

# NEW YORK CENTRAL SYSTEM

C. E. DEFENDORF  
CHIEF ENGINEER  
KARL OVARDITS  
ASST. PLANNING ENGINEER

LA SALLE STREET STATION  
CHICAGO 5, ILLINOIS

October 30, 1964

File M-DE-509A-M

The Detroit Edison Company  
2000 Second Avenue  
Detroit, Michigan

Attention: Mr. I. W. Gamble  
Supervisor of Rights of Way

Gentlemen:

As requested in your letter of October 28, 1964, attached for your record is fully executed copy of agreement dated October 1, 1964, between our respective companies covering your 120,000 volt aerial power wire line crossing of our r/w and track at our val.sta.909+60 at Warren, Michigan, and providing for an initial fee of \$100 and annual rental of \$100.

Yours very truly,

*C. E. Defendorf*  
Chief Engineer. *AD*

encl

RECORDED RIGHT OF WAY NO. 22879

# THE DETROIT EDISON COMPANY

2000 SECOND AVENUE  
DETROIT 26, MICHIGAN

October 28, 1964

Railroad File No. M-DE-509A-M

Mr. C. E. Defendorf  
Chief Engineer  
New York Central System  
La Salle Street Station  
Chicago 5, Illinois

Dear Mr. Defendorf:

We are returning agreement/~~permits~~ in duplicate, covering our facilities over your tracks and/~~or~~ right of way as shown on our Plan RX-3655, and located as follows:

Part of the St. Clair-Logan-Troy and the Sterling-Logan-Northeast 120 KV transmission lines, 1/2 mile west of Van Dyke and approximately 2660 feet south of the center line of 16 Mile Road. Valuation Station 909+68 (Crossing #1)

City/Village \_\_\_\_\_ Township, Sterling (Section 28),  
County Macomb. The agreement/~~permits~~ has been signed for our Company.

Will you please return one fully executed copy of this agreement/~~permits~~ to us for our records.

Yours very truly,

*I. W. Gamble*

I. W. Gamble  
Supervisor of Rights of Way  
Properties and Rights of Way Dept.

IWG/gd  
Encls.

RECORDED RIGHT OF WAY NO. 228779

# NEW YORK CENTRAL SYSTEM

C. E. DEFENDORF  
CHIEF ENGINEER  
KARL OVARDITS  
ASST. PLANNING ENGINEER

LA SALLE STREET STATION  
CHICAGO 5, ILLINOIS

October 20, 1964

File: M-DB-509A-M

The Detroit Edison Company  
2000 Second Avenue  
Detroit, Michigan

Attention: Mr. I. W. Gamble  
Supervisor of Rights of Way

I. W. GAMBLE

*IW*  
OCT 21 1964

*WGH*  
PROP. & R/W DEPT.

Gentlemen:

As referred to in our letter dated October 6th, enclosed herewith is original and duplicate copy of proposed agreement dated October 1, 1964, between our respective companies covering your 120,000 volt aerial power wire line crossing of our right of way and track at our valuation station 909.68 at Warren, Michigan, and providing for an initial fee of \$100.00 and an annual rental of \$100.00.

Please arrange for execution of both copies and return same to me for like action on behalf of our company, after which a fully executed copy will be returned for your record.

Yours very truly,

*C. E. Defendorf*  
Chief Engineer

encls.

RECORDED RIGHT OF WAY NO. 22879.

INTERDEPARTMENT CORRESPONDENCE

October 20, 1964

NOTICE OF PERMIT RECEIVED

TO: Mr. Martin F. Widor, A-420 Warren Service Center  
Overhead Lines Department

Michigan Public Service Commission Permit ED2-8-5436 (10-19-64)

For crossing of steel tower/~~hardware~~ transmission line over tracks of New York  
Central System

Location: In private property at a point on the St. Clair-Logan-Troy  
and the Sterling-Logan-Northeast 120-KV Transmission Lines approximately  
2660 feet south of the center line of Sixteen Mile Road and 370 feet  
east of the New York Central Railroad right of way.

City/Village \_\_\_\_\_

Township Sterling (Section 28)

County Macomb Crossing Plan No. RX-3655 (Crossing #2)

I. W. Gamble/dal  
Properties and Rights of Way Dept.

CC - RAILROAD CROSSING ENGINEER,  
GENERAL ENGINEERING  
TRANSMISSION ENGINEER,  
GENERAL ENGINEERING

RECORDED RIGHT OF WAY NO.

22879

INTERDEPARTMENT CORRESPONDENCE

October 20, 1964

NOTICE OF PERMIT RECEIVED

TO: Mr. Martin F. Wider, A-420 Warren Service Center  
Overhead Lines Department

Michigan Public Service Commission Permit ED2-B-5435 (10-19-64)

For crossing of steel tower/~~to~~ transmission line over tracks of New York  
Central System

Location: **In Railroad property at a point on the St. Clair-Logan-Troy  
and the Sterling-Logan-Northeast 120-KV Transmission Lines approximately  
2660 feet south of the center line of Sixteen Mile Road and 1/2 mile  
west of Van Dyke.**

City/Village \_\_\_\_\_

Township Sterling (Section 28)

County Macomb Crossing Plan No. HX-3655 (Crossing #1)

I. W. Gamble/dal  
Properties and Rights of Way Dept.

CC - RAILROAD CROSSING ENGINEER,  
GENERAL ENGINEERING  
TRANSMISSION ENGINEER,  
GENERAL ENGINEERING

# THE DETROIT EDISON COMPANY

2000 SECOND AVENUE  
DETROIT, MICHIGAN 48226

October 9, 1964

Michigan Public Service Commission  
Lansing 13, Michigan

Gentlemen:

The Detroit Edison Company, Detroit, Michigan, hereby makes application for authority to string the following wires over the tracks of the New York Central Railroad Company in Sterling Township, Section 28, Macomb County, Michigan.

## Crossing #2

Two 120,000 volt, 60-cycle, 3-wire, 3-phase transmission circuits with two ground wires over the tracks of the New York Central Railroad located in private property at a point on the St. Clair-Logan-Troy and the Sterling-Logan-Northeast 120-KV Transmission Lines approximately 2660 feet south of the center line of Sixteen Mile Road and 370 feet east of the New York Central Railroad right of way.

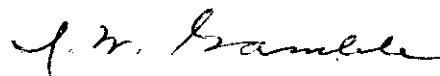
The proposed wire crossing will be constructed in accordance with specifications of the Michigan Public Service Commission and the construction standards of The Detroit Edison Company, approved by the Michigan Public Service Commission on July 19, 1939, File ED 2-9.01.

- Enclosed is a waiver of hearing granted by the Railroad Company. (10-6-64)
- Waiver of hearing by the Railroad Company is covered by blanket waiver.
- This application covers reconstruction of existing crossing and will cancel and supersede wire crossing permit No. \_\_\_\_\_ dated \_\_\_\_\_
- This is a new crossing.

Reference number of construction drawing is RX-3655, 3 copies enclosed.

Railroad File M-DE-509A-M

Yours very truly,



I. W. Gamble  
Supervisor of Rights of Way  
Properties and Rights of Way Dept.

RECORDED RIGHT OF WAY NO. 22579

# THE DETROIT EDISON COMPANY

2000 SECOND AVENUE  
DETROIT, MICHIGAN 48226

October 9, 1964

Michigan Public Service Commission  
Lansing 13, Michigan

Gentlemen:

The Detroit Edison Company, Detroit, Michigan, hereby makes application for authority to string the following wires over the tracks of the New York Central Railroad Company in Sterling Township, Section 28, Macomb County, Michigan.

### Crossing #1

Two 120,000 volt, 60-cycle, 3-wire, 3-phase transmission circuits with one ground wire over the tracks of the New York Central Railroad located in Railroad property at a point on the St. Clair-Logan-Troy and the Sterling-Logan-Northeast 120-KV Transmission Lines approximately 2660 feet south of the center line of Sixteen Mile Road and 1/2 mile west of Van Dyke.

The proposed wire crossing will be constructed in accordance with specifications of the Michigan Public Service Commission and the construction standards of The Detroit Edison Company, approved by the Michigan Public Service Commission on July 19, 1939, File ED 2-9.01.

- Enclosed is a waiver of hearing granted by the Railroad Company. (10-6-64)
- Waiver of hearing by the Railroad Company is covered by blanket waiver.
- This application covers reconstruction of existing crossing and will cancel and supersede wire crossing permit No. \_\_\_\_\_ dated \_\_\_\_\_
- This is a new crossing.

Reference number of construction drawing is RX-3655, 3 copies enclosed

Railroad File M-DE-509A-M

Yours very truly,



I. W. Gamble  
Supervisor of Rights of Way  
Properties and Rights of Way Dept.

RECORDED RIGHT OF WAY NO.

22879

# NEW YORK CENTRAL SYSTEM

LaSalle St. Station  
Chicago 5, Ill.

October 6, 1961

File M-DE-509A-M

The Detroit Edison Company  
2000 Second Ave.  
Detroit 26, Michigan

Attention: Mr. I. W. Gamble, Supervisor of Rights of Way  
Properties and Rights of Way Department

Gentlemen:

Reference is made to your letter of June 12, 1961, for a standard waiver of hearing before the Michigan Public Service Commission for a wire crossing permit to install two 120,000 volt, 60-cycle, 3-wire, 3-phase transmission circuits with two ground wires (Crossing #2), part of the St. Clair-Logan-Troy and the Sterling-Logan-Northeast 120 KV Transmission Lines, approximately 2660 ft. south of the center line of 16 Mile Road and 370 ft. east of our right-of-way, in the City of Warren, Sterling Township (Section 28), Macomb County, Michigan, as indicated on your plan RX-3655.

The New York Central Railroad Company, lessee of the Michigan Central Railroad, hereby waives hearing in regard to your Company making the above mentioned crossing provided the work is done in a safe and satisfactory manner and subject to rules and regulations of the Michigan Public Service Commission.

Advice should be furnished Mr. C. F. Hunt, District Engineer, Detroit, Michigan, by letter or wire, three days prior to start of the work.

Yours very truly,

(Sgd) C. E. Defendorf

Chief Engineer.

cc: Mr. C. F. Hunt

RECORDED RIGHT OF WAY NO. 22879



# NEW YORK CENTRAL SYSTEM

LaSalle St. Station  
Chicago 5, Ill.

October 6, 1961

File M-DE-509A-M

The Detroit Edison Company  
2000 Second Ave.  
Detroit 26, Michigan

Attention: Mr. I. W. Gamble, Supervisor of Rights of Way  
Properties and Rights of Way Department

Gentlemen:

Reference is made to your letter of June 12, 1961, for a standard waiver of hearing before the Michigan Public Service Commission for a wire crossing permit to install two 120,000 volt, 60-cycle, 3-wire, 3-phase transmission circuits with one ground wire (Crossing #1), part of the St. Clair-Logan-Tröy and the Sterling-Logan-Northeast 120 KV transmission lines, 1/2 mile west of Van Dyke and approximately 2660 ft. south of the center line of 16 Mile Road (our val. sta 909+68), in the City of Warren, Sterling Township (Section 28), Macomb County, Michigan, as indicated on your plan RX-3655.

The New York Central Railroad Company, lessee of the Michigan Central Railroad, hereby waives hearing in regard to your Company making the above mentioned crossing provided the work is done in a safe and satisfactory manner and subject to rules and regulations of the Michigan Public Service Commission.

Advice should be furnished Mr. C. F. Hunt, District Engineer, Detroit, Michigan by letter or wire, three days prior to start of the work.

Yours very truly,

(Sgd) C. E. Defendorf

Chief Engineer.

cc: Mr. C. F. Hunt

RECORDED RIGHT OF WAY NO.

22879

# NEW YORK CENTRAL SYSTEM

C. E. DEFENDORF  
CHIEF ENGINEER  
KARL OVARDIUS  
ASST. PLANNING ENGINEER

LA SALLE STREET STATION  
CHICAGO 5, ILLINOIS

October 6, 1964

File M-DE-509A-M

ACCEPTED:

*I. W. Gamble*  
IVAN W. GAMBLE

Date: OCT 9 1964

The Detroit Edison Company  
2000 Second Ave.  
Detroit 26, Michigan

Attention: Mr. I. W. Gamble, Supervisor of Rights of Way  
Properties and Rights of Way Department

Gentlemen:

Reference is made to your letter of June 12, 1964, attaching copies of your plan RX-3655 covering your proposed installation of a 120,000 volt aerial power wire line crossing of our r/w and track at our val. sta. 909+68, 2660 ft. south of the center line of 16 Mile Road in the City of Warren, Michigan.

As requested, waiver of hearing before the Michigan Public Service Commission is attached, in duplicate, to cover the aerial crossing of our property and track.

This approval is given with the understanding that you will enter into our usual form of revocable agreement to cover the crossing of our property and track and provide for a fee of \$100 and an annual rental of \$100.

Should you desire to proceed with the installation prior to preparation of the agreement, we would have no objections with the further understanding that you will reimburse the Railroad Co. for any expense it may incur in connection with the installation and that you shall in no instance be relieved from making such payment by any third party or parties agreeing in any manner to assume or pay same, the work will be performed in a safe and satisfactory manner, your Company to assume all liability in connection with the installation, and that you will notify Mr. C. F. Hunt, District Engineer, Detroit, Michigan, by letter or wire, three days prior to start of work.

If the above terms and conditions meet with your approval, will you please indicate your acceptance in the space provided on the duplicate of this letter and return it to me, it being understood no work will be started until this condition is complied with and Mr. Hunt notified as herein requested.

Yours very truly,

*C. E. Defendorf*  
Chief Engineer.

cc: Mr. C. F. Hunt

RECORDED RIGHT OF WAY NO. 22579

June 30, 1964

Railroad File: M-DE-509A-M

Mr. C. E. Defendorf, Chief Engineer  
New York Central System  
LaSalle Street Station  
Chicago 5, Illinois

Dear Mr. Defendorf:

In response to your letter of June 24, 1964, our engineers verify that the crossing is at your Valuation Station 909+68.

The siding tracks east of your right of way are owned by Chrysler Corporation and are located as shown in red on your print attached.

Very truly yours,



I. W. Gamble  
Supervisor of Rights of Way  
Properties and Rights of Way Dept.

LGH:dal  
Enclosure

RECORDED RIGHT OF WAY NO.

22879

# NEW YORK CENTRAL SYSTEM

C. E. DEFENDORF  
CHIEF ENGINEER  
KARL OVARDITS  
ASST. PLANNING ENGINEER

LA SALLE STREET STATION  
CHICAGO 5, ILLINOIS

June 24, 1964

File M-DE-509A-M

I. W. GAMBLE

JUN 24 1964

PROP. & R/W DEPT.

The Detroit Edison Company  
2000 Second Avenue  
Detroit 26, Michigan

Attention: Mr. I. W. Gamble, Supervisor of Rights of Way

Gentlemen:

Reference is made to your application of June 12, 1964, for crossing of two 120,000 volt, 60-cycle, 3-wire, 3-phase transmission circuits with two ground wires (Crossing #2), your plan RX-3655, Macomb County, Sterling Township, Michigan.

Attached are two copies of our plan #W-127-7-1-D which we have prepared on which we would appreciate your locating or verifying that said crossing is at our val.sta.909+68. Also, we would appreciate your showing where the siding is at this point for we have only one track at this location, and return one copy of our plan with this information.

Yours very truly,

*C. E. Defendorf*  
Chief Engineer. *VED*

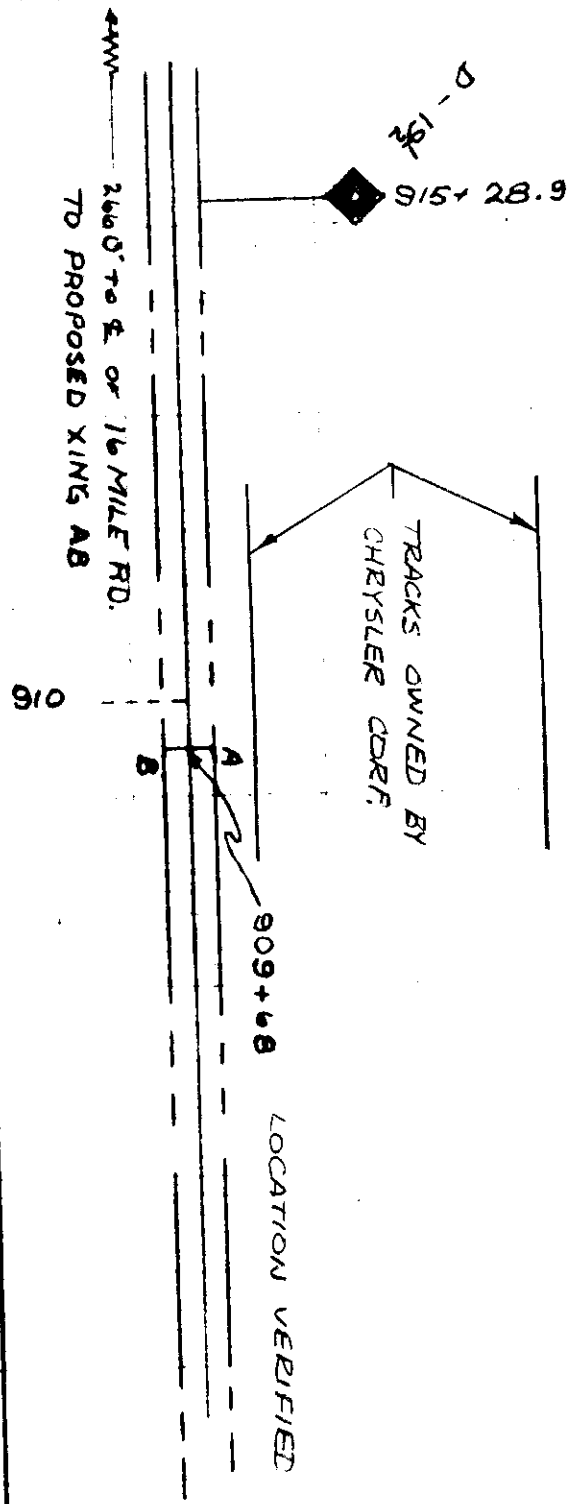
encls.

RECORDED RIGHT OF WAY NO. 22879

MACOMB CO. MICH.  
STERLING TWP  
SEC 28

*WJE*

RECORDED RIGHT OF WAY NO. *22879*



AB: Aerial Crossing on RR R/W; Track  
to = 266.8 MCM ACS R 26/7 129 000V  
1 5/8" GRD Wire

DETROIT DIV.  
BAY CITY BR.



|                         |              |                    |  |
|-------------------------|--------------|--------------------|--|
| NEW YORK CENTRAL SYSTEM |              |                    |  |
| Office of Chief Engr    | Nearest Dist | Chicago, Ill.      |  |
| Aerial Crossing         |              |                    |  |
| DETROIT EDISON CO.      |              |                    |  |
| WARREN MICHIGAN         |              |                    |  |
| Drawn DLO               | Date 6-22-64 | Plan "W-127-7-1-D  |  |
| Scale: 1" = 200'        | Checked MFE  | File # M-DE-500A-M |  |

# THE DETROIT EDISON COMPANY

2000 SECOND AVENUE  
DETROIT 26, MICHIGAN

TO: Mr. C. E. Defendorf, Chief Engineer  
New York Central System  
LaSalle Street Station  
Chicago 5, Illinois

June 12, 1964

We hereby ~~request~~ request permission for facilities over your tracks ~~and/or~~  
~~highways~~ as follows:

Proposed Construction: Install two 120,000 volt, 60-cycle, 3-wire, 3-phase transmission circuits with two ground wires (Crossing #2).

Specific Location Part of the St. Clair-Logan-Troy and the Sterling-Logan-Northeast 120 KV Transmission Lines, approximately 2660 feet south of the center line of 16 Mile Road and 370 feet east of New York Central Railroad right of way.

R.R. Valuation Station \_\_\_\_\_ R.R. Mile Post \_\_\_\_\_  
City/Village \_\_\_\_\_ Township **Sterling (Section 28)**  
County **Macomb** Detroit Edison Plan Attached **EX-3655**  
This is a New Crossing  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 **In Duplicate**  
(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.

*I. W. Gamble*  
I. W. Gamble, Supervisor of Rights of Way  
Properties and Rights of Way Department

LGH:dal

RECORDED RIGHT OF WAY NO. 22879

# THE DETROIT EDISON COMPANY

2000 SECOND AVENUE  
DETROIT 26, MICHIGAN

TO: Mr. C. E. Defendorf, Chief Engineer  
New York Central System  
LaSalle Street Station  
Chicago 5, Illinois

June 12, 1964

We hereby ~~notify you of our~~ request permission for facilities over your tracks and/~~our~~ right of way as follows:

Proposed Construction: Install two 120,000 volt, 60-cycle, 3-wire, 3-phase transmission circuits with one ground wire (Crossing #1).

Specific Location Part of the St. Clair-Logan-Troy and the Sterling-Logan-Northeast 120 KV transmission lines, 1/2 mile west of Van Dyke and approximately 2660 feet south of the center line of 16 Mile Road.

R.R. Valuation Station 909+68 R.R. Mile Post \_\_\_\_\_  
City/Village \_\_\_\_\_ Township Sterling (Section 28)  
County Macomb Detroit Edison Plan Attached EX-3655  
This is a New Crossing  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 In Duplicate  
(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.

*I. W. Gamble*  
I. W. Gamble, Supervisor of Rights of Way  
Properties and Rights of Way Department

LGH:dal

RECORDED RIGHT OF WAY NO. 22879

STATE OF MICHIGAN  
BEFORE MICHIGAN PUBLIC SERVICE COMMISSION

Standard Railroad Wire-Crossing Permit No. **ED2-2-4436**

In Re Application of **The Detroit Edison Company**  
**2000 Second Avenue**  
**Detroit, Michigan 48226**

Pursuant to Act No. 171 of the Session Laws of 1893, as amended, application having been made to Michigan Public Service Commission by said

**The Detroit Edison Company**  
for permission to string wires across the tracks of the  
**New York Central System**  
and said  
**The Detroit Edison Company**

having conformed to the Commission's rules governing the filing of notices and issuing of permits for the construction of electrical lines and said rail road company having waived the right of notice and hearing provided for in said act

THEREFORE, It is ordered that said

**The Detroit Edison Company**

be permitted to string the following described wires across the tracks of said railroad at the following described place:

**Township of Stirling**  
**County of Macomb**  
**State of Michigan**

*crossing # 2*  
At a point approx. 2660' S of el of Sixteen Mile Rd. and 370' E of New York Central Railroad right of way, in Sect. 28, T2N, R12E, two (2) 120 kv, 60 cycle, 3 wire, 3 phase Circuits with two Ground Wires being 3 - 266.8 MCM ACSR (26/7) Conductors 2 - 3/8" Both "C" Steel Ground Wires per Dwg. **EX-3655**

as indicated on the attached plans, when, as and if approved.

At the point of crossing said wires shall be constructed in accordance with this Commission's rules and regulations.

Given under our hands and the Official Seal of this Commission at the City of Lansing, State of Michigan, this **nineteenth** day of **October** A. D. 19 **64**

MICHIGAN PUBLIC SERVICE COMMISSION

By

**Peter B. Spivak**

Chairman,

**John E. Torney**

Commissioner,

**George Washington**

Commissioner.

Countersigned

**Norman Berkowitz**

Secretary

RECORDED RIGHT OF WAY NO. 22879-



STATE OF MICHIGAN }  
Office of the Michigan Public Service Commission } SS.

I, Norman Berkowitz, Secretary of the Michigan Public Service Commission Do Hereby Certify, That I have compared the annexed copy of **Railroad Wire Crossing Permit No. ED2-8-5436**

with the original, and that it is a true and correct transcript therefrom, and of the whole of such original.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the Commission, at Lansing, this **nineteenth** day of **October** in the year of our Lord one thousand nine hundred **sixty four**

*Norman Berkowitz*

Secretary

RECORDED RIGHT OF WAY NO. 22879

DATA SHEET TO ACCOMPANY DRAWING RX-3655

Name of Company

The Detroit Edison Company

Name and Location of Crossing

Crossing of the St. Clair-Logan-Troy and the Sterling-Logan-Northeast 120 KV transmission lines over the New York Central Railroad  $\frac{1}{2}$  mile west of Van Dyke ~~at two locations~~ in Section 28, Sterling Township, Macomb County, Michigan. ~~Crossing No. 1 is located approximately 2,660 ft. south of the centerline of 16 Mile Road, and~~ Crossing No. 2 is located 370 ft. east of Crossing No. 1.

Circuits

Proposed: two 120,000-volt, 60-cycle, 3-wire, 3-phase transmission circuits with one ground wire at Crossing No. 1 and two ground wires at Crossing No. 2.

Towers and Crossarms

Steel towers and crossarms as per attached prints T-1862, T-8415 and 5S938-1.

Poles

50-ft. Class 2 Western Red Cedar

Conductors

Proposed 6 - 266.8 Mcm 26/7 ACSR with 3/8" steel Overhead ground wire.

Insulators

5-3/4" x 10" suspension insulators OB #32440 or equivalent: 9 in. deadend on steel, 8 in. deadend on wood.

Guy and Guy Attachments

See drawing ED-5643.

Guy Clamps and Insulators

See drawing ED-5643.

Guy Anchor and Anchor Rods

See drawing ED-5643.

Suspension and Deadend Details

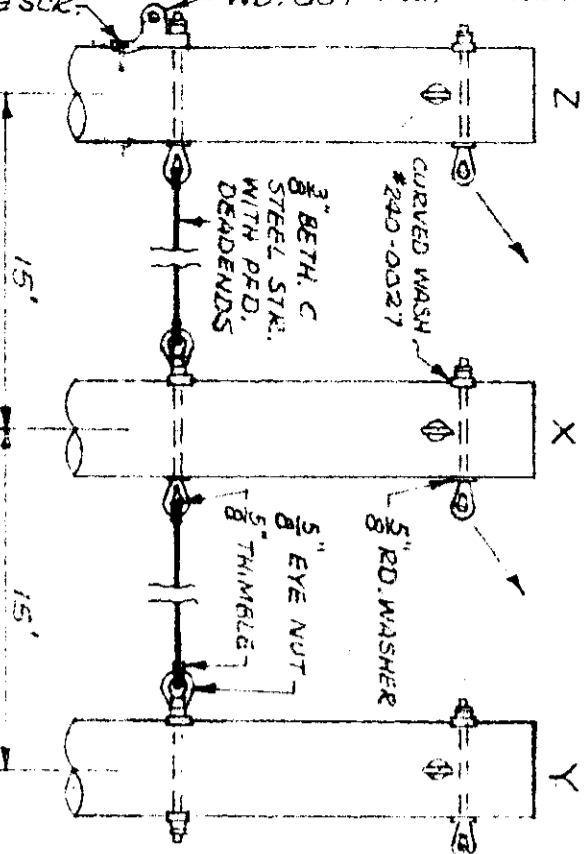
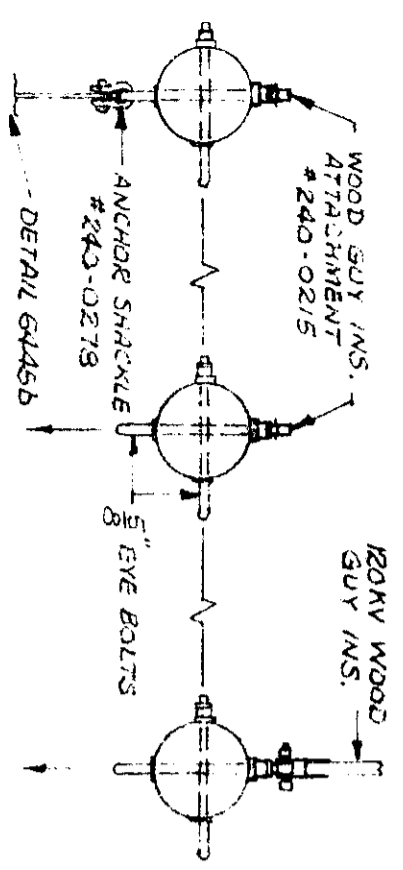
See drawing RX-3655

General Engineering Dept.  
6-5-64/JH:cap

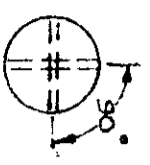
RECORDED RIGHT OF WAY NO.

22879

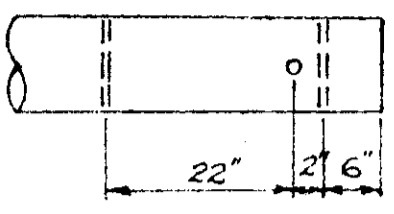
TWO 1/2" LAG SCR. WD. GUY INS. ATTACH.



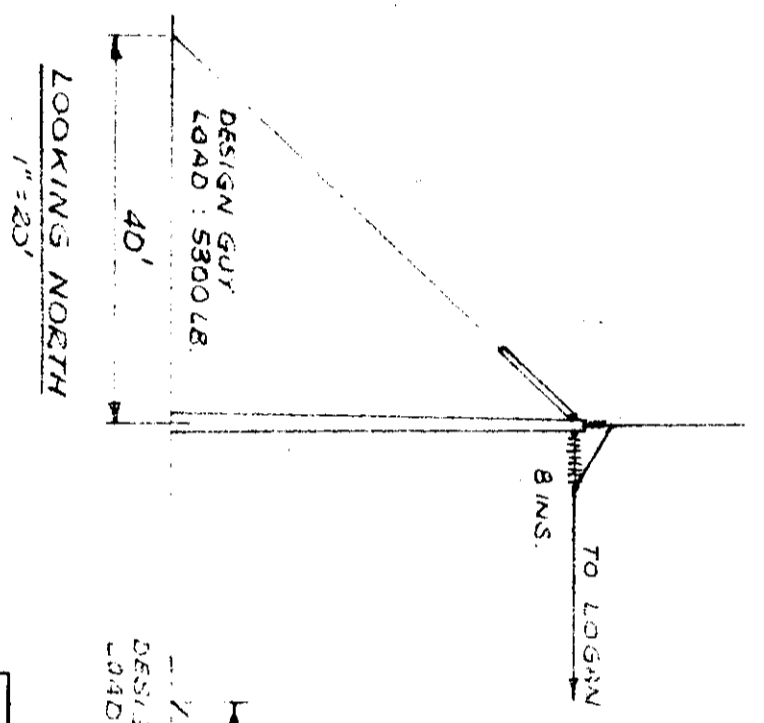
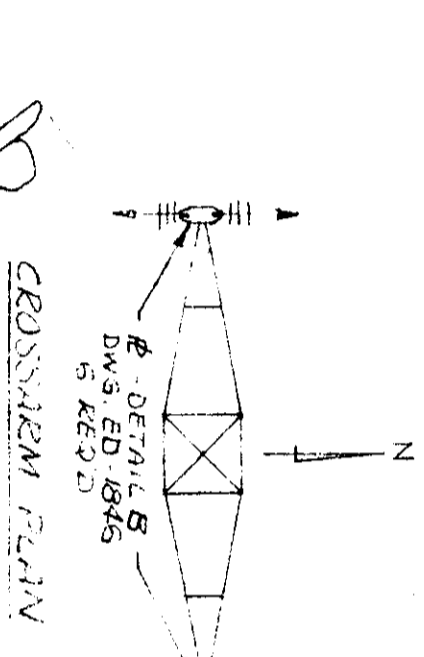
ALL GUYS 3/8" BETH. C STEEL STAND. NO GROUNDING REQUIRED. INSTALL PAL NUTS THROUGHOUT.



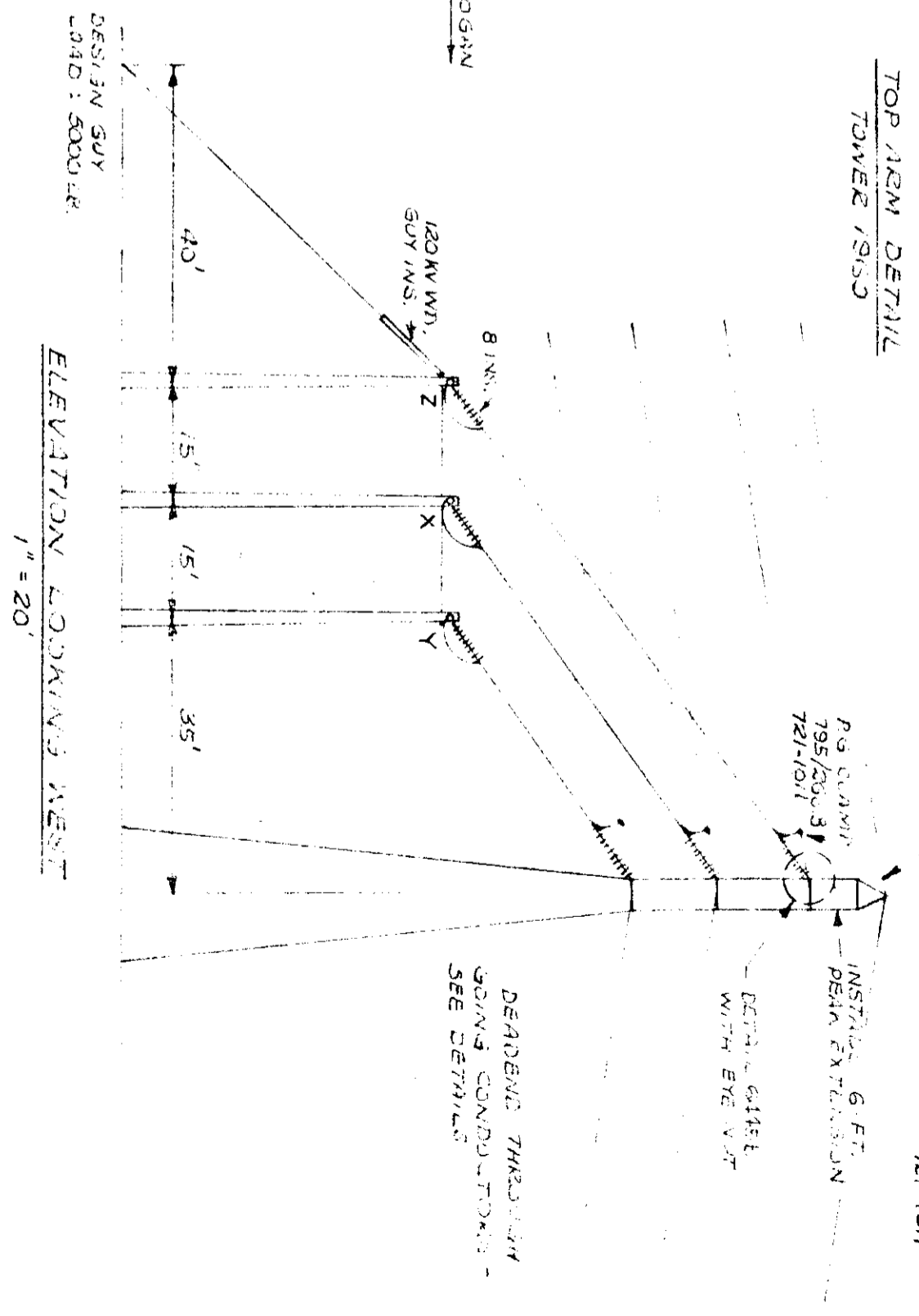
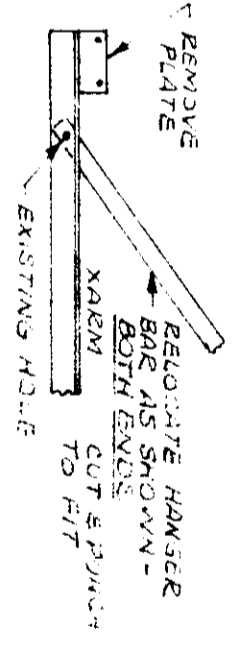
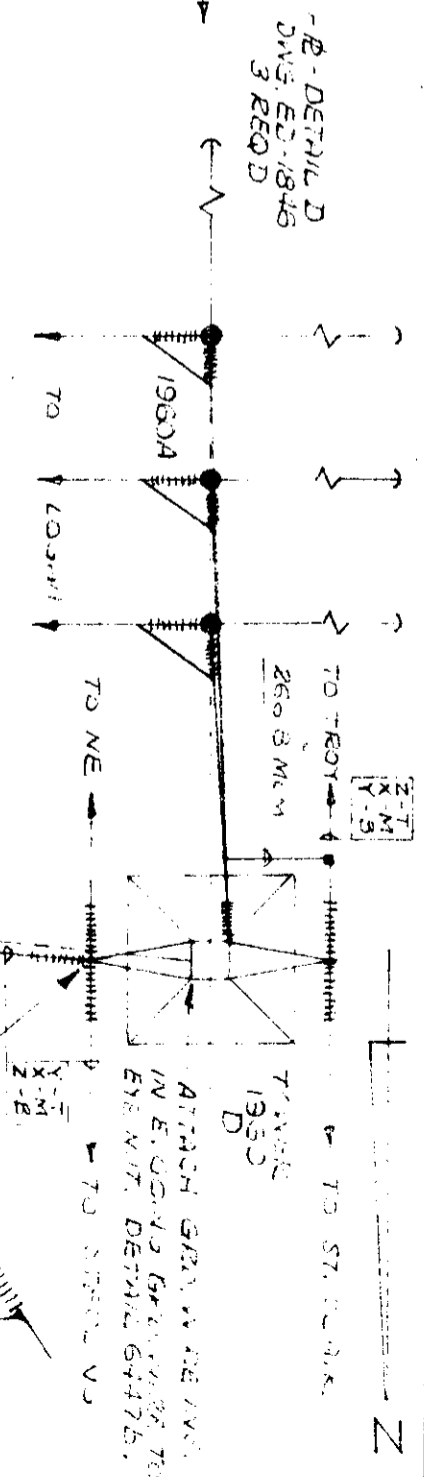
ALL HOLES 1/16" DIA.



POLE FRAMING DETAIL FOR 3 - 50' C2 WRC



SEE DWG. ED-5603 FOR COMPLETE JOB LAYOUT.



TAKE-OFF DETAILS FOR 120KV TAPS TO LOGAN STATION

|  |                |           |          |
|--|----------------|-----------|----------|
| APPROVED   | DATE           | LAYOUT BY | DRAWN BY |
| <i>[Signature]</i>   | 5/21/64        | HOWE      | HOWE     |
| THE DETROIT EDISON COMPANY<br>GENERAL ENGINEERING DEPARTMENT |                |           |          |
| SCALES   | DRAWING NUMBER |           |          |
| AS SHOWN   | ED-5642        |           |          |

1-20 Suspension Tower, 150' H. 150' Dia.  
 Total Construction Material 3,500,000 Lbs.  
 Super Concrete 1,500,000 Lbs. (40%) RC Steel Reinforcement 1,500,000 Lbs.  
 Total 3,000,000 Lbs. (80%) RC Steel Reinforcement 1,500,000 Lbs.  
 Total 3,000,000 Lbs. (80%) RC Steel Reinforcement 1,500,000 Lbs.  
 Total 3,000,000 Lbs. (80%) RC Steel Reinforcement 1,500,000 Lbs.

LOADS  
 1- Concrete 1- Concrete 1- Concrete 1- Concrete 1- Concrete 1- Concrete  
 2- Concrete 2- Concrete 2- Concrete 2- Concrete 2- Concrete 2- Concrete  
 3- Concrete 3- Concrete 3- Concrete 3- Concrete 3- Concrete 3- Concrete  
 4- Concrete 4- Concrete 4- Concrete 4- Concrete 4- Concrete 4- Concrete  
 5- Concrete 5- Concrete 5- Concrete 5- Concrete 5- Concrete 5- Concrete

4- Units on Tower of 6.5" dia. 59 Feet on 12  
 Times The Projected Area of One Piece  
 of the Tower.

5- Piece Length of Tower  
 Concrete  
 12704 2-4-12, 2-5-4-4, 127 of 5  
 1-1-1-1, 2-5-4-4, 127 of 5, 1-2-7-4-5

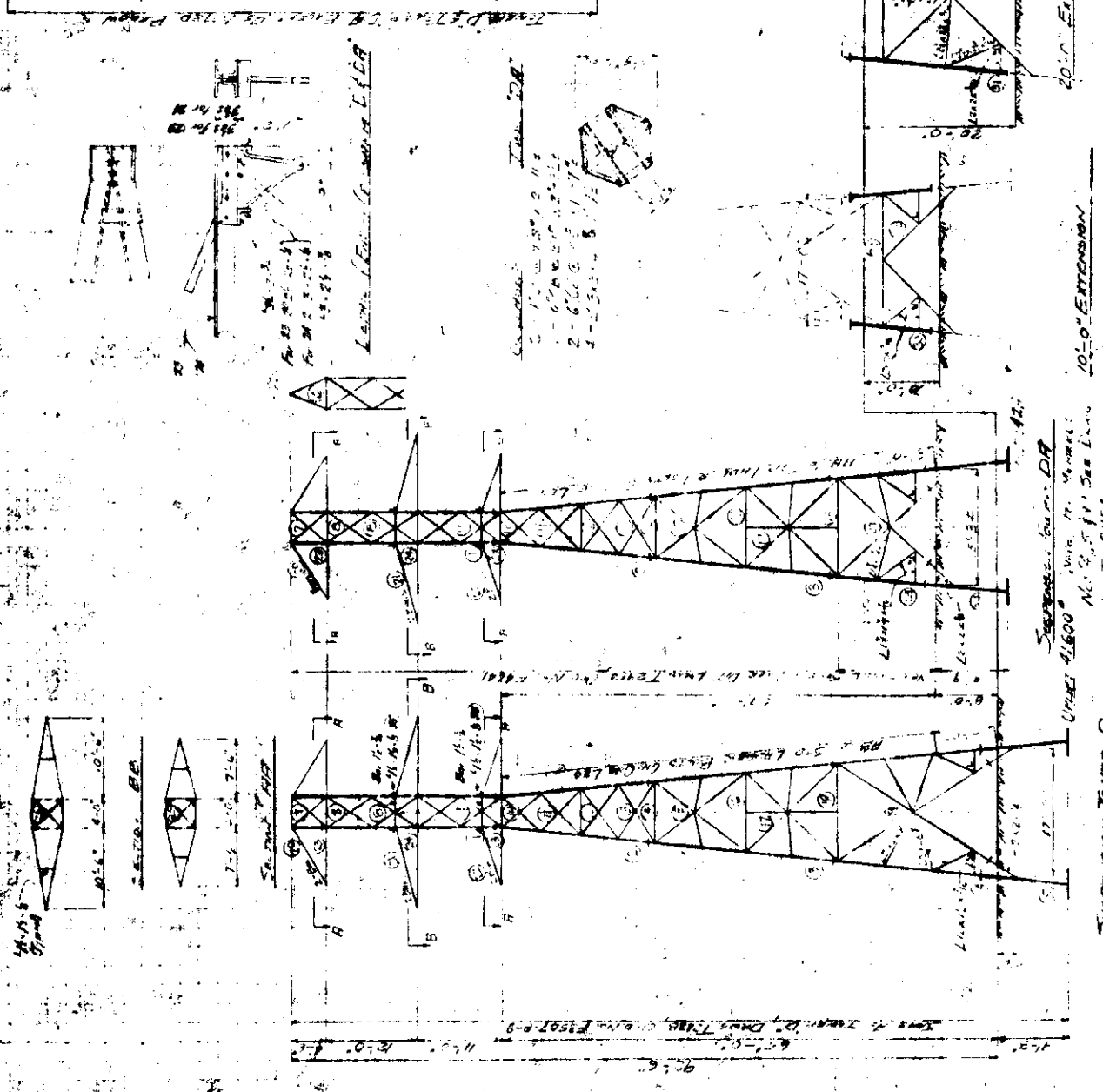
UNIT STRESSES - (ULTIMATE - N.E.C. STRESSING)  
 TENSION ON NET SECTION 33,000 PSI  
 COMPRESSION ON CROSS SECTION 35,000 PSI  
 STRESS ON BOLTS 30,000 PSI  
 STRESS ON BLADES 60,000 PSI

CONNECTIONS: BOLTED, 8" BOLTS  
 SPECIFICATIONS: A.C.I. C. 310. SPEC. FOR  
 TOWER TOWER.

65'-0" SUSPENSION TOWER D. 150"  
 57'-0" SUSPENSION TOWER D. 150"  
 THE DETMOLD ELLISON CO.  
 DETMOLD MILK

AMERICAN BRIDGE COMPANY  
 Bridge Dept  
 1000 Market Street  
 Philadelphia, Pa.  
 T-5415  
 Q-346-XI

| Item | Quantity | Unit | Weight (Lbs.) |
|------|----------|------|---------------|
| 1    | 100      | ft   | 100           |
| 2    | 100      | ft   | 100           |
| 3    | 100      | ft   | 100           |
| 4    | 100      | ft   | 100           |
| 5    | 100      | ft   | 100           |
| 6    | 100      | ft   | 100           |
| 7    | 100      | ft   | 100           |
| 8    | 100      | ft   | 100           |
| 9    | 100      | ft   | 100           |
| 10   | 100      | ft   | 100           |
| 11   | 100      | ft   | 100           |
| 12   | 100      | ft   | 100           |
| 13   | 100      | ft   | 100           |
| 14   | 100      | ft   | 100           |
| 15   | 100      | ft   | 100           |
| 16   | 100      | ft   | 100           |
| 17   | 100      | ft   | 100           |
| 18   | 100      | ft   | 100           |
| 19   | 100      | ft   | 100           |
| 20   | 100      | ft   | 100           |
| 21   | 100      | ft   | 100           |
| 22   | 100      | ft   | 100           |
| 23   | 100      | ft   | 100           |
| 24   | 100      | ft   | 100           |
| 25   | 100      | ft   | 100           |
| 26   | 100      | ft   | 100           |
| 27   | 100      | ft   | 100           |
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| 31   | 100      | ft   | 100           |
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| 64   | 100      | ft   | 100           |
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| 75   | 100      | ft   | 100           |
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| 89   | 100      | ft   | 100           |
| 90   | 100      | ft   | 100           |
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| 92   | 100      | ft   | 100           |
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| 96   | 100      | ft   | 100           |
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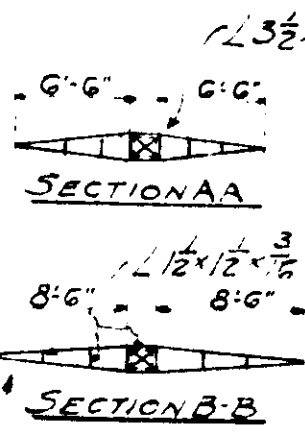
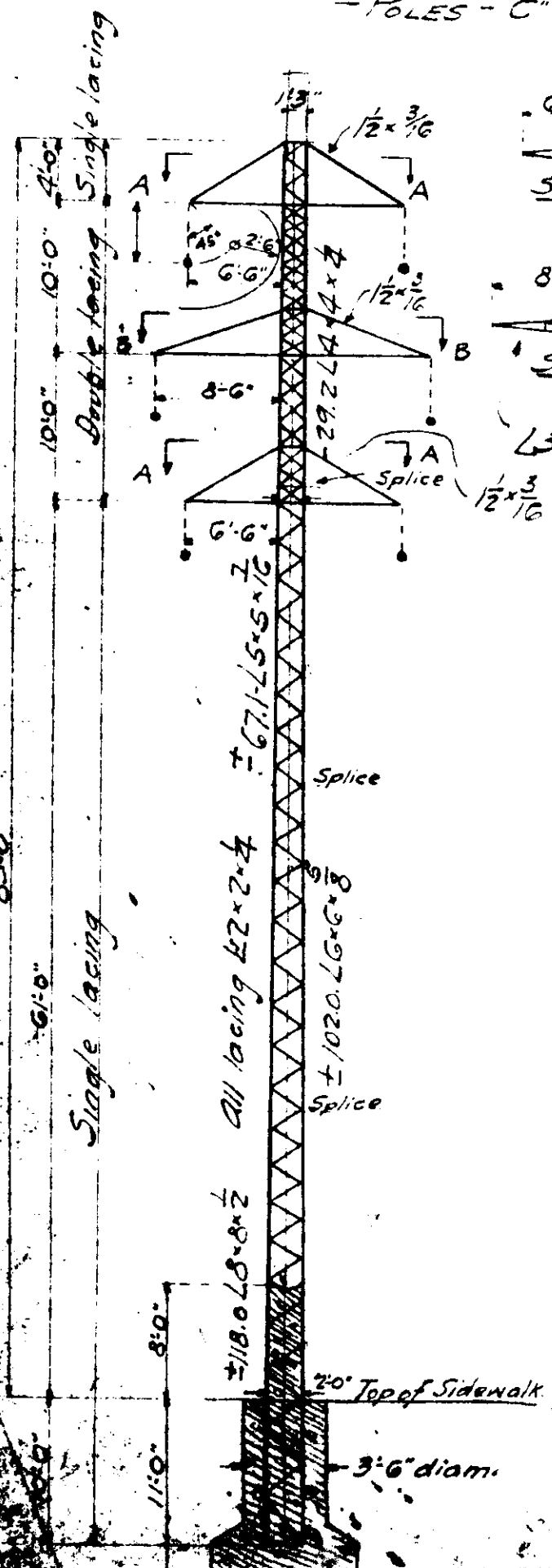
THE DETMOLD ELLISON CO.  
 DETMOLD MILK  
 1000 Market Street  
 Philadelphia, Pa.  
 T-5415  
 Q-346-XI

AMERICAN BRIDGE COMPANY  
 Bridge Dept  
 1000 Market Street  
 Philadelphia, Pa.  
 T-5415  
 Q-346-XI

RECORDED RIGHT OF WAY NO. 22879  
 SUSPENSION TOWER D  
 UNIT 41608  
 100' 0" EXTENSION  
 10' 0" EXTENSION  
 20' 0" EXTENSION

DETROIT EDISON CO.

- POLES - "C" -



$L 3\frac{1}{2} \times 3 \times \frac{3}{4}$  Poles designed for:  
 300'-0" Spans  
 110,000 Volts  
 $\frac{3}{8}$ " H.D. Copper Conductors.  
 $\frac{7}{16}$ " Ground Wire.

LOADS

- (1) Vertical at each cond  $11 \times 300 = 330 + 100 + 170 = 600\#$
  - (2) Horizontal transverse =  $300 \times 0.98 = 350\#$  at each conductor.
  - (3) Horizontal long. at one cond. 1500
  - (4) wind on pole.
  - (5) Dead load on tower.
- Crossarms designed for a pull of 3000#

Unit Stresses

- Tension on net section = 20000# per sq in.
- Compression on gross = 20000# per sq in.
- Shear on bolts 13500#
- Bearing 27000#

Material. O. H. Steel for Bldgs.  
 A. S. T. M. Std. Spec.  
Coating. Material including bolts to be galvanized.

RECORDED RIGHT OF WAY NO.

STATE OF MICHIGAN  
BEFORE MICHIGAN PUBLIC SERVICE COMMISSION

Standard Railroad Wire-Crossing Permit No. **ED2-2-5435**

In Re Application of **The Detroit Edison Company**  
**2000 Second Avenue**  
**Detroit, Michigan 48226**

Pursuant to Act No. 171 of the Session Laws of 1893, as amended, application having been made to Michigan Public Service Commission by said

**The Detroit Edison Company**  
for permission to string wires across the tracks of the  
**New York Central System**  
and said **The Detroit Edison Company**

having conformed to the Commission's rules governing the filing of notices and issuing of permits for the construction of electrical lines and said rail road company having waived the right of notice and hearing provided for in said act

THEREFORE, It is ordered that said

**The Detroit Edison Company**  
be permitted to string the following described wires across the tracks of said railroad at the following described place:

**Township of Stirling**  
**County of Macomb**  
**State of Michigan**

*Crossing #1*  
At a point approx. 2660' S of cl of Sixteen Mile Rd. and 1/4 mile W of Van Dyke, Sect. 28, T2N, R12E, two (2) 120 kv, 60 cycle, 3 wire, 3 phase Circuits with one Ground Wire being  
3 - 266.8 MCM ACBR (26/7) Conductors  
1 - 3/8" Beth "C" Steel Ground Wire  
per Dwg. EX-3655

as indicated on the attached plans, when, as and if approved.

At the point of crossing said wires shall be constructed in accordance with this Commission's rules and regulations.

Given under our hands and the Official Seal of this Commission at the City of Lansing, State of Michigan, this **nineteenth** day of **October** A. D. 19 **64**

MICHIGAN PUBLIC SERVICE COMMISSION  
By

**Peter B. Spivak**  
Chairman,

**John E. Torney**  
Commissioner,

**George Washington**  
Commissioner.

Countersigned

**Norman Berhovitz**  
Secretary

66-388-22879

STATE OF MICHIGAN }  
Office of the Michigan Public Service Commission } SS.

I, Norman Berkowitz, Secretary of the Michigan Public Service Commission Do Hereby Certify, That I have compared the annexed copy of **Railroad Wire Crossing Permit No. ED2-8-5435**

with the original, and that it is a true and correct transcript therefrom, and of the whole of such original.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the Commission, at Lansing, this **nineteenth** day of **October** in the year of our Lord one thousand nine hundred **sixty four**

*Norman Berkowitz*

Secretary

RECORDED RIGHT OF WAY NO. 22879

DATA SHEET TO ACCOMPANY DRAWING RX-3655

Name of Company

The Detroit Edison Company

Name and Location of Crossing

Crossing of the St. Clair-Logan-Troy and the Sterling-Logan-Northeast 120 KV transmission lines over the New York Central Railroad  $\frac{1}{2}$  mile west of Van Dyke at two locations in Section 28, Sterling Township, Macomb County, Michigan. Crossing No. 1 is located approximately 2,660 ft. south of the centerline of 16 Mile Road, and Crossing No. 2 is located 370 ft. east of Crossing No. 1.

Circuits

Proposed: two 120,000-volt, 60-cycle, 3-wire, 3-phase transmission circuits with one ground wire at Crossing No. 1 and two ground wires at Crossing No. 2.

Towers and Crossarms

Steel towers and crossarms as per attached prints T-1862, T-8415 and 5S938-1.

Poles

50-ft. Class 2 Western Red Cedar

Conductors

Proposed 6 - 266.8 Mcm 26/7 ACSR with 3/8" steel Overhead ground wire.

Insulators

5-3/4" x 10" suspension insulators OB #32440 or equivalent: 9 in. deadend on steel, 8 in. deadend on wood.

Guy and Guy Attachments

See drawing ED-5643.

Guy Clamps and Insulators

See drawing ED-5643.

Guy Anchor and Anchor Rods

See drawing ED-5643.

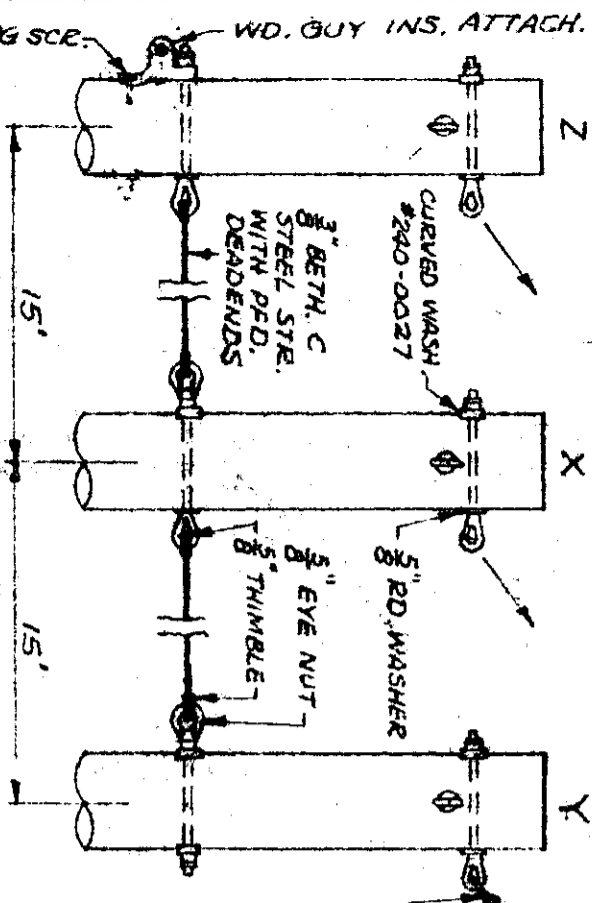
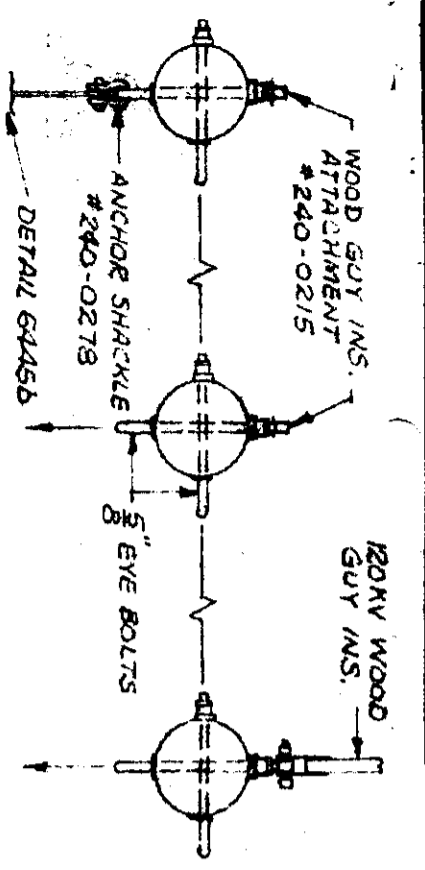
Suspension and Deadend Details

See drawing RX-3655

General Engineering Dept.  
6-5-64/JH:cap

RECORDED RIGHT OF WAY NO. 22879

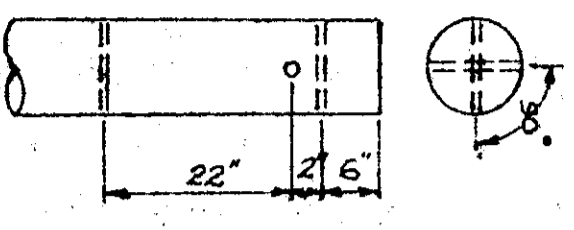




ALL GUYS  $\frac{3}{8}$ " BETH. C STEEL STAND.  
NO GROUNDING REQUIRED.  
INSTALL PAL NUTS THROUGHOUT.

**STRUCTURE #1960A DETAILS**

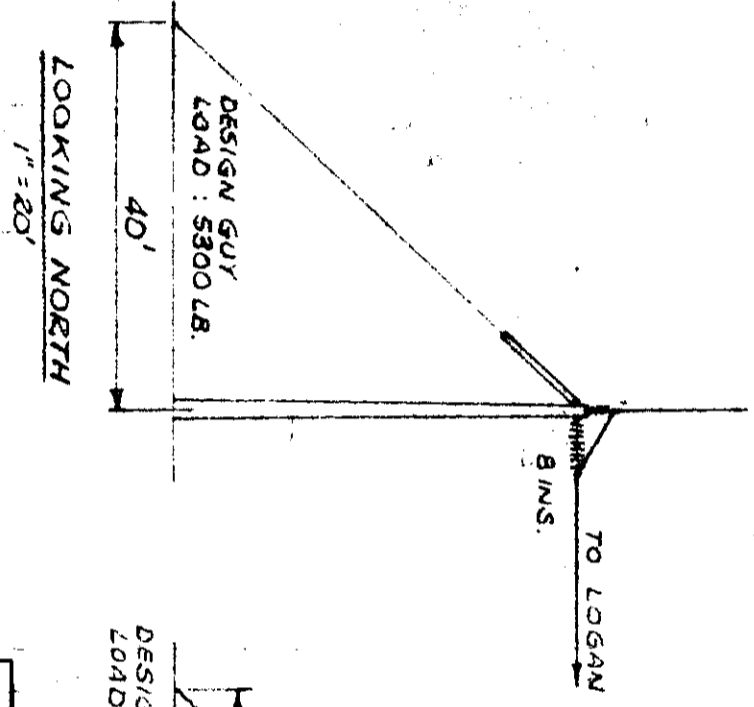
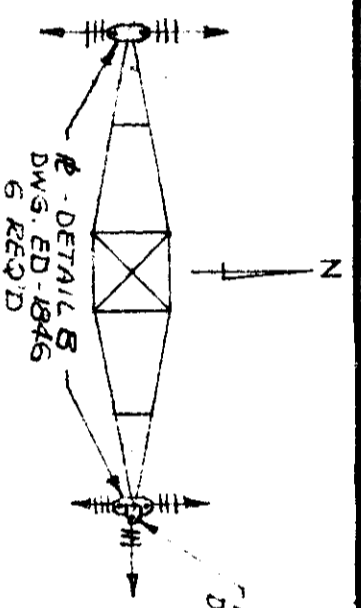
ALL HOLES  
 $\frac{1}{16}$ " DIA.



**POLE FRAMING DETAIL**

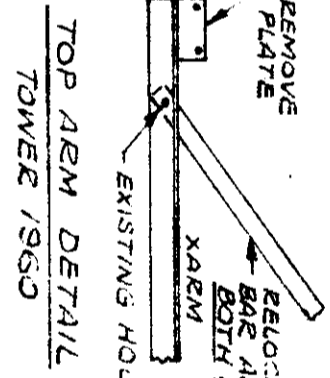
FOR 3 - 50' C2 WRC

**CROSSARM PLAN**  
TOWER 1960

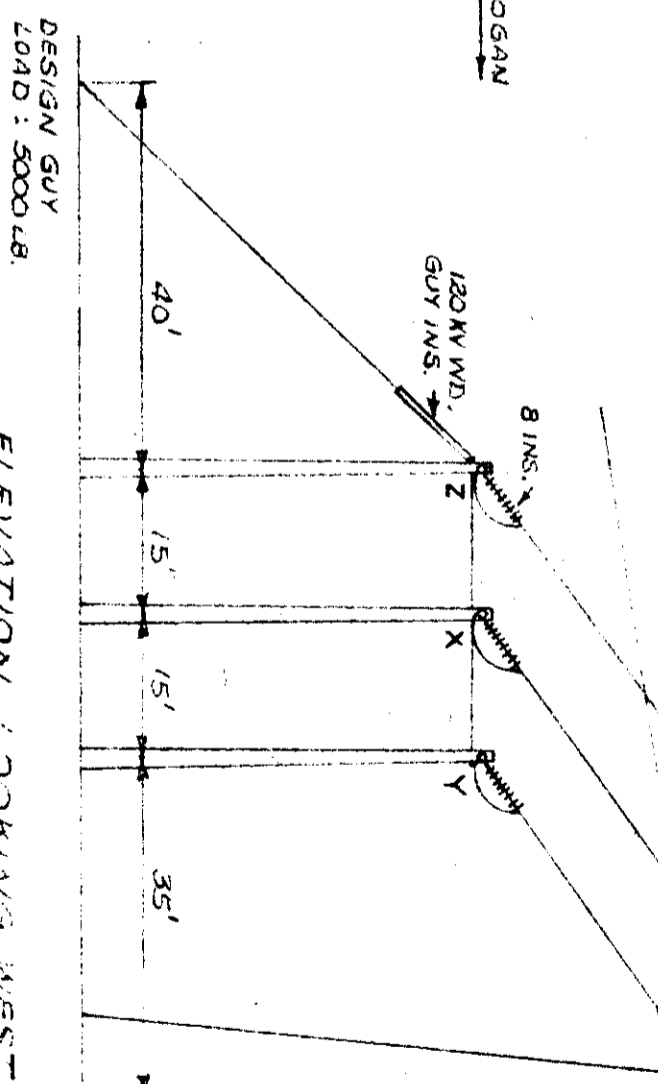


LOOKING NORTH  
1" = 20'

SEE DWG. ED-5603  
FOR COMPLETE JOB  
LAYOUT.

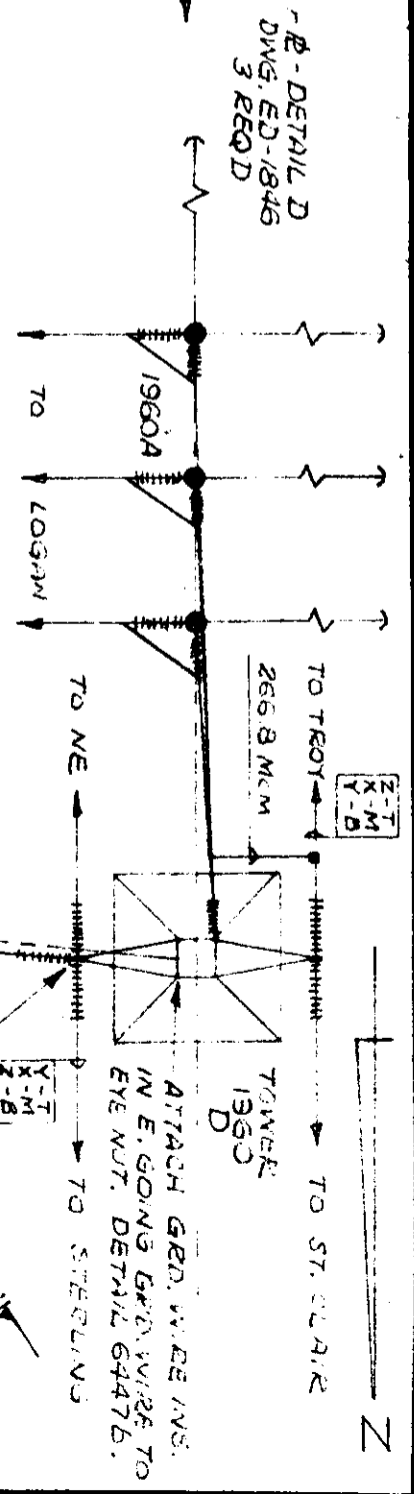


**TOP ARM DETAIL**  
TOWER 1960



LOOKING WEST  
1" = 20'

TAKE-OFF DETAILS FOR 120KV  
TAPS TO LOGAN STATION



**PLAN**  
1" = 20'

DEADEND THROUGH  
GOING CONDUCTORS -  
SEE DETAILS

|                                |  |
|--------------------------------|--|
| APPROVED<br><i>[Signature]</i> | THE DETROIT EDISON COMPANY<br>GENERAL ENGINEERING DEPARTMENT |
| LAYOUT BY HOWE                 |  |
| DATE 5/21/64                   | DRAWN BY   |
| SCALE AS SHOWN                 | DRAWING NUMBER ED-5642                                       |





**This Agreement,** made this **1st** day  
of **October**, 19 **64**, between **THE NEW YORK CENTRAL RAILROAD COMPANY,**  
**Lessee of the Michigan Central Railroad,**

, hereinafter called First Party, and **THE DETROIT EDISON COMPANY, a New York**  
**corporation,**

(address: **2000 Second Avenue**  
**Detroit 26, Michigan**)

hereinafter called Second Party,

**Witnesseth,** that the parties hereto, in consideration of the covenants and  
agreements hereinafter contained, covenant and agree as follows:

First Party hereby licenses and permits, but without warranty, the Second Party, to **install,**  
**maintain, and use an aerial power wire line crossing consisting of six (6) #266.8 NCM**  
**ACSR (26/7) wires carrying 120,000 volts and one (1) 3/8" ground wire over and across**  
**First Party's right-of-way and track at valuation station 909/68, at Warren, Michigan,**  
**as indicated on print of plan No. W-127-7-1-P dated 6-22-64,**

which is hereto attached and hereby made a part of this instrument, all of which is hereinafter referred  
to as the "WORK," upon the following terms and conditions, all of which Second Party covenants and  
agrees to keep, abide by and perform:

**FIRST:** Said WORK shall be done at such time or times, in such manner, with such material  
and under such general conditions as shall be satisfactory to and approved by the Chief Engineer  
of First Party, or his duly authorized agent, and as will not interfere with the proper and safe use,  
operation, and enjoyment of the property and railroad of First Party. Second Party shall after  
the doing of said WORK restore the premises of First Party to the same or as good a condition  
as they were in prior to the commencement of the doing of said WORK.

RECORDED IN OFFICE OF WAY NO. 22879

**SECOND:** All the work to be done by Second Party, or by the contractors, agents or servants of Second Party, in connection with the doing of said WORK, or in connection with the repair, renewal or maintenance thereof, shall be done at the sole risk and expense of Second Party, and the cost of all work done by First Party in connection therewith, the checking of plans and the wages of any inspectors or watchmen which, in the judgment of the said Chief Engineer of First Party, may be required during the doing of said WORK, or in connection with the repair, renewal, maintenance or use thereof, for the proper and safe protection of the property, traffic and business of First Party, shall be paid to First Party by Second Party, upon bills being rendered therefor. **Second Party shall in no instance be relieved from making such payments by any third party or parties agreeing in any manner to assume or pay same.**

**THIRD:** First Party may, at its election, do all the work within the exterior lines of its lands in connection with or necessary for the doing of said WORK, or in connection with the repair, renewal, maintenance or use thereof, through its lands and across its roadway and tracks, and all said WORK shall be paid for by Second Party as hereinbefore provided.

**FOURTH:** Second Party shall, if requested so to do by First Party, advance to First Party the estimated cost of said WORK, and upon the completion of said WORK, the unexpended balance, if any, shall be returned to Second Party, or if the sum advanced by Second Party to First Party insufficient to pay for the cost of said WORK, then Second Party shall pay to First Party such additional sum as was necessary to complete said WORK, upon being furnished by First Party with a detailed statement of the amount and cost of such additional work.

**FIFTH:** Whenever it may be necessary to make any repairs to or renewals of said WORK in or upon the premises of First Party, such repairs or renewals shall be made under the supervision and control of said Chief Engineer of First Party, or his duly authorized agent, at the sole expense of Second Party, in such a manner as to interfere as little as possible with the premises, property and business of First Party, and Second Party shall, at the cost and expense of Second Party, restore the premises of First Party to the same or as good a condition as they were in prior to the making of such repairs or renewals; or First Party may, at its election, make such repairs or renewals, and the expense thereof shall be paid to it by Second Party, as hereinbefore provided.

**SIXTH:** Second Party shall at all times hereafter assume all liability for, and pay and indemnify and save harmless First Party from and against any and all damages, losses, claims, demands, suits, costs, or expenses which First Party may suffer, sustain, or be subject to, directly or indirectly, caused either wholly or in part by reason of the location, construction, maintenance, use, presence or removal of said WORK, regardless of whether or not caused or contributed to by the negligence of First Party, its agents, or employees.

**SEVENTH:** This agreement and the license and privilege it confers may be revoked and terminated at the option of First Party at any time by giving thirty (30) days' written notice to Second Party or by posting such notice in a conspicuous place where said WORK has been done; and upon the expiration of said thirty (30) days after service of said notice, this agreement and the license and privilege hereby granted shall be absolutely terminated and extinguished; and thereupon, Second Party shall remove said WORK from the premises of First Party and restore same to their former condition at the expense of Second Party, or on the failure of Second Party so to do, First Party may remove said WORK at the expense of Second Party, which the latter hereby expressly agrees to pay on demand.

REC'D AT THE OFFICE OF THE COUNTY CLERK  
NOV 22 1879

INTERDEPARTMENT CORRESPONDENCE

November 9, 1964

TO RECORDS CENTER:

Attached is fully executed copy of agreement/~~permit~~ from:

New York Central System

Facilities Covered:

Install two 120,000 volt, 60-cycle, 3-wire, 3-phase transmission circuits with one ground wire (Crossing #1).

Specific Location:

Part of the St. Clair-Logan-Troy and the Sterling-Logan-Northeast 120 KV transmission lines, 1/2 mile west of Van Dyke and approximately 2660 feet south of the center line of 16 Mile Road.

R.R. Valuation Station 909+68 Mile Post

City/Village Township Sterling (Section 28)

County Macomb Detroit Edison Plan No. RX-3655

Agreement/~~Permit~~ Date October 1, 1964 R.R. Plan No. W-127-7-1-P dated 6-22-64

Preparation Fee \$100.00 Annual Rental \$100.00

Supersedes and Cancels Agreement dated R/W No.

This is a Supplemental Agreement and is to be made a part of R/W

RESERVED Attached Grand Trunk Western Railroad Permit No. to be made a part of R/W No. 9064.

GEN'L ACCTG. DEPT. ENTERED - 11/11/64 CONTRACT BOOK NO. 22879 DATE 11/11/64 BY [Signature] CHECKED BY [Signature]

RECORDS CENTER

RECEIVED NOV 11 1964 TICKLER MADE CLASSIFIED [Signature] I. W. Gamble Supervisor of Rights of Way Real Estate and Rights of Way Dept.

RECORDED RIGHT OF WAY NO. 22879

LGH/gd

**EIGHTH:** It is understood and agreed by and between the parties hereto that if, at any time or times hereafter, First Party shall desire to make any changes in its tracks, structures, roadbed or other facilities at the point of crossing, or make any changes whatever in, to, upon, over or under the premises owned, controlled or leased by said First Party, and crossed or in any way affected by the WORK of Second Party under this agreement, then Second Party shall, at its own cost and expense, upon thirty (30) days' notice in writing to that effect from First Party make such changes in the location or construction of its said WORK, as in the judgment of the Chief Engineer of First Party may be necessary to accommodate any future construction, improvements or changes of said First Party.

**NINTH:** It is agreed that in no event shall any wires, pipes, or other structures, except those herein mentioned and shown on the blueprint hereto attached be strung or placed across the tracks or upon the property of First Party, without express permission so to do, in writing from said First Party, to that effect; and that in that event, all the terms and conditions of this agreement shall immediately, upon the giving of such permission for the stringing and placing of such additional wires, pipes or other structures, apply to and cover the same with the same effect as if the right to string or place them had been incorporated in this agreement.

**TENTH:** It is understood and agreed by and between the parties hereto, that if at any time during the continuance of this agreement, Second Party hereto removes, abandons or discontinues the use of the WORK hereinabove referred to, this agreement and all rights hereby conferred upon said Second Party shall be deemed to be abrogated and determined as of the date of such removal, abandonment or discontinuance, without further action on the part of either party; and Second Party covenants and agrees that, in case said WORK hereinabove referred to is at any time during the continuance of this agreement discontinued or abandoned, said Second Party shall, within sixty (60) days after the abandonment or discontinuance of said WORK, actually remove said WORK from the premises of First Party hereto, or cause it to be removed, and if, after the expiration of said sixty (60) days the said WORK is not actually removed, it is understood that First Party hereto may forthwith remove the same at the risk and expense of Second Party, and without being in any manner liable to said Second Party for such removal, and Second Party covenants and agrees to pay to First Party hereto the cost of such removal upon the receipt of bill therefor rendered to Second Party.

**ELEVENTH:** Second Party shall pay to First Party, (1) upon delivery to Second Party of executed copy hereof, the sum of One Hundred Dollars (\$100.00), and (2) as rental for the privilege herein granted, the sum of One Hundred Dollars (\$100.00) per annum, beginning on the first day of October, 1964, and annually in advance thereafter, during the term and continuance of this permit.

**TWELFTH:** Said power wire line, and all appurtenances connected therewith shall be constructed and maintained in accordance with Specifications for Electrical Supply Lines at Crossings with the Facilities of Steam and Electrified Railroads as contained in August 1946 Reports of Joint Engineering Committee of Association of American Railroads and Edison Electric Institute, and plat attached hereto and made a part hereof.

22879





PROPOSED RIGHT OF WAY NO. 22879

MACOMB CO. MICH.  
STERLING TWP  
SEC 28

*UZZ*

25  
97

D-19  
915+28.9

ADD TO E. OF 1/4 MILE RD.  
TO PROPOSED XING AB

AB = Aerial Crossing of RRR/W<sup>+</sup> Track  
to 266.8 MCM ACS R 26/7 120,000V  
1 5/8" GRD. Wire

DETROIT DIV.  
BAY CITY BR.

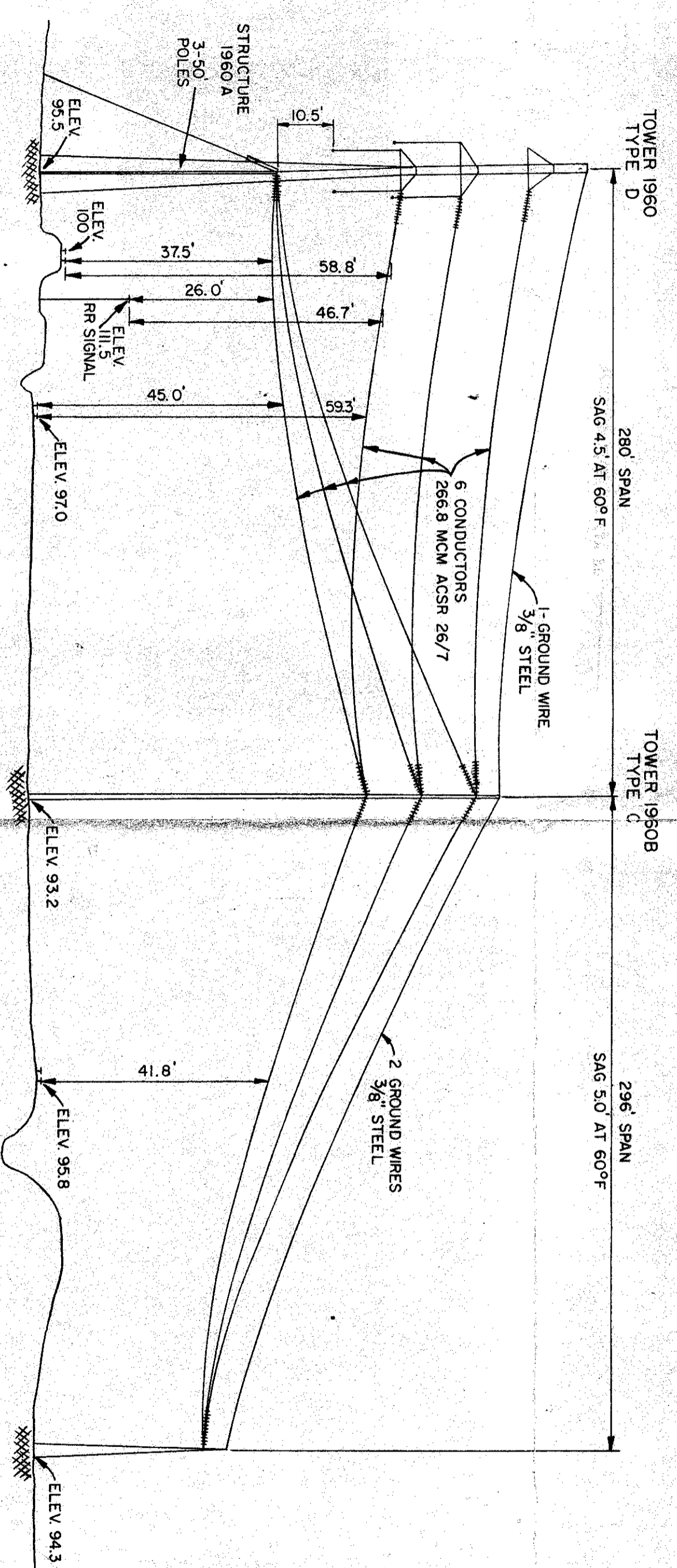
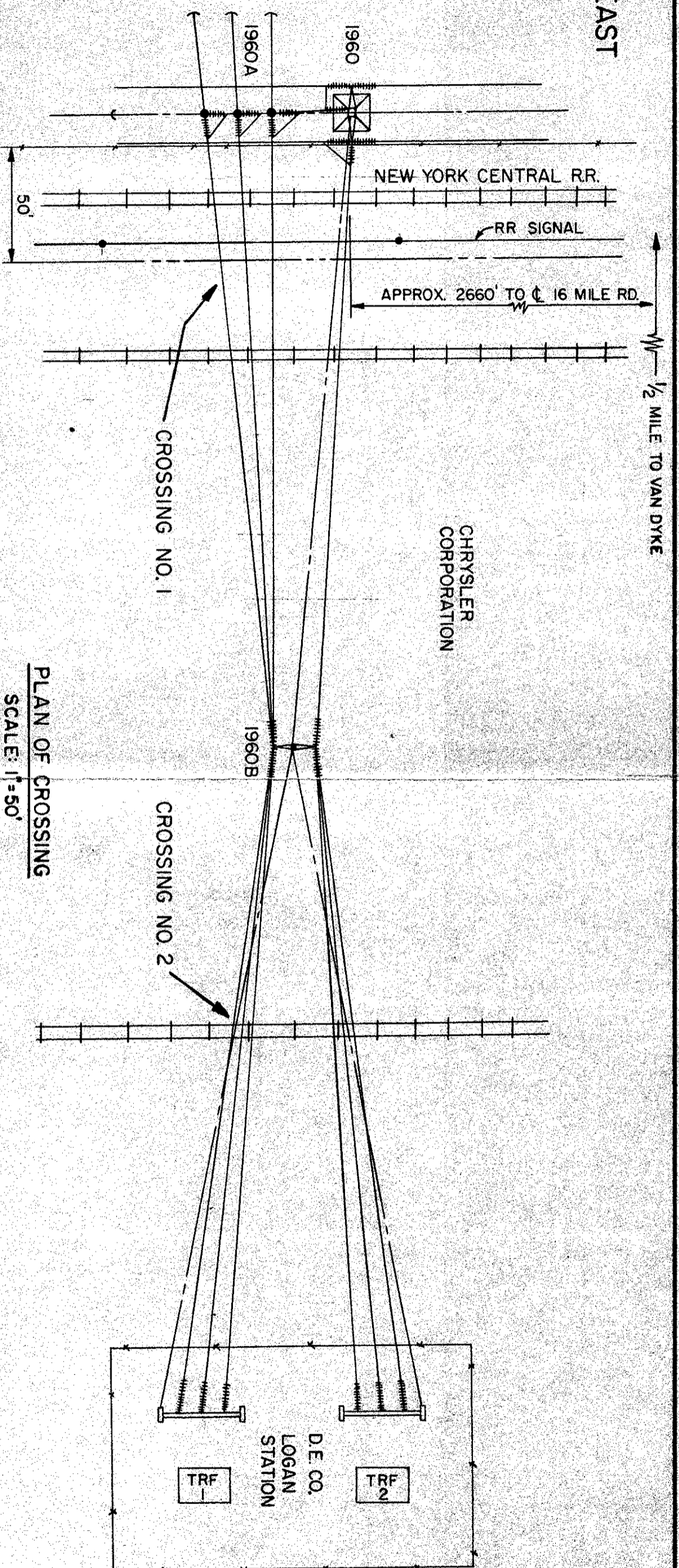


809+68

0.6

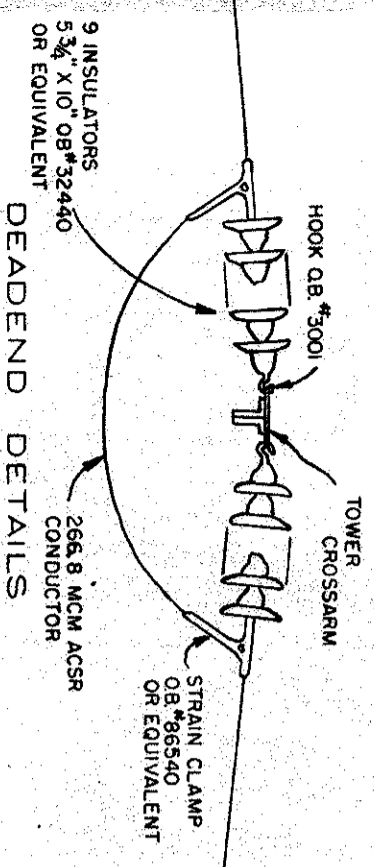
|                         |               |                                  |  |
|-------------------------|---------------|----------------------------------|--|
| NEW YORK CENTRAL SYSTEM |               |                                  |  |
| Office of Chief Eng'r   |               | Northwestern Dist. Chicago, Ill. |  |
| Aerial Crossing         |               |                                  |  |
| DETROIT EDISON CO.      |               |                                  |  |
| WARREN MICHIGAN         |               |                                  |  |
| Drawn: DLO              | Date: 6-22-64 | Plan: W-127-2-1-CD               |  |
| Scale: 1" = 200'        | Checked: JWE  | File: M-DE-509A-M                |  |

ST CLAIR-LOGAN-TROY &  
STERLING-LOGAN-NORTHEAST  
120 KV TOWER LINE



ELEVATION OF CROSSING  
SCALE 1"=50' HORIZONTAL  
1"=20' VERTICAL

SEE DWG. ED-5643 FOR DEADEND  
DETAILS ON STRUCTURE 1960 A.



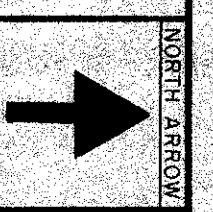
TOWERS 1960 & 1960B

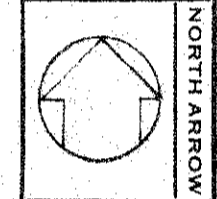
RECORDED RIGHT OF WAY  
R22879

APPROVED  
FOR  
MICHIGAN PUBLIC SERVICE  
DIRECTOR OF PUBLIC UTILITIES  
FILE NO. MD2-8-5436 DATE 10-19-64

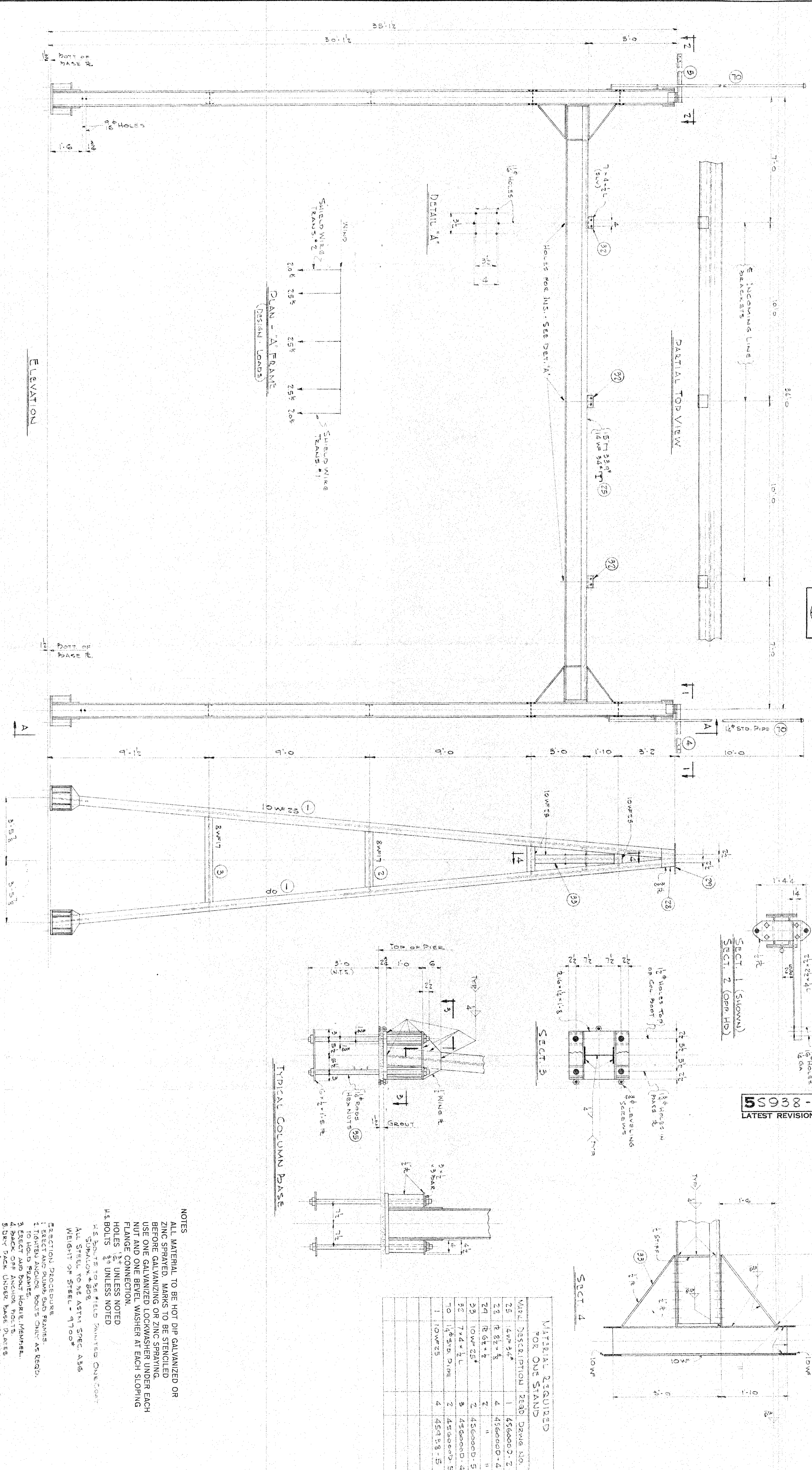
CITY \_\_\_\_\_  
COUNTY MACOMB  
TOWNSHIP STERLING  
T2N R12E  
SECTION NO. 28

THE DETROIT EDISON COMPANY  
PLAN SUBMITTED TO  
MICHIGAN PUBLIC SERVICE COMMISSION  
FOR 120,000 VOLT CROSSING  
OVER NYC RR  
DRAWN BY JH/LM DATE 5-19-64  
APPROVED BY *JH* DATE 5-27-64  
PERMIT NO. \_\_\_\_\_  
DRAWING NO. RX-3655





55938-1  
LATEST REVISION



MATERIAL REQUIRED FOR ONE STAND

| QTY | DESCRIPTION  | REQD | DRAWG NO. |
|-----|--------------|------|-----------|
| 25  | 4W 34"       | 1    | 456000D-2 |
| 28  | R 84" x 8"   | 4    | 456000D-4 |
| 24  | R 64" x 8"   | 2    | " "       |
| 53  | 10W 25"      | 2    | 456000D-5 |
| 50  | 744 x 1/2" L | 3    | 456000D-4 |
| 70  | 1/4 STD PIPE | 2    | 456000D-5 |
| 1   | 10W 25"      | 4    | 45938-5   |

**NOTES**

1. ALL MATERIAL TO BE HOT DIP GALVANIZED OR ZINC SPRAYED. MARKS TO BE STENCILED BEFORE GALVANIZING OR ZINC SPRAYING. USE ONE GALVANIZED LOCKWASHER UNDER EACH NUT AND ONE BEVEL WASHER AT EACH SLOPING FLANGE CONNECTION.

2. HOLES 1/8" UNLESS NOTED

3. H.S. BOLTS 1/2" UNLESS NOTED

4. H.S. BOLTS TO BE FELD PAINTED ONE COAT 50% ALUMINUM P.B.O.B.

5. ALL STEEL TO BE ASTM SPEC. A36

6. WEIGHT OF STEEL - 4700#

**SECTION PROCEDURE**

1. ERECT AND PUMP SAND FRAMES.
2. TIGHTEN ANCHOR BOLTS ONLY AS REQD.
3. ERECT AND PUMP HOLES MEMBER.
4. BACK OFF ANCHOR BOLTS 1/4" INCHES.
5. ERECT AND PUMP LINES AND TIGHTEN ANCHOR BOLTS ONE HALF TURN BEYOND FINISHED TIGHT.
6. REMOVE LEVELING SCREWS.

| NO. | DATE    | BY       | CHKD BY | APP'D BY | DESCRIPTION                             |
|-----|---------|----------|---------|----------|---|
| 1   | 7/25/64 | SCURCHON |         |          | DIAGRAM OF 'A' FRAME STRUCTURE - 120 KV |
| 2   | 9/29/64 | BLAIR    |         |          | TEANS. 1 R. 2                           |
| 3   | 1/5/64  |          |         |          |   |
| 4   | 1/5/64  |          |         |          |   |
| 5   | 1/5/64  |          |         |          |   |
| 6   | 1/3/64  |          |         |          |   |

| NO. | DATE    | BY       | CHKD BY | APP'D BY | DESCRIPTION                             |
|-----|---------|----------|---------|----------|---|
| 1   | 7/25/64 | SCURCHON |         |          | DIAGRAM OF 'A' FRAME STRUCTURE - 120 KV |
| 2   | 9/29/64 | BLAIR    |         |          | TEANS. 1 R. 2                           |
| 3   | 1/5/64  |          |         |          |   |
| 4   | 1/5/64  |          |         |          |   |
| 5   | 1/5/64  |          |         |          |   |
| 6   | 1/3/64  |          |         |          |   |

| NO. | DATE    | BY       | CHKD BY | APP'D BY | DESCRIPTION                             |
|-----|---------|----------|---------|----------|---|
| 1   | 7/25/64 | SCURCHON |         |          | DIAGRAM OF 'A' FRAME STRUCTURE - 120 KV |
| 2   | 9/29/64 | BLAIR    |         |          | TEANS. 1 R. 2                           |
| 3   | 1/5/64  |          |         |          |   |
| 4   | 1/5/64  |          |         |          |   |
| 5   | 1/5/64  |          |         |          |   |
| 6   | 1/3/64  |          |         |          |   |

OPERATION: LOGAN STATION

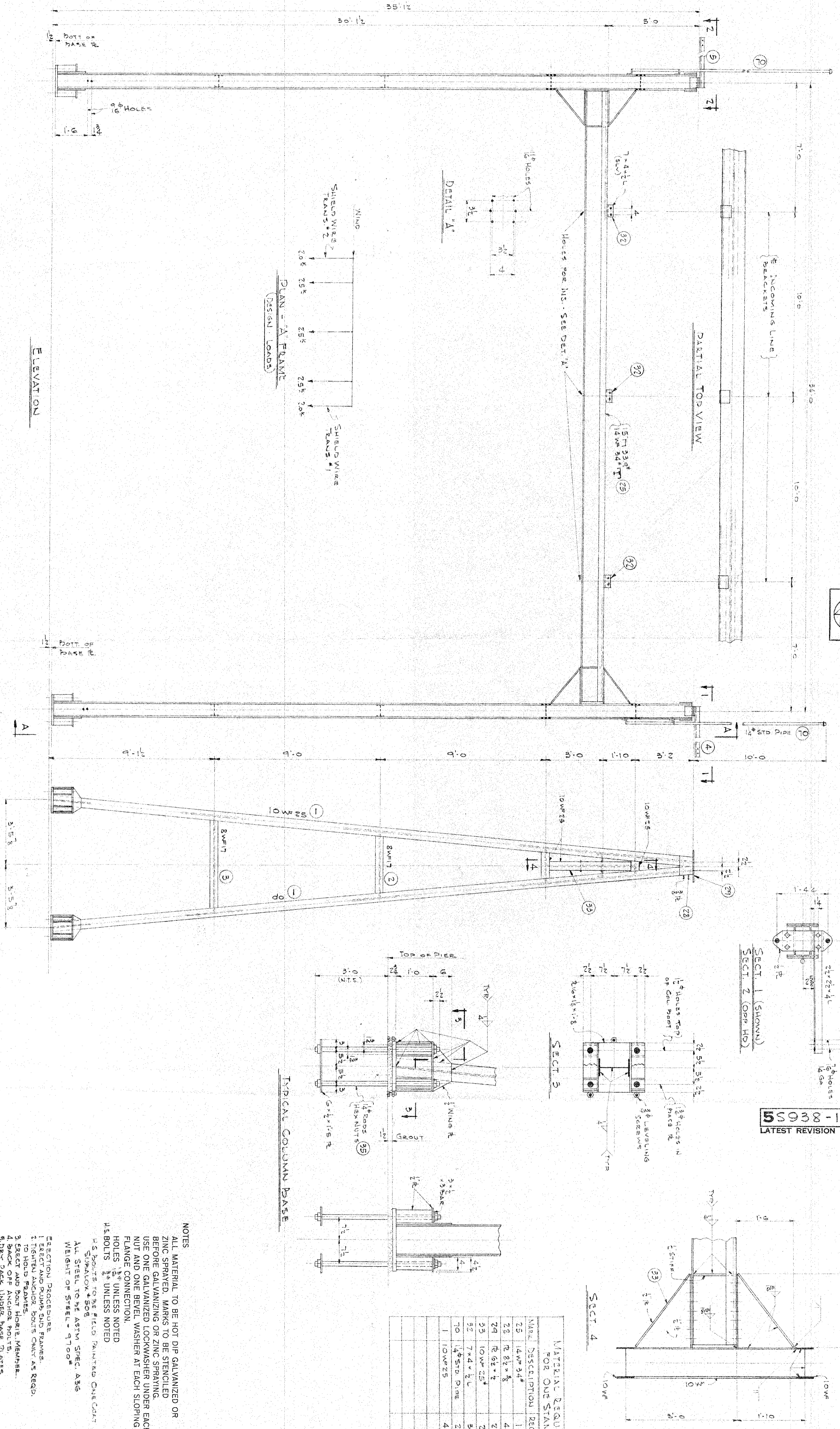
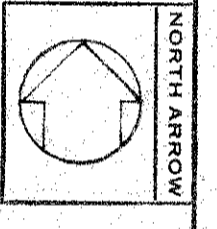
TITLE: DIAGRAM OF 'A' FRAME STRUCTURE - 120 KV

THE DETROIT EDISON COMPANY

ENGINEERING DEPARTMENT

SCALE: 401910

ORDER WORK: 55938-1



55938-1  
LATEST REVISION

MATERIAL REQUIRED FOR ONE STAND

| MATL DESCRIPTION  | REQD | DEMG NO.   |
|-------------------|------|------------|
| 25 14W 34"        | 1    | 456000-D-2 |
| 28 12 8 1/2 x 8   | 4    | 456000-D-4 |
| 29 12 6 1/2 x 8   | 2    | "          |
| 33 10W 25"        | 2    | 456000-D-5 |
| 32 7 1/4 x 1/2 L  | 3    | 456000-D-4 |
| 70 1 1/2 STD PIPE | 2    | 456000-D-5 |
| 1 10W 25"         | 4    | 456198-5   |

NOTES

ALL MATERIAL TO BE HOT DIP GALVANIZED OR ZINC SPRAYED. MARKS TO BE STENCILED BEFORE GALVANIZING OR ZINC SPRAYING. USE ONE GALVANIZED LOCKWASHER UNDER EACH NUT AND ONE BEVEL WASHER AT EACH SLOPING FLANGE CONNECTION.

HOLES 1/8" UNLESS NOTED

H.S. BOLTS 3/4" UNLESS NOTED

U.S. BOLTS TO BE FIELD PAINTED ONE COAT SPALON'S 208

ALL STEEL TO ME ASTM SPEC. A36

WEIGHT OF STEEL = 9700

ERECTION PROCEDURE

1. ERECT AND RUMBLE STD FRAMES.
2. ERECT AND RUMBLE TRANS-1 AND TRANS-2 TO HUBS.
3. ERECT AND RUMBLE HORIZ. MEMBERS.
4. BACK OFF ANCHOR BOLTS.
5. DRY BACK UNDER BASE PLATES.
6. AFTER DRY BACK HAS SET TIGHTEN ANCHOR BOLTS ONE HALF TURN BEYOND FINISH TIGHT.
7. REMOVE LEVELING SCREWS.

| NO. | DATE    | BY        | CHK'D BY | REVISION |
|-----|---------|-----------|----------|----------|
| 1   | 6/28/61 | W. J. ... | ...      | ...      |
| 2   | 7/1/61  | ...       | ...      | ...      |
| 3   | ...     | ...       | ...      | ...      |
| 4   | ...     | ...       | ...      | ...      |
| 5   | ...     | ...       | ...      | ...      |
| 6   | ...     | ...       | ...      | ...      |

| NO. | DATE    | BY        | CHK'D BY | REVISION |
|-----|---------|-----------|----------|----------|
| 1   | 6/28/61 | W. J. ... | ...      | ...      |
| 2   | 7/1/61  | ...       | ...      | ...      |
| 3   | ...     | ...       | ...      | ...      |
| 4   | ...     | ...       | ...      | ...      |
| 5   | ...     | ...       | ...      | ...      |
| 6   | ...     | ...       | ...      | ...      |

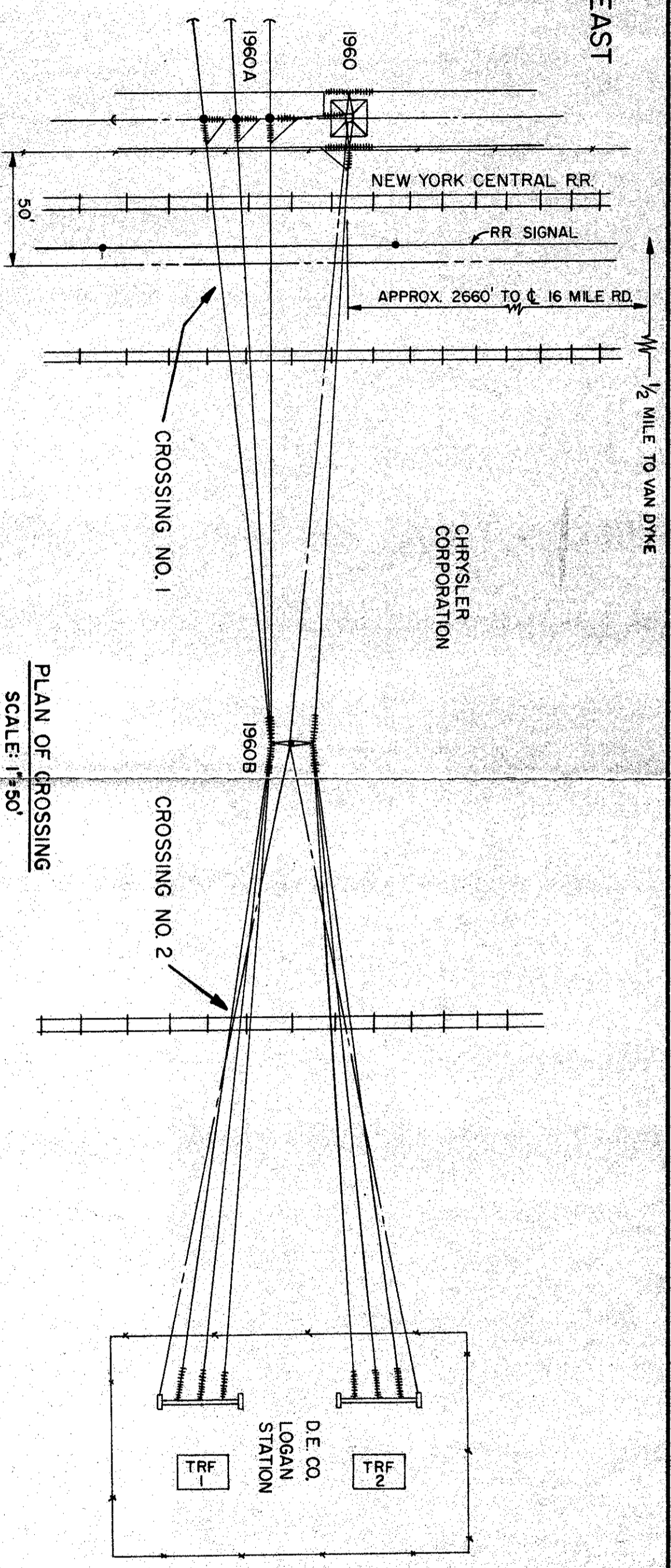
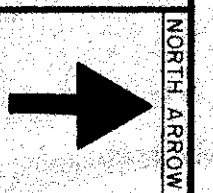
| NO. | DATE    | BY        | CHK'D BY | REVISION |
|-----|---------|-----------|----------|----------|
| 1   | 6/28/61 | W. J. ... | ...      | ...      |
| 2   | 7/1/61  | ...       | ...      | ...      |
| 3   | ...     | ...       | ...      | ...      |
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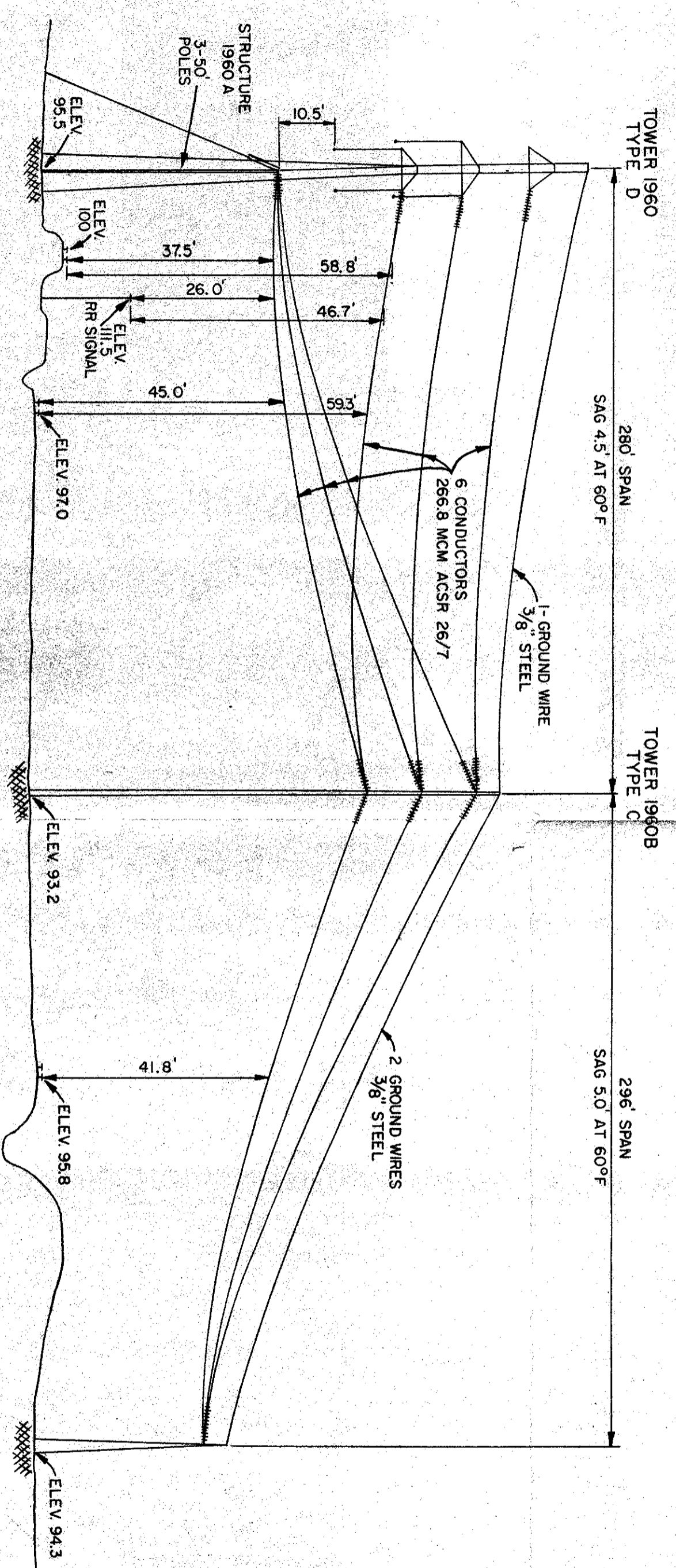
| NO. | DATE    | BY        | CHK'D BY | REVISION |
|-----|---------|-----------|----------|----------|
| 1   | 6/28/61 | W. J. ... | ...      | ...      |
| 2   | 7/1/61  | ...       | ...      | ...      |
| 3   | ...     | ...       | ...      | ...      |
| 4   | ...     | ...       | ...      | ...      |
| 5   | ...     | ...       | ...      | ...      |
| 6   | ...     | ...       | ...      | ...      |

THE DETROIT EDISON COMPANY  
ENGINEERING DEPARTMENT  
DRAWING NUMBER 55938-1  
SCALE 1/8" = 1'-0"  
JOB NUMBER 401910  
LOCATION LOGAN STATION  
TITLE DIAGRAM OF 'A' FRAME STRUCTURE - 120 KV  
TRANS-1 & 2

ST CLAIR - LOGAN - TROY &  
STERLING - LOGAN - NORTHEAST  
120 KV TOWER LINE

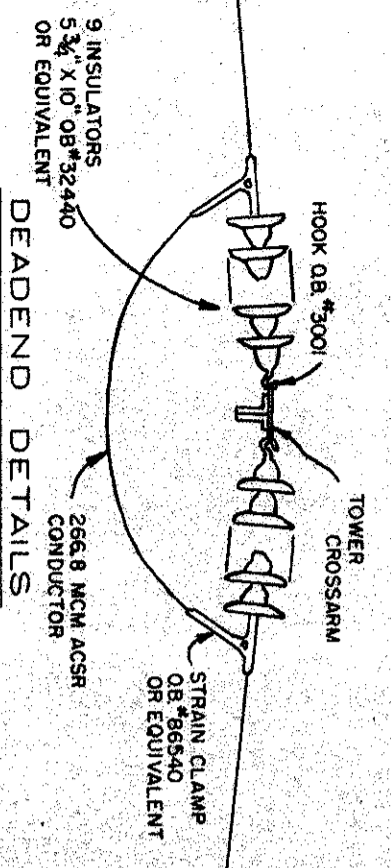


PLAN OF CROSSING  
SCALE: 1" = 50'



ELEVATION OF CROSSING  
SCALE 1" = 50' HORIZONTAL  
1" = 20' VERTICAL

RECORDED RIGHT OF WAY  
*R 22879*



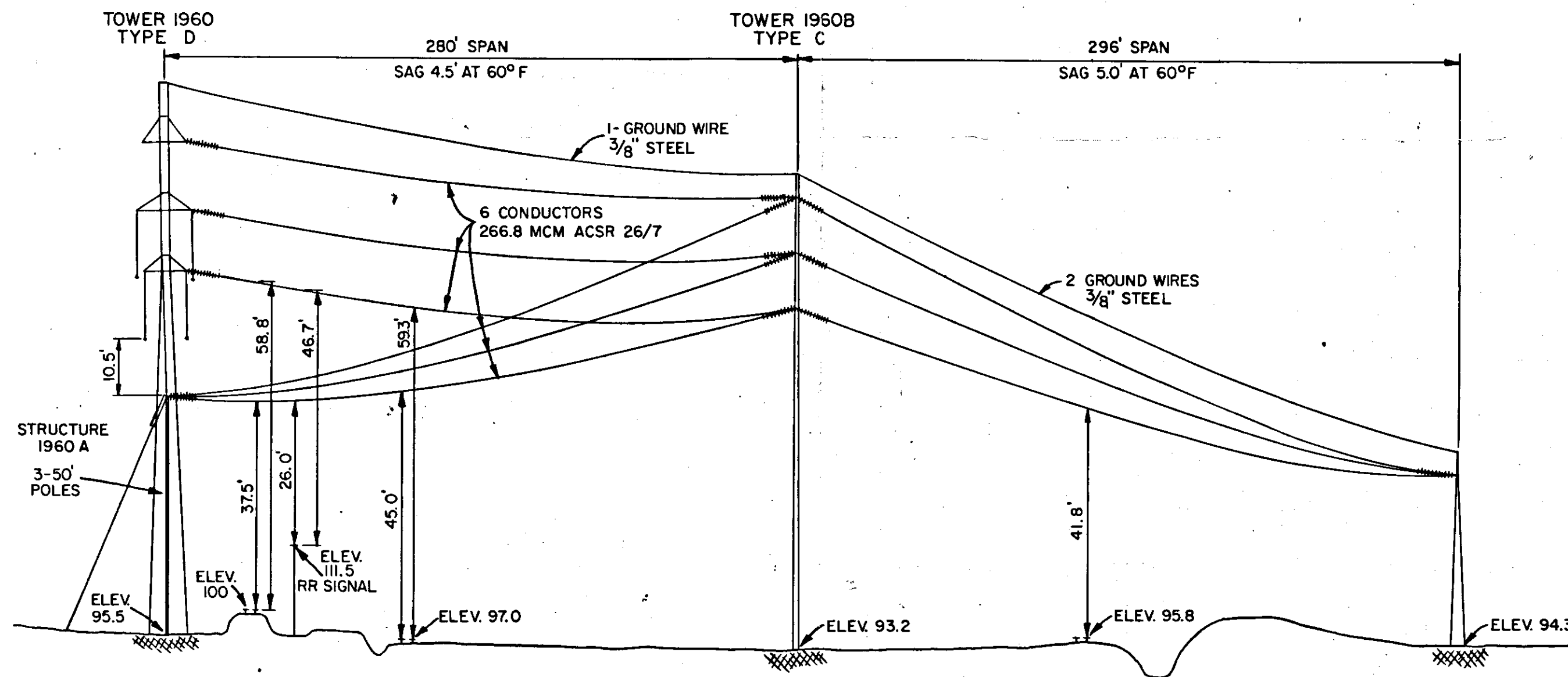
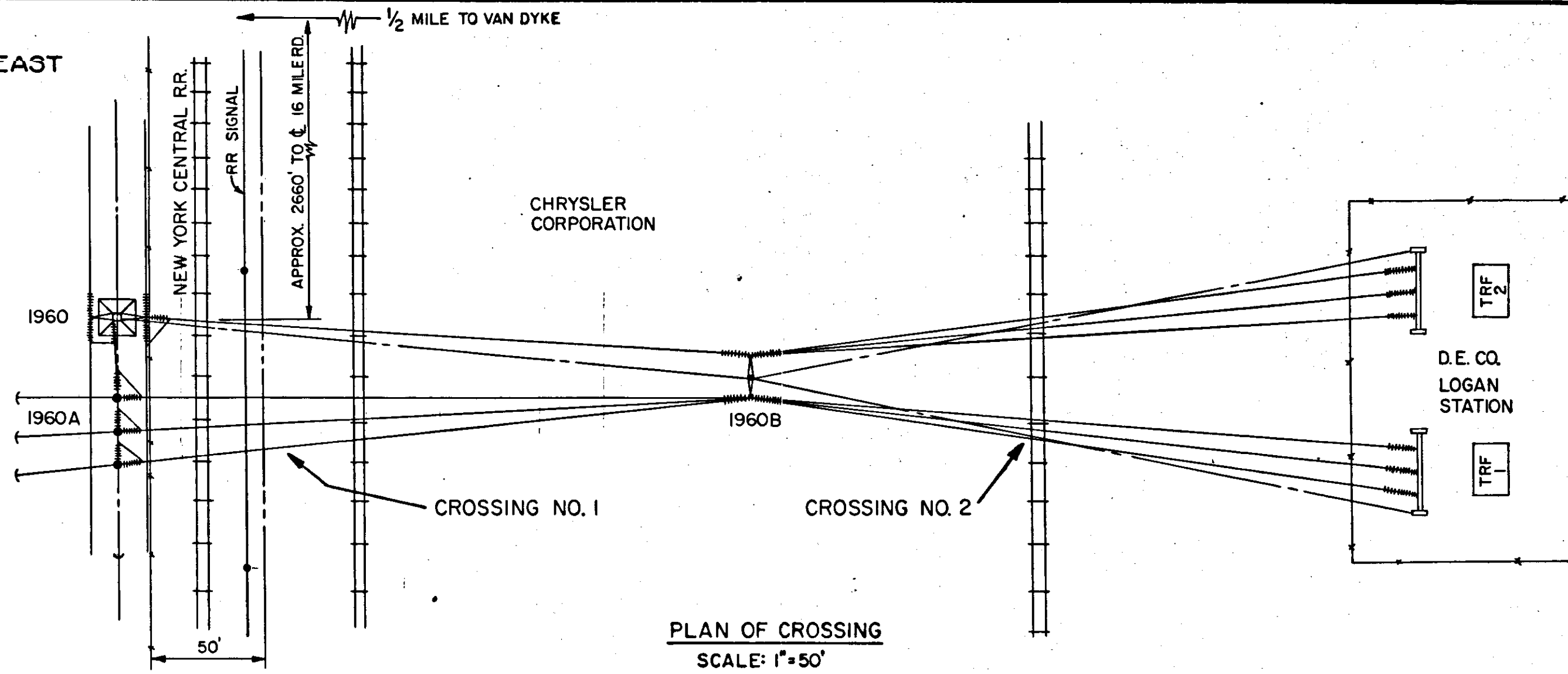
SEE DWG. ED-5643 FOR DEADEND  
DETAILS ON STRUCTURE 1960 A.

CITY \_\_\_\_\_  
COUNTY MACOMB  
TOWNSHIP STERLING  
T 2 N R 12 E  
SECTION NO. 28

APPROVED FOR  
MICHIGAN PUBLIC SERVICE  
COMMISSION  
DIRECTOR OF PUBLIC UTILITIES  
FILE ED2-8-5435 DATE 10-19-64

THE DETROIT EDISON COMPANY  
PLAN SUBMITTED TO  
MICHIGAN PUBLIC SERVICE COMMISSION  
FOR 120,000 VOLT CROSSING  
OVER NYC RR  
DRAWN BY JH/LM DATE 5-19-64  
APPROVED BY JH/Manser DATE 5-27-64  
PERMIT NO. \_\_\_\_\_  
DRAWING NO. RX-3655

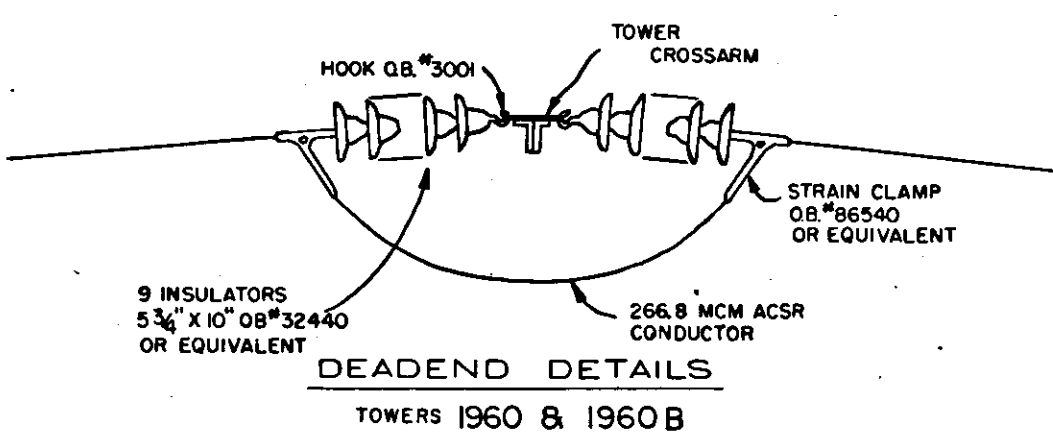
ST. CLAIR-LOGAN-TROY &  
STERLING-LOGAN-NORTHEAST  
120 KV TOWER LINE



ELEVATION OF CROSSING  
SCALE 1"=50' HORIZONTAL  
1"=20' VERTICAL

RECORDED RIGHT OF WAY  
R22879

APPROVED  
FOR  
MICHIGAN PUBLIC SERVICE COMMISSION  
DIRECTOR OF PUBLIC UTILITIES  
FILE ED2-8-5436 DATE 10-19-64

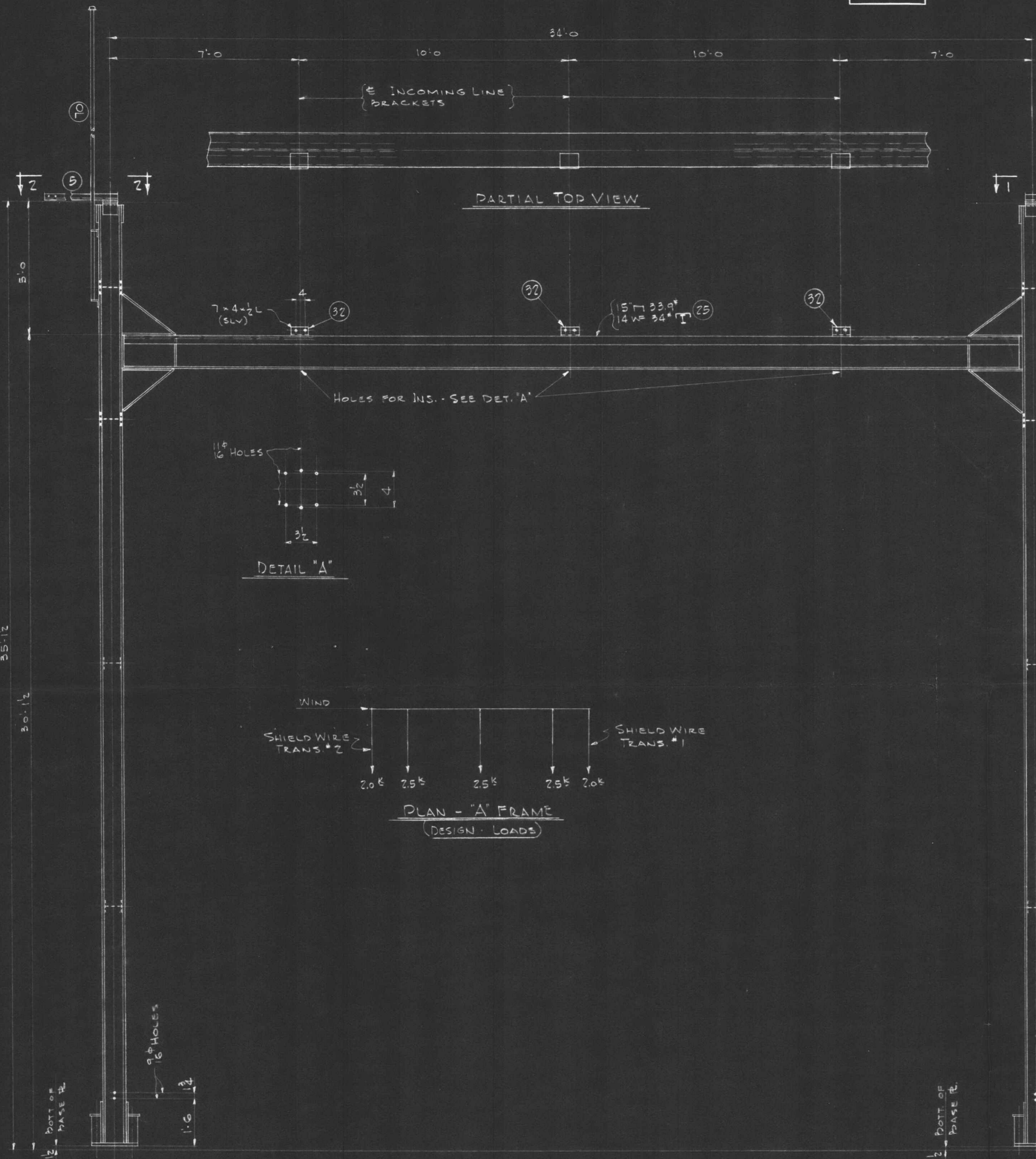


SEE DWG. ED-5643 FOR DEADEND  
DETAILS ON STRUCTURE 1960 A.

CITY \_\_\_\_\_  
COUNTY MACOMB  
TOWNSHIP STERLING  
T2N R12E  
SECTION NO. 28

THE DETROIT EDISON COMPANY  
PLAN SUBMITTED TO  
MICHIGAN PUBLIC SERVICE COMMISSION  
FOR 120,000 VOLT CROSSING  
OVER NYC RR  
DRAWN BY J.H./L.M. DATE 5-19-64  
APPROVED BY *J.B. Wenger* DATE 5-21-64  
PERMIT NO. ED DRAWING NO. RX-3655

RECORDED RIGHT OF WAY NO. 22879

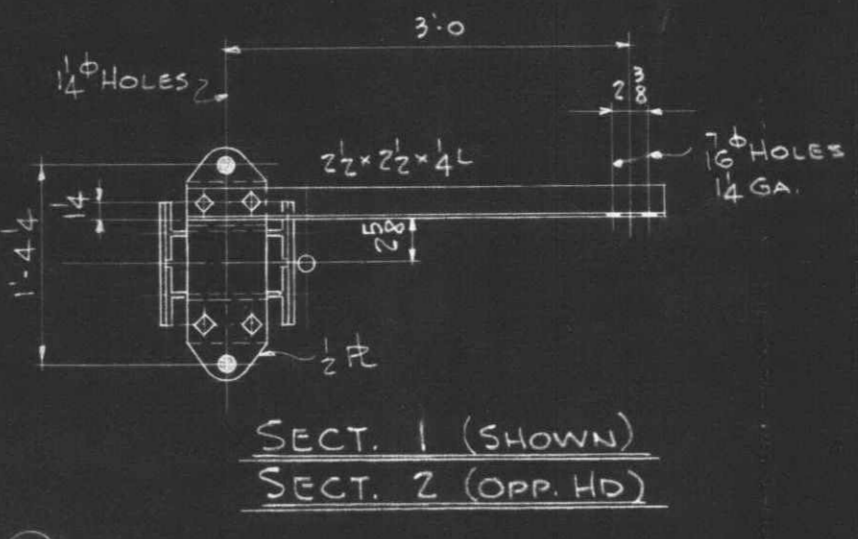


DETAIL "A"

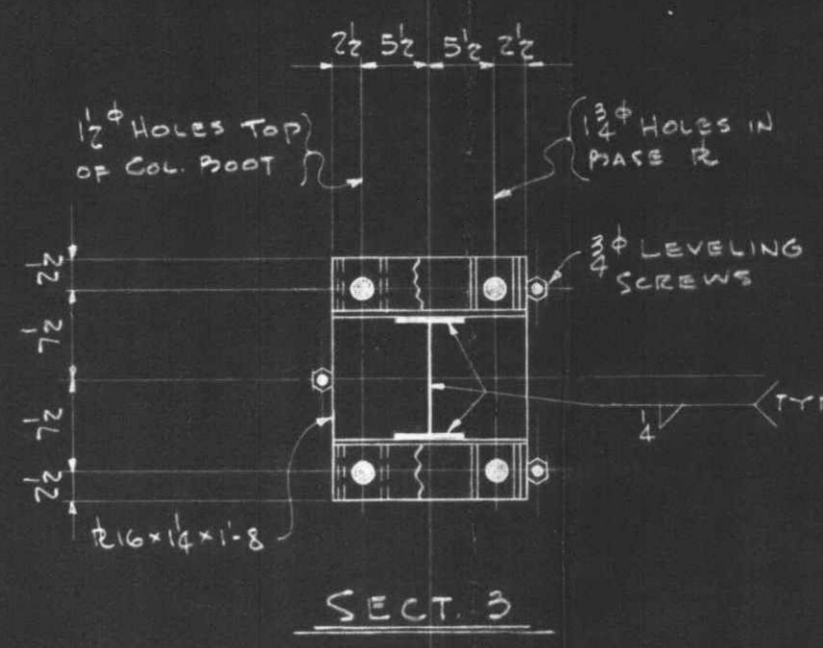
PLAN - "A" FRAME  
(DESIGN LOADS)

ELEVATION

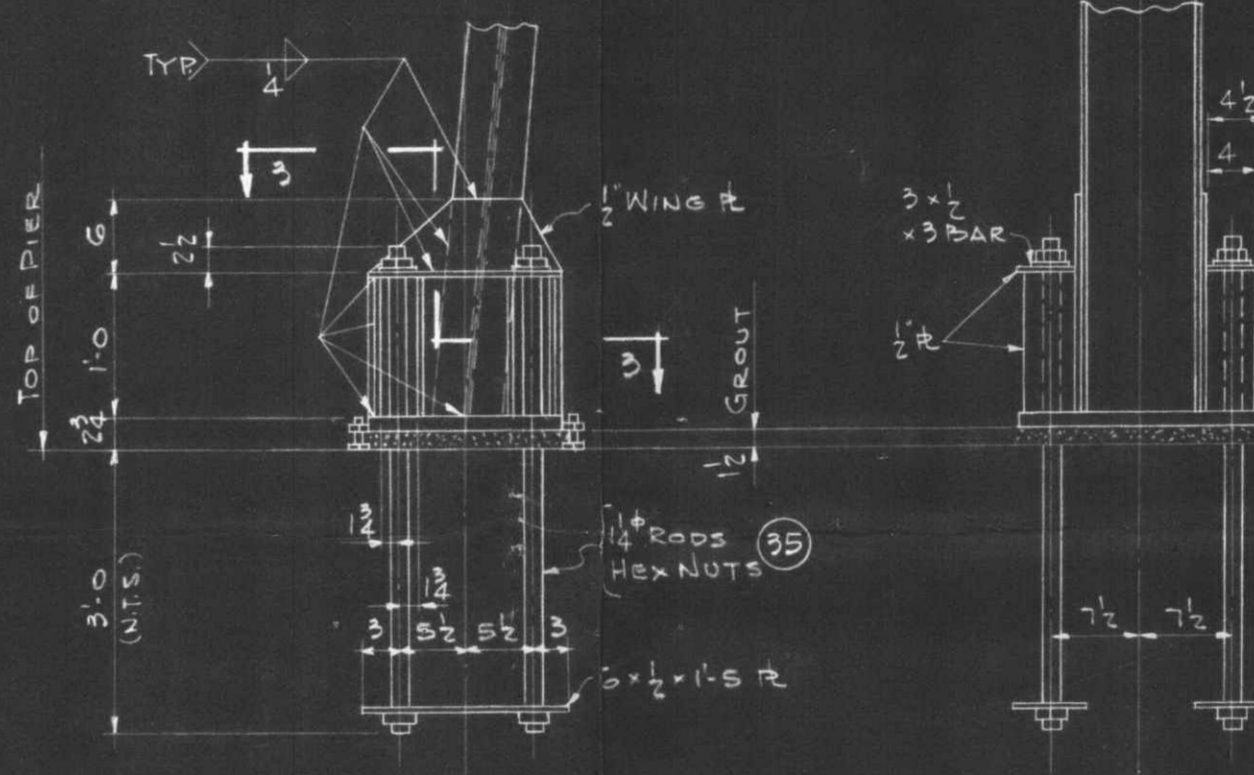
SECT. A



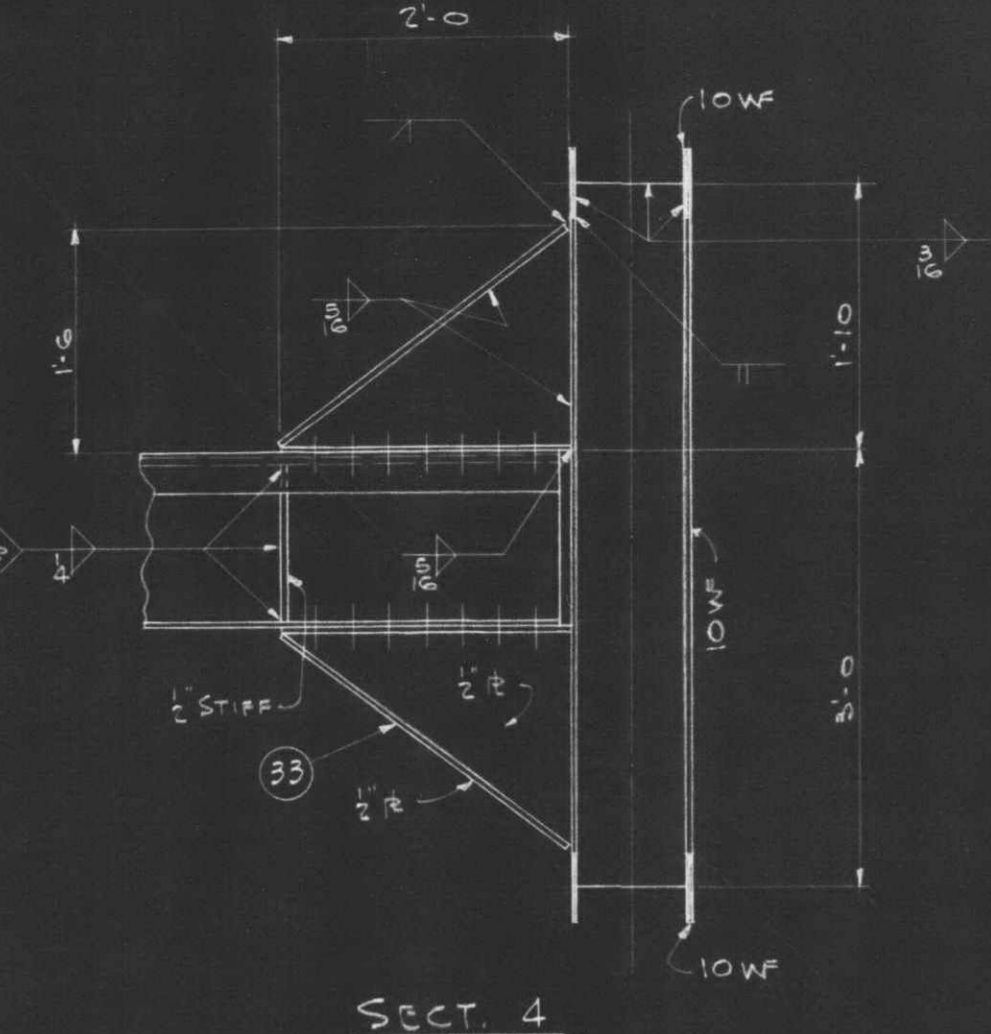
SECT. 1 (SHOWN)  
SECT. 2 (OPP. HD)



SECT. 3



TYPICAL COLUMN BASE



SECT. 4

| MATERIAL REQUIRED FOR ONE STAND |                  |      |           |
|---------------------------------|------------------|------|-----------|
| MARK                            | DESCRIPTION      | REQD | DWG. NO.  |
| 25                              | 14 WF 34*        | 1    | 456000D-2 |
| 28                              | R 8 1/2 x 3/8    | 4    | 456000D-4 |
| 29                              | R 6 1/2 x 1/2    | 2    | " "       |
| 33                              | 10 WF 25*        | 2    | 456000D-5 |
| 32                              | 7 x 4 x 1/2 L    | 3    | 456000D-4 |
| 70                              | 1 1/4" STD. PIPE | 2    | 456000D-5 |
| 1                               | 10 WF 25         | 4    | 45938-5   |

NOTES  
 ALL MATERIAL TO BE HOT DIP GALVANIZED OR ZINC SPRAYED. MARKS TO BE STENCILED BEFORE GALVANIZING OR ZINC SPRAYING. USE ONE GALVANIZED LOCKWASHER UNDER EACH NUT AND ONE BEVEL WASHER AT EACH SLOPING FLANGE CONNECTION.  
 HOLES 1/2" UNLESS NOTED  
 U.S. BOLTS 3/4" UNLESS NOTED  
 U.S. BOLTS TO BE FIELD PAINTED ONE COAT SUPALOX + 502  
 ALL STEEL TO BE ASTM SPEC. A36  
 WEIGHT OF STEEL - 9700\*

- ERECTION PROCEDURE  
 1. ERECT AND PLUMB END FRAMES.  
 2. TIGHTEN ANCHOR BOLTS ONLY AS REQD. TO HOLD FRAMES.  
 3. ERECT AND BOLT HORIZ. MEMBER.  
 4. BACK OFF ANCHOR BOLTS.  
 5. DRY PACK UNDER BASE PLATES.  
 6. AFTER DRY PACK HAS SET TIGHTEN ANCHOR BOLTS ONE HALF TURN BEYOND FINGER TIGHT.  
 7. REMOVE LEVELING SCREWS.

| F          |            |            |         |      | E          |            |            |         |      | D          |            |            |         |      | C          |            |            |         |      | B          |            |            |         |      | A          |            |            |         |      |  |  |  |  |  |
|------------|------------|------------|---------|------|------------|------------|------------|---------|------|------------|------------|------------|---------|------|------------|------------|------------|---------|------|------------|------------|------------|---------|------|------------|------------|------------|---------|------|--|--|--|--|--|
| PROJ. DIR. | PROJ. ENG. | PROJ. DES. | MADE BY | DATE | PROJ. DIR. | PROJ. ENG. | PROJ. DES. | MADE BY | DATE | PROJ. DIR. | PROJ. ENG. | PROJ. DES. | MADE BY | DATE | PROJ. DIR. | PROJ. ENG. | PROJ. DES. | MADE BY | DATE | PROJ. DIR. | PROJ. ENG. | PROJ. DES. | MADE BY | DATE | PROJ. DIR. | PROJ. ENG. | PROJ. DES. | MADE BY | DATE |  |  |  |  |  |
|            |            |            |         |      |            |            |            |         |      |            |            |            |         |      |            |            |            |         |      |            |            |            |         |      |            |            |            |         |      |  |  |  |  |  |

| OTHER DEPT. APPROVAL |  | DATE |  |
|----------------------|--|------|--|
|                      |  |      |  |

| DIVISION    |  | DATE |  |
|-------------|--|------|--|
| ARCH        |  |      |  |
| BOILER      |  |      |  |
| CONCRETE    |  |      |  |
| ELECT. PWR. |  |      |  |
| ELECT. LTG. |  |      |  |
| MECH.       |  |      |  |
| PIPING      |  |      |  |
| STEEL       |  |      |  |

| DRAWN BY          |  | DATE    |  |
|-------------------|--|---------|--|
| SCOPHOLM          |  | 9/25/64 |  |
| CHECKED BY        |  |         |  |
| PROJECT DIRECTOR  |  |         |  |
| PROJECT ENGINEER  |  |         |  |
| PROJECT DESIGNER  |  |         |  |
| DIVISION ENGINEER |  |         |  |

| TITLE                                   |  | DATE |  |
|---|--|------|--|
| DIAGRAM OF "A" FRAME STRUCTURE - 120 KV |  |      |  |
| TRANS. #1 & 2                           |  |      |  |

| LOCATION      |  |
|---------------|--|
| LOGAN STATION |  |

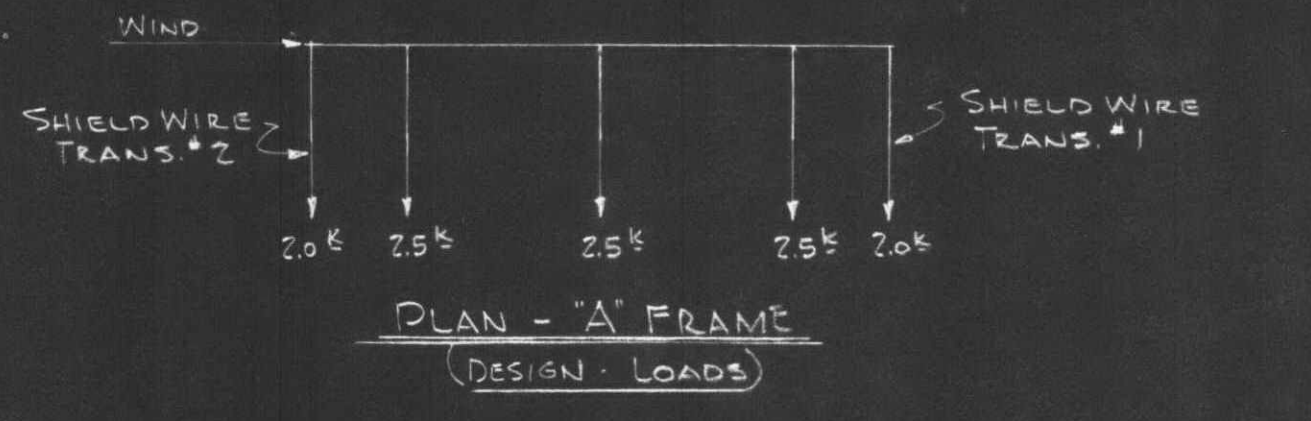
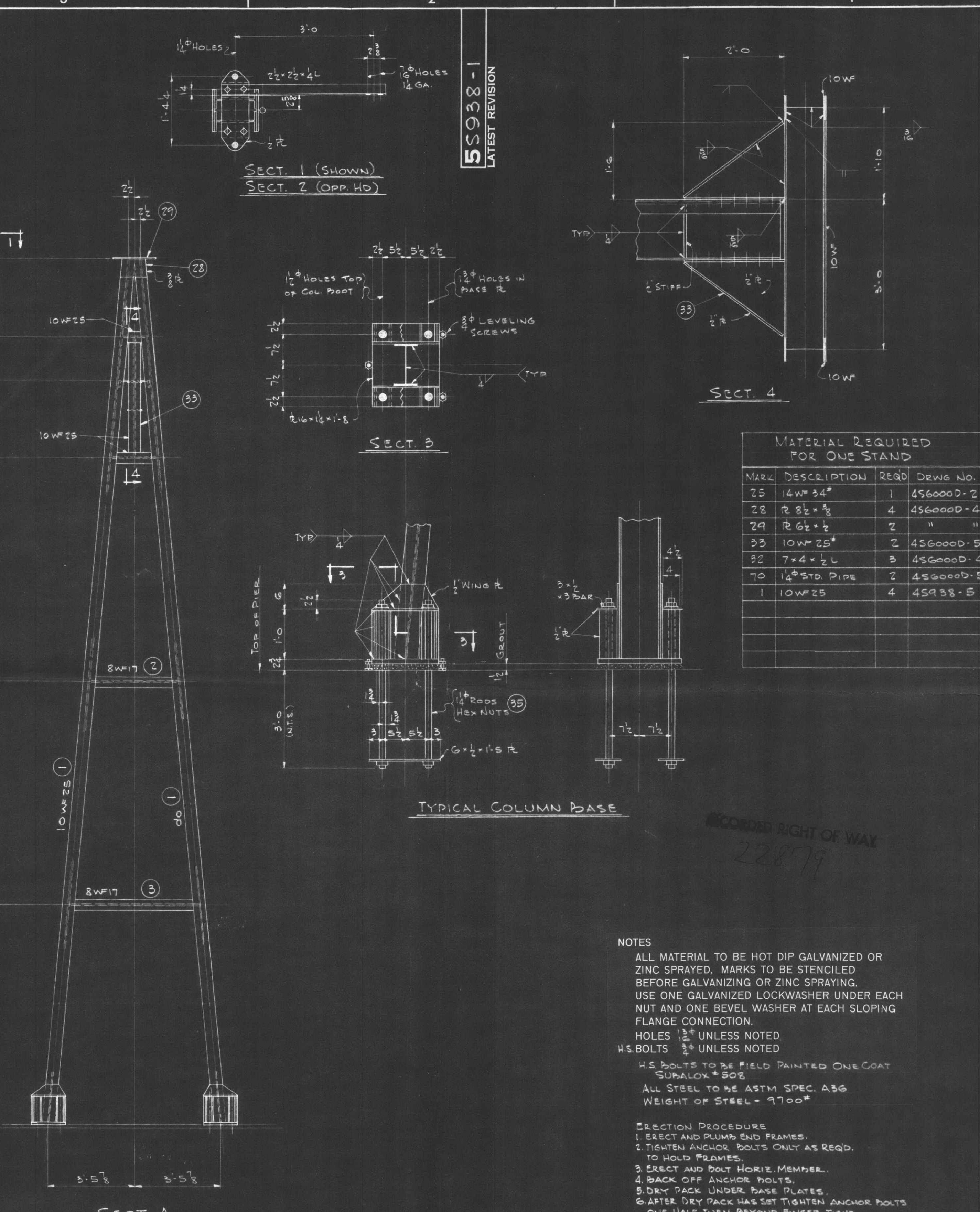
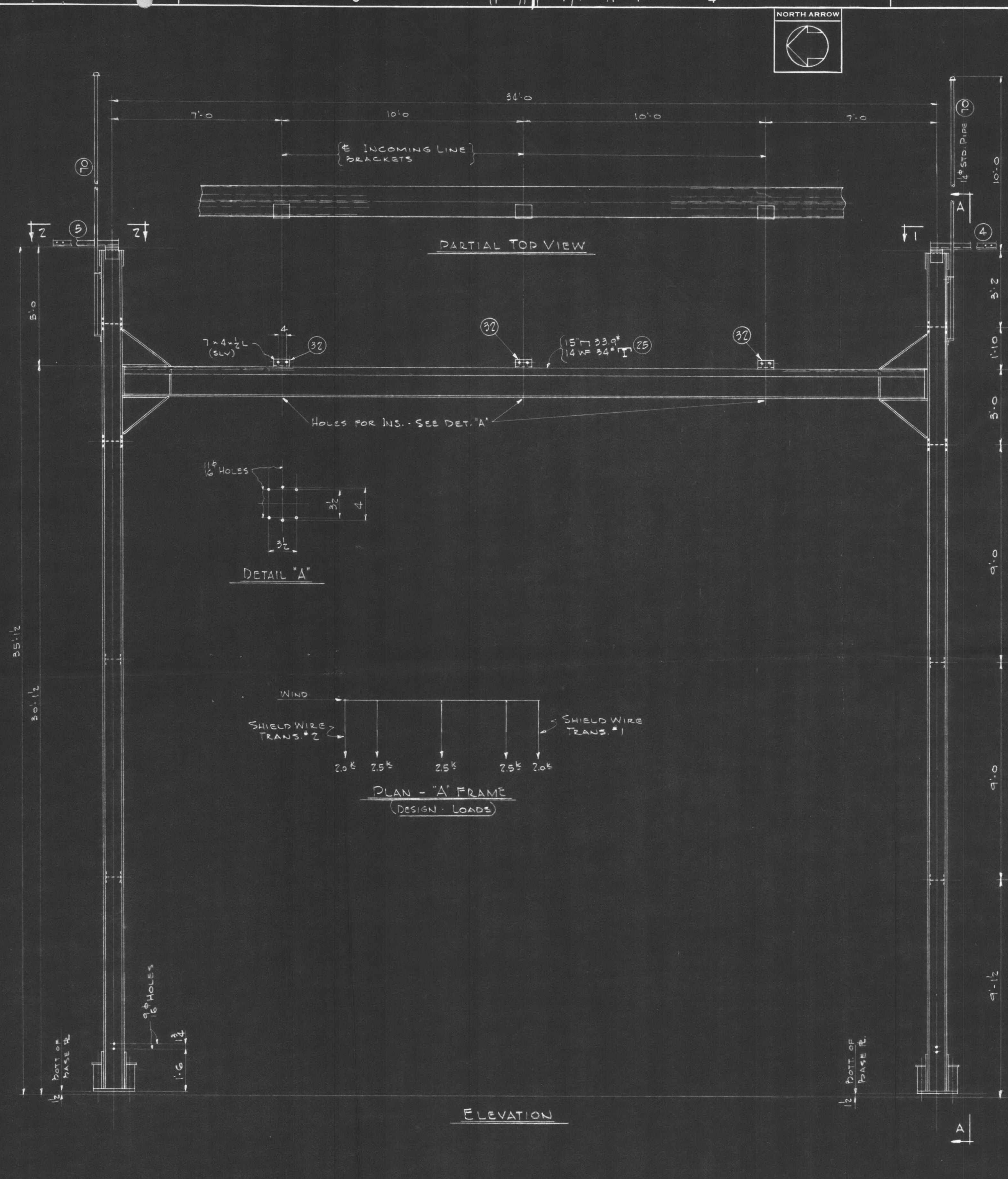
| THE DETROIT EDISON COMPANY |         | ENGINEERING DEPARTMENT |                                  |
|----------------------------|---------|------------------------|----------------------------------|
| DRAWING NUMBER             | 55938-1 | SCALE                  | USE DIMENSIONS ONLY DO NOT SCALE |
| ORDER FOR WORK             | 401910  |                        |                                  |



1964 JUN 14 1964 JUN 14 1964 JUN 14

RECORDED RIGHT OF WAY NO. 22879

1964 JUN 14 1964 JUN 14 1964 JUN 14



- NOTES**
- ALL MATERIAL TO BE HOT DIP GALVANIZED OR ZINC SPRAYED. MARKS TO BE STENCILED BEFORE GALVANIZING OR ZINC SPRAYING. USE ONE GALVANIZED LOCKWASHER UNDER EACH NUT AND ONE BEVEL WASHER AT EACH SLOPING FLANGE CONNECTION.
  - HOLES 1/2" UNLESS NOTED
  - H.S. BOLTS 3/4" UNLESS NOTED
  - H.S. BOLTS TO BE FIELD PAINTED ONE COAT SUBALOX # 502
  - ALL STEEL TO BE ASTM SPEC. A36
  - WEIGHT OF STEEL - 9700\*
- ERECTION PROCEDURE**
- ERECT AND PLUMB END FRAMES.
  - TIGHTEN ANCHOR BOLTS ONLY AS REQD. TO HOLD FRAMES.
  - ERECT AND BOLT HORIZ. MEMBER.
  - BACK OFF ANCHOR BOLTS.
  - DRY PACK UNDER BASE PLATES.
  - AFTER DRY PACK HAS SET TIGHTEN ANCHOR BOLTS ONE HALF TURN BEYOND FINGER TIGHT.
  - REMOVE LEVELING SCREWS.

|                            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |                        |      |          |                   |                                  |          |   |         |      |
|----------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------------------|------|----------|-------------------|----------------------------------|----------|---|---------|------|
| PROJ. DIR.                 | PROJ. ENG. | PROJ. DES. | PROJ. DIR. | PROJ. ENG. | PROJ. DES. | PROJ. DIR. | PROJ. ENG. | PROJ. DES. | PROJ. DIR. | PROJ. ENG. | PROJ. DES. | PROJ. DIR. | PROJ. ENG. | PROJ. DES. | OTHER DEPT. APPROVAL   | DATE | DIVISION | DESIGN SUPERVISOR | DATE                             | DRAWN BY | DATE                                    | TITLE   | DATE |
|                            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |                        |      | SCUPHOLM | 5/28/64           | SCUPHOLM                         | 5/28/64  | DIAGRAM OF 'A' FRAME STRUCTURE - 120 KV | 5/28/64 |      |
|                            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |                        |      | BLAIR    | 5/28/64           | BLAIR                            | 5/28/64  | TRANS. 1 1/2 x 2                        | 5/28/64 |      |
|                            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |                        |      |          |                   |                                  |          | LOGAN STATION                           | 5/28/64 |      |
| THE DETROIT EDISON COMPANY |            |            |            |            |            |            |            |            |            |            |            |            |            |            | ENGINEERING DEPARTMENT |      |          |                   |                                  |          |   |         |      |
| DRAWING NUMBER             |            |            |            |            |            |            |            |            |            |            |            |            |            |            | 55938-1                |      | SCALE    |                   | USE DIMENSIONS ONLY DO NOT SCALE |          |   |         |      |
| ORDER FOR WORK             |            |            |            |            |            |            |            |            |            |            |            |            |            |            | 401910                 |      |          | DATE              |                                  |          |   |         |      |
| DATE                       |            |            |            |            |            |            |            |            |            |            |            |            |            |            | 6/3/64                 |      | DATE     |                   | DATE                             |          |   |         |      |

1964 JUN 14 1964 JUN 14 1964 JUN 14

RECORDED RIGHT OF WAY NO. 22879

1964 JUN 14 1964 JUN 14 1964 JUN 14