Table showing which drawing applies to which 2357 unit

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These drawings show a forty year old domestic property which is to undergo major refurbishment which includes a total rewire of the premises (new wiring, accessories and appliances) and the installation of a new workshop in the garden. The installation forms part of a 230 V single-phase TN-C-S supply with a declared $Z_e$ of 0.19 $\Omega$ and PFC of 1.2 kA.
KEY

- 2-gang socket-outlet
- 1800mm IP 65 twin luminaire
- Distribution Board
- Flood light c/w PIR
- Wall mounted Luminaire
- Multi-gang single-pole switch

Site Plan. Scale 1:200

- Wooden five-bar gate 2.4 m width
- Proposed Route for SWA Supplying Workshop
Building utilisation
The attached drawings show the proposed refurbishment of the shop/offices and shower block at the Touring Caravan Park.

Building construction
The construction of the two single-storey building are as follows:

Walls
External walls consist of fair-faced brickwork, a cavity and an inner leaf of concrete blockwork. Internal walls consist of concrete blockwork with structural supports where required. All walls have a plaster finish throughout.

Floors
The floor is to be a standard raft of reinforced concrete with a 100mm screed finish.

Floor finishes
Floor finishes are as follows:
- Carpet: Shop floor and office areas
- Non-slip vinyl covering: Throughout public shower and toilet areas
- Compressed treated screed: Service intake and store rooms

Ceilings
Ceilings are as follows:
- All ceilings in the shop/office block are to be suspended 600 mm x 600 mm grid with removable tiles 2400 mm above ffl in all areas, with the exception of the service intake.
- All ceilings in the shower/toilet block are to be plasterboard with moisture proof paint with access panels where required in all areas, 2400 mm above ffl, with the exception of the service intake room.

Roof
The roof will be tile hung on wood truss.

Electrical supply
The incoming supply is 400 / 230 V 50 Hz three-phase four-wire, which together with the installation forms part of a TN-C-S system. The declared value of $Z_e$ is 0.08 Ω and the prospective fault current is 5 kA. Consumer’s control unit (CCU) together with metering equipment are housed in the service intake room located in the shop/office block. The supply to the shower/toilet block will be wired using XLPE multi-core steel-wire-armoured cable.

Electrical installation
This is to be carried out in accordance with BS 7671 and any statutory/non statutory regulations that may apply. All materials and practices employed are to comply with the relevant standards. All wiring systems are to be surface mounted PVC conduit on walls with a metal trunking in the ceiling void. Accessories will be surface mounted.

All wiring to the pitch supplies located around the park and to the park lighting will be using XLPE multi-core steel-wire-armoured cable.

Telephones, security/fire alarm and information technology systems
To be installed by specialist installers.

Heating and ventilation
To be installed by specialist contractors.

Temporary site supplies
Installation and maintenance is part of the general electrical contract.
SHOWER BLOCK SOUTH ELEVATION
SCALE 1:50

SHOP NORTH ELEVATION
SCALE 1:50

Key

600 x 600 mm recess modular luminaire
1800 mm IP 65 surface mounted fluorescent luminaire
2-gang switched 13 A socket-outlet
Shaver outlet unit
Distribution Board
6 kW Electric Water Heater (immersion type)
Building Construction
The construction of this building is as follows:

Walls
External walls consist of standard brick, cavity and inner leaf blockwork. Internal walls are blockwork to roof height, with exception of the toilet/restroom area where blockwork extends to 2.5 m above ffl.

Floors
The floor is to a standard raft of reinforced concrete with a 100 mm compressed screed finish. Floor finishes are to be epoxy treated throughout.

Ceilings
The underside of the steel clad roof is to be used throughout with the exception of the toilet/restroom area which will have a plasterboard ceiling, 2.4 m above ffl, 200 mm void and chipboard fixed on wood truss which will form a mezzanine storage facility.

Roof
The roof will be steel clad sheeting supported by a steel frame. Steel uprights will be enclosed by fire proof boarding.

Electrical Supply
The 11 kV/400/230 V Transformer supply to the Main Distribution Panel will form a TN-C-S supply having a declared Zc of 0.008 Ω and prospective fault current declared as 50 kA. Standby (essential) systems will be supplied by the standby generator should the supply system fail.

Electrical Installation
All wiring systems are to be a mixture of PVC and metallic containment systems. Main metallic trunking routes are shown. Surface conduit will link trunking to final points. All machines will require correct starting/control equipment. Accessories must be suitable for the given environment.

Telephone/Security/Security Systems
Containment systems to be installed as part of the general electrical installation contract, wiring and connections to be carried out by specialist contractors.

Fire Alarm
To be installed as part of the general electrical installation contract

HVAC
To be installed by specialist contractors

Temporary Site Supplies
Installation and maintenance is part of the general electrical installation contract.
EAST ELEVATION SCALE 1:100

STEEL CLAD ROOF SUPPORTED ON STEEL FRAME FORMING SHALLOW Apex AT NORTH/SOUTH ELEVATIONS

STEEL FRAME CONSTRUCTION WITH BRICK INFILL, CAVALY AND INNER CONCRETE BLOCK

1000 mm REINFORCED CONCRETE SLAB

1000 mm REINFORCED CONCRETE SLAB

TYPICAL CROSS SECTION OF SERVICE TRENCH
SCALE 1:10

5 mm STEEL CLAD AT ACCESS POINTS

ELECTRICAL SERVICES INCLUDING DISTRIBUTION RING, STREET AND SECURITY LIGHTING, DATA/TELECOMS AND SECURITY SYSTEMS TRUNKING

MECHANICAL SERVICES

REINFORCED CONCRETE WALL

CONCRETE BASE

100 mm COMPRESSED SCREED

STEEL CLAD ROOF AT 100 mm

Army Barracks
New Sub-Station

Elevations

Drawing Number
2357-C-03
These drawings show a forty year old domestic property. The installation forms part of a 230 V single-phase TN-C-S supply with a declared Z₀ of 0.19 Ω and PFC of 1.2 kA. The supply company main fuse located in the service ‘cut out’ is a 100 A BS 1361. The wiring appears to be twenty years old.
West Elevation
Scale 1:100

Workshop Plan
Scale 1:100

KEY
- 2-gang socket-outlet
- 1800mm IP 65 twin luminaire
- Distribution Board
- Flood light c/w PIR
- Wall mounted Luminaire
- Multi-gang single-pole switch

Proposed Route for SWA
Supplying Workshop

Wooden five-bar gate 2.4 m width

Site Plan. Scale 1:200

City & Guilds
2357 Assignment
House ‘As Fitted’

Site Plan
Elevations and Workshop Plan

Drawing Number
2357-AM-03
Notes

Building utilisation
The attached drawings show the as fitted drawings of the shop/offices and shower block at the Touring Caravan Park.

Building construction
The construction of the two single-storey building are as follows:

Walls
External walls consist of fair-faced brickwork, a cavity and an inner leaf of concrete blockwork. Internal walls consist of concrete block-work with structural supports where required. All walls have a plaster finish throughout.

Floors
The floor is a standard raft of reinforced concrete with a 100mm screed finish.

Floor finishes
Floor finishes are as follows:
- Carpet: Shop floor and office areas
- Non-slip vinyl covering: Throughout public shower and toilet areas
- Compressed treated screed: Service intake and store rooms.

Ceilings
Ceilings are as follows:
- All ceilings in the shop/office block are suspended 600 mm x 600 mm grid with removable tiles 2400 mm above ffl in all areas, with the exception of the service intake.
- All ceilings in the shower/toilet block are plasterboard with moisture proof paint with access panels where required in all areas, 2400 mm above ffl, with the exception of the service intake room.

Roof
The roof is tile hung on wood truss.

Electrical supply
The incoming supply is 400 / 230 V 50 Hz three-phase four-wire, which together with the installation forms part of a TN-C-S system. The declared value of Z_e is 0.08 Ω and the prospective fault current is 5 kA. Consumer’s control unit (CCU) together with metering equipment are housed in the service intake room located in the shop/office block. The supply to the shower/toilet block is wired using XLPE multi-core steel-wire-armoured cable.

Electrical installation
All wiring systems are surface mounted PVC conduit on walls with a metal trunking in the ceiling void. Accessories will be surface mounted.

All wiring to the pitch supplies located around the park and to the park lighting are wired using XLPE multi-core steel-wire-armoured cable.
Shower Block

150 W Son-T Luminaires mounted on 5 m Standards

Playground

Scale 1:500

City & Guilds

2357 Assignment

Touring Caravan Park ‘As Fitted’

Site Plan

Drawing Number 2357-BM-02

River
SHOWER BLOCK SOUTH ELEVATION
SCALE 1:50

SHOP NORTH ELEVATION
SCALE 1:50

Key

600 x 600 mm recess modular luminaire
1800 mm IP 65 surface mounted fluorescent luminaire
2-gang switched 13 A socket-outlet
Shaver outlet unit
Distribution Board
6 kW Electric Water Heater (immersion type)
13 A Fused Spur Connection Unit for Hand Driers
13 A Fused Spur Connection Unit for Hair Driers
13 A Fused Spur Connection Unit
Vending Machines (720 W)
Building Construction
The construction of this building is as follows:

Walls
External walls consist of standard brick, cavity and inner leaf blockwork. Internal walls are blockwork to roof height, with exception of the toilet/restroom area where blockwork extends to 2.5 m above ffl.

Floors
The floor is to a standard raft of reinforced concrete with a 100 mm compressed screed finish. Floor finishes are epoxy treated throughout.

Ceilings
The underside of the steel clad roof is used throughout with the exception of the toilet/restroom area which is a plasterboard ceiling, 2.4 m above ffl. 200 mm void and chipboard fixed on wood truss which will form a mezzanine storage facility.

Roof
The roof is steel clad sheeting supported by a steel frame. Steel uprights will be enclosed by fire proof boarding.

Electrical Supply
The 11 kV/400/230 V Transformer supply to the Main Distribution Panel forms a TN-C-S supply having a declared Ze of 0.008 Ω and Prospective Fault Current declared as 50 kA.

Generator Set
Standby (essential) systems are supplied by the standby generator should the supply system fail. The generator set is a 700 kVA 400 V three-phase set with six cylinder 18.1 litre in line diesel drive at a constant 1500 rpm.

Electrical Installation
All wiring systems are a mixture of PVC and metallic containment systems. Main metallic trunking routes are shown. Surface conduit links trunking to final points. All machines have correct starting/control equipment. Accessories are suitable for the given environment.
STEEL CLAD ROOF SUPPORTED ON STEEL FRAME FORMING SHALLOW APPEX AT NORTH/SOUTH ELEVATIONS

STEEL FRAME CONSTRUCTION WITH BRICK INFILL, CAVITY AND INNER CONCRETE BLOCK

1000 mm REINFORCED CONCRETE SLAB

STEEL COMPRESSED SCREED

5 mm STEEL CLAD AT ACCESS POINTS

REINFORCED CONCRETE WALL

CONCRETE BASE

ELECTRICAL SERVICES INCLUDING DISTRIBUTION RING, STREET AND SECURITY LIGHTING, CAT TELECOMS AND SECURITY SYSTEMS TRUNKING

MECHANICAL SERVICES

TYPICAL CROSS SECTION OF SERVICE TRENCH

SCALE 1:10

EAST ELEVATION SCALE 1:100
Communal room

Workshop
Timber construction workshop built on a concrete base

Scale 1:100

Not to scale

2357

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Sunnymead Sheltered Accommodation Ground Floor Plan

Layout of refurbishment

Drawing Number 2357-A2-01
Sunnymead Sheltered Accommodation
First Floor Plan

Key
- 50 W metal halide outdoor luminaire
- Pendant light point
- 1500 mm twin fluorescent luminaire
- Pull operated switch
- One-way switch (M denotes multi-gang)
- Two-way switch
- Distribution board
- Cooker (7 kW in communal kitchen, 1 kW dual fuel in accommodation units)
- 3.6 kW Washing machine
- 4 kW tumble drier

Scale: 1:100
Block 1 is a forty year old building which is to undergo renovation work. The building is constructed of outer brick with cavity and inner block work. All internal walls are block work with plaster finish. Floors- the ground floor is concrete base with screed. First floor is tongue and groove floor board on wooden joists. All ceilings are aertex. Roof is tiled on wood truss and felt.

All stair, corridor and outside lighting is controlled by time clock/daylight sensor combination.

Block 2 is a newly completed and is in use by residents whilst work to block 1 is carried out.

Notes

Electrical Supply
Three-phase TN-C-S. 
Ze= 0.16 Ω. 
PFC= 2.5 kA
Key
- Consumer's Control Unit
- 1800 mm twin IP65 luminaire
- 1500 mm twin luminaire
- Wall mounted luminaire with PIR controller
- 28 W 2D bulkhead
- Recess compact fluorescent luminaire downlight
- 13 A switched socket-outlet
- Two-way switch
- Fused connection unit with neon indicator
- One-way switch
- Multi-gang switch point
- IP44 socket-outlet to BS EN 60898
- Earth rod location

Scale 1:50

Glasshouse

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Barnsmead Nursery

New bedding plant sales centre and office
Ground Floor

Drawing Number 2357-B2-02
All accessories in offices are mounted on three-compartment dado trunking.

Notes

Electrical Supply
230 V single-phase TT system

Building Construction
Glasshouse - steel framed with brick dwarf wall and toughened glass. Floor is treated screed.

Office/shop - wood framed with fairfaced brick outer skin and boarded inner. All partition walls to be metal framed with plasterboard finish. Suspended 600x600 mm tiled suspended ceiling in all areas except staircase and store rooms.
Barnsmead Nursery

New bedding plant sales centre and office

Site Plan

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Notes
Supply detail
230/400 V TN-S
Ze- 0.12 Ω
PFC- 3.5 kA

Building
Construction
The workshop section of this building is steel framed and steel clad with blockwork inner walls. The mezzanine floor is wood board mounted on wooden joists which also serves as the ceiling for the storeroom below (open joist). Workshop floors are bare screed with anti-slip oil resistant treatment.

The office section is outer fairfaced brick with inner leaf blockwork. All inner walls are plaster finish. Ceilings are suspended 600 x 600 mm tiles on grid 2400 mm above ffl. Floors are carpet throughout with exception of the toilets, restroom and stores which have an anti-slip sealed covering.

Drawing
Number
2357-C2-02

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