

FISCAL YEAR	COUNTY	COUNTY HIGHWAY	TOTAL SHEETS	SHEET NO.
2007	DUPAGE	•	241	105
CONTRACT NUMBER 83908				
SECTION 97-00084-00-BR				
• FAU 3549/ FAU 1432				

**GENERAL NOTES**

- Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts 3/4" φ, open holes 1/2" φ, unless otherwise noted.
- Calculated weight of Structural Steel = 193,088 lbs.  
AASHTO M270 Gr. 50 = 179,907 lbs.  
AASHTO M270 Gr. 36 = 13,181 lbs.
- The organic zinc rich primer/epoxy/urethane paint system shall be used for painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception that masked off connection surfaces, field installed fasteners and damaged areas shall be touched up in the field. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be redish brown, Munsell No. 2.5YR 3/4. See Special Provision for "Cleaning and Painting New Metal Structures."
- Field welding of construction accessories will not be permitted to beams or girders.
- Anchor bolts shall be set before bolting diaphragms over supports.
- 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, the tension flanges, webs and all connection plate material except fill plates.
- Reinforcement bars shall conform to the requirements of ASTM A 706, Gr 60 (LL Modified). See Special Provisions.
- Reinforcement Bars designated (E) shall be epoxy coated.
- The Contractor shall drive 1 Steel HP12x53 test pile to 110% of the nominal required bearing specified in a permanent location at the South Abutment or as directed by the Engineer before ordering the remainder of piles.
- The existing structural steel coating may contain lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project.
- Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure.
- Conduits to be provided in parapet for sidewalk and roadway lighting.
- All Construction joints shall be bonded.
- The proposed bridge structure shall not change the quantity and/or characteristic of the flow in the railway ditches and/or drainage structures.
- Cost for PVC electrical conduit in parapets shall be included in cost for Concrete Superstructure. See lighting drawings for conduit plan location.

**TOTAL BILL OF MATERIAL**

	UNIT	SUPER	SUB	TOTAL
Removal and Disposal of Unsuitable Material	Cu. Yd	-	2,295	2,295
* Porous Granular Embankment, Subgrade	Cu. Yd.	-	2,295	2,295
* Bridge Approach Pavement (Special)	Sq. Yd.	671	-	671
* Removal of Existing Structures No. 1	Each	-	-	1
* Concrete Retaining Wall Removal	Foot	-	508	508
* Removal of Existing Sub-structures	L. Sum	-	1	1
Protective Shield	Sq. Yd.	913	-	913
Concrete Structures	Cu. Yd.	-	85.2	85.2
Concrete Superstructure	Cu. Yd.	1,161.9	-	1,161.9
Bridge Deck Grooving	Sq. Yd.	569	-	569
* Protective Coat	Sq. Yd.	2,599	-	2,599
Furnishing and Erecting Structural Steel Bridge No. 1	L. Sum	1	-	1
Stud Shear Connectors	Each	1,652	-	1,652
Reinforcement Bars, Epoxy Coated	Pound	162,530	7,060	169,590
Bar Splicers	Each	149	-	149
* Parapet Railing	Foot	1,740	-	1,740
Furnishing Steel Piles, HP12x53	Foot	-	1,848	1,848
Driving Piles	Foot	-	1,848	1,848
Test Pile Steel, HP12x53	Each	-	1	1
Name Plates	Each	1	-	1
Waterproofing Membrane System	Sq. Yd.	328	-	328
* Bridge Fence Parapet Mounted	Foot	197	-	197
* Temporary Earth Retention System	Each	-	1	1
* Temporary Soil Retention System	Sq. Ft.	-	80	80
* Mechanically Stabilized Earth Retaining Wall	Sq. Ft.	-	38,739	38,739
* Bridge Deck Microsilica Concrete Overlay 2 1/2"	Sq. Yd.	569	-	569
* Pile Casing, CMP 24" Dia.	Foot	-	610	610

\* Indicates Pay Item governed by a Special Provision.

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**SEISMIC DATA**

Seismic Performance Category (SPC) = A  
Bedrock Acceleration Coefficient (A) = 0.042  
Site Coefficient (S) = 1.2

**DESIGN SPECIFICATIONS**

2002 AASHTO Standard Specifications

**DESIGN STRESSES**

Field Units  
f'c = 4,000 psi (Superstructure and Precast Panels)  
f'c = 3,500 psi (Substructure)  
fy = 60,000 psi (Reinf.)  
fy = 50,000 psi (AASHTO M270 Grade 50)

**LOADING HS20-44**

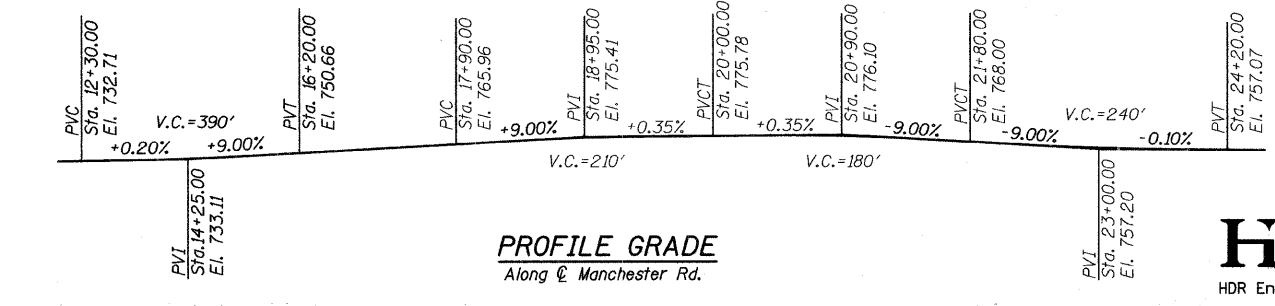
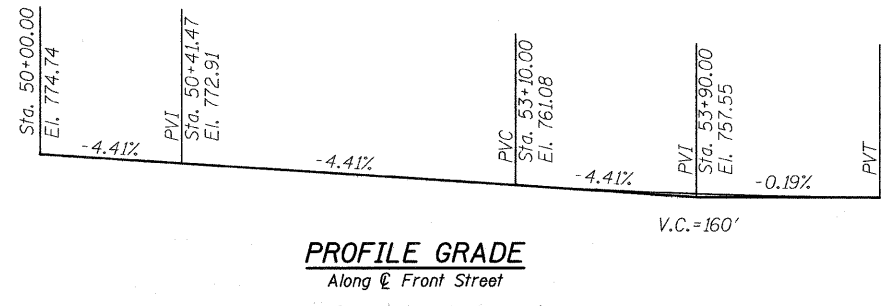
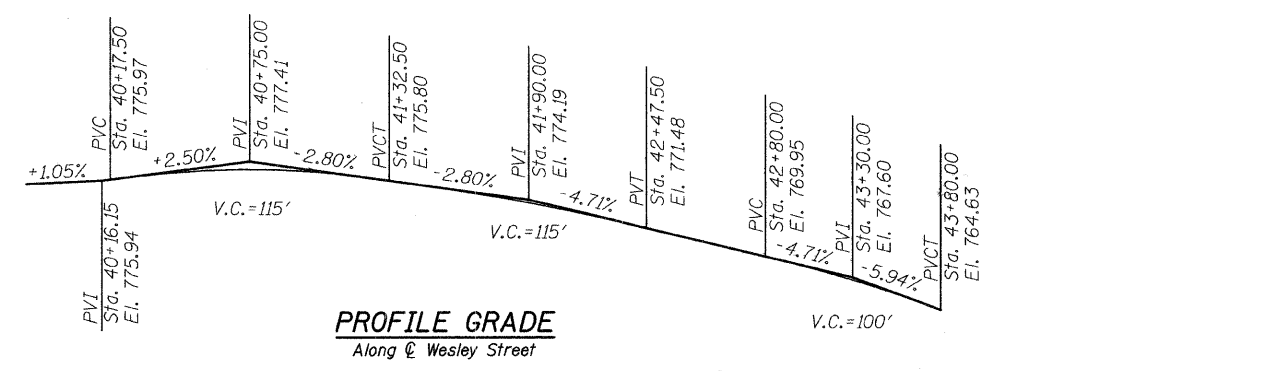
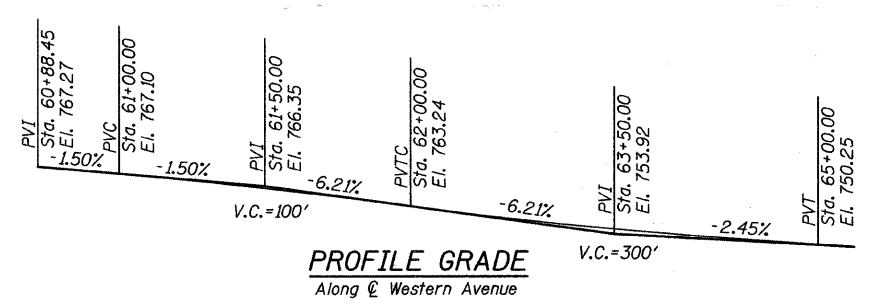
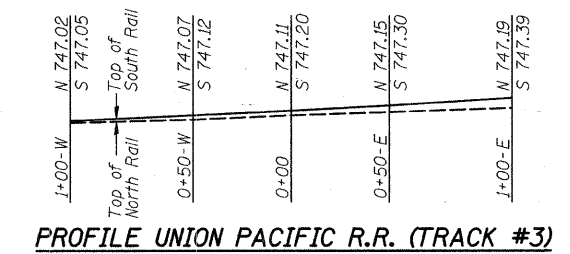
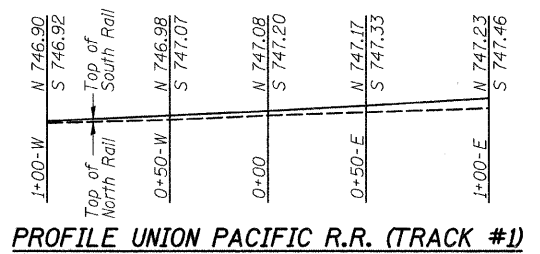
Allow 50 #/sq. ft. for future wearing surface in addition to 2 1/2" overlay.

**LOADING MSE RETAINING WALL**

Equivalent Fluid Lateral Soil Pressure = 40 psf  
Traffic Surcharge = 2 feet of fill

**PROP. CURVE**

Wesley Street	Manchester Road
PI STA. = 41+67.39	PI STA. = 22+64.67
Δ = 27° 17' 08" (RT)	Δ = 58° 08' 34" (RT)
D = 38° 11' 50"	D = 76° 23' 40"
R = 150.00'	R = 75.00'
T = 36.41'	T = 41.70'
L = 71.43'	L = 76.11'
E = 4.36'	E = 10.81'
e = N/A	e = N/A
T.R. = N/A	T.R. = N/A
S.E. RUN = N/A	S.E. RUN = N/A
P.C. STA = 41+05.57	P.C. STA = 22+22.98
P.T. STA = 41+77.00	P.T. STA = 22+99.09



<b>CITY OF WHEATON</b>	
MANCHESTER ROAD/ WESLEY STREET OVER UNION PACIFIC RAILROAD	
<b>GENERAL NOTES, INDEX AND BILL OF MATERIAL</b>	
DRAWN	JM
CHECKED	VEVS
APPROVED	BSK
DATE	06/04/2008
SCALE	NONE
SHEET NO. <b>S-2</b>	