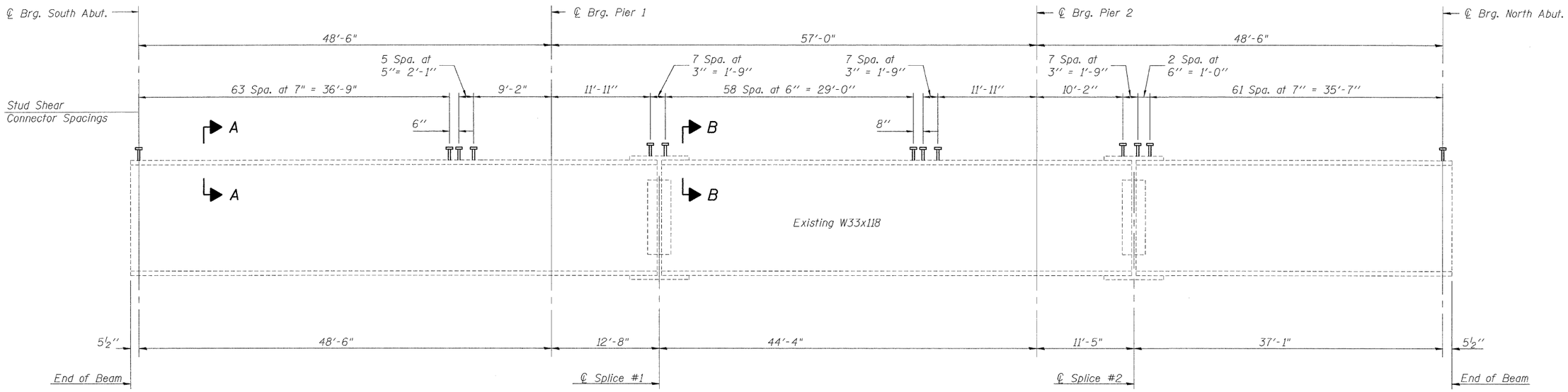
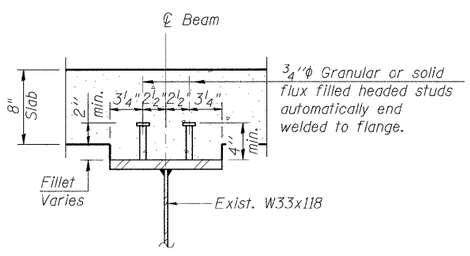
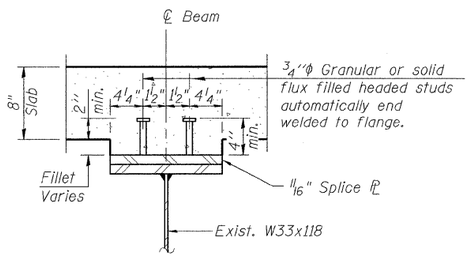



## BEAM ELEVATION




## SECTION A-A




## SECTION B-B

Total No. of Studs Req'd = 2,150

| INTERIOR GIRDER MOMENT TABLE | | 0.4 Sp. 1 or 0.6 Sp. 3 | Pier 1 & 2 | 0.5 Sp. 2 |
|---|---|---|---|---|
| Is | (in4) | 5,900 | 5,900 | 5,900 |
| Ic (n) | (in4) | 16,172 | ----- | 16,172 |
| Ic (3n) | (in4) | 11,970 | ----- | 11,970 |
| Ss | (in3) | 359 | 359 | 359 |
| Sc (n) | (in3) | 535 | ----- | 535 |
| Sc (3n) | (in3) | 484 | ----- | 484 |
| Z | (in3) | ----- | 408 | ----- |
| M℄ | (k/ft.) | 0.801 | 1.151 | 0.801 |
| M℄ | ('k) | 136.6 | 306.2 | 101.6 |
| s℄ | (k/ft.) | 0.35 | ----- | 0.35 |
| Ms℄ | ('k) | 66.8 | ----- | 61.1 |
| M⊥ | ('k) | 304.5 | 162.0 | 314.1 |
| M (Imp) | ('k) | 88.0 | 45.5 | 86.4 |
| $5_3$[M⊥+M(Imp)] | ('k) | 654.2 | 345.8 | 667.5 |
| Ma | ('k) | 1114.9 | 847.6 | 1079.3 |
| * Mu | ('k) | 2246.5 | 1224.7 | 2246.5 |
| fs℄ non-comp | (k.s.i.) | 4.57 | 10.24 | 3.40 |
| fs℄ (comp) | (k.s.i.) | 1.66 | ----- | 1.51 |
| fs$5_3$(⊥+Imp) | (k.s.i.) | 14.67 | 11.56 | 14.97 |
| fs (Overload) | (k.s.i.) | 20.90 | 21.80 | 19.88 |
| ** fs (Total) | (k.s.i.) | ----- | ----- | ----- |
| VR | (k) | 52 | ----- | 55 |

| INTERIOR GIRDER REACTION TABLE | | N. & S. Abuts. | Piers 1 & 2 |
|---|---|---|---|
| R℄ | (k) | 21.7 | 67.2 |
| R⊥ | (k) | 37.7 | 43.6 |
| Imp. | (k) | 10.9 | 12.3 |
| R (Total) | (k) | 70.3 | 123.1 |

* Compact section
** Braced non-compact and partially braced section.

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).

$Ic_{(n)}$ and $Sc_{(n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.

$Ic_{(3n)}$ and $Sc_{(3n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)

VR is the maximum Live Load + Impact shear range in span.

Ma (Applied Moment)=1.3[M℄ + Ms℄ + $5_3$(M⊥ + M(Imp))].

The Plastic Moment capacity (Mu) is computed according to AASHTO 10.48.1 and 10.50.1.1.

fs (Overload) is the sum of the stresses due to M℄ + Ms℄ + $5_3$(M⊥ + M(Imp)).

fs (Total) (Non-compact section) is the sum of the stresses due to 1.3[M℄ + Ms℄ + $5_3$(M⊥ + M(Imp))].

BEAM ELEVATION

PERRYVILLE ROAD BRIDGE
OVER SOUTH BRANCH KISHWAUKEE RIVER
F.A.U. ROUTE 5148
SECTION 08-00448-00-BR
WINNEBAGO COUNTY
STRUCTURE NUMBER 101-3064
STATION 36+58.20

Corporate License Number 184-001-084

JOB NO. 09L0003
DATE 01/28/10

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HANSON

SHEET NO. 7
11 SHEETS

| F.A.U. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 5148 | 08-00448-00-BR | Winnebago | 14 | 10 |

CONTRACT NO. 85509

FED. ROAD DIST. NO. 2 | ILLINOIS | FED. AID PROJECT

| | | |
|---|---|---|
| LAYOUT | SMK | 01/28/10 |
| DRAWN | JDM | 01/28/10 |
| REVIEWED | SMK | 01/28/10 |

01-27-2010
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