

APPALACHIAN POWER COMPANY
BEFORE THE
VIRGINIA STATE CORPORATION COMMISSION
CASE NO. PUR-2021-00219

APPLICATION FOR APPROVAL AND CERTIFICATION OF
ELECTRICAL TRANSMISSION LINE

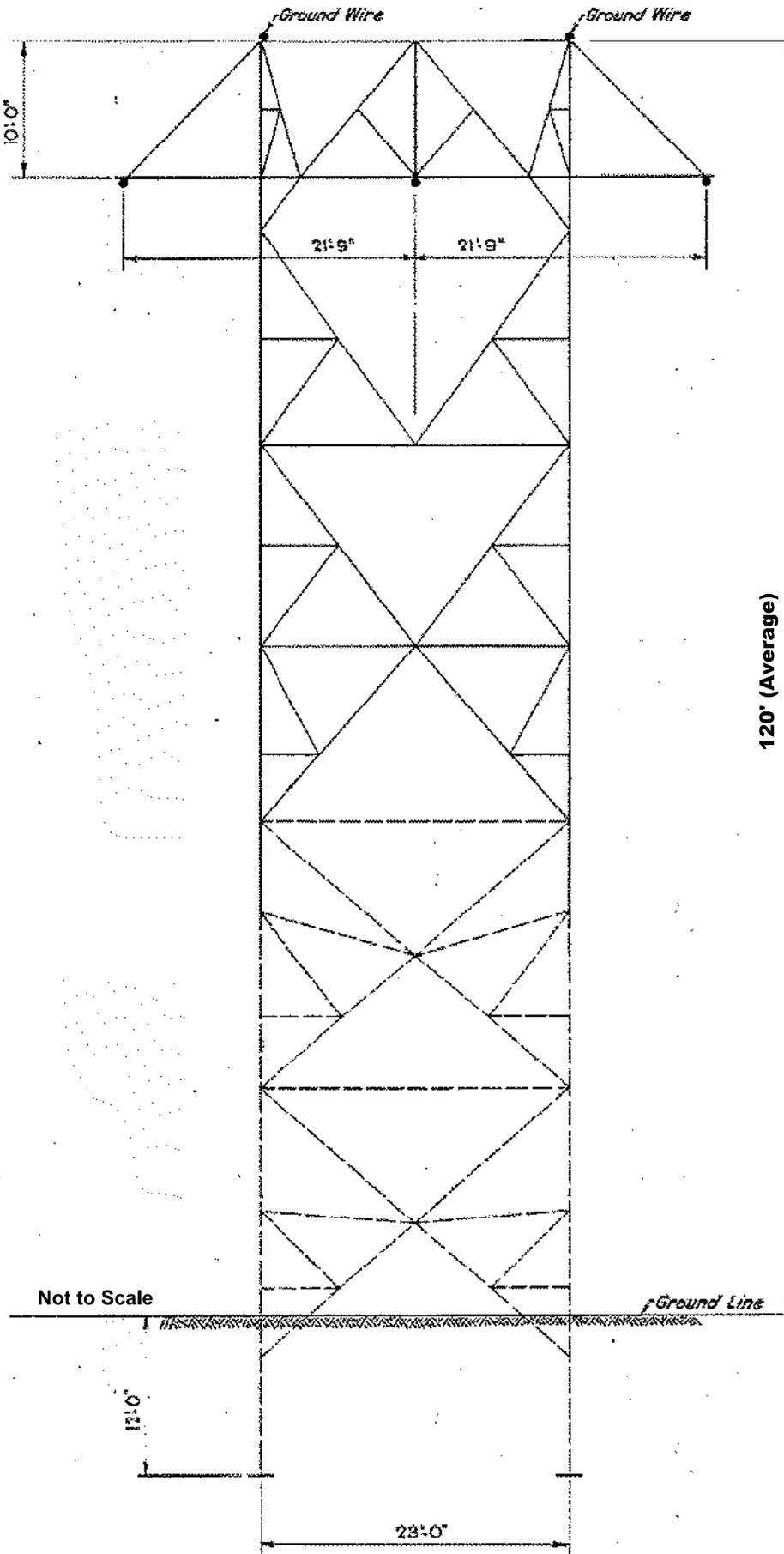
Fieldale to Ridgeway
138 kV Rebuild Project

VOLUME 1 OF 2

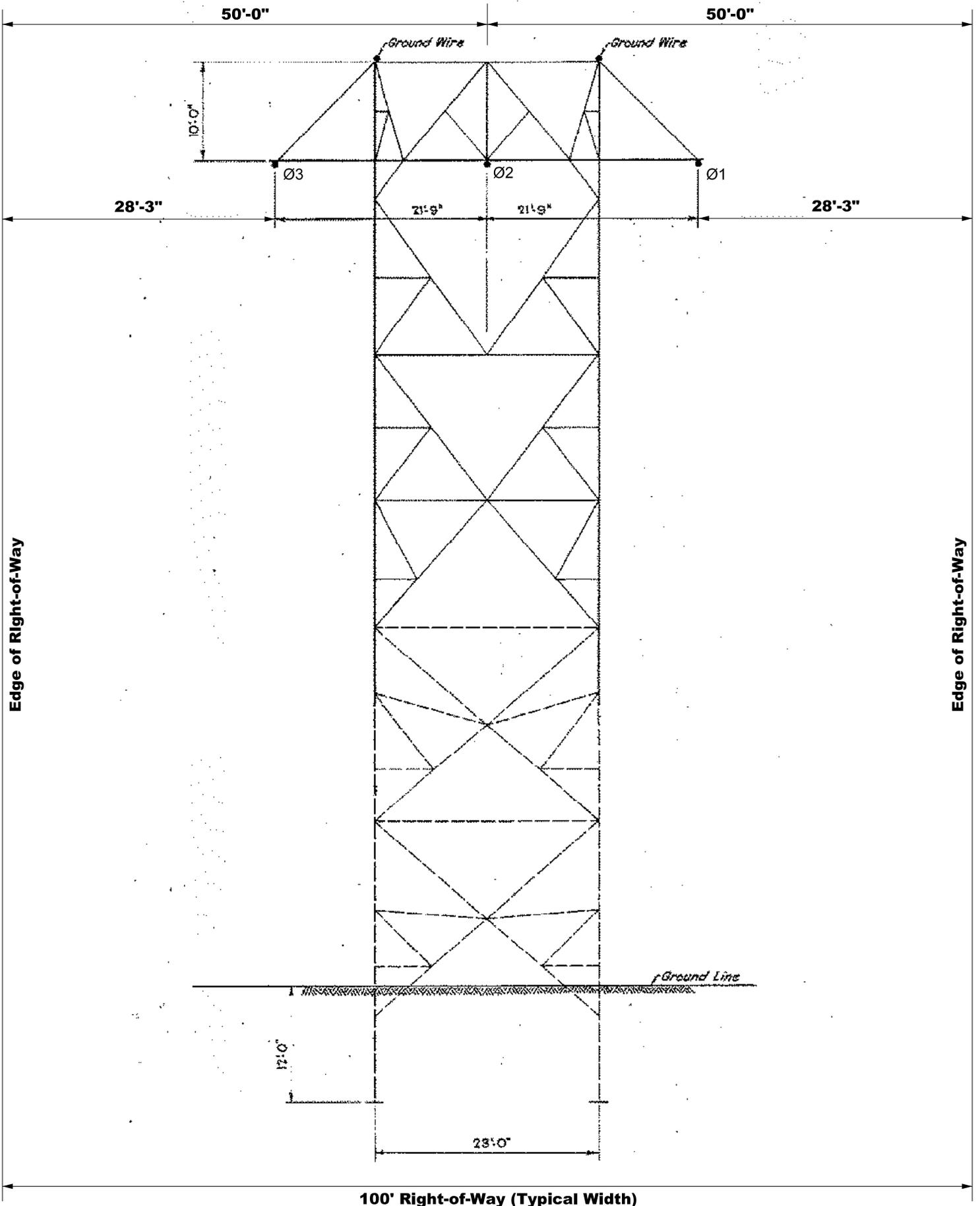
Application, Testimony, Response to Guidelines and
Exhibits

November 2021

**EXHIBIT 4: EXISTING 138 KV SELF-SUPPORTING LATTICE
TOWER**



TYPICAL SCHEMATIC

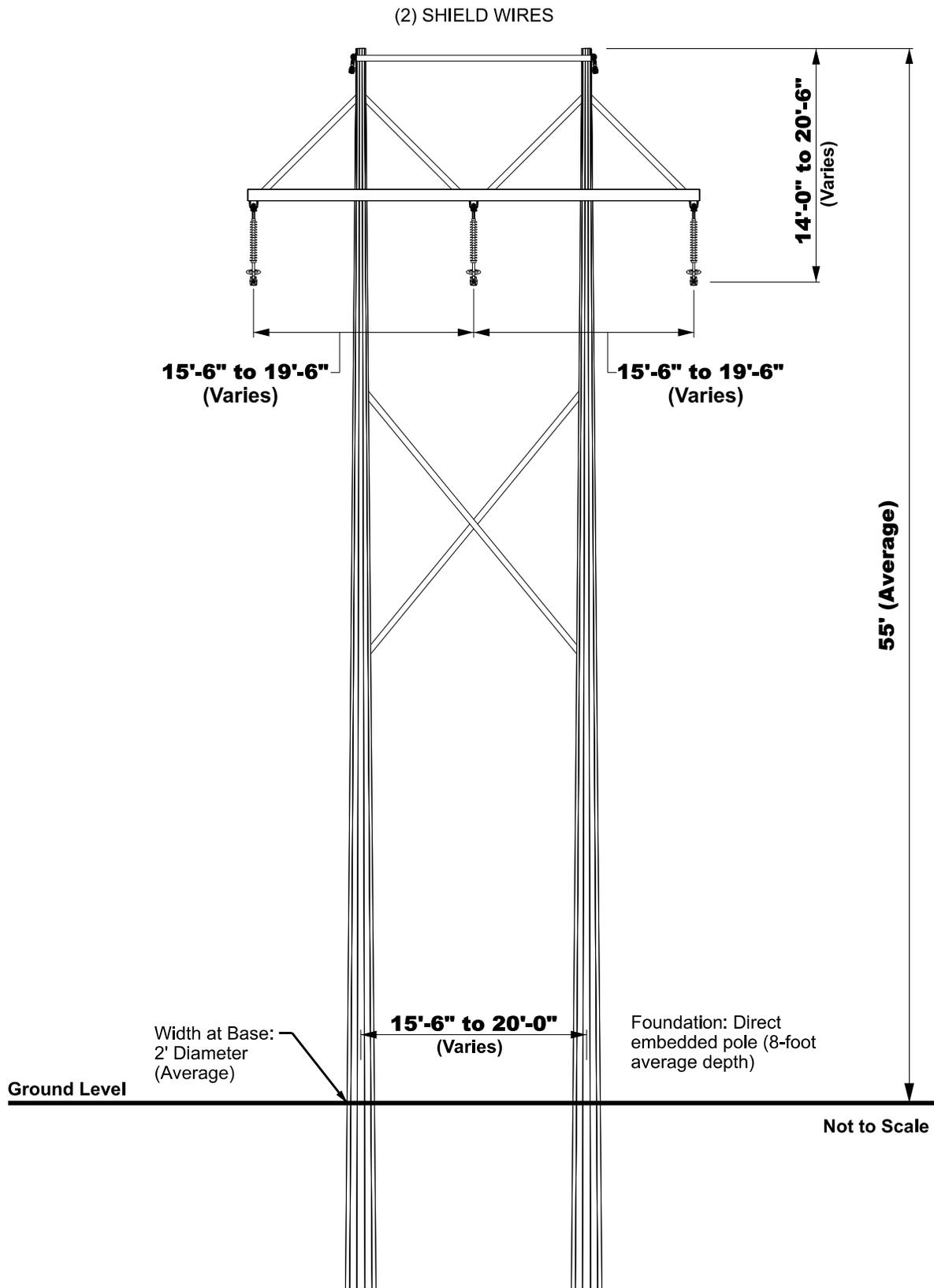


TYPICAL RIGHT-OF-WAY CROSS SECTION

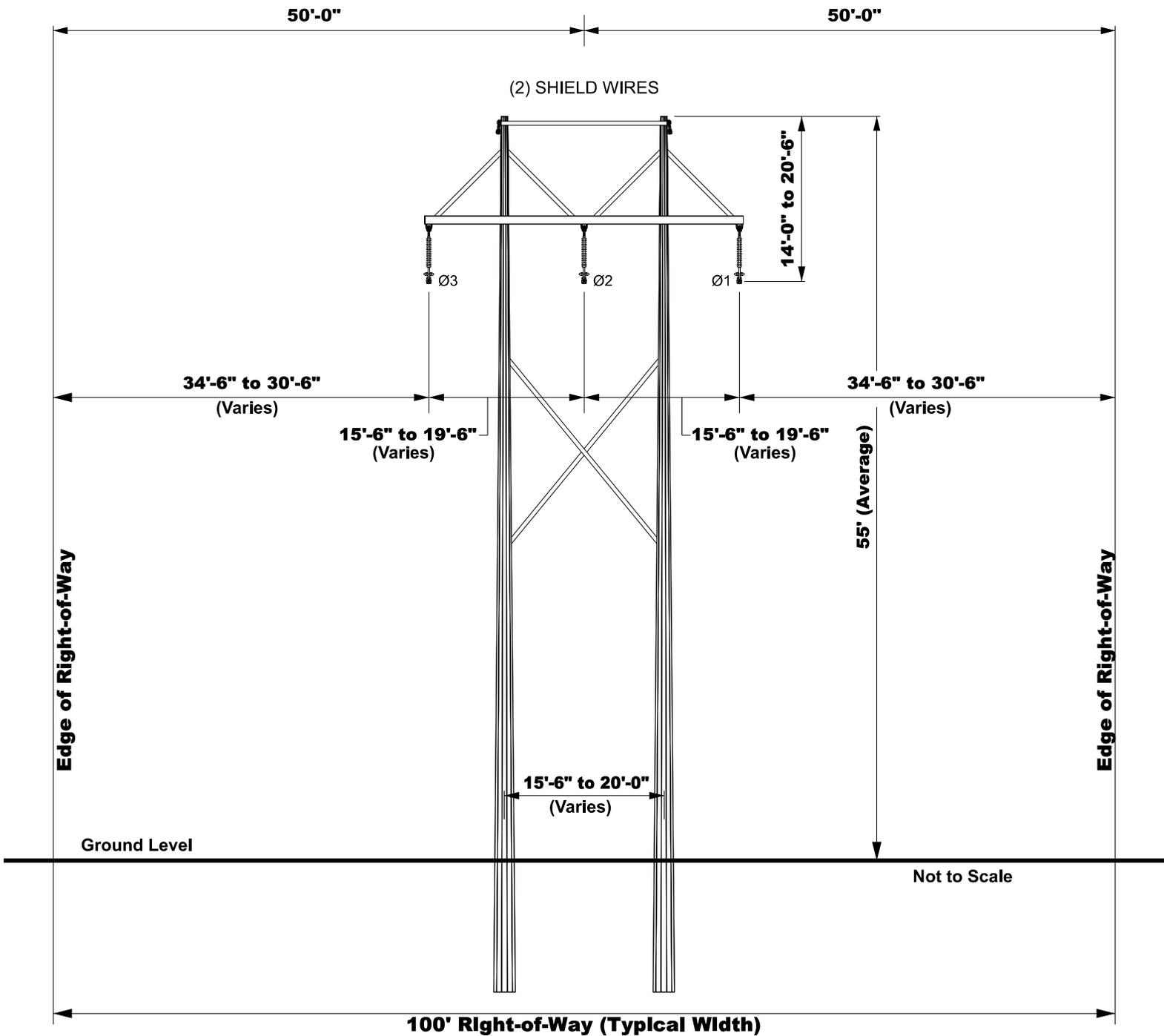


COMPARABLE EXISTING STRUCTURE PHOTOGRAPH

EXHIBIT 5: EXISTING 138 KV H-FRAME



TYPICAL SCHEMATIC

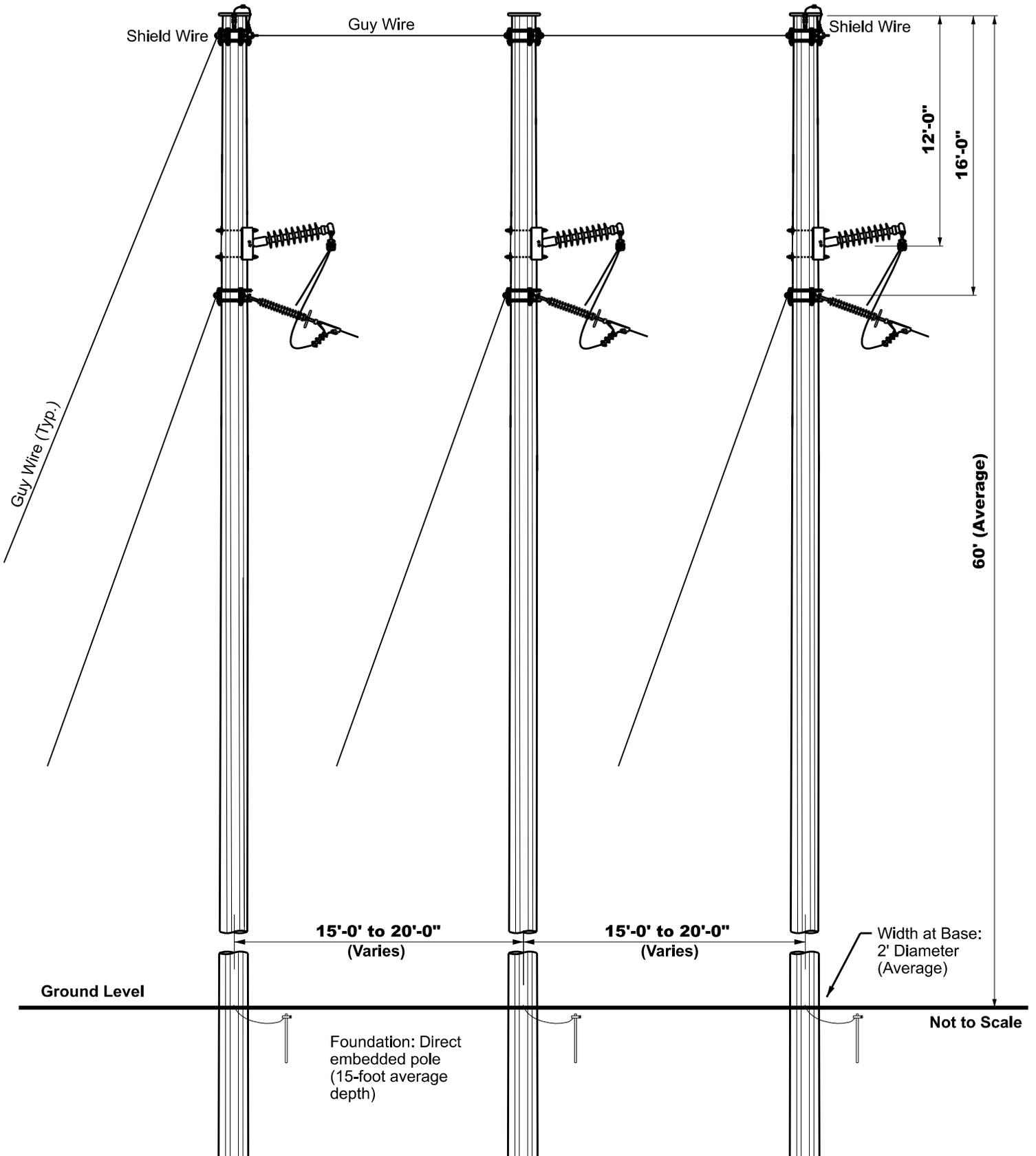


TYPICAL RIGHT-OF-WAY CROSS SECTION

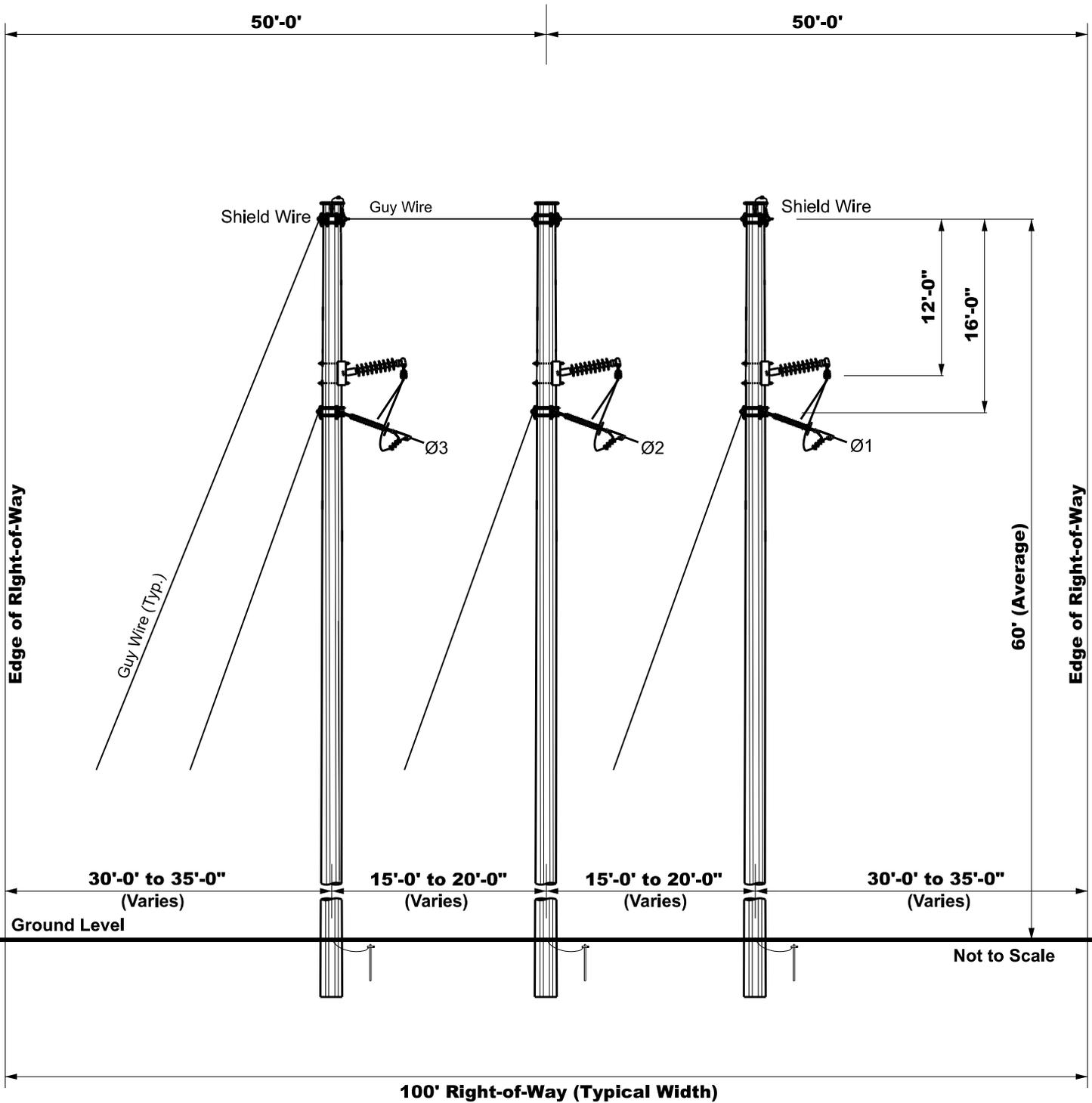


COMPARABLE EXISTING STRUCTURE PHOTOGRAPH

EXHIBIT 6: EXISTING 138 KV THREE-POLE



TYPICAL SCHEMATIC

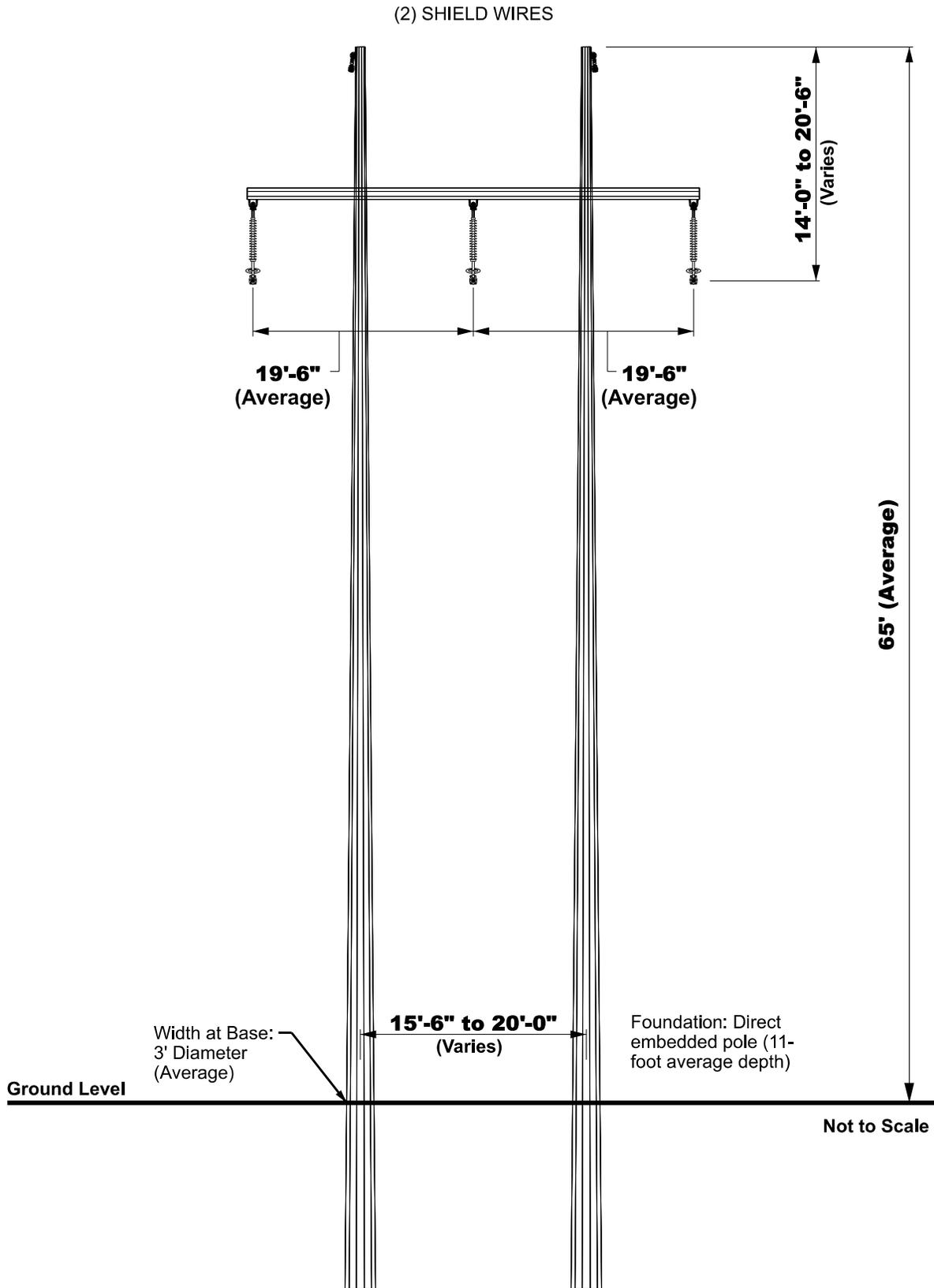


TYPICAL RIGHT-OF-WAY CROSS SECTION

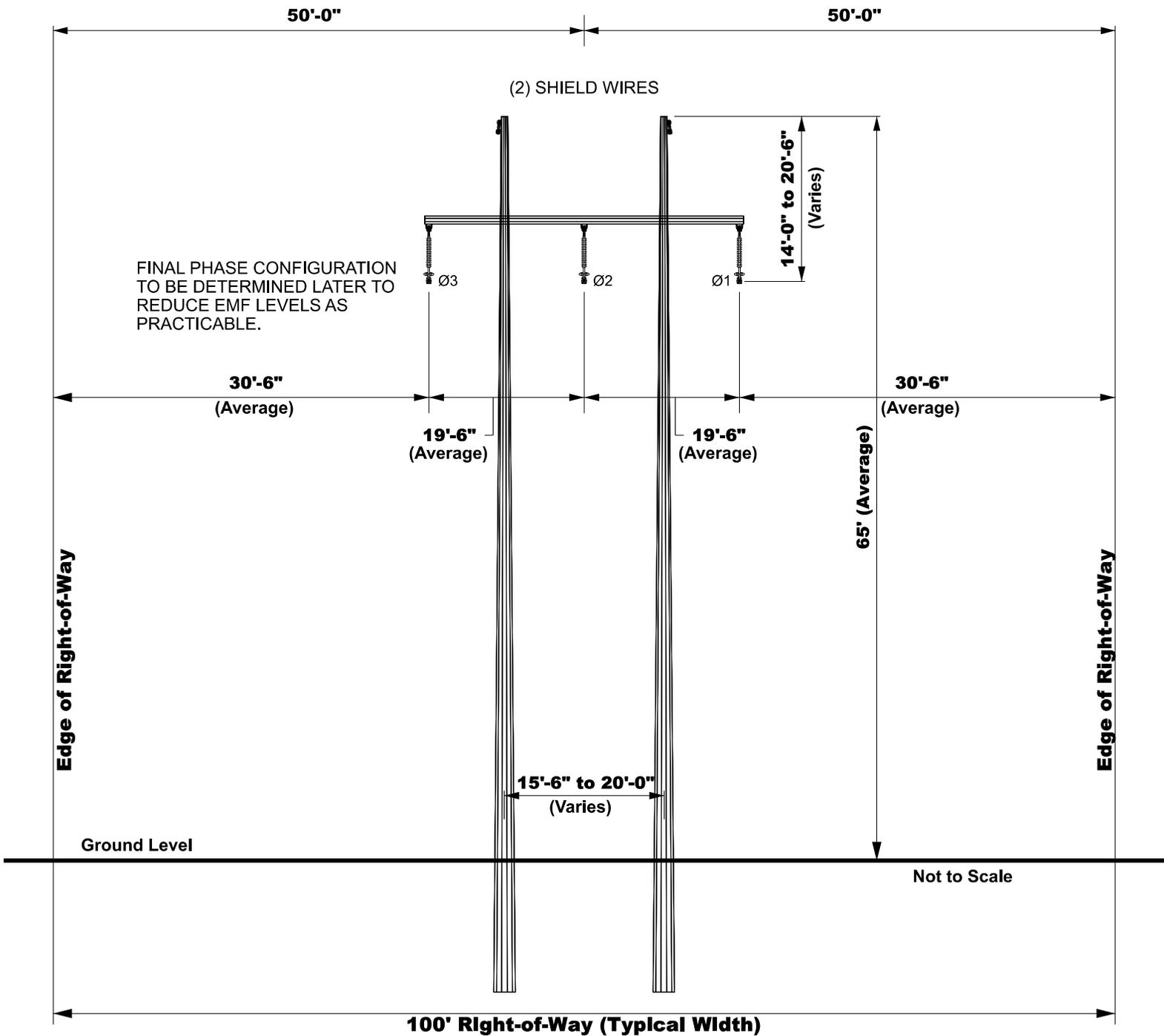


COMPARABLE EXISTING STRUCTURE PHOTOGRAPH

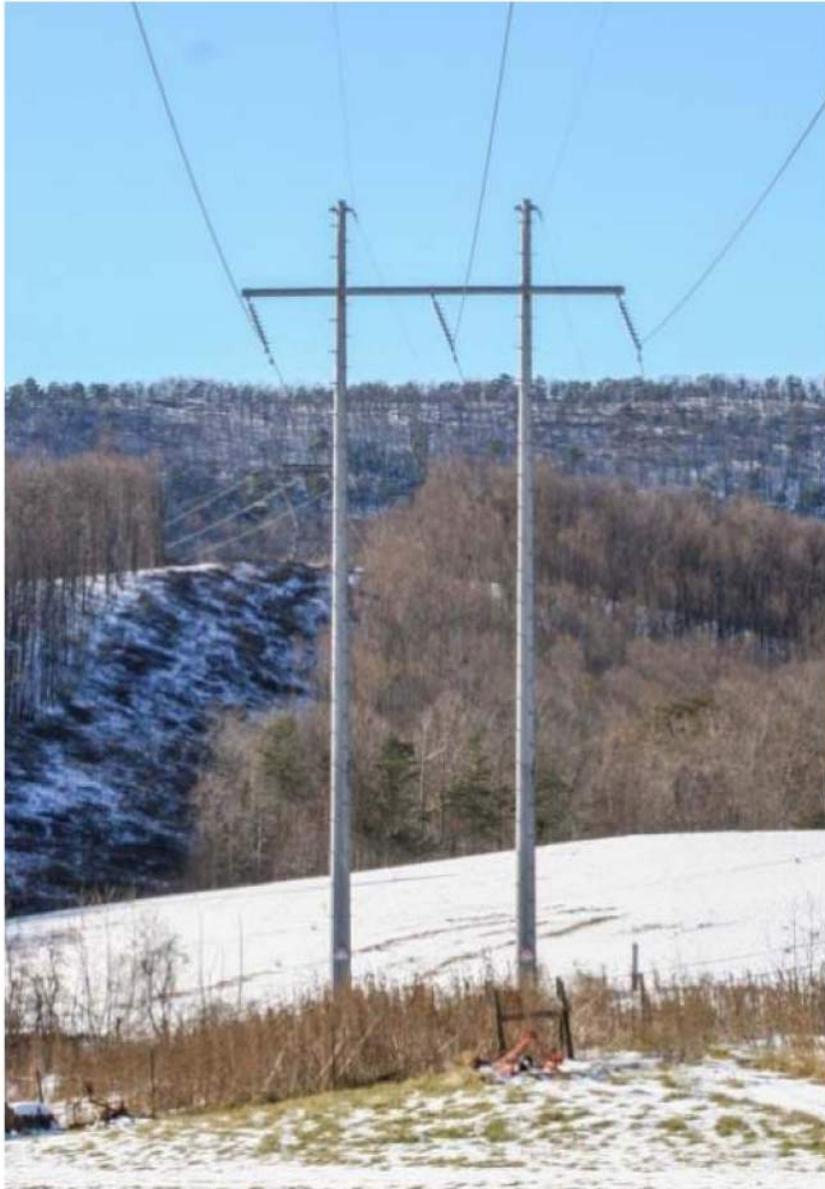
EXHIBIT 7: PROPOSED 138 KV H-FRAME



TYPICAL SCHEMATIC



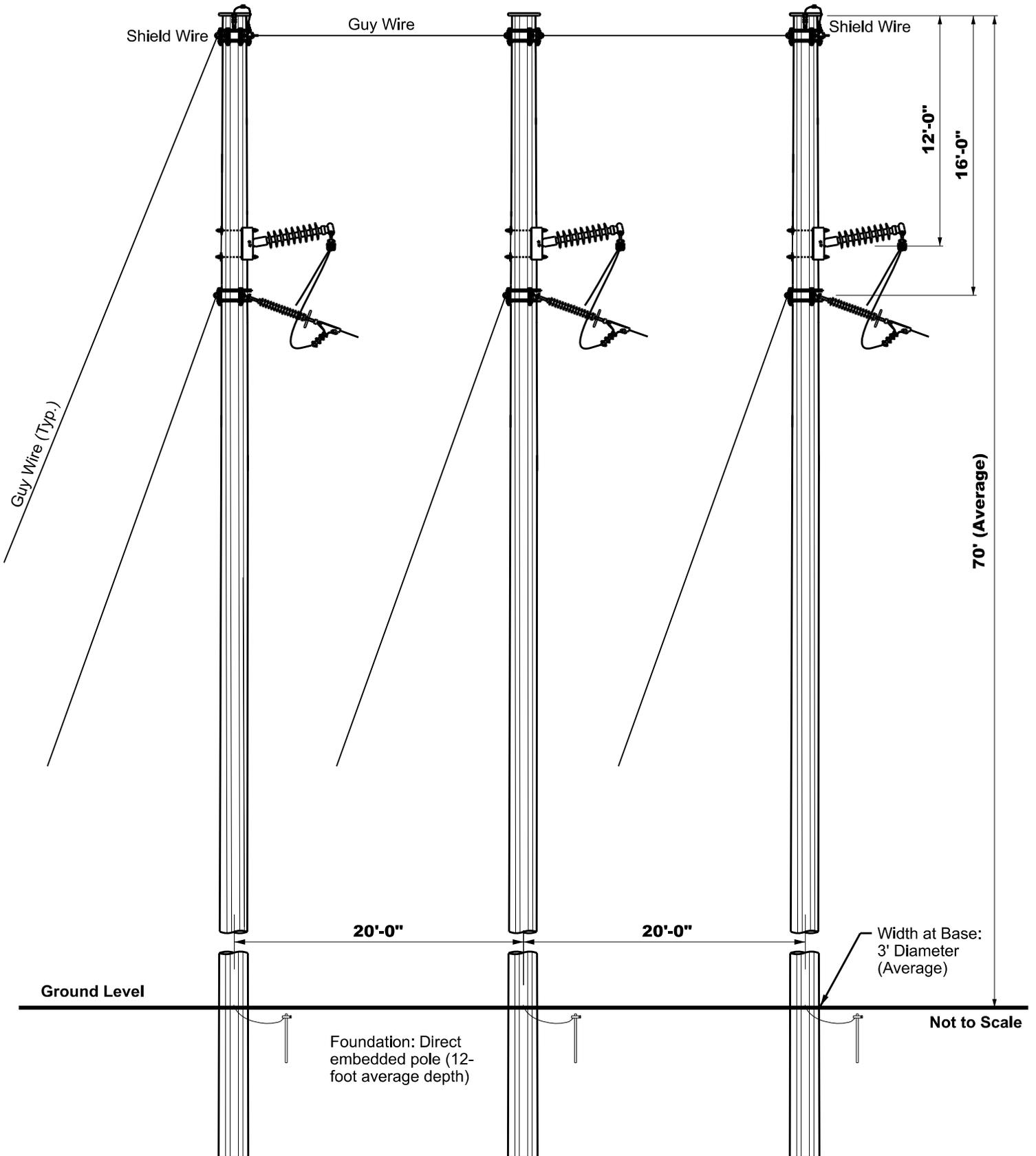
TYPICAL RIGHT-OF-WAY CROSS SECTION



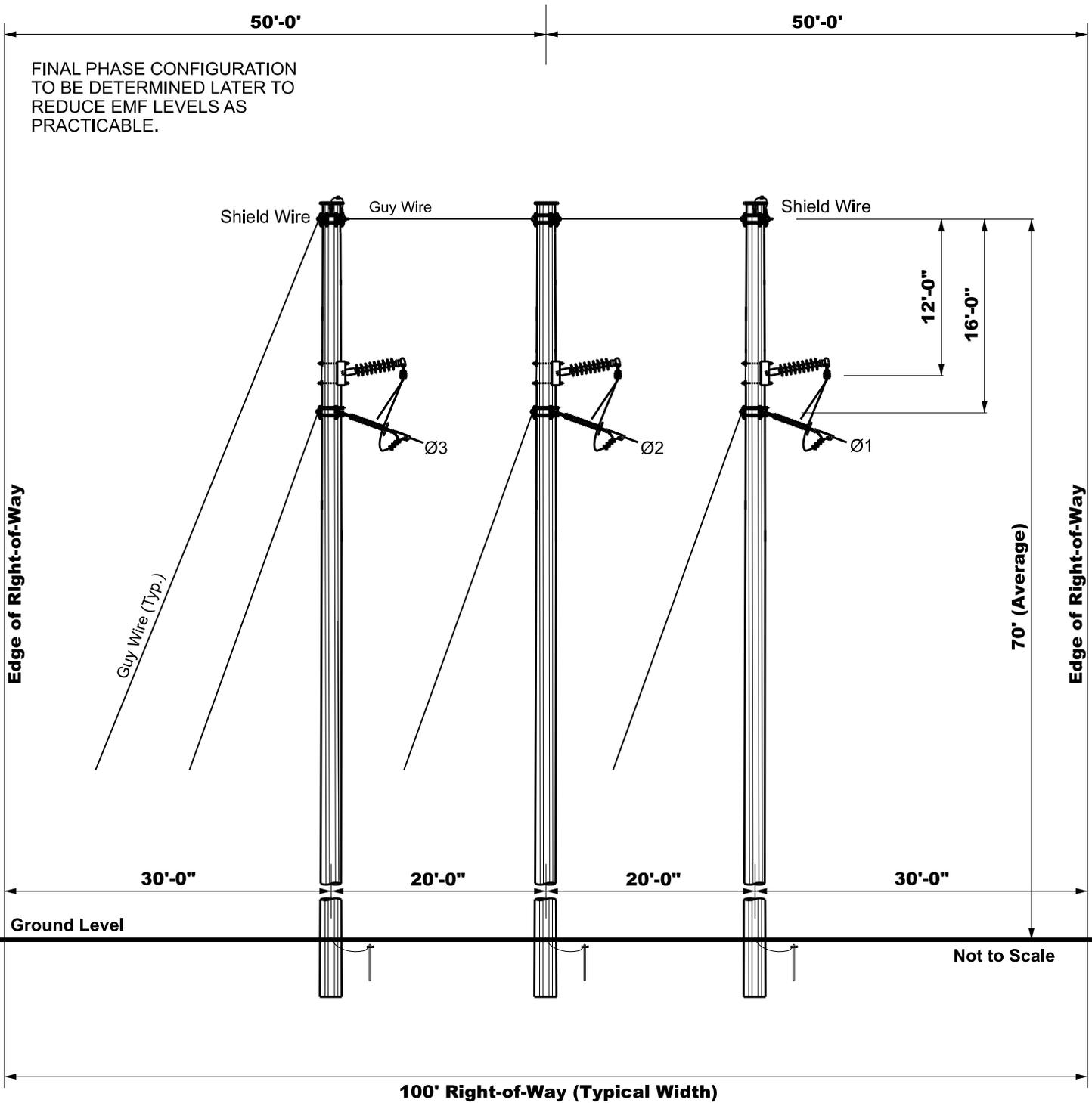
COMPARABLE PROPOSED STRUCTURE PHOTOGRAPH

Note: The proposed material for the typical structure will be galvanized steel with a dulled finish (as shown above).

EXHIBIT 8: PROPOSED 138 KV THREE-POLE



TYPICAL SCHEMATIC



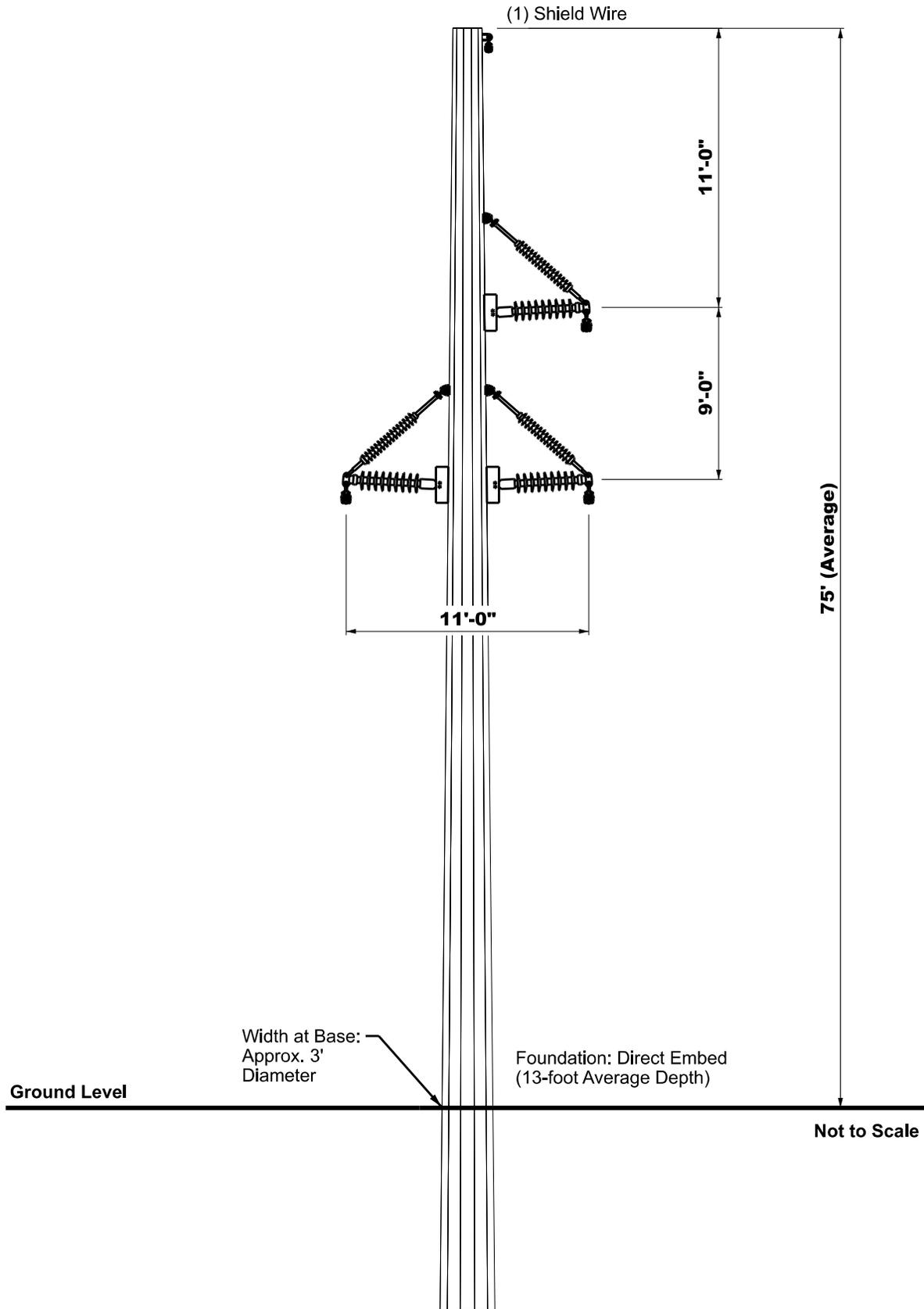
TYPICAL RIGHT-OF-WAY CROSS SECTION



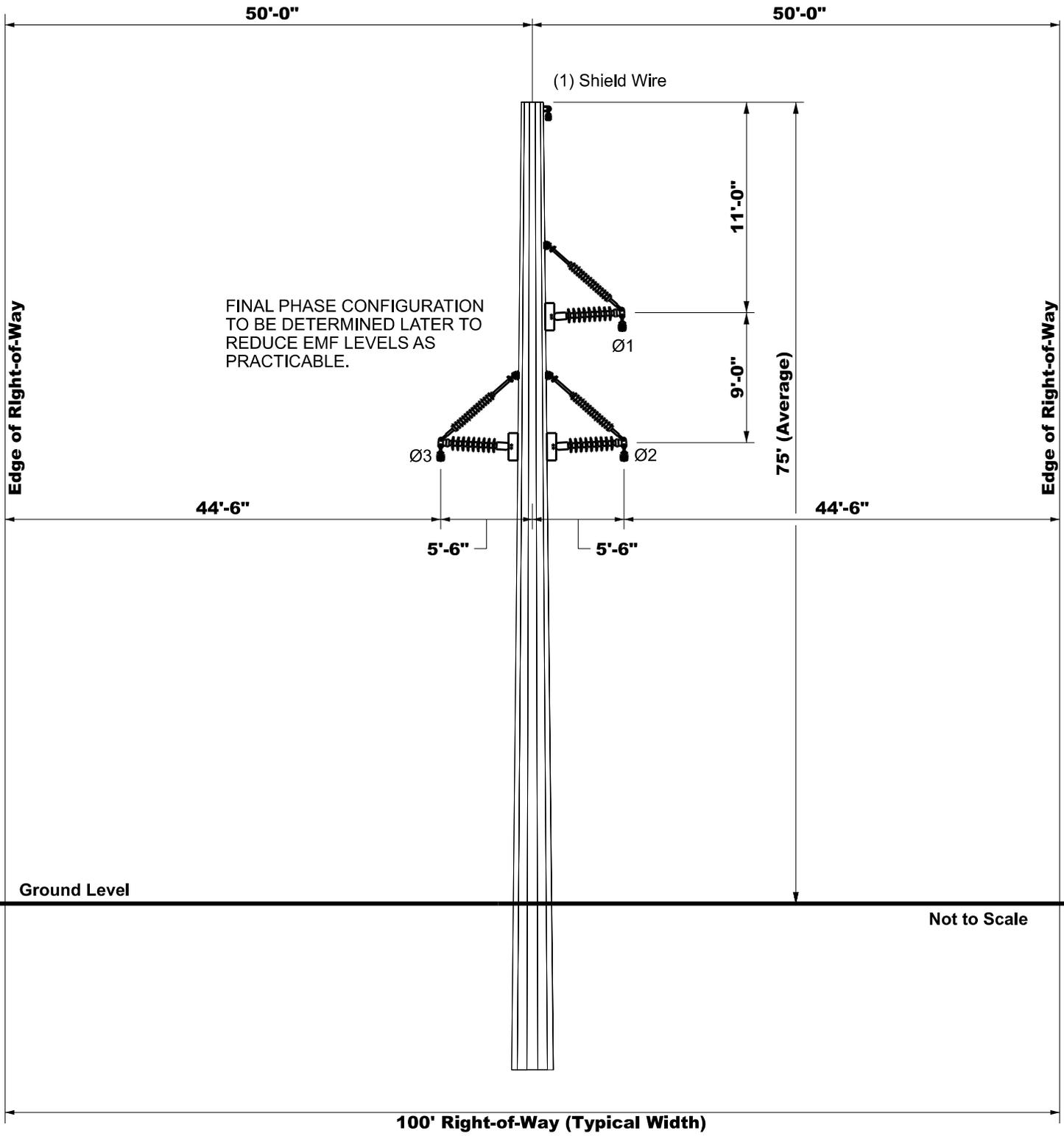
COMPARABLE PROPOSED STRUCTURE PHOTOGRAPH

Note: The proposed material for the typical structure will be galvanized steel with a dulled finish (as shown above).

**EXHIBIT 9: PROPOSED 138 KV TANGENT BRACED-POST
MONOPOLE**



TYPICAL SCHEMATIC



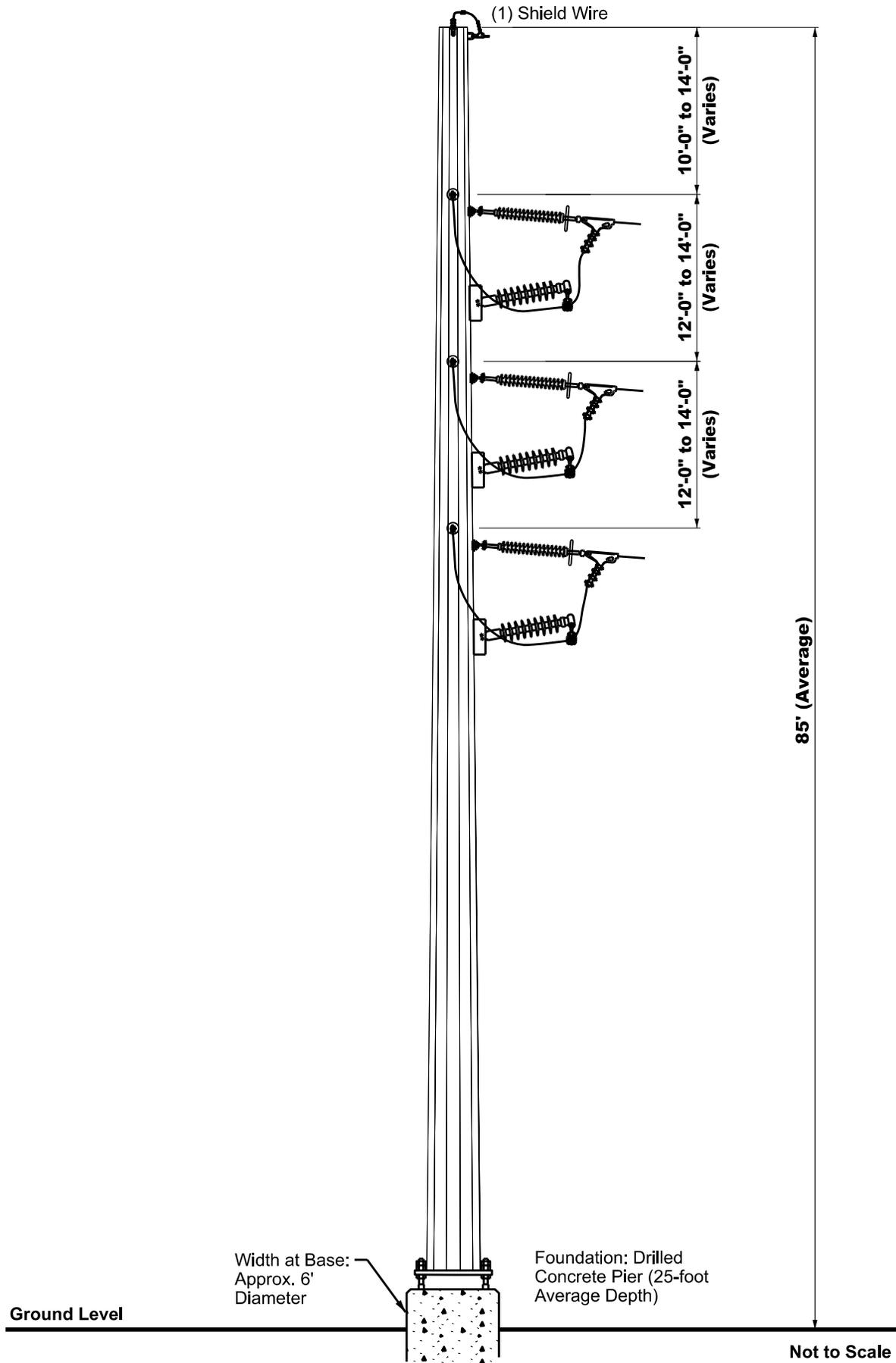
TYPICAL RIGHT-OF-WAY CROSS SECTION



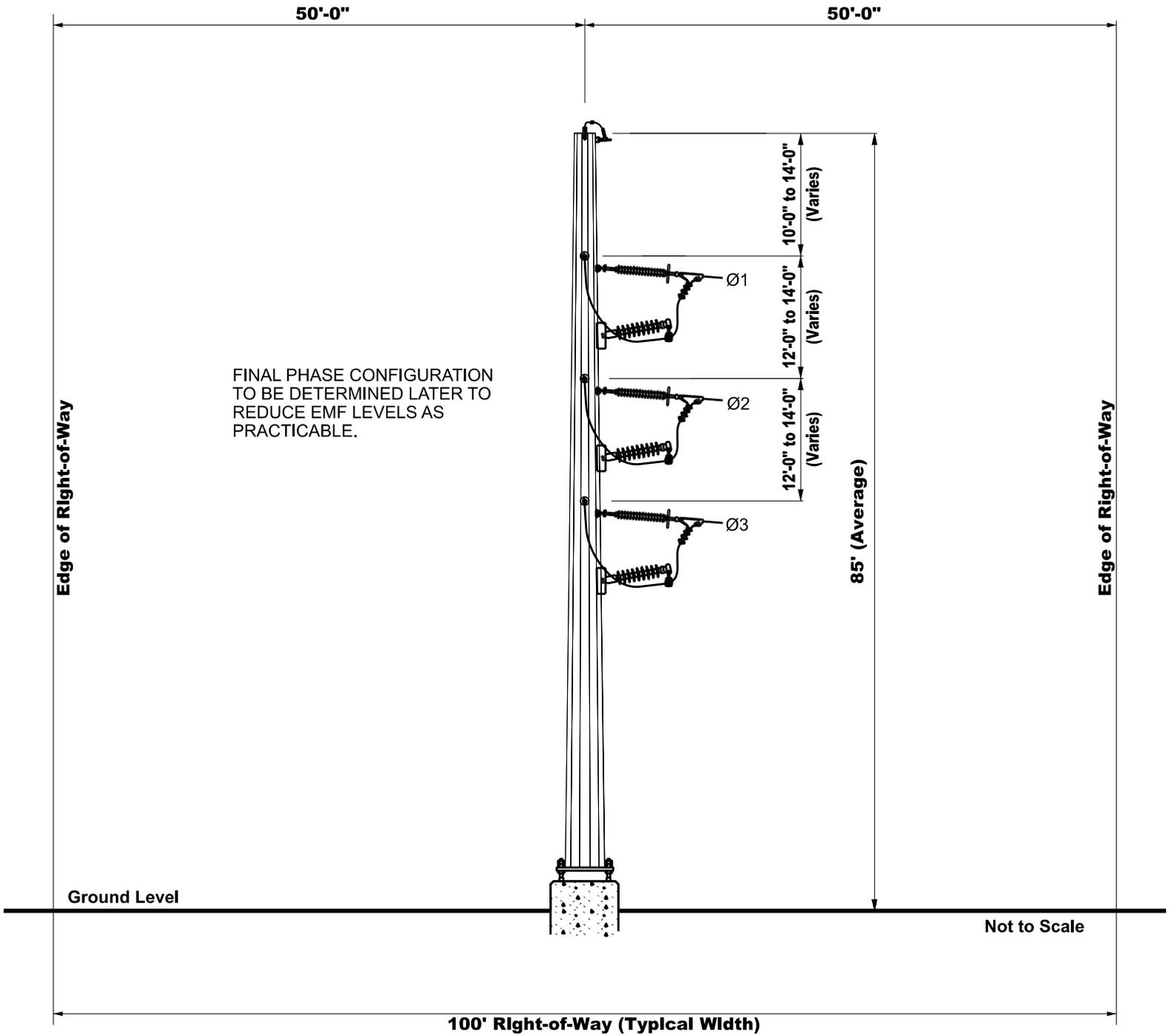
COMPARABLE PROPOSED STRUCTURE PHOTOGRAPH

Note: The proposed material for the typical structure will be galvanized steel with a dulled finish (as shown above).

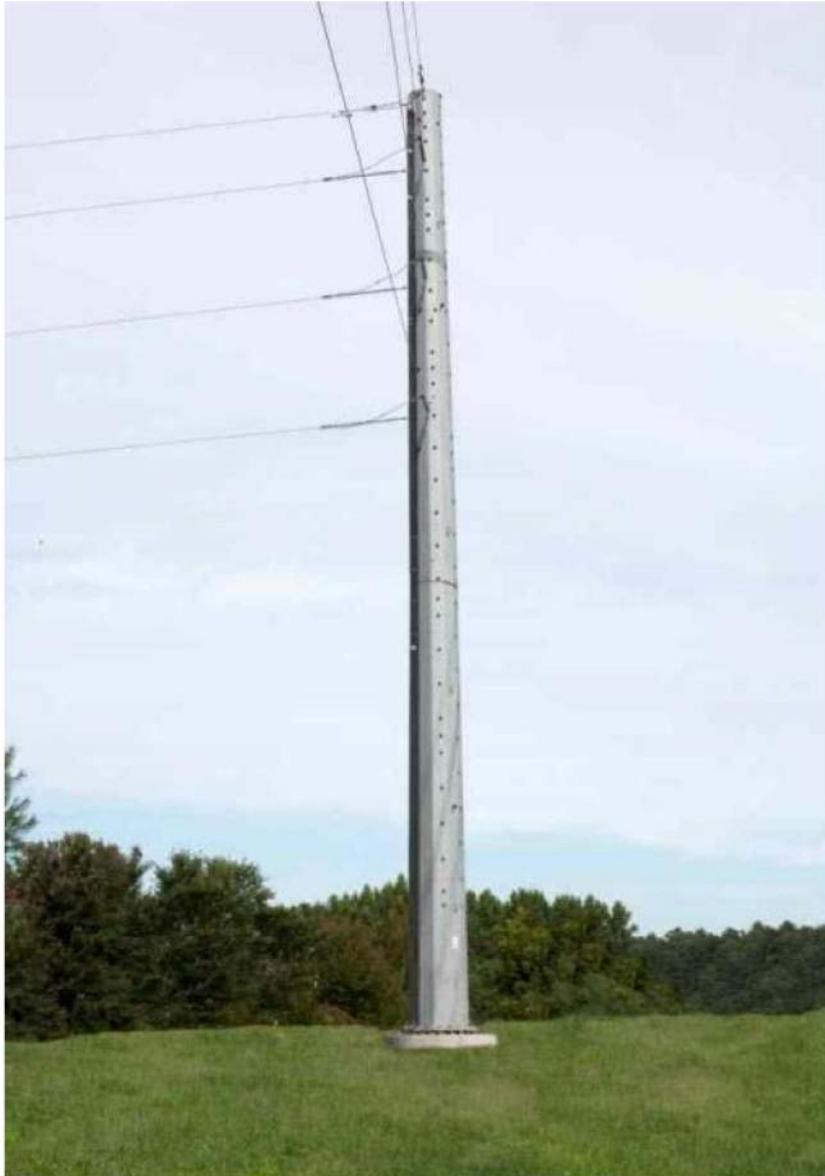
EXHIBIT 10: PROPOSED 138 KV DEAD-END MONOPOLE



TYPICAL SCHEMATIC



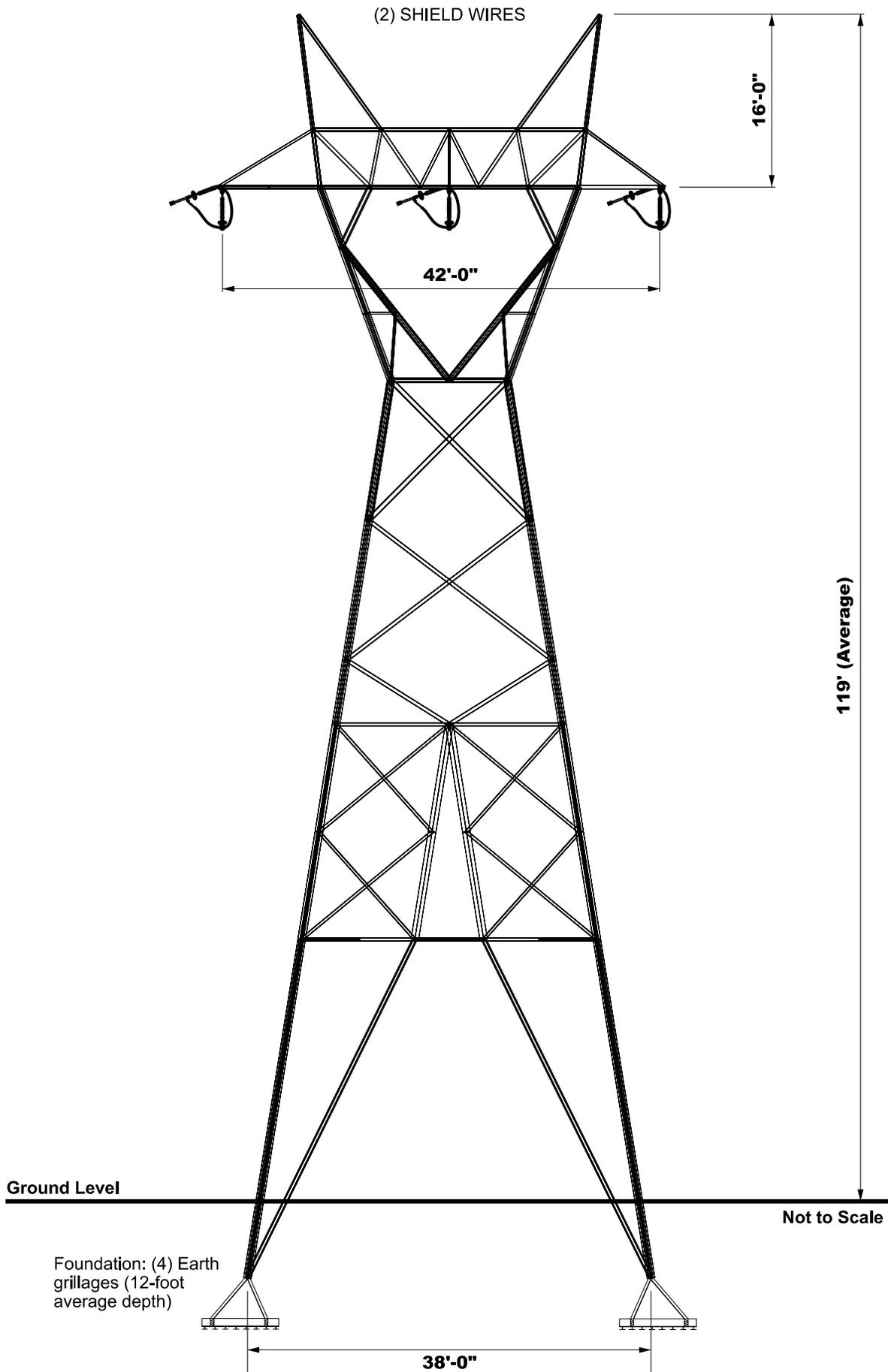
TYPICAL RIGHT-OF-WAY CROSS SECTION



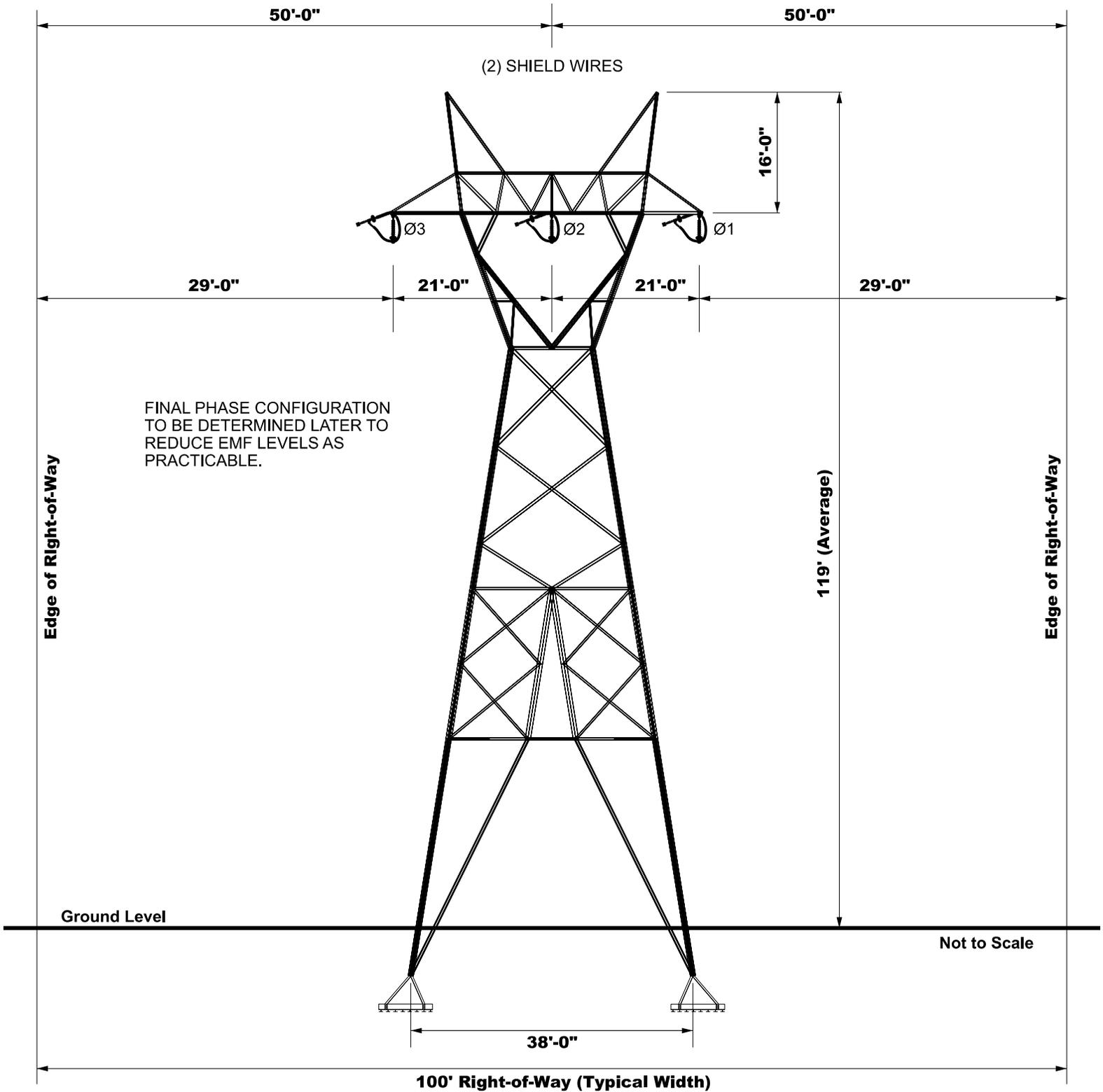
COMPARABLE PROPOSED STRUCTURE PHOTOGRAPH

Note: The proposed material for the typical structure will be galvanized steel with a dulled finish (as shown above).

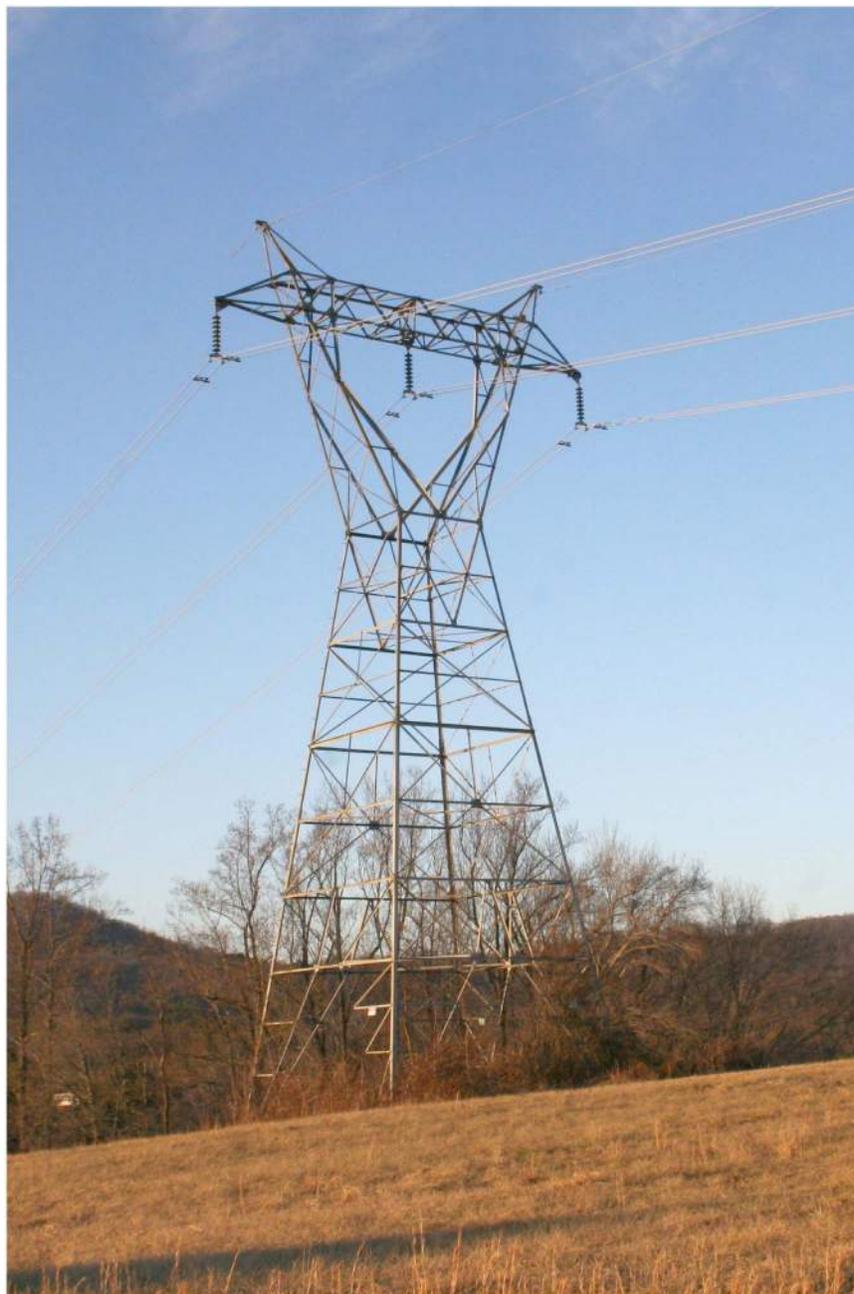
**EXHIBIT 11: PROPOSED 138 KV SELF-SUPPORTING
LATTICE TOWER**



TYPICAL SCHEMATIC



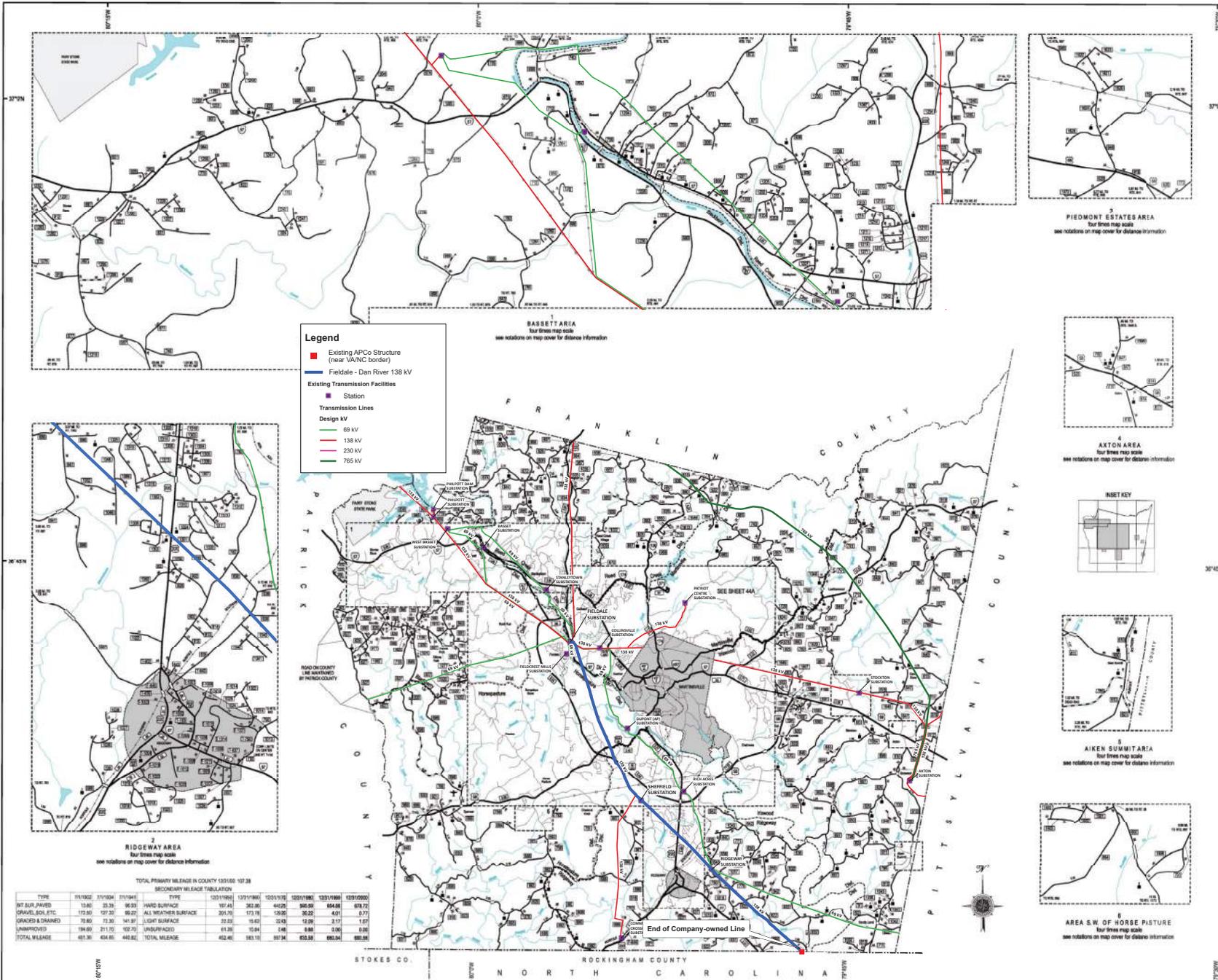
TYPICAL RIGHT-OF-WAY CROSS SECTION



COMPARABLE PROPOSED STRUCTURE PHOTOGRAPH

Note: The proposed material for the typical structure will be galvanized steel with a dulled finish (as shown above).

**EXHIBIT 12: VDOT GENERAL HIGHWAY MAP AND
EXISTING TRANSMISSION FACILITIES**



Legend

- Existing APCo Structure (near VA/NC border)
- Fieldale - Dan River 138 KV
- Existing Transmission Facilities
- Station
- Transmission Lines
- Design KV
 - 69 KV
 - 138 KV
 - 230 KV
 - 765 KV

TOTAL PRIMARY MILEAGE IN COUNTY 133,100 - 107.38

SECURITY MILEAGE TABLE 2021		TYPE		12/1/1994	12/31/1995	12/31/1996	12/31/1997	12/31/1998	12/31/1999	12/31/2000
RT SUR. PAVED	13.40	23.33	66.93	187.41	302.06	442.25	592.59	654.08	678.72	678.72
GRAVEL, SOL. ETC.	172.80	127.30	89.27	301.70	173.79	106.20	36.22	4.01	4.01	0.77
SPRACED & GRADED	79.82	72.30	141.87	22.02	16.60	24.90	12.00	2.17	1.97	1.97
UNIMPROVED	184.80	211.70	102.70	61.26	10.94	1.48	0.80	0.06	0.06	0.06
TOTAL MILEAGE	457.82	434.63	400.87	452.40	383.15	397.84	353.58	360.94	360.83	360.83

ROAD CLASSIFICATIONS

- Divided Highway (Interstate)
- Hard Surface
- A3 Weather Surface
- Light Surface
- Unsurfaced

HIGHWAY ROUTE SIGNS

- Interstate Highway
- US Highway
- VA Primary Highway
- VA Secondary Highway
- Frontage Road
- Forest Highway
- US Bicycle Route

RAILROADS

- Single Track
- Two or More Tracks
- Regional Metro

BOUNDARIES

- State Line
- County Line
- Intergovernmental Line
- Incorporated Town or City
- Park, Reservation, or Forest Boundary

CITY AND VILLAGE CENTERS

- State Capital
- County Seat
- Town or Village

MISCELLANEOUS

- Place of Worship
- School
- Park & Ride Lot
- Transmission Line
- Bridge
- Primary Road Distances

PORTS

- Seaport
- Military Airport
- Commercial Airport
- Other Airport

Request for information on roads shown on this map should be addressed to: State Office Administrator, Virginia Department of Transportation, 717 Harrison Avenue, Salem, VA 24153, 800-551-5525 (Toll free, call 717).

DISTANCES SHOWN ON MAP MAY NOT BE OFFICIAL DISTANCES. Distances shown on Primary Roads are between Frontage Road Intersections and/or county lines. Distances shown on Secondary Roads are between interchanges and/or county lines. Municipal District Boundary lines shown parallel to feature such as roads, streams, etc. are on the center line of each feature. The accuracy or completeness of this map is not guaranteed or warranted. Map depicts state-maintained highway network as of January 1, 2001. Copyright © 2004 by Commonwealth of Virginia, Department of Transportation, All Rights Reserved.

HENRY COUNTY, VA

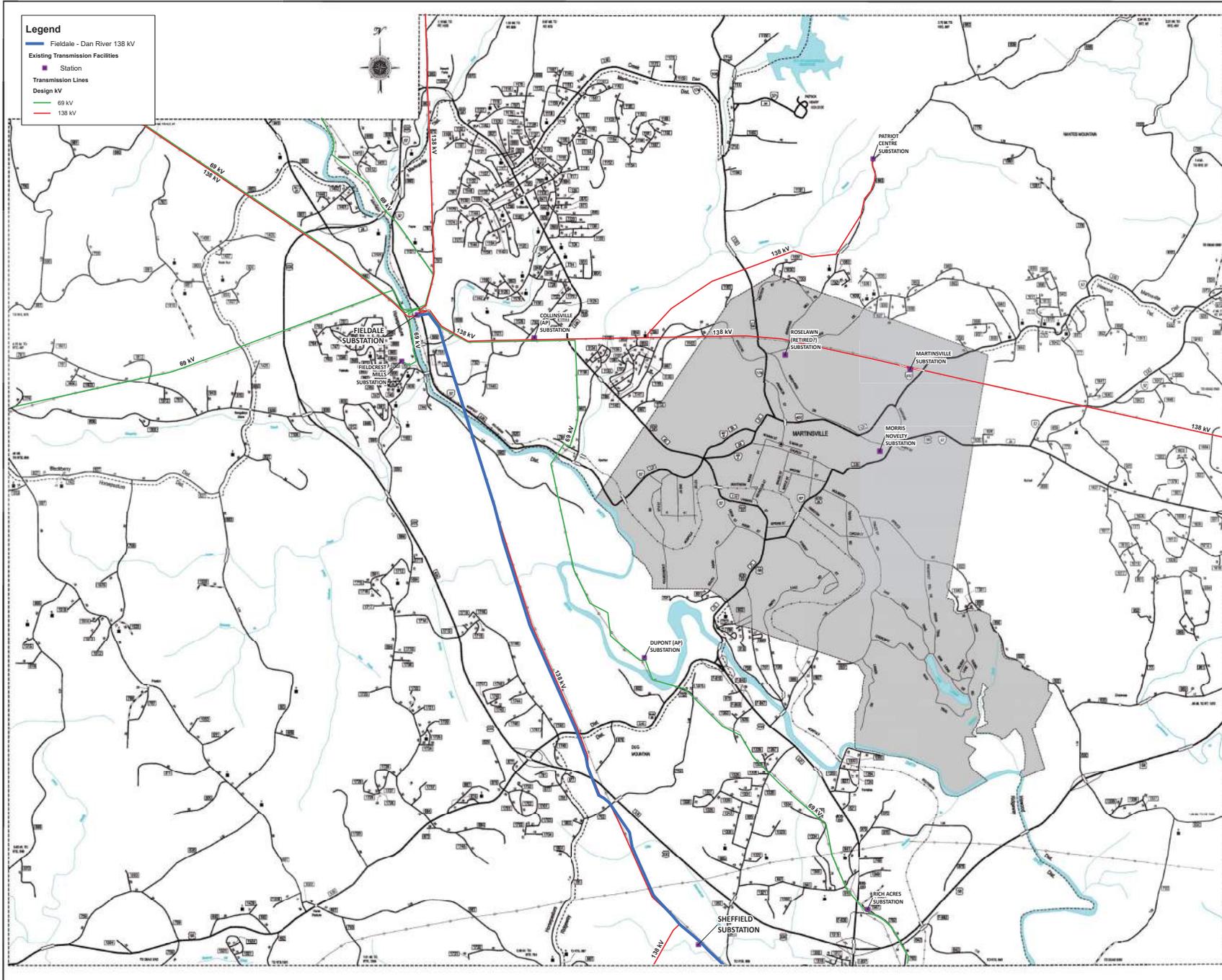
VDOT

COUNTY ROAD MAP

HENRY COUNTY

AN INVENTORY OF STATE-MAINTAINED ROADS
HENRY COUNTY, VA

44



Legend

- Fieldale - Dan River 138 kV
- Existing Transmission Facilities
- Station
- Transmission Lines
- Design kV
 - 69 kV
 - 138 kV

ROAD CLASSIFICATIONS

- Divided Highway (Interstate)
- Hard Surface
- All Weather Surface
- Light Surface
- Unsurfaced

HIGHWAY ROUTE SIGNS

- Interstate Highway
- US Highway
- VA Primary Highway
- VA Secondary Highway
- Frontage Road
- Forest Highway
- US Bicycle Route

RAILROADS

- Single Track
- Two or More Tracks
- Regional Metro

BOUNDARIES

- State Line
- County Line
- Marginal District Line
- Incorporated Town or City
- Park, Reservation, or Forest Boundary

CITY AND VILLAGE CENTERS

- State Capital
- County Seat
- Town or Village

MISCELLANEOUS

- Place of Worship
- School
- Park & Ride Lot
- Transmission Line
- Bridge
- Primary Road Distances

PORTS

- Seaport
- Military Airport
- Commercial Airport
- Other Airport

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723 Highway Avenue, Salem, VA 24153
540-387-6300 (TTY users, call 711)

DISTANCES SHOWN ON MAP MAY NOT BE OFFICIAL DISTANCES.
Distances shown on Primary Roads and between Primary Road Intersections and/or county lines. Distances shown on Secondary Roads are between intersections and roadway limits or county lines. Marginal District Boundary lines shown parallel to features such as roads, streams, etc. are on the outside line of such features. The accuracy or completeness of this map is not guaranteed or warranted.

Map depicts state-maintained highway network as of January 1, 2001.
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HENRY COUNTY, VA

VDOT

COUNTY ROAD MAP

HENRY COUNTY

Supplement A

0 1000 2000 3000
0 100 200 300
FEET
METERS

AN INVENTORY OF STATE-MAINTAINED ROADS
HENRY COUNTY, VA 44A

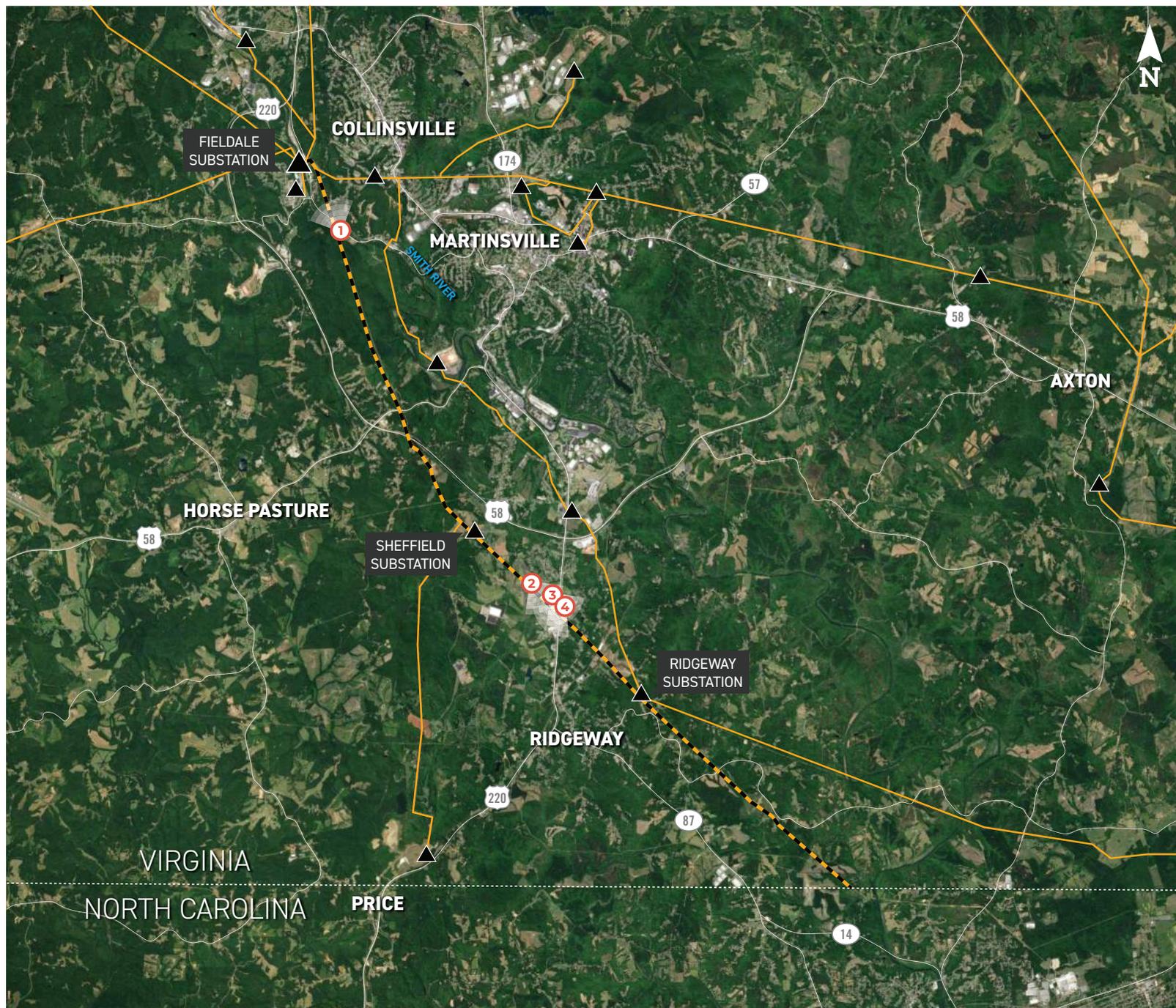
EXHIBIT 13: VISUAL SIMULATIONS

FIELDALE TO RIDGEWAY

138 KV REBUILD PROJECT

PHOTO VIEWPOINT MAP

-  EXISTING 138 KV TRANSMISSION LINE TO BE REBUILT
-  EXISTING AEP TRANSMISSION LINE
-  EXISTING AEP SUBSTATION
-  PHOTO VIEWPOINT



An AEP Company

BOUNDLESS ENERGY™

FIELDALE TO RIDGEWAY

138 KV REBUILD PROJECT

PHOTO VIEWPOINT 1

LOCATED AT THE FIELDALE TRAIL AND
RIVER ACCESS EASEMENT

DATE: 8/11/2021

TIME: 10:52 AM

DIRECTION: NORTH



--- EXISTING 138 KV TRANSMISSION LINE
TO BE REBUILT

① PHOTO VIEWPOINT



An AEP Company

BOUNDLESS ENERGY™



EXISTING CONDITIONS



PROPOSED CONDITIONS

PHOTO SIMULATION IS FOR VISUALIZATION AND DISCUSSION PURPOSES ONLY.

FIELDALE TO RIDGEWAY

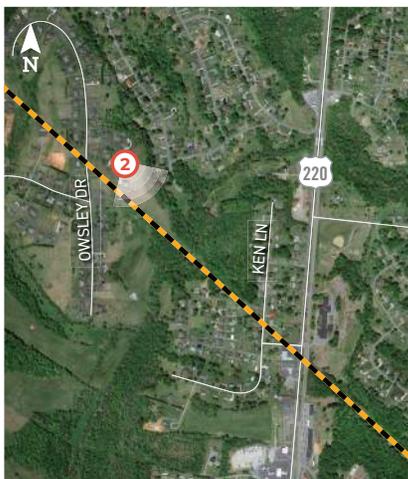
138 KV REBUILD PROJECT

PHOTO VIEWPOINT 2

DATE: 8/11/2021

TIME: 11:44 AM

DIRECTION: SOUTHEAST



— EXISTING 138 KV TRANSMISSION LINE
TO BE REBUILT

② PHOTO VIEWPOINT



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BOUNDLESS ENERGY™



EXISTING CONDITIONS



PROPOSED CONDITIONS

PHOTO SIMULATION IS FOR VISUALIZATION AND DISCUSSION PURPOSES ONLY.

FIELDALE TO RIDGEWAY

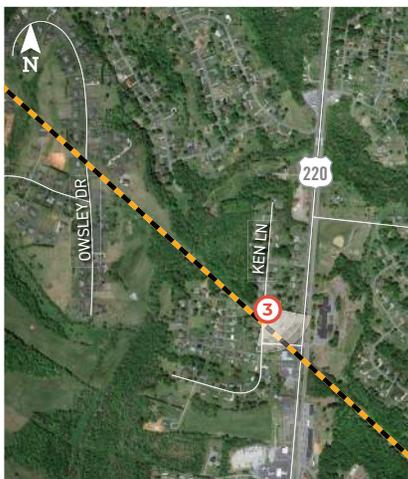
138 KV REBUILD PROJECT

PHOTO VIEWPOINT 3

DATE: 8/11/2021

TIME: 12:12 PM

DIRECTION: SOUTHEAST



— EXISTING 138 KV TRANSMISSION LINE
TO BE REBUILT

③ PHOTO VIEWPOINT



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BOUNDLESS ENERGY™



EXISTING CONDITIONS



PROPOSED CONDITIONS

PHOTO SIMULATION IS FOR VISUALIZATION AND DISCUSSION PURPOSES ONLY.

FIELDALE TO RIDGEWAY

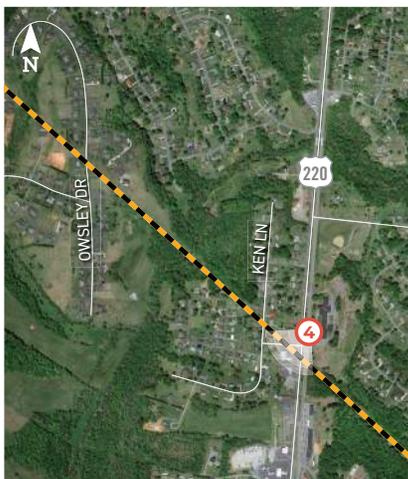
138 KV REBUILD PROJECT

PHOTO VIEWPOINT 4

DATE: 8/11/2021

TIME: 11:59 AM

DIRECTION: SOUTHWEST



— EXISTING 138 KV TRANSMISSION LINE
TO BE REBUILT

④ PHOTO VIEWPOINT



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BOUNDLESS ENERGY™

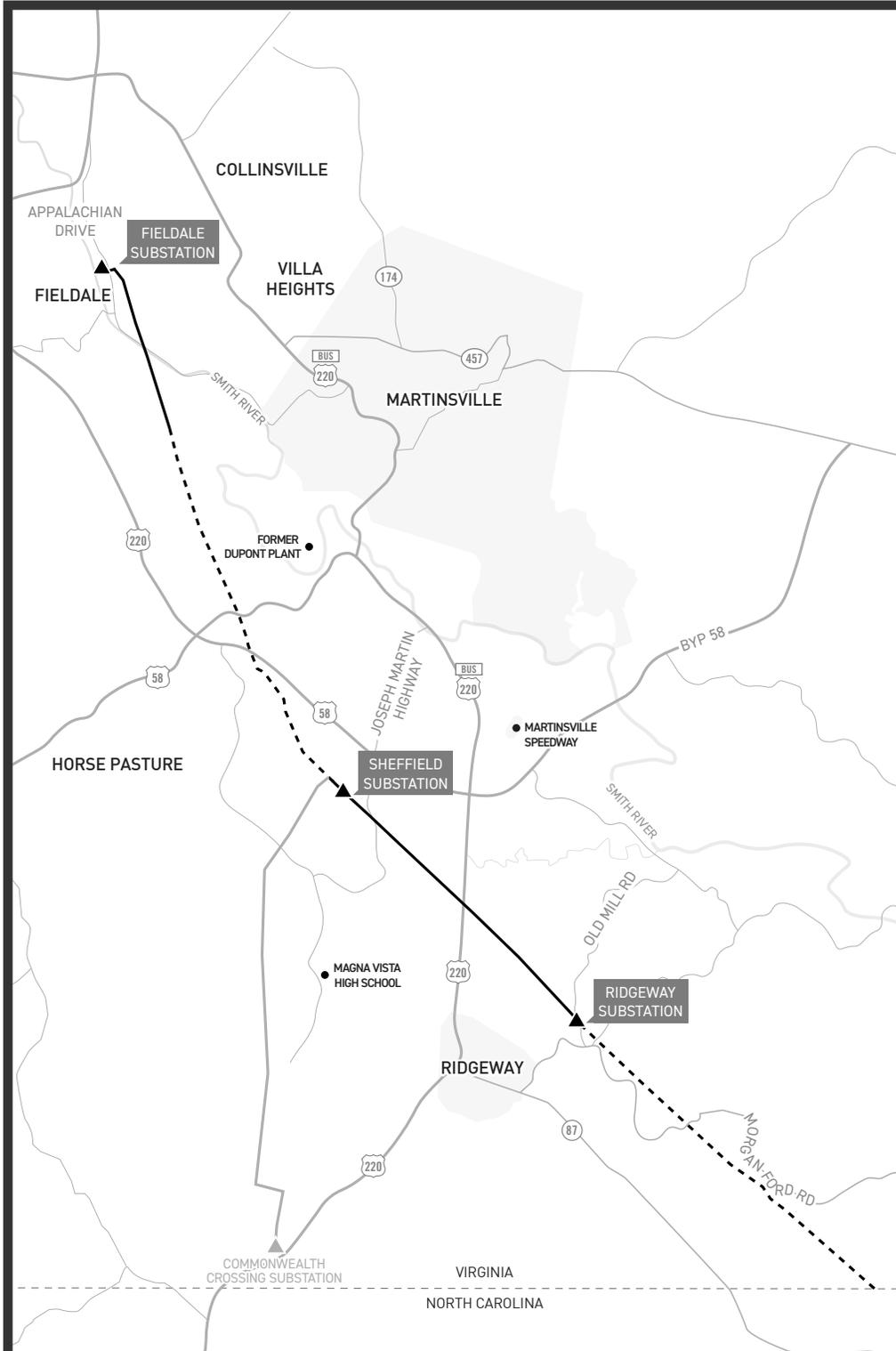


PHOTO SIMULATION IS FOR VISUALIZATION AND DISCUSSION PURPOSES ONLY.

EXHIBIT 14: PUBLIC NOTICE MAP

FIELDALE TO RIDGEWAY

138 KV REBUILD PROJECT



FIELDALE TO RIDGEWAY 138KV REBUILD PROJECT

- 138 KV TRANSMISSION LINE TO BE REBUILT (IN THE EXISTING RIGHT-OF-WAY)
- - - 138 KV TRANSMISSION LINE TO BE REBUILT (IN OR NEAR THE EXISTING RIGHT-OF-WAY)
- EXISTING TRANSMISSION LINE
- ▲ EXISTING SUBSTATION TO BE UPGRADED (IN FENCE)
- ▲ EXISTING SUBSTATION

