PWA CAD STANDARDS MANUAL

ROADS & DRAINAGE

Version 4.0

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Acknowledgement

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We would also like to place on record our appreciation to the coordinators who rendered valuable advice and guidance in bringing these standards to completion and in editing the text for publication.

Special thanks to

Director of Roads Affairs

Director of Drainage Affairs

Director of Building Affairs

Document Control

Version	Date	Modified by	Agency	Purpose
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Additions / Revisions

This standard is intended to be neither static nor all-inclusive and thus will be updated and enhanced as appropriate. Suggestions for improvements are strongly encouraged so that subsequent updates will reflect the input and needs the current format will undergo versioning or changes when new technologies become available. Addendum to these standards will be issued when such changes are made.

In general, changes to these standards shall occur because of three primary factors:

1) Additional users and functionality.
2) Discovery of, and subsequent fixing of latent errors and omissions.
3) Changes to utilize advantage of latest technologies and software versions.

Therefore, it is reasonable to expect updates to this document. Users are cautioned to inquire about changes within. In order to ensure the reader is using the latest version, a revision date will be shown in the document control.

CAD STANDARDS : Control and Authorization

The Standards are under Information Services Department Management.

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CAD STANDARDS: Distribution

The Master or Original Version of the PWA CAD Standards Manual is held electronically in ASHGHAL's Information Services Department. The copy of this PWA CAD Standards Manual is available on our website (www.Ashghal.gov.qa or www.Ashghal.com) and with all PWA department directorates.

CAD STANDARDS: Authorization and Change

This PWA CAD Standards Manual will undergo continuous reviews and updates, subject to change, by the Management of ASHGHAL. Any changes or updates will be announced on our website (www.Ashghal.gov.qa or www.Ashghal.com).

DISCLAIMER:

Table of Contents

1 OVERVIEW

1.1 Purpose

Public Works Authority - Engineering Information Section (PWA - ISD / EIS) produced this manual with the objective to ensure compatibility and transference of digital data between all parties. The goal is to create an environment for seamless integration between CAD and GIS. The document will achieve this through setting out the standards for drawing data production. This will then enable drawing data to be incorporated into the GIS through:

i. Simple data translation.
ii. Common language.
iii. Ease of data storage.
iv. Common medium of information exchange.
v. Drawings and data integration with other applications.

For complete guidelines on GIS database development refer to PWA GIS Standards Manual.

1.2 Application

The Computer Aided Design (CAD) Standards Manual shall be applied to all disciplines in all offices and design houses, working on PWA projects. The scope of this document is to provide guidelines and procedures for adopting AutoCAD standards in preparing design and as-built drawings for seamless integration with GIS. These standards will address the following:

i. Drawing file naming convention
ii. Layers names and layer properties.
iii. Symbol blocks & Title blocks.
iv. Drafting standards.
v. Colour usage associated with line widths for all Roads & Drainage drawings.

The standards are to be applied for all drawings from Concept through to As Built handover stage.

2 STANDARDS

2.1 Introduction

These standards are aimed to serve all the departments within Ashghal and consultants / contractors. It has recognized that all workflows have some common characteristics, enabling them potentially to achieve a level of interoperability through the use of common standards for various functions. It is intended that such standards and specifications will enable interoperability between heterogeneous workflows and improved integration of workflows, thereby improving the opportunities for the effective use of workflow process within Ashghal and the outside domains.

Ashghal is committed to enforce the standards of information delivery that ensures predictability and the ability to easily reuse information. As a result this CAD standard will be included as part of the contractual requirement for delivery of digital information to Ashghal.

This document stipulates the CAD standards to be adopted on projects from design to construction.

This standard is intended to be neither static nor all-inclusive and thus will be updated and enhanced as appropriate. Suggestions for improvements are strongly encouraged so that subsequent updates will reflect the input and needs. Addendum to these standards will be issued when such changes are made.

2.2 Objectives

This document is intended to address the following principal objectives:

i. To ensure that the CAD drawing files produced by all CAD users are formed and referenced in a consistent and compatible manner
ii. To standardise the format and content of CAD files throughout where these are common to all disciplines; such as drawing borders, title blocks, north arrows, grid lines etc.,

iii. To ensure a consistent approach to CAD activities and best practices across all users. Benefits include common levels of understanding and competency, which will facilitate more effective working.

iv. To provide the means by which all CAD users and other staff involved in drawing production are kept informed of changes to these standards and requirements.

3 CAD

3.1 General

Drawings that are produced by CAD that are subsequently amended with manual corrections will not be permitted, as this can lead to future revision discrepancies.

3.1.1 File Setup

Ashghal will provide consultants and contractors an AutoCAD template on a CD- ROM with project boundaries containing policy plan and topographic features as base map (site Plan) which are geo referenced as per QND 1995 (Qatar National Grid). All the features of the projects must be drawn onto that template only.

It is the responsibility of the submitting party to organize drawing information coherently as mentioned in the standard and maintain a reasonable file size.

3.2 Ashghal Standard Layer Templates

CAD drawings will be created using the latest versions of the Ashghal Standard Layer Templates provided with this manual (refer to Appendices). CAD users are not permitted to edit or modify the templates.

3.3 Drawing Borders

Details of drawing border and its filename for AutoCAD are as Table 1 below.

Table 1 :

Drawing Borders – AutoCAD		
Drawing Size	Description	File Name (.dwg)
A1	A1 – right hand title block	PWA_TEMPLATE-A1.dwg

4 FILING AND STORAGE OF DRAWINGS

4.1 Filing and Storage of Drawings

In order that the project information is readily accessible it is essential that all drawing data is filed and stored in a consistent and logical manner.

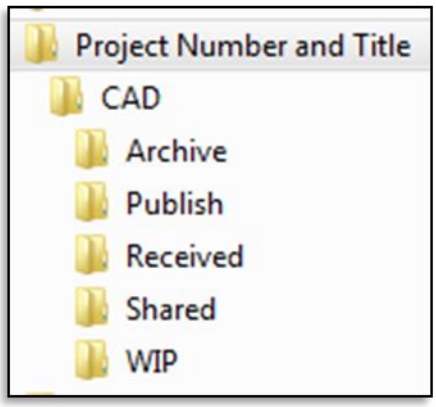
4.2 Electronic Copies

All electronic drawing and sketch files associated with a particular project will be filed within the project folder.

4.3 Folder Structure

The standard folder structure for CAD data is as shown in Figure 1 below, it adopts the Code of Practice BS1192:2007 on Common Data Environment for collaborative working.

Figure 1:



4.4 Folder Name: Project Number and Title

This can be under the main office or discipline folder, or, if the number of files would render lists unwieldy, then further sub-folder are permissible. Folder names are not to include any symbols.

4.5 Sub Folder Name: CAD

Contains drawings and digital information organized as shown in Figure 1.

In a multi-disciplinary office the main sub-folders defined below may be sub-divided as necessary into the relevant disciplines:

4.5.1 Sub Folder Name: WIP (Work in Progress)

Contains the current working project drawings and sketches. This is where all files currently in the iterative process of design have not yet been approved to be shared.

This folder will contain further sub-folders which can be amended to suit Consultant's individual requirements.

4.5.2 Sub Folder Name: Shared

Contains verified, checked and approved CAD data for use by others for reference. This folder will hold the project specific drawings such as title frames, references, images, etc.

This folder will contain further sub-folders which can be amended to suit Consultant's individual requirements.

4.5.3 Sub Folder Name: Published

Contains all final published sheet files, figures or sketches. This folder must contain the last issued Models / Xref's. Data filed in this area will never be deleted or overwritten, but will remain until archived.

4.5.4 Sub Folder Name: Archive

Contains all previous issues and superseded data. This folder is to allow retrieval of previously issued drawings at certain stages of design decisions. This folder will provide an audit trail of documentation and changes through the life of the project.

4.5.5 Sub Folder Name: Received

Contains read only copies of design data which have been received from Third Party sources or Stakeholders and will contain further sub-folders to identify the source and date of receipt.

The Received folder can be directly under the main project folder structure, under CAD or wherever the Consultant's find it suitable.

The vital concern is that a folder must be dedicated for incoming issues, where a full archive of all received information is stored with an audit trail that is related to the sending company and the date received and the current copy is easily identifiable throughout the project.

4.6 Collaborative Working

i. Within WIP folder each discipline can create a folder structure to suit its needs.

ii. Models and sheets in a discipline WIP area may reference own discipline models in WIP, but models from other disciplines must be referenced from the Shared area.

iii. Common resource files such as title sheets, mapping, surveys, imagery and other shared CAD data must be available to all disciplines in the Shared area.

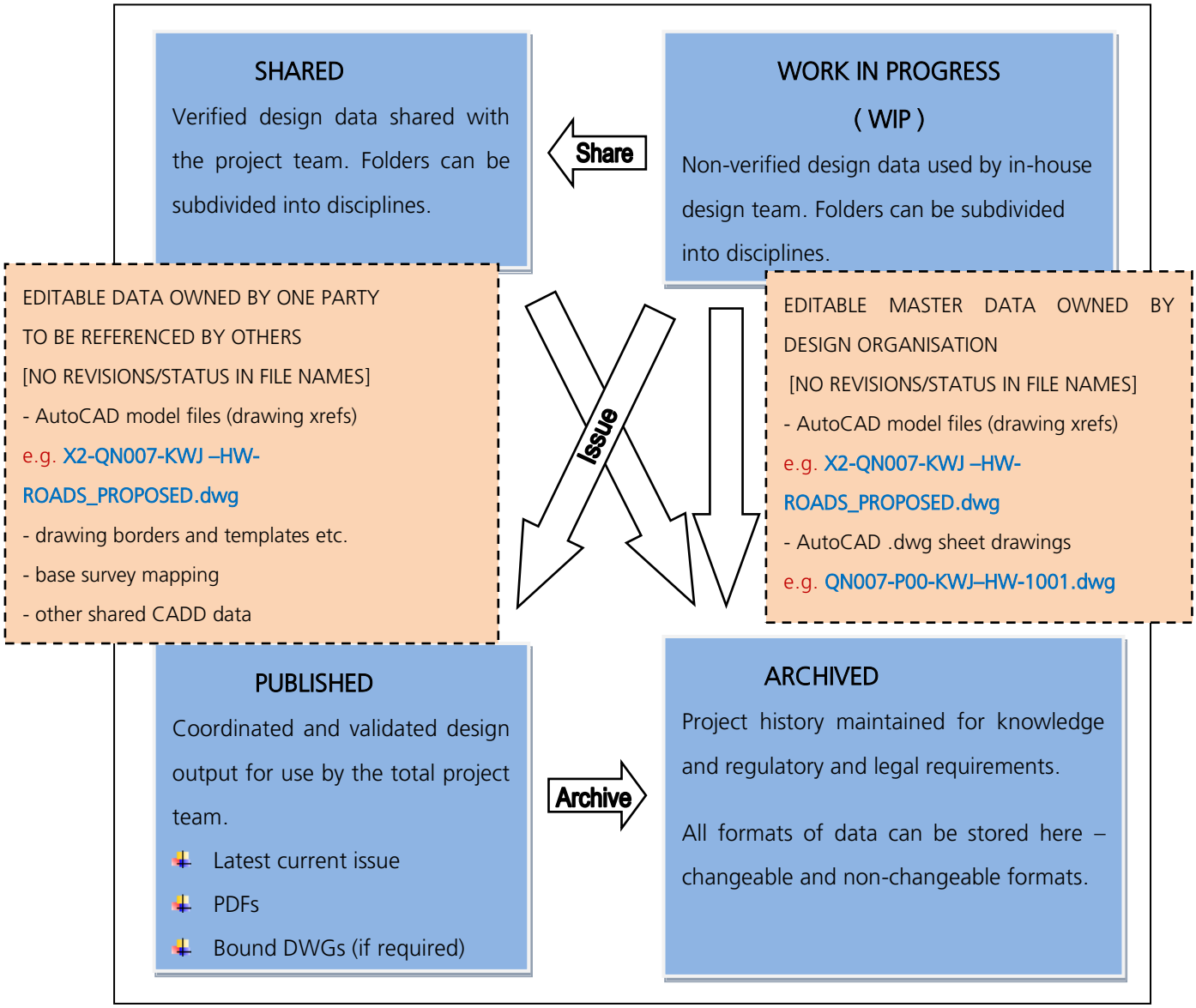
iv. Once data has been checked, verified and approved, it must be copied to the Shared area and other disciplines notified.

v. When models are revised or updated; other disciplines referencing the model will be affected, so effective communication between disciplines is essential.

vi. When data files have been authorised and verified for issue, it is copied to the Published area, to maintain a local copy within the design organization's server.

vii. The previous version of the data in the Published area will be moved to the Archive area as a historical record and to maintain an audit trail.

Figure 2 : Application of Code of Practice BS1192:2007 on Common Data Environment (CDE)



4.7 Hard Copies

The print containing the original stamped, checked and approved signatures becomes the hard-copy 'master plot' for the drawing. See *Section 5.3.13*.

Note:
It is vital at all times to maintain absolute correlation between the hard-copy stamped and signed master and the current electronic version of the drawing or sketch held on the electronic data storage system. ALL DWG/XREF/Model files will be submitted on a separate CD (or best) via zip files along with a separate detailed letter of transmittal describing contents along with any written variation to standard that was not already provided within this document. See section 6.11.1 & 6.11.2 Submissions & File Format.

4.7.1 Drawings

The Consultant's Project Implementation Plan (PIP) will define the area where the hard-copies for projects are to be filed.

The electronic version (DWG files) of the master plot of the drawing will be known as the 'reference master'. The reference master, is required as part of the submittal, and will be utilized for the electronic issue of the file.

Superseded master plots will be retained and endorsed "superseded".

Following the close of the project the master plots will be removed from the drawing office and archived.

4.7.2 Check Prints

All completed and signed check prints will be filed within the drawing office by the drafting checker in an area in accordance with the Project Implementation Plan (PIP).

All check prints are to be retained at least for the term of the project unless otherwise agreed with the PWA. No check prints are to be disposed of without the consent of the Project Manager.

5 DRAWING DEVELOPMENT

5.1 Drawing Numbering System

The drawing names and numbers are to be entered into the drawing register during creation of the drawings so as to eliminate duplicate drawing numbers being assigned. The drawing number will be unique for each drawing and will normally be as per the drawing naming and numbering convention below.

Table 2 :

	Project No.	-	Package No.	-	Originator	-	Type	-	Number
Example	**QN007**	**-**	**P01**	**-**	**KWJ**	**-**	**HW**	**-**	**1001**
See Reference	5.1.1		5.1.2		5.1.3		5.1.4		5.1.5

Fields will be separated by a hyphen (-)

Example:

QN007-P01-KWJ-HW-1001

5.1.1 Project Number

A five alphanumeric code for PWA Project number.

5.1.2 Package Number

A three digit alphanumeric code to identify the package number. Each package will be identified by P00, P01, P02, P03 and so on. P00 to be used by projects that have no packages.

5.1.3 Originator Code

A three letter code to identify the Consultant who prepared the drawing.

Table 3 :

Originator CODE	Originator NAME
ATK	ATKINS
HYD	HYDER
PAR	PARSONS INTERNATIONAL
KWJ	KHATIB & ALAMI - WSP
AEC	AECOM

5.1.4 Drawing Type Code

Two letter code to assist in identifying a discipline or particular portion of works. (i.e. **HW** for Highways, **ST** for Structures, **LE** for Landscape, **SK** for Sketch, etc.).Refer to **Appendix C**.

5.1.5 Drawing Number Code

Four digit sequential number for a specific drawing type series. Refer to **Appendix C.**

Subsequent issue of a drawing will have the revision coding incremented by the next sequential number or letter.

> Note:
> **Working drawings will not have the drawing status and revision in the file name.**

5.2 Model File (XRef) Naming

Model Files will be named in accordance with the convention described below:

Table 4 :

	Model Type Identifier	-	Project No.	-	Originator	-	Drawing Type	-	Short Description
Example	**X2**	**-**	**QN007**	**-**	**KWJ**	**-**	**HW**	**-**	**Proposed_Road**
See Reference	5.2.1		5.2.2		5.2.3		5.2.4		5.2.5

Example:

X2-QN007-KWJ-HW-Proposed_Road

5.2.1 Model Identifier Code

This code identifies the model file if it is in 2D or 3D drawing as defined below.

Table 5 :

Description	Model Type Identifier
2D Model	X2
3D Model	X3

5.2.2 Project Number Code

A Five (5) alphanumeric code for PWA Project number.

5.2.3 Originator Code

Refer to Section 5.1.3, Table 3.

5.2.4 Drawing Type Code

Refer to Appendix C.

5.2.5 Short Description Field

A short description of the model/Xref file. An underscore is to be used in place of any spaces in the description field.

Working models will not have the drawing status and revision in the file name.

5.3 Drawing Title Blocks, Signatures, and Logos

A standard drawing arrangement (Drawing Border and Title Block) will be adopted for all drawings and will be consistent across all drawings within the project. Title block entries will be concise and informative to indicate fully the content of the drawing.

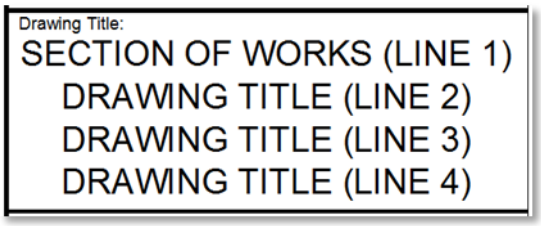
5.3.1 Drawing Title

i. The top line will identify the specific area or section within the contract, i.e. "HIGHWAYS", or it may be left blank where no such area or section exists.

ii. The second third and fourth lines will identify the content or purpose of the drawing, i.e. "TRAFFIC SIGNS AND ROAD MARKINGS"

iii. Where several drawings depict similar detail and no other qualifications are available for distinguishing between them, the distinction will be made by labelling each drawing consecutively with sheet numbers, such as "SHEET 1" , "SHEET 2", etc.

Figure 3 :



5.3.2 Drawing Status

The issue DRAWING STATUS box shown below (Figure 4) will be completed to describe the current status of the drawing. Refer to Table 6 for the list of drawing status/stages:

Figure 4 :

Table 6 :

Drawing Status
Concept Design
Preliminary Design
Detailed Design
Tender
Contract
AsBuilt

For Corridor Approval drawings:

Table 7 :

Drawing Status
Corridor Approval

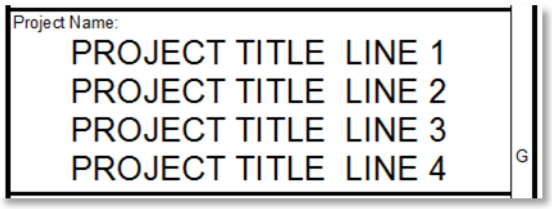
Note :

Utility Corridor drawings only get U01, U02 revisions and these will be submitted to both the utility companies and the PWA as such. They are never given K01, K02, P01, D01… revisions. They may be submitted as part of a Concept, Preliminary or Detailed submittal but would retain their U01, U02… revision status.

5.3.3 Project Name Field

For Project Name refer to Baseline Assessment Report on detailed list of projects.

Figure 5 :



5.3.4 Project Code Field

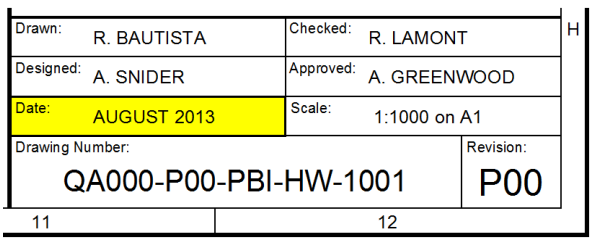
PWA-specific project codes will be assigned by Ashghal Contracts department.

Figure 6 :

5.3.5 Drawing Date Issued Field

The DATE field will reflect the issue date of a drawing and will be formatted by Month and Year as highlighted below.

Figure 7 :



5.3.6 Revision History Table

A concise description of each approved and issued revision will be entered into the revision description column. The revision columns indicate the history and development of the drawing; therefore, the description will be as informative as is practical.

Drawings that are issued under specific Submissions or Milestones sets will have clear, consistent revision description that states the purpose of the submission. e.g. ISSUED FOR APPROVAL, etc.

Figure 8 :

P00	30AUG13	ISSUED FOR REVIEW	RB	JE	AG
Rev.	Date	Revision Details	Drawn	Chkd.	Appd.

The date shown in the revision history table will be in the format DDMMMYY as highlighted in Figure 9 below:

Figure 9 :

P00	30AUG13	ISSUED FOR REVIEW	RB	JE	AG
Rev.	Date	Revision Details	Drawn	Chkd.	Appd.

The months will be abbreviated as shown in table 8 below:

Table 8 :

Abbreviation	Month	Abbreviation	Month
JAN	January	JUL	July
FEB	February	AUG	August
MAR	March	SEP	September
APR	April	OCT	October
MAY	May	NOV	November
JUN	June	DEC	December

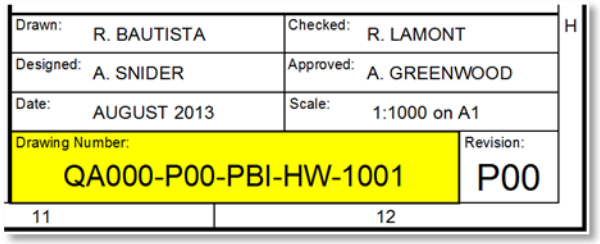
The date of completion of the revision and the initials of the person effecting the revision will be stated. The earliest revision descriptions will be deleted when there is no space to include the current revision within the revision column.

5.3.7 Drawing Number Field

Drawing number field will be completed as highlighted in the box below.

Refer to Section 5.1 for drawing numbering convention.

Figure 10 :

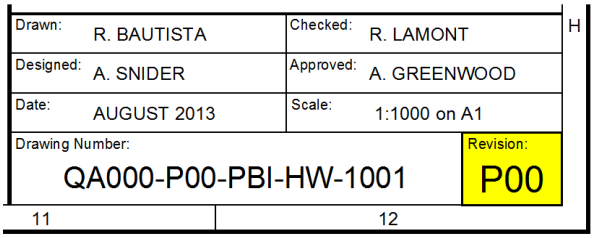


5.3.8 Revision Field Box

Revision field box will be completed as highlighted below.

For drawing revision codes refer to Section 5.12.3.

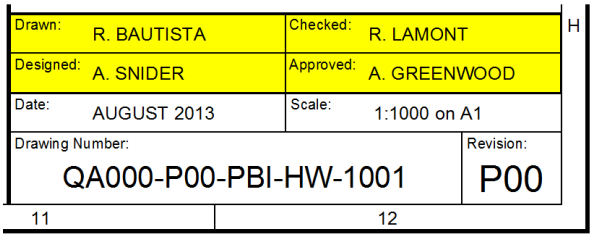
Figure 11 :



5.3.9 Name Fields

The 'Drawn', 'Designed', 'Checked' and 'Approved' field boxes on the title block, as highlighted below, will include the first name initial and the full last name of the person who performed or is responsible for the major portion of the work.

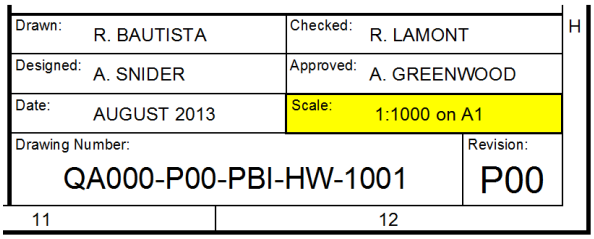
Figure 12 :



5.3.10 Drawing Scale Field

For completing the drawing scale field box in the title frame, refer to *Section 5.7*

Figure 13 :



5.3.11 Signatures

The revision history table will contain the current issue revision number, date of issue, Drafter/Author, Checker, Approver signatures or initials and description of current revision.

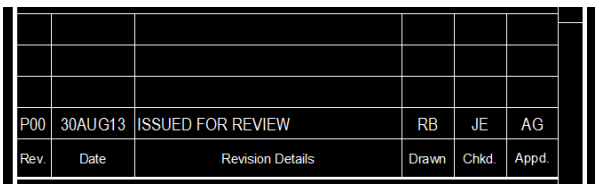
Table 9 :

TITLE BLOCK	CAD FILE	HARD COPY	PDF COPY
DRAWN BY	See 5.3.12	See 5.3.13	See 5.3.14
CHECKED BY	See 5.3.12	See 5.3.13	See 5.3.14
APPROVED BY	See 5.3.12	See 5.3.13	See 5.3.14

5.3.12 Drawing File

When issued, drawing files will bear the typed CAD initials of the author, checker and approver on the revision history box.

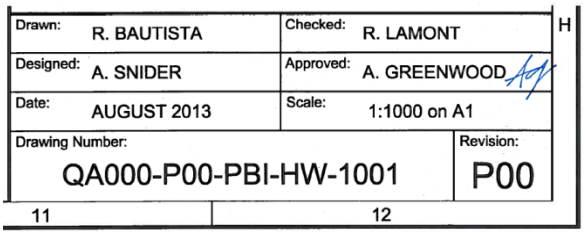
Figure 14 : CAD file



5.3.13 Hard Copy

The original hard copy set to be submitted to PWA will be signed by hand and stamped. This set will become the control set for reference. The drawing will bear hand signature of the drawing **Approver** beside his/her name in the Approved field box on the title frame as shown in *Figure 15*. Each drawing will be stamped with the issuing company's official stamp.

Figure 15 : Signed hard copy by Approver



Original hand-signed copy is required for all 'Final' drawings submitted for: Concept design, Preliminary design, Detailed design, Tender set, Contract set, Shop drawings (during construction) and AsBuilt.

Subsequent hard copies of the submitted original do not have to be hand signed. Scanned copies of the hand signed drawing are permitted as long as the clarity of the drawing is not compromised. Alternatively, copies may be printed directly from CAD files as shown in Figures 16 & 17. It is acceptable for these not to contain a copy of the hand signature, but to bear typed initials instead.

e.g. in the Revision history box:

Figure 16 : CAD file

Rev.	Date	Revision Details	Drawn	Chkd.	Appd.
P00	30AUG13	ISSUED FOR REVIEW	RB	JE	AG

Figure 17 : Plotted drawing (subsequent hard Copy)

PLOT

Rev.	Date	Revision Details	Drawn	Chkd.	Appd.
P00	30AUG13	ISSUED FOR REVIEW	RB	JE	AG

e.g. in the Approved box:

Figure 18 : CAD File

Drawn:	R. BAUTISTA	Checked:	R. LAMONT	H
Designed:	A. SNIDER	Approved:	A. GREENWOOD	
Date:	AUGUST 2013	Scale:	1:1000 on A1	
Drawing Number:	QA000-P00-PBI-HW-1001		Revision: P00	
11		12		

PLOT

Figure 19 : Plotted drawing (subsequent hard copy)

Drawn:	R. BAUTISTA	Checked:	R. LAMONT	H
Designed:	A. SNIDER	Approved:	A. GREENWOOD	
Date:	AUGUST 2013	Scale:	1:1000 on A1	
Drawing Number:	QA000-P00-PBI-HW-1001		Revision: P00	
11		12		

5.3.14 PDF copy

When Issued, PDF copy can be generated electronically from the cad file bearing the typed initials of the author, checker and approver.

Figure 20 : CAD file

P00	30AUG13	ISSUED FOR REVIEW	RB	JE	AG
Rev.	Date	Revision Details	Drawn	Chkd.	Appd.

PLOT

Figure 21 : PDF copy

P00	30AUG13	ISSUED FOR REVIEW	RB	JE	AG
Rev.	Date	Revision Details	Drawn	Chkd.	Appd.

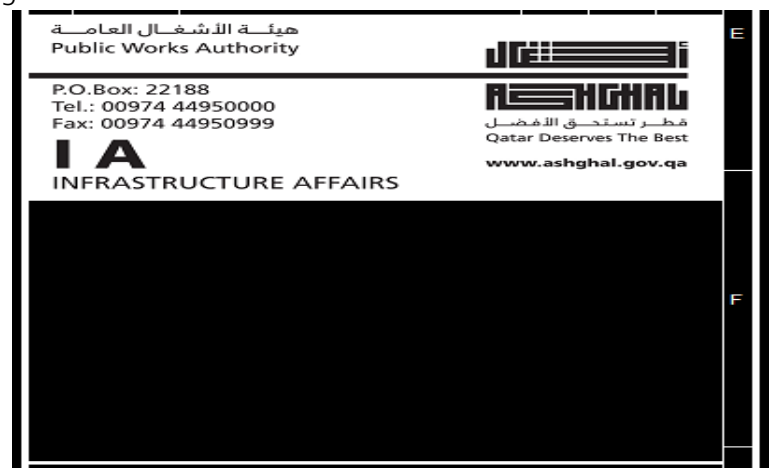
5.3.15 LOGOS

All Consultant / Agency / Programme Logos are incorporated into the Title Block and placed on layers that can be turned off.

Figure 22 :

At Tender, all logos of Consultant's & Contractor's other than the PWA's will be removed.

Figure 23 :



5.4 Global Origin and Orientation

A consistent approach to drawing global origin and orientation is essential for the development of multi-disciplinary drawings.

Layouts, general arrangements and detailed plans will clearly mark real world Northing and Easting values on the drawing file and will be in reference to the QND1995/Qatar National Grid reference system which is a Transverse Mercator Projection (See *Table 9* below for parameters):. These will be in metres.

Table 10 :

Central Meridian	51° 13′ 00″ E	
Scale Factor at the Central Meridian	0.99999	
Location of the Origin	51° 13' 00" E	24° 27' 00" N
False Easting of the Origin	200,000 m	
False Northing of the Origin	300,000 m	
Reference Spheroid	International 1924	
Datum	QND1995	

Where there is a need to create drawings with elements that are not spatially referenced to a mapping grid, such as standard detail drawings, and these will not need to be incorporated into the PWA GIS, these elements do not need to be drawn at a specified coordinate grid system.

5.4.1 Precision

Coordinates are stored in double precision (15 significant digits). Given the coordinate system defined above, all Easting and Northing will carry six digits before the decimal. Thus, the coordinate resolution (precision) for vector data is nine significant digits after the decimal.

5.5 Units

All general drawing work (e.g. Xrefs) are to be in model space and be produced in meters to three decimal places. Drawing borders to be in paper space and in millimetres.

e.g.

27.500
8.150
0.678

(metres)

Dimensions in metres and using whole numbers, can be expressed using the 'm' (metre) suffix as in the following:

15.000m

The position of the decimal point will be the same as a full stop and no space will be left between the number and its units, to ensure clarity, as in the following example:

9.900m

All other non-linear measurements, e.g. areas and volumes, will be followed by the unit symbol. The most common non-linear measurements are as follows:

Square metre – m^2

Cubic metre – m^3

All detail drawing work (e.g. standard details) is to be in model space and be produced in millimetres in whole numbers (i.e. no decimal places).

e.g.

275
10000 } (millimetres)
150

Dimensions in millimetres using whole numbers, can be expressed using the 'mm' (millimetre) suffix as in the following:

150mm

Chainages will be in metres and written as shown:

e.g.

0+100 Chainages in whole numbers can be written without the decimal accuracy

1+750.123
10+850.123 } (metres)

Chainages are plan measurements taken along a setting out line, and provide a horizontal distance not taking into account slope lengths.

5.6 Drawing Sizes

Drawing sizes will conform to the International Standards Organisation (ISO).

Sizes (in mm) are as follows: -

A0 – 1189 x 841

A1 – 841 x 594

A2 – 594 x 420

A3 – 420 x 297

A4 – 297 x 210

In general, all drawings will be produced at the preferred A1 original size. The use of A0 size drawings will be avoided wherever possible.

Each group or set of drawings will use only one drawing size unless situations make this impractical.

5.7 Scales

Scales used on drawings will be selected as indicated in the table below. Only standard metric scales will be used. In all cases, the selected scale will be large enough to permit easy and clear interpretation of the information depicted.

Specific scale requirements of particular drawings such as layouts will be as stated in the Consultant's Project Brief.

Table 11 :

Permitted scales				
1:1	1:2		1:5	2:1
1:10	1:20	1:25	1:50	5:1
1:100	1:200	1:250	1:500	10:1
1:1,000	1:2,000	1:2,500	1:5,000	20:1
1:10,000	1:20,000	1:25,000	1:50,000	50:1

In exceptional cases where for functional reasons the recommended scale cannot be applied, intermediate scales may be chosen, provided that the required scale is of a whole number, such as 1:125, 1:150, etc.

The following scale notes will be considered:

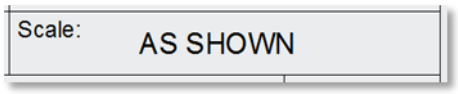
i. Number of scales on any one drawing will be kept to a minimum.

ii. CAD entities will be drawn at full scale (1 Drawing unit = 1 Measurement unit). Final plotted scale will be established during composition of the drawing layout for plotting.

iii. Originators using AutoCAD will employ the **PAPER SPACE/ MODEL SPACE** facility to establish drawing layout and scales. All drawing entities will reside in **MODEL SPACE** with the exception of view ports, general notes, revision clouding and its labels, title block and border.

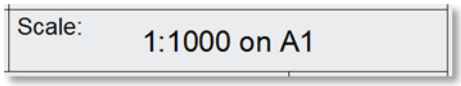
iv. Where different scales exist, each scale will be specified under the title of the area of the drawing to which it applies and noted in the Title Block field as shown below:

Figure 24 :



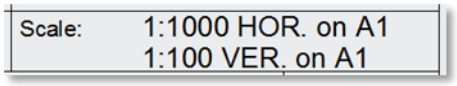
v. Where a single scale is used on a drawing, it will be specified within the title block only. (See below). The scales selected will depend on the object area and will be large enough to permit easy and clear interpretation of information and ensure clarity of prints on the original as well as reduced copies i.e. A3 versions of A1 drawings.

Figure 25 :



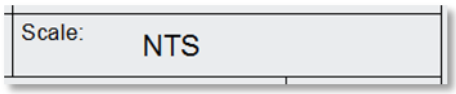
vi. Where different scales are used **for horizontal and vertical dimensions**, such as in profiles, each scale will be clearly indicated on the drawing as shown below:

Figure 26 :



vii. When the drawing is not drawn to any scale, **'NTS'** (Not to Scale) will be placed in the title block as shown below:

Figure 27 :

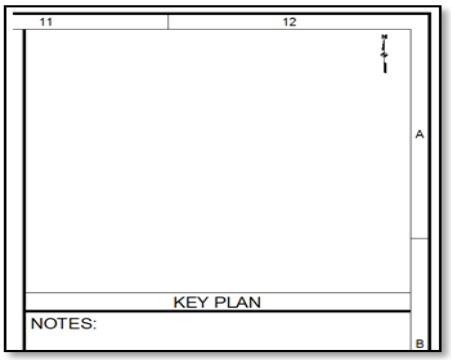


viii. Scale bars will be shown on all drawings containing plans.

5.8 Key Plan

Where layout plans are produced on a number of drawings to cover the extent or section of the project, a Key Plan will be included on each sheet, clearly indicating the section of the works under consideration. A dedicated box in the title frame is provided for the Key Plan as shown below.

Figure 28 :



5.9 Drawing Notes

Notes are to be numbered and positioned appropriately and will include the following notes:

i. All Dimensions are in metres unless otherwise stated. (Only on drawings drawn in metres.)

ii. All levels in metres above Qatar National Datum. (Only on drawings where this note is applicable.)

iii. All dimensions are in millimetres unless otherwise stated. (Only on drawings drawn in millimetres.)

5.10 General Notes

Where notes are extensive and apply on several drawings, a General Notes Drawing will be provided which consolidates all notes. Deviation from these notes on a particular drawing may be permitted, provided this amendment is shown in the Notes section of the drawing.

Where a General Notes Drawing is used, the first note on each applicable drawing will contain the following statement:

"1. FOR GENERAL NOTES, REFER TO DRAWING NO. XXX "

5.11 Reference Files

Referencing of other CAD files or external files is the method employed for data sharing. Effective use of CAD reference files ensures that data integrity and accuracy across disciplines is maintained and the latest, up-to-date revision of the CAD background is automatically displayed. These will be attached into the appropriate layer when referenced into the drawing sheets containing the drawing border. Refer to *Section 5.2* for Model File reference naming and *Section 6.8* for layering standards.

5.12 Drawing Revision

5.12.1 Revision Clouds and Triangles

i. All revisions on the body of the plotted drawing will be clearly identified by a revision cloud and triangle.

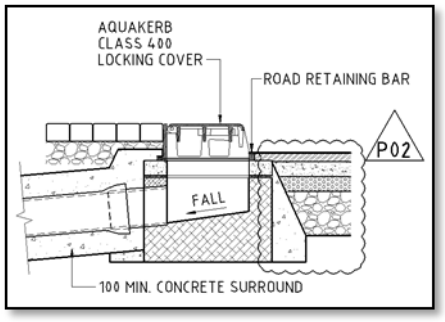
ii. Each area in which a revision occurs will be ringed with a cloud and marked with an equilateral triangle containing the current revision letter.

iii. Revision clouds and its triangle label will be placed on the paper space.

iv. Revision clouds and triangles will be placed on layer Z_REV.

v. Clouding and revision triangles denoting the previous revision will be removed from the CAD file.

Figure 29 :



5.12.2 Revision Description

The date and description of the revision / issue will be given in the identified space within the Title Frame. Refer to *Section 5.3.6* for completing the revision history table on the title frame.

5.12.3 Drawing Revision Code

This code identifies the drawing revision and will be as defined in Table 12 below.

Subsequent issue of a drawing will have the revision coding incremented by the next sequential number or letter.

All drawings at first issue of all design stages will begin with - alpha character + '00'.

Table 12 :

Design Stage	Revision Code
Concept Design	K00,K01,K02,K03….etc.,
Preliminary Design	P00,P01,P02,P03….etc.,
Detailed Design	D00,D01,D02,D03….etc.,
Tender	TA, TB, TC…….etc.,
Contract	CA, CB, CC, CD…….etc.,
AsBuilt	XA, XB, XC…. etc.,

For Corridor Approval drawings:

Status	Revision / Issue Code
Corridor Approval (see Note in Section 5.3.2)	U01,U02,U03….etc.,

Note : As drawings move from one stage to another, all historical revision history under that stage is to be removed from the revision history on the title block.

5.13 Drawing Register and Transmittal Record

The issue of drawings will be recorded on the drawing register and a transmittal provided by drawing originators containing like information. The drawing register will be a concise and continuous record of drawing revisions and issue history.

The current revision indicator will be recorded for each issue.

5.14 Checking and Approval of Drawings

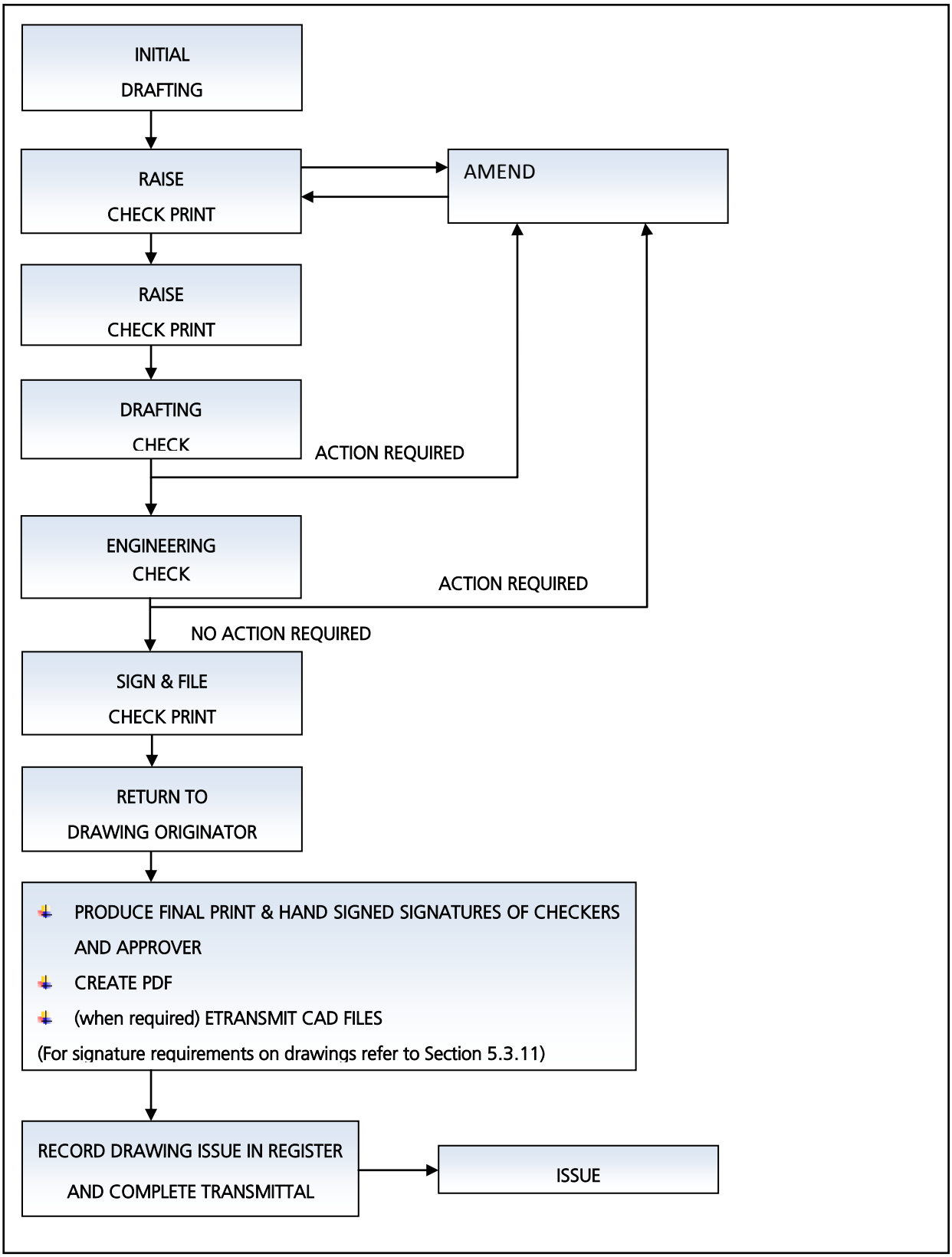
During drawing production a system of continuous checking will be employed by the Consultant to confirm that all CAD information fully complies with the conditions set out in this document.

It is imperative that all drawings are subjected to a Quality Assurance and Quality Control (QA/QC) check and are duly signed and authorized prior to issue.

The PWA, upon receipt of CAD data, will run an audit on all drawings. All data found on non-conformance and without an attached variance notation via transmittal, will be rejected and returned to the Consultant for notation in transmittal/request variance and/or correction.

Any drawing leaving the drawing office will have been properly checked for presentation, clarity, accuracy, technical correctness and compliance with the relevant CAD Standard. Refer to the flow chart overleaf in Figure 30 for an overview of the checking procedure.

Figure 30 : Flow diagram showing overview of CAD drawing checking procedure



5.14.1 Self Check

After preparation, the drawing will be checked by the drawing originator and any required amendment to the drawing is to be carried out prior to handing over the check print for checking.

5.14.2 Drafting Check

Generally the Drafting Check must precede the Engineering Check.

The Drafting Check will normally be carried out by a person designated by the CAD Office representative/Manager.

The Drafting Check will verify adherence to the Project Brief in conjunction with any applicable supplied criteria. The checker will also make an assessment with respect to presentation, standard of workmanship and adherence to the CAD Standard Manual.

The Drafting Check will, where deemed necessary, include an electronic check of the CAD File to ensure compliance with applicable standards and/or client requirements.

The check print will be clearly marked by the checker with any required modifications.

Upon completion of the Drafting Check the checker will then sign, date and highlight the required action to be taken.

Any amendment to the drawing requirements may, if required, be carried out prior to the Engineering Check and a new print raised, duly stamped and signed.

5.14.3 Engineering Check

The Engineering check will normally be carried out by a competent and relevant experienced Senior Engineer within the Consultant's organization.

The Engineering check will verify adherence to the design calculations, design standards and associated construction issues.

Upon completion of the Engineering Check, the checker will then sign, date and highlight the required action to be taken.

5.14.4 Further drawing amendments

Upon completion of the Drafting Check and Engineering Check the completed check print will be returned to the originator of the drawing for amendment of the drawing.

Where required, further check prints will be raised and the checks repeated.

5.14.5 Approval

Upon completion of the checking process, a clean print of the drawing will be submitted to the relevant checkers for signature and to the designated authority for approval. This then becomes the controlled drawing for reference. The checker's and approver's initials together with the relevant dates will be entered in the appropriate areas of the CAD file.

5.15 Safety, Health & Environmental (SHE) Box

The QCS stipulates that provision of information can be achieved by inclusion of notes on drawings, as a preferred method, since the notes will then be immediately available to those carrying out the work. One common technique that is used is the SHE Box. Details about the SHE box can be found in the 'Design for Health and Safety' Standard (PMC-ST-HSS-020-020). The SHE box appears at Design Stage on drawings to be issued to contractors. Once construction works are completed, any residual risk needs to be reported in a similar way on the As-Built drawings. Placement of the SHE box ideally will be placed in the upper right corner of the drawing area of each sheet. Should this placement obscure key drawing information, the consultant's / contractor's may move it to a more ideal location on the drawing to provide clarity. There are no restrictions on how many lines may be used within the SHE box.

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION
In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following specific residual risks (Reference shall also be made to the design hazard log).
Construction
None
Maintenance / Cleaning
None
Use
None
Decommissioning / Demolition
None

Figure 31 : SHE Box

6 CAD STANDARDS

6.1 Drawing set up

i. Drawing templates will be used for setting the layers of identifiable drawings (e.g. Roads, Drainage).

ii. Units in AutoCAD will be set to metres for layouts and profiles and millimetres for detail drawings such as standard details.

iii. The CAD files provided will be in the current version of AutoCAD file format used on the project.

iv. Fonts and line types are to be followed as provided in this manual.

v. Files will be purged before issue only.

vi. Drawing features / entities must be in model space. Title frames must be in paperspace.

vii. The colour and line type of each entity is drawn on BYLAYER.

viii. For all general drawing annotations, ISOCP.shx will be used. True type fonts such as Arial.ttf will be used for presentation drawings and Title frame.

ix. All polygons will be closed polylines.

x. Do not place entities on layer 0. This layer is for the creation of blocks only.

6.2 Line Work

6.2.1 Line Types

The following guidelines will apply to the use of line types:

i. LINETYPE to be set BYLAYER. (Deviation: Standard AutoCAD Blocks)

ii. All layers will have their entities set to 'BYLAYER'

iii. All colours of AutoCAD objects to be BYLAYER. (Deviation: Standard AutoCAD Blocks)

iv. The plotted appearance of linetypes will be consistent across all drawings.

v. Modification of AutoCAD default source file is not permitted.

vi. Lines on a drawing that cannot be represented by those in the default AutoCAD source file may be loaded from the approved Custom line types provided.

The default AutoCAD source file **ACADISO.LIN** will be used with the following:

Table 13 :

System Variable	LTSCALE	PSLTSCALE	MEASUREMENT	MEASUREINIT
Value	1	1	1	1

Custom line types provided:

- **PWA_Drainage.lin** (accompanied by **Drainage.shp & Drainage.shx)**
- **PWA_Roads.lin**
- **PWA_Utilities.lin**

6.2.2 Line Weights

Table 14 :

Colour No.	Display Screen	Plotted Line Weight (mm)	Plotted Colour	
			PWA_COL_A1.CTB	PWA_BW_A1.CTB
1	Red	0.18	BLACK	BLACK
2	Yellow	0.25	BLACK	BLACK
3	Green	0.35	BLACK	BLACK
4	Cyan	0.50	BLACK	BLACK
5	Blue	0.70	BLACK	BLACK
6	Magenta	0.35	BLACK	BLACK
7	White	0.25	BLACK	BLACK
8	Dark	0.20	Object Colour	BLACK
9	Light	0.15	Object Colour	BLACK
11-79 & 81-249	Object	0.35	Object Colour	BLACK
10	Object	0.60	Object Colour	BLACK
80	Object	0.60	Object Colour	BLACK
250-255 (Greys)	Object	0.15	Object Colour	Object Colour

6.2.3 Xref as Background

The external reference, when used as a background, will be shown as screened or subdued such that the proposed work is more legible against the background reference.

6.3 Text

6.3.1 General

i. The AutoCAD Styles will have a default height setting = 0.

ii. Sloping, italic, and elaborate fonts are not permitted.

iii. The objective will be to make all lettering highly legible so that information can be communicated with the minimal possibility of error in reading. Lettering sizes will be chosen such that it will remain legible when drawings are reduced to A3 size.

iv. Lettering will be consistent, both in size and placement. Lettering sizes for specific applications, such as notes or titles, will not vary within the same drawing.

v. Lettering will be uniform, clear, sharp and distinct. The mixing of lettering styles, sloping, italic, and elaborate fonts will not be permitted.

vi. All text will be regularly spaced, upright and uppercase and not be underlined. Deviation Titles under plans, details, etc. are to be underlined.

vii. All text will be left justified. Deviation: Titles will be centre justified and underlined.

viii. Specific notations will be carefully placed so they relate to the portion of the drawing or detail to which they apply.

ix. The placing of notes through drawing lines is to be avoided.

x. Leader arrows relating to specific text or annotation will be placed in model space with the detail it is referencing on the same layer as the text to which it relates.

6.3.2 Fonts

Permitted text fonts are as shown below:

Table 15 :

AutoCAD Style Name	AutoCAD Font File	CAD Usage
STANDARD	ISOCP.SHX	Technical / Engineering drawings
ARIAL / ARIAL NARROW	ARIAL.TTF	Presentation Drawings

6.3.3 Text Assignments

The table below indicates approved texts with their appropriate colour/application assignments:

Table 16 :

Plotted Text Height (mm)	Width Factor	Plotted Line weight	Usage
1.8	1	0.18	General text, Dimensions, Notes – used on A3 & A4 only where drawing is not plotted at a reduced scale.
2.5	1	0.25	General text annotations, Dimensions, Notes Special Notes
3.5	1	0.35	For more prominent notes or labels requiring special emphasis.
5.0	1	0.50	Normal Titles, Drawing Numbers, Section titles, Detail Titles
7.0	1	0.7	Major Titles

i. The preferred text height for general text and notes is 2.5mm.

ii. The text height adopted for a project will be consistent across all drawings unless situations make this impractical.

6.4 Dimensioning

Automated dimensioning commands within CAD software programs will be used for creation and editing of dimensions, as shown in table 17 below.

The editing of dimension values via basic text editing commands is not permitted.

Dimensions will be associative and placed on their own unique layer.

Table 17 :

Dimension Text Height	Extension Line Offset	Extension Line Extension	Stack Offset	Arrow Size	Centre Mark
2.5mm	Dimexo = 2	Dimexe = 2	Dimdli = 6.25	Dimasz = 2.5	Dimcen = 1

6.5 Standard Symbols and Blocks

In order to promote consistency, standard symbols will be utilized. All blocks are to be inserted into the drawing on its appropriate drawing layer. Where a symbol required is not available from the blocks provided with this manual, symbols compliant to international standards will be used. These new blocks will be submitted to PWA through a proper transmittal and action assignment. Email requests will be considered. PWA will confirm and verify then update the list of standard symbols library and then reissue a block/symbols library.

All symbols will be consistent within a drawing or set of drawings.

All blocks that need to be created as new blocks will have all their elements saved on layer 0.

All symbols used within a drawing must be defined using a legend.

6.6 Hatching

Wherever possible, all hatching created will be associative and placed on its own unique layer. Exploding of hatches must be avoided.

6.7 Colours

In AutoCAD, entity colour will be assigned "**ByLayer**". Deviation can be on standard blocks, i.e. are Road signs blocks where specific standard colours are assigned for each.

6.8 Layering

CAD Layering will be in accordance with PWA AutoCAD Layering Standards as included in Appendix A of this manual.

Additional layers may be required and the naming of such layers will follow format as shown in Section 6.8.1.

> Note :
> All new layer names must be forwarded to PWA for review and approval. So as not to hold up production of drawings, work must continue on any new layers created while design offices seek PWA approval. If issue is unresolved as project goes to submittal – Consultant to provide transmittal stating variance from standard and provide detailed description of non-conforming layers, blocks, linestyles, etc. ALL requests for new symbology to go through a proper transmittal and action assignment to PWA.

6.8.1 Layer Name Layout

Where new layers are to be created the AutoCAD layer naming convention is as follows:

1 2 3

D_EX_SEW_MH

Where:

1 = Department Designator

2 = Status / Section Designator

3 = Feature / Entity Designator

Department Designator *(Field 1)*

This code identifies the PWA department (i.e. B = Building Affairs, D = Drainage and RD = Roads.

Status / Section Designator *(Field 2)*

This code identifies the main classification of the type of element within a discipline. For example 'EX_SEW" describes as Existing Sewer.

Feature / Entity Designator *(Field 3)*

This code further identifies the entity description feature name. For example 'MH" describes the Sewer Manhole feature.

List of PWA Standard Layers

See Appendix A.

6.9 Reference Files (Xrefs)

i. Where CAD data is to be shared between drawings the use of reference files is to be adopted.

ii. All reference files are to be inserted in model space with the UCS set to 'world'. All files are to be inserted at 0,0,0.

iii. Unused reference files will be detached upon completion of drawings.

iv. The number of reference files on a project will be kept to a minimum.

v. The preferred method of attaching Xrefs will be Overlay option.

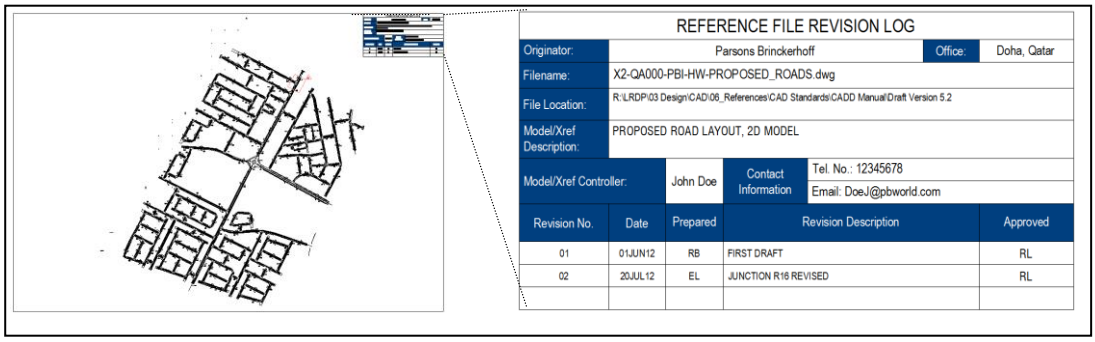
vi. Reference files will be inserted on unique layer that does not conflict with the general content of the drawing. (i.e. layer **Z_XREF** in AutoCAD).

vii. Reference files will be "**CLIPPED**" within the Active drawing sheet file to ensure that only the design data relevant to the drawing is displayed.

viii. Reference files issued externally or shared between departments will indicate revised areas with a **revision cloud** and **triangle**. A revision history will be maintained within the reference file. In AutoCAD, the revision history log will be placed in **paper space,** see *Figure 32* below.

ix. For Model File Naming refer to *Section 5.2*

Figure 32 :



6.10 Plotting

The following standard colour source files will be used:

Table 18 :

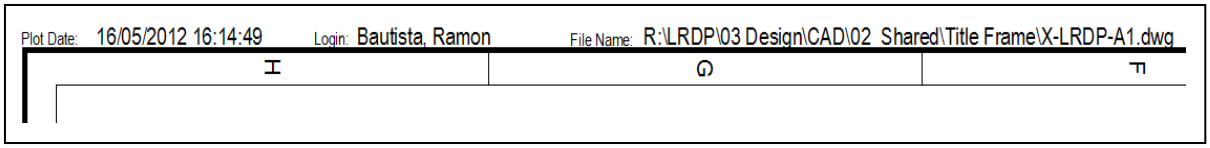
Colour	Black and White
PWA _COLOUR_A1.ctb	PWA _BW_A1.ctb

This standard colour source (CTB) file will be flexible and can be adjusted to suit Consultant's need during plotting. When drawing (DWG) files are required as part of a submittal, the CTB file used for the plotting of the drawings will also be required in the submittal.

6.10.1 Date and File location update

These are field entities contained within the drawing border and are used to print the file name, file location, date and time of print, etc.

Figure 33 :



6.11 Data Submission Standards

All drawing files must conform to the PWA CAD Standards set forth in this document.

6.11.1 Submission

Submittals at each level of design will be in hard copy and soft copy digital format per requirements in the Project Brief. The digital submittal will not be locked to prevent PWA from extracting or editing content of the submittal. Furthermore, the digital submittal will be produced in PDF format and the original format of the deliverable for each level of design.

Table 19 : Levels of Design

Drawing Status
Concept Design
Preliminary Design
Detailed Design
Tender
Contract
AsBuilt

Due to file size and volume of data sets, CAD Drawings & Technical Engineering Models, as the deliverables are defined as per the Consultant Project Brief, will be delivered via best means (transmittal + CD, Portable drive). This Visualization Simulation and Technical Engineering Model data is to be delivered from other documents that are delivered at the same time. It is required that there be a Letter of Transmittal and a full description of data included; listing of files, project area, Consultant project number, title and date of submission to be included, along with any variances to standards as published.

6.11.2 File Format

Digital submittals will be in both DWG and PDF format. DWG files will be delivered via best means (Consultant to submit with transmittal + CD, Portable drive) in ZIP format.

Table 20 : Technical Model Data Formats

DELIVERABLES:			
Technical Engineering Model Data			
Approved Software Listing	**File Format Type(s)**	**Submittal Format**	**Discipline(s)**
Autodesk : AutoCAD / Civil 3D / Revit	DWG, XML, PDF	As per PWA CAD Standards / GIS Standards Manual (v 4.0 or later)	ALL
Bentley : Microstation/InRoads/InRail/Geopak/ MX	DGN, RWK, DTM, ALG, IRD, ITL, XIN, XML, PDF	**"Save as"** DWG with prescribed PWA CAD Standards / GIS Standards Manual (v 4.0 or later)	ALL
ESRI : ArcGIS	GDB	As per PWA CAD Standards / GIS Standards Manual (v 4.0 or later)	GIS
VISUM	VER		TRAFFIC MODEL
SYNCHRO	SYN		TRAFFIC MODEL
SDRA	SIP		TRAFFIC MODEL
HCS	INF		TRAFFIC MODEL
INFOWORKS	IWC/IWT	Recomended use of the compact .iwc format. The .iwt format is retained for downward compatibility.	DRAINAGE MODEL
Civil 3D / InRoads	DWG, DGN, RWK, DTM, ALG, IRD, ITL, XIN, XML, PDF	**"Save as"** DWG with prescribed PWA CAD Standards / GIS Standards Manual (v 4.0 or later)	ROADWAY MODEL

7 OTHER STANDARDS

7.1 Summary

For consistency in production the following external CAD standards will be followed:

7.2 Survey

Qatar Survey Manual : Urban Planning & Development Authority / The Centre for GIS – State of Qatar

All surveys conducted in accordance to the standards and specifications as laid out in Qatar Survey Manual will be assured of the same level of consistency and accuracy. This will ensure the reliability of all the survey data and enhance the confidence level of all its users. With this standardized survey data, it can be uploaded onto the Qatar GIS system as seamlessly as possible.

Link: http://www.gisqatar.org.qa/english/projects/projects.htm

7.3 MMUP

7.3.1 Ministry of Municipality & Urban Planning (MMUP) - Urban Planning & Development Sector

In accordance with the Memorandum of Understanding between MMUP-Urban Planning Sector and Public Works Authority – December 2012 Notes, Section 6. Land Expropriation CAD Format and Drawing template is attached. Soft Copy should be requested from PWA. The following CAD layers, line types and hatching are to be used for all Land Acquisition Drawings.

Table 21 :

Description	Plotted color	Pen color	Layer	MMUP GIS LAYER INFO.	
				Feature Dataset	Feature Class
Survey parcel (Cadastral)	Green	90	0-Survey Parcel (Cadastral)	LIC.Landplan	LIC.LPLN_CadastrePlot
Road ROW	Cyan	130	0- Right Of Way – By Zone	LIC.Causeway	LIC.REF_PolicyPlan_Merged
Proposed ROW	Red	10 Linetype Hidden2	0-PROPOSED-ROW	N/A	N/A
Existing Buildings impacted by proposed ROW	Purple Ref Notes	201	0-EX BLDG TO BE EXPROPRIATED WITHIN ROW	N/A	N/A
Land to be expropriated outside existing ROW	Yellow Ref Notes	50	0-EX PROP ROW EXPROPRIATED	N/A	N/A
Land to be expropriated within the existing ROW	Cyan Ref Notes	113	0-EX ROW EXPROPRAITED	N/A	N/A
Land to be expropriated within existing buffer zones	Green Note 1	84	0-EX BUFFER ROW EXPROPRIATED	N/A	N/A

Notes on drawing set up:

To ensure consistency for all land expropriations drawing produced, the following layering sequence to be used for the drawing objects (1 being the top layer followed by 2,3, and so on):

1. Viewport text and notes (top)
2. Proposed right of way (red dotted lines)
3. Land expropriation hatching (purple on top, then yellow, green, blue)
4. Existing right of way (blue lines)
5. Survey parcel / plot boundary (green lines)
6. Road design Layout (greyscale/fine black lines)
7. Aerial image (bottom)

The drawings to be kept clean by placing text (coordinates, etc.) and annotations away from engineering lines and colour hatching (land expropriation).

A transparency value of 60 to be used for hatching layers (yellow, Cyan and green) to allow showing the aerial image background. The purple hatch for buildings to be in front of the yellow, cyan, and green hatch to avoid colour change. The purple hatch will not have transparency to avoid change in colour if placed on top of the other transparent colour hatch.

The proposed right of way (red dotted lines) to be on top of the existing right of way (blue dotted lines). The proposed right of way to only include the additional right of way required for the new road project.

7.3.2 MMUP Typical Road Cross-sections and Utility Corridors

Consultant's to contact MMUP for standards. When submitting typical cross section drawings to MMUP, Consultant's to use MMUP standard color coding as MMUP specified.

7.4 Utility CAD Standards

Consultant's / Contractor's to contact Utility Authority (i.e. KAHRAMAA, Ooreedoo, Vodafone, or others) for CAD Plan Preparation Standards. If no other Utility standard is in place by the given Utility Authority, then the Utility standards as outlined in this manual will take precedent.

Appendix A – AUTOCAD LAYERS DEFINITIONS

A.1 General Layers

CORE LAYERS NON DISCIPLINE				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
Z_18TEXT	RED	Continuous	0.10	TEXT AT RESPECTIVE HEIGHT
Z_25TEXT	WHITE	Continuous	0.25	TEXT AT RESPECTIVE HEIGHT
Z_35TEXT	GREEN	Continuous	0.35	TEXT AT RESPECTIVE HEIGHT
Z_50TEXT	CYAN	Continuous	0.50	TEXT AT RESPECTIVE HEIGHT
Z_70TEXT	BLUE	Continuous	0.70	TEXT AT RESPECTIVE HEIGHT
Z_DIMS	RED	Continuous	0.10	ALL DIMENSIONS
Z_DWG_GRID	251	CENTER2	0.15	DRAWING / MAP GRID LINES
Z_DWG_SHT	WHITE	Continuous	0.25	DRAWING SHEET & TITLE BLOCK
Z_NORTH	GREEN	Continuous	0.35	NORTH DIRECTION SYMBOL
Z_REV	YELLOW	Continuous	0.25	REVISION CLOUDS AND TRIANGLES
Z_SECMK	GREEN	Continuous	0.35	SECTION AND DETAIL MARKS
Z_XREF	WHITE	Continuous	0.25	EXTERNAL REFERENCE (XREF)
Z_VPORT	WHITE	Continuous	0.25	VIEWPORT

A.2 GIS Layers

GIS LAYERS				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
GIS_ACQ_BDRY	20	ACAD_ISO13W100	0.25	LAND ACQUISITION BOUNDARY
GIS_CADASTRAL	RED	Continuous	0.10	CADASTRAL PLOT
GIS_CNTRS	9	Continuous	0.15	CONTOURS

GIS LAYERS				
Layer Name	Screen Colour	Linetype	Plotted Line	Description
GIS_CNTRS_TEXT	RED	Continuous	0.10	CONTOURS TEXT
GIS_CSTL	90	Continuous	0.35	COASTLINE
GIS_CTRL	YELLOW	Continuous	0.10	STATION NAME, EASTING, NORTHING, HEIGHT, ACCURACY RATINGS, ETC.
GIS_DIST	72	ACAD_ISO12W100	0.35	DISTRICT
GIS_FLOWLINE	8	Continuous	0.05	FLOWLINES
GIS_MUNC	200	ACAD_ISO10W100	0.35	MUNICIPALITY
GIS_PPLN	252	Continuous	0.15	POLICY PLAN
GIS_PRJ_BDRY	222	ACAD_ISO14W100	0.35	PROJECT BOUNDARY
GIS_RD01	121	Continuous	0.35	MAJOR ROAD
GIS_RD02	151	Continuous	0.35	MINOR ROAD
GIS_RD03	181	Continuous	0.35	STREETS
GIS_ROW_BDRY	170	PHANTOM2	0.35	RIGHT OF WAY BOUNDARY
GIS_ZONE	13	Continuous	0.35	ZONE

A.3 Drainage layers

A.3.1 Surface Ground Water

PROPOSED SURFACE GROUND WATER (SGW)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
D_PR_SGW	80	SGW_PR	0.60	PROPOSED SURFACE GROUND
D_PR_SGW_ATT	YELLOW	Continuous	0.25	PROPOSED SURFACE GROUND WATER LINE ATTRIBUTES (ID, DIAMETER, LENGTH, MATERIAL, ETC.)
D_PR_SGW_AVCH	90	Continuous	0.35	PROPOSED SGW AIRVALVE CHAMBER
D_PR_SGW_DCH	90	Continuous	0.35	PROPOSED SGW
D_PR_SGW_DT	90	Continuous	0.35	PROPOSED SGW DRAIN TRENCH
D_PR_SGW_DUCT	30	Continuous	0.35	PROPOSED SGW DUCT
D_PR_SGW_FCH	90	Continuous	0.35	PROPOSED SGW FLUSHING CHAMBER
D_PR_SGW_FLOW	WHITE	Continuous	0.25	PROPOSED SGW FLOW ARROW
D_PR_SGW_GC	90	Continuous	0.35	PROPOSED SGW GULLY CONNECTION
D_PR_SGW_GL	90	Continuous	0.35	PROPOSED SGW GULLY
D_PR_SGW_HP	WHITE	Continuous	0.25	PROPOSED SGW HIGH POINT
D_PR_SGW_ICH	90	Continuous	0.35	PROPOSED SGW INSPECTION
D_PR_SGW_ITCH	90	Continuous	0.35	PROPOSED SGW INTAKE CHAMBER
D_PR_SGW_LP	WHITE	Continuous	0.25	PROPOSED SGW LOW POINT
D_PR_SGW_MH	90	Continuous	0.35	PROPOSED SGW MANHOLE
D_PR_SGW_OFCH	90	Continuous	0.35	PROPOSED SGW OUTFALL CHAMBER
D_PR_SGW_PS	90	Continuous	0.35	PROPOSED SGW PUMPING STATION
D_PR_SGW_RM	90	RM_PR	0.35	PROPOSED SGW RISING MAIN
D_PR_SGW_RM_DIA	YELLOW	Continuous	0.25	PROPOSED SGW RISING MAIN
D_PR_SGW_SAW	90	Continuous	0.35	PROPOSED SGW SOAKAWAY
D_PR_SGW_ST_E	90	Continuous	0.35	PROPOSED SGW STUB END
D_PR_SGW_ST_P	90	Continuous	0.35	PROPOSED SGW STUB PIPE
D_PR_SGW_TDS	90	Continuous	0.35	PROPOSED TUNNELING DRIVE SHAFT

PROPOSED SURFACE GROUND WATER (SGW) (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
D_PR_SGW_TRS	90	Continuous	0.35	PROPOSED TUNNELING RECEPTION
D_PR_SGW_VALV	90	Continuous	0.35	PROPOSED SGW VALVE
D_PR_SGW_VC	90	Continuous	0.35	PROPOSED SGW VALVE CHAMBER
D_PR_SGW_WCH	90	Continuous	0.35	PROPOSED SGW WASHOUT
D_PR_SGW_HTANK	90	Continuous	0.35	PROPOSED SURFACE GROUND WATER / STORM WATER HOLDING
D_PR_SGW_MTMH	90	Continuous	0.35	PROPOSED SGW MICROTUNNEL
D_PR_SGW_MT	90	Continuous	0.35	PROPOSED SGW MICROTUNNEL

EXISTING SURFACE GROUND WATER (SGW)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
D_EX_SGW	96	SGW_EX	0.35	EXISTING SURFACE GROUND WATER LINES
D_EX_SGW_ATT	WHITE	Continuous	0.25	EXISTING SURFACE GROUND WATER LINE ATTRIBUTES (ID, DIAMETER, LENGTH, MATERIAL, ETC.)
D_EX_SGW_AVCH	96	Continuous	0.35	EXISTING SGW AIRVALVE CHAMBER
D_EX_SGW_DCH	96	Continuous	0.35	EXISTING SGW DISCHARGE CHAMBER
D_EX_SGW_DT	96	Continuous	0.35	EXISTING SGW DRAIN TRENCH
D_EX_SGW_DUCT	30	Continuous	0.35	EXISTING SGW DUCT
D_EX_SGW_FCH	96	Continuous	0.35	EXISTING SGW FLUSHING CHAMBER

EXISTING SURFACE GROUND WATER (SGW) (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
D_EX_SGW_FLOW	WHITE	Continuous	0.25	EXISTING SGW FLOW DIRECTION ARROW
D_EX_SGW_GC	96	HIDDEN2	0.35	EXISTING SGW GULLY
D_EX_SGW_GL	96	Continuous	0.35	EXISTING SGW GULLY
D_EX_SGW_HP	WHITE	Continuous	0.25	EXISTING SGW HIGH POINT
D_EX_SGW_ICH	96	Continuous	0.35	EXISTING SGW INSPECTION
D_EX_SGW_ITCH	96	Continuous	0.35	EXISTING SGW INTAKE CHAMBER
D_EX_SGW_LP	WHITE	Continuous	0.25	EXISTING SGW LOW POINT
D_EX_SGW_MH	96	Continuous	0.35	EXISTING SGW MANHOLE
D_EX_SGW_OFCH	96	DASHED2	0.35	EXISTING SGW OUTFALL CHAMBER
D_EX_SGW_PS	96	Continuous	0.35	EXISTING SGW PUMPING STATION
D_EX_SGW_RM	96	RM_EX	0.35	EXISTING SGW RISING MAIN
D_EX_SGW_RM_DIA	WHITE	Continuous	0.25	EXISTING SGW RISING MAIN
D_EX_SGW_SAW	96	Continuous	0.35	EXISTING SGW SOAKAWAY
D_EX_SGW_ST_E	96	Continuous	0.35	EXISTING SGW STUB END
D_EX_SGW_ST_P	96	HIDDEN2	0.35	EXISTING SGW STUB PIPE
D_EX_SGW_TDS	96	Continuous	0.35	EXISTING TUNNELING DRIVE SHAFT
D_EX_SGW_TRS	96	Continuous	0.35	EXISTING TUNNELING RECEPTION
D_EX_SGW_VALV	96	Continuous	0.35	EXISTING SGW VALVE
D_EX_SGW_VC	96	Continuous	0.35	EXISTING SGW VALVE CHAMBER
D_EX_SGW_WCH	96	Continuous	0.35	EXISTING SGW WASHOUT
D_EX_SGW_HTANK	96	Continuous	0.35	EXISTING SURFACE GROUND
D_EX_SGW_MTMH	96	Continuous	0.35	EXISTING SGW MICROTUNNEL MANHOLE
D_EX_SGW_MT	96	Continuous	0.35	EXISTING SGW MICROTUNNEL LINES

A.3.2 Foul Sewerage

PROPOSED FOUL SEWERAGE (SEW)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
D_PR_SEW_ATT	YELLOW	Continuous	0.25	PROPOSED SEWER ATTRIBUTES (ID, DIAMETER, LENGTH, MATERIAL, ETC.)
D_PR_SEW_AVCH	20	Continuous	0.35	PROPOSED SEWER AIRVALVE CHAMBER
D_PR_SEW_DCH	20	Continuous	0.35	PROPOSED SEWER DISCHARGE CHAMBER
D_PR_SEW_DUCT	20	Continuous	0.35	PROPOSED SEWER DUCT
D_PR_SEW_FCH	20	Continuous	0.35	PROPOSED SEWER FLUSHING CHAMBER
D_PR_SEW_FLOW	WHITE	Continuous	0.25	PROPOSED SEWER FLOW DIRECTION ARROW
D_PR_SEW_HC	20	HIDDEN2	0.35	PROPOSED SEWER HOUSECONNECTION
D_PR_SEW_HC_ST_E	20	HIDDEN2	0.35	PROPOSED SEWER HOUSE CONNECTION STUB END
D_PR_SEW_HC_ST_P	20	HIDDEN2	0.35	PROPOSED SEWER HOUSE CONNECTION STUB PIPE
D_PR_SEW_ICH	20	Continuous	0.35	PROPOSED SEWER INSPECTION CHAMBER
D_PR_SEW_ICH_ID	WHITE	Continuous	0.25	PROPOSED SEWER INSPECTION CHAMBER ID
D_PR_SEW_MH	20	Continuous	0.35	PROPOSED SEWER MANHOLE
D_PR_SEW_MH-1	20	Continuous	0.35	PROPOSED SEWER MANHOLE-1

PROPOSED FOUL SEWERAGE (SEW) (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
D_PR_SEW_MT	20	Continuous	0.35	PROPOSED SEWER MICROTUNNEL LINES
D_PR_SEW_MTMH	20	Continuous	0.35	PROPOSED SEWER MICROTUNNEL MANHOLE
D_PR_SEW_PS	20	Continuous	0.35	PROPOSED SEWER PUMPING STATION
D_PR_SEW_RM	13	RM_PR	0.60	PROPOSED SEWER RISING MAIN
D_PR_SEW_SPTK	RED	Continuous	0.10	PROPOSED SEWER SEPTIC TANK
D_PR_SEW_ST_E	20	DASHED2	0.35	PROPOSED SEWER STUB END
D_PR_SEW_ST_P	20	DASHED2	0.35	PROPOSED SEWER STUB PIPE
D_PR_SEW_TDS	20	Continuous	0.35	PROPOSED TUNNELING DRIVE SHAFT
D_PR_SEW_TRS	20	Continuous	0.35	PROPOSED TUNNELING RECEPTION SHAFT
D_PR_SEW_VALV	20	Continuous	0.35	PROPOSED SEWER VALVE (ALL VALVES)
D_PR_SEW_VC	20	Continuous	0.35	PROPOSED SEWER VALVE CHAMBER
D_PR_SEW_WCH	20	Continuous	0.35	PROPOSED SEWER WASHOUT CHAMBER
D_PR_SEWER	10	Continuous	0.60	PROPOSED SEWER LINE
D_PR_TR_SEW	10	TRSEW_PR	0.60	PROPOSED TRUNK SEWER

EXISTING FOUL SEWERAGE (SEW)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
D_EX_SEW_ATT	WHITE	Continuous	0.25	EXISTING SEWER ATTRIBUTES (ID, DIAMETER, LENGTH, MATERIAL, ETC.)
D_EX_SEW_AVCH	30	Continuous	0.35	EXISTING SEWER AIRVALVE CHAMBER
D_EX_SEW_DCH	30	Continuous	0.35	EXISTING SEWER DISCHARGE CHAMBER
D_EX_SEW_DUCT	30	Continuous	0.35	EXISTING SEWER DUCT
D_EX_SEW_FCH	30	Continuous	0.35	EXISTING SEWER FLUSHING CHAMBER
D_EX_SEW_FLOW	WHITE	Continuous	0.25	EXISTING SEWER FLOW DIRECTION ARROW
D_EX_SEW_HC	30	HIDDEN2	0.35	EXISTING SEWER HOUSE CONNECTION
D_EX_SEW_HC_ST_E	30	Continuous	0.35	EXISTING SEWER HOUSE CONNECTION STUB END
D_EX_SEW_HC_ST_P	30	HIDDEN2	0.35	EXISTING SEWER HOUSE CONNECTION STUB PIPE
D_EX_SEW_ICH	30	Continuous	0.35	EXISTING SEWER INSPECTION CHAMBER
D_EX_SEW_ICH_ID	30	Continuous	0.35	EXISTING SEWER INSPECTION CHAMBER ID
D_EX_SEW_MH	30	Continuous	0.35	EXISTING SEWER MANHOLE
D_EX_SEW_MH-1	30	Continuous	0.35	EXISTING SEWER MANHOLE-1
D_EX_SEW_MT	30	Continuous	0.35	EXISTING SEWER MICROTUNNEL

EXISTING FOUL SEWERAGE (SEW) (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
D_EX_SEW_MTMH	30	Continuous	0.35	EXISTING SEWER MICROTUNNEL MANHOLE
D_EX_SEW_PS	30	Continuous	0.35	EXISTING SEWER PUMPING STATION
D_EX_SEW_RM	170	RM_EX	0.35	EXISTING SEWER RISING MAIN
D_EX_SEW_SPTK	30	Continuous	0.35	EXISTING SEWER SEPTIC TANK
D_EX_SEW_ST_E	30	Continuous	0.35	EXISTING SEWER STUB END
D_EX_SEW_ST_P	30	DASHED2	0.35	EXISTING SEWER STUB PIPE
D_EX_SEW_TDS	30	Continuous	0.35	EXISTING TUNNELING DRIVE SHAFT
D_EX_SEW_TRS	30	Continuous	0.35	EXISTING TUNNELING RECEPTION SHAFT
D_EX_SEW_VALV	30	Continuous	0.35	EXISTING SEWER VALVE
D_EX_SEW_VC	30	Continuous	0.35	EXISTING SEWER VALVE CHAMBER
D_EX_SEW_WCH	30	Continuous	0.35	EXISTING SEWER WASHOUT CHAMBER
D_EX_SEWER	30	DASHED2	0.35	EXISTING SEWER LINE
D_EX_TR_SEW	30	TRSEW_EX	0.35	EXISTING TRUNK SEWER

A.3.3 Treated Sewage Effluent (TSE)

PROPOSED TREATED SEWAGE EFFLUENT (TSE)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
D_PR_TSE	210	TSE_PR	0.35	PROPOSED TREATED SEWAGE EFFLUENT LINES
D_PR_TSE_ATT	YELLOW	Continuous	0.25	PROPOSED TSE ATTRIBUTES (ID, DIAMETER, LENGTH, MATERIAL, ETC.)
D_PR_TSE_AVCH	200	Continuous	0.35	PROPOSED TSE AIR VALVE CHAMBER
D_PR_TSE_BY_OTHERS	160	Continuous	0.35	PROPOSED TSE BY OTHERS
D_PR_TSE_DCH	200	Continuous	0.35	PROPOSED TSE DISCHARGE CHAMBER
D_PR_TSE_DICH	200	Continuous	0.35	PROPOSED TSE DISTRIBUTION CHAMBER
D_PR_TSE_DUCT	30	Continuous	0.35	PROPOSED TSE DUCT
D_PR_TSE_FCH	200	Continuous	0.35	PROPOSED TSE FLUSHING CHAMBER
D_PR_TSE_FLOW	WHITE	Continuous	0.25	PROPOSED TSE FLOW DIRECTION ARROW
D_PR_TSE_ICH	200	Continuous	0.35	PROPOSED TSE INSPECTION CHAMBER
D_PR_TSE_MH	200	Continuous	0.35	PROPOSED TSE MANHOLE
D_PR_TSE_PS	200	Continuous	0.35	PROPOSED TSE PUMPING STATION
D_PR_TSE_RM	210	RM_PR	0.35	PROPOSED TSE RISING MAIN LINES
D_PR_TSE_ST_E	200	Continuous	0.35	PROPOSED TSE STUB END

PROPOSED TREATED SEWAGE EFFLUENT (TSE) (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
D_PR_TSE_ST_P	200	Continuous	0.35	PROPOSED TSE STUB PIPE
D_PR_TSE_VALV	200	Continuous	0.35	PROPOSED TSE VALVE
D_PR_TSE_VC	200	Continuous	0.35	PROPOSED TSE VALVE CHAMBER
D_PR_TSE_WCH	200	Continuous	0.35	PROPOSED TSE WASHOUT CHAMBER
D_PR_TSE_WTWR	200	Continuous	0.35	PROPOSED TSE WATER TOWER

EXISTING TREATED SEWAGE EFFLUENT (TSE)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
D_EX_TSE	240	TSE_EX	0.35	EXISTING TREATED SEWAGE EFFLUENT LINES
D_EX_TSE_ATT	WHITE	Continuous	0.25	EXISTING TSE ATTRIBUTES (ID, DIAMETER, LENGTH, MATERIAL, ETC.)
D_EX_TSE_AVCH	240	Continuous	0.35	EXISTING TSE AIR VALVE CHAMBER
D_EX_TSE_DCH	240	Continuous	0.35	EXISTING TSE DISCHARGE CHAMBER
D_EX_TSE_DICH	240	Continuous	0.35	EXISTING TSE DISTRIBUTION CHAMBER
D_EX_TSE_DUCT	30	Continuous	0.35	EXISTING TSE DUCT
D_EX_TSE_FCH	240	Continuous	0.35	EXISTING TSE FLUSHING CHAMBER

EXISTING TREATED SEWAGE EFFLUENT (TSE) (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
D_EX_TSE_FLOW	WHITE	Continuous	0.25	EXISTING TSE FLOW DIRECTION ARROW
D_EX_TSE_ICH	240	Continuous	0.35	EXISTING TSE INSPECTION CHAMBER
D_EX_TSE_MH	240	Continuous	0.35	EXISTING TSE MANHOLE
D_EX_TSE_PS	240	Continuous	0.35	EXISTING TSE PUMPING STATION
D_EX_TSE_RM	240	RM_EX	0.35	EXISTING TSE RISING MAIN LINES
D_EX_TSE_ST_E	240	Continuous	0.35	EXISTING TSE STUB END
D_EX_TSE_ST_P	240	DASHED2	0.35	EXISTING TSE STUB PIPE
D_EX_TSE_VALV	240	Continuous	0.35	EXISTING TSE VALVE
D_EX_TSE_VC	240	Continuous	0.35	EXISTING TSE VALVE CHAMBER
D_EX_TSE_WCH	240	Continuous	0.35	EXISTING TSE WASHOUT CHAMBER
D_EX_TSE_WTWR	240	Continuous	0.35	EXISTING TSE WATER TOWER

A.3.4 General Construction Layers

GENERAL CONSTRUCTION LAYERS				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
D_C_10HID	RED	HIDDEN2	0.10	HIDDEN DETAILS
D_C_10OUT	RED	Continuous	0.10	ALL VERY THIN OUTLINES
D_C_10PIPE	RED	Continuous	0.10	PIPE WORK OUTLINES / FITTINGS
D_C_10PIPEHID	RED	HIDDEN2	0.10	PIPE WORK HIDDEN LINES
D_C_25DASH	WHITE	DASHED2	0.25	HIDDEN DETAILS
D_C_25HID	WHITE	HIDDEN2	0.25	HIDDEN DETAILS
D_C_25OUT	YELLOW	Continuous	0.25	ALL THIN OUTLINES
D_C_35OUT	GREEN	Continuous	0.35	ALL OUT LINES IN PLAN / ELEVATION
D_C_50OUT	CYAN	Continuous	0.50	ALL CONCRETE OUTLINES IN SECTION
D_C_70OUT	BLUE	Continuous	0.50	ALL CONCRETE OUTLINES IN SECTION
D_C_50REBARS	CYAN	Continuous	0.50	REINFORCEMENT DETAILS
D_C_BUND	YELLOW	Continuous	0.25	BUND OUTLINES
D_C_CHAIN	WHITE	Continuous	0.25	CHAINAGE SYMBOL
D_C_CHAIN-TEXT	WHITE	Continuous	0.25	CHAINAGE TEXT
D_C_CTRLINE	RED	CENTER2	0.10	CENTRE LINE
D_C_EX_GRND	WHITE	DASHED2	0.25	EXISTING GROUND LEVEL
D_C_FRL	WHITE	DASHED2	0.25	FINISHED ROAD LEVEL
D_C_HATCH	RED	Continuous	0.10	ALL HATCHING
D_C_PROF_CURV	CYAN	Continuous	0.50	PROFILE: VERTICAL CURVES
D_C_PROF_DIAG	CYAN	Continuous	0.50	PROFILE: BAND DIAGRAMS
D_C_PROF_FG	YELLOW	HIDDEN2	0.25	PROFILE: FINISHED GROUND

GENERAL CONSTRUCTION LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
D_C_PROF_GRID-MAJR	251	Continuous	0.15	PROFILE: GRIDLINE @ MAJOR STATIONS
D_C_PROF_GRID-MINR	251	Continuous	0.15	PROFILE: GRIDLINE @ MINOR STATIONS
D_C_PROF_LABL	8	Continuous	0.20	PROFILE: LABEL
D_C_PROF_LINE	RED	Continuous	0.10	PROFILE: VERTICAL LINES
D_C_PROF_MATCH LINE	BLUE	PHANTOM2	0.70	PROFILE: MATCHLINE
D_C_PROF_STAN-GEOM	WHITE	Continuous	0.25	PROFILE: GEOMETRY POINT LABELS
D_C_PROF_STAN-MAJR	YELLOW	Continuous	0.25	PROFILE: MAJOR STATION LABELS
D_C_PROF_STAN-MINR	RED	Continuous	0.10	PROFILE: MINOR STATION LABELS
D_C_PROF_TEXT	WHITE	Continuous	0.25	PROFILE: TEXT
D_C_PROF_TICK	251	Continuous	0.15	PROFILE: TICK MARKS
D_C_PROF_TITL	CYAN	Continuous	0.50	PROFILE: LABEL / TITLE
D_C_PROF_SGW	CYAN	Continuous	0.50	PROFILE: SGW PROFILE LINE
D_C_PROF_SEW	CYAN	Continuous	0.50	PROFILE: SEW PROFILE LINE
D_C_PROF_TSE	CYAN	Continuous	0.50	PROFILE: TSE PROFILE LINE
D_C_TABLE	WHITE	Continuous	0.25	TABLES
D_C_TEXT	WHITE	Continuous	0.25	GENERAL / COMMON TEXT

A.3.5 Attribute & Common Layers

(DRAINAGE) ATTRIBUTE & COMMON LAYERS				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
D_EX_ABD_SEW	30	---A---	0.35	ABANDONED SEWER LINES
D_EX_ABD_SGW	30	---A---	0.35	ABANDONED SURFACE GROUND WATER LINES
D_EX_ABD_TSE	30	---A---	0.35	ABANDONED TSE LINES
D_EX_AVCH_ATT	WHITE	Continuous	0.25	EXISTING AIRVALVE CHAMBER ATTRIBUTES (ID, DEPTH, COV. LVL, INV. LVL, ETC.)
D_EX_BOREHOLE	220	Continuous	0.35	EXISTING BOREHOLE
D_EX_BOREHOLE_ATT	WHITE	Continuous	0.35	EXISTING BOREHOLE ATTRIBUTES (ID, DEPTH, COV. LVL, INV. LVL, ETC.)
D_EX_DC_ATT	WHITE	Continuous	0.25	EXISTING DISCHARGE CHAMBER ATTRIBUTES (ID, DEPTH, COV. LVL, INV. LVL, ETC.)
D_EX_DC_RM_DIA	WHITE	Continuous	0.25	EXISTING INCOMING DISCHARGE CHAMBER RISING MAIN DIAMETER
D_EX_DC_SEW_DIA	WHITE	Continuous	0.25	EXISTING DISCHARGE CHAMBER OUTGOING SEWER DIAMETER
D_EX_DC_SGW_DIA	WHITE	Continuous	0.25	EXISTING DISCHARGE CHAMBER OUTGOING SGW PIPE DIAMETER
D_EX_DC_TSE_DIA	WHITE	Continuous	0.25	EXISTING DISCHARGE CHAMBER OUTGOING TSE PIPE DIAMETER
D_EX_FM_RM_DIA	WHITE	Continuous	0.25	EXISTING FLOWMETER RISING MAIN DIAMETER
D_EX_FMCH	30	Continuous	0.35	EXISTING FLOWMETER CHAMBER

(DRAINAGE) ATTRIBUTE & COMMON LAYERS (CONTINUATION…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
D_EX_FMCH_ATT	WHITE	Continuous	0.25	EXISTING FLOWMETER CHAMBER ATTRIBUTES (ID, DEPTH, COV. LVL, INV. LVL, TYPE, ETC.)
D_EX_GC_ATT	WHITE	Continuous	0.25	EXISTING GULLY CONNECTION ATTRIBUTES (ID, DIAMETER, LENGTH, MATERIAL, DEPTH, COV. LVL, INV. LVL, ETC.)
D_EX_GL_ATT	WHITE	Continuous	0.25	EXISTING GULLY ATTRIBUTES (ID, COV. LVL, INV. LVL, ETC)
D_EX_ITCH_ATT	WHITE	Continuous	0.25	EXISTING INTAKE CHAMBER ATTRIBUTES (ID, DEPTH, COV. LVL, INV. LVL, TYPE, ETC.)
D_EX_HC_ATT	WHITE	Continuous	0.25	EXISTING HOUSECONNECTION ATTRIBUTES (ID, DIAMETER, LENGTH, MATERIAL, DEPTH, COV. LVL, INV. LVL, TYPE, ETC.)
D_EX_LD	96	HIDDEN2	0.35	EXISTING LAND DRAIN
D_EX_MH-1_ATT	WHITE	Continuous	0.25	EXISTING MANHOLE-1 ATTRIBUTES (ID, DEPTH, COV. LVL, INV. LVL, ETC.)
D_EX_MH_ATT	WHITE	Continuous	0.25	EXISTING MANHOLE ATTRIBUTES (ID, DEPTH, COV. LVL, INV. LVL, TYPE, RODDING EYE LVL, ETC.)
D_EX_MTMH_ATT	WHITE	Continuous	0.25	EXISTING MICROTUNNEL MANHOLE ATTRIBUTES (ID, DEPTH, COV. LVL, INV. LVL, TYPE, RODDING EYE LVL, ETC.)

(DRAINAGE) ATTRIBUTE & COMMON LAYERS (CONTINUATION…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
D_EX_OFCH_ATT	WHITE	Continuous	0.25	EXISTING OUTFALL CHAMBER ATTRIBUTES (ID, DEPTH, COV. LVL, INV. LVL, TYPE, ETC.)
D_EX_PENSTOCK	21	Continuous	0.35	EXISTING PENSTOCK
D_EX_PS_ATT	WHITE	Continuous	0.25	EXISTING PUMPING STATION ATTRIBUTES (ID, DEPTH, COV. LVL, INV. LVL, PUMP CAPACITY, TOTAL HEAD, ETC.)
D_EX_PS_SCADA	WHITE	Continuous	0.25	EXISTING PUMPING STATION SCADA SYSTEM
D_EX_PS_SEW_ATT	WHITE	Continuous	0.25	EXISTING P/S INCOMING SEWER ATTRIBUTES (ID, DIAMETER, LENGTH, MATERIAL, DEPTH, COV. LVL, INV. LVL, ETC.)
D_EX_PS_SGW_ATT	WHITE	Continuous	0.25	EXISTING P/S INCOMING SGW ATTRIBUTES (ID, DIAMETER, LENGTH, MATERIAL, DEPTH, COV. LVL, INV. LVL, ETC)
D_EX_PS_TSE_ATT	WHITE	Continuous	0.25	EXISTING P/S INCOMING TSE ATTRIBUTES (ID, DIAMETER, LENGTH, MATERIAL, DEPTH, COV. LVL, INV. LVL, ETC.)
D_EX_RE_SEW	30	---R---	0.35	EXISTING REFUR/REFINED/REPLACED SEWER LINES
D_EX_RE_SGW	30	---R---	0.35	EXISTING REFUR/REFINED/REPLACED SURFACE GROUND WATER LINES

(DRAINAGE) ATTRIBUTE & COMMON LAYERS (CONTINUATION…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
D_EX_RE_TSE	30	---R---	0.35	EXISTING REFUR/REFINED/REPLACED TSE LINES
D_EX_RM_ATT	WHITE	Continuous	0.25	EXISTING RISING MAIN ATTRIBUTES (ID, DIAMETER, LENGTH, MATERIAL ETC.)
D_EX_RM_MH	170	Continuous	0.35	EXISTING RISING MAIN MANHOLE
D_EX_RM_PS	240	Continuous	0.35	EXISITING RISING MAIN PUMP STATION
D_EX_SCR-CHMBR	MAGENTA	Continuous	0.25	EXISTING SCREEN CHAMBER
D_EX_STW	240	DASHED2	0.35	EXISTING SEWERAGE TREATMENT WORKS
D_EX_STW_TANKS	CYAN	Continuous	0.50	EXISTING SEWERAGE TREATMENT WORK TANKS
D_EX_SV_ATT	WHITE	Continuous	0.25	EXISTING SURGE VESSEL CHAMBER ATTRIBUTES (ID, DEPTH, COV. LVL, INV. LVL, TYPE, CAPACITY, ETC.)
D_EX_SV_RM_DIA	WHITE	Continuous	0.25	EXISTING SURGE VESSEL RISING MAIN DIAMETER
D_EX_SVCH	40	Continuous	0.35	EXISTING SURGE VESSEL CHAMBER
D_EX_VALV_ATT	WHITE	Continuous	0.25	EXISTING VALVE ATTRIBUTES (ID, DEPTH, COV. LVL, INV. LVL, ETC.)
D_EX_VC_ATT	WHITE	Continuous	0.25	EXISTING VALVE CHAMBER ATTRIBUTES (ID, DEPTH, COV. LVL, INV. LVL, TYPE, CAPACITY, ETC.)
D_EX_VC_RM_DIA	WHITE	Continuous	0.25	EXISTING VALVE RISING MAIN DIAMETER

(DRAINAGE) ATTRIBUTE & COMMON LAYERS (CONTINUATION…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
D_EX_WO_ATT	WHITE	Continuous	0.25	EXISTING WASHOUT CHAMBER ATTRIBUTES (ID, DEPTH, COV. LVL, INV. LVL, ETC.)
D_EX_WO_RM_DIA	WHITE	Continuous	0.25	EXISTING WASHOUT CHAMBER RISING MAIN DIAMETER
D_EX_WO_SUMP	140	Continuous	0.25	EXISTING WASHOUT SUMP/MH
D_PR_AVCH_ATT	YELLOW	Continuous	0.25	PROPOSED AIRVALVE CHAMBER ATTRIBUTES (ID, DEPTH, COV. LVL, INV. LVL, ETC.)
D_PR_BOREHOLE	220	Continuous	0.35	PROPOSED BOREHOLE
D_PR_BOREHOLE_ATT	YELLOW	Continuous	0.35	PROPOSED BOREHOLE ATTRIBUTES (ID, DEPTH, COV. LVL, INV. LVL, ETC.)
D_PR_DC_ATT	YELLOW	Continuous	0.25	PROPOSED DISCHARGE CHAMBER ATTRIBUTES (ID, DEPTH, COV. LVL, INV. LVL, ETC.)
D_PR_DC_RM_DIA	YELLOW	Continuous	0.25	PROPOSED INCOMING RISING MAIN DIAMETER
D_PR_DC_SEW_DIA	YELLOW	Continuous	0.25	PROPOSED DISCHARGE CHAMBER OUTGOING SEWER DIAMETER
D_PR_DC_SGW_DIA	YELLOW	Continuous	0.25	PROPOSED DISCHARGE CHAMBER OUTGOING SGW DIAMETER
D_PR_DC_TSE_DIA	YELLOW	Continuous	0.25	PROPOSED DISCHARGE CHAMBER OUTGOING TSE DIAMETER
D_PR_FM_RM_DIA	YELLOW	Continuous	0.25	PROPOSED FLOWMETER RISING MAIN DIAMETER

(DRAINAGE) ATTRIBUTE & COMMON LAYERS (CONTINUATION...)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
D_PR_FMCH	30	Continuous	0.35	PROPOSED FLOWMETER CHAMBER
D_PR_FMCH_ATT	YELLOW	Continuous	0.25	PROPOSED FLOWMETER CHAMBER ATTRIBUTES (ID, DEPTH, COV. LVL, INV. LVL, TYPE, ETC.)
D_PR_GC_ATT	YELLOW	Continuous	0.25	PROPOSED GULLY CONNECTION ATTRIBUTES (ID, DIAMETER, LENGTH, MATERIAL, DEPTH, COV. LVL, INV. LVL, ETC.)
D_PR_GL_ATT	YELLOW	Continuous	0.25	PROPOSED GULLY ATTRIBUTES (ID, COV. LVL, INV. LVL, ETC.)
D_PR_ITCH_ATT	YELLOW	Continuous	0.25	PROPOSED INTAKE CHAMBER ATTRIBUTES (ID, DEPTH, COV. LVL, INV. LVL, TYPE, ETC.)
D_PR_HC_ATT	YELLOW	Continuous	0.35	PROPOSED HOUSECONNECTION ATTRIBUTES (ID, DIAMETER, LENGTH, MATERIAL, DEPTH, COV. LVL, INV. LVL, ETC.)
D_PR_LD	90	Continuous	0.35	PROPOSED LAND DRAIN
D_PR_MH-1_ATT	YELLOW	Continuous	0.25	PROPOSED MANHOLE-1 ATTRIBUTES (ID, DEPTH, COV. LVL, INV. LVL, ETC.)
D_PR_MH_ATT	YELLOW	Continuous	0.25	PROPOSED MANHOLE ATTRIBUTES (ID, DEPTH, COV. LVL, INV. LVL, TYPE, RODDING EYE LVL, ETC.)
D_PR_MTMH_ATT	YELLOW	Continuous	0.25	PROPOSED MICROTUNNEL MANHOLE ATTRIBUTES (ID, DEPTH, COV. LVL, INV. LVL, TYPE, RODDING EYE LVL, ETC.)

(DRAINAGE) ATTRIBUTE & COMMON LAYERS (CONTINUATION…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
D_PR_OFCH_ATT	YELLOW	Continuous	0.25	PROPOSED OUTFALL CHAMBER ATTRIBUTES (ID, DEPTH, COV. LVL, INV. LVL, TYPE, ETC.)
D_PR_PENSTOCK	21	Continuous	0.35	PROPOSED PENSTOCK
D_PR_PS_ATT	YELLOW	Continuous	0.25	PROPOSED PUMPING STATION ATTRIBUTES (ID, DEPTH, COV. LVL, INV. LVL, PUMP CAPACITY, TOTAL HEAD, ETC.)
D_PR_PS_SCADA	YELLOW	Continuous	0.25	PROPOSED PUMPING STATION SCADA SYSTEM
D_PR_PS_SEW_ATT	YELLOW	Continuous	0.25	PROPOSED P/S INCOMING SEWER ATTRIBUTES (ID, DIAMETER, LENGTH, MATERIAL, DEPTH, COV. LVL, INV. LVL, ETC.)
D_PR_PS_SGW_ATT	YELLOW	Continuous	0.25	PROPOSED P/S INCOMING SGW ATTRIBUTES (ID, DIAMETER, LENGTH, MATERIAL, DEPTH, COV. LVL, INV. LVL, ETC.)
D_PR_PS_TSE_ATT	YELLOW	Continuous	0.25	PROPOSED P/S INCOMING TSE ATTRIBUTES (ID, DIAMETER, LENGTH, MATERIAL, DEPTH, COV. LVL, INV. LVL, ETC.)
D_PR_RM_ATT	YELLOW	Continuous	0.25	PROPOSED RISING MAIN ATTRIBUTES (ID, DIAMETER, LENGTH, ETC.)
D_PR_RM_MH	170	Continuous	0.35	PROPOSED RISING MAIN MANHOLE

(DRAINAGE) ATTRIBUTE & COMMON LAYERS (CONTINUATION…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
D_PR_RM_PS	240	Continuous	0.35	PROPOSED RISING MAIN PUMP STATION
D_PR_SCR-CHMBR	32	Continuous	0.25	PROPOSED SCREEN CHAMBER
D_PR_STW	240	Continuous	0.35	PROPOSED SEWERAGE TREATMENT WORKS
D_PR_SV_ATT	YELLOW	Continuous	0.25	PROPOSED SURGE VESSEL CHAMBER ATTRIBUTES (ID, DEPTH, COV. LVL, INV. LVL, TYPE, CAPACITY, ETC.)
D_PR_SV_RM_DIA	YELLOW	Continuous	0.25	PROPOSED SURGE VESSEL RISING MAIN DIAMETER
D_PR_SVCH	40	Continuous	0.35	PROPOSED SURGE VESSEL CHAMBER
D_PR_VALV_ATT	YELLOW	Continuous	0.25	PROPOSED VALVE ATTRIBUTES (ID, DEPTH, COV. LVL, INV. LVL, ETC.)
D_PR_VC_ATT	YELLOW	Continuous	0.25	PROPOSED VALVE CHAMBER ATTRIBUTES (ID, DEPTH, COV. LVL, INV. LVL, TYPE, CAPACITY, ETC.)
D_PR_VC_RM_DIA	YELLOW	Continuous	0.25	PROPOSED VALVE RISING MAIN DIAMETER
D_PR_WO_ATT	YELLOW	Continuous	0.25	PROPOSED WASHOUT CHAMBER ATTRIBUTES (ID, DEPTH, COV. LVL, INV. LVL, ETC.)
D_PR_WO_RM_DIA	YELLOW	Continuous	0.25	PROPOSED WASHOUT CHAMBER RISING MAIN DIAMETER
D_PR_WO_SUMP	GREEN	Continuous	0.35	PROPOSED WASHOUT SUMP/MH

A.4 ROAD LAYERS

A.4.1 Road Design Layers

PROPOSED ROAD DESIGN LAYERS				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_PR_ACRS	22	Continuous	0.35	PROPOSED ROAD FEATURE : ANIMAL CROSSING
RD_PR_AFNCE	22	FENCELINE15	0.35	PROPOSED ROAD FEATURE: ANIMAL FENCE
RD_PR_AGRID	22	Continuous	0.35	PROPOSED ROAD FEATURE : ANIMAL GRID
RD_PR_APED	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE : ASPHALT EDGE
RD_PR_APPROACH-SPLAY	220	Continuous	0.35	PROPOSED ROAD FEATURE : JUNCTION APPROACH SPLAY
RD_PR_AWAY	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: ACCESS WAY
RD_PR_BICYL	GREEN	Continuous	0.35	PROPOSED ROAD FEATURE: BICYCLE LANE
RD_PR_BRDG	YELLOW	Continuous	0.25	PROPOSED ROAD FEATURE: BRIDGE FLYOVER
RD_PR_CHNL	RED	HIDDEN2	0.10	PROPOSED ROAD FEATURE: CHANNEL
RD_PR_CILND	GREEN	Continuous	0.35	PROPOSED ROAD FEATURE: CENTRAL/ROUNDABOUT ISLAND
RD_PR_CLMN	RED	Continuous	0.10	PROPOSED ROAD FEATURE: COLUMN
RD_PR_CLVT	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: CULVERT

PROPOSED ROAD DESIGN LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_PR_CNRL	RED	CENTER2	0.10	PROPOSED ROAD FEATURE: CENTERLINE
RD_PR_CSLPE	MAGENTA	Continuous	0.35	PROPOSED ROAD FEATURE: CONCRETE SLOPE PROTECTION
RD_PR_CWAY	CYAN	Continuous	0.50	PROPOSED ROAD FEATURE: CARRIAGEWAY
RD_PR_FNCE	GREEN	FENCELINE25	0.35	PROPOSED ROAD FEATURE: FENCE
RD_PR_FTPH	11	Continuous	0.35	PROPOSED ROAD FEATURE: FOOTPATH
RD_PR_FUT-CDITCH	30	Continuous	0.35	PROPOSED ROAD FEATURE : RESERVED FOR FUTURE CONTAINMENT DITCH
RD_PR_FUT-LANE	20	Continuous	0.35	PROPOSED ROAD FEATURE : RESERVED FOR FUTURE
RD_PR_GIVE-WAY-SPLAY	111	Continuous	0.35	PROPOSED ROAD FEATURE : JUNCTION GIVE-WAY SPLAY
RD_PR_GRAIL	WHITE	GUARDRAIL	0.25	PROPOSED ROAD FEATURE: GUARD RAIL
RD_PR_ILOCK	RED	Continuous	0.10	PROPOSED ROAD FEATURE: INTER LOCK
RD_PR_INTER-VISIBILITY-ZONE	254	Continuous	0.15	PROPOSED ROAD FEATURE : JUNCTION INTERVISIBILITY SPLAY

PROPOSED ROAD DESIGN LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_PR_JILND	GREEN	Continuous	0.35	PROPOSED ROAD FEATURE: JUNCTION ISLAND
RD_PR_KBDD	GREEN	HIDDEN2	0.35	PROPOSED ROAD FEATURE: DROPPED KERB
RD_PR_KBED	150	Continuous	0.25	PROPOSED ROAD FEATURE: EDGE KERB
RD_PR_KBFL	YELLOW	DASHED2	0.25	PROPOSED ROAD FEATURE: FLUSH KERB
RD_PR_KBRD	CYAN	Continuous	0.50	PROPOSED ROAD FEATURE: RAISED KERB
RD_PR_LOW	BLUE	DASHDOT2	0.70	LIMIT OF WORKS
RD_PR_MBK	YELLOW	Continuous	0.25	PROPOSED ROAD FEATURE: EMBANKMENT
RD_PR_MEDIAN	GREEN	Continuous	0.35	PROPOSED ROAD FEATURE: MEDIAN
RD_PR_OTHR	RED	Continuous	0.10	PROPOSED ROAD FEATURE:OTHER INFORMATIONINFORMATION
RD_PR_PBAY	GREEN	Continuous	0.35	PROPOSED ROAD FEATURE: PARKING BAY
RD_PR_PDCR	8	Continuous	0.05	PROPOSED ROAD FEATURE: PEDESTRIAN CROSSING
RD_PR_PRAMP	GREEN	Continuous	0.35	PROPOSED ROAD FEATURE: PEDESTRIAN RAMP
RD_PR_PRKG	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: PARKING

PROPOSED ROAD DESIGN LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_PR_PTS	YELLOW	Continuous	0.25	PROPOSED ROAD FEATURE: IPS, CURVE POINTS ETC.,
RD_PR_RAILCOR	252	HIDDEN2	0.05	PROPOSED ROAD FEATURE : RAIL CORRIDOR
RD_PR_RAILWAY	WHITE	TRACKS2	0.25	PROPOSED ROAD FEATURE: RAILWAY
RD_PR_RAMP	YELLOW	Continuous	0.25	PROPOSED ROAD FEATURE: RAMP
RD_PR_RBTR	8	Continuous	0.05	PROPOSED ROAD FEATURE: ROAD BATTER
RD_PR_REDG	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE : ROAD EDGE
RD_PR_RLVL	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: ROAD LEVEL
RD_PR_RNDA	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: ROUND ABOUT
RD_PR_RRAP	8	Continuous	0.05	PROPOSED ROAD FEATURE: RIPRAP
RD_PR_RSLAB	RED	Continuous	0.10	PROPOSED ROAD FEATURE : ROAD SLAB
RD_PR_RSTL	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE : ROAD SPEED TABLE
RD_PR_SBAR-END	172	END_TERMINAL	0.35	PROPOSED ROAD FEATURE : SAFETY BARRIER END TERMINAL
RD_PR_SBAR-TERM	104	TERMINAL	0.35	PROPOSED ROAD FEATURE : SAFETY BARRIER TERMINAL

PROPOSED ROAD DESIGN LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_PR_SDITCH	44	Continuous	0..35	PROPOSED ROAD FEATURE : SWALE DITCH
RD_PR_SHLDR	GREEN	Continuous	0.35	PROPOSED ROAD FEATURE: SHOULDER
RD_PR_SP-KBCLER	170	Continuous	0.35	PROPOSED ROAD FEATURE : SWEPT PATH KERB CLEARANCE
RD_PR_SP-PATH	RED	Continuous	0.10	PROPOSED ROAD FEATURE : VEHICLE SWEPT PATH
RD_PR_SPTR	20	Continuous	0.35	PROPOSED ROAD FEATURE: ROAD SEPARATOR
RD_PR_STAIRS	YELLOW	Continuous	0.25	PROPOSED ROAD FEATURE : STAIRS
RD_PR_SWAY	190	Continuous	0.35	PROPOSED ROAD FEATURE : PEDESTRIAN SUBWAY
RD_PR_UPSS	YELLOW	Continuous	0.25	PROPOSED ROAD FEATURE: UNDERPASS TUNNEL
RD_PR_VBAR	MAGENTA	Continuous	0.35	PROPOSED ROAD FEATURE: VEHICLE BARRIER
RD_PR_VERGE	YELLOW	Continuous	0.25	PROPOSED ROAD FEATURE: VERGE
RD_PR_VISIBILITY-SPLAY	100	Continuous	0.35	PROPOSED ROAD FEATURE : STOPPING SIGHT DISTANCE SPLAY
RD_PR_WALL	40	Continuous	0.35	PROPOSED ROAD FEATURE : ALL WALLS

EXISTING ROAD DESIGN LAYERS				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_EX_ACRS	31	Continuous	0.35	EXISTING ROAD FEATURE : ANIMAL CROSSING
RD_EX_AFNCE	31	FENCELINE1	0.35	EXISTING ROAD FEATURE: ANIMAL FENCE
RD_EX_AGRID	31	Continuous	0.35	EXISTING ROAD FEATURE : ANIMAL GRID
RD_EX_APED	WHITE	Continuous	0.25	EXISTING ROAD FEATURE : ASPHALT EDGE
RD_EX_AWAY	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ACCESS WAY
RD_EX_BICYL	GREEN	Continuous	0.35	EXISTING ROAD FEATURE: BICYCLE LANE
RD_EX_BRDG	YELLOW	Continuous	0.25	EXISTING ROAD FEATURE: BRIDGE FLYOVER
RD_EX_CHNL	RED	HIDDEN2	0.10	EXISTING ROAD FEATURE: CHANNEL
RD_EX_CILND	GREEN	Continuous	0.35	EXISTING ROAD FEATURE: CENTRAL/ROUNDABOUT ISLAND
RD_EX_CLMN	RED	Continuous	0.18	EXISTING ROAD FEATURE: COLUMN
RD_EX_CLVT	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: CULVERT
RD_EX_CNRL	RED	CENTER2	0.10	EXISTING ROAD FEATURE: CENTERLINE

EXISTING ROAD DESIGN LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_EX_CSLPE	MAGENTA	Continuous	0.35	EXISTING ROAD FEATURE: CONCRETE SLOPE PROTECTION
RD_EX_CWAY	CYAN	Continuous	0.5	EXISTING ROAD FEATURE: CARRIAGEWAY
RD_EX_FNCE	GREEN	FENCELINE25	0.35	EXISTING ROAD FEATURE: FENCE
RD_EX_FTPH	11	Continuous	0.35	EXISTING ROAD FEATURE: FOOTPATH
RD_EX_GRAIL	WHITE	GUARDRAIL	0.25	EXISTING ROAD FEATURE: GUARD RAIL
RD_EX_ILOCK	RED	Continuous	0.10	EXISTING ROAD FEATURE: INTER LOCK
RD_EX_JILND	GREEN	Continuous	0.35	EXISTING ROAD FEATURE: JUNCTION ISLAND
RD_EX_KBDD	GREEN	HIDDEN2	0.35	EXISTING ROAD FEATURE :DROPPED KERB
RD_EX_KBED	150	Continuous	0.25	EXISTING ROAD FEATURE: EDGE KERB
RD_EX_KBFL	YELLOW	DASHED2	0.25	EXISTING ROAD FEATURE: FLUSH KERB
RD_EX_KBRD	CYAN	Continuous	0.5	EXISTING ROAD FEATURE: RAISED KERB
RD_EX_LOW	BLUE	DASHDOT2	0.7	LIMIT OF WORKS
RD_EX_MBK	YELLOW	Continuous	0.25	EXISTING ROAD FEATURE: EMBANKMENT

EXISTING ROAD DESIGN LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_EX_MEDIAN	GREEN	Continuous	0.35	EXISTING ROAD FEATURE: MEDIAN
RD_EX_OTHR	RED	Continuous	0.10	EXISTING ROAD FEATURE: OTHER INFORMATION
RD_EX_PBAY	GREEN	Continuous	0.35	EXISTING ROAD FEATURE: PARKING BAY
RD_EX_PDCR	8	Continuous	0.05	EXISTING ROAD FEATURE: PEDESTRIAN CROSSING
RD_EX_PRAMP	GREEN	Continuous	0.35	EXISTING ROAD FEATURE: PEDESTRIAN RAMP
RD_EX_PRKG	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: PARKING
RD_EX_PTS	YELLOW	Continuous	0.25	EXISTING ROAD FEATURE: IPS, CURVE POINTS ETC
RD_EX_RAILCOR	252	Continuous	0.05	EXISTING ROAD FEATURE : RAIL CORRIDOR
RD_EX_RAILWAY	WHITE	TRACKS2	0.25	EXISTING ROAD FEATURE: RAILWAY
RD_EX_RAMP	YELLOW	Continuous	0.25	EXISTING ROAD FEATURE: RAMP
RD_EX_RBTR	8	Continuous	0.05	EXISTING ROAD FEATURE: ROAD BATTER
RD_EX_REDG	WHITE	Continuous	0.25	EXISTING ROAD FEATURE : ROAD EDGE
RD_EX_RLVL	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ROAD LEVEL

EXISTING ROAD DESIGN LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_EX_RNDA	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ROUND ABOUT
RD_EX_RRAP	8	Continuous	0.05	EXISTING ROAD FEATURE: RIPRAP
RD_EX_RSLAB	RED	Continuous	0.10	EXISTING ROAD FEATURE: ROAD SLAB
RD_EX_RSTL	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ROAD SPEED TABLE
RD_EX_SBAR-END	14	END_TERMINAL	0.35	EXISTING ROAD FEATURE : SAFETY BARRIER END
RD_EX_SBAR-TERM	30	TERMINAL	0.35	EXISTING ROAD FEATURE : SAFETY BARRIER TERMINAL
RD_EX_SDITCH	44	Continuous	0.35	EXISTING ROAD FEATURE : SWALE DITCH
RD_EX_SHLDR	GREEN	Continuous	0.35	EXISTING ROAD FEATURE: SHOULDER
RD_EX_SPTR	20	Continuous	0.35	EXISTING ROAD FEATURE: ROAD SEPARATOR
RD_EX_STAIRS	YELLOW	Continuous	0.25	EXISTING ROAD FEATURE : STAIRS
RD_EX_SWAY	190	Continuous	0.35	EXISTING ROAD FEATURE : PEDESTRIAN SUBWAY
RD_EX_UPSS	YELLOW	Continuous	0.25	EXISTING ROAD FEATURE: UNDERPASS TUNNEL
RD_EX_VBAR	MAGENTA	Continuous	0.35	EXISTING ROAD FEATURE: VEHICLE BARRIER

EXISTING ROAD DESIGN LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_EX_VERGE	YELLOW	Continuous	0.25	EXISTING ROAD FEATURE: VERGE
RD_EX_WALL	40	Continuous	0.35	EXISTING ROAD FEATURE : ALL WALLS

A.4.2 Traffic and Safety

PROPOSED TRAFFIC AND SAFETY LAYERS				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_PR_TS_BARL	GREEN	Continuous	0.35	TRAFFIC : BARRIERS, RAILS & BOLLARDS
RD_PR_TS_CTRL_BOX	RED	Continuous	0.10	TRAFFIC : CONTROL BOX OR SERVICE BOX
RD_PR_TS_DET_LOOP	8	Continuous	0.05	TRAFFIC : DETECTOR LOOP
RD_PR_TS_DUCT	30	Continuous	0.35	TRAFFIC : DUCT
RD_PR_TS_HMPL	8	Continuous	0.05	TRAFFIC : SPEED HUMP
RD_PR_TS_INCH	12	Continuous	0.35	TRAFFIC : INSPECTION CHAMBER
RD_PR_TS_MNHL	YELLOW	Continuous	0.25	TRAFFIC : MANHOLE
RD_PR_TS_OHLL	WHITE	Continuous	0.25	TRAFFIC : OVERHEAD CABLE/LINE
RD_PR_TS_OTHR	YELLOW	Continuous	0.25	TRAFFIC : OTHER
RD_PR_TS_PBDG	31	Continuous	0.35	TRAFFIC : PEDESTRIAN BRIDGE

PROPOSED TRAFFIC AND SAFETY LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_PR_TS_PGR	40	Continuous	0.35	TRAFFIC : PEDESTRIAN GUARDRAIL
RD_PR_TS_PMTR	40	Continuous	0.35	TRAFFIC : PARKING METERS
RD_PR_TS_PPBN	13	Continuous	0.35	TRAFFIC : PEDESTRIAN PUSH BUTTON
RD_PR_TS_PUP	13	Continuous	0.35	TRAFFIC : PEDESTRIAN UNDERPASS
RD_PR_TS_RDSN	YELLOW	Continuous	0.25	TRAFFIC : ROAD DIRECTIONAL SIGNS (EX: DIRECTIONS, LIMITS ETC.)
RD_PR_TS_RM_500	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: ROAD MARKING LINE CODE 500
RD_PR_TS_RM_501	WHITE	QTM501	0.25	PROPOSED ROAD FEATURE: ROAD MARKING LINE CODE 501
RD_PR_TS_RM_502	WHITE	QTM502	0.25	PROPOSED ROAD FEATURE: ROAD MARKING LINE CODE 502
RD_PR_TS_RM_503	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: ROAD MARKING POLYGON CODE 503
RD_PR_TS_RM_504	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: ROAD MARKING POLYGON CODE 504
RD_PR_TS_RM_505	WHITE	QTM505	0.25	PROPOSED ROAD FEATURE: ROAD MARKING LINE CODE 505

PROPOSED TRAFFIC AND SAFETY LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_PR_TS_RM_505	WHITE	QTM505	0.25	PROPOSED ROAD FEATURE: ROAD MARKING LINE CODE 505
RD_PR_TS_RM_506	WHITE	QTM506	0.25	PROPOSED ROAD FEATURE: ROAD MARKING LINE CODE 506
RD_PR_TS_RM_507	WHITE	QTM507	0.25	PROPOSED ROAD FEATURE: ROAD MARKING LINE CODE 507
RD_PR_TS_RM_508	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: ROAD MARKING LINE CODE 508
RD_PR_TS_RM_509	WHITE	QTM509	0.25	PROPOSED ROAD FEATURE: ROAD MARKING LINE CODE 509
RD_PR_TS_RM_510	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: ROAD MARKING LINE CODE 510
RD_PR_TS_RM_511	WHITE	QTM511	0.25	PROPOSED ROAD FEATURE: ROAD MARKING LINE CODE 511
RD_PR_TS_RM_512	WHITE	QTM512	0.25	PROPOSED ROAD FEATURE: ROAD MARKING LINE CODE 512
RD_PR_TS_RM_513	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: ROAD MARKING LINE CODE 513
RD_PR_TS_RM_513Y	YELLOW	Continuous	0.25	PROPOSED ROAD FEATURE: ROAD MARKING LINE CODE 513Y - THICK YELLOW LINE
RD_PR_TS_RM_514	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: ROAD MARKING POLYGON CODE 514

PROPOSED TRAFFIC AND SAFETY LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_PR_TS_RM_515	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: ROAD MARKING POLYGON CODE 515
RD_PR_TS_RM_516	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: ROAD MARKING POLYGON CODE 516
RD_PR_TS_RM_517	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: ROAD MARKING POLYGON CODE 517
RD_PR_TS_RM_518	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: ROAD MARKING POLYGON CODE 518
RD_PR_TS_RM_519	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: ROAD MARKING LINE CODE 519
RD_PR_TS_RM_520	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: ROAD MARKING LINE CODE 520
RD_PR_TS_RM_521	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: ROAD MARKING POLYGON CODE 521
RD_PR_TS_RM_522	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: ROAD MARKING POLYGON CODE 522
RD_PR_TS_RM_523	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: ROAD MARKING POLYGON CODE 523

PROPOSED TRAFFIC AND SAFETY LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_PR_TS_RM_524	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: ROAD MARKING POLYGON CODE 524
RD_PR_TS_RM_525	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: ROAD MARKING LINE CODE 525
RD_PR_TS_RM_526	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: ROAD MARKING LINE CODE 526
RD_PR_TS_RM_527	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: ROAD MARKING LINE CODE 527
RD_PR_TS_RM_528	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: ROAD MARKING LINE CODE 528
RD_PR_TS_RM_529	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: ROAD MARKING LINE CODE 529
RD_PR_TS_RM_530	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: ROAD MARKING LINE CODE 530
RD_PR_TS_RM_531	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: ROAD MARKING POLYGON CODE 531
RD_PR_TS_RM_532	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: ROAD MARKING POLYGON CODE 532

PROPOSED TRAFFIC AND SAFETY LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_PR_TS_RM_533	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: ROAD MARKING POLYGON CODE 533
RD_PR_TS_RM_534	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: ROAD MARKING LINE CODE 534
RD_PR_TS_SHEAD	13	Continuous	0.35	TRAFFIC : SIGNAL HEAD
RD_PR_TS_SIGN	WHITE	Continuous	0.25	TRAFFIC : SIGNS (EX: WARNINGS, SPEED LIMITS ETC.)
RD_PR_TS_SIGN_ POST	WHITE	Continuous	0.25	TRAFFIC : SIGN POST
RD_PR_TS_SIGNAL	WHITE	Continuous	0.25	TRAFFIC : SIGNAL
RD_PR_TS_SIGNAL_POST	WHITE	Continuous	0.25	TRAFFIC SIGNAL POST/POLE
RD_PR_TS_STNM	GREEN	Continuous	0.35	TRAFFIC : STREET NAME POST/SIGN
RD_PR_TS_STUDS	8	Continuous	0.05	TRAFFIC : STUDS
RD_PR_TS_TCAM	13	Continuous	0.35	TRAFFIC : CAMERA
RD_PR_TS_TEXT	WHITE	Continuous	0.25	TRAFFIC : ANNOTATIONS /DESCRIPTIVE TEXT
RD_PR_TS_TPP	8	Continuous	0.05	TRAFFIC : POLICE PLATFORM
RD_PR_TS_UGLL	YELLOW	Continuous	0.25	TRAFFIC : UNDERGROUND CABLE/LINE

EXISTING TRAFFIC AND SAFETY LAYERS				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_EX_TS_BARL	GREEN	Continuous	0.35	TRAFFIC : BARRIERS, RAILS & BOLLARDS
RD_EX_TS_CTRL_BOX	RED	Continuous	0.10	TRAFFIC : CONTROL BOX OR SERVICE BOX
RD_EX_TS_DET_LOOP	8	Continuous	0.05	TRAFFIC : DETECTOR LOOP
RD_EX_TS_DUCT	30	Continuous	0.35	TRAFFIC : DUCT
RD_EX_TS_HMPL	8	Continuous	0.05	TRAFFIC : SPEED HUMP
RD_EX_TS_INCH	12	Continuous	0.35	TRAFFIC : INSPECTION CHAMBER
RD_EX_TS_MNHL	YELLOW	Continuous	0.25	TRAFFIC : MANHOLE
RD_EX_TS_OHLL	WHITE	Continuous	0.25	TRAFFIC : OVERHEAD CABLE/LINE
RD_EX_TS_OTHR	YELLOW	Continuous	0.25	TRAFFIC : OTHER
RD_EX_TS_PBDG	31	Continuous	0.35	TRAFFIC : PEDESTRIAN BRIDGE
RD_EX_TS_PGR	40	Continuous	0.35	TRAFFIC : PEDESTRIAN GUARDRAIL
RD_EX_TS_PMTR	40	Continuous	0.35	TRAFFIC : PARKING METERS
RD_EX_TS_PPBN	13	Continuous	0.35	TRAFFIC : PEDESTRIAN PUSH BUTTON
RD_EX_TS_PUP	13	Continuous	0.35	TRAFFIC : PEDESTRIAN UNDERPASS
RD_EX_TS_RDSN	YELLOW	Continuous	0.25	TRAFFIC : ROAD DIRECTIONAL SIGNS (EX: DIRECTIONS, LIMITS ETC.)

EXISTING TRAFFIC AND SAFETY LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_EX_TS_RM_500	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ROAD MARKING LINE CODE 500
RD_EX_TS_RM_501	WHITE	QTM501	0.25	EXISTING ROAD FEATURE: ROAD MARKING LINE CODE 501
RD_EX_TS_RM_502	WHITE	QTM502	0.25	EXISTING ROAD FEATURE: ROAD MARKING LINE CODE 502
RD_EX_TS_RM_503	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ROAD MARKING POLYGON CODE 503
RD_EX_TS_RM_504	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ROAD MARKING POLYGON CODE 504
RD_EX_TS_RM_505	WHITE	QTM505	0.25	EXISTING ROAD FEATURE: ROAD MARKING LINE CODE 505
RD_EX_TS_RM_506	WHITE	QTM506	0.25	EXISTING ROAD FEATURE: ROAD MARKING LINE CODE 506
RD_EX_TS_RM_507	WHITE	QTM507	0.25	EXISTING ROAD FEATURE: ROAD MARKING LINE CODE 507
RD_EX_TS_RM_508	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ROAD MARKING LINE CODE 508

EXISTING TRAFFIC AND SAFETY LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_EX_TS_RM_509	WHITE	QTM509	0.25	EXISTING ROAD FEATURE: ROAD MARKING LINE CODE 509
RD_EX_TS_RM_510	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ROAD MARKING LINE CODE 510
RD_EX_TS_RM_511	WHITE	QTM511	0.25	EXISTING ROAD FEATURE: ROAD MARKING LINE CODE 511
RD_EX_TS_RM_512	WHITE	QTM512	0.25	EXISTING ROAD FEATURE: ROAD MARKING LINE CODE 512
RD_EX_TS_RM_513	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ROAD MARKING LINE CODE 513
RD_EX_TS_RM_513Y	YELLOW	Continuous	0.25	EXISTING ROAD FEATURE: ROAD MARKING LINE CODE 513Y - THICK YELLOW LINE
RD_EX_TS_RM_514	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ROAD MARKING POLYGON CODE 514
RD_EX_TS_RM_515	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ROAD MARKING POLYGON CODE 515
RD_EX_TS_RM_516	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ROAD MARKING POLYGON CODE 516

EXISTING TRAFFIC AND SAFETY LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_EX_TS_RM_517	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ROAD MARKING POLYGON CODE 517
RD_EX_TS_RM_518	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ROAD MARKING POLYGON CODE 518
RD_EX_TS_RM_519	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ROAD MARKING LINE CODE 519
RD_EX_TS_RM_520	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ROAD MARKING LINE CODE 520
RD_EX_TS_RM_521	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ROAD MARKING POLYGON CODE 521
RD_EX_TS_RM_522	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ROAD MARKING POLYGON CODE 522
RD_EX_TS_RM_523	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ROAD MARKING POLYGON CODE 523
RD_EX_TS_RM_524	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ROAD MARKING POLYGON CODE 524
RD_EX_TS_RM_525	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ROAD MARKING LINE CODE 525

EXISTING TRAFFIC AND SAFETY LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_EX_TS_RM_526	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ROAD MARKING LINE CODE 526
RD_EX_TS_RM_527	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ROAD MARKING LINE CODE 527
RD_EX_TS_RM_528	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ROAD MARKING LINE CODE 528
RD_EX_TS_RM_529	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ROAD MARKING LINE CODE 529
RD_EX_TS_RM_530	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ROAD MARKING LINE CODE 530
RD_EX_TS_RM_531	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ROAD MARKING POLYGON CODE 531
RD_EX_TS_RM_532	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ROAD MARKING POLYGON CODE 532
RD_EX_TS_RM_533	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ROAD MARKING POLYGON CODE 533
RD_EX_TS_RM_534	WHITE	Continuous	0.25	EXISTING ROAD FEATURE: ROAD MARKING LINE CODE 534
RD_EX_TS_SHEAD	13	Continuous	0.35	TRAFFIC : SIGNAL HEAD
RD_EX_TS_SIGN	WHITE	Continuous	0.25	TRAFFIC : SIGNS (EX: WARNINGS, SPEED LIMITS ETC.)
RD_EX_TS_SIGN_ POST	WHITE	Continuous	0.25	TRAFFIC : SIGN POST
RD_EX_TS_SIGNAL	WHITE	Continuous	0.25	TRAFFIC SIGNAL
RD_EX_TS_SIGNAL _POST	WHITE	Continuous	0.25	TRAFFIC SIGNAL POST/POLE

EXISTING TRAFFIC AND SAFETY LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_EX_TS_STNM	GREEN	Continuous	0.35	TRAFFIC : STREET NAME POST/SIGN
RD_EX_TS_STUDS	8	Continuous	0.05	TRAFFIC : STUDS
RD_EX_TS_TCAM	13	Continuous	0.35	TRAFFIC : CAMERA
RD_EX_TS_TEXT	WHITE	Continuous	0.25	TRAFFIC : ANNOTATIONS /DESCRIPTIVE TEXT
RD_EX_TS_TPP	8	Continuous	0.05	TRAFFIC : POLICE PLATFORM
RD_EX_TS_UGLL	YELLOW	Continuous	0.25	TRAFFIC : UNDERGROUND CABLE/LINE

A.4.3 Street Lighting Layers

PROPOSED STREET LIGHTING LAYERS				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_PR_ST_10sq mmCBLE	CYAN	SL_10MM_4C	0.50	PROPOSED ROAD FEATURE : STREET LIGHTING CABLE 10 Sq. mm
RD_PR_ST_16sq mmCBLE	CYAN	SL_16MM_4C	0.50	PROPOSED ROAD FEATURE : STREET LIGHTING CABLE 16 Sq. mm
RD_PR_ST_25sq mmCBLE	CYAN	SL_25MM_4C	0.50	PROPOSED ROAD FEATURE : STREET LIGHTING CABLE 25 Sq. mm

PROPOSED STREET LIGHTING LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_PR_ST_35sq mmCBLE	CYAN	SL_35MM_4C	0.50	PROPOSED ROAD FEATURE : STREET LIGHTING CABLE 35 Sq. mm
RD_PR_ST_CBLE	CYAN	Continuous	0.50	PROPOSED ROAD FEATURE: STREET LIGHTING CABLE
RD_PR_ST_DUCT	20	Continuous	0.35	PROPOSED ROAD FEATURE: STREET LIGHTING DUCT
RD_PR_ST_ERTH	GREEN	Continuous	0.35	PROPOSED ROAD FEATURE : STREET LIGHTING EARTHING
RD_PR_ST_FDPL	MAGENTA	Continuous	0.35	PROPOSED ROAD FEATURE: STREET LIGHTING FEEDER PILLAR
RD_PR_ST_LIGHT	CYAN	Continuous	0.50	PROPOSED ROAD FEATURE : LIGHTING OTHER THAN STREET LIGHTING POLES (UNDERPASS/OVERPASS/SUBWAY ETC)
RD_PR_ST_POLE	YELLOW	Continuous	0.25	PROPOSED ROAD FEATURE: STREET LIGHTING POLE
RD_PR_ST_SUBSTN	CYAN	Continuous	0.50	PROPOSED ROAD FEATURE: STREET LIGHTING SUBSTATION
RD_PR_ST_TEXT	WHITE	Continuous	0.25	PROPOSED ROAD FEATURE: STREET LIGHTING ANNOTATION/TEXT

EXISTING STREET LIGHTING LAYERS				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_EX_ST_10sq mmCBLE	153	SL_10MM_4C	0.35	EXISTING ROAD FEATURE : STREET LIGHTING CABLE 10 Sq. mm
RD_EX_ST_16sq mmCBLE	153	SL_16MM_4C	0.35	EXISTING ROAD FEATURE : STREET LIGHTING CABLE 16 Sq. mm
RD_EX_ST_25sq mmCBLE	153	SL_25MM_4C	0.35	EXISTING ROAD FEATURE : STREET LIGHTING CABLE 25 Sq. mm
RD_EX_ST_35sq mmCBLE	153	SL_35MM_4C	0.35	EXISTING ROAD FEATURE : STREET LIGHTING CABLE 35 Sq. mm
RD_EX_ST_CBLE	153	DASHED2	0.35	EXISTING ROAD FEATURE: STREET LIGHTING CABLE
RD_EX_ST_DUCT	30	HIDDEN2	0.35	EXISTING ROAD FEATURE: STREET LIGHTING DUCT
RD_EX_ST_ERTH	GREEN	Continuous	0.35	EXISTING ROAD FEATURE : STREET LIGHTING EARTHING
RD_EX_ST_FDPL	MAGENTA	Continuous	0.35	EXISTING ROAD FEATURE: STREET LIGHTING FEEDER PILLAR
RD_EX_ST_LIGHT	153	Continuous	0.35	EXISTING ROAD FEATURE : LIGHTING OTHER THAN STREET LIGHTING POLES (UNDERPASS/OVERPASS/SUBWAY ETC)

EXISTING STREET LIGHTING LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_EX_ST_POLE	8	Continuous	0.05	EXISTING ROAD FEATURE: STREET LIGHTING POLE
RD_EX_ST_SUBSTN	CYAN	Continuous	0.50	EXISTING ROAD FEATURE: STREET LIGHTING SUBSTATION
RD_EX_ST_TEXT	YELLOW	Continuous	0.25	EXISTING ROAD FEATURE: STREET LIGHTING ANNOTATION/TEXT

A.4.4 Road Furniture Layers

ROAD FURNITURE LAYERS				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_F_BNCH	YELLOW	Continuous	0.25	ROAD/STREET FURNITURE: BENCH/SEAT
RD_F_LGHT	WHITE	Continuous	0.25	ROAD/STREET FURNITURE: LIGHTING
RD_F_OTHR	WHITE	Continuous	0.25	ROAD/STREET FURNITURE: OTHERS
RD_F_PBX	WHITE	Continuous	0.25	ROAD/STREET FURNITURE: PLANTER BOX
RD_F_POLE	YELLOW	Continuous	0.25	ROAD/STREET FURNITURE: POLE
RD_F_TEXT	WHITE	Continuous	0.25	ROAD/STREET FURNITURE: ANNOTATION/TEXT

A.4.5 Road Network Plan Layers

ROAD NETWORK PLAN LAYERS				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_NP-CDRD	43	Continuous	0.35	PROPOSED ROAD NETWORK PLAN : COLLECTOR DISTRIBUTER ROAD
RD_NP-LARD	252	Continuous	0.15	PROPOSED ROAD NETWORK PLAN : LOCAL ACCESS ROAD
RD_NP-LINKRD	210	Continuous	0.35	PROPOSED ROAD NETWORK PLAN : LINK ROAD
RD_NP-SERRD	43	Continuous	0.35	PROPOSED ROAD NETWORK PLAN : SERVICE ROAD
RD_NP-SLIPRD	30	Continuous	0.35	PROPOSED ROAD NETWORK PLAN : SLIP ROAD
RD_NP-UAMAJ	80	Continuous	0.60	PROPOSED ROAD NETWORK PLAN : URBAN MAJOR ARTERIAL
RD_NP-UAMIN	62	Continuous	0.35	PROPOSED ROAD NETWORK PLAN : URBAN MINOR ARTERIAL
RD_NP-UCMAJ	170	Continuous	0.35	PROPOSED ROAD NETWORK PLAN : URBAN COLLECTOR MAJOR
RD_NP-UCMIN	130	Continuous	0.35	PROPOSED ROAD NETWORK PLAN : URBAN COLLECTOR MINOR
RD_NP-UEXW	10	Continuous	0.60	PROPOSED ROAD NETWORK PLAN : URBAN EXPRESSWAY

A.4.6 Roads – Common Layers

ROADS - COMMON LAYERS				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_C_10HID	RED	HIDDEN2	0.10	ALL VERY THIN HIDDEN LINES
RD_C_10OUT	RED	Continuous	0.10	ALL VERY THIN OUT LINES
RD_C_25DASH	WHITE	DASHED2	0.25	HIDDEN DETAILS
RD_C_25HID	WHITE	HIDDEN2	0.25	HIDDEN DETAILS
RD_C_25OUT	WHITE	Continuous	0.25	ALL THIN OUT LINES
RD_C_35OUT	GREEN	Continuous	0.35	ALL OUTLINES IN PLAN/ELEVATION
RD_C_50OUT	CYAN	Continuous	0.50	ALL CONCRETE OUTLINES IN SECTION
RD_C_70OUT	BLUE	Continuous	0.50	ALL CONCRETE OUTLINES IN SECTION
RD_C_50REBARS	CYAN	Continuous	0.5	REINFORCEMENT DETAILS
RD_C_CHAIN_TEXT	WHITE	Continuous	0.25	CHAINAGE TEXT
RD_C_CHAIN_MARK	YELLOW	Continuous	0.25	CHAINAGE MARKING
RD_C_CONT_MAJR	8	Continuous	0.05	MAJOR CONTOUR
RD_C_CONT_MINR	9	Continuous	0.15	MINOR CONTOUR
RD_C_CTRLINE	RED	CENTER2	0.10	CENTRE LINE
RD_C_HATCH	RED	Continuous	0.10	ALL HATCHES
RD_C_MATCH_LINE	BLUE	PHANTOM	0.70	SHEET CONTINUATION MATCH LINE
RD_C_PROF_ASMC	92	Continuous	0.35	ROADWAYS: PROFILE ASSYMETRICAL CURVES
RD_C_PROF_CURV	BLUE	Continuous	0.50	ROADWAYS: PROFILE VERTICAL CURVES

ROADS - COMMON LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_C_PROF_DIAG	CYAN	Continuous	0.50	ROADWAYS: PROFILE BAND DIAGRAMS
RD_C_PROF_EG	YELLOW	DASHED2	0.25	ROADWAYS: PROFILE EXISTING
RD_C_PROF_FG	CYAN	Continuous	0.4	ROADWAYS: PROFILE PROPOSED
RD_C_PROF_GRID	150	Continuous	0.35	ROADWAYS: PROFILE GRID
RD_C_PROF_GRID-GEOM	MAGENTA	Continuous	0.35	ROADWAYS: PROFILE GRIDLINE @ GEOMETRY
RD_C_PROF_GRID-MAJR	251	Continuous	0.15	ROADWAYS: PROFILE GRIDLINE @ MAJOR
RD_C_PROF_GRID-MINR	251	Continuous	0.15	ROADWAYS: PROFILE GRIDLINE @ MINOR
RD_C_PROF_LABL	8	Continuous	0.05	ROADWAYS: PROFILE LABEL
RD_C_PROF_LINE	RED	Continuous	0.10	ROADWAYS: PROFILE VERTICAL LINES
RD_C_PROF_LINE-EXTN	252	HIDDEN	0.15	ROADWAYS: CENTERLINE EXTENSION
RD_C_PROF_LTOF	RED	Continuous	0.10	ROADWAYS: PROFILE LEFT OFFSET SAMPLE LINE
RD_C_PROF_PARB	WHITE	Continuous	0.25	ROADWAYS: PROFILE PARABOLIC CURVES

ROADS - COMMON LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
RD_C_PROF_PNTS	252	HIDDEN	0.15	ROADWAYS: PROFILE GEOMETRY POINTS
RD_C_PROF_PROJ	92	Continuous	0.35	
RD_C_PROF_RTOF	RED	Continuous	0.10	ROADWAYS: PROFILE RIGHT OFFSET SAMPLE LINE
RD_C_PROF_STAN-GEOM	WHITE	Continuous	0.25	ROADWAYS: PROFILE GEOMETRY POINT LABELS
RD_C_PROF_STAN-MAJR	YELLOW	Continuous	0.25	ROADWAYS: PROFILE MAJOR STATION LABELS
RD_C_PROF_STAN-MINR	RED	Continuous	0.10	ROADWAYS: PROFILE MINOR STATION LABELS
RD_C_PROF_TEXT	WHITE	Continuous	0.25	ROADWAYS: PROFILE TEXT
RD_C_PROF_TICK	251	Continuous	0.15	ROADWAYS: PROFILE TICK MARKS
RD_C_PROF_TITL	WHITE	Continuous	0.25	ROADWAYS: PROFILE LABEL
RD_C_SPT_HGT	YELLOW	Continuous	0.25	SURVEY ROAD FEATURE : SPOT HEIGHT MARKER & TEXT
RD_C_SPT_NUM	YELLOW	Continuous	0.25	SURVEY ROAD FEATURE : SURVEY POINT NUMBER
RD_C_TABLE	WHITE	Continuous	0.25	TABLES
RD_C_TEXT	WHITE	Continuous	0.25	COMMON TEXT
RD_C_ABANDONED	RED	Continuous	0.10	ABANDONED FEATURES

A.5 Town Beautification Layers

A.5.1 Town Beautification – Irrigation Layers

TOWN BEAUTIFICATION – IRRIGATION LAYERS				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
TB_I_BUBBLER	170	Continuous	0.35	FOR ALL BUBBLERS OF DIFFERENT TYPES WITH LATERAL LINES
TB_I_COM	WHITE	Continuous	0.25	ALL TYPES OF COMMUNICATION EQUIPMENTS AND CABLES
TB_I_CONTROL	WHITE	Continuous	0.25	ALL CONTROL SYSTEM WIRES, CONTROLLERS, ATTRIBUTES
TB_I_CONTROLLER	WHITE	Continuous	0.25	ALL TYPE OF CONTROLLERS
TB_I_DESERT	11	Continuous	0.35	DESERT OF ALL TYPES
TB_I_DISTRIBUTION_ CHAMBER	YELLOW	Continuous	0.25	IRRIGATION DISTRIBUTION CHAMBER
TB_I_DRIP	210	Continuous	0.35	FOR ALL DRIP LINES OF DIFFERENT TYPE WITH LATERAL LINES
TB_I_DUCT	WHITE	Continuous	0.25	IRRIGATION DUCT
TB_I_ENDCAP	BLUE	Continuous	0.70	IRRIGATION END CAP
TB_I_FILTERS	WHITE	Continuous	0.25	ALL TYPES OF FILTERS
TB_I_FLOW_BALANCE	WHITE	Continuous	0.25	FLOW BALANCE
TB_I_HEDGES	GREEN	Continuous	0.35	FOR ALL HEDGES OF DIFFERENT TYPE WITH LATERAL LINES
TB_I_IRRIGATION_PIPE	CYAN	Continuous	0.50	IRRIGATION PIPE

TOWN BEAUTIFICATION – IRRIGATION LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
TB_I_LH	CYAN	Continuous	0.50	SPRINKLER IRRIGATION LAWN HEAD
TB_I_MAINLINE	MAGENTA	DASHDOT2	0.35	ALL MAINLINE TYPES AND SIZES
TB_I_PE	GREEN	Continuous	0.35	IRRIGATION PVC-PE CONNECTION
TB_I_RCVALVE	GREEN	Continuous	0.35	IRRIGATION REMOTE CONTROL VALVE
TB_I_ROTOR	GREEN	Continuous	0.35	BLOCK FOR ALL ROTOR OF DIFFERENT TYPES WITH LATERAL LINES
TB_I_SENSOR	WHITE	Continuous	0.25	ALL TYPES OF SENSORS
TB_I_SHRUBS	94	Continuous	0.35	FOR ALL SHRUBS OF DIFFERENT TYPE WITH LATERAL LINES
TB_I_SLEEVES	MAGENTA	Continuous	0.35	ALL SLEEVES TYPES AND SIZES
TB_I_SPRAYER	GREEN	Continuous	0.35	FOR ALL SPRAYERS OF DIFFERENT TYPES WITH LATERAL LINES
TB_I_SPRINKLER_PIPE	YELLOW	HIDDEN2	0.25	SPRINKLER IRRIGATION PIPE
TB_I_VALVES	WHITE	Continuous	0.25	ALL VALVES QCV, MASTER CONTROL, GATE AND VALVE CHAMBERS

A.5.2 Town Beautification – Landscaping Layers

TOWN BEAUTIFICATION – LANDSCAPING LAYERS				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
TB_L_AGAVE	76	Continuous	0.35	TOWN BEAUTIFICATION (LANDSCAPE) AGAVE TREES
TB_L_ALTERNANTHERA	12	Continuous	0.35	TOWN BEAUTIFICATION (LANDSCAPE) ALTERNANTHERA TREES
TB_L_ASPARAGUS	90	Continuous	0.35	TOWN BEAUTIFICATION (LANDSCAPE) ASPARAGUS TREES
TB_L_BUSH	90	Continuous	0.35	BUSH
TB_L_CANNA	192	Continuous	0.35	TOWN BEAUTIFICATION (LANDSCAPE) CANNA TREES
TB_L_FACILITIES	20	Continuous	0.35	BBQ, DR FOUNTAINS, TRASH BINS
TB_L_GARBAGE_BIN	96	Continuous	0.35	GARBAGE BIN
TB_L_GRASS	90	Continuous	0.35	GRASS OF ALL TYPES
TB_L_GRDN	8	Continuous	0.05	GARDEN
TB_L_GROUND_COVERS	MAGENTA	Continuous	0.35	GROUND COVERS
TB_L_HEDGES	150	Continuous	0.35	HEDGES
TB_L_LANTANA	32	Continuous	0.35	TOWN BEAUTIFICATION (LANDSCAPE) LANTANA TREES
TB_L_NERIUM	20	Continuous	0.35	TOWN BEAUTIFICATION (LANDSCAPE) NERIUM TREES

TOWN BEAUTIFICATION – LANDSCAPING LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
TB_L_PALMS	90	Continuous	0.35	PALMS, COCAS, WASHINGTONIAN
TB_L_PLAY_AREA	150	Continuous	0.35	CHILDREN PLAY AREA
TB_L_RECREATION	8	Continuous	0.05	SPORTS FIELD AND AREAS
TB_L_SEASONAL	60	Continuous	0.35	SEASONAL FLOWERS
TB_L_SHADED_AREA	153	Continuous	0.35	CLOTH, WOOD, CONCRETE SHADES
TB_L_SHRUBS	RED	Continuous	0.10	SHRUBS LARGE AND SMALL, VINES
TB_L_TREES	GREEN	Continuous	0.35	TREES LARGE AND SMALL
TB_L_VEGETATION	82	Continuous	0.35	VEGETATION/PLANT
TB_L_VINCA	96	Continuous	0.35	TOWN BEAUTIFICATION (LANDSCAPE) VINCA TREES
TB_L_WALKWAY	RED	Continuous	0.10	WALKWAY

A.6 UTILITIES LAYERS

A.6.1 Electricity

ELECTRICITY LAYERS				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
SVE_ABDL	255,51,51	ELE ABANDONED	0.35	SERVICES FIXTURES (ELECTRICITY) : ABANDONED LINE
SVE_CONDUIT	20	Continuous	0.35	SERVICES FIXTURES (ELECTRICITY) : ELECTRICITY CONDUIT

ELECTRICITY LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
SVE_DUCT	10	Continuous	0.60	SERVICES FIXTURES (ELECTRICITY) : ELECTRICITY DUCT
SVE_ERTH_PIT	8	Continuous	0.05	SERVICES FIXTURES (ELECTRICITY) : EARTH PIT
SVE_FT_TEE	30	Continuous	0.35	SERVICES FIXTURES (ELECTRICITY) : ELECTRICAL FITTING TEE
SVE_MHLL	WHITE	Continuous	0.25	SERVICES FIXTURES (ELECTRICITY) : UTILITY/MANHOLE
SVE_MNHL	WHITE	Continuous	0.25	SERVICES FIXTURES (ELECTRICITY) : MANHOLE
SVE_MRKR	WHITE	Continuous	0.25	SERVICES FIXTURES (ELECTRICITY) : MARKER
SVE_OH_EHV	255,51,51	ELE OVERHEAD EHV	0.35	SERVICES FIXTURES (ELECTRICITY) : EXTRA HIGH VOLTAGE - OVERHEAD LINES
SVE_OH_HV	255,51,51	ELE OVERHEAD HV	0.35	SERVICES FIXTURES (ELECTRICITY) : HIGH VOLTAGE - OVERHEAD LINES
SVE_OH_LV	255,51,51	ELE OVERHEAD LV	0.35	SERVICES FIXTURES (ELECTRICITY) : LOW VOLTAGE - OVERHEAD LINES
SVE_OH_MV	255,51,51	ELE OVERHEAD MV	0.35	SERVICES FIXTURES (ELECTRICITY) : MEDIUM VOLTAGE - OVERHEAD LINES
SVE_OTHR	WHITE	Continuous	0.25	SERVICES FIXTURES (ELECTRICITY) : OTHER
SVE_PLT_CBL	WHITE	ELE PILOT CABLE	0.25	SERVICES FIXTURES (ELECTRICITY) : ELECTRICAL PILOT CABLE

ELECTRICITY LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
SVE_PLT_CBL_ABDL	255,51,51	ELE PILOT CABLE ABANDONED	0.25	SERVICES FIXTURES (ELECTRICITY) : ABANDONED ELECTRICAL PILOT CABLE
SVE_POLE	WHITE	Continuous	0.25	SERVICES FIXTURES (ELECTRICITY) : POST/POLE
SVE_PYLN	WHITE	Continuous	0.25	SERVICES FIXTURES (ELECTRICITY) : PYLON
SVE_SBOX	WHITE	Continuous	0.25	SERVICES FIXTURES (ELECTRICITY) : SERVICE BOX
SVE_SJNT	GREEN	Continuous	0.35	SERVICES FIXTURES (ELECTRICITY) : ELECTRICAL STRAIGHT JOINT
SVE_SSTL	YELLOW	Continuous	0.25	SERVICES FIXTURES (ELECTRICITY) : SUBSTATION
SVE_TEXT	WHITE	Continuous	0.25	SERVICES FIXTURES (ELECTRICITY) : ANNOTATION / TEXT
SVE_TOWER	40	Continuous	0.35	SERVICES FIXTURES (ELECTRICITY) : ELECTRICITY TOWER
SVE_TRANSF	CYAN	Continuous	0.5	SERVICES FIXTURES (ELECTRICITY) : TRANSFORMER
SVE_UG_EHV	255,51,51	ELE UNDERGROUND EHV	0.35	SERVICES FIXTURES (ELECTRICITY) : EXTRA HIGH VOLTAGE – UNDERGROUND LINES
SVE_UG_HV	255,51,51	ELE UNDERGROUND HV	0.35	SERVICES FIXTURES (ELECTRICITY) : HIGH VOLTAGE - UNDERGROUND LINES

ELECTRICITY LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
SVE_UG_LV	255,51,51	ELE UNDERGROUND LV	0.35	SERVICES FIXTURES (ELECTRICITY) : LOW VOLTAGE - UNDERGROUND LINES
SVE_UG_MV	255,51,51	ELE UNDERGROUND MV	0.35	SERVICES FIXTURES (ELECTRICITY) : MEDIUM VOLTAGE - UNDERGROUND LINES
SVE_UGLL	255,51,51	ELE UGP	0.35	SERVICES FIXTURES (ELECTRICITY) : UNDERGROUND LINES

A.6.2 Oil and Gas

OIL & GAS LAYERS				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
SVO_BNDL	171	Continuous	0.35	SERVICES FIXTURES (OIL AND GAS) : BUND
SVO_DUCT	241	Continuous	0.35	SERVICES FIXTURES (OIL AND GAS) : OIL / GAS DUCT
SVO_GAS	90	GAS PIPE	0.35	SERVICES FIXTURES (OIL AND GAS) : GAS PIPE LINE
SVO_GAS_ABDL	90	GAS PIPE ABANDONED	0.35	SERVICES FIXTURES (OIL AND GAS) : ABANDONED GAS PIPE
SVO_GVLV	171	Continuous	0.35	SERVICES FIXTURES (OIL AND GAS) : GAS VALVE
SVO_MNHL	171	Continuous	0.35	SERVICES FIXTURES (OIL AND GAS) : MANHOLE

OIL & GAS LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
SVO_MRKR	171	Continuous	0.35	SERVICES FIXTURES (OIL AND GAS) : MARKER
SVO_OIL_ABDL	128,96,0	OIL PIPE ABANDONED	0.35	SERVICES FIXTURES (OIL AND GAS) : ABANDONED OIL PIPE LINE
SVO_OTHR	171	Continuous	0.35	SERVICES FIXTURES (OIL AND GAS) : OTHER
SVO_PIPE	128,96,0	OIL PIPE	0.35	SERVICES FIXTURES (OIL AND GAS) : OIL PIPE LINE
SVO_POLE	171	Continuous	0.35	SERVICES FIXTURES (OIL AND GAS) : POST / POLE
SVO_PUMP	171	Continuous	0.35	SERVICES FIXTURES (OIL AND GAS) : PUMP
SVO_SBOX	171	Continuous	0.35	SERVICES FIXTURES (OIL AND GAS) : SERVICE BOX
SVO_TANK	171	Continuous	0.35	SERVICES FIXTURES (OIL AND GAS) : TANK
SVO_TEXT	WHITE	Continuous	0.25	SERVICES FIXTURES (OIL AND GAS) : ANNOTATION / TEXT

A.6.3 Telecommunications

TELECOMMUNICATIONS LAYERS				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
SVQ_ACCOR	20	DASHED2	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : AERIAL CABLE CORRIDOR
SVQ_ARFL	30	QAF	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : QATAR ARMED FORCE LINE
SVQ_ARFL_ ABDL	30	QAF ABANDONED	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : ABANDONED QATAR ARMED FORCE LINE
SVQ_BCCOR	30	Continuous	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : BURIED CABLE CORRIDOR
SVQ_BOOT	30	Continuous	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : TELEPHONE BOOTH
SVQ_CABNT	30	Continuous	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : CABINET
SVQ_COMMS	30	COMMS	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : COMMUNICATION LINE (GENERAL)
SVQ_COMMS _ABDL	30	COMMS ABANDONED	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : ABANDONED COMMUNICATION LINE (GENERAL)
SVQ_DIST_PT	30	Continuous	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : DISTRIBUTION POINT
SVQ_DOTH	30	Continuous	0.35	DESIGN SERVICES FIXTURES (QTEL / TELECOMS) : OTHER

TELECOMMUNICATIONS LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
SVQ_DUCT	YELLOW	Continuous	0.25	SERVICES FIXTURES (QTEL / TELECOMS) : DUCT
SVQ_EXCH	30	Continuous	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : CENTRAL OFFICE (RLU OR EXCHANGE BUILDING)
SVQ_JBOX	30	Continuous	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : JOINT BOX
SVQ_MNHL	30	Continuous	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : MANHOLE
SVQ_MRKR	30	Continuous	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : SERVICE MARKER
SVQ_OHLN	20	TEL OVERHEAD LINE	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : OVERHEAD LINE
SVQ_OHLN_ ABDL	20	TEL OVERHEAD LINE ABANDONED	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : ABANDONED TELECOM OVERHEAD LINE
SVQ_OTHR	30	Continuous	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : OTHER
SVQ_POLE	30	Continuous	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : POST / POLE
SVQ_QNB	30	QNB	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : QATAR NATIONAL BROADBAND LINE
SVQ_QNB_ ABDL	30	QNB ABANDONED	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : ABANDONED QATAR NATIONAL BROADBAND LINE

TELECOMMUNICATIONS LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
SVQ_QTL	30	OOR	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : OOREDOO LINE
SVQ_QTL_ABDL	30	OOR ABANDONED	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : ABANDONED OOREDOO LINE
SVQ_SBOX	30	Continuous	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : SERVICE BOX
SVQ_SCCOR	30	Continuous	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : SURFACE CABLE
SVQ_SSD	30	SSD	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : SECURITY SYSTEMS DEPARTMENT LINE
SVQ_SSD_ABDL	30	SSD ABANDONED	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : ABANDONED SECURITY SYSTEMS DEPARTMENT LINE
SVQ_SSTA	30	Continuous	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : SUBSTATION
SVQ_TEXT	WHITE	Continuous	0.25	SERVICES FIXTURES (QTEL / TELECOMS) : ANNOTATION / TEXT
SVQ_TOWR	30	Continuous	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : TOWER
SVQ_TRAN_ NTWK	10	DASHDOT	0.60	SERVICES FIXTURES (QTEL / TELECOMS) : TRANSMISSION
SVQ_TRAN_PT	30	Continuous	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : TRANSMISSION POINT

TELECOMMUNICATIONS LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
SVQ_UDCOR	30	Continuous	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : UNDER GROUND DUCT CORRIDOR
SVQ_UGLN	30	Continuous	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : UNDER GROUND LINE
SVQ_VOD	30	VOD	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : VODAFONE LINE
SVQ_VOD_ABDL	30	VOD ABANDONED	0.35	SERVICES FIXTURES (QTEL / TELECOMS) : ABANDONED VODAFONE LINE

A.6.4 Water

WATER LAYERS				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
SVW_ABDL	142	WATER ABANDONED	0.35	SERVICES FIXTURES (WATER) : ABANDONED WATER LINE
SVW_BNDL	130	Continuous	0.35	SERVICES FIXTURES (WATER) : BUND
SVW_CLR_PT	200	Continuous	0.35	SERVICES FIXTURES (WATER) : CHLORINATION POINT
SVW_CPRT	200	Continuous	0.35	SERVICES FIXTURES (WATER) : CASING PROTECTION
SVW_CWMAIN	142	CHILLED WATER	0.35	SERVICES FIXTURES (WATER) : CHILLED WATER MAIN

WATER LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
SVW_CWMAIN_ABDL	142	CHILLED WATER ABANDONED	0.35	SERVICES FIXTURES (WATER) : ABANDONED CHILLED WATER MAIN
SVW_DRKL	130	Continuous	0.35	SERVICES FIXTURES (WATER) : DRINKING AREA
SVW_DUCT	30	Continuous	0.35	SERVICES FIXTURES (WATER) : DUCT
SVW_FT_ADPTR	150	Continuous	0.35	SERVICES FIXTURES (WATER) : FITTING ADAPTER
SVW_FT_BEND	150	Continuous	0.35	SERVICES FIXTURES (WATER) : FITTING BEND
SVW_FT_ENDCAP	150	Continuous	0.35	SERVICES FIXTURES (WATER) : FITTING ENDCAP
SVW_FT_RDCR	150	Continuous	0.35	SERVICES FIXTURES (WATER) : FITTING REDUCER
SVW_FT_TEE	150	Continuous	0.35	SERVICES FIXTURES (WATER) : FITTING TEE
SVW_GCHNL	200	Continuous	0.35	SERVICES FIXTURES (WATER) : GRAVITY CHANNEL
SVW_GPIPE	200	Continuous	0.35	SERVICES FIXTURES (WATER) : GRAVITY PIPE
SVW_HYDR	200	Continuous	0.35	SERVICES FIXTURES (WATER) : HYDRANT
SVW_METER	200	Continuous	0.35	SERVICES FIXTURES (WATER) : METER
SVW_MNHL	170	Continuous	0.35	SERVICES FIXTURES (WATER) : MANHOLE

WATER LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
SVW_MRKR	130	Continuous	0.35	SERVICES FIXTURES (WATER) : MARKER
SVW_PUMP	200	Continuous	0.35	SERVICES FIXTURES (WATER) : PUMP
SVW_SCOCK	200	Continuous	0.35	SERVICES FIXTURES (WATER) : STOPCOCK
SVW_SCSR	200	Continuous	0.35	SERVICES FIXTURES (WATER) : SCADA SENSOR
SVW_SMETER	200	Continuous	0.35	SERVICES FIXTURES (WATER) : SERVICE METER
SVW_SPIPE	200	Continuous	0.35	SERVICES FIXTURES (WATER) : SERVICE PIPE
SVW_STRG_PT	200	Continuous	0.35	SERVICES FIXTURES (WATER) : STORAGE POINT
SVW_TANK	230	Continuous	0.35	SERVICES FIXTURES (WATER) : TANK
SVW_TANK_FIL_PT	200	Continuous	0.35	SERVICES FIXTURES (WATER) : TANKER FILLING POINT
SVW_TEXT	WHITE	Continuous	0.25	SERVICES FIXTURES (WATER) : ANNOTATION / TEXT
SVW_VALV	160	Continuous	0.35	SERVICES FIXTURES (WATER) : WATER SLUICE VALVE, AIR VALVE, FLOW CONTROL VALVE, SERVICE VALVE, SYSTEM VALVE, VALVE
SVW_WELL	200	Continuous	0.35	SERVICES FIXTURES (WATER) : WELL

WATER LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
SVW_WFAC	200	Continuous	0.35	SERVICES FIXTURES (WATER) : WATER FACILITY
SVW_WMAIN	142	WATER	0.35	SERVICES FIXTURES (WATER) : WATER MAIN
SVW_WSCON	200	Continuous	0.35	SERVICES FIXTURES (WATER) : WATER SERVICE CONNECTION

A.6.5 Commercial

COMMERCIAL LAYERS				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
SVC_TEXT	WHITE	Continuous	0.25	SERVICE FIXTURES (COMMERCIAL) : ANNOTATION / TEXT
SVC_SBDL	WHITE	Continuous	0.25	SERVICE FIXTURES (COMMERCIAL) : SIGNBOARD
SVC_POLE	WHITE	Continuous	0.25	SERVICE FIXTURES (COMMERCIAL) : POST / POLE
SVC_OTHR	WHITE	Continuous	0.25	SERVICE FIXTURES (COMMERCIAL) : OTHER FEATURES
SVC_BBDL	30	Continuous	0.35	SERVICE FIXTURES (COMMERCIAL) : BILLBOARD
SVC_BANK	30	Continuous	0.35	SERVICE FIXTURES (COMMERCIAL) : ATM AND SIMILAR FEATURES

A.6.6 On-going Works

ONGOING WORKS LAYERS				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
WRK_CONL	WHITE	Continuous	0.25	ON-GOING CONSTRUCTION WORKS
WRK_EXVL	WHITE	Continuous	0.25	EXCAVATION WORKS
WRK_FILL	WHITE	Continuous	0.25	FILLING MATERIAL LIMITS
WRK_TEXT	WHITE	Continuous	0.25	ON-GOING WORKS : ANNOTATION / TEXT

A.7 UTILITY CORRIDOR LAYERS

UTILITY CORRIDOR LAYERS				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
GIS_UC_CHILLED_WATER	199,255,255	Continuous	0.35	CHILLED WATER
GIS_UC_DSSS	255,255,209	Continuous	0.35	DOHA SURVEILLANCE SECURITY SYSTEM
GIS_UC_ELECTRICITY_D	255,51,51	Continuous	0.35	ELECTRICITY (DISTRIBUTION)
GIS_UC_ELECTRICITY_T	255,51,51	Continuous	0.35	ELECTRICITY (TRANSMISSION)
GIS_UC_GAS	255,255,36	Continuous	0.35	GAS
GIS_UC_ICT	189,248,160	Continuous	0.35	ICT (INFORMATION AND COMMUNICATION TECHNOLOGY)

UTILITY CORRIDOR LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
GIS_UC_L_ITS	255,204,204	Continuous	0.35	ITS (INTELLIGENT TRANSPORT SYSTEMS)
GIS_UC_SEWERAGE	128,96,0	Continuous	0.35	SEWERAGE
GIS_UC_SEWERAGE_FM	255,232,163	Continuous	0.35	SEWERAGE (FORCE MAIN)
GIS_UC_SOLID_WASTE_ DISPOSAL	237,221,254	Continuous	0.35	SOLID WASTE DISPOSAL
GIS_UC_SURFACE_WATER	214,161,0	Continuous	0.35	SURFACE WATER
GIS_UC_TELECOM	148,255,148	Continuous	0.35	TELECOMMUNICATIONS
GIS_UC_TELECOM_QAF	189,248,100	Continuous	0.35	TELECOMMUNICATIONS QAF (QATAR ARMED FORCES)
GIS_UC_TSE	235,96,201	Continuous	0.35	TSE (TREATED SEWAGE EFFLUENT)
GIS_UC_WATER	185,185,254	Continuous	0.35	WATER

A.8 INTELLIGENT TRANSPORTATION SYSTEM - (ITS)

PROPOSED INTELLIGENT TRANSPORTATION SYSTEM LAYERS				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
ITS_PR_2WAY-DUCT	235,0,235	Continuous	0.35	PROPOSED ITS DUCT 2WAY
ITS_PR_4WAY-DUCT	132	DASHDOT2	0.35	PROPOSED ITS DUCT 4WAY

PROPOSED INTELLIGENT TRANSPORTATION SYSTEM LAYERS				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
ITS_PR_6WAY-DUCT	230	DASHED2	0.35	PROPOSED ITS DUCT 6WAY
ITS_PR_ALRM_A	WHITE	Continuous	0.25	PROPOSED ITS AUDIBLE ALARM
ITS_PR_ALRM_AV	WHITE	Continuous	0.25	PROPOSED ITS AUDIO VISUAL ALARM
ITS_PR_ANTENNA	WHITE	Continuous	0.25	PROPOSED ITS 3G/4G ANTENNA
ITS_PR_AP_DEV	YELLOW	Continuous	0.25	PROPOSED ITS ACCESS POINT
ITS_PR_AQM_AS	GREEN	Continuous	0.35	PROPOSED ITS AIR QUALITY MONITOR
ITS_PR_BLUTH_DEV	WHITE	Continuous	0.25	PROPOSED ITS BLUETOOTH ASSEMBLY
ITS_PR_CCTV	12	Continuous	0.35	PROPOSED ITS FIXED CCTV
ITS_PR_CCTV_AID	12	Continuous	0.35	PROPOSED ITS AUTOMATIC INCIDENT DETECTOR
ITS_PR_CCTV_BJC	WHITE	Continuous	0.25	PROPOSED ITS BOX JUNCTION ENFORCEMENT CAMERA
ITS_PR_CCTV_FEL	YELLOW	Continuous	0.25	PROPOSED ITS FISH EYE LENS CAMERA
ITS_PR_CCTV_LPR	170	Continuous	0.35	PROPOSED ITS LICENSE PLATE READER

PROPOSED INTELLIGENT TRANSPORTATION SYSTEM LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
ITS_PR_CCTV_PTZ	170	Continuous	0.35	PROPOSED ITS PAN TILT ZOOM CCTV CAMERA
ITS_PR_CHBR_ITS	YELLOW	Continuous	0.25	PROPOSED ITS CHAMBER
ITS_PR_CHBR_SPL	YELLOW	Continuous	0.25	PROPOSED ITS SPLICE CHAMBER
ITS_PR_COMMS-HUB	WHITE	Continuous	0.25	PROPOSED ITS COMMUNICATION HUB
ITS_PR_DATA-LOOP	62	Continuous	0.35	PROPOSED ITS DATA COLLECATION LOOP
ITS_PR_DC-PRI	GREEN	Continuous	0.35	PROPOSED ITS DATA CABLE - PRIMARY
ITS_PR_DC-SEC	WHITE	Continuous	0.25	PROPOSED ITS DATA CABLE - SECONDARY
ITS_PR_DC-TXT	WHITE	Continuous	0.25	PROPOSED ITS DATA CABLE - TEXT
ITS_PR_DMS	YELLOW	Continuous	0.25	PROPOSED ITS CENTER MOUNTED DYNAMIC MESSAGE SIGN
ITS_PR_DUCT_FO	CYAN	PHANTOM2	0.50	PROPOSED ITS FIBRE DUCTING
ITS_PR_ELEC_CBL	RED	PHANTOM2	0.10	PROPOSED ITS ELECTRIC CABLE
ITS_PR_ENCL_GRD	GREEN	Continuous	0.35	PROPOSED ITS GROUND MOUNTED ENCLOSURE
ITS_PR_ENCL_SML	12	Continuous	0.35	PROPOSED ITS SMALL ENCLOSURE
ITS_PR_ERT	GREEN	Continuous	0.35	PROPOSED ITS EMERGENCY ROADWAY TELEPHONE

PROPOSED INTELLIGENT TRANSPORTATION SYSTEM LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
ITS_PR_FAWL	WHITE	Continuous	0.25	PROPOSED ITS FLASHING AMBER WARNING LIGHT
ITS_PR_FEDR_PLR	WHITE	Continuous	0.25	PROPOSED ITS FEEDER PILLAR
ITS_PR_FO_12C	WHITE	Continuous	0.25	PROPOSED ITS FO_12C
ITS_PR_FO_48C	CYAN	Continuous	0.50	PROPOSED ITS FO_48C
ITS_PR_FO_96C	CYAN	Continuous	0.50	PROPOSED ITS FO_96C
ITS_PR_INST-SYM	WHITE	Continuous	0.25	PROPOSED ITS INSTRUMENT SYMBOLS/LINEWORKS
ITS_PR_LCS	YELLOW	Continuous	0.25	PROPOSED ITS LANE CONTROL SIGN
ITS_PR_LOOP	WHITE	Continuous	0.25	PROPOSED ITS MAGNETOMETER
ITS_PR_OVDS_AS	WHITE	Continuous	0.25	PROPOSED ITS OVER HEIGHT DETECTOR ASSEMBLY
ITS_PR_PMS	WHITE	Continuous	0.25	PROPOSED ITS PARKING MANAGEMENT SIGN
ITS_PR_POLE	YELLOW	Continuous	0.25	PROPOSED ITS METAL POLE
ITS_PR_REP_DEV	GREEN	Continuous	0.35	PROPOSED ITS REPEATER UNIT
ITS_PR_RWIS_AS	GREEN	Continuous	0.35	PROPOSED ITS ROAD WEATHER INFORMATION SYSTEM
ITS_PR_SDMS	WHITE	Continuous	0.25	PROPOSED ITS SMALL DYNAMIC MESSAGE SIGN (POST MOUNTED)
ITS_PR_SPLICE	WHITE	Continuous	0.25	PROPOSED ITS SPLICE
ITS_PR_TRANS	WHITE	Continuous	0.25	PROPOSED ITS TRANSFORMER

PROPOSED INTELLIGENT TRANSPORTATION SYSTEM LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
ITS_PR_TRUSS_CA	12	Continuous	0.35	PROPOSED ITS CANTILEVER POST (SMALL)
ITS_PR_TRUSS_FULL	WHITE	Continuous	0.25	PROPOSED ITS SIZED FOR FULL SPAN TRUSS, MID SPAN TRUSS
ITS_PR_WIM_LOOP	170	Continuous	0.35	PROPOSED ITS WEIGH IN MOTION SYSTEM

EXISTING INTELLIGENT TRANSPORTATION SYSTEM LAYERS				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
ITS_EX_2WAY-DUCT	252	Continuous	0.20	EXISTING ITS DUCT 2WAY
ITS_EX_4WAY-DUCT	252	DASHDOT2	0.20	EXISTING ITS DUCT 4WAY
ITS_EX_6WAY-DUCT	252	DASHED2	0.20	EXISTING ITS DUCT 6WAY
ITS_EX_ALRM_A	252	Hidden2	0.20	EXISTING ITS AUDIBLE ALARM
ITS_EX_ALRM_AV	252	Hidden2	0.20	EXISTING ITS AUDIO VISUAL ALARM
ITS_EX_ANTENNA	252	Continuous	0.20	EXISTING ITS 3G/4G ANTENNA
ITS_EX_AP_DEV	252	Hidden2	0.20	EXISTING ITS ACCESS POINT
ITS_EX_AQM_AS	252	Hidden2	0.20	EXISTING ITS AIR QUALITY MONITOR
ITS_EX_BLUTH_DEV	252	Hidden2	0.20	EXISTING ITS BLUETOOTH ASSEMBLY
ITS_EX_CCTV	252	Hidden2	0.20	EXISTING ITS FIXED CCTV
ITS_EX_CCTV_AID	252	Hidden2	0.20	EXISTING ITS AUTOMATIC INCIDENT DETECTOR

EXISTING INTELLIGENT TRANSPORTATION SYSTEM LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
ITS_EX_CCTV_BJC	252	Hidden2	0.20	EXISTING ITS BOX JUNCTION ENFORCEMENT CAMERA
ITS_EX_CCTV_FEL	252	Hidden2	0.20	EXISTING ITS FISH EYE LENS CAMERA
ITS_EX_CCTV_LPR	252	Hidden2	0.20	EXISTING ITS LICENSE PLATE READER
ITS_EX_CCTV_PTZ	252	Hidden2	0.20	EXISTING ITS PAN TILT ZOOM CCTV CAMERA
ITS_EX_CHBR_ITS	252	Hidden2	0.20	EXISTING ITS CHAMBER
ITS_EX_CHBR_SPL	252	Hidden2	0.20	EXISTING ITS SPLICE CHAMBER
ITS_EX_COMMS-HUB	252	Continuous	0.20	EXISTING ITS COMMUNICATION HUB
ITS_EX_DATA-LOOP	252	Continuous	0.20	EXISTING ITS DATA COLLECATION LOOP
ITS_EX_DC-PRI	252	Continuous	0.20	EXISTING ITS DATA CABLE - PRIMARY
ITS_EX_DC-SEC	252	Continuous	0.20	EXISTING ITS DATA CABLE - SECONDARY
ITS_EX_DC-TXT	252	Continuous	0.20	EXISTING ITS DATA CABLE - TEXT
ITS_EX_DMS	252	Hidden2	0.20	EXISTING ITS CENTER MOUNTED DYNAMIC MESSAGE SIGN
ITS_EX_DUCT_FO	252	phantom2	0.20	EXISTING ITS EXISTING FIBRE DUCTING

EXISTING INTELLIGENT TRANSPORTATION SYSTEM LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
ITS_EX_ELEC_CBL	252	phantom2	0.20	EXISTING ITS ELECTRIC CABLE
ITS_EX_ENCL_GRD	252	Hidden2	0.20	EXISTING ITS GROUND MOUNTED ENCLOSURE
ITS_EX_ENCL_SML	252	Hidden2	0.20	EXISTING ITS SMALL ENCLOSURE
ITS_EX_ERT	252	Hidden2	0.20	EXISTING ITS EMERGENCY ROADWAY TELEPHONE
ITS_EX_FAWL	252	Hidden2	0.20	EXISTING ITS FLASHING AMBER WARNING LIGHT
ITS_EX_FEDR_PLR	252	Hidden2	0.20	EXISTING ITS FEEDER PILLAR
ITS_EX_FO_12C	252	Continuous	0.20	EXISTING ITS FO_12C
ITS_EX_FO_48C	252	Continuous	0.20	EXISTING ITS FO_48C
ITS_EX_FO_96C	252	Continuous	0.20	EXISTING ITS FO_96C
ITS_EX_INST-SYM	252	Continuous	0.20	EXISTING ITS INSTRUMENT SYMBOLS/LINEWORKS
ITS_EX_LCS	252	Hidden2	0.20	EXISTING ITS LANE CONTROL SIGN
ITS_EX_LOOP	252	Hidden2	0.20	EXISTING ITS MAGNETOMETER
ITS_EX_OVDS_AS	252	Hidden2	0.20	EXISTING ITS OVER HEIGHT DETECTOR ASSEBLY
ITS_EX_PMS	252	Hidden2	0.20	EXISTING ITS PARKING MANAGEMENT SIGN
ITS_EX_POLE	252	Hidden2	0.20	EXISTING ITS METAL POLE
ITS_EX_REP_DEV	252	Hidden2	0.20	EXISTING ITS REPEATER UNIT

EXISTING INTELLIGENT TRANSPORTATION SYSTEM LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
ITS_EX_RWIS_AS	252	Hidden2	0.20	EXISTING ITS ROAD WEATHER INFORMATION SYSTEM
ITS_EX_SDMS	252	Hidden2	0.20	EXISTING ITS SMALL DYNAMIC MESSAGE SIGN (POST MOUNTED)
ITS_EX_SPLICE	252	Continuous	0.20	EXISTING ITS SPLICE
ITS_EX_TRANS	252	Hidden2	0.20	EXISTING ITS TRANSFORMER
ITS_EX_TRUSS_CA	252	Hidden2	0.20	EXISTING ITS CANTILEVER POST (SMALL)
ITS_EX_TRUSS_FULL	252	Hidden2	0.20	EXISTING ITS SIZED FOR FULL SPAN TRUSS, MID SPAN TRUSS
ITS_EX_WIM_LOOP	252	Hidden2	0.20	EXISTING ITS WEIGH IN MOTION SYSTEM

PROPOSED SCADA LAYERS				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
SCA_PR_AP_DEV	YELLOW	Continuous	0.25	PROPOSED SCADA ACCESS POINT
SCA_PR_AQM_DEV	YELLOW	Continuous	0.25	PROPOSED SCADA AIR QUALITY MONITOR
SCA_PR_CCTV	YELLOW	Continuous	0.25	PROPOSED SCADA FIXED CCTV

PROPOSED SCADA LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
SCA_PR_CCTV_AID	YELLOW	Continuous	0.25	PROPOSED SCADA AUTOMATIC INCIDENT DETECTION
SCA_PR_CHBR_ITS	RED	Continuous	0.10	PROPOSED SCADA CHAMBER
SCA_PR_CHBR_SPL	RED	Continuous	0.10	PROPOSED SCADA SPLICE CHAMBER
SCA_PR_ELEC_CBL	RED	PHANTOM2	0.10	PROPOSED SCADA CABLE
SCA_PR_ENCL_SML	RED	Continuous	0.10	PROPOSED SCADA SMALL ENCLOSURE
SCA_PR_FAWL	WHITE	Continuous	0.25	PROPOSED SCADA FLASHING AMBER WARNING LIGHT
SCA_PR_FO_12C	WHITE	Continuous	0.25	PROPOSED SCADA FO_12C
SCA_PR_FO_48C	CYAN	Continuous	0.50	PROPOSED SCADA FO_48C
SCA_PR_FO_96C	CYAN	Continuous	0.50	PROPOSED SCADA FO_96C
SCA_PR_LCS	GREEN	Continuous	0.35	PROPOSED SCADA LANE CONTROL SIGN
SCA_PR_REP_DEV	YELLOW	Continuous	0.25	PROPOSED SCADA REPEATER UNIT
SCA_PR_RWIS_AS	YELLOW	Continuous	0.25	PROPOSED SCADA ROAD WEATHER INFORMATION SYSTEM
SCA_PR_SDMS	GREEN	Continuous	0.35	PROPOSED SCADA SMALL DYNAMIC MESSAGE SIGN
SCA_PR_SPLICE	WHITE	Continuous	0.25	PROPOSED SCADA SPLICE
SCA_PR_WIM_LOOP	GREEN	Continuous	0.35	PROPOSED SCADA WEIGH IN MOTION SYSTEM

EXISTING SCADA LAYERS				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
SCA_EX_AP_DEV	253	Continuous	0.15	EXISTING SCADA ACCESS POINT
SCA_EX_AQM_DEV	253	Continuous	0.15	EXISTING SCADA AIR QUALITY MONITOR
SCA_EX_CCTV	253	Continuous	0.15	EXISTING SCADA FIXED CCTV
SCA_EX_CCTV_AID	253	Continuous	0.15	EXISTING SCADA AUTOMATIC INCIDENT DETECTION
SCA_EX_CHBR_ITS	253	Continuous	0.15	EXISTING SCADA CHAMBER
SCA_EX_CHBR_SPL	253	Continuous	0.15	EXISTING SCADA SPLICE CHAMBER
SCA_EX_ELEC_CBL	252	PHANTOM2	0.15	EXISTING SCADA CABLE
SCA_EX_ENCL_SML	253	Continuous	0.15	EXISTING SCADA SMALL ENCLOSURE
SCA_EX_FAWL	253	Continuous	0.15	EXISTING SCADA FLASHING AMBER WARNING LIGHT
SCA_EX_FO_12C	252	Continuous	0.15	EXISTING SCADA FO_12C
SCA_EX_FO_48C	252	Continuous	0.15	EXISTING SCADA FO_48C
SCA_EX_FO_96C	252	Continuous	0.15	EXISTING SCADA FO_96C
SCA_EX_LCS	253	Continuous	0.15	EXISTING SCADA LANE CONTROL SIGN
SCA_EX_REP_DEV	253	Continuous	0.15	EXISTING SCADA REPEATER UNIT
SCA_EX_RWIS_AS	253	Continuous	0.15	EXISTING SCADA ROAD WEATHER INFORMATION SYSTEM

EXISTING SCADA LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line weight	Description
SCA_EX_SDMS	253	Continuous	0.15	EXISTING SCADA SMALL DYNAMIC MESSAGE SIGN
SCA_EX_SPLICE	252	Continuous	0.15	EXISTING SCADA SPLICE
SCA_EX_WIM_LOOP	253	Continuous	0.15	EXISTING SCADA WEIGH IN MOTION SYSTEM

STRUCTURAL LAYERS				
Layer Name	Screen Colour	Linetype	Plotted Line Weight	Description
S_PR_ABUTMENT_BARRIER10	RED	CONTINUOUS	0.10	ABUTMENT BARRIER
S_PR_ABUTMENT_BARRIER10H	RED	HIDDEN	0.10	ABUTMENT BARRIER
S_PR_ABUTMENT_BARRIER25	WHITE	CONTINUOUS	0.25	ABUTMENT BARRIER
S_PR_ABUTMENT_BARRIER25H	WHITE	HIDDEN	0.25	ABUTMENT BARRIER
S_PR_ABUTMENT_BARRIER35	GREEN	CONTINUOUS	0.35	ABUTMENT BARRIER
S_PR_ABUTMENT_BARRIER50	CYAN	CONTINUOUS	0.50	ABUTMENT BARRIER
S_PR_ABUTMENT_BEARING10	RED	CONTINUOUS	0.10	ABUTMENT BEARING
S_PR_ABUTMENT_BEARING10H	RED	HIDDEN	0.10	ABUTMENT BEARING
S_PR_ABUTMENT_BEARINGSOL10C	RED	CENTER	0.1	ABUTMENT BEARING SET-OUT LINE

STRUCTURAL LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line Weight	Description
S_PR_ABUTMENT_HATCH253	253	CONTINUOUS	0.15	ABUTMENT HATCH
S_PR_ABUTMENT_MORTARPAD10	RED	CONTINUOUS	0.10	ABUTMENT MORTAR PAD
S_PR_ABUTMENT_PILE10C	RED	CENTER	0.10	ABUTMENT PILE
S_PR_ABUTMENT_PILE10H2	RED	HIDDEN2	0.10	ABUTMENT PILE
S_PR_ABUTMENT_PILE25	WHITE	CONTINUOUS	0.25	ABUTMENT PILE
S_PR_ABUTMENT_PILELINER10	RED	CONTINUOUS	0.10	ABUTMENT PILE LINER
S_PR_ABUTMENT_PILELINER10H	RED	HIDDEN	0.10	ABUTMENT PILE LINER
S_PR_ABUTMENT_PILELINER25	WHITE	CONTINUOUS	0.25	ABUTMENT PILE LINER
S_PR_ABUTMENT_PILELINER25H	WHITE	HIDDEN	0.25	ABUTMENT PILE LINER
S_PR_ABUTMENT_PILELINER35	GREEN	CONTINUOUS	0.35	ABUTMENT PILE LINER
S_PR_ABUTMENT_PILELINER50	CYAN	CONTINUOUS	0.50	ABUTMENT PILE LINER
S_PR_ABUTMENT_SOL10C	RED	CENTER	0.10	ABUTMENT SET-OUT LINE
S_PR_ABUTMENT 10	RED	CONTINUOUS	0.10	ABUTMENT
S_PR_ABUTMENT 10H	RED	HIDDEN	0.10	ABUTMENT

STRUCTURAL LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line Weight	Description
S_PR_ABUTMENT25	WHITE	CONTINUOUS	0.25	ABUTMENT
S_PR_ABUTMENT25H	WHITE	HIDDEN	0.25	ABUTMENT
S_PR_ABUTMENT35	GREEN	CONTINUOUS	0.35	ABUTMENT
S_PR_ABUTMENT50	CYAN	CONTINUOUS	0.50	ABUTMENT
S_PR_ANCHOR10	RED	CONTINUOUS	0.10	ANCHOR
S_PR_ANCHOR10C	RED	CENTER	0.10	ANCHOR
S_PR_ANCHOR10H	RED	HIDDEN	0.10	ANCHOR
S_PR_ANCHOR13C2	9	CENTER2	0.15	ANCHOR
S_PR_ANCHOR25	WHITE	CONTINUOUS	0.25	ANCHOR
S_PR_ANCHOR25H	WHITE	HIDDEN	0.25	ANCHOR
S_PR_ANCHOR35	WHITE	CONTINUOUS	0.25	ANCHOR
S_PR_ANCHOR50	RED	CONTINUOUS	0.10	ANCHOR
S_PR_BARRIER	200	CONTINUOUS	0.35	BARRIER
S_PR_BARRIER_JOINT	RED	CONTINUOUS	0.10	BARRIER JOINT
S_PR_BARRIER10	RED	CONTINUOUS	0.10	BARRIER
S_PR_BARRIER10H	RED	HIDDEN	0.10	BARRIER
S_PR_BARRIER25	WHITE	CONTINUOUS	0.25	BARRIER
S_PR_BARRIER25H	WHITE	HIDDEN	0.25	BARRIER
S_PR_BARRIER35	GREEN	CONTINUOUS	0.35	BARRIER
S_PR_BARRIER50	CYAN	CONTINUOUS	0.50	BARRIER
S_PR_BASE10	RED	CONTINUOUS	0.10	BASE
S_PR_BASE10H	RED	HIDDEN	0.10	BASE
S_PR_BASE25	WHITE	CONTINUOUS	0.25	BASE
S_PR_BASE25H	WHITE	HIDDEN	0.25	BASE
S_PR_BASE35	GREEN	CONTINUOUS	0.35	BASE

STRUCTURAL LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line Weight	Description
S_PR_BASE50	RED	CONTINUOUS	0.10	BASE
S_PR_BATTER10	RED	CONTINUOUS	0.10	BATTER
S_PR_BATTER10D	RED	DASHED	0.10	BATTER
S_PR_BATTER10H	RED	HIDDEN	0.10	BATTER
S_PR_BATTER25	WHITE	CONTINUOUS	0.25	BATTER
S_PR_BATTER25H	WHITE	HIDDEN	0.25	BATTER
S_PR_BATTER35	GREEN	CONTINUOUS	0.35	BATTER
S_PR_BATTER50	CYAN	CONTINUOUS	0.50	BATTER
S_PR_BOREHOLE25	WHITE	CONTINUOUS	0.25	BOREHOLE
S_PR_BOREHOLE35	GREEN	CONTINUOUS	0.35	BOREHOLE
S_PR_CAPPING-BEAM10	RED	CONTINUOUS	0.10	CAPPING BEAM
S_PR_CAPPING-BEAM10H	RED	HIDDEN	0.10	CAPPING BEAM
S_PR_CAPPING-BEAM25	WHITE	CONTINUOUS	0.25	CAPPING BEAM
S_PR_CAPPING-BEAM25H	WHITE	HIDDEN	0.25	CAPPING BEAM
S_PR_CAPPING-BEAM35	GREEN	CONTINUOUS	0.35	CAPPING BEAM
S_PR_CAPPING-BEAM50	CYAN	CONTINUOUS	0.50	CAPPING BEAM
S_PR_CAST-IN10	RED	CONTINUOUS	0.10	CAST-IN
S_PR_CAST-IN10H	RED	HIDDEN	0.10	CAST-IN
S_PR_CAST-IN13C2	9	CENTER2	0.15	CAST-IN
S_PR_CAST-IN25	WHITE	CONTINUOUS	0.25	CAST-IN
S_PR_CAST-IN25H	WHITE	HIDDEN	0.25	CAST-IN
S_PR_CAST-IN35	GREEN	CONTINUOUS	0.35	CAST-IN
S_PR_CAST-IN50	CYAN	CONTINUOUS	0.50	CAST-IN
S_PR_CJ1	RED	CJ1	0.10	CONSTRUCTION JOINT

STRUCTURAL LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line Weight	Description
S_PR_CJ2	RED	CJ2	0.10	CONSTRUCTION JOINT
S_PR_CLADDING10	RED	CONTINUOUS	0.10	CLADDING
S_PR_CLADDING10H	RED	HIDDEN	0.10	CLADDING
S_PR_CLADDING25	WHITE	CONTINUOUS	0.25	CLADDING
S_PR_COLUMN10	RED	CONTINUOUS	0.10	COLUMN
S_PR_COLUMN10C	RED	CENTER	0.10	COLUMN
S_PR_COLUMN10H	RED	HIDDEN	0.10	COLUMN
S_PR_COLUMN25	WHITE	CONTINUOUS	0.25	COLUMN
S_PR_COLUMN25H	WHITE	HIDDEN	0.25	COLUMN
S_PR_COLUMN35	GREEN	CONTINUOUS	0.35	COLUMN
S_PR_COLUMN50	CYAN	CONTINUOUS	0.50	COLUMN
S_PR_CONC10	RED	CONTINUOUS	0.10	CONCRETE
S_PR_CONC10H	RED	HIDDEN	0.10	CONCRETE
S_PR_CONC25	WHITE	CONTINUOUS	0.25	CONCRETE
S_PR_CONC25H	WHITE	HIDDEN	0.25	CONCRETE
S_PR_CONC35	GREEN	CONTINUOUS	0.35	CONCRETE
S_PR_CONC50	CYAN	CONTINUOUS	0.50	CONCRETE
S_PR_CONDUIT10	RED	CONTINUOUS	0.10	CONDUIT
S_PR_CONDUIT10C	RED	CENTER	0.10	CONDUIT
S_PR_CONDUIT10H	RED	HIDDEN	0.10	CONDUIT
S_PR_CONDUIT13C2	9	CENTER2	0.15	CONDUIT
S_PR_CONDUIT25	WHITE	CONTINUOUS	0.25	CONDUIT
S_PR_CONDUIT25H	WHITE	CONTINUOUS	0.25	CONDUIT
S_PR_CONDUIT35	GREEN	CONTINUOUS	0.35	CONDUIT

STRUCTURAL LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line Weight	Description
S_PR_CONDUIT50	CYAN	CONTINUOUS	0.50	CONDUIT
S_PR_CONTROL	RED	CENTER	0.10	CONTROL LINE
S_PR_COVERPLATE10	RED	CONTINUOUS	0.10	COVERPLATE
S_PR_COVERPLATE10H	RED	HIDDEN	0.10	COVERPLATE
S_PR_COVERPLATE13C2	9	CENTER2	0.15	COVERPLATE
S_PR_COVERPLATE25	WHITE	CONTINUOUS	0.25	COVERPLATE
S_PR_COVERPLATE25H	WHITE	HIDDEN	0.25	COVERPLATE
S_PR_COVERPLATE35	GREEN	CONTINUOUS	0.35	COVERPLATE
S_PR_COVERPLATE50	CYAN	CONTINUOUS	0.50	COVERPLATE
S_PR_DECK_CJ1	RED	CJ1	0.10	DECK CONSTRUCTION JOINT
S_PR_DECK_DIAPHRAGM10H	RED	HIDDEN	0.10	DECK DIAPHRAGM
S_PR_DECK_DIAPHRAGM25H	WHITE	HIDDEN	0.25	DECK DIAPHRAGM
S_PR_DECK_SOFFIT10H	RED	HIDDEN	0.10	DECK SOFFIT
S_PR_DECK_SOFFIT25	WHITE	CONTINUOUS	0.25	DECK SOFFIT
S_PR_DECK_SOFFIT35	GREEN	CONTINUOUS	0.35	DECK SOFFIT
S_PR_DECK10	RED	CONTINUOUS	0.10	DECK
S_PR_DECK10H	RED	HIDDEN	0.10	DECK
S_PR_DECK25	WHITE	CONTINUOUS	0.25	DECK
S_PR_DECK25H	WHITE	HIDDEN	0.25	DECK
S_PR_DECK35	GREEN	CONTINUOUS	0.35	DECK
S_PR_DECK50	CYAN	CONTINUOUS	0.50	DECK
S_PR_DIAPHRAGM_WALL10	RED	CONTINUOUS	0.10	DIAPHRAGM WALL

STRUCTURAL LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line Weight	Description
S_PR_DIAPHRAGM_WALL10H	RED	HIDDEN	0.10	DIAPHRAGM WALL
S_PR_DIAPHRAGM_WALL25	WHITE	CONTINUOUS	0.25	DIAPHRAGM WALL
S_PR_DIAPHRAGM_WALL25H	WHITE	HIDDEN	0.25	DIAPHRAGM WALL
S_PR_DIAPHRAGM_WALL35	GREEN	CONTINUOUS	0.35	DIAPHRAGM WALL
S_PR_DIAPHRAGM_WALL50	CYAN	CONTINUOUS	0.50	DIAPHRAGM WALL
S_PR_DRAINAGE10	RED	CONTINUOUS	0.10	DRAINAGE
S_PR_DRAINAGE10C	RED	CENTER	0.10	DRAINAGE
S_PR_DRAINAGE10H	RED	HIDDEN	0.10	DRAINAGE
S_PR_DRAINAGE13C2	9	CENTER2	0.15	DRAINAGE
S_PR_DRAINAGE25	WHITE	CONTINUOUS	0.25	DRAINAGE
S_PR_DRAINAGE25H	WHITE	HIDDEN	0.25	DRAINAGE
S_PR_DRAINAGE35	GREEN	CONTINUOUS	0.35	DRAINAGE
S_PR_DRAINAGE50	CYAN	CONTINUOUS	0.50	DRAINAGE
S_PR_EXPANSIONJOINT10	RED	CONTINUOUS	0.10	EXPANSION JOINT
S_PR_EXPANSIONJOINT10C	RED	CENTER	0.10	EXPANSION JOINT
S_PR_EXPANSIONJOINT10H	RED	HIDDEN	0.10	EXPANSION JOINT
S_PR_EXPANSIONJOINT13C2	9	CENTER2	0.15	EXPANSION JOINT
S_PR_EXPANSIONJOINT25	WHITE	CONTINUOUS	0.25	EXPANSION JOINT
S_PR_EXPANSIONJOINT25H	WHITE	HIDDEN	0.25	EXPANSION JOINT
S_PR_EXPANSIONJOINT35	GREEN	CONTINUOUS	0.35	EXPANSION JOINT
S_PR_EXPANSIONJOINT50	CYAN	CONTINUOUS	0.50	EXPANSION JOINT
S_PR_FLOOR10	RED	CONTINUOUS	0.10	FLOOR
S_PR_FLOOR10H	RED	HIDDEN	0.10	FLOOR
S_PR_FLOOR25	WHITE	CONTINUOUS	0.25	FLOOR
S_PR_FLOOR25H	WHITE	HIDDEN	0.25	FLOOR

STRUCTURAL LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line Weight	Description
S_PR_FLOOR35	GREEN	CONTINUOUS	0.35	FLOOR
S_PR_FLOOR50	CYAN	CONTINUOUS	0.50	FLOOR
S_PR_FOOTING10	RED	CONTINUOUS	0.10	FOOTING
S_PR_FOOTING10H	RED	HIDDEN	0.10	FOOTING
S_PR_FOOTING25	WHITE	CONTINUOUS	0.25	FOOTING
S_PR_FOOTING25H	WHITE	HIDDEN	0.25	FOOTING
S_PR_FOOTING35	GREEN	CONTINUOUS	0.35	FOOTING
S_PR_FOOTING50	CYAN	CONTINUOUS	0.50	FOOTING
S_PR_FSL	RED	CONTINUOUS	0.10	FINISHED SURFACE LEVEL
S_PR_GIRDER_SOFFIT10H	RED	HIDDEN	0.10	GIRDER SOFFIT
S_PR_GIRDER_SOFFIT25	WHITE	CONTINUOUS	0.25	GIRDER SOFFIT
S_PR_GIRDER_SOFFIT25C	WHITE	CENTER	0.25	GIRDER SOFFIT
S_PR_GIRDER_TOP10C	RED	CENTER	0.10	GIRDER TOP
S_PR_GIRDER10	RED	CONTINUOUS	0.10	GIRDER
S_PR_GIRDER10C	RED	CENTER	0.10	GIRDER
S_PR_GIRDER10H	RED	HIDDEN	0.10	GIRDER
S_PR_GIRDER25	WHITE	CONTINUOUS	0.25	GIRDER
S_PR_GIRDER25H	WHITE	HIDDEN	0.25	GIRDER
S_PR_GIRDER35	GREEN	CONTINUOUS	0.35	GIRDER
S_PR_GIRDER50	CYAN	CONTINUOUS	0.50	GIRDER
S_PR_HATCH	250	CONTINUOUS	0.15	HATCH
S_PR_HATCH253	253	CONTINUOUS	0.15	HATCH
S_PR_HATCH253-BNDY	40	CONTINUOUS	0.35	HATCH BOUNDARY
S_PR_KERB10	RED	CONTINUOUS	0.10	KERB

STRUCTURAL LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line Weight	Description
S_PR_KERB25	WHITE	CONTINUOUS	0.25	KERB
S_PR_KERB35	GREEN	CONTINUOUS	0.35	KERB
S_PR_KERB50	CYAN	CONTINUOUS	0.50	KERB
S_PR_LAMP10	RED	CONTINUOUS	0.10	LAMP
S_PR_LAMP10H	RED	HIDDEN	0.10	LAMP
S_PR_LAMP25	WHITE	CONTINUOUS	0.25	LAMP
S_PR_LAMP25H	WHITE	HIDDEN	0.25	LAMP
S_PR_LAMP35	GREEN	CONTINUOUS	0.35	LAMP
S_PR_LAMP50	CYAN	CONTINUOUS	0.50	LAMP
S_PR_MATCHLINE	BLUE	CENTER	0.70	MATCHLINE
S_PR_MISC25	WHITE	CONTINUOUS	0.25	MISC
S_PR_NGL	RED	CONTINUOUS	0.10	NATURAL GROUND LEVEL
S_PR_PANEL10	RED	CONTINUOUS	0.10	PANEL
S_PR_PANEL10H	RED	HIDDEN	0.10	PANEL
S_PR_PANEL25	WHITE	CONTINUOUS	0.25	PANEL
S_PR_PANEL35	GREEN	CONTINUOUS	0.35	PANEL
S_PR_PANEL50	CYAN	CONTINUOUS	0.50	PANEL
S_PR_PIER_BEARING10	RED	CONTINUOUS	0.10	PIER BEARING
S_PR_PIER_BEARING10H	RED	HIDDEN	0.10	PIER BEARING
S_PR_PIER_BEARINGSOL10C	RED	CENTER	0.10	PIER BEARING SET-OUT LINE
S_PR_PIER_COLUMN10	RED	CONTINUOUS	0.10	PIER COLUMN
S_PR_PIER_COLUMN10C	RED	CENTER	0.10	PIER COLUMN
S_PR_PIER_COLUMN10H	RED	HIDDEN	0.10	PIER COLUMN

STRUCTURAL LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line Weight	Description
S_PR_PIER_COLUMN25	WHITE	CONTINUOUS	0.25	PIER COLUMN
S_PR_PIER_COLUMN25H	WHITE	HIDDEN	0.25	PIER COLUMN
S_PR_PIER_COLUMN35	GREEN	CONTINUOUS	0.35	PIER COLUMN
S_PR_PIER_COLUMN50	CYAN	CONTINUOUS	0.50	PIER COLUMN
S_PR_PIER_FOOTING25	WHITE	CONTINUOUS	0.25	PIER FOOTING
S_PR_PIER_FOOTING35	GREEN	CONTINUOUS	0.35	PIER FOOTING
S_PR_PIER_HATCH253	253	CONTINUOUS	0.15	PIER HATCH
S_PR_PIER_HEADSTOCK10	RED	CONTINUOUS	0.10	PIER HEADSTOCK
S_PR_PIER_HEADSTOCK10H	RED	HIDDEN	0.10	PIER HEADSTOCK
S_PR_PIER_HEADSTOCK25	WHITE	CONTINUOUS	0.25	PIER HEADSTOCK
S_PR_PIER_HEADSTOCK25H	WHITE	HIDDEN	0.25	PIER HEADSTOCK
S_PR_PIER_HEADSTOCK35	GREEN	CONTINUOUS	0.35	PIER HEADSTOCK
S_PR_PIER_HEADSTOCK50	CYAN	CONTINUOUS	0.50	PIER HEADSTOCK
S_PR_PIER_MORTARPAD10	RED	CONTINUOUS	0.10	PIER MORTAR PAD
S_PR_PIER_PILE10C	RED	CENTER	0.10	PIER PILE
S_PR_PIER_PILE10H2	RED	HIDDEN2	0.10	PIER PILE
S_PR_PIER_PILE25	WHITE	CONTINUOUS	0.25	PIER PILE
S_PR_PIER_PILECAP10	RED	CONTINUOUS	0.10	PIER PILECAP
S_PR_PIER_PILECAP10H	RED	HIDDEN	0.10	PIER PILECAP
S_PR_PIER_PILECAP25	WHITE	CONTINUOUS	0.25	PIER PILECAP
S_PR_PIER_PILECAP25H	WHITE	HIDDEN	0.25	PIER PILECAP
S_PR_PIER_PILECAP35	GREEN	CONTINUOUS	0.35	PIER PILECAP
S_PR_PIER_PILECAP50	CYAN	CONTINUOUS	0.50	PIER PILECAP
S_PR_PIER_PILESOL10C	RED	CENTER	0.10	PIER PILE SETOUT LINE

STRUCTURAL LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line Weight	Description
S_PR_PIER_SOL10C	RED	CENTER	0.10	PIER SETOUT LINE
S_PR_PIER10	RED	CONTINUOUS	0.10	PIER
S_PR_PIER10H	RED	HIDDEN	0.10	PIER
S_PR_PIER25	WHITE	CONTINUOUS	0.25	PIER
S_PR_PIER25H	WHITE	HIDDEN	0.25	PIER
S_PR_PIER35	GREEN	CONTINUOUS	0.35	PIER
S_PR_PIER50	CYAN	CONTINUOUS	0.50	PIER
S_PR_RAIL_HD	GREEN	CONTINUOUS	0.35	RAIL
S_PR_RAIL10	RED	CONTINUOUS	0.10	RAIL
S_PR_RAIL10C	RED	CENTER	0.10	RAIL
S_PR_RAIL10H	RED	HIDDEN	0.10	RAIL
S_PR_RAIL13C2	9	CENTER2	0.15	RAIL
S_PR_RAIL25	WHITE	CONTINUOUS	0.25	RAIL
S_PR_RAIL35	GREEN	CONTINUOUS	0.35	RAIL
S_PR_RAIL50	CYAN	CONTINUOUS	0.50	RAIL
S_PR_RELIEVINGSLAB_ EXPANSIONJOINT10	RED	CONTINUOUS	0.10	RELIEVING SLAB EXPANSION JOINT
S_PR_RELIEVINGSLAB_ EXPANSIONJOINT13	9	CONTINUOUS	0.15	RELIEVING SLAB EXPANSION JOINT
S_PR_RELIEVINGSLAB_ EXPANSIONJOINT25	WHITE	CONTINUOUS	0.25	RELIEVING SLAB EXPANSION JOINT
S_PR_RELIEVINGSLAB10	RED	CONTINUOUS	0.10	RELIEVING SLAB
S_PR_RELIEVINGSLAB10H	RED	HIDDEN	0.10	RELIEVING SLAB
S_PR_RELIEVINGSLAB13H	9	HIDDEN	0.15	RELIEVING SLAB
S_PR_RELIEVINGSLAB25	WHITE	CONTINUOUS	0.25	RELIEVING SLAB

STRUCTURAL LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line Weight	Description
S_PR_RELIEVINGSLAB25H	WHITE	HIDDEN	0.25	RELIEVING SLAB
S_PR_RELIEVINGSLAB35	GREEN	CONTINUOUS	0.35	RELIEVING SLAB
S_PR_RELIEVINGSLAB50	CYAN	CONTINUOUS	0.5	RELIEVING SLAB
S_PR_REO10	RED	CONTINUOUS	0.10	REO
S_PR_REO10H	RED	HIDDEN	0.10	REO
S_PR_REO25	WHITE	CONTINUOUS	0.25	REO
S_PR_REO252	252	CONTINUOUS	0.15	REO
S_PR_REO25H	WHITE	HIDDEN	0.25	REO
S_PR_REO35	GREEN	CONTINUOUS	0.35	REO
S_PR_REO35H	GREEN	HIDDEN	0.35	REO
S_PR_REO50	CYAN	CONTINUOUS	0.50	REO
S_PR_REO50H	CYAN	HIDDEN	0.50	REO
S_PR_REO70	BLUE	CONTINUOUS	0.70	REO
S_PR_RETWALL	92	CONTINUOUS	0.35	RETAINING WALL
S_PR_RETWALL10	RED	CONTINUOUS	0.10	RETAINING WALL
S_PR_RETWALL10H	RED	HIDDEN	0.10	RETAINING WALL
S_PR_RETWALL25	WHITE	CONTINUOUS	0.25	RETAINING WALL
S_PR_RETWALL25H	WHITE	HIDDEN	0.25	RETAINING WALL
S_PR_RETWALL35	GREEN	CONTINUOUS	0.35	RETAINING WALL
S_PR_RETWALL50	CYAN	CONTINUOUS	0.50	RETAINING WALL
S_PR_ROCK_DW10PH	RED	PHANTOM	0.10	ROCK DISTINCTLY WEATHERED
S_PR_ROCK_SW10DD2	RED	DASHDOT2	0.10	ROCK SLIGHTLY WEATHERED
S_PR_ROCK_XW10DI	RED	PHANTOM	0.10	ROCK EXTREMELY WEATHERED

STRUCTURAL LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line Weight	Description
S_PR_ROOF10	RED	CONTINUOUS	0.1	ROOF
S_PR_ROOF10H	RED	HIDDEN	0.1	ROOF
S_PR_ROOF25	WHITE	CONTINUOUS	0.25	ROOF
S_PR_ROOF25H	WHITE	HIDDEN	0.25	ROOF
S_PR_ROOF35	GREEN	CONTINUOUS	0.35	ROOF
S_PR_ROOF50	CYAN	CONTINUOUS	0.5	ROOF
S_PR_RSS10	RED	CONTINUOUS	0.1	REINFORCED SOIL STRUCTURE
S_PR_RSS10H	RED	HIDDEN	0.1	REINFORCED SOIL STRUCTURE
S_PR_RSS25	WHITE	CONTINUOUS	0.25	REINFORCED SOIL STRUCTURE
S_PR_RSS35	GREEN	CONTINUOUS	0.35	REINFORCED SOIL STRUCTURE
S_PR_RSS50	CYAN	CONTINUOUS	0.5	REINFORCED SOIL STRUCTURE
S_PR_SECTION	133	CONTINUOUS	0.35	SECTION
S_PR_SERVICES25	WHITE	CONTINUOUS	0.25	SERVICES
S_PR_SERVICES25H	WHITE	HIDDEN	0.25	SERVICES
S_PR_SERVICES35	GREEN	CONTINUOUS	0.35	SERVICES
S_PR_SERVICES50	CYAN	CONTINUOUS	0.5	SERVICES
S_PR_SOP	GREEN	CONTINUOUS	0.35	SET-OUT POINT
S_PR_STAIR10H	RED	HIDDEN	0.1	STAIR
S_PR_STAIR25	WHITE	CONTINUOUS	0.25	STAIR
S_PR_STAIR25H	WHITE	HIDDEN	0.25	STAIR
S_PR_STAIR35	GREEN	CONTINUOUS	0.35	STAIR
S_PR_STAIR50	RED	CONTINUOUS	0.1	STAIR
S_PR_STEEL10	RED	CONTINUOUS	0.1	STEEL
S_PR_STEEL10C	RED	CENTER	0.1	STEEL
S_PR_STEEL10H	RED	HIDDEN	0.1	STEEL

STRUCTURAL LAYERS (Continuation…)				
Layer Name	Screen Colour	Linetype	Plotted Line Weight	Description
S_PR_STEEL13C2	9	CENTER2	0.15	STEEL
S_PR_STEEL25	WHITE	CONTINUOUS	0.25	STEEL
S_PR_STEEL25H	WHITE	HIDDEN	0.25	STEEL
S_PR_STEEL35	GREEN	CONTINUOUS	0.35	STEEL
S_PR_STEEL50	CYAN	CONTINUOUS	0.5	STEEL
S_PR_TAPERPLATE10	RED	CONTINUOUS	0.1	TAPER PLATE
S_PR_TAPERPLATE10H	RED	HIDDEN	0.1	TAPER PLATE
S_PR_TAPERPLATE25	WHITE	CONTINUOUS	0.25	TAPER PLATE
S_PR_TENDON10	RED	CONTINUOUS	0.1	TENDON
S_PR_TENDON10C	RED	CENTER	0.1	TENDON
S_PR_TENDON10H	RED	HIDDEN	0.1	TENDON
S_PR_TENDON10H2	RED	HIDDEN2	0.1	TENDON
S_PR_TENDON13C2	9	CENTER2	0.15	TENDON
S_PR_TENDON25	WHITE	CONTINUOUS	0.25	TENDON
S_PR_TENDON35	GREEN	CONTINUOUS	0.35	TENDON
S_PR_TENDON50	CYAN	CONTINUOUS	0.5	TENDON
S_PR_WALL10	RED	CONTINUOUS	0.1	WALL
S_PR_WALL10H	RED	HIDDEN	0.1	WALL
S_PR_WALL25	WHITE	CONTINUOUS	0.25	WALL
S_PR_WALL25H	WHITE	HIDDEN	0.25	WALL
S_PR_WALL35	GREEN	CONTINUOUS	0.35	WALL
S_PR_WALL50	CYAN	CONTINUOUS	0.5	WALL
S_PR_WATER PROOF	WHITE	CONTINUOUS	0.25	WATER PROOF
S_PR_WATER PROOFH	WHITE	HIDDEN	0.25	WATER PROOF HIDDEN
S_PR_WIPEOUT	255	CONTINUOUS	0.15	WIPE OUT
S_PR_XCLIP	103	CONTINUOUS	0.35	XREF CLIP

Appendix B – USEFUL TABLES FOR AUTOCAD

Useful tables for AutoCAD

Table 1 - Model Space Zoom XP Factors (Metres)

Scale of Drawing	Zoom XP Scale
1 : 1000	1
1 : 1250	0.8
1 : 2500	0.4
1 : 5000	0.2
1 : 10000	0.1
1 : 25000	0.04
1 : 50000	0.02
1 : 500	2
1 : 200	5
1 : 100	10
1 : 50	20
1 : 20	50
1 : 10	100
1 : 5	200
1 : 2	500
1 : 1	1000

Table 2 – Model Space Zoom XP Factors (Millimetres)

Scale of Drawing	Zoom XP Scale
1 : 500	0.002
1 : 200	0.005
1 : 100	0.01
1 : 50	0.02
1 : 20	0.05
1 : 10	0.1
1 : 5	0.2
1 : 2	0.5
1 : 1	1

All text on drawings are to be produced in upper case only, unless specifically requested not to do so (e.g. presentation drawings). Text sizes are to be relative to the scale of the drawing as follows:

Table 3 – Text relation to drawing size (Millimetres)

Drawing Size	Titles	Pen Size	General Text & Notes	Pen Size
A0	5mm	0.5mm	2.5mm	0.25mm
A1	5mm	0.5mm	2.5mm	0.25mm
A2	5mm	0.5mm	2.5mm	0.25mm
A3	3.5mm	0.35mm	2.5mm	0.25mm
A4	3.5mm	0.35mm	2.5mm	0.25mm

Table 4 - Text Heights for use in Model Space (Millimetres)

Scale of Drawing	Factor (Multiply)	Text Height		
		0.25 Pen	0.35 Pen	0.5 Pen
1 : 500	500	1250.00	1750.00	2500.00
1 : 200	200	500.00	700.00	1000.00
1 : 100	100	250.00	350.00	500.00
1 : 50	50	125.00	175.00	250.00
1 : 20	20	50.00	70.00	100.00
1 : 10	10	25.00	35.00	50.00
1 : 5	5	12.50	17.50	25.00
1 : 2	2	5.00	7.00	10.00
1 : 1	1	2.50	3.50	5.00

Table 5 - Text Heights for use in Model Space (Metres)

Scale of Drawing	Factor (Multiply)	Text Height		
		0.25 Pen	0.35 Pen	0.5 Pen
1 : 1000	1.00	2.50	3.50	5.00
1 : 1250	1.25	3.125	4.375	6.25
1 : 2500	2.5	6.25	8.75	12.50
1 : 5000	5.00	12.50	17.50	25.00
1 : 10000	10.00	25.00	35.00	50.00
1 : 25000	25.00	62.50	87.50	125.00
1 : 50000	50.00	125.00	175.00	250.00
1 : 500	0.50	1.25	1.75	2.50
1 : 200	0.20	0.50	0.70	1.00
1 : 100	0.10	0.25	0.35	0.50
1 : 50	0.05	0.125	0.175	0.25
1 : 20	0.02	0.05	0.07	0.10
1 : 10	0.01	0.025	0.035	0.05
1 : 5	0.005	0.0125	0.175	0.025
1 : 2	0.002	0.005	0.007	0.010
1 : 1	0.001	0.0025	0.0035	0.005