



Ref : ETWB(CS) 1/4/7

Group : 5,17

17 September 2002

Environment, Transport and Works Bureau
Technical Circular (Works) No. 38/2002

Computer-Aided-Drafting Standard for Works Projects

Scope

1. This Circular announces the implementation of the Computer-Aided-Drafting (CAD) Standard for Works Projects (CSWP).

Effective Date

2. This Circular shall take effect on 15 October 2002.

Effect on Existing Circulars

3. This Circular supersedes the Works Branch Technical Circular No. 22/91. The Works Branch Technical Circular No. 22/91 is hereby cancelled.

Background

4. Works Departments started the deployment of CAD systems in late 1980's. Since then, these systems have proliferated and have become the dominant tools for drawing production. To keep pace with this trend, Works Departments have developed departmental CAD standards to standardize the drawing production process.

5. A consultancy study was commissioned in 1998 to review the CAD systems of the Works Departments. It concluded that Works Departments were using CAD systems mainly as a tool for drawing production but that further productivity gains could be made if CAD data were to be used as a source of management information and a medium for information sharing. There was limited use of CAD data for these purposes because the necessary standards were not available.

6. In order to align the departmental CAD standards of the Works Departments, a consultancy study was commissioned to formulate the CAD Standard for Works Projects (CSWP). The CSWP will set out comprehensive and coherent provisions for graphical representation of the works under the Works Departments' portfolio, the data standards for drawings and the core requirements for drawing management. Consultations with the Works Departments and the construction industry on the CSWP were conducted in October 2001. Strong and positive support on the use of the CSWP was received.

7. In addition to productivity enhancement, the CSWP will facilitate the Administration's commitment in developing electronic service delivery (ESD). The enabling factors for developing the ESD are described in the publication of the Information Technology and Broadcasting Bureau entitled "Digital 21". One of these factors is the "common software interface" through which individuals, business and Government can interact easily. As the CSWP will be a facilitator for the re-use of CAD data and for data exchange between commonly used CAD platforms, the CSWP is an essential component of the common software interface. It will form part of the data infrastructures for ESD.

Policy

8. The CSWP aims at aligning the Works Departments' CAD standards, setting standards for data exchange and provisions for basic requirements of CAD data management. A change to the current drafting practice is anticipated.

9. For works projects delivered using in-house resources of Works Departments, the following arrangement shall apply:-

- (a) For works contracts awarded before 15 October 2002, it is not required to comply with this Circular;
- (b) For detailed design of the works projects commenced before 15 October 2002 and the associated works contracts to be awarded on or after 15 October 2002, the Works Departments shall decide at their discretion whether CAD drawings shall be prepared to the CSWP. Nevertheless, the Works Department shall make every endeavour to have the CAD drawings prepared to the CSWP. If drawings are to be prepared in accordance with the CSWP, the standard clause of paragraph 11 below requiring the preparation of CAD drawings to the CSWP shall be incorporated in the works contract documents as a Special Condition of Contract; and
- (c) For detailed design of the works projects to commence on or after 15 October 2002, Works Departments shall prepare CAD drawings of these works projects and their associated works contracts complying with the CSWP. The standard clause of paragraph 11 below shall be included as a Special Condition of

Contract in the works contract documents.

10. For consultancies, and works contracts managed by consultants, the following arrangement shall apply:-
- (a) For consultancies together with their associated works contracts awarded before 15 October 2002, it is not required to comply with this Circular;
 - (b) For consultancies awarded before 15 October 2002 and their associated works contracts to be awarded on or after 15 October 2002, preparation of CAD drawings to the CSWP should apply if compliance with this Circular will not incur extra cost to the Government. If this Circular is to be followed, the standard clause of paragraph 11 below requiring the preparation of CAD drawings to the CSWP shall be incorporated in the works contract documents as a Special Condition of Contract; and
 - (c) For consultancies to be awarded on or after 15 October 2002, the standard clause of paragraph 11 below requiring the preparation of CAD drawings to the CSWP shall be incorporated in the study briefs of the consultancies, and also in the works contract documents as a Special Condition of Contract.

11. The following is the standard clause to be included in the consultancy study brief and in the works contract documents as a Special Condition of Contract:-

“CAD drawings shall be prepared conforming to the CAD Standard for Works Projects version **xx** (or later versions as agreed between the Employer and the Contractor/Consultant from time to time) as posted on the Environment, Transport and Works Bureau’s web site <http://www.etwb.gov.hk/cswp>”

12. Drawings for consultancies or works contracts shall be prepared in accordance with the CSWP stated in the standard clause of Clause 11 above. The requirement to incorporate subsequent changes in the CSWP shall be at the discretion of the Works Departments.

CSWP

13. The CSWP comprises the CAD standard, the symbol and line-style libraries and the Agent Responsible Code (ARC) tables. ETWB will digitally sign the CSWP and post it on the CSWP web page www.etwb.gov.hk/cswp.

14. The CSWP web page will have sections on the CSWP and the standard tools. The standard tools are provided as a means to facilitate the use of the CSWP.

15. Use of the symbol and line-style libraries and the ARC tables are mandatory. If

no appropriate symbol or line-style exists, user defined symbols or line-styles may be used. These user defined symbols/line-styles may be referred to the CSWP Working Group for consideration for inclusion in the libraries. If no appropriate ARC exists, user has to consult the CSWP Working Group for assignment of an ARC.

16. ETWB will update the CSWP and the standard tools on the CSWP web page on the advice of the CSWP Working Group. Works Departments will be informed of such updates through the CSWP Committee. However, logs of the versions and dates of updates will be posted on the CSWP web page.

CSWP Committee and Working Group

17. The Terms of Reference and membership of the CSWP Committee are shown in Annex 1.

18. The Terms of Reference and membership of the CSWP Working Group are shown in Annex 2.

Enquiries

19. Enquires on this circular may be made to Information Technology and Services Promotion Unit of the Environment, Transport and Works Bureau at email address csu@etwb.gov.hk or fax no. 2905 1181.

(W.S. CHAN)

**Deputy Secretary for the Environment,
Transport and Works (Transport and Works) W2**

Annex 1

Terms of Reference of the CSWP Committee

1. Coordinate and apportion responsibilities for the implementation and updating of the CSWP.
2. Oversee the implementation of the CSWP.
3. Monitor the feedback from users of the CSWP.
4. Make arrangements for promulgating the CSWP and its revisions.
5. Ratify proposals on the maintenance and further development of the CSWP as recommended by the CSWP Working Group.

Membership of the CSWP Committee

The CSWP Committee comprises the following members:

Chairman:	Chief Assistant Secretary (Works) 7, ETWB
Departmental Representatives:	Representatives of ArchSD, CED, DSD, EMSD, HyD, TDD and WSD at senior professional level Representative of ITSD
CSWP Working Group Coordinator:	Chairman of CSWP Working Group
Secretary:	Assistant Secretary (Computer Service) 1, ETWB

Annex 2

Terms of Reference of the CSWP Working Group

1. To provide feedback from departmental users on the suitability of the CSWP to the CSWP Committee.
2. To recommend the CSWP updates to the CSWP Committee for endorsement
3. To recommend CAD software upgrades to the CSWP Committee for endorsement.
4. To maintain the databases (such as, but not limited to, the symbol and line-style libraries and the Agent Responsible Code tables).
5. To maintain the standard tools including the Standard Interface.
6. To take on ad-hoc tasks including those assigned by the CSWP Committee.

Membership of the CSWP Working Group

The CSWP Working Group comprises the following members:

Chairman: Senior Architect or equivalent, ArchSD

Departmental

Representatives: One professional officer and One Senior Technical Officer or above of ArchSD, CED, DSD, EMSD, HyD, TDD and WSD

Representative of ITSD

Assistant Secretary (Computer Service) 1, ETWB

Secretary: ArchSD