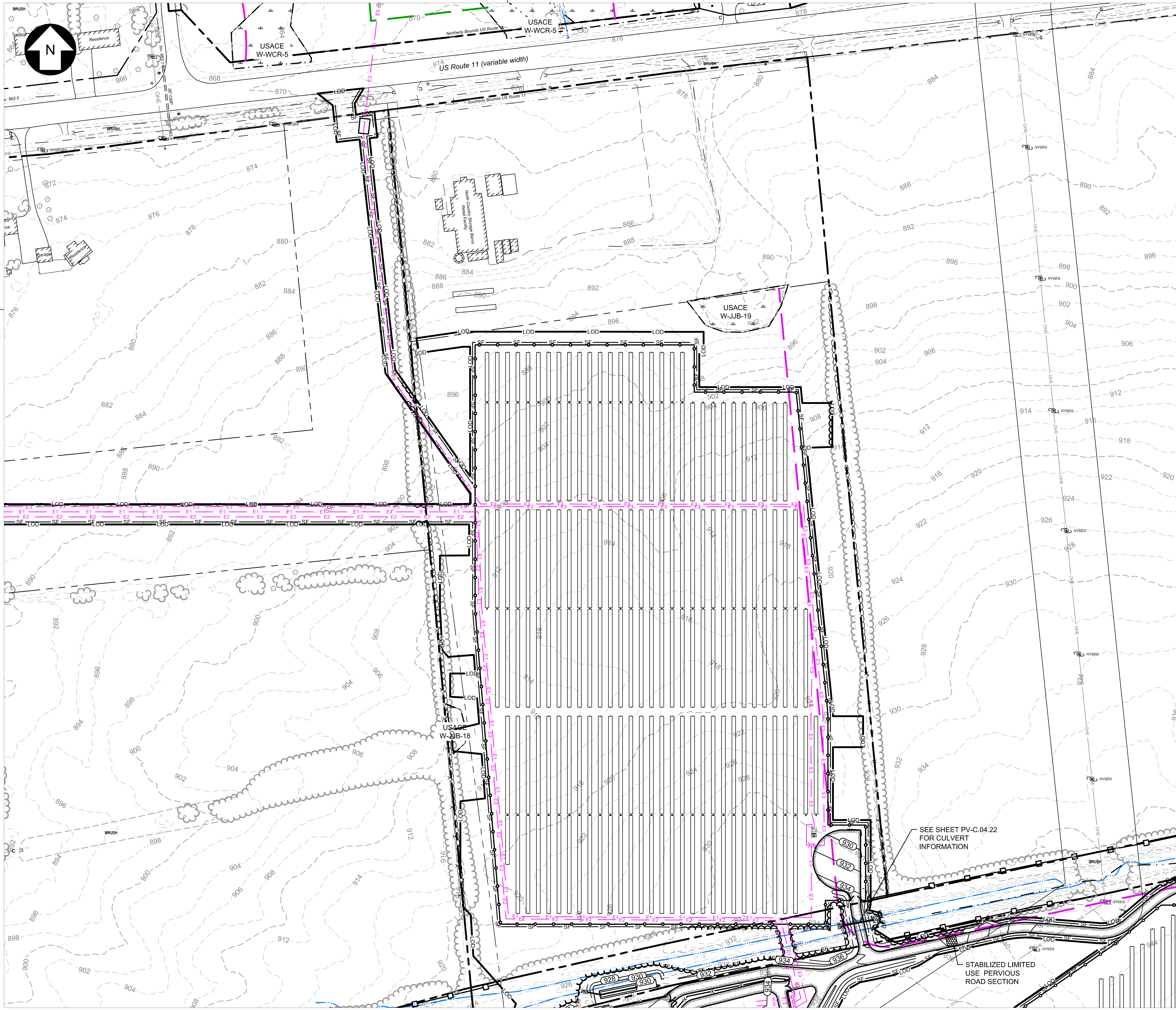
FOR CONTINUATION, SEE SHEET PV-C.04.08
FOR CONTINUATION, SEE SHEET PV-C.04.10



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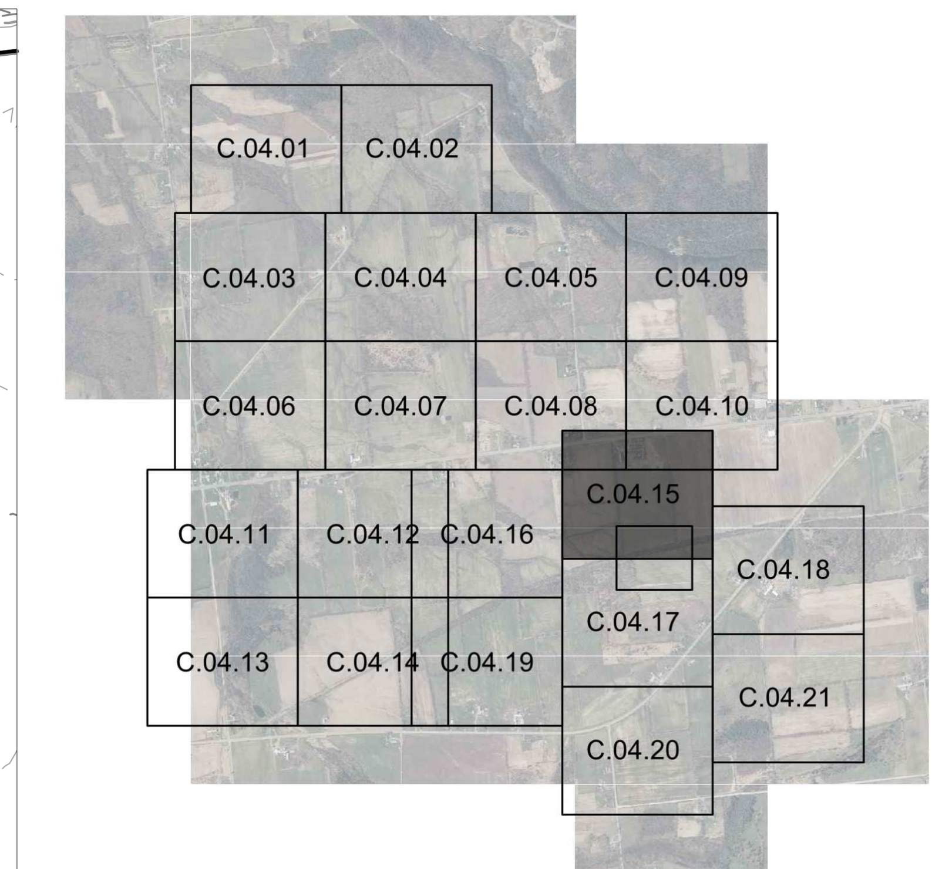
FOR CONTINUATION, SEE SHEET PV-C.04.18
FOR CONTINUATION, SEE SHEET PV-C.04.17



KEY MAP
SCALE: 1" = 3000'

LEGEND

EXISTING / PROPOSED

- PROPERTY BOUNDARY
- 94C SETBACK
- TOWN SETBACK
- LIMIT OF DISTURBANCE (LOD)
- SOIL BOUNDARY
- SILT FENCE (SF)
- OVERHEAD ELECTRIC (OHE)
- CHAIN LINK FENCE
- BARBED WIRE FENCE
- GRAVEL ROAD
- BASELINE
- PV ARRAY
- EQUIPMENT PADS & BOLLARDS
- MINOR CONTOUR (598)
- MAJOR CONTOUR (600)
- WETLAND
- STREAM
- WATER SURFACE
- TREELINE
- BRUSH
- BUILDING
- STONE WALL
- UTILITY POLE
- VALVE
- CULVERT
- WETLAND ADJACENT AREA / STREAM BUFFER
- LAYDOWN YARD
- TOWN BOUNDARY
- COLLECTOR LINE (E1)
- RIGHT OF WAY
- PAVED ROAD
- NON LEASE LINE
- DRIVEWAY
- HORIZONTAL DIRECTIONAL DRILL

Call 811 before you dig

PRELIMINARY
NOT FOR CONSTRUCTION

100 0 100 200 FT
SCALE: 1" = 100'

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PE STAMP:
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Daniel Thomas Butler
2022.07.20 14:05:32-04'00'

KEY PLAN:

REVISIONS:

NO.	DATE	DESCRIPTION
0	01/19/2022	DESIGN DRAWINGS
1	06/27/2022	ISSUED FOR PERMIT
2	07/20/2022	ISSUED FOR PERMIT
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-

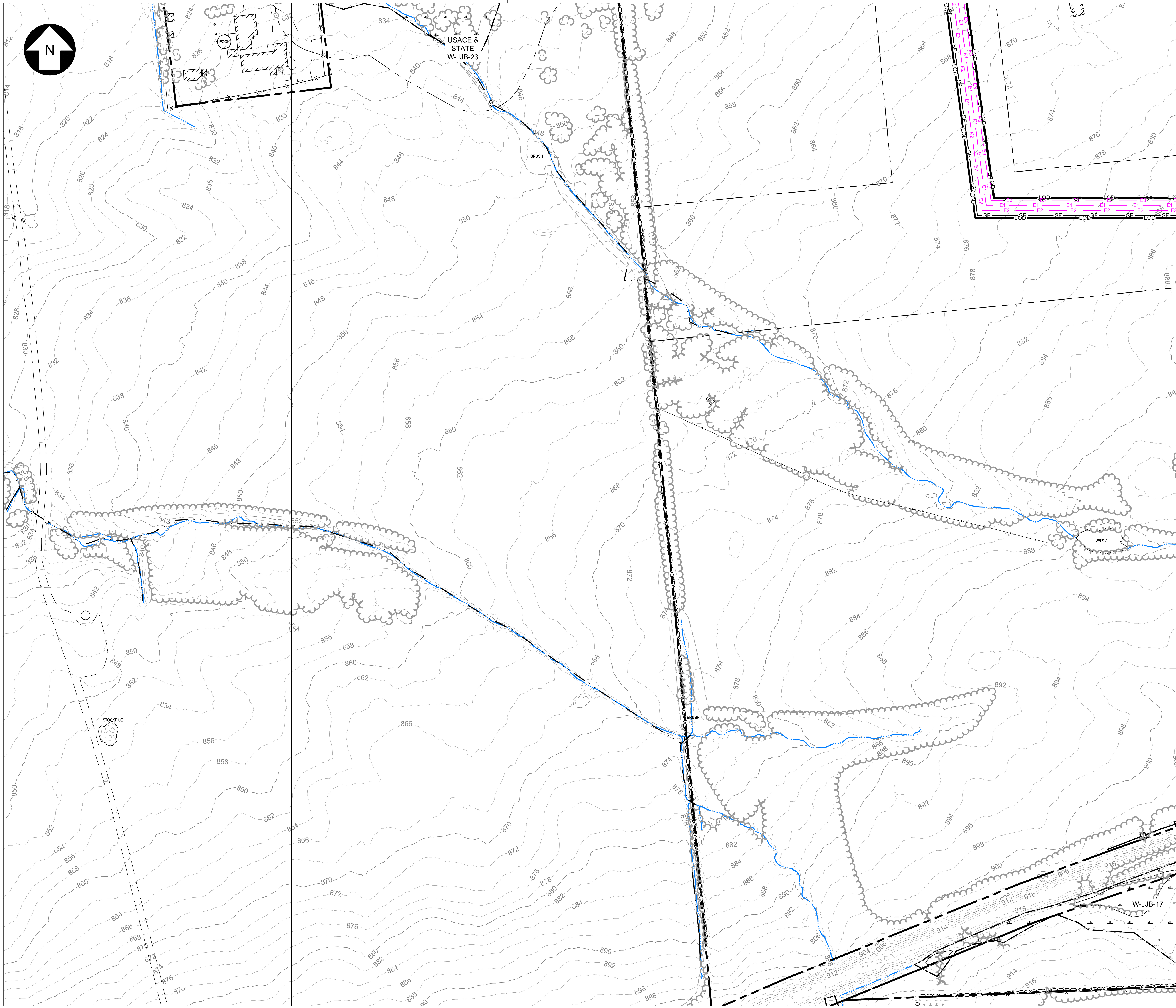
PROJECT TITLE:
BROOKSIDE SOLAR PROJECT

PROJECT LOCATION:
TOWNS OF BURKE AND CHATEAUGAY, NY

SHEET TITLE & DESCRIPTION:
GRADING, DRAINAGE, AND EROSION CONTROL PLAN

PROJ NUM:	422299
DES:	C. WINTERMUTE
DWN:	C. WINTERMUTE
CHK:	J. HEIDIG
APV:	-
DATE:	05/21/2021
SCALE AT 22" x 34":	1" = 100'
SHEET NO:	PV-C.04.15
REV:	2

FOR CONTINUATION, SEE SHEET PV-C.04.07
FOR CONTINUATION, SEE SHEET PV-C.04.08
FOR CONTINUATION, SEE SHEET PV-C.04.12
FOR CONTINUATION, SEE SHEET PV-C.04.15
FOR CONTINUATION, SEE SHEET PV-C.04.17



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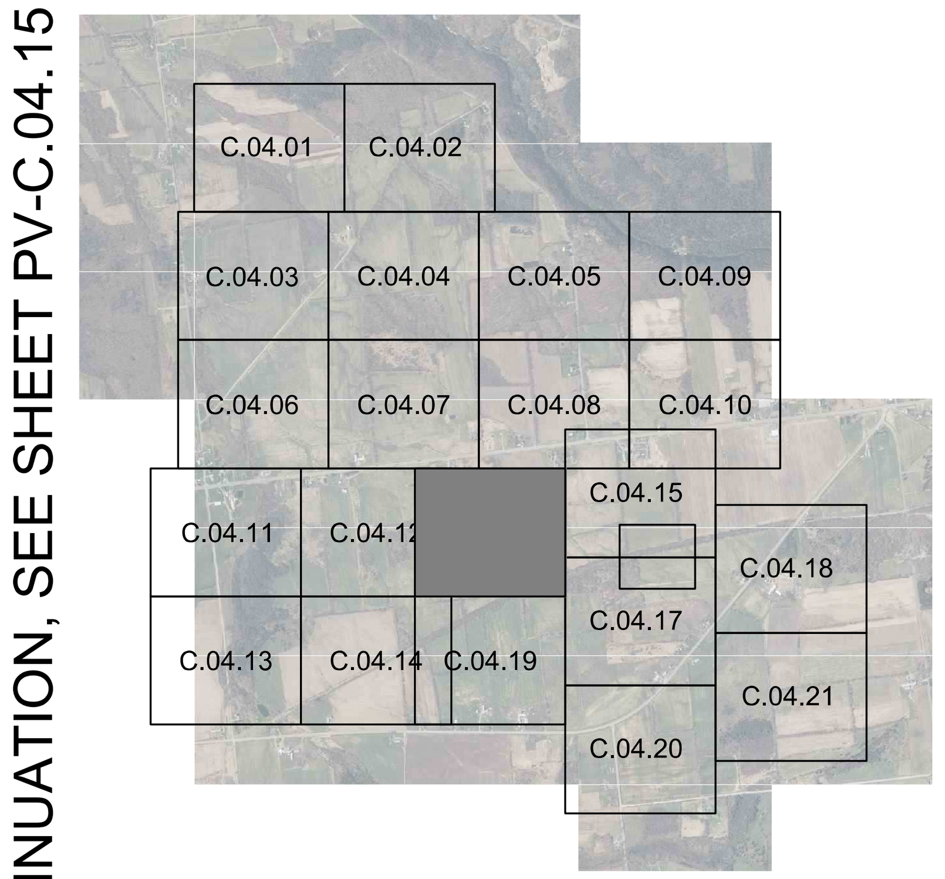

KEY MAP
SCALE: 1" = 3000'

LEGEND

EXISTING		PROPOSED
	PROPERTY BOUNDARY	
	94C SETBACK	
	TOWN SETBACK	
	LIMIT OF DISTURBANCE	LOD
	SOIL BOUNDARY	
	SILT FENCE	SF
OHE	OVERHEAD ELECTRIC	
	CHAIN LINK FENCE	
X	BARBED WIRE FENCE	X
	GRAVEL ROAD	
	BASELINE	
	PV ARRAY	
	EQUIPMENT PADS & BOLLARDS	
598	MINOR CONTOUR	598
600	MAJOR CONTOUR	600
	WETLAND	
	STREAM	
	WATER SURFACE	
	TREELINE	
	BRUSH	
	BUILDING	
	STONE WALL	
	UTILITY POLE	
	VALVE	
	CULVERT	
	WETLAND ADJACENT AREA / STREAM BUFFER	
	LAYDOWN YARD	
	TOWN BOUNDARY	
	COLLECTOR LINE	E1
	RIGHT OF WAY	
	PAVED ROAD	
	NON LEASE LINE	
	DRIVEWAY	
	HORIZONTAL DIRECTIONAL DRILL	

PRELIMINARY
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100 0 100 200 FT
SCALE: 1" = 100'

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079800
Daniel Thomas Butler
2022.07.20 14:05:48-04'00'

KEY PLAN:

REVISIONS:

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-	-	-
-	-	-
-	-	-
-	-	-

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BROOKSIDE SOLAR PROJECT

PROJECT LOCATION:

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PROJ NUM:	422299
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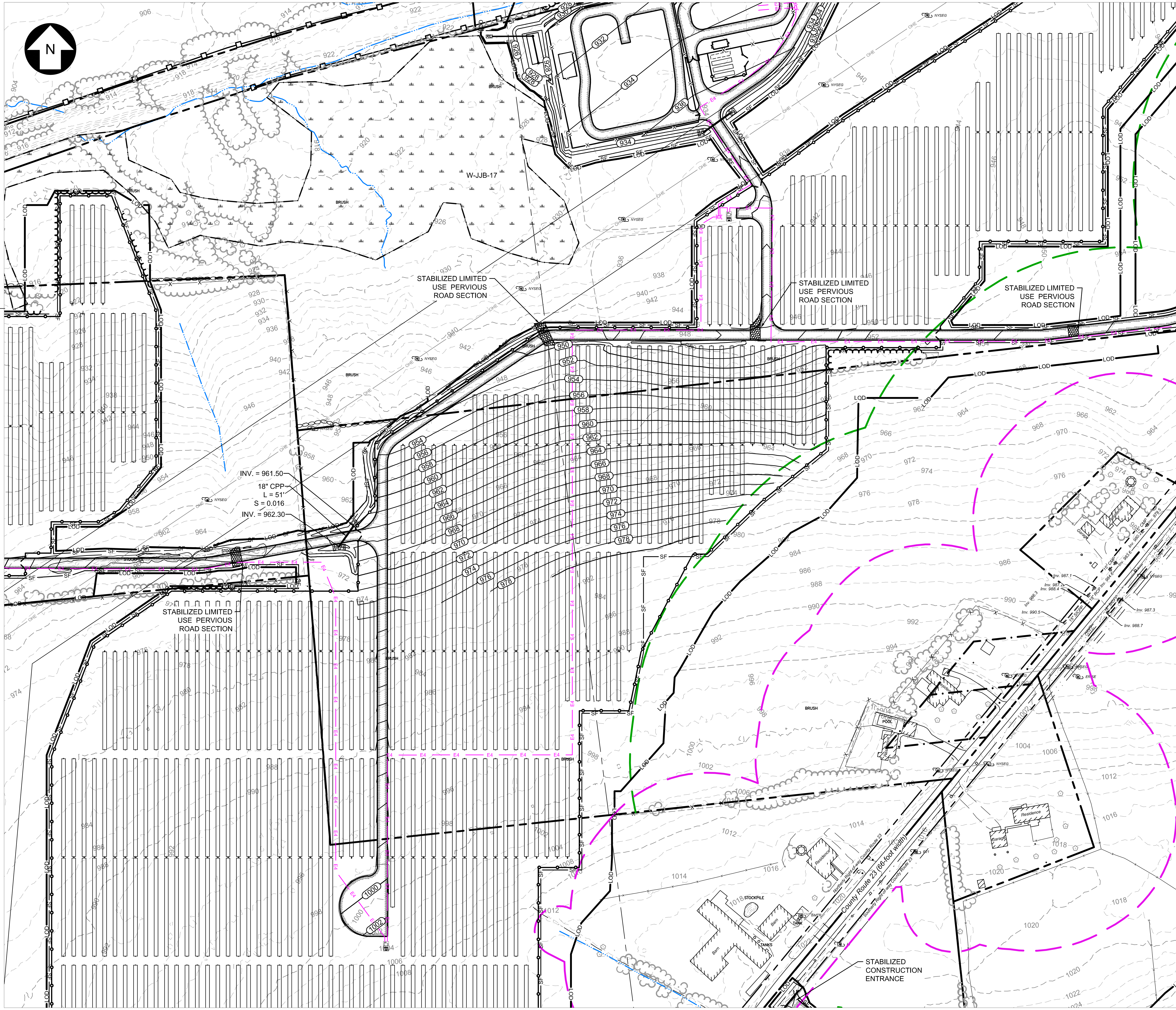
APV:	-
DATE:	05/21/2021

SCALE AT 22" x 34":
1" = 100'

SHEET NO: PV-C.04.16
REV: 2

FOR CONTINUATION, SEE SHEET PV-C.04.15

FOR CONTINUATION, SEE SHEET PV-C.04.16



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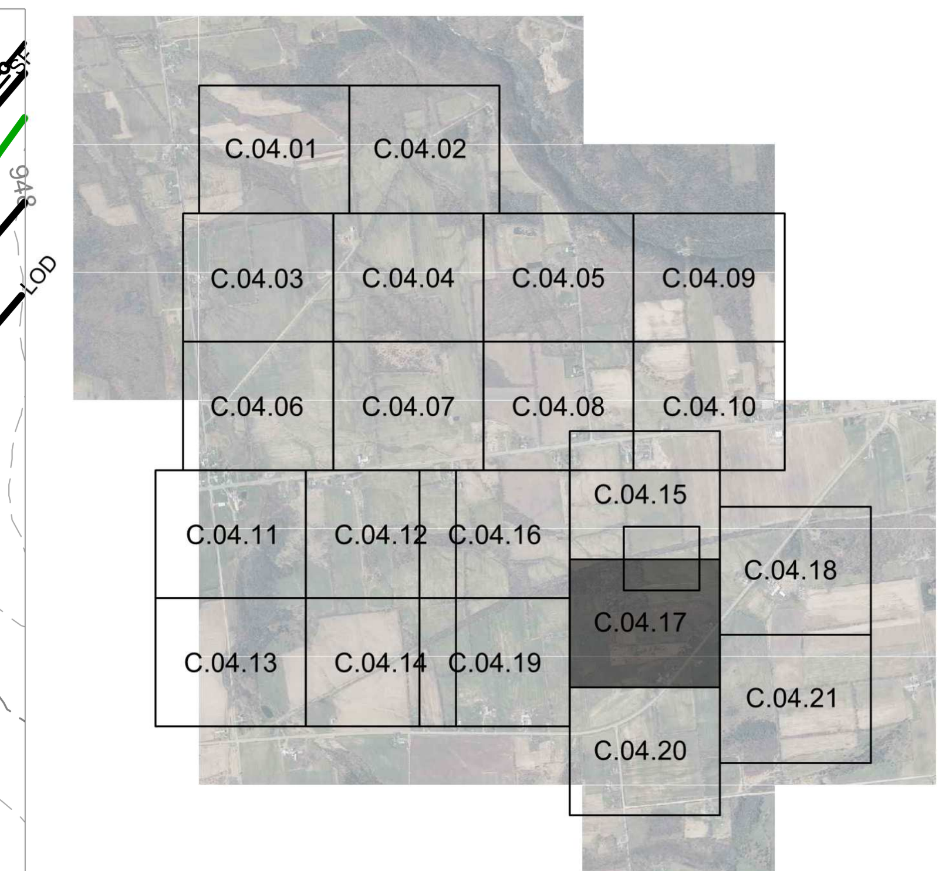
FOR CONTINUATION, SEE SHEET PV-C.04.20

FOR CONTINUATION, SEE SHEET PV-C.04.21



KEY MAP
SCALE: 1" = 3000'

LEGEND

EXISTING		PROPOSED
	PROPERTY BOUNDARY	
	94C SETBACK	
	TOWN SETBACK	
	LIMIT OF DISTURBANCE	LOD
	SOIL BOUNDARY	
	SILT FENCE	SF SF
OHE	OVERHEAD ELECTRIC	
	CHAIN LINK FENCE	
X X	BARBED WIRE FENCE	X X
	GRAVEL ROAD	
	BASELINE	
	PV ARRAY	
	EQUIPMENT PADS & BOLLARDS	
598	MINOR CONTOUR	598
600	MAJOR CONTOUR	600
	WETLAND	
	STREAM	
	WATER SURFACE	
	TREELINE	
	BRUSH	
	BUILDING	
	STONE WALL	
	UTILITY POLE	
	VALVE	
	CULVERT	
	WETLAND ADJACENT AREA / STREAM BUFFER	
	LAYDOWN YARD	
	TOWN BOUNDARY	
	COLLECTOR LINE	E1
	RIGHT OF WAY	
	PAVED ROAD	
	NON LEASE LINE	
	DRIVEWAY	
	HORIZONTAL DIRECTIONAL DRILL	

Call 811 before you dig

PRELIMINARY
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100 0 100 200 FT
SCALE: 1" = 100'

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KEY PLAN:

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-	-	-
-	-	-

PROJECT TITLE:
BROOKSIDE SOLAR PROJECT

PROJECT LOCATION:
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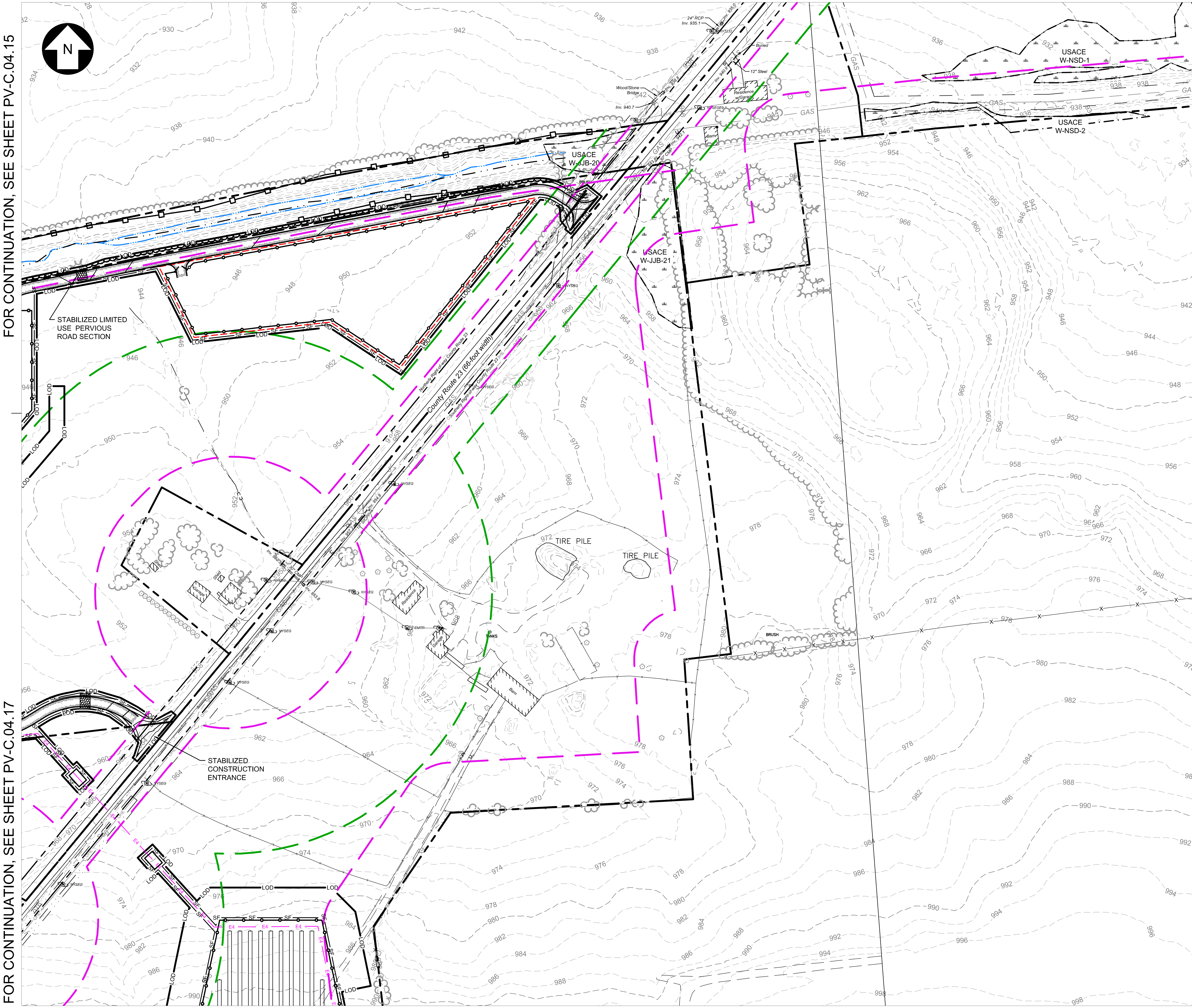
SHEET TITLE & DESCRIPTION:
GRADING, DRAINAGE, AND EROSION CONTROL PLAN

PROJ NUM:	422299
DES:	C. WINTERMUTE
DWN:	C. WINTERMUTE
CHK:	J. HEIDIG
APV:	-
DATE:	05/21/2021
SCALE AT 22" x 34":	1" = 100'
SHEET NO:	PV-C.04.17
REV:	2

PLOTTED: 7/19/2022 4:12 PM

FOR CONTINUATION, SEE SHEET PV-C.04.15

FOR CONTINUATION, SEE SHEET PV-C.04.17



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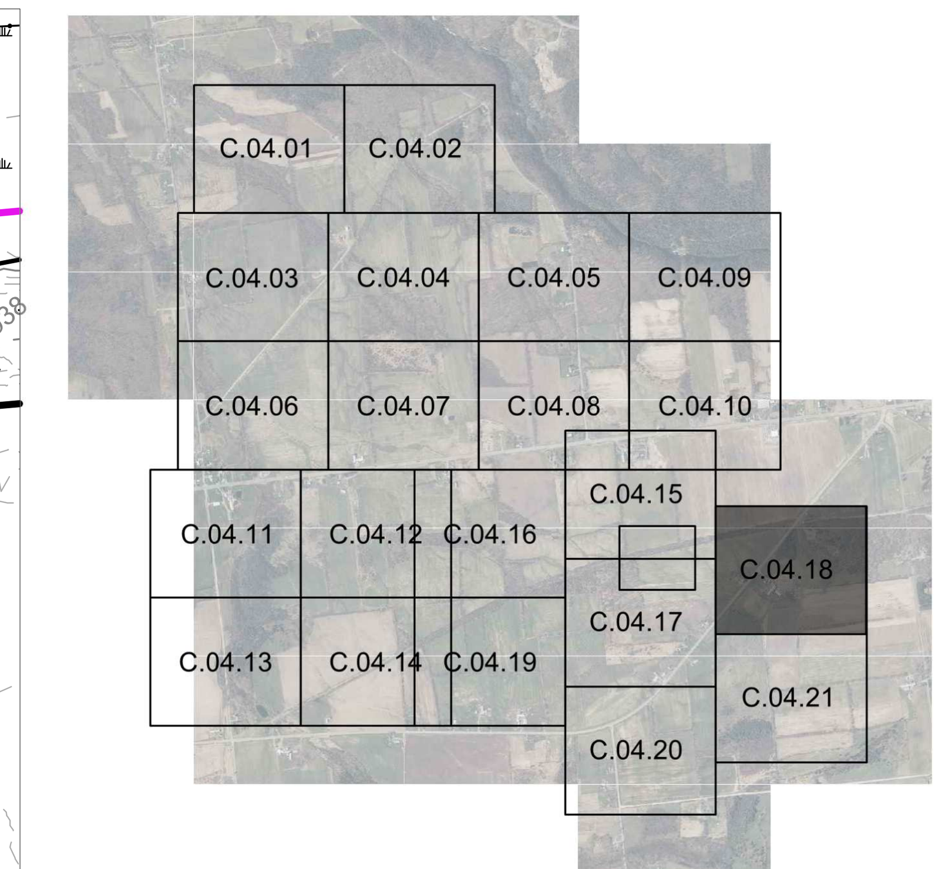

KEY MAP
SCALE: 1" = 3000'

LEGEND

EXISTING		PROPOSED
	PROPERTY BOUNDARY	
	94C SETBACK	
	TOWN SETBACK	
	LIMIT OF DISTURBANCE	LOD
	SOIL BOUNDARY	
	SILT FENCE	SF — SF
OHE	OVERHEAD ELECTRIC	
	CHAIN LINK FENCE	
X — X	BARBED WIRE FENCE	X — X
	GRAVEL ROAD	
	BASELINE	
	PV ARRAY	
	EQUIPMENT PADS & BOLLARDS	
598	MINOR CONTOUR	598
600	MAJOR CONTOUR	600
	WETLAND	
	STREAM	
	WATER SURFACE	
	TREELINE	
	BRUSH	
	BUILDING	
	STONE WALL	
	UTILITY POLE	
	VALVE	
	CULVERT	
	WETLAND ADJACENT AREA / STREAM BUFFER	
	LAYDOWN YARD	
	TOWN BOUNDARY	
	COLLECTOR LINE	E1
	RIGHT OF WAY	
	PAVED ROAD	
	NON LEASE LINE	
	DRIVEWAY	
	HORIZONTAL DIRECTIONAL DRILL	

Dig Safely. New York Call 811 before you dig

PRELIMINARY
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100 0 100 200 FT
SCALE: 1" = 100'

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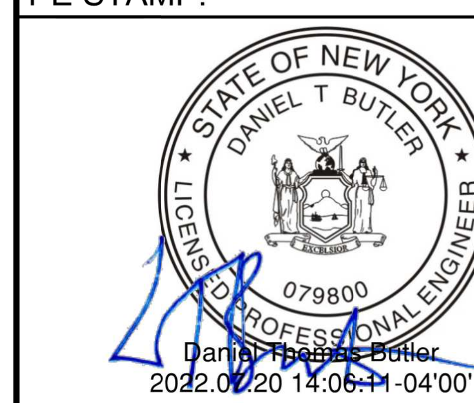

KEY PLAN:

REVISIONS:

NO.	DATE	DESCRIPTION
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2	07/20/2022	ISSUED FOR PERMIT
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-	-	-
-	-	-
-	-	-
-	-	-

PROJECT TITLE:

BROOKSIDE SOLAR PROJECT

PROJECT LOCATION:

TOWNS OF BURKE AND CHATEAUGAY, NY

SHEET TITLE & DESCRIPTION:

GRADING, DRAINAGE, AND EROSION CONTROL PLAN

PROJ NUM:	422299
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DWN:	C. WINTERMUTE
CHK:	J. HEIDIG
APV:	-
DATE:	05/21/2021

SCALE AT 22" x 34":
1" = 100'

SHEET NO: PV-C.04.18
REV: 2

PLOTTED: 7/19/2022 4:13 PM
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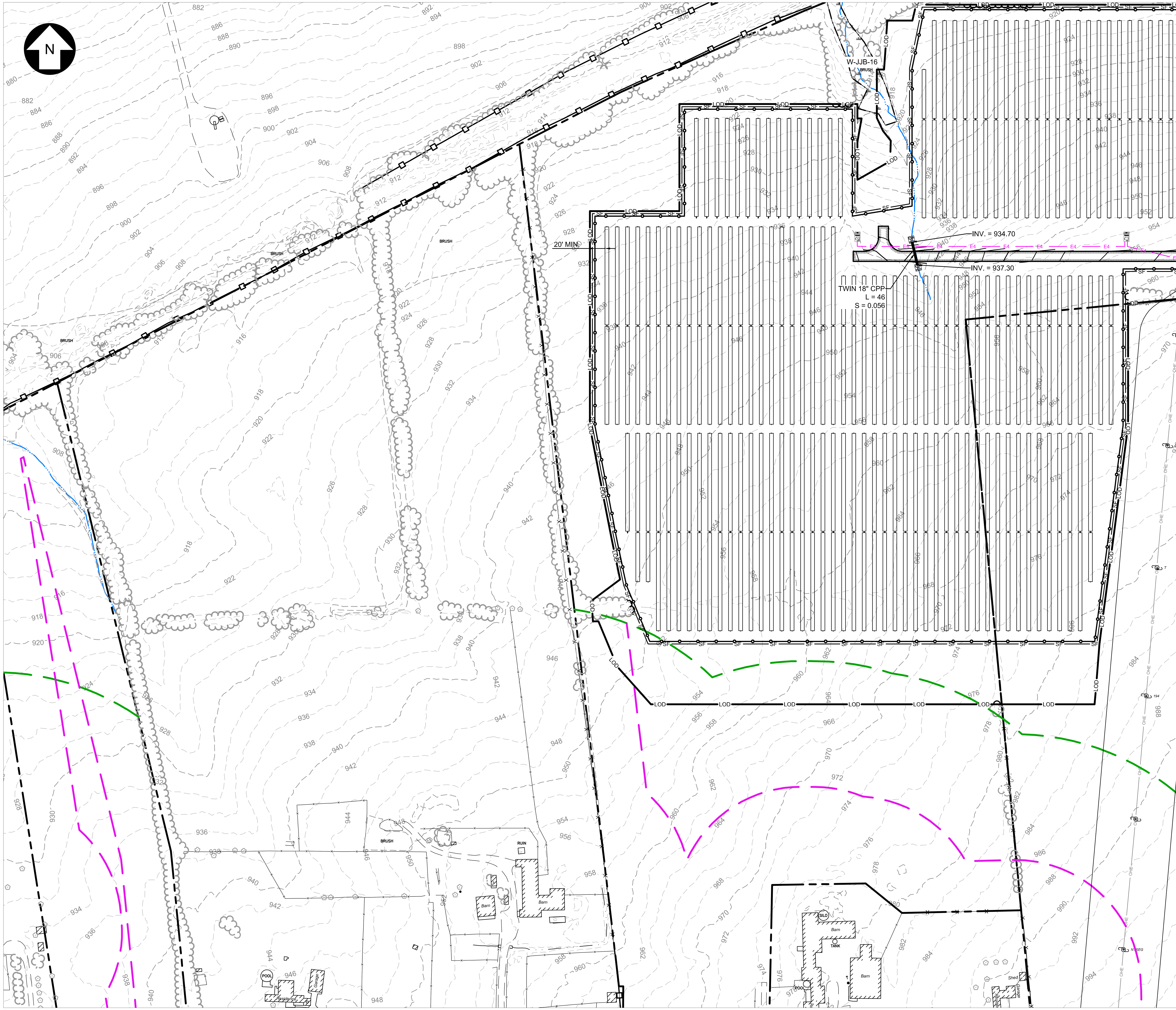
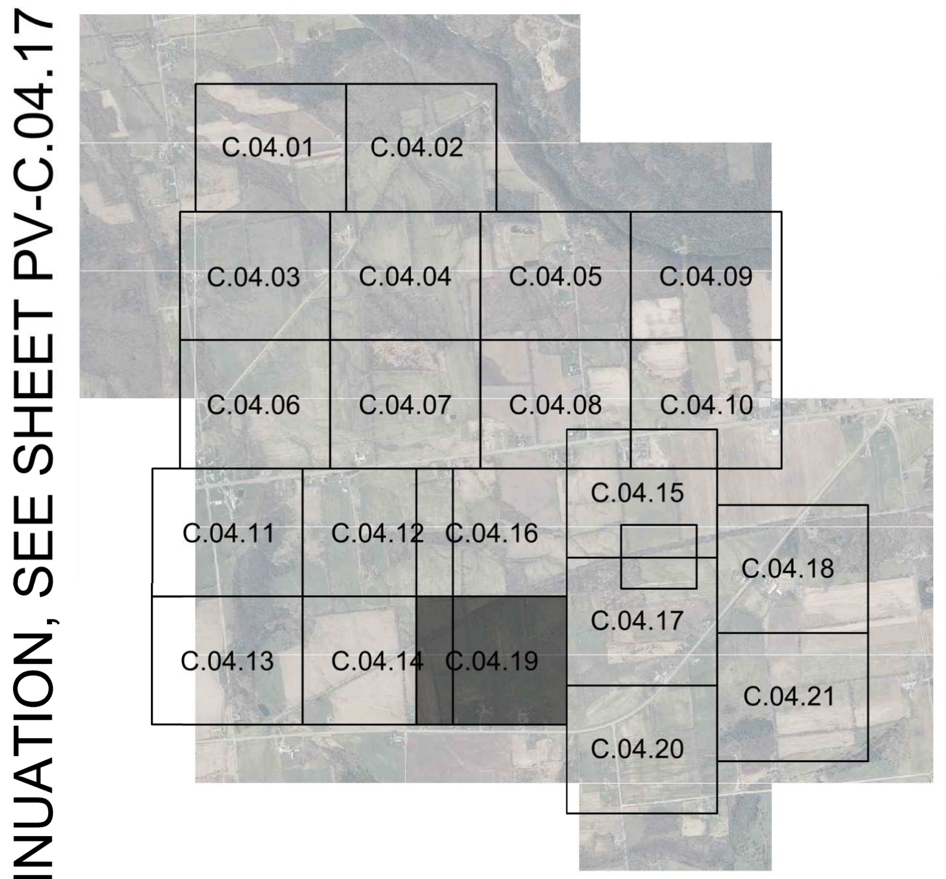
FOR CONTINUATION, SEE SHEET PV-C.04.16

FOR CONTINUATION, SEE SHEET PV-C.04.14



FOR CONTINUATION, SEE SHEET PV-C.04.17

FOR CONTINUATION, SEE SHEET PV-C.04.20



KEY MAP
SCALE: 1" = 3000'

LEGEND

EXISTING		PROPOSED
— — —	PROPERTY BOUNDARY	
— — —	94C SETBACK	
— — —	TOWN SETBACK	
	LIMIT OF DISTURBANCE	— LOD —
— · —	SOIL BOUNDARY	
	SILT FENCE	— SF — SF —
— OHE —	OVERHEAD ELECTRIC	
—o—o—	CHAIN LINK FENCE	—o—o—
—X—X—	BARBED WIRE FENCE	—X—X—
— — —	GRAVEL ROAD	═══
	BASELINE	— — —
	PV ARRAY	▯▯▯▯▯▯▯
	EQUIPMENT PADS & BOLLARDS	▯▯
— 598 —	MINOR CONTOUR	— 598 —
— 600 —	MAJOR CONTOUR	— 600 —
— · —	WETLAND	
— ·· —	STREAM	
▭	WATER SURFACE	
⌒⌒⌒	TREELINE	⌒⌒⌒
- - -	BRUSH	- - -
▨	BUILDING	
∞∞∞	STONE WALL	
	UTILITY POLE	
⋈	VALVE	
= = =	CULVERT	——
— — —	WETLAND ADJACENT AREA / STREAM BUFFER	
	LAYDOWN YARD	- - -
— — —	TOWN BOUNDARY	
	COLLECTOR LINE	— E1 —
— — —	RIGHT OF WAY	
——	PAVED ROAD	
	NON LEASE LINE	— — —
——	DRIVEWAY	
	HORIZONTAL DIRECTIONAL DRILL	▭—▭

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100 0 100 200 FT
SCALE: 1" = 100'

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LICENSED PROFESSIONAL ENGINEER
079800
Daniel Thomas Butler
2022.07.20 14:06:25-04'00'

KEY PLAN:

REVISIONS:

NO.	DATE	DESCRIPTION
0	01/19/2022	DESIGN DRAWINGS
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2	07/20/2022	ISSUED FOR PERMIT
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-	-	-
-	-	-
-	-	-
-	-	-

PROJECT TITLE:
BROOKSIDE SOLAR PROJECT

PROJECT LOCATION:
TOWNS OF BURKE AND CHATEAUGAY, NY

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GRADING, DRAINAGE, AND EROSION CONTROL PLAN

PROJ NUM:	422299
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DWN:	C. WINTERMUTE
CHK:	J. HEIDIG
APV:	-
DATE:	05/21/2021

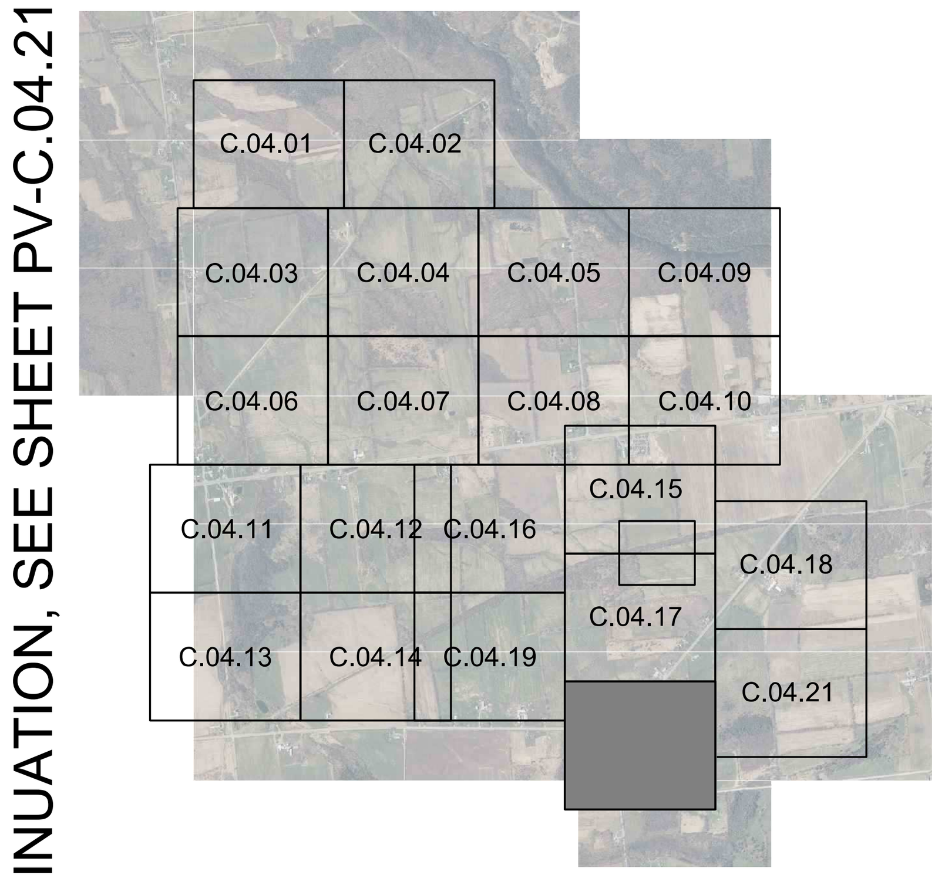
SCALE AT 22" x 34":
1" = 100'

SHEET NO: PV-C.04.19
REV: 2

FOR CONTINUATION, SEE SHEET PV-C.04.17

FOR CONTINUATION, SEE SHEET PV-C.04.19

FOR CONTINUATION, SEE SHEET PV-C.04.21



KEY MAP
SCALE: 1" = 3000'

LEGEND

EXISTING		PROPOSED
	PROPERTY BOUNDARY	
	94C SETBACK	
	TOWN SETBACK	
	LIMIT OF DISTURBANCE	LOD
	SOIL BOUNDARY	
	SILT FENCE	SF
OHE	OVERHEAD ELECTRIC	
	CHAIN LINK FENCE	
X	BARBED WIRE FENCE	X
	GRAVEL ROAD	
	BASELINE	
	PV ARRAY	
	EQUIPMENT PADS & BOLLARDS	
598	MINOR CONTOUR	598
600	MAJOR CONTOUR	600
	WETLAND	
	STREAM	
	WATER SURFACE	
	TREELINE	
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	RIGHT OF WAY	
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100 0 100 200 FT
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LICENSED PROFESSIONAL ENGINEER
Daniel Thomas Butler
2022.07.20 14:06:39-04'00'

KEY PLAN:

REVISIONS:

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-	-	-
-	-	-
-	-	-
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PROJECT TITLE:
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PROJ NUM:	422299
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DWN:	C. WINTERMUTE
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APV:	-
DATE:	05/21/2021

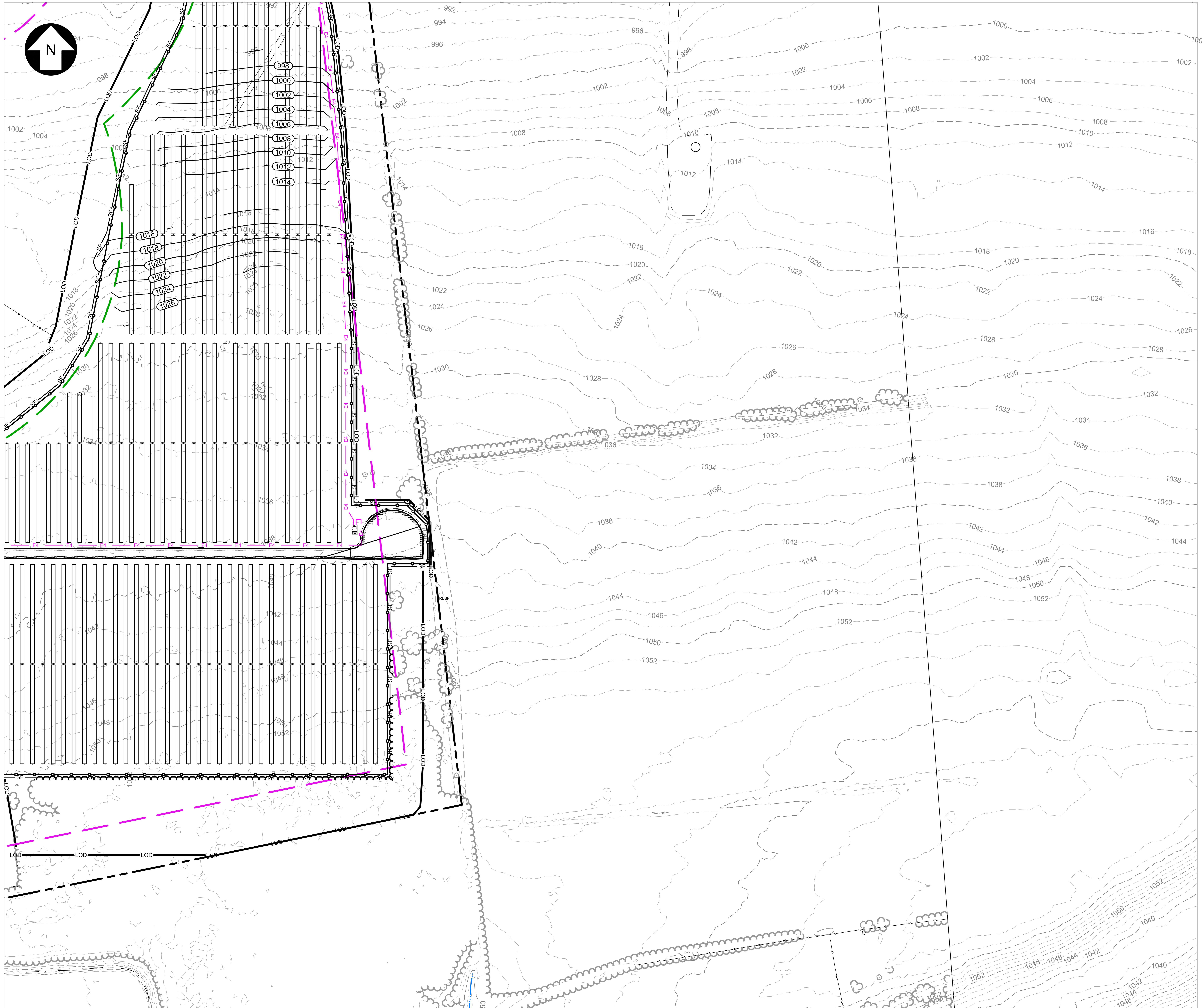
SCALE AT 22" x 34":
1" = 100'

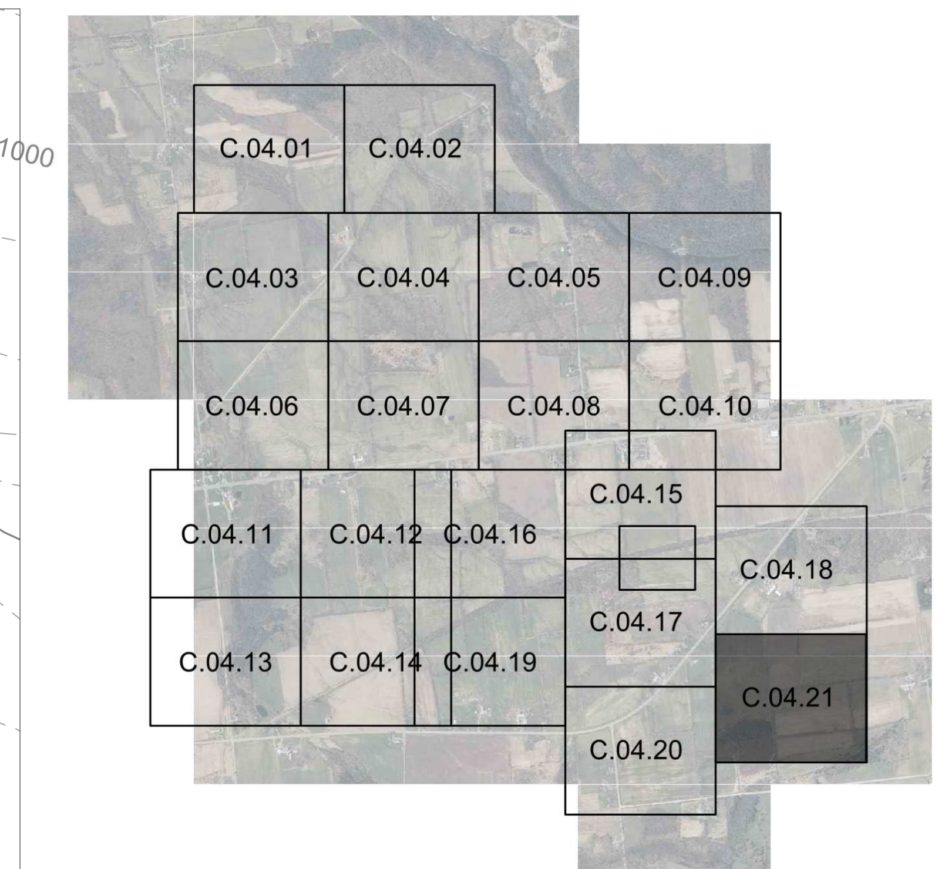
SHEET NO: PV-C.04.20
REV: 2

FOR CONTINUATION, SEE SHEET PV-C.04.18

FOR CONTINUATION, SEE SHEET PV-C.04.17

FOR CONTINUATION, SEE SHEET PV-C.04.20





KEY MAP
SCALE: 1" = 3000'

LEGEND

EXISTING		PROPOSED
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	TOWN SETBACK	
	LIMIT OF DISTURBANCE	LOD
	SOIL BOUNDARY	
	SILT FENCE	SF SF
OHE	OVERHEAD ELECTRIC	
	CHAIN LINK FENCE	
X X	BARBED WIRE FENCE	X X
	GRAVEL ROAD	
	BASELINE	
	PV ARRAY	
	EQUIPMENT PADS & BOLLARDS	
598	MINOR CONTOUR	598
600	MAJOR CONTOUR	600
	WETLAND	
	STREAM	
	WATER SURFACE	
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-	-	-
-	-	-
-	-	-
-	-	-

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1" = 100'

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REV: 2

PLOTTED: 7/19/2022 4:15 PM
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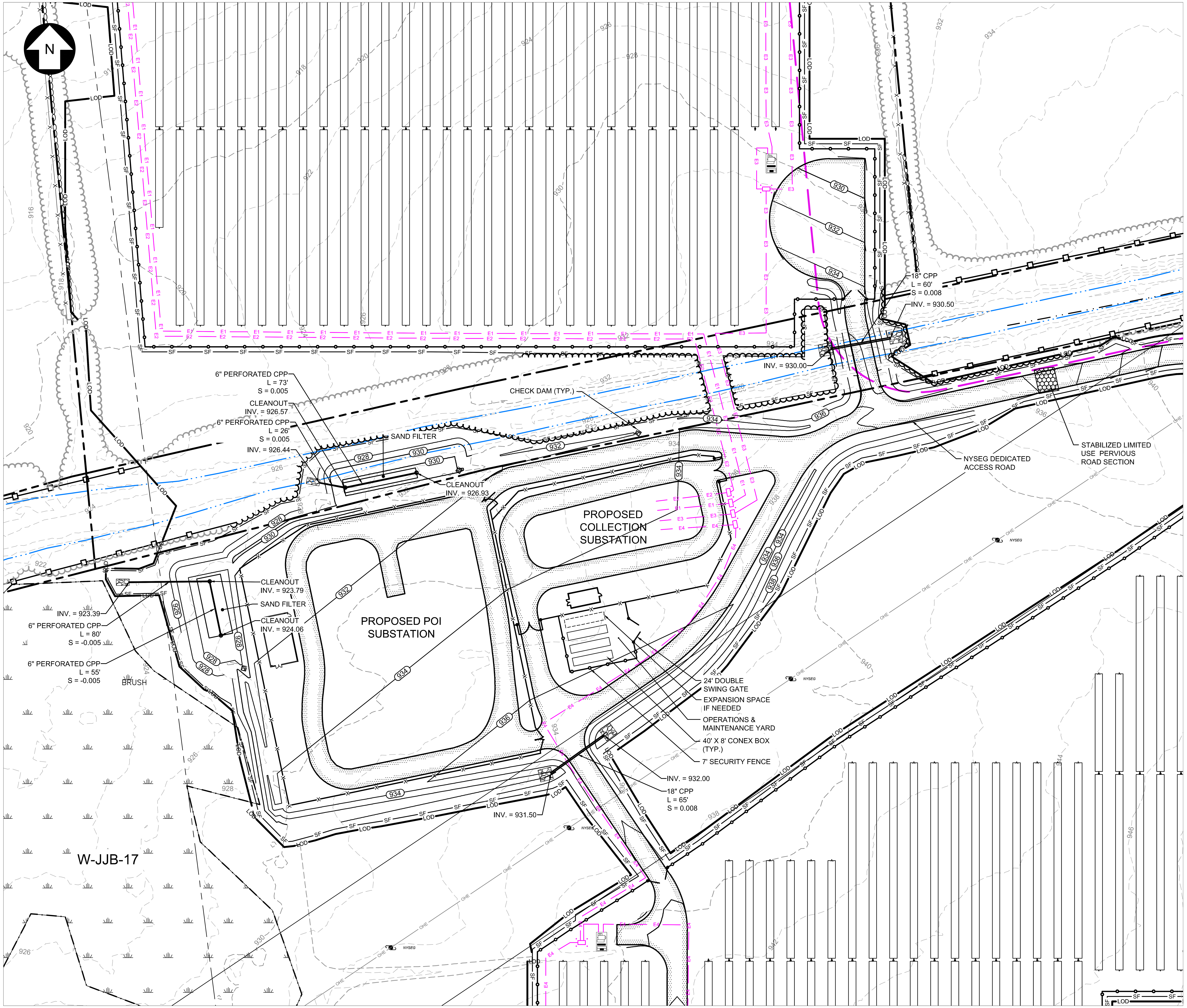
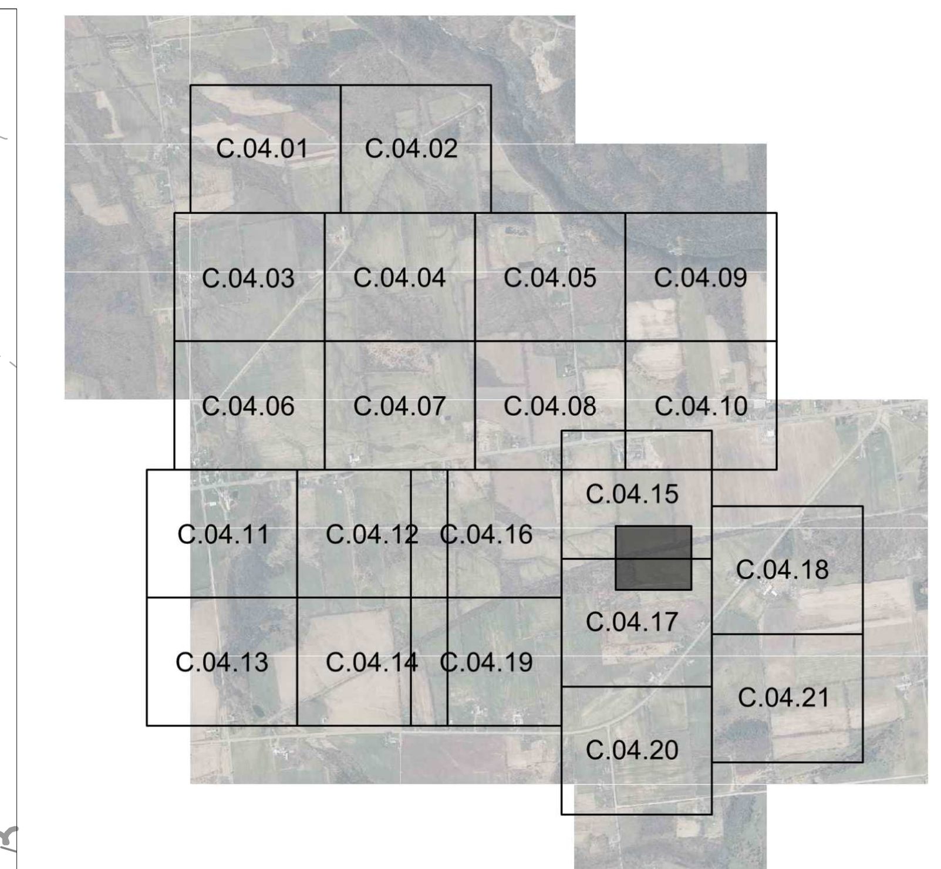




KEY MAP

SCALE: 1" = 3000'

LEGEND

EXISTING		PROPOSED
	PROPERTY BOUNDARY	
	94C SETBACK	
	TOWN SETBACK	
	LIMIT OF DISTURBANCE	LOD
	SOIL BOUNDARY	
	SILT FENCE	SF SF
OHE	OVERHEAD ELECTRIC	
	CHAIN LINK FENCE	
X X	BARBED WIRE FENCE	X X
	GRAVEL ROAD	
	BASELINE	
	PV ARRAY	
	EQUIPMENT PADS & BOLLARDS	
598	MINOR CONTOUR	598
600	MAJOR CONTOUR	600
	WETLAND	
	STREAM	
	WATER SURFACE	
	TREELINE	
	BRUSH	
	BUILDING	
	STONE WALL	
	UTILITY POLE	
	VALVE	
	CULVERT	
	WETLAND ADJACENT AREA / STREAM BUFFER	
	LAYDOWN YARD	
	TOWN BOUNDARY	
	COLLECTOR LINE	E1
	RIGHT OF WAY	
	PAVED ROAD	
	NON LEASE LINE	
	DRIVEWAY	
	HORIZONTAL DIRECTIONAL DRILL	

Dig Safely. New York. Call 811 before you dig

PRELIMINARY
NOT FOR CONSTRUCTION

50 0 50 100 FT

SCALE: 1" = 50'

UNDER NEW YORK STATE EDUCATION LAW ARTICLE 145 (ENGINEERING), SECTION 7209 (2), IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

aes
2180 South 1300 East, Suite 600
Salt Lake City, UT 84106-2749
(801) 679 - 3500

TRC
249 Western Avenue
Augusta, ME 04330

PE STAMP:

STATE OF NEW YORK
DANIEL T BUTLER
LICENSED PROFESSIONAL ENGINEER
079800
Daniel Thomas Butler
2022.07.20 14:07:05 -04'00'

KEY PLAN:

REVISIONS:

NO.	DATE	DESCRIPTION
0	01/19/2022	DESIGN DRAWINGS
1	06/27/2022	ISSUED FOR PERMIT
2	07/20/2022	ISSUED FOR PERMIT
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-

PROJECT TITLE:

BROOKSIDE SOLAR PROJECT

PROJECT LOCATION:

TOWNS OF BURKE AND CHATEAUGAY, NY

SHEET TITLE & DESCRIPTION:

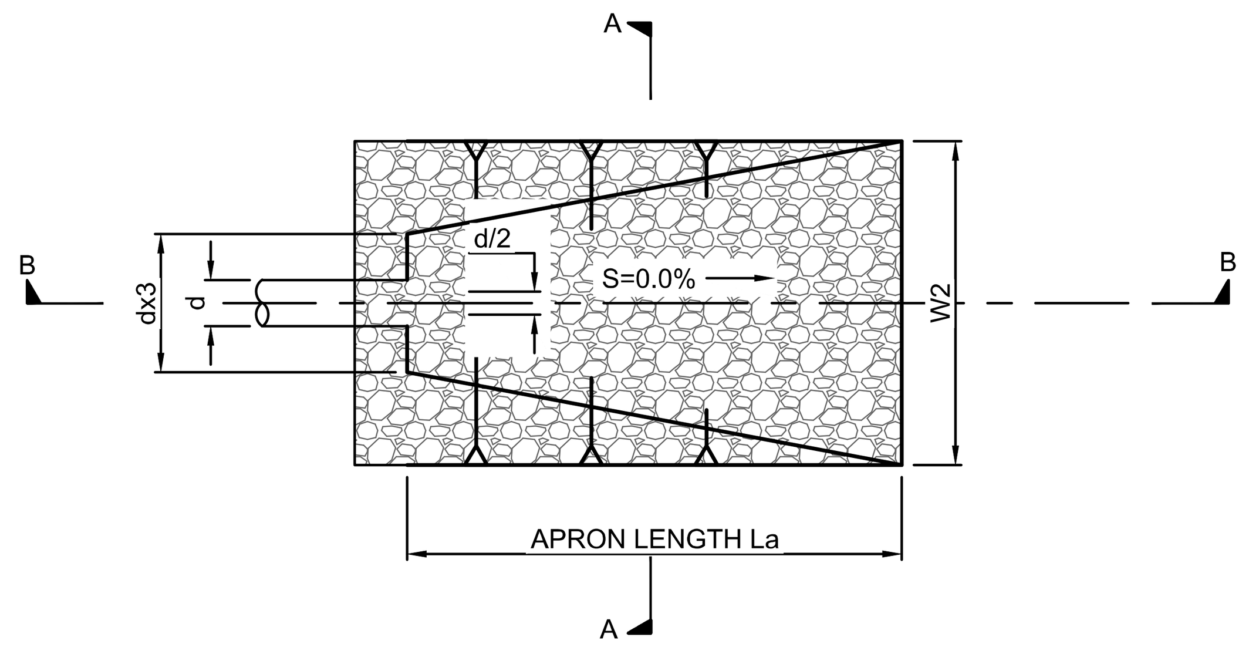
SUBSTATION INSET

PROJ NUM:	422299
DES:	J. HEIDIG
DWN:	J. HEIDIG
CHK:	J. HEIDIG
APV:	-
DATE:	05/25/2021

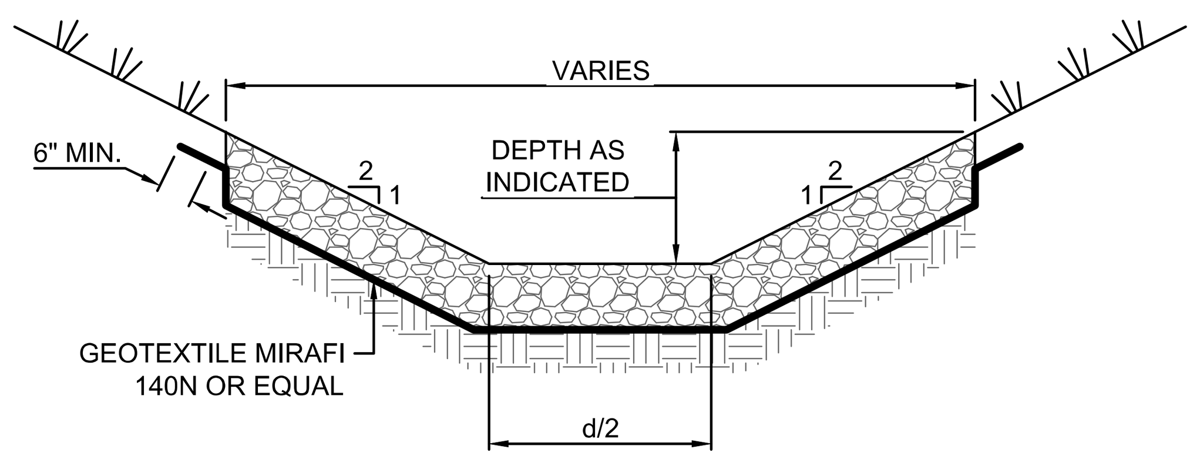
SCALE AT 22" x 34":

1" = 50'

SHEET NO:	REV:
PV-C.04.22	2



PLAN VIEW



SECTION A-A

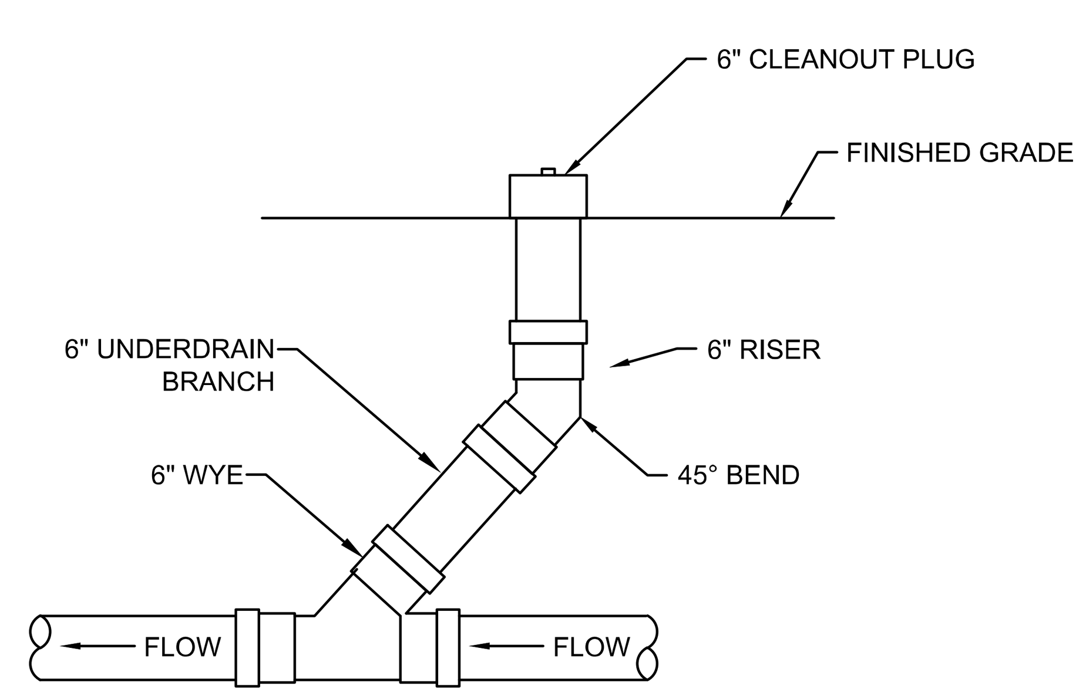
OUTLET PROTECTION DIMENSIONS	
D50	6 IN
THICKNESS	15 IN
d	SEE PLAN
La	12 FT
W2	12 FT

NOTES:

1. CONSTRUCT RIPRAP PROTECTION IN ACCORDANCE WITH NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.

RIPRAP OUTLET PROTECTION

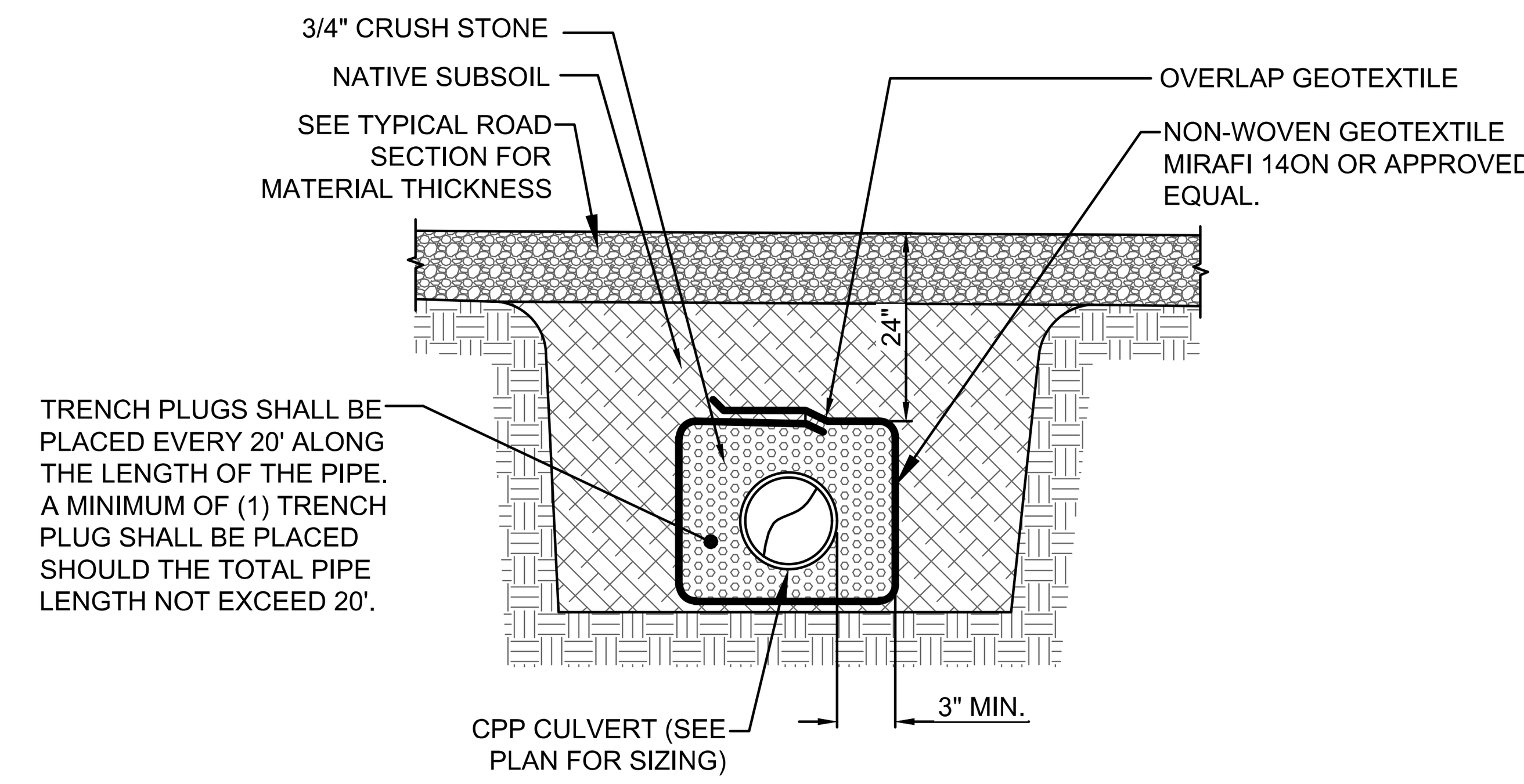
SCALE: N.T.S.



CLEANOUT DETAIL

SCALE: N.T.S.

UNDER NEW YORK STATE EDUCATION LAW ARTICLE 145 (ENGINEERING), SECTION 7209 (2), IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.



NOTES:

SUBSURFACE DRAIN SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH NEW YORK STATE STANDARDS AND SPECIFICATIONS ON EROSION AND SEDIMENT CONTROL.

PROVIDE DRAIN OUTLET TO GRADE, ROAD DITCH, DRAIN STRUCTURE OR OTHER APPROVED DEVICE.

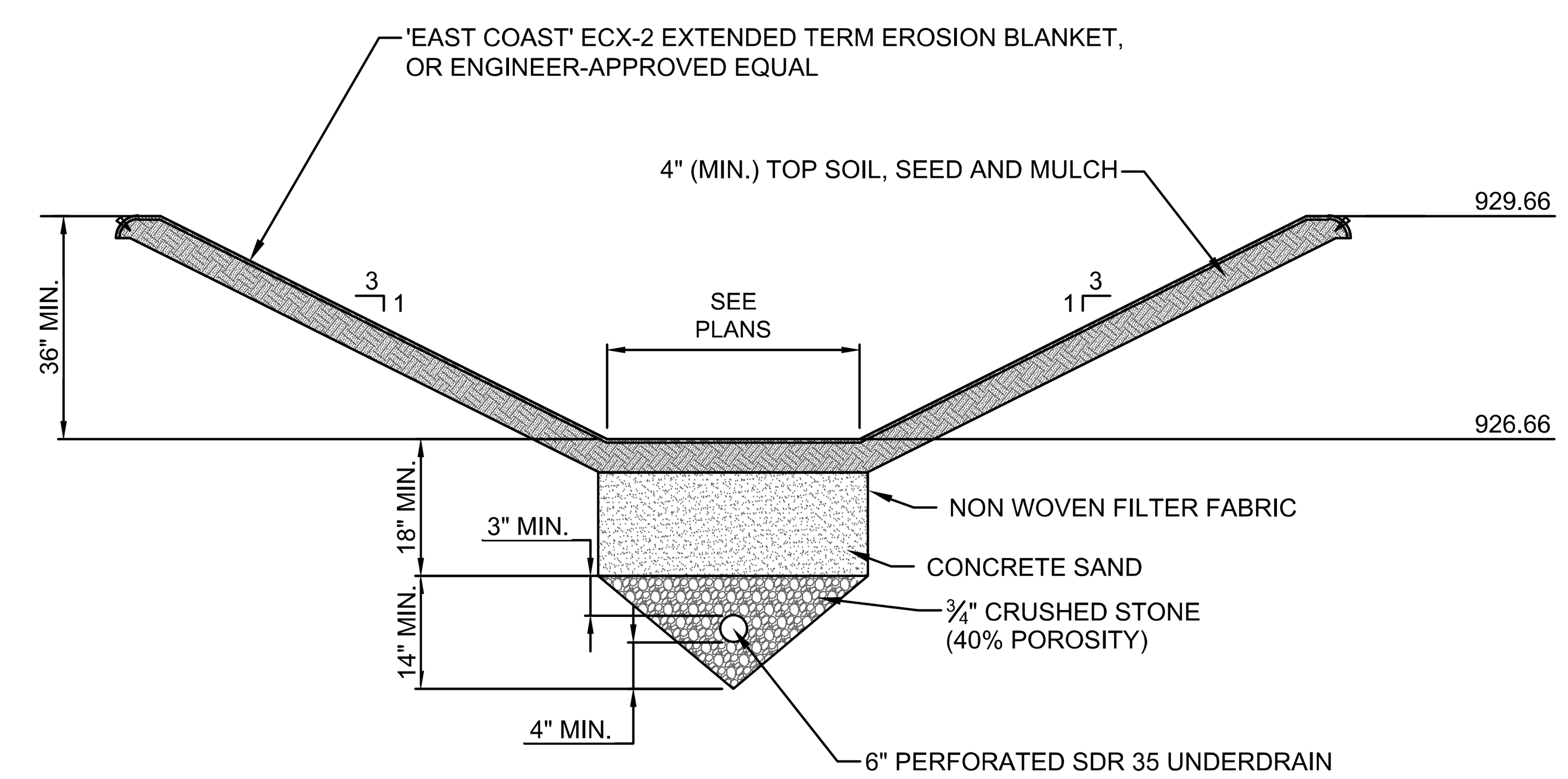
PROVIDE EROSION PROTECTION AND SOIL STABILIZATION IN ACCORDANCE WITH NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND TEMPORARY SEDIMENT CONTROL.

TOPSOIL SHALL BE STRIPPED AND STOCKPILED FOR RE-USE AFTER DRAIN CONSTRUCTION. DECOMPACT SOIL WITHIN AGRICULTURAL FIELDS, REMOVE ROCKS AND RESTORE GROUND COVER AS REQUIRED BY THE NEW YORK STATE DEPARTMENT OF AGRICULTURE AND MARKETS GUIDELINES FOR AGRICULTURAL MITIGATION FOR WIND PROJECTS.

DRAIN SHALL BE PROVIDED IN CUT SLOPES WHERE INDICATED AND ELSEWHERE AS DETERMINED NECESSARY TO LIMIT EROSION.

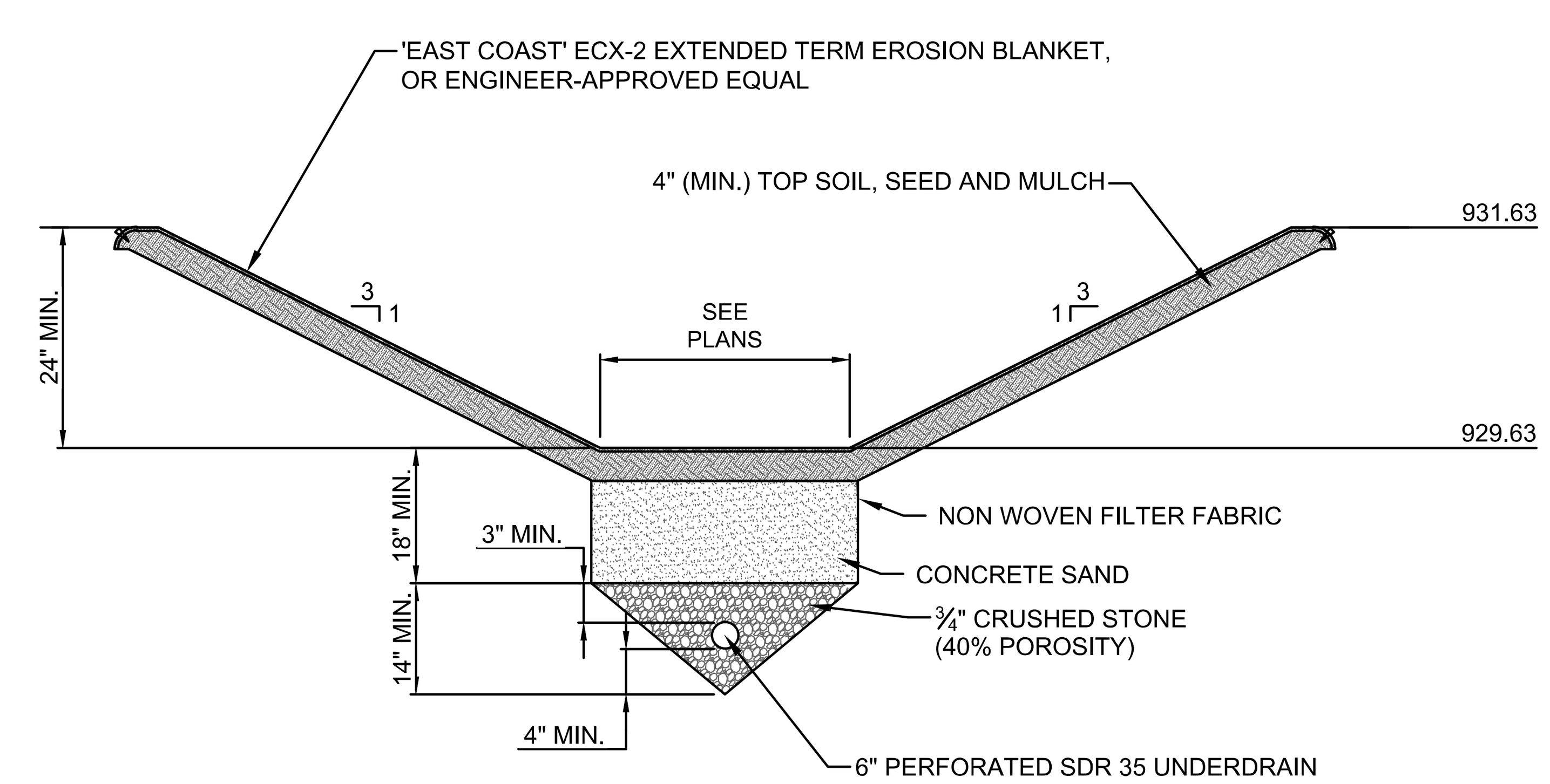
TYPICAL SUBSURFACE DRAIN DETAIL

SCALE: N.T.S.



SAND FILTER DETAIL (SF-1)

SCALE: N.T.S.



SAND FILTER DETAIL (SF-2)

SCALE: N.T.S.

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aes
2180 South 1300 East, Suite 600
Salt Lake City, UT 84106-2749
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TRC
249 Western Avenue
Augusta, ME 04330

PE STAMP:

STATE OF NEW YORK · DANIEL T BUTLER · LICENSED PROFESSIONAL ENGINEER · 079800
Daniel Thomas Butler
2022.07.20 14:07:24 -04'00'

KEY PLAN:

REVISIONS:

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-	-	-
-	-	-
-	-	-
-	-	-
-	-	-

PROJECT TITLE:

BROOKSIDE SOLAR PROJECT

PROJECT LOCATION:

TOWNS OF BURKE AND CHATEAUGAY, NY

SHEET TITLE & DESCRIPTION:

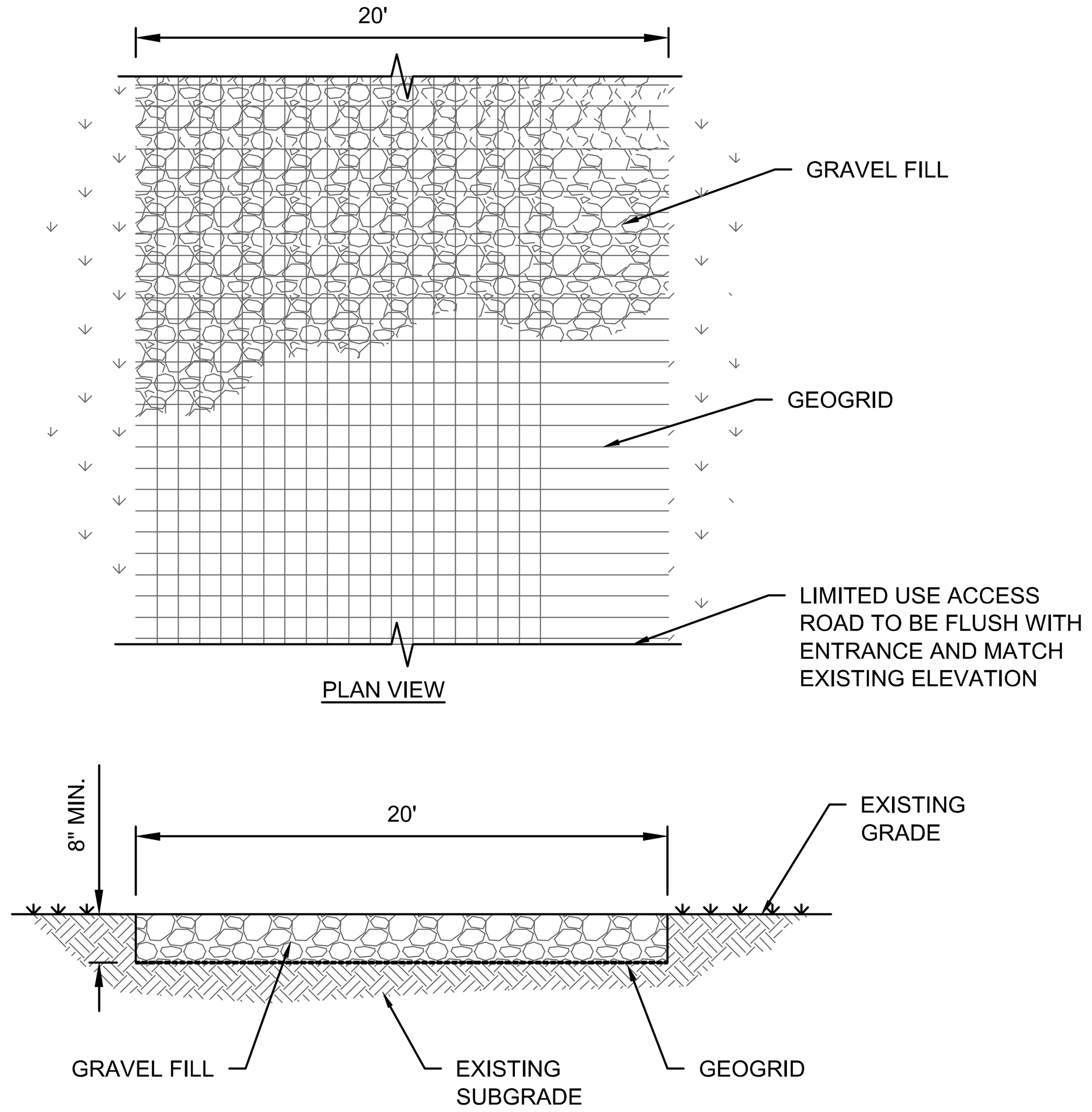
GRADING AND DRAINAGE DETAILS

PROJ NUM:	422299
DES:	C. WINTERMUTE
DWN:	C. WINTERMUTE
CHK:	J. HEIDIG
APV:	-
DATE:	05/21/2021

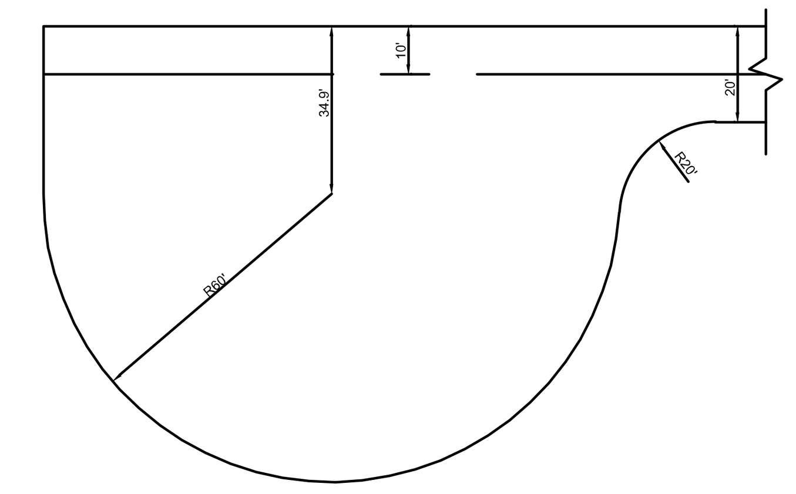
SCALE AT 22" x 34":

AS NOTED

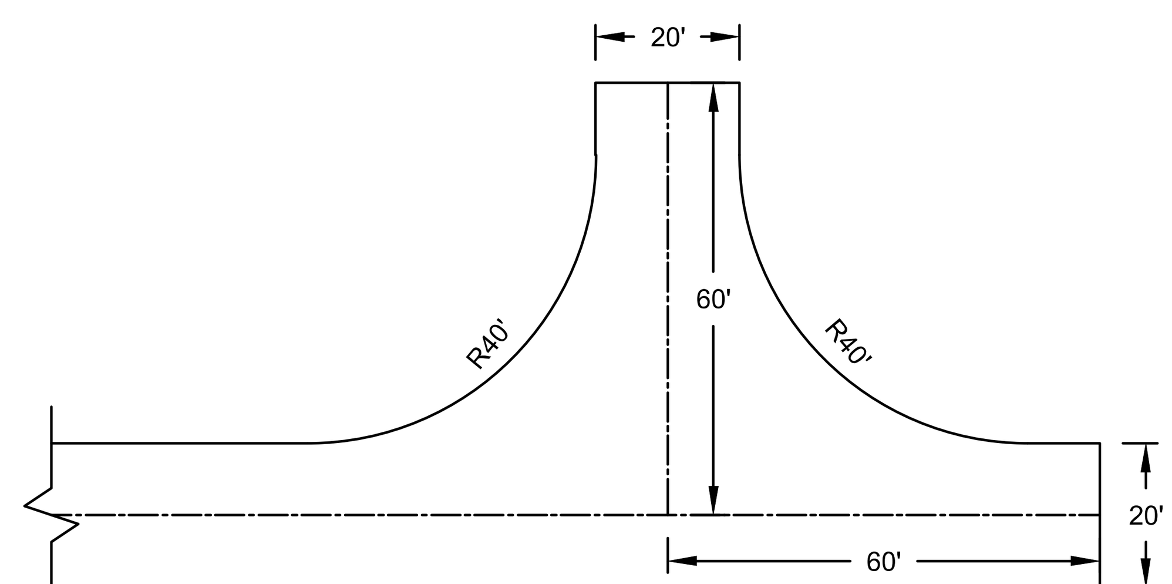
SHEET NO:	REV:
PV-C.05.01	2



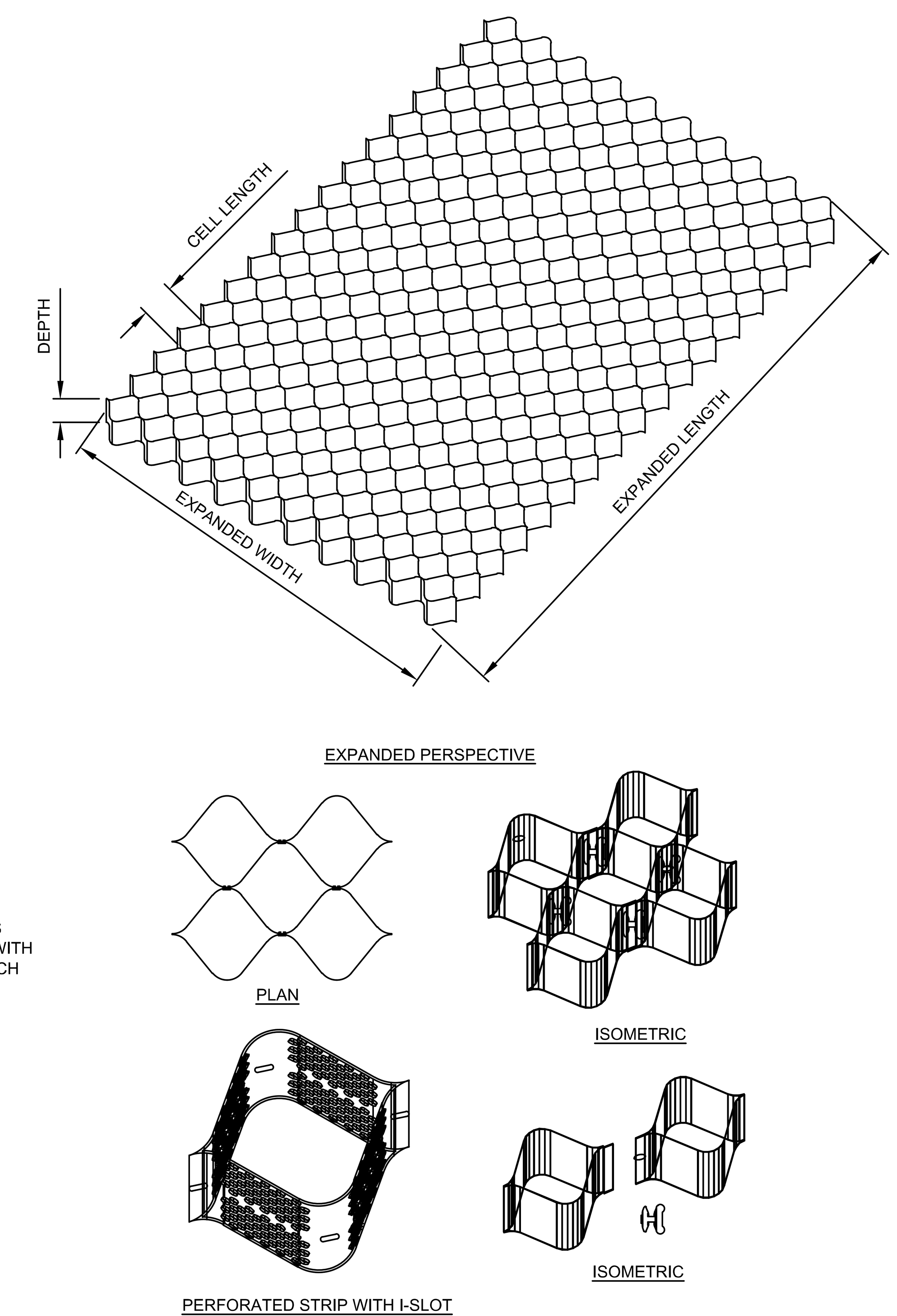
LIMITED USE PERVIOUS ACCESS ROAD
SCALE: N.T.S.



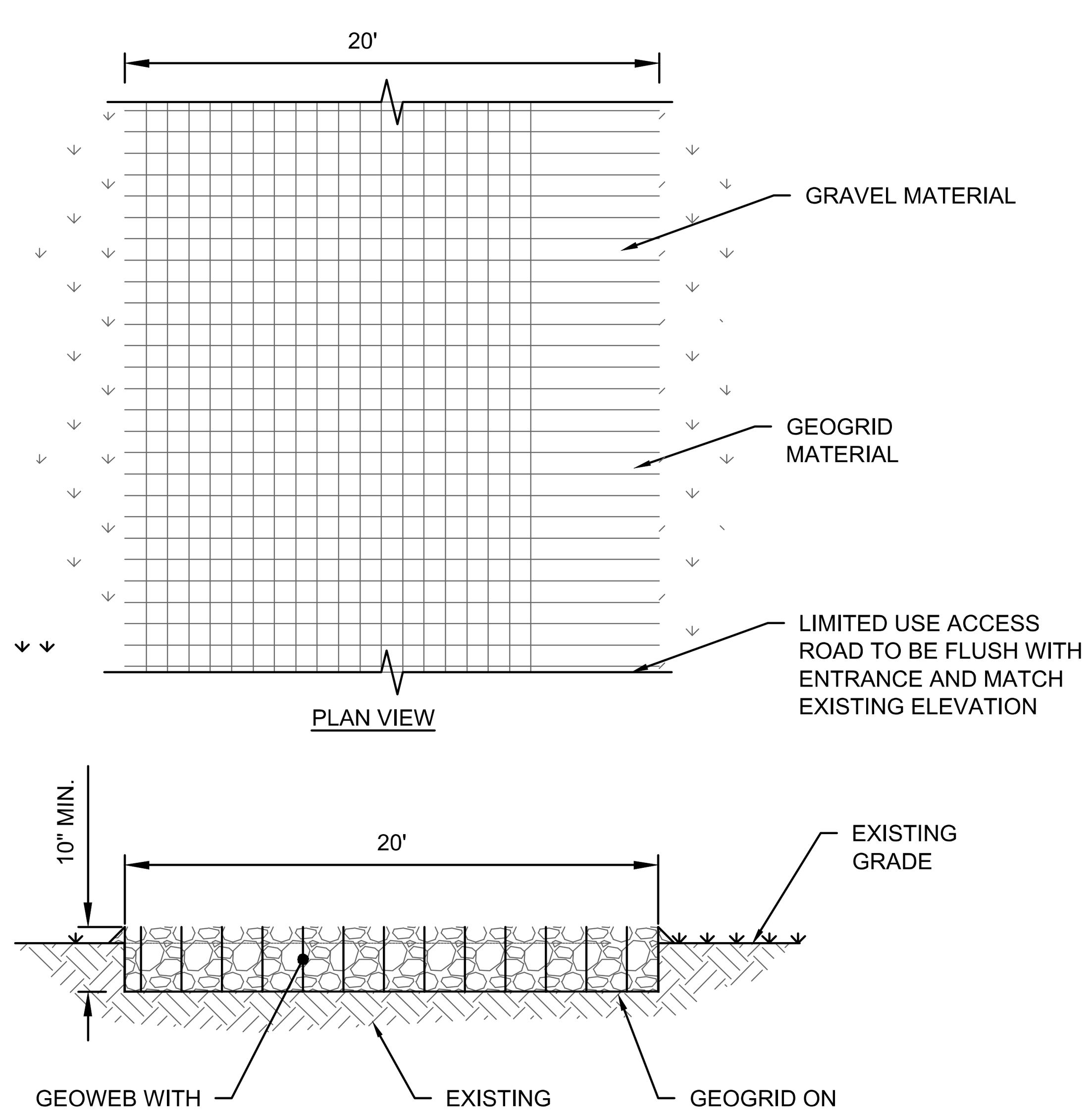
TYPICAL ACCESS ROAD TURN AROUND (RADIAL)
SCALE: N.T.S.



TYPICAL ACCESS ROAD TURN AROUND
SCALE: N.T.S.



CELLULAR CONFINEMENT SYSTEM - GEOWEB



STABILIZED LIMITED USE PERVIOUS ACCESS ROAD
SCALE: N.T.S.

UNDER NEW YORK STATE EDUCATION LAW ARTICLE 145 (ENGINEERING), SECTION 7209 (2), IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

PERVIOUS ACCESS ROAD GENERAL NOTES:

1. LIMITED USE PERVIOUS ACCESS ROAD IS LIMITED TO ACCESS ROADS USED ON AN OCCASIONAL BASIS ONLY (I.E. PROVIDE ACCESS FOR MOWING, EQUIPMENT REPAIR OR MAINTENANCE, EMERGENCY VEHICLES, ETC.).
2. LIMITED USE PERVIOUS ACCESS ROAD IS RESTRICTED TO POST-CONSTRUCTION, LOW IMPACT, MAINTENANCE/EQUIPMENT REPAIR ACTIVITIES ASSOCIATED WITH RENEWABLE ENERGY PROJECTS IN NEW YORK STATE.
3. CONSTRUCT LIMITED USE PERVIOUS ACCESS ROAD TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION PLANS.
4. USE OF STABILIZED PERVIOUS ACCESS ROAD:
   - 4.1. STABILIZED PERVIOUS ACCESS ROADS SHALL BE CONSTRUCTED IN AREAS WHERE THE SLOPE OF THE ROAD EXCEEDS 8%. THE GEOWEB WILL HOLD THE ROAD MATERIAL IN PLACE UNDER TRAFFIC LOADS.
   - 4.2. STABILIZED PERVIOUS ACCESS ROADS SHALL BE CONSTRUCTED IN AREAS WITH SOFT OR PLACID SOILS, WHERE ADDITIONAL STRUCTURAL SUPPORT IS NEEDED TO SUPPORT TRAFFIC LOADS.
   - 4.3. STABILIZED PERVIOUS ROAD SECTION IS INTENDED AS A STABILIZATION METHOD FOR ROAD MATERIALS IN LOCATIONS WHERE STORMWATER RUNOFF MAY FLOW ACROSS THE ACCESS ROAD. THE OPEN-GRADED STONE WILL ALLOW LOW FLOWS TO PASS THROUGH THE ROAD MATERIAL WHILE HIGHER FLOWS WILL PASS OVER THE ROAD. THE CELLULAR CONFINEMENT SYSTEM (GEOWEB) WILL PREVENT EROSION OF THE ROAD MATERIAL. THIS APPROACH MINIMIZES IMPACTS TO EXISTING RUNOFF PATTERNS.
5. STABILIZED PERVIOUS ROAD SECTIONS SHALL BE INSTALLED AT NATURAL LOW POINTS OF THE ACCESS ROADS AND TERRAIN WHERE STORMWATER RUNOFF IS LIKELY TO BE CONCENTRATED DUE TO EXISTING HYDROLOGY/TOPOGRAPHY, AND CULVERT INSTALLATION IS IMPRACTICAL DUE TO LIMITED COVER.
6. REMOVE STUMPS, ROCKS AND DEBRIS AS NECESSARY. FILL VOIDS TO MATCH EXISTING NATIVE SOILS AND COMPACTION LEVEL.
7. REMOVED TOPSOIL MAY BE STOCKPILED FOR LATER USE OR SPREAD IN ADJACENT AREAS AS DIRECTED BY THE PROJECT ENGINEER. DO NOT PLACE IN AN AREA THAT IMPEDES STORMWATER DRAINAGE.
8. PREPARE SUBGRADE AS NEEDED TO ACHIEVE LINES AND GRADES SHOWN ON CONSTRUCTION PLANS.
9. REMOVE REFUSE SOILS AS DIRECTED BY THE PROJECT ENGINEER OR ENVIRONMENTAL INSPECTOR. DO NOT PLACE IN AN AREA THAT IMPEDES STORMWATER DRAINAGE.
10. ROADWAY WIDTH TO BE INSTALLED AS SHOWN ON PLANS.
11. THE LIMITED USE PERVIOUS ACCESS ROAD CROSS SLOPE SHALL NOT EXCEED 2.5% THE LONGITUDINAL SLOPE OF THE ACCESS DRIVE SHALL NOT EXCEED 8% UNLESS OTHERWISE INDICATED ON THE GRADING PLANS. IN NO CASE SHALL THE SLOPE EXCEED 12%.
12. LIMITED USE PERVIOUS ACCESS ROAD IS NOT TO BE UTILIZED FOR CONSTRUCTION TRAFFIC WHICH MAY SUBJECT THE ACCESS ROAD TO SEDIMENT TRACKING.
13. PRIOR TO PERVIOUS ACCESS ROAD CONSTRUCTION, SOIL PENETROMETER TESTING SHALL BE PERFORMED AT NO GREATER THAN 100-FOOT INTERVALS ALONG THE ACCESS ROAD ALIGNMENT. AFTER THE SUBGRADE HAS BEEN PREPARED AND PRIOR TO PLACEMENT OF GEOGRID AND GRAVEL, SOIL PENETROMETER TESTING SHALL BE PERFORMED AGAIN TO VERIFY THAT SOIL COMPACTION DOES NOT EXCEED PRE-CONSTRUCTION CONDITIONS. SOIL RESTORATION PRACTICES SHALL BE REQUIRED TO DE-COMPACT SOILS IN AREAS WHERE THIS CRITERION IS NOT MET.
14. TO ENSURE THAT SOIL IS NOT TRACKED ONTO THE LIMITED USE PERVIOUS ACCESS ROAD, IT SHALL NOT BE USED BY CONSTRUCTION VEHICLES TRANSPORTING SOIL, FILL MATERIAL, ETC. IF ACCESS IS COMPLETED DURING THE INITIAL PHASES OF CONSTRUCTION, A STABILIZED CONSTRUCTION ACCESS/ENTRANCE IS REQUIRED TO REMOVE SEDIMENT FROM CONSTRUCTION VEHICLES AND EQUIPMENT PRIOR TO ENTERING THE LIMITED USE PERVIOUS ACCESS ROAD. MAINTENANCE OF THE PERVIOUS ACCESS ROAD WILL BE REQUIRED IF SEDIMENT IS OBSERVED WITHIN THE CLEAN STONE.
15. THE LIMITED USE PERVIOUS ACCESS ROAD SHALL NOT BE CONSTRUCTED OR USED UNTIL ALL AREAS SUBJECT TO RUNOFF ONTO THE PERVIOUS ACCESS ROAD HAVE ACHIEVED FINAL STABILIZATION.
16. IF A ROADSIDE DITCH IS NOT UTILIZED TO CAPTURE RUNOFF FROM THE ACCESS ROAD, THE PERVIOUS ACCESS ROAD WILL HAVE A WELL-ESTABLISHED PERENNIAL VEGETATIVE COVER, WHICH SHALL CONSIST OF UNIFORM VEGETATION, 20 FEET PARALLEL TO THE DOWN GRADIENT SIDE OF THE ACCESS ROAD. POST-CONSTRUCTION OPERATION AND MAINTENANCE PRACTICES WILL MAINTAIN THIS VEGETATIVE COVER TO ENSURE STABILIZATION FOR THE LIFE OF THE ACCESS ROAD.

GEOGRID MATERIAL NOTES:

1. GEOGRID, OR APPROVED EQUIVALENT PRODUCT, SHALL BE USED FOR ALL CONDITIONS IN ORDER TO ASSIST IN MATERIAL SEPARATION FROM NATIVE SOILS AND PRESERVE STRUCTURAL STRENGTH.
2. GRAVEL FILL MATERIAL SHALL CONSIST OF 1-4" CLEAN, WASHED, DURABLE, SHARP-ANGLED CRUSHED STONE OF UNIFORM QUALITY, MEETING THE SPECIFICATIONS OF NYSDOT ITEM 703-0201, SIZE DESIGNATION 3, 4A OR 4 OF TABLE 703-4. STONE MAY BE PLACED IN FRONT OF, AND SPREAD WITH, A TRACKED VEHICLE. GRAVEL SHALL NOT BE COMPACTED.
3. GEOGRID SHALL BE MIRAFI BXG110 OR APPROVED EQUAL. GEOGRID SHALL BE DESIGNED BASED ON EXISTING SOIL CONDITIONS AND PROPOSED HAUL ROAD SLOPES.
4. IF MORE THAN ONE ROLL WIDTH IS REQUIRED, ROLLS SHOULD OVERLAP A MINIMUM OF SIX INCHES.
5. REFER TO MANUFACTURER'S SPECIFICATION FOR PROPER TYING AND CONNECTIONS.
6. LIMITED USE PERVIOUS ACCESS ROAD SHALL BE TOP DRESSED AS REQUIRED WITH 1"-4" WASHED CRUSHED STONE MEETING NYSDOT ITEM 703-0201, SIZE DESIGNATION 3, 4A OR 4 OF TABLE 703-4 SPECIFICATIONS.

BASIS OF DESIGN: TENCATE MIRAFI BXG110 GEOGRIDS; 365 SOUTH HOLLAND DRIVE, PENDERGRASS, GA;800-685-9990 OR 706-693-2226; WWW.MIRAFI.COM

GEOWEB MATERIAL NOTES:

1. CELLULAR CONFINEMENT SYSTEM SHALL BE PRESTO GEOSYSTEM GEOWEB GW30V, OR APPROVED EQUIVALENT PRODUCT. MINIMUM CELL DEPTH SHALL BE 6".
2. INSTALLATION SHALL BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. GRAVEL FILL MATERIAL SHALL CONSIST OF CLEAN, WASHED, DURABLE, SHARP-ANGLED CRUSHED STONE OF UNIFORM QUALITY, MEETING THE SPECIFICATIONS OF NYSDOT ITEM 703-02, SIZE DESIGNATION 3, 4A OR 4 OF TABLE 703-4. STONE MAY BE PLACED IN FRONT OF, AND SPREAD WITH, A TRACKED VEHICLE. GRAVEL SHALL NOT BE COMPACTED.
4. ACCESS ROAD SHALL BE TOP DRESSED AS REQUIRED WITH 2"-4" WASHED CRUSHED STONE MEETING NYSDOT ITEM 703-0201, SIZE DESIGNATION 3, 4A OR 4 OF TABLE 703-4 SPECIFICATIONS.
5. THE TOP EDGES OF ADJACENT CELL WALLS SHALL BE FLUSH WHEN CONNECTING. ALIGN THE I-SLOTS FOR INTERLEAF AND END TO END CONNECTIONS. THE GEOWEB PANELS SHALL BE CONNECTED WITH ATRA KEYS AT EACH INTERLEAD AND END TO END CONNECTIONS. REFER TO MANUFACTURER'S SPECIFICATION FOR PROPER INSTALLATION, TYING AND CONNECTIONS.

BASIS OF DESIGN: PRESTO GEOSYSTEMS GEOWEB; 670 NORTH PERKINS STREET, APPLETON, WI; 800-548-3424 OR 920-738-1222; INFO@PRESTOGEO.COM; WWW.PRESTOGEO.COM

WOVEN GEOTEXTILE MATERIAL NOTES:

1. GEOTEXTILE SHALL BE RS280i OR APPROVED EQUIVALENT.
2. SPECIFIED GEOTEXTILE WILL ONLY BE UTILIZED IN PLACID SOILS, OR AS DIRECTED BY PROJECT ENGINEER OR ENVIRONMENTAL INSPECTOR.

BASIS OF DESIGN: TENCATE MIRAFI RSi-SERIES WOVEN GEOSYNTHETICS; 365 SOUTH HOLLAND DRIVE, PENDERGRASS, GA;800-685-9990 OR 706-693-2226; WWW.MIRAFI.COM

PERVIOUS ACCESS ROAD DESIGN NOTES:

1. THE LIMITED USE PERVIOUS ACCESS ROAD CROSS SLOPE SHALL NOT EXCEED 2.5%. THE LONGITUDINAL SLOPE OF THE ACCESS DRIVE SHALL NOT EXCEED 12%.
2. A DRAINAGE DITCH IS REQUIRED FOR CIRCUMSTANCES WHERE CONCENTRATING FLOW CAN NOT BE AVOIDED. THE INTENTION OF THIS DESIGN IS TO MINIMIZE ALTERATIONS TO HYDROLOGY, HOWEVER WHEN DEALING WITH 2%-15% GRADES NOT PARALLEL TO THE CONTOUR, A ROADSIDE DITCH MAY BE REQUIRED. THE NYS STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROLS FOR GRASSED WATERWAYS AND VEGETATED WATERWAYS ARE APPLICABLE FOR SIZING AND STABILIZATION. DIMENSIONS FOR THE GRASSED WATERWAY SPECIFICATION WOULD BE DESIGNED FOR PROJECT SPECIFIC HYDROLOGIC RUNOFF CALCULATIONS, AND A SEPARATE DETAIL FOR THE SPECIFIC GRASSED WATERWAY WOULD BE INCLUDED IN THIS PRACTICE. RUNOFF DISCHARGES WILL BE SUBJECT TO THE OUTLET REQUIREMENTS OF THE REFERENCED STANDARD. INCREASED POST-DEVELOPMENT RUNOFF FROM THE ASSOCIATED ROADSIDE DITCH MAY REQUIRE ADDITIONAL PRACTICES TO ATTENUATE RUNOFF TO PRE-DEVELOPMENT CONDITIONS.
3. THE DESIGN PROFESSIONAL MUST ACCOUNT FOR THE LIMITED USE PERVIOUS ACCESS ROAD IN THEIR SITE ASSESSMENT/HYDROLOGY ANALYSIS. IF THE HYDROLOGY ANALYSIS SHOWS THAT THE HYDROLOGY HAS BEEN ALTERED FROM PRE- TO POST-DEVELOPMENT CONDITIONS (SEE APPENDIX A OF GP-0-20-001 FOR THE DEFINITION OF "ALTER THE HYDROLOGY..."), THE DESIGN MUST INCLUDE THE NECESSARY DETENTION/RETENTION PRACTICES TO ATTENUATE THE RATES (10 AND 100 YEAR EVENTS) TO PRE-DEVELOPMENT CONDITIONS.

GEOWEB MATERIAL NOTES:

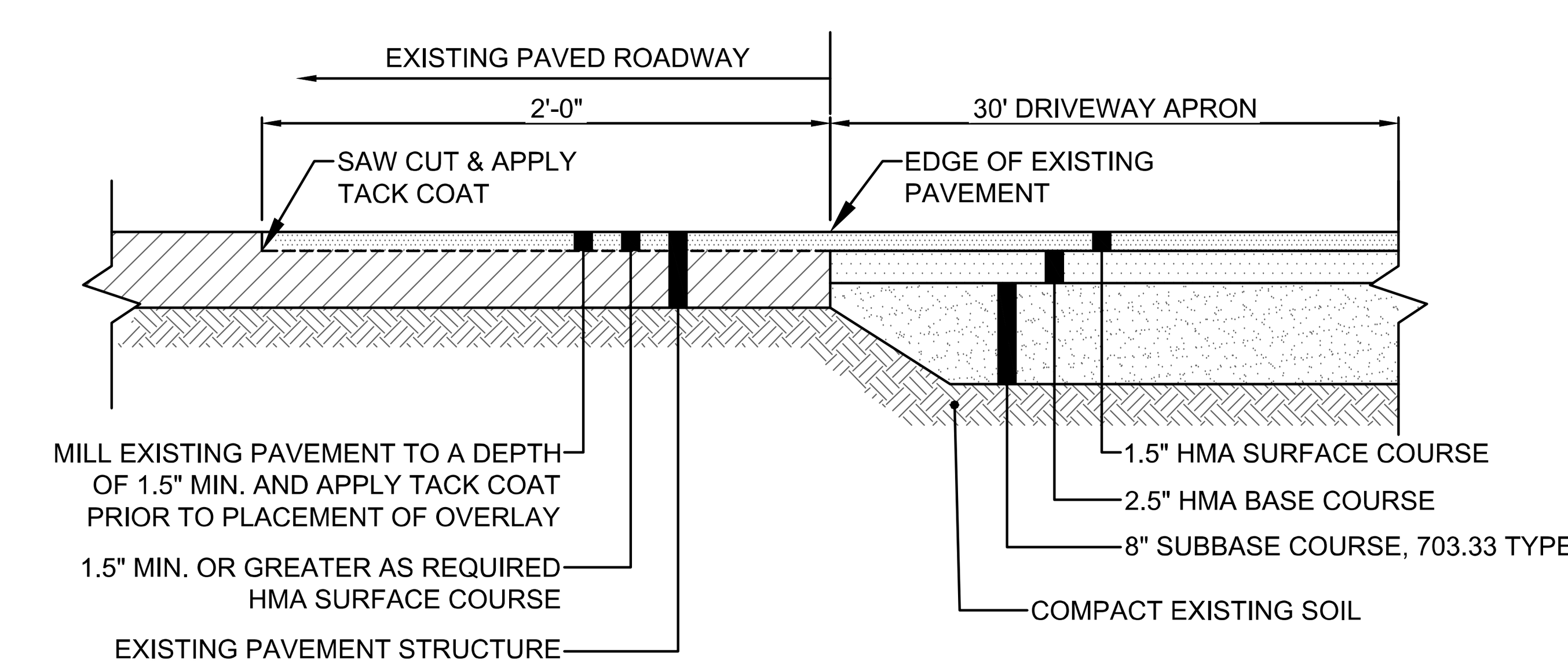
1. THE GEOWEB, OR COMPARABLE PRODUCT, IS SHALL BE USED ON ROAD PROFILES EXCEEDING 8%. THE GEOWEB PRODUCT IS INTENDED TO LIMIT SHIFTING STONE MATERIAL DURING USE.
2. GEOWEB SYSTEM SHALL BE PRESTO GEOSYSTEM GEOWEB OR APPROVED EQUAL. GEOWEB SHALL BE DESIGNED BASED ON EXISTING SOIL CONDITIONS AND PROPOSED ACCESS ROAD SLOPES.

BASIS OF DESIGN: PRESTO GEOSYSTEMS GEOWEB; 670 NORTH PERKINS STREET, APPLETON, WI; 800-548-3424 OR 920-738-1222; INFO@PRESTOGEO.COM; WWW.PRESTOGEO.COM

WOVEN GEOTEXTILE MATERIAL NOTES:

1. SPECIFIED GEOTEXTILE WILL ONLY BE UTILIZED IN PLACID SOILS. PLACID SOILS CONSIST OF POORLY DRAINED SOILS COMPOSED OF FINELY TEXTURED PARTICLES AND ARE PRONE TO RUTTING. PLACID SOILS ARE TYPICALLY PRESENT IN LOW-LYING AREAS WITH HYDROLOGIC SOILS GROUP (HSG) OF C OR D, OR AS SPECIFIED FROM AN ENVIRONMENTAL SCIENTIST, SOIL SCIENTIST, OR GEOTECHNICAL DATA.
2. THE CONCERN FOR POTENTIAL REDUCTION OF NATIVE INFILTRATION RATES DUE TO THE GEOTEXTILE MATERIAL WOULD NOT BE A SIGNIFICANT CONCERN IN POORLY DRAINED SOILS WHERE SEGREGATION OF PERVIOUS STONE AND NATIVE MATERIALS IS CRUCIAL FOR LONG TERM OPERATION AND MAINTENANCE.

BASIS OF DESIGN: TENCATE MIRAFI RSi-SERIES WOVEN GEOSYNTHETICS; 365 SOUTH HOLLAND DRIVE, PENDERGRASS, GA;800-685-9990 OR 706-693-2226; WWW.MIRAFI.COM



NOTES:
1. PAVED DRIVEWAY APRON SHALL MEET ALL NYSDOT REQUIREMENTS FOR A MINOR COMMERCIAL DRIVEWAY ACCESSED FROM A STATE HIGHWAY.

PAVED DRIVEWAY APRON
SCALE: N.T.S.

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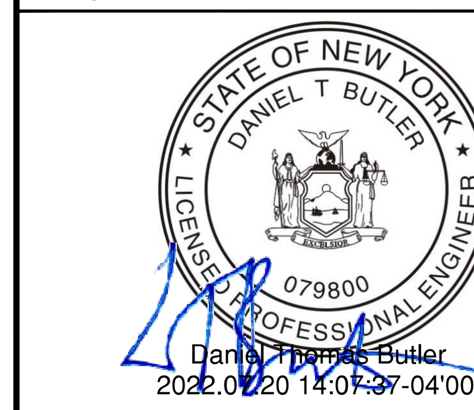
aes
2180 South 1300 East, Suite 600
Salt Lake City, UT 84106-2749
(801) 679 - 3500

TRC
249 Western Avenue
Augusta, ME 04330

PE STAMP:



KEY PLAN:

REVISIONS:

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2	07/20/2022	ISSUED FOR PERMIT
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-	-	-
-	-	-

PROJECT TITLE:

BROOKSIDE SOLAR PROJECT

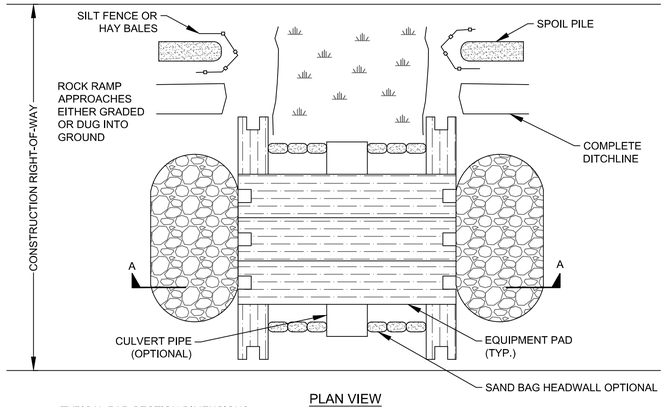
PROJECT LOCATION:

TOWNS OF BURKE AND CHATEAUGAY, NY

SHEET TITLE & DESCRIPTION:

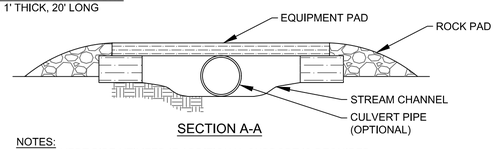
DRIVEWAY AND ROAD DETAILS

PROJ NUM:	422299
DES:	C. WINTERMUTE
DWN:	C. WINTERMUTE
CHK:	J. HEIDIG
APV:	-
DATE:	05/21/2021
SCALE AT 22" x 34":	AS NOTED
SHEET NO:	PV-C.06.01
REV:	2



PLAN VIEW

TYPICAL PAD SECTION DIMENSIONS
3' WIDE, 1' THICK, 20' LONG

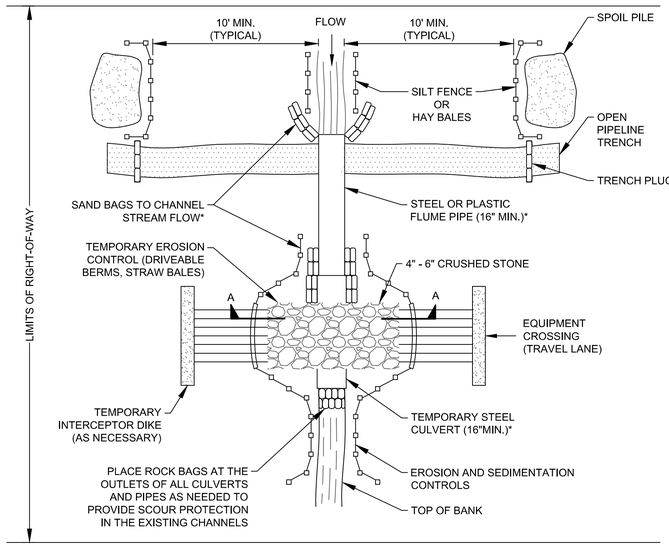


SECTION A-A

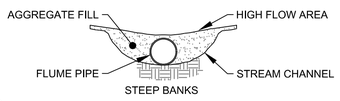
NOTES:
1. CULVERT PIPE UTILIZED IF ADDITIONAL SUPPORT IS REQUIRED.
2. ADDITIONAL PADS CAN BE PUT SIDE BY SIDE IF EXTRA WIDTH IS REQUIRED.
3. EQUIPMENT PAD TYPICALLY CONSTRUCTED OF HARDWOOD; MUST ACCOMMODATE THE LARGEST EQUIPMENT USED.
4. ROCK PADS OR CRUSHED STONE SHALL BE USED AT ENTRANCE TO THE EQUIPMENT PADS (IF NECESSARY).

TEMPORARY EQUIPMENT BRIDGE

SCALE: N.T.S.



PLAN VIEW

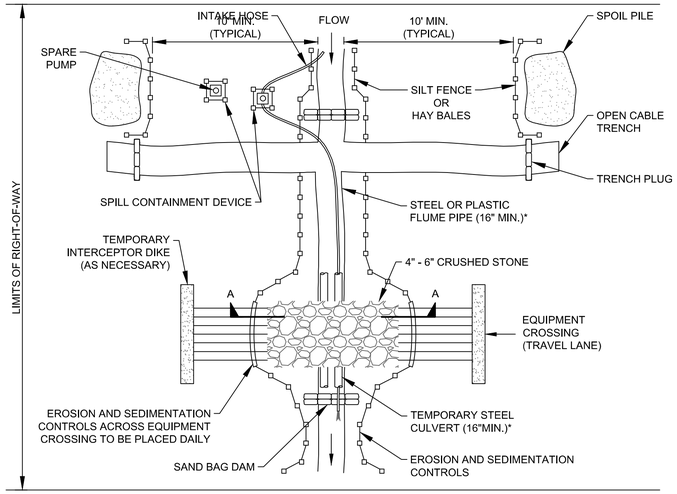


SECTION A-A

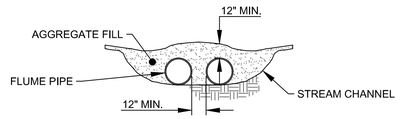
* IF WELDED PIPE IS USED SAND BAGS AT JOINTS NOT REQUIRED. ACTUAL NUMBERS OF FLUMES AND CULVERT PIPE REQUIRED TO BE DETERMINED BY STREAM WIDTH.

TYPICAL FLUMED STREAM CROSSING

SCALE: N.T.S.



PLAN VIEW

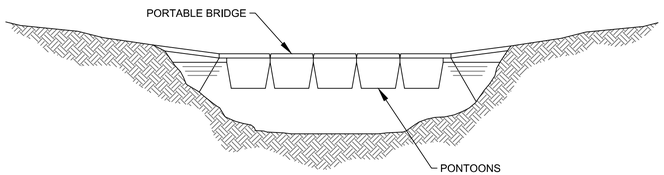


SECTION A-A

NOTES:
1. EXCAVATE ACROSS STREAM CHANNEL FOLLOWING WATER RE-ROUTING.
2. LOWER PIPE UNDER HOSE AND BACKFILL.
3. MONITOR PUMPS AT ALL TIMES DURING STREAM CROSSING PROCEDURE.
4. REMOVE SILT FENCE/HAY BALES ACROSS EQUIPMENT CROSSING AS NEEDED FOR ACCESS, AND REPLACE AT THE END OF EACH DAY.
5. NUMBER OF FLUME PIPES WILL VARY DEPENDING ON SITE CONDITIONS.

TYPICAL DAM & PUMP STREAM CROSSING

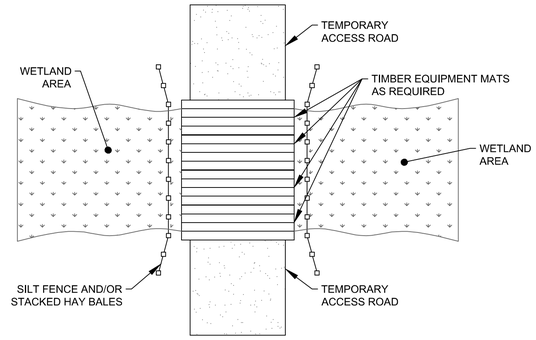
SCALE: N.T.S.



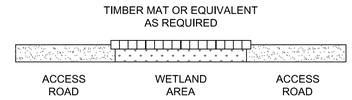
NOTES:
1. STABILIZE EDGES WITH SANDBAGS OR STONE.
2. REMOVE BRIDGE DURING CLEANUP.

TEMPORARY EQUIPMENT BRIDGE

SCALE: N.T.S.



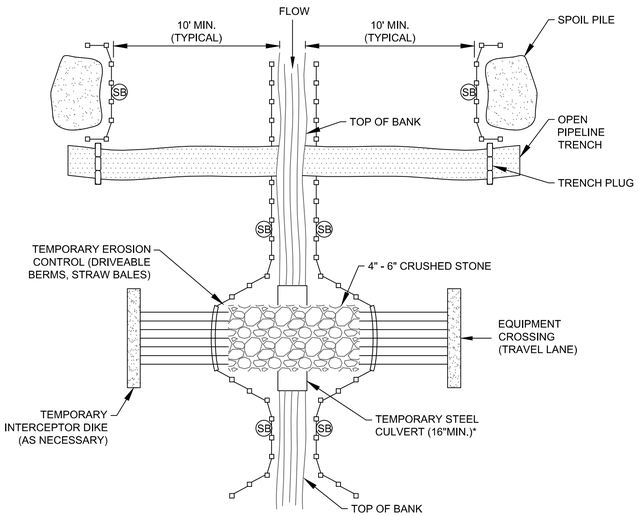
PLAN VIEW



SECTION VIEW

TEMPORARY WETLAND CROSSING

SCALE: N.T.S.



NOTES:
1. SB TEMPORARY SEDIMENT BARRIER OF SILT FENCE AND/OR STRAW BALES, OR APPROPRIATE MATERIALS.
2. FOR MINOR WATERBODIES, COMPLETE TRENCHING AND BACKFILL IN THE WATERBODY (NOT INCLUDING BLASTING OR OTHER ROCK BREAKING MEASURES) WITHIN 24 CONTINUOUS HOURS. IF A FLUME IS INSTALLED WITHIN THE WATERBODY DURING MAINLINE ACTIVITIES, IT CAN BE REMOVED JUST PRIOR TO LOWERING IN THE CABLE OR CONDUIT. THE 24-HOUR TIMEFRAME STARTS AS SOON AS THE FLUME IS REMOVED.
3. FOR INTERMEDIATE WATERBODIES, COMPLETE TRENCHING AND BACKFILLING IN THE WATERBODY (NOT INCLUDING BLASTING OR OTHER ROCK BREAKING MEASURES) WITHIN 48 CONTINUOUS HOURS, IF FEASIBLE.

* ACTUAL NUMBERS OF FLUMES AND CULVERT PIPE REQUIRED TO BE DETERMINED BY STREAM WIDTH.

TYPICAL OPEN CUT STREAM CROSSING

SCALE: N.T.S.

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STATE OF NEW YORK · DANIEL T BUTLER · LICENSED · 079800 · PROFESSIONAL ENGINEER
Daniel Thomas Butler
2022.07.20 15:07:33-04'00'

KEY PLAN:

REVISIONS:

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2	07/20/2022	ISSUED FOR PERMIT
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-	-	-

PROJECT TITLE:

BROOKSIDE SOLAR PROJECT

PROJECT LOCATION:

TOWNS OF BURKE AND CHATEAUGAY, NY

SHEET TITLE & DESCRIPTION:

WATER CROSSING DETAILS

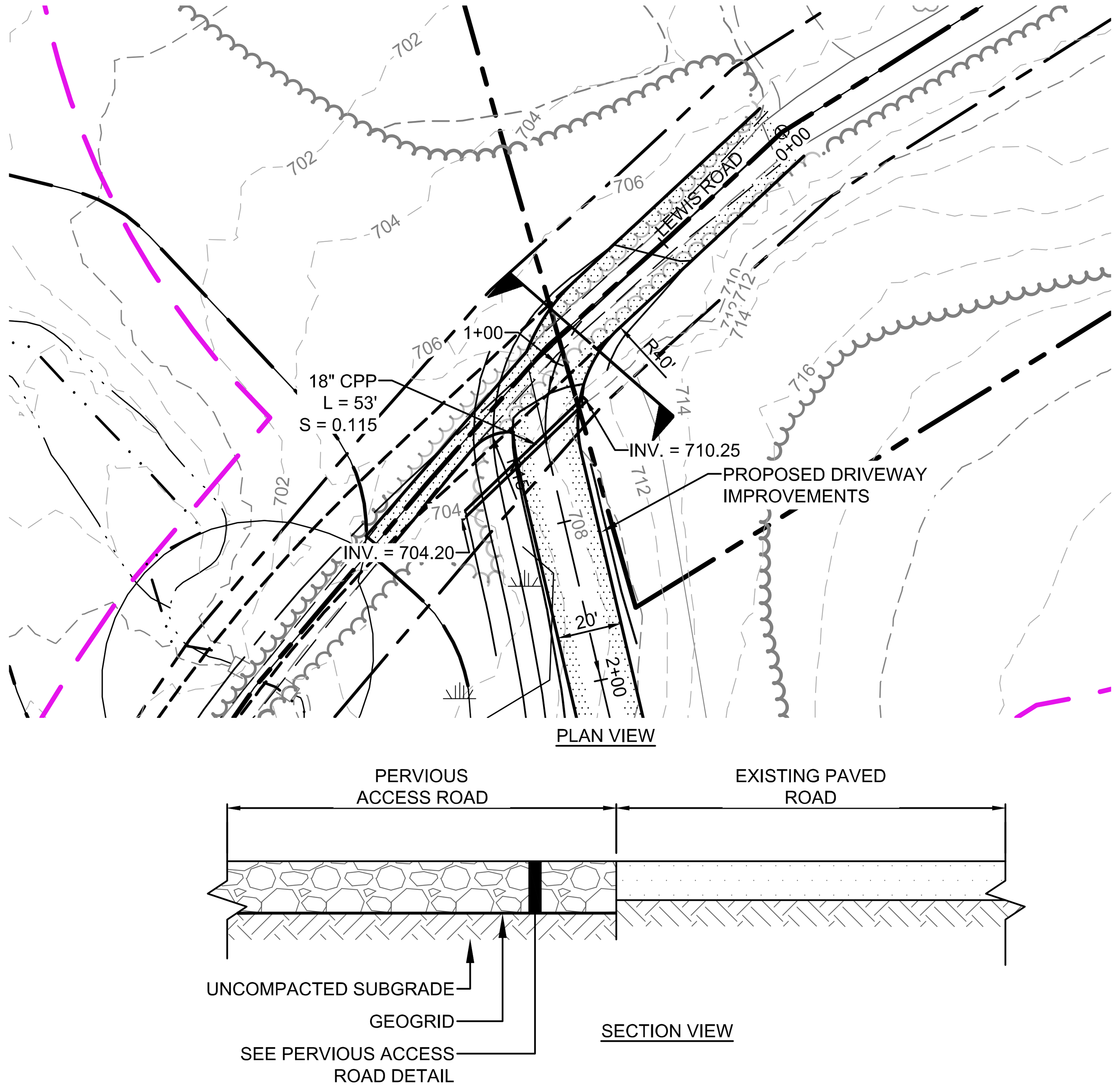
PROJ NUM:	422299
DES:	C. WINTERMUTE
DWN:	C. WINTERMUTE
CHK:	J. HEIDIG
APV:	-
DATE:	05/21/2021

SCALE AT 22" x 34":

AS NOTED

SHEET NO: PV-C.07.01

REV: 2



SITE ENTRANCE 1

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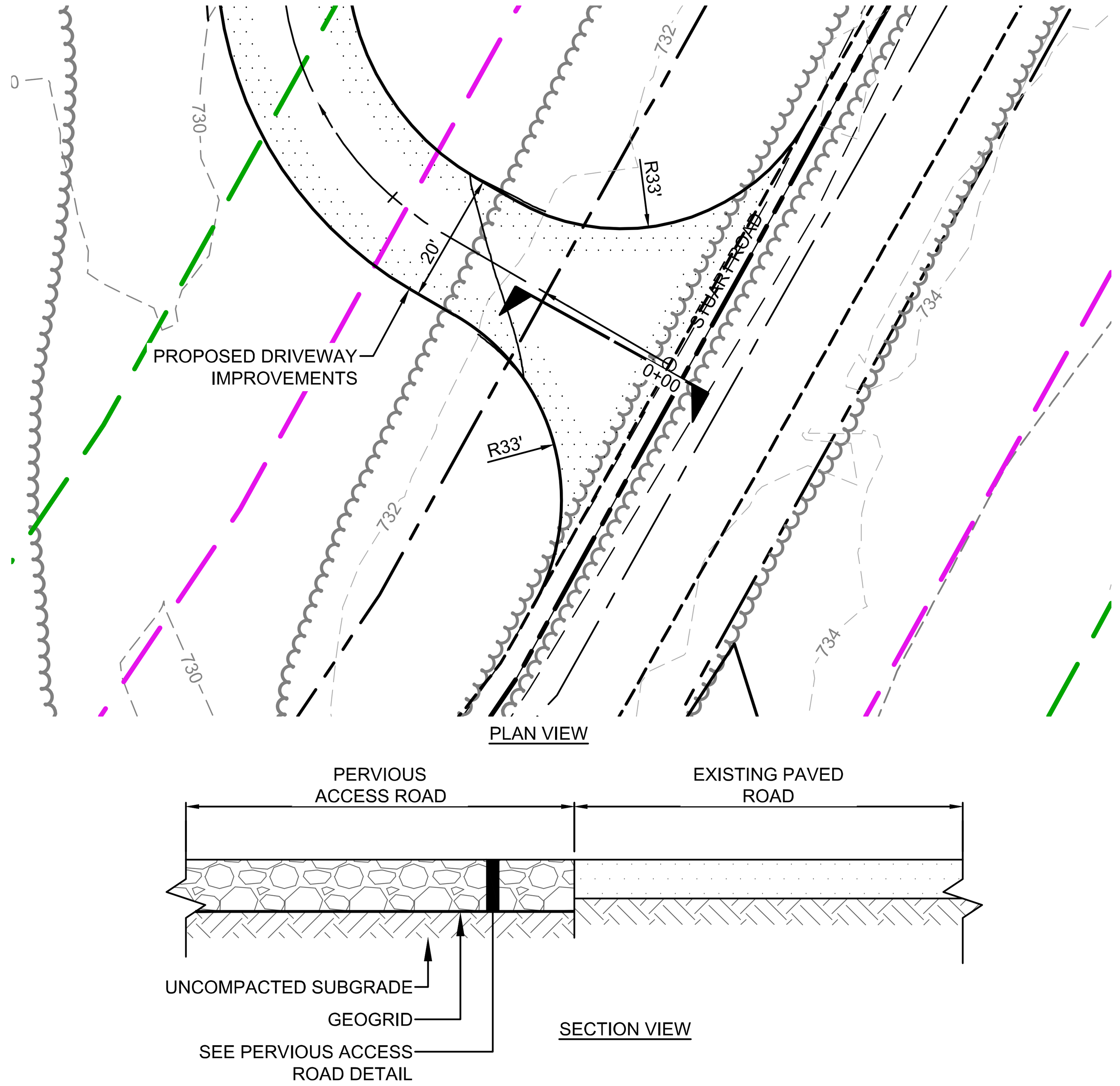

SITE ENTRANCE 2

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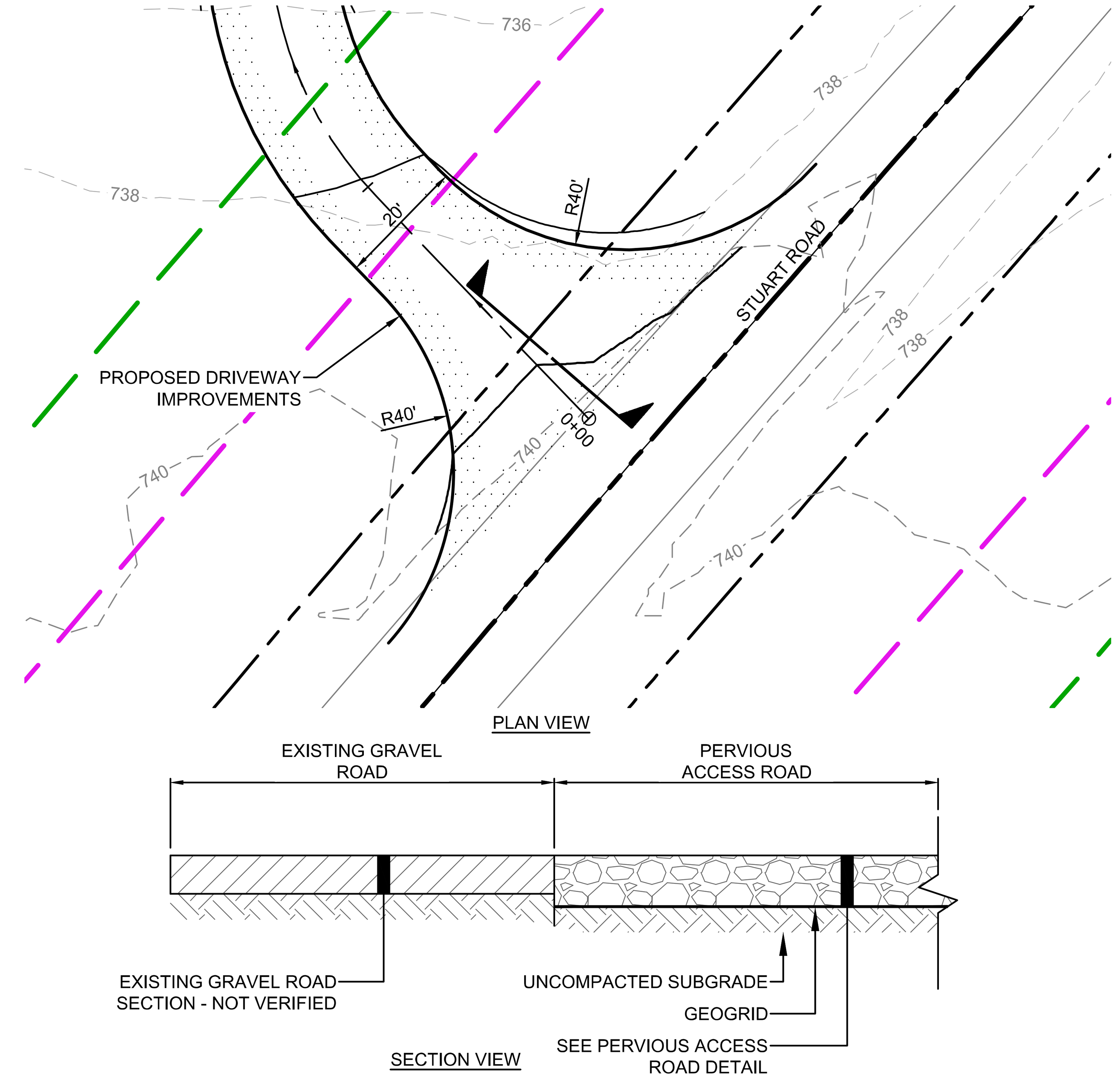
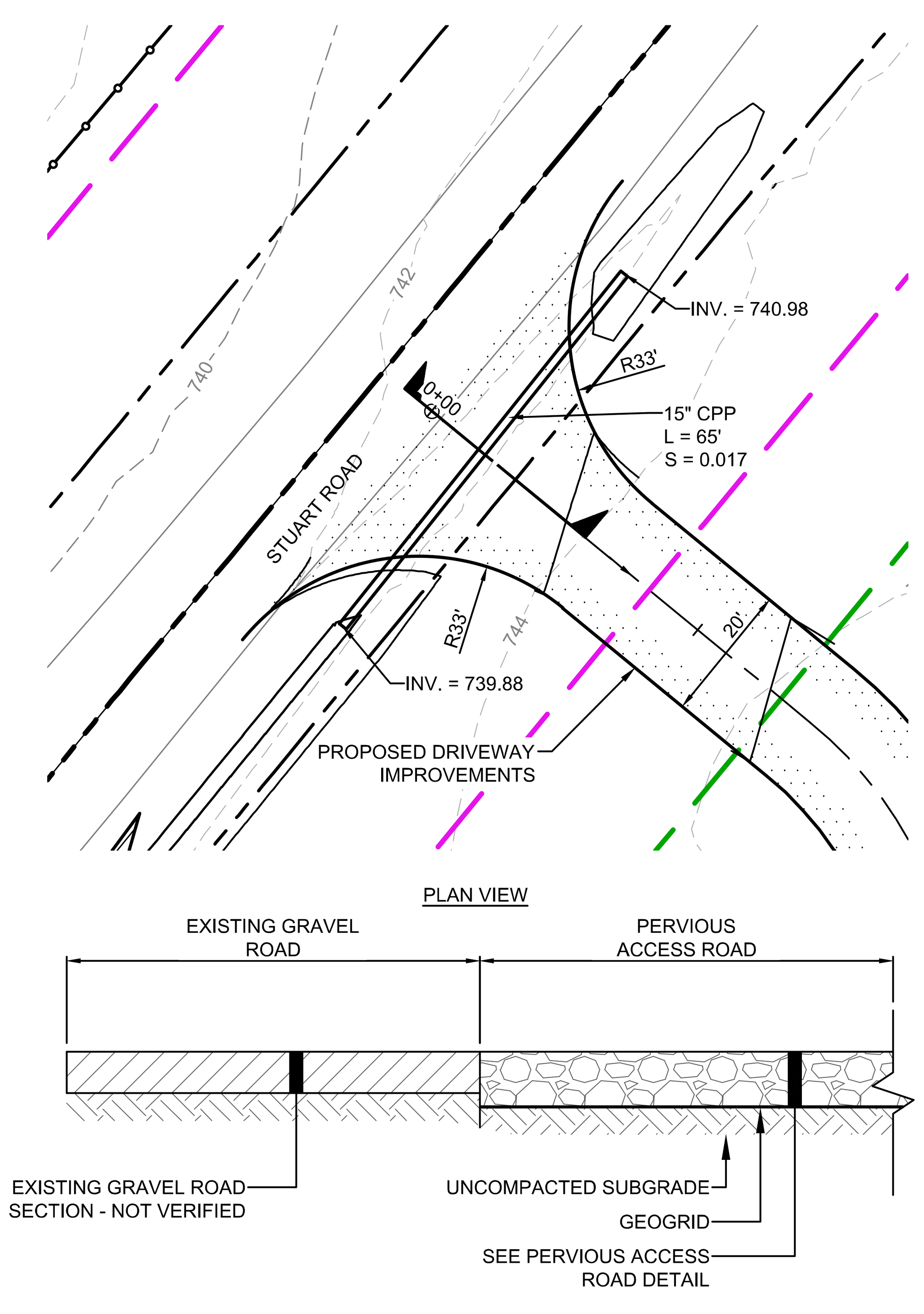


SITE ENTRANCE 3

SCALE: N.T.S.



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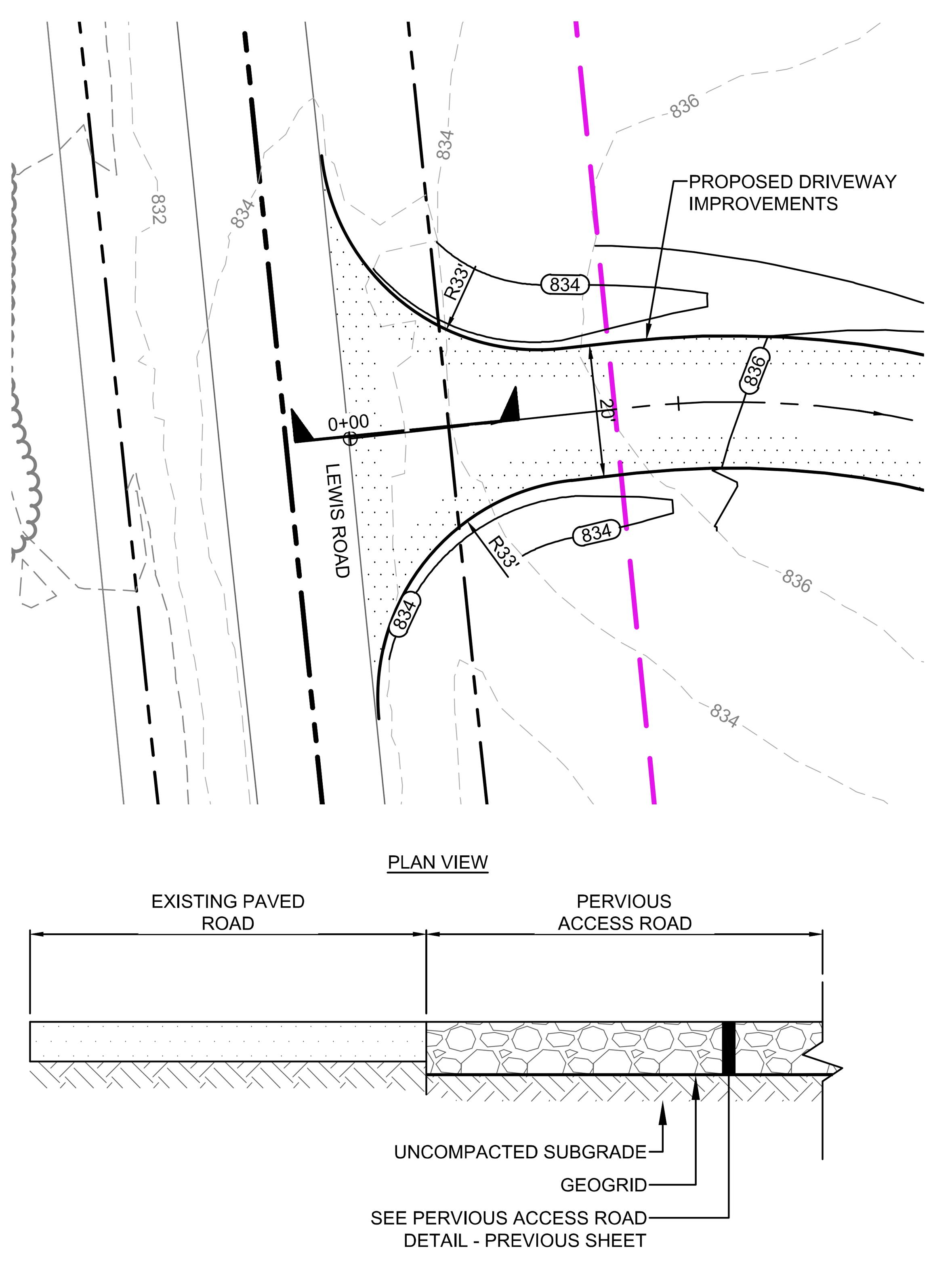
SITE ENTRANCE 4

SCALE: N.T.S.



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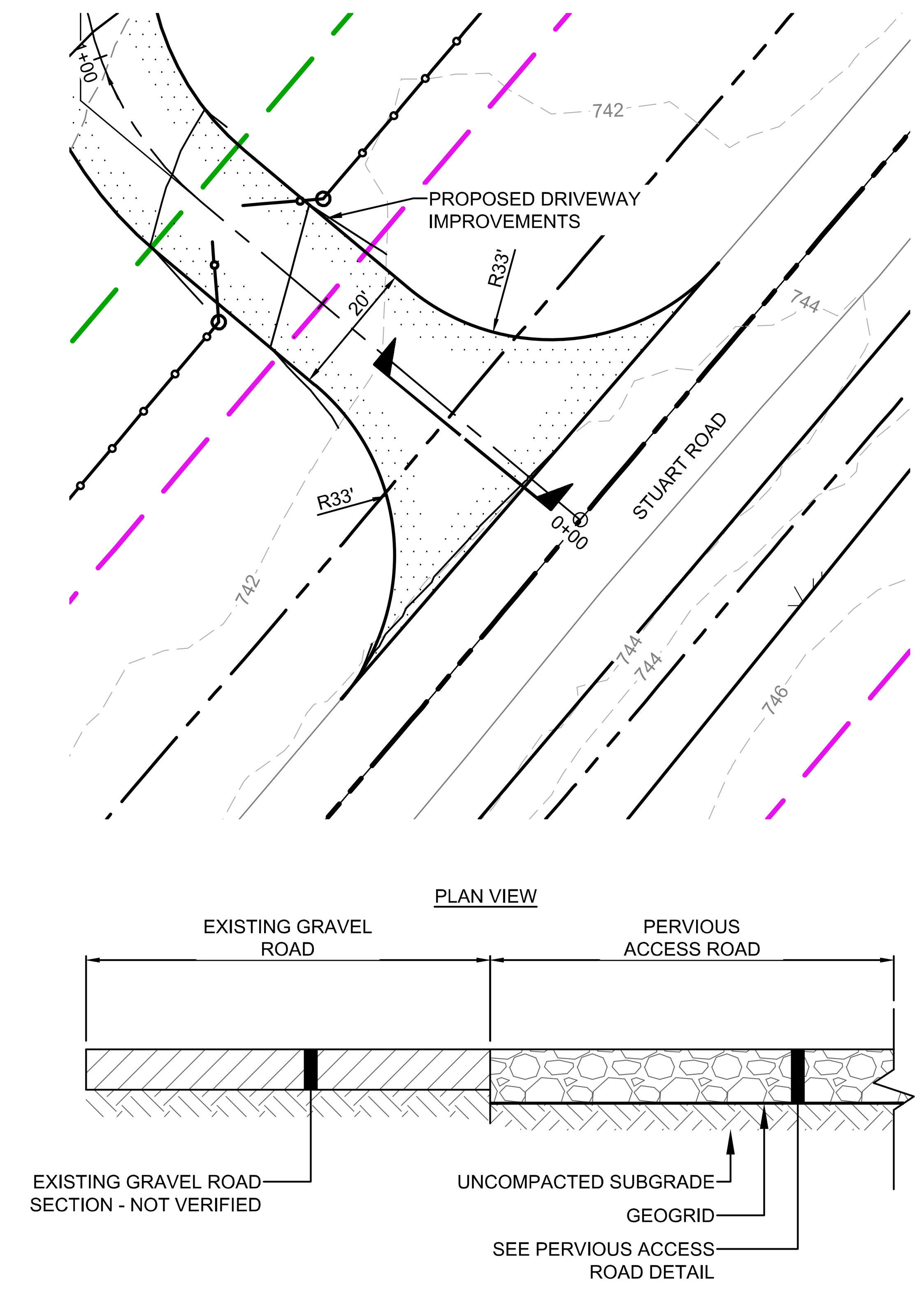
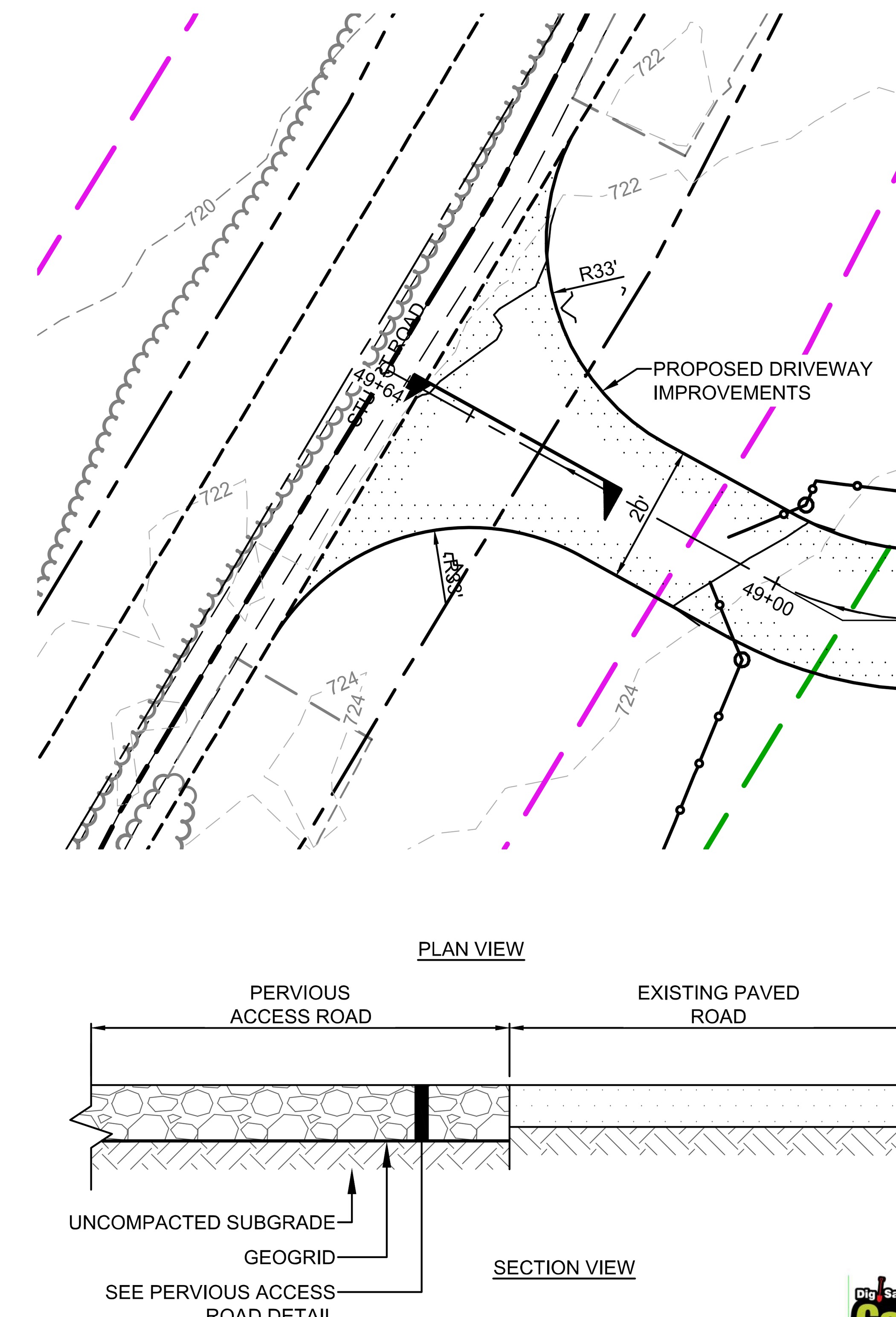


SITE ENTRANCE 12

SCALE: N.T.S.



SITE ENTRANCE 13

SCALE: N.T.S.

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Daniel Thomas Butler
2022.07.20 14:08:08-04'00'

KEY PLAN:

REVISIONS:

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-	-	-
-	-	-

PROJECT TITLE:

BROOKSIDE SOLAR PROJECT

PROJECT LOCATION:

TOWNS OF BURKE AND CHATEAUGAY, NY

SHEET TITLE & DESCRIPTION:

SITE ENTRANCE DETAILS 1

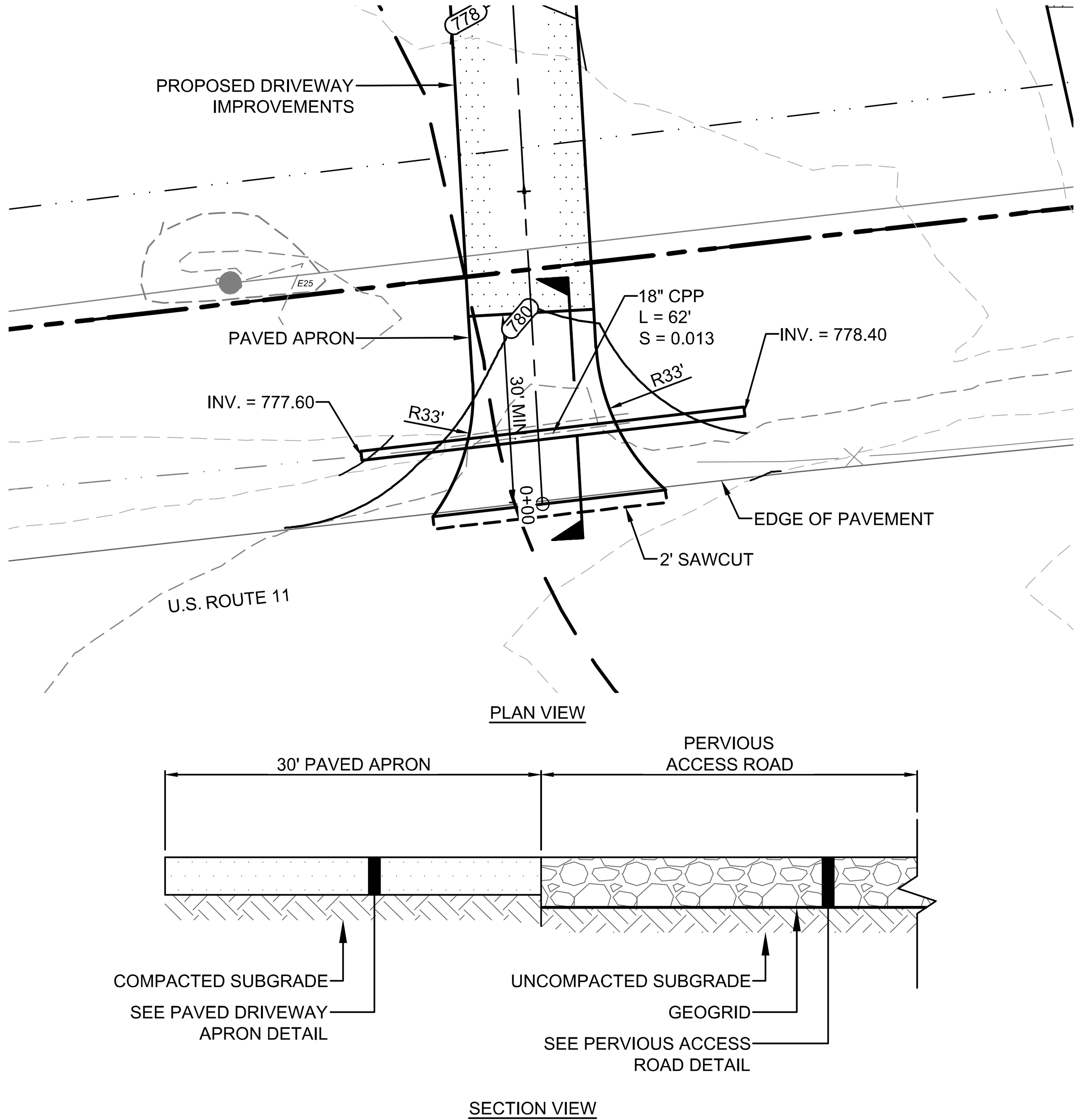
PROJ NUM:	422299
DES:	C. WINTERMUTE
DWN:	C. WINTERMUTE
CHK:	J. HEIDIG
APV:	-
DATE:	05/21/2021

SCALE AT 22" x 34":

AS NOTED

SHEET NO: PV-C.08.01

REV: 2



SITE ENTRANCE 6

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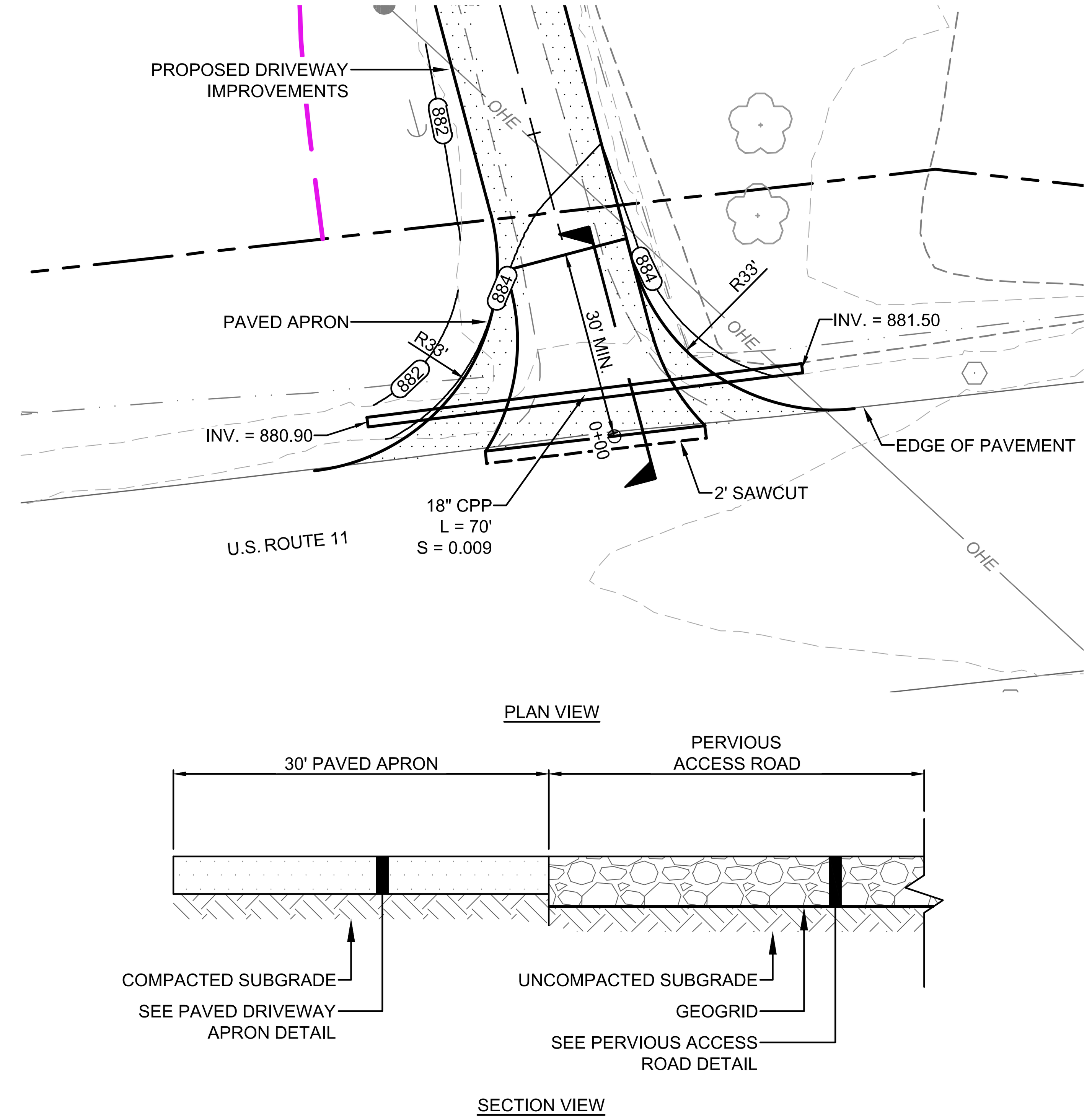

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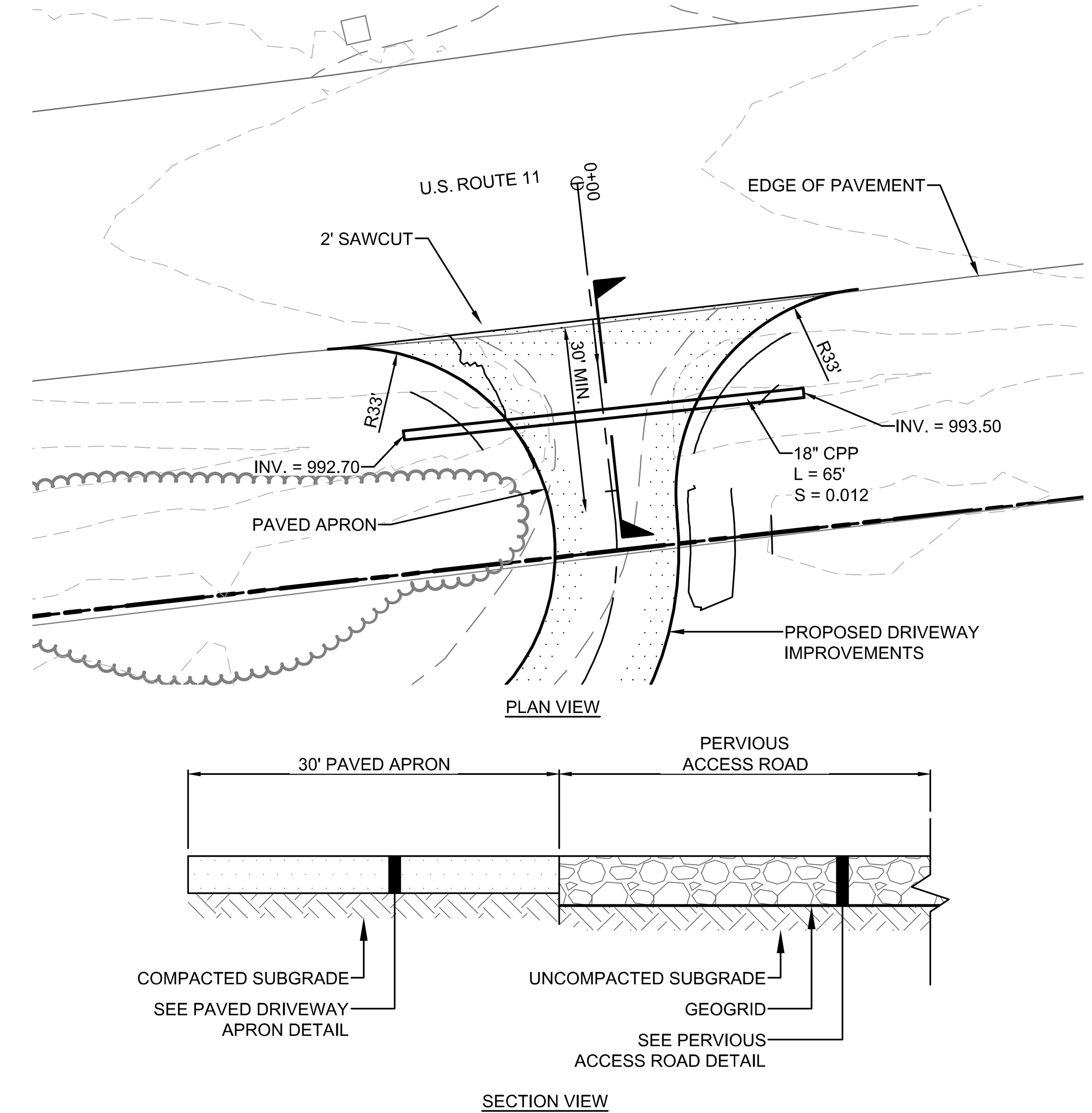

SITE ENTRANCE 8

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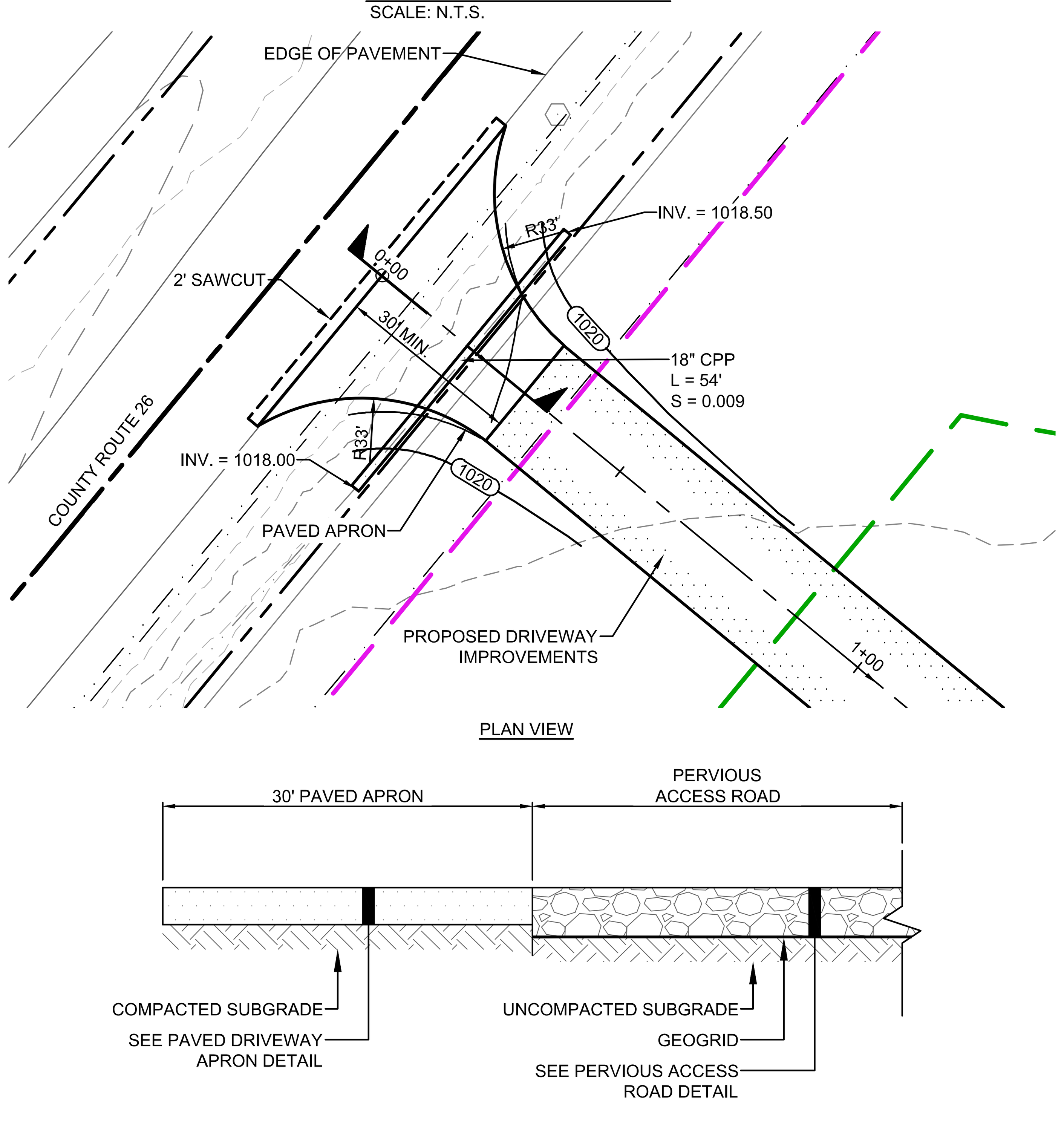

SITE ENTRANCE 9

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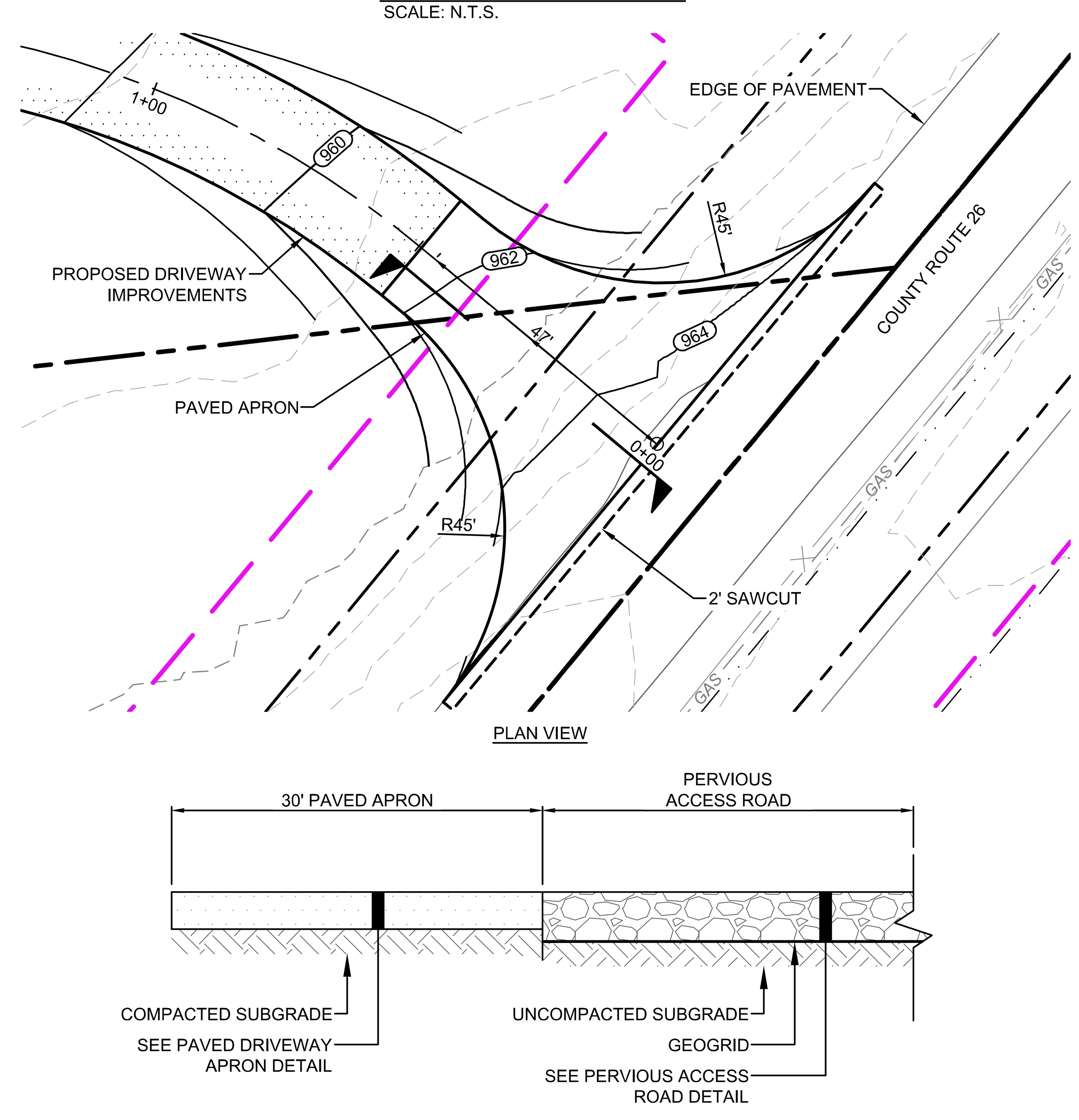

SITE ENTRANCE 10

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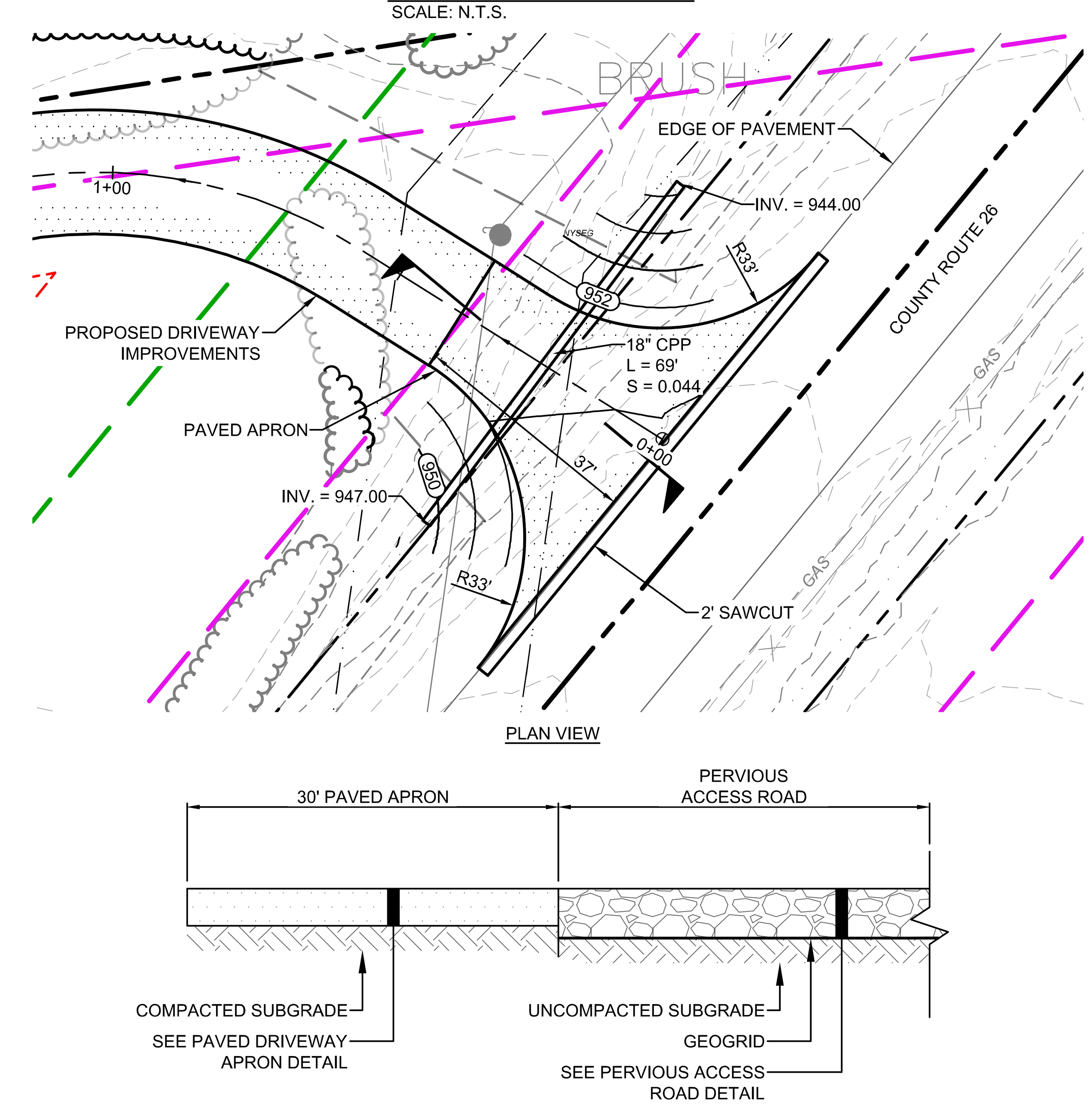

SITE ENTRANCE 11

SCALE: N.T.S.

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Daniel Thomas Butler
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KEY PLAN:

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PROJECT TITLE:

BROOKSIDE SOLAR PROJECT

PROJECT LOCATION:

TOWNS OF BURKE AND CHATEAUGAY, NY

SHEET TITLE & DESCRIPTION:

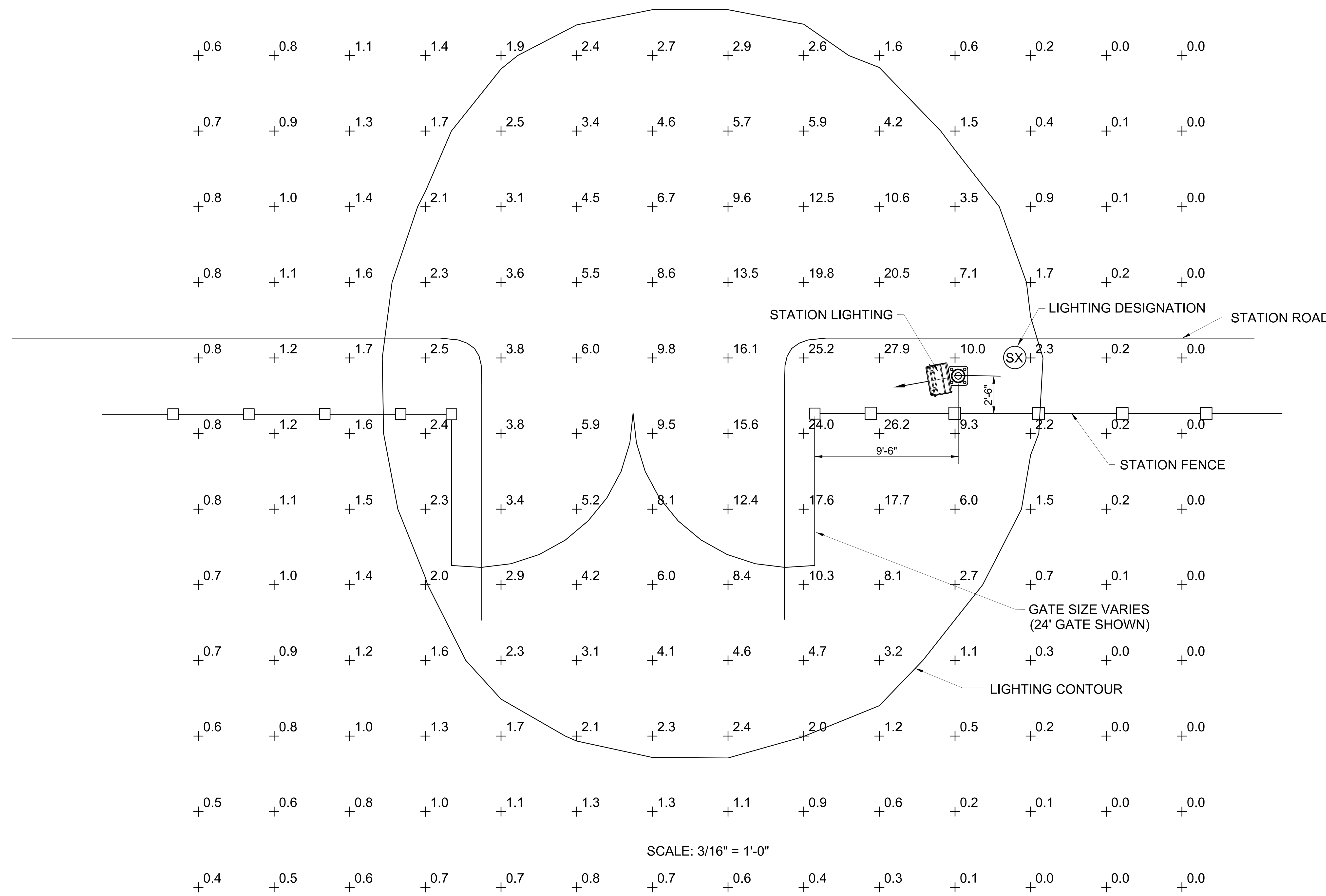
SITE ENTRANCE DETAILS 2

PROJ NUM:	422299
DES:	C. WINTERMUTE
DWN:	C. WINTERMUTE
CHK:	J. HEIDIG
APV:	-
DATE:	05/21/2021

SCALE AT 22" x 34":

AS NOTED

SHEET NO:	REV:
PV-C.08.02	2

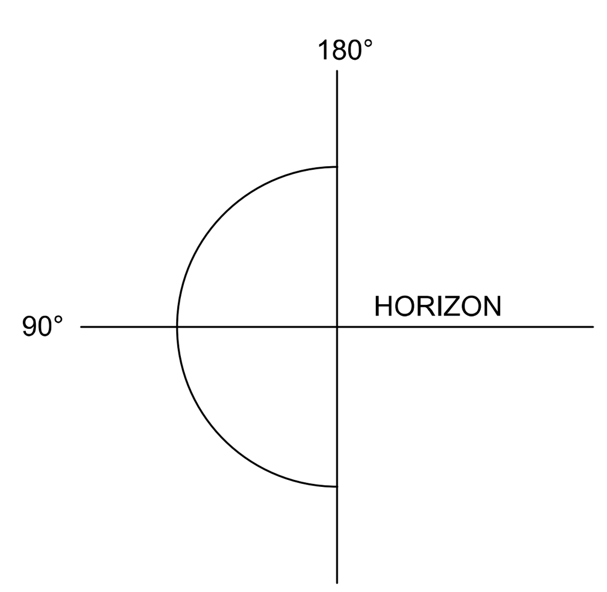


SCALE: 3/16" = 1'-0"

TABLE 1 - LIGHTING FIXTURE SCHEDULE (NOTE 2)

FIXTURE								LAMP	PHOTO-ELECTRIC CONTROL
TYPE	WATTAGE	LIGHT SOURCE	VOLTAGE	WEIGHT (LBS)	LUMENS	NEMA CLASS	TILT ANGLE	MANUFACTURER (GE) ITEM #	MANUFACTURER ITEM #
A3	150W	LED	120V	26	18,800	7X6	60°	GE EVOLVE EFH101AA76740 W/ TOP & SIDE VISOR TSDKBZ-EFH	N/A

TILT KEY



NOTES:

1. ENTRANCE GATE LIGHTING IS COMPRISED OF (1) 150W,120V AC LED FLOODLIGHT PER GATE. THIS GATE DETAIL IS APPLICABLE TO ALL PV YARD AND O&M YARD GATES. (20) PV YARD GATES AND (1) O&M GATE. A TOTAL OF (21) FIXTURES ARE REQUIRED.
2. LIGHT FIXTURES TO BE MOUNTED ON INDICATED STRUCTURES 15' ABOVE FINISHED GRADE. THE FIXTURES SHALL BE AIMED AS SHOWN ON THIS DRAWING AND HAVE A TILT ANGLE BASED ON THE FIXTURE SCHEDULE.
3. LIGHTING CONTOUR IS 2 FT CANDLES (F.C.) AVERAGE FOR THIS YARD.
4. FLOODLIGHTS INSTALLED WITH TOP AND SIDE VISORS ACHIEVE FULL CUTOFF REQUIREMENT (0 F.C.) ABOVE FIXTURE.
5. GATE LIGHTS SHALL BE CAPABLE OF MANUAL SHUT-OFF.

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PROJECT TITLE:

BROOKSIDE SOLAR ENERGY FACILITY

PROJECT LOCATION:

TOWNS OF BURKE AND CHATEAUGAY, NY

SHEET TITLE & DESCRIPTION:

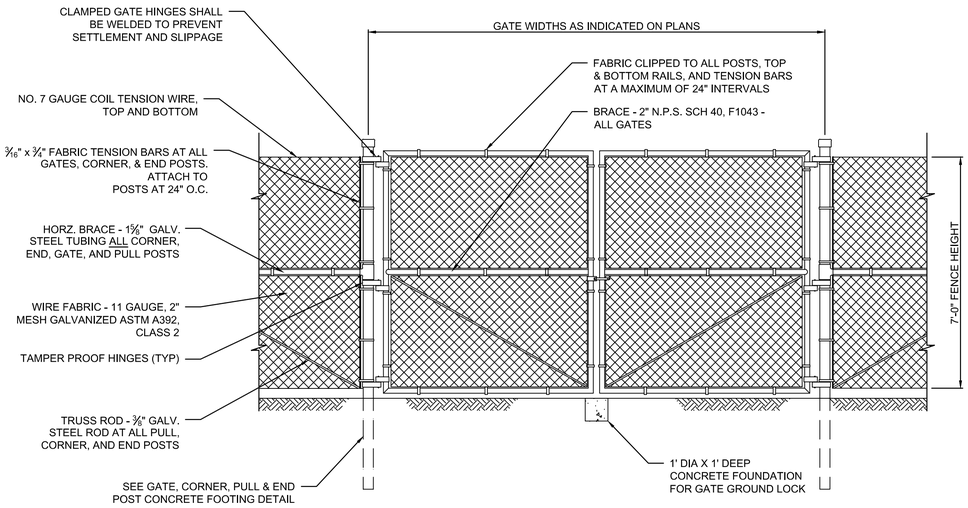
PV ENTRANCE GATE LIGHTING

LIGHTING DETAIL

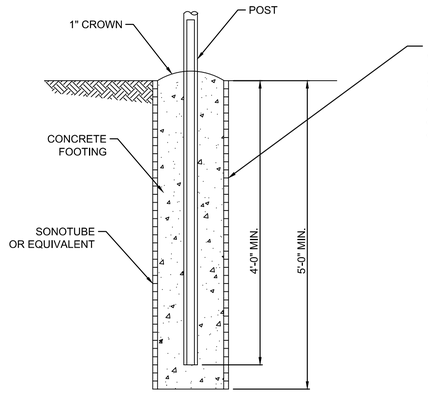
PROJ NUM:	422299
DES:	D. FARRELL
DWN:	D. FARRELL
CHK:	C. PASCALE
APV:	C. PASCALE
DATE:	05/21/21

SCALE AT 22" x 34": 0 2' 4' 8' 12'
3/16" = 1'-0"

SHEET NO: PV-C.08.03 REV: 1



SWING GATE FRAME
NOT TO SCALE



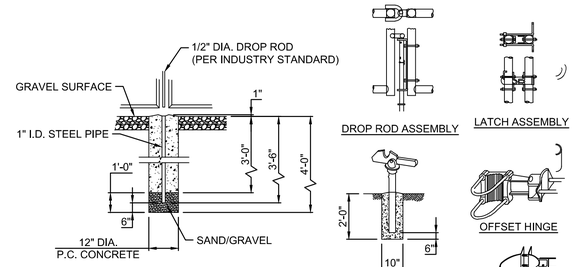
POSTS SHALL BE STEEL PIPE, ASTM F1083 STANDARD WEIGHT. POSTS SHALL BE DRIVEN 6' INTO UNDISTURBED SUBGRADE SOIL FOR LINE POSTS OR SET IN 2'-0" DIA. X 5' MIN DEEP CONCRETE FOR CORNER AND GATE POST.

- LINE POSTS - 1 1/2" SCH 40 (O.D. = 1 7/8")
- GATE POSTS - 3 1/2" SCH 40 (O.D. = 4")
- CORNER AND PULL POSTS - 2" SCH 40 (O.D. = 2 3/8")

POST USE	GATE	CORNER	PULL	END
NOMINAL PIPE SIZE (INCHES)	4	2 3/8	2 3/8	2 3/8
SONOTUBE SIZE (INCHES)	12	12	12	12

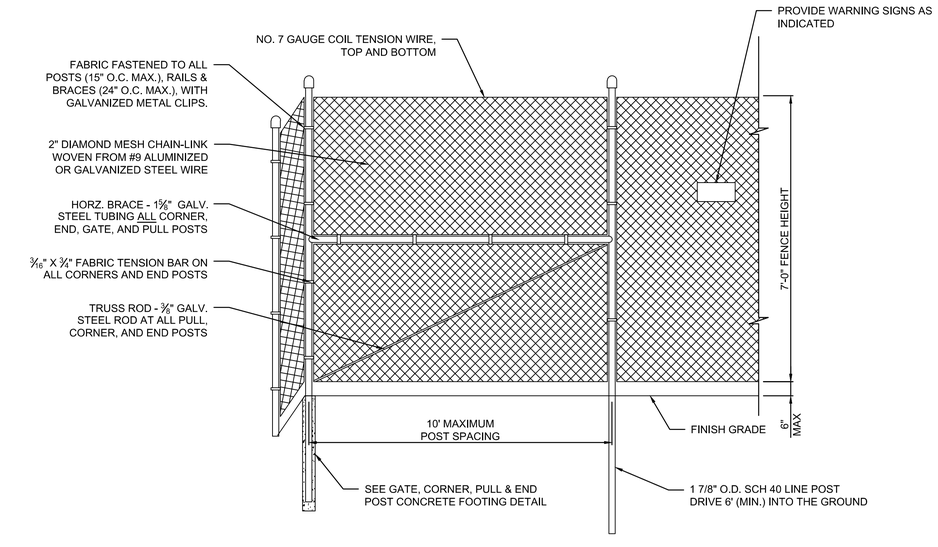
FOOTING NOTES:
1. UNLESS OTHERWISE INDICATED, FENCE POST SIZES ARE INDUSTRY STANDARD NOMINAL SIZES IN ACCORDANCE WITH ASTM F 1083, GALVANIZED STEEL PIPE.
2. BACKFILL SONOTUBE WITH MIN. 3,000 PSI CONCRETE.
3. ALL CONCRETE SHALL BE SINGLE POUR TO FINAL GRADE.
4. WHEN INSTALLING POSTS IN CLAY:
   - POST HOLE DEPTH SHALL BE INCREASED TO 6 FEET.
   - BACKFILL 4 FEET WITH CONCRETE.
   - BACKFILL FINAL 2 FEET WITH NATIVE SOIL.
5. WHEN INSTALLING POSTS IN LEDGE, CORE AND GROUT POSTS IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
6. LINE POSTS SHALL BE DRIVEN TO A DEPTH OF 6 FEET BELOW GRADE, AND NOT SET IN CONCRETE.

GATE, END, BRACE & CORNER POST CONCRETE FOOTING DETAIL
NOT TO SCALE

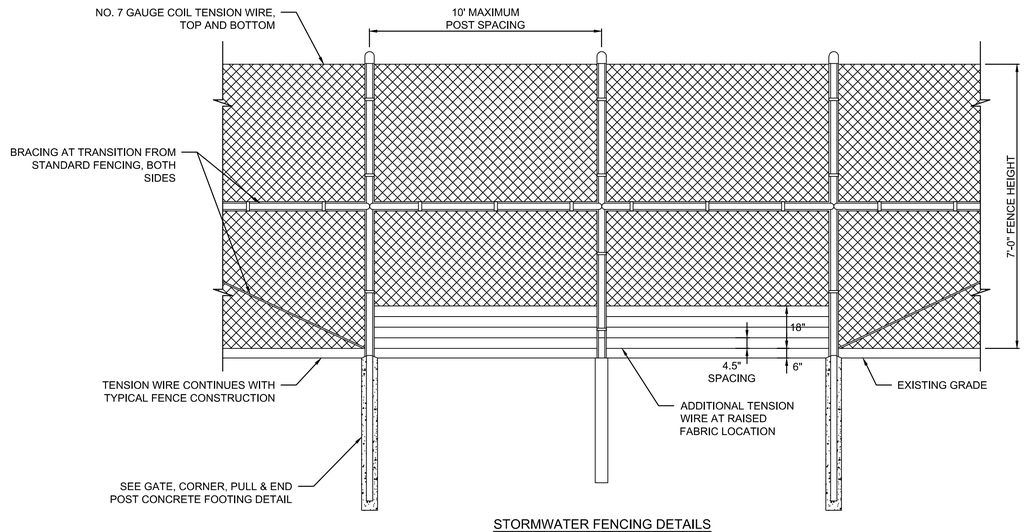


ACCESS GATE DETAILS
NOT TO SCALE

GENERAL FENCING NOTES:
1. ALL ITEMS SHALL BE GALVANIZED AND ZINC COATED TO ASTM SPECIFICATIONS, INCLUDING ALL POSTS, RAILS, GATES, AND HARDWARE.
2. GATE FENCE FABRIC SHALL BE MOUNTED INSIDE THE FRAME.
3. All SWING GATE OPENINGS SHALL BE 24 FEET UNLESS OTHERWISE SPECIFIED.
4. SWING GATES SHALL BE CONSTRUCTED WITH DROP RODS, PADLOCKS, LATCH ASSEMBLY, AND GATE KEEPERS.
5. BOLTS AND HINGES SHALL BE OF A TAMPER-PROOF TYPE.
6. EXPOSED BOLTS AND NUTS SHALL BE SPOT WELDED.
7. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL FENCE AND GATE REQUIREMENTS



ARRAY FENCE DETAILS
NOT TO SCALE



STORMWATER FENCING DETAILS
NOT TO SCALE

FENCING NOTES:
1. FENCING CONTRACTOR TO DESIGN AND INSTALL FENCE PER LOCAL REQUIREMENTS AND/OR SUGGESTED PRACTICE FOR ALL COMPONENTS NOT SPECIFICALLY CALLED OUT.
2. THE CONTRACTOR SHALL BECOME FAMILIAR WITH ALL EXISTING SITE CONDITIONS AND WITH DESIGN DOCUMENTS PROVIDED BY THE VARIOUS DESIGN PROFESSIONALS INVOLVED IN THIS PROJECT.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, DETAILS, AND SPATIAL RELATIONSHIPS SHOWN ON THESE DRAWINGS IN CONJUNCTION WITH ALL OTHER RELATED DESIGN DRAWINGS. ANY DISCREPANCIES, CONFLICTS, OR OMISSIONS FOUND SHALL BE REPORTED TO THE ENGINEER AND OTHER DESIGN PROFESSIONALS AS APPROPRIATE FOR RESOLUTION PRIOR TO PROCEEDING WITH ANY WORK ON THE PROJECT.
4. THE CONTRACTOR SHALL REVIEW ALL SUBMITTALS, INCLUDING SHOP DRAWINGS, AND VERIFY CORRECTNESS OF THEM PRIOR TO SUBMISSION TO OWNER.
5. MAXIMUM SPACING BETWEEN BRACES SHALL BE 500 FEET. CORNER BRACES TO BE PROVIDED WHERE CORNER ANGLE IS 15° OR MORE AND WHERE SPACING REACHES 500 FEET.
6. SEE ELECTRICAL SHEETS FOR REQUIRED SIGNAGE.
7. ALL STEEL SHALL BE GALVANIZED PER ASTM A123 UNLESS CORROSION ANALYSIS REPORT RECOMMENDS ADDITIONAL CORROSION PROTECTION.
8. FOUNDATION CONCRETE SHALL MEET NEW YORK DOT SPECIFICATIONS FOR CLASS A3 CONCRETE.
9. FACILITY LAYOUT RELATIVE TO THE PROJECT WETLANDS AND BOUNDARY SHALL BE CONFIRMED BY A LICENSED LAND SURVEYOR PRIOR TO CONSTRUCTION.

STORMWATER FENCING NOTES:
1. THE STORMWATER FENCES SHOULD BE INSPECTED AFTER RUNOFF PRODUCING STORM EVENTS AND CLEARED OF DEBRIS.
2. POST REPLACEMENT SHOULD BE AVOIDED IF POSSIBLE AND MINIMIZED WITHIN THE WETLAND CROSSINGS. CONTRACTOR MUST NOT ALLOW VEHICLES TO CROSS THE WETLANDS EXCEPT WHEN ABSOLUTELY REQUIRED TO INSTALL THE STORMWATER FENCING.
3. TENSION WIRE STRANDS AT THE BOTTOM, WITH A MAXIMUM OF 6 INCHES BETWEEN STRANDS FOR 24 INCHES (STARTING FROM THE GROUND.)
4. ADDITIONAL BRACING OR LARGER POST SIZE MAY BE REQUIRED TO SPAN WETLANDS ONSITE.

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KEY PLAN:

REVISIONS:

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-	-	-
-	-	-
-	-	-

PROJECT TITLE:

BROOKSIDE SOLAR PROJECT

PROJECT LOCATION:

TOWNS OF BURKE AND CHATEAUGAY, NY

SHEET TITLE & DESCRIPTION:

ARRAY FENCING DETAILS

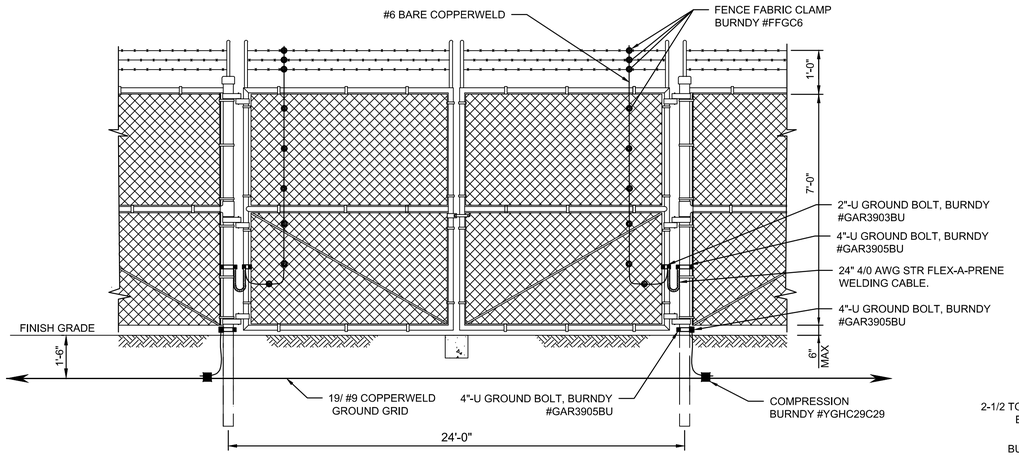
PROJ NUM:	422299
DES:	C. WINTERMUTE
DWN:	C. WINTERMUTE
CHK:	J. HEIDIG
APV:	-
DATE:	05/25/2021

SCALE AT 22" x 34":

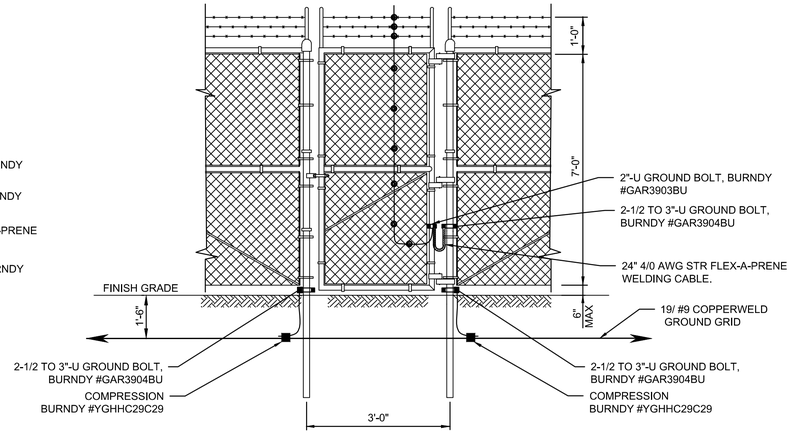
AS NOTED

SHEET NO: PV-C.10.01

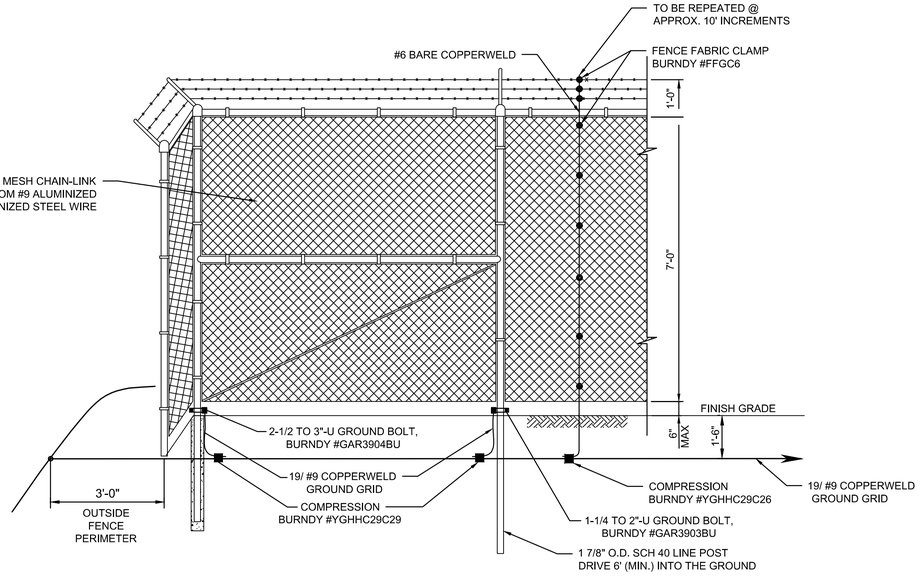
REV: 2



VEHICLE SWING GATE FRAME GROUNDING
NOT TO SCALE



PERSONNEL SWING GATE FRAME GROUNDING
NOT TO SCALE

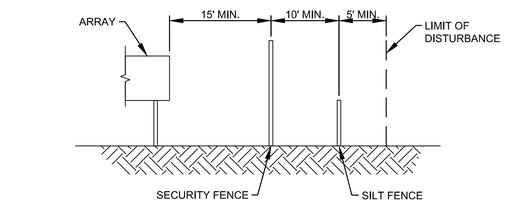


SUBSTATION FENCE GROUNDING DETAILS
NOT TO SCALE

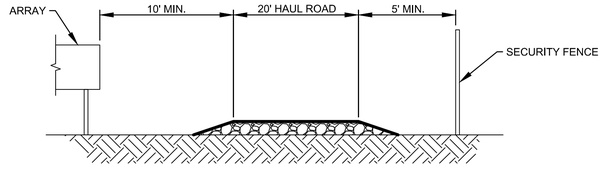
POST USE	GATE	CORNER	PULL	END	LINE
NOMINAL PIPE SIZE (INCHES)	4	2 3/8	2 3/8	2 3/8	1 7/8
SONOTUBE SIZE (INCHES)	12	12	12	12	12

FENCING NOTES:
1. FENCING CONTRACTOR TO DESIGN AND INSTALL FENCE PER LOCAL REQUIREMENTS AND/OR SUGGESTED PRACTICE FOR ALL COMPONENTS NOT SPECIFICALLY CALLED OUT.
2. THE CONTRACTOR SHALL BECOME FAMILIAR WITH ALL EXISTING SITE CONDITIONS AND WITH DESIGN DOCUMENTS PROVIDED BY THE VARIOUS DESIGN PROFESSIONALS INVOLVED IN THIS PROJECT.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, DETAILS, AND SPATIAL RELATIONSHIPS SHOWN ON THESE DRAWINGS IN CONJUNCTION WITH ALL OTHER RELATED DESIGN DRAWINGS. ANY DISCREPANCIES, CONFLICTS, OR OMISSIONS FOUND SHALL BE REPORTED TO THE ENGINEER AND OTHER DESIGN PROFESSIONALS AS APPROPRIATE FOR RESOLUTION PRIOR TO PROCEEDING WITH ANY WORK ON THE PROJECT.
4. THE CONTRACTOR SHALL REVIEW ALL SUBMITTALS, INCLUDING SHOP DRAWINGS, AND VERIFY CORRECTNESS OF THEM PRIOR TO SUBMISSION TO OWNER.
5. MAXIMUM SPACING BETWEEN BRACES SHALL BE 500 FEET. CORNER BRACES TO BE PROVIDED WHERE CORNER ANGLE IS 15° OR MORE AND WHERE SPACING REACHES 500 FEET.
6. ALL STEEL SHALL BE GALVANIZED PER ASTM A123 UNLESS CORROSION ANALYSIS REPORT RECOMMENDS ADDITIONAL CORROSION PROTECTION.
7. FOUNDATION CONCRETE SHALL MEET NEW YORK DOT SPECIFICATIONS FOR CLASS A3 CONCRETE.
8. FACILITY LAYOUT RELATIVE TO THE PROJECT WETLANDS AND BOUNDARY SHALL BE CONFIRMED BY A LICENSED LAND SURVEYOR PRIOR TO CONSTRUCTION.

GENERAL FENCING NOTES:
1. ALL ITEMS SHALL BE GALVANIZED AND ZINC COATED TO ASTM SPECIFICATIONS, INCLUDING ALL POSTS, RAILS, GATES, AND HARDWARE.
2. GATE FENCE FABRIC SHALL BE MOUNTED INSIDE THE FRAME.
3. All SWING GATE OPENINGS SHALL BE 24 FEET UNLESS OTHERWISE SPECIFIED.
4. SWING GATES SHALL BE CONSTRUCTED WITH DROP RODS, PADLOCKS, LATCH ASSEMBLY, AND GATE KEEPERS.
5. BOLTS AND HINGES SHALL BE OF A TAMPER-PROOF TYPE.
6. EXPOSED BOLTS AND NUTS SHALL BE SPOT WELDED.
7. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL FENCE AND GATE REQUIREMENTS



NOTE:
CONSTRUCT 12' ACCESS ROAD WHERE INDICATED ON PLANS.



NOTE:
TYPICAL SPACING TO BE USED UNLESS OTHERWISE NOTED ON DESIGN PLANS.

TYPICAL SPACING REQUIRMENTS
NOT TO SCALE

SPEED LIMIT 15

NOTES:
1. **DIMENSIONS: 30" X 24".**
2. **SIGNS SHALL BE 0.080" (MIN.) RUST-FREE ALUMINUM.**
3. **INSTALL AT LOCATIONS SHOWN ON PLANS.**

WARNING
KEEP OUT
AUTHORIZED PERSONEL ONLY

PRIVATE PROPERTY
NO TRESPASSING

NOTES:
1. **DIMENSIONS: 18" X 12".**
2. **SIGNS SHALL BE 0.040" (MIN.) RUST-FREE ALUMINUM.**
3. **ATTACH TO OUTSIDE OF PERIMETER FENCE EVERY 200' MAX.**

CLEAN ENERGY
IN CASE OF EMERGENCY CALL: ??

NOTES:
1. **DIMENSIONS: 18" X 12".**
2. **SIGNS SHALL BE 0.040" (MIN.) RUST-FREE ALUMINUM.**
3. **ATTACH TO ACCESS GATES.**

DANGER
HIGH VOLTAGE
AUTHORIZED PERSONEL ONLY

NOTES:
1. **DIMENSIONS: 18" X 12".**
2. **SIGNS SHALL BE 0.040" (MIN.) RUST-FREE ALUMINUM.**
3. **ATTACH TO SUBSTATION ACCESS GATE AND SECURITY FENCE.**

SITE SIGNAGE
NOT TO SCALE

Dig Safely. New York Call 811 before you dig

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aes
2180 South 1300 East, Suite 600
Salt Lake City, UT 84106-2749
(801) 679 - 3500

TRC
249 Western Avenue
Augusta, ME 04330

PE STAMP:

STATE OF NEW YORK · DANIEL T BUTLER · LICENSED PROFESSIONAL ENGINEER · 079800
Daniel Thomas Butler
2022.07.20 14:15:09 -04'00'

KEY PLAN:

REVISIONS:

NO.	DATE	DESCRIPTION
0	01/19/2022	DESIGN DRAWINGS
1	06/27/2022	ISSUED FOR PERMIT
2	07/20/2022	ISSUED FOR PERMIT
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-	-	-
-	-	-
-	-	-

PROJECT TITLE:
BROOKSIDE SOLAR PROJECT

PROJECT LOCATION:
TOWNS OF BURKE AND CHATEAUGAY, NY

SHEET TITLE & DESCRIPTION:
SUBSTATION FENCING DETAILS

PROJ NUM:	422299
DES:	C. WINTERMUTE
DWN:	C. WINTERMUTE
CHK:	J. HEIDIG
APV:	-
DATE:	05/25/2021

SCALE AT 22" x 34":
AS NOTED

SHEET NO: PV-C.10.02
REV: 2

AES Tilelock 22X34_v120319
PLOTTED: 7/19/2022 4:48 PM
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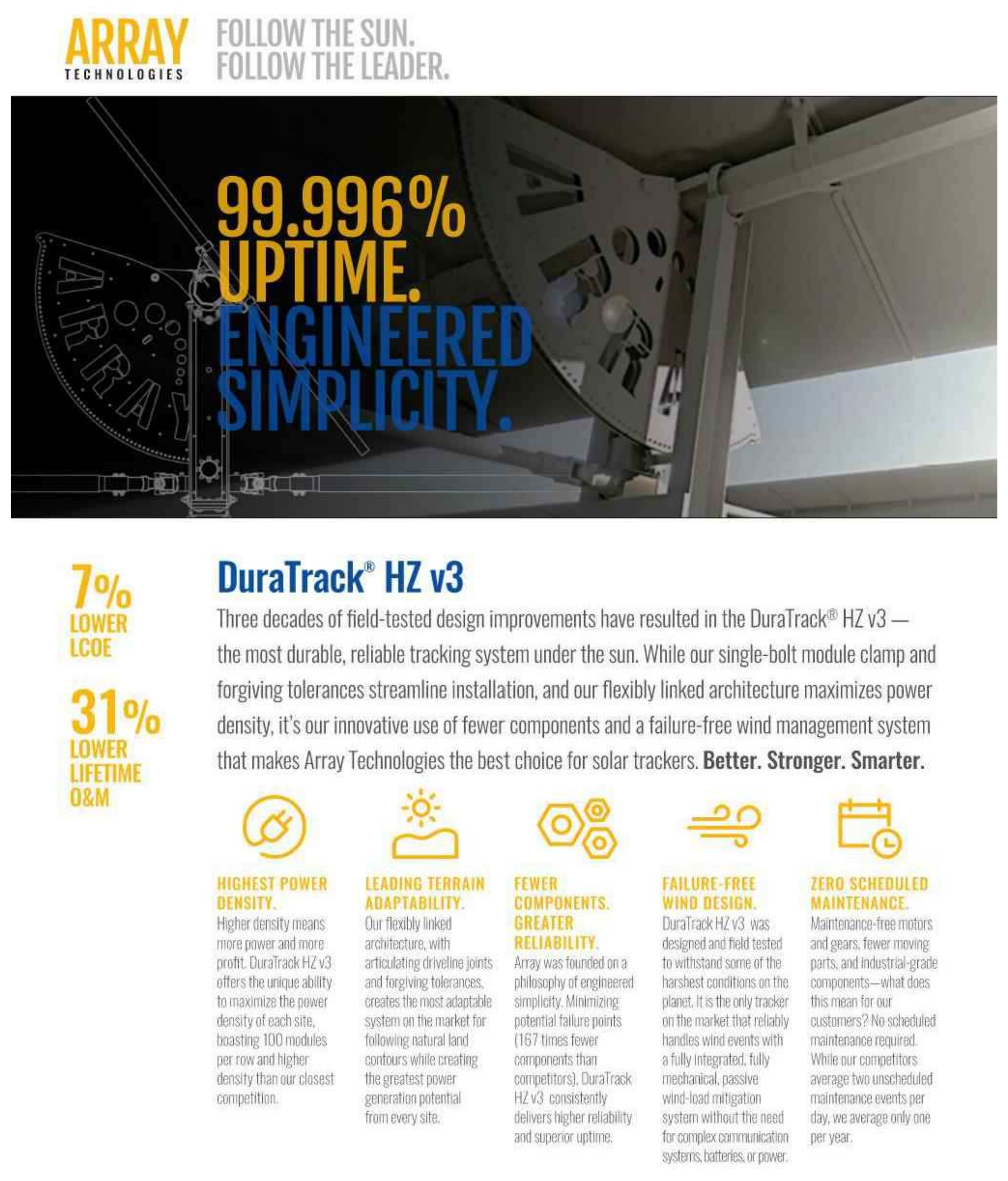
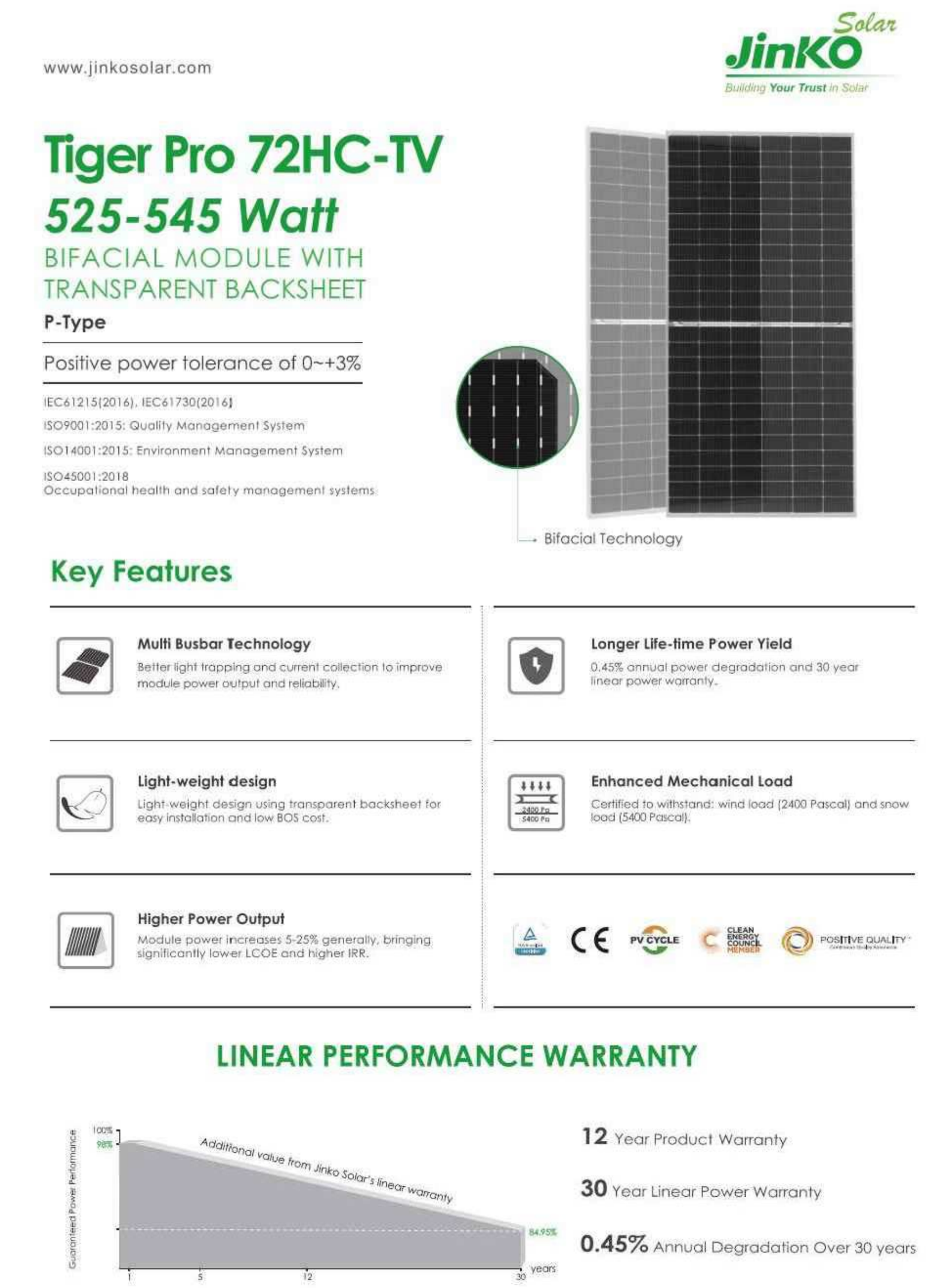
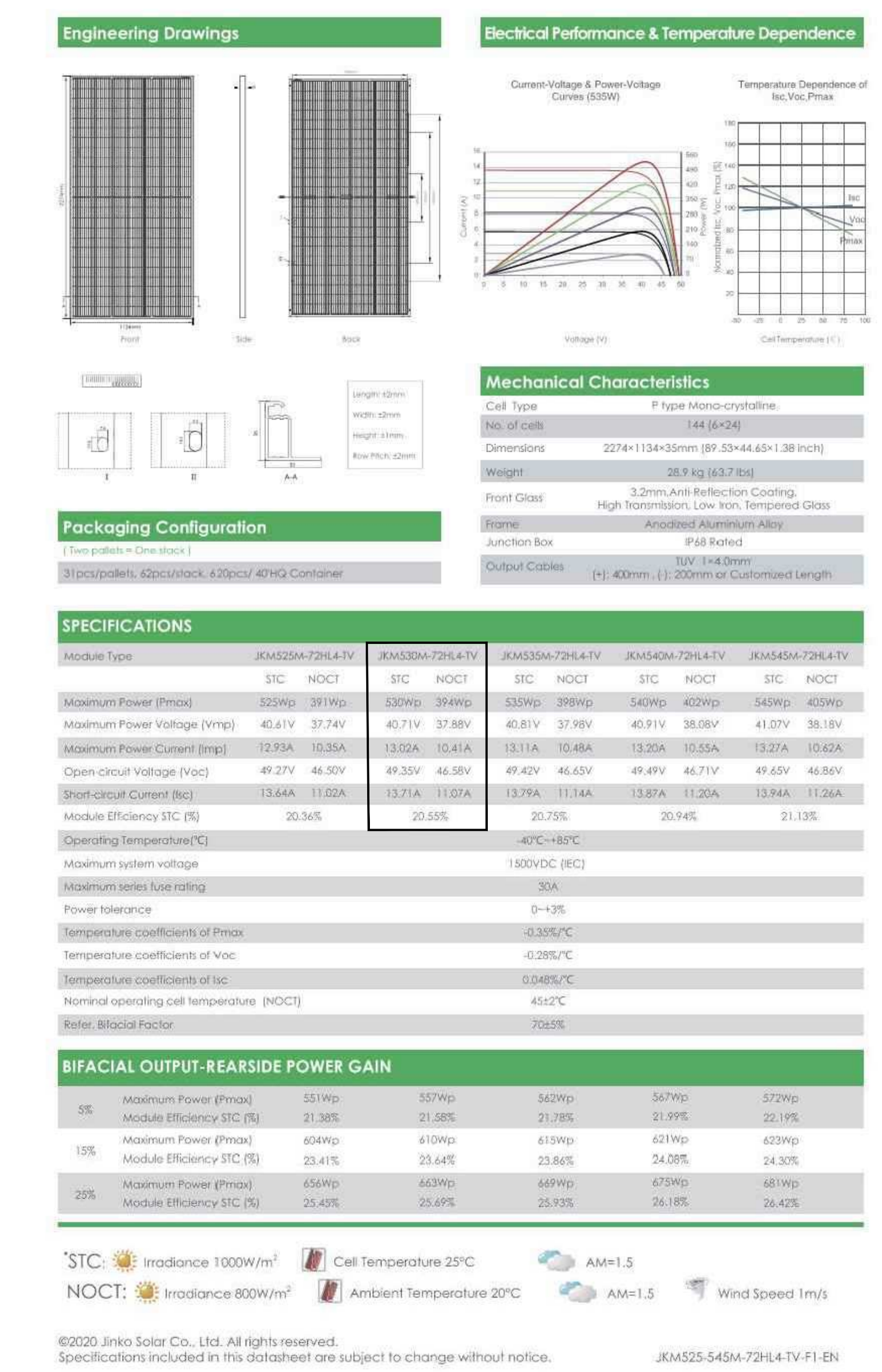
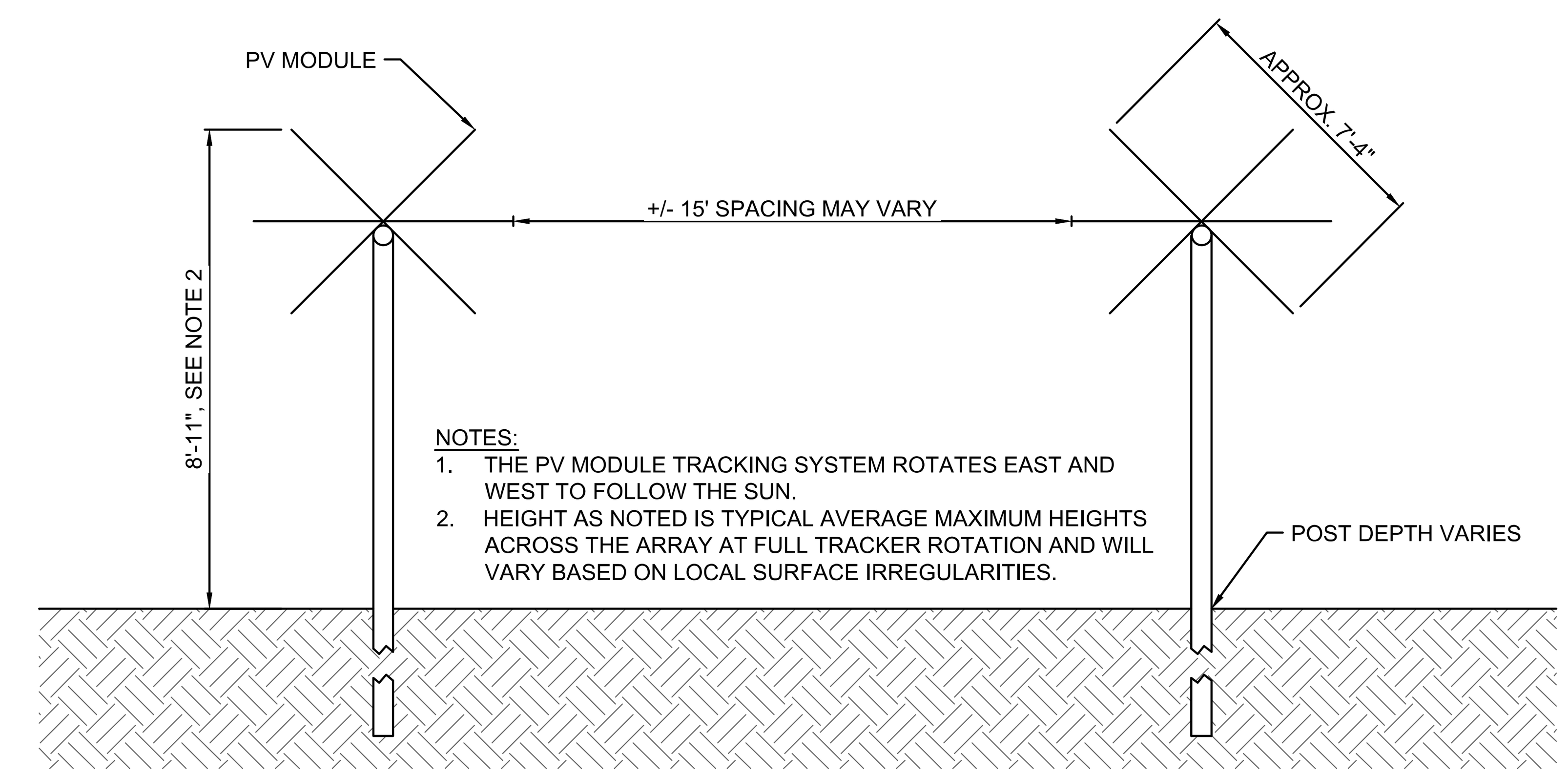


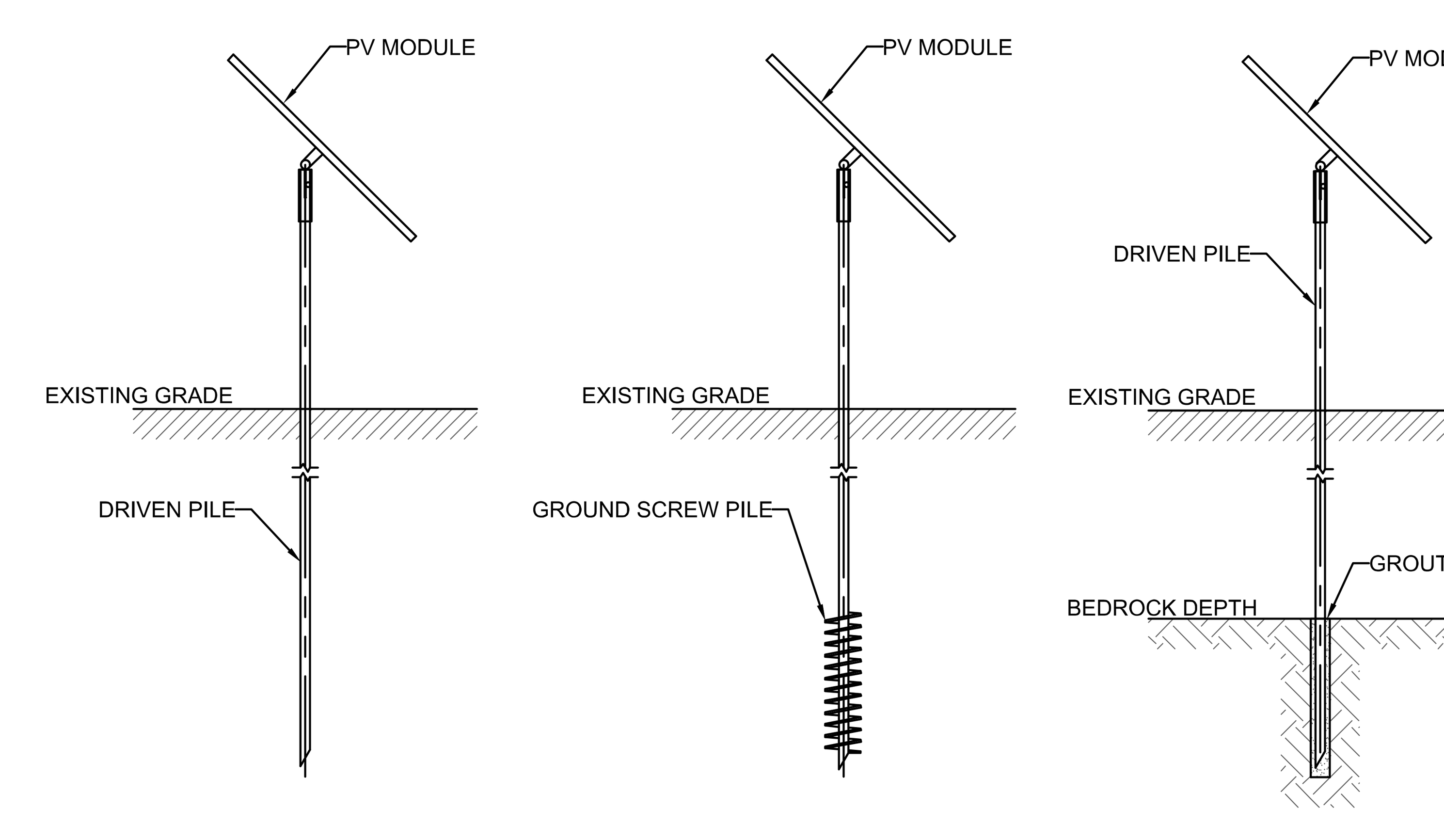






NOTES:
1. THE PV MODULE TRACKING SYSTEM ROTATES EAST AND WEST TO FOLLOW THE SUN.
2. HEIGHT AS NOTED IS TYPICAL AVERAGE MAXIMUM HEIGHTS ACROSS THE ARRAY AT FULL TRACKER ROTATION AND WILL VARY BASED ON LOCAL SURFACE IRREGULARITIES.

TRACKER RACK SECTION DETAIL
SCALE: N.T.S.



TYPICAL RACK FOUNDATION DETAILS
SCALE: N.T.S.

PRELIMINARY
NOT FOR CONSTRUCTION

UNDER NEW YORK STATE EDUCATION LAW ARTICLE 145 (ENGINEERING), SECTION 7209 (2), IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

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Salt Lake City, UT 84106-2749
(801) 679 - 3500

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Augusta, ME 04330

PE STAMP:
STATE OF NEW YORK — DANIEL T BUTLER — LICENSED PROFESSIONAL ENGINEER — 079800
Daniel Thomas Butler
2022.07.20 14:13:22-04'00'

KEY PLAN:

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PROJECT TITLE:
BROOKSIDE SOLAR PROJECT

PROJECT LOCATION:
TOWNS OF BURKE AND CHATEAUGAY, NY

SHEET TITLE & DESCRIPTION:
ARRAY & RACKING DETAILS

PROJ NUM:	422299
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CHK:	J. HEIDIG
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DATE:	05/21/2021

SCALE AT 22" x 34":
AS NOTED

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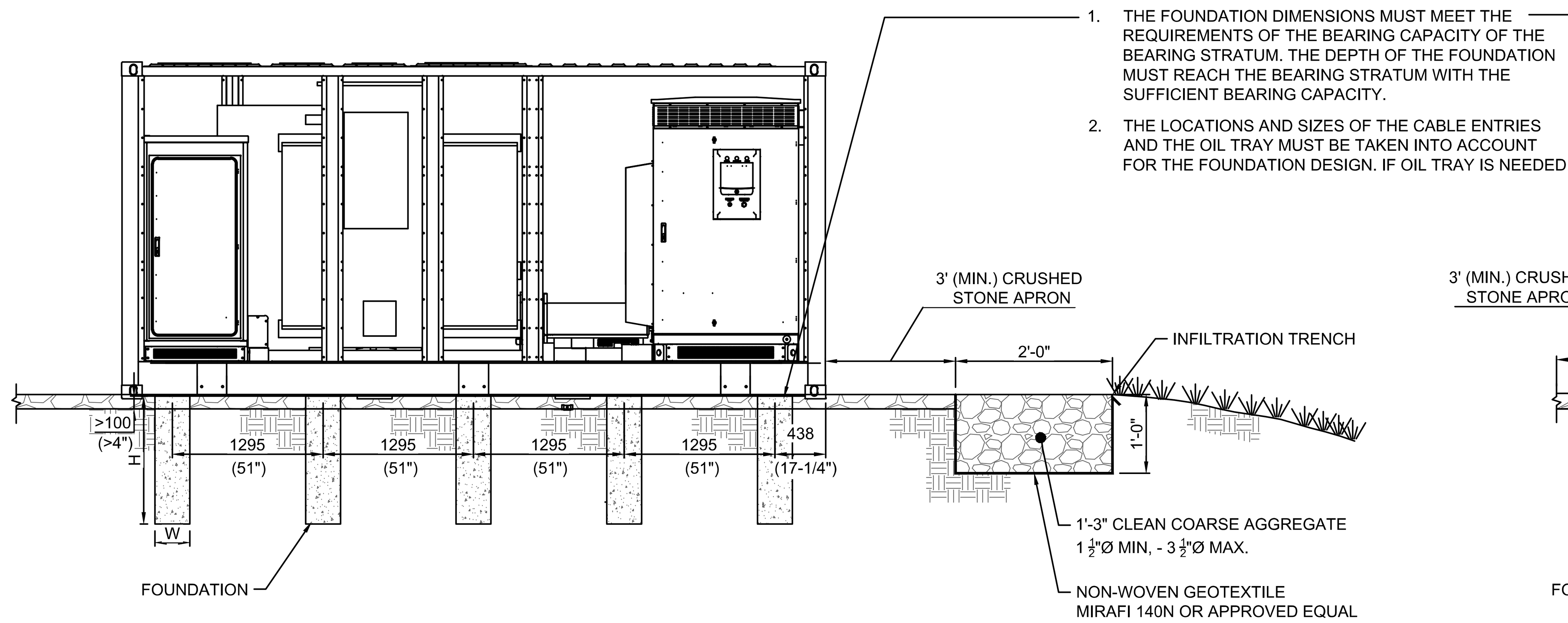
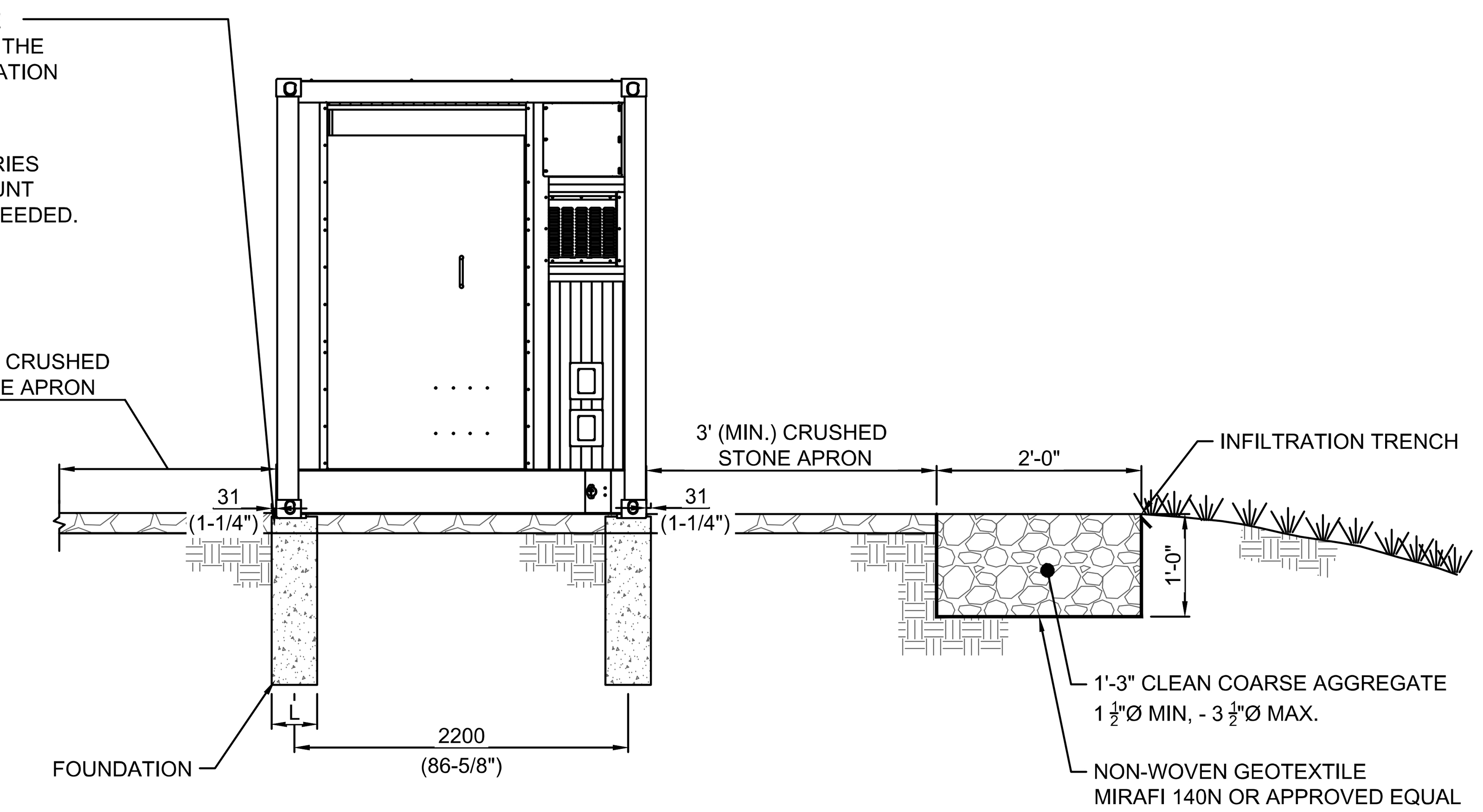
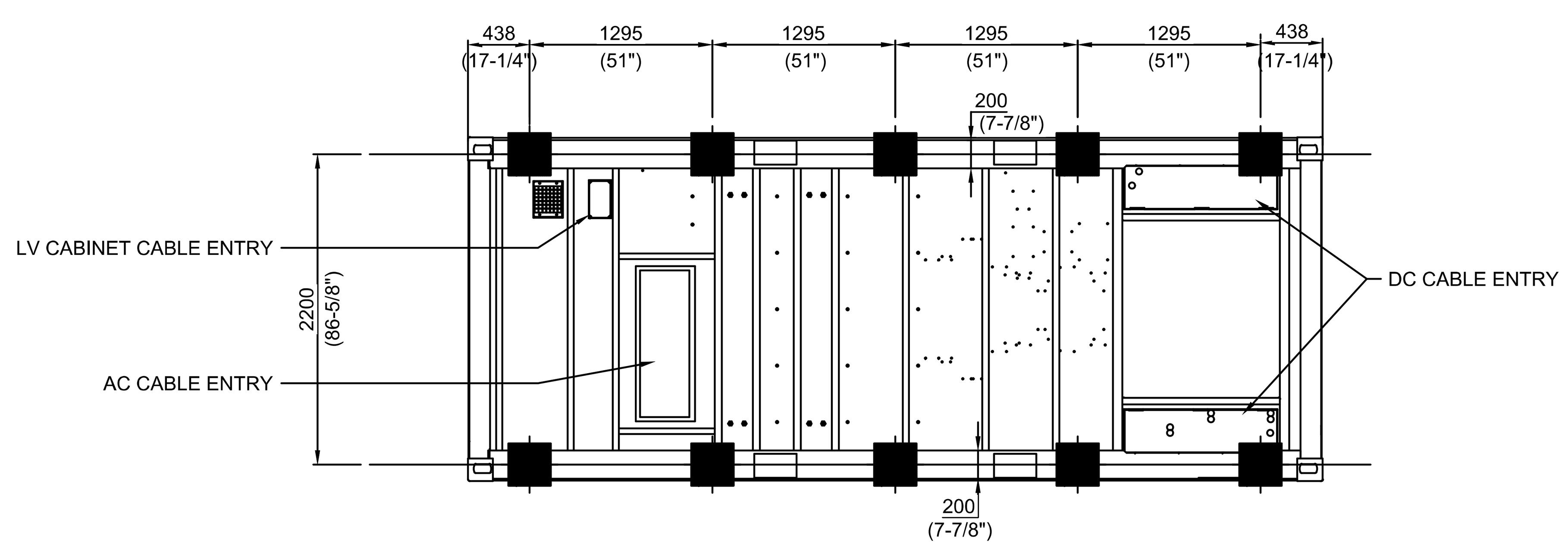


FRONT VIEW



LEFT VIEW



BOTTOM VIEW

NOTES:

1. THE TOTAL WEIGHT OF THE TURNKEY STATION IS ABOUT 36 KIPS.
2. THE TURNKEY STATION IS INSTALLED ON THE 10 FOUNDATIONS, THE FOUNDATION SIZE MUST MEET THE REQUIREMENTS OF THE BEARING CAPACITY OF THE BEARING STRATUM. THE DEPTH OF THE FOUNDATION MUST REACH THE BEARING STRATUM WITH THE SUFFICIENT BEARING CAPACITY, THE BEARING CAPACITY SHALL BE DETERMINED WITH REFERENCE TO THE GEOLOGICAL SURVEY REPORT.THE GROUND SURFACE MUST BE SOLID AND FLAT, WITH NO RISK OF COLLAPSE OR SLIDING.
3. THE TURNKEY STATION IS RECOMMENDED TO BE PLACED AT LEAST 4 INCHES ABOVE THE GROUND BUT WHEN THE INVERTER BOTTOM IS 8 INCHES HIGHER THAN THE GROUND , IT IS RECOMMENDED TO CONSTRUCT AN AUXILIARY O&M PLATFORM ON THE TOP OF THE PILE , FOR THE SPECIFIC DESIGN, REFER TO THE DRAWING OF THE DESIGN INSTITUTE.
4. THE UPPER SURFACES OF THE STRIP FOUNDATIONS SHOULD BE AT THE SAME LEVEL (ERROR SHOULD BE WITHIN 0.25 INCHES).
5. NOT FOR CONSTRUCTION. THESE DRAWINGS ARE FOR INFORMATION PURPOSE, SHOWING THE FACTORS TO BE CONSIDERED WHEN DESIGNING THE FOUNDATIONS; THE FINAL ENGINEERING DRAWINGS MUST BE PREPARED BY PROFESSIONAL PERSONNEL.
6. FINISH FLOOR ELEVATION OF INVERTER SKIDS SHALL BE SET NO LESS THAN 1 FOOT ABOVE THE 100-YEAR BASE FLOOD ELEVATION WHEN LOCATED IN A FLOOD HAZARD ZONE.

EQUIPMENT PAD DETAILS PREPARED AND PROVIDED BY SUNGROW.

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NOT FOR CONSTRUCTION

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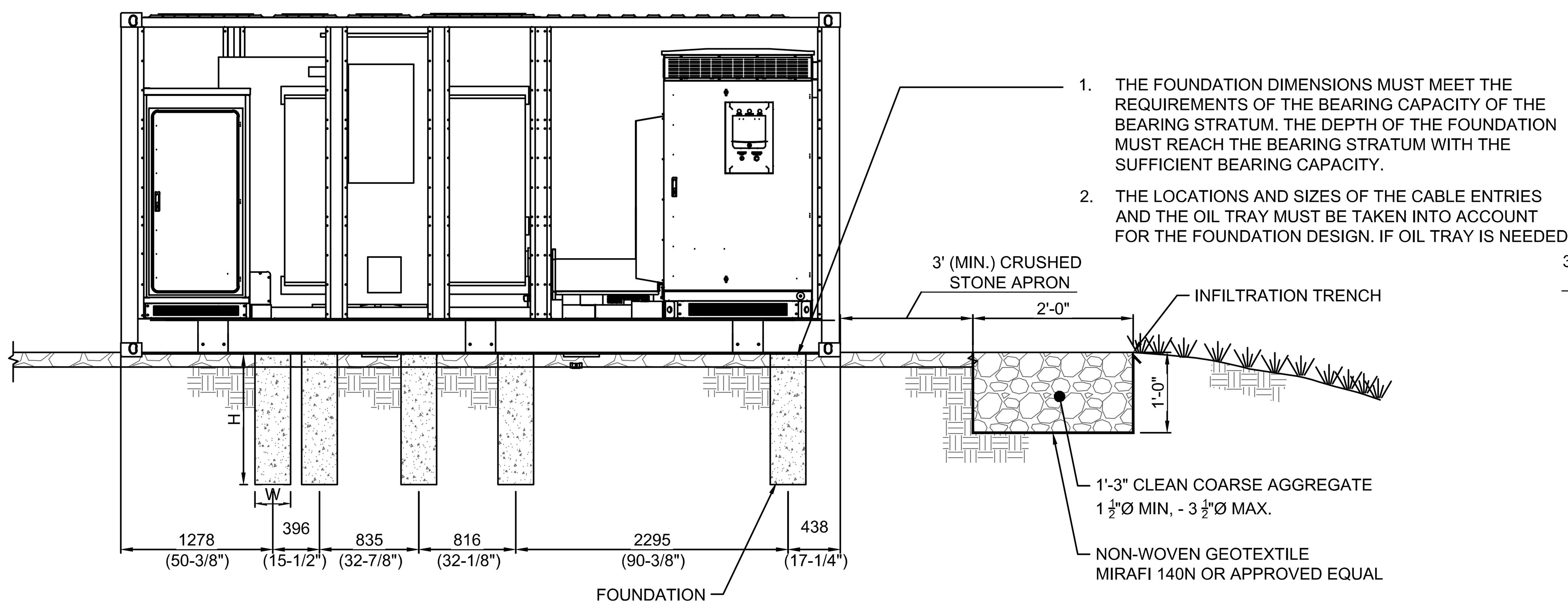
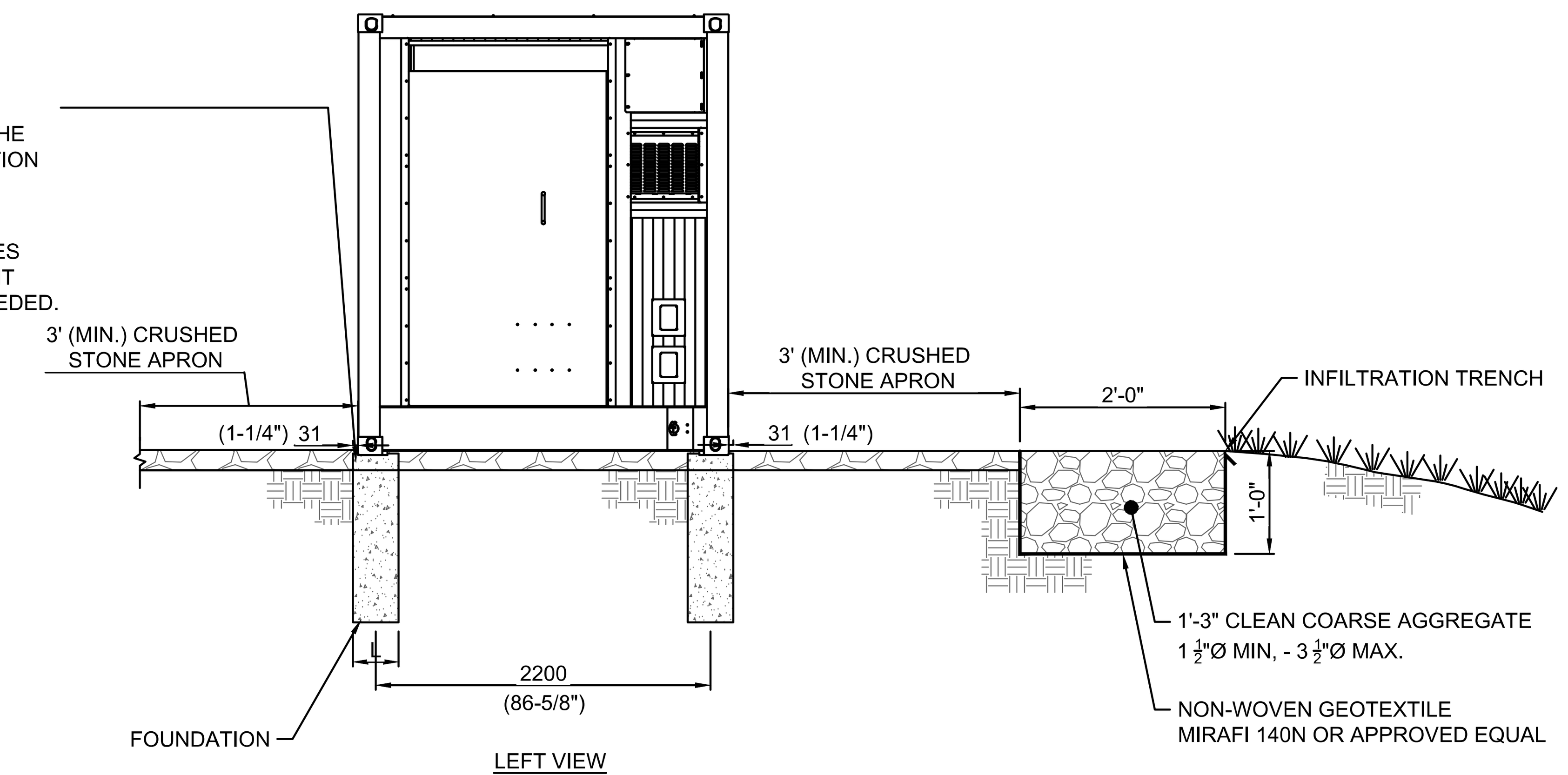
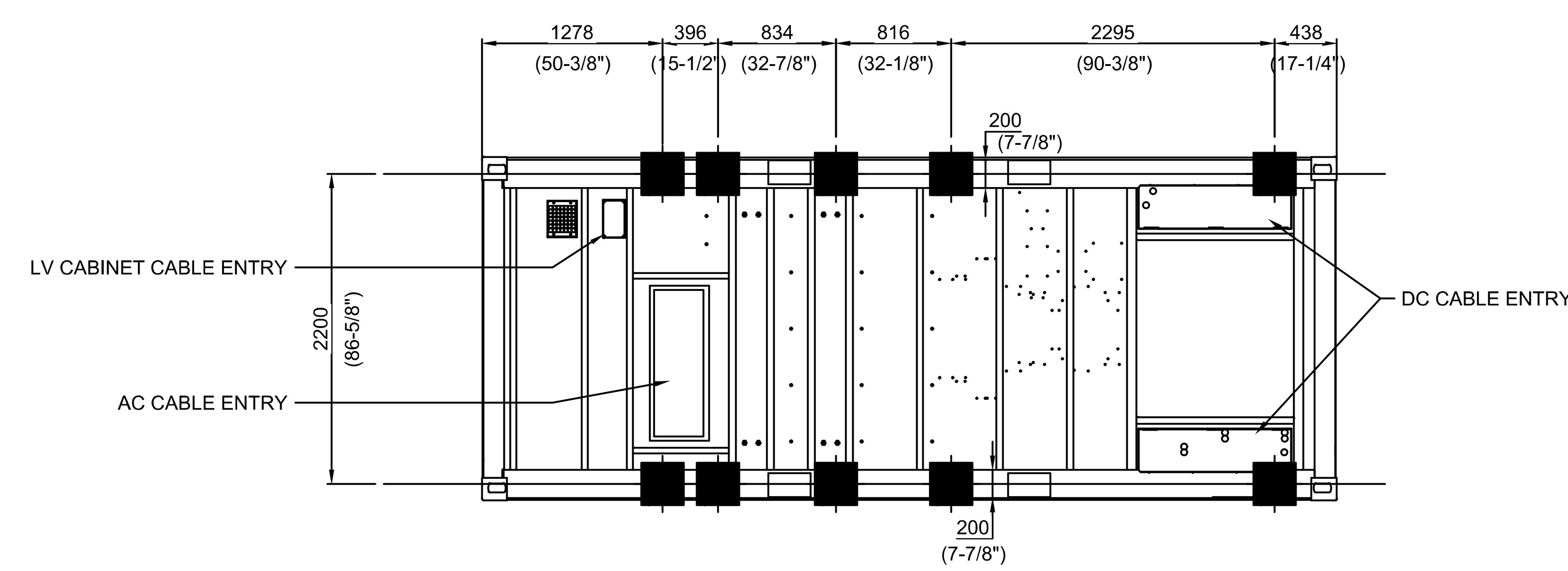


FRONT VIEW



LEFT VIEW



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Daniel Thomas Butler
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PROJECT TITLE:

BROOKSIDE SOLAR PROJECT

PROJECT LOCATION:

TOWNS OF BURKE AND CHATEAUGAY, NY

SHEET TITLE & DESCRIPTION:

EQUIPMENT PAD DETAILS

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SCALE AT 22" x 34":	AS NOTED
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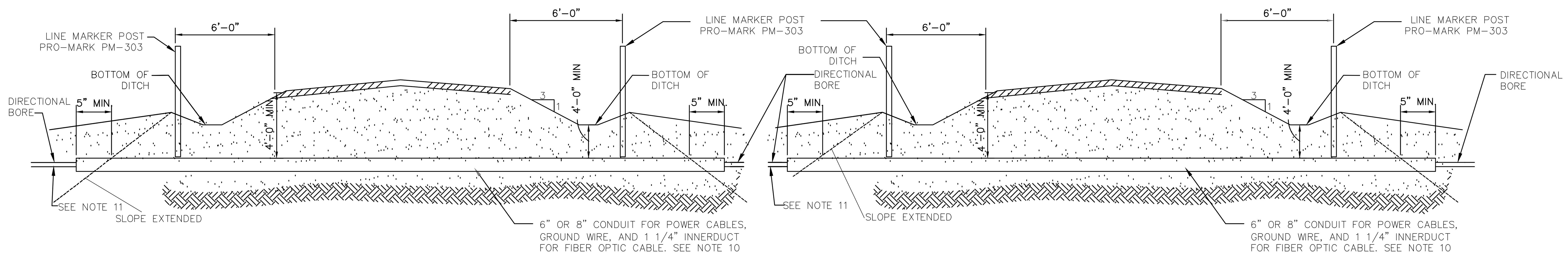
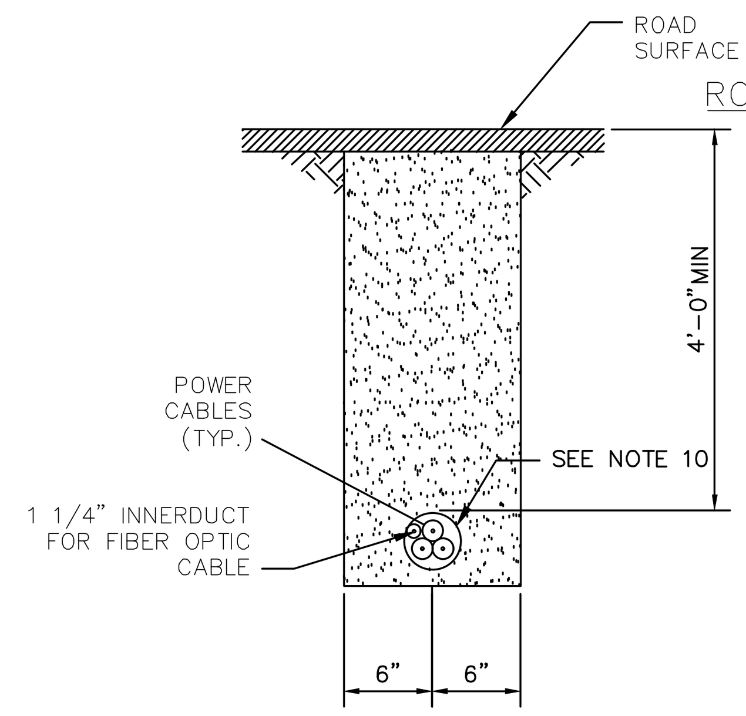
REV:	2

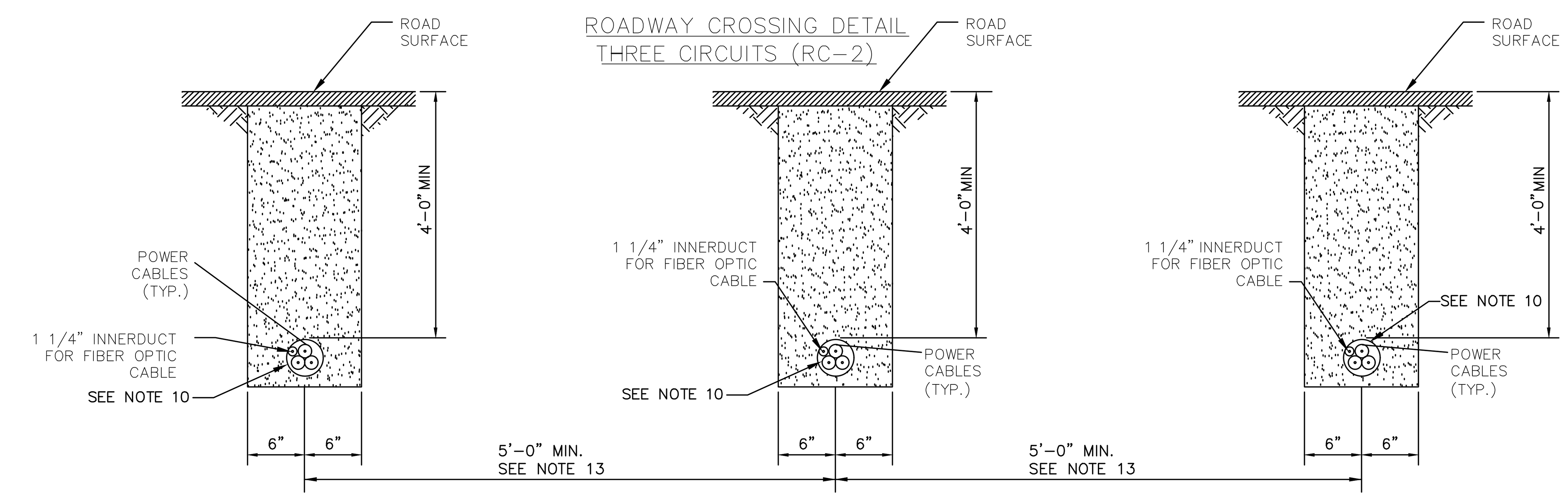


ROADWAY CROSSING DETAIL ONE CIRCUIT (RC-1)



SECTION C-C
SCALE: N.T.S.

ROADWAY CROSSING DETAIL THREE CIRCUITS (RC-2)



SECTION D-D
SCALE: N.T.S.

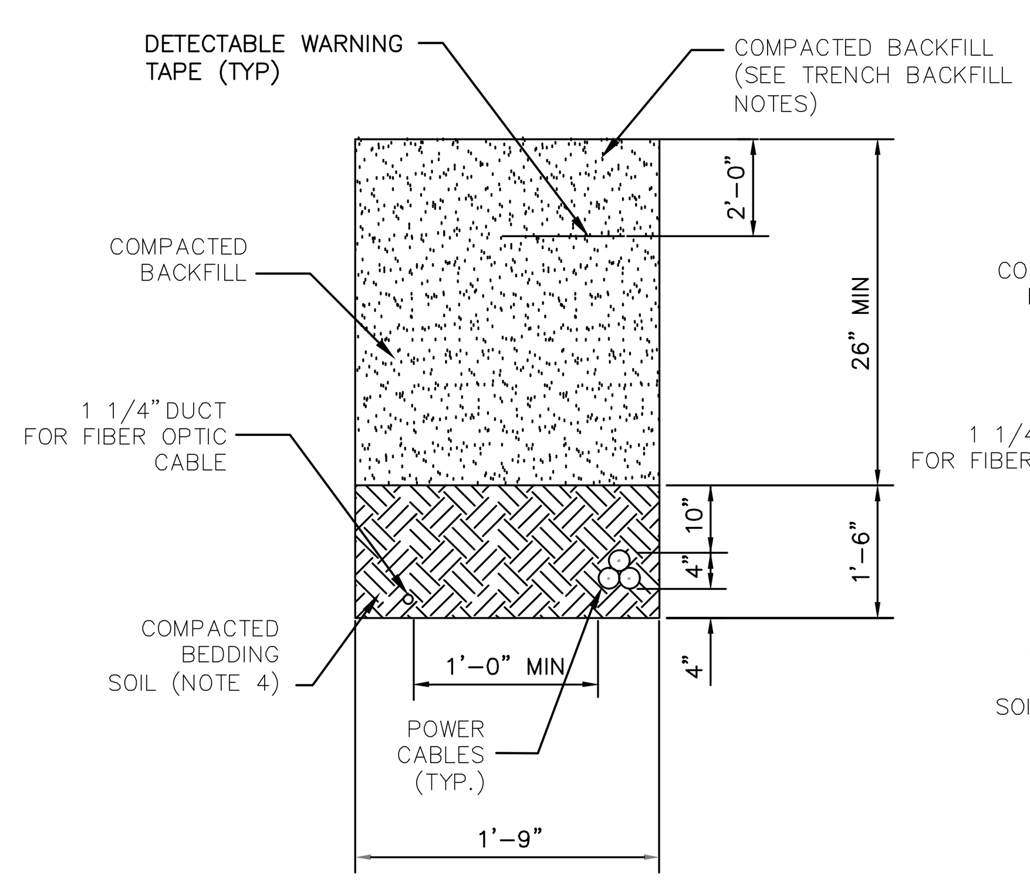
TRENCH BACKFILL NOTES

1. BACKFILLING OPERATIONS SHALL NOT BE CONDUCTED UNDER FREEZING TEMPERATURE OR FROZEN SOIL CONDITIONS.
2. THE BEDDING AND PADDING BACKFILL MATERIAL FOR THE TRENCH SHALL BE EXCAVATED SOIL FREE OF ROCKS (NO ROCKS LARGER THAN 3/8" DIAMETER) AND FREE OF WOOD, ROOTS, VEGETABLE MATTER, TOPSOIL OR OTHER DELETERIOUS MATERIAL.
3. TOPSOIL CONSISTS OF ORGANIC SILT AND SILTY SAND IN ACCORDANCE WITH THE UNITES SOIL CLASSIFICATION SYSTEMS (USCS).
4. SUITABLE PROTECTIVE BEDDING AND PADDING SOIL WITH A MINIMUM COVER ON ALL SIDES OF ALL CABLE AND / OR CONDUIT SYSTEMS SHALL BE PROVIDED. CONTRACTOR TO INSTALL GPS BALL MARKER AT EACH BORING PIT, NO DEEPER THAN 5'-0"
5. ALL THE LAYERS SHALL BE SUFFICIENTLY COMPACTED TO ACHIEVE THE NECESSARY THERMAL RESISTIVITY. COMPACTING BY FLOODING SHALL NOT BE PERMITTED.
6. BACKFILL SHALL BE PLACED IN THREE LIFTS (1 FOOT BOTTOM LIFT, 1 FOOT CENTER LIFT AND 2 FOOT TOP LIFT WITH TOPSOIL HEAPED FOR FINAL COMPLETION.
7. COMPACTED BACKFILL ABOVE CABLE SHALL NOT HAVE ROCKS LARGER THAN 1.5" DIAMETER.
8. ALL BACKFILL SHALL BE 140°CM/W (TO BE VERIFIED BY AMPACITY MODELING) OR LESS, AT 2% MOISTURE CONTENT SHALL BE USED.
9. ALL BACKFILL SHALL BE COMPACTED TO THE LESSOR OF 93 PERCENT OF THE ASTM D698 DRY-DENSITY VALUE OR THE NATIVE IN-SITU DENSITY.
10. USE 6" BORE-GARD SCHEDULE 40 FOR POWER CABLES 1/0 AWG TO 500 MCM. USE 8" HDPE SDR 13.5 FOR POWER CABLES GREATER THAN 500MCM.
11. ALL BACKFILL REQUIRED TO MATCH DENSITY OF EXISTING ADJACENT SOILS, TYP.
12. ADD CONDUITS AS REQUIRED
13. SEPARATION WILL BE DETERMINED BASED ON THE AMPACITY CALCULATIONS DURING IFC DESIGN
14. A DESCRIPTION OF THE CABLE INSTALLATION PROCESS CAN BE FOUND IN APPENDIX 21-2, THE BROOKSIDE SOLAR ENERGY FACILITY 115KV TRANSMISSION & 34.5KV COLLECTION DESIGN CRITERIA

UNDERGROUND OR EMBEDDED UTILITIES MAY BE LOCATED WITHIN OR ADJACENT TO THE AREA IN WHICH EXCAVATION, DEMOLITION, FOUNDATION, OR MODIFICATION WORK IS TO BE PERFORMED.

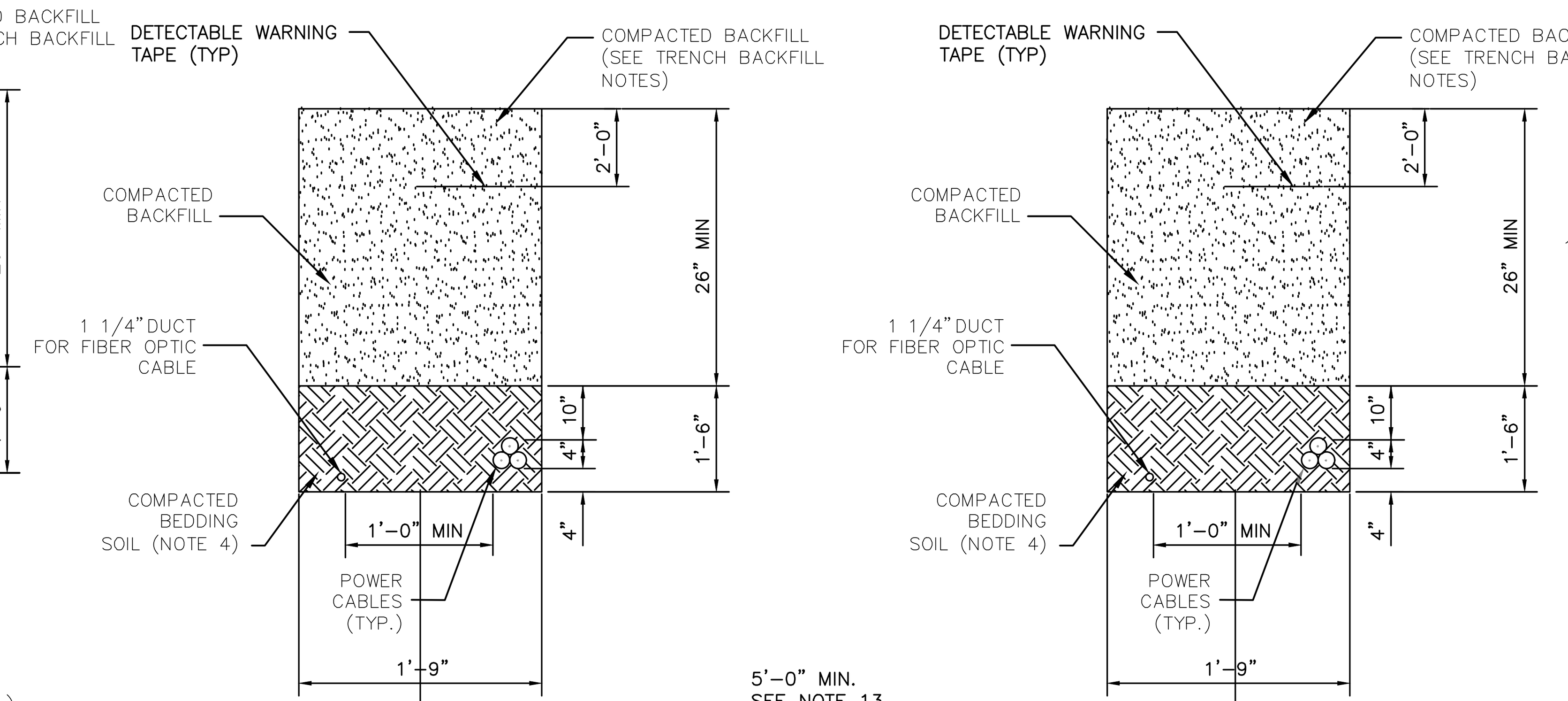
REFERENCES RELATING TO THE UNDERGROUND OR EMBEDDED UTILITIES ARE PROVIDED TO ASSIST THE CONTRACTOR/INSTALLER IN THE FIELD LOCATING THOSE UTILITIES AND OTHER POSSIBLE UNDERGROUND OR EMBEDDED INTERFERENCES WITH THE WORK.

THE CONTRACTOR/INSTALLER SHALL EXERCISE DUE CAUTION DURING ALL EXCAVATION/FOUNDATION/DEMOLITION WORK.



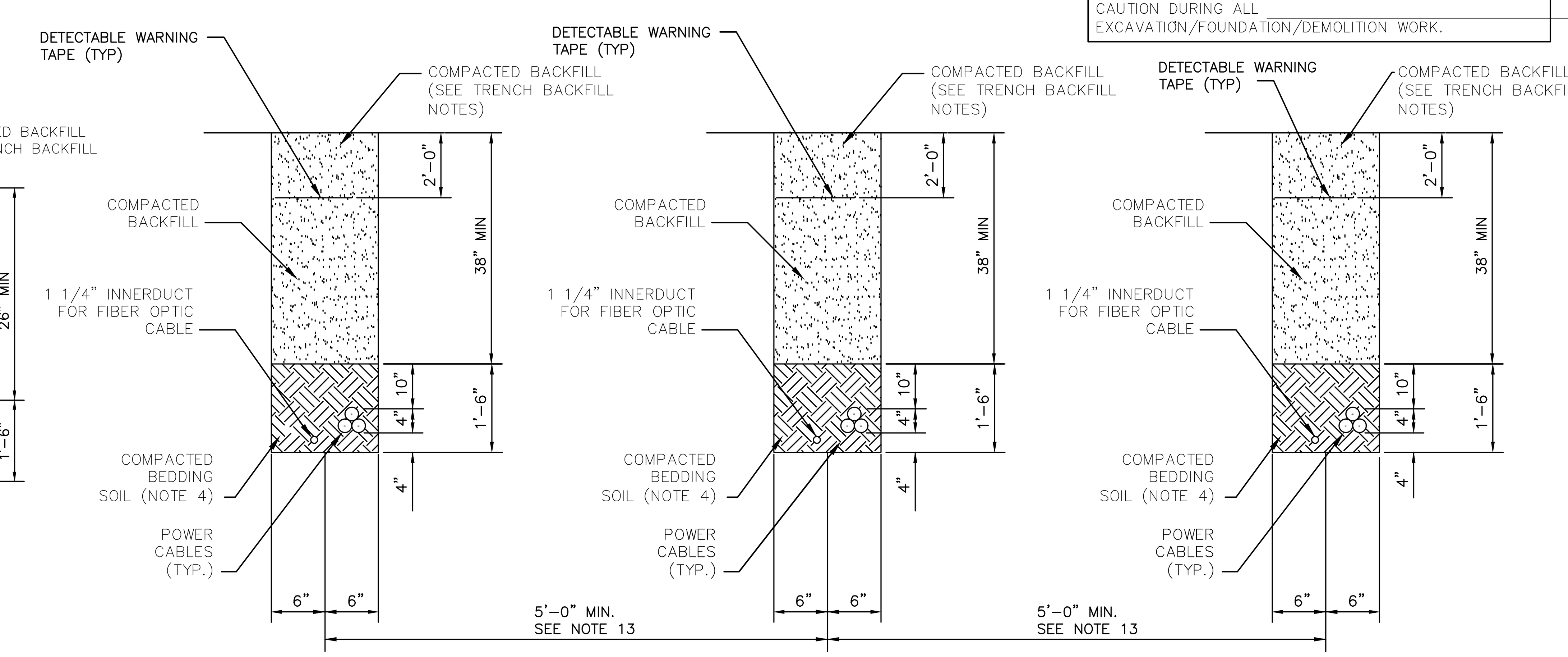
STANDARD TRENCH/ONE CIRCUIT (ST-1)
SCALE: NONE

SECTION A-A
SCALE: N.T.S.



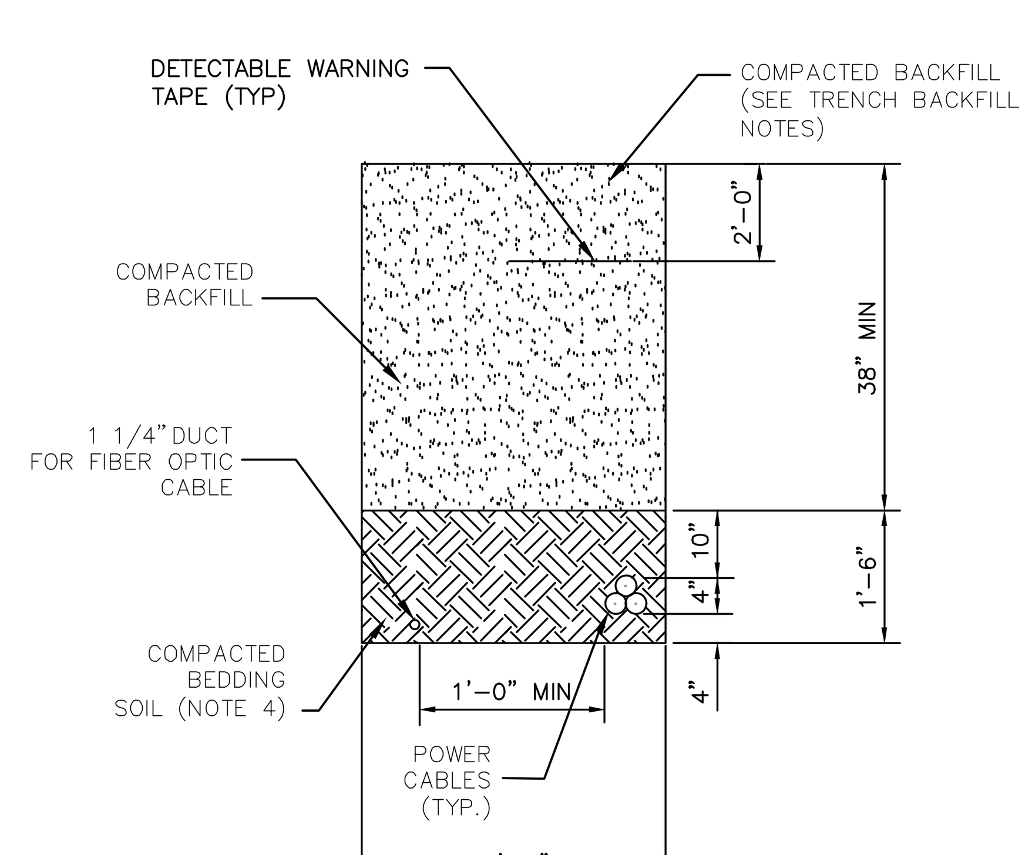
STANDARD TRENCH/TWO CIRCUITS (ST-2)
SCALE: NONE

SECTION B-B
SCALE: N.T.S.



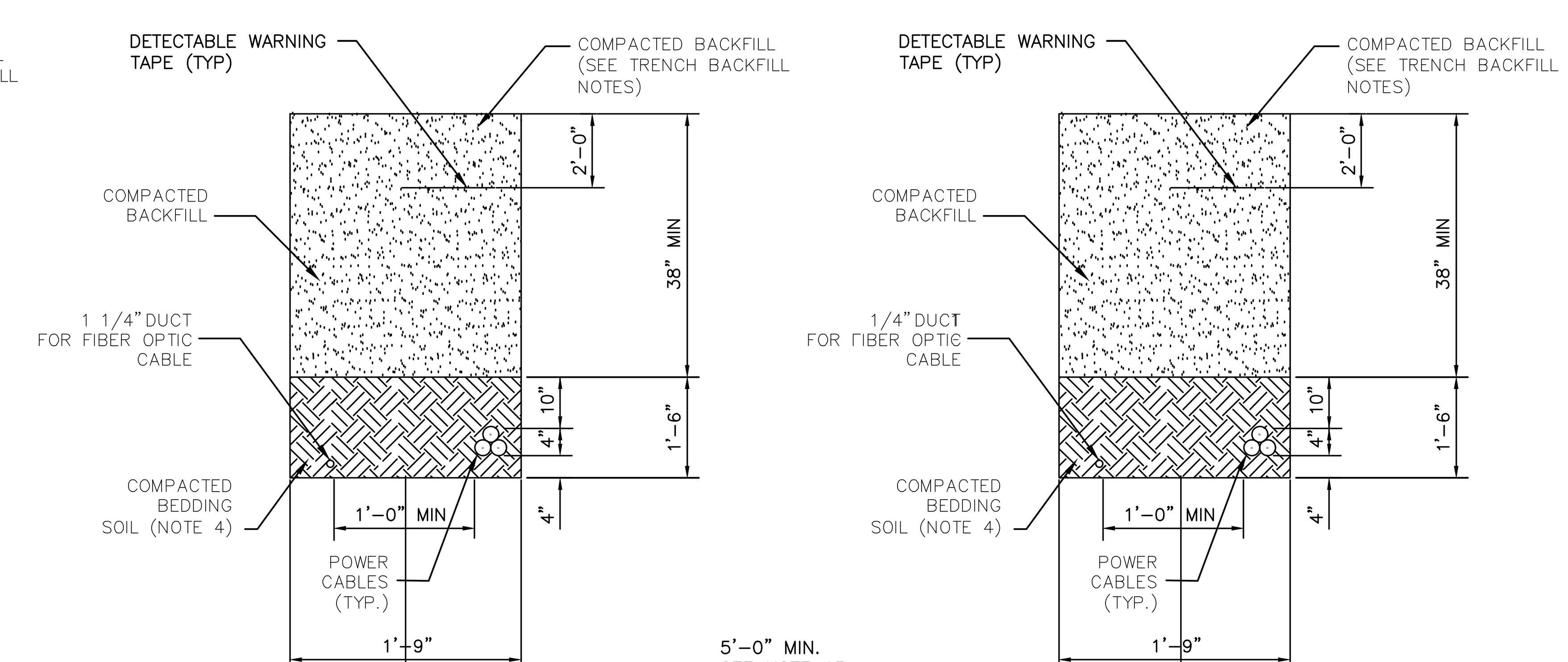
STANDARD TRENCH/THREE CIRCUITS (DT-3)
SCALE: NONE

SECTION J-J
SCALE: N.T.S.



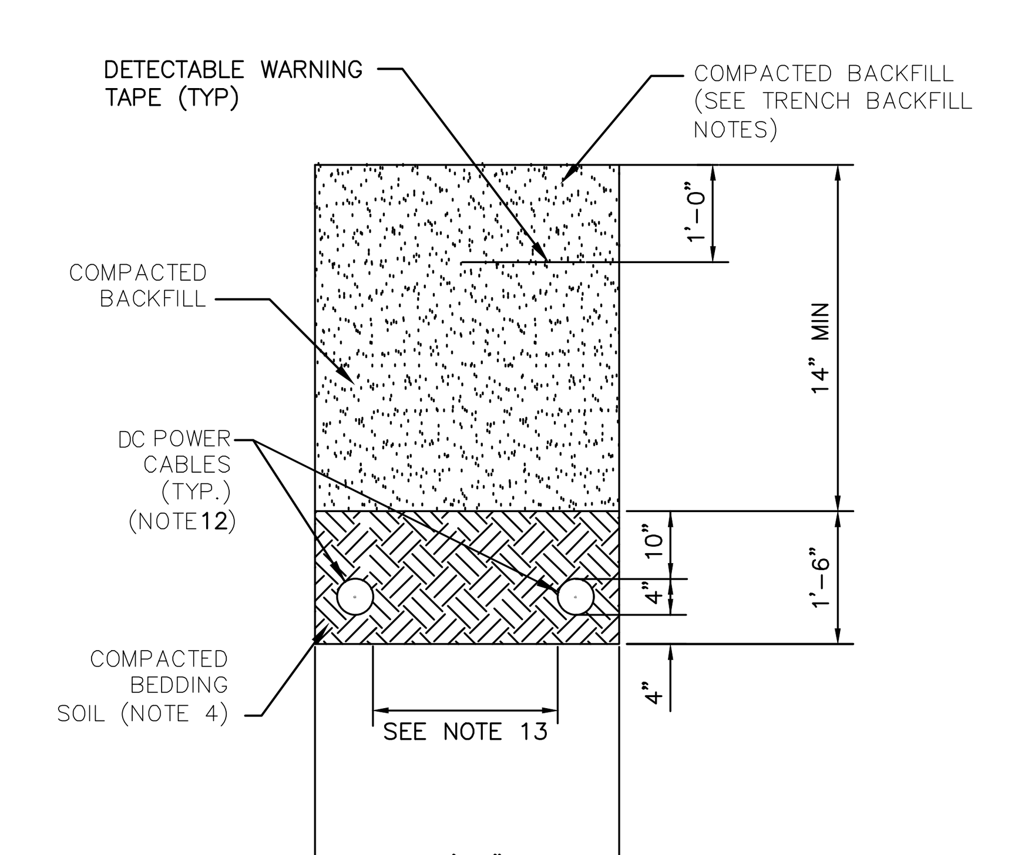
STANDARD TRENCH/ONE CIRCUIT AREAS OUTSIDE OF FENCE IN CROPLAND, HAYLAND, AND IMPROVED PASTURE

SECTION G-G
SCALE: N.T.S.



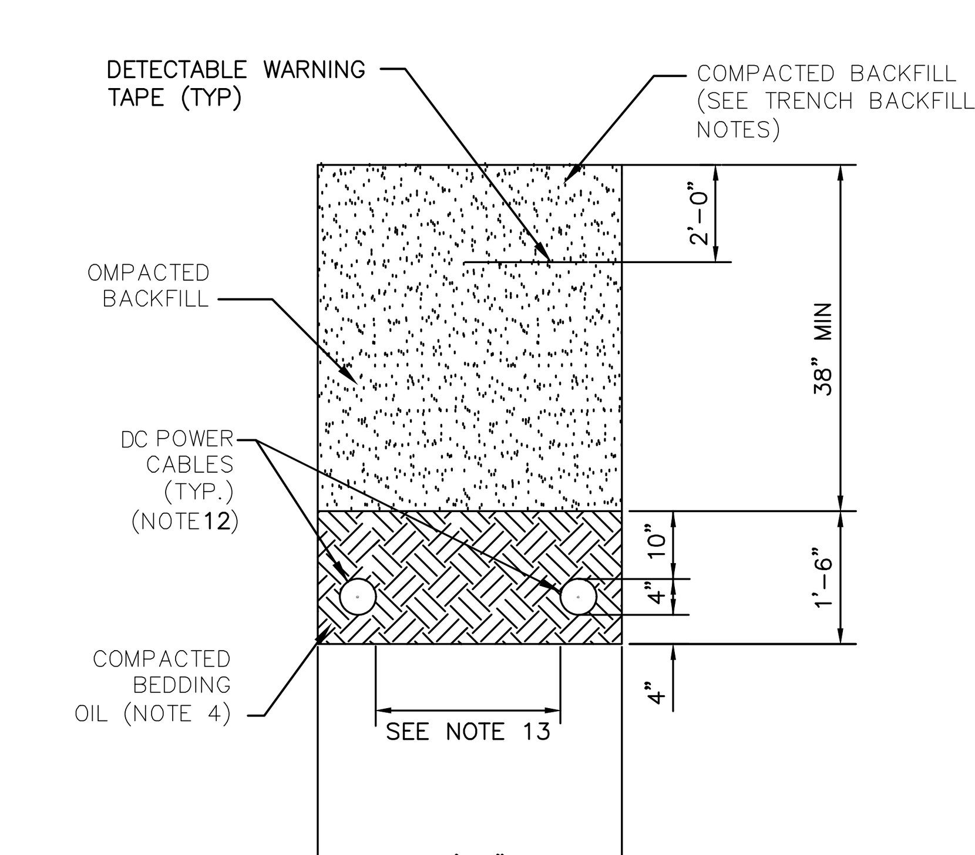
STANDARD TRENCH/TWO CIRCUIT AREAS OUTSIDE OF FENCE IN CROPLAND, HAYLAND, AND IMPROVED PASTURE

SECTION H-H
SCALE: N.T.S.



TYPICAL DC TRENCH

SECTION I-I
SCALE: N.T.S.



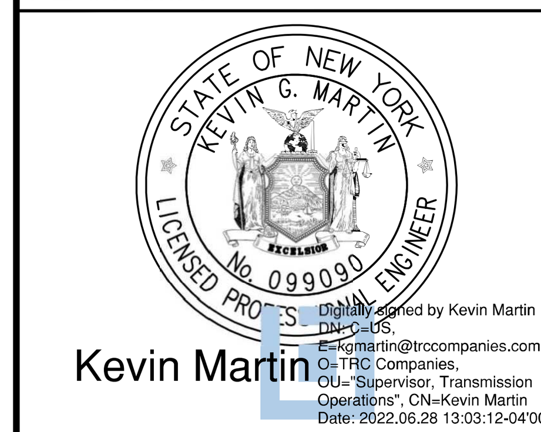
TYPICAL DC TRENCH AREAS OUTSIDE OF FENCE IN CROPLAND, HAYLAND, AND IMPROVED PASTURE

SECTION K-K
SCALE: N.T.S.

aes
2180 South 1300 East, Suite 600
Salt Lake City, UT 84106-2749
(801) 679 - 3500

TRC
249 Western Avenue
Augusta, ME 04330

PE STAMP:



Kevin Martin

KEY PLAN:

REVISIONS:

NO.	DATE	DESCRIPTION
0	01/14/2022	DESIGN DRAWINGS
1	06/27/2022	ISSUED FOR PERMIT

PROJECT TITLE:

BROOKSIDE SOLAR ENERGY FACILITY

PROJECT LOCATION:

TOWNS OF BURKE AND CHATEAUGAY, NY

SHEET TITLE & DESCRIPTION:

TRENCH, BORING, AND CROSSING DETAILS

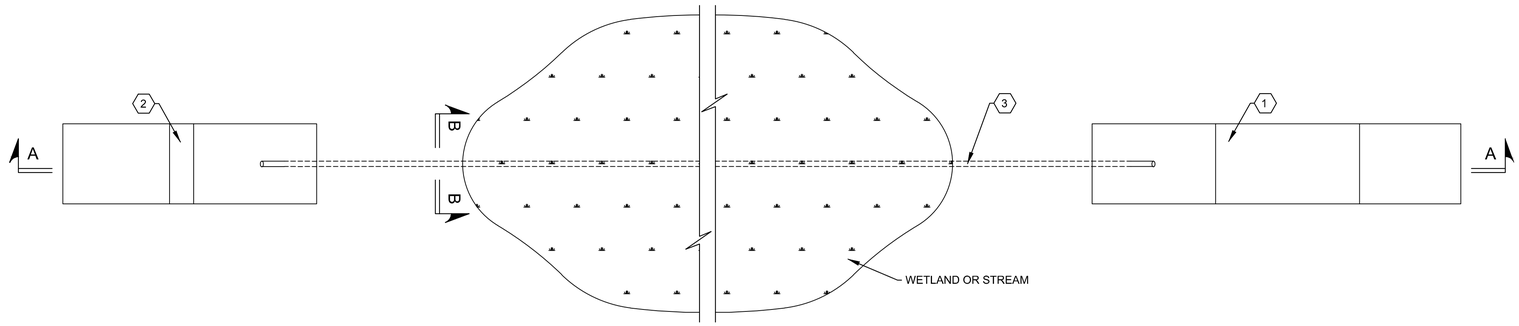
-

PROJ NUM:	422299
DES:	A. SILVA
DWN:	A. SILVA
CHK:	A. GROSHEV
APV:	
DATE:	10/27/2021

SCALE AT 22" x 34":

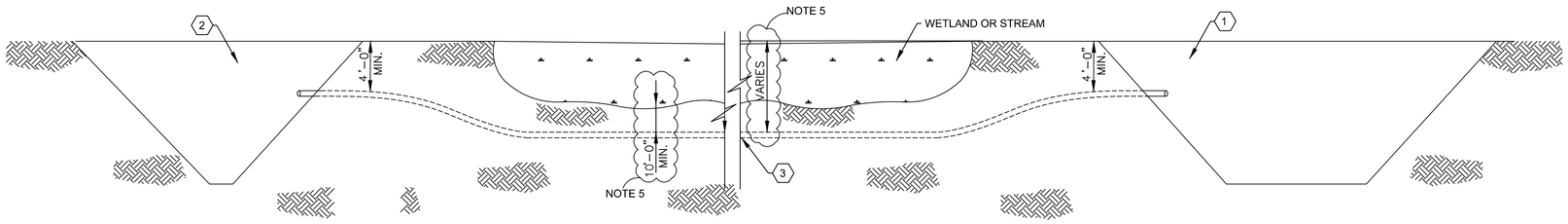
NTS

SHEET NO:	REV:
PV-C.12.01	1



WETLAND BORING PLAN VIEW

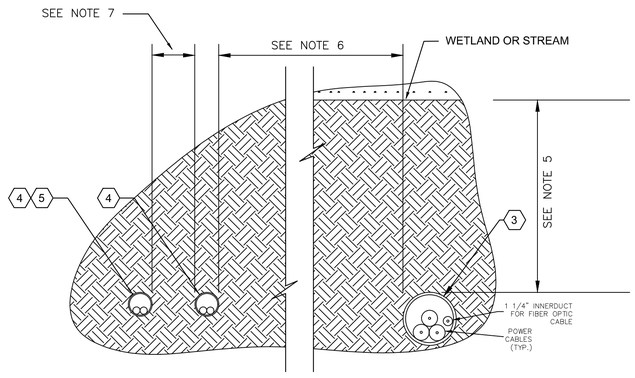
SINGLE BORE SHOWN



DETAIL A

WETLAND BORING SECTION

(UGWC-1)



DETAIL B

TYPICAL BORE CONDUIT DETAIL

SECTION F-F

SCALE: N.T.S.

GENERAL NOTES:

1. CONTACT STATE CALL CENTER (811) FOR MARK-OUT OF ALL EXISTING UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION. MAINTAIN FIELD MARKINGS AS NECESSARY TO AVOID INTERFERENCE WITH EXISTING UNDERGROUND FACILITIES FOR DURATION OF CONSTRUCTION.
2. MAINTAIN 12" MINIMUM CLEAR DISTANCE FROM ALL FOREIGN SYSTEMS, INCLUDING CULVERTS.
3. PROVIDE GPS BALL MARKER. INSTALL NO DEEPER THAN 5'-0" AT EACH BORING PIT.
4. HANDLE AND DISPOSE OF DRILL SLURRY PER PROJECT ENVIRONMENTAL STANDARDS.
5. CONTRACTOR TO DETERMINE WETLAND DEPTH AND LOWEST POINT FOR BORING. BORE DEPTH SHALL BE A MINIMUM OF 10FT BELOW WETLANDS LOWEST POINT. DESIGN BORE IN ACCORDANCE WITH ASCE MANUAL NO. 108. BORING CONTRACTOR SHALL RETAIN FULL RESPONSIBILITY FOR BORE DESIGN AND EXECUTION
6. SOME LOCATIONS WILL REQUIRE BOTH MV COLLECTION BORES WITH ADJACENT DC COLLECTION CIRCUIT BORES. MAINTAIN A MINIMUM 10' SEPARATION DISTANCE FROM MV COLLECTION CIRCUIT HDD AND THE NEAREST DC COLLECTION CIRCUIT HDD.
7. SEPARATION WILL BE DETERMINED BASED ON THE AMPACITY CALCULATIONS DURING IFC DESIGN

KEYED NOTES:

1. PIT FOR DIRECTIONAL DRILLING, JACKING, RAMMING, OR BORING. RECOMPACT DISTURBED SOILS TO PRE-EXCAVATION DENSITY.
2. RECEIVING PIT. RECOMPACT DISTURBED SOILS TO PRE-EXCAVATION DENSITY.
3. USE 6" BORE-GARD SCHEDULE 40 FOR POWER CABLES 4/0 AWG TO 500 MCM. USE 8" HDPE SDR 13.5 FOR POWER CABLES 750 MCM TO 1250 MCM.
4. USE MINIMUM 4" BORE-GUARD SCHEDULE 40 FOR DC COLLECTION CIRCUITS UP TO 750 KCMIL. NO MORE THAN 2 CURRENT CARRYING CONDUCTORS PER CONDUIT.
5. ADD ADDITIONAL HDD CONDUITS FOR THE REQUIRED NUMBER OF DC COLLECTION CIRCUITS.

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PE STAMP:

STATE OF NEW YORK
KEVIN G. MARTIN
LICENSED PROFESSIONAL ENGINEER
No. 099093

Kevin Martin

Digitally signed by Kevin Martin
DN: cn=Kevin Martin, email=KevinMartin@trccompanies.com, o=TRC Companies, ou="Supervisor, Transmission Operations", CN=Kevin Martin
Date: 2022.06.28 13:02:51-04'00'

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