



ESTIMATED QUANTITIES		
Item	Unit	Quantity
Structural Steel	Lb.	226,500
Cast Steel	Lb.	6,900
Metal Handrail	L.F.	131

DESIGN DATA			
Loading: Cooper E72 with steam locomotive impact. Specifications: A.R.E.A. 1958. Distance c. to c. of bearings of track beams = 54'-10" Provide adequate diaphragms to distribute dead load and live load from one track equally over a beams.			
Dead Load:			
Track and ballast	421 #/Lin. Ft. of beam.		
Waterproofing and protection	129 "		
Steel	410 "		
	Total = 960 "		
	Shear	Moment	
Dead Load	26.4 K	360 K'	
Live Load	55.2 K	666 K'	
Impact 61.5 %	34.0 K	410 K'	
Total per track beam	115.6 K	1436 K'	
Section of track beam:			
36 WF 300	Gross	25,972 44	1706 43
Floor Pl. 32 x 8"	Net	25,250 44	1,158 43
Unit Stresses:			
Depth / Span = 1 / 77.6	Flange Compression	10.10 K.S.I.	15.34 K.S.I.
	Flange Tension	14.90 K.S.I.	15.34 K.S.I.
	Web Shear (Gross)	3.66 K.S.I.	11.00 K.S.I.

NOTES FOR STEEL SUPERSTRUCTURE

Material and Workmanship, except Handrail, Welding and Painting, shall be in accordance with A.R.E.A. Specifications for Railway Bridges 1958.

Material: Structural and Rivet Steel (Carbon Grade), Steel Castings for Bearings.

Rivets: 3/8" diameter.

Holes: 1/8" diameter except as shown and noted.

Reaming: All shop and field holes in top flanges and in diaphragm connections between track beams shall be subpunched or subdrilled and reamed to size with all parts shop assembled. Matchmark field connections.

Welding: Welding shall conform to the Specifications for Design, Construction and Repair of Welded Highway and Railway Bridges of The American Welding Society, current.

Painting: Painting shall be in accordance with the Illinois Highway Specifications as shown on Sheet E4.
Shop Paint - One coat of red lead paint.
Field Paint - Two coats of aluminum paint.
Surfaces of steel which are to be in contact with concrete or waterproofing are not to be painted.

Pipe Handrail: Pipe Handrail shall be in accordance with the Illinois Highway Specifications as shown on Sheet E4.
Material - 3/8" Extra Strong Wrought Iron Pipe.
Post marked "A" to have tees threaded both sides for railing, all other posts to have reamed tees for slip joints. Random lengths of pipes may be used and couplings must clear tees by 6".

FLOOR PLAN AND BEAM ELEVATIONS				10-C.S.-B
ORCHARD DRIVE UNDERPASS MICHIGAN CENTRAL R.R. PARK FOREST INDUSTRY PARK PARK FOREST ILLINOIS				Project engineer: S.E.P.
				Architect: M.M.V. engineer: M.M.V.
A. EPSTEIN AND SONS, INC. ENGINEERS 2011 WEST PERSHING ROAD CHICAGO 9 ILLINOIS				Job no: 57-1629 date: MAY 15, 1959
REVISIONS released for constr. no. date description by				sheet number: E-7



DESIGNED -	MAC	REVISED -	
DRAWN -	MAC	REVISED -	
CHECKED -		REVISED -	
DATE -	7/1/11	FILE -	060670-PH2-ST4.sht

VILLAGE OF PARK FOREST, ILLINOIS
ORCHARD DRIVE IMPROVEMENTS

EXISTING STRUCTURAL PLANS
FOR INFORMATION ONLY

SCALE: NONE STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2836	06-00090-00-FP	COOK	200	153
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				CONTRACT NO. 63635
				M-80031661

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