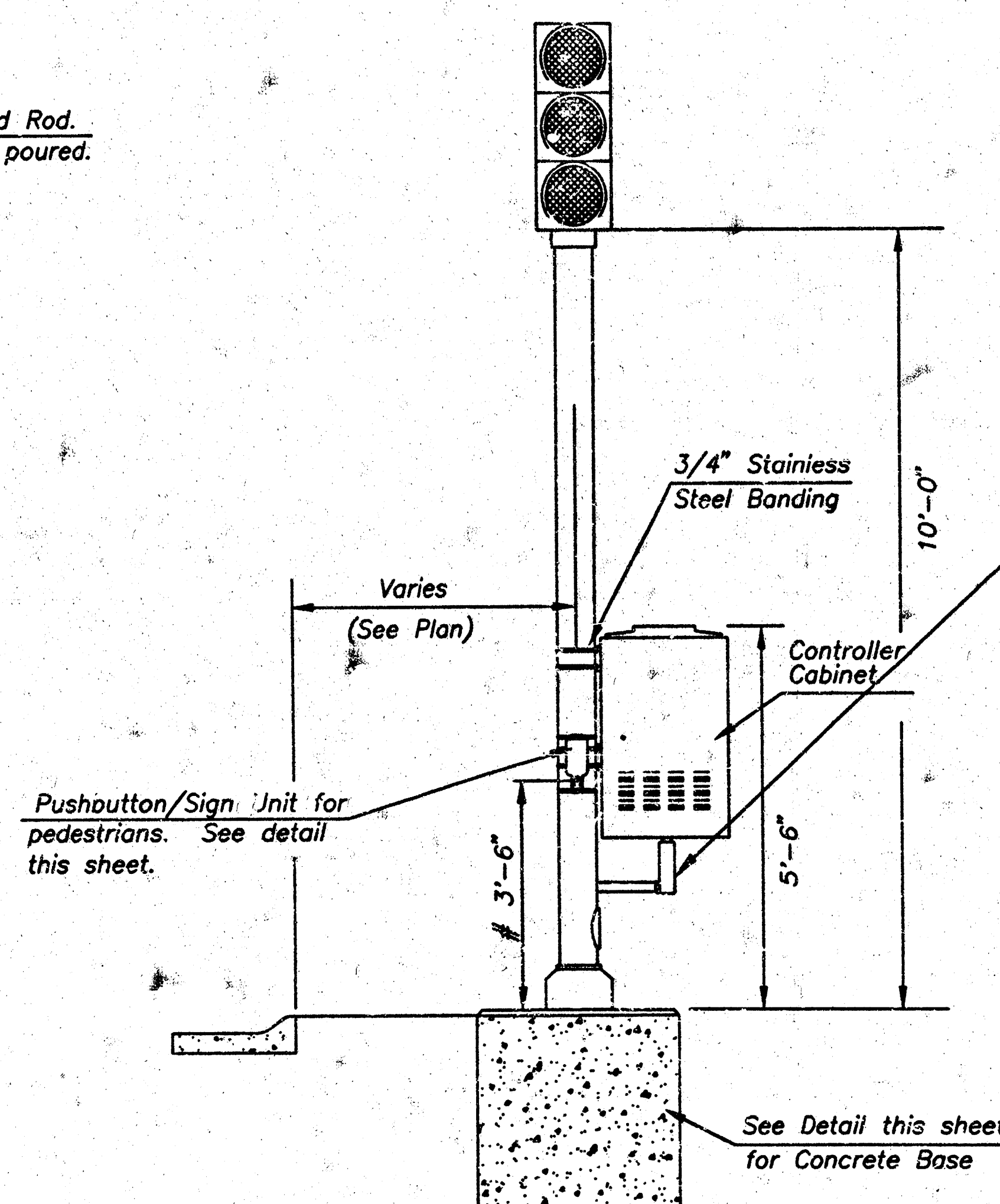
PEDESTRIAN PUSHBUTTON/SIGN
UNIT DETAIL

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.



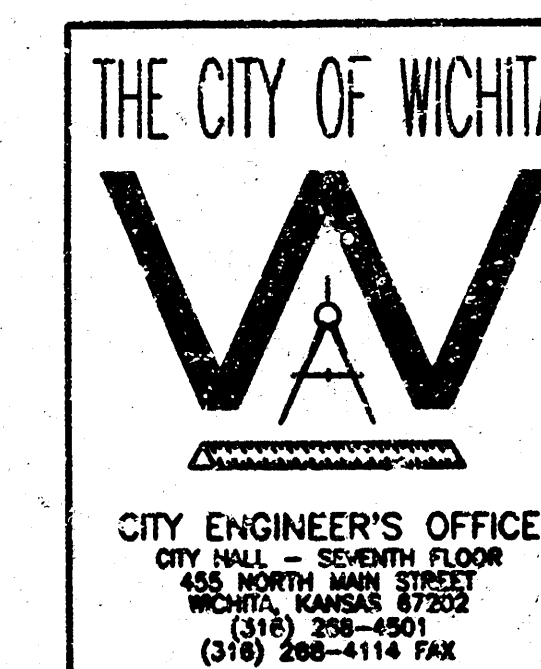
A hole shall be drilled in the
signal pole & threaded to
receive the 2" nipple.

2" Threaded Nipple, Length to
be as required to fit Controller
Cabinet.



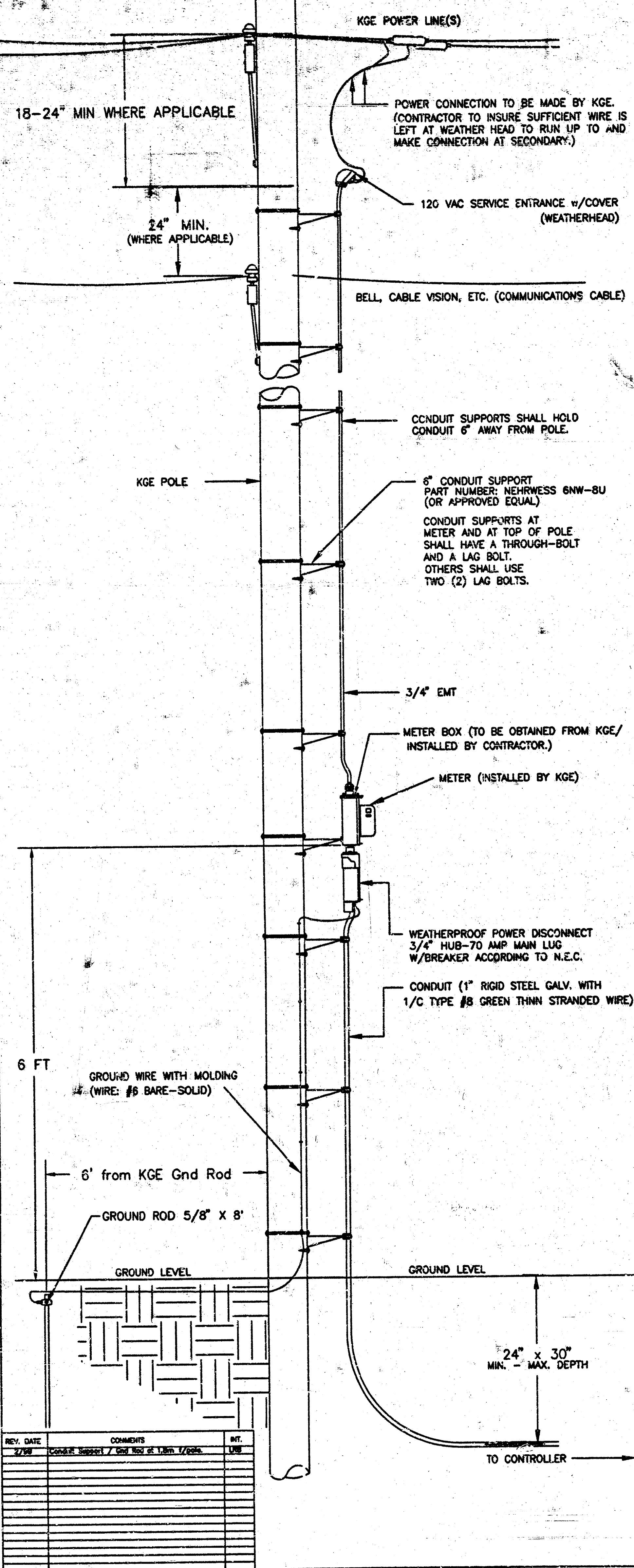
TRAFFIC SIGNAL PEDESTAL

From Sidewalk Finish Grade
to Center of Pushbutton.



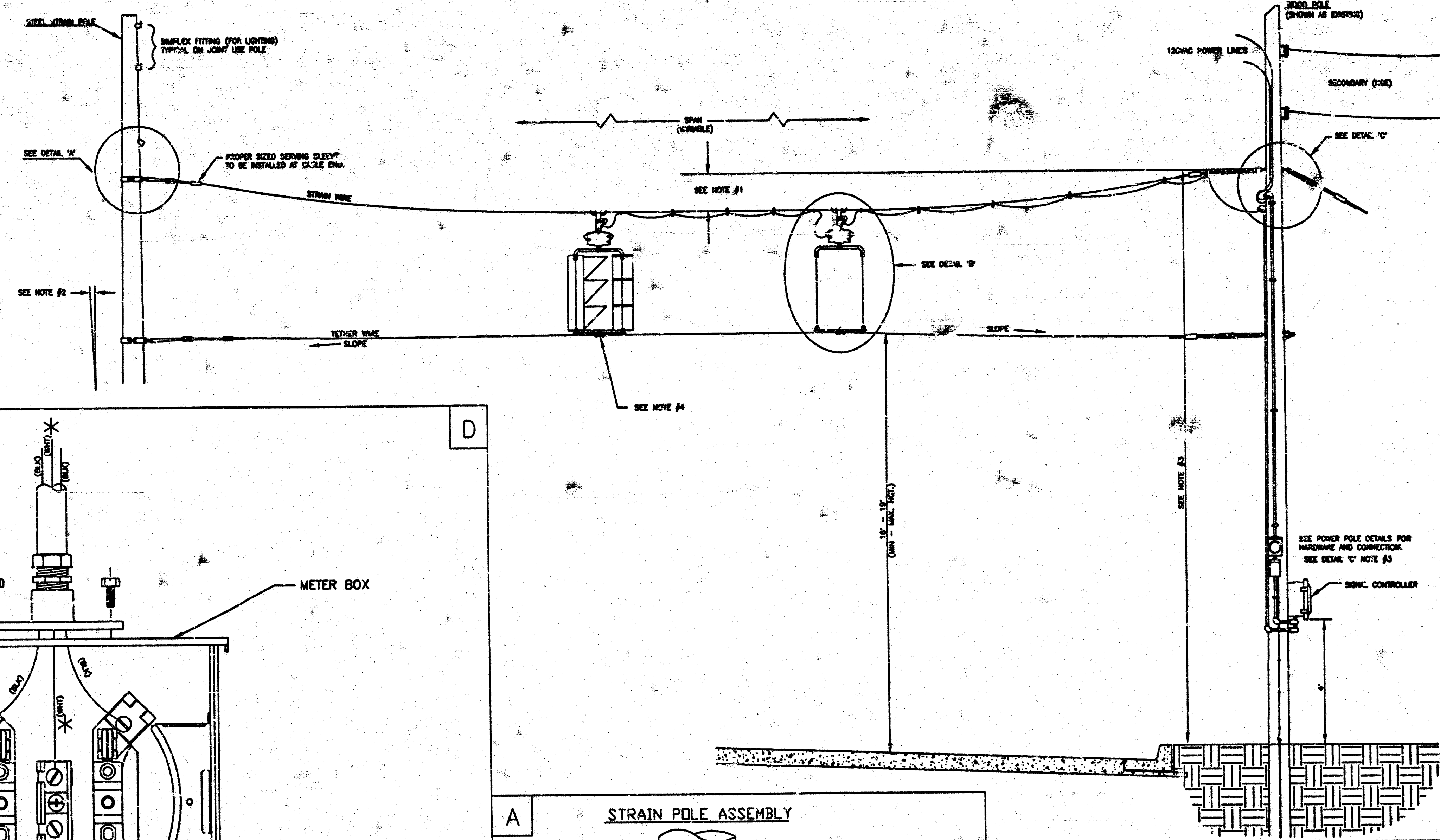
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PROJECT NUMBER			
472-76-245-83251-000-000-001			
DRAWN BY: T.M.	SCALE NO SCALE		REVISED BY:
DATE: MAY 97			DATE:
CITY OF WICHITA DEPARTMENT OF PUBLIC WORKS			
DIVISION OF TRAFFIC ENGINEERING			SHEET 6 OF 8
WILL G. MCKINLEY P.E. TRAFFIC ENGINEER			

POWER POLE DETAILS



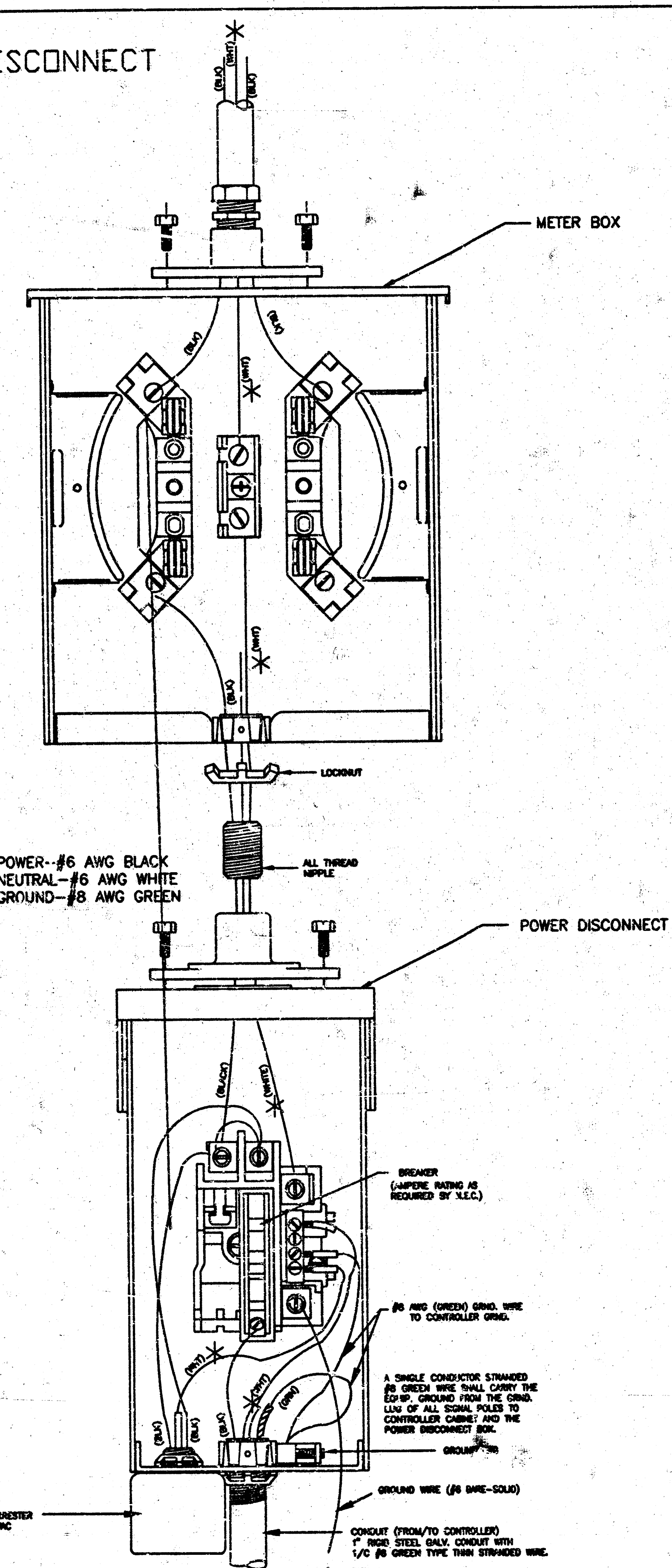
SPANWIRE ASSEMBLY DETAILS

1. MAX. SAG = 5% OF SPAN.
2. STANDARD BACKRAKE = 1.5E
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\"/>

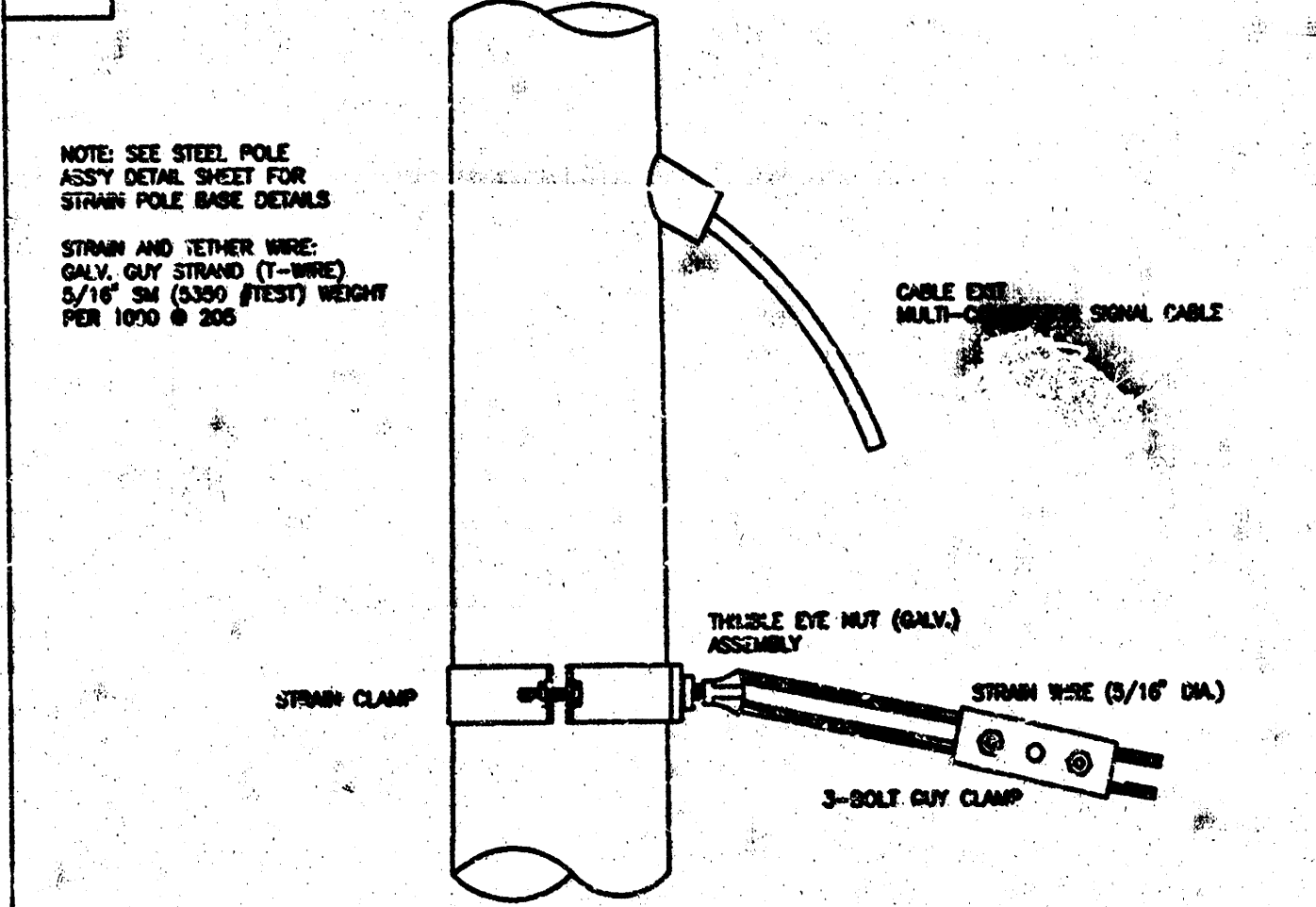


METER BOX & POWER DISCONNECT DETAILS

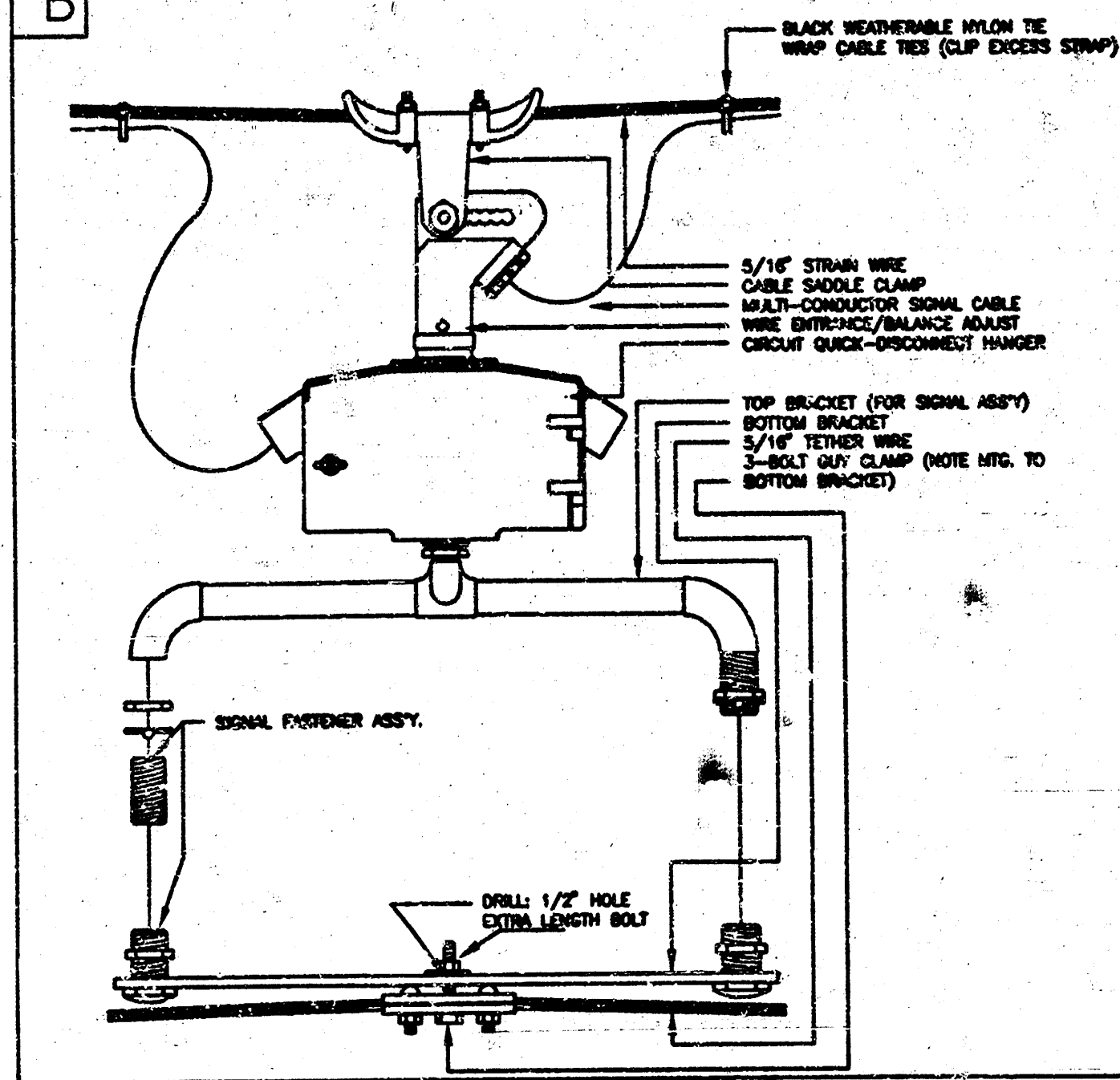
NOTE:
*TO BE MARKED WITH WHITE TAPE



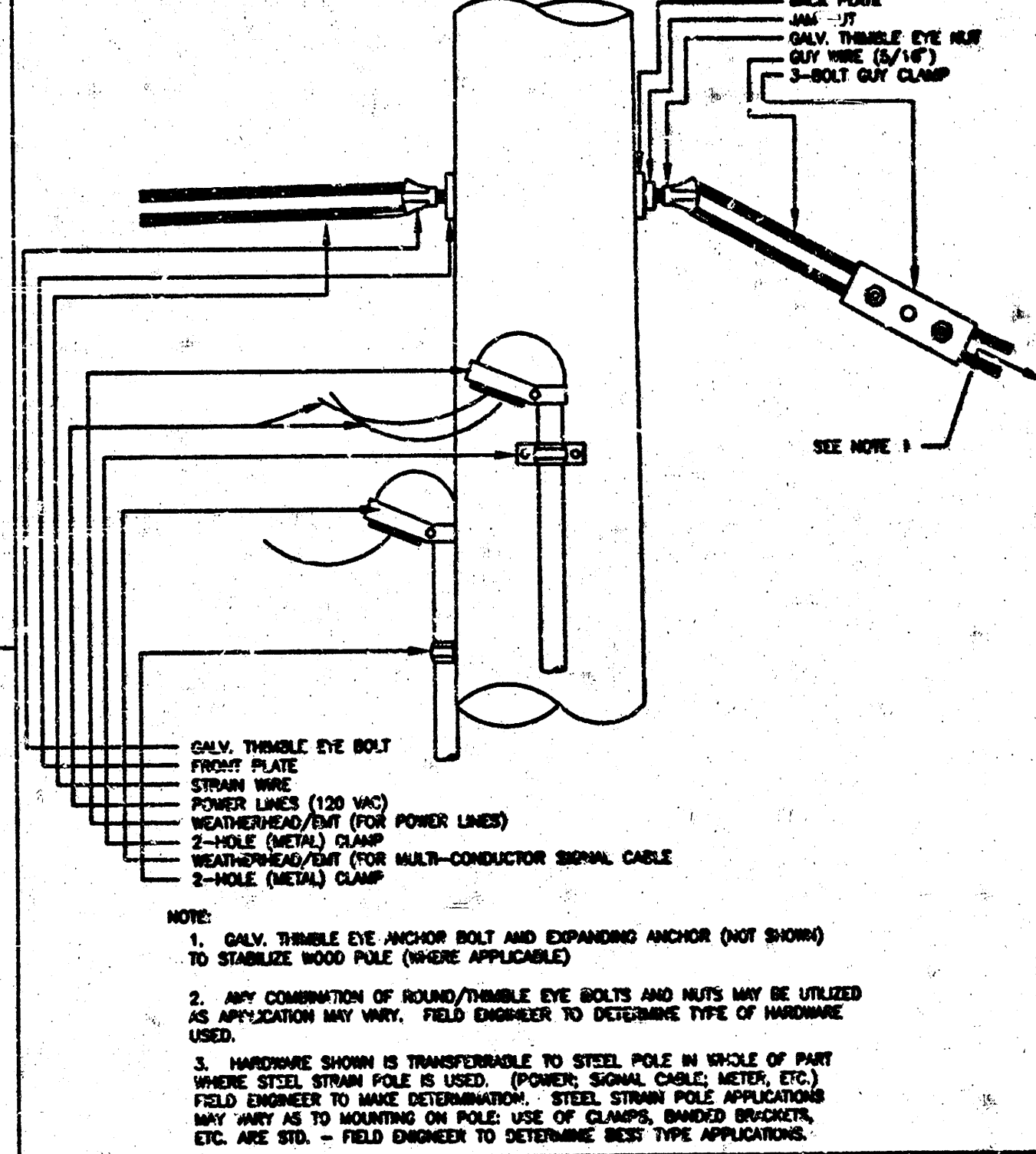
A STRAIN POLE ASSEMBLY



B SIGNAL BRACKET ASSEMBLY DETAILS



C WOOD POLE ASSEMBLY DETAILS KGE POLE EXCLUDED



POWER POLE AND SPAN POLE ASSEMBLY DETAILS

PROJECT DESCRIPTION			
POWER POLE AND SPAN POLE ASSEMBLY DETAILS			
PROJECT NUMBER			
472-76-245-83251-000-000-001			
DESIGN BY: J. L.	SCALE: NO SCALE	REVISION BY: L. B.	DATE: 2/26/99
CITY OF WICHITA			
DEPARTMENT OF PUBLIC WORKS			
DIVISION OF TRAFFIC ENGINEERING			
WM. G. MCKINLEY P.E. TRAFFIC ENGINEER			SHEET 7 OF 8

PRE-CAST CONCRETE
SERVICE BOX

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

Top View: Shows a square box with a 48" outer dimension and a 36" inner dimension. It features concentric circles representing the RCP and a grid of 84 REBAR. Dimensions include 48", 4", 4", 4", and 48".

Side View (SECTION A-A): Shows the box with a 54" height and a 36" width. It includes a 6" cap, a 30" depth, a 5" max. gap, and a 36" x 54" RCP. Labels include: CAP TO BE FLUSH TO GROUND LEVEL, CAP TO MOUNT FLUSH, CONDUIT AS REQUIRED, GROUT SEALER, PLASTIC CABLE BUSHING, CONDUIT, 5" MAX., 36" X 54" RCP, BASKET TYPE REINFORCEMENT, 2 MIN. CRUSHED 3/4" DRAINAGE, 4" WALL THICKNESS, and 30" DEPTH.

Ring & Cover Detail: Shows a circular ring with a 2 1/2" pull ring and a pick hole. The cover has a 25 1/2" width and a 24" height. The ring has a 1 7/8" thickness and the cover has a 1 1/4" thickness. The overall width is 28".

SECTION A-A

Diagram illustrating the cross-section of a standard curb and gutter. The diagram shows a concrete curb with a saw cut, approved sealer, and detector wiring. A drill is shown at the base of the curb. The high edge is marked, and the distance from the high edge to the drill is labeled "MIN. 18" FROM HIGH EDGE". The curb is shown with a 3/4" R/C (Reinforced Concrete) slope. The depth of the curb is labeled "24" - 30" BELOW TOP OF CURB". The diagram is labeled "STD. CURB & GUTTER".

The technical drawings illustrate the construction of a concrete pad with the following details:

- Top View:** Shows a rectangular pad with overall dimensions of 9' x 16'. A central area is defined by 16' and 9' dimensions. A label 'P.C.C. PAD FLUSH WITH UNPAVED AREAS, SIDEWALKS & PAVED AREAS.' points to the pad surface. Another label 'PERMISSIBLE CONDUIT AREA 9' x 16'' points to the central area. A 'Cab. FRONT' label is on the left side.
- Section View (Left):** Shows a cross-section of the pad. The total width is 24", with 4 1/2" on each side. The total height is 24", with 3 1/2" on the left and 4 1/2" on the right. A central section is 15" wide and 3" high. It shows #4 REBAR and a layer of aggregate at the base.
- Section View (Right):** Shows a cross-section of the pad with a width of 30". The total height is 4". The base is 8" thick and labeled '8" LAYER OF AGGREGATE'. The pad is 2 1/2" high. The central section is 25" wide and 30" high. It shows #4 REBAR and 'ANCHOR BOLTS (4) (3/4" x 15" x 2")'. A label 'CONDUIT AS REQ'D.' points to the central area. A label '5/8" x 8' GROUND ROD' points to the bottom. A label '14" REBAR' points to the top reinforcement.

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

30"
24"
4"
36"
6" Blockout @ 90°
8" Minimum Crushed Rock

SECTION A-A

36"
4"
36"
#4 REBAR
24"
28"

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

SEE SERVICE BOX INSTALLATION
FOR RING & COVER DETAILS.

[illegible]

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



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

PROJECT DESCRIPTION

SERVICE/JUNCTION BOX, CONTROLLER PAD
CONSTRUCTION/INSTALLATION DETAILS

PROJECT NUMBER
472-76-245-83251-000-000-001

DRAWN BY: T.M.
DATE: MAY 97

SCALE
NO SCALE

REVISED BY:
DATE:

	09-02	Page 17 of 17
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CITY OF WICHITA

11

MENT OF PUBLIC

KS

DIVISION OF TRANSPORTATION

WM. G. McKINNEY

TRAFFIC ENGINEER

SHEET

18-11-05-10