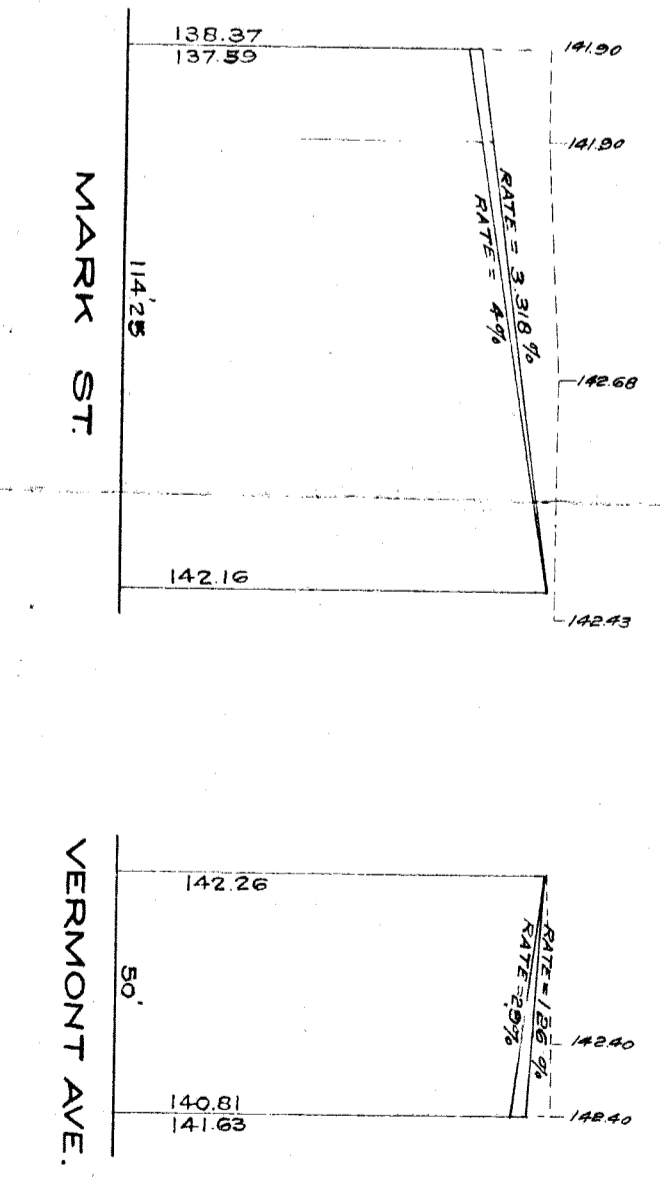
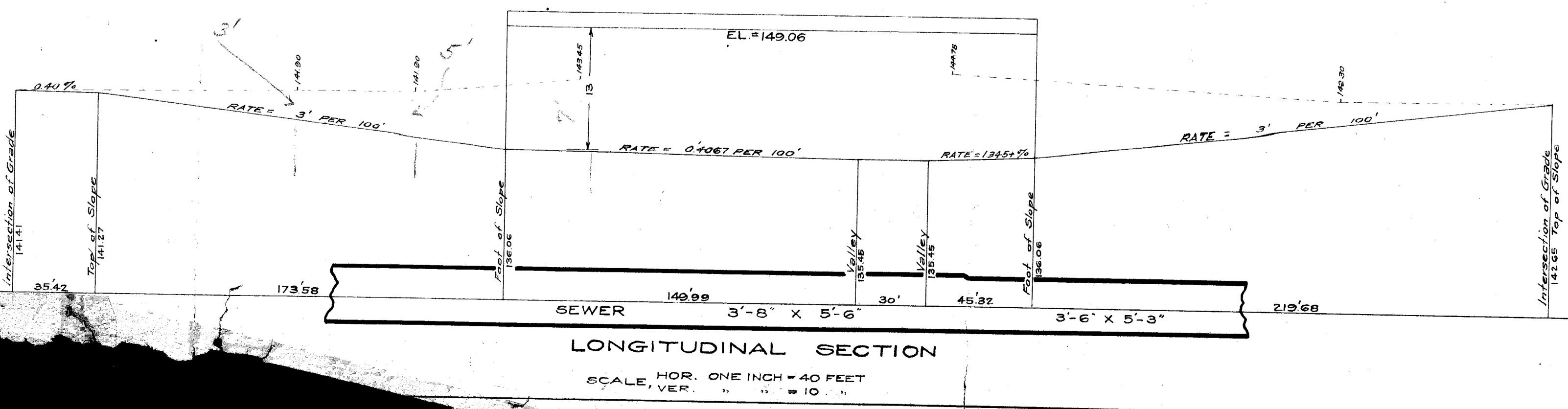
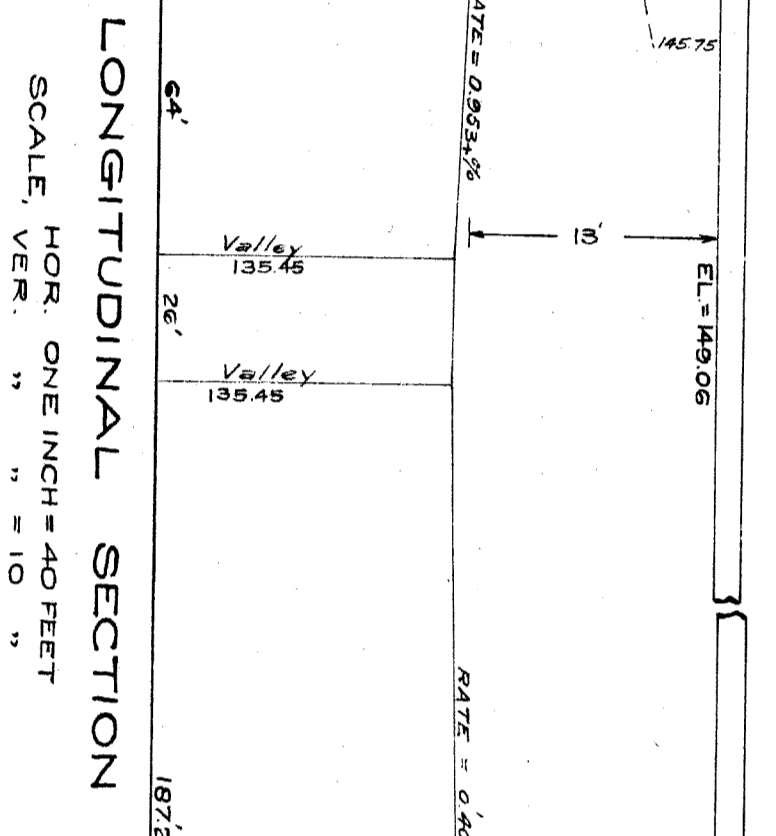
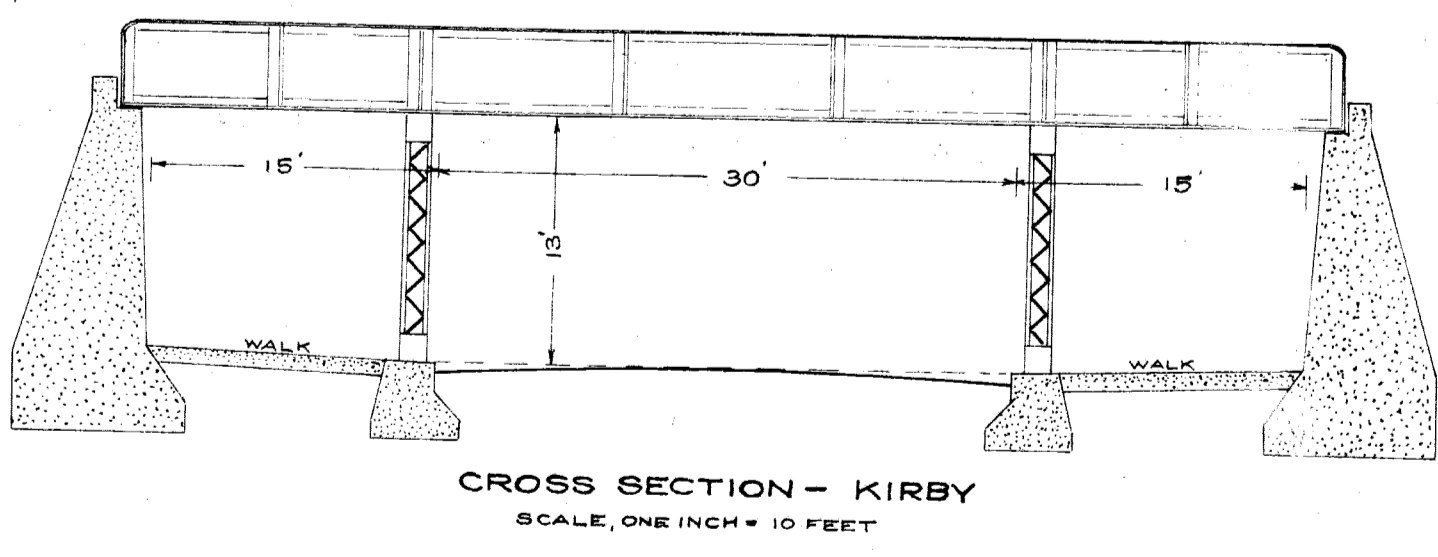
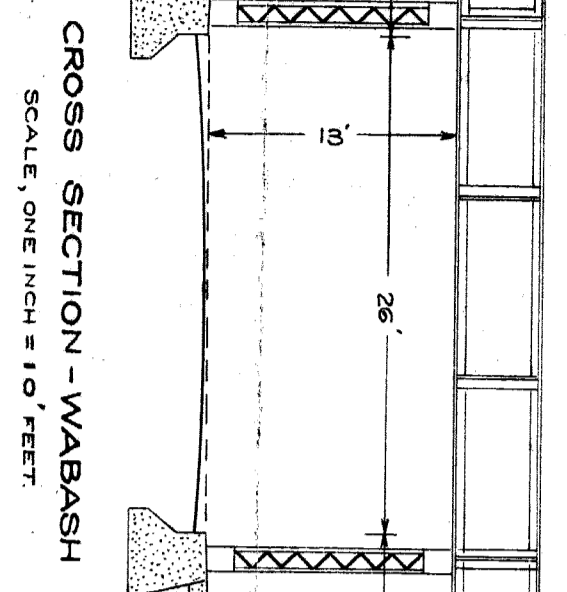
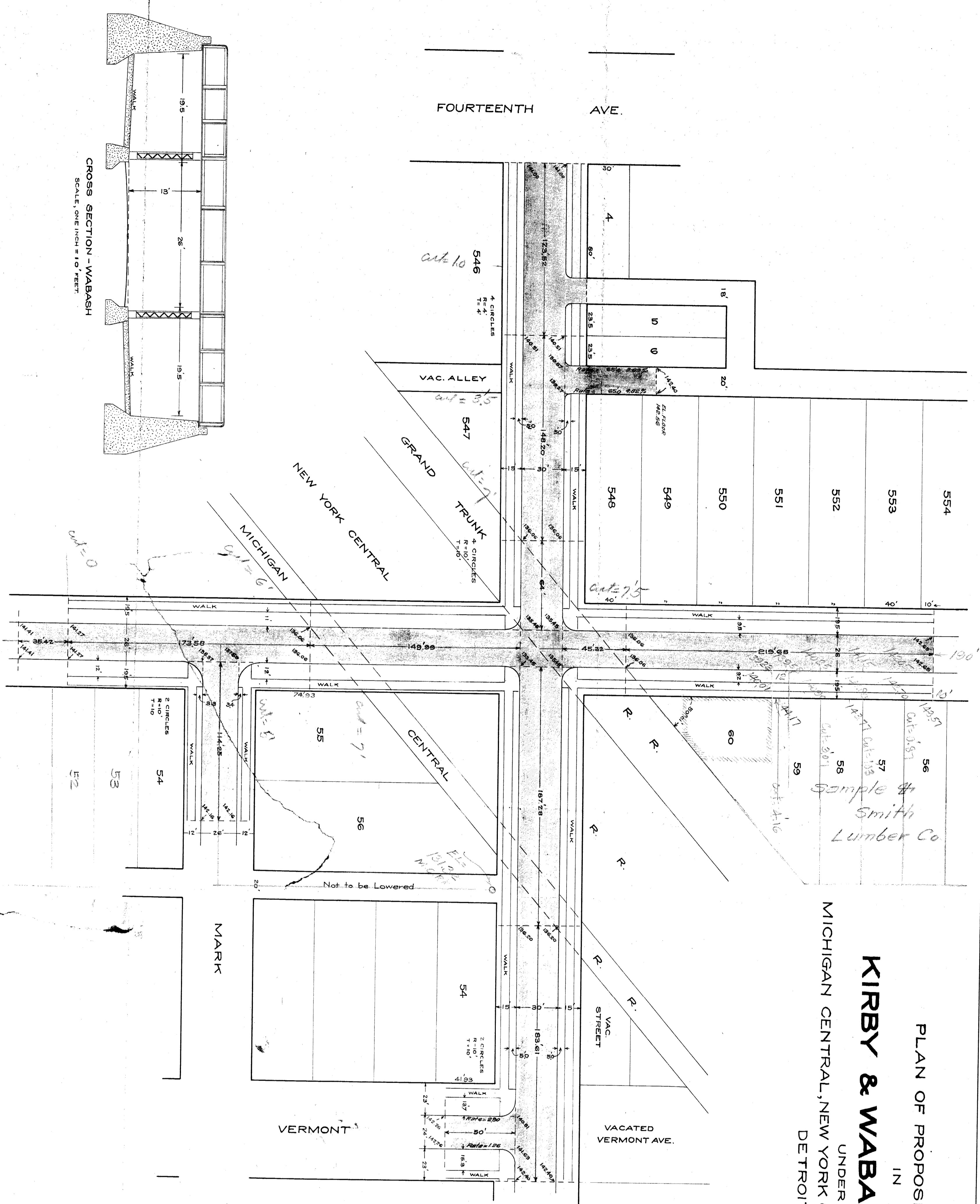


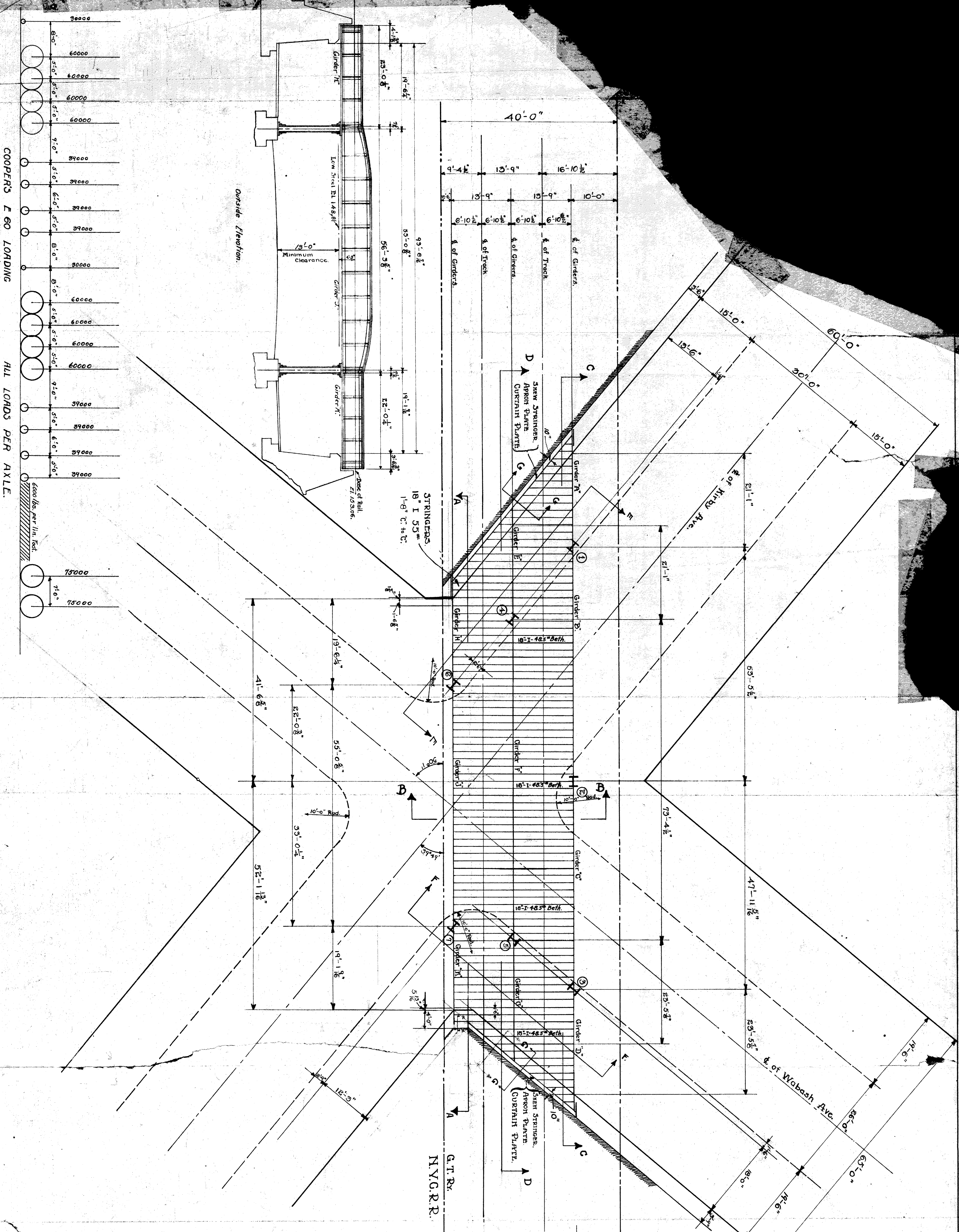
PLAN OF PROPOSED SUBWAY  
 IN  
**KIRBY & WABASH AVENUES**  
 UNDER  
 MICHIGAN CENTRAL, NEW YORK CENTRAL & GRAND TRUNK R.R.'S.  
 DETROIT.

Approved May 1916.  
*Arthur C. Conner*  
 Chief Eng. - M.C.R.R.  
 City Engineer



CITY ENGINEER'S OFFICE.  
 JOHN W. REED  
 1916

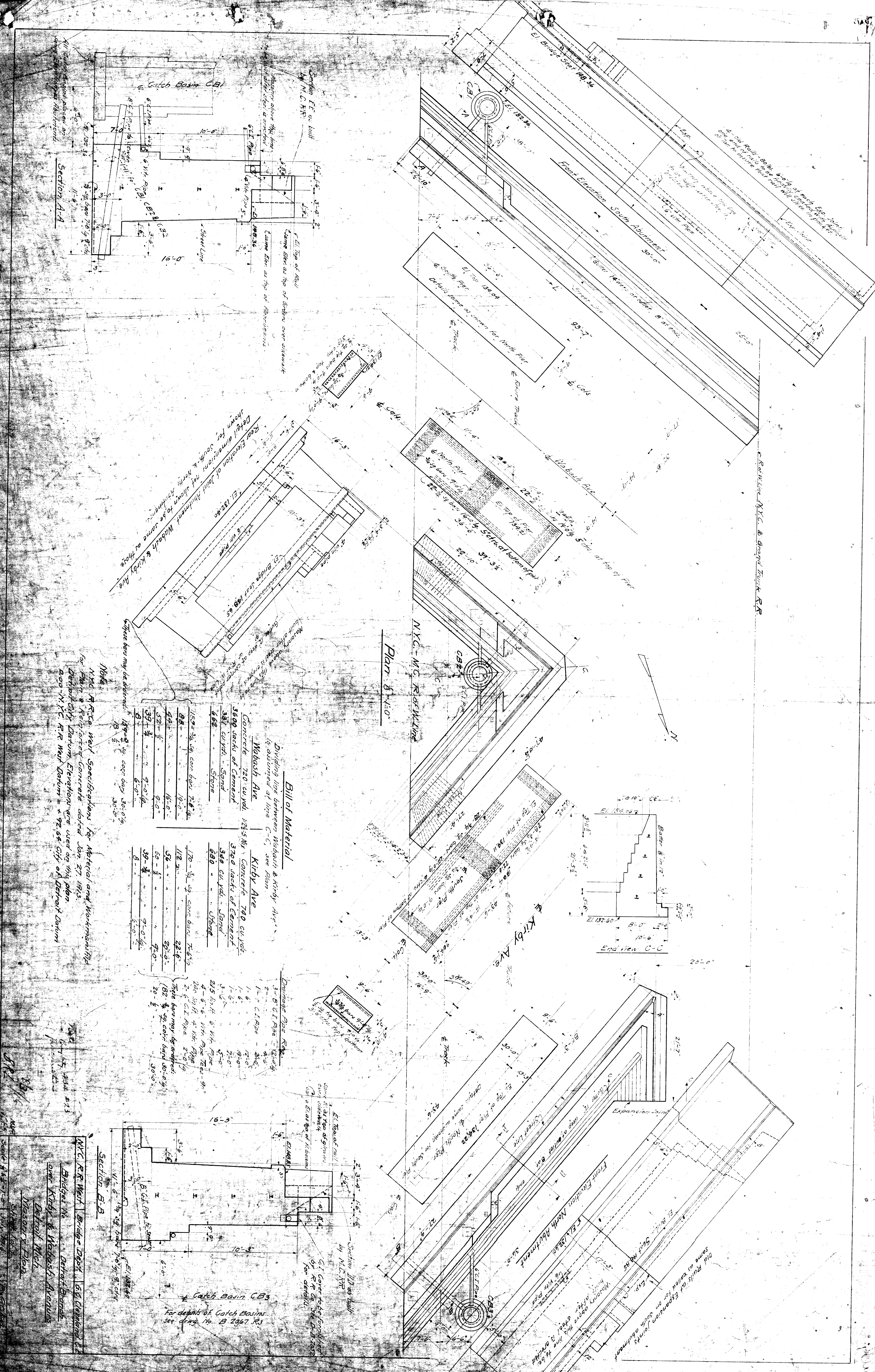
File XUII-113



Examined: *W. H. ...*  
 Structural Engineer  
 Approved: *W. H. ...*  
 Chief Engineer  
 Date: 6/24/1916.

3. SPECIFICATIONS:-  
 GRAND TRUNK RAILWAY-1910.  
 GRAND TRUNK RAILWAY SYSTEM/  
 DETROIT DIVISION, 22<sup>ND</sup> DISTRICT  
 OVER  
 KIRBY & WABASH AVENUES  
 WEST DETROIT  
 GRAD. SEPARATE FROM  
 DESIGNED BY: *W. H. ...*  
 Scale: 1" = 10 Feet  
 Office of Chief Engineer, Michigan State E.S. 1516  
 Sheet No. 1 of 5. *J. L. N. 6122*  
 Revised Sept 18<sup>th</sup> 1916.

File XVII-2



Plan 8'-4"0"

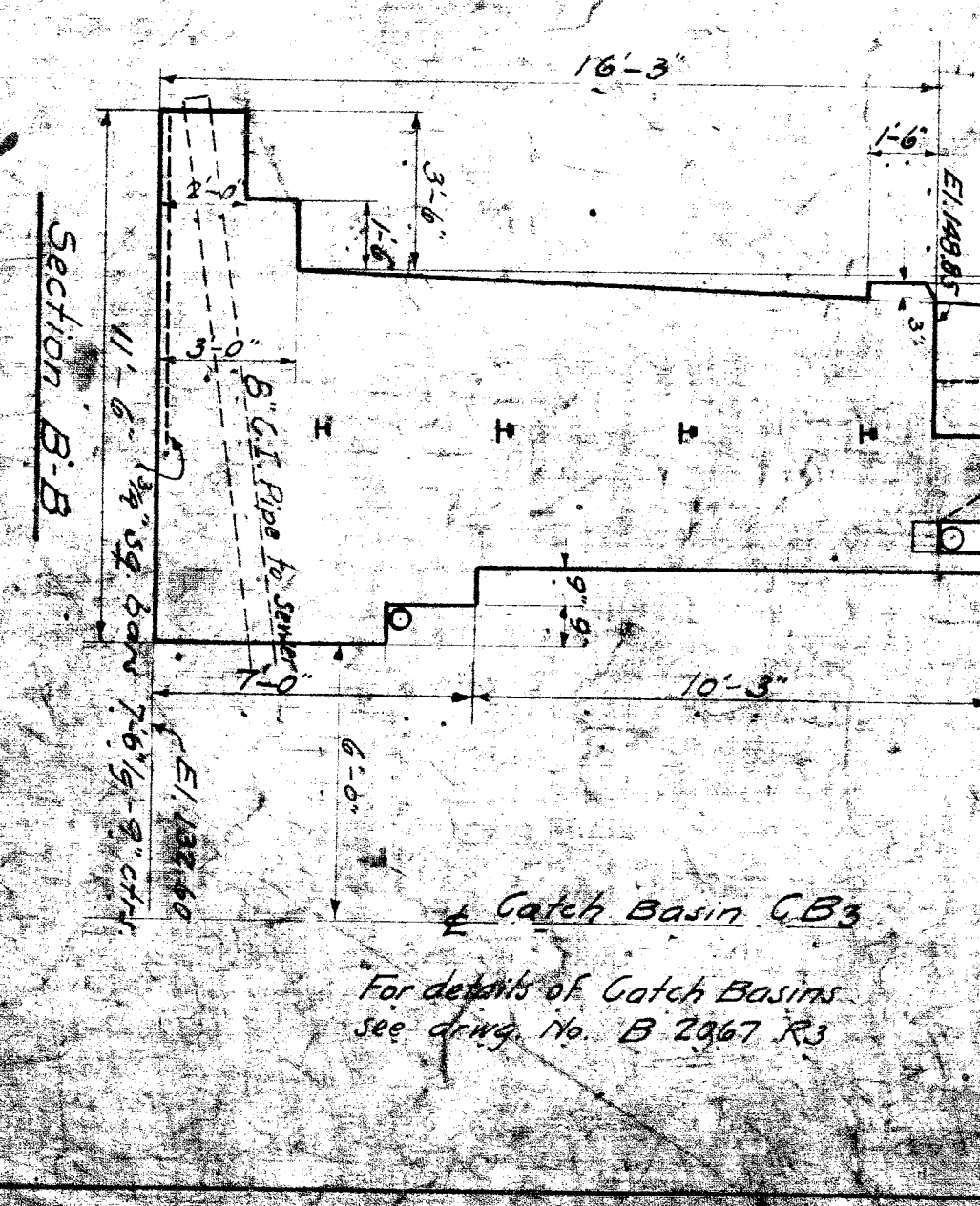
End View C-C

**Bill of Material**  
 Dividing line between Wabash & Kirby Ave is assumed at line C-C, see Plan.

Wabash Ave		Kirby Ave	
Concrete	720 cu yds.	1025 cu yds.	Concrete 740 cu yds.
3500 sacks of Cement		3700 sacks of Cement	
331 cu yds. Sand		340 cu yds. Sand	
668	Stone	680	Stone
152-3/4" sq. corr. bars	76.6	170-3/4" sq. corr. bars	76.6
64		112	
52-1/2"	16-0"	52	22-6"
39-3/4"	9-0"	39-3/4"	9-0"
8	6-0"	8	6-0"

**Drainage Pipe Table**

3-8" C.I. Pipe	120.0
2-8" C.I. Pipe	4.0
1-8" C.I. Pipe	12.0
1-6"	9.0
3-4"	7.0
2-4"	5.0
2-1/2" 4" 1/4" Pipe	25.0
4-6" 1/4" Pipe	25.0
2-6" C.I. Pipe	2.0
240 1/4" 4" 1/4" Pipe	2.0
182-3/4" sq. corr. bars	60.0
20-3/4"	30.0



**Note:**  
 NYC R.R. West Specifications for Material and Workmanship for Piers & Retained Concrete dated Jan 27, 1913. Detroit City Datum Elevations etc. used as this plan. 2000 NYC R.R. West Datum = + 92.68 City of Detroit Datum.

For depths of Catch Basins see drawing no. B 2967 R3

Section 111 as built by N.C.R.R.

C.I. Cover holes furnished by R.R. Co. See B 3322 for details.

Old Rails of Expansion Joints same as used for on south abutment.

Wabash Ave. Steel Wabash Exp. Masonry above this pier is to be built with steel & concrete.

Front Elevation North Abutment 26'-0"

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

El. 128.80

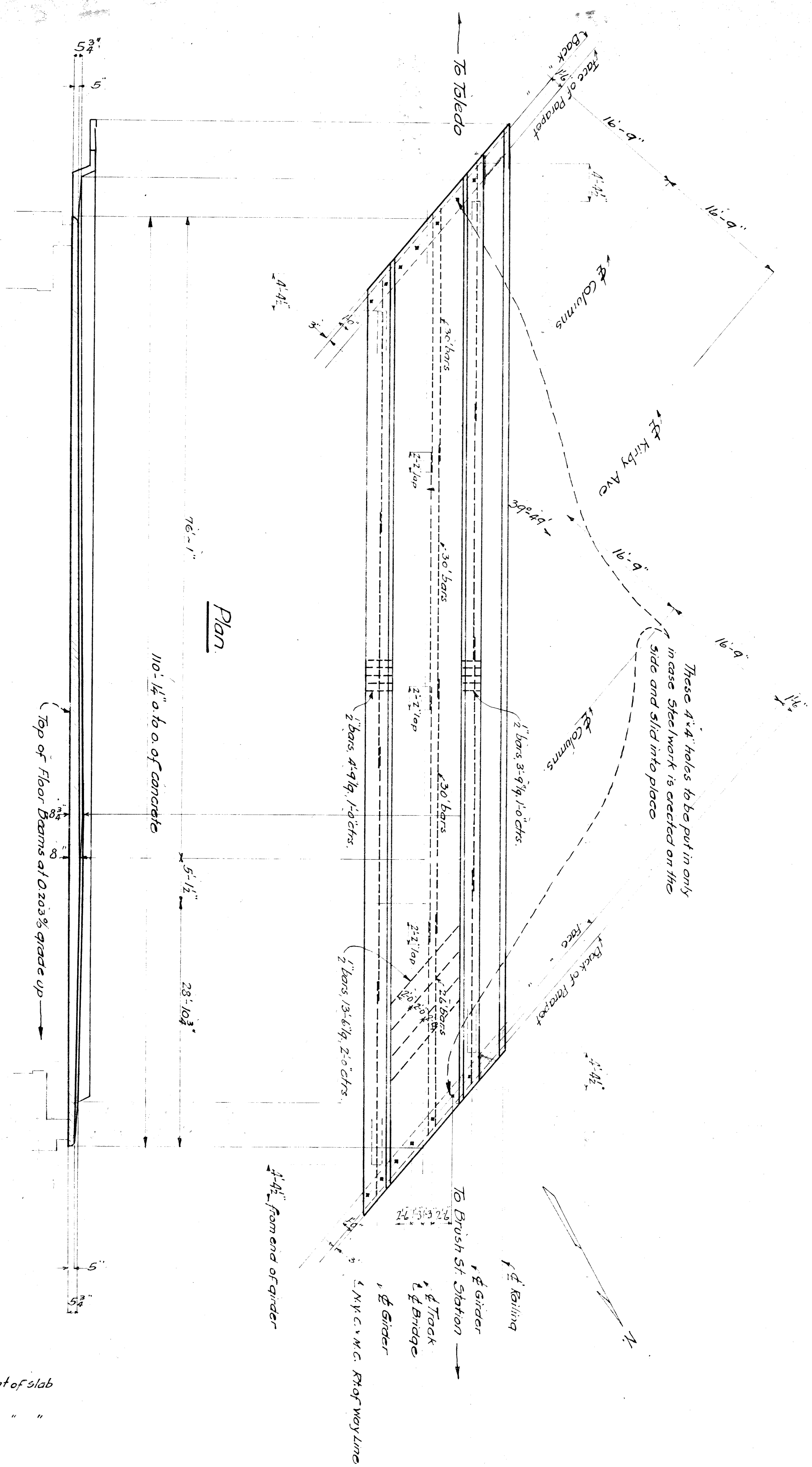
El. 128.80

El. 128.80

El. 128.80



Section thru Slab on  $\frac{1}{2}$  Bridge



Plan

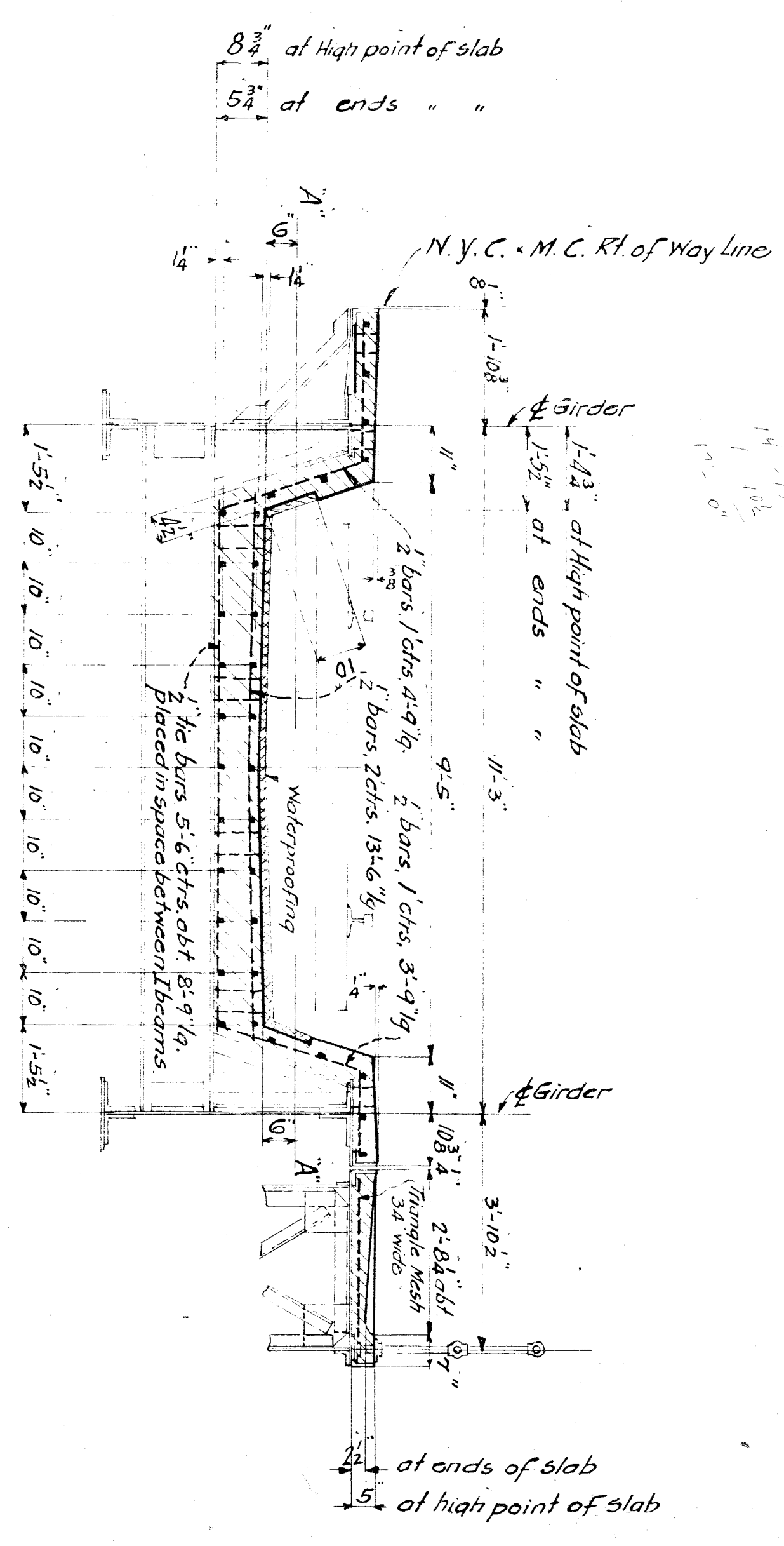
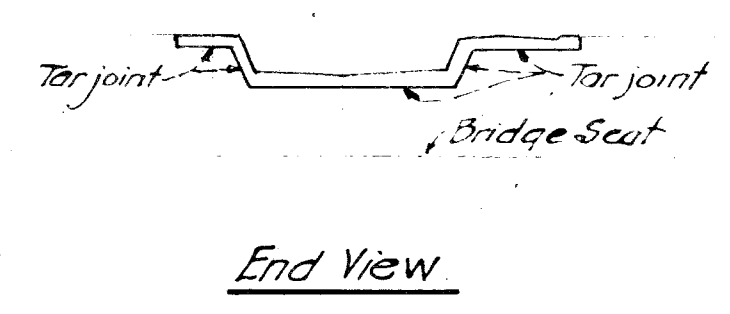
Bill of Waterproofing  
1130 sq ft to be waterproofed

Bill of Concrete  
40-cu yds. of concrete 1:2:4-Mixture  
240-sacks of cement  
18-cu yds. of sand  
36- " " " stone

Bill of Bars

99-2 corrugated bars	30'-0" lg.
33-2 "	26'-0" "
21-2 "	8'-9" "
112-2 "	4'-9" "
112-2 "	3'-9" "
36-2 "	13'-6" "
115 lin. ft. style "7" Am. Steel. wire	
65 triangle wire mesh 34 wide	
(not galvanized)	

*These bars may be ordered and cut from 185-1/2 bars 30' lg.*



Typical Section

Note:  
N.Y.C.R.R. Co. West Specifications for Material and Workmanship for Plain and Reinforced Concrete Masonry dated Jan. 27-13.  
Floor Slab below line A-A to be completed in one continuous operation.

N.Y.C.R.R. West	Bridge Dept.	G.C. Cleveland & Co.
Bridge No.	Detroit Branch	
over Kirby Ave		
Detroit Mich.		
Slab Plan		
Sheet 1 of 1		

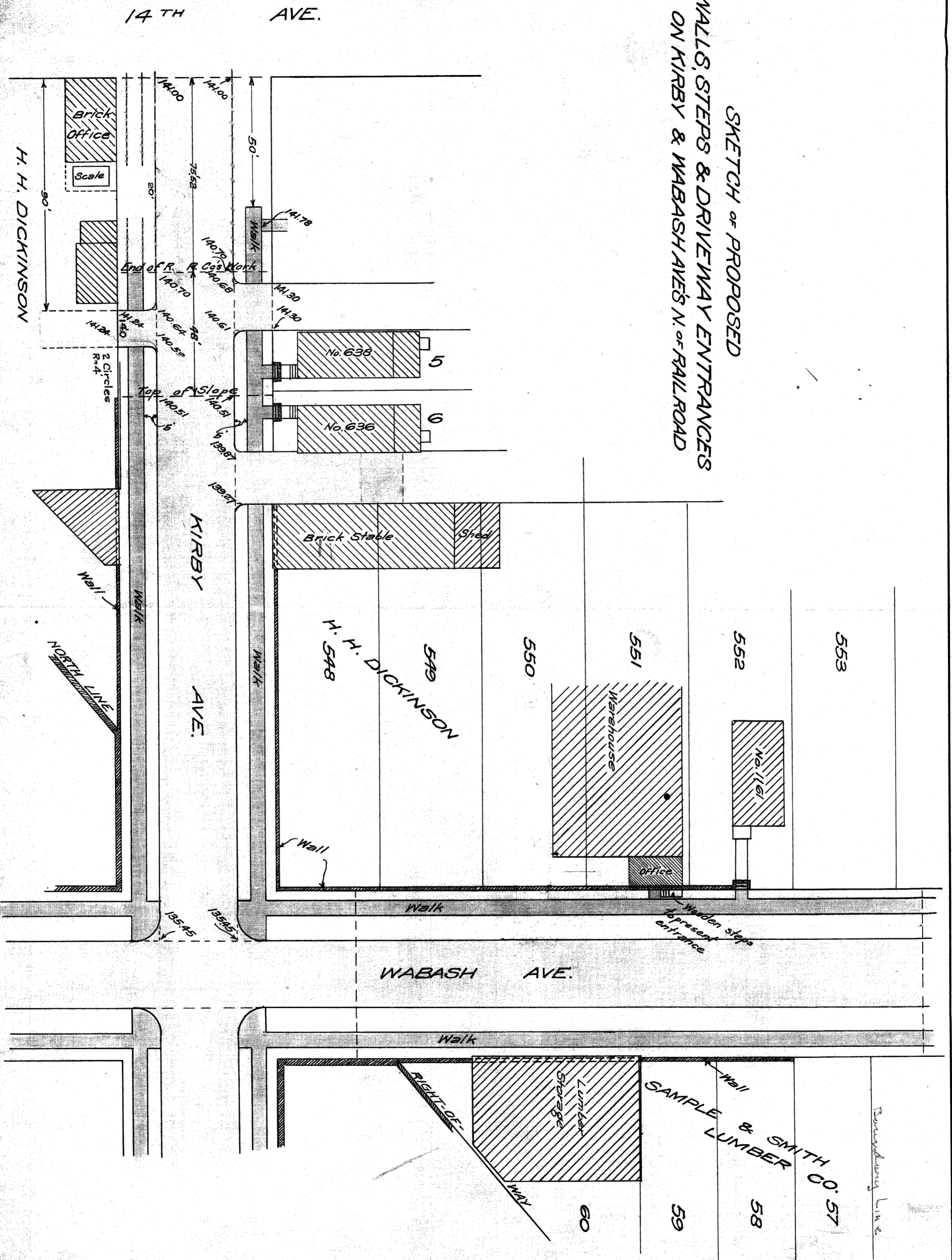








SKETCH OF PROPOSED  
WALLS, STEPS & DRIVEWAY ENTRANCES  
ON KIRBY & WABASH AVES N. OF RAILROAD



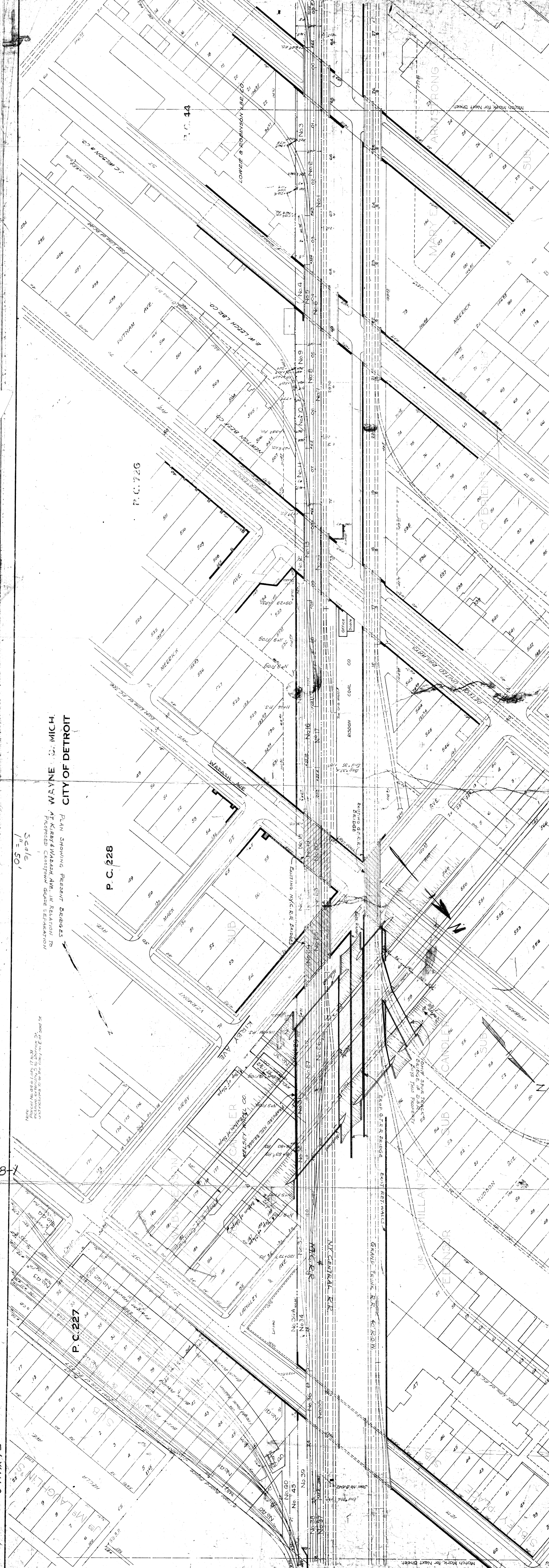
CITY ENGINEER'S OFFICE  
UWREID OCT 4, 1916

H. H. DICKINSON

SCALE, 1" = 30'

FILE X11-8

8-16(T)



**WAYNE CO. MICH.**  
**CITY OF DETROIT**  
 PLAN SHOWING PRESENT BRIDGES  
 AT KIRBY & WABASH AVE. IN RELATION TO  
 PROPOSED CROSBY GRADE SEPARATION

Scale  
1" = 50'

Note:  
 1. All dimensions are in feet.  
 2. All lot numbers are shown.  
 3. All street names are shown.  
 4. All bridge structures are shown.  
 5. All proposed grade separations are shown.  
 6. All utility lines are shown.  
 7. All existing structures are shown.  
 8. All proposed structures are shown.  
 9. All easements are shown.  
 10. All other features are shown as they exist.

P.C. 227

P.C. 228

P.C. 14

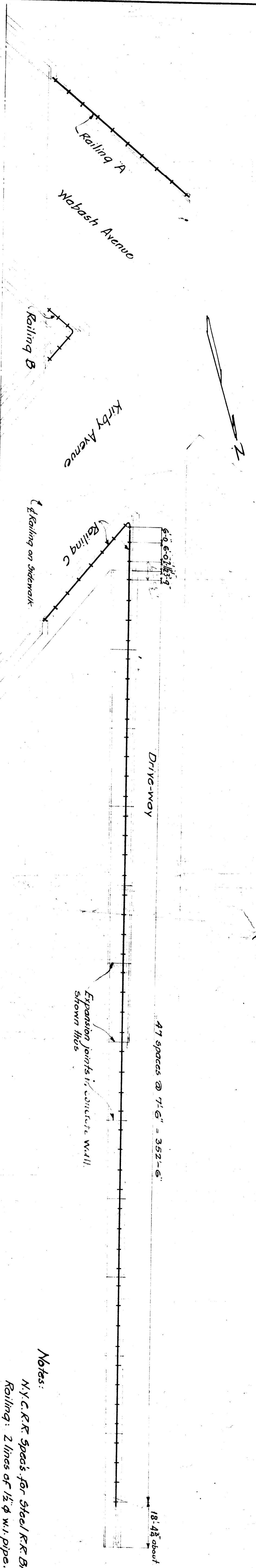
Match Mark for Next Sheet

Match Mark for Next Sheet

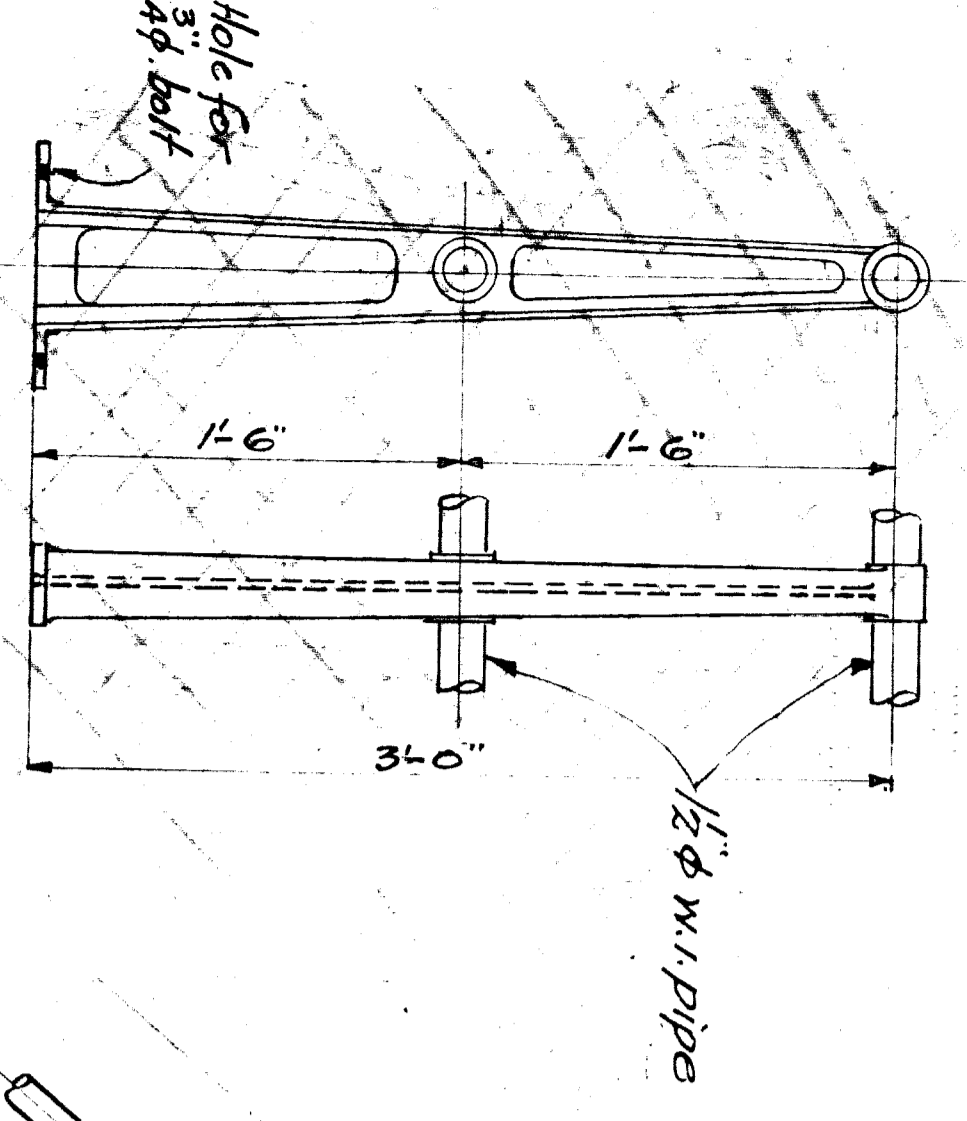
7/16/11-9

8-1

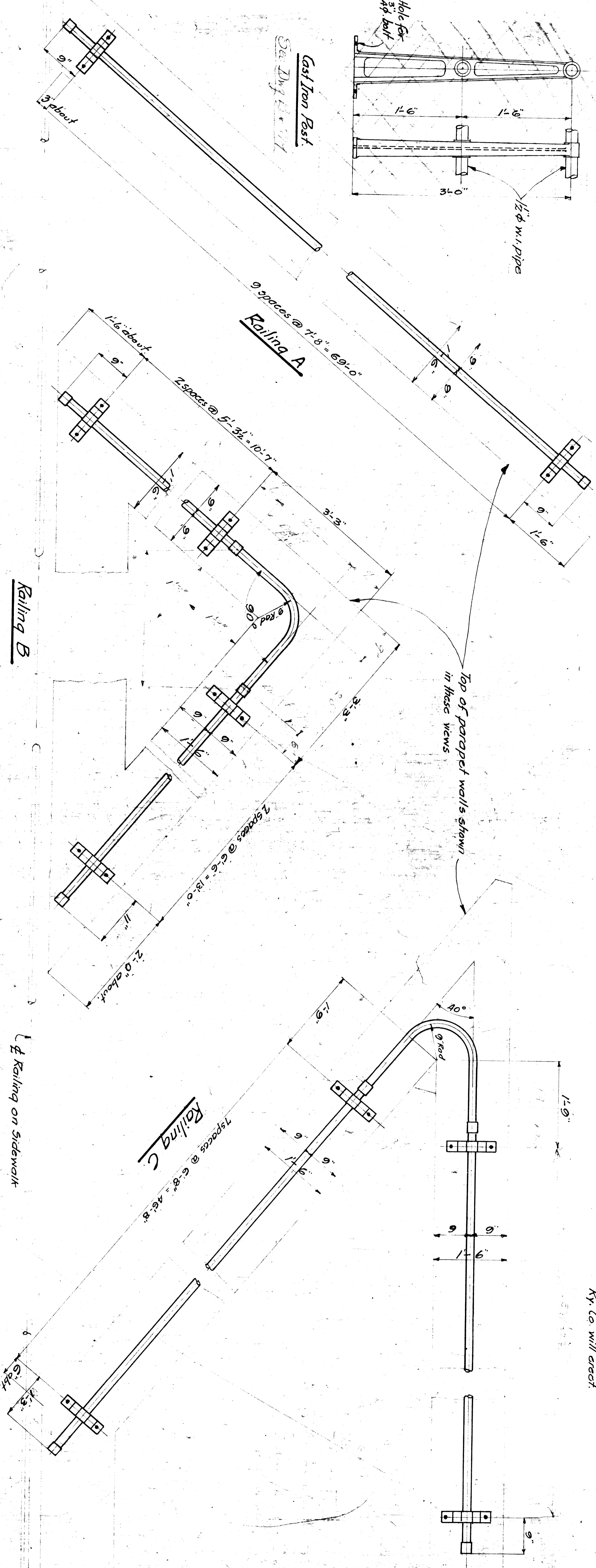
9



**General Plan**



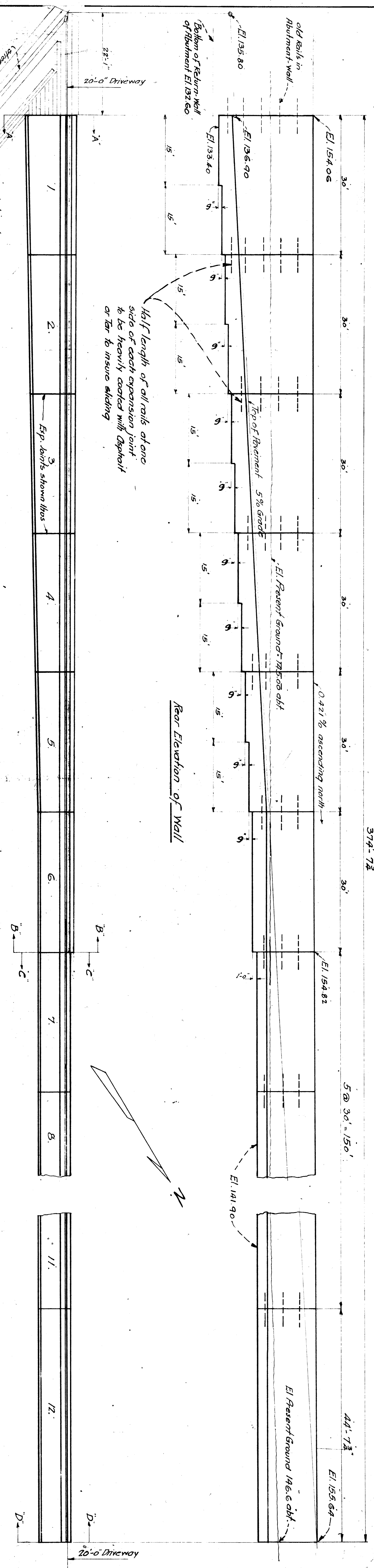
Cast Iron Post  
See Drawing 1-11-17



Top of parapet walls shown in these views

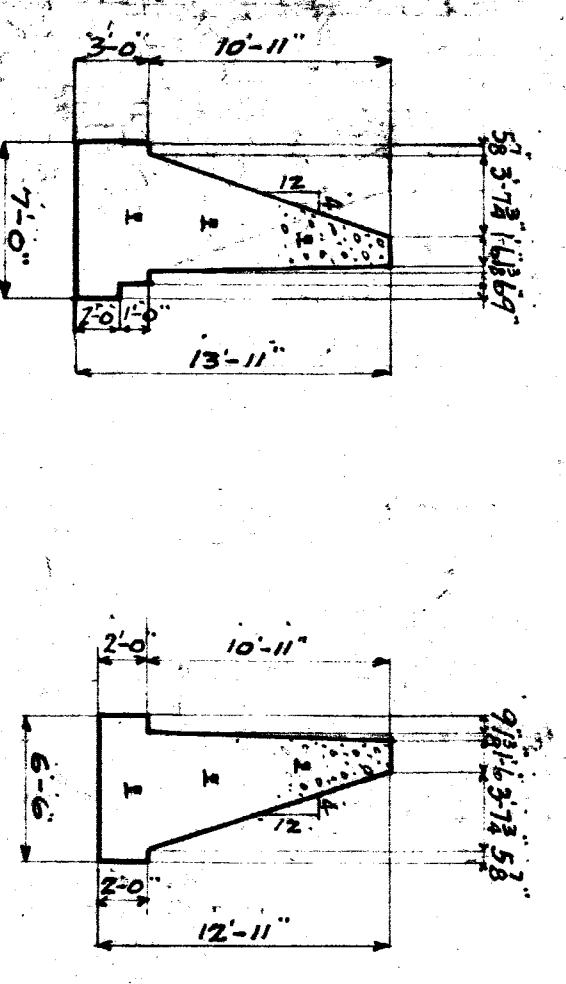
- Notes:
- N.Y.C.R.R. Specs for Steel R.R. Bridges of 1910.
  - Railing: 2 lines of 1/2" w.i. pipe.
  - Cast Iron posts.
  - Pipe railing to slide in posts.
  - Bids to be accompanied by drawing showing details of construction.
  - Ry. Co. will erect.

N.Y.C.R.R. West Bridge Dept. G.C. Cleveland  
 Bridge No. Detroit Branch  
 over Kirby & Wabash Aves.  
 Detroit, Mich.  
 Pipe Railing for Red Well and Abutments  
 Sheet No. 17  
 No. B. 6472  
 Scale 3/4" = 1'-0"  
 Nov. 25 - 17



Half length of all rails of one side of each expansion joint to be heavily coated with Asphalt or Tar to insure sliding

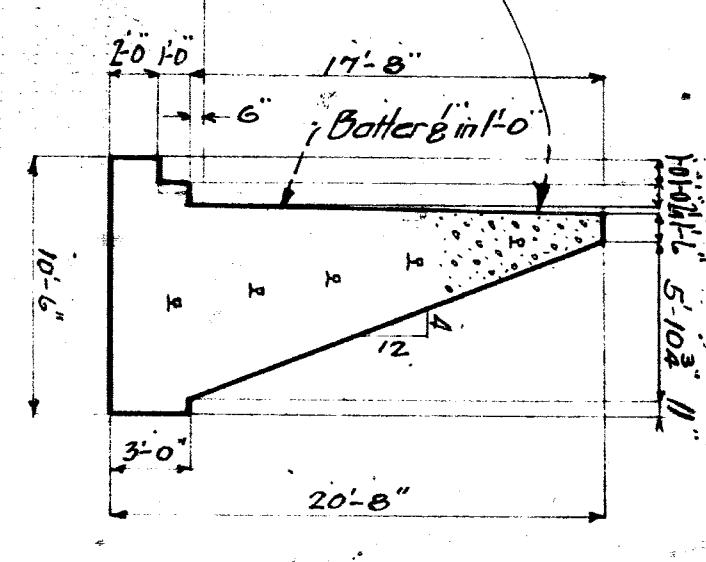
Plan



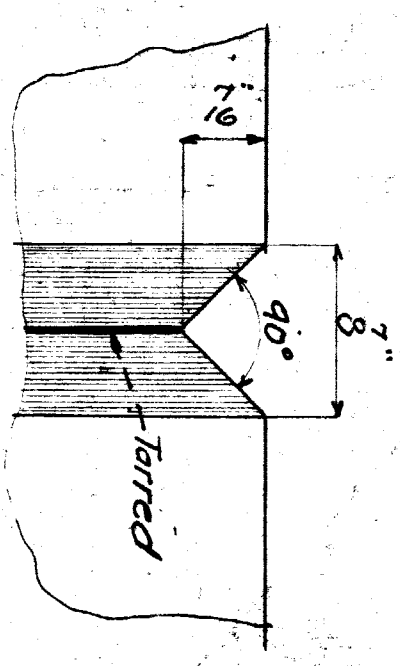
Section B-B

Section C-C

End View H-H



Detail of Expansion Groove at Expansion Joints



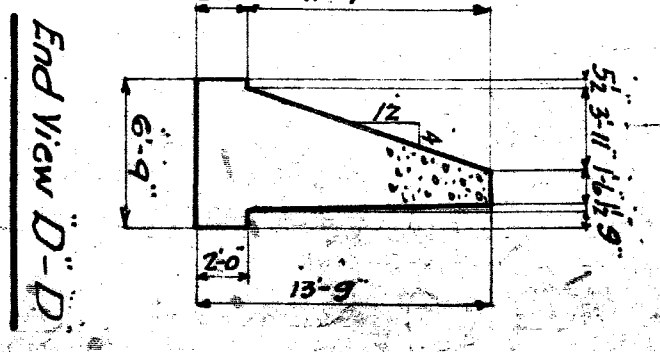
**Bill of Concrete**  
 940 cu yds. of Concrete, 1-2 1/2-5 Mixture  
 4700 sacks of cement  
 492 cu yds. sand  
 866 stone

**Bill of Rails**  
 38 old rails 80° C-C-14

**Note:**  
 N.Y.C.R.R. Co. West specifications for Material and Workmanship for Plain and Reinforced Concrete Masonry dated Jan'y 13. Elevations given are City of Detroit Datum. Ooo N.Y.C. Datum = +92.64 City of Detroit Datum.

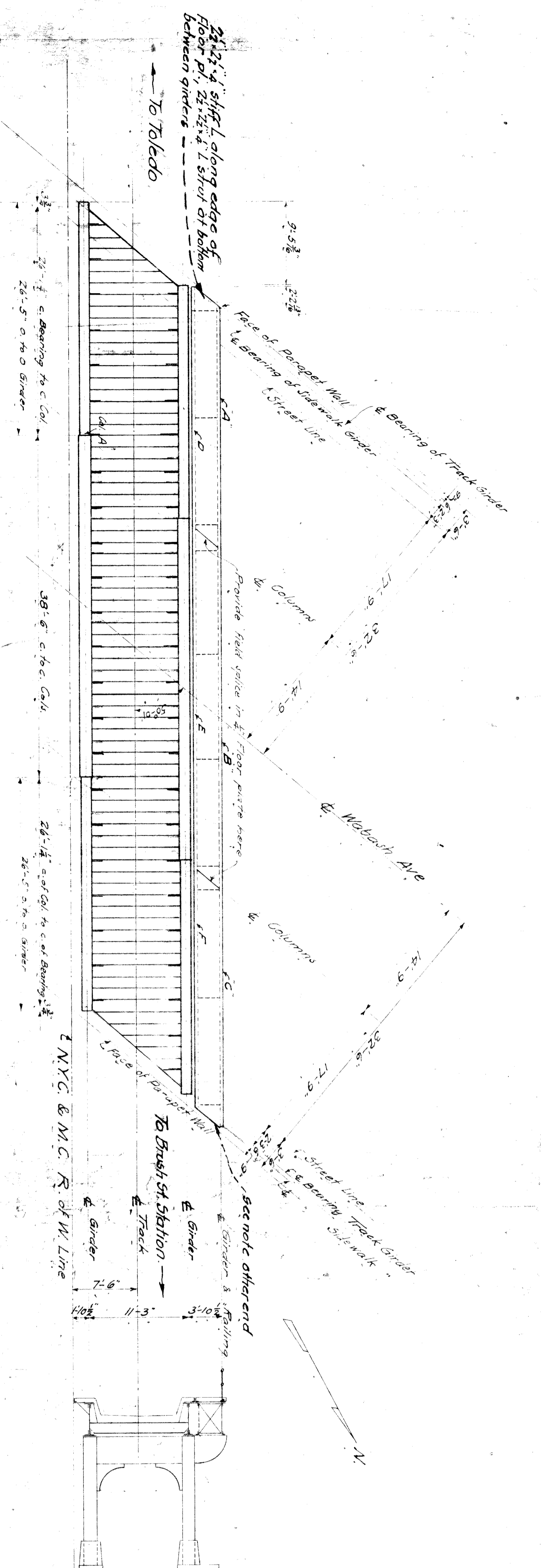
N.Y.C.R.R. West Bridge Dept. G.C. Cleveland C.E.  
 Drawn by: Detroit Div.  
 Kirby and Webber Pres.  
 Detroit, Mich.  
 Retaining Wall along Driveway.  
 Sheet left

Scale 3/8" = 1'-0"  
 Oct-10-16  
 No. B-8398



End View D-D





Plan

Columns  
 Concentration D.L. 86000  
 L.L. 138000  
 Imp. 174000  
 Total 398000

Section:  
 2'-15" x 40" } 1'-28" x 6" x 4" L.  
 4L 3 1/2 x 3 1/2 x 3/8 }  
 10L 13 1/2 x 3 1/2 x 3/8 }  
 Average hog conc. Load 8810  
 Assumed eccentricity 3500  
 Column action 2800  
 Max. Shear Total 151200  
 Col. Base 2'-9" x 2'-6" for Col. under East Girder  
 2'-9" x 4'-0"

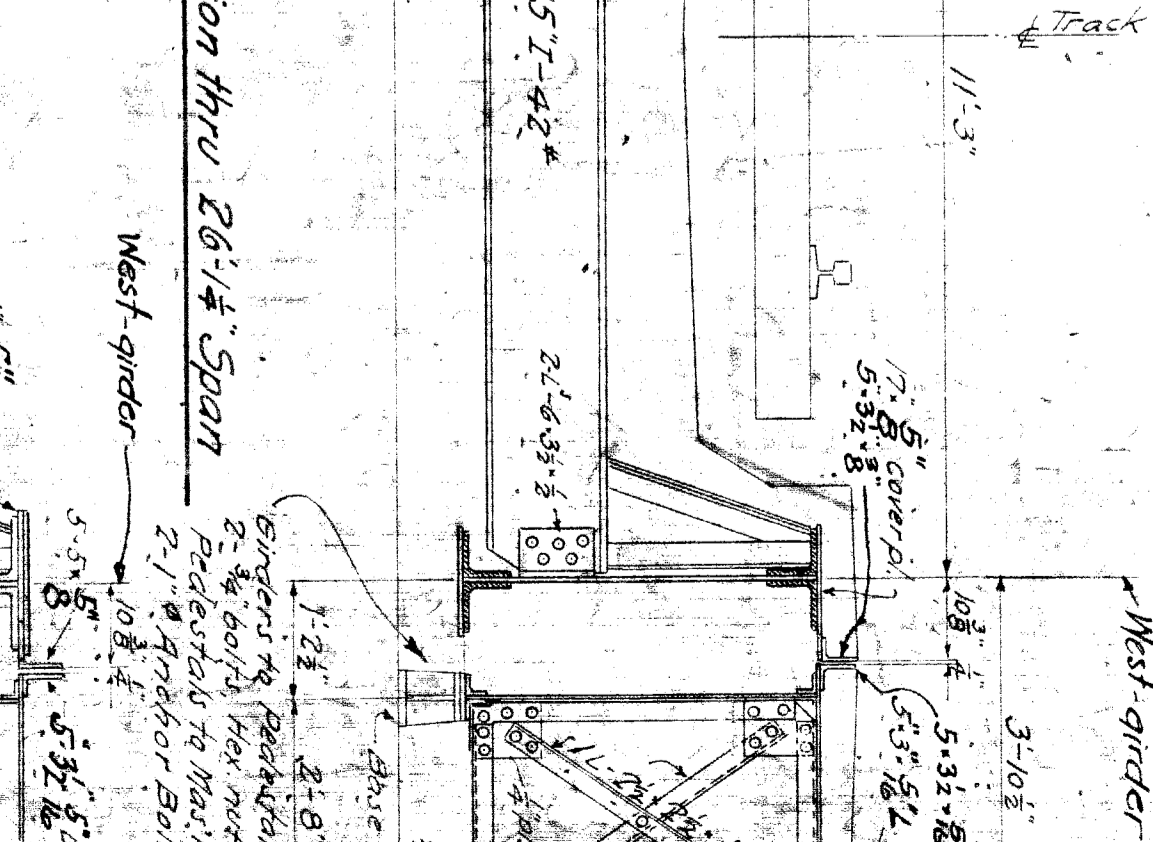
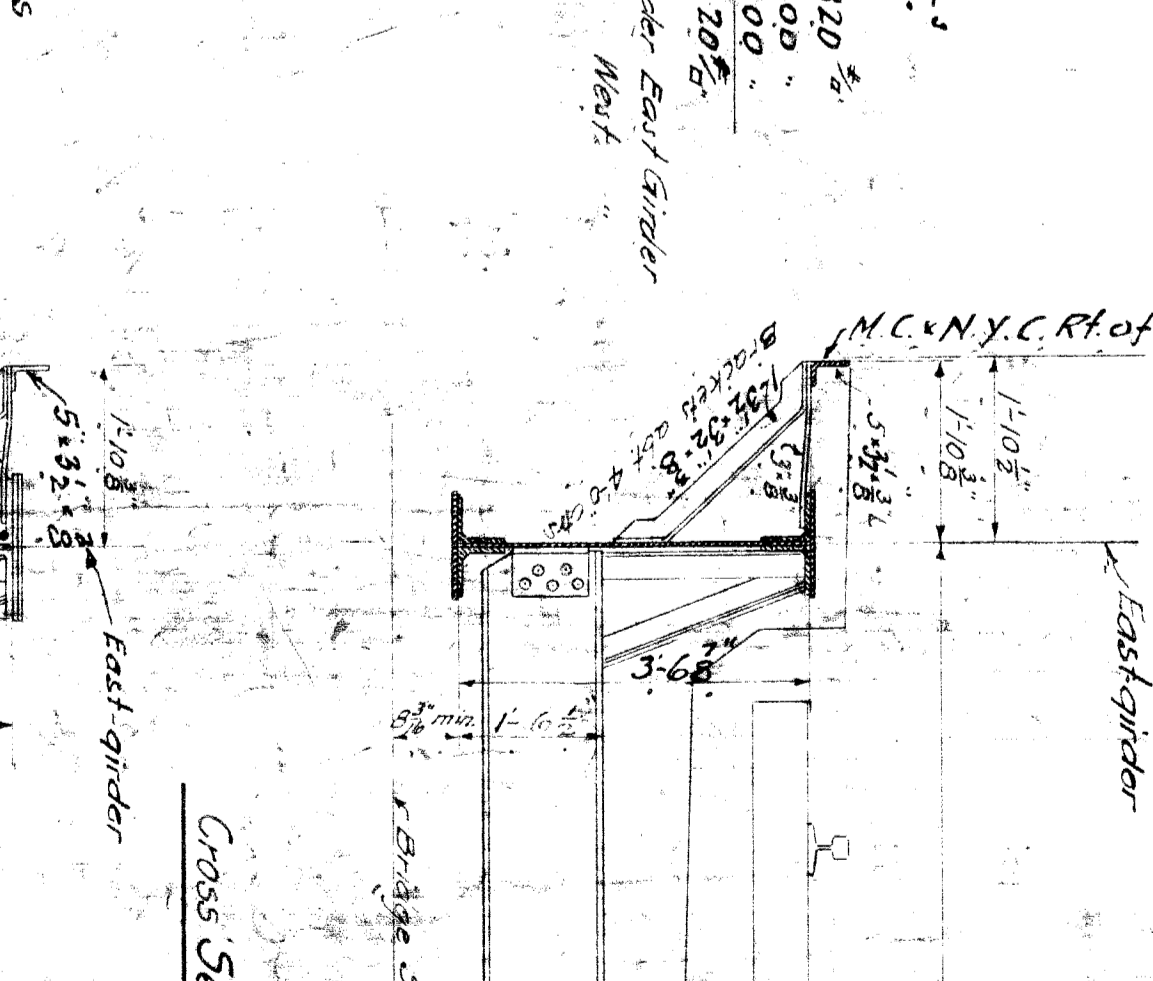
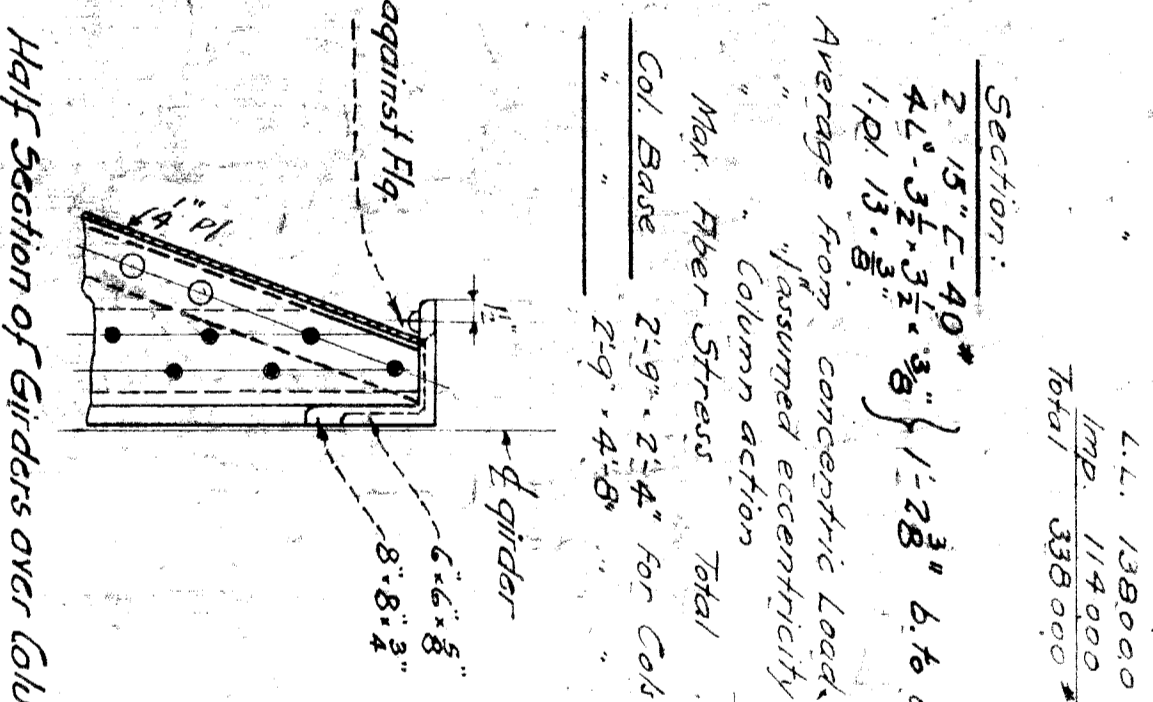
Columns  
 Max. Moment D.L. 6900 ft#  
 L.L. 12000  
 Imp. 31200  
 Total 69200 ft#  
 Section Modulus Req'd. = 69200 / 17000 = 4.08  
 58.9 used = 15.1-42"

End Shear  
 Max. End Shear D.L. 6900  
 L.L. 35000  
 Imp. 35000  
 Total 76900  
 Web Pl. 19 1/2" x 3/4" x 3/8"  
 Rivet spacing 15" thru gusset pl.  
 4-Riv. 15" x 1/2" thru gusset pl.

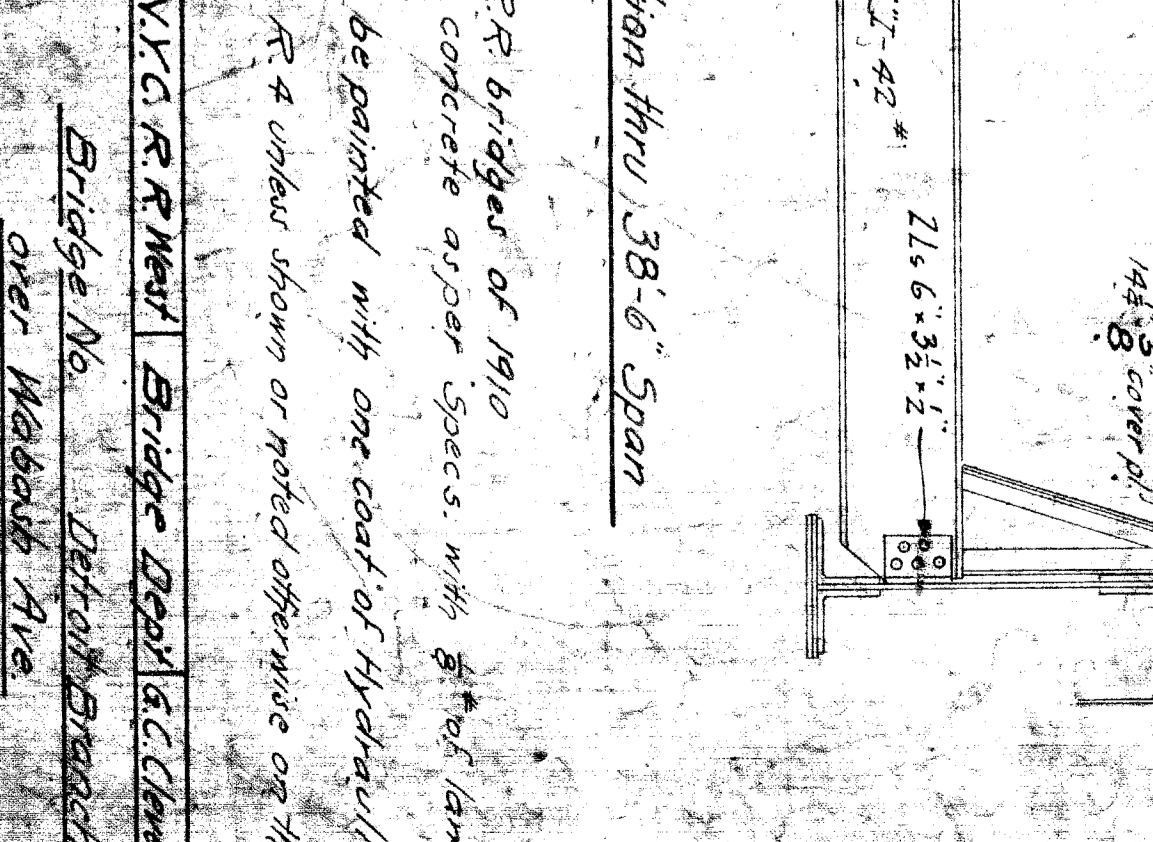
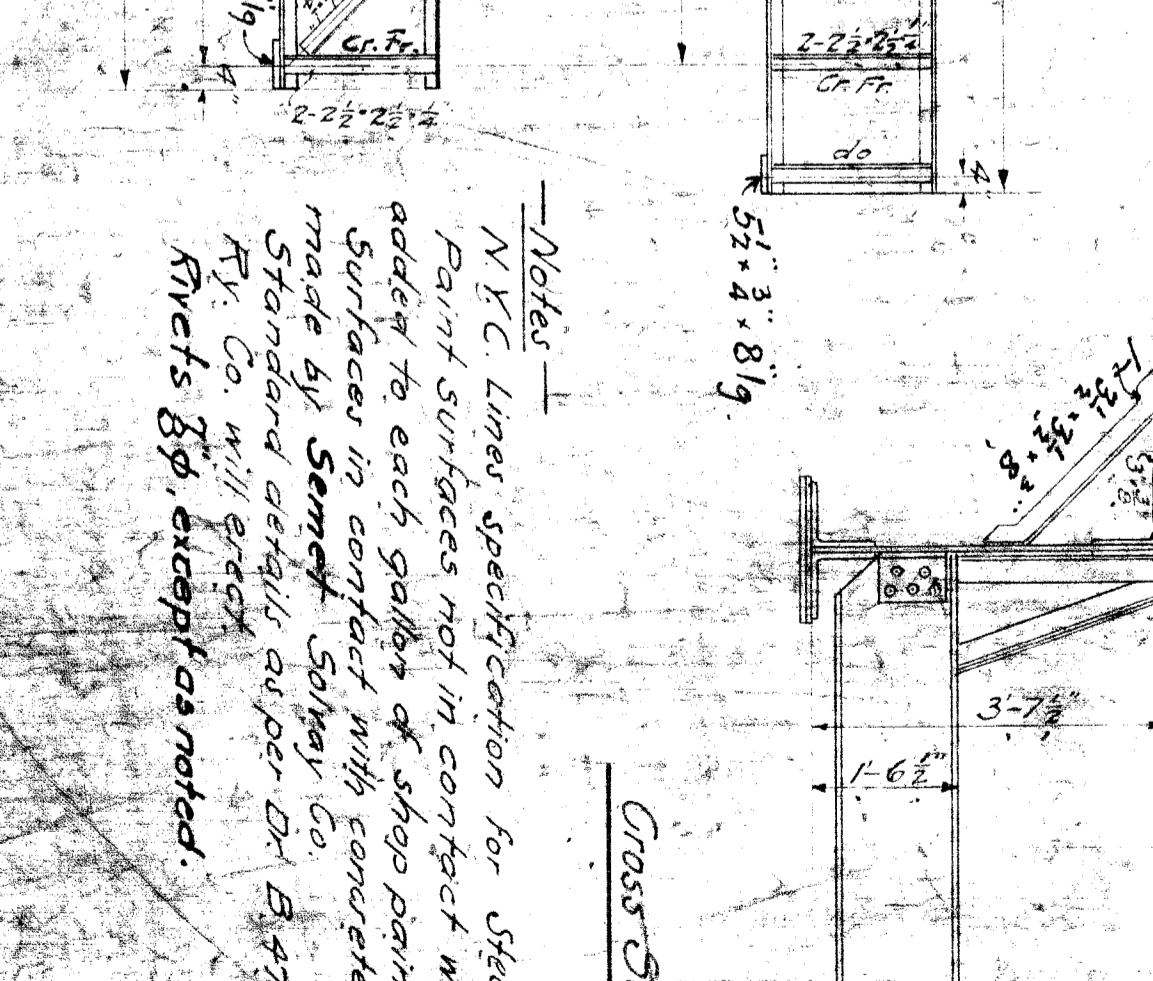
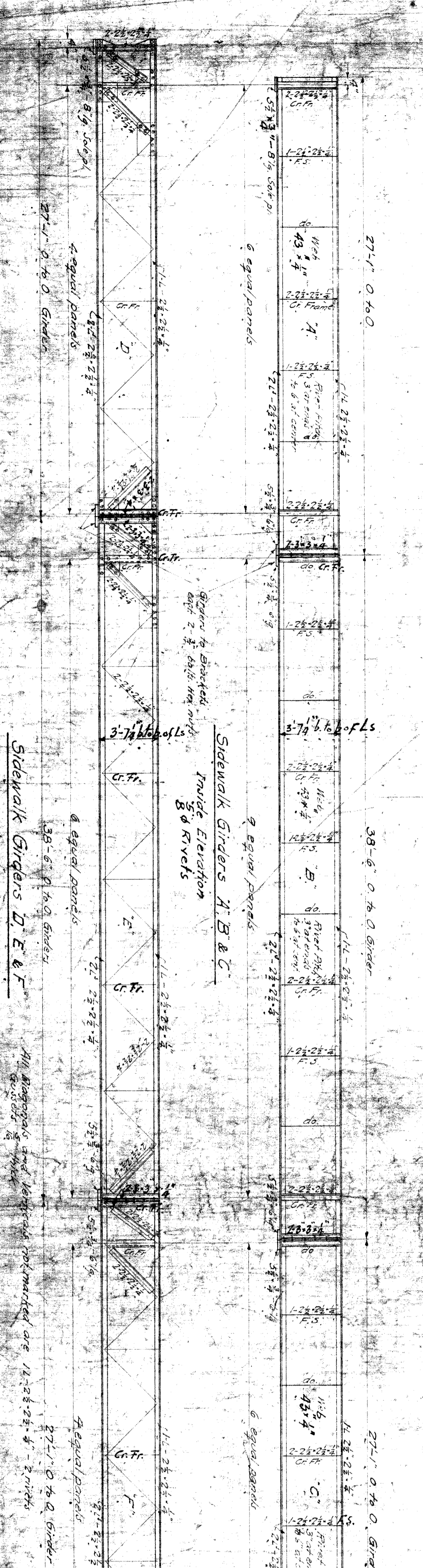
Girders over Sidewalk Span 26'-1/2"  
 Max. Mom. D.L. 720000 \* Max. End Shear D.L. 342000 \*  
 L.L. 400000 L.L. 87300  
 Imp. 451000 Imp. 80300  
 Total 1571000 Total 200000  
 Web Pl. 42 1/2" x 1/2" x 1/2" End stiff. over col. 12'-0"  
 Pedestal Base 1'-8" x 1'-0" Pedestal 45x45x12

Girders over Street Span 38'-6"  
 Max. Mom. D.L. 900000 Max. End Shear D.L. 52000 \*  
 L.L. 500000 L.L. 110200  
 Imp. 815300 Imp. 210000  
 Total 1715300 Total 280000  
 Web Pl. 45 1/2" x 3/4" x 3/8" End stiff. 12'-0"  
 Rivet spacing from end to 3' point 3'-0"  
 3'-7 1/2" x 6" x 6" Fig. 1 on Girder

Notes:  
 NYC Lines specification for steel R.R. bridges of 1910  
 Paint surfaces not in contact with concrete or other species with 5% red lampblack  
 added to each gallon of shop paint.  
 Surfaces in contact with concrete to be painted with one coat of hydraulic paint  
 made by Sarnoff, Sawyer Co.  
 Standard details as per Dr. B-9725 R-4 unless shown or noted otherwise on this sheet.  
 Ry. Co. will erect  
 Rys. 8p. except as noted.



Notes:  
 NYC Lines specification for steel R.R. bridges of 1910  
 Paint surfaces not in contact with concrete or other species with 5% red lampblack  
 added to each gallon of shop paint.  
 Surfaces in contact with concrete to be painted with one coat of hydraulic paint  
 made by Sarnoff, Sawyer Co.  
 Standard details as per Dr. B-9725 R-4 unless shown or noted otherwise on this sheet.  
 Ry. Co. will erect  
 Rys. 8p. except as noted.



Notes:  
 NYC Lines specification for steel R.R. bridges of 1910  
 Paint surfaces not in contact with concrete or other species with 5% red lampblack  
 added to each gallon of shop paint.  
 Surfaces in contact with concrete to be painted with one coat of hydraulic paint  
 made by Sarnoff, Sawyer Co.  
 Standard details as per Dr. B-9725 R-4 unless shown or noted otherwise on this sheet.  
 Ry. Co. will erect  
 Rys. 8p. except as noted.

NYC R.R. New Bridge Dept. C.C. Cleverley  
 Bridge No. Detroit Mich.  
 Street Plan  
 Scale 1/4" = 1'-0"  
 10/16/1918  
 10/16/1918