

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

The diameter of this part is equal or larger than the diameter of bar spliced.

The diameter of this part is the same as the diameter of the bar spliced.

ROLLED THREAD DOWEL BAR



** ONE PIECE

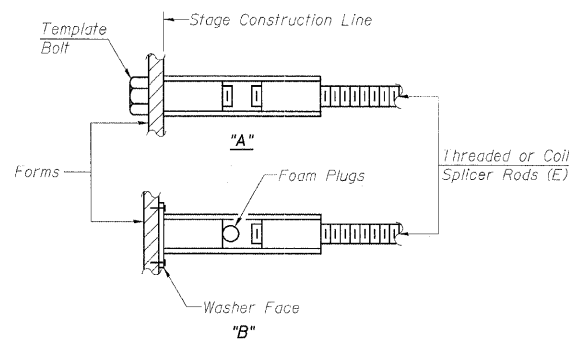
Wire Connector



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

**Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

NOTES

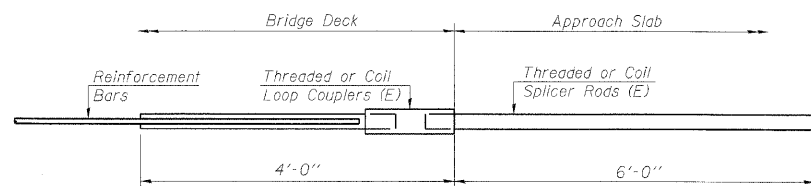
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- ① Minimum Capacity = $1.25 \times f_y \times A_s$
(Tension in kips)
- ② Minimum *Pull-out Strength = $0.66 \times f_y \times A_s$
(Tension in kips)

Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_s = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

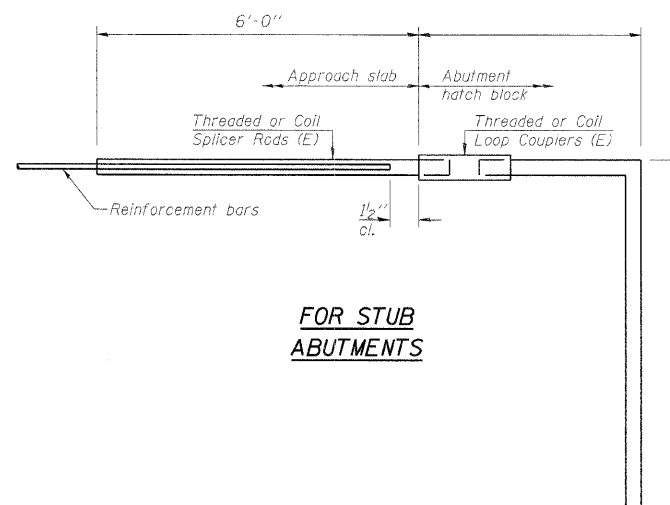
BAR SPLICER ASSEMBLIES

| Bar Size to be Spliced | Splicer Rod or Dowel Bar Length | Strength Requirements | |
|------------------------|---------------------------------|------------------------------|---------------------------------------|
| | | Min. Capacity kips - tension | Min. Pull-Out Strength kips - tension |
| #4 | 1'-8" | 14.7 | 7.9 |
| #5 | 2'-2" | 23.0 | 12.3 |
| #6 | 2'-7" | 33.1 | 17.4 |
| #7 | 3'-5" | 45.1 | 23.8 |
| #8 | 4'-6" | 58.9 | 31.3 |
| #9 | 5'-9" | 75.0 | 39.6 |
| #10 | 7'-3" | 95.0 | 50.3 |
| #11 | 9'-0" | 117.4 | 61.8 |



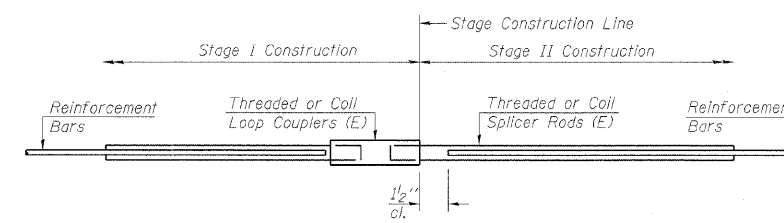
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

| |
|--|
| Bar Splicer for #5 bar |
| Min. Capacity = 23.0 kips - tension |
| Min. Pull-out Strength = 12.3 kips - tension |
| No. Required = |



FOR STUB ABUTMENTS

| |
|--|
| Bar Splicer for #5 bar |
| Min. Capacity = 23.0 kips - tension |
| Min. Pull-out Strength = 12.3 kips - tension |
| No. Required = |



STANDARD

| Bar Size | No. Assemblies Required | Location |
|----------|-------------------------|--------------|
| #5 | 36 | Deck |
| #4 | 50 | App. Slab |
| #5 | 92 | App. Slab |
| #5 | 80 | App. Footing |

BAR SPLICER ASSEMBLY DETAILS
STRUCTURE NO. 022-0137

| | |
|------------|-----|
| DESIGNED - | MFB |
| CHECKED - | KWS |
| DRAWN - | RMG |
| CHECKED - | KWS |

BSD-1

10-1-08

benesch

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205 North Michigan Avenue, Suite 2400
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312-565-0460 Job No. 10050

| | | | | | |
|---------------------------|--------------------|--------------------------------|------------------|---|------------------|
| SHEET NO. 15 32 SHEETS | F.A.I. RTE. 290 | SECTION 22(1, 1-1, 2&3)RS-7 | COUNTY DUPAGE | TOTAL SHEETS 546 | SHEET NO. 428 |
| | CONTRACT NO. 60C51 | | | FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | |