TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO.

TENN.	YEAR	SHEET NO.
	2015	U1-1
STATE PROJ. NO.	75951-3597-04	
FED. AID PROJ. NO.		

Index Of Sheets	
SHEET NAME	SHEET NUMBER
UTILITIES INDEX, UTILITIES OWNERS	U1-1
MUFREESBORO ELECTRIC DEPT.	U2-1 - U2-4

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RUTHERFORD COUNTY

INDUSTRIAL ACCESS ROAD SERVING NISSAN NORTH AMERICA IN MURFREESBORO

**MURFREESBORO ELECTRIC DEPT. IS THE ONLY UTILITY THAT IS MOVE IN STATE.
THEIR RELOCATION PLANS ARE ON THE U2 SHEETS.
WINDSTREAM IS LOCATED ON THE SAME POLES AS M.E.D. AND WILL BE MOVING AT NO COST
ATMOS ENERGY, QWEST AND AT&T DID NOT SEND ANY RELOCATION PLANS.
THEY WERE SENT TO WORK AT NO COST TO TDOT.**

STANDARD LEGEND

EXISTING UTILITES

- POWER
- TELEPHONE
- WATER
- CABLE TV
- SANITARY SEWER
- UNDERGROUND TELEPHONE
- GAS
- FORCE MAIN SEWER
- UNDERGROUND POWER

PROPOSED UTILITIES

- POWER
- UNDERGROUND POWER
- TELEPHONE
- WATER
- CABLE TV
- UNDERGROUND TELEPHONE
- GAS
- FORCE MAIN SEWER

(R) REMOVE (A) ABANDON

- POWER POLE
- TELEPHONE POLE
- POWER/TELEPHONE POLE
- MANHOLE
- WATER METER W.M.
- WATER VALVE W.V.
- LIGHT POLE
- POWER POLE ●P
- TELEPHONE POLE ●T
- WATER METER ■ W.M.

SPECIAL NOTES

SOME UTILITIES CAN BE LOCATED BY CALLING THE
TENNESSEE ONE CALL SYSTEM, INC.
AT 1-800-351-1111

UTILITY OWNERS AND CONTACTS:

ELECTRIC:	MURFREESBORO ELEC. DEPT. 205 N. WALNUT ST. MURFREESBORO, TN 37129 CHRIS BARNES PH: (615)494-0428	TELEPHONE:	AT&T 116 S. CANON AVE. MURFREESBORO, TN 37129 KENNETH KORNEGAY PH: (615)848-2082
ELECTRIC:	MTEMC 555 NEW SALEM RD. MURFREESBORO, TN 37129 TALLEY FLOYD PH: (615)494-1540	WATER:	CONSOLIDATED U.D. 709 NEW SALEM HIGHWAY MURFREESBORO, TN 37129 WILLIAM DUNNILL PH: (615)278-6027
SEWER:	MURFREESBORO SEWER 220 N. BROAD ST. MURFREESBORO, TN 37103 DARREN GORE PH: (615)890-0862	F.O.C.:	QWEST COMM. 700 W. MINERAL AVE. LITTLETON, CO. 80120-4511 GEORGE W. MCELVAIN PH: (303)992-9931
TELEPHONE /F.O.C.:	VERIZON 2400 N. GLENVILLE BLVD. RICHARDSON, TX. 75082 DEAN BOYERS PH: (972)729-6322	F.O.C.:	WINDSTREAM COMM. 3701 COMMUNICATION WAY EVANSVILLE, IN 47715 TOMMY RAYFIELD PH: (812) 253-1587

GAS:	ATMOS ENERGY 810 CRESCENT CENTRE DR.S-600 FRANKLIN, TN 37067 ROBERT ARNOLD PH: (615) 771-8311

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INDEX OF DRAWINGS

U2–1 ESTIMATED QUANTITIES, DRAWING INDEX, LEGEND, VICINITY MAP & GENERAL NOTES
U2–2 UTILITY RELOCATION STA. 9+10 TO STA. 17+63.20
U2–3 FRAMING ASSEMBLY DETAILS
U2–4 FRAMING ASSEMBLY DETAILS

GENERAL NOTES

1. CONTRACTOR SHALL PROVIDE OWNER AND PROJECT ENGINEER WITH (1) SET OF CLEAN, CLEARLY MARKED AS–BUILT DRAWINGS AT END OF PROJECT. THESE DRAWINGS SHALL REFLECT ANY AND ALL CHANGES TO ELECTRONIC PLANS DURING CONSTRUCTION.

2. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY EXCAVATION WORK REQUIRED TO LOCATE UNDERGROUND UTILITIES. THE CONTRACTOR IS ALSO REQUIRED TO NOTIFY ANY AFFECTED UTILITY OWNERS PRIOR TO DIGGING. IN THE EVENT OF ACCIDENTAL INTERRUPTION OF SERVICE, CONTRACTOR WILL IMMEDIATELY NOTIFY THE UTILITY OWNER.

3. POLE STRUCTURES SET WITHIN 3' OF DITCHES SHALL BE BACKFILLED AND TAMPED WITH CRUSHED LIMESTONE. PLACE RIPRAP A MINIMUM OF 2' RADIUS FROM EDGE OF POLE TO A MINIMUM HEIGHT OF 8" ABOVE GRADE LEVEL.

4. THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE DRAWINGS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL REQUEST THE UTILITY OWNER TO PROPERLY LOCATE AND MARK THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS IN THE VICINITY OF THE UTILITY.

5. THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES AND THE GENERAL PUBLIC FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT.

6. SOME UTILITIES CAN BE LOCATED BY CALLING THE TENNESSEE ONE CALL SYSTEM INC. AT 811.

7. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE N.E.S.C., N.E.C., AND ANY AND ALL OTHER APPLICABLE LOCAL SAFETY CODES.

8. THESE DRAWINGS ARE NOT CONSIDERED A COMPLETE SET OF CONTRACT DOCUMENTS WITHOUT THE ACCOMPANYING TECHNICAL SPECIFICATIONS.

9. SEE TECHNICAL SPECIFICATIONS FOR ANY UNITS NOT SPECIFICALLY DETAILED IN THESE DRAWINGS.

10. THE ENGINEER WILL FURNISH DESIGN TENSION AND SAG DATA AS REQUIRED. IT IS THE CONTRACTORS RESPONSIBILITY TO CONTACT THE ENGINEER SEVEN DAYS PRIOR TO STRINGING CONDUCTORS FOR SAGGING AND STRINGING DATA.

11. ALL INSTALLED POLES TO BE METAL UNLESS SPECIFIED OTHERWISE.

12. ALL EXISTING POLES WITH REMOVED ELECTRIC FACILITIES ARE TO BE TOPPED 2' ABOVE HIGHEST COMMUNICATION ATTACHMENT IF COMMUNICATION CABLES ARE ATTACHED TO THE POLE.

13. ALL NON–STEEL CROSSARMS ON THIS PROJECT ARE TO BE HEAVY DUTY BRACELESS FIBERGLASS UNLESS OTHERWISE SPECIFIED ON THE CONTRACT DRAWINGS.

14. CONTRACTOR WILL BE RESPONSIBLE FOR ANY INSTALLATIONS IN ROCK.

15. THE UTILITY WILL FURNISH ALL TRANSFORMERS TO BE INSTALLED AS SHOWN ON PLAN DRAWINGS.

16. THE OWNER WILL PROVIDE TRANSFORMER INFORMATION SHEETS AND CONTRACTOR WILL BE REQUIRED TO COMPLETE AND RETURN A TRANSFORMER INFORMATION SHEET FOR EACH UNIT REMOVED OR INSTALLED ON THE PROJECT.

17. ATTACH ALL CONNECTIONS, TAPS, AND TRANSFORMERS AS TO MAINTAIN EXISTING PHASE CONNECTIONS UNLESS SPECIFIED OTHERWISE. COORDINATE ANY NEW CONNECTIONS WITH OWNER'S DISPATCH OR PROJECT MANAGER.

18. CONTRACTOR TO TRANSFER CONDUCTORS THAT ARE NOT BEING SPECIFICALLY REPLACED FROM REMOVED POLE TO NEW POLES AND RESAG ALL CONDUCTORS TO PROPER TENSIONS. SPLICE ADDITIONAL CONDUCTOR AS REQUIRED TO ACHIEVE PROPER SAG. NO SPLICE SHALL BE WITHIN 10' OF ANY POLE OR STRUCTURE. THIS WORK IS CONSIDERED PART OF THE PROJECT AND IS NOT A SPECIFIC PAY ITEM.

19. FIBERGLASS STRAIN INSULATOR QUANTITIES ARE APPROXIMATE. CONTRACTOR TO INSTALL FIBERGLASS STRAIN INSULATORS WHERE REQUIRED TO INSURE DOWN GUYS ARE CLEAR OF ENERGIZED CONDUCTORS AS REQUIRED BY THE NESC.

20. CONTRACTOR TO COORDINATE ALL METER WORK WITH OWNER.

21. EXISTING CONDUCTOR DESIGN TENSIONS ARE ASSUMED. ADDITIONAL GUYING MAY BE REQUIRED AS ACTUAL FIELD CONDITIONS MAY BE DIFFERENT.

22. CONTRACTOR TO INSTALL ALL GUYS AT 3 TO 2 LEAD UNLESS OTHERWISE INDICATED ON PLAN DRAWINGS OR IN GUYING DETAILS. NO ANCHORS SHALL BE PLACED CLOSER THAN 5 FEET TO ANY OTHER ANCHOR WITHOUT ENGINEERS PERMISSION.

23. ON POLES WHERE TRANSFORMERS ARE BEING REMOVED AND INSTALLED, THE EXISTING TRANSFORMER MAY BE RE–USED IF IN GOOD CONDITION.

24. ANY CONTRACTOR OR SUBCONTRACTOR WHO WILL BE PERFORMING THE WORK OF THE ELECTRIC UTILITY CONSTRUCTION SHALL SUBMIT QUALIFICATION REQUIREMENTS DIRECTLY TO TDOT FOR APPROVAL BY 30 DAYS PRIOR TO THE LETTING OF THE CONTRACT.

25. THE WORK OF ELECTRIC RELOCATION AS INDICATED WITHIN THESE CONTRACT DRAWINGS SHALL BE COVERED UNDER STANDARD SPECIFICATIONS FOR UTILITY CONSTRUCTION" AS PART OF THE TDOT PROPOSAL CONTRACT.

26. CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL ELECTRIC FACILITIES AT FINAL GRADE AS SHOWN. ANY TEMPORARY INSTALLATIONS OR GRADING ARE THE RESPONSIBILITY OF THE CONTRACTOR.

27. CONTRACTOR TO ENSURE THAT ANY STEEL POLES PLACED IN FILL AREAS SHALL HAVE SUFFICIENT ANTI–CORROSION COATING TO 18" ABOVE FINISHED GRADE.

28. RAIN WATER WHICH COLLECTS IN THE UTILITY TRENCH SHALL BE PUMPED INTO A TEMPORARY DEWATERING STRUCTURE OR FILTER BAG.

29. SILT FENCE TO BE INSTALLED ON THE DOWNSTREAM SIDE OF STOCKPILED SOIL. TRENCHING ACROSS WET WEATHER CONVEYANCES TO BE DONE DURING NO FLOW CONDITIONS AND STABILIZED BY THE END OF THE WORK DAY.

30. UTILITY CROSSING FOR PERENNIAL STREAMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH TDOT STANDARDS, AND NO WORK SHALL BE CONDUCTED IN FLOWING WATERS. TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) REGULATIONS APPLY TO THE UTILITIES IN THIS PROJECT IN REGARDS TO EROSION CONTROL. CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE STORM WATER POLLUTION PREVENTION PLANS.

31. IT IS THE RESPONSIBILITY OF THE UTILITIES INSTALLER TO PROTECT FROM EROSION EXPOSED EARTH RESULTING FROM HIS OPERATIONS AND TO PROVIDE FOR CONTAINMENT OF SEDIMENT THAT MAY RESULT FROM HIS WORK. PRIOR TO BEGINNING WORK, ADEQUATE MEASURES MUST BE IN PLACE TO TRAP ANY SEDIMENT THAT MAY TRAVEL OFF–SITE IN THE EVENT OF RAIN. DURING THE PROGRESSION OF HIS WORK, EXPOSED EARTH AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE TO PREVENT EROSION. AT NO TIME SHALL EXPOSED EARTH RESULTING FROM HIS OPERATIONS HAVE UNPROTECTED ACCESS TO FLOWING OFF–SITE AND BECOME WATERS OF THE STATE.

32. FOR THE INSTALLATION OF BURIED UTILITIES (PIPES AND CABLES), TRENCHES SHALL BE BACKFILLED DAILY AS CONSTRUCTION PROCEEDS. BACKFILLED TRENCHES SHALL BE SEEDED AND MULCHED OR SODDED DAILY IF POSSIBLE, BUT NO LATER THAN 7 DAYS AFTER TRENCHING. ANY TEMPORARY SPOIL PILE OF EXCAVATED EARTH SHALL BE LOCATED WITHIN THE TDOT ROW EROSION CONTROL MEASURES OR RECEIVE SEPARATE EROSION CONTROL MEASURES. IF TRENCHES ARE NOT BACKFILLED OVERNIGHT, APPROPRIATE EROSION CONTROL MEASURES WILL BE INSTALLED UNTIL SUCH TIME THE TRENCH IS BACKFILLED.

33. TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) REGULATIONS APPLY TO THE UTILITIES IN THIS PROJECT IN REGARDS TO EROSION CONTROL. THE STATE CONTRACTOR IS ONLY RESPONSIBLE FOR EROSION CONTROL MEASURES FOR UTILITY CONSTRUCTION THAT IS INCLUDED IN THE STATE CONTRACT WORK.

34. EXCEPT FOR EROSION SEDIMENT CONTROL ITEMS, NO ROADWAY OR BRIDGE ITEMS SHALL BE UTILIZED TO COMPENSATE FOR WORK METHODS OR MATERIALS ASSOCIATED WITH AND/OR SPECIFIED FOR THE UTILITY INSTALLATION, EVEN THOUGH THE SAME OR SIMILAR ROADWAY OR BRIDGE MATERIALS MAY HAVE BEEN CALLED FOR IN THE UTILITY SPECIFICATIONS OR DRAWINGS.

35. ALL MATERIALS, METHODS, AND/OR INTEGRAL MATERIAL OUTLINED IN THE UTILITY SPECIFICATIONS OR DRAWINGS NECESSARY TO PROVIDE A COMPLETE AND FUNCTIONAL INSTALLATION MUST BE INCLUDED IN THE UNIT PRICE FOR THE ASSOCIATED UTILITY WORK ITEM.

36. IT SHALL BE RESPONSIBILITY OF THE PRIME CONTRACTOR'S SURVEYOR TO LAY OUT ALL THE FACILITIES BEING RELOCATED WITHIN THE CONTRACT.

37. WHERE EROSION CONTROL MEASURES ARE NEEDED FOR THE UTILITY RELOCATION WORK OCCURRING INSIDE OR OUTSIDE STATE RIGHT–OF–WAY, THE CONTRACTOR SHALL SUBMIT TO THE TDOT PROJECT SUPERVISOR FOR APPROVAL A PROPOSED EROSION AND SEDIMENT CONTROL PLAN PRIOR TO BEGINNING THE WORK. TDOT APPROVAL MUST BE RECEIVED BEFORE THE EROSION CONTROL PAY ITEMS FOR ROADWAY CONSTRUCTION CAN BE USED FOR ANY ADDITIONAL EROSION CONTROL MEASURES REQUIRED FOR THE UTILITY RELOCATION WORK.

38. ALL UNDERGROUND CONDUCTOR TERMINATORS AND SPLICES ARE TO BE CONSIDERED PART OF THE PROJECT AND ARE NOT SPECIFIC PAY ITEMS UNLESS INDICATED OTHERWISE ON THE CONTRACT DRAWINGS.

	ITEM	TDOT DESCRIPTION	UTILITY DESCRIPTION	UNIT	TOTAL QUANTITY	PERCENT UTILITY	PERCENT PROJECT
(1)	790-07.07	POLE 60FT CLASS H1 METAL	INSTALL 60-H1 STEEL POLE	EACH	5	100%	0%
(2)	790-21.09	1Ø PRIMARY TAP 15KV	INSTALL A5-2	EACH	1	100%	0%
(2)	790-25.01	3Ø CROSSARM SGL 15KV	INSTALL C1F	EACH	3	100%	0%
(2)	790-25.21	3Ø CROSSARM DEADEND SGL 15KV	INSTALL C7F	EACH	2	100%	0%
(2)	790-25.23	3Ø CROSSARM DDE 15KV	INSTALL C8	EACH	4	100%	0%
	790-30.06	SECONDARY CONDUCTOR 6 AL DUPLEX	INSTALL DUPLEX	L.F.	471	100%	0%
	790-30.11	SECONDARY CONDUCTOR 6 AL TRIPLEX	INSTALL TRIPLEX	L.F.	20	100%	0%
	790-31.02	SERVICE ASSEMBLY-POLE TYPE	INSTALL SVC	EACH	7	100%	0%
	790-32.01	DOWN GUY - THROUGH BOLT TYPE	INSTALL E1-2	EACH	17	100%	0%
	790-40.03	OH COND 1/0 6/1 ACSR RAVEN	INSTALL TAP (NEU)	L.F.	20	100%	0%
	790-40.05	OH COND 3/0 6/1 ACSR PIGEON	INSTALL TAP (PRI)	L.F.	20	100%	0%
	790-40.42	OH COND 336.4 19 AAC TULIP	INSTALL (NEUTRAL)	L.F.	646	100%	0%
	790-40.49	OH COND 795 37 AAC ARBUTUS	INSTALL (PRIMARY)	L.F.	1938	100%	0%
(3)	790-46.01	1Ø TRANSFORMER	INSTALL 1TR	EACH	2	100%	0%
	790-58.03	CUTOUT KNIFE SWITCH, SNGL LOADBREAK 15KV	INSTALL M5-9	EACH	4	100%	0%
(4)	790-58.06	GOAB SWITCH 15KV	INSTALL GS	EACH	1	100%	0%
	790-70.20	STREET LIGHT (DESCRIPTION)	INSTALL SL	EACH	4	100%	0%
	790-72.01	ANCHOR POWER SCREW	INSTALL FP-2	EACH	9	100%	0%
(5)	790-98.01	REMOVE WIRE	REMOVE WIRE	L.F.	2482	100%	0%
(6)	790-98.02	REMOVE POLES	REMOVE POLES	EACH	5	100%	0%
(7)	790-98.03	REMOVE FRAMING/ASSOCIATED APPARATUS	REMOVE FRAMING ASSEMBLIES	EACH	41	100%	0%

FOOT NOTES:

(1) INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT FOR COMPLETE INSTALLATION INCLUDING BUT NOT LIMITED TO SETUP, TRAFFIC CONTROL, DIGGING HOLE, FILLING HOLE, BLASTING, BUTT WRAP OR SINGLE GROUND ROD, MGNV, NUMBERING POLE. (SEE M2–11 DETAIL DRAWING)

(2) ASSEMBLIES OF SIMILAR CONSTRUCTION BUT DIFFERING ONLY IN USE OF EPOXY VS. PORCELAIN INSULATORS OR FIBERGLASS VS. WOOD CROSSARMS OR LACK OF NEUTRAL ASSEMBLY SHOULD BE GROUPED WITHIN THE SAME ITEM.

(3) SINGLE PHASE TRANSFORMER NOT REQUIRING ADDITIONAL FUSE OR LIGHTNING ARRESTER

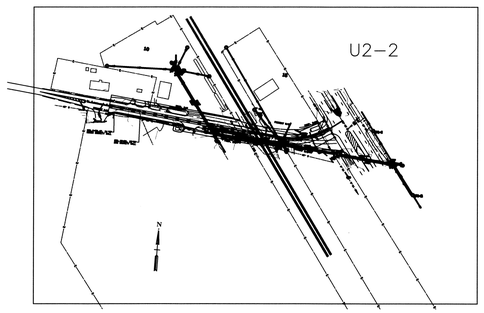
(4) VERTICAL OR HORIZONTAL MOUNT, INCLUDES OPERATOR MECHANISM

(5) INCLUDES SECONDARY WIRE, OH GUYS, MAIN LINE WIRE

(6) INCLUDES MAINLINE POLES, SERVICE POLES, STUB POLES

(7) INCLUDES CROSSARMS, TRANSFORMERS, SWITCHES, ETC.

VICINITY MAP



LEGEND

- THREE PHASE EXISTING
- TWO PHASE EXISTING
- SINGLE PHASE EXISTING
- THREE PHASE PROPOSED
- TWO PHASE PROPOSED
- SINGLE PHASE PROPOSED
- PROPOSED DUPLEX
- PROPOSED TRIPLEX
- PROPOSED QUADRAPLEX
- EXISTING/REMOVAL DUPLEX
- EXISTING/REMOVAL TRIPLEX
- EXISTING/REMOVAL QUADRAPLEX
- UNDERGROUND SERVICES
- EXISTING POLE
- PROPOSED POLE
- REPLACEMENT POLE
- EXISTING SINGLE PHASE TRANSFORMER
- PROPOSED SINGLE PHASE TRANSFORMER
- EXISTING THREE PHASE TRANSFORMER
- PROPOSED THREE PHASE TRANSFORMER
- EXISTING M5–9
- PROPOSED M5–9
- EXISTING GS
- PROPOSED GS
- SPAN GUY
- PROPOSED ANCHOR
- PROPOSED IN LINE ANCHOR
- EXISTING ANCHOR TO BE REMOVED
- EXISTING ANCHOR TO REMAIN
- EXISTING/REMOVAL PL
- PROPOSED PL
- EXISTING /REMOVAL SL
- PROPOSED SL

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2015	75951-3597-04	U2-1

RUTHERFORD CO.

JAMES N. CROWDER REGISTERED ENGINEER AGRICULTURE No. 021978 STATE OF TENNESSEE 01/27/2015

UTILITY INFORMATION

Murfreesboro Electric Department
205 North Walnut St.
Murfreesboro, TN 37133
Contact: Chris Barns
Phone: (615)–494–0428
Email: CBarns@medtn.com

MURFREESBORO ELECTRIC DEPARTMENT

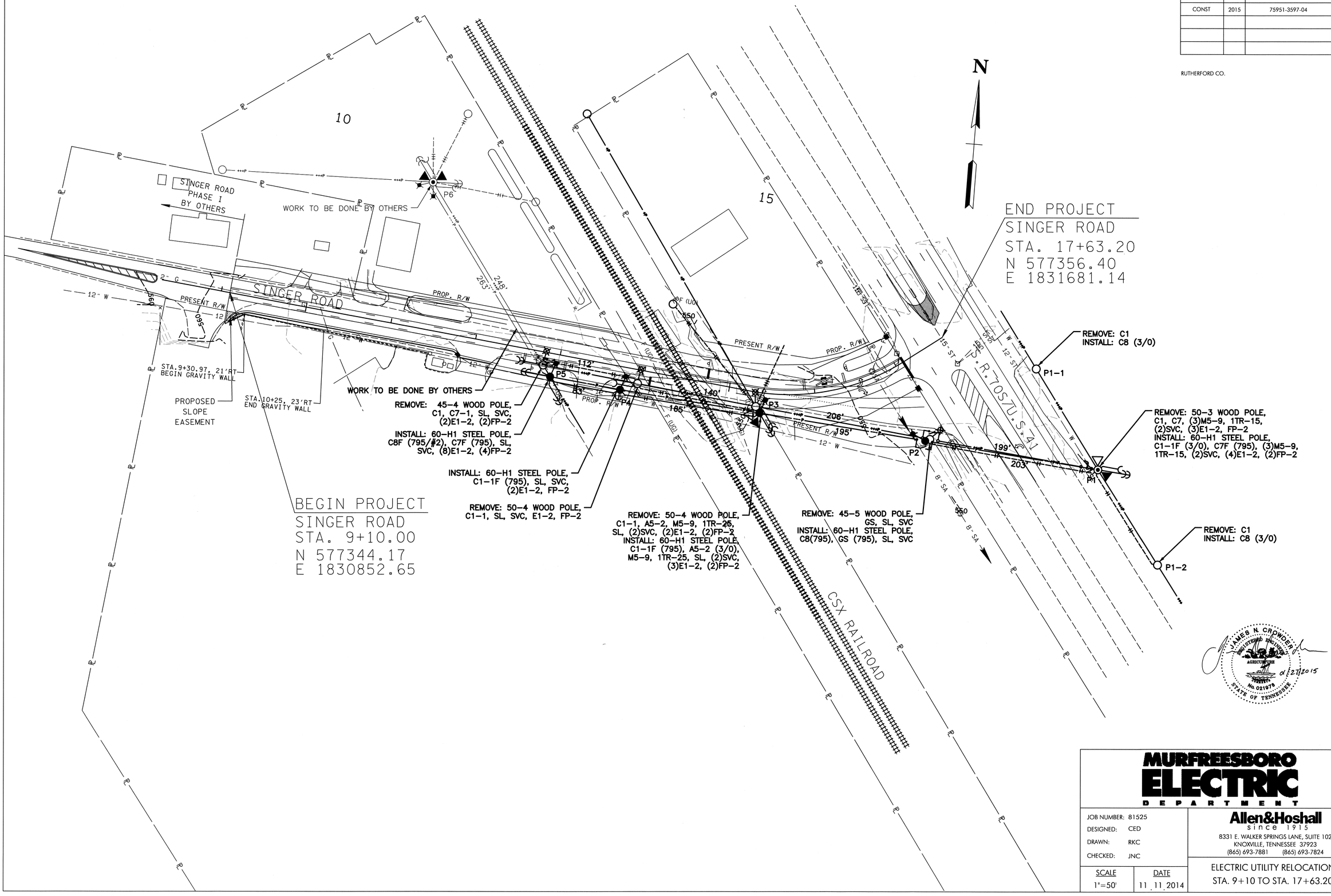
JOB NUMBER:	81525
DESIGNED:	CED
DRAWN:	RKC
CHECKED:	JNC
SCALE	1"=50'
DATE	11.11.2014

Allen&Hoshall since 1915
8331 E. WALKER SPRINGS LANE, SUITE 102
KNOXVILLE, TENNESSEE 37923
(865) 693-7881 (865) 693-7824

ELECTRIC UTILITY RELOCATION
ESTIMATED QUANTITIES

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2015	75951-3597-04	U2-2

RUTHERFORD CO.



JAMES N. CROWDER
REGISTERED ENGINEER
AGRICULTURE
No. 021979
STATE OF TENNESSEE
04/27/2015

MURFREESBORO ELECTRIC DEPARTMENT

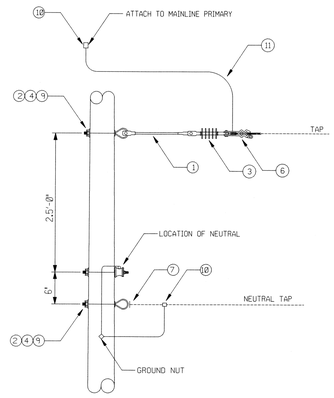
JOB NUMBER:	81525
DESIGNED:	CED
DRAWN:	RKC
CHECKED:	JNC
SCALE	1"=50'
DATE	11.11.2014

Allen&Hoshall since 1915
8331 E. WALKER SPRINGS LANE, SUITE 102
KNOXVILLE, TENNESSEE 37923
(865) 693-7881 (865) 693-7824

ELECTRIC UTILITY RELOCATION
STA. 9+10 TO STA. 17+63.20

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2015	75951-3597-04	U2-3

RUTHERFORD CO.



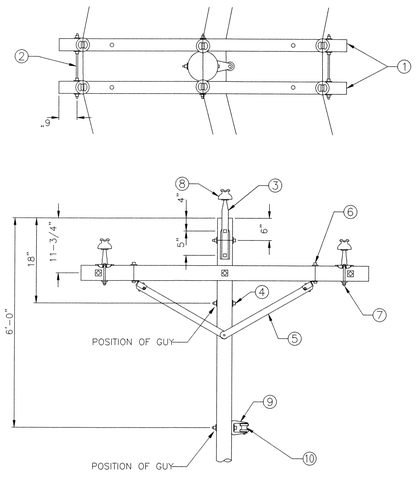
NOTES:

1. USE FLAT WASHERS ON FLAT SURFACES, AND CURVED WASHERS ON CURVED SURFACES.

ID	QTY.	DESCRIPTION
1	1	FIBERGLASS EXTENSION, 24' MINIMUM
2	2	WASHER, SQUARE, 3", CURVED
3	1	INSULATOR, SUSPENSION, 15 kV
4	2	BOLT, EYE, 5/8" X REQ'D
6	1	DEADEND ASSEMBLY, PRIMARY
7	1	DEADEND ASSEMBLY, NEUTRAL
8	1	SHACKLE, ANCHOR
9	1	LOCKNUTS, AS REQUIRED
10	1	CONNECTORS, AS REQUIRED
11	1	JUMPERS, AS REQUIRED

SINGLE PHASE
DEAD END (2 ACSR - 795 AAC)

ASSEMBLY
A5-2



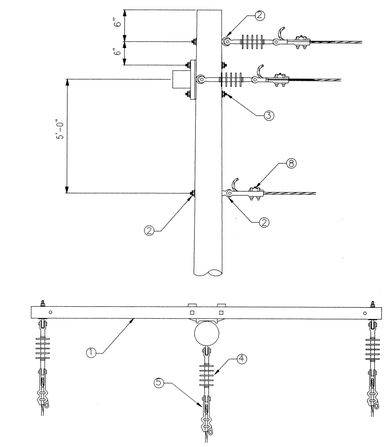
NOTES:

1. USE FLAT WASHERS ON FLAT SURFACES, AND CURVED WASHERS ON CURVED SURFACES.

ID	QTY.	DESCRIPTION
1	2	FIBERGLASS CROSSARMS 8"
2	3	DOUBLE ARM BOLTS 5/8" x 18"
3	2	PINS STRAIGHT RIDGE
4	5	THRU BOLTS 5/8" x 10"
5	2	60" BOW BRACES
6	4	BRACE BOLTS 1/2" x 6"
7	4	STRAP PINS
8	6	INSULATORS
9	1	SECONDARY DEAD END CLEVIS
10	1	SECONDARY DEAD END INSULATOR WHITE

3-PHASE CROSSARM CONSTRUCTION
0-5 DEGREE ANGLE

ASSEMBLY
C1-1F



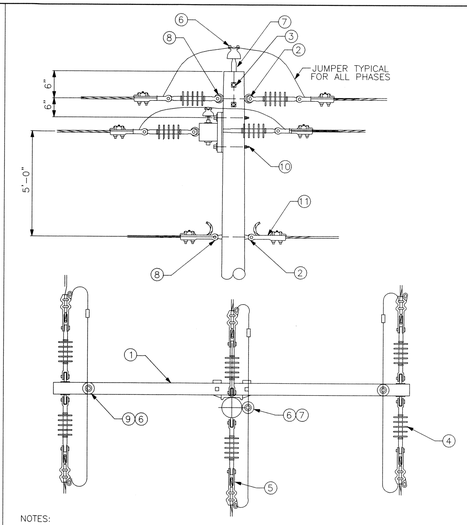
NOTES:

1. USE FLAT WASHERS ON FLAT SURFACES, AND CURVED WASHERS ON CURVED SURFACES.

ID	QTY.	DESCRIPTION
1	1	CROSSARM, 8' FIBERGLASS, DEADEND, HEAVY DUTY
2	2	EYE BOLT, 5/8" x REQUIRED LENGTH
3	2	THRU BOLT, 3/4" x REQUIRED LENGTH
4	3	INSULATOR, POLYMER SUSPENSION (25kV)
5	3	CLAMP, DE, PRIMARY
8	1	CLAMP, DE, NEUTRAL

THREE PHASE FIBERGLASS CROSSARM CONSTRUCTION
DEAD END (SINGLE)

ASSEMBLY
C7F



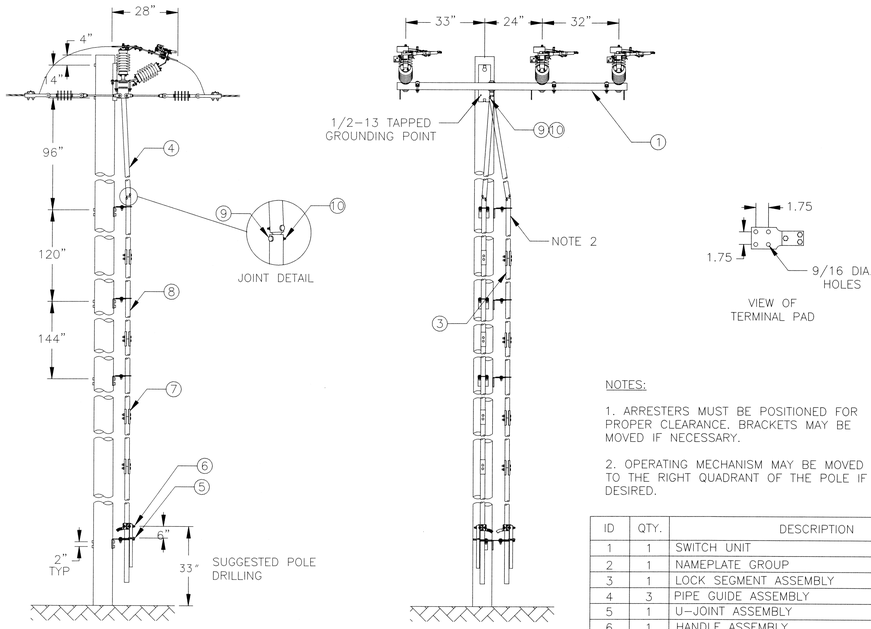
NOTES:

1. USE FLAT WASHERS ON FLAT SURFACES, AND CURVED WASHERS ON CURVED SURFACES.

ID	QTY.	DESCRIPTION
1	1	CROSSARM, FIBERGLASS
2	2	EYE BOLT, 5/8" x REQUIRED LENGTH
4	6	INSULATOR, SUSPENSION, 25KV
5	6	CLAMP, DE, PRIMARY
6	3	INSULATOR, POLE TOP, 25KV
7	1	PIN, POLE TOP, 20"
8	2	NUT, OVAL EYE, 5/8"
9	2	PIN, CLAMP TYPE
10	2	THRU BOLT, 3/4" x REQUIRED LENGTH
11	1	CLAMP, DE, NEUTRAL

THREE PHASE FIBERGLASS CROSSARM CONSTRUCTION
DOUBLE DEAD END

ASSEMBLY
C8F



NOTES:

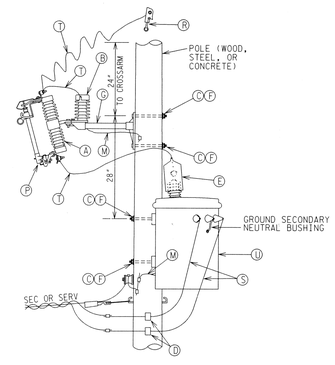
1. ARRESTERS MUST BE POSITIONED FOR PROPER CLEARANCE. BRACKETS MAY BE MOVED IF NECESSARY.

2. OPERATING MECHANISM MAY BE MOVED TO THE RIGHT QUADRANT OF THE POLE IF DESIRED.

ID	QTY.	DESCRIPTION
1	1	SWITCH UNIT
2	1	NAMEPLATE GROUP
3	1	LOCK SEGMENT ASSEMBLY
4	3	PIPE GUIDE ASSEMBLY
5	1	U-JOINT ASSEMBLY
6	1	HANDLE ASSEMBLY
7	5	PIPE, 7'
8	2	PIN
9	4	COUPLING ASSEMBLY
10	2	COTTER PIN

GOAB SWITCH 15kV

ASSEMBLY
GS



NOTES:

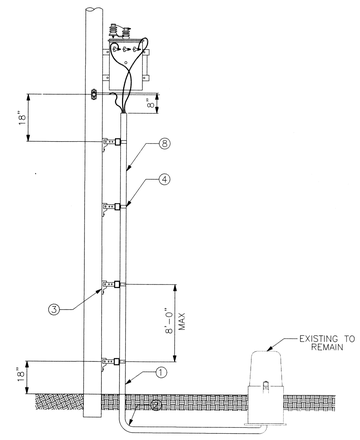
1. BOND TRANSFORMER NEUTRAL TO SYSTEM GROUND.
2. TRANSFORMERS NORMALLY MOUNTED IN-LINE, MAY BE MOUNTED AT 45° TO THE LINE IF NECESSARY.
3. UNIT TO BE COMPLETE WITH ALL NECESSARY MOUNTING HARDWARE, CONNECTORS, AND JUMPERS.
4. CUTOUT AND LIGHTNING ARRESTORS MAY BE MOUNTED ON CROSSARM IF THERE IS SPACE AVAILABLE.
5. CUTOUT SHOULD BE MOUNTED SO THAT IT CAN BE EASILY OPERATED FROM THE GROUND AND WILL NOT DISCHARGE ON OTHER EQUIPMENT.

NOTES:
1. BOND TRANSFORMER NEUTRAL TO SYSTEM GROUND.

ID	INDEX DESCRIPTION	QTY
A	CUTOUT 15KV 100A W/O BKT	1
B	ARRESTER DISTR 10KV	1
C	BOLT MACHINE 5/8 X 12	4
D	WIREHOLDER SCREW PORCELA	1
E	GUARD BIRD & SQUIRREL	1
F	WASHER SQUARE 2-1/4"	4
G	BRACKET FGLASS CO-ARR	1
M	WIRE AR BARE #1/0AWG	AS REQ'D
N	CONN BOLTED (SIZE REQD)	1
P	FUSE CO 15KV (SIZE REQD)	1
R	CLAMP HOTLINE(SIZE REQD)	1
S	WIRE CU WP SD(SIZE REQD)	AS REQ'D
T	WIRE CU TR RS(SIZE REQD)	AS REQ'D
U	TRANSFORMER (SIZE REQD)	1

SINGLE PHASE POLE-MOUNTED TRANSFORMER

ASSEMBLY
1TR



NOTES:

1. USE FLAT WASHERS ON FLAT SURFACES, AND CURVED WASHERS ON CURVED SURFACES.
2. LAST TWO DIGITS OF UNIT INDICATE HEIGHT OF POLE (EX. S3WUG40).
3. A-2 INDICATES TWO PEDESTALS, A-3 INDICATES THREE PEDESTALS.

ID	QTY.	DESCRIPTION
1	10'	SCH. 80 PVC CONDUIT, 4"
2	1	ELBOW 90 DEG., SCH. 40 PVC
3	4	STAND OFF BRACKETS
4	4	STRAP KIT, 3"
8		SCH. 40 PVC CONDUIT, 3", (LENGTH & SIZE AS REQ'D)
9		CABLE, SECONDARY TRIPLEX (LENGTH & SIZE AS REQ'D)
10	8	THRU BOLT, 5/8" X REQUIRED LENGTH

UNDERGROUND SERVICE RISER POLE

ASSEMBLY
SVC RISER

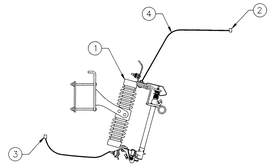
MURFREESBORO ELECTRIC DEPARTMENT

JOB NUMBER: 81525
DESIGNED: CED
DRAWN: RKC
CHECKED: JNC

Allen&Hoshall since 1915
8331 E. WALKER SPRINGS LANE, SUITE 102
KNOXVILLE, TENNESSEE 37923
(865) 693-7881 (865) 693-7824

SCALE: 1"=50'
DATE: 11.11.2014

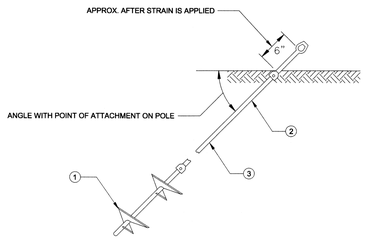
ELECTRIC UTILITY RELOCATION
DETAIL ASSEMBLIES



ID	QTY.	DESCRIPTION
1	1	CUTOUT SWITCH
2	1	HOT LINE CLAMPS, SIZE AS REQ'D
3	1	CONNECTIONS AS REQ'D
4	10	#4 SOLID COPPER RISER WIRE

SINGLE-SHOT CUTOUT

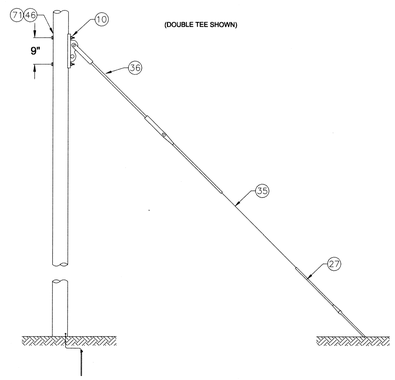
ASSEMBLY M5-9



ID	QTY.	DESCRIPTION
1	1	DOULBE HELIX HUB
2	1	TWIN EYE ADAPTER
3	1	EXTENSION ROD 3-1/2' (INCLUDED IN BASE UNIT)
		ADD'L EXTENSION RODS (3-1/3', 5', & 7' AS REQ'D)

POWER INSTALLED HELIX SCREW ANCHORS

ASSEMBLY FP-2

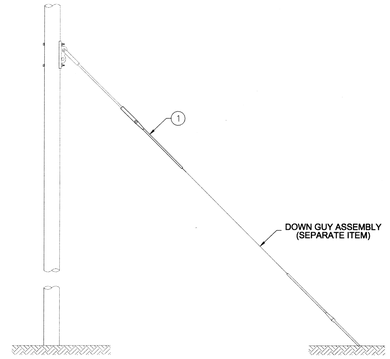


NOTES:
1. ATTACHMENT BOLTS FOR SOME ASSEMBLIES MAY BE SUBSTITUTED FOR TOP BOLT WHERE SPECIFIED.
2. ALL GUY LEADS SHALL BE 3/2 UNLESS OTHERWISE INDICATED.
3. POLE GROUNDING IS SEPARATE ITEM.

		GALVANIZED MATERIAL
ID	QTY.	DESCRIPTION
10	2	BOLT, 5/8" MACHINE X REQ'D LENGTH
27	2	PREFORMED DEADEND (3/8")
35	–	GUY, 3/8" STRAND (LENGTH AS REQUIRED)
36	1	GUY, STRAN INSULATOR, 16,000# MIN.
46	2	NUT, 5/8" MF TYPE
71	2	WASHER, 4" X 11/16" SQUARE CURVED

SINGLE DOWN GUY THROUGH BOLT TYPE

ASSEMBLY E1-2

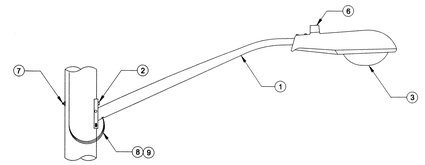


NOTES:
1. ULTIMATE TENSION STRENGTH OF FIBERGLASS LINK IS 21,000 LBS.
2. UNIT IS FOR ADDITIONAL INSULATORS NOT INCLUDED IN DOWN GUY ASSEMBLY ONLY.

QTY.	DESCRIPTION
1	GUY, FIBERGLASS LINK

FIBERGLASS INSULATOR LINK

ASSEMBLY INSLINK

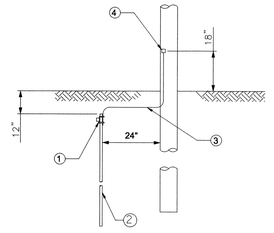


NOTES:
1. GROUND TO POLE NEUTRAL.
2. ACTUAL LIGHT FIXTURE MAY DIFFER FROM ONE SHOWN. COORDINATE LIGHT TYPE AND STYLE WITH UTILITY.

ID	QTY.	DESCRIPTION
1	1	ARM, STREET LIGHT, GALV. 6' X 1.25"
2	1	BOLT, MACHINE, 5/8" X 12"
3	1	FIXTURE, STREET LIGHT HEAD, HPS
4	1	GROUNDING LUG, FOR STREET LIGHT ARM
5	1	LAMP, HPS
6	1	PE CELL, SOCKET TYPE
7	1	WASHER, 2-1/4" SQUARE, 11/16"
8	12	WIRE, #12 COPPER SOLID, WHITE
9	12	WIRE, #12 COPPER SOLID, BLACK

STREET LIGHT / PRIVATE LIGHT

ASSEMBLY SL/PL



NOTE:
1. **INSTALL GROUND ROD IN UNDISTURBED EARTH.**

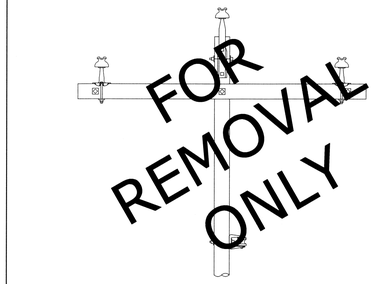
ID	STEEL QTY.	DESCRIPTION
1	1	CLAMP, GROUND ROD 5/8"
2	1	GROUND ROD 5/8" x 8'
3	1	GROUND WIRE #6 COPPER, LENGTH AS REQUIRED
4	1	GROUNDING CLAMP

GROUNDING ROD

ASSEMBLY M2-11

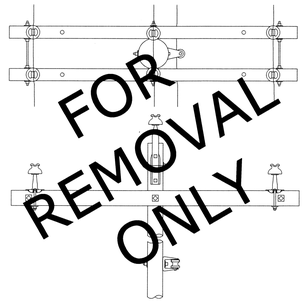
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2015	75951-3597-04	U2-4

RUTHERFORD CO.



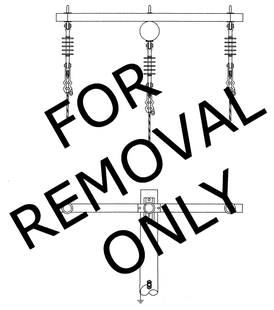
THREE PHASE CROSSARM CONSTRUCTION

ASSEMBLY C1



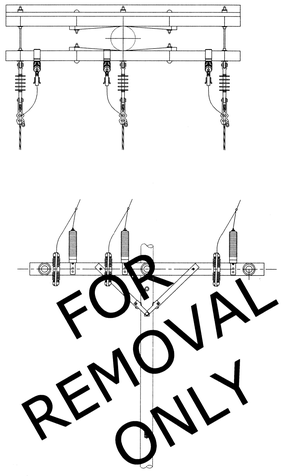
THREE PHASE CROSSARM CONSTRUCTION

ASSEMBLY C1-1



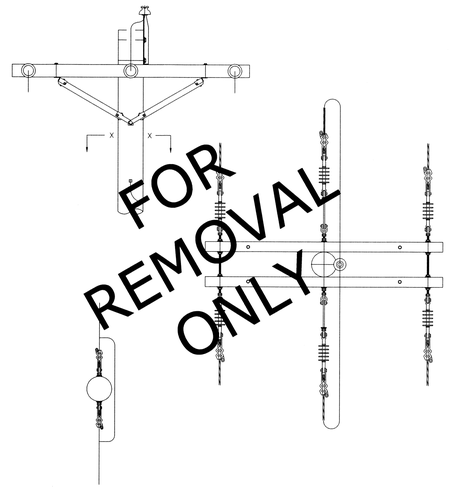
THREE PHASE CROSSARM CONSTRUCTION
SINGLE DEAD END

ASSEMBLY C7



3-PHASE CROSSARM CONSTRUCTION
DEAD END (2 ACSR - 795 AAC)

C7-1



THREE PHASE CROSSARM CONSTRUCTION
DOUBLE DEAD END

ASSEMBLY C8

JAMES N. CROWDER
REGISTERED ENGINEER
AGRICULTURE
No. 021978
STATE OF TENNESSEE
12/12/2014

MURFREESBORO ELECTRIC DEPARTMENT

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