Detroit Edison

BW3609

August 15, 1986

To: Records Center

From: Sharon Selonke SS
Real Estate and Rights of Way Department

Subject: Transmission Crossing Located 1180 Feet North of Gibralter Road and 1,400 Feet East of Hall Road on Ford Motore Company property, in the SE¼ of Section 33, City of Flatrock Brownstown Township, Wayne County, Michigan.

The attached papers are for records center storage. Information about the completed transaction is shown in the following summary.

34636 Part 274 Grand Tk

R.R. (1)	R.R. INVOICE NO. M.P.S.C. NO. OR R.E. & R/W NO. (3–9)	Update Type (10)	D.E.C.O. RECORDS CENTER FILE NO. (11–15)	R.X. NO. OR MAP NO. (16–20)	Facility (21)	Agreement Date (22–27)
07	ED17572	2		4338A	2	08 15 86

Payment Frequency (28)	Rental (29–33)	OH-UG Code (34)	Division (35)	County (36)	City or Township (38–44)	Section (45)
X	XXXXX	1	6	13	BRWNS+WN	33

Location (47–80)
W OF GIBRALTAR E OF HALC RD

Update Type Codes
1 = New Agreement
2 = Revised Agreement
3 = Terminated Agreement

~~The Accounts Payable Department is requested to start or change the rental payment effective~~

Approved B. M. Fulton

cc: ☐ Accounts Payable
☐ Service Planning
☒ System Engineering Dave Doubley
☐ Transmission & Distribution

RECORDED RIGHT OF WAY NO. 34636 Part 274

DE FORM RR-1S 3-76 CS

Does not require a license
Rec Ron Mills - Grand Trk
8-12-86

Detroit Edison
2000 Second Avenue
Detroit, Michigan 48226
(313) 237-8000

June 23, 1986

Line to feed Mazda. They need the power

Mr. W. LaMasters
Engineer of Surveys & Construction
Grand Trunk Western Railroad Company
131 Lafayette Blvd.
Detroit, Michigan 48226

Proposed Overhead Wire Crossing:

Two 3 wire 120,000 volt, 60 cycle, three phase transmission lines with one shield wire.

Six 794 MCM ACSR'S, with one 7/16" steel shield wire.

120-kV suspension assembly - 8 Ohio Brass insulators, catalog #48008 or equivalent.

Specific Location

1180 Feet North of Gibralter Road and 1,400 Feet East of Hall Road on Ford Motor Company property., in the SE¼ or Section 33.

RECORDED RIGHT OF WAY NO. 3/6/86 pRM

R.R. Valuation Station _____ R.R. Mile Post _____

City/Village Flatrock Township Brownstown

County Wayne Detroit Edison Plan Attached 4338A

This is a New Crossing _____ This is a Reconstruction of Existing Crossing XX

Previous Agreement Information (if any) Date _____ (R.R. Plan) 333

~~Blanket Waiver of Hearing covers~~ ~~Waiver of Hearing Requested~~ ~~(Waiver of Hearing to be limited to applications listed below)~~

All construction will be done in accordance with the rules and regulations of the Michigan Public Service Commission.

Richard A. Gloger

Richard A. Gloger
Lease Representative
Real Estate and Rights of Way
448 G.O.

/ss

DE 963-2866 10-81CS (PD 187)

DATA SHEET TO ACCOMPANY DRAWING RX-4338A
REVISION OF CROSSING RX-4338
COVERED UNDER PERMIT: 8482000843ME DATE: 11/08/84

Name of Company

Detroit Edison Company

Name and Location of Crossing

Crossing of the Brownstown-Mazda #2 and Browntown-Fermi 120Kv transmission lines over the Grand Trunk Western Railroad Line, located 1180 feet north of Gibralter Road and 1,400 feet east of Hall Road, on Ford Motor Company property.

Southeast 1/4 of section 33, city of Flatrock, Brownstown Township, Wayne County, Michigan.

Circuits

Two 3 wire 120,000 volt, 60 cycle, three phase transmission lines with one shield wire.

Towers and Crossarms

See attached drawing T-2056, type "A" towers

Conductors

Six 795 MCM ACSR's, with one 7/16" steel shield wire.

Insulators

120Kv suspension assembly - 8 Ohio Brass insulators, catalog #48008 or equivalent.

Guy and Guy Attachments

None

Suspension and Deadend Details

See attached drawing ED1-7572

System Engineering Department
DGD/- 5/30/86

RECORDED RIGHT OF WAY NO. 34636 p274

~~BW3529~~ BW3609

Detroit Edison

11-14-84

To: Records Center

From: Sharon Selonke SS
Real Estate and Rights of Way Department

Subject: 120-Kv line over Spur Track located 960 feet N. of Gibraltor Road and 1,400 Feet E. of Cahill Road, on Ford Motor Company property in SE ¼ of Section 33, Brownstown Township, Wayne County.

The attached papers are for records center storage. Information about the completed transaction is shown in the following summary.

R.R. (1)	R.R. INVOICE NO. M.P.S.C. NO. OR R.E. & R/W NO. (3–9)	Update Type (10)	D.E.C.O. RECORDS CENTER FILE NO. (11–15)	R.X. NO. OR MAP NO. (16–20)	Facility (21)	Agreement Date (22–27)
07	848283	1		~~4438~~ 4338	2	110814

Payment Frequency (28)	Rental (29–33)	OH-UG Code (34)	Division (35)	County (36)	City or Township (38–44)	Section (45)
X	XXXXX	1	6	13	BRNSTWN	33

Location (47–80)
GIBRALTOR & CAHILL SPUR Fomoco

RECORDED RIGHT OF WAY NO. 34636 P 274

Update Type Codes
1 = New Agreement
2 = Revised Agreement
3 = Terminated Agreement

The Accounts Payable Department is requested to start or change the rental payment effective

Approved B. A. Merton

cc: ☐ Accounts Payable
☐ Service Planning
☐ System Engineering
☒ Transmission & Distribution
☒ D. Miller

DE FORM RR-1S 3-76CS

Do Not Write in This Box		
Application No. 82000-54-84		
Permit No 8482000843ME		
Date of Issuance 11/8/84		
Fee Amount 10.00	Date 11/8 /84	
Cash	Bill X	By JC

Detroit Edison

2000 Second Avenue
Detroit, Michigan 48226
(313) 237-8000

David Wilson
Utilities-Permits Engineer
Department of Transportation
18101 Nine Mile Road
Southfield, MI 48075

November 2, 1984

Gentlemen:

The Detroit Edison Company plans to construct, operate, and maintain an overhead line in Township of Brownstown, Wayne County

The line will cross the tracks of the Grand Trunk Western Railroad Company. The wires to be installed are:

One 6 Wire 120,000 Volt 60 Cycle, Three-Phase
Transmission Line with One Ground Wire.

The railroad has given the following waiver of hearing:

☒ Waiver dated 10-30-84 enclosed.

☐ Blanket Waiver on file with the MPSC.

The proposed crossing is shown on drawing No. RX- 4438

☒ This is a new crossing.

☐ This is a re-construction.

Please grant a State Highway Permit to The Detroit Edison Company for the proposed crossing.

RECORDED RIGHT OF WAY NO. 3436 p274

APPROVED

NOV 08 1984

Harold E. Abbott

ASST DIST. UTILITY ENGINEER
MICHIGAN STATE HIGHWAY DEPT

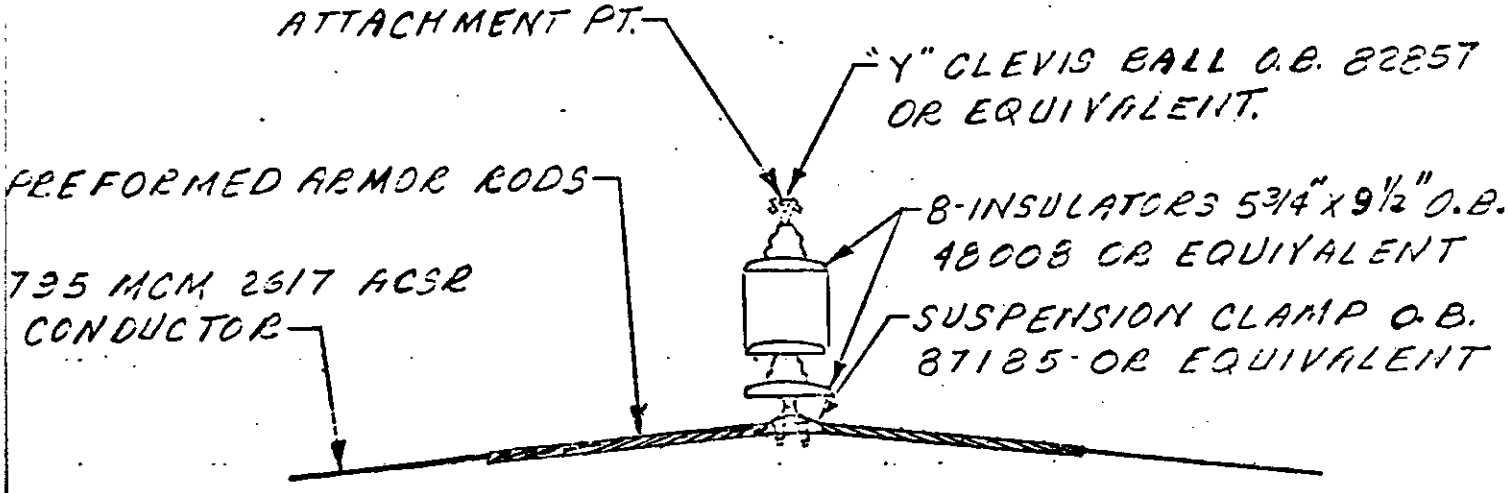
/ss

Very truly yours,

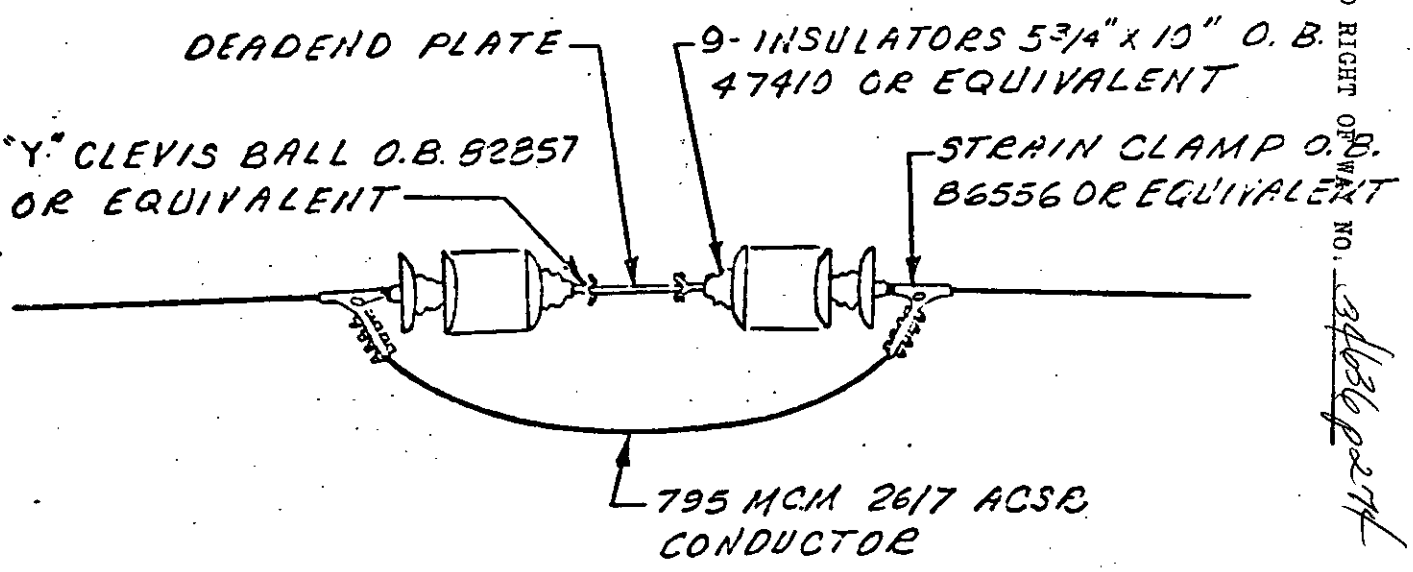
Barbara A. Mention

Barbara A. Mention
Supervisor-Real Estate Services
448 G.O.

DETAILS



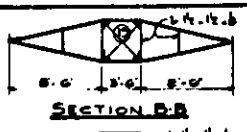
DEADEND ASS'Y DETAILS



RECORDED RIGHT OF WAY NO. 34636 p274

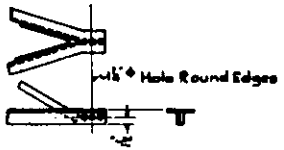
REV A 4-20-77 WEZ

120 KV SUSPENSION & DEADEND ASS'Y DETAILS	APPROVED JK	THE DETROIT EDISON COMPANY GENERAL ENGINEERING DEPARTMENT
		LAYOUT BY J. WRIGHT DRAWN BY JLW
		DATE 5-7-71 SCALE DRAWING NUMBER EDI-7572

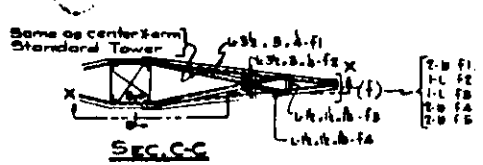


SECTION B-B

SECTION A-A



DETAIL AT END OF CROSS-ARM FOR COPPER CONDUCTORS



SEC. C-C

SEC. B-B SEC. X-X

LOADS

(1) A vertical load at each cable support of 1300#, total 2100#.
(2) A horizontal load transverse to line of 1000# at each cable support, total 2000#.
(3) A horizontal load in the direction of the line of 3500#, at any one conductor support.
(4) Wind on tower of 30# per lin. foot of height of tower.
(5) Dead load of tower.

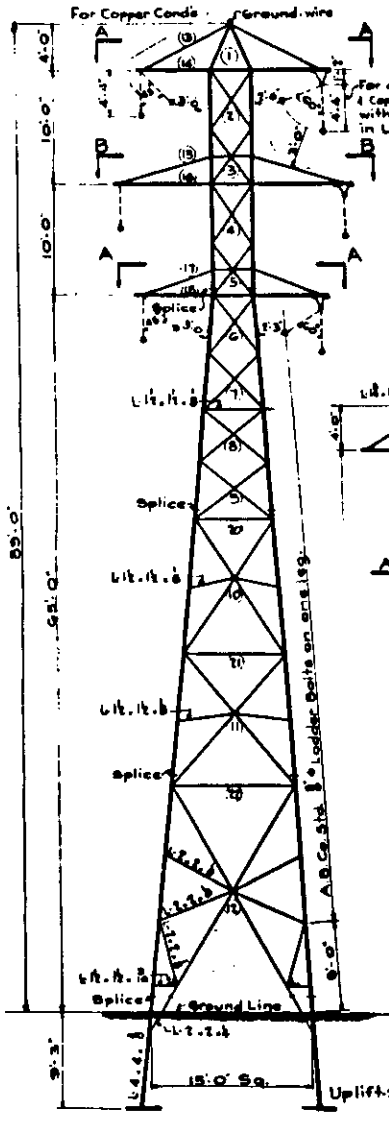
UNIT STRESSES

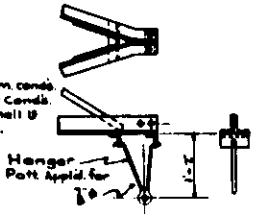
Tension on net section 20000# per □"
Compression on gross ... 20000 - 85 k/r
Shear on bolts ..... 13500# per □"
Bearing on bolts ..... 27000# per □"

MATERIAL:- O.H. Steel for Bdlgs. A.S.T.M. Std. Specification.

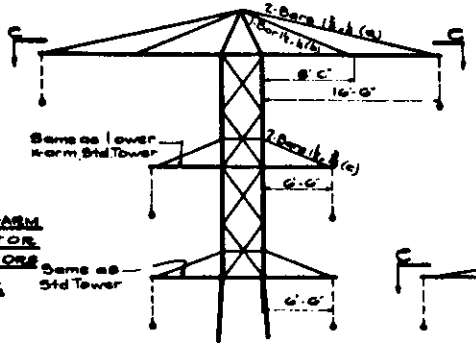
COATING:- Material including bolts to be galvanized.

NOTE:- The above loads are based on 3/0 Hard drawn Copper Cable 880' Span 266800 C.M. Aluminum Steel Core 880' Spn 3/0 " " " 1056' "



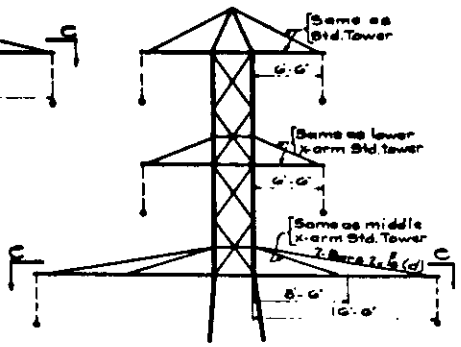


DETAIL AT END OF CROSS-ARM FOR ALUMINUM CONDUCTOR AND FOR COPPER CONDUCTORS WITH SMALL ⌀ IN LINE



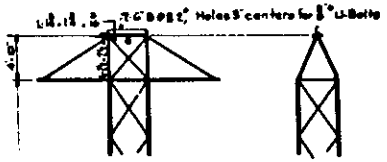
TRANSPOSITION CROSS-ARMS ARRANGEMENT T1

Special X-arm members Req'd. { 2-Ends (f) with bracing, 4-Bars (a), 2- do (b), 4- do (c)



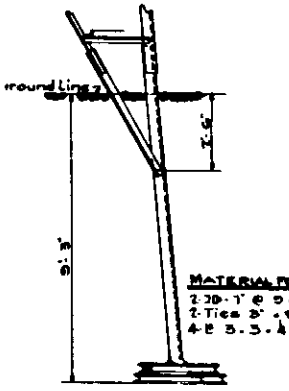
TRANSPOSITION CROSS-ARMS ARRANGEMENT T2

Special X-arm material Req'd. { 2-Ends (f) with bracing, 4-Bars (d)

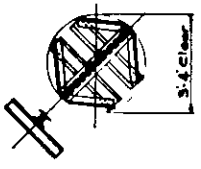


ALTERNATE DESIGN FOR TOWER PEAK

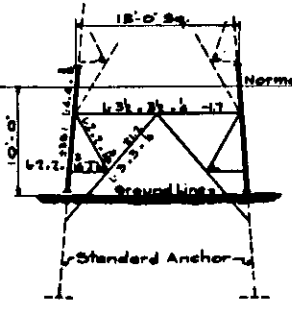
Member		Stress	Material
Legs	5	± 21.8	L 3½ x 3½ x ½
	9	± 30.2	L 4 x 4 x ½
	11	± 34.4	L 4 x 4 x ½
	12	± 36.9	L do
Bracing	1	± 0.6	L 2 x 2 x ¼
	2	± 4.9	L 1½ x 1½ x ¼
	3	± 4.9	do
	4	± 6.6	L 1½ x 1½ x ¼
	5	± 6.6	do
	6	± 5.0	do
	7	± 3.7	do
	8	+ 3.0	do
	9	± 2.4	do
	10	+ 5.8	L 1½ x 1½ x ¼
	11	+ 4.5	do
	12	+ 3.8	do
Cross-Arms	13	+ 9.0	Bar 1½ x ¼
	14	± 8.7	L 3 x 2½ x ¼
	15	+ 7.1	2-Bars 1½ x ¼
	16	± 11.3	L 3 x 2½ x ¼
	17	+ 1.6	2-Bars 1½ x ¼
	18	± 8.7	L 3 x 2½ x ¼
	19	+ 4.8	Bar 1½ x ¼
	20	- 7.0	L 2½ x 2½ x ¼
	21	- 5.0	L 2½ x 2½ x ¼
	22	- 7.1	L 3 x 3 x ¼



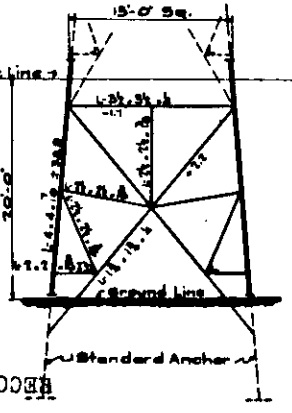
MATERIAL FOR GRILLAGE
2-30-T @ 9.8# = 3'-5"
2-Ties 3" x 3/8" x 3'-0"
4-PL 3'-3" x 1/4" x 1'-9"



A.B.Co. STD. EARTH ANCHOR PATENTED



10'-0" EXTENSION
1700# Est.



20'-0" EXTENSION
2800# Est.

SUSPENSION TOWER A

Anchor 1264#
Tower 6304#
Total- 7568#

RECORDED RIGHT OF WAY NO.

Copyright American Bridge Co. 19

TRANSMISSION TOWERS

DETROIT EDISON CO

SUSPENSION TOWER A

880'	NORMAL SPAN
110 000	VOLTS
2	CIRCUITS
	CONDUCTOR
7/16 E.M. Steel	GROUND WIRE

REVISIONS	
2-2-29	Alternate Peak Added
5-7-29	Retraced

AMERICAN BRIDGE CO.
PITTSBURGH, PA.

INQUIRY No. P-31844-A
ORDER No. E-5306
DRAWING T-7056
DATE 10-22-28 SCALE

This drawing is traced from and supersedes drawings T-1791 & 1971. Arrangement for Cross-arms is revised.

DATA SHEET TO ACCOMPANY DRAWING RX-4338A
REVISION OF CROSSING RX-4338
COVERED UNDER PERMIT: 8482000843ME DATE: 11/08/84

Name of Company

Detroit Edison Company

Name and Location of Crossing

Crossing of the Brownstown-Mazda #2 and Browntown-Fermi 120Kv transmission lines over the Grand Trunk Western Railroad Line, located 1180 feet north of Gibralter Road and 1,400 feet east of Hall Road, on Ford Motor Company property.

Southeast 1/4 of section 33, city of Flatrock, Brownstown Township, Wayne County, Michigan.

Circuits

Two 3 wire 120,000 volt, 60 cycle, three phase transmission lines with one shield wire.

Towers and Crossarms

See attached drawing T-2056, type "A" towers

Conductors

Six 795 MCM ACSR's, with one 7/16" steel shield wire.

Insulators

120Kv suspension assembly - 8 Ohio Brass insulators, catalog #48008 or equivalent.

Guy and Guy Attachments

None

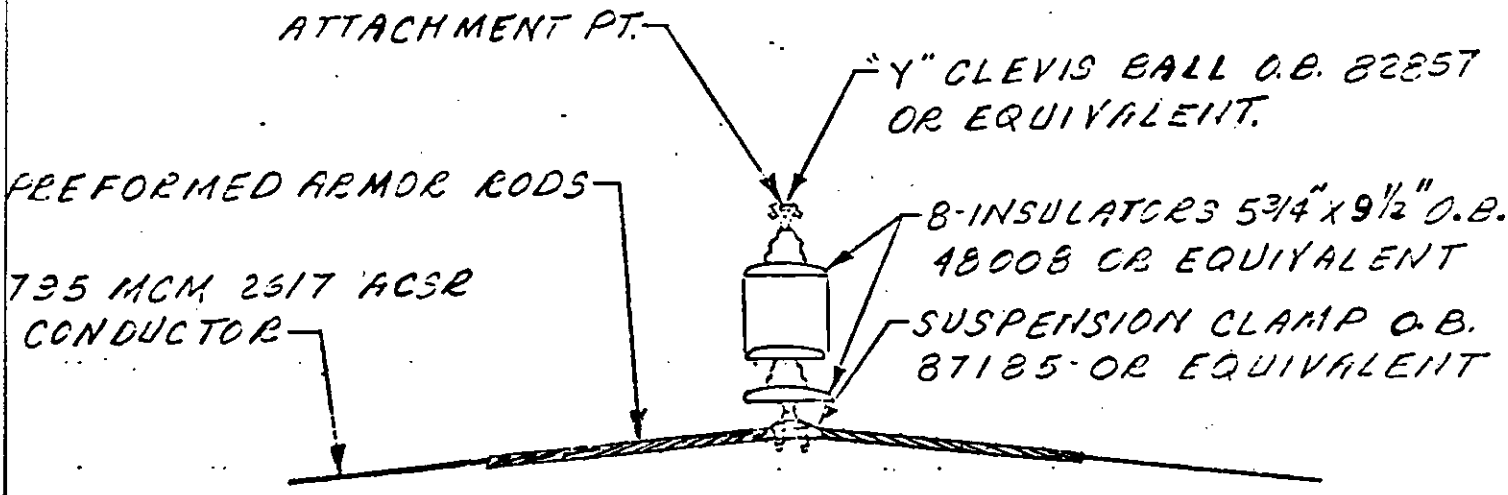
Suspension and Deadend Details

See attached drawing ED1-7572

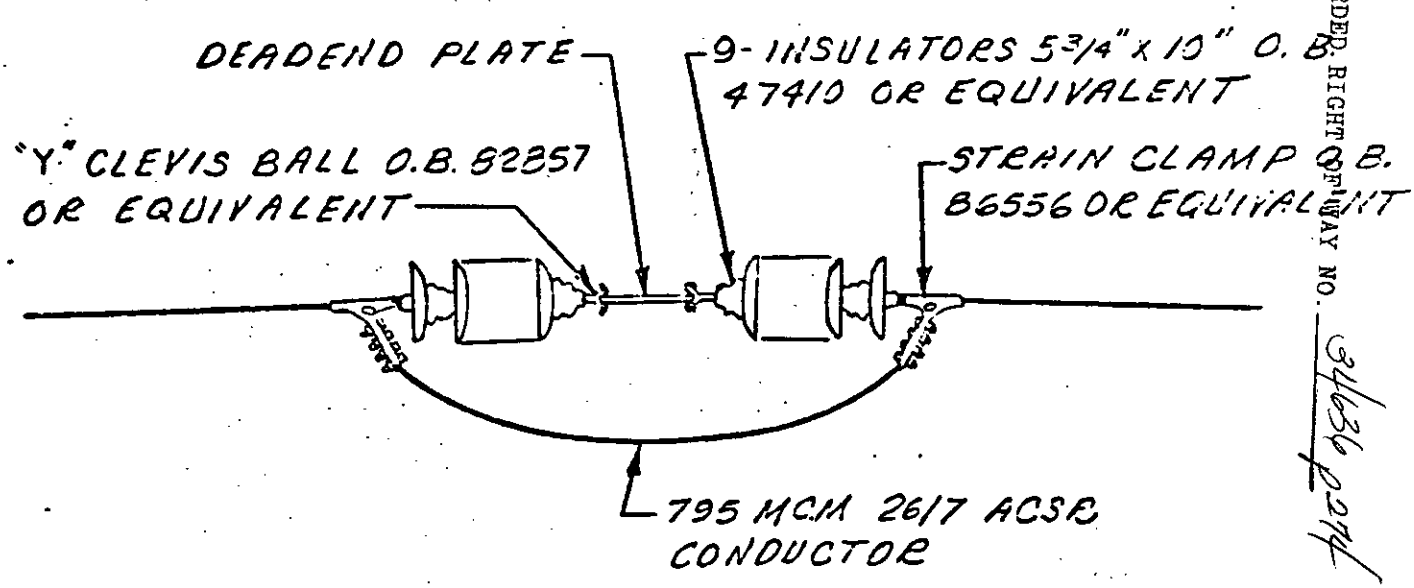
System Engineering Department
DGD/- 5/30/86

RECORDED RIGHT OF WAY NO. 34936 p2 of 4

DETAILS



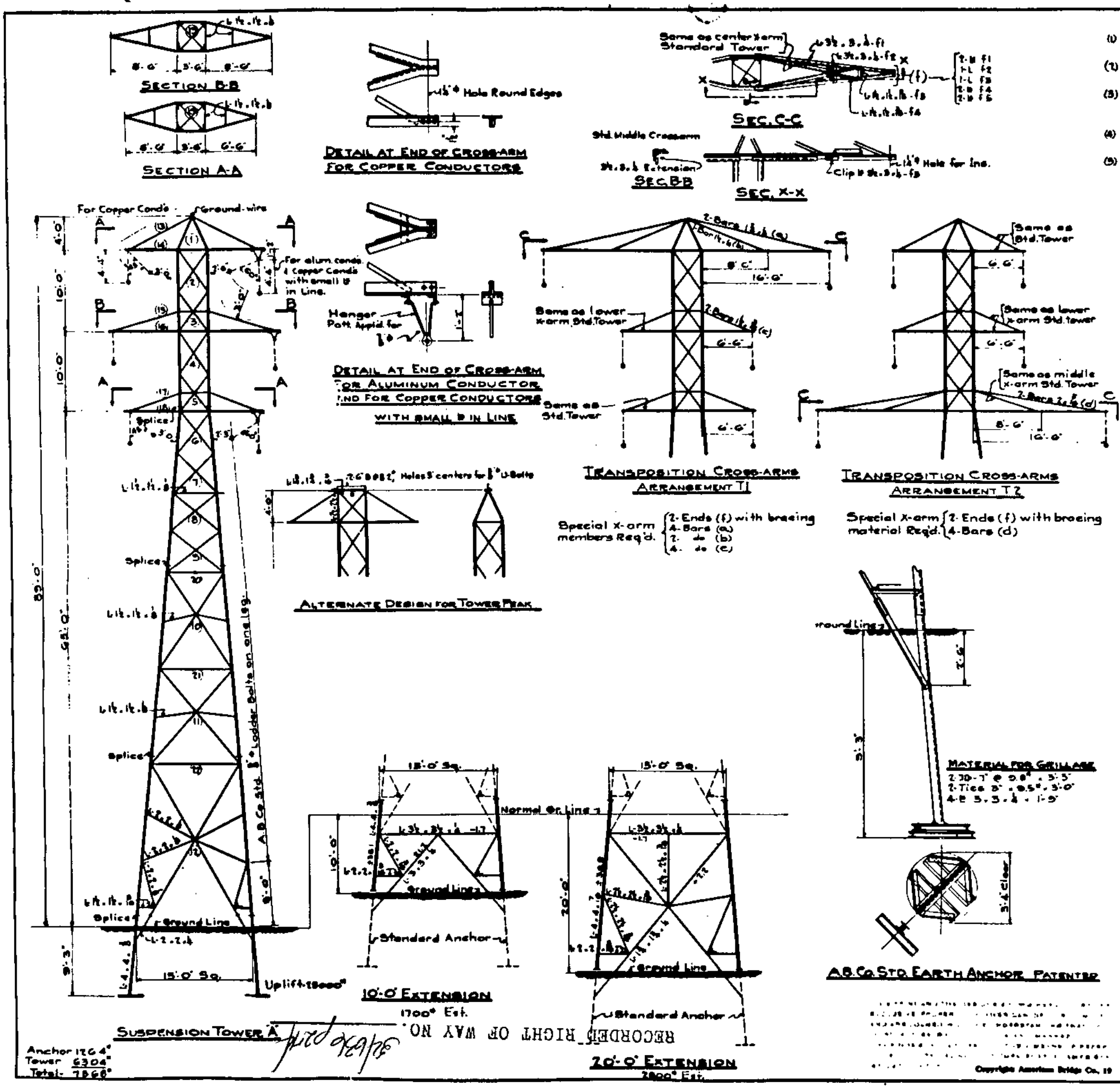
DEADEND ASS'Y DETAILS



RECORDED RIGHT OF WAY NO. 34636 p.274

REV A 1-20-77 WEZ

120 KV SUSPENSION & DEADEND ASS'Y DETAILS	APPROVED JK	THE DETROIT EDISON COMPANY GENERAL ENGINEERING DEPARTMENT
		LAYOUT BY J. WRIGHT DRAWN BY JLK
		DATE 5-7-71 SCALE DRAWING NUMBER ED1-7572



Loads

(1) A vertical load at each cable support of 1300#, total 8100#
(2) A horizontal load transverse to line of 1000# at each cable support, total 7000#
(3) A horizontal load in the direction of the line of 3500# at any one conductor support.
(4) Wind on tower of 30# per lin. foot of height of tower.
(5) Dead load of tower.

Unit Stresses

Tension on net section 20000# per □"
Compression on gross ....20000 - 85 l/r
Shear on bolts ....13500# per □"
Bearing on bolts ....27000# per □"

Material:- O.H. Steel for Bdge. A.S.T.M. Std. Specification.

Coating:- Material including bolts to be galvanized.

Note:- The above loads are based on
3/0 Hard drawn Copper Cable 880' Span
266800 C.M. Aluminum Steel Core 880' Span
3/0 " " " 1056' "

Member		Stress	Material
Legs	5	± 21.8	L-3½ . 3½ . ¼
	9	± 30.2	L-4 . 4 . 5/16
	11	± 34.4	L-4 . 4 . 3/8
	12	± 36.8	L- do
Bracing	1	± 0.6	L-2 . 2 . 3/16
	2	± 4.9	L-1¾ . 1¾ . 3/16
	3	± 4.9	do
	4	± 6.6	L-1¾ . 1¾ . 3/16
	5	± 6.6	do
	6	± 3.0	do
	7	± 3.7	do
	8	± 3.0	do
	9	± 2.4	do
	10	+ 5.8	L 1½ . 1½ . 3/16
	11	+ 4.3	do
	12	+ 5.8	do
Cross-Arms	13	+ 3.0	Bar 1½ . ¼
	14	± 8.7	L-3 . 2½ . 3/16
	15	+ 2.1	2-Bars 1½ . 3/16
	16	± 11.3	L-3 . 2½ . ¼
	17	+ 1.6	2-Bars 1½ . 3/16
	18	± 8.7	L-3 . 2½ . 3/16
	19	+ 4.8	Bar 1¾ . ¼
	20	- 2.0	L-2½ . 2½ . 3/16
	21	- 3.0	L-2½ . 2½ . 3/16
	22	- 2.7	L-3 . 3 . 3/16

TRANSMISSION TOWERS

DETROIT EDISON CO

SUSPENSION TOWER "A"

880'	NORMAL SPAN
110 000	VOLTS
2	CIRCUITS
	CONDUCTORS
7/16 S.M. Steel	GROUND WIRE

REVISIONS

2-9-22	Alternate Peak Added
2-7-21	Retraced

AMERICAN BRIDGE CO.

PITTSBURGH, PA.

INQUIRY No. P-31844-A

ORDER No. E-5306

DRAWING T-2056

DATE 10-22-20 SCALE

This drawing is traced from and supersedes drawings T-1751 & 1971. Arrangement for Cross-arms is revised.

GT RAIL

131 W. Lafayette
Detroit, MI 48226
Telephone: (313) 962-2260

October 30, 1984
Our File: 333

Mr. Richard A. Gloger
Lease Representative
Real Estate & Rights of Way
Detroit Edison Company
2000 Second Avenue
Detroit, Michigan 48226

Re: D.E. Plan RX 4338

Dear Mr. Gloger:

In accordance with your request this letter will serve as Grand Trunk's consent and approval to the construction of a wire crossing at a point you have described as "960 feet North of Gibraltar Road and 1,400 feet east of Cahill Road, on Ford Motor Company property, Southeast 1/4 Section 33, Brownstown Township, Wayne County, Michigan," consisting of the following wires:

six - 3/0 copper wires to carry 120,000 volts, 60 cycle,
three phase transmission line with one 3/0 copper ground wire.

This construction will be over private property and therefore a license agreement will not be required.

Yours very truly,

R. E. Milz

bb

RECORDED RIGHT OF WAY NO. 34636 p274

Detroit Edison
2000 Second Avenue
Detroit, Michigan 48226
(313) 237-8000

September 29, 1984

Mr. W. LaMasters
Engineer of Surveys & Construction
Grand Trunk Western Railroad Company
131 Lafayette Blvd.
Detroit, Michigan 48226

Proposed Overhead Wire Crossing:

One 6 Wire 120,000 Volt, 60 Cycle, Three Phase Transmission Line with one Ground Wire.

Specific Location

960 Feet North of Gibraltar Road and 1,400 feet east of Cahill Road, on Ford Motor Company property.

RECORDED RIGHT OF WAY NO. 34636 P 274

R.R. Valuation Station _____ R.R. Mile Post _____

City/Village _____ Township SE¼ of Section 33 Brownstown

County Wayne Detroit Edison Plan Attached RX 4338

This is a New Crossing XX This is a Reconstruction of Existing Crossing _____

Previous Agreement Information (if any) Date _____ (R.R. Plan) _____

Blanket Waiver of Hearing Covers _____ Waiver of Hearing Requested XX
(Waiver of Hearing to be mailed to applicant listed below)

All construction will be done in accordance with the rules and regulations of the Michigan Public Service Commission.

Richard A. Gloger

Richard A. Gloger
Lease Representative
Real Estate & Rights of Way

/ss

DE 963-2866 10-81CS (PD 187)

DATA SHEET TO ACCOMPANY DRAWING RX-4338

Name of Company

The Detroit Edison Company

Name and Location of Crossing

Crossing of the Brownstown-Fermi 120KV transmission line over the D.T. & I Railroad Spur Line. Located at 960 feet north of Gibraltar Road and 1,400 feet east of Cahill Road, on Ford Motor Company property.

Southeast 1/4 of section 33, Brownstown Township, Wayne County, Michigan.

Circuits

One 6 wire 120,000 volt, 60 cycle, three phase transmission line with one groundwire.

Towers and Crossarms

See attached drawing T-2056 (A).

Conductors

Six 3/0 copper, with one 3/0 copper ground wire.

Insulators

120KV suspension assembly - 8 O.B. insulators O.B. 48008 or equivalent

Guy and Guy Attachments

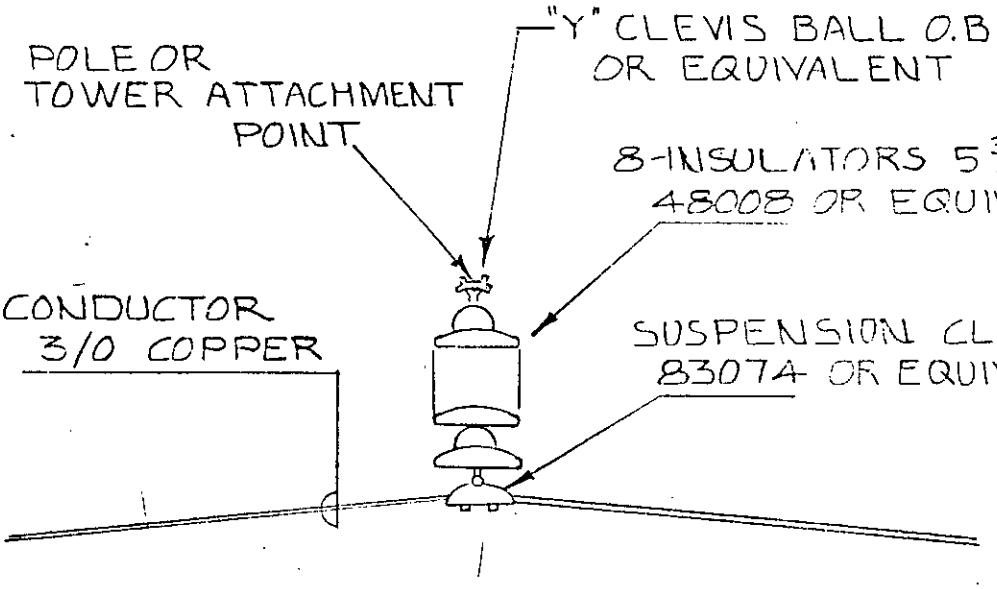
None

Suspension and Deadend Details

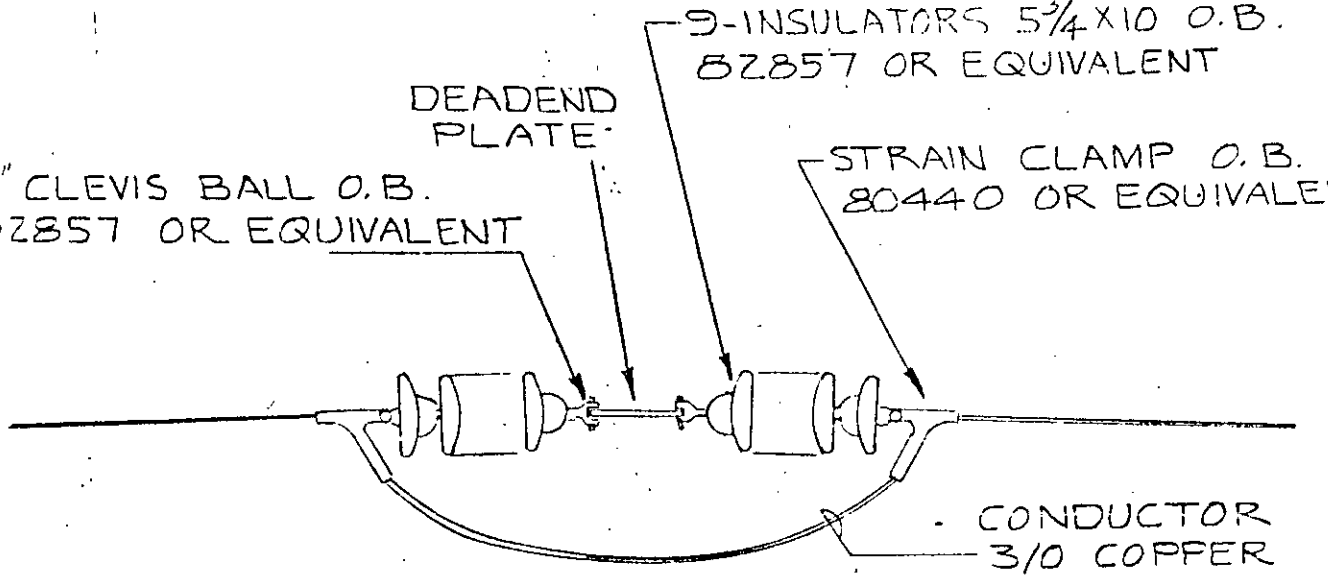
See attached drawing ED1-8175

RECORDED RIGHT OF WAY NO. 34636 p2 of 4

System Engineering Departmen
CVP/cb 8/13/84



SUSPENSION DETAILS

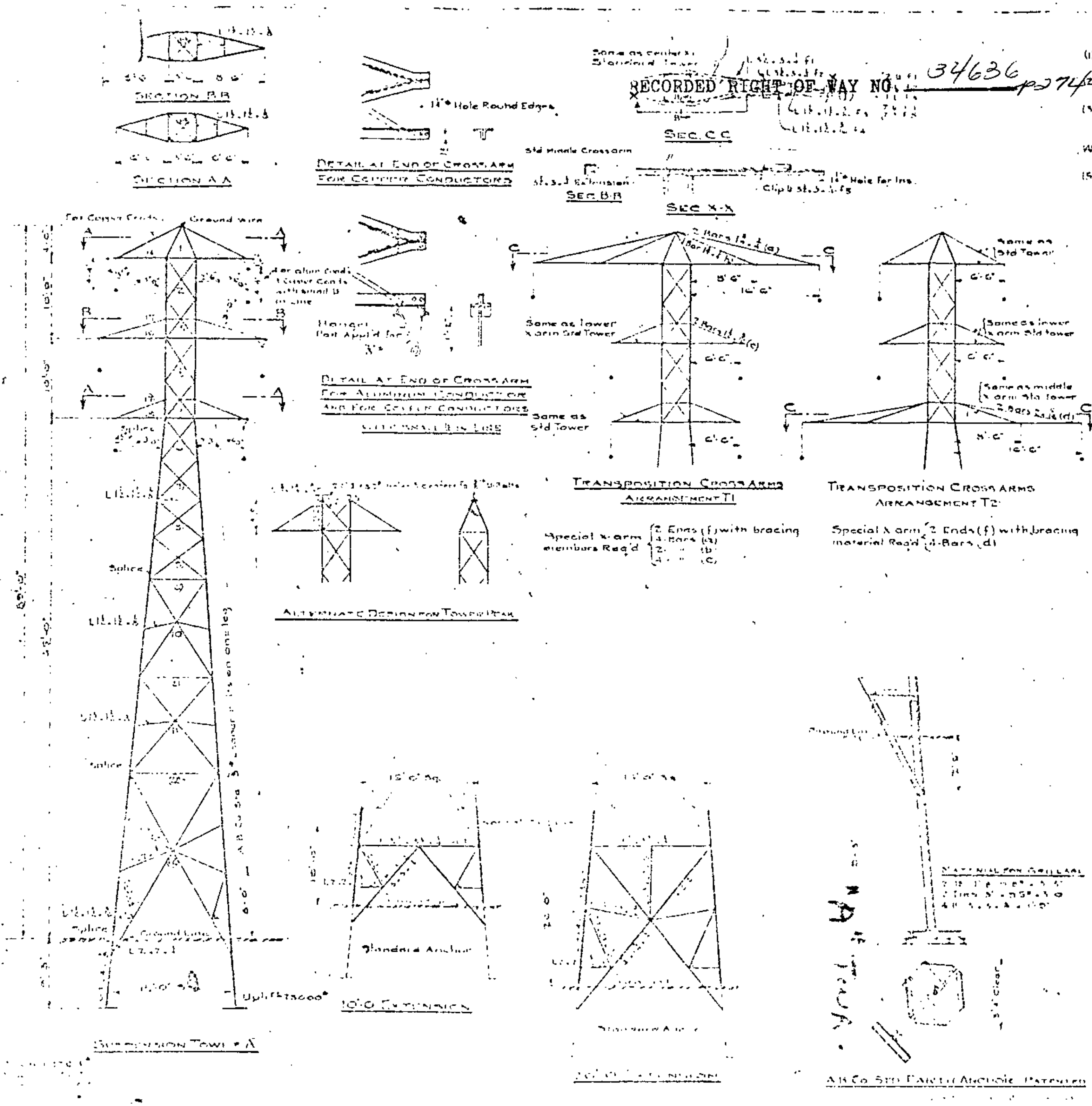


DEADEND DETAILS

RECORDED RIGHT OF WAY NO. 34636 pg 274

120 KV SUSPENSION AND DEADEND DETAILS FOR 3/0 COPPER	APPROVED JH	THE DETROIT EDISON COMPANY SYSTEM ENGINEERING DEPARTMENT LAYOUT BY C. VAN PARIS DRAWN BY DATE 9-21-72 DRAWING NUMBER ED 1-8175 SCALE

RECORDED RIGHT OF WAY NO. 34636 p 274



Loads

(1) A vertical load at each co[illegible] support of 1300# total 9100#
(2) A horizontal load transverse to line of 1000# at each cable support, total 7000#
(3) A horizontal load in the direction of the line of 3500# at any one conductor support
(4) Wind on tower of 30# per lin foot of height of tower.
(5) Dead load of tower

Unit Stresses

Tension on net section 20000# per □"
Compression on gross " 20000 − 85 l/r
Shear on bolts 13500# per □"
Bearing on bolts 27000# " "

Material — O.H. Steel for Bldgs A.S.T.M. Std Specification

Coating — Material including bolts to be galvanized

Note — The above loads are based on 3/0 Hard drawn Copper Cable 550' Span 266,500 C.M. Aluminum Steel Core 680 Span 3/0 " " " 1056' "

Member		Stress	Material
Legs	5	±21.4	L 3½ × 3½ × [illegible]
	9	±30.2	L 4 × 4 × [illegible]
	11	±34.4	L 4 × 4 × [illegible]
	12	±34.9	L do
Bracing	1	±0.6	L 2 × 2 × [illegible]
	2	±4.9	L 1¾ × 1¾ × [illegible]
	3	±4.9	do
	4	±6.6	L 1¾ × 1¾ × [illegible]
	5	[illegible]	do
	6	±5.[illegible]	do
	7	±5.7	do
	8	±3.0	do
	9	±2.4	do
	10	±5.8	L 1¾ × 1¾ × [illegible]
	11	±4.5	do
	12	±3.8	do
Cross Arms	13	±3.0	[illegible]
	14	±3.7	L 3 × 2½ × [illegible]
	15	±2.1	2 Bars 1¾ × [illegible]
	16	±11.5	L 3 × 2½ × [illegible]
	17	±1.[illegible]	2 Bars 1¾ × [illegible]
	18	±3.7	L 3 × 2½ × [illegible]
	19	±4.8	Bar 1¾ × [illegible]
	20	−2.0	L 2½ × 2½ × [illegible]
	21	−5.0	L [illegible] × 2½ × [illegible]
	22	−2.1	L 3 × 3 × [illegible]

Transmission Towers

Detroit Edison Co.

Suspension Tower A

American Bridge Co.

Pittsburgh, PA

[illegible] P-5124 A

Order No. E-5306

[illegible] T-2056

THE CALCULATIONS FOR THIS TRIAL ARE FOR BNSTN-MAZDA #2, TOWERS #1211 TO 1215
STRESS-STRAIN CURVES USED REPRESENT 795,000 CM ACSR 26/7

STARTING INDEX	COMPUTED RULING SPAN	STARTING SAG OR TENSION	AREA OF CONDUCTOR	INITIAL LIMIT MAX TENSION	INITIAL BARE LIMIT TENSION	FINAL BARE LIMIT SAG OR TENSION
1	594.9	8000.00	0.72610	18720.00	10920.00	7800.00

SAG IS IN FEET AND TENSION IS IN POUNDS.

INDEX	TEMP.	INITIAL SAG	INITIAL TENSION	FINAL SAG	FINAL TENSION
1	0.	13.98	-8000.	13.98	8000.
2	0.	10.63	4564.	11.32	4286.
3	32.	14.18	6554.	14.52	6400.
4	10.	11.04	4394.	11.78	4117.
5	20.	11.45	4238.	12.25	3963.
6	30.	11.85	4093.	12.70	3821.
7	40.	12.26	3958.	13.15	3692.
8	50.	12.66	3833.	13.59	3573.
9	60.	13.06	3717.	14.02	3463.
10	70.	13.45	3608.	14.44	3363.
11	80.	13.84	3507.	14.86	3269.
12	90.	14.23	3413.	15.27	3182.
13	100.	14.61	3325.	15.67	3101.
14	110.	14.98	3242.	16.07	3025.
15	120.	15.35	3165.	16.29	2984.
16	257.	19.03	2558.	19.00	2562.
17	347.	20.72	2352.	20.68	2356.

----MINUS SIGN INDICATES CONTROLLING SAG OR TENSION VALUE

THE CALCULATIONS FOR THIS TRIAL ARE FOR BNSTN-MAZDA #2, TOWERS #1211 TO 1215
STRESS-STRAIN CURVES USED REPRESENT 795,000 CM ACSR 26/7

STARTING INDEX	COMPUTED RULING SPAN	STARTING SAG OR TENSION	AREA OF CONDUCTOR	INITIAL LIMIT MAX TENSION	INITIAL BARE LIMIT TENSION	FINAL BARE LIMIT SAG OR TENSION
1	594.9	8000.00	0.72610	18720.00	10920.00	7800.00

INDEX	TEMP.	INITIAL SAG	INITIAL TENSION	FINAL SAG	FINAL TENSION
1	0.	13.98	-8000.	13.98	8000.
2	0.	10.63	4564.	11.32	4286.
3	32.	14.18	6554.	14.52	6400.
4	10.	11.04	4394.	11.78	4117.
5	20.	11.45	4238.	12.25	3963.
6	30.	11.85	4093.	12.70	3821.
7	40.	12.26	3958.	13.15	3692.
8	50.	12.66	3833.	13.59	3573.
9	60.	13.06	3717.	14.02	3463.
10	70.	13.45	3608.	14.44	3363.
11	80.	13.84	3507.	14.86	3269.
12	90.	14.23	3413.	15.27	3182.
13	100.	14.61	3325.	15.67	3101.
14	110.	14.98	3242.	16.07	3025.
15	120.	15.35	3165.	16.29	2984.
16	257.	19.03	2558.	19.00	2562.
17	347.	20.72	2352.	20.68	2356.

SAG IS IN FEET AND TENSION IS IN POUNDS.

----MINUS SIGN INDICATES CONTROLLING SAG OR TENSION VALUE

RECORDED RIGHT OF WAY NO. Alabama Power

THE CALCULATIONS FOR THIS TRIAL ARE FOR 3/0 CU STUDY 7/16/69
STRESS-STRAIN CURVES USED REPRESENT 3/0 COPPER

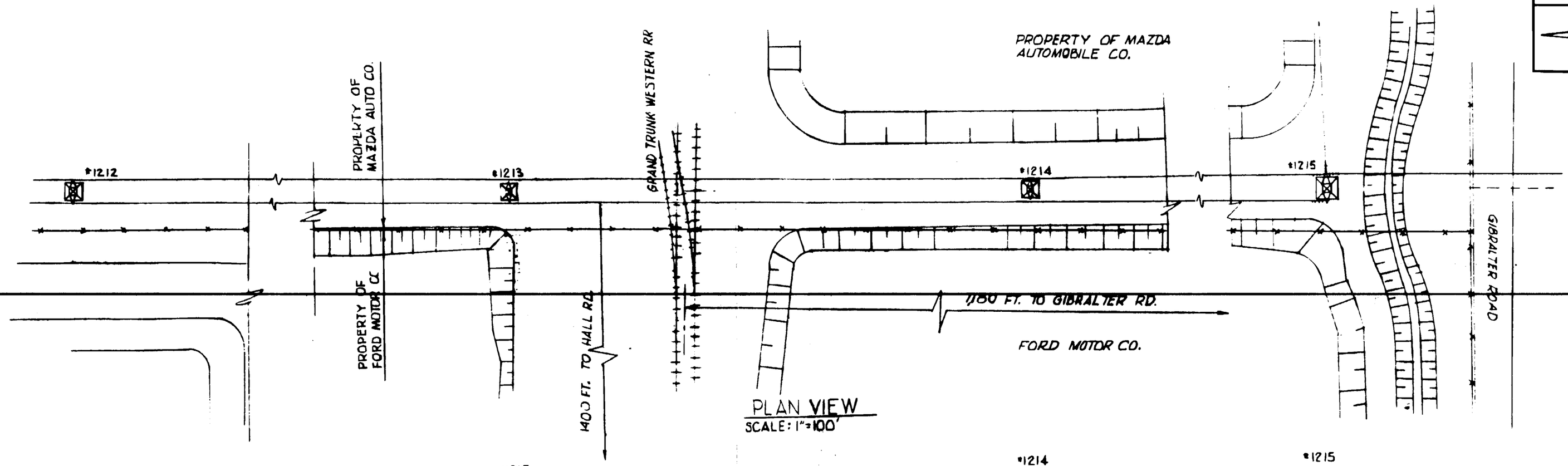
STARTING INDEX	RULING SPAN	STARTING SAG OR TENSION	AREA OF CONDUCTOR	INITIAL LIM MAX TENSIO
1	700.0	3950.00	0.13180	3950.0

INDEX	TEMP.	INITIAL SAG	INITIAL TENSION	FINAL SAG	FINAL TENSION	S
1	0.	23.55	-3950.	23.55	3950.	----MINUS
2	0.	-17.87	1783.	19.13	1666.	
3	0.	21.55	3191.	22.04	3121.	
4	30.	-19.00	1678.	20.26	1574.	
5	60.	-20.11	1586.	21.36	1494.	
6	90.	-21.18	1506.	22.41	1424.	
7	120.	-22.23	1436.	23.44	1363.	

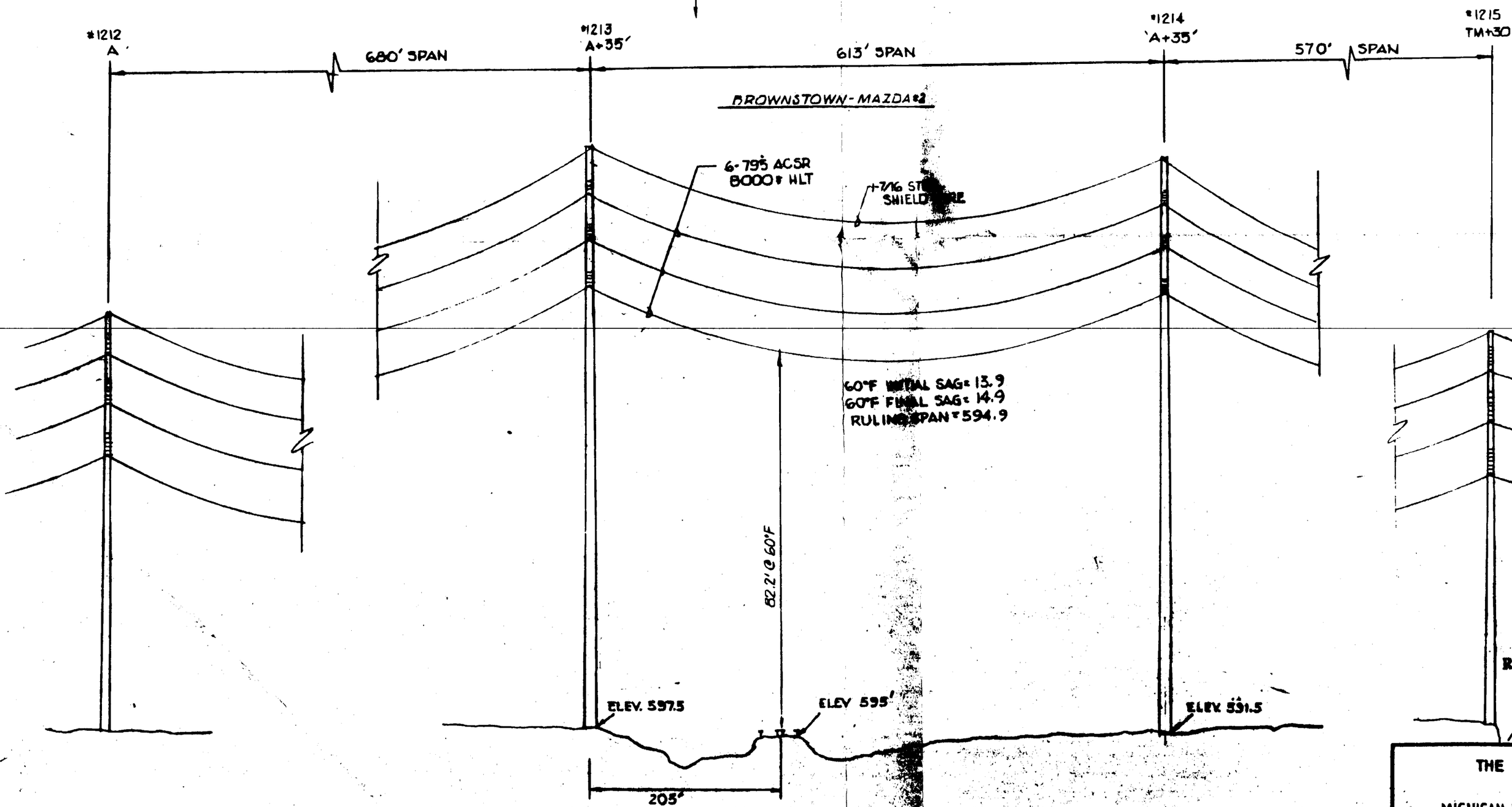
****

RECORDED RIGHT OF WAY NO. 34636 pg 74

NORTH ARROW



PLAN VIEW
SCALE: 1"=100'



ELEVATION OF CROSSING
HORIZONTAL 1"=100'
VERTICAL 1"= 20'

RECORDED R/W FILE NO. ~~34636~~

THE DETROIT EDISON COMPANY

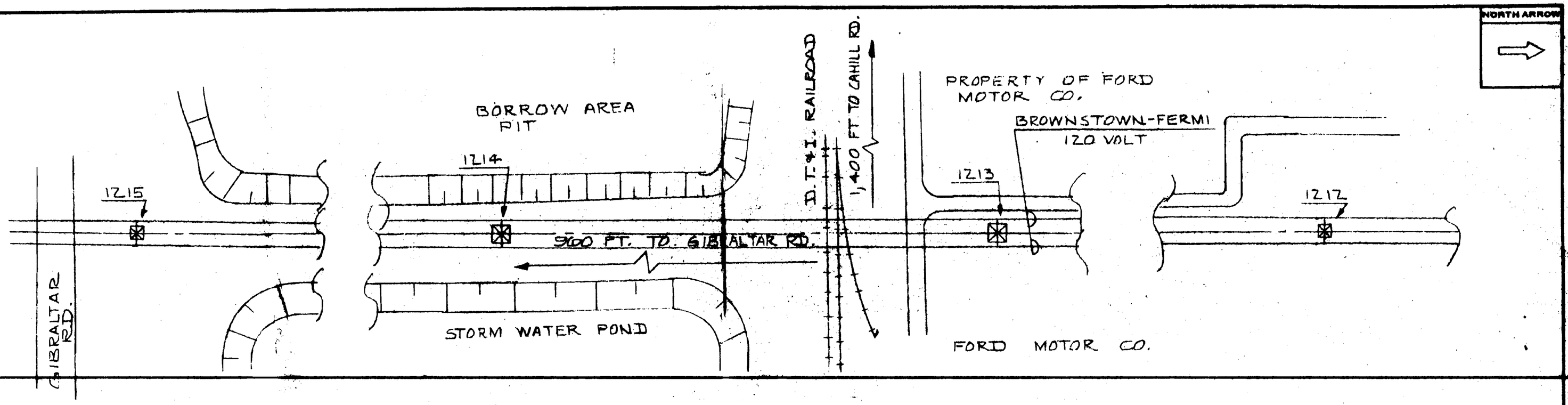
PLAN SUBMITTED TO
MICHIGAN DEPARTMENT OF TRANSPORTATION
~~MICHIGAN PUBLIC SERVICE COMMISSION~~

FOR 120,000 VOLT CROSSING
OVER GRAND TRUNK WESTERN
DRAWN BY D. DOUBLEY DATE 5-26-86
APPROVED BY W. J. Thrasher DATE 6-02-86

CITY FLATROCK
COUNTY WAYNE
TOWNSHIP BROWNSTOWN
SECTION NO. S.E. 1/4 - 25

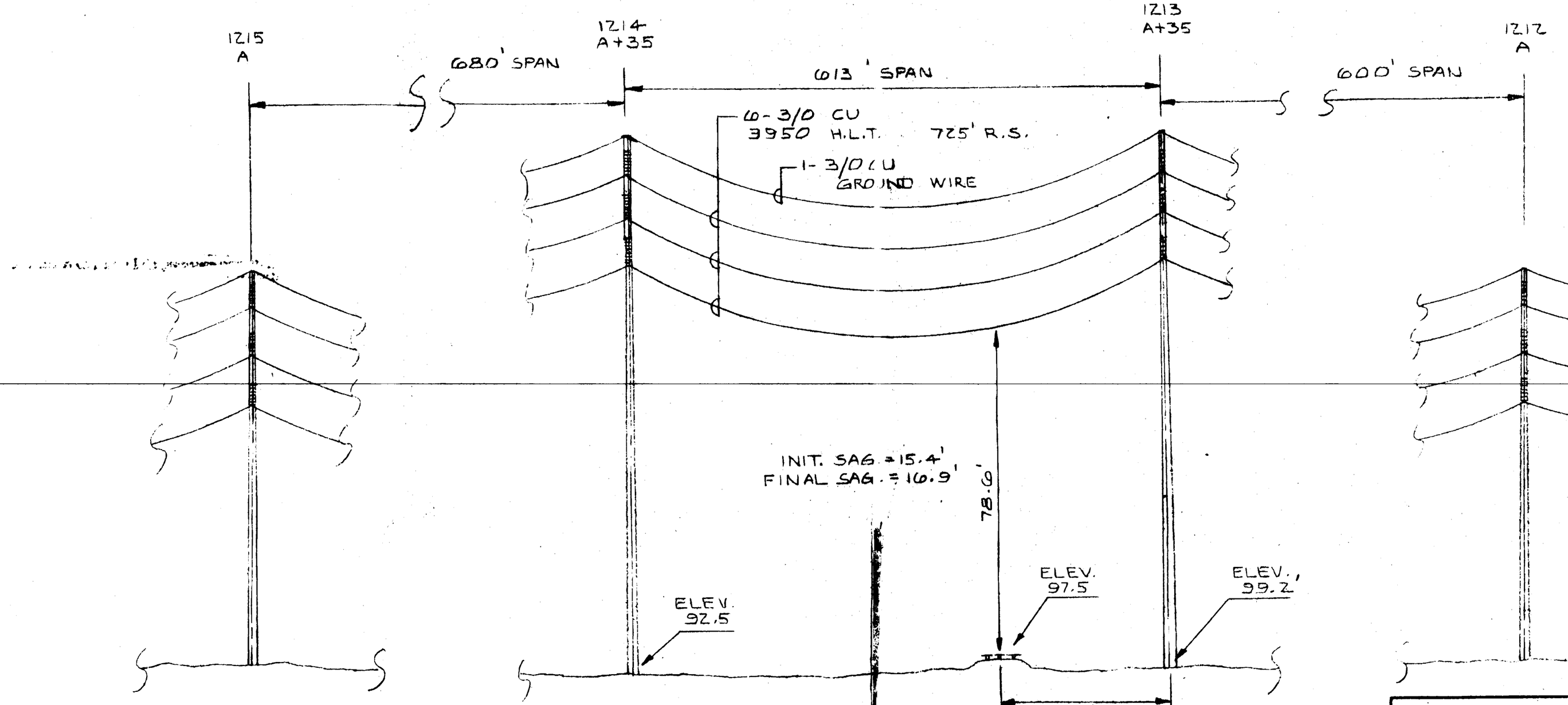
PERMIT NO. ED

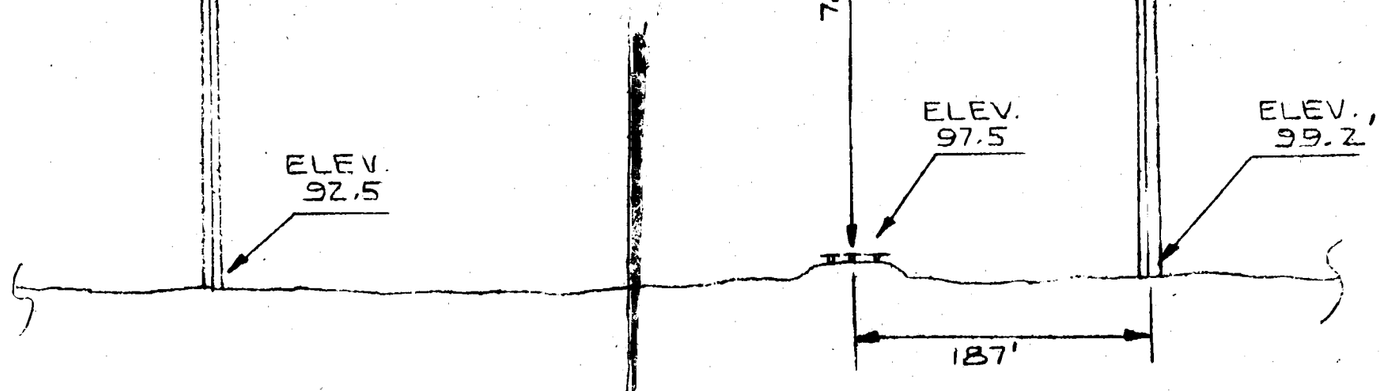
DRAWING NO. RX-4338A



PLAN OF CROSSING

SCALE 1"=100'





ELEVATION OF CROSSING

SCALE: HOR. 1"=100'
VERT. 1"=20'

ALL DIMENSIONS AT 40°F FINAL

RECORDED R/W FILE NO. 34636 P274

CITY
COUNTY WAYNE
TOWNSHIP BROWNSTOWN
SECTION NO. S.E. 1/4 - 33

THE DETROIT EDISON COMPANY

PLAN SUBMITTED TO

MICHIGAN PUBLIC SERVICE COMMISSION

FOR 120,000 VOLT CROSSING
OVER D.T.&I. RAILROAD
DRAWN BY C. VAN PARIS DATE 8-10-84
APPROVED BY M.J. Thacker DATE 8-10-84

PERMIT NO.	DRAWING NO.
ED	RX- 4338

DE FORM 85 102 PTG. 12-79