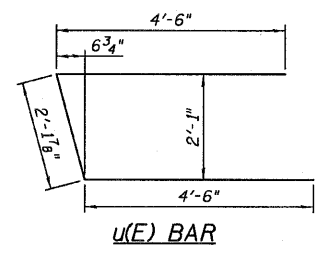
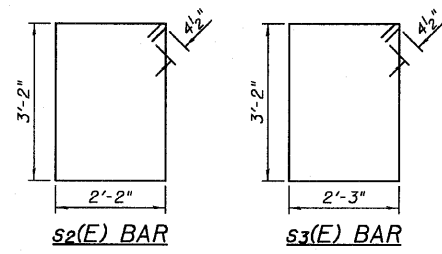
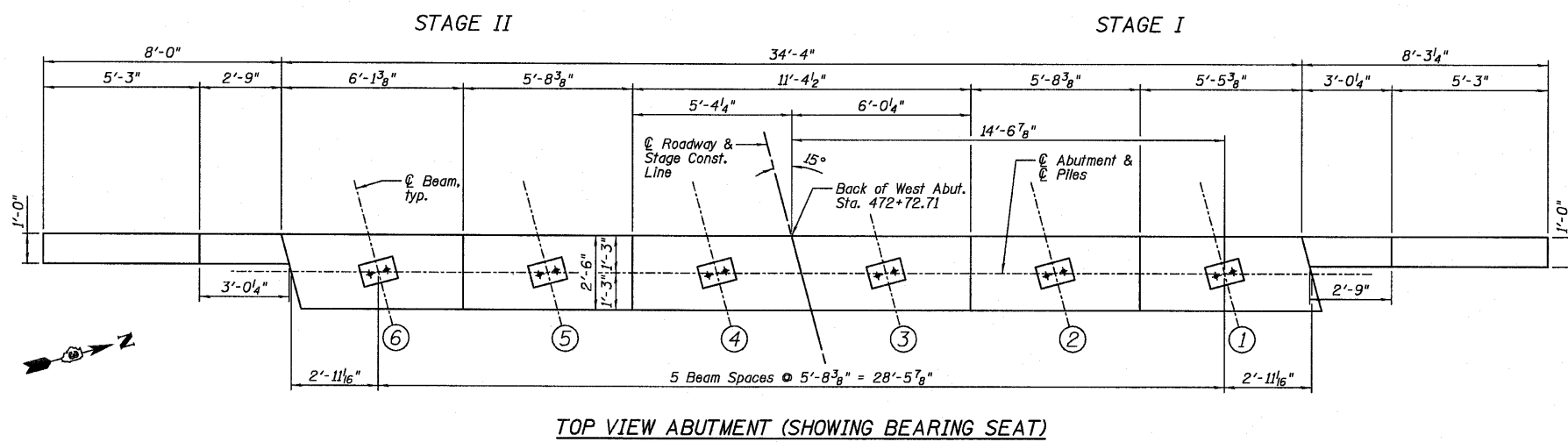
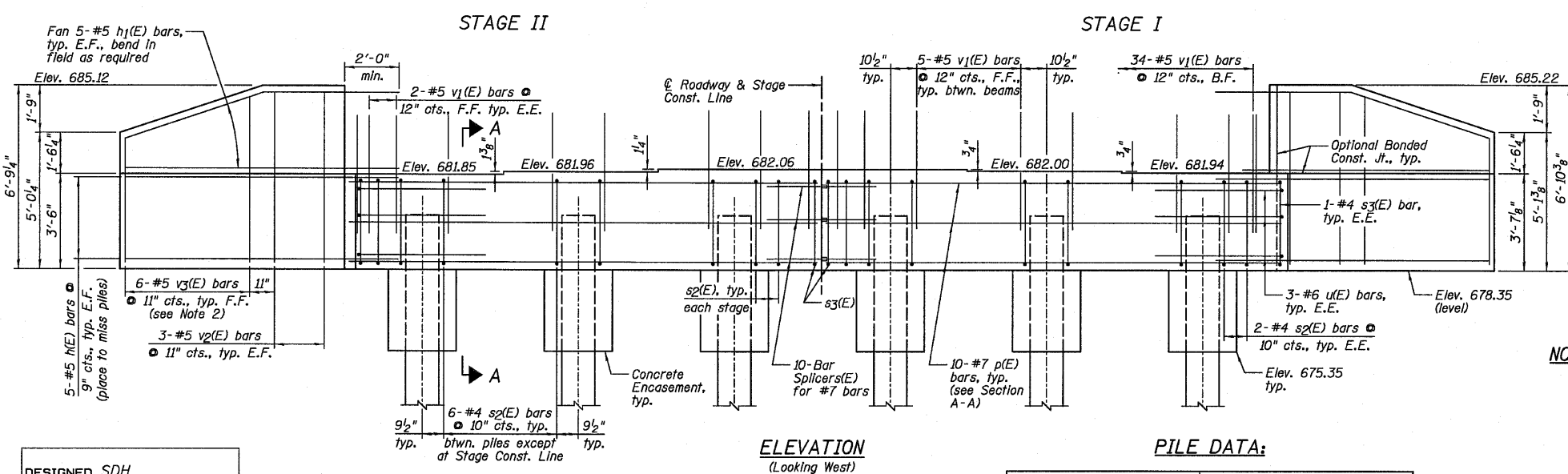
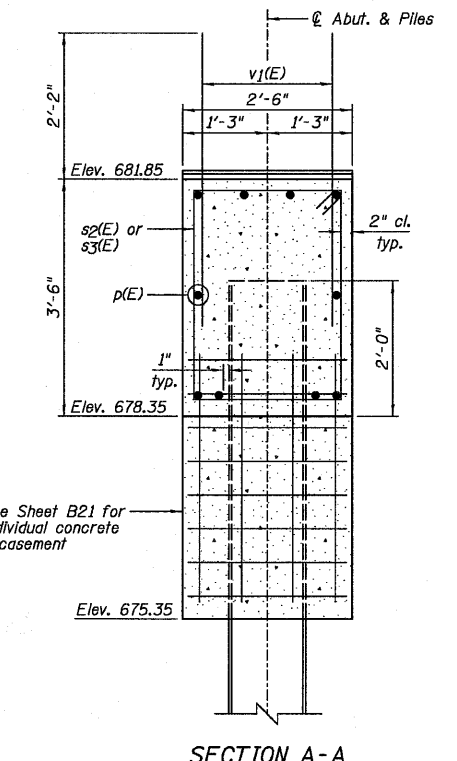
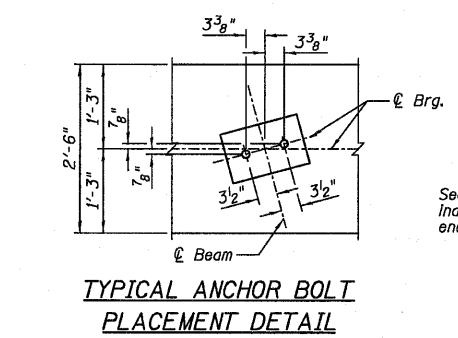
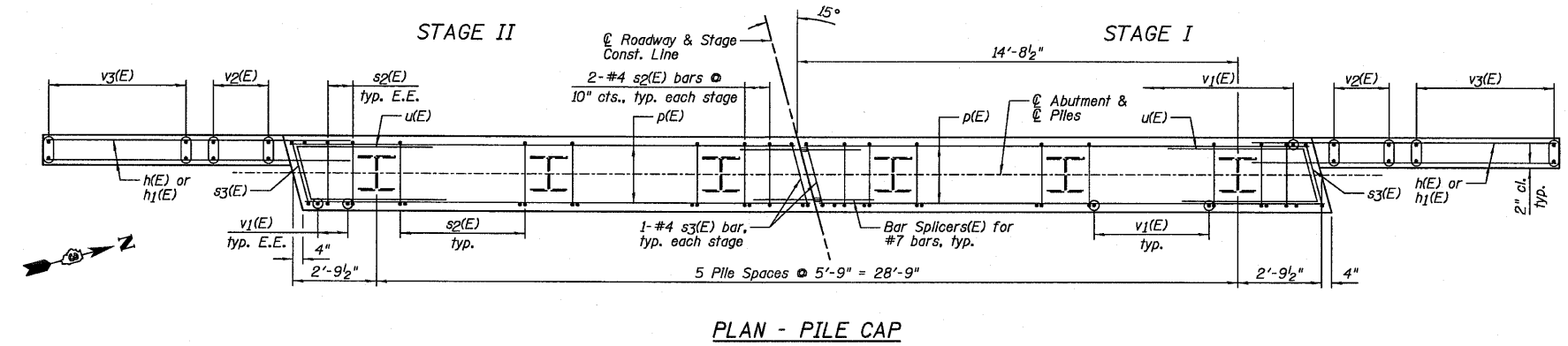
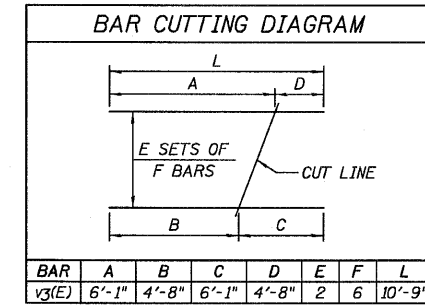


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



**WEST ABUTMENT
BILL OF MATERIAL**

| Bar | No. | Size | Length | Shape |
|-------------------------------------|---------|----------|---------|-------|
| h(E) | 20 | #5 | 10'-1" | — |
| h1(E) | 20 | #5 | 10'-4" | — |
| p(E) | 20 | #7 | 16'-10" | — |
| sp2(E) | 32 | #4 | 11'-5" | □ |
| s3(E) | 4 | #4 | 11'-7" | □ |
| u(E) | 6 | #6 | 11'-2" | — |
| v1(E) | 63 | #5 | 4'-4" | — |
| v2(E) | 12 | #5 | 6'-5" | — |
| v3(E) | 12 | #5 | 10'-9" | — |
| Item | Unit | Quantity | | |
| Porous Granular Embankment, Special | Cu. Yd. | 49 | | |
| Structure Excavation | Cu. Yd. | 64 | | |
| Concrete Structures | Cu. Yd. | 15.3 | | |
| Concrete Encasement | Cu. Yd. | 3.3 | | |
| Reinforcement Bars, Epoxy Coated | Pound | 1,990 | | |
| Bar Splicers | Each | 10 | | |
| Furnishing Steel Piles HP14x73 | Foot | 115 | | |
| Driving Piles | Foot | 115 | | |
| Test Pile Steel HP14x73 | Each | 1 | | |
| Pile Shoes | Each | 6 | | |
| Geocomposite Wall Drain | Sq. Yd. | 28 | | |
| Pipe Underdrains for Structures 4" | Foot | 71 | | |



PILE DATA:

| | |
|-------------------------------|---------------------------------|
| Pile Type and Size | Steel - HP14x73 with Pile Shoes |
| Nominal Required Bearing | 297 kips |
| Factored Resistance Available | 163 kips |
| Estimated Pile Length | 23 Feet |
| Number of Production Piles | 5 |
| Number of Test Piles | 1 |

NOTES:

- 1.) Pour steps monolithically with cap.
- 2.) Order v3(E) bars full length. Cut according to Bar Cutting Diagram. Use remainder of bars in opposite face of wingwall.
- 3.) Bend or cut h(E) bars to miss piles.
- 4.) E.E. denotes Each End, F.F. denotes Front Face, B.F. denotes Back Face and E.F. denotes Each Face.
- 5.) See Sheet B22 for Bar Splicer Details.

| |
|--------------|
| DESIGNED SDH |
| CHECKED JML |
| DRAWN DJM |
| CHECKED MSW |

DATE 08/13/10

**WEST ABUTMENT
STRUCTURE NO. 053-0188**

| | | | | | | |
|--|---------------|---------------------|------------------|---------------------------|-----------------|--------------|
| Farnsworth GROUP, INC. 2709 McGraw Drive Bloomington, Illinois 61704 309/663-8435, 309/663-1571 fax | SHEET NO. B17 | F.A.P. RTE. 317 | SECTION (25)BR-2 | COUNTY LIVINGSTON | TOTAL SHEETS 58 | SHEET NO. 40 |
| | 26 SHEETS | CONTRACT NO. 66823 | | | | |
| | | FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | |