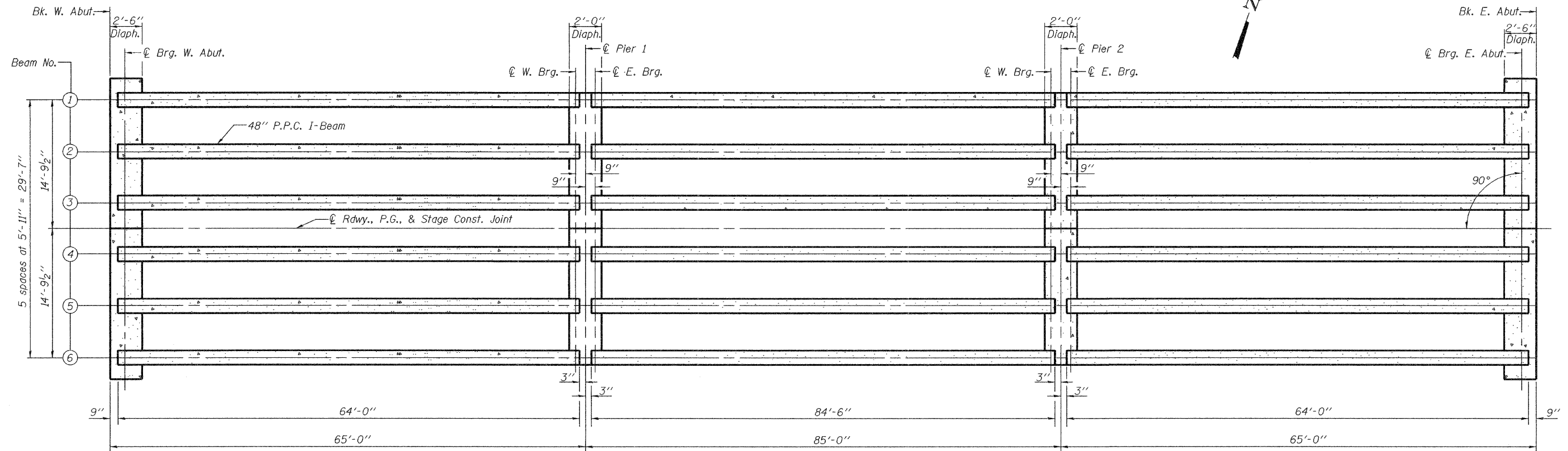


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| | | | | | |
|--------------------------|------------------|-----------------|------------------|-----------------|---------------------------|
| ROUTE NO. FAS 1536 | SECTION 125BR | COUNTY Macon | SHEET NO. 45 | SHEET NO. 23 | SHEET NO. 16 29 SHEETS |
| FED. ROAD DIST. NO. 7 | | ILLINOIS | FED. AID PROJECT | | |

Contract #74145



FRAMING PLAN

| | | 0.4 Sp. 1 0.6 Span 3 | Pier 1 or 2 | 0.5 Sp. 2 |
|-------------|--------------------|-------------------------|-------------|-----------|
| I | (in ⁴) | 144117.1 | --- | 144117.1 |
| I' | (in ⁴) | 381085 | --- | 381085 |
| S_b | (in ³) | 6834.1 | --- | 6834.1 |
| S_b' | (in ³) | 11075 | --- | 11075 |
| S_t | (in ³) | 5355.1 | --- | 5355.1 |
| S_t' | (in ³) | 28042 | --- | 28042 |
| $DC1$ | (k/') | 1.206 | --- | 1.206 |
| M_{DC1} | (k) | 598 | --- | 1051 |
| $DC2$ | (k/') | 0.150 | 0.150 | 0.150 |
| M_{DC2} | (k) | 39 | 86 | 50 |
| DW | (k/') | 0.296 | 0.296 | 0.296 |
| M_{DW} | (k) | 77 | 169 | 98 |
| $M_L + Imp$ | (k) | 716 | 788 | 755 |

| | | Abut. | Pier 1 Span 1 Pier 2 Span 3 | Pier 1 Span 2 Pier 2 Span 2 |
|---------------|-----|-------|--------------------------------|--------------------------------|
| R_{DC1} | (k) | 38.4 | 38.4 | 51.3 |
| * R_{DC2} | (k) | 3.4 | 6.2 | 6.2 |
| * R_{DW} | (k) | 6.8 | 12.3 | 12.3 |
| * $R_L + Imp$ | (k) | 64.8 | 51.5 | 51.5 |
| R_{Total} | (k) | 113.4 | 108.4 | 121.3 |

* The total R_{DC2} , R_{DW} and $R_L + Imp$ are assumed to be distributed evenly to each bearing line at a pier regardless of the span ratios.

- I : Non-composite moment of inertia of beam section (in⁴).
- I' : Composite moment of inertia of beam section (in⁴).
- S_b : Non-composite section modulus for the bottom fiber of the prestressed beam (in³).
- S_b' : Composite section modulus for the bottom fiber of the prestressed beam (in³).
- S_t : Non-composite section modulus for the top fiber of the prestressed beam (in³).
- S_t' : Composite section modulus for the top fiber of the prestressed beam (in³).
- $DC1$: Un-factored non-composite dead load (kips/ft.).
- M_{DC1} : Un-factored moment due to non-composite dead load (kip-ft.).
- $DC2$: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
- M_{DC2} : Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
- DW : Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
- M_{DW} : Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
- $M_L + Imp$: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

| | |
|----------|----------------|
| DESIGNED | Ray Ahanchi |
| CHECKED | Nick Barnett |
| DRAWN | BECKY M. LEACH |
| CHECKED | GRA & NRB |

November 14, 2008
EXAMINED *Thomas J. Domagalaki*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES

FRAMING PLAN
F.A.S. ROUTE 1536 - SEC. 125BR
MACON COUNTY
STATION 616+26.50
STRUCTURE NO. 058-0132