
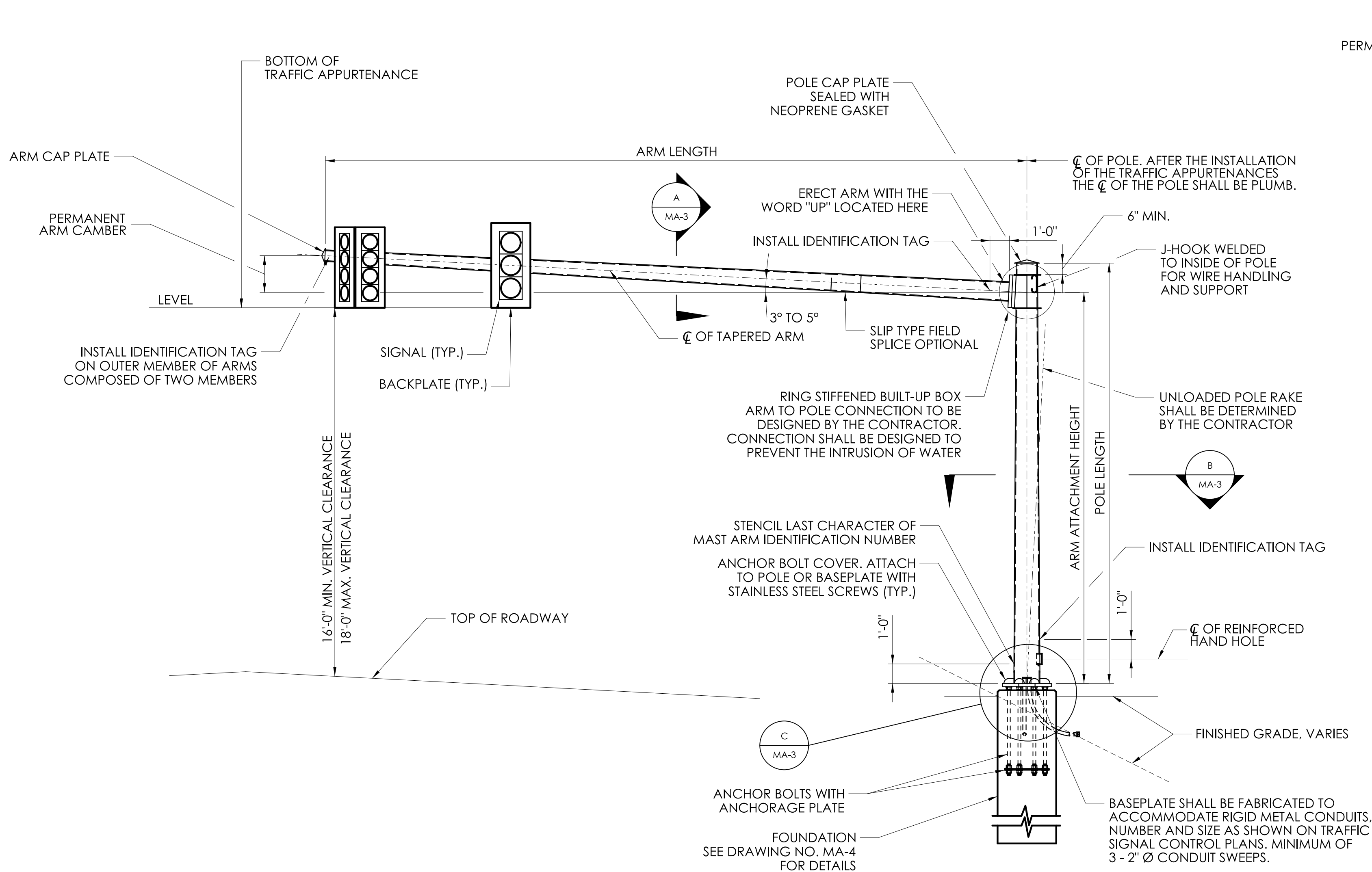


05 - STRUCTURES - MAST ARMS INDEX OF DRAWINGS			
DRAWING NUMBER	DRAWING TITLE	DRAWING NUMBER	DRAWING TITLE
MA-1	INDEX OF DRAWINGS		
MA-2	STEEL MAST ARM ASSEMBLY ELEVATION		
MA-3	STEEL MAST ARM ASSEMBLY DETAILS		
MA-4	STEEL MAST ARM ASSEMBLY FOUNDATION DETAILS		

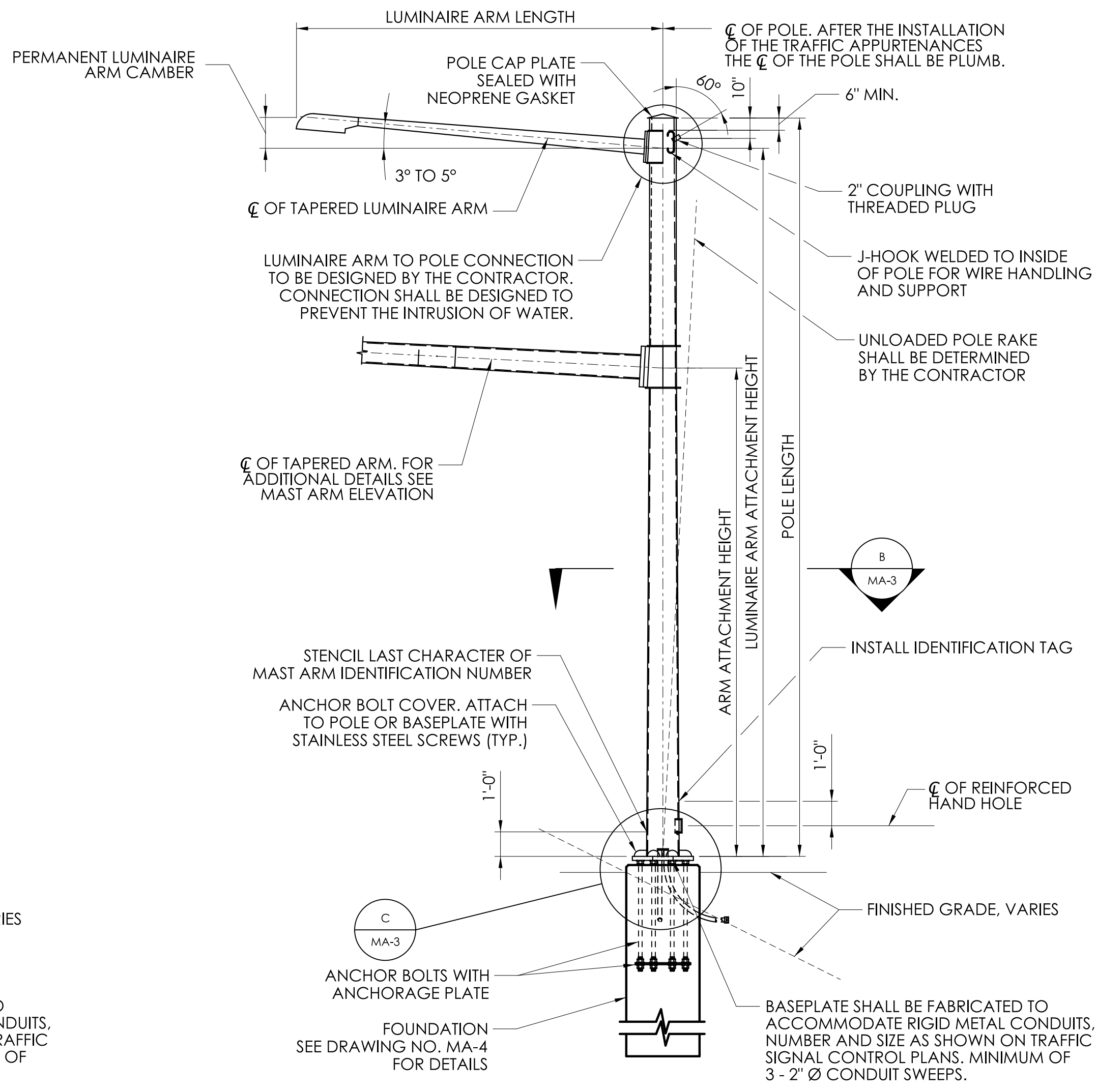
DESIGNED BY:  
BL COMPANIES

  
BL COMPANIES, INC.  
100 CONSTITUTION PLAZA, 10TH FLOOR  
HARTFORD, CT 06103

REV	DATE	REVISION DESCRIPTION



**ELEVATION - MAST ARM**  
SCALE: 1/4"=1'-0"



**ELEVATION - COMBINATION MAST ARM**  
SCALE: 1/4"=1'-0"

#### MAST ARM ASSEMBLY NOTES


THE MAST ARM ASSEMBLY, INCLUDING THE ANCHORAGE TO THE FOUNDATION, SHALL BE DESIGNED, FABRICATED AND INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE SPECIAL PROVISION "XX STEEL MAST ARM ASSEMBLY" OR "XX STEEL COMBINATION MAST ARM ASSEMBLY".

THE MAST ARM ASSEMBLY, INCLUDING THE ARM SPAN, ARM ORIENTATION, AND THE LOCATIONS OF THE TRAFFIC APPURTENANCES SUPPORTED BY THE STRUCTURE ARE SHOWN ON THE TRAFFIC CONTROL SIGNAL PLAN. PRIOR TO DESIGN OF EACH MAST ARM ASSEMBLY, THE CONTRACTOR SHALL PREPARE A LAYOUT DRAWING BASED ON A FIELD SURVEY AND THE CONTRACT DOCUMENTS TO VERIFY THE MAST ARM ASSEMBLY WHEN INSTALLED WILL MEET THE GEOMETRIC AND CLEARANCE REQUIREMENTS IN THE CONTRACT DOCUMENTS. IF THE REQUIREMENTS CANNOT BE MET, THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

THE MAST ARM ASSEMBLIES SHALL BE DESIGNED IN ACCORDANCE WITH THE LATEST EDITION OF THE AASHTO LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS. INCLUDING THE LATEST INTERIM SPECIFICATIONS, AS AMENDED BY THE SPECIAL PROVISION "XX STEEL MAST ARM ASSEMBLY" OR "XX STEEL COMBINATION MAST ARM ASSEMBLY".

THE MAST ARM ASSEMBLIES SHALL BE DESIGNED TO SUPPORT TRAFFIC APPURTENANCES WITH PROPERTIES NO LESS THAN THOSE SHOWN ON THE TRAFFIC PLANS.

REV.	DATE	REVISION DESCRIPTION

SIGNATURE BLOCK:	DESIGNER/DRAFTER:	CHECKED BY:
 E. Compton 100 Constitution Plaza 10 <sup>th</sup> Floor Hartford, CT 06103		

SCALE AS NOTED

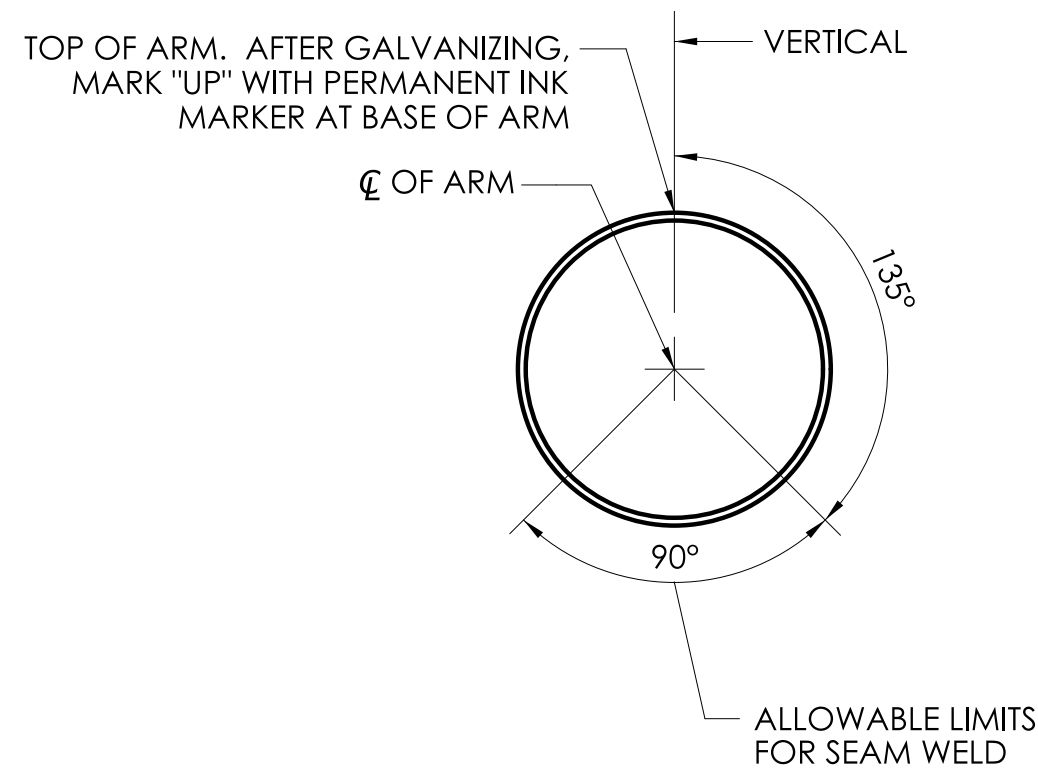


CONNECTICUT  
DEPARTMENT OF  
TRANSPORTATION

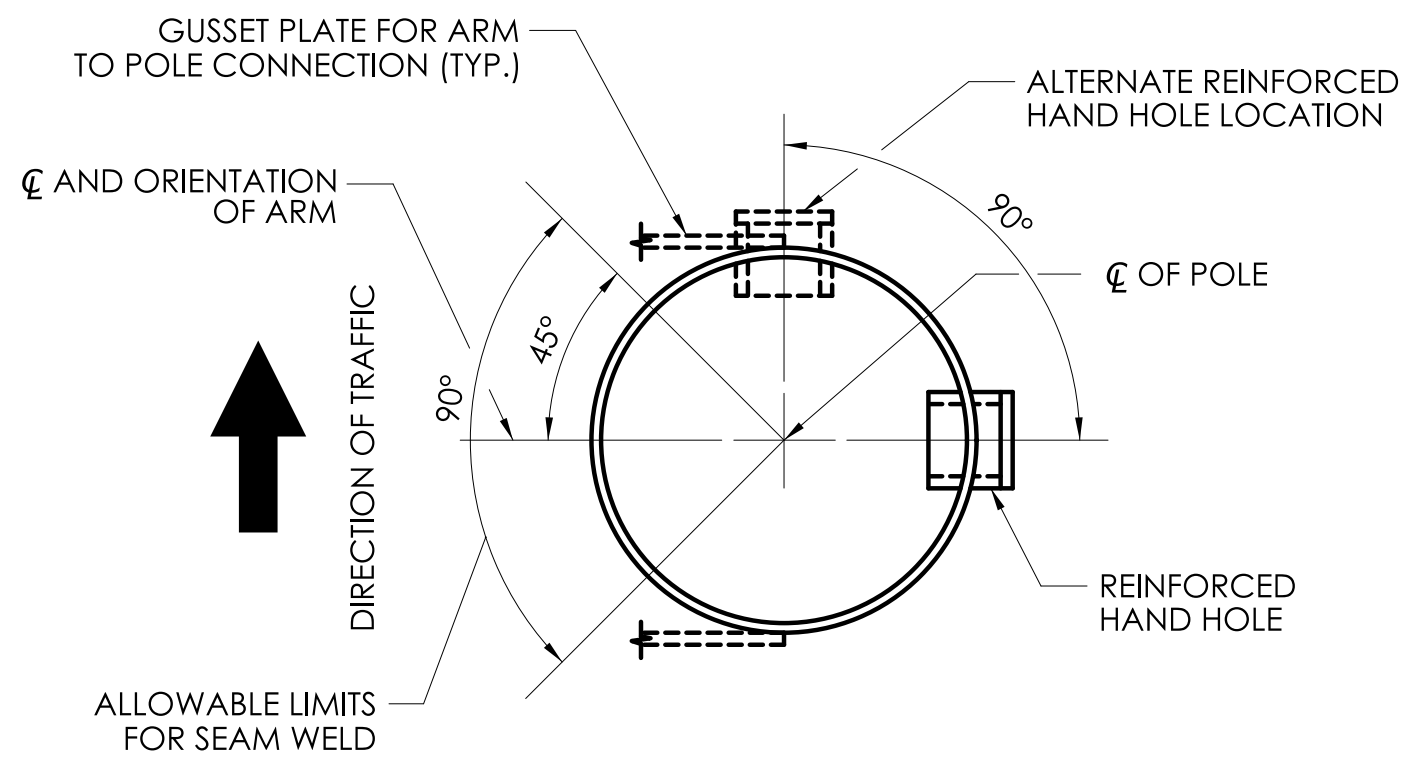
PROJECT TITLE:	TOWN(S):
REMOVAL OF I-84 EASTBOUND EXIT 21 OFF-RAMP	WATERBURY

DRAWING TITLE:	PROJECT NO.:	DRAWING NO.:
STEEL MAST ARM ASSEMBLY ELEVATION	0151-0340	MA-2
		SHEET NO.: 05.02

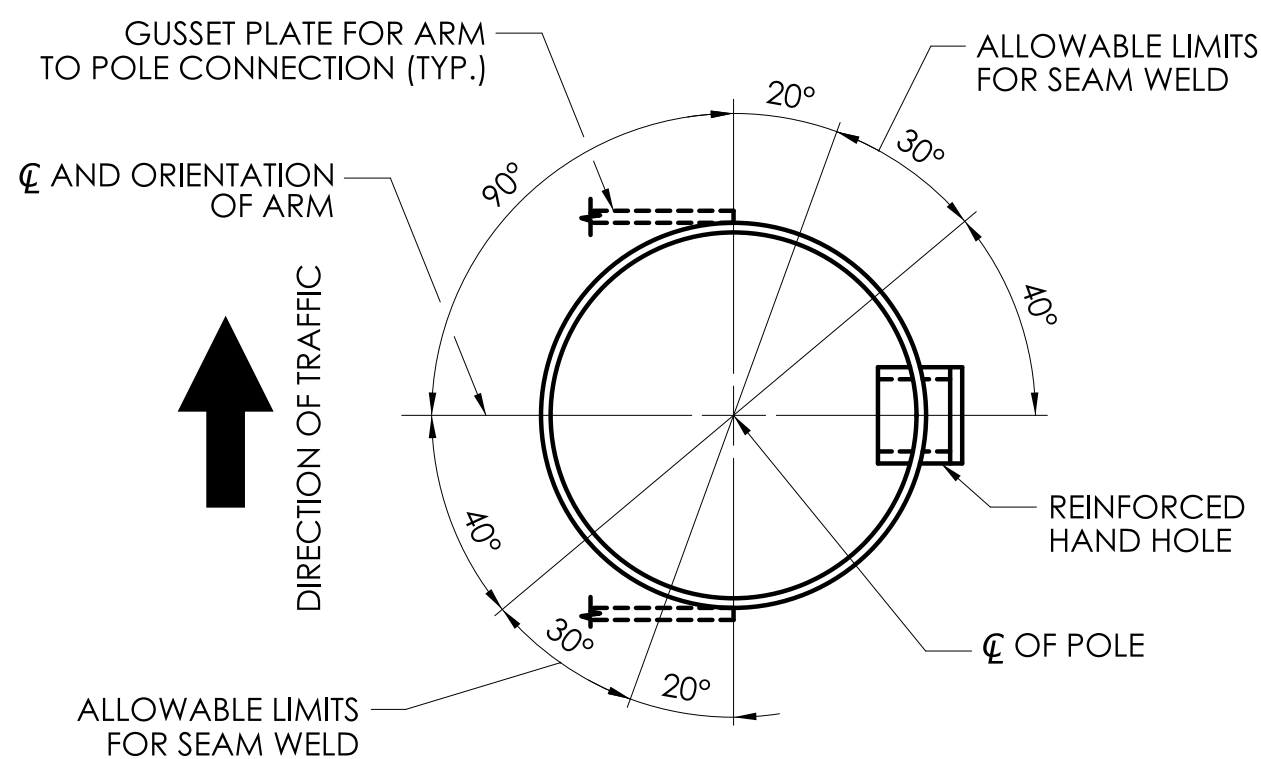
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PLOTTED DATE: 9/17/2024



**SECTION**  
SCALE: 1 1/2" = 1'-0" A  
MA-2

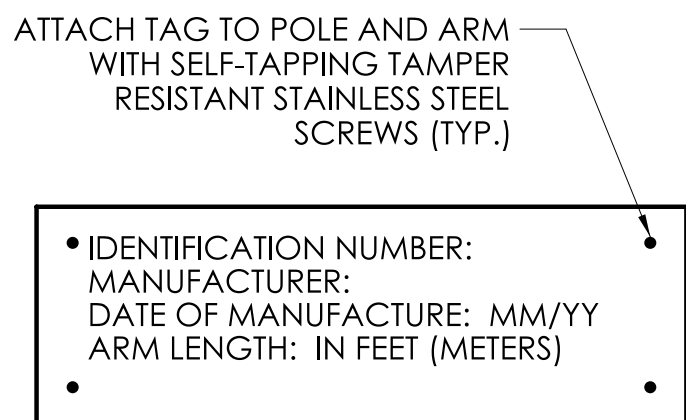


**POLE WITH 1 SEAM WELD**

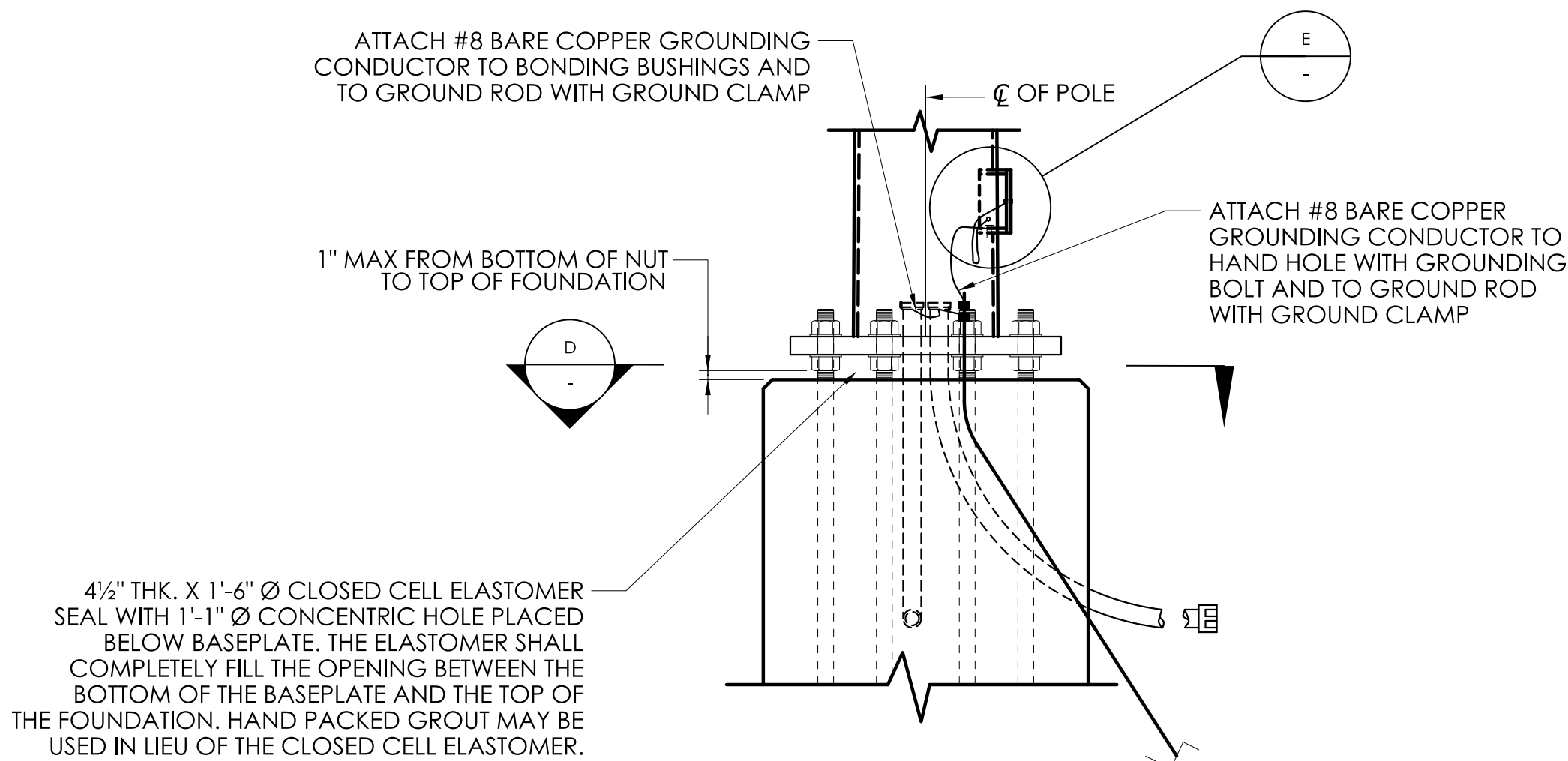


**POLE WITH 2 SEAM WELD**

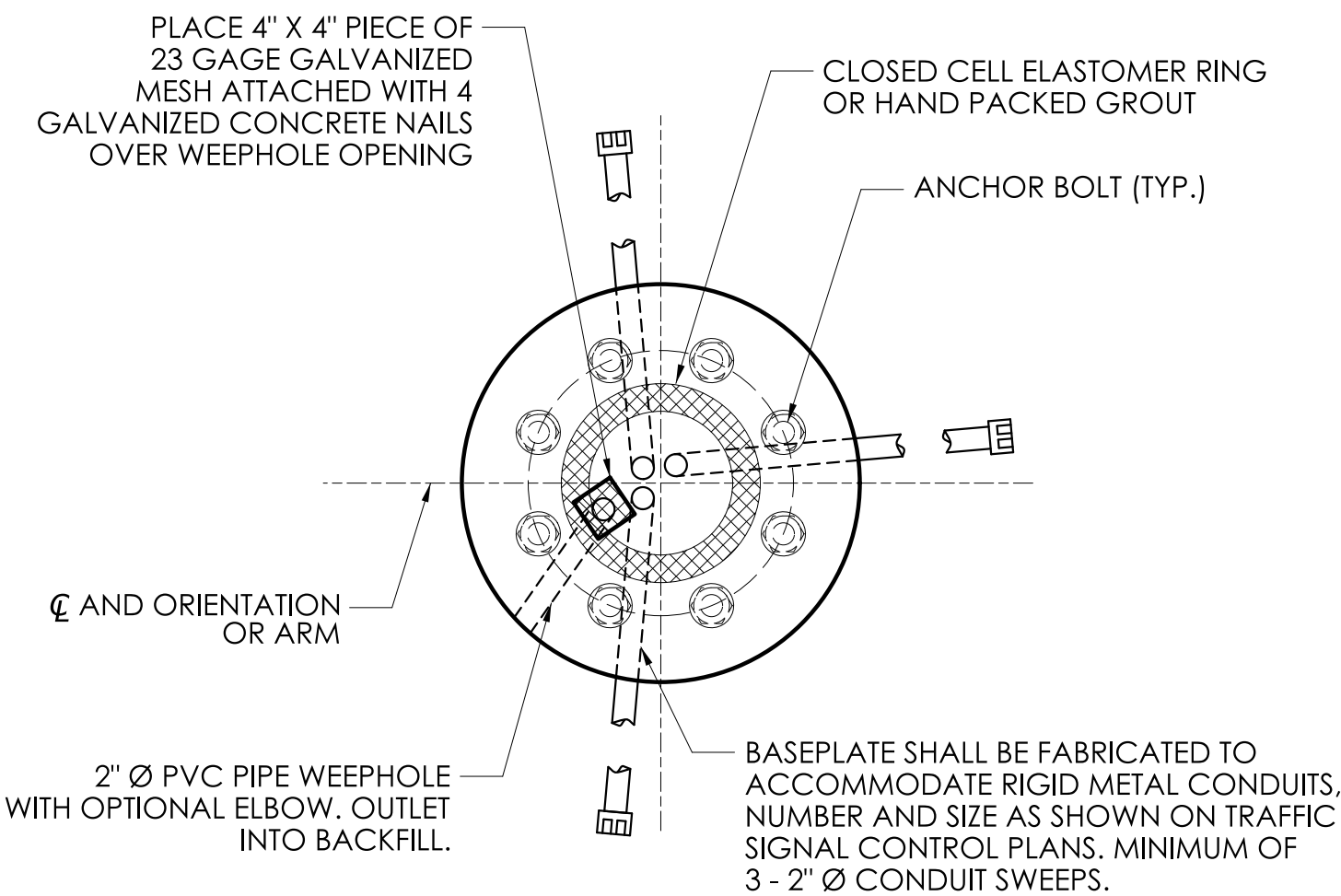
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SCALE: 1 1/2" = 1'-0" B  
MA-2



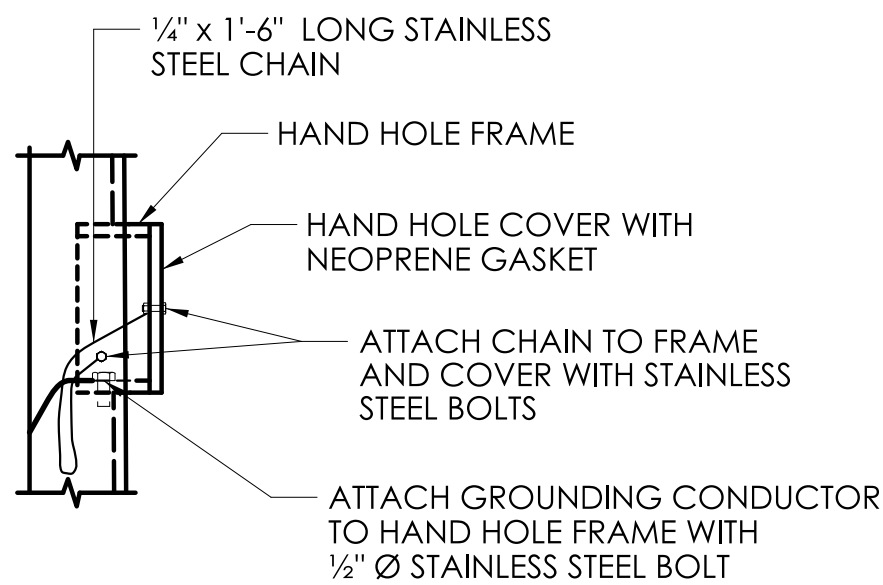
**IDENTIFICATION TAG - N.T.S**



**DETAIL**  
SCALE: 3/4" = 1'-0" C  
MA-2



**SECTION**  
SCALE: 3/4" = 1'-0" D  
MA-2



**DETAIL**  
SCALE: 1 1/2" = 1'-0" E  
MA-2

REV.	DATE	REVISION DESCRIPTION

SIGNATURE BLOCK:	
DESIGNER/DRAFTER:	CHECKED BY:

SCALE AS NOTED



CONNECTICUT  
DEPARTMENT OF  
TRANSPORTATION

PROJECT TITLE:  
**REMOVAL OF I-84 EASTBOUND  
EXIT 21 OFF-RAMP**

TOWN(S):  
**WATERBURY**

DRAWING TITLE:  
**STEEL MAST ARM  
ASSEMBLY DETAILS**

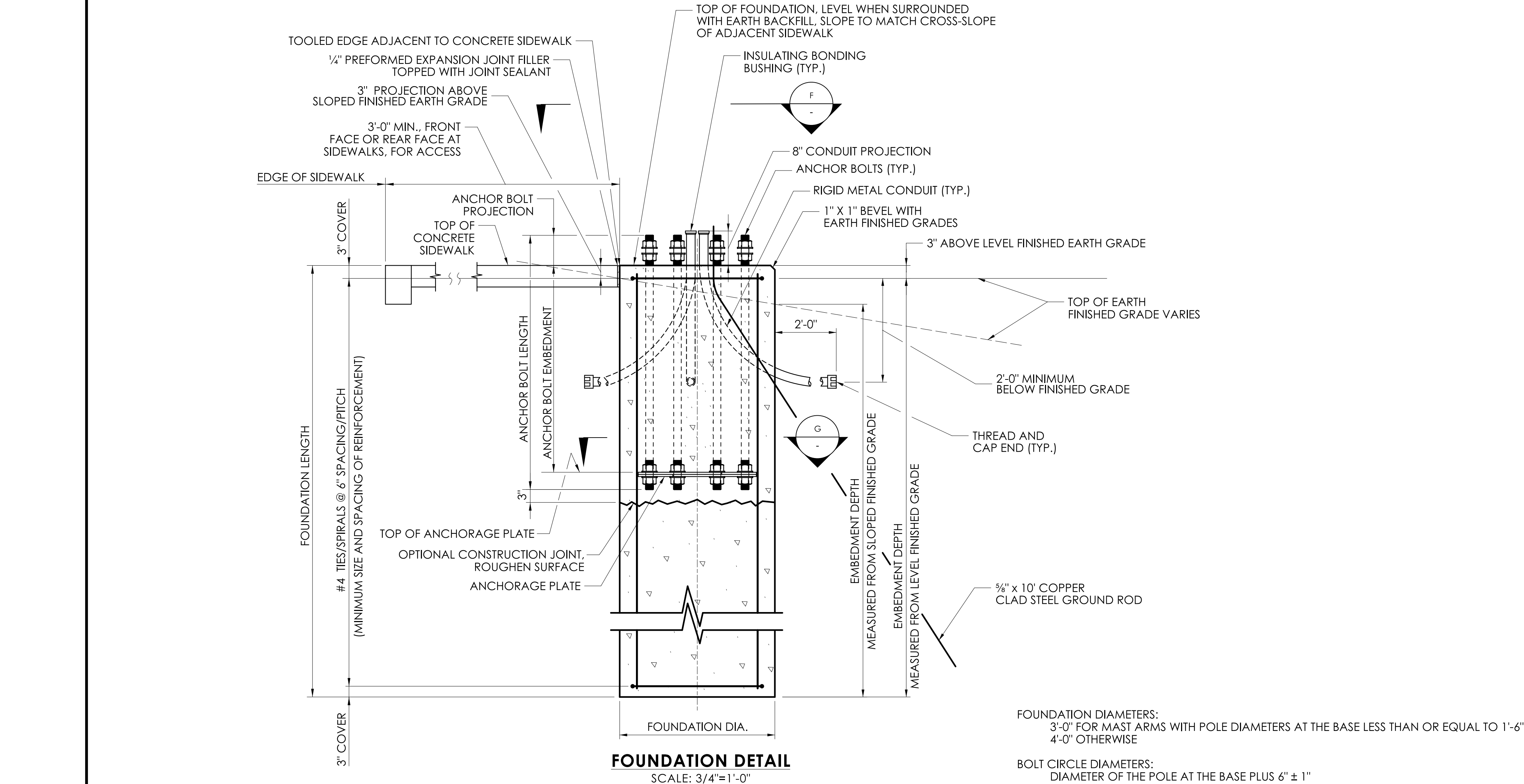
PROJECT NO.:  
**0151-0340**

DRAWING NO.:  
**MA-3**  
SHEET NO.:  
05.03

LASTED SAVED BY:  
PLOTTED DATE: 9/17/2024

FILE NAME:





**FOUNDATION NOTES**

THE DRILLED SHAFT FOUNDATION FOR THE MAST ARM ASSEMBLY SHALL BE DESIGNED, FABRICATED, AND CONSTRUCTED BY THE CONTRACTOR IN ACCORDANCE WITH THE SPECIAL PROVISION "TRAFFIC CONTROL FOUNDATION - MAST ARM".

THE FOUNDATION SHALL BE DESIGNED FOR THE SOILS AND ROCK PROPERTIES BASED ON THE SUBSURFACE CONDITIONS (CHARACTER OF THE SOIL AND ROCK, PRESENCE OF GROUND WATER, ETC.) IN THE LOCATION OF, ADJACENT TO AND BELOW THE DRILLED SHAFT FOUNDATION EXCAVATION. THE NEED AND EXTENT OF ALL SUBSURFACE EXPLORATIONS AND INVESTIGATIONS SHALL BE DETERMINED BY THE CONTRACTOR.

THE DESIGN OF THE FOUNDATION SHALL BE COORDINATED WITH THE MAST ARM ASSEMBLY AND THE MAST ARM ANCHORAGE TO ENSURE THAT THE FOUNDATION IS ADEQUATE FOR THE MAST ARM REACTIONS AND TO AVOID CONFLICTS BETWEEN THE EMBEDDED MAST ARM ANCHORAGE AND THE FOUNDATION REINFORCEMENT.

THE CONCRETE FOR THE FOUNDATION SHALL CONFORM TO CLASS PCC04460. THE COMPRESSIVE STRENGTH,  $f_c$ , USED IN DESIGN OF THE FOUNDATION SHALL BE 4,000 PSI. THE COMPRESSIVE STRENGTH OF THE CONCRETE IN THE CONSTRUCTED FOUNDATION SHALL CONFORM TO THE REQUIREMENTS OF 6.01 - CONCRETE FOR STRUCTURES AND M.03 - PORTLAND AND HYDRAULIC CEMENT CONCRETE.

THE REINFORCEMENT SHALL BE UNCOATED AND CONFORM TO ASTM A615, GRADE 60. THE REINFORCEMENT SHALL BE ASSEMBLED WITH WIRE TIES. WELDING TO ASSEMBLE REINFORCEMENT IS NOT PERMITTED. ALL REINFORCEMENT SHALL HAVE 3" COVER, UNLESS OTHERWISE NOTED.

THE CONCRETE SHALL BE PLACED IN THE EXCAVATION AGAINST UNDISTURBED EARTH.

THE MAST ARM SHALL NOT BE ERECTED ON THE FOUNDATION UNTIL THE CONCRETE IN THE SHAFT HAS ATTAINED A COMPRESSIVE STRENGTH,  $f_c$ , GREATER THAN OR EQUAL TO 4000 PSI.

THE COST OF THE FOUNDATION, INCLUDING THE EXCAVATION, CONCRETE, REINFORCEMENT, CASING AND WEEPHOLES, INCLUDING THE DESIGN AND FABRICATION, TO BE INCLUDED FOR PAYMENT UNDER THE ITEM "TRAFFIC CONTROL FOUNDATION - MAST ARM".

WHERE AN EXISTING CONCRETE SIDEWALK ABUTTING A FOUNDATION IS DAMAGED OR CUT DURING INSTALLATION, REPLACE THE ENTIRE SECTION. ALL SIDEWALK REPLACED DUE TO FOUNDATION INSTALLATION SHALL BE PAID FOR UNDER THE ITEM "CONCRETE SIDEWALK".

THE COST OF PREFORMED EXPANSION JOINT FILLER AND JOINT SEALANT SHALL BE INCLUDED FOR PAYMENT UNDER THE ITEM "CONCRETE SIDEWALK".