## English -- Hydraulic Preliminary Layout Data

---------- For Submittal to Cadd ----------

Date Submitted to Cadd: _____ Initials: ___ Target Date for Completion: _____ Date Returned from Cadd: _____ Initials: ___

---

Project Title: __________________________ over __________________________ County

Project #: __________________________
P.E. #: __________________________
Bridge I. D. #: __________________________
Bridge Length: ________ ft

Begin Bridge Sta.: ________ ft (±)
End Bridge Sta.: ________ ft (±)

_______ Berm @ Abut. #1
_______ Berm @ Abut. #2

Low Girder El. ________ ft @ Abut. #____

Rip Rap to [ ] El. ________ ft [ ] edge of shoulder

Hydraulic Designer: ________ (JKZ)
Supervisor: ________ (KRE)

Roadway Width: ________ ft
Superstructure Depth: ________ ft

Pier Width: ________ ft
ADT (____ yr.) ________

Design Speed: ________ mph

Datum El. ________ ft

Subgrade Slope: 2:1

Finish Grade El. - Low Cord El.

Sub Structure Skew Angle: ___° To [ ] CL, [ ] PL CL, or [ ] Tan. to Sta. __________

[ ] _____ equal beam lengths or span lengths from Begin Bridge Sta. __________

[ ] See attached sketch for span arrangement.

[ ] Scale of Drawing ______________

[ ] Ordinary High Water El. ________ ft
[ ] 100 year Bridge Backwater El. ________ ft
[ ] ___ year Bridge Backwater El. ________ ft (if less than overtopping).

[ ] Estimated design (___ yr.) scour El. ________ ft
[ ] Gravel filter blanket if required (pay item # 709-12.06).
[ ] Insert Haul Road cross-section.

Existing Groundline provided by: [ ] Bridge Grid (** MOST DESIRABLE**),
[ ] X, Y Coordinates, [x] Profile Sheet.

---

## Hydraulic Data

Drainage Area -------------------------------------------- mi\(^2\)

Design Discharge (_____ yr) ------------------------ cfs
[ ] Total Design Discharge------ cfs

Water area provided below El. ________ ft\(^2\)

_______ yr Velocity -------------------------- fps

_______ yr Bridge Backwater -------------------------- ft @ El. ________ ft

Roadway Overtopping Elevation -------------------------- ft

[ ] 100 year Discharge ________ cfs @ El. ________ ft
[ ] ___ year Discharge ________ cfs @ El. ________ ft

[ ] For overflow data see attached.

[ ] Machined Rip-Rap shall be class “___“ in accordance with Section 709 of the Standard Specifications and shall be paid for under item #: >>

### Rip- Rap Item # s

<table>
<thead>
<tr>
<th>Item</th>
<th>Code</th>
<th>Description</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-1</td>
<td>709-05.06</td>
<td>1.50 ft tk.</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>709-05.08</td>
<td>2.50 ft tk.</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>709-05.09</td>
<td>3.50 ft tk.</td>
<td></td>
</tr>
<tr>
<td>3” to 6” Stone</td>
<td>709-05.04</td>
<td>8” tk.</td>
<td></td>
</tr>
</tbody>
</table>

(See RD-SA-1)

[ ] Hand Placed  709-07 ____ ft tk.
Rubble-Stone
Use STD-1-1 Bridgerail. (See STD-1-2 for Deck Drains)

Use STD-7-1 (open) Bridgerail.

Use STD-11-1 Bridgerail with structural tubing. (See STD-1-2 for Deck Drains)

Use ________ prestressed _______ beams. [ ] Type of beam is designers choice.

Use ________ inch deep steel girders.

Use solid shaft piers. [ ] Existing piers to be used.

Use _____ post piers. [ ] Use concrete pile bents.

Use Hammerhead piers. [ ] Type of pier is designer’s choice.

See Drawing # ______________ for similar bridge design.

Maintain traffic by stage construction.
Maintain traffic on existing structure.
Maintain traffic by temporary runaround.
Close road during construction.

Existing bridge # ______________ and approaches to be removed to natural ground between stations __________ and ____________.

Bridge deck drains are not required.

Bridge deck drains are required.

[ ] Parapet Type Curb Opening (STD-1-2)

[ ] Grate Type Opening (STD-1-2)

Type: ______ (1 or 2)

[ ] See Attached for Stationing.

End of bridge drains are not required.

_____ End of bridge drains are required as shown in plan view.

2’ x 8’-7” with end of bridge pavement (see STD-1-6, 7, and 8).

4’ x 8’-7” with end of bridge pavement (see STD-1-6, 7, and 9).

2’ x 8’-7” without end of bridge pavement (see STD-1-10, 11, and 12).

4’ x 8’-7” without end of bridge pavement (see STD-1-10, 11, and 13).

Note: End of Bridge Drains only to be used with STD-1-1 or STD-11-1 Bridge Rail

The structural designer shall discuss footing placement with the hydraulic designer when foundation data becomes available.

See SMO #27 and foundation report recommendations for footing placement.

Any excavation of the stream channel area (e.g. for rip-rap or pier placement) shall be separated from flowing water during low-flow conditions. This shall be accomplished by the use of flumes, lined diversion channel with sand bag berm, diversion pipe with sand bag dam at pipe inlet or in some cases cofferdams.

REVISION  March 8, 2000