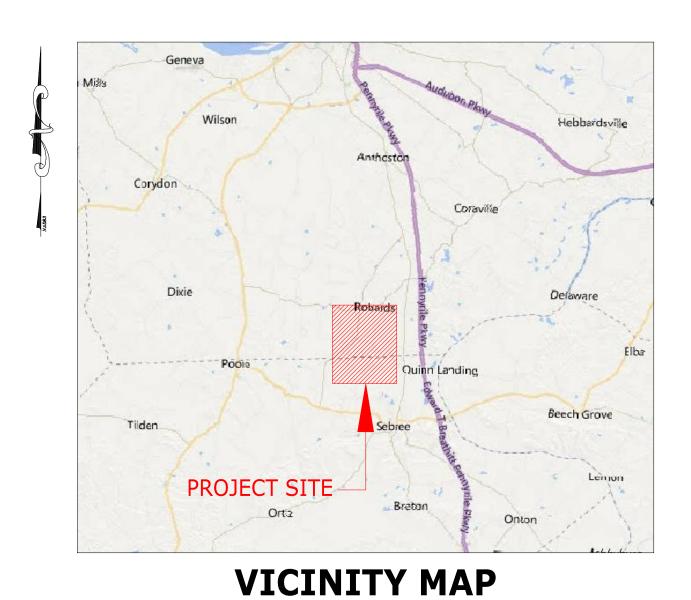
UNBRIDLED SOLAR PROJECT

HENDERSON & WEBSTER COUNTY KENTUCKY



	Sheet List Table
Sheet Number	Sheet Title
UNB-E-000-01	COVER SHEET
UNB-T-100-01	OVERALL TRANSMISSION LINE ROUTE MAP
UNB-E-500-03	OVERALL SITE ARRAY PLAN
UNB-E-502-01	KEYMAP LAYOUT TOP
UNB-E-502-02	KEYMAP LAYOUT CENTER
UNB-E-502-03	KEYMAP LAYOUT BOTTOM
UNB-E-522-03	TYPICAL OVERHEAD COLLECTOR LINE DETAILS
UNB-L-900-01	VEGETATION SCREENING NOTES AND DETAILS



OWNER:

NATIONALGRID RENEWABLES 8400 NORMANDALE LAKE BLVD. SUITE 1200 BLOOMINGTON, MN 55437



ENGINEER:

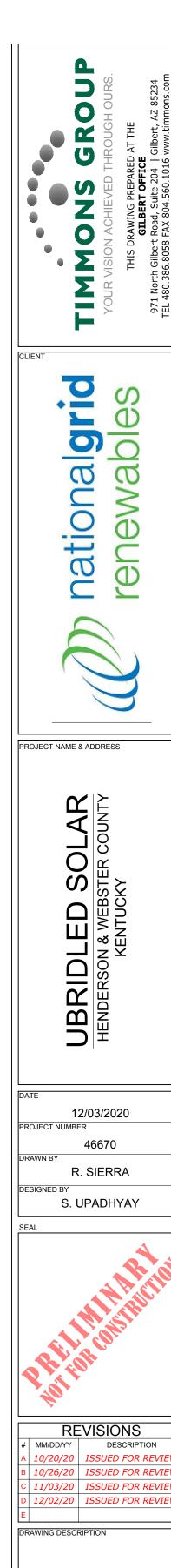
TIMMONS GROUP

971 NORTH GILBERT ROAD, SUITE 204

GILBERT, AZ 85234

TELEPHONE: (480) 386-8058

WWW.TIMMONS.COM



COVER SHEET

34"x22" FULL SIZE (17"x11" PLOTS ARE HALF SCALE)

UNB-E-000-01



LEGEND:

PROJECT BOUNDARY (SUPPLIED KMZ) ----- EQUIPMENT SETBACK (SOLAR ORDINANCE) - 200' INVERTER SETBACK (ASSUMED 50dBA) WETLAND BOUNDARY (DELINEATION DATA) 40' WETLAND SETBACK (KDOT) EXISTING ROADS (PUBLIC DATA) -----69kV T-OHU----- 69KV OVERHEAD LINE (BIG RIVER GIS) ——161kV T-OHU—— 161KV OVERHEAD LINE (BIG RIVER GIS) ——345kV T-OHU—— 345KV OVERHEAD LINE (BIG RIVER GIS) T-OHU——— FOREIGN OVERHEAD LINE (BIG RIVER GIS) ---- UTILITY EASEMENT (ASSUMED) 100' RESIDENTIAL BUFFER (HENDERSON COUNTY SOLAR ORDINANCE) EXISTING UTILITY POLE (SUPPLIED KMZ) 2 FLOW DEPTH (FLO-2D MODEL BY OTHERS)
4 FLOW DEPTH (FLO-2D MODEL BY OTHERS)
6 FLOW DEPTH (FLO-2D MODEL BY OTHERS)
LANDSCAPE SCREENING EXISTING LANDSCAPE SCREENING PROPOSED SUBSTATION LOCATION ■ PROPOSED O&M BUILDING LOCATION PROPOSED OPERATION & MAINTENANCE YARD & OFFICE PROPOSED SITE FENCE PROPOSED SITE ROAD ---- PROPOSED T-LINE EASEMENT PROPOSED T-LINE

PV PANEL TRACKER

PROPOSED T-LINE POLE

SCALE 1" = 900'

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.
THIS DRAWING PREPARED AT THE
GILBERT OFFICE
971 North Gilbert Road, Suite 204 | Gilbert, AZ 85234

mationalgrid renewables

PROJECT NAME & ADDRESS

UBRIDLED SOLAR
HENDERSON & WEBSTER COUNTY
KENTUCKY

DATE

12/02/2020
PROJECT NUMBER

46670
DRAWN BY

R. SIERRA

R. SIERRA

DESIGNED BY
S. UPADHYAY

SEAL

Riller On Structure

MM/DD/YY DESCRIPTION
A 10/20/20 ISSUED FOR REVIEW
B 10/26/20 ISSUED FOR REVIEW
C 11/03/20 ISSUED FOR REVIEW
D 12/02/20 ISSUED FOR REVIEW
E

DRAWING DESCRIPTION

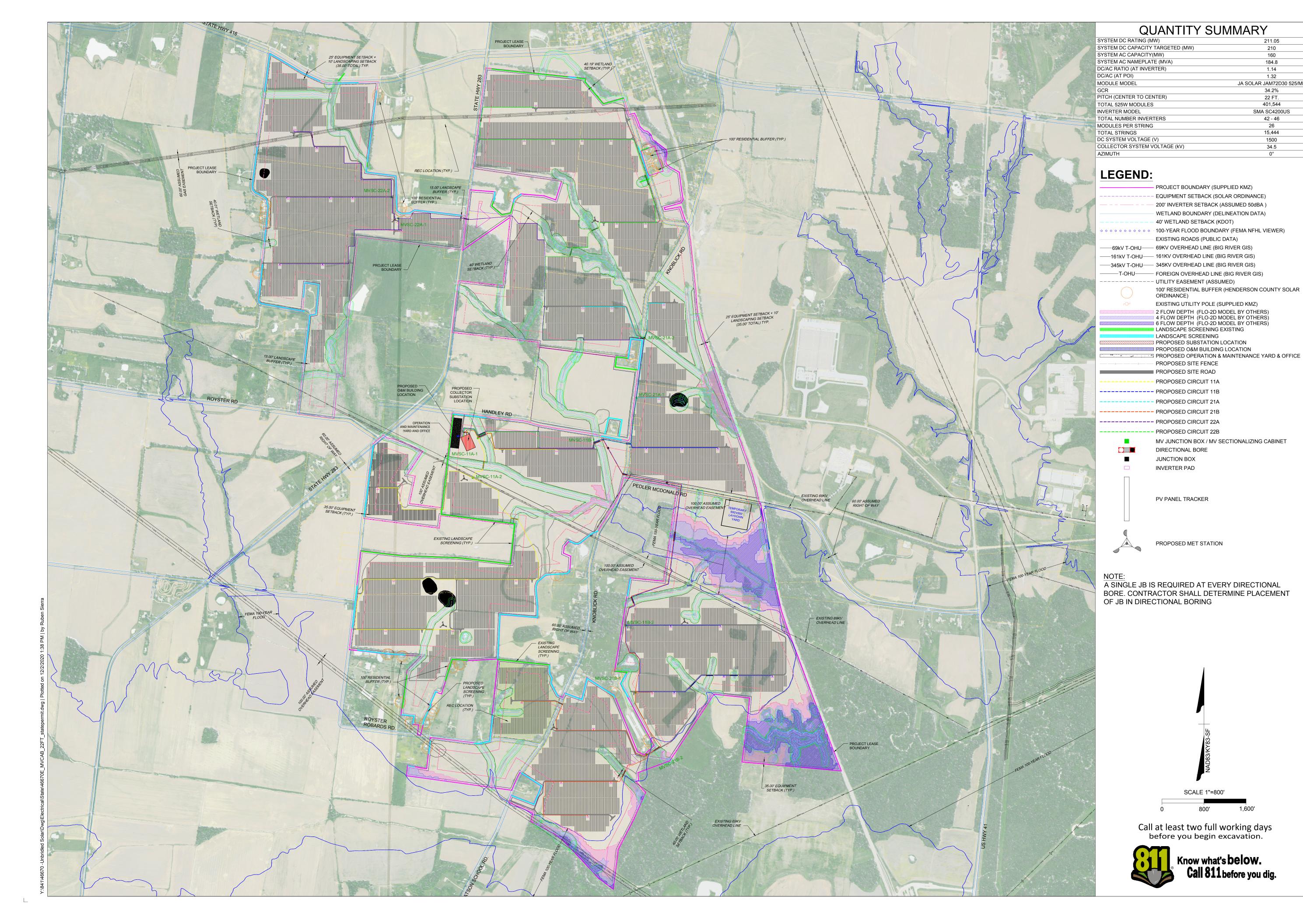
OVERALL TRANSMISSION LINE ROUTE MAP

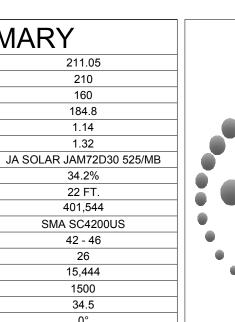
34"x22" FULL SIZE (17"x11" PLOTS ARE HALF SCALE)

SCALE SHEET NUMBER

1" = 900' UNB-T-100-01

L





<u>L</u> algi Pable nation



PROJECT NAME & ADDRESS

SOLAR SSTER COUNTY SKY

12/02/2020 PROJECT NUMBER 46670 C. VU DESIGNED BY C. VU

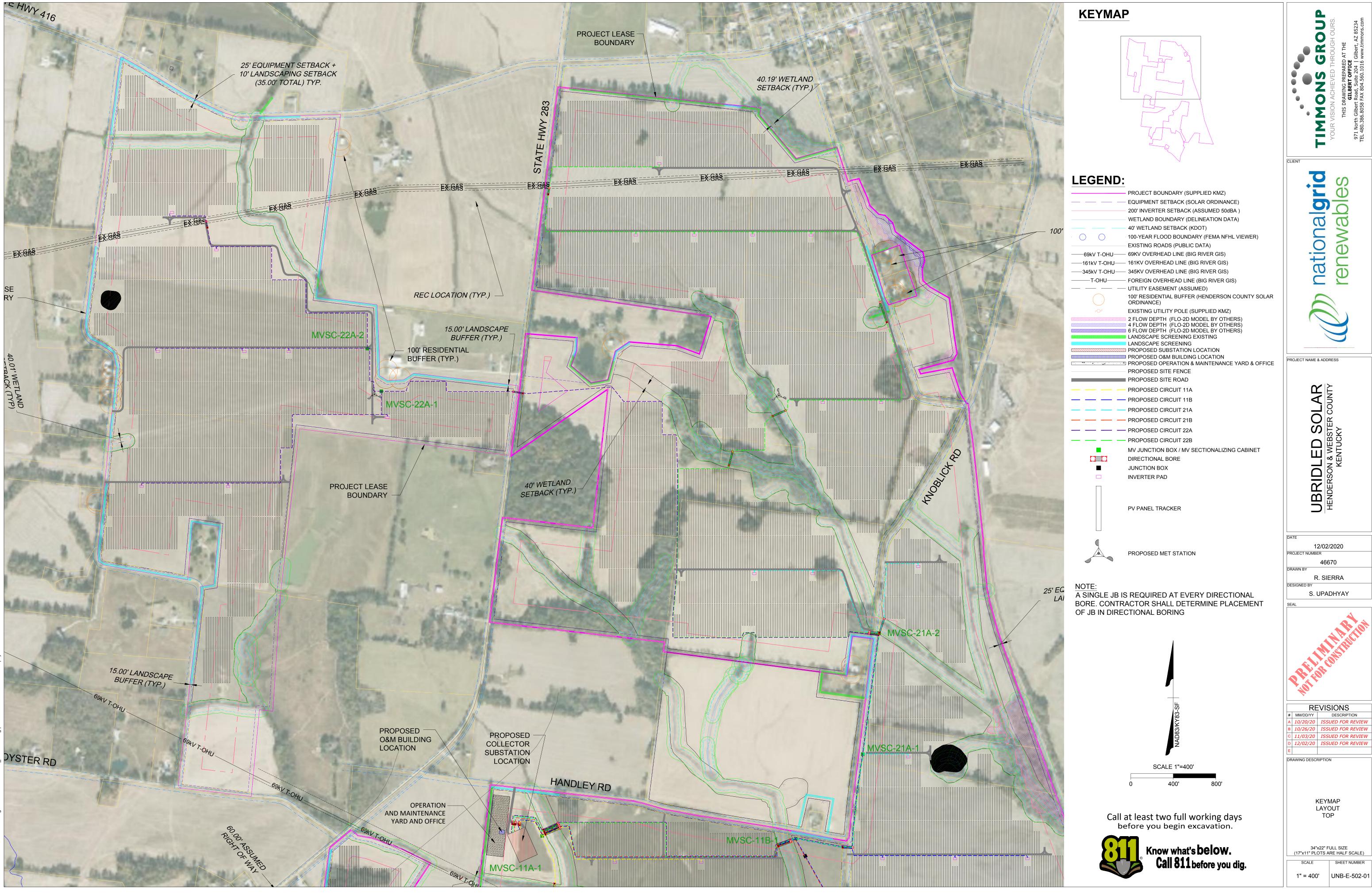
REVISIONS A 10/20/20 ISSUED FOR REVIEW
B 10/26/20 ISSUED FOR REVIEW C 11/03/20 ISSUED FOR REVIEW
D 12/02/20 ISSUED FOR REVIEW

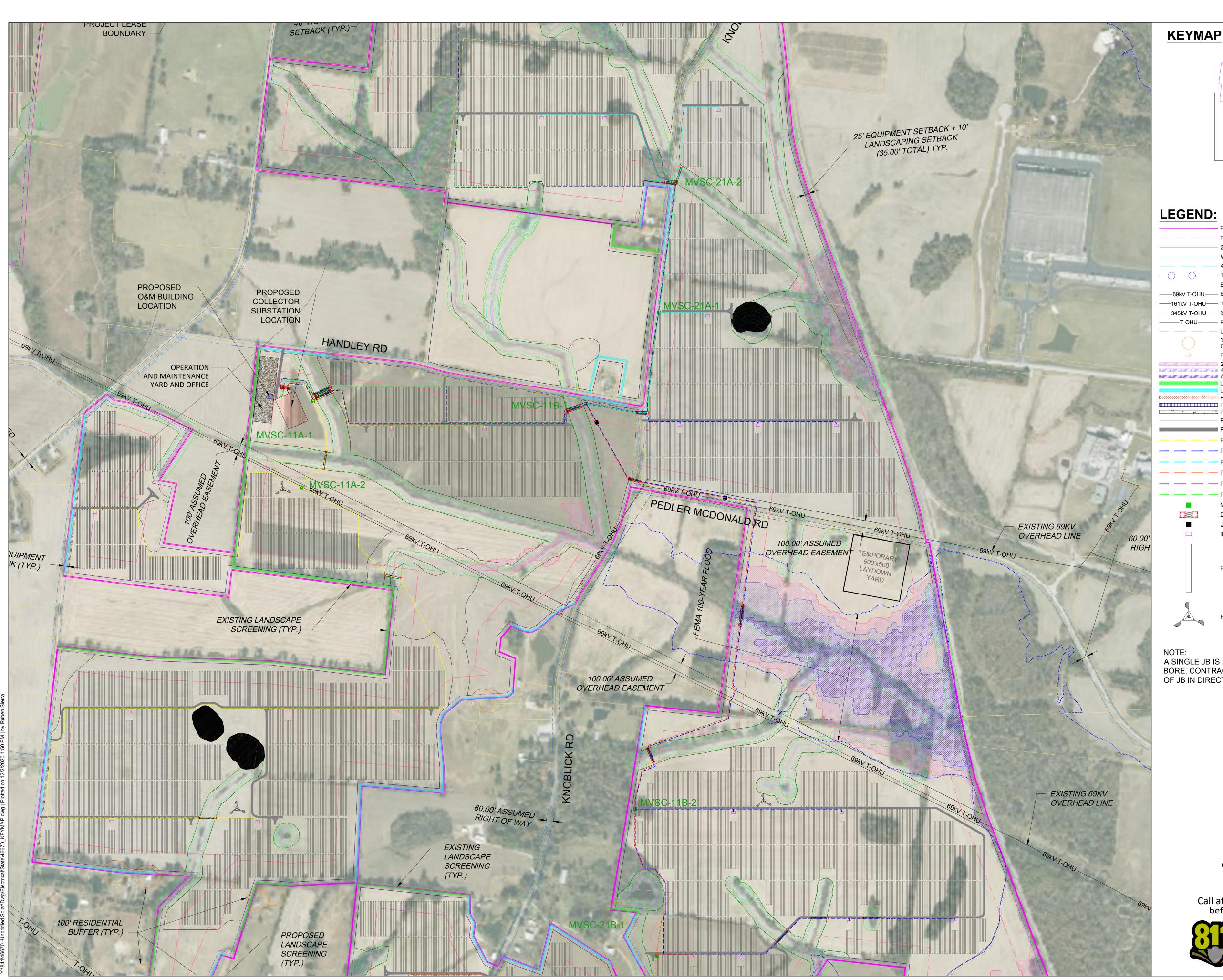
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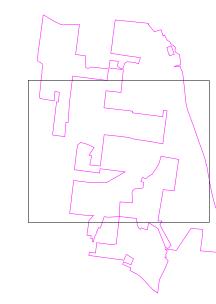
OVERALL SITE ARRAY PLAN

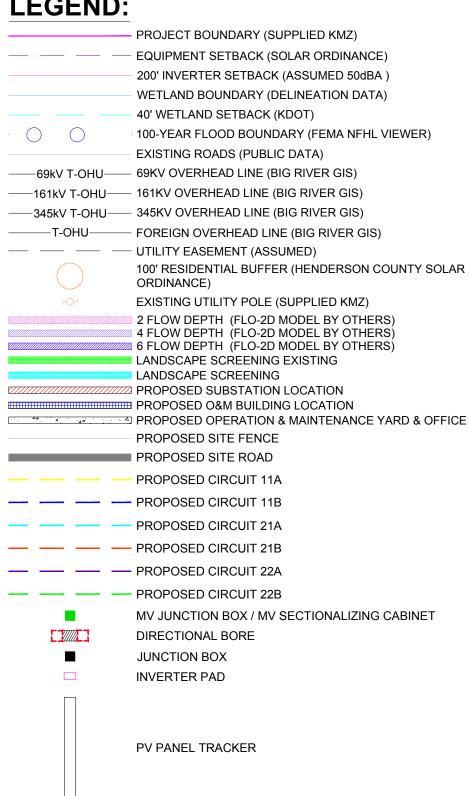
34"x22" FULL SIZE (17"x11" PLOTS ARE HALF SCALE)

SCALE SHEET NUMBER 1" = 800' UNB-E-500-03



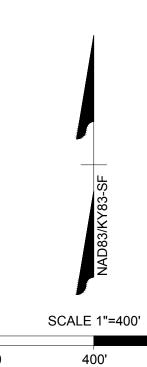






A SINGLE JB IS REQUIRED AT EVERY DIRECTIONAL BORE. CONTRACTOR SHALL DETERMINE PLACEMENT OF JB IN DIRECTIONAL BORING

PROPOSED MET STATION



Call at least two full working days before you begin excavation.



TIMMO

national**grid**

PROJECT NAME & ADDRESS

12/02/2020 PROJECT NUMBER R. SIERRA



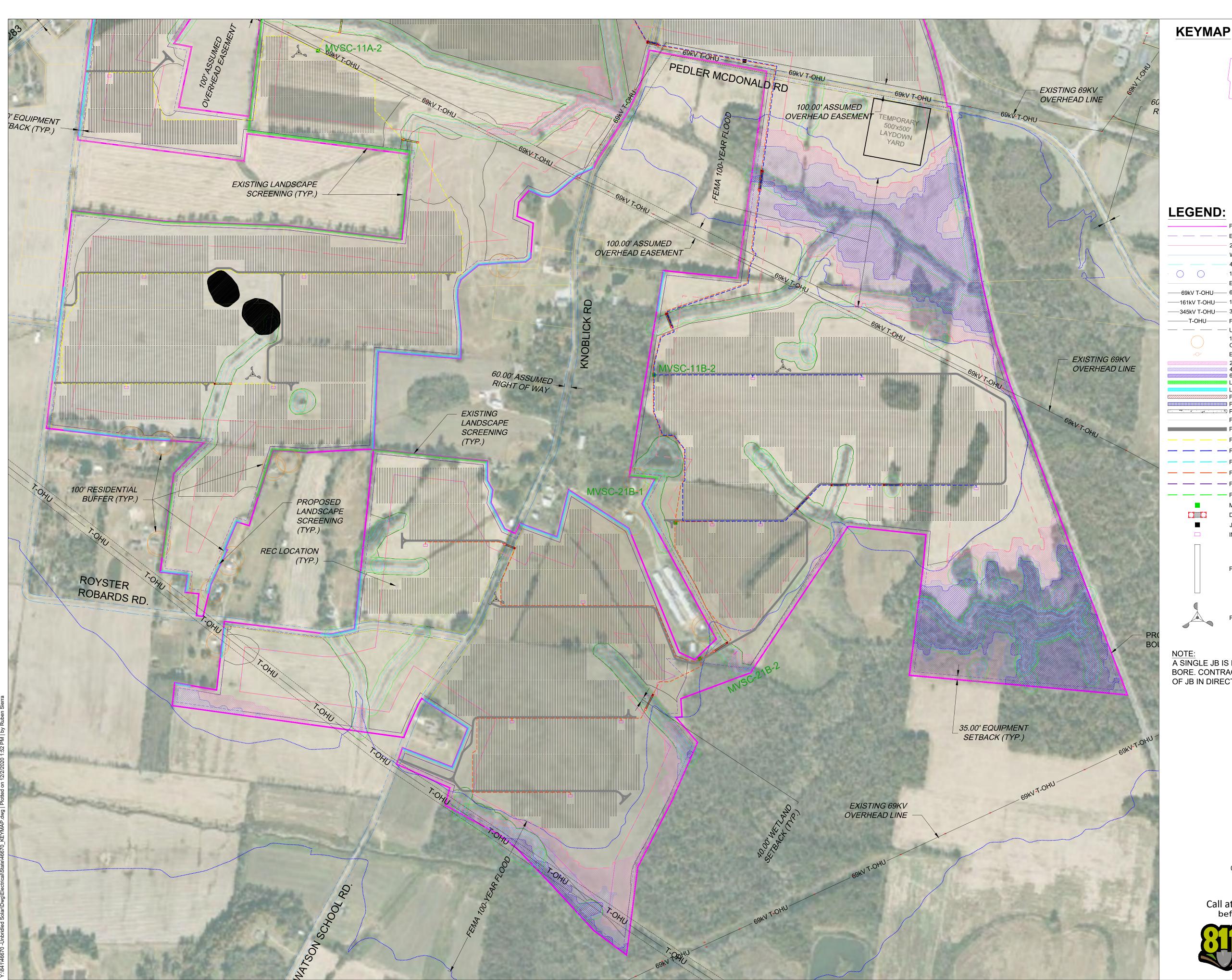
REVISIONS
MM/DD/YY DESCRIPTION A 10/20/20 ISSUED FOR REVIEW B 10/26/20 ISSUED FOR REVIEW C 11/03/20 ISSUED FOR REVIEW D 12/02/20 ISSUED FOR REVIEW

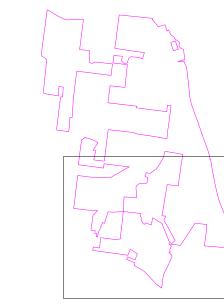
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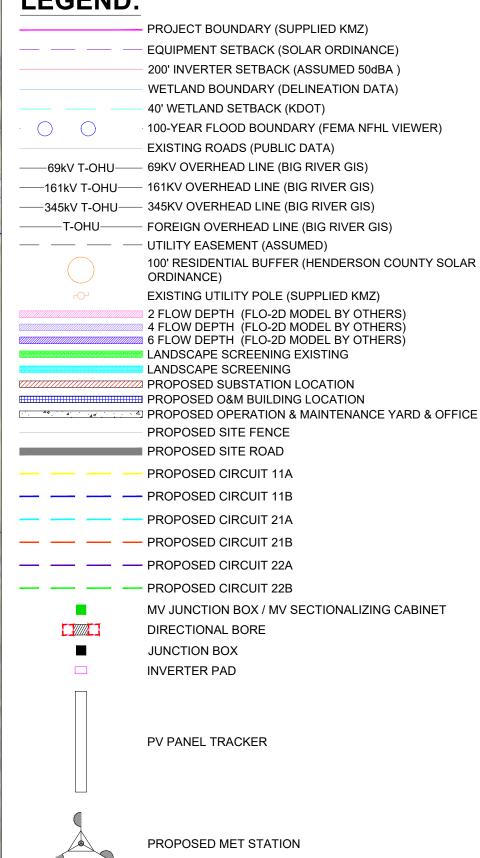
KEYMAP LAYOUT CENTER

34"x22" FULL SIZE (17"x11" PLOTS ARE HALF SCALE)

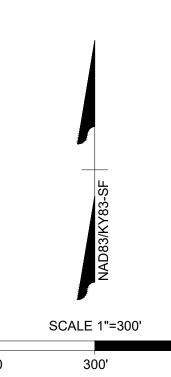
1" = 400' UNB-E-502-02







A SINGLE JB IS REQUIRED AT EVERY DIRECTIONAL BORE. CONTRACTOR SHALL DETERMINE PLACEMENT OF JB IN DIRECTIONAL BORING



Call at least two full working days before you begin excavation.



NOWWIL

national**grid**

PROJECT NAME & ADDRESS

12/02/2020 R. SIERRA



REVISIONS

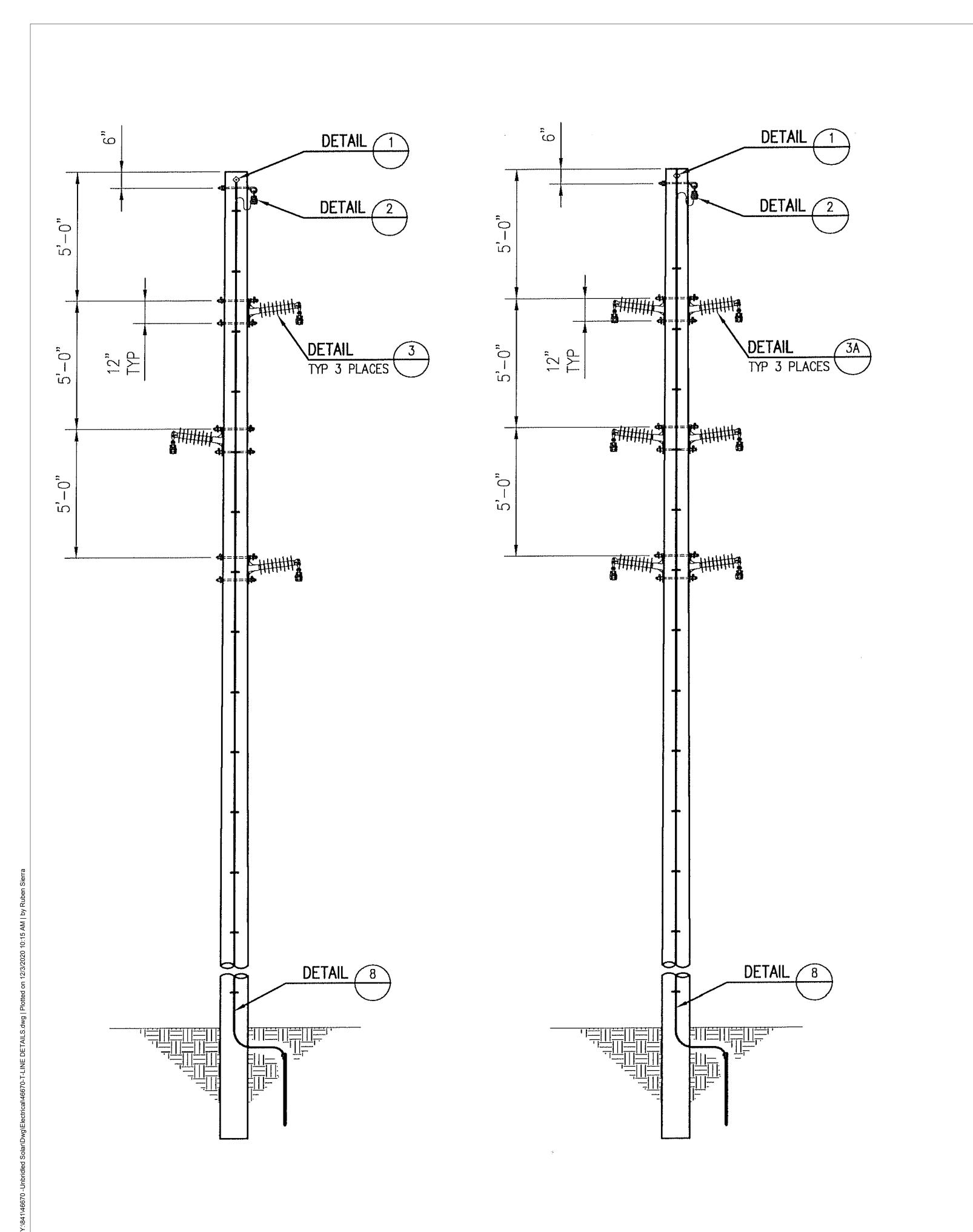
MM/DD/YY DESCRIPTION A 10/20/20 ISSUED FOR REVIEW B 10/26/20 ISSUED FOR REVIEW C 11/03/20 ISSUED FOR REVIEW D 12/02/20 ISSUED FOR REVIEW

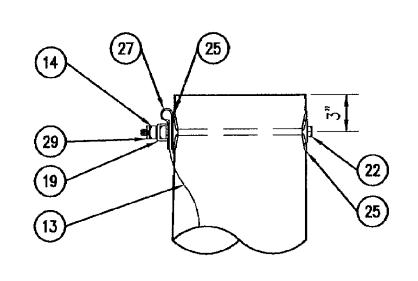
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KEYMAP LAYOUT BOTTOM

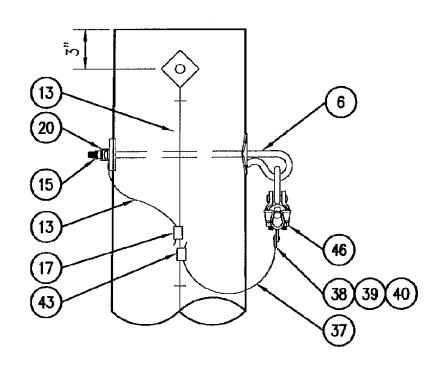
34"x22" FULL SIZE (17"x11" PLOTS ARE HALF SCALE)

1" = 300' UNB-E-502-03

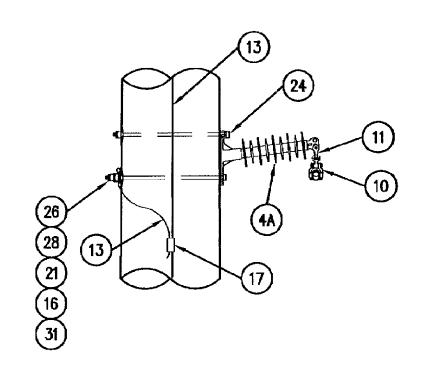




DETAIL 1
ANTI-SPLIT BOLT ASSEMBLY

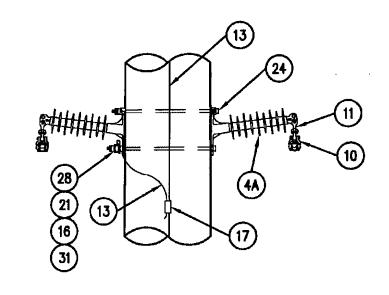


DETAIL 2
OPGW SUSPENSION ASSEMBLY



DETAIL 3

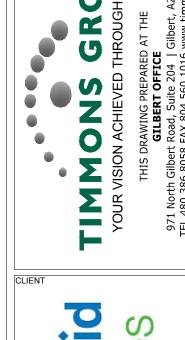
CONDUCTOR SUSPENSION ASSEMBLY



DETAIL 3A CONDUCTOR SUSPENSION ASSEMBLY

DETAIL 8

POLE GROUNDING



national**grid** renewables

PROJECT NAME & ADDRESS

UBRIDLED SOLAR
HENDERSON & WEBSTER COUNTY
KENTUCKY

12/03/2020 PROJECT NUMBER R. SIERRA

S. UPADHYAY

S to top			
REVISIONS			
¥	MM/DD/YY	DESCRIPTION	
٩	11/03/20	ISSUED FOR REVIEW	
3	12/02/20	ISSUED FOR REVIEW	
)			
5			

DRAWING DESCRIPTION

TYPICAL OVERHEAD COLLECTOR LINE DETAILS

34"x22" FULL SIZE (17"x11" PLOTS ARE HALF SCALE)

UNB-E-522-03

GENERAL NOTES

PRE-CONSTRUCTION

- CONTRACTOR IS RESPONSIBLE FOR CONTACTING KENTUCKY 811 AT 1.800.752.6007 FOR LOCATION OF ALL UTILITY LINES.TREES SHALL BE LOCATED A MINIMUM OF 5 FEET FROM SEWER/WATER CONNECTIONS. NOTIFY LANDSCAPE ARCHITECT OF CONFLICTS.
- VERIFY ALL PLANT MATERIAL QUANTITIES ON THE PLAN PRIOR TO BIDDING, PLANT LIST TOTALS ARE FOR CONVENIENCE ONLY AND SHALL BE VERIFIED PRIOR TO BIDDING.
- PROVIDE PLANT MATERIALS OF QUANTITY, SIZE, GENUS, SPECIES, AND VARIETY INDICATED ON PLANS. ALL PLANT MATERIALS AND INSTALLATION SHALL COMPLY WITH RECOMMENDATIONS AND REQUIREMENTS OF ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK". IF SPECIFIED PLANT MATERIAL IS NOT OBTAINABLE, SUBMIT PROOF OF NON AVAILABILITY TO THE LANDSCAPE ARCHITECT TOGETHER WITH PROPOSAL FOR USE OF EQUIVALENT MATERIAL
- PROVIDE AND INSTALL ALL PLANTS AS IN ACCORDANCE WITH DETAILS AND CONTRACT SPECIFICATIONS.
- SOIL TESTS SHALL BE PERFORMED TO DETERMINE SOIL CHARACTER AND QUALITY. NECESSARY SOIL AMENDMENTS SHALL BE PERFORMED PER TEST RESULTS TO ENSURE PLANT HEALTH.

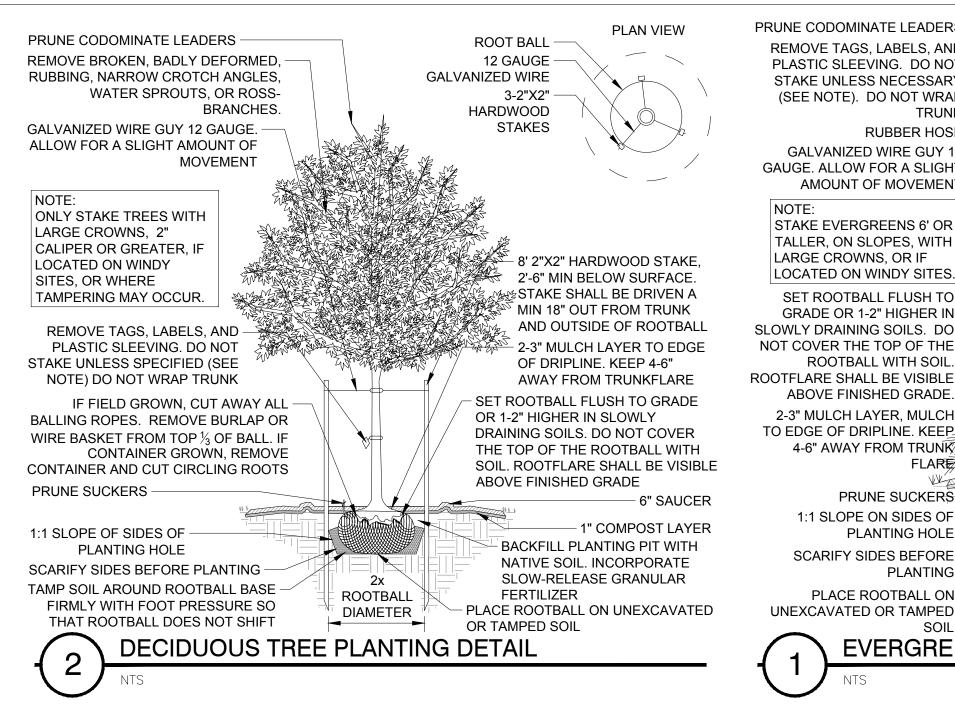
CONSTRUCTION/INSTALLATION

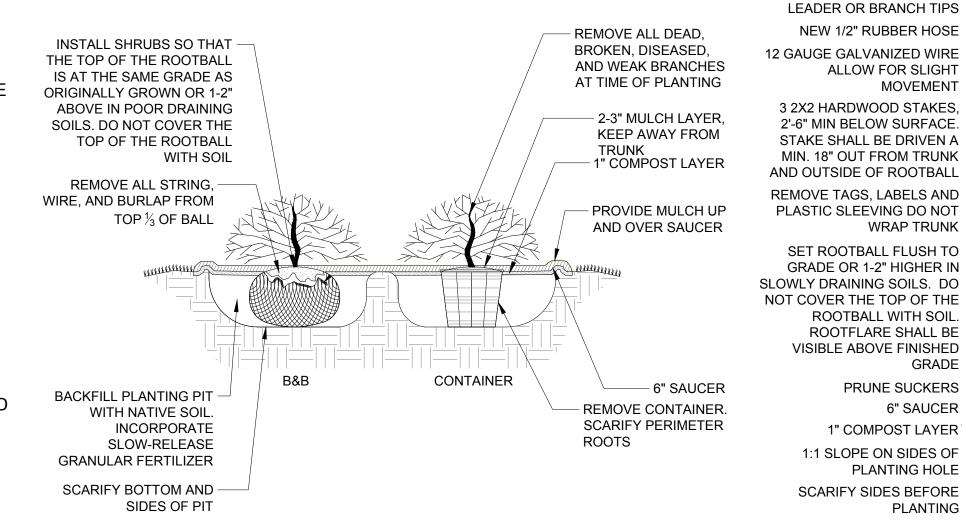
- LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY PLANTS AND MATERIALS THAT ARE IN AN UNHEALTHY OR UNSIGHTLY CONDITION. AS WELL AS PLANTS AND MATERIALS THAT DO NOT CONFORM TO ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK"
- LABEL AT LEAST ONE TREE AND ONE SHRUB OF EACH VARIETY AND CALIPER WITH A SECURELY ATTACHED, WATERPROOF TAG BEARING THE DESIGNATION OF BOTANICAL AND COMMON NAME.
- INSTALL LANDSCAPE PLANTINGS AT ENTRANCES/EXITS AND PARKING AREAS ACCORDING TO PLANS SO THAT MATERIALS WILL NOT INTERFERE WITH SIGHT DISTANCES.
- CONTRACTOR IS RESPONSIBLE FOR WATERING ALL PLANT MATERIAL DURING INSTALLATION AND UNTIL FINAL INSPECTION AND ACCEPTANCE BY OWNER. CONTRACTOR SHALL NOTIFY OWNER OF CONDITIONS WHICH AFFECTS THE GUARANTEE

INSPECTIONS/GUARANTEE

- UPON COMPLETION OF LANDSCAPE INSTALLATION, THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR WHO WILL VERIFY COMPLETENESS, INCLUDING THE REPLACEMENT OF ALL DEAD PLANT MATERIAL. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING A FINAL INSPECTION BY THE LANDSCAPE ARCHITECT
- ALL EXTERIOR PLANT MATERIALS SHALL BE GUARANTEED FOR ONE FULL YEAR AFTER DATE OF FINAL INSPECTION AGAINST DEFECTS INCLUDING DEATH AND UNSATISFACTORY GROWTH. DEFECTS RESULTING FROM NEGLECT BY THE OWNER, ABUSE OR DAMAGE BY OTHERS, OR UNUSUAL PHENOMENA OR INCIDENTS WHICH ARE BEYOND THE CONTRACTORS CONTROL ARE NOT THE RESPONSIBILITY OF THE CONTRACTOR.
- PLANT MATERIAL QUANTITIES AND SIZES WILL BE INSPECTED FOR COMPLIANCE WITH APPROVED PLANS BY A SITE PLAN REVIEW AGENT OF THE PLANNING DEPARTMENT PRIOR TO THE RELEASE OF THE CERTIFICATE OF OCCUPANCY.
- REMOVE ALL GUY WIRES AND STAKES 12 MONTHS AFTER INSTALLATION.

GENERAL NOTES AND DETAILS







ILEX X 'CONAF' OAKLEAF / **RED/OAFLEAF HOLLY**



JUNIPERUS VIRGINIANA 'BRODIE' / THUJA OCCIDENTALIS/ EASTERN RED CEDAR 'TECHNY' EASTERN ARBORVITAE







SHADBLOW SERVICEBERRY

PRUNE CODOMINATE LEADERS

REMOVE TAGS, LABELS, AND

PLASTIC SLEEVING. DO NOT

STAKE UNLESS NECESSARY

(SEE NOTE). DO NOT WRAP

GALVANIZED WIRE GUY 12

AMOUNT OF MOVEMENT

GAUGE. ALLOW FOR A SLIGHT

STAKE EVERGREENS 6' OR

TALLER, ON SLOPES, WITH

LOCATED ON WINDY SITES.

SET ROOTBALL FLUSH TO

GRADE OR 1-2" HIGHER IN

ABOVE FINISHED GRADE.

4-6" AWAY FROM TRUNK

1:1 SLOPE ON SIDES OF

SCARIFY SIDES BEFORE

UNEXCAVATED OR TAMPED

DO NOT PRUNE TERMINAL

3 2X2 HARDWOOD STAKES.

2'-6" MIN BELOW SURFACE.

STAKE SHALL BE DRIVEN A

MIN. 18" OUT FROM TRUNK

AND OUTSIDE OF ROOTBALL

REMOVE TAGS, LABELS AND

PLASTIC SLEEVING DO NOT

SET ROOTBALL FLUSH TO

GRADE OR 1-2" HIGHER IN

ROOTBALL WITH SOIL

ROOTFLARE SHALL BE

PRUNE SUCKERS

PLANTING HOLE

VISIBLE ABOVE FINISHED

1:1 SLOPE ON SIDES OF

SCARIFY SIDES BEFORE

UNEXCAVATED OR TAMPED

PLACE ROOTBALL ON

LEADER OR BRANCH TIPS

NEW 1/2" RUBBER HOSE

ALLOW FOR SLIGHT

MOVEMENT

WRAP TRUNK

GRADE

6" SAUCER

PLANTING

AMELANCHIER CANADENSIS / CERCIS CANADENSIS

1" COMPOST LAYER "TOTAL

PLACE ROOTBALL ON

PRUNE SUCKERS

PLANTING HOLE

PLANTING

ROOTBALL

DIAMETER

EVERGREEN TREE PLANTING DETAIL

FLARE//

2-3" MULCH LAYER, MULCH

TO EDGE OF DRIPLINE. KEEP-

ROOTBALL WITH SOIL.

SLOWLY DRAINING SOILS. DO

NOT COVER THE TOP OF THE

LARGE CROWNS, OR IF

TRUNK

RUBBER HOSE



3 x

ROOTBALL

DIAMETER

MULTI-STEM TREE PLANTING DETAIL

EASTERN RED BUD

PRUNUS LAUROCERASUS / 'SCHIPKAENSIS' SCHIPKA LAUREL



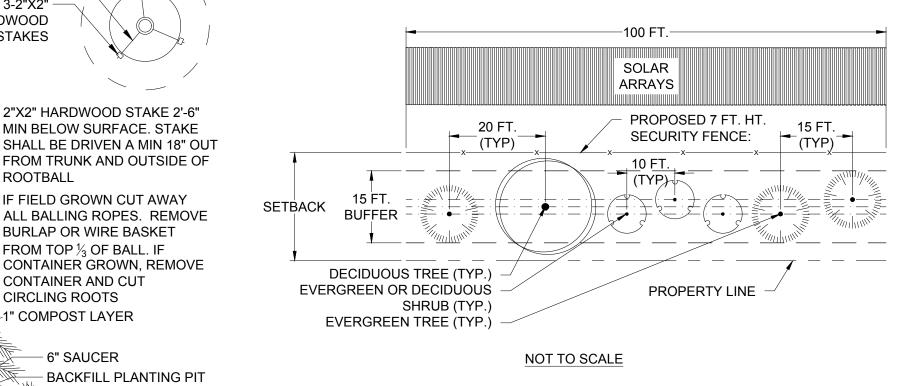
CORNUS FLORIDA

FLOWERING DOGWOOD

VIBURNUM 'PRAGENSE' PRAGUE VIBURNUM

VEGETATION SCREENING CONCEPT PLAN

ALTERNATIVE PLAN PROPOSED



AT PLANTING

ROOT BALL

HARDWOOD

GALVANIZED WIRE

12 GAUGE

3-2"X2"

STAKES

ROOTBALL

2"X2" HARDWOOD STAKE 2'-6"

MIN BELOW SURFACE. STAKE

IF FIELD GROWN CUT AWAY

BURLAP OR WIRE BASKET

CONTAINER GROWN, REMOVE

WITH NATIVE SOIL

GRANULAR FERTILIZER

ROOTBALL BASE FIRMLY

PLAN VIEW

WITH FOOT PRESSURE

TAMP SOIL AROUND

SO THAT ROOTBALL

DOES NOT SHIFT

PRUNE BROKEN

2-3" MULCH LAYER TO

- IF FIELD GROWN CUT

BALL. IF CONTAINER

CONTAINER AND CUT

BACKFILL PLANTING PIT

GRANULAR FERTILIZER

ROOTBALL BASE FIRMLY

THAT ROOTBALL DOES

WITH FOOT PRESSURE SO

TAMP SOIL AROUND

GROWN, REMOVE

CIRCLING ROOTS

WITH NATIVE SOIL

INCORPORATE

SLOW-RELEASE

EDGE OF DRIPLINE. KEEP

4-6" AWAY FROM TRUNK

AWAY ALL BALLING ROPES

REMOVE BURLAP OR WIRE

BASKET FROM TOP 1/3 OF

BRANCHES

ROOT BALL

GALVANIZED WIRE

12 GAUGE

HARDWOOD

3-2"X2"

STAKES

INCORPORATE

SLOW-RELEASE

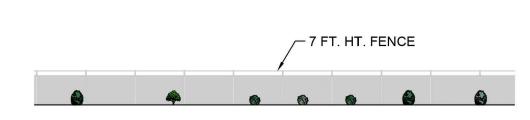
FROM TOP 1/3 OF BALL. IF

CONTAINER AND CUT

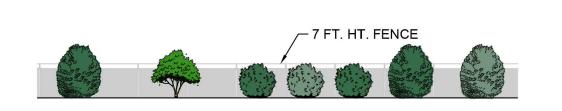
CIRCLING ROOTS

1" COMPOST LAYER

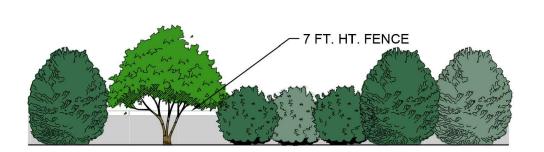
6" SAUCER



5 YEARS AFTER PLANTING



AT MATURITY



PER 100 LINEAR FEET

- THREE (3) MEDIUM/SMALL EVERGREEN TREES
- ONE (1) MEDIUM/SMALL DECIDUOUS TREE • THREE (3) LARGE/MEDIUM EVERGREEN AND DECIDUOUS SHRUBS

- SCREENING CONSISTS OF A MIXED PLANTING OF DECIDUOUS AND EVERGREEN TREES AND SHRUBS THAT HAVE BEEN SELECTED FOR SCREENING AT MATURE HEIGHT.
- EVERGREEN AND DECIDUOUS TREES ARE 3 FT. HEIGHT AND EVERGREEN AND DECIDUOUS SHRUBS ARE 24 IN. HEIGHT AT PLANTING.
- WHERE EXISTING TREES OR SHRUBS EXIST IN THE PROPOSED BUFFER LOCATION. PROPOSED SCREENING MUST BE FIELD-LOCATED AND PLANTED AS NEEDED TO SUPPLEMENT THE EXISTING VEGETATIVE SCREENING.
- VARY THE SPECIES USED FOR EACH OF THE THREE TYPES OF PLANTS (EVERGREEN) TREES, DECIDUOUS TREES, SHURBS) EVERY 200 LINEAR FEET.

RECOMMENDED PLANT MATERIAL

MEDIUM/SMALL EVERGREEN TREES **BOTANICAL NAME / COMMON NAME** ILEX X 'CONAF' OAKLEAF / RED HOLLY/OAKLEAF HOLLY JUNIPERUS VIRGINIANA 'BRODIE' / EASTERN RED CEDAR THUJA OCCIDENTALIS 'TECHNY' / EASTERN ARBORVITAE

MEDIUM/SMALL DECIDUOUS TREES **BOTANICAL NAME / COMMON NAME** AMELANCHIER CANADENSIS / SHADBLOW SERVICEBERRY CERCIS CANADENSIS / EASTERN RED BUD CORNUS FLORIDA / FLOWERING DOGWOOD

LARGE/MEDIUM EVERGREEN AND DECIDUOUS SHRUBS **BOTANICAL NAME / COMMON NAME**

ILEX VERTICILLATA 'WINTER RED' AND 'SOUTHERN GENTLEMAN' / WINTERBERRY* PRUNUS LAUROCERASUS 'SCHIPKAENSIS' / SCHIPKA CHERRY LAUREL VIBURNUM 'PRAGENSE' / PRAGUE VIBURNUM

* NEED BOTH THE FEMALE AND MALE CULTIVARS LISTED FOR POLLINATION AND FRUIT PRODUCTION. PLANT ONE (1) MALE PER THREE (3) FEMALES.

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PROJECT NAME & ADDRESS

10/16/2020 PROJECT NUMBER 46670 T. BUCKLEY DESIGNED BY T. BUCKLEY



REVISIONS DESCRIPTION 10/19/20 ISSUED FOR REVIEW B 11/03/20 ISSUED FOR REVIEW c 12/02/20 ISSUED FOR REVIEW

DRAWING DESCRIPTION

VEGETATION SCREENING

NOTES AND DETAILS

34"x22" FULL SIZE (17"x11" PLOTS ARE HALF SCALE)

SHEET NUMBER

UNB-L-900-01