

**CITY OF LEESBURG  
DEPARTMENT OF PUBLIC WORKS**

**CONTRACT PLANS**

**LEESBURG  
MAIN STREET AT CANAL STREET**

**SIGNALIZATION PLANS**

A DETAILED INDEX APPEARS ON THE  
KEY SHEET OF EACH COMPONENT

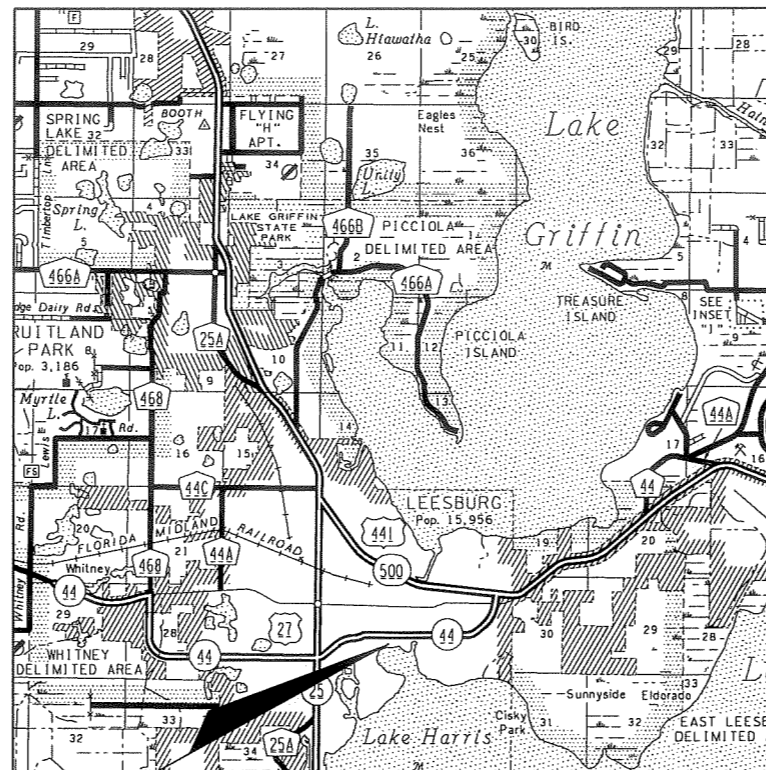
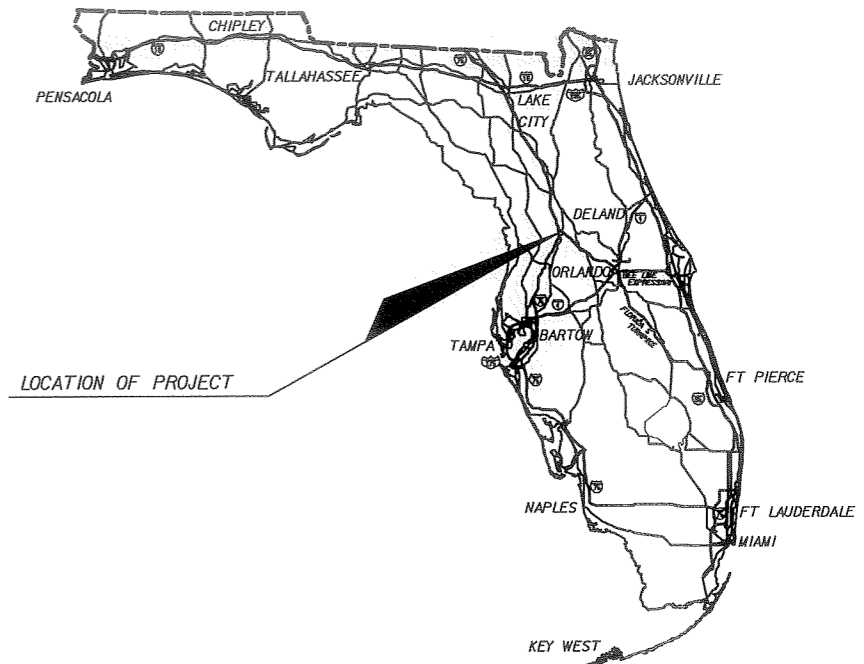
**INDEX OF SIGNALIZATION PLANS**

SHEET NO.	SHEET DESCRIPTION
T-1	KEY SHEET
T-2	TABULATION OF QUANTITIES
T-3	GENERAL NOTES
T-4	SIGNALIZATION PLAN SHEETS
T-5	MAST ARM TABULATION
T-6	MAST ARM DETAILS
T-7	TABLE OF VARIABLES FOR MAST ARM DRILLED SHAFT UNION METAL MAST ARM STRUCTURES

GOVERNING STANDARDS AND SPECIFICATIONS:  
FLORIDA DEPARTMENT OF TRANSPORTATION,  
DESIGN STANDARDS DATED 2004, AND  
STANDARD SPECIFICATIONS FOR ROAD  
AND BRIDGE CONSTRUCTION DATED 2004,  
AS AMENDED BY CONTRACT DOCUMENTS.

APPLICABLE DESIGN STANDARDS MODIFICATIONS: 1-1-06

For Design Standards Modifications click on  
"Design Standards" at the following web site:  
<http://www.dot.state.fl.us/rddeslgn/>



LOCATION OF PROJECT

SIGNALIZATION SHOP DRAWINGS  
TO BE SUBMITTED TO:

MICHAEL L. CORNEJO, P.E.  
METRIC ENGINEERING INC.  
2269 LEE ROAD - SUITE 200  
WINTER PARK, FLORIDA 32789

PLANS PREPARED BY:



- ENGINEERS
- PLANNERS
- SURVEYORS

MICHAEL L. CORNEJO, PE# 47734  
METRIC ENGINEERING, INC.  
2269 LEE ROAD - SUITE 200  
WINTER PARK, FLORIDA 32789  
TEL. (407) 644-1898  
FAX. (407) 644-2376  
FLORIDA CERT. NO. EB-0002294

NOTE: THE SCALE OF THESE PLANS MAY  
HAVE CHANGED DUE TO REPRODUCTION.

KEY SHEET REVISIONS		
DATE	BY	DESCRIPTION

*Michael L. Cornejo*  
SIGNALIZATION PLANS  
ENGINEER OF RECORD: MICHAEL L. CORNEJO, P.E.

P.E. NO. 47734 *5/11/06*

FISCAL YEAR	SHEET NO.
06	T-1

PROJECT MANAGER: LORA HOLLINGSWORTH, P.E.

# TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS																				TOTAL THIS SHEET		GRAND TOTAL		REF. SHEET
			T-4																								
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL					
102-99*	VARIABLE MESSAGE SIGN (TEMPORARY)	DA	28																				28		28		
LAKE	MOT	PI	1																				1		1		
110-4*	CONCRETE PAVEMENT, REMOVAL OF EXISTING	SY	40																				40		40		
522-1	CONCRETE SIDEWALK, 4"	SY	40																				40		40		
620-1-1	GROUNDING ELECTRODES	LF	180																				180		180		
630-1-12	CONDUIT (F&I) (UNDERGROUND)	LF	396																				396		396		
630-1-13	CONDUIT (F&I) (UNDER PAVEMENT)	LF	147																				147		147		
630-1-14	CONDUIT (F&I) (JACKED)	LF	92																				92		92		
632-7-1	CABLE (SIGNAL)	PI	1																				1		1		
635-1-11	PULL AND JUNCTION BOXES (PULL BOX)	EA	14																				14		14		
635-1-14	PULL AND JUNCTION BOXES (F.O. PULL BOX)	EA	1																				1		1		
639-1-22	ELECTRICAL POWER SERVICE (UNDERGROUND)	AS	1																				1		1		
639-2-1	ELECTRICAL SERVICE WIRE	LF	66																				66		66		
648-1B	48" CONCRETE FOUNDATION FOR MAST ARMS	LF	36																				36		36		
649-740*	MAST ARM ASSEMBLY (F&I) (SPECIAL)	EA	2																				2		2		
650-1-131	TRAFFIC SIGNAL (F&I) (3 SEC - 1 WAY) (STD)	AS	8																				8		8		
653-181	PED SIGNAL (F&I) (1-WAY) (INT'L) (LED)	AS	2																				2		2		
653-182	PED SIGNAL (F&I) (2-WAY) (INT'L) (LED)	AS	3																				3		3		
659-108	SIGNAL HEAD AUXILIARIES (STEEL PEDESTAL)	EA	3																				3		3		
659-109	SIGNAL HEAD AUXILIARIES (CONCRETE PEDESTAL)	EA	1																				1		1		
660-1-109	LOOP DET INDUCTIVE (F&I) (RM) (2 CH) (TYPE 9)	EA	2																				2		2		
660-1-110	LOOP DET INDUCTIVE (F&I) (RM) (2 CH) (TYPE 10)	EA	1																				1		1		
660-2-106	LOOP ASSEMBLY (F&I) (TYPE F)	AS	6																				6		6		
665-11	PED DETECTOR (F&I) (POLE MOUNTED DETECTOR STA)	EA	8																				8		8		
670-5-111	TRAFFIC CONTROLLER ASSEMBLY (F & I NEMA)	AS	1																				1		1		
699-1-1	SIGN, INTERNALLY ILLUMINATED STREET NAME SIGN	EA	4																				4		4		
700-46-11*	REMOVE EXISTING SINGLE POST SIGN	AS	4																				4		4		
999-1*	GENERATOR SWITCH BOX	EA	1																				1		1		
999-2*	GENERATOR PAD 3' X 3' X 4'	EA	1																				1		1		
253	TRAFFIC STRIPE SOLID (THERMOPLASTIC) (WHITE)	LF	66																				66		66		

\* DENOTES ITEM NOT SPECIFICALLY COVERED BY CONTRACT.

*Michael J. Canino 5/11/06*

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION



MICHAEL L. CORNEJO, P.E. # 47734  
 METRIC ENGINEERING, INC.  
 2269 LEE ROAD  
 WINTER PARK, FLORIDA 32789  
 TEL. (407) 644-1898  
 FAX. (407) 644-2376  
 FLORIDA CERT. NO. EB-0002294

**CITY OF LEEBURG**  
**DEPARTMENT OF PUBLIC WORKS**

ROAD	COUNTY
MAIN ST.	LAKE

**TABLULATION OF QUANTITIES**  
**MAIN ST. @ CANAL ST.**

SHEET NO.  
T-2

GENERAL

1. A PRECONSTRUCTION MEETING SHALL BE SCHEDULED WITH THE CITY OF LEESBURG AT (352) 728-9876 AND LAKE COUNTY TRAFFIC OPERATIONS AT (352) 742-1766, 14 DAYS PRIOR TO BEGINNING CONSTRUCTION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE CITY OF LEESBURG AT (352) 728-9876 AND LAKE COUNTY TRAFFIC OPERATIONS AT (352) 742-1766, 48 HOURS IN ADVANCE OF ALL PHASES OF CONSTRUCTION INCLUDING, INSTALLING SIGNAL POLES, GROUND RODS, UNDERGROUND CONDUIT, SIGNAL HEAD ASSEMBLIES, AND LOOP INSTALLATION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING THE ELECTRICAL PERMIT, AND WILL COORDINATE THE APPLICATION FOR POWER WITH THE CITY OF LEESBURG.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE POWER COMPANY PROVIDING THE ELECTRICAL POWER, TO DETERMINE IF ANY ADDITIONAL FEES ARE REQUIRED TO CONNECT POWER AND FOR CONNECTION OF POWER. IF REQUIRED, THE FEE SHALL BE INCLUDED AS PART OF BID ITEM PAYMENT FOR ELECTRICAL SERVICE ASSEMBLY.
5. TRAFFIC CONTROL SHALL BE PERFORMED IN ACCORDANCE WITH FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS INDEX 600 SERIES AS APPLICABLE. EXISTING SPEED LIMITS SHALL BE MAINTAINED DURING CONSTRUCTION.
6. THE CONTRACTOR SHALL STAKE ALL MAST ARM LOCATIONS AND HAVE THEM APPROVED BY LAKE COUNTY TRAFFIC OPERATIONS.
7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EXACT LOCATIONS OF ALL UTILITIES PRIOR TO BEGINNING WORK. THE CONTRACTOR SHALL HAND DIG THE FIRST 4' AT EACH LOCATION TO VERIFY THERE ARE NO UTILITY CONFLICTS.
8. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY DEPARTMENT AT LEAST 48 HOURS IN ADVANCE OF POLE SETTING OPERATIONS WHERE A CONFLICT WITH OVERHEAD ELECTRICAL CONDUCTORS IS EXPECTED.
9. ALL MATERIALS AND HARDWARE SHALL BE F.D.O.T. APPROVED, AND PRE-APPROVED BY LAKE COUNTY TRAFFIC OPERATIONS.
10. THE CONTRACTOR SHALL FURNISH THE CITY OF LEESBURG WITH EMERGENCY CONTACTS AND PHONE NUMBERS AND HAVE AN IMSA LEVEL II CERTIFIED SIGNAL TECHNICIAN ON CALL WITHIN A TWO HOUR MINIMUM RESPONSE TIME.
11. ANY STRIPING/PAVEMENT MARKINGS OR LANDSCAPING DESTROYED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE RESTORED AT THE CONTRACTOR'S EXPENSE.
12. NO OFF-DUTY LAW ENFORCEMENT OFFICER SHOULD BE NECESSARY, HOWEVER THE CITY OF LEESBURG CAN PROVIDE ONE IF NEEDED.
13. THE CONTRACTOR SHALL FURNISH THE CITY OF LEESBURG, THREE COMPLETE SETS OF AS-BUILT PLANS AT FINAL INSPECTION.
14. VARIABLE MESSAGE SIGNS ARE TO BE IN PLACE 200' BEFORE THE STOP BAR WITH THE APPROPRIATE MESSAGE "CAUTION AHEAD", "NEW TRAFFIC SIGNAL" FOR TWO WEEKS AFTER THE SIGNAL INSTALLATION.
15. SPEED LIMIT ON MAIN ST. IS 20 MPH.
16. STOP SIGN ASSEMBLIES TO BE REMOVED AT THE SAME TIME THE SIGNAL IS SWITCHED INTO FULL OPERATION.
17. THERE ARE NO TIME RESTRICTIONS ON LANE CLOSURES ON MAIN ST, BUT ONLY ONE LANE MAY BE CLOSED DURING ACTIVE WORK PERIODS. ALL LANE CLOSURES SHALL BE APPROVED BY THE CITY ENGINEER. TRAFFIC SIGNAL SHALL FLASH FOR NO LESS THAN 7 DAYS AND NO MORE THAN 14 DAYS PRIOR TO TURN ON INSPECTION.
18. THE CONTRACTOR SHALL COORDINATE THE FINAL ACCEPTANCE INSPECTION IN ACCORDANCE WITH FDOT SPECIFICATION 611-2.2 WITH THE CITY ENGINEER AT LEAST TEN DAYS IN ADVANCE. LAKE COUNTY (STEVE BOLLINGER) (352) 742-1766 SHOULD ALSO BE CONTACTED TEN DAYS BEFORE THE INSPECTION IS TO BE PERFORMED SO HE MAY BE PRESENT.
19. THE CONTRACTOR IS REQUIRED TO INSPECT THE INSTALLATION OF THE TRAFFIC SIGNALS IN ACCORDANCE WITH FDOT SPECIFICATIONS 105.5.10.

CONTROLLER

1. A GENERATOR SWITCH BOX ASSEMBLY (RELIANCE CONTROLS CSR302 WITH POWER INDICATOR/LIGHT OR EQUIVALENT) SHALL BE FURNISHED AND INSTALLED SUCH THAT A GENERATOR MAY BE HOOKED UP DIRECTLY TO THE CABINET WITHOUT ADDITIONAL HARDWARE. THE COST OF FURNISHING AND INSTALLING SHALL BE INCIDENTAL TO THE CONTROLLER CABINET PAY ITEM.
2. THE MOUNTING OF ELECTRICAL SERVICE EQUIPMENT TO THE TRAFFIC SIGNAL CABINET SHALL BE PROHIBITED.
3. THE CABINET DOOR SHALL OPEN AWAY FROM THE INTERSECTION.
4. A MANUAL PUSH BUTTON CORD SHALL BE FURNISHED IN ALL CONTROLLER CABINETS.
5. A PHOTOCCELL FOR THE INTERNALLY ILLUMINATED SIGNS SHALL BE INSTALLED NEAR THE ELECTRIC SERVICE WITHIN REACH OF A LIFT TRUCK. CARE SHALL BE GIVEN TO INSTALL WHERE STREET LIGHTING DOES NOT AFFECT OPERATION.
6. GROUNDING RESISTANCE FOR THE CONTROLLER ASSEMBLY SHALL MEASURE 25 OHMS OR LESS.

MAST ARMS

1. SIX FEET OF ADDITIONAL SIGNAL CABLE SLACK SHALL BE WOUND INSIDE THE UPRIGHT AND SUPPORTED BY THE J HOOK SUCH THAT THE TERMINAL BLOCK CAN BE REMOVED FROM THE UPRIGHT TO ALLOW FOR TROUBLE SHOOTING.
2. THE CABLE GRIP SHALL BE OF SUFFICIENT SIZE TO NOT COMPROMISE THE INSULATION ON THE SIGNAL CABLE.

SIGNAL CABLE, LOOPS, CONDUIT, & PULL BOXES

1. IT SHALL BE NOTED THAT NO TEST BORINGS WERE MADE WHERE CONDUIT RUNS ARE TO BE INSTALLED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE THE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS.
2. LOOP HOME RUNS SHALL NOT BE CUT INTO THE RADIUS.
3. A FIBER PULL BOX AND CONDUIT INTO THE CONTROLLER ASSEMBLY SHALL BE INSTALLED FOR FUTURE USE.
4. PULL BOXES SHALL BE LOCATED AWAY FROM EDGE OF PAVEMENT, OR BEHIND A CURB WHEN POSSIBLE, ATTEMPTING TO KEEP FROM THE BOTTOM OF A DITCH OR RETENTION AREA, AND WHERE LARGE VEHICLES PARK.
5. PULL BOX COVERS SHALL BE F.D.O.T. APPROVED NON-METALLIC WITH RECESSED COVER LOGO "TRAFFIC SIGNAL", "ELECTRICAL", OR "FIBER OPTICS" AS APPROPRIATE.
6. DELAY DETECTORS SHALL BE SET TO 5 SECONDS.
7. SIGNAL CABLE AND LOOP WIRES TO BE IN SEPARATE PULL BOXES.
8. LOOPS ARE NOT TO BE CUT INTO BRICK OR STAMPED CONCRETE.

SIGNAL HEADS

1. THE USE OF "JONES" PLUGS SHALL BE PROHIBITED.
2. VEHICLE SIGNAL HEADS SHALL BE BLACK, CAST ALUMINUM, WITH TUNNEL VISORS, AND LED'S FOR ALL INDICATIONS.
3. PEDESTRIAN SIGNAL ASSEMBLIES SHALL BE CAST ALUMINUM WITH FILLED HAND/PERSON LED'S.

PAY ITEM NOTES

1. PAY ITEM NUMBER 522-1 SHALL INCLUDE REMOVAL AND RESTORATION (EQUAL TO OR BETTER THAN THE PRE EXISTING CONDITION) OF CONCRETE SIDEWALK NECESSARY TO INSTALL PULL BOXES
2. PAY ITEM NUMBER 632-7-1 AS APPLICABLE INCLUDES THE ADDITIONAL SLACK CABLE STORED IN THE UPRIGHT PER THE CABLE STRAIN RELIEF DETAIL.
3. PAY ITEM NUMBER 639-1-22 TO INCLUDE ALL FEES BY THE POWER COMPANY.
4. PAY ITEM NUMBER 649-740 TO BE UNION METAL MAST ARM MODEL NO. 50310-B29 WITH MM 70 BASE OR APPROVED EQUAL.
5. PAY ITEM NUMBER 659-108 TO INCLUDE A BREAK AWAY BASE AND SLIP FOOTER.
6. PAY ITEM NUMBER 665-11 INCLUDES FTP-25-04 AND RIO-3F INTERNATIONAL SIGNS.
7. PAY ITEM NUMBER 699-1-1 SHALL INCLUDE A SINGLE MASTER PHOTOCCELL MOUNTED AND RUN ON A SEPARATE BREAKER FROM THE TRAFFIC SIGNAL. INTERNALLY ILLUMINATED SIGNS TO BE DOUBLE SIDED.

UTILITY CONTACTS

COMPANY	CONTACT	PHONE NUMBER
CITY OF LEESBURG - ELECTRIC	BOB BRUCK	352-728-9819
CITY OF LEESBURG - GAS	KIM OUGH	352-728-9840 x 8584
CITY OF LEESBURG - WATER	MIKE BOLLES	352-728-9827
COMCAST CABLE	BILL GRAHAM	352-787-9601 x 159
SPRINT	CRAIG HAGER	352-368-8763

*Michael L. Cornejo 5/11/06*

MICHAEL L. CORNEJO, PE# 47734  
 METRIC ENGINEERING, INC.  
 2269 LEE ROAD, SUITE 200  
 WINTER PARK, FLORIDA 32789  
 TEL. (407) 644-1898  
 FAX. (407) 644-2376  
 FLORIDA CERT. NO. EB-0002294

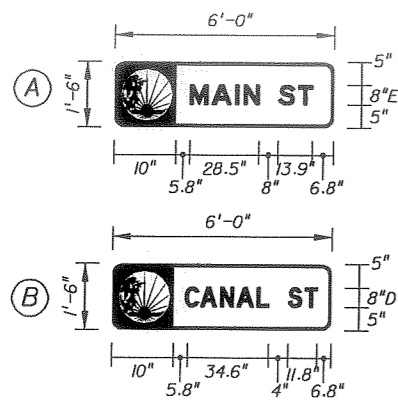
<b>CITY OF LEESBURG</b>	
<b>DEPARTMENT OF PUBLIC WORKS</b>	
ROAD	COUNTY
MAIN ST.	LAKE

**GENERAL NOTES**  
**MAIN ST. @ CANAL ST.**

SHEET  
 NO.  
 T-3

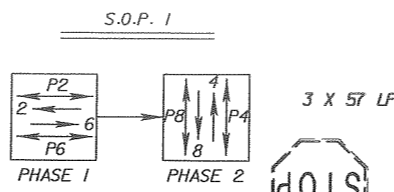
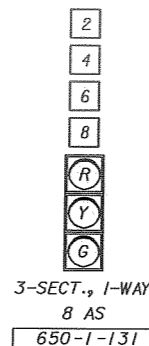
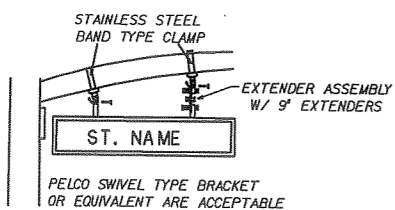
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION



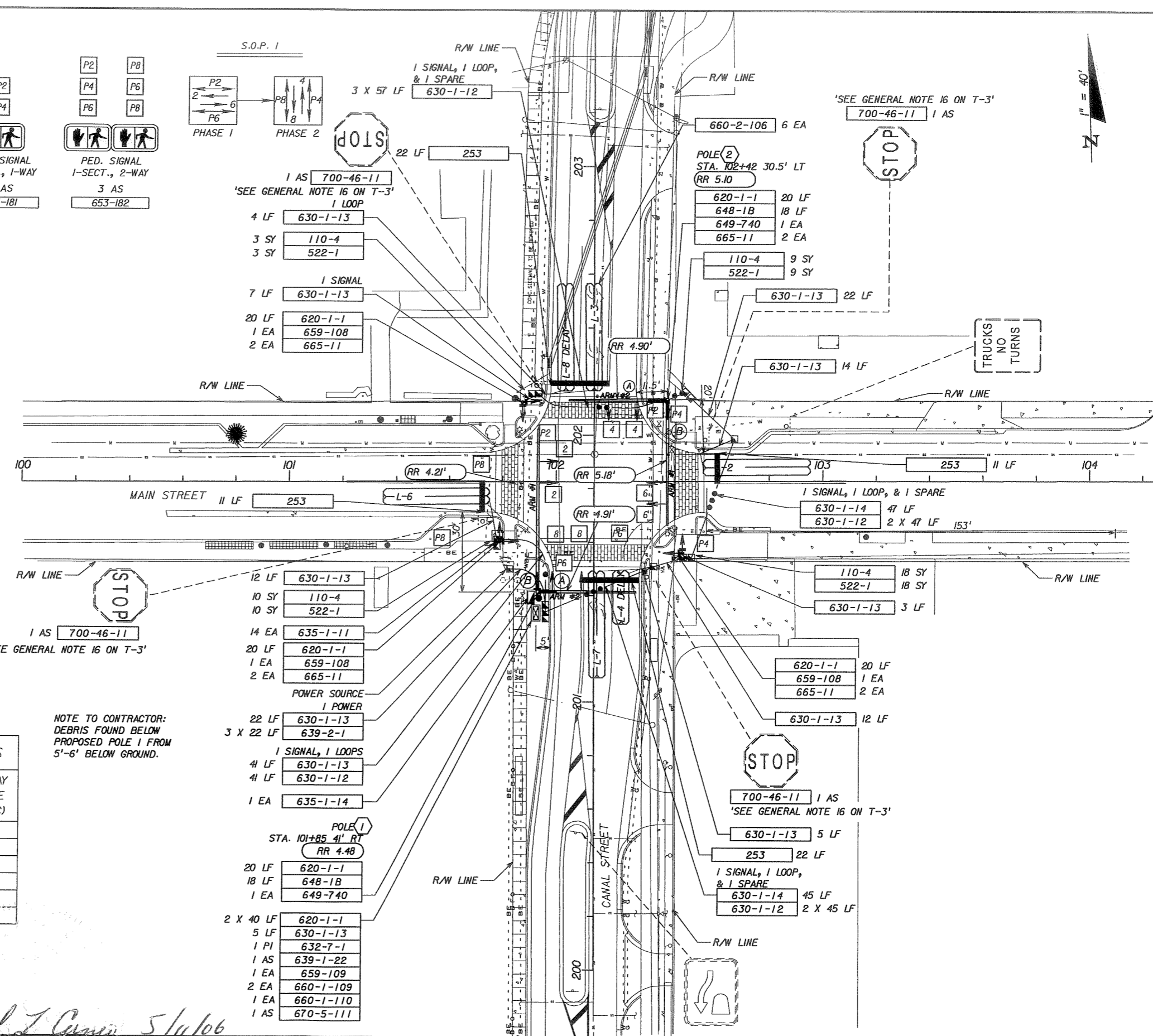


699-1-1 4 EA  
(DOUBLE SIDED)

**TWO POINT MAST ARM  
SIGN MOUNTING  
ASSEMBLY DETAIL**



- 1 AS 700-46-11  
'SEE GENERAL NOTE 16 ON T-3'  
1 LOOP
- 4 LF 630-1-13
- 3 SY 110-4
- 3 SY 522-1
- 1 SIGNAL
- 7 LF 630-1-13
- 20 LF 620-1-1
- 1 EA 659-108
- 2 EA 665-11



1 AS 700-46-11  
'SEE GENERAL NOTE 16 ON T-3'

NOTE TO CONTRACTOR:  
DEBRIS FOUND BELOW  
PROPOSED POLE 1 FROM  
5'-6' BELOW GROUND.

CONTROLLER TIMINGS				
TIMING FUNCTION	2	4	6	8
MOVEMENT NUMBER	2	4	6	8
MINIMUM GREEN	8	5	8	5
EXTENSION	3	3	3	3
MAXIMUM GREEN 1	30	20	30	20
MAXIMUM GREEN 2				
YELLOW CLEARANCE	4	4	4	4
ALL RED	1	1	1	1
PEDESTRIAN WALK	7	6	7	6
PED. CLEARANCE	10	8	10	8
RECALL	MIN	MIN		
DET. FUNCTION	L	L		
FLASH MODE	Y	R	Y	R

DETECTORS FOR LOOPS			
LOOP	NO. OF LOOPS	NO. OF NEW DETS.	DELAY TIME (SEC)
L-2	1		
L-6	1	1	
L-3	1		
L-7	1	1	
L-4	1		5
L-8	1		5

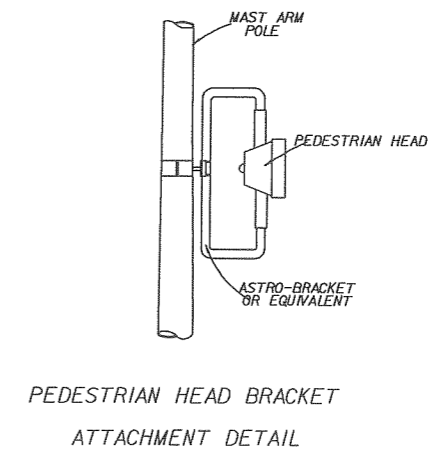
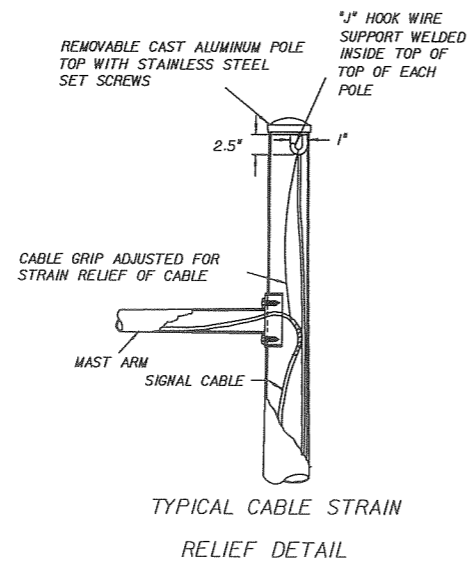
*Michael J. Canino 5/11/06*

REVISIONS						<b>CITY OF LEESBURG</b> <b>DEPARTMENT OF PUBLIC WORKS</b>		<b>PLAN SHEET</b> <b>MAIN ST. @ CANAL ST.</b>		SHEET NO. <b>T-4</b>	
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	ROAD	COUNTY				
						MAIN ST.	LAKE				

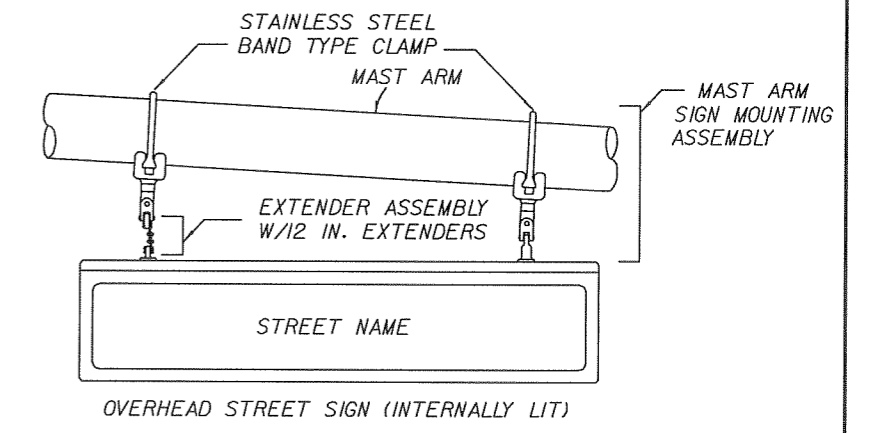
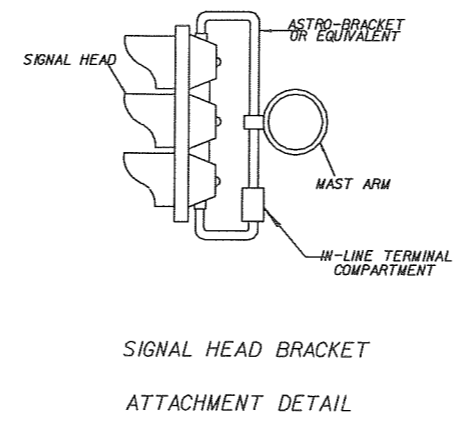
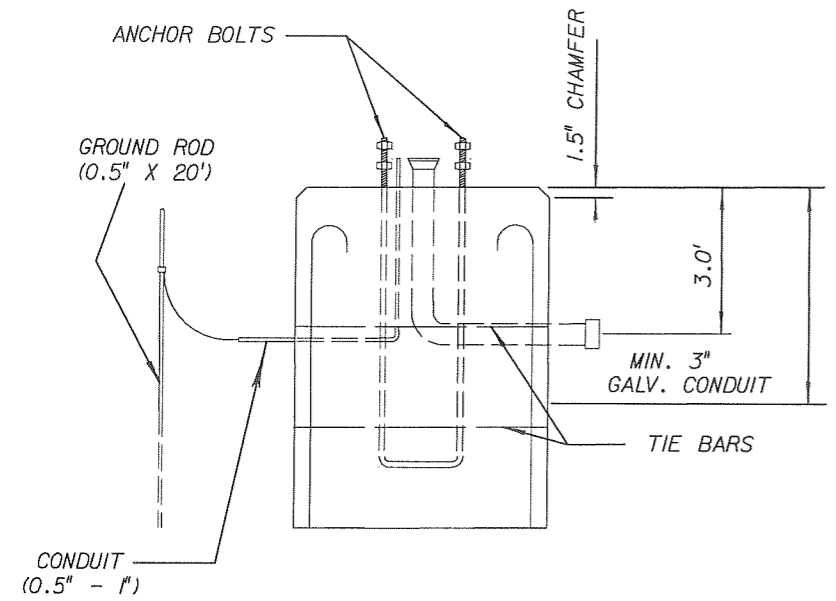
MICHAEL L. CORNEJO, PE# 47734  
METRIC ENGINEERING, INC.  
2269 LEE ROAD - SUITE 200  
WINTER PARK, FLORIDA 32789  
TEL. (407) 644-1898  
FAX. (407) 644-2376  
FLORIDA CERT. NO. EB-0002294

ENGINEERS  
PLANNERS  
SURVEYORS





FOUNDATION DETAIL



TWO POINT MAST ARM SIGN MOUNTING ASSEMBLY DETAIL

*Michael J. Cornejo 5/12/06*

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

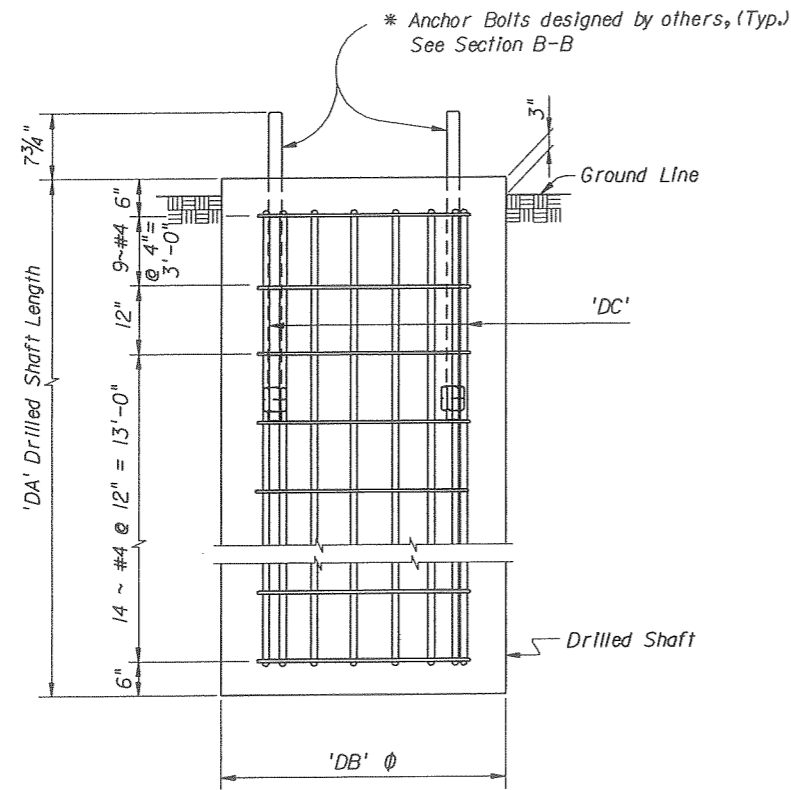


MICHAEL L. CORNEJO, PE# 47734  
 METRIC ENGINEERING, INC.  
 2289 LEE ROAD- SUITE 200  
 WINTER PARK, FLORIDA 32789  
 TEL. (407) 644-1898  
 FAX. (407) 644-2376  
 FLORIDA CERT. NO. EB-0002294

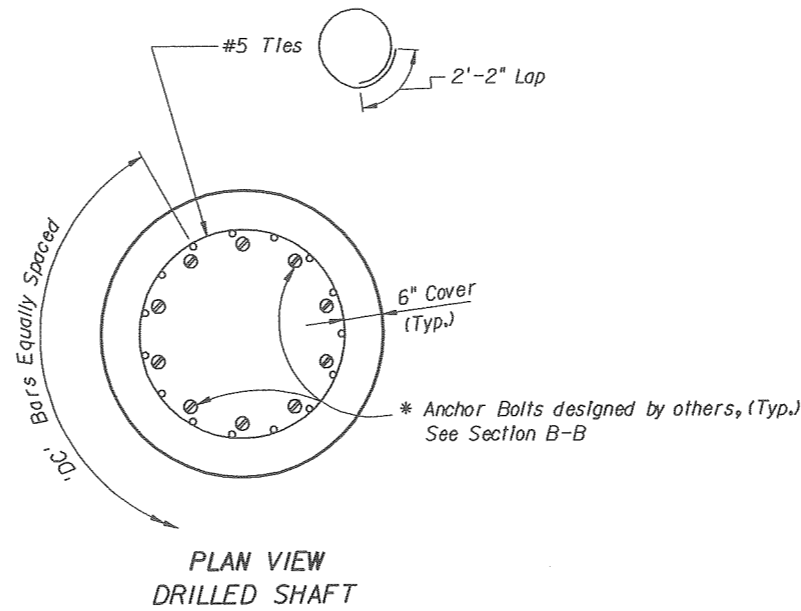
CITY OF LEESBURG	
DEPARTMENT OF PUBLIC WORKS	
ROAD	COUNTY
MAIN ST.	LAKE

MAST ARM DETAIL SHEET  
 MAIN ST. @ CANAL ST.

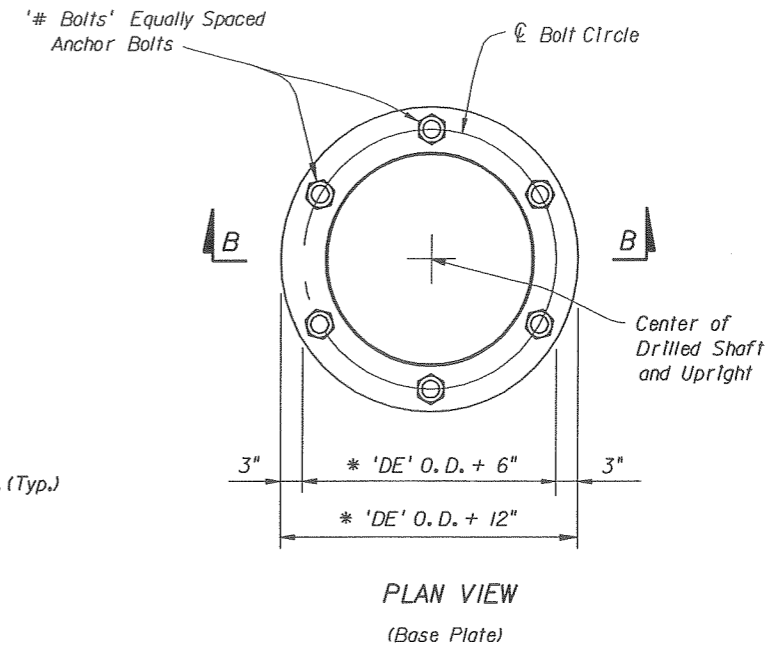
SHEET NO.  
 T-6



ELEVATION  
DRILLED SHAFT



PLAN VIEW  
DRILLED SHAFT



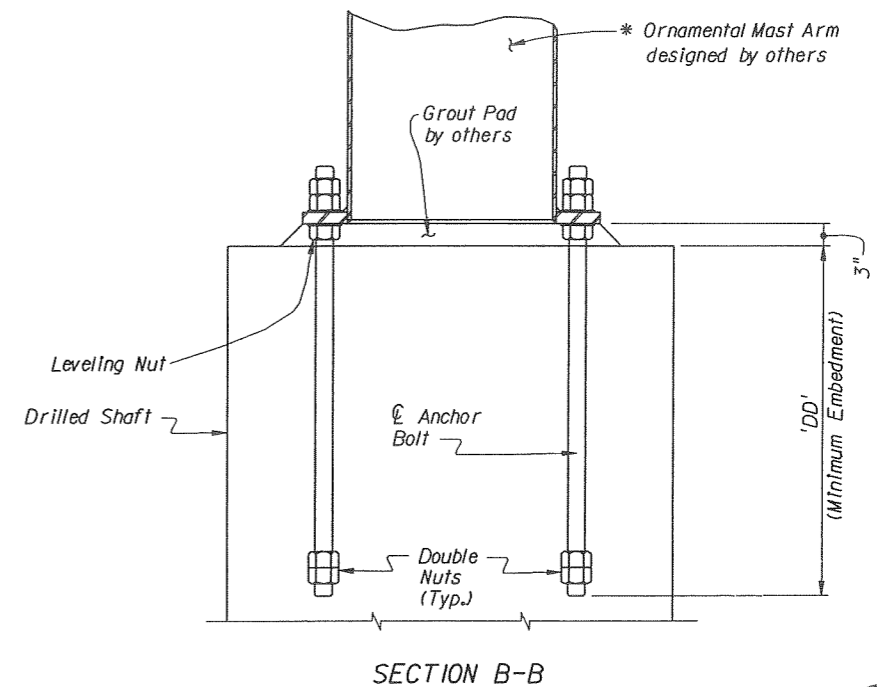
PLAN VIEW  
(Base Plate)

NOTES:

1. Design Wind Speed = 90 mph
2. Contractor shall coordinate anchor bolt requirements with fabricator.
3. Contractor shall identify Structure Numbers and submit detailed shop drawings.

FOUNDATION NOTES:

1. Assumptions and Values used in design:
  - Soil Type Sand
  - Soil Layer Thickness = 20 ft.
  - Soil Friction Angle = 26 degrees
  - Soil Weight = 50 pcf
  - Design Water Table is within 3 ft. below ground elevation.



SECTION B-B

TABLE OF SIGNAL STRUCTURE VARIABLES							
STRUCTURE NUMBER	STATION	DRILLED SHAFT AND REINFORCEMENT					
		#Bolts	DA ft	DB ft	DC # / size	DD in	DE in
1	101+85	6	14	4	22 # 10	30	16
2	102+42	6	14	4	22 # 10	30	15

\* Match with Manufacturers plans

*Douglas Ruggiano*  
5-11-06

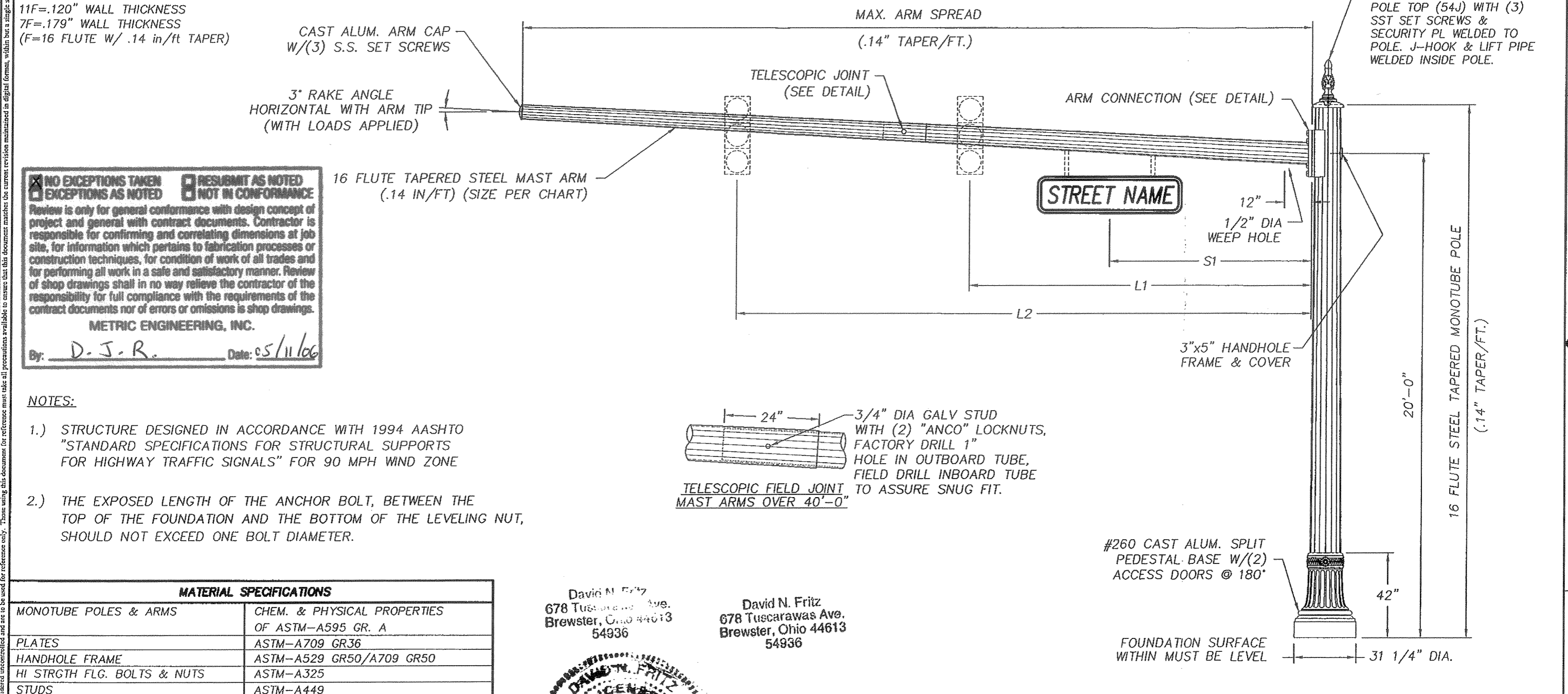
REVISIONS				NAMES		DATES		ENGINEER OF RECORD:		CITY OF LEEBSBURG		SHEET TITLE:	
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	DESCRIPTION	METRIC ENGINEERING, INC.		DEPARTMENT OF PUBLIC WORKS		TABLES OF VARIABLES FOR MAST ARM DRILLED SHAFT	
								13940 SW 126 Street Suite 200 Miami, Florida 33186 COA # 00002294		ROAD COUNTY		PROJECT NAME:	
								Douglas J. Ruggiano, P.E. 51497		MAIN ST. LAKE		MAIN STREET @ CANAL STREET	
												SHEET NO. T-7	

2:55:25 PM \$\$\$\$\$\$DGN\$SPECIFICATION\$\$\$\$\$\$

A B C D E F G H

QTY	POLE NO.	DESIGN NO.	POLE TUBE SIZE	TRAFFIC ARM SPAN	TRAFFIC ARM TUBE SIZE	L1	L2	S1
1	1	50310-B29-Y1	7F-16.0x12.92x22'-0"	60'-0"	7F-13.0x9.22x27'-0" 11F-9.84x4.94x35'-0"	40'	48'	27'
				36'-0"	11F-10.0x4.96x36'-0"	14'	24'	11'
1	2	50310-B29-Y2	7F-15.0x11.92x22'-0"	46'-0"	7F-11.5x8.70x20'-0" 11F-9.32x5.40x28'-0"	30'	39'	17'
				36'-0"	11F-10.0x4.96x36'-0"	11'	22'	8.5'

**NOTE:**  
(3) 1" I.D. GROMMETS WILL BE SUPPLIED WITH EACH SIGNAL ARM. ARMS TO BE FIELD DRILLED W/ #1 3/8 HOLES.



NO EXCEPTIONS TAKEN  
 EXCEPTIONS AS NOTED

RESUBMIT AS NOTED  
 NOT IN CONFORMANCE

Review is only for general conformance with design concept of project and general with contract documents. Contractor is responsible for confirming and correlating dimensions at job site, for information which pertains to fabrication processes or construction techniques, for condition of work of all trades and for performing all work in a safe and satisfactory manner. Review of shop drawings shall in no way relieve the contractor of the responsibility for full compliance with the requirements of the contract documents nor of errors or omissions in shop drawings.

METRIC ENGINEERING, INC.

By: D. J. R. Date: 05/11/06

- NOTES:**
- STRUCTURE DESIGNED IN ACCORDANCE WITH 1994 AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY TRAFFIC SIGNALS" FOR 90 MPH WIND ZONE
  - THE EXPOSED LENGTH OF THE ANCHOR BOLT, BETWEEN THE TOP OF THE FOUNDATION AND THE BOTTOM OF THE LEVELING NUT, SHOULD NOT EXCEED ONE BOLT DIAMETER.

MATERIAL SPECIFICATIONS	
MONOTUBE POLES & ARMS	CHEM. & PHYSICAL PROPERTIES OF ASTM-A595 GR. A
PLATES	ASTM-A709 GR36
HANDHOLE FRAME	ASTM-A529 GR50/A709 GR50
HI STRGTH FLG. BOLTS & NUTS	ASTM-A325
STUDS	ASTM-A449
"ANCO" LOCK NUTS	ASTM-A563 GR. A
FLAT WASHERS	ASTM-F436
ANCHOR BOLTS	ASTM-F1554 GR. 55
ANCHOR BOLT NUTS	ASTM-A563 GR. A
ST. STEEL HARDWARE	AISI-300 SERIES (18-8)
POLE TOP	CAST ALUMINUM AA319F
ORNAMENTAL BASE	CAST ALUMINUM AA319F
HARDWARE FINISH	H.D. GALV. TO ASTM-A153
STRUCTURE FINISH	PER SALES ORDER

David N. Fritz  
678 Tuscarawas Ave.  
Brewster, Ohio 44613  
54936

David N. Fritz  
678 Tuscarawas Ave.  
Brewster, Ohio 44613  
54936

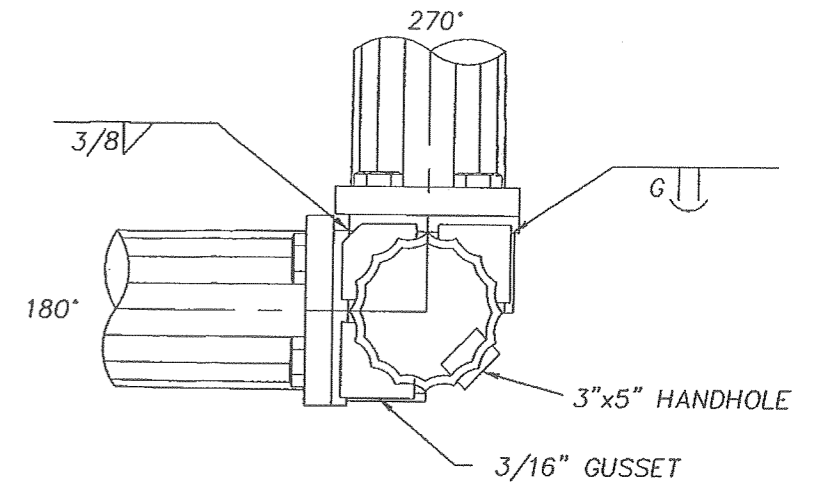
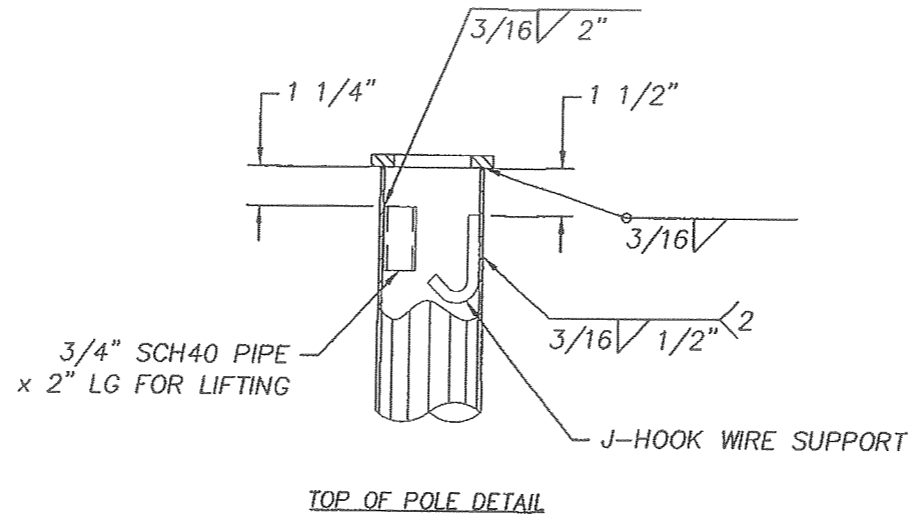
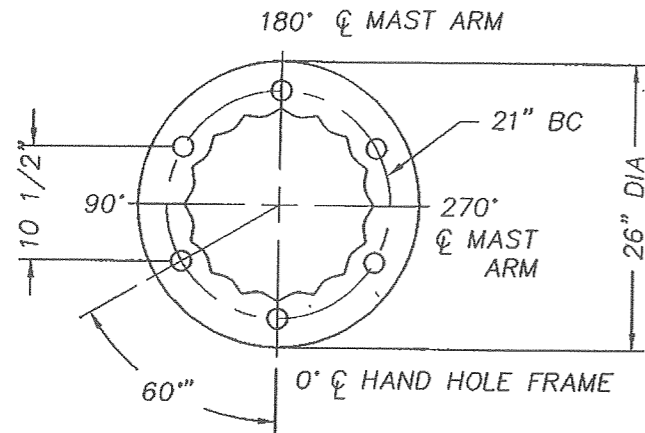
PROFESSIONAL ENGINEER  
STATE OF FLORIDA  
No. 54936  
5/10/06

STATE: FLORIDA	REQ# / SO# : NFL-12150-1	REV	DESCRIPTION	DATE	REV BY/CHK BY
PROJECT NAME: CITY OF LEESBURG (MAIN/CANAL ST)			REVISIONS		
ORNAMENTAL TRAFFIC STANDARDS FOR LEESBURG, FLORIDA					
	This document and the contents herein are proprietary and the property of Union Metal Corporation. This document is not to be copied, reproduced, or used for any reason except for the purposes which it was issued without the express written consent of Union Metal Corporation. Furthermore Union Metal Corporation reserves the right to recall this document and all copies at any time for any reason.	DESIGNED BY	CHECKED BY	DATE	SCALE
		KLS	972	12/29/05	1:48
50310-B29				REVISION	SHEET
				0	1 OF 2

Hardcopies of this document are considered uncontrolled and are to be used for reference only. Those using this document for reference must take all precautions available to ensure that this document matches the current revision maintained in digital format, within but a single source and protected by edit restrictions.



Hardcopies of this document are considered uncontrolled and are to be used for reference only. Those using this document for reference must take all precautions available to ensure that this document matches the current revision maintained in digital format, within but a single source and protected by edit restrictions.

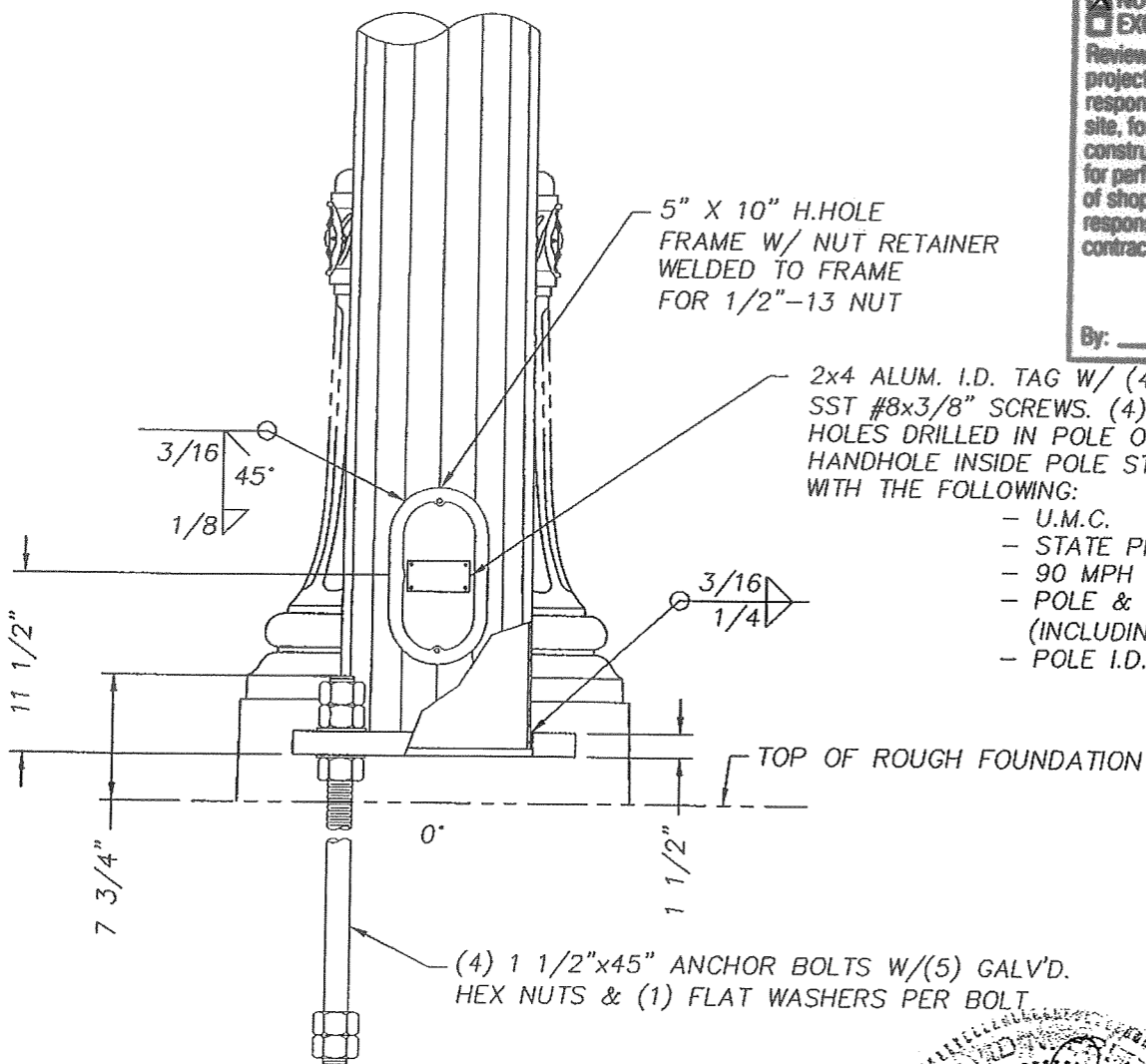


NO EXCEPTIONS TAKEN  
 EXCEPTIONS AS NOTED

RESUBMIT AS NOTED  
 NOT IN CONFORMANCE

Review is only for general conformance with design concept of project and general with contract documents. Contractor is responsible for confirming and correlating dimensions at job site, for information which pertains to fabrication processes or construction techniques, for condition of work of all trades and for performing all work in a safe and satisfactory manner. Review of shop drawings shall in no way relieve the contractor of the responsibility for full compliance with the requirements of the contract documents nor of errors or omissions in shop drawings.

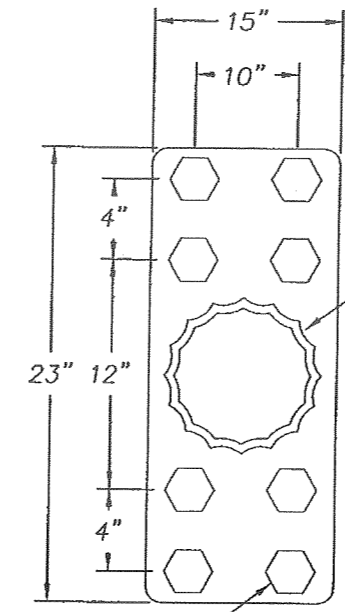
**METRIC ENGINEERING, INC.**  
 By: D. J. R. Date: 05/10/06



(4) 1 1/2"x45" ANCHOR BOLTS W/(5) GALV'D. HEX NUTS & (1) FLAT WASHERS PER BOLT

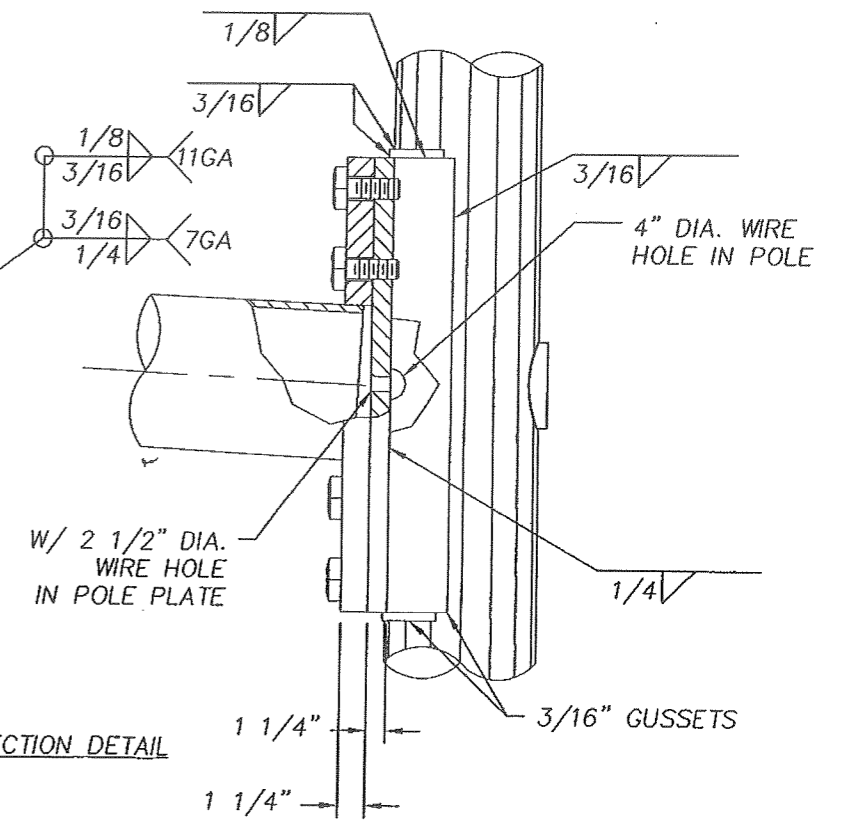
2x4 ALUM. I.D. TAG W/ (4) SELF TAP SST #8x3/8" SCREWS. (4) .136 DIA HOLES DRILLED IN POLE OPPOSITE HANDHOLE INSIDE POLE STAMPED WITH THE FOLLOWING:

- U.M.C.
- STATE PROJ. NO.
- 90 MPH
- POLE & ARM SIZES (INCLUDING GA.)
- POLE I.D. NUMBER



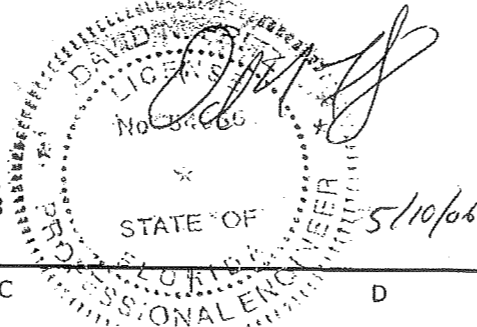
(8) 1"-8NC HEX HEAD CONN. BOLTS W/ FLAT WASHERS

ARM CONNECTION DETAIL



BASE PLATE DETAIL

David N. Fritz  
 678 Tuscarawas Ave.  
 Brewster, Ohio 44613  
 54936

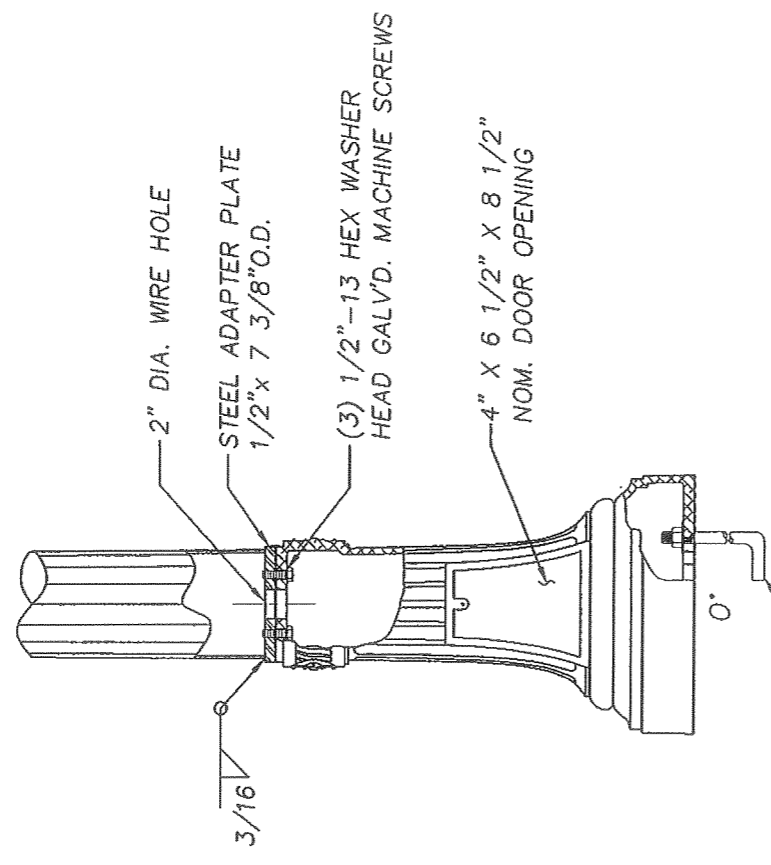
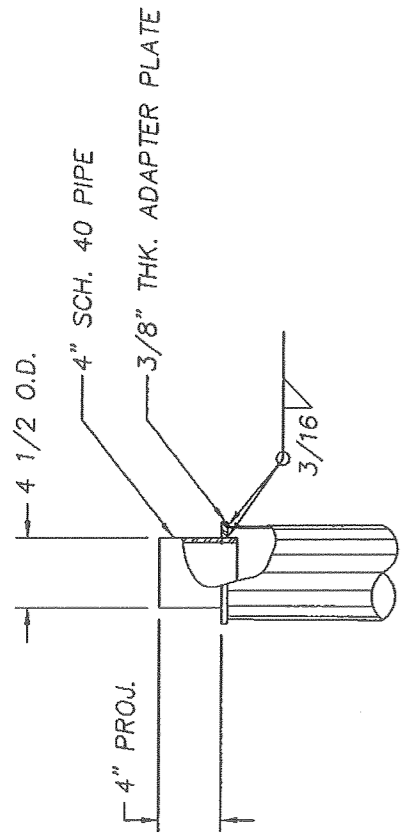
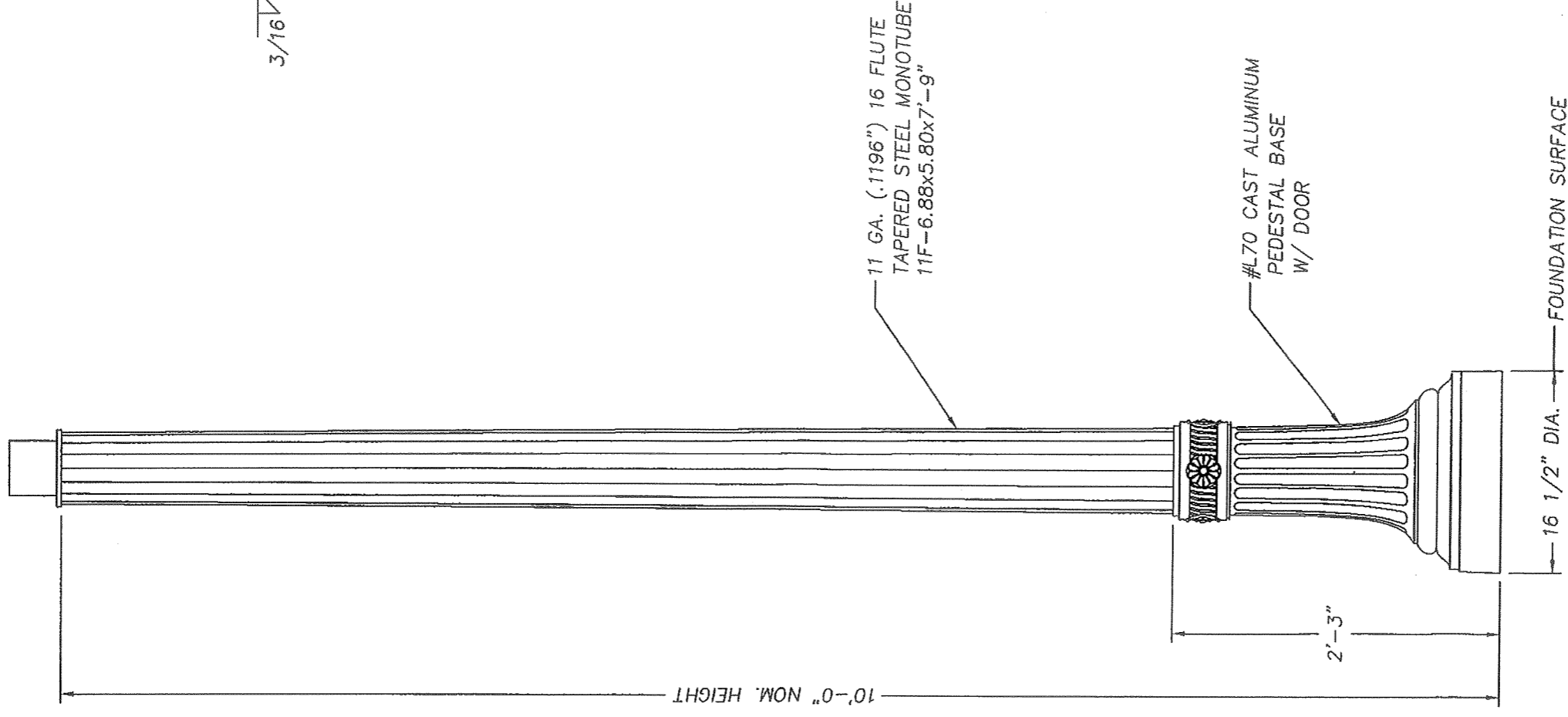


STATE: FLORIDA	REQ# / SO#: NFL-12150-1	REV	DESCRIPTION	DATE	REV BY/CHK BY
PROJECT NAME: CITY OF LEESBURG (MAIN/CANAL ST)			REVISIONS		
<b>ORNAMENTAL TRAFFIC STANDARDS FOR LEESBURG, FLORIDA</b>					
	This document and the contents herein are proprietary and the property of Union Metal Corporation. This document is not to be copied, reproduced, or used for any reason except for the purposes which it was issued without the express written consent of Union Metal Corporation. Furthermore Union Metal Corporation reserves the right to recall this document and all copies at any time for any reason.				
	DESIGNED BY	CHECKED BY	DATE	SCALE	ENG REF
KLS	97	12/29/05	NONE		
<b>50310-B29</b>				REVISION	SHEET
				0	2 OF 2

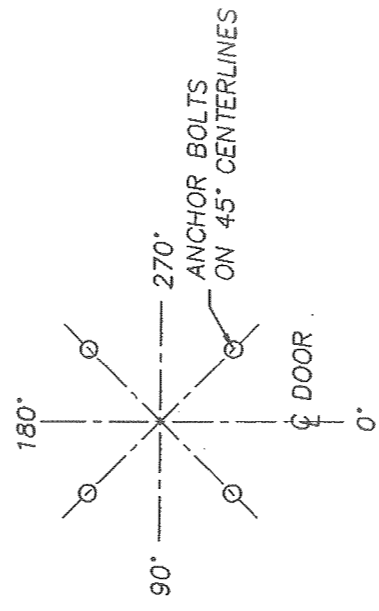
Handcopies of this document are considered uncontrolled and are to be used for reference only. Those using this document for reference must take all precautions available to ensure that this document matches the current revision maintained in digital format, within the single source and protected by edit restrictions.

**MATERIAL SPECIFICATIONS**

TUBES: CHEM. & PHYSICAL PROP. OF ASTM A595 GR. A.  
 PLATE, BAR: ASTM A36  
 ANCHOR BOLTS: ASTM A36M55  
 NUTS: (INCL. ANCHOR) ASTM 563 GR. A  
 MISC. HDWE: (STN. STL) AISI 300 SERIES (18-8)  
 CAST ALUM BASE: A356T6  
 STEEL PIPE: ASTM A53 GR. B OR A501  
 FINISH: PER SALES ORDER.



(4) 3/4" X 27" X 3" LG. GALV'D. ANCHOR BOLTS (2 1/2" PROJ.) W/ (1) GALV'D. HEX NUT, (1) .812" I.D. X 2.0" O.D. X .148" THK 3/4" GALV'D. FLAT WASHER ON 12" BOLT CIRCLE (8 1/2" CTRS.)  
 (4) #16 GA. GALV'D. SHIMS PER POLE INCLUDED.



TOP VIEW ORIENTATION

FOUNDATION SURFACE  
 WITHIN MUST BE LEVEL

David N. Fritz  
 678 Tuscarawas Ave.  
 Brewster, Ohio 44613  
 54936



**NO EXCEPTIONS TAKEN** **RESUBMIT AS NOTED**  
**EXCEPTIONS AS NOTED** **NOT IN CONFORMANCE**  
 Review is only for general conformance with design concept of project and general with contract documents. Contractor is responsible for confirming and correlating dimensions at job site, for information which pertains to fabrication processes or construction techniques, for condition of work of all trades and for performing all work in a safe and satisfactory manner. Review of shop drawings shall in no way relieve the contractor of the responsibility for full compliance with the requirements of the contract documents nor of errors or omissions in shop drawings.  
**METRIC ENGINEERING, INC.**  
 By: D.S.R. Date: 05/11/06

STATE: FLORIDA	REQ# / SO# : NFL12150	REV	DESCRIPTION	DATE	REV BY/CHK BY
PROJECT NAME: CITY OF LEESBURG			REVISIONS		
<b>ORNAMENTAL 10'-0" PEDESTRIAN TRAFFIC STANDARD</b>					
<b>DESIGN NUMBER P1571-70-B121-Y1</b>					
This document and the contents herein are proprietary and the property of Union Metal Corporation. This document is not to be copied, reproduced, or used for any reason except for the purposes which it was issued without the express written consent of Union Metal Corporation. Furthermore Union Metal Corporation reserves the right to recall this document and all copies at any time for any reason.		DESIGNED BY	DATE	SCALE	ENG REF
		MB	4/19/06		P1571-70-B112
		N1571-70-B121		REVISION	SHEET
				0	1 OF 1