

GENERAL NOTES:

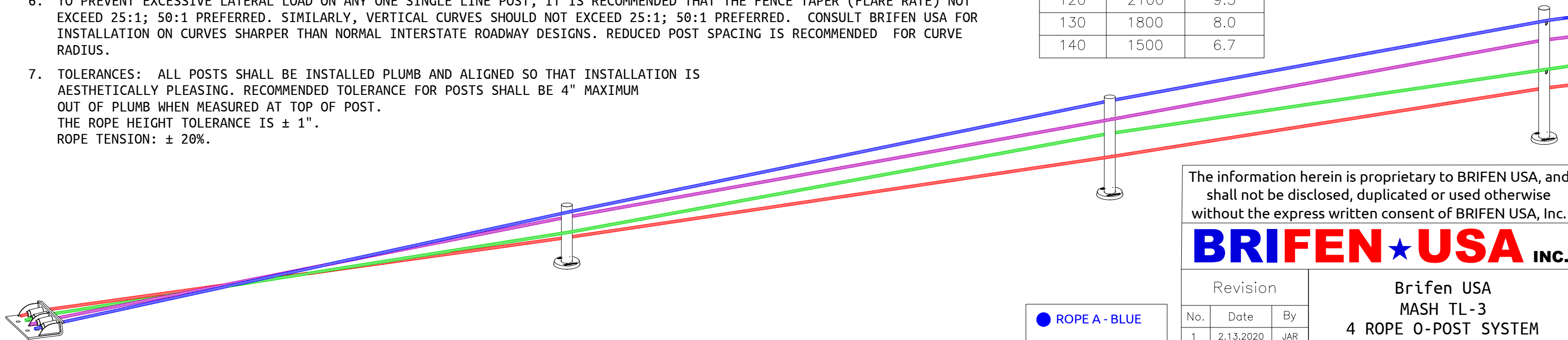
1. THE BRIFEN WIRE ROPE SAFETY FENCE SYSTEM (WRSF) 4 ROPE 0-POST LENGTH OF NEED (LON) HAS BEEN SUCCESSFULLY TESTED TO MASH TL-3 CONDITIONS. REFER TO FHWA ELIGIBILITY LETTER (HSST/B-245A). THE BRIFEN MASH GATING TERMINAL (MGT) HAS BEEN SUCCESSFULLY TESTED TO MASH 2016, SECOND EDITION. REFER TO FHWA ELIGIBILITY LETTER (HSST1/CC-137).
2. PURSUANT TO MASH TESTING CRITERIA, ALL END TERMINAL TESTS ARE CONDUCTED ON LEVEL TERRAIN. PLACEMENT OF END TERMINALS ON SLOPES MAY RESULT IN NON CRASH WORTHY PERFORMANCE IN SOME CONDITIONS.
3. BRIFEN WRSF DRAWINGS, SPECIFICATIONS, AND PRODUCT MANUALS SHOULD BE REVIEWED PRIOR TO STARTING INSTALLATION. FOR ADDITIONAL INFORMATION OR QUESTIONS, CONTACT BRIFEN USA, INC. AT (866) 427-4336.
4. BRIFEN WRSF SHALL BE INSTALLED ON SMOOTH SURFACE WITHOUT DROP-OFFS, ABOVE GROUND OBSTRUCTIONS OR DEPRESSIONS THAT MAY INTERFERE WITH THE REASONABLE STABILITY, AND NORMAL SUSPENSION HEIGHT OF AN ERRANT VEHICLE AT CONTACT WITH THE FENCE.
5. BRIFEN WRSF DEFLECTION AND FOUNDATION TYPE SHALL BE AS SPECIFIED BY THE CONTRACTING AGENCY. THE PROJECT SPECIFICATIONS SHALL INDICATE A REQUIRED DEFLECTION BASED ON RESULTS OF FULL SCALE CRASH TESTS TO MASH TEST 3-11. THE DEFLECTION TABLE SHALL BE USED TO DETERMINE THE REQUIRED POST SPACING FOR THE SPECIFIED DEFLECTION. CONTACT BRIFEN USA FOR ADDITIONAL INFORMATION. POST SPACING MAY VARY WHEN ENCOUNTERING UNDERGROUND CONFLICTS AS LONG AS THE POST SPACING REMAINS BETWEEN 7' AND 21'. THIS MAY REQUIRE THE ADJUSTMENT OF SEVERAL POSTS BEFORE AND AFTER THE CONFLICT TO MINIMIZE THE VARIANCE OF POST SPACING.
6. TO PREVENT EXCESSIVE LATERAL LOAD ON ANY ONE SINGLE LINE POST, IT IS RECOMMENDED THAT THE FENCE TAPER (FLARE RATE) NOT EXCEED 25:1; 50:1 PREFERRED. SIMILARLY, VERTICAL CURVES SHOULD NOT EXCEED 25:1; 50:1 PREFERRED. CONSULT BRIFEN USA FOR INSTALLATION ON CURVES SHARPER THAN NORMAL INTERSTATE ROADWAY DESIGNS. REDUCED POST SPACING IS RECOMMENDED FOR CURVE RADIUS.
7. TOLERANCES: ALL POSTS SHALL BE INSTALLED PLUMB AND ALIGNED SO THAT INSTALLATION IS AESTHETICALLY PLEASING. RECOMMENDED TOLERANCE FOR POSTS SHALL BE 4" MAXIMUM OUT OF PLUMB WHEN MEASURED AT TOP OF POST. THE ROPE HEIGHT TOLERANCE IS $\pm 1"$. ROPE TENSION: $\pm 20\%$.

ROPE TENSION TABLE

ROPE TEMP (F°)	TENSION (LBS)	TENSION (kN)
0	5700	25.4
10	5400	24.0
20	5100	22.7
30	4800	21.4
40	4500	20.0
50	4200	18.7
60	3900	17.3
70	3600	16.0
80	3300	14.7
90	3000	13.3
100	2700	12.0
110	2400	10.7
120	2100	9.3
130	1800	8.0
140	1500	6.7

DEFLECTION TABLE

DEFLECTION (LF)	POST SPACING (LF)
8'-0"	7'-0"
8'-10"	10'-0"
9'-0"	10'-6"
10'-3"	15'-0"
11'-1"	18'-0"
11'-11"	21'-0"
*Note 5	

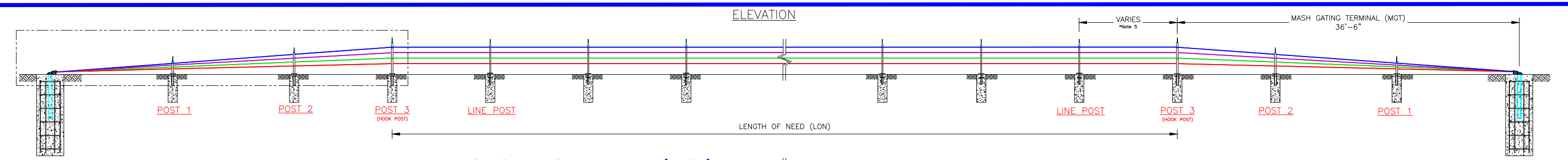


- ROPE A - BLUE
- ROPE B - PURPLE
- ROPE C - GREEN
- ROPE D - RED

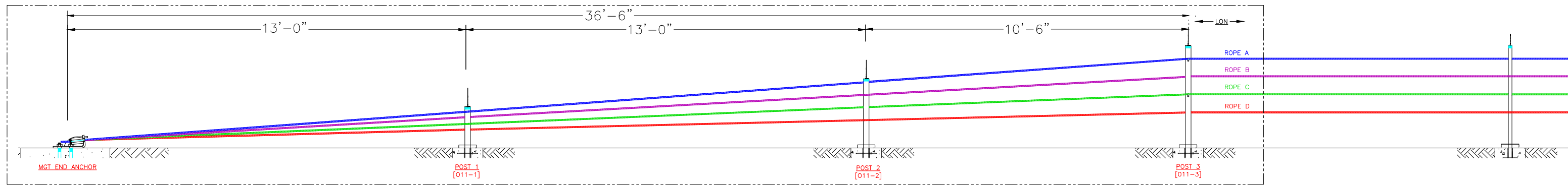
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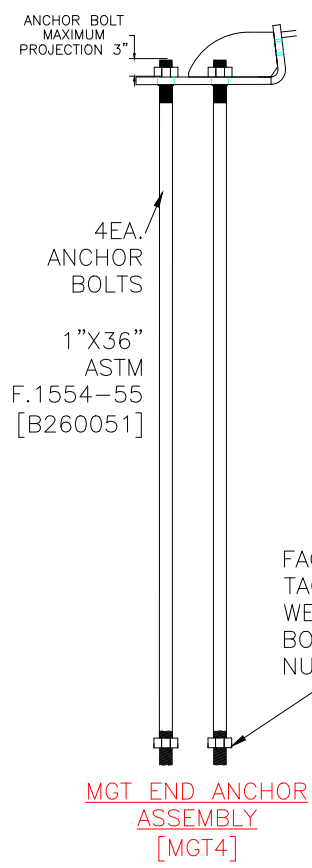
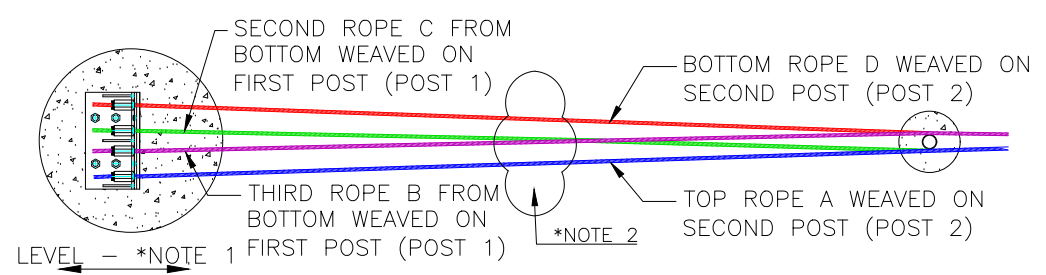
Revision			Brifen USA MASH TL-3 4 ROPE 0-POST SYSTEM		
No.	Date	By	Date	Drawn By	Scale
1.	2.13.2020	JAR	3.08.2021	JAR	None
2.	10.21.2020	JAR	MASH VERSION		Sheet No 1 OF 3
3.	1.13.2021	JAR			
4.	2.3.2021	JAR	Dwg. No.	MASH-OP-002	
5.	2.4.2022	JAR			



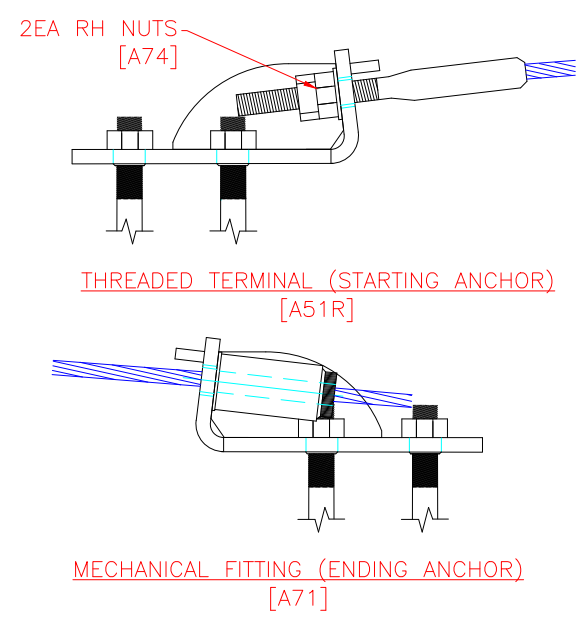
MASH GATING TERMINAL (MGT) DETAIL II



MGT END ANCHOR ROPE WEAVE DETAIL



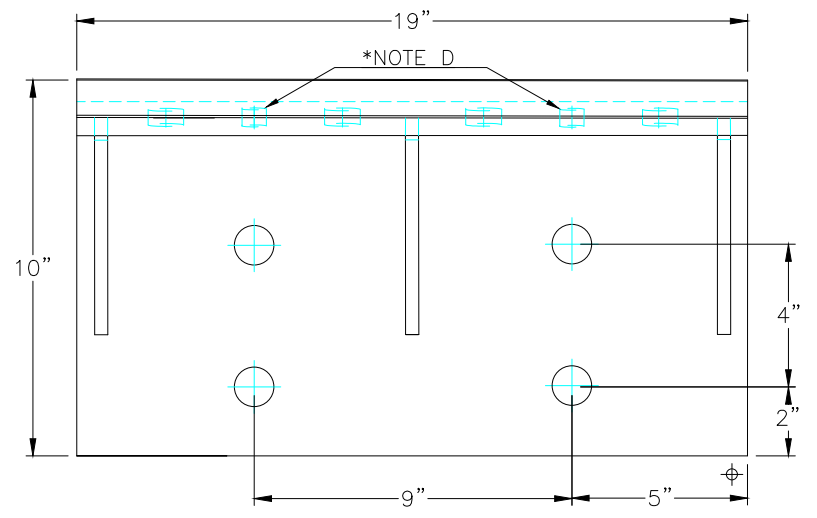
MGT END ANCHOR CONNECTIONS



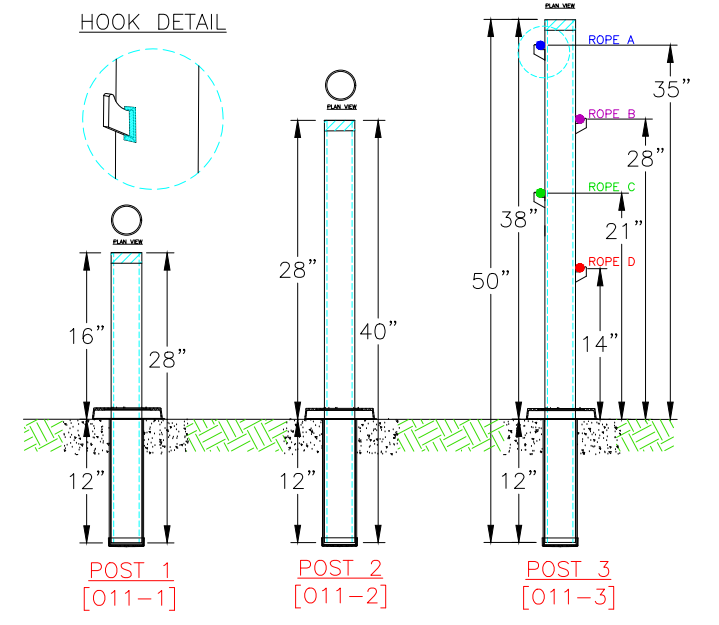
NOTE

- A. MASH GATING TERMINAL (MGT) END ANCHOR PLATE SHALL BE INSTALLED LEVEL (FRONT TO BACK WHEN VIEWED FROM THE END OF THE FENCE). IF MGT END ANCHOR IS PLACED ON A SLOPE, THE PLATE SHOULD BE INSTALLED TO MATCH THE SLOPE (LEFT TO RIGHT WHEN VIEWED FROM THE END OF THE FENCE).
- B. SINCE ROPES ALTERNATE SIDES OF EACH SUCCESSIVE POST, THE TRAILING END TERMINAL MAY HAVE ROPES REVERSED DEPENDING ON ODD OR EVEN NUMBER OF POSTS IN FENCE.
- C. SIZE AND DESIGN OF MGT END ANCHOR, POST 1-3, AND LINE POST FOUNDATIONS (POST MOUNTING METHOD) ARE BEST DETERMINED BY PROJECT SPECIFIC SOIL INFORMATION AND GEOTECHNICAL EVALUATION. IF UNEXPECTED ROCK IS ENCOUNTERED, PLEASE CONTACT BRIFEN. BRIFEN RECOMMENDS IF CONCRETE FOUNDATIONS ARE SPECIFIED, THE 28 DAY COMPRESSIVE STRENGTH SHALL BE A MINIMUM OF 3000 PSI. END TERMINAL FOUNDATION AND POST 1-3 FOUNDATIONS SHALL ALWAYS BE APPROPRIATE SIZED CONCRETE FOUNDATIONS.
- D. THESE HOLES ARE FOR THE TEMPORARY EYE BOLT [T18] FOR A WINCH ATTACHMENT DURING INITIAL INSTALLATION ONLY.

MGT ANCHOR BOLT TEMPLATE



MASH GATING TERMINAL (MGT) POST DETAILS

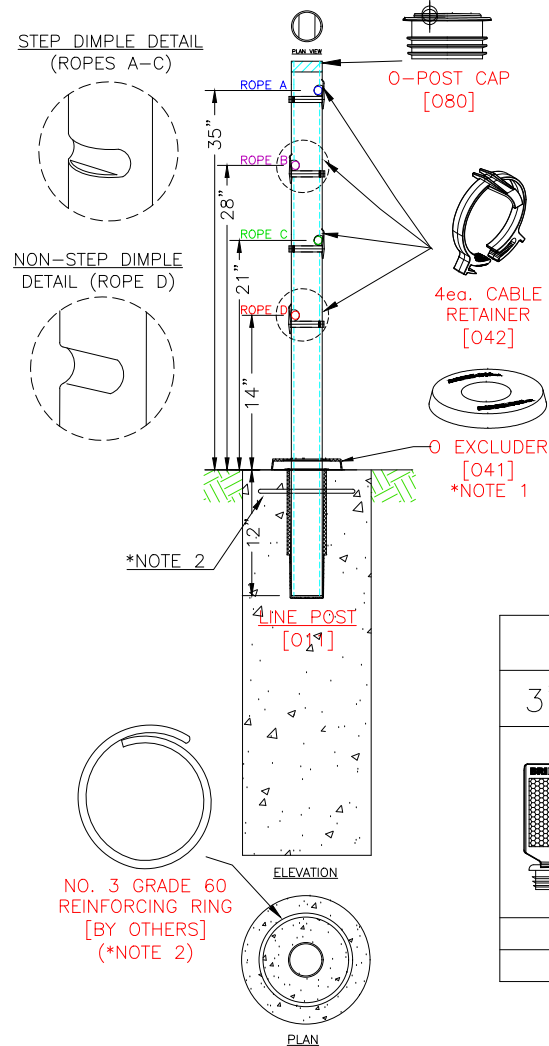


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Revision			MASH TL-3 4 ROPE 0-POST SYSTEM MGT DETAILS		
No.	Date	By	Date 3.08.2021	Drawn By JAR	Scale None
1.	1.24.2020	JAR			
2.	2.13.2020	JAR	MASH VERSION		Sheet No 2 OF 3
3.	1.11.2021	JAR			
4.	3.3.2021	JAR	Dwg. No.	MASH-OP-002	
5.	12.11.2023	JAR			

**LENGTH OF NEED
(LON) POST DETAILS**



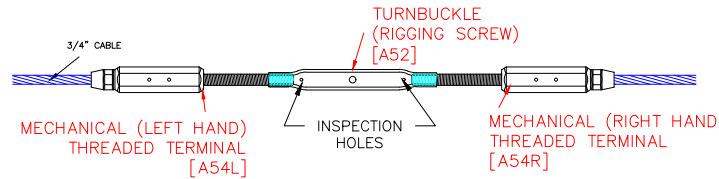
NOTES

1. ALL POSTS (EXCEPT WHERE DRIVEN POSTS ARE USED) SHALL HAVE AN EXCLUDER.
2. REINFORCING RING (BY OTHERS) WILL BE USED ACCORDING TO FOUNDATION SIZE. THE REINFORCING RING MAY BE OMITTED IF THE FOOTING IS PLACED IN A CONTINUOUS CONCRETE MOW STRIP.
3. SOCKET SHALL BE FLUSH WITH THE GROUND LINE, TO A MAXIMUM OF 1 INCH BELOW OR ABOVE GROUND LINE.
4. ALL POSTS SHALL BE INSTALLED WITH A POST CAP. REFLECTOR BLADES ARE AVAILABLE IN SINGLE AND DOUBLE SIDED 3" SQUARE AND 3" X 6" SIZES IN COLORS TO MEET THE MUTCD AND PROJECT SPECIFICATIONS. CONTRACT PLANS OR SPECIFICATIONS SHALL STIPULATE SIZE, COLOR AND POST FREQUENCY OF REFLECTOR BLADES.

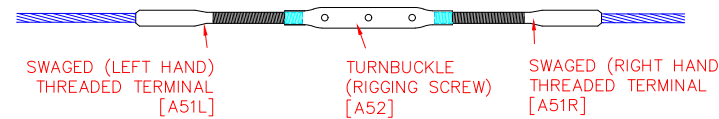
O-POST CAP BLADE OPTIONS

3" REFLECTOR BLADE		6" REFLECTOR BLADE	
SINGLE SIDED		SINGLE SIDED	
AMBER	O80-A31	AMBER	O80-A61
WHITE	O80-W31	WHITE	O80-W61
DOUBLE SIDED		DOUBLE SIDED	
AMBER	O80-A32	AMBER	O80-A62
WHITE	O80-W32	WHITE	O80-W62
3"X3" REFLECTIVE DECAL		3"X6" REFLECTIVE DECAL	
SEE *NOTE 4			

TURNBUCKLE & MECHANICAL THREADED TERMINALS



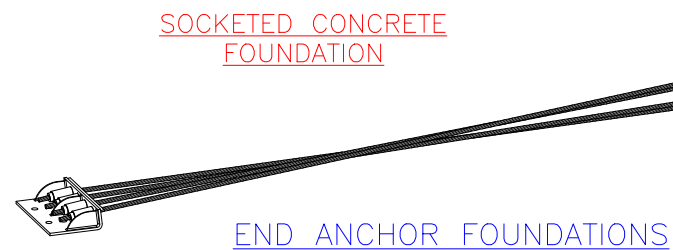
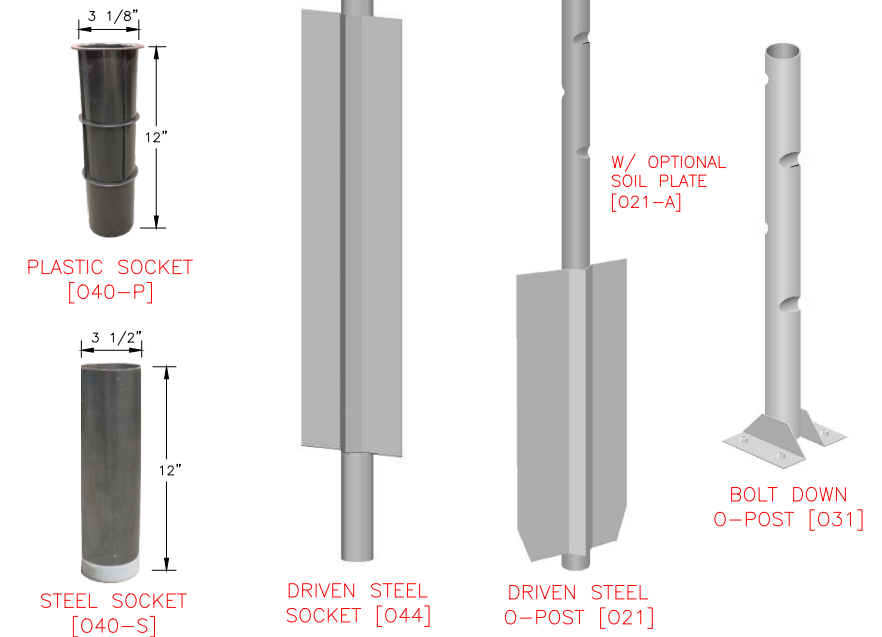
TURNBUCKLE & SWAGED THREADED TERMINALS



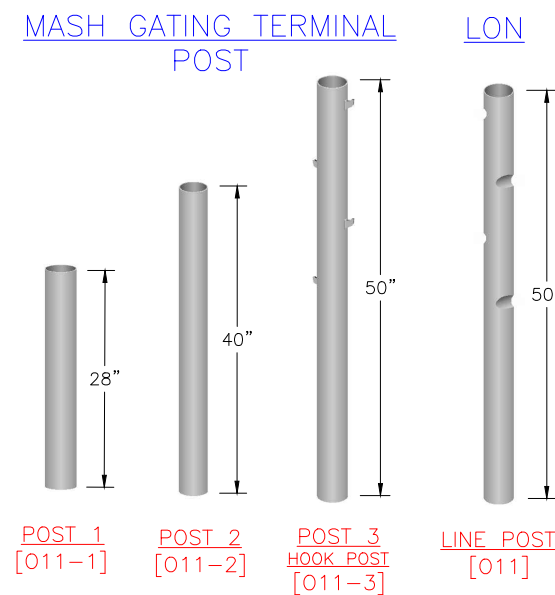
5. RIGGING SCREWS (TURNBUCKLES) SHALL NOT BE LOCATED BETWEEN THE MGT END ANCHOR AND POST 3 AND SHALL BE AT A MAXIMUM SPACING OF 1000' +5% ON EACH ROPE. RIGGING SCREWS MAY BE PLACED AGAINST POSTS WITHOUT RETAINER CLIP AND THERE IS NO LIMITATION OF THEIR LOCATION WITH ADJACENT ROPE RIGGING SCREWS.
6. TERMINALS SHALL BE INSTALLED A MINIMUM OF 1" INTO TURNBUCKLE.

POST MOUNTING METHODS (FOUNDATIONS)

SOCKETED CONCRETE FOUNDATION



POST COMPONENTS



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Revision			MASH TL-3 4 ROPE O-POST SYSTEM LON DETAILS		
No.	Date	By	Date	Drawn By	Scale
1.	2.13.2020	JAR	3.08.2021	JAR	None
2.	10.21.2020	JAR	MASH VERSION		Sheet No 3 OF 3
3.	1.13.2021	JAR	Dwg. No.	MASH-OP-002	
4.	2.3.2021	JAR			
5.	2.4.2022	JAR			