PENNDOT e-Notification

Bureau of Information Systems
Application Development Division

SPLRFD No. 001 November 4, 2005	**Release of SPLRFD Version 1.1.0.0**

PENNDOT's LRFD Steel Girder Splice Design and Analysis Program (SPLRFD) has been revised as described on the attached Summary of October 2005 Revisions – Version 1.1.0.0.

The new version has been placed on PENNDOT servers for use by the Districts. Consultants and others, who have a current license agreement for SPLRFD, can obtain Version 1.1.0.0 by submitting a Software Update Request form with the appropriate update fee. Updates for **SPLRFD Version 1.0 or 1.0a** require an **update fee of $300** ($50 for governmental agencies and educational institutions).

The Software Update Request form can be obtained on the PENNDOT Engineering Software Support website at http://penndot.engrprograms.com by clicking on "Ordering/Updating" and, then, "Update Form".

Please direct any questions concerning the above to:

Shyh-hann Ji, P.E.
PENNDOT Bureau of Information Systems
Application Development Division
Phone: (717)783-8822 | Fax: (717) 705-5529
e-mail: sji@state.pa.us

SUMMARY OF OCTOBER 2005 REVISIONS–VERSION 1.1.0.0

Since the release of SPLRFD Version 1.0, several error reports and user requested enhancements have been received. This release of SPLRFD Version 1.1.0.0 contains the following revisions:

1. The program was converted to use Digital Visual Fortran Version 6.5 (Request 001)

2. The extension of the Parameter Data File has been changed to PD to avoid conflicts with Adobe Acrobat files. (Request 003)

3. Chapter 9 of User Manual was updated for addresses and e-mail address for the contact person. (Request 004)

4. Program was updated to store input files anywhere facilitating multiple users to run the program from a shared directory. (Request 005)

5. Program was updated to prevent PDF date check failure on Windows 2000. (Request 006)

6. The program was modified to overcome the concerns pertaining to apparently large values for M_{grd} in the output. User manual was updated to reflect the changes made to the program. (Request 007)

7. Additional compiler settings were activated to trap divide-by-zero errors. (Request 008)

8. The program now pauses after execution so that if the program is run via an icon on the desktop or Start menu the Command Prompt window does not close immediately after program execution. At the end of program execution, a message is printed on the screen advising the user to “Press <ENTER> to exit program.” (Request 009)

9. The program makes it easy to print a special copyright notice for Beta test versions of the program. (Request 010)

10. The program was updated for staggered bolt pattern specification checks. An additional check was introduced for staggered bolt pattern to check the clear inclined bolt distance rather than the pitch and the gage against minimum bolt clearance required. (Request 011)

11. Bolt resistance factors were updated to 0.38 and 0.48 from the old values of 0.4 and 0.5. (Request 012)

12. Originally during a design, bearing failure was overcome by increasing either the number of bolts or the splice plate thickness. Now the option of increasing the bearing distances (web edge, splice edge, splice end) to

overcome the bearing failure has been provided. When bearing governs the failure for analysis problems, or whenever there is a bearing failure and the bearing failure can not be overcome by incrementing the bearing distances for the design runs, warning messages are now provided in the output to inform the user that the bearing has caused the failure and the user has the option to increment the bearing distances to overcome the bearing failure. (Request 013)

13. Modifications were made to the program to prevent stack dump problem during the program execution. Prints error messages if the user entered values are lower than the DM-4 mandates. (Request 014).

14. Chapter 7 of User Manual was updated to clarify the sign convention for shear. (Request 017)

15. The program now flags a code failure when the absolute value of the design flexural stress exceeds the factored flexural resistance for both positive and negative values of forces and stresses. (Request 019)

16. The program now increments the number of bolts by number of gage lines rather than fixed increment of two. (Request 020)

17. Eliminated unwarranted bolt pitch warning message for FSB line. Modifications are made such that the FSB maximum bolt pitch warning message is printed only for staggered bolt pattern. (Request 021)

18. Program and User Manual (Chapter 5) were updated to provide default values for Ductility Factor, Redundancy Factor and Importance Factor of 1.0. (Request 023)

19. Program and User Manual were modified to provide consistent SID parameter definitions. State Route field was changed from alphanumeric to numeric with a lower limit of 0 and an upper limit of 9999. (Request 024)

20. Redundant information has been eliminated from the design trial tables in the design output. (Request 031)

21. A new summary output report that provides a list of specification check warnings has been added to the output. (Request 032)

22. The program has been converted to run as a Windows DLL. (Request 033)

23. The program now supports long file names. (Request 034)

24. The program has been enhanced so temporary files are now created on the local drive for network compatibility. (Request 037)

25. Captions have been added to the EngAsst Image files (Request 038)

26. Example input files have been modified to eliminate all input warnings (Request 040)

27. The program has been modified to prevent it from crashing when more than one WBP command is entered on the input. (Request 041)

The following is a list of reported problems, user requests and clarifications that will be addressed in a later version of SPLRFD:

1. An input item will be added for the filler plate factor as per DM-4 (2000) (Request 012)

2. The upper limit of left and right flange edge distances (parameters 11 and 12 of FSB command) will be changed from 5” to 8” (Request 036)