

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Cook	14	4
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 4
5 SHEETS

Contract Number: 60A60

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Fasteners shall be high strength bolts. Flange splice holes shall be $1\frac{5}{16}$ " ϕ for $1\frac{1}{2}$ " ϕ bolts. Web splice holes shall be $1\frac{3}{16}$ " ϕ for $3\frac{3}{4}$ " ϕ bolts.

The Contractor shall provide support and/or shoring systems for the slab and beam in the area of existing beam removal. See Special Provisions "Temporary Shoring and Cribbing".

After the new beam is in its final position and/or beam straightening operations have been completed, the Engineer in the field shall check to see that the top flange is tight against the slab. If not, the Contractor shall inject epoxy between the existing concrete deck and the top flange of the beam. See Special Provision "Epoxy Injection".

Reinforcement bars shall conform to the requirements of AASHTO M 31 or M 322 Grade 60.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Cost of removal and re-installation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included in the cost of Furnishing and Erecting Structural Steel.

The inorganic zinc rich primer/acrylic/acrylic paint system shall be used for shop and field painting of new structural steel except where otherwise noted. The color for all interior steel surfaces shall be Gray, Munsell No. 5B 7/1. The color of the acrylic finish coat for the exterior and bottom flange of the fascia beams shall be Reddish Brown, Munsell No. 2.5 YR 3/4. See Special Provision "Cleaning and Painting New Metal Structures".

The existing structural steel coating contains lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project.

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

Existing reinforcement extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost shall be included with Concrete Removal.

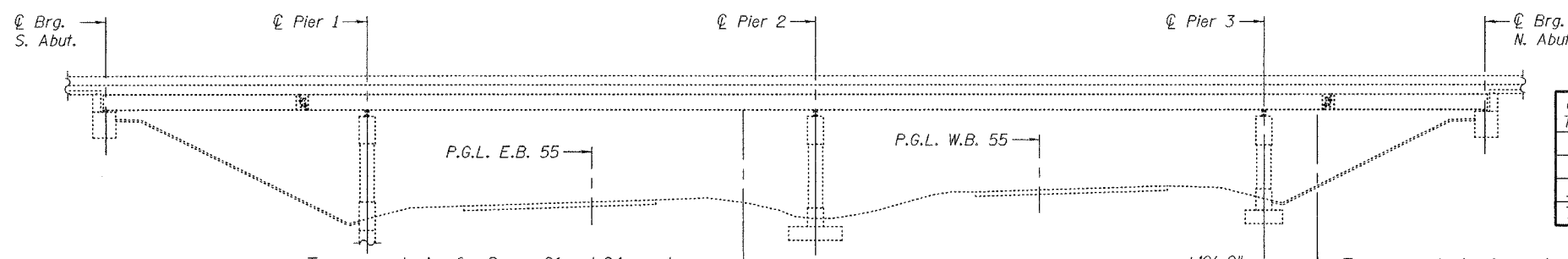
Prior to pouring the new concrete deck, all loose rust, loose mill scale and other loose potentially detrimental foreign material shall be removed from the surfaces of the beams or girders in contact with concrete. The cost of this work will be included in the pay item covering removal of the existing concrete. All heavy rust and other tightly adhered potentially detrimental foreign matter shall also be removed from the surfaces of the beams or girders in contact with concrete. Tightly adhered paint may remain unless otherwise noted. This removal shall be accomplished by methods that will not damage the steel. The cost of this work will be paid for according to Article 109.04 of the Standard Specifications.

Diaphragm connection holes shall be $1\frac{5}{16}$ " ϕ for $3\frac{3}{4}$ " ϕ bolts. Two hardened washers shall be required at diaphragm connections.

All construction joints shall be bonded. The existing 2" ϕ and 4" ϕ conduits shown in Section A-A, on sheet 3 of 5, are to be removed and re-installed. Cost shall be included in the cost of Concrete Removal.

Field welding of construction accessories will not be permitted to beams.

The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams and all splice plate material except fill plates.



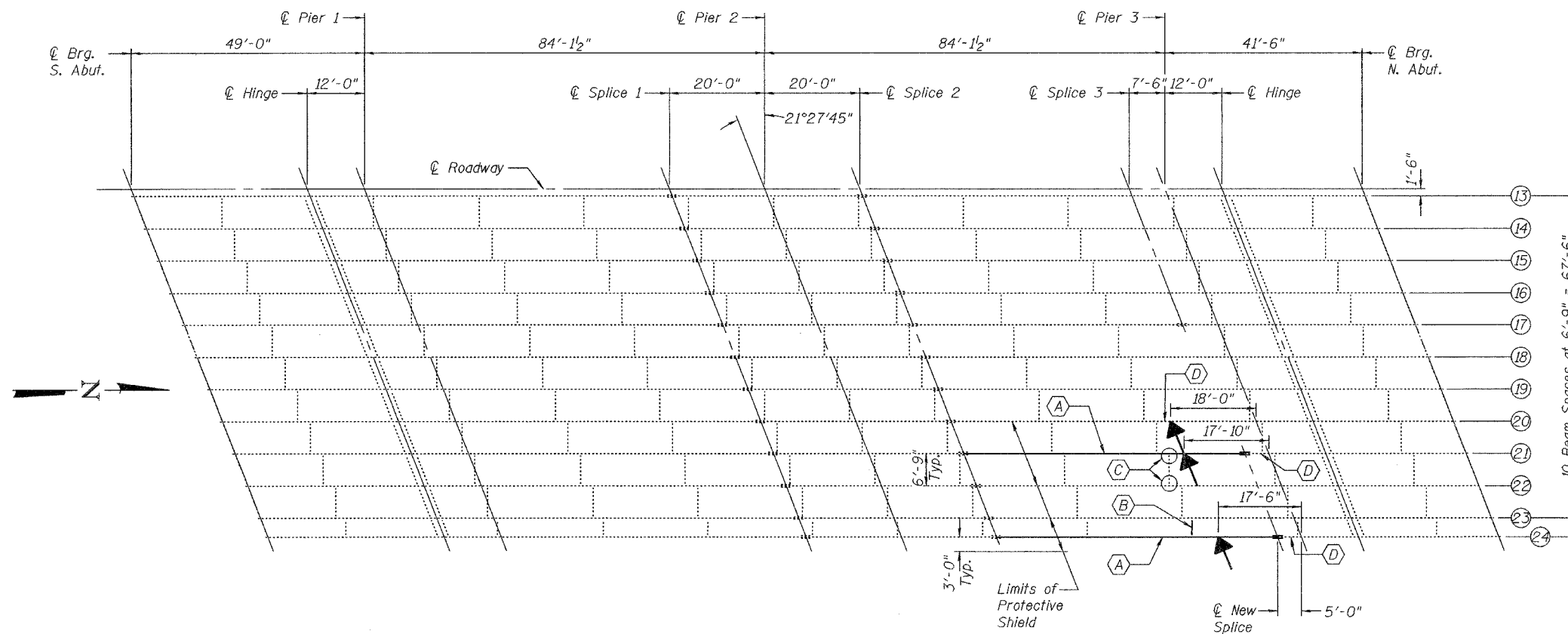
REACTION TABLE AT TEMPORARY SHORING

Q	(k)	21.1
L	(k)	31.1
Imp.	(k)	9.3
Total	(k)	61.5

Temporary shoring for Beams 21 and 24 may be required to facilitate alignment of existing splices. Use 12"x12" timbers or HP's. Cost shall be included in the cost of temporary shoring and cribbing. The shoring shall be removed as soon as possible after the splice has been connected to minimize traffic control in the E.B. lanes.

Temporary shoring is required for Beams 21 and 24 South of hinge. To be paid for as Temporary Shoring and Cribbing. Removal and Replacement of the slopewall, if required, shall be included with Temporary Shoring and Cribbing.

ELEVATION



PARTIAL FRAMING PLAN

Impact Line →

- (A) Remove and replace existing beam section.
- (B) Remove and replace existing diaphragm.
- (C) Remove and replace bottom clip angles.
- (D) Beam Straightening.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	34.1
Concrete Superstructure	Cu. Yd.	34.1
Reinforcement Bars, Epoxy Coated	Pound	6,740
Stud Shear Connectors	Each	392
Furnishing and Erecting Structural Steel	Pound	20,300
Beam Straightening	L.S.	1
Removing and Re-erecting Existing Railing	Foot	74
Protective Shield	Sq. Yd.	155
Temporary Shoring and Cribbing	L.S.	1
Mechanical Splice	Each	280
Bridge Deck Grooving	Sq. Yd.	57
Protective Coat	Sq. Yd.	114
Structural Steel Removal	Pound	19,640

DESIGNED *[Signature]*
CHECKED Victor H. Velaz
DRAWN *[Signature]*
CHECKED S.T.B./ V.H.V.

November 10, 2005
EXAMINED *[Signature]*
PASSED *[Signature]*



Expires: November 30, 2006

PLAN AND ELEVATION
HARLEM AVE / F.A.I. 55
COOK COUNTY
SN 016-0316