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TOTAL SHEETS =



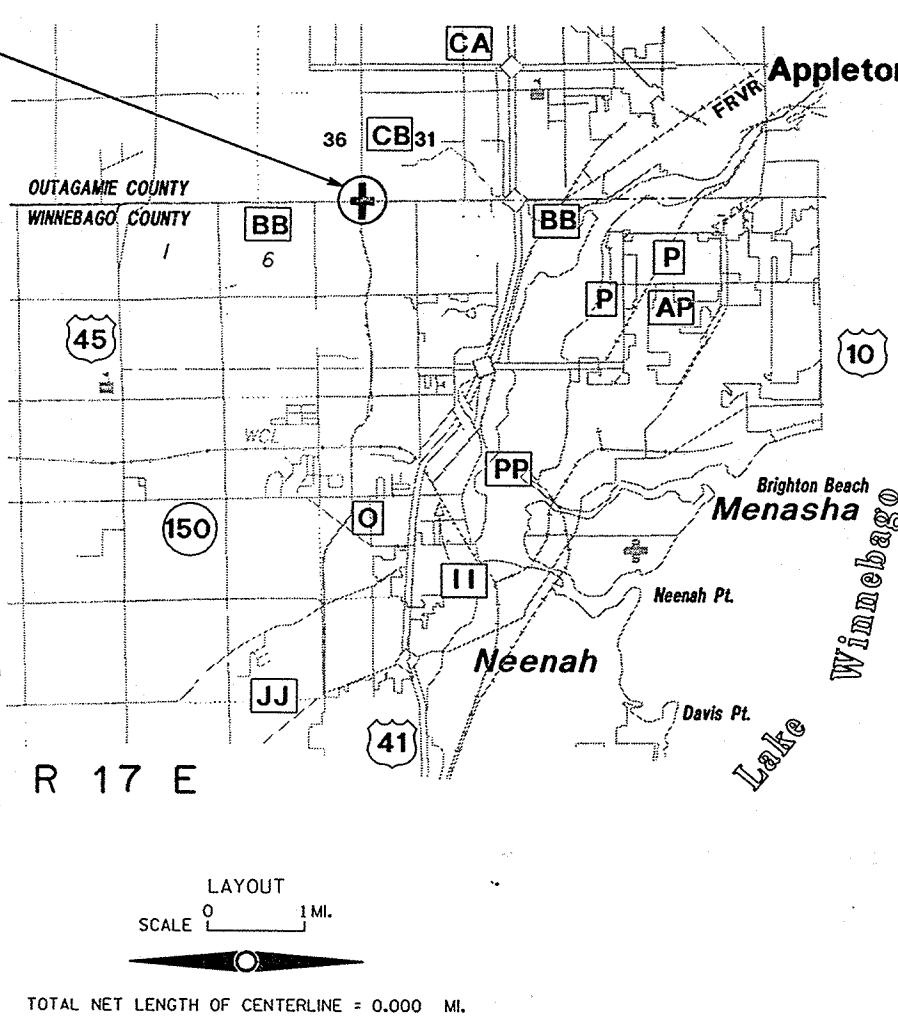
CTH CB
 DESIGN DESIGNATION
 A.D.T. (1995) = 11150
 A.D.T. (2015) = 16,600
 D.H.V. (2015) = 1,566
 D. = 55-45%
 T. = 9.5%
 DESIGN SPEED = 45 MPH
 ESALS = N/A

CTH BB
 DESIGN DESIGNATION
 A.D.T. (1995) = 10100
 A.D.T. (2015) = 15,000
 D.H.V. (2015) = 2,250
 D. = 55-45%
 T. = 9.5%
 DESIGN SPEED = 45 MPH
 ESALS = N/A

CONVENTIONAL SIGNS

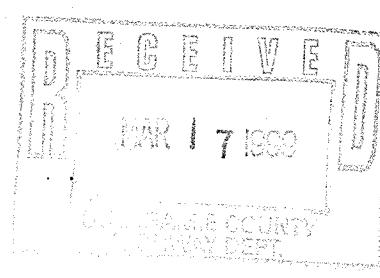
COUNTY LINE	
CORPORATE LIMITS	
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LOT LINE	
LIMITED EASEMENT	
EXISTING RIGHT OF WAY	
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CULVERT (Profile View)	

COMBUSTIBLE FLUIDS	
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GAS	
ELECTRIC	
TELEPHONE OR TELEGRAPH	
SERVICE PEDESTAL	
CABLE MARKER	
POWER POLE	
TELEPHONE POLE	
RAILROAD	
MARSH AREA	
WOODED OR SHRUB AREA	



CB-12

APPROVED FOR WINNEBAGO COUNTY	DATE	HIGHWAY COMMISSIONER
ORIGINAL PLANS PREPARED BY		
MEAD & HUNT <small>ENGINEERS ARCHITECTS SCIENTISTS PLANNERS</small> <small>MADISON, WISCONSIN</small>		
DATE	CONSULTING ENGINEER	

*CB-12*

STANDARD DETAIL DRAWINGS

9B2-6 CONDUIT
9B4-3 PULL BOX
9C2-2 CONCRETE BASES, TYPES 1, 2, AND 5
9C3-2 TRANSFORMER/PEDESTAL BASE
9C5-2 CONCRETE CONTROL CABINET BASES
9D1-2 CABINET SERVICE INSTALLATION
9D2-2 CONTROL CABINET
9E1-2a POLE MOUNTING FOR TRAFFIC SIGNALS, TYPE 2
9E1-2b POLE MOUNTINGS FOR TRAFFIC SIGNALS & LIGHT UNITS, TYPE 3
9E1-2f HARDWARE DETAILS FOR POLE MOUNTINGS
9E3-2 NON-FREEWAY LIGHTING UNIT POLE WIRING
9E6-1 TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL)
13 FT. OR 15 FT.
9F13-2 LOOP DETECTOR INSTALLED IN EXISTING ASPHALTIC PAVEMENT

UTILITIES

AMERITECH
1 (920) 735-3252

MR. TOM KOTESKI
221 W. WASHINGTON ST., 4th FLOOR
APPLETON, WI 54911

WEPCO - ELECTRIC OPERATIONS
1 (920) 380-3554

MR. TOM BORCHART
800 S. LYNNDALE DRIVE
P.O. BOX 1699
APPLETON, WI 54913

WEPCO - GAS OPERATIONS
1 (920) 380-3466

MR. DENNIS GERARD
800 S. LYNNDALE DRIVE
P.O. BOX 1699
APPLETON, WI 54913

TOWN OF GREENVILLE
SANITARY DISTRICT
1 (920) 585-7608

MR. DON SCHINKE
P.O. BOX 60
GREENVILLE, WI 54942

TIME WARNER CABLE
1 (920) 831-9207

MR. STEVE POEHlein
1001 KENNEDY AVENUE
P.O. BOX 145
KIMBERLY, WI 54136

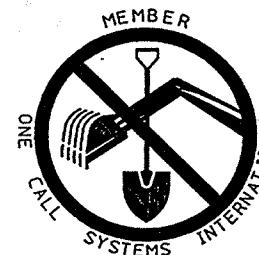
COUNTY PROJECT	SHEET NO.
GENERAL NOTES AND UTILITIES	
CTH CB - CTH BB	OUTAGAMIE/WINNEBAGO

GENERAL NOTES

NO TREES AND OR SHRUBS ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

LOCATIONS ARE APPROXIMATE AND MAY BE ADJUSTED BY THE ENGINEER TO RESOLVE POSSIBLE CONFLICTS.



TO OBTAIN LOCATION OF
PARTICIPANTS' UNDERGROUND
FACILITIES BEFORE YOU
DIG IN WISCONSIN

CALL DIGGERS HOTLINE

1-800-242-8511

TOLL FREE

FAX A LOCATE 1-800-338-3860

TDD (FOR HEARING IMPAIRED) 1-800-542-2289

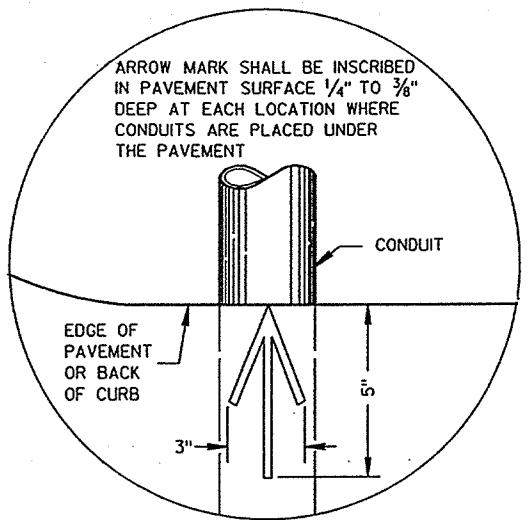
WISCONSIN STATUTE 182.0175 (1974)
REQUIRES MINIMUM OF 3 WORK DAYS
NOTICE BEFORE YOU EXCAVATE.

ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
21301	FINISHING ROADWAY	L.S.	1.00	1.00
61910	MOBILIZATION	L.S.	1.00	1.00
64301	TRAFFIC CONTROL	L.S.	1.00	1.00
65219	NONMETALLIC CONDUIT, SCHEDULE 40 2-INCH	L.F.	1118.00	1118.00
65221	NONMETALLIC CONDUIT, SCHEDULE 40 3-INCH	L.F.	261.00	261.00
65235	CONDUIT, 2-INCH, SPECIAL	L.F.	60.00	60.00
65237	CONDUIT, 3-INCH, SPECIAL	L.F.	218.00	218.00
65250	LOOP DETECTOR CONDUIT, 1-INCH	L.F.	508.00	508.00
65255	LOOP DETECTOR SLOTS	L.F.	446.00	446.00
65303	PULL BOXES, STEEL, 18x24 INCH	EACH	4.00	4.00
65306	PULL BOXES, STEEL, 24x36-INCH	EACH	8.00	8.00
65401	CONCRETE BASES, TYPE 1	EACH	4.00	4.00
65402	CONCRETE BASES, TYPE 2	EACH	4.00	4.00
65415	CONCRETE CONTROL CABINET BASE, TYPE 6	EACH	1.00	1.00
65425	PEDESTAL BASES	EACH	4.00	4.00
65430	TRANSFORMER BASES, STANDARD, 11-1/2 INCH BOLT CIRCLE	EACH	4.00	4.00
65525	TRAFFIC SIGNAL CABLE, 5 CONDUCTOR, NO. 14	L.F.	292.00	292.00
65529	TRAFFIC SIGNAL CABLE, 9 CONDUCTOR, NO. 14	L.F.	208.00	208.00
65531	TRAFFIC SIGNAL CABLE, 12 CONDUCTOR, NO. 14	L.F.	175.00	175.00
65533	TRAFFIC SIGNAL CABLE, 15 CONDUCTOR, NO. 14	L.F.	238.00	238.00
65545	TYPE UF CABLE, 2 CONDUCTOR, NO. 12, GROUNDED	L.F.	296.00	296.00
65557	ELECTRICAL WIRE, TRAFFIC SIGNALS, NO. 10	L.F.	1703.00	1703.00
65565	ELECTRICAL WIRE, LIGHTING, NO. 12	L.F.	180.00	180.00
65580	LOOP DETECTOR LEAD-IN-CABLE	L.F.	2072.00	2072.00
65585	LOOP DETECTOR WIRE	L.F.	1268.00	1268.00
65615	ELECTRICAL SERVICE, METER BREAKER PEDESTAL, CTH CB & CTH BB	L.S.	1.00	1.00
65702	POLES, TYPE 2	EACH	2.00	2.00
65703	POLES, TYPE 3	EACH	2.00	2.00
65732	TRAFFIC SIGNAL STANDARDS, ALUMINUM, 13-FOOT	EACH	4.00	4.00
65803	TROMBONE ARMS, 20-FEET	EACH	4.00	4.00
65826	TRAFFIC SIGNAL FACES, 3-12 INCH VERTICAL	EACH	8.00	8.00
65829	TRAFFIC SIGNAL FACES, 3-12 INCH HORIZONTAL	EACH	4.00	4.00
65836	BACKPLATES, 3 SECTION, 12-INCH SIGNAL FACES	EACH	12.00	12.00
65850	TRAFFIC SIGNAL MOUNTING HARDWARE, CTH CB & CTH BB	L.S.	1.00	1.00
65903	LUMINAIRES, UTILITY, 150 WATTS	EACH	2.00	2.00
65926	LUMINAIRES ARMS, SINGLE MEMBER, 4 1/2-INCH CLAMP, 6-FOOT	EACH	2.00	2.00
90858	TRAFFIC SIGNAL CONTROLLER, FULLY ACTUATED, 4 PHASE	EACH	1.00	1.00

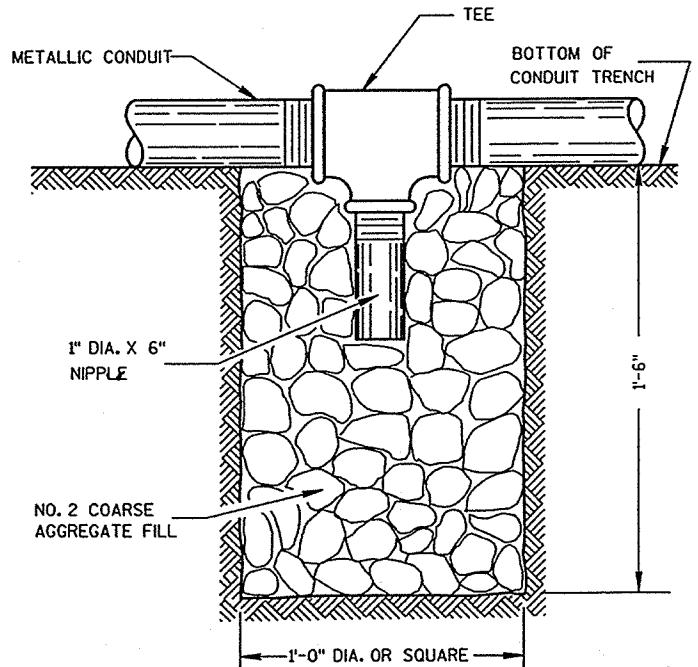
COUNTY PROJECT	SHEET NO
ESTIMATE OF QUANTITIES	
CTH CB - CTH BB	OUTAGAMIE/WINNEBAGO

COUNTY PROJECT	SHEET NO
CONDUIT DETAIL	

CTH CB - CTH BB OUTAGAMIE/WINNEBAGO

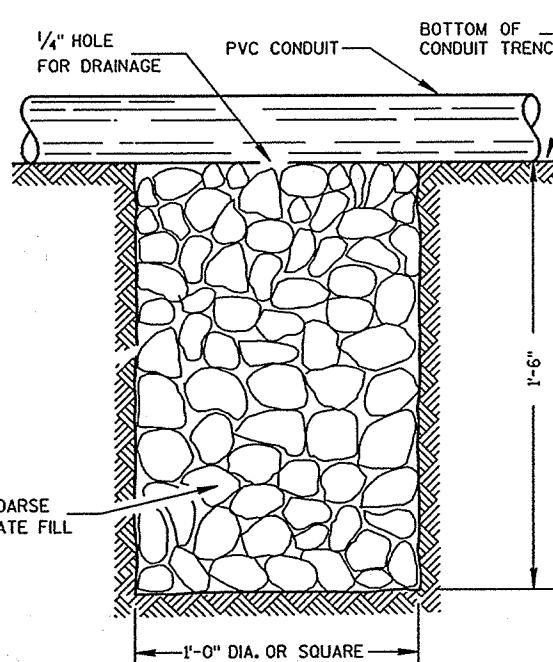


PLAN VIEW
ARROW MARK



NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS
CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT



NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS
CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

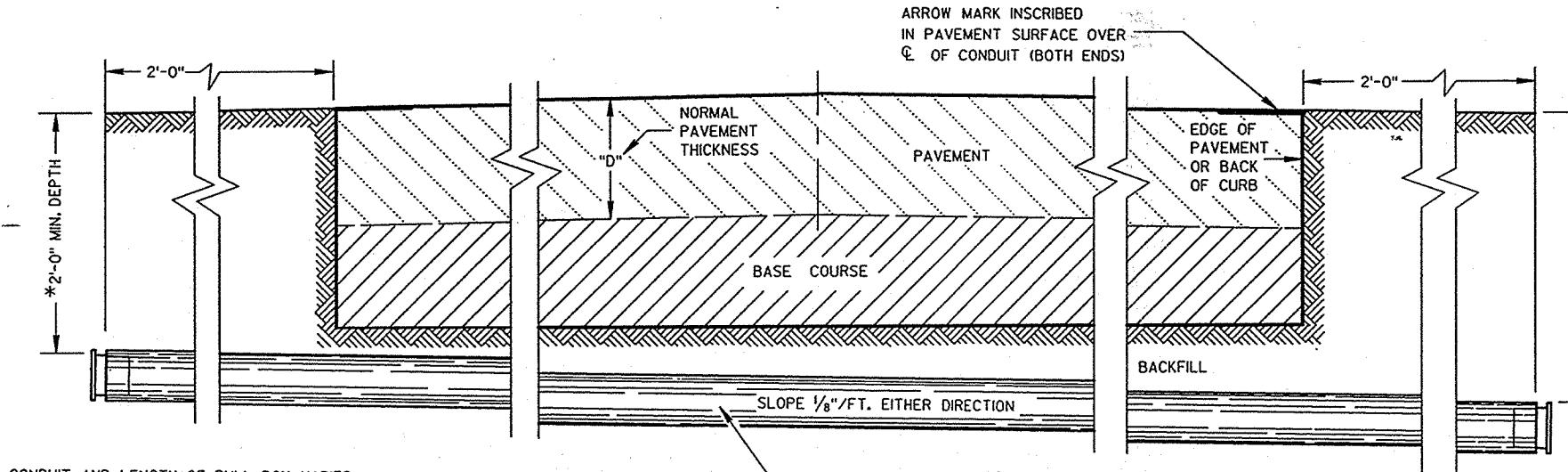
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

POLY ROPE OR A PULL WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.11.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS UNLESS OTHERWISE APPROVED BY THE PROJECT ENGINEER.



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES
WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.O. 984

SIDE ELEVATION
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

DIMENSION IN INCHES	TYPE OF PIPE									
	CORRUGATED STEEL					POLYETHYLENE SDR 32.5				
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	12
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	24
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.4
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	10 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	14 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	8 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	11 1/2
WEIGHT IN POUNDS *										
FRAME AND COVER		60	60	60	110	110	110	155	155	60

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPliced). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

POLYETHYLENE PULL BOXES SHALL NOT BE INSTALLED IN CONCRETE OR ASPHALTIC PAVEMENT. PULL BOXES LOCATED IN THE ROADWAY SHALL HAVE LOCKING COVERS.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE. THE MECHANICAL CONNECTION (INSIDE AND OUTSIDE) TO THE PULL BOX, SHALL BE TOTALLY AND PERMANENTLY SEALED WITH A SILICONE OR RUBBERIZED CAULKING COMPOUND AS APPROVED BY THE ENGINEER.

GROUNDING LUGS ARE NOT REQUIRED IN PULL BOXES WHEN VOLTAGES OF LESS THAN 50 VOLTS AC ARE THE ONLY VOLTAGES ENCOUNTERED IN THE BOXES.

DRAIN DUCT SHALL BE MEASURED AND PAID FOR SEPARATELY.

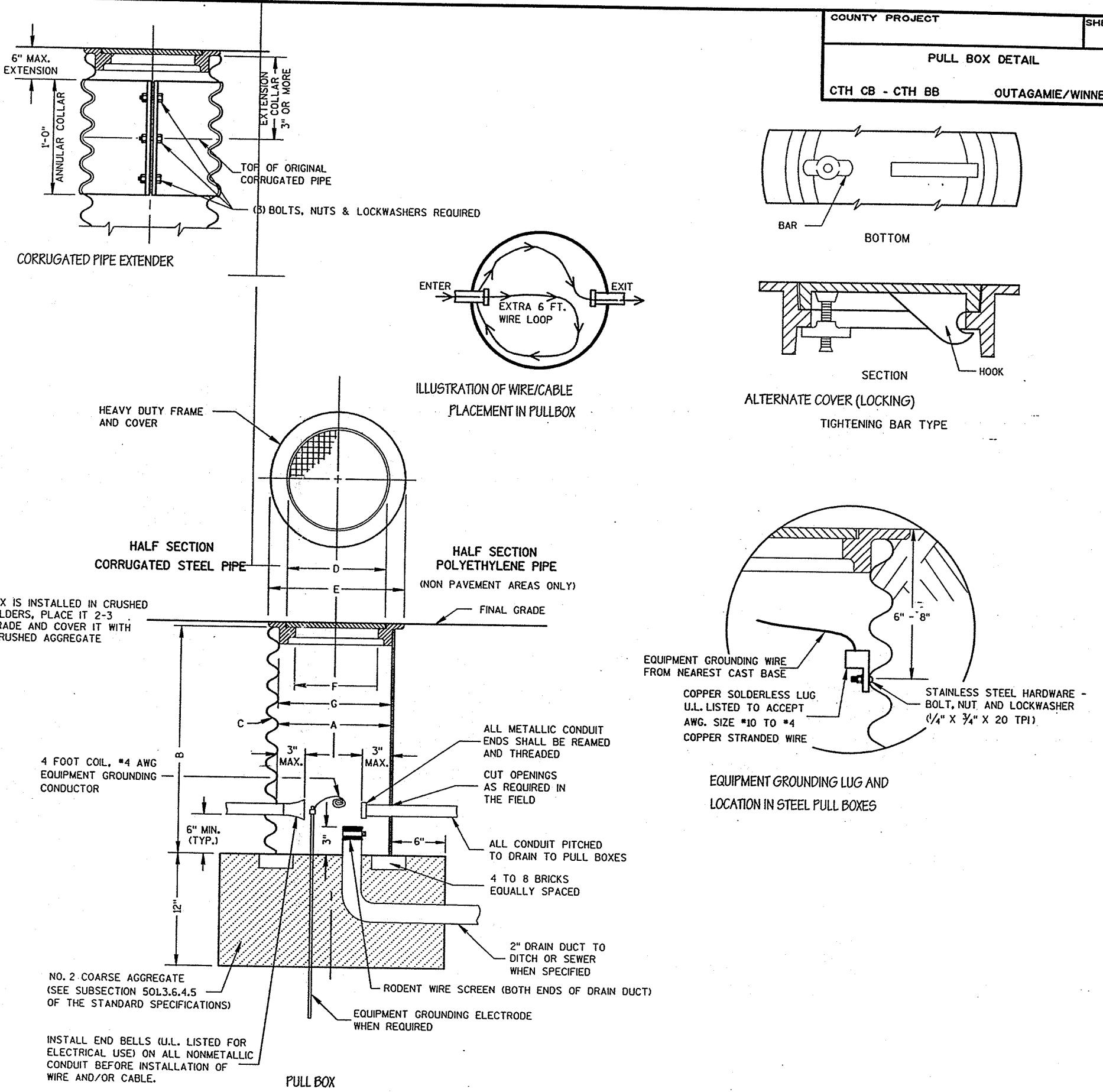
RODENT WIRE SCREEN SHALL BE 1/8" STAINLESS STEEL MESH AND BE INSTALLED WITH A STAINLESS STEEL HOSE CLAMP OF SUFFICIENT SIZE.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

S.D.D. 9B2, "CONDUIT", APPLIES TO THIS DRAWING.

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.

IF PULL BOX EQUIPMENT GROUNDING IS REQUIRED USING AN EQUIPMENT GROUNDING ELECTRODE IN EACH PULL BOX, THE EQUIPMENT GROUNDING ELECTRODE SHALL BE 5/8" X 8'-0", COPPERCLAD AND BE EXOTHERMICALLY WELDED TO A #4 AWG, COPPER, STRANDED WIRE (BARE OR GREEN INSULATED). THE #4 AWG WIRE SHALL BE 4 FEET IN LENGTH, NEATLY COILED, TAPE AND AVAILABLE FOR USE WHEN REQUIRED.



COUNTY PROJECT
PULL BOX DETAIL
CTH CB - CTH BB OUTAGAMIE/WINNEBAGO
SHEET NO.

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 6412.2 OF THE STANDARD SPECIFICATIONS, ASTM A-325, (92,000 YIELD) HEAVY HEX NUT AND BE GALVANIZED IN ACCORDANCE WITH ASTM A-153, CLASS C.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED AND U.L. LISTED MECHANICAL CONNECTOR (LUG) AL/CU RATED AND SIZED TO ACCEPT #10 AWG STRANDED WIRE, SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

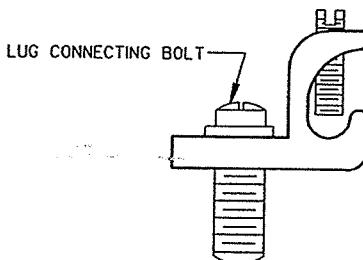
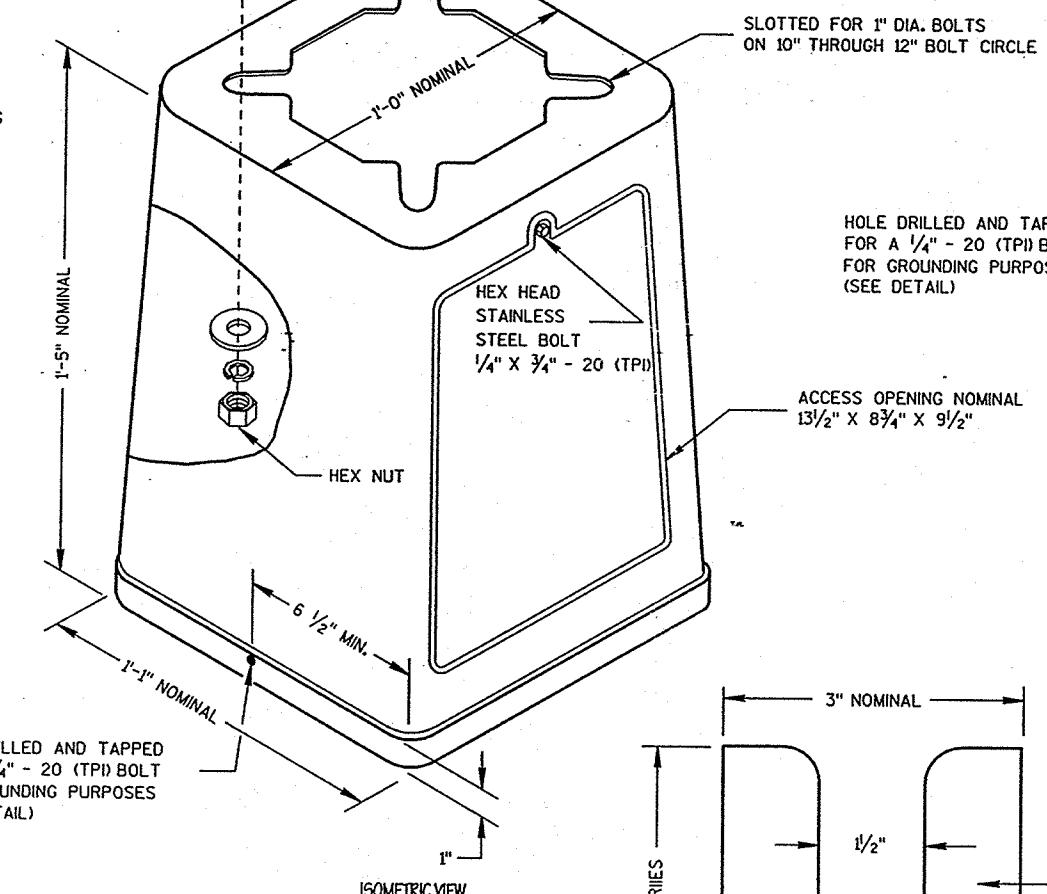
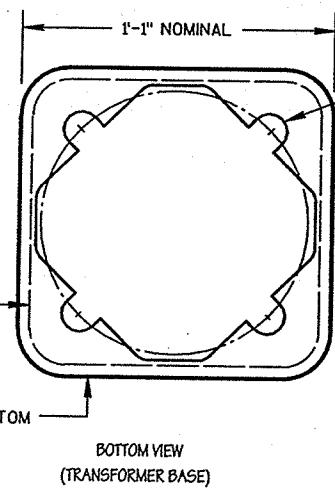
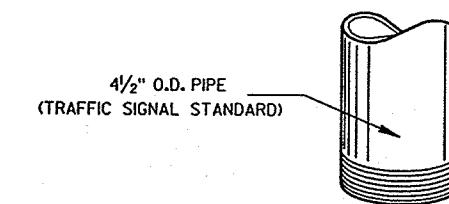
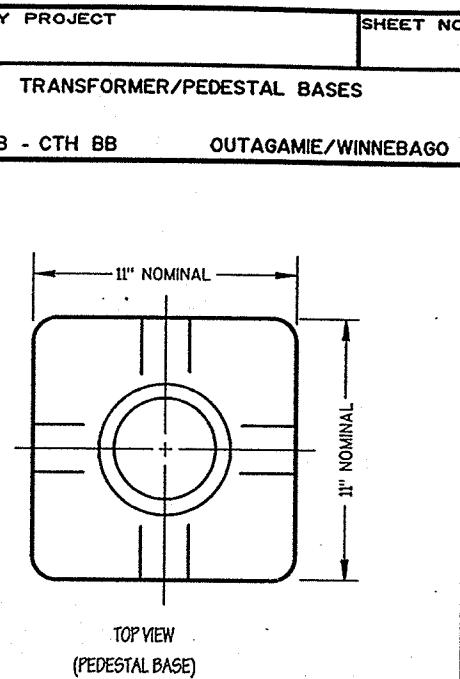
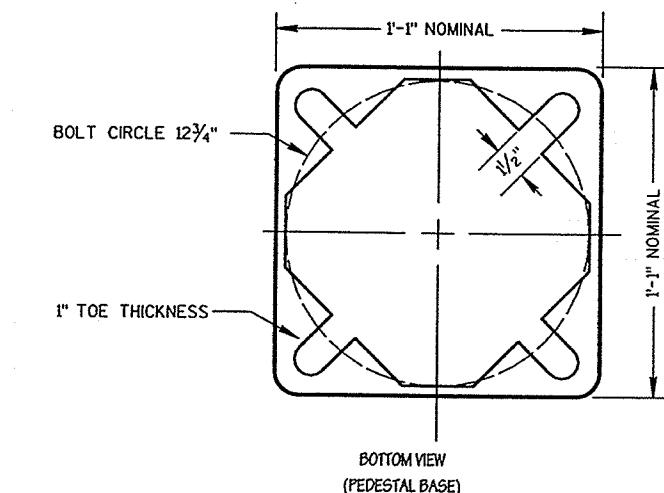
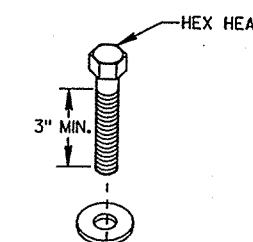
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

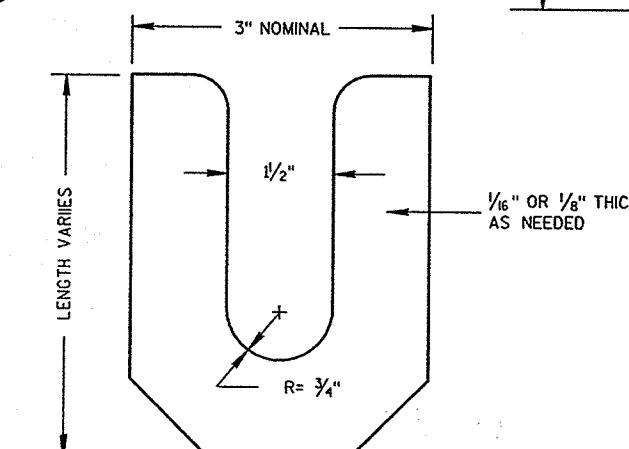
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

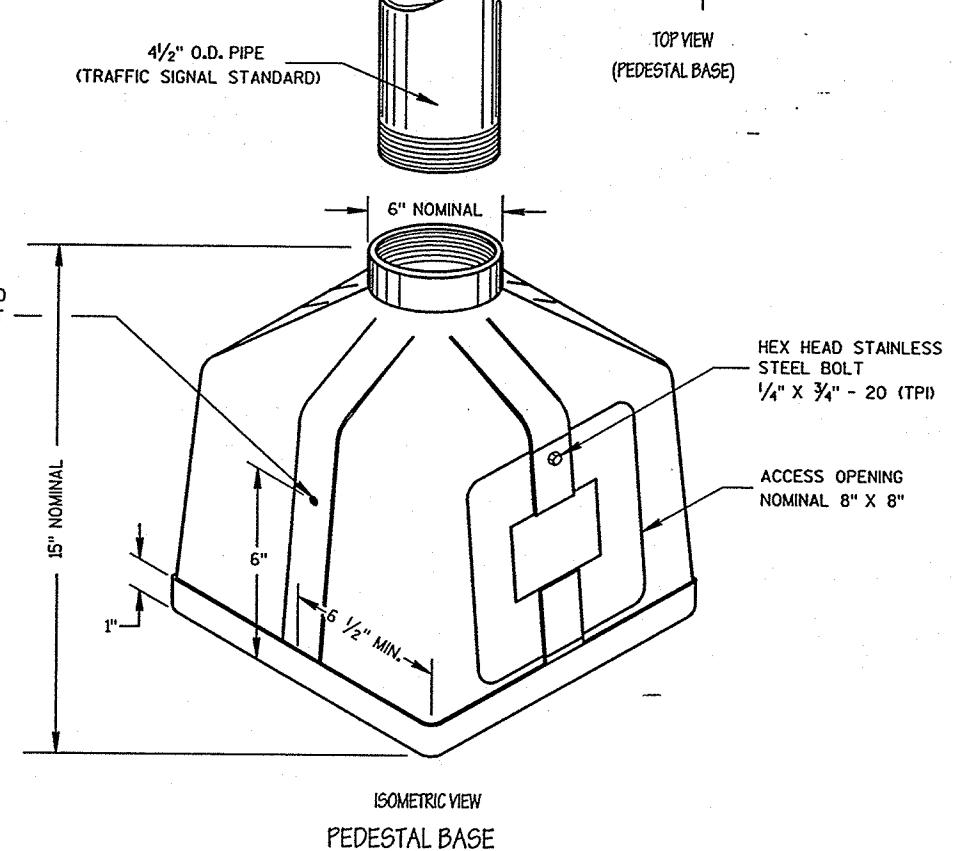


TRANSFORMER BASE
INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES

TYPICAL MECHANICAL
CONNECTOR LUG
TO BE FURNISHED WITH EACH BASE



LEVELING SHIM

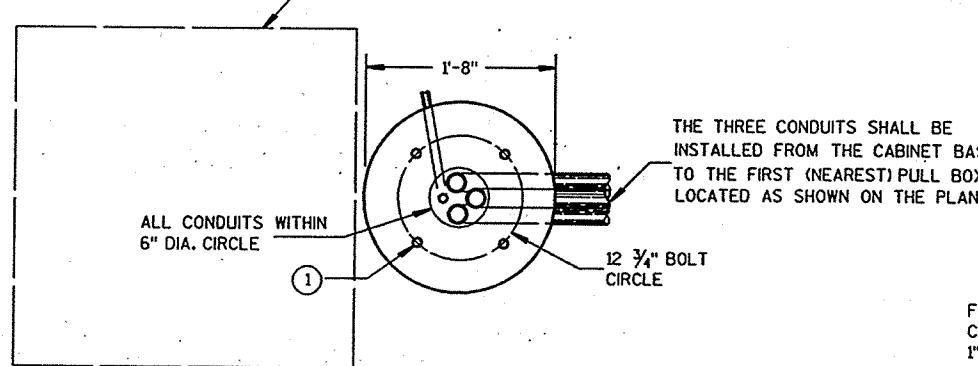


ISOMETRIC VIEW
PEDESTAL BASE

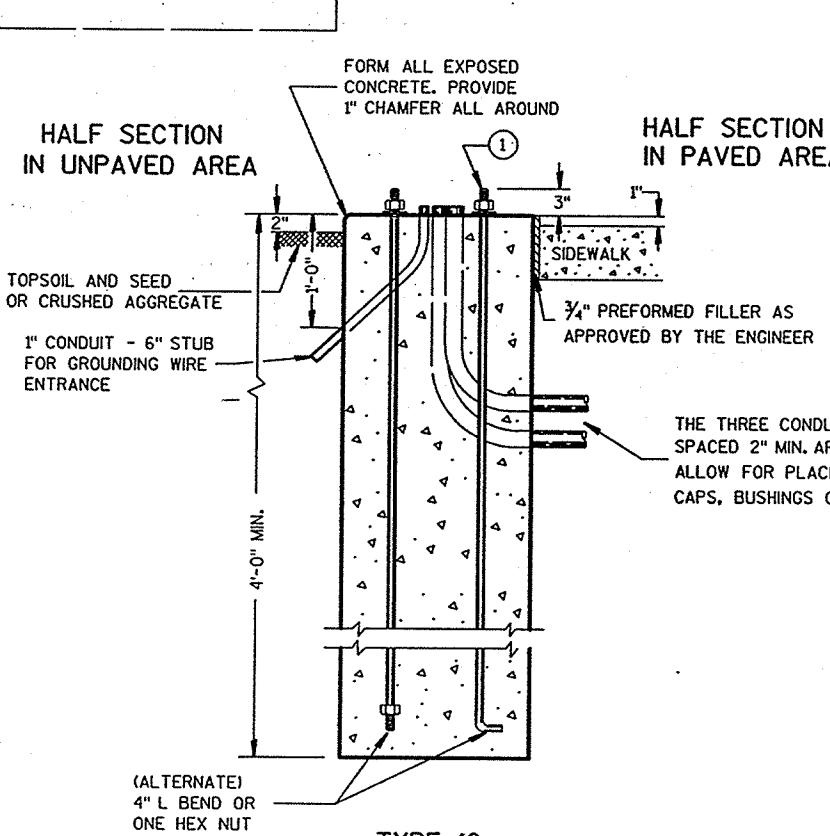
COUNTY PROJECT	SHEET NO
TRANSFORMER/PEDESTAL BASES	
CTH CB - CTH BB	OUTAGAMIE/WINNEBAGO

CONTROL CABINET BASE TYPE	DIMENSIONS				C.Y. CONCRETE (APPROX.)
	H	I	J	K	
TYPE 6 - 30" CABINET	34"	60"	10"	17"	.64
TYPE 7 - 38" CABINET	42"	60"	10"	21"	.93
TYPE 8 - 38" CABINET	42"	72"	12"	21"	1.29
TYPE 9 - VARIABLE	54"	72"	14"	27"	1.56
TYPE 10 - POST MOUNT	AS SHOWN				.32

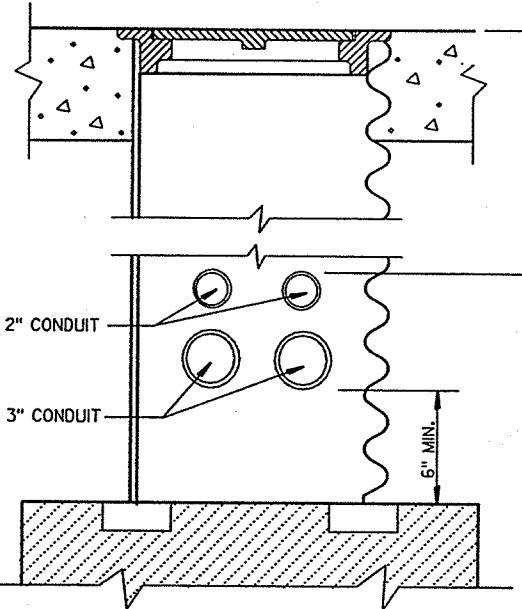
TYPICAL 3'-0" X 3'-0"
MAINTENANCE PLATFORM.
LOCATION TO BE DETERMINED
IN THE FIELD.



**CONDUIT LOCATIONS IN 24" X 36" PULL BOX
(LEADING TO CONTROLLER CABINET BASE TYPE 6, 7, 8 AND**



CONCRETE CONTROL CABINET BASES



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING
SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

INSTALL FOUR $\frac{1}{2}$ INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH APPROVED CONCRETE MASONRY ANCHORS TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1INCH

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

CONTROL CABINET BASE TOP SURFACES SHALL BE TROWEL FINISHED AND LEVEL.

WHEN A TYPE 10 CONTROL CABINET BASE IS USED TO POST MOUNT A CONTROL CABINET, A 36" SQUARE 4" THICK CONCRETE MAINTENANCE PLATFORM SHALL BE REQUIRED ON THE DOOR SIDE OF THE CABINET. THE TOP 1INCH SHALL BE ABOVE FINISHED GRADE AND BE BROOM FINISHED AND LEVEL.

Maintenance platforms are not required when the surrounding area is paved.

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

ALL FOUR (TWO INCH AND THREE INCH) CONDUIT SHALL BE INSTALLED FROM THE CABINET BASE TO THE FIRST (NEAREST PULL BOX LOCATED AS SHOWN ON THE PLANS).

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

THE 4" ANCHOR RODS USING THE ALTERNATIVE "L" BEND ARE FURNISHED FOR THE TYPE 10 BASE, THE 4" L BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

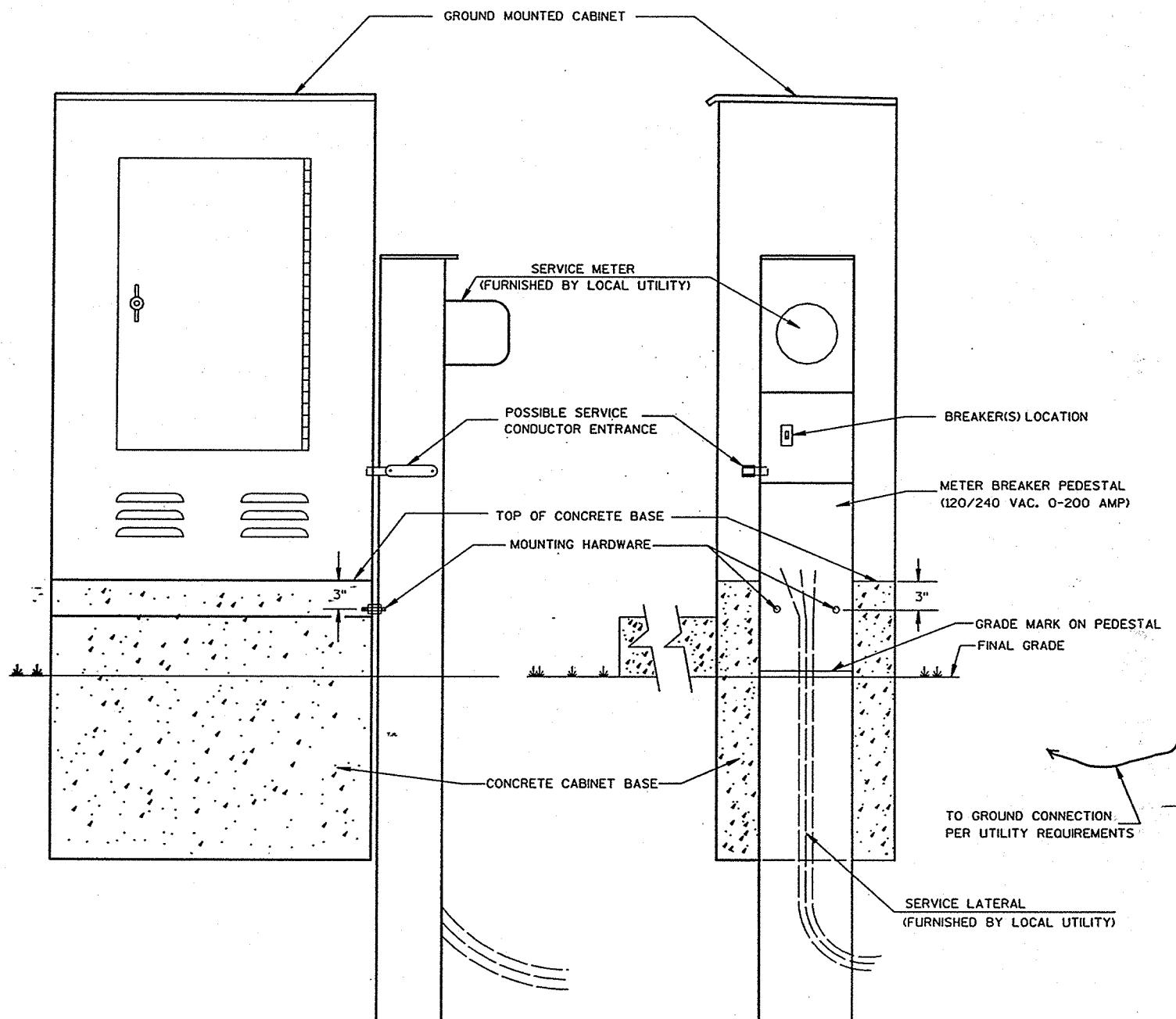
Straight anchor rods shall be the

① FOUR (4) ANCHOR RODS, 1" DIA. X 3'-6"

ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 AND 6412.2 OF THE STANDARD SPECIFICATIONS AND IN ACCORDANCE WITH A-449, OR ASTM. A-687 (GRADE 105).

TYPE 6,7,8 AND 9
(ISOMETRIC VIEW)

COUNTY PROJECT	SHEET NO
CABINET SERVICE INSTALLATION	
CTH CB - CTH BB	OUTAGAMIE/WINNEBAGO



TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE, CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRIC SERVICE LATERAL WILL APPROACH. THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

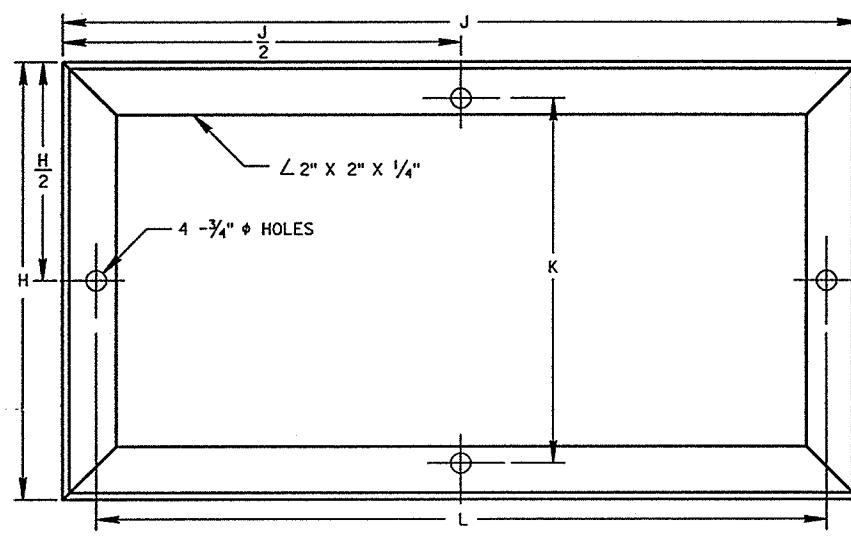
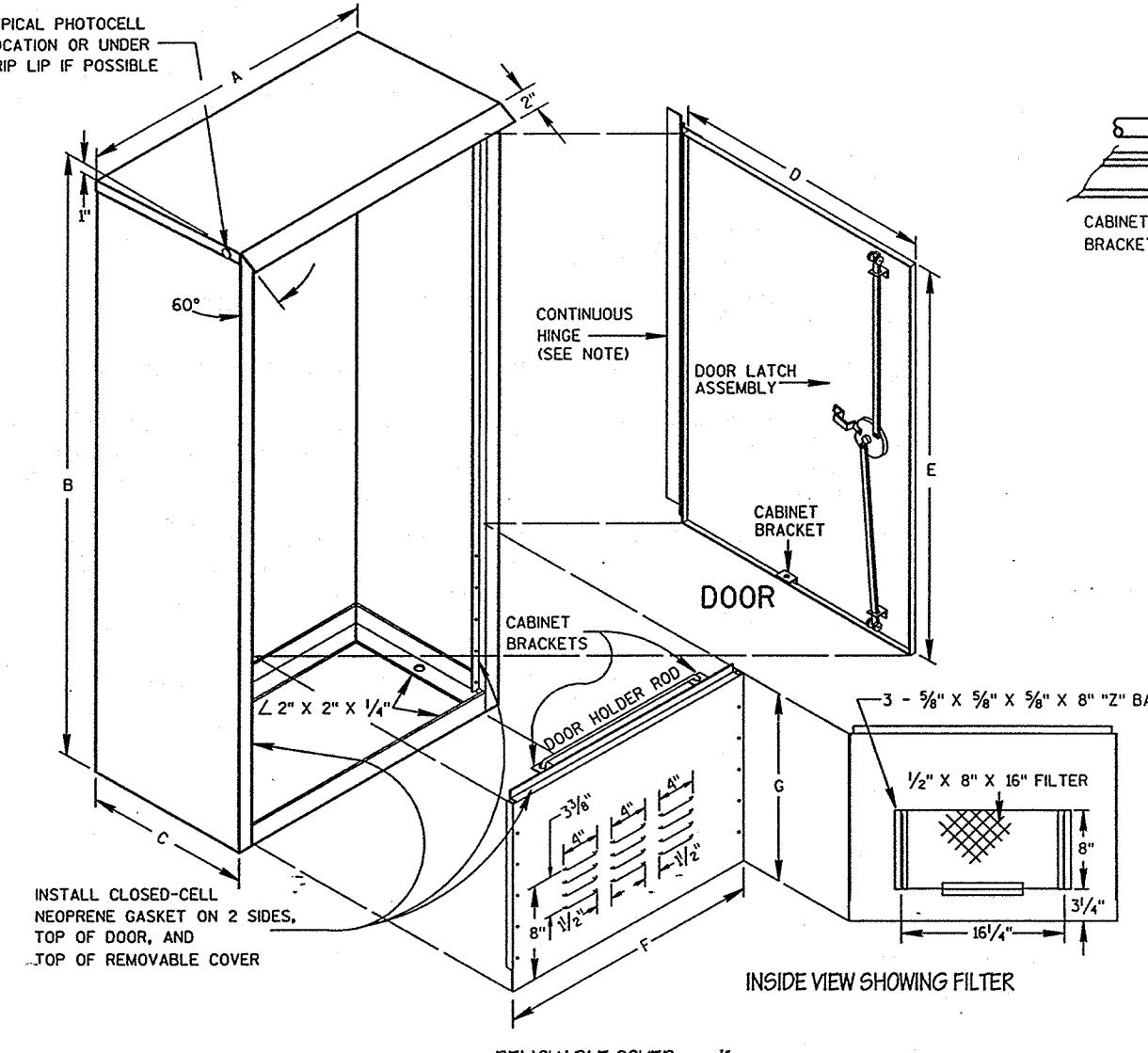
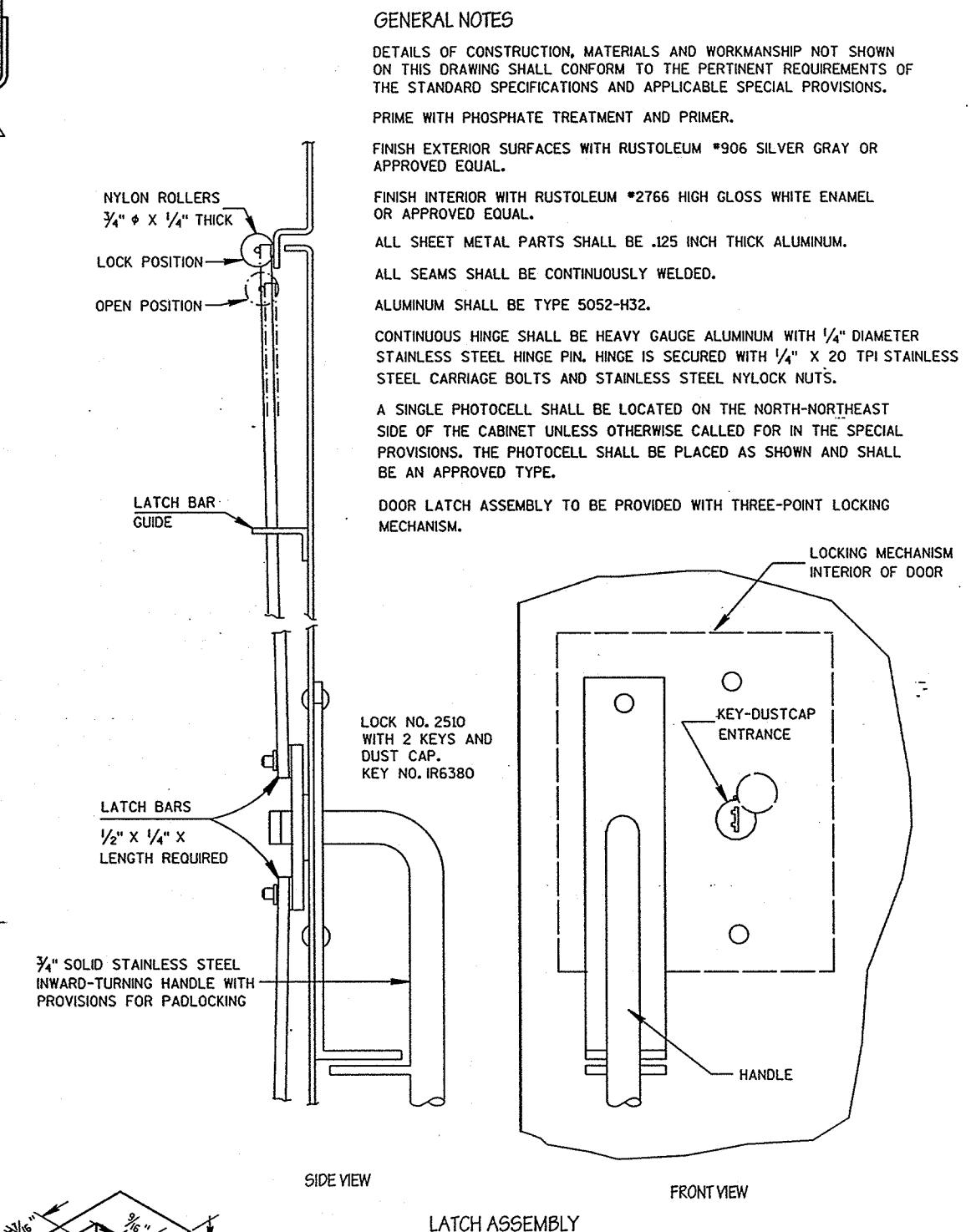
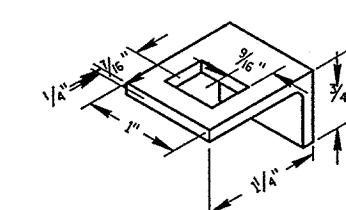
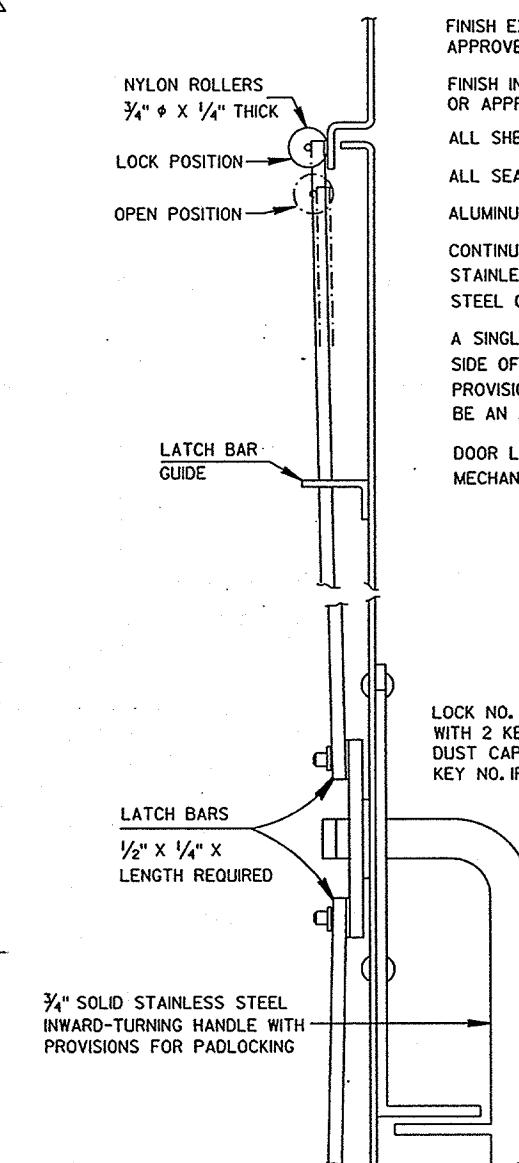
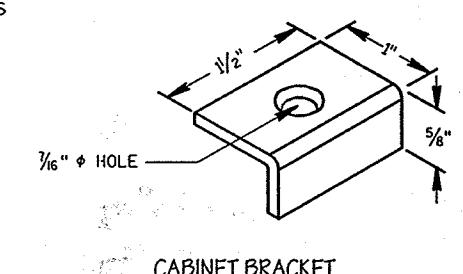
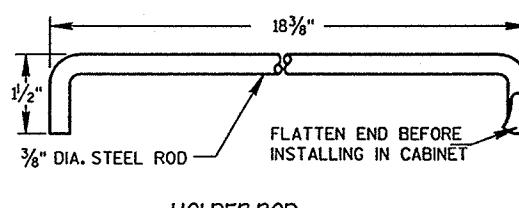
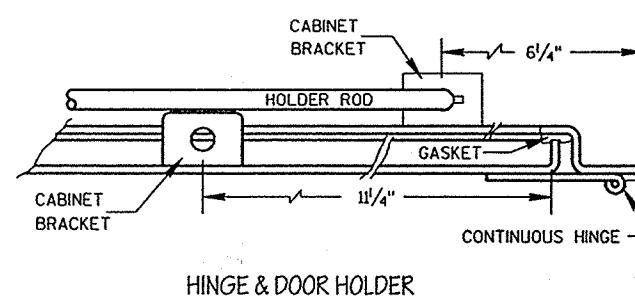


TABLE OF DIMENSIONS (INCHES)

MARK	CABINET TYPE		
	3060	3860	3866
A	30	38	38
B	60	60	66
C	16 1/2	16 1/2	24
D	26 1/2	34 3/4	33 3/4
E	38 3/4	38 3/4	38 3/4
F	26 1/2	34 3/4	33 3/4
G	19	19	25
H	16 1/2	16 1/2	24
H/2	8 1/4	8 1/4	12
J	30	38	38
J/2	15	19	19
K	13 3/4	13 3/4	21 1/4
L	27 1/2	35 1/2	35 1/2



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPROVED SPECIAL PROVISIONS.

PRIME WITH PHOSPHATE TREATMENT AND PRIMER.

FINISH EXTERIOR SURFACES WITH RUSTOLEUM #906 SILVER GRAY OR APPROVED EQUAL.

FINISH INTERIOR WITH RUSTOLEUM #2766 HIGH GLOSS WHITE ENAMEL OR APPROVED EQUAL.

ALL SHEET METAL PARTS SHALL BE .125 INCH THICK ALUMINUM.

ALL SEAMS SHALL BE CONTINUOUSLY WELDED.

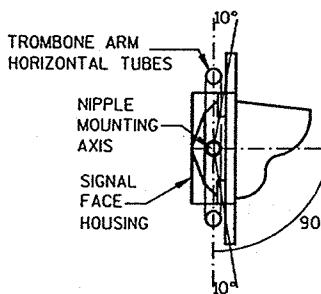
ALUMINUM SHALL BE TYPE 5052-H32.

CONTINUOUS HINGE SHALL BE HEAVY GAUGE ALUMINUM WITH $1/4"$ DIAMETER STAINLESS STEEL HINGE PIN. HINGE IS SECURED WITH $1/4" \times 20$ TPI STAINLESS STEEL CARRIAGE BOLTS AND STAINLESS STEEL NYLOCK NUTS.

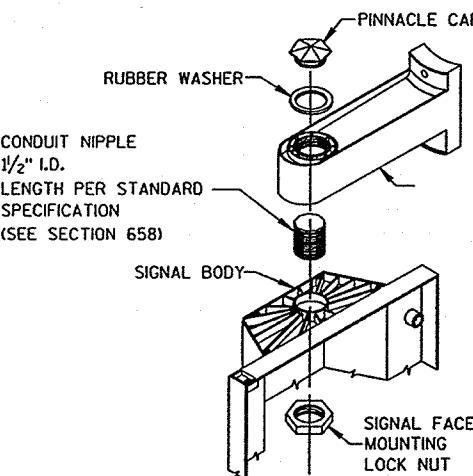
A SINGLE PHOTOCELL SHALL BE LOCATED ON THE NORTH-NORTHEAST SIDE OF THE CABINET UNLESS OTHERWISE CALLED FOR IN THE SPECIAL PROVISIONS. THE PHOTOCELL SHALL BE PLACED AS SHOWN AND SHALL BE AN APPROVED TYPE.

DOOR LATCH ASSEMBLY TO BE PROVIDED WITH THREE-POINT LOCKING MECHANISM.

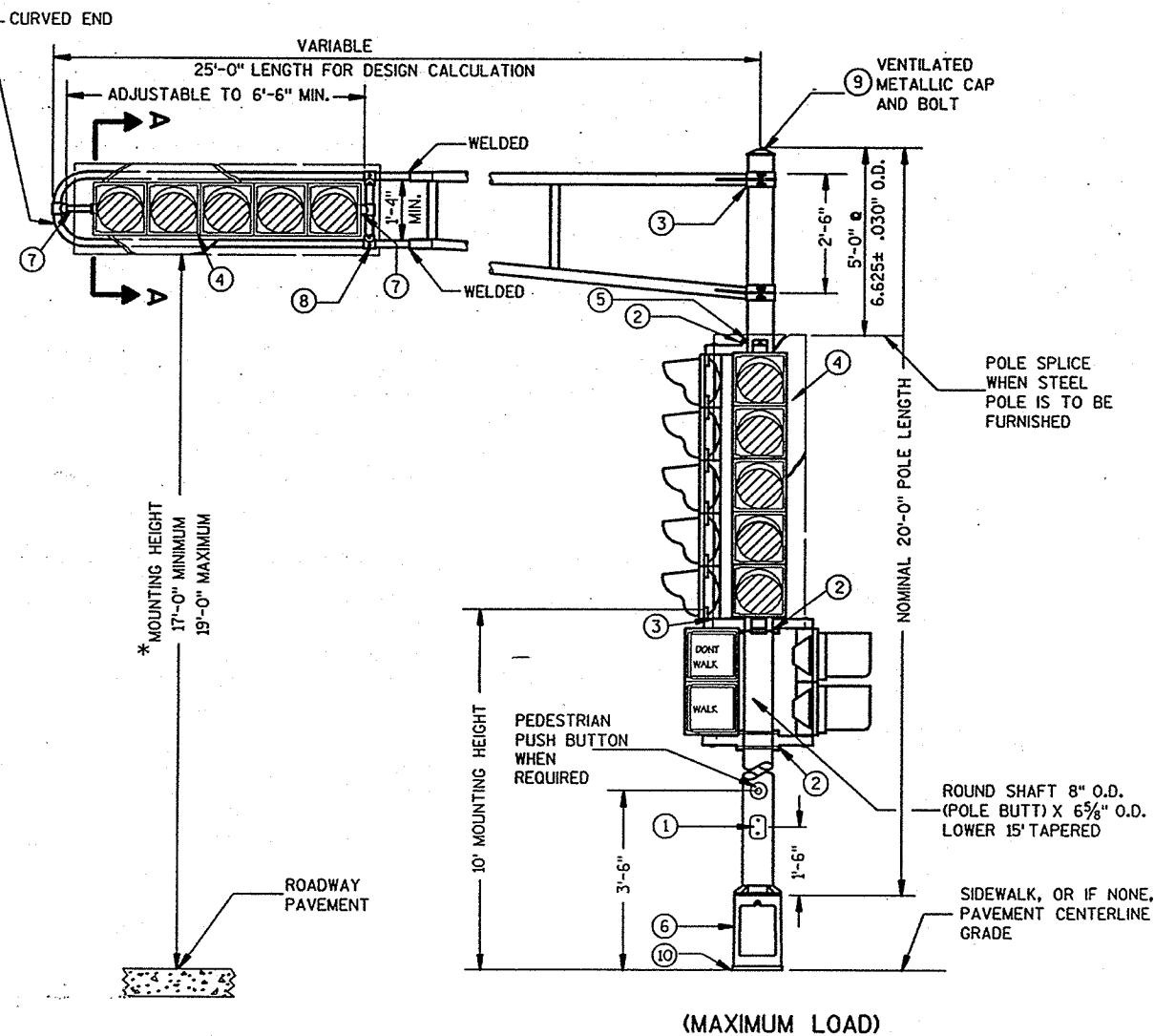
COUNTY PROJECT	SHEET NO
POLE MOUNTINGS FOR TRAFFIC SIGNALS, TYPE 2 CTH CB - CTH BB	OUTAGAMIE/WINNEBAGO



SECTION A-A
(10 DEGREES TILT REQUIREMENT OF FACE(S) IN THE TROMBONE MOUNTING)



SIGNAL FACE MOUNTING DETAIL
(BANDED)



TYPE 2 POLE MOUNTING CONFIGURATION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

POLES SHALL BE EITHER ALUMINUM OR GALVANIZED STEEL AS CALLED FOR IN THE CONTRACT.

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

A PULL WIRE/ROPE IN ACCORDANCE WITH STANDARD SPECIFICATION 652 SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

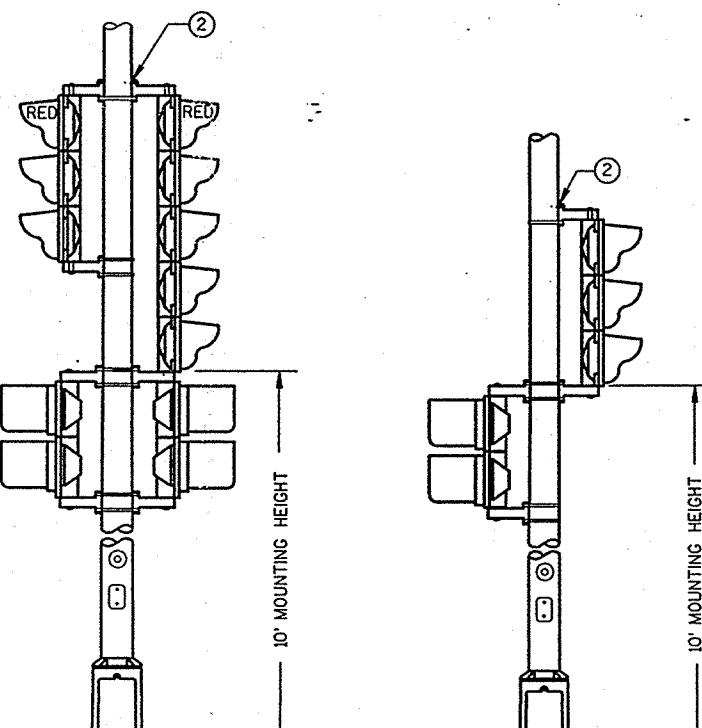
TYPE 2 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

- ① 4" X 6" REINFORCED HANHOLE & COVER ASSEMBLY WITH 2 (TWO) $1/4" \times 3/4" - 20$ TPI HEX HEAD STAINLESS STEEL BOLTS.
- ② SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING. (SEE STANDARD SPECIFICATIONS - SEC. 658)
- ③ GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR $1\frac{1}{8}$ " HOLE IN POLE SHAFT FOR WIRING.
- ④ BACKBOARDS ARE REQUIRED AT ALL TIMES ON TROMBONE MAST ARM MOUNTED SIGNAL FACES. VERTICAL MOUNTED SIGNAL FACES WITH BACKBOARDS REQUIRED ARE LOCATED AS SHOWN ON THE PLANS. BACKBOARDS ARE REQUIRED TO SURROUND SIGNAL FACES. BACKBOARDS SHALL EXTEND 5" BEYOND EXTREMITIES OF THE SIGNAL FACE.
- ⑤ POLE MOUNTED SIGNAL FACES SHALL REQUIRE 1 OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACES.
- ⑥ CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.
- ⑦ MOUNTING BRACKET NIPPLES FOR THE SIGNAL FACE(S) SHALL BE 2 INCHES IN LENGTH AND $1\frac{1}{2}$ INCHES IN DIAMETER. (SEE STANDARD SPECIFICATION - SECTION 658).
- ⑧ VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW ($1/4" \times 3/4" - 20$ TPI, STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.
- ⑨ FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) $1/4" \times 3/4" - 20$ TPI STAINLESS STEEL, HEX HEAD BOLT.
- ⑩ SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

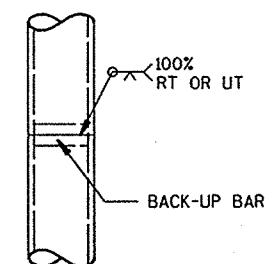
*MOUNTING HEIGHT LIMITATION DIMENSIONS OF THE TROMBONE MAST ARM WILL BE DEPENDENT UPON THE USE/NON-USE OF A TRANSFORMER BASE.

REQUIREMENTS OF AWS D 15-88. RECORDS OF

FOR MANUFACTURERS USE ONLY
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE
COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED
TO THE OFFICE OF DESIGN/BRIDGE FOR VERIFICATION
AND APPROVAL.

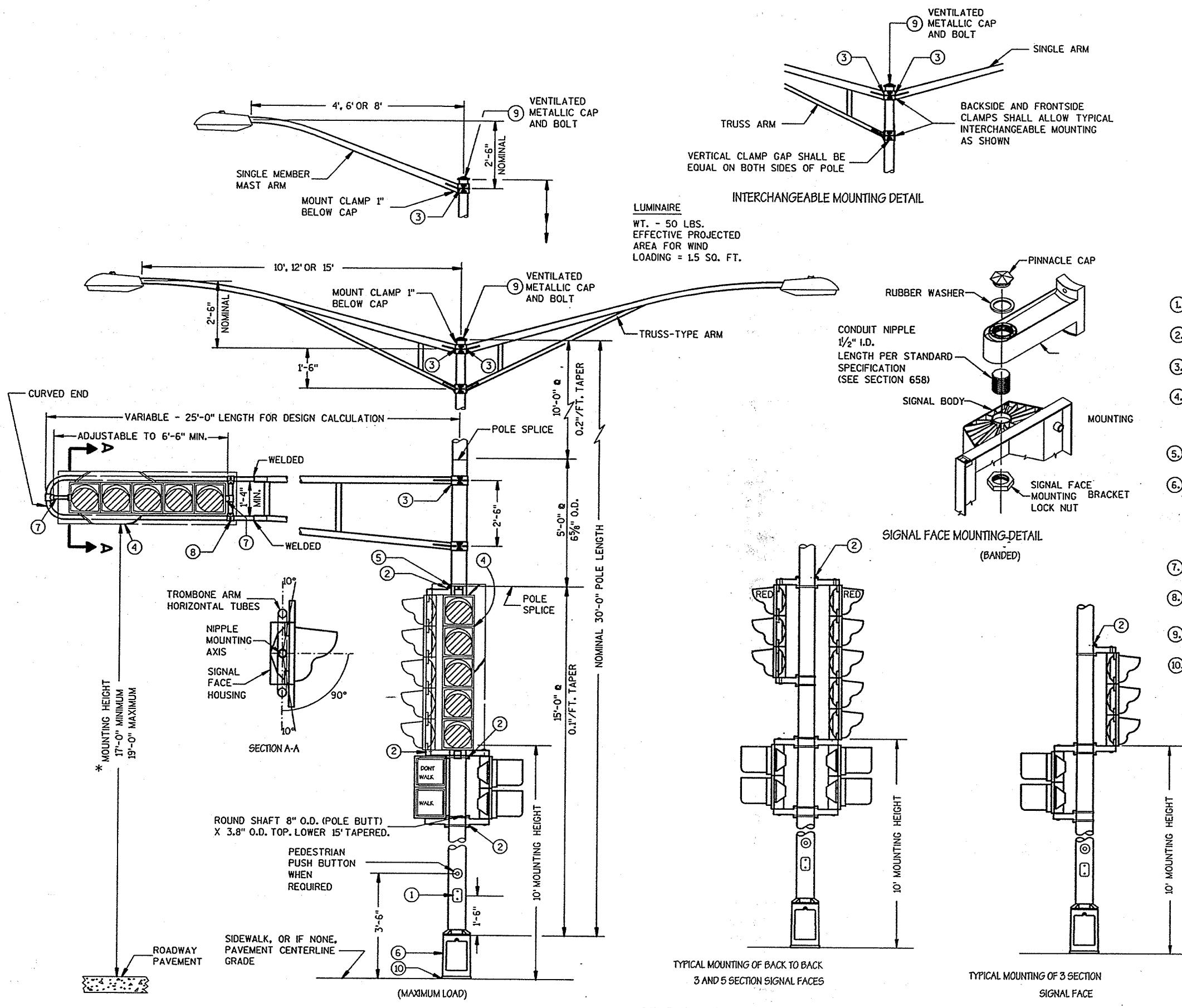


TYPICAL MOUNTING OF 3 SECTION
SIGNAL FACE

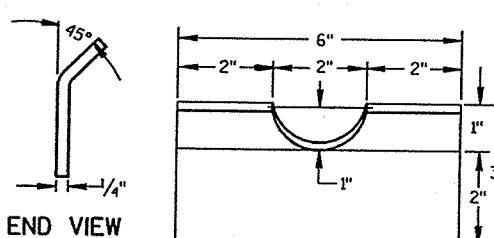


POLE SPLICE DETAIL

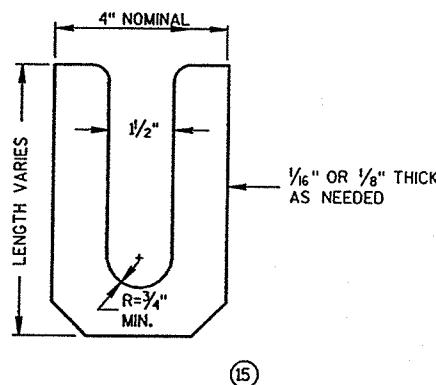
COUNTY PROJECT	SHEET NO
TYPE 3 POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING CTH CB - CTH BB OUTAGAMIE/WINNEBAGO	



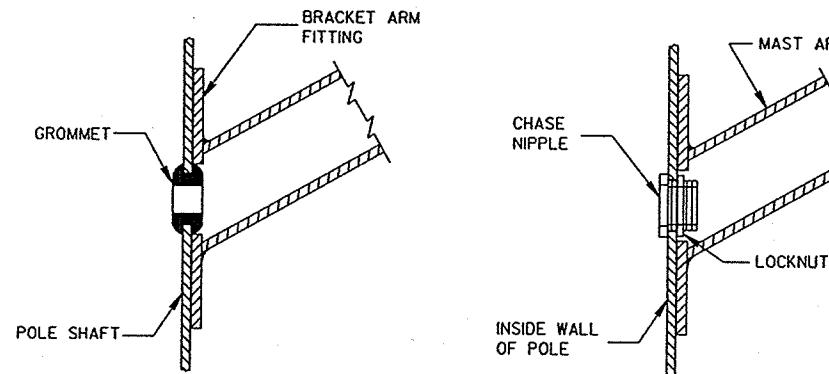
COUNTY PROJECT	SHEET NO
HARDWARE DETAILS FOR POLE MOUNTINGS CTH CB - CTH BB OUTAGAMIE/WINNEBAGO	



FRONT VIEW
RECTANGULAR CLAMP SHIM
(4 TO A SET)

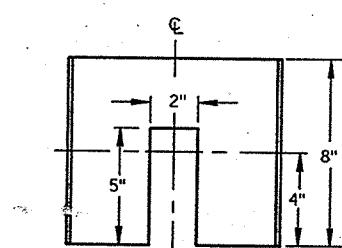
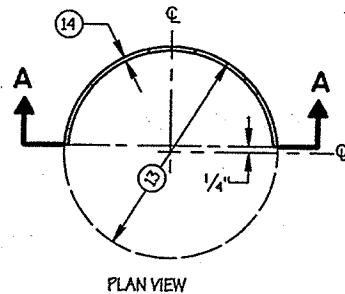


LEVELING SHIM
SHALL BE ALUMINUM

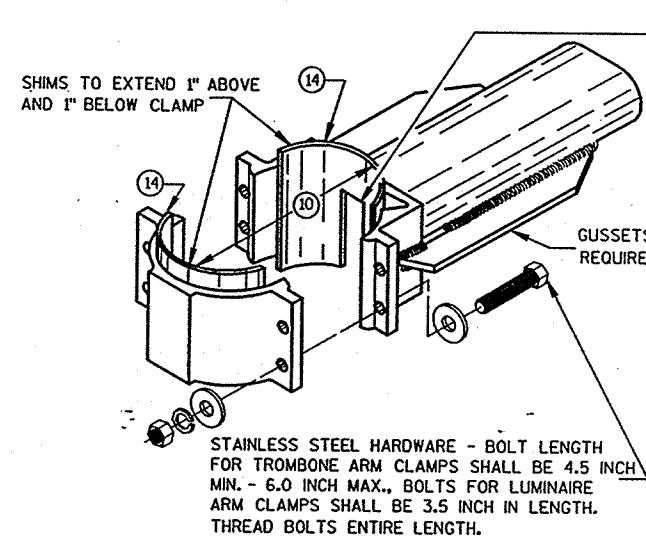


TYPICAL APPLICATION OF
GROMMET IN POLE SHAFT

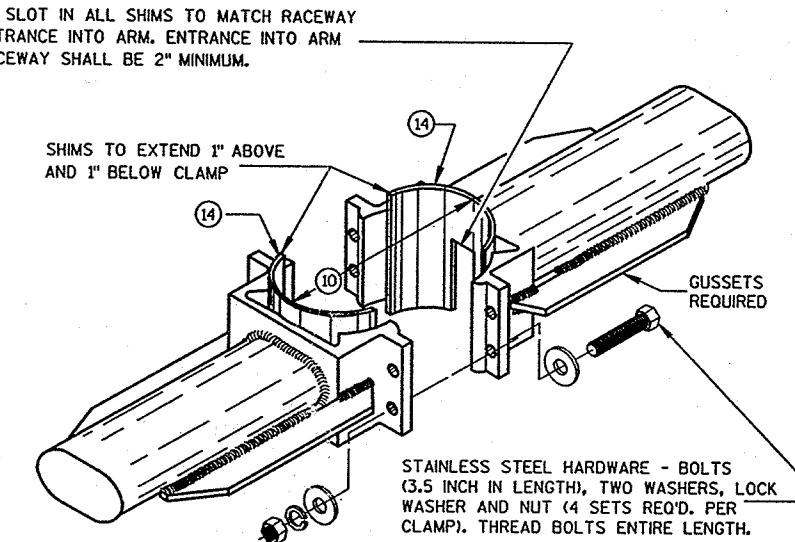
TYPICAL APPLICATION OF
CHASE NIPPLE IN POLE SHAFT



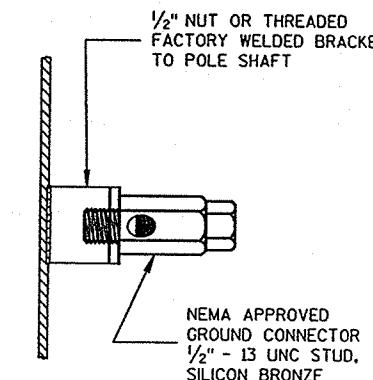
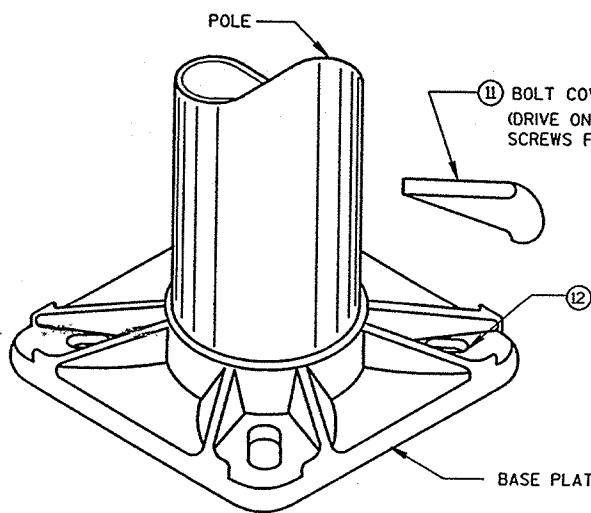
SECTION A-A
CIRCULAR CLAMP SHIM
(2 TO A SET)



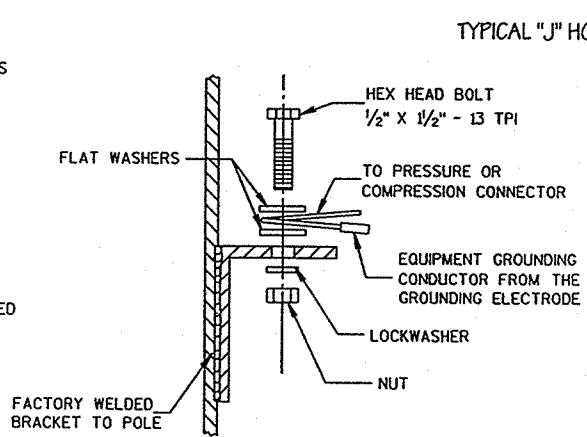
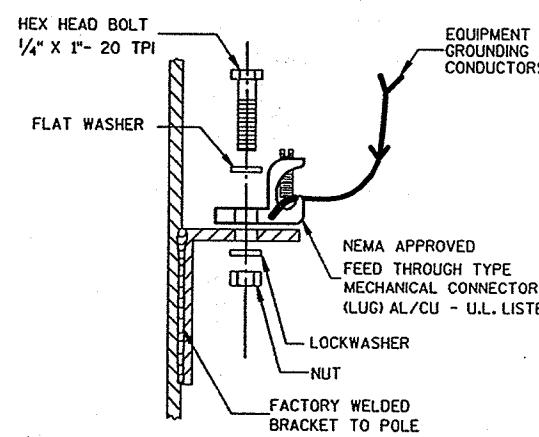
TYPICAL TROMBONE MAST ARM AND SINGLE
LUMINAIRE MAST ARM MOUNTING CLAMP



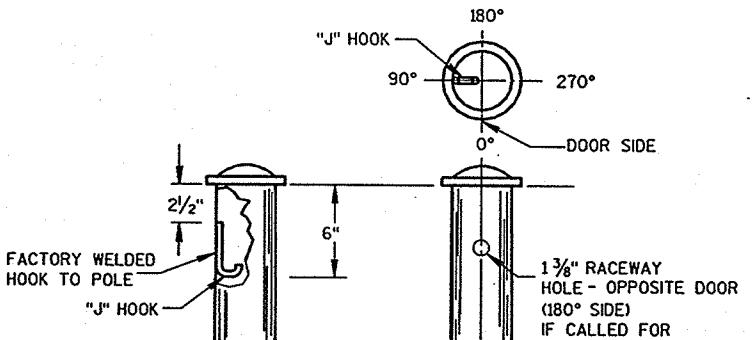
TYPICAL LUMINAIRE MAST ARM
(DOUBLE) MOUNTING BRACKETS



TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL
BE STAINLESS STEEL



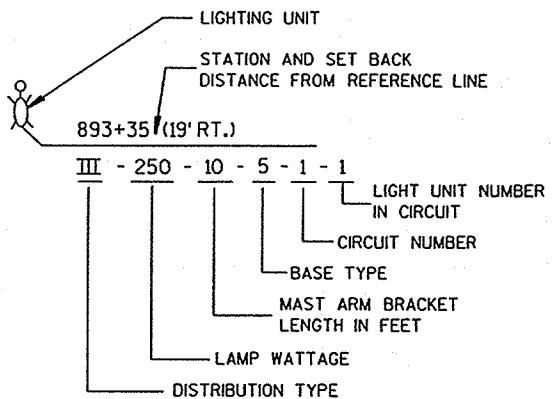
TYPICAL "J" HOOK LOCATION



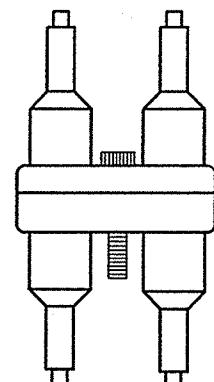
GENERAL NOTES

CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

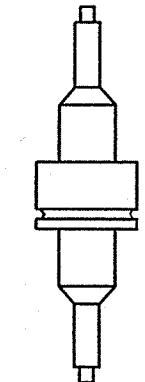
- ⑩ 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP.
6.625" I.D. FOR TROMBONE MAST ARM CLAMP.
- ⑪ INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)
- ⑫ BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.
- ⑬ OUTSIDE SHIM DIAMETER - (4.5" O.D. FOR LUMINAIRE MAST ARM)
(6.625" O.D. FOR TROMBONE MAST ARM)
- ⑭ VARIABLE SHIM THICKNESS - (0.10", 0.25", 0.35", 0.53" OR 0.70")
SHIM THICKNESS FOR TROMBONE MAST ARMS MAY BE TYPICALLY 0.25", 0.35", 0.53" OR 0.70".
SHIM THICKNESS FOR LUMINAIRE MAST ARMS MAY BE TYPICALLY 0.10", 0.25" OR 0.35".
SHIM MATERIAL SHALL BE ALUMINUM ALLOY.
SHIM THICKNESS SHALL BE IMPRESSED INTO EACH SHIM. NUMERALS SHALL BE 1/4" HIGH AND LEGIBLE.
- THE CONTRACTOR SHALL SUBMIT TWO COPIES OF ALL SHIM SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL.
- ⑮ LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



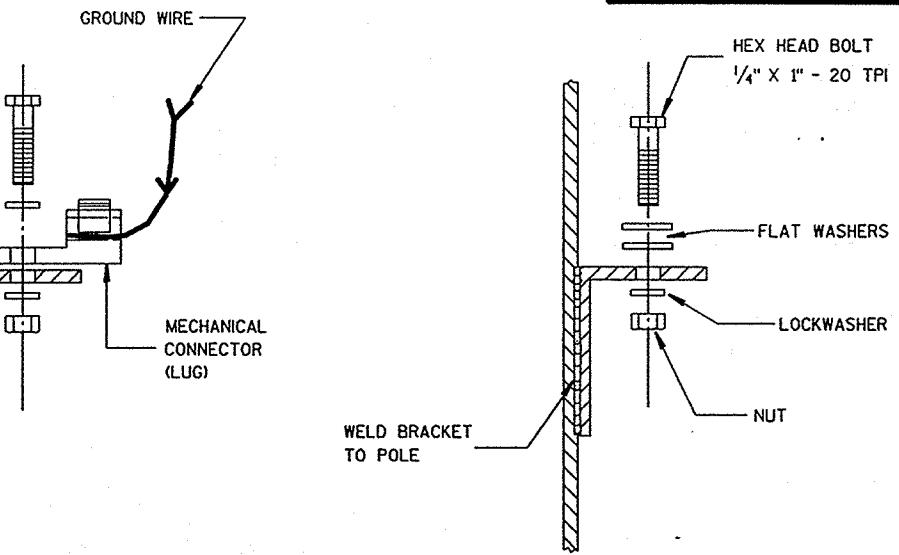
LIGHTING UNIT CODE



DETAIL "A"
DOUBLE POLE



DETAIL "B"
SINGLE POLE

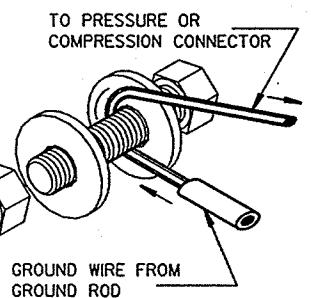
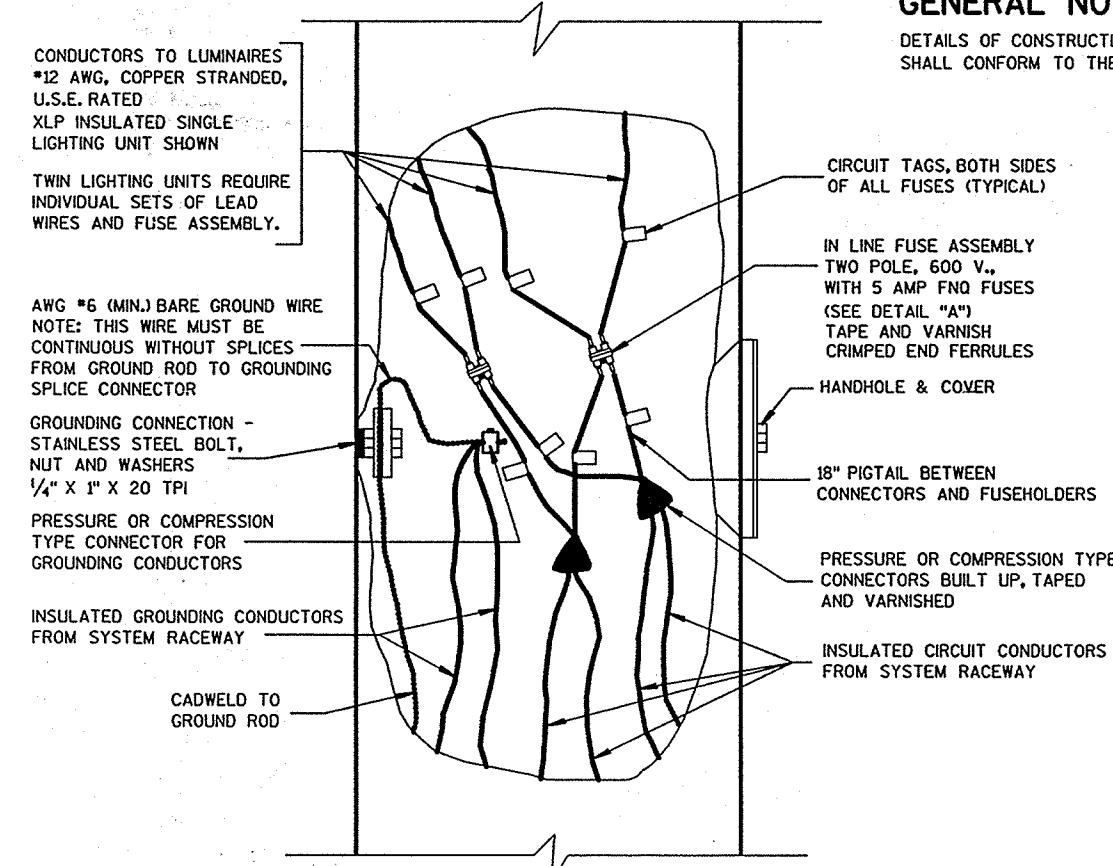
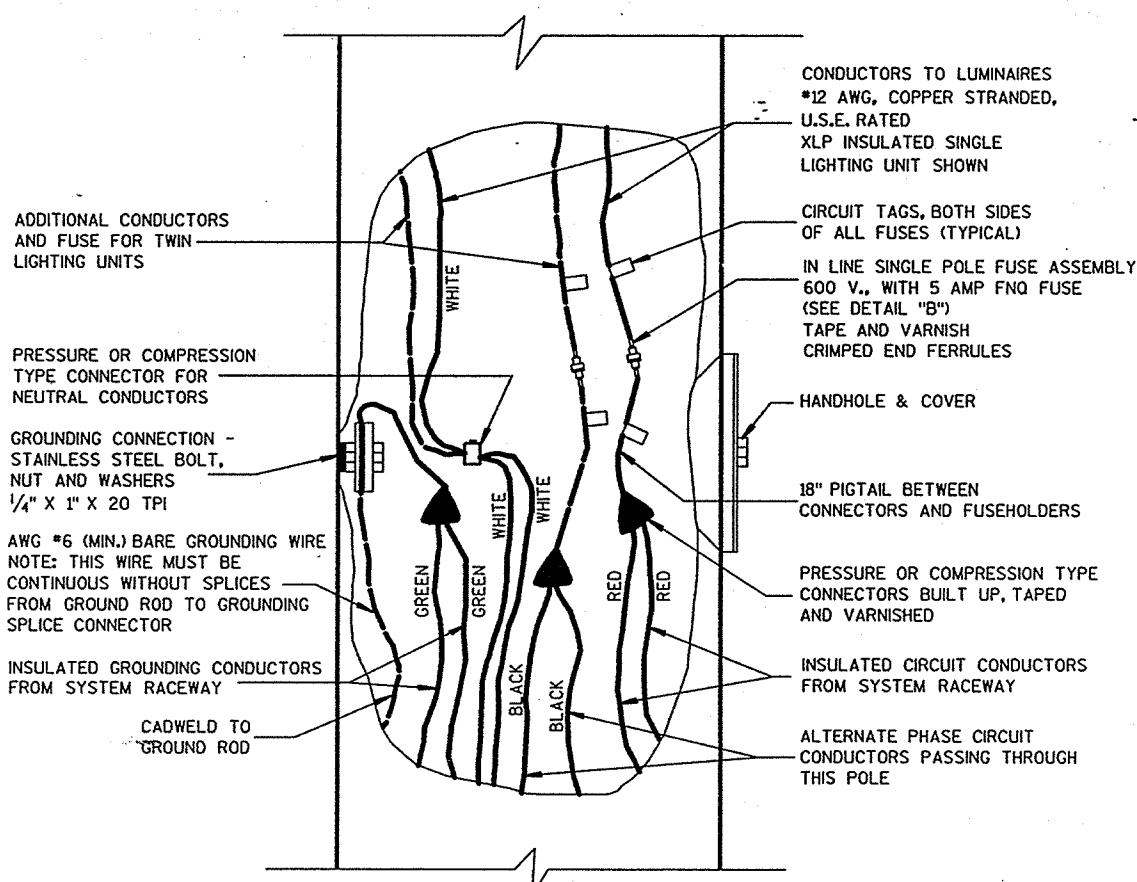


TYPICAL GROUNDING CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

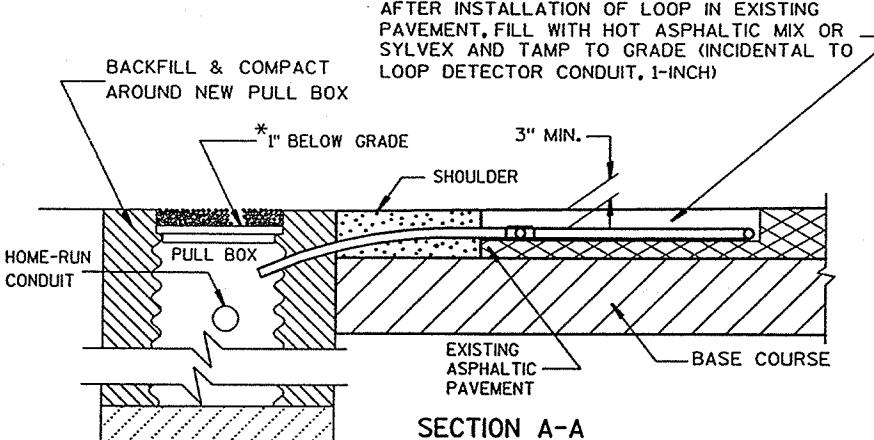
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.



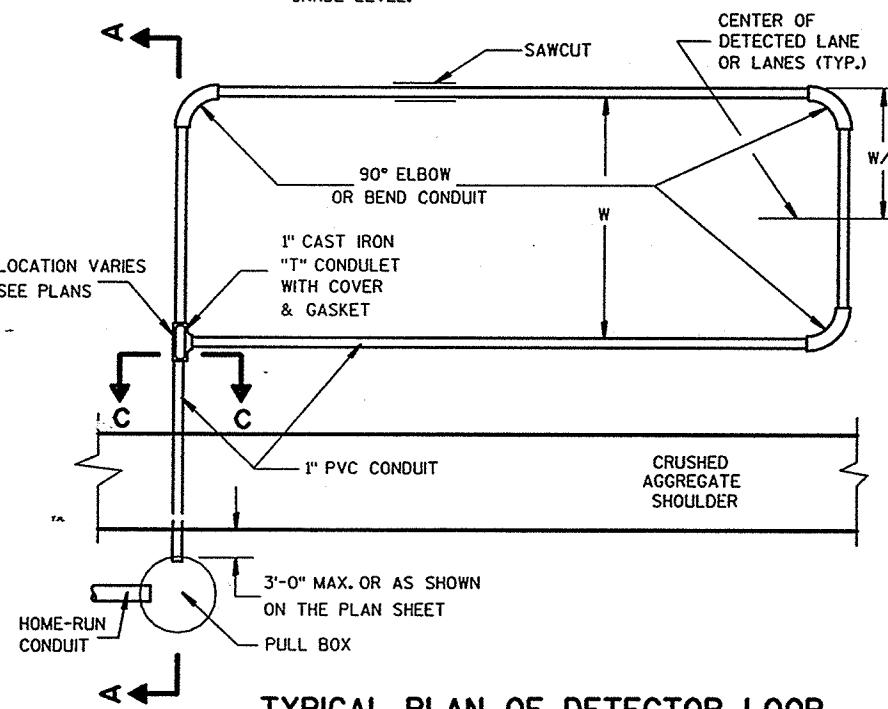
GROUND WIRE INSTALLATION BETWEEN TWO WASHERS

COUNTY PROJECT	SHEET NO
LOOP DETECTOR DETAIL	
CTH CB - CTH BB	OUTAGAMIE/WINNEBAGO

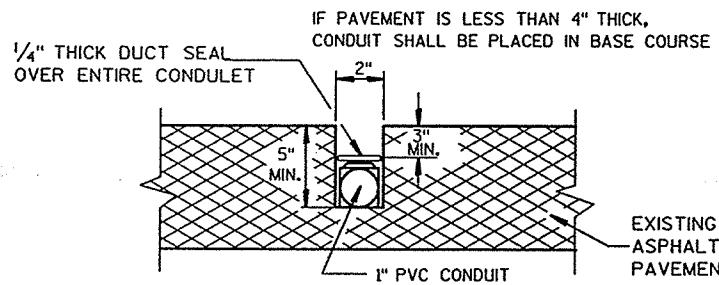


SECTION A-A NO CURB & GUTTER LOOP DETECTOR INSTALLATION DETAIL

*RECESS PULL BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.



TYPICAL PLAN OF DETECTOR LOOP



SIDE VIEW
SECTION C-C
LOOP DETECTOR SLOT DETAIL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL BOX.

SPlices shall be installed by using cast in place splice kits such as 3M type 82A1 or approved equal. Non-insulated butt splices to fit #12 AWG stranded wire shall be used. Splices shall be soldered and insulated from each other as per instructions included in the splice kit.

THE GROUND RESISTANCE READING OF THE LOOP SHALL READ "INFINITY" TO GROUND ON AN OHMMETER USING A MULTIPLIER SCALE OF 1MEGHOMH AND AN INPUT RESISTANCE OF 11MEGHOMS MINIMUM BEFORE SPLICING THE LOOP TO THE LEAD-IN CABLE.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

IN THE EVENT EPOXY IS USED AS A LOOP SLOT FILLER, THE SLOT SHALL BE TOTALLY CLEAN AND DRY BEFORE ITS INSTALLATION.

ANTI-SIEZE LUBRICATING MATERIAL SHALL BE USED ON ALL THREADS OF THREADED ASSEMBLIES BEFORE INSTALLATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

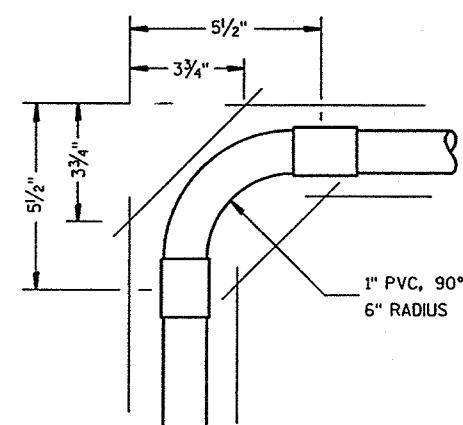
THE #12 AWG LOOP WIRE FROM THE LOOP TO THE ROADSIDE PULL BOX, SHALL BE HAND TWISTED AT LEAST 3 TURNS PER FOOT BEFORE INSTALLATION.

SPlices of loop wire to lead-in cable shall be made only in pull boxes at the side of the road.

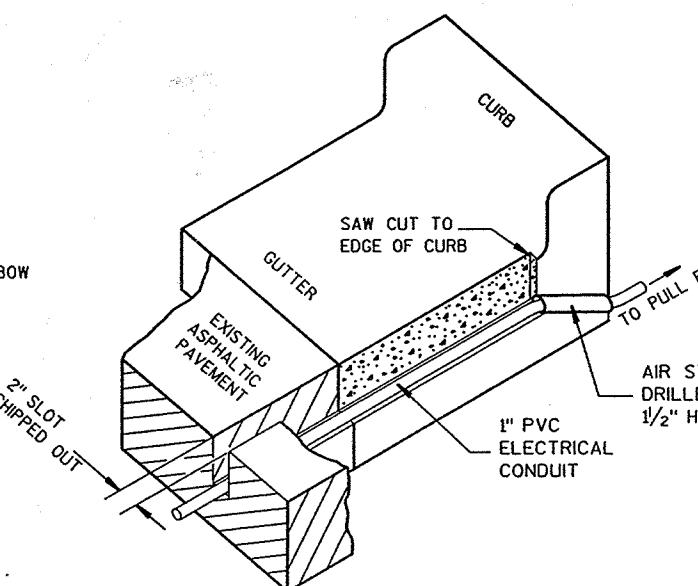
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL BOX, AND BE INSTALLED IN ONE, NON-SPliced, CONTINUOUS LENGTH.

IN THE EVENT THAT THE EXISTING PAVEMENT IS MORE THAN 5 INCHES THICK, AND THEREFORE, THE 1INCH CONDUIT DOES NOT REQUIRE INSTALLATION BELOW THE PAVEMENT INTO THE BASE COURSE, PLACE SOME OF THE TAR OR EPOXY SEALANT IN THE SLOT TO A DEPTH OF APPROXIMATELY $\frac{1}{2}$ INCH BEFORE INSTALLATION OF THE CONDUIT. IF THE CONDUIT MUST BE PLACED IN THE BASE COURSE, DO NOT PLACE THE TAR OR EPOXY SEALANT IN THE SLOT.

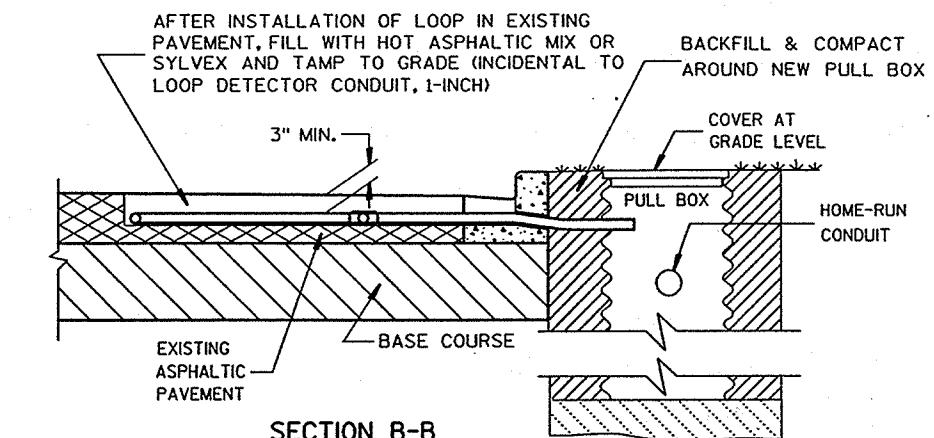
ONCE THE 2" LOOP SLOT HAS BEEN CHIPPED OUT, THE LOOP INSTALLATION SHALL BE COMPLETED PRIOR TO OPENING THE LANE(S) TO TRAFFIC.



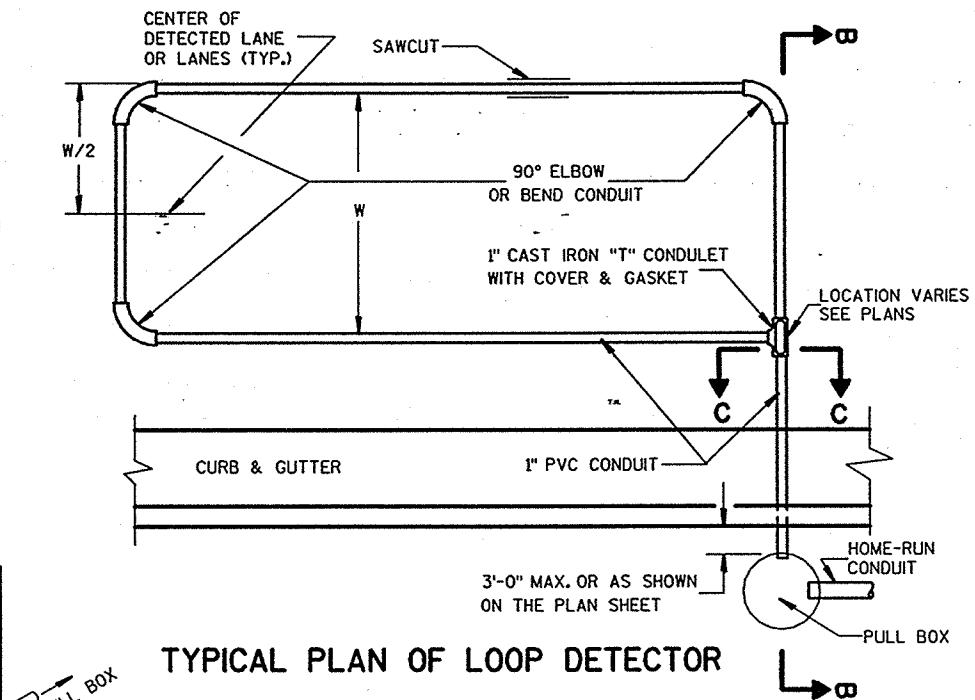
CORNER SAW SLOT DETAIL



ISOMETRIC VIEW
TYPICAL SAW CUT DETAIL FOR LEAD-IN CONDUIT



SECTION B-B CURB & GUTTER LOOP DETECTOR INSTALLATION DETAIL



TYPICAL PLAN OF LOOP DETECTOR

MATCH LINE STA 22+00

INTERSECTION DETAIL

CTH CB - CTH 8B OUTAGAMIE/WINNEBAGO

TRAFFIC SIGNAL LEGEND

NON-METALLIC CONDUIT, 3-INCHES UNLESS
OTHERWISE NOTED.

SIGNAL HEAD, PEDESTAL MOUNT, TYPE 1 BASE.

SIGNAL HEAD, MAST-ARM MOUNT, TYPE 2 BASE.

The diagram shows a signal head mounted on a mast-arm. The signal head is a circular device with a starburst pattern. It is connected to a vertical mast-arm by a horizontal mounting bracket. Below the mast-arm is a circular base labeled 'TYPE 2 BASE'.

PULL BOX 24-INCH X 36-INCH

PULL BOX 18-INCH X 24-INCH

LOOP DETECTOR (SIZE AS NOTED)

CONTROL CABINET

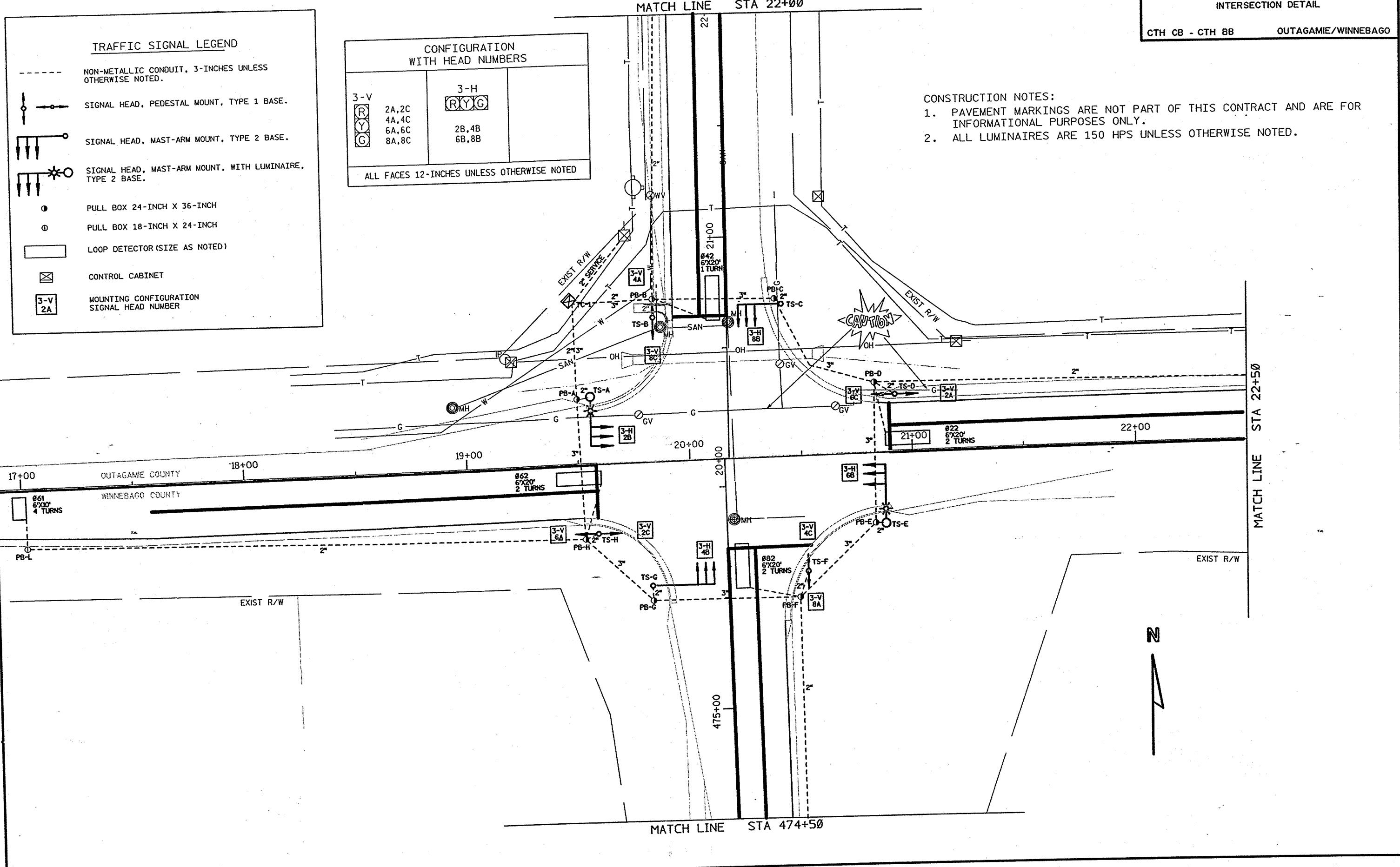
**MOUNTING CONFIGURATION
SIGNAL HEAD NUMBER**

CONFIGURATION WITH HEAD NUMBERS		
3-V 	3-H  2A,2C 4A,4C 6A,6C 8A,8C	2B,4B 6B,8B

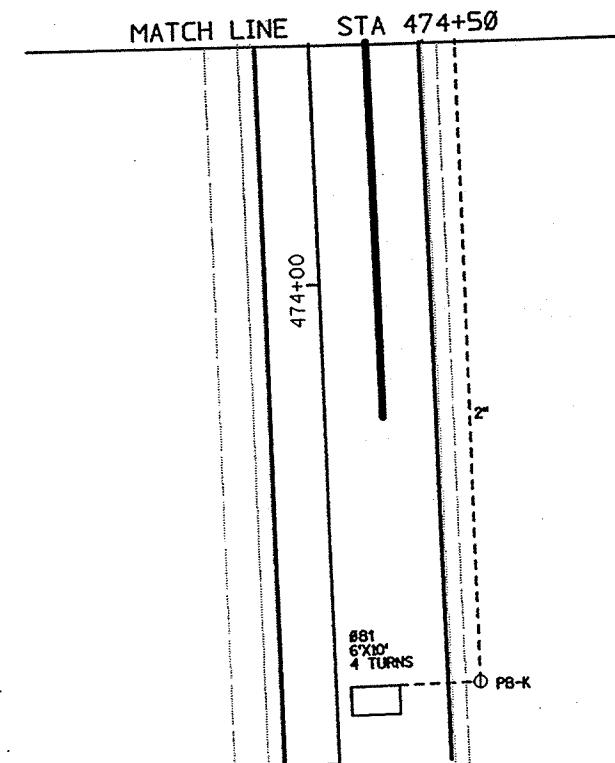
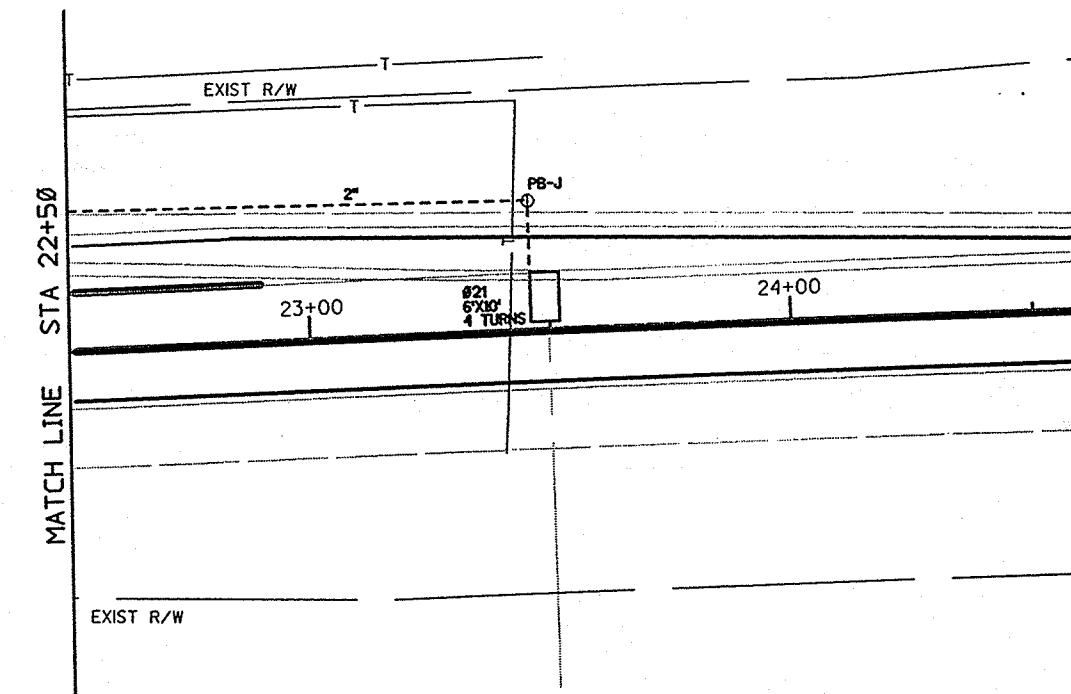
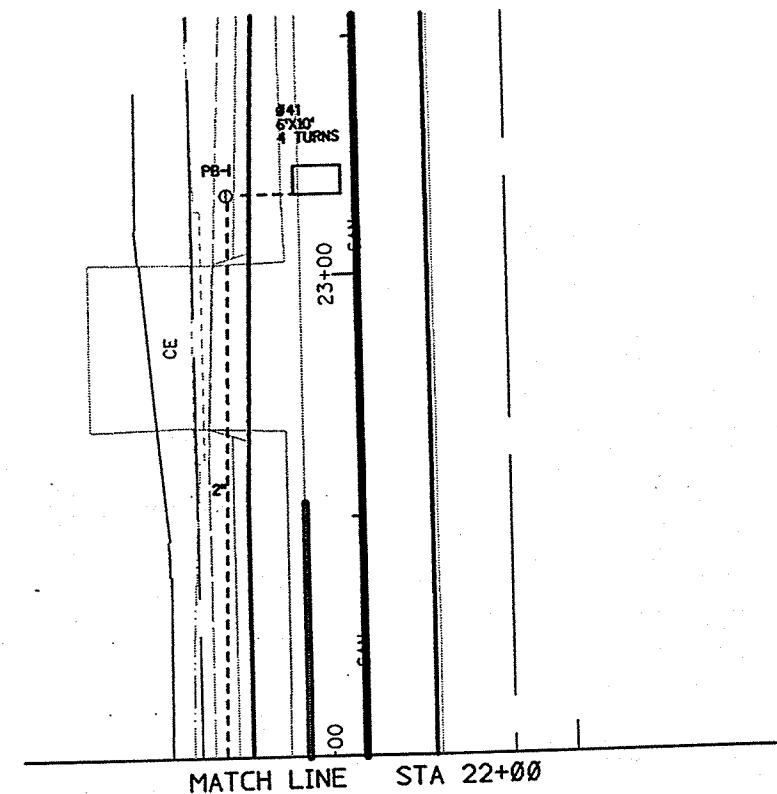
CONSTRUCTION NOTES:

- CONSTRUCTION NOTES:

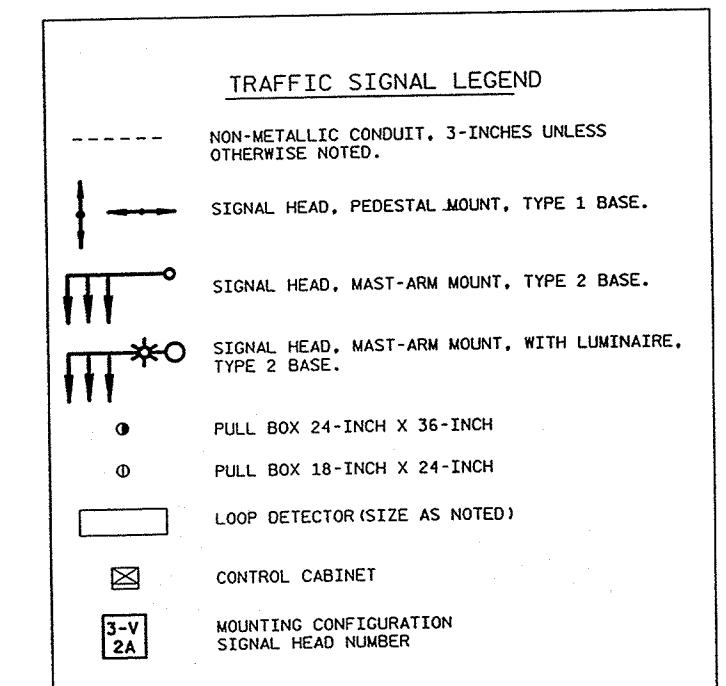
 1. PAVEMENT MARKINGS ARE NOT PART OF THIS CONTRACT AND ARE FOR INFORMATIONAL PURPOSES ONLY.
 2. ALL LUMINAIRES ARE 150 HPS UNLESS OTHERWISE NOTED.



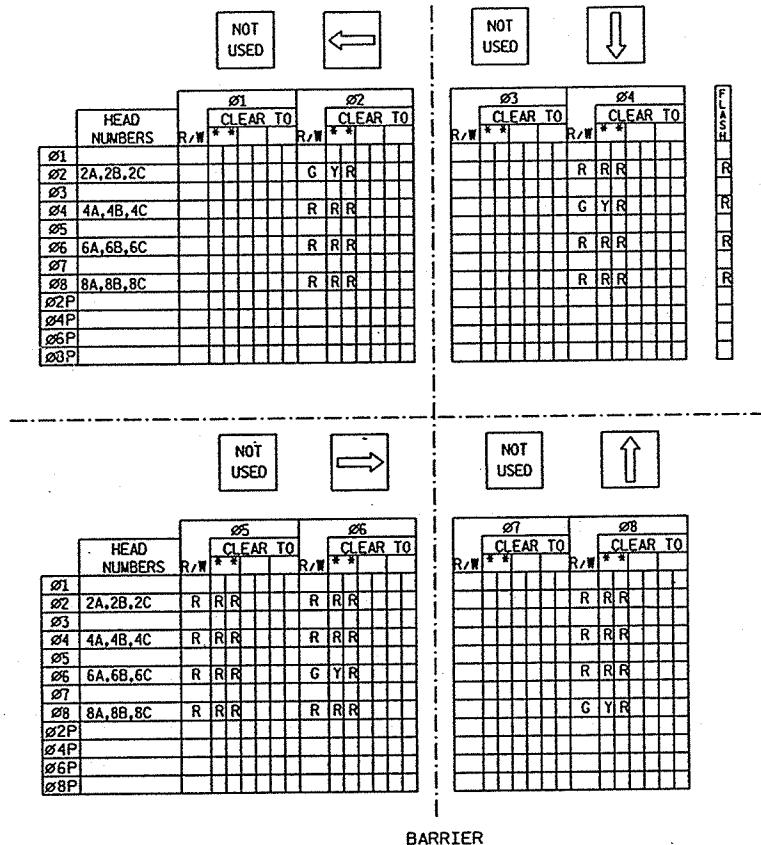
COUNTY PROJECT	SHEET NO
INTERSECTION DETAIL	
CTH CB - CTH BB	OUTAGAMIE/WINNEBAGO



N



SEQUENCE OF OPERATION



** CLEARANCE TO A PHASE IN CONFLICT WITH PHASE ON (SEE CHART 1 BELOW).

CHART 1

PHASE ON	NON-CONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
Ø 1		
Ø 2	6	4 AND 8
Ø 3		
Ø 4	8	2 AND 6
Ø 5		
Ø 6	2	4 AND 8
Ø 7		
Ø 8	4	2 AND 6

DETECTOR LOGIC

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W/10	PHASE RECALL
1			
2	X	6	MIN.
3			
4	X	8	
5			
6	X	2	MIN.
7			
8	X	4	

OVERLAPS

O.L.	"A"	= N/A
O.L.	"B"	= N/A
O.L.	"C"	= N/A
O.L.	"D"	= N/A

TYPE OF INTERCONNECT	
NONE	<input checked="" type="checkbox"/>
TBC	<input type="checkbox"/>
CLOSED LOOP	<input type="checkbox"/>
HARDWIRE	<input type="checkbox"/>
TONE (FREQ.)	<input type="checkbox"/>

TYPE OF PRE-EMPT	
NONE	<input checked="" type="checkbox"/>
RAILROAD	<input type="checkbox"/>
EMERGENCY VEHICLE	<input type="checkbox"/>
	<input type="checkbox"/>

TYPE OF LIGHTING	
NONE	
IN TRAFFIC CONTROL CABINET	➡
IN SEPERATE CONTROL CABINET	

GENERAL NOTES:

1. ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
 2. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL.
(SEE CHART 1 AT LEFT.)

COUNTY PROJECT	SHEET NO
WIRING DIAGRAM	
CTH CB - CTH BB	OUTAGAMIE/WINNEBAGO

COUNTY PROJECT	SHEET NO
MISCELLANEOUS QUANTITIES	
CTH CB - CTH BB	OUTAGAMIE/WINNEBAGO

PULL BOXES, STEEL, 24X36-INCH

NO.	STATION	LOCATION	EACH
PB-A	19+50.5	29.8' LT	1
PB-B	20+73.0	32.9' LT	1
PB-C	20+71.8	21.4' RT	1
PB-D	20+83.6	31.7' LT	1
PB-E	20+82.4	31.6' RT	1
PB-F	475+48.9	31.5' RT	1
PB-G	475+50.2	34.1' LT	1
PB-H	19+52.2	33.5' RT	1
			8

PULL BOXES, STEEL, 18X24-INCH

NO.	STATION	LOCATION	EACH
PB-I	23+17	27' LT	1
PB-J	23+46	28' LT	1
PB-K	473+16	30' RT	1
PB-L	17+02	26.5' RT	1
			4

CONCRETE BASES

CONTROL CABINET

NO.	STATION	LOCATION	TYPE 1	TYPE 2	BASE, TYPE 6
TC-1	20+71.8	68.8' LT			1
TS-A	19+56.5	30.7' LT		1	
TS-B	20+53.9	31.8' LT	1		
TS-C	20+69.9	26.6' RT		1	
TS-D	20+92.8	26.0' LT	1		
TS-E	20+87.0	31.9' RT		1	
TS-F	475+60.4	35.5' RT	1		
TS-G	475+46.9	34.2' LT		1	
TS-H	19+58.0	31.2' RT	1		
			4	4	1

TRAFFIC SIGNAL WIRE, NO. 10 XLP

FROM	TO	NEUTRAL (WHITE) LF	EQUIPMENT GROUND (GREEN) LF
TC-1	TS-B	73	73
TS-B	PB-B	25	
TS-B	TS-C	97	97
TS-C	PB-C	12	
TS-C	TS-D	99	99
TS-D	PB-D	18	
TS-D	TS-E	99	99
TS-E	PB-E	12	
TS-E	TS-F	84	84
TS-F	PB-F	18	
TS-F	TS-G	104	104
TS-G	PB-G	14	
TS-G	TS-H	73	73
TS-H	PB-H	12	
TS-H	TS-A	94	94
TS-A	PB-A	12	
TS-A	TC-1	67	67
		790	913

TRAFFIC SIGNAL FACES

HEAD NO.	VERTICAL 3 12-INCH EACH	HORIZONTAL 3 12-INCH EACH	BACK PLATES 12-INCH EACH
2A	1		1
2B		1	1
2C	1		1
4A	1		1
4B		1	1
4C	1		1
6A	1		1
6B		1	1
6C	1		1
8A	1		1
8B		1	1
8C	1		1
	8	4	12

NON-METALLIC CONDUIT, SCHEDULE 40

LOCATION FROM	TO	3-INCH SPECIAL LF	2-INCH SPECIAL LF	3-INCH LF	2-INCH LF
TC-1	SERVICE				40
TC-1	PB-A			43	43
TC-1	PB-B			36	36
PB-B	PB-C	48		6	
PB-C	PB-D			64	
PB-D	PB-E	56		8	
PB-E	PB-F			48	
PB-F	PB-G	58		8	
PB-G	PB-H			41	
PB-H	PB-A	56		7	
PB-D	PB-J			262	
PB-F	PB-K			233	
PB-H	PB-L			251	
PB-B	PB-I		50	194	
PB-A	TS-A			6	
PB-B	TS-B		10	8	
PB-C	TS-C			5	
PB-D	TS-D			11	
PB-E	TS-E			5	
PB-F	TS-F			11	
PB-G	TS-G			7	
PB-H	TS-H			6	
		218	60	261	1118

LOOP DETECTORS

NO.	STATION	LOCATION	*	SIZE FT	SLOTS LF	CONDUIT LF	WIRE LF	LEAD-IN CABLE LF
021	23+46	7' LT	6' X 10'	4	42	55	180	424
022	20+88	6' LT	6' X 20'	2	68	76	158	162
041	23+17	7' RT	6' X 10'	4	45	56	182	288
042	20+51	6' RT	6' X 20'	1	70	75	104	44
061	17+02	8' LT	6' X 10'	4	41	47	164	365
062	19+60	6' LT	6' X 20'	2	68	77	160	114
081	473+16	8' RT	6' X 10'	4	43	48	166	454
082	475+74	6' RT	6' X 20'	2	69	74	154	221
				446	508	1268	2072	

* LOCATION IS FRONT CENTER OF LOOP

COUNTY PROJECT	SHEET NO
MISCELLANEOUS QUANTITIES	
CTH CB - CTH BB	OUTAGAMIE/WINNEBAGO

TRAFFIC SIGNALS

BASE NO.	PEDESTAL BASES EACH	TRANSFORMER BASES, 11½-INCH EACH	TRAFFIC SIGNAL, 13' STANDARD ALUMINUM EACH	POLES, TYPE 2 EACH	TYPE 3 EACH	TROMBONE ARMS 20-FEET EACH	LUMINAIRE ARMS, SINGLE MEMBER 4 1/2-INCH CLAMP 6-FOOT EACH	LUMINAIRES, UTILITY 150 WATTS EACH
TS-A		1		1	1	1	1	1
TS-B	1		1			1		
TS-C		1		1				
TS-D	1		1			1		
TS-E		1			1	1		1
TS-F	1		1			1		
TS-G		1		1				
TS-H	1		1					
	4	4	4	2	2	4	2	2

ELECTRICAL WIRE, LIGHTING

FROM	TO	TYPE UF CABLE, 2 CONDUCTOR, NO. 12 W/GROUND LF	ELECTRICAL WIRE, LIGHTING, NO. 12 LF
TC-1	TS-A	86	
TC-1	TS-E	210	
—	TS-A		90
	TS-E		90
		296	180

TRAFFIC SIGNAL CABLE, NO. 14

LOCATION	FROM	TO	15-COND. LF	12-COND. LF	9-COND. LF	5-COND. LF
TC-1	TS-B		73			
TS-B	TS-C			99		
TS-C	TS-D				102	
TC-1	TS-A		68			
TS-A	TS-H		97			
TS-H	TS-G			76		
TS-G	TS-F				106	
TS-F	TS-E					80
TS-A	TS-A					40
TS-B	TS-B					13
TS-C	TS-C					40
TS-D	TS-D					13
TS-E	TS-E					40
TS-F	TS-F					13
TS-G	TS-G					40
TS-H	TS-H					13
			238	175	208	292