HYDRAULIC ENGINEERING FIELD REPORT

I. HYDRAULIC AND HYDROLOGICAL DATA REQUIRED FOR ALL EXISTING OR PROPOSED BRIDGE STREAM CROSSING PROJECTS

A. Project Location
   Project No.: __________  County: __________  District: ___
   P.I. No.: ______  Stream Name: ______________________  Route: ____
   Surveyed By: ____________________________  Date: __________

B. Site Information
   Floodplain and Stream Channel description:
   1. Flat, rolling, mountainous, etc.: _______________________________________
   2. Wooded, heavily vegetated, pasture, swampy, etc.: __________________________
   3. Stream channel description: well-defined banks, meandering, debris, etc.
      ______________________________________________________________________
      ______________________________________________________________________
   4. Is there any fill in the upstream or downstream floodplain, which will affect the natural drainage or limit the floodplain width at this site?
      ______________________________________________________________________
      ______________________________________________________________________

C. Required Existing Bridge Information at Project Site
   1. Bridge Identification No.: ____________________________________________
   2. Date Built: _________________________________________________________
   3. Skew angle of bridge bents: ___________________________________________
   4. Height of curb, parapet or barrier: ______________________________________
   Substructure Information:
   1. Column type (concrete, steel, etc.): _________________________________
   2. Size of columns: _________________________________________________
   3. Number of columns per bent: _______________________________________
   4. Guide Bank (Spur Dike) length, elevation and location (if applicable):
      ______________________________________________________________________
      ______________________________________________________________________
   5. Note any scour problems at intermediate bents or abutments:
      ______________________________________________________________________
      ______________________________________________________________________
Note: The above information is required for all bridges within the floodplain (main and overflow bridges) along the roadway. In addition, the location, size and number of barrels are required for all box culverts located within the floodplain.

D. Normal Water Surface Data

WS ELEV

500 feet upstream of survey centerline: _______________
At the survey centerline: _______________
500 feet downstream of survey centerline: _______________
Normal high tide: _______________
Normal low tide: _______________

E. Historical Flood Data

1. Extreme high water elevation at site: _______________ Date: __________
2. Highest observed tide elevation: _______________ Date: __________
3. Location of extreme high water elevation (upstream/downstream face of bridge at the centerline or station and offset if not at bridge):
________________________________________________________________________
4. Source of high water information: _______________________________________

5. Location and floor elevation of any houses/buildings/structures that have been flooded:
________________________________________________________________________

6. Information about flood (number of times structure has been flooded, water surface elevations and date(s) of flood):
________________________________________________________________________

7. Location and floor elevation of any houses/buildings/structures that have floor elevations within 2 feet of the extreme high water elevation:
________________________________________________________________________

F. Benchmark Information

Location 1:
1. Benchmark Name: ___________________________ Elevation: __________
2. Location (project stations/offset):
Northing: ____________________ Easting: ____________________

3. Physical description: __________________________

Location 2:
1. Benchmark Name: ___________________________ Elevation: __________
2. Location (project stations/offset):
Northing: ____________________ Easting: ____________________
3. Physical description: __________________________________________

**Location 3:**
1. Benchmark Name: ___________________________ Elevation: ____________
2. Location *(project stations/offset)*: ______________________________________
   Northing: _______________ Easting: __________________
3. Physical description: ____________________________________________

**G. Upstream and Downstream Structures**

**Structure 1**
1. Structure Type *(railroad/highway bridge, culvert)*: ______________________
2. Route Number *(if applicable)*: ______________________________________
3. Distance from proposed structure along stream centerline: ________________
4. Length of bridge or culvert size: ______________________________________
5. Superstructure *(slab thickness, beam depth)*: __________________________
6. Substructure information: __________________________________________
7. Column Type *(concrete, steel, etc.)*: _________________________________
8. Size of Column: __________________________________________________
9. Number of Columns per bent: _______________________________________

**Structure 2**
1. Structure Type *(railroad/highway bridge, culvert)*: ______________________
2. Route Number *(if applicable)*: ______________________________________
3. Distance from proposed structure along stream centerline: ________________
4. Length of bridge or culvert size: ______________________________________
5. Superstructure *(slab thickness, beam depth)*: __________________________
6. Substructure information: __________________________________________
7. Column Type *(concrete, steel, etc.)*: _________________________________
8. Size of Column: __________________________________________________
9. Number of Columns per bent: _______________________________________

**Structure 3**
1. Structure Type *(railroad/highway bridge, culvert)*: ______________________
2. Route Number *(if applicable)*: ______________________________________
3. Distance from proposed structure along stream centerline: ________________
4. Length of bridge or culvert size: ______________________________________
5. Superstructure *(slab thickness, beam depth)*: __________________________
6. Substructure information: __________________________________________
7. Column Type *(concrete, steel, etc.)*: _________________________________
8. Size of Column: __________________________________________________
9. Number of Columns per bent: _______________________________________
NOTE: The above information is required for all bridges or culverts, which lie within 2000 feet upstream and downstream from the project bridge, unless otherwise directed by the Office of Bridge Hydraulics.

H. Miscellaneous Information

1. Are there water surfaces affected by other factors (high water from other streams, reservoirs, etc.):

________________________________________________________________________
________________________________________________________________________

2. Give location (horizontal distance to dam or spill way along stream centerline), length, width and elevation of dam and spillway, if applicable:

________________________________________________________________________

________________________________________________________________________