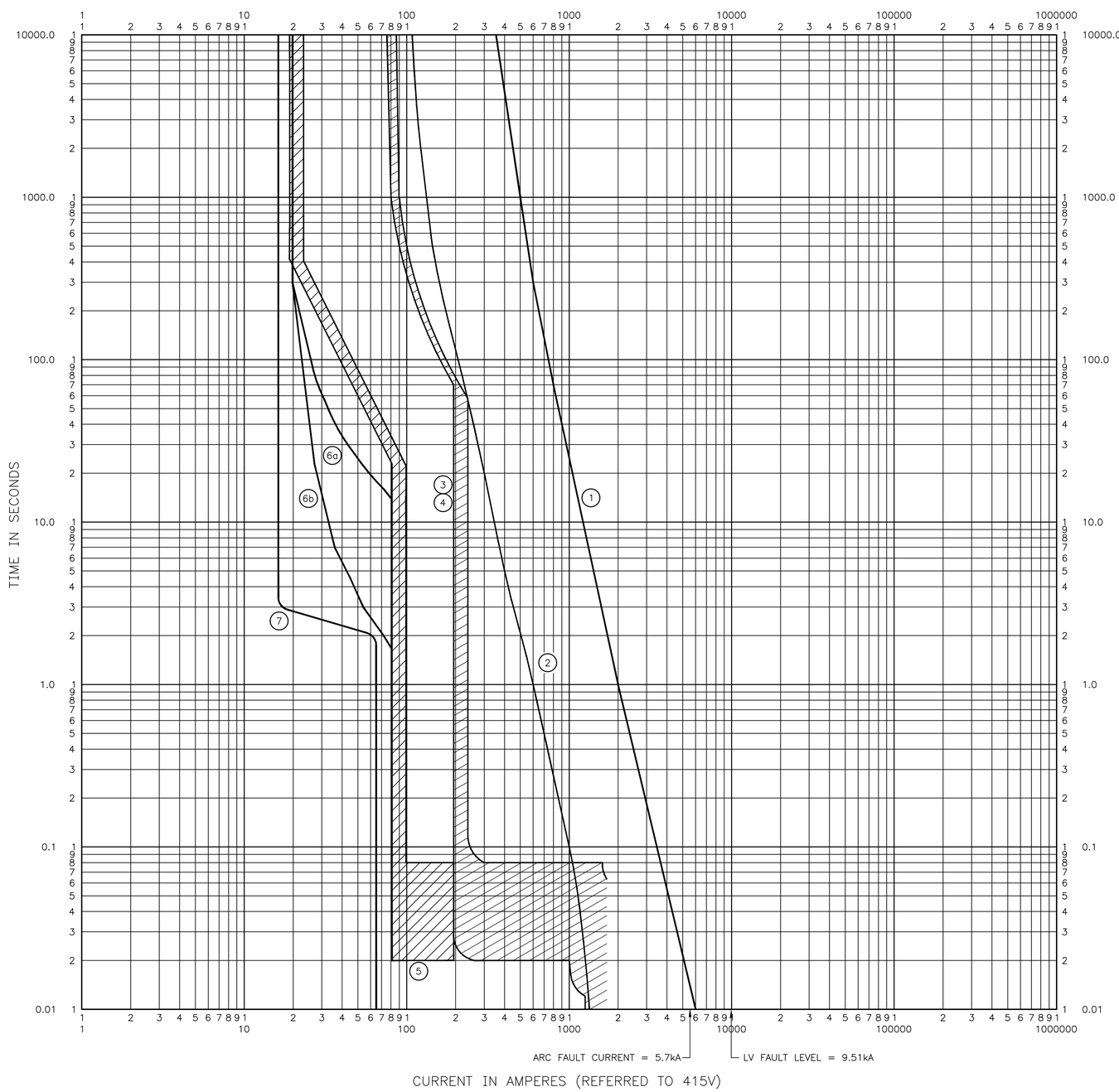

PROTECTION EQUIPMENT SCHEDULE

CURVE	CODE	SPECIFICATION	PARAMETER	VALUE	UNIT	INPUT	COMMENT
1		SUPPLY AUTHORITY LV FUSE	315A				
2	SPD	SERVICE PROTECTION DEVICE	80A (INSTALLED BY SUPPLY AUTHORITY)				
3	NSMS	NORMAL SUPPLY MAIN SWITCH	In	100	A	–	TRIP UNIT RATING
		SCHNEIDER ELECTRIC, COMPACT NSX100F : 100A, 36kA,	Io	80	A	DIAL	
		COMPLETE WITH MICROLOGIC 2.2, 100A TRIP UNIT	Ir	0.9	x Io	DIAL	
			tr	16	s	–	NON ADJUSTABLE
			Isd	3	x Ir	DIAL	
			tsd	0.02	s	–	NON ADJUSTABLE
			Ii	1500	A	–	NON ADJUSTABLE
			LONG TIME PROTECTION Ir = 72A				
			SHORT TIME PROTECTION Isd = 216A				
			INSTANTANEOUS CURRENT Ii = 1500A				
4	SSMS	STANDBY SUPPLY MAIN SWITCH	In	100	A	–	TRIP UNIT RATING
		SCHNEIDER ELECTRIC, COMPACT NSX100F : 100A, 36kA,	Io	80	A	DIAL	
		COMPLETE WITH MICROLOGIC 2.2, 100A TRIP UNIT	Ir	0.9	x Io	DIAL	
			tr	16	s	–	NON ADJUSTABLE
			Isd	3	x Ir	DIAL	
			tsd	0.02	s	–	NON ADJUSTABLE
			Ii	1500	A	–	NON ADJUSTABLE
			LONG TIME PROTECTION Ir = 72A				
			SHORT TIME PROTECTION Isd = 216A				
			INSTANTANEOUS CURRENT Ii = 1500A				
5	MoCB	MOTOR CIRCUIT BREAKER	In	40	A	–	TRIP UNIT RATING
		SCHNEIDER ELECTRIC, COMPACT NSX100B : 100A, 25kA,	Io	18	A	DIAL	
		COMPLETE WITH MICROLOGIC 2.2, 40A TRIP UNIT	Ir	0.9	x Io	DIAL	
			Isd	5	x Ir	DIAL	
			tr	16	s	–	NON ADJUSTABLE
			tsd	0.08	s	–	NON ADJUSTABLE
			Ii	600	A	–	NON ADJUSTABLE
			LONG TIME PROTECTION Ir = 16.2A				
			SHORT TIME PROTECTION Isd = 90A				
			INSTANTANEOUS CURRENT Ii = 600A				
6	MPR	MOTOR PROTECTION RELAY					
		SPRECHER + SCHUH, CEP7	SET AT 18A, CLASS 10				
6a		COLD					
6b		HOT					
7		MOTOR					
		BASED ON 11kW, 415V, MOTOR, FLC = 18A LOCKED ROTOR CURRENT = 128A AUTOTRANSFORMER STARTING DRAWN FOR DUTY RUNNING CURRENT = (0.9 x FLC) = 16.2A AND STARTING CURRENT = 3.6 x FLC = 64.9A					

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

ARC FLASH HAZARD ASSESSMENT RESULTS
STAGE 1 OR 2 ASSESSMENT
MAIN SWITCHBOARD

ASSESSED AS CAT 0 USING THE SHORT-HAND METHOD
DS29 VERSION 1, REVISION 2, TABLE 8A
ROW NUMBER : 6
SWITCHBOARD SUPPLIED FROM : 315kVA TRANSFORMER
CAT PPE : CAT 0

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

ISSUE	DATE	GRID	REVISION	DRN	REC	APPD
E	07/2021		ARC FAULT CURRENT AND CAUTION NOTE ADDED	PH	TL	EG
D	11/2019		CURVES 5, 6 AND ARC FLASH ASSESMENT TABLE REVISED	PH	EG	NJ
C	02/2019		CURVE 5 MoCB REVISED	PH	EG	NJ
B	05/2018		TRIP UNIT SETTINGS AND ARC FLASH TABLE REVISED	PH	EF	KOG

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 100A – PROTECTION GRADING CURVES

FILE | PLAN MN01-31-4 | CAD | ISSUE E | ORIGINAL SHEET SIZE A1
PROJECT | MF

STANDARDS\APPROVED\MN01\MN01-031-004-01E 13:26 26/04/2022 HARVEYPO/NB46193

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