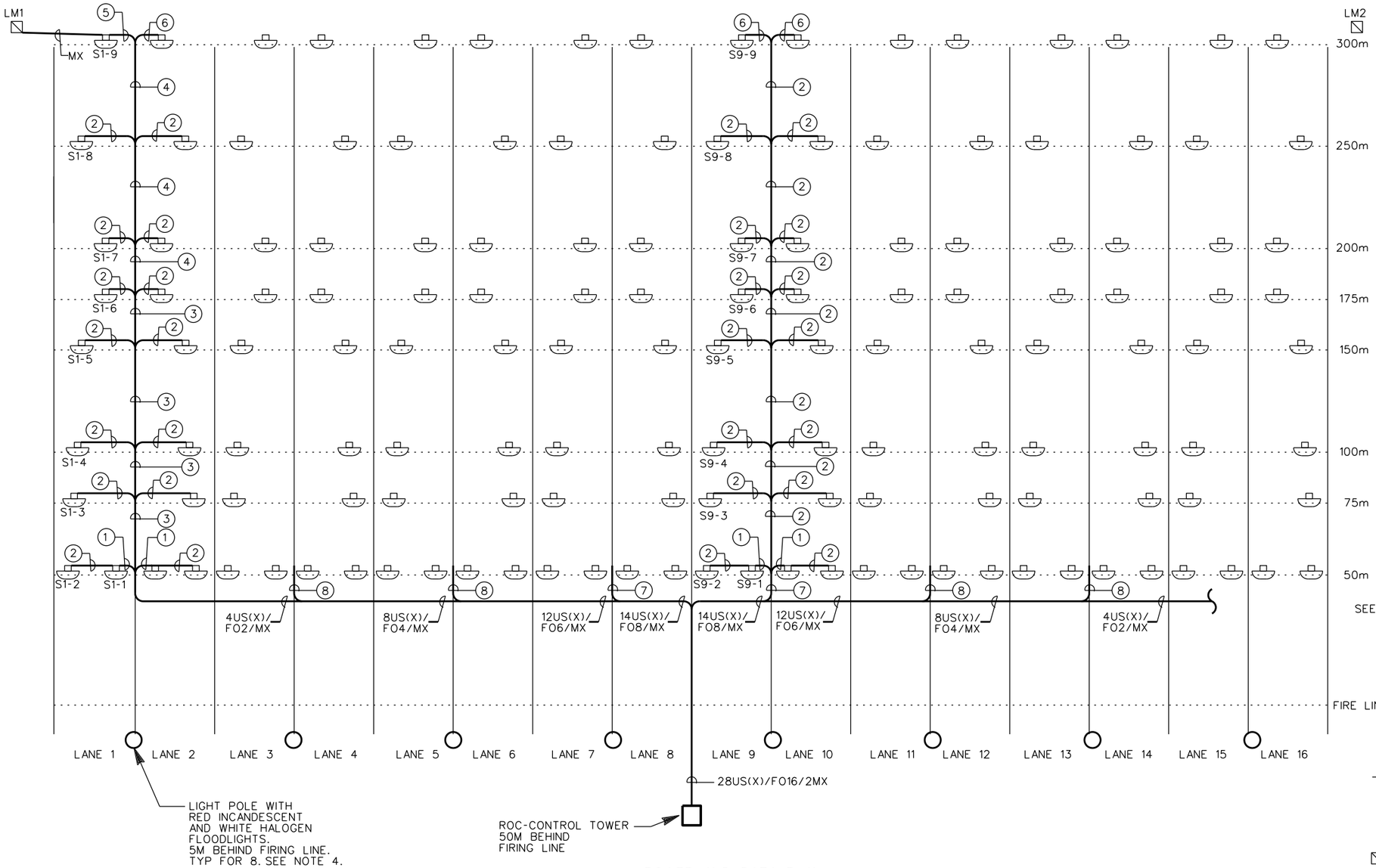
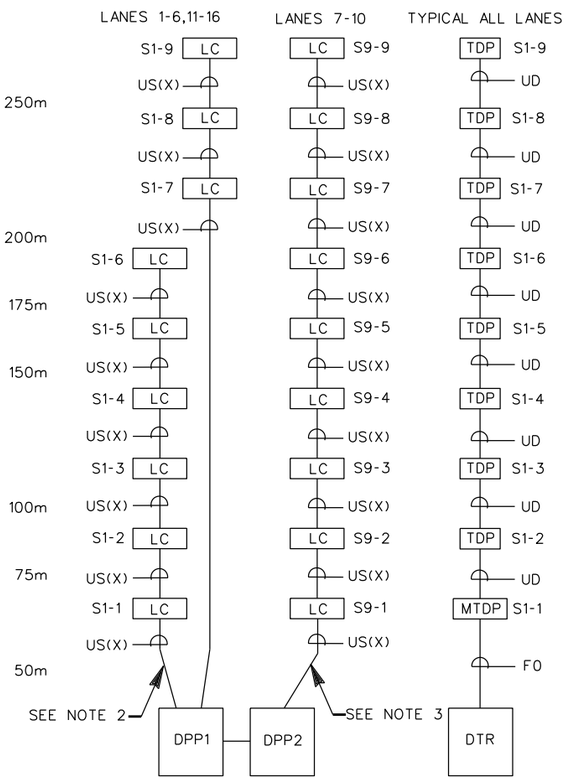


POWER AND DATA PLAN
NOT TO SCALE



SAMPLE POWER ONE-LINE
NOT TO SCALE

SAMPLE DATA ONE-LINE
NOT TO SCALE

LEGEND

	STATIONARY INFANTRY TARGET EMPLACEMENT
SX-Y	SIT - X REPRESENTS LANE NUMBER Y REPRESENTS TARGET NUMBER
LMX	LIMIT MARKER - X IS A REPRESENTATIVE NUMBER
FOX	DIRECT BURIED FIBER OPTIC CABLE - X INDICATES NUMBER OF 6-STRAND CABLES, X NOT SHOWN FOR SINGLE 6-STRAND.
MX	DIRECT BURIED POWER CABLE FOR RANGE LIMIT MARKER. X INDICATES SIZE IN AWG.
(Y)US(X)	DIRECT BURIED SECONDARY POWER - X INDICATES SIZE IN AWG AND (Y) INDICATES NUMBER OF POWER CIRCUITS. Y NOT SHOWN FOR SINGLE CIRCUIT.
DPPX	DOWNRANGE POWER PANEL - X IS A REPRESENTATIVE NUMBER.
(X)UD	DIRECT-BURIED, SHIELDED CATEGORY 5E COPPER NETWORK CABLE. X INDICATES NUMBER OF CABLES. X NOT SHOWN FOR SINGLE CABLE.
DTR	DATA TERMINATION RACK
MTDP	MASTER TARGET DATA PANEL
TDP	TARGET DATA PANEL
LC	TARGET EMPLACEMENT LOAD CENTER

NOTES:

1. DPPX MAY BE LOCATED NEAR OR ON THE ROC - CONTROL TOWER. LOCATE DPPX 5M MINIMUM BEHIND THE FIRING LINE WHEN MORE THAN 16 LANES ARE REQUIRED.
2. CIRCUIT LAYOUT IS TYPICAL FOR LANES 1-6 & 11-16.
3. CIRCUIT LAYOUT IS TYPICAL FOR LANES 9-15.
4. LIGHT POLE CONTAINS TWO HALOGEN AND TWO INCANDESCENT FLOOD LIGHTS.
5. CABLING SHOULD ENTER AND EXIT THE SIDE OR THE REAR OF EACH TARGET EMPLACEMENT. CABLING IS SHOWN ENTERING FRONT OF TARGET FOR DRAWING CLARITY ONLY.

(1) 2US(X)/FO/UD
(2) 2US(X)/2UD
(3) 4US(X)/2UD/MX
(4) 2US(X)/2UD/MX
(5) US(X)/UD/MX
(6) US(X)/UD
(7) 2US(X)/FO2
(8) 2US(X)/FO2

NOTES TO DESIGNER:

1. LAYOUT SHOWN IS FOR TYPICAL MRF. ACTUAL LAYOUT OF TRENCHING MUST BE COORDINATED AROUND EXISTING ENVIRONMENTAL AND UXO CONDITIONS.
2. CONDUCTOR SIZING MUST BE VALIDATED USING TARGET FEEDER VOLTAGE DROP CALCULATOR. CALCULATOR CAN BE FOUND ON RANGE DESIGN GUIDE.
3. CAT5E CABLE MUST HAVE AN INSTALLED LENGTH LESS THAN 295'. IF DATA CABLE LENGTH WILL EXCEED LIMIT FIBER OPTIC CABLE MUST BE INSTALLED.
4. TO MINIMIZE TRENCHING, COLLOCATE POWER AND DATA CABLES WHERE POSSIBLE.
5. THE DESIGNER MUST PROVIDE A COMPLETE SITE DRAWING, A COMPLETE DATA ONE-LINE DIAGRAM, AND A COMPLETE SECONDARY POWER ONE-LINE DIAGRAM AS PART OF THE DESIGN DOCUMENTS FOR SPECIFIC MRF PROJECTS. SAMPLE DIAGRAMS OR PLANS ARE NOT ACCEPTABLE.

US Army Corps of Engineers

Rev. *	Description	Date	Approved

Designed by: | Date: | Rev.
Dwn by: | Ckd by: | Design file no.
Reviewed by: | Drawing code:
Submitted by: | File name: Plot scale: Plot date:

U. S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
HUNTSVILLE, ALABAMA

30 APR. 2013

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

SAMPLE POWER AND DATA LAYOUT
MODIFIED RECORD FIRE RANGE

Sheet reference number:
MRF-E-01

Sheet of