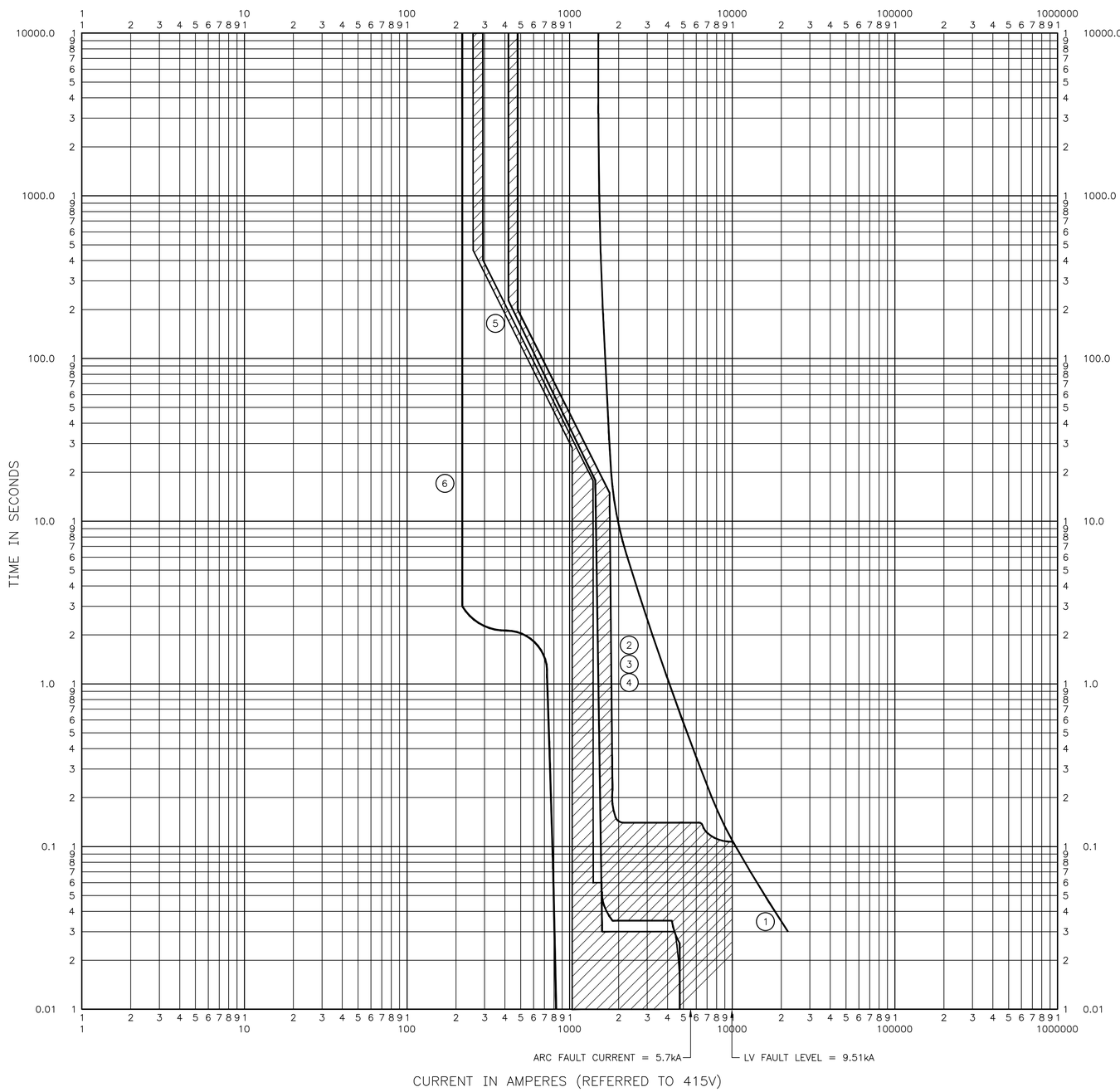

NO CHANGES TO THE PROTECTION GRADING SETTINGS WITHOUT REFERENCE TO THE DESIGNER

PROTECTION EQUIPMENT SCHEDULE

CURVE	CODE	SPECIFICATION	PARAMETER	VALUE	UNIT	INPUT	COMMENT
1		SUPPLY AUTHORITY HV FUSE	16A AT 22kV				
2	SPD	SERVICE PROTECTION DEVICE	In	630	A	–	TRIP UNIT MAX VALUE
		SCHNEIDER, COMPACT, NSX630F : 630A 36kA	Ir	400	A	DIAL	MAXIMUM VALUE
		SCHNEIDER, MICROLOGIC 5.3A, 630A TRIP UNIT	Ir	400	A	KEYPAD	FINE ADJUSTMENT
			tr	8	s	KEYPAD	
			Isd	4	xIr	DIAL	MAXIMUM VALUE
			Isd	4	xIr	KEYPAD	FINE ADJUSTMENT
			tsd	0.1	s	KEYPAD	
			I^2	OFF	–	KEYPAD	
			Ii	10.5	xIn	KEYPAD	
			LONG TIME PROTECTION Ir = 400A				
			SHORT TIME PROTECTION Isd = 1600A				
			INSTANTANEOUS CURRENT Ii = 6615A				
3	PSMS	MAIN SWITCHBOARD – PUMP STATION SUPPLY MAIN SWITCH	In	630	A	–	TRIP UNIT MAX VALUE
		SCHNEIDER, COMPACT, NSX630F : 630A 36kA	Ir	400	A	DIAL	MAXIMUM VALUE
		SCHNEIDER, MICROLOGIC 5.3A, 630A TRIP UNIT	Ir	400	A	KEYPAD	FINE ADJUSTMENT
			tr	8	s	KEYPAD	
			Isd	4	xIr	DIAL	MAXIMUM VALUE
			Isd	4	xIr	KEYPAD	FINE ADJUSTMENT
			tsd	0.1	s	KEYPAD	
			I^2	OFF	–	KEYPAD	
			Ii	10.5	xIn	KEYPAD	
			LONG TIME PROTECTION Ir = 400A				
			SHORT TIME PROTECTION Isd = 1600A				
			INSTANTANEOUS CURRENT Ii = 6615A				
4	SSMS	PUMP STATION SWITCHBOARD – STANDBY SUPPLY MAIN SWITCH	In	630	A	–	TRIP UNIT MAX VALUE
		SCHNEIDER, COMPACT, NSX630F : 630A 36kA	Ir	400	A	DIAL	MAXIMUM VALUE
		SCHNEIDER, MICROLOGIC 5.3A, 630A TRIP UNIT	Ir	400	A	KEYPAD	FINE ADJUSTMENT
			tr	8	s	KEYPAD	
			Isd	4	xIr	DIAL	MAXIMUM VALUE
			Isd	4	xIr	KEYPAD	FINE ADJUSTMENT
			tsd	0.1	s	KEYPAD	
			I^2	OFF	–	KEYPAD	
			Ii	10.5	xIn	KEYPAD	
			LONG TIME PROTECTION Ir = 400A				
			SHORT TIME PROTECTION Isd = 1600A				
			INSTANTANEOUS CURRENT Ii = 6615A				
5	MoCB	MOTOR CIRCUIT BREAKER	In	320A	A	–	TRIP UNIT MAX VALUE
		SCHNEIDER, COMPACT, NSX400F : 400A 36kA	Ir	260A	A	DIAL	MAXIMUM VALUE
		SCHNEIDER, MICROLOGIC 6.3 E–M, 320A TRIP UNIT	Ir	243A	A	KEYPAD	FINE ADJUSTMENT
			TRIP CLASS	10	–	KEYPAD	DEFINES tr VALUE
			Isd	5	x Ir	KEYPAD	FINE ADJUSTMENT
			Ig	OFF	**xIn	DIAL	MAXIMUM VALUE
			Ig	OFF	**A	KEYPAD	FINE ADJUSTMENT
			tg	OFF	**s	KEYPAD	
			LONG TIME PROTECTION Ir = 243A				
			SHORT TIME PROTECTION Isd = 1215.5A				
			INSTANTANEOUS CURRENT Ii = 4800A				
6		MOTOR BASED ON 140kW, 415V, FLC = 243A LOCKED ROTOR CURRENT = 1628A AUTOTRANSFORMER STARTING DRAWN FOR DUTY RUNNING CURRENT = (0.9 x FLC) = 218.7A AND STARTING CURRENT 3.4 x FLC = 825A					

CAUTION

VALUES SHOWN ARE INDICATIVE ONLY, DRAWING IS ONLY A PRESENTATION EXAMPLE OF A COMPLETED DESIGN

ISSUE	DATE	GRID	REVISION	DRN	REC	APPD
D	07/2021		ARC FAULT CURRENT AND CAUTION NOTE ADDED	PH	TL	EG
C	11/2019		BREAKER TRIP UNITS REVISED	PH	EG	NJ
B	02/2019		MPR AND tsd VALUES REVISED	PH	EG	NJ

DESIGN SURVEY NONE | VERTICAL DATUM NONE | COORDINATE SYS NONE | ASCON SURVEY NONE | DES REF | DES CALC E FONG | DES CHD K O'GRADY | DRN P HARVEY | Q.C. CHD S MEMORY | NORTH POINT

SUBMITTED 24/07/2017 E FONG (SIGNED) SENIOR ENGINEER – ELECTRICAL

RECOMMENDED 24/07/2017 K O'GRADY (SIGNED) PRINCIPAL ENGINEER – ELECTRICAL

APPROVED 24/07/2017 N JOHNSON (SIGNED) SNR PRINCIPAL ENGINEER – ELECT

ENGINEERING

WATER CORPORATION

ELECTRICAL STANDARD SWITCHBOARD DESIGNS
SMALL PUMP STATIONS
ELECTRICAL PRIMARY DESIGN – DRAWING EXAMPLE
WASTEWATER 440A – PROTECTION GRADING CURVES – PART 1

FILE | PROJECT | PLAN MN01–32–4.1 | CAD | ISSUE D | ORIGINAL SHEET SIZE A1 | MF

566 810

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