

# BR BENSON MINES SOLAR PROJECT

TOWN OF CLIFTON  
ST. LAWRENCE COUNTY, NEW YORK

LAT: N44° 09' 42.70"  
LONG: W74° 59' 48.86"  
DECEMBER 2021

PREPARED FOR:  
NEW YORK STATE ENERGY RESEARCH  
AND DEVELOPMENT AUTHORITY  
17 COLUMBIA CIRCLE  
ALBANY, NY 12203

CIVIL ENGINEER:  
TRC ENGINEERS, LLC  
10 MAXWELL DRIVE  
CLIFTON PARK, NY 12065

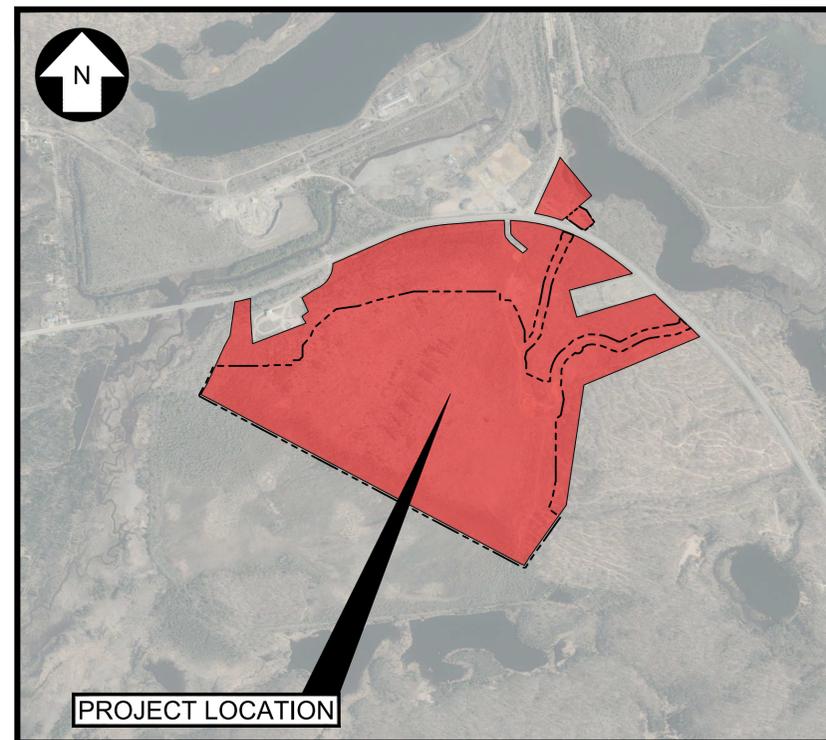
ELECTRICAL ENGINEER:  
TRC ENGINEERS, LLC  
124 GROVE STREET, SUITE 207  
FRANKLIN, MA 02038

SURVEY PROVIDED BY:  
CORNER POST LAND SURVEYING, LLC  
364 SPRAGUETOWN ROAD  
GREENWICH, NY 12834

PV ENGINEER:  
TRC ENGINEERS, LLC  
670 N. COMMERCIAL STREET, SUITE 203  
MANCHESTER, NH 03101

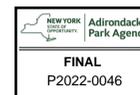
GEOTECHNICAL ENGINEER:  
TRC ENGINEERS, LLC  
16000 COMMERCE PARKWAY, SUITE B  
MT. LAUREL, NJ 08054

ENVIRONMENTAL ENGINEER:  
TRC ENGINEERS, LLC  
10 MAXWELL DRIVE  
CLIFTON PARK, NY 12065



LOCATION MAP  
1" = 1000'

POINT OF INTERCONNECT:  
DC CAPACITY: 26,449.88 KW  
AC CAPACITY: 20,000.00 KW  
DESIGN TEMP: 32°C  
MINIMUM TEMP: -28°C



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C-203	EXISTING CONDITIONS AND SITE REMOVALS PLAN
C-204	EXISTING CONDITIONS AND SITE REMOVALS PLAN
C-205	EXISTING CONDITIONS AND SITE REMOVALS PLAN
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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.

10 MAXWELL DRIVE CLIFTON PARK, NY 12065		PROJECT NO: 444154			
REV	DESCRIPTION	DATE	DES	CHK	APP
0	IFP SET	02/25/2022	RMK	SJW	SJW



BWH  
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DRAWN  
JWH  
CHECKED  
NAM  
APPROVED

COVER SHEET  
BR BENSON MINES SOLAR PROJECT  
NEW YORK STATE ENERGY RESEARCH  
AND DEVELOPMENT AUTHORITY  
CLIFTON, ST LAWRENCE COUNTY, NEW YORK

7/21 DATE AS NOTED SCALE		G-100	REV. 0
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**GENERAL NOTES:**

**SURVEY NOTES:**

- EXISTING CONDITIONS SURVEY WAS PROVIDED BY CORNER POST LAND SURVEYING, PLLC. SEE ALTA SURVEY DATED JULY 26, 2021, SEALED BY MATTHEW C. VAN DOREN, PLS.
- SURVEY IS REFERENCED HORIZONTALLY TO THE NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT (NAD83/2011), PROJECTED ON THE NEW YORK STATE PLANE COORDINATE SYSTEM (EAST ZONE) AND VERTICALLY TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAV88).
- NORTH ARROW AS SHOWN INDICATES GRID NORTH REFERENCED TO NAD83 AND PROJECTED ON THE NEW YORK STATE PLANE COORDINATE SYSTEM (CENTRAL ZONE).
- WETLAND BOUNDARY INFORMATION PROVIDED BY TRC AND CONFIRMED BY APA DURING 7/26/2021 SITE WALKTHROUGH.
- ZONING BOUNDARY INFORMATION OBTAINED FROM THE TOWN OF CLIFTON.
- APA LAND USE BOUNDARY OBTAINED FROM APA MAP AND GIS (<https://apa.ny.gov/gis/>)
- FLOOD ZONE CLASSIFICATION: THE SUBJECT PARCEL IS DEPICTED ON FEMA FIRM 361173 B, INDEX SHEET 01, DATED MAY 15, 1986. THE PROJECT LIMITS WITHIN THE SUBJECT PARCEL LIE WITHIN THE ZONE C FLOODPLAIN (AREAS OF MINIMAL FLOODING)
- TOPOGRAPHY SHOWN ON THIS MAP HAS BEEN COMPILED FROM AVAILABLE LIDAR ELEVATION DATA, PROVIDED BY THE N.Y.S. GIS PROGRAM, THROUGH A COOPERATIVE AGENCY(S) PROJECT. SURVEY GROUND CHECKS WERE DONE USING A BASE & ROVER RTKGPS SYSTEM, AND ALSO USING A CONVENTION TOTAL STATION. THE CONTOURS COMPILED ARE AT A 2 FOOT INTERVAL, AND THE ELEVATION DATUM IS NAV88.
- SOME NATURAL FEATURES, SUCH AS FIELDS, TREE LINES, STREAMS, AND WATER BODIES SHOWN ON THE EXISTING CONDITIONS SURVEY WERE APPROXIMATED FROM N.Y.S. GIS ORTHOIMAGERY PROGRAM AND WERE NOT COMPILED FROM AN INVOLVED GROUND SURVEY.
- NO INFORMATION WAS PROVIDED OR OBSERVED IN REGARDS TO THE SURVEYED PROPERTY ADDRESS. THE TITLE DOCUMENTS DID NOT HAVE A PROPERTY ADDRESS LISTED AND NO PROPERTY ADDRESS WAS FOUND OR LISTED ON OTHER AVAILABLE ("ONLINE") SOURCES.
- THE PROPERTIES ARE CURRENTLY PARTIALLY WOODED, HAVE PONDS, WATERWAYS, OR WET AREAS. THE PROPERTIES SOUTH OF N.Y.S. ROUTE NO. 3 HAVE AREAS FORMERLY USED FOR THE MINE TAILINGS, AS SHOWN. PROPERTY NORTH OF N.Y.S. ROUTE NO. 3 IS CURRENTLY USED FOR AN ELECTRIC SUBSTATION & HIGHWAY, AS SHOWN.

**REMOVAL NOTES:**

- TREE REMOVAL WILL BE IN CONFORMANCE WITH LOCAL AND STATE REGULATIONS AS WELL AS ANY SPECIFIC NYSDEC OR APA GUIDANCE.
- TREE REMOVAL LIMITS IDENTIFIED ON THE PLANS SHALL BE DEMARCATED IN THE FIELD. TREE REMOVAL WITHIN 100' WETLAND BUFFER SHALL BE SELECTIVE CUTTING ONLY OF TREES TALLER THAN 30' AND SHALL BE ACCOMPLISHED WITH CHAINSAWS AND HAND TOOLS. NO SOIL DISTURBANCE, INCLUDING CLEARING & GRUBBING, STUMP REMOVAL, ETC., SHALL OCCUR WITHIN THE 100' WETLAND BUFFER.
- TREES AND OTHER VEGETATION MAY BE REDUCED TO CHIPS BY THE USE OF CHIPPING MACHINES OR STUMP GRINDER AND USED AS REQUIRED FOR EROSION CONTROL. ALL OTHER CHIPS AND WOOD WASTE RESULTING FROM REMOVAL OPERATIONS SHALL BE DISPOSED OF OFF-SITE AT A CERTIFIED FACILITY AND IN A MANNER APPROVED BY THE OWNER.
- ALL EXISTING DEBRIS, RUBBISH, AND ABANDONED ITEMS SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF OFF-SITE IN STRICT ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS. ANY MATERIALS TO BE REMOVED FROM PARCEL 224.000-8-4, NORTH OF ROUTE 3 MUST ALSO BE IN ACCORDANCE WITH THE NOTICE OF CERTIFICATE OF COMPLETION MADE BY FORMER JONES & LAUGHLIN ORE PROCESSING.
- ALL EXCESS SOIL FROM GRADING AND EXCAVATION, DEMOLITION WASTE, DEBRIS AND RUBBISH SHALL BE PROPERLY REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH THE SITE MANAGEMENT PLAN AND ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. ANY MATERIALS TO BE REMOVED FROM PARCEL 224.000-8-4, NORTH OF ROUTE 3 MUST ALSO BE IN ACCORDANCE WITH THE NOTICE OF CERTIFICATE OF COMPLETION MADE BY FORMER JONES & LAUGHLIN ORE PROCESSING. ALTERNATIVELY, EXCESS SOIL FROM GRADING MAYBE SPREAD IN RELATIVELY UNIFORM LAYERS WITHIN THE LIMITS OF THE TEMPORARY CONSTRUCTION LAYDOWN YARD UPON COMPLETION OF THE PV ARRAY FIELD.
- TAKE NECESSARY PRECAUTIONS TO AVOID DAMAGE TO EXISTING IMPROVEMENTS AND FACILITIES TO REMAIN IN PLACE. CONTRACTOR IS RESPONSIBLE FOR REPAIR AND REPLACEMENT OF DAMAGED ITEMS AS A RESULT OF CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.

**CONTRACTOR NOTES:**

- UNLESS INDICATED OTHERWISE, REFER TO THE LATEST EDITION OF THE STATE OF NEW YORK DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS FOR GENERAL REQUIREMENTS, PRODUCTS AND EXECUTION RELATED TO CONSTRUCTION OF BUT NOT LIMITED TO; CLEARING, GRUBBING, ROADS, UTILITY TRENCH EXCAVATION, BORROW, SUBGRADE, SUBBASE, GRANULAR FILL, AND AGGREGATE BASE.
- PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL MARK OR DELINEATE THE FOLLOWING PROJECT FEATURES USING APPROPRIATE MEANS, INCLUDING BUT NOT LIMITED TO LATH MARKERS, SURVEYORS RIBBON, PIN FLAGS, BARRIER FENCE, OR SUITABLE EQUIVALENT.
  - A. PROPOSED FACILITY COMPONENTS DEPICTED ON THE CONSTRUCTION DRAWINGS
  - B. STREAMS, WETLANDS, AND WETLAND BUFFER ZONES
  - C. VEHICLE TRAVEL CORRIDORS, STREAM CROSSING LOCATIONS
  - D. LIMITS OF CLEARING AND DISTURBANCE
  - E. LIMITS OF SELECTIVE TREE CUTTING
  - F. PROTECTED CULTURAL AND NATURAL RESOURCES
- THE CONTRACTOR SHALL NOTE THE CONDITION OF ANY EXISTING FEATURES NOT INDICATED FOR REMOVAL THAT MAY BE IMPACTED BY PROJECT CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR REPAIR OR REPLACEMENT OF ANY DAMAGED FEATURES AT HIS/HER EXPENSE.
- DISRUPTION TO REGULATED WETLANDS AND PROTECTED HABITAT SHALL BE AVOIDED. THE CONTRACTOR SHALL NOTIFY THE FACILITY OWNER/LESSEE OF ANY UNAVOIDABLE IMPACTS THAT MAY VIOLATE THE APA PERMIT. FACILITY OWNER/LESSEE SHALL DETERMINE WHETHER TO EXERCISE STOP WORK AUTHORITY OR WHETHER TO DIRECT THE CONTRACTOR TO FURTHER MINIMIZE IMPACTS TO STREAMS AND WETLANDS.
- RESTRICTED ACTIVITIES PERTAIN TO A BUFFER ZONE OF 100 FEET ON EITHER SIDE OF THE BOUNDARIES OF REGULATED WATER-RELATED RESOURCES (STREAMS, WETLANDS, SPRINGS, WELLS, DRAINAGE, ETC.) AND INCLUDE THE FOLLOWING RESTRICTIONS:
  - A. NO DEPOSITION OF SLASH OR WOOD CHIPS WITHIN IDENTIFIABLE STREAM CHANNELS OR BUFFERS, OR WITHIN 100 FEET OF WETLANDS;
  - B. LIMITED TREE REMOVAL SHALL BE ACCOMPLISHED WITH CHAINSAWS AND HAND TOOLS ONLY; NO UNNECESSARY REMOVAL OF WOOD VEGETATION WITHIN WETLAND AND STREAM BUFFERS OR DEGRADATION OF STREAM BANKS;
  - C. NO EQUIPMENT WASHING OR REFUELING EXCEPT AS SPECIFICALLY PERMITTED BY THE FINAL PROJECT DOCUMENTS;
  - D. AND NO STORAGE, MIXING, OR HANDLING OF ANY PETROLEUM OR CHEMICAL MATERIALS IN OPEN CONTAINERS.

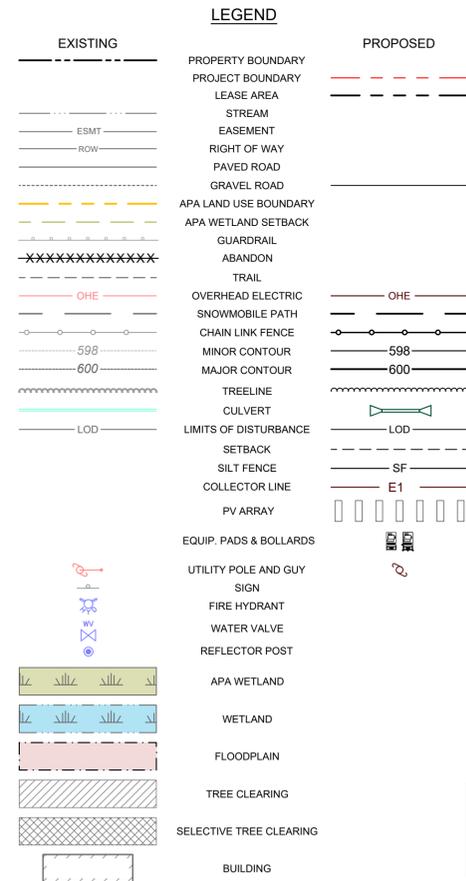
- AT THE END OF EACH WORK DAY ALL EQUIPMENT AND MACHINERY SHALL BE STORED AND SAFELY CONTAINED MORE THAN 100 FEET LANDWARD OF ANY REGULATED WETLAND OR WATER BODY.
- FUEL AND OTHER CHEMICAL STORAGE TANKS SHALL BE CONTAINED WITHIN THE TEMPORARY LAYDOWN YARD IDENTIFIED ON THE PLANS.
- ALL MOBILE EQUIPMENT, EXCLUDING DEWATERING PUMPS, SHALL BE FUELED IN LOCATIONS THAT ARE A MINIMUM OF 100 FEET FROM THE TOP OF STREAM BANK, WETLAND, OR WATER BODY. DEWATERING PUMPS OPERATING CLOSER THAN 100 FEET FROM THE STREAM BANK WETLAND, OR WATER BODY MUST BE ON AN IMPERVIOUS SURFACE WITH ABSORBENTS CAPABLE OF CONTAINING ANY LEAKAGE OF PETROLEUM PRODUCTS.
- "AVOID, DO NOT CROSS" INDICATES THAT AN AREA DOES NOT HAVE A DESIGNATED ACCESS ROUTE AND THAT EQUIPMENT IS RESTRICTED FROM CROSSING OR OPERATING IN THAT AREA. THIS DESIGNATION IS APPLIED TO ALL WETLANDS, STREAMS, AND ASSOCIATED BUFFERS THAT DO NOT HAVE APPROVED EQUIPMENT ACCESS, AS INDICATED.
- THE NATIVE SUBSOIL AT THE SITE CONTAINS VARYING FINE-GRAINED (SILT) CONTENT AND MAY BE SLIGHTLY SENSITIVE TO MOISTURE AND DISTURBANCE, ESPECIALLY DURING WET PERIODS. SUBSOILS MAY LOSE STRENGTH WHEN WET OR DISTURBED BY CONSTRUCTION EQUIPMENT AND COULD BE DIFFICULT TO WORK WITH DURING COLD OR WET WEATHER. THE CONTRACTOR SHALL UTILIZE APPROPRIATE WET WEATHER CONSTRUCTION TECHNIQUES DURING CONSTRUCTION OF THE FACILITY. WET WEATHER CONSTRUCTION TECHNIQUES MAY INCLUDE LIMITING EXPOSURE OF SUBSOILS TO THAT WHICH CAN BE COMPLETED OR COVERED BY THE END OF EACH WORKDAY; TEMPORARY CONSTRUCTION ROADS AND PLATFORMS BUILT WITH CONSTRUCTION MATTING OR GEOTEXTILES AND CRUSHED STONE; TEMPORARY FILL, AND OTHER METHODS.
- REFER TO THE PROJECT GEOTECHNICAL REPORT FOR MORE SPECIFIC CUT AND FILL CONSTRUCTION REQUIREMENTS.
- ALL VEHICLE TRAFFIC AND PARKING SHALL BE CONFINED TO THE TEMPORARY ACCESS ROADS, DESIGNATED WORK AREAS, AND DESIGNATED MATERIAL LAYDOWN AREAS.
- EXISTING FENCES NOT INDICATED FOR REMOVAL SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. WHERE EXISTING FENCE OR GATES MUST BE REMOVED OR ALTERED, TEMPORARY FENCING AND GATES SHALL BE PROVIDED TO MATCH THE FUNCTION OF THE EXISTING SYSTEM. AT THE END OF CONSTRUCTION, RESTORE THE FENCE AND GATE TO MATCH THAT EXISTING AT THE START OF THE WORK.
- THE CONTRACTOR SHALL IDENTIFY AND PROTECT ALL OIL/GAS WELLS AND PIPELINES PRIOR TO CONSTRUCTION ACTIVITIES.

**GENERAL ENVIRONMENTAL RESTRICTIONS:**

- THIS PROJECT INCLUDES A SWPPP THAT HAS BEEN PREPARED IN ACCORDANCE WITH THE 'NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) STATE POLLUTION DISCHARGE ELIMINATION SYSTEM (SPDES) GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITY' GENERAL PERMIT GP-0-20-001, EFFECTIVE JANUARY 29, 2020 THROUGH JANUARY 28, 2025. ALL SITE OPERATIONS SHALL COMPLY WITH THE SWPPP AND ASSOCIATED PERMIT REQUIREMENTS.
- ALL EQUIPMENT ACCESS, STORAGE OF EQUIPMENT, MATERIALS, EMPLOYEE PARKING, AND OTHER CONSTRUCTION ACTIVITIES ARE RESTRICTED TO THE DESIGNATED ACCESS ROADS, LAYDOWN AREAS, COLLECTION LINE ROUTES AS INDICATED BY THE PROJECT DOCUMENTS.
- FUGITIVE DUST RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE MINIMIZED TO THE MAXIMUM EXTENT PRACTICAL BY IMPLEMENTING APPROPRIATE CONTROL MEASURES. THESE MEASURES INCLUDE THE APPLICATION OF MULCH, WATER, OR STONE ON ACCESS ROADS, EXPOSED SOILS, STOCKPILED SOILS, OR UNPAVED PUBLIC ROADS WHEN DRY, WINDY CONDITIONS EXIST. A WATERING VEHICLE (OR A VEHICLE CONTAINING AN APPROVED CHEMICAL TREATMENT) SHALL BE MADE AVAILABLE AS NEEDED.
- CONTRACTOR SHALL MAINTAIN ALL EQUIPMENT IN GOOD OPERATING CONDITION. ALL MOTORS AND ENGINES SHALL BE MUFFLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND SHALL COMPLY WITH STATE ENVIRONMENTAL LAW, SUBCHAPTER E, PART 450 (NOISE FROM HEAVY MOTOR VEHICLES). ANY FAULTY NOISE SUPPRESSOR SHALL BE REPAIRED OR REPLACED IMMEDIATELY. EQUIPMENT SHALL NOT BE LEFT RUNNING UNNECESSARILY. EXISTING TALL GROWING VEGETATION SHALL BE RETAINED TO THE MAXIMUM EXTENT PRACTICABLE, TO SERVE AS A NOISE BUFFER.
- NO STUMP REMOVAL OR GRUBBING SHALL OCCUR WITHIN ANY REGULATED STREAM, WETLAND OR ASSOCIATED BUFFER, EXCEPT WHERE PERMITTED.
- ALL NATIVE OR IMPORTED FILL MATERIALS SHALL CONSIST OF CLEAN SOIL, SAND, AND/OR GRAVEL THAT IS FREE OF THE FOLLOWING SUBSTANCES: ASPHALT, SLAG, FLY ASH, DEMOLITION DEBRIS, BROKEN CONCRETE, GARBAGE, HOUSEHOLD REFUSE, TIRES, WOODY MATERIALS, AND METAL OBJECTS. REASONABLE EFFORTS SHALL BE MADE TO USE FILL MATERIALS THAT ARE VISIBLY FREE OF INVASIVE SPECIES BASED ON ONSITE AND SOURCE INSPECTIONS. THE INTRODUCTION OF MATERIALS TOXIC TO AQUATIC LIFE IS EXPRESSLY PROHIBITED.
- INDIRECT IMPACTS TO STREAMS AND WETLANDS SHALL BE CONTROLLED THROUGH THE EMPLOYMENT OF APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH APPROVED PROJECT STORMWATER POLLUTION PREVENTION PLAN (SWPPP). MEASURES TO BE EMPLOYED SHALL INCLUDE, BUT ARE NOT LIMITED TO, SILT FENCES, CHECK DAMS, MULCH, TEMPORARY SEEDING, AND OTHER PRACTICES AS OUTLINED IN THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL (LATEST EDITION).
- EXPOSED SOIL SHALL BE SEEDED AND/OR MULCHED AS SOON AS PRACTICABLE AFTER FINAL GRADING. TEMPORARY SEED AND MULCH SHALL BE USED DURING PERIODS OF PLANNED EXTENDED SHUT-DOWNS, INTERRUPTED CONSTRUCTION AND DURING PERIODS OF HOT WEATHER WHEN PERMANENT SEEDING IS LIKELY TO FAIL. SEE LANDSCAPING PLAN AND SWPPP.
- IN THE EVENT THAT ARCHAEOLOGICAL MATERIALS, HUMAN REMAINS, OR EVIDENCE OF HUMAN BURIALS ARE ENCOUNTERED DURING CONSTRUCTION, ALL WORK IN THE VICINITY OF THE FIND SHALL BE IMMEDIATELY HALTED AND THE FACILITY OWNER/LESSEE AND LANDOWNER REPRESENTATIVES NOTIFIED.
- THE CONTRACTOR SHALL LOCATE AND DISTRIBUTE EXCESS EXCAVATION MATERIAL IN UPLAND AREAS (I.E., OUTSIDE OF WETLANDS, STREAMS, AND ASSOCIATED BUFFERS). WHERE PRACTICAL, SUCH MATERIAL SHALL BE USED AS ROAD FILL OR BACKFILL AROUND STRUCTURES. EROSION CONTROL PRACTICES SHALL BE INSTALLED, AND EXPOSED SOILS STABILIZED IN ACCORDANCE WITH THE SWPPP. EXCESS FILL THAT CAN'T BE DISPOSED ONSITE WILL BE PROPERLY REMOVED OFF SITE
- EXCESS CONCRETE SHALL BE PROPERLY DISPOSED OF OFF SITE.

**EROSION PREVENTION AND SEDIMENT CONTROL:**

- MITIGATION, RESTORATION, AND CLEAN UP MAY INCLUDE, BUT IS NOT LIMITED TO, THE FOLLOWING:
  - A. TOPSOIL STRIPPING AND STOCKPILING,
  - B. USE OF CONSTRUCTION MATTING,
  - C. CONSTRUCTION OF TEMPORARY HAUL ROADS AND HAUL ROAD REMOVAL,
  - D. PLACEMENT AND COMPACTION OF STONE BEARING LAYER WITH OR WITHOUT GEOSYNTHETIC LAYER,
  - E. SURFACE TILLAGE,
  - F. REGRADING AND SPREADING PREVIOUSLY STRIPPED TOPSOIL,
  - G. DRAINAGE SYSTEM REPAIR OR ALTERATION.
- TEMPORARY GRAVEL ROADS, TEMPORARY CULVERTS, TIMBER MATS, AND SIMILAR TEMPORARY MEASURES SHALL BE REMOVED AND THE IMPACTED AREAS RESTORED WITHIN THE TIMEFRAME PRESCRIBED BY THE PERMIT.
- RESTORATION OF DISTURBED AREAS, TEMPORARY ROADS AND WORK PLATFORMS SHALL INCLUDE THE FOLLOWING PRE- AND POST-CONSTRUCTION TREATMENTS:
  - A. REGRADED TO MATCH FINAL CONTOURS AND STABILIZED.
  - B. UPON COMPLETION OF CONSTRUCTION ACTIVITIES, ALL TEMPORARY ROADS AND WORK SITES SHALL BE SCARIFIED/DECOMPACTED AND STOCKPILED SOIL SPREAD AND THE AREA STABILIZED AND ALLOWED TO RE-VEGETATE NATURALLY.
  - C. APPROVED SWPPP/ESC CONTROLS, INCLUDING BIODEGRADABLE MEASURES, SHALL BE PROVIDED AND SHALL REMAIN IN PLACE UNTIL THE RESTORED AREA HAS BEEN RE-VEGETATED.
- ACCESS ROUTES SHALL BE CONSTRUCTED AS INDICATED ON THE FINAL CONSTRUCTION DRAWINGS, WITH CONSTRUCTION ACTIVITIES RESTRICTED TO DESIGNATED CORRIDORS/RIGHTS-OF-WAY.
- ALL EXISTING DRAINAGE AND EROSION CONTROL FEATURES NOT INDICATED FOR REMOVAL INCLUDING BUT NOT LIMITED TO DRAINAGE DITCHES, DIVERSIONS, DRAIN TILE, CULVERTS ETC; SHALL BE AVOIDED OR PROTECTED FROM DAMAGE. ANY FEATURES DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION IMMEDIATELY.
- TOPSOIL STRIPPED FROM WORK SITES SHALL BE SEGREGATED FROM OTHER SOIL PRODUCTS AND STOCKPILED IN AREAS IMMEDIATELY ADJACENT TO WHERE IT WAS REMOVED. THE TOPSOIL SHALL BE USED FOR RESTORATION OF THAT SITE AND NOT FOR BACKFILLING.



SYSTEM SPECIFICATIONS	
SYSTEM STC DC RATING (KW)	26449.88 (+/- 10%)
SYSTEM AC CAPACITY AT GRID (KW)	20,000.00
SYSTEM AC RATING AT INVERTER (KW)	20,200.00
DC/AC RATIO AT GRID	1.32 (+/- 10%)
DC/AC RATIO AT INVERTER	1.31 (+/- 10%)
MODULE STC DC RATING (W)	425
MODULE COUNT	62,235
MODULES PER STRING	27
STRING COUNT	2,305
4 STRING TRACKER	464
3 STRING TRACKER	95
2 STRING TRACKER	82
INVERTER RATING (KW)	2800 (PERMANENTLY SOFTWARE LIMITED TO 2525)
QUANTITY OF INVERTERS	8
TRANSFORMER RATING (MVA)	2,800
QUANTITY OF TRANSFORMERS	8
DC SYSTEM VOLTAGE (V)	1,500
INTERCONNECTION VOLTAGE (KV)	34.5
RACKING SYSTEM	Single-Axis Tracker (TBD)
MODULE TILT	-60° TO 60°
AXIS AZIMUTH	180°
GCR	0.3600
ROW-TO-ROW SPACING (LF)	12'-0"
ASHRAE 0.4% DESIGN BULB TEMP MAX (°C)	32
ASHRAE EXTREME ANNUAL MEAN MINIMUM DRY-BULB TEMP (°C)	-28
ROAD WIDTH	20'-0"
ROAD TO PANEL SPACING	15'
FENCE TO PANEL SPACING	15' MIN., 20' TYP.

**ESTIMATED CIVIL QUANTITIES**

PROJECT AREA (ACRES)	255.2
FENCED AREA (ACRES)	113.1
FENCE LENGTH (LF)	9,430
HAUL ROAD LENGTH (LF)	7,445
HAUL ROAD AREA (ACRES)	3.55
TREE CLEARING (ACRES)	3.58
SELECTIVE TREE CUTTING (ACRES)	1.72
VOLUME OF CUT (CY)*	21,950
VOLUME OF FILL (CY)*	10,686
LIMITS OF DISTURBANCE (LOD) (ACRES)	119.0
LEASE AREA (ACRES)	165.6

\*EARTHWORK VOLUMES ARE RAW SURFACE CALCULATIONS BASED ON COMPARISON OF EXISTING LIDAR AND PROPOSED GRADING AND DO NOT ACCOUNT FOR EXPANSION, COMPACTION, STRUCTURAL FILL IMPORT OR TOPSOIL REMOVAL/REPLACEMENT.

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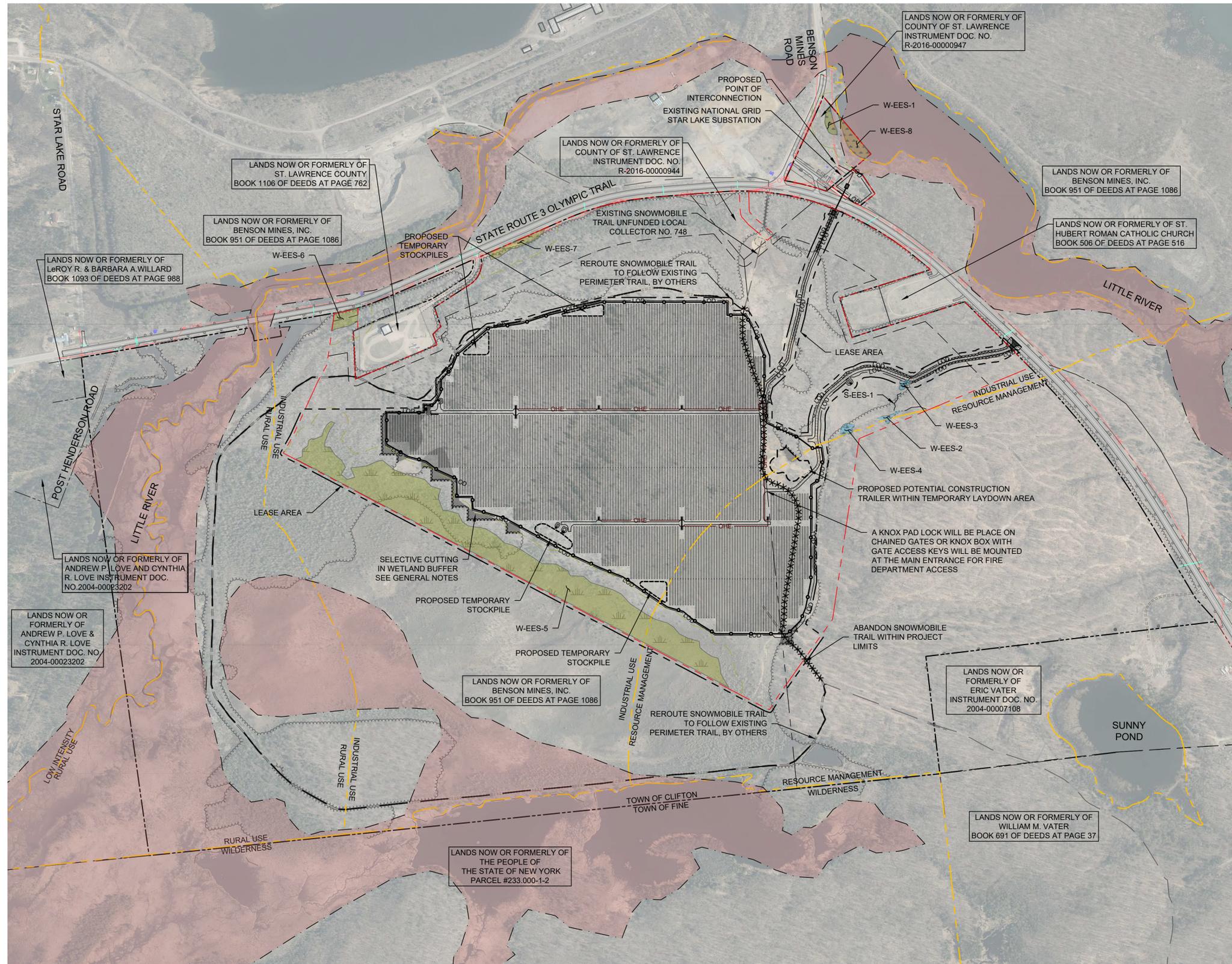
		10 MAXWELL DRIVE CLIFTON PARK, NY 12065		PROJECT NO: 444154		
REV	DESCRIPTION	DATE	DES	CHK	APP	
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NEW YORK STATE  
Adirondack Park Agency  
**FINAL**  
P2022-0046

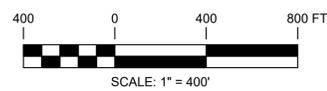


BWI DESIGNED BWI DRAWN JWH CHECKED NAM APPROVED	GENERAL NOTES AND LEGEND  BR BENSON MINES SOLAR PROJECT NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY CLIFTON, ST LAWRENCE COUNTY, NEW YORK		7/21 DATE AS NOTED SCALE		G-101	REV. 0
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Adirondack Park Agency  
FINAL  
P2022-0046

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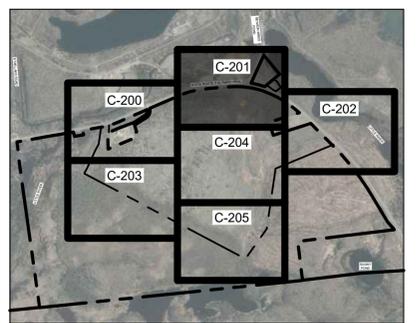
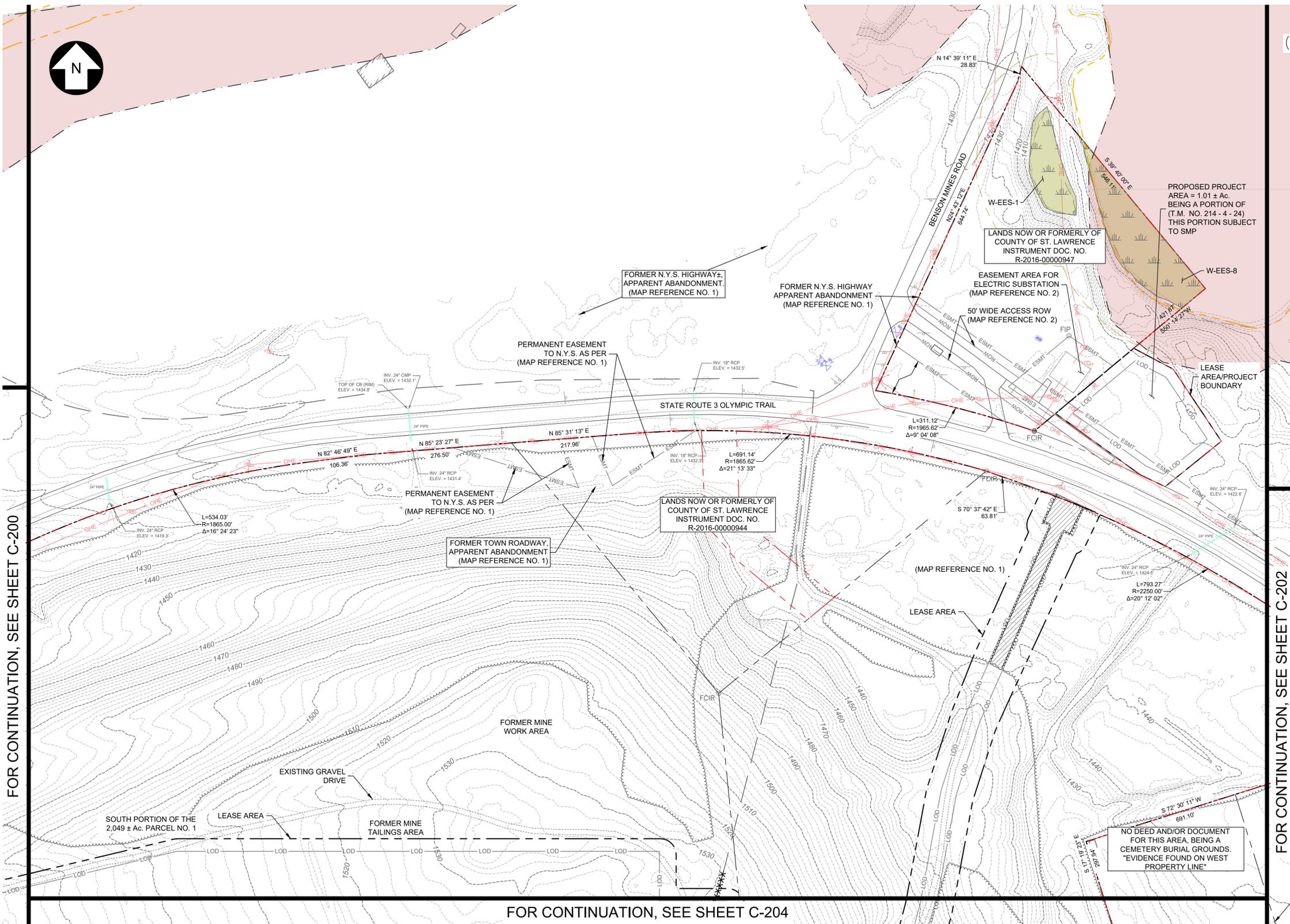
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APPROVED

<b>OVERALL SITE LAYOUT</b>  BR BENSON MINES SOLAR PROJECT NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY CLIFTON, ST LAWRENCE COUNTY, NEW YORK		7/21 DATE AS NOTED SCALE		C-100	REV. 0
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KEY MAP  
SCALE: 1" = 2000'

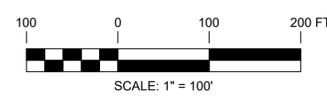
LEGEND

EXISTING	PROPOSED
ESMT	PROPERTY BOUNDARY
ROW	PROJECT BOUNDARY
	LEASE AREA
	EASEMENT
	STREAM
	RIGHT OF WAY
	PAVED ROAD
	GRAVEL ROAD
	APA LAND USE BOUNDARY
	APA WETLAND SETBACK
	GUARDRAIL
	ABANDON
	TRAIL
	OVERHEAD ELECTRIC
	SNOWMOBILE TRAIL
	CHAIN LINK FENCE
	MINOR CONTOUR
	MAJOR CONTOUR
	TREELINE
	CULVERT
	LIMITS OF DISTURBANCE
	SETBACK
	LAYDOWN YARD
	SILT FENCE
	COLLECTOR LINE
	PV ARRAY
	EQUIP. PADS & BOLLARDS
	UTILITY POLE AND GUY
	SIGN
	FIRE HYDRANT
	WATER VALVE
	REFLECTOR POST
	APA WETLAND
	WETLAND
	FLOODPLAIN
	TREE CLEARING
	SELECTIVE TREE CLEARING
	BUILDING

MAP REFERENCES:

- KEY MAP AND TABLES, WITH ASSOCIATED MAPS AND PARCELS, OF PROPERTY ACQUISITIONS FOR THE STAR LAKE - CRANBERRY LAKE S.H. 8269, BEING DATED 1926, 1942-1943 AND 1962. ANOTHER KEY MAP WITH ASSOCIATED MAPS AND PARCELS WAS COMPLETED TO RELOCATE S.H. 8269 SOUTH OF THE "CEMETERY LOT", AND DATED 1973. ALL MAPS & DOCUMENTS WERE PROVIDED BY N.Y.S.D.O.T. REGION 7.
- MAP OF SURVEY PREPARED FOR NATIONAL GRID STAR LAKE SUBSTATION PERMANENT EASEMENT, DATED DECEMBER, 2013, BY WCT SURVEYORS, P.C. = RONALD E. TOWNE, PLS..
- POINT OF INTERCONNECTION (POI): BROWN'S FALLS TO NEWTON FALLS #2234.5kV LINE, NORTH OF STAR LAKE SUBSTATION. THE POI AS DEPICTED IS SUBJECT TO FINAL APPROVAL OF THE NEW YORK INDEPENDENT SYSTEM OPERATOR (NYISO) AND NATIONAL GRID THROUGH THE ONGOING SMALL GENERATOR INTERCONNECTION PROCESS (SGIP). ANY RESULTING MODIFICATION TO THE POI FACILITY CONFIGURATION WILL BE SUBMITTED TO THE APA BY PROVISION OF AN UPDATED DRAWING SHEET(S) PRIOR TO CONSTRUCTION.

PRELIMINARY  
NOT FOR CONSTRUCTION



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		10 MAXWELL DRIVE CLIFTON PARK, NY 12065		PROJECT NO: 444154		
REV	DESCRIPTION	DATE	DES	CHK	APP	
0	IFP SET	02/25/2022	RMK	SJW	SJW	



BWH DESIGNED
BWH DRAWN
JWH CHECKED
NAM APPROVED

EXISTING CONDITIONS AND SITE REMOVALS PLAN

BR BENSON MINES SOLAR PROJECT  
NEW YORK STATE ENERGY RESEARCH  
AND DEVELOPMENT AUTHORITY  
CLIFTON, ST LAWRENCE COUNTY, NEW YORK

7/21 DATE AS NOTED SCALE		C-201	REV. 0
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FOR CONTINUATION, SEE SHEET C-200

FOR CONTINUATION, SEE SHEET C-202

FOR CONTINUATION, SEE SHEET C-204





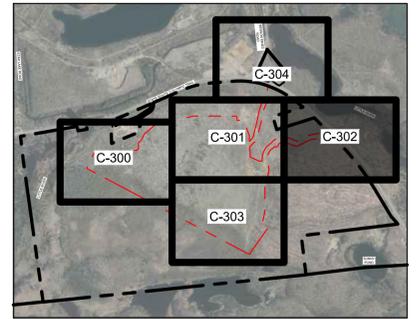








FOR CONTINUATION, SEE SHEET C-301



KEY MAP  
SCALE: 1" = 2000'

LEGEND

EXISTING	PROPERTY BOUNDARY	PROPOSED
---	PROPERTY BOUNDARY	---
---	PROJECT BOUNDARY	---
---	LEASE AREA	---
---	STREAM	---
---	EASEMENT	---
---	RIGHT OF WAY	---
---	PAVED ROAD	---
---	GRAVEL ROAD	---
---	APA LAND USE BOUNDARY	---
---	APA WETLAND SETBACK	---
---	GUARDRAIL	---
---	ABANDON	---
---	TRAIL	---
---	OVERHEAD ELECTRIC	---
---	SNOWMOBILE TRAIL	---
---	CHAIN LINK FENCE	---
---	MINOR CONTOUR	---
---	MAJOR CONTOUR	---
---	TREELINE	---
---	CULVERT	---
---	LIMITS OF DISTURBANCE	---
---	SETBACK	---
---	LAYDOWN YARD	---
---	SILT FENCE	---
---	COLLECTOR LINE	---
---	PV ARRAY	---
---	EQUIP. PADS & BOLLARDS	---
---	UTILITY POLE AND GUY	---
---	SIGN	---
---	FIRE HYDRANT	---
---	WATER VALVE	---
---	REFLECTOR POST	---
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---	WETLAND	---
---	FLOODPLAIN	---
---	TREE CLEARING	---
---	SELECTIVE TREE CLEARING	---
---	BUILDING	---

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TREE CLEARING NOTE:

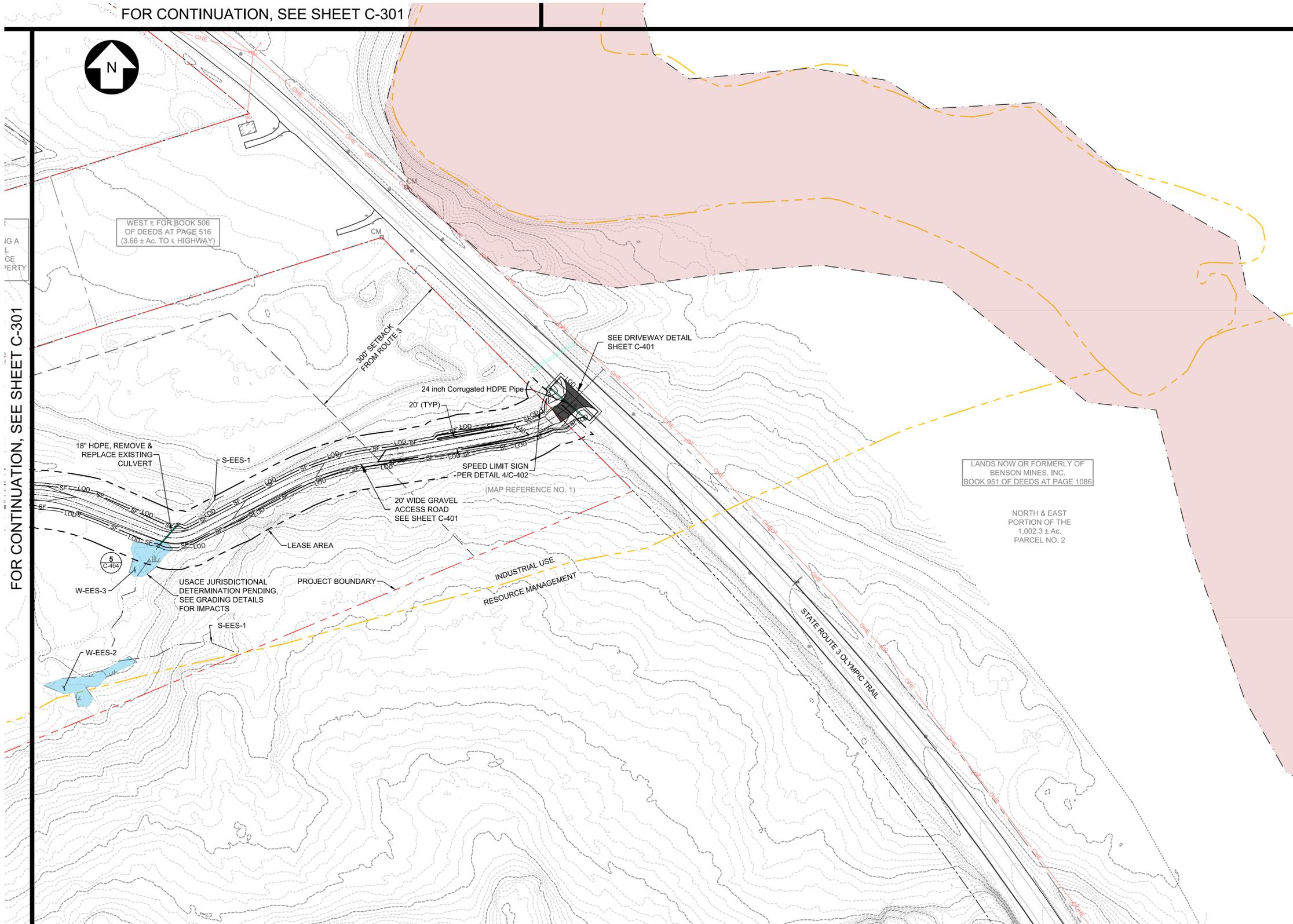
- TREE CLEARING WITHIN THE LOD SHALL INCLUDE FULL REMOVAL OF TREES, BRUSH, STUMPS, AND SURFACE RESTORATION TO ACCOMMODATE PANEL INSTALLATION. TREE CLEARING BEYOND THE LOD TO ELIMINATE SHADING SHALL CONSIST OF SELECTIVE CUTTING OF ANY TREES TALLER THAN 30'. FOR SELECTIVE CUTTING WITHIN THE WETLAND BUFFER, ALL TREES AND SLASH SHALL BE DROPPED IN PLACE WITH NO REMOVAL.

PRELIMINARY

NOT FOR CONSTRUCTION



FOR CONTINUATION, SEE SHEET C-301



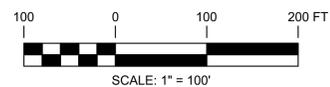
WEST 1/4 FOR BOOK 506 OF DEEDS AT PAGE 516 (3.66 ± Ac. TO & HIGHWAY)

LANDS NOW OR FORMERLY OF BENSON MINES, INC. BOOK 951 OF DEEDS AT PAGE 1086

NORTH & EAST PORTION OF THE 1,002.3 ± Ac. PARCEL NO. 2



FINAL  
P2022-0046



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.

		10 MAXWELL DRIVE CLIFTON PARK, NY 12065		PROJECT NO: 444154	
REV	DESCRIPTION	DATE	DES	CHK	APP
1	IFP SET APA COMMENTS	03/31/2022	RMK	SJW	SJW
0	IFP SET	02/25/2022	RMK	SJW	SJW



BWJ  
DESIGNED  
BWJ  
DRAWN  
JWJ  
CHECKED  
NAM  
APPROVED

SITE PLAN

BR BENSON MINES SOLAR PROJECT  
NEW YORK STATE ENERGY RESEARCH  
AND DEVELOPMENT AUTHORITY  
CLIFTON, ST LAWRENCE COUNTY, NEW YORK

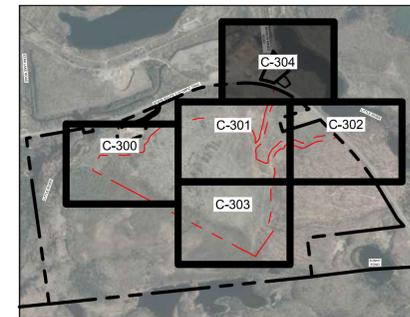
7/21  
DATE  
AS NOTED  
SCALE



C-302

REV.  
1





KEY MAP  
SCALE: 1" = 2000'

LEGEND

EXISTING	PROPERTY BOUNDARY	PROPOSED
---	PROPERTY BOUNDARY	---
---	PROJECT BOUNDARY	---
---	LEASE AREA	---
---	STREAM	---
---	EASEMENT	---
---	RIGHT OF WAY	---
---	PAVED ROAD	---
---	GRAVEL ROAD	---
---	APA LAND USE BOUNDARY	---
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---	SIGN	---
---	FIRE HYDRANT	---
---	WATER VALVE	---
---	REFLECTOR POST	---
---	APA WETLAND	---
---	WETLAND	---
---	FLOODPLAIN	---
---	TREE CLEARING	---
---	SELECTIVE TREE CLEARING	---
---	BUILDING	---

MAP REFERENCES:

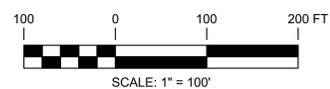
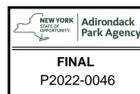
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FOR CONTINUATION, SEE SHEET C-301

FOR CONTINUATION, SEE SHEET C-302



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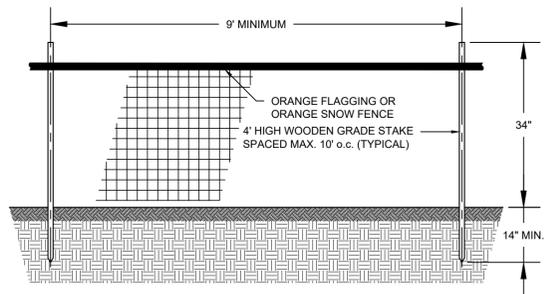
		10 MAXWELL DRIVE CLIFTON PARK, NY 12065		PROJECT NO: 444154		
REV	DESCRIPTION	DATE	DES	CHK	APP	
1	IFP SET APA COMMENTS	03/31/2022	RMK	SJW	SJW	
0	IFP SET	02/25/2022	RMK	SJW	SJW	



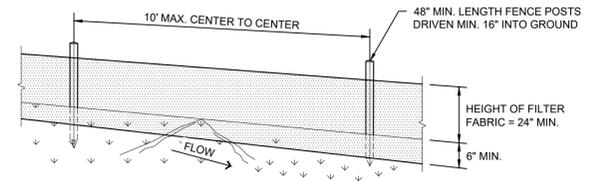
BWH DESIGNED		C-304	REV. 1
BWH DRAWN			
JWH CHECKED			
NAM APPROVED			
DATE 7/21		SCALE AS NOTED	
SITE PLAN BR BENSON MINES SOLAR PROJECT NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY CLIFTON, ST LAWRENCE COUNTY, NEW YORK			

PRELIMINARY  
NOT FOR CONSTRUCTION

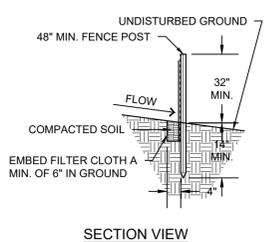




**1 TYPICAL PROJECT DEMARCATION FENCE**  
SCALE: N.T.S.

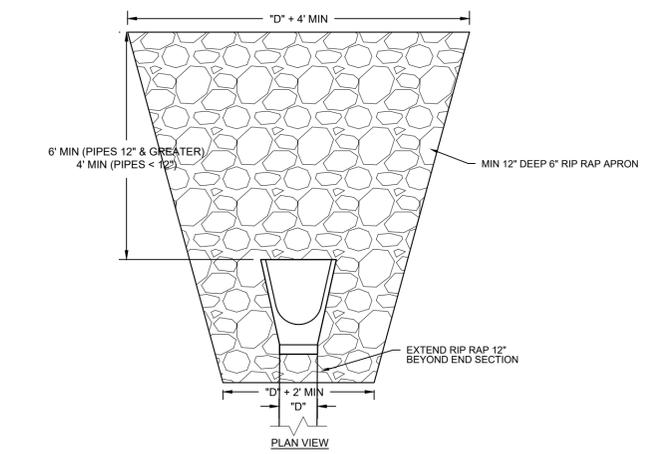
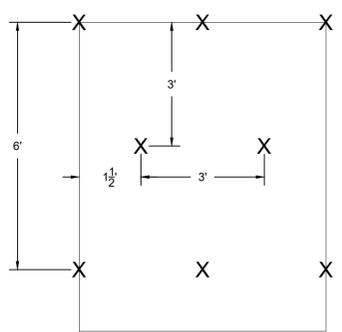
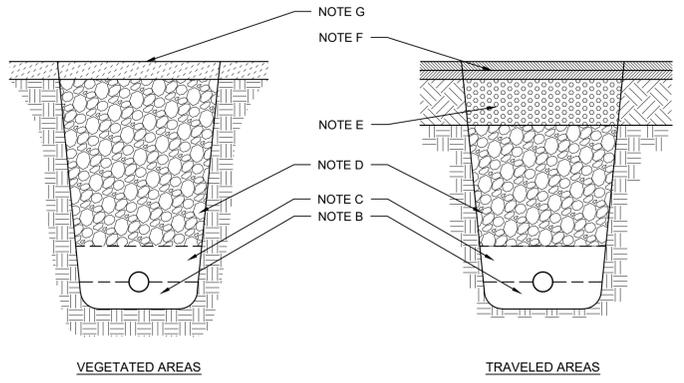


PERSPECTIVE VIEW



- CONSTRUCTION SPECIFICATIONS**
1. FILTER CLOTH TO BE FASTENED SECURELY TO POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL, EITHER "T" OR "U" TYPE, OR HARDWOOD.
  2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFY 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
  3. PRE-FABRICATED UNITS SHALL BE 'GEOFAB', 'ENVIROFENCE', OR APPROVED EQUIVALENT.
  4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

**2 TYPICAL SILT FENCE**  
SCALE: N.T.S.

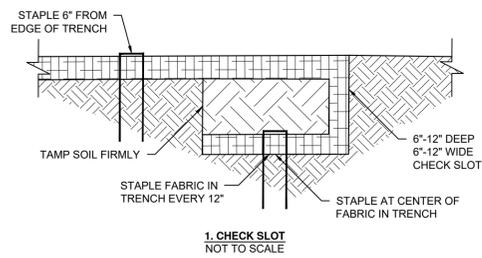


**8 RIP-RAP APRON DETAIL**  
SCALE: N.T.S.

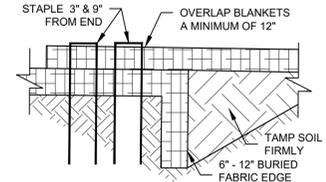


12 STAPLES/YD<sup>2</sup>  
3:1 SLOPES  
STAPLE PATTERN  
NOT TO SCALE

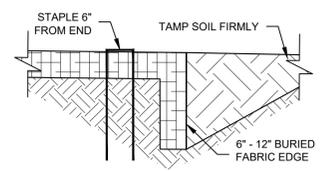
**4 ROLLED EROSION CONTROL PRODUCT (RECP) - TYPICAL**  
SCALE: N.T.S.



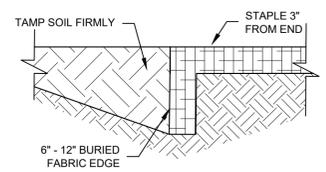
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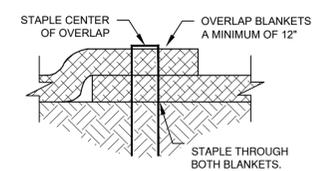
2. JUNCTION SLOT  
NOT TO SCALE



3. ANCHOR SLOT  
NOT TO SCALE



4. TERMINAL FOLD  
NOT TO SCALE



5. LAP JOINT  
NOT TO SCALE

**CONSTRUCTION SPECIFICATIONS**

1. INSTALL RECP ON ALL SLOPES 3:1 OR GREATER AND IN CHANNELS
2. METAL STAPLES TO BE UNGALVANIZED U-SHAPED WIRE WITH 2" CROWN AND 6" TO 8" LONG LEG. SET STAPLE INTO THE FABRIC FLUSH WITH SURROUNDING SOIL. MAY BE MANUALLY OR MECHANICALLY HAMMERED DOWN.
3. METAL STAPLES ARE TO BE PLACED ALTERNATIVELY, IN COLUMNS ~ 2' APART AND IN ROWS ~ 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4' x 225' ROLL OF MATERIAL AND ABOUT 125 STAPLES ARE REQUIRED PER 4' x 150' ROLL OF MATERIAL. ACTUAL STAPLE AMOUNTS VARY BASED UPON SOIL CONDITIONS.
4. DISTURBED AREA SHALL BE SMOOTHLY GRADED TO ENSURE CLOSE CONTACT BETWEEN RECP AND GROUND. REMOVE LARGE STONES AND WOODY DEBRIS THAT WILL PREVENT RECP FROM CONTACTING THE GROUND.
5. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
6. ENSURE EROSION CONTROL MATERIAL ROLLS ARE UNRAVELED DOWN SLOPE IN A CONTROLLED FASHION.
7. ALL RECP TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

Adirondack Park Agency  
FINAL  
P2022-0046

PRELIMINARY  
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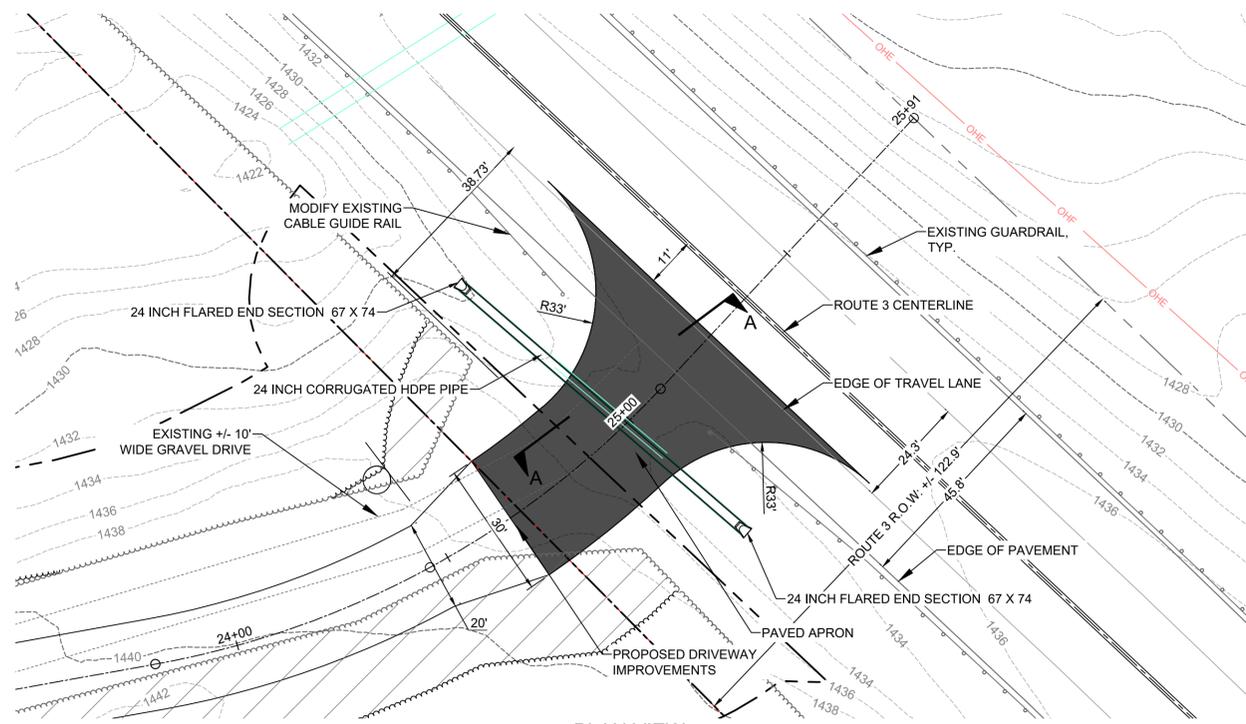


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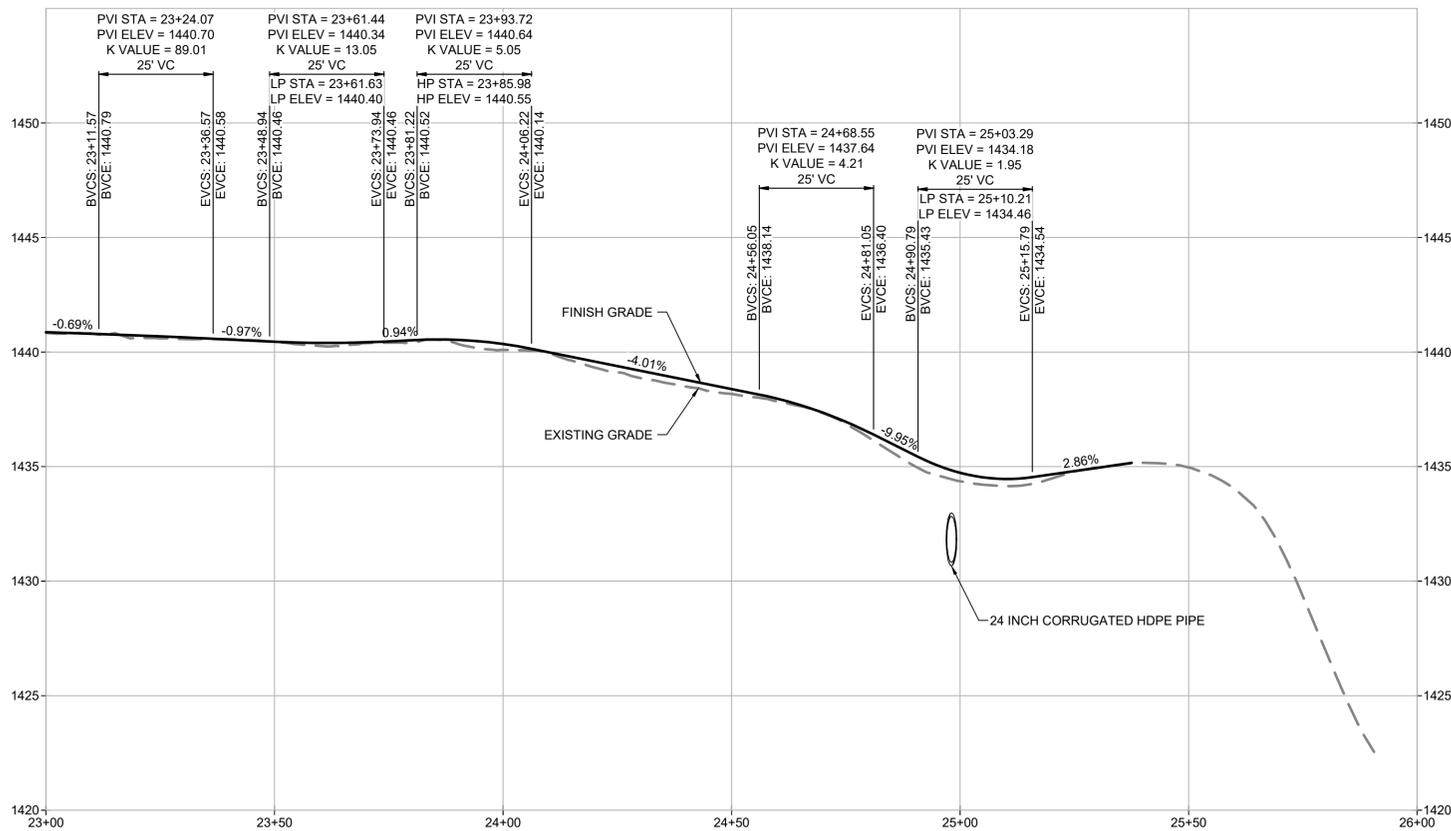
GRADING AND DRAINAGE DETAILS  
  
BR BENSON MINES SOLAR PROJECT  
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7/21 DATE AS NOTED SCALE		C-400	REV. 0
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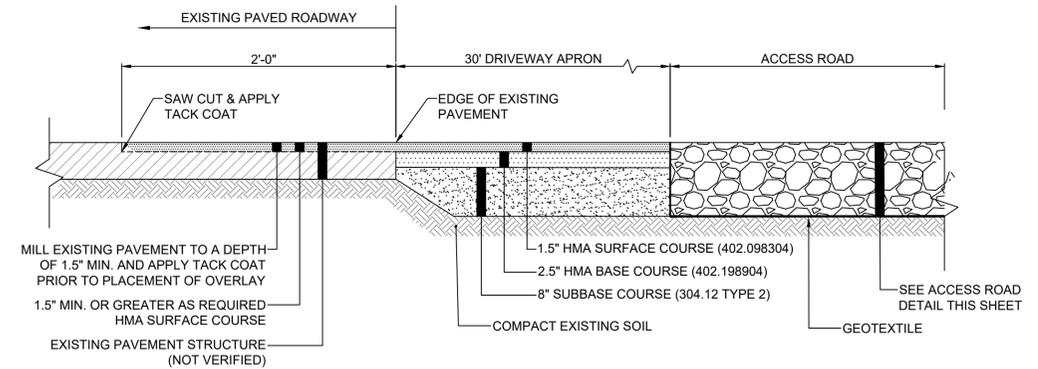
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PLAN VIEW  
SCALE: 1"=20'



PROFILE VIEW  
SCALE: H: 1"=20'; V: 1"=4'

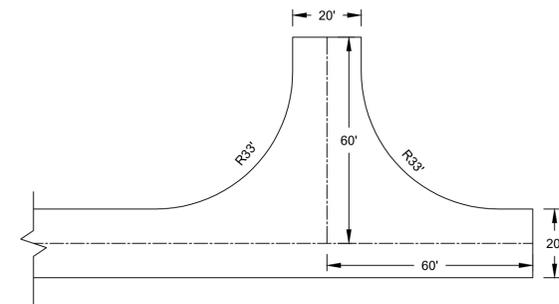


SECTION A-A  
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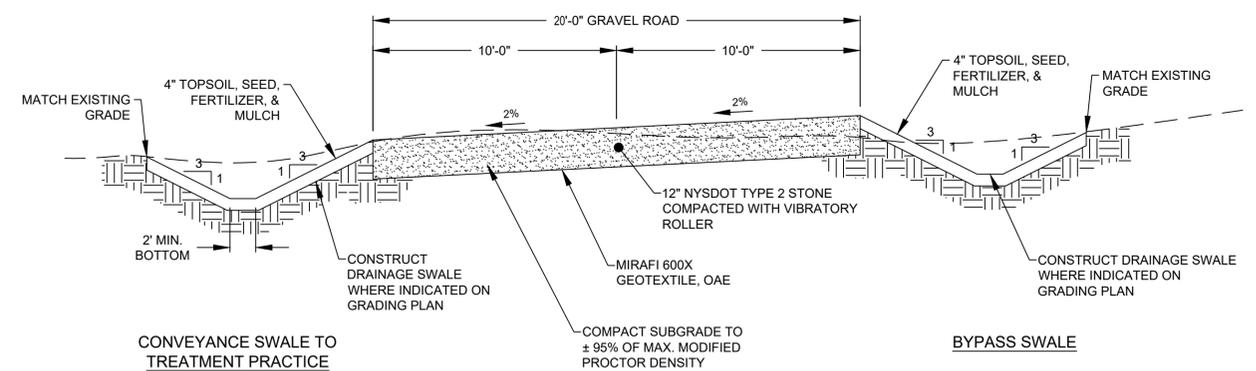
NOTES:

- PAVED DRIVEWAY APRON SHALL MEET ALL NYS DOT REQUIREMENTS FOR A MINOR COMMERCIAL DRIVEWAY ACCESSED FROM A STATE HIGHWAY.
- THIS DRIVEWAY HAS BEEN DESIGNED IN ACCORDANCE WITH NYS DOT STANDARD SHEETS 608.03 AND "POLICY AND STANDARDS FOR THE DESIGN OF ENTRANCES TO STATE HIGHWAYS" (SEPTEMBER 1, 2017 EDITION).

1 STATE ROUTE 3 DRIVEWAY DETAIL  
SCALE: N.T.S.



2 TYPICAL ACCESS ROAD TURNAROUND  
SCALE: N.T.S.



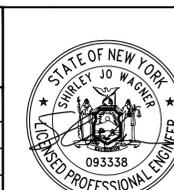
3 TYPICAL ACCESS ROAD SECTION  
SCALE: N.T.S.

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APPROVED

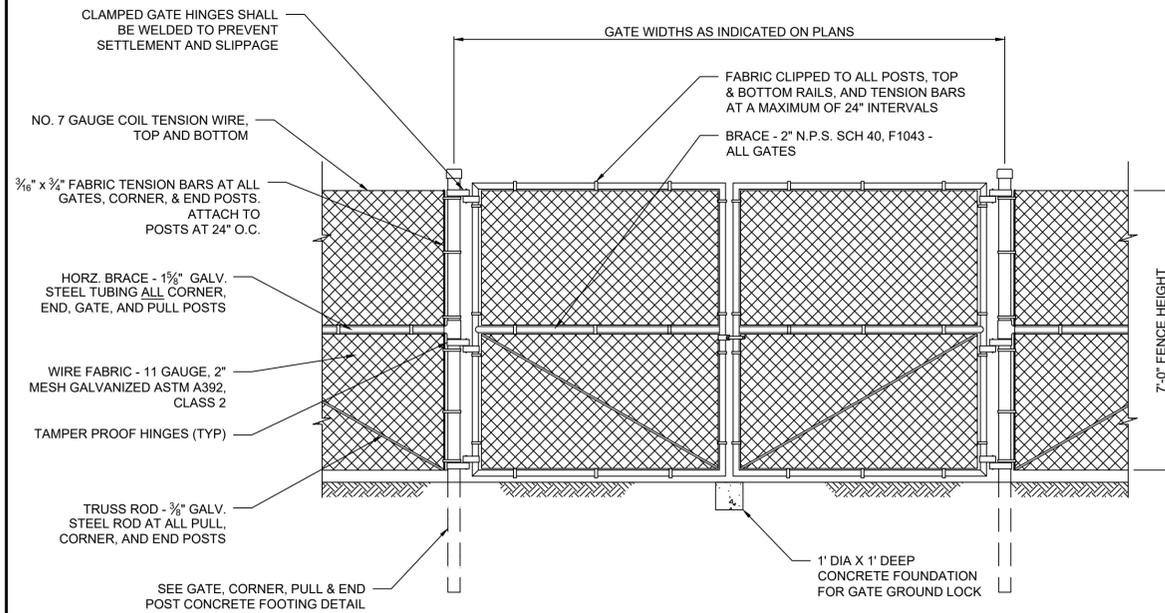
DRIVEWAY AND ROAD DETAILS  
  
BR BENSON MINES SOLAR PROJECT  
NEW YORK STATE ENERGY RESEARCH  
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CLIFTON, ST LAWRENCE COUNTY, NEW YORK

7/21  
DATE  
AS NOTED  
SCALE

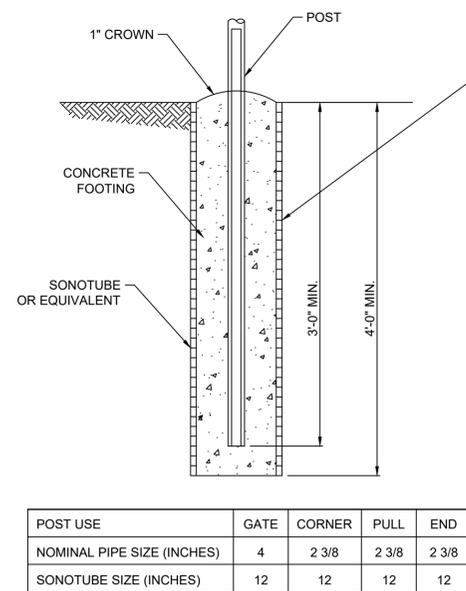


C-401

REV.  
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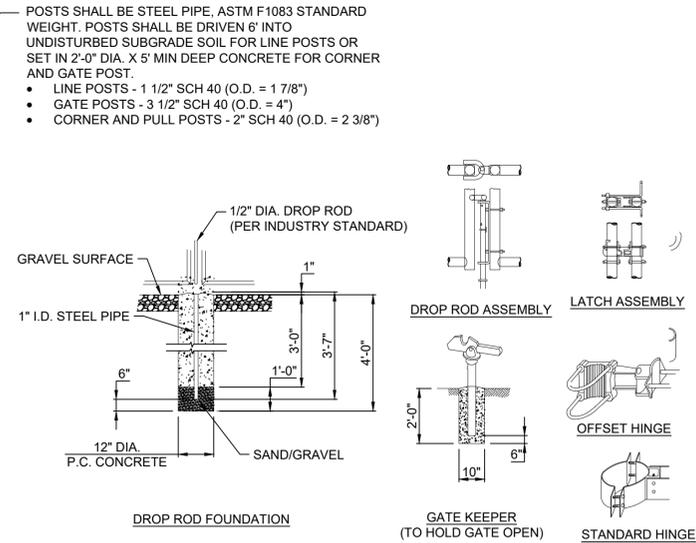
**1 SWING GATE FRAME**  
SCALE: NTS



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

**2 CONCRETE FOOTING DETAIL**  
SCALE: NTS



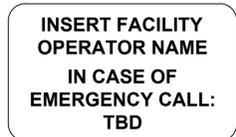
**3 ACCESS GATE DETAILS**  
SCALE: NTS

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

- FENCING NOTES:**
- FENCING CONTRACTOR TO DESIGN AND INSTALL FENCE PER LOCAL REQUIREMENTS AND/OR SUGGESTED PRACTICE FOR ALL COMPONENTS NOT SPECIFICALLY CALLED OUT.
  - THE CONTRACTOR SHALL BECOME FAMILIAR WITH ALL EXISTING SITE CONDITIONS AND WITH DESIGN DOCUMENTS PROVIDED BY THE VARIOUS DESIGN PROFESSIONALS INVOLVED IN THIS PROJECT.
  - 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.
  - THE CONTRACTOR SHALL REVIEW ALL SUBMITTALS, INCLUDING SHOP DRAWINGS, AND VERIFY CORRECTNESS OF THEM PRIOR TO SUBMISSION TO OWNER.
  - 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.
  - SEE ELECTRICAL SHEETS FOR REQUIRED SIGNAGE.
  - ALL STEEL SHALL BE GALVANIZED PER ASTM A123 UNLESS CORROSION ANALYSIS REPORT RECOMMENDS ADDITIONAL CORROSION PROTECTION.
  - FOUNDATION CONCRETE SHALL MEET NEW YORK DOT SPECIFICATIONS FOR CLASS A3 CONCRETE.
  - FACILITY LAYOUT RELATIVE TO THE PROJECT WETLANDS AND BOUNDARY SHALL BE CONFIRMED BY A LICENSED LAND SURVEYOR PRIOR TO CONSTRUCTION.
  - PROVIDE 6\"/>



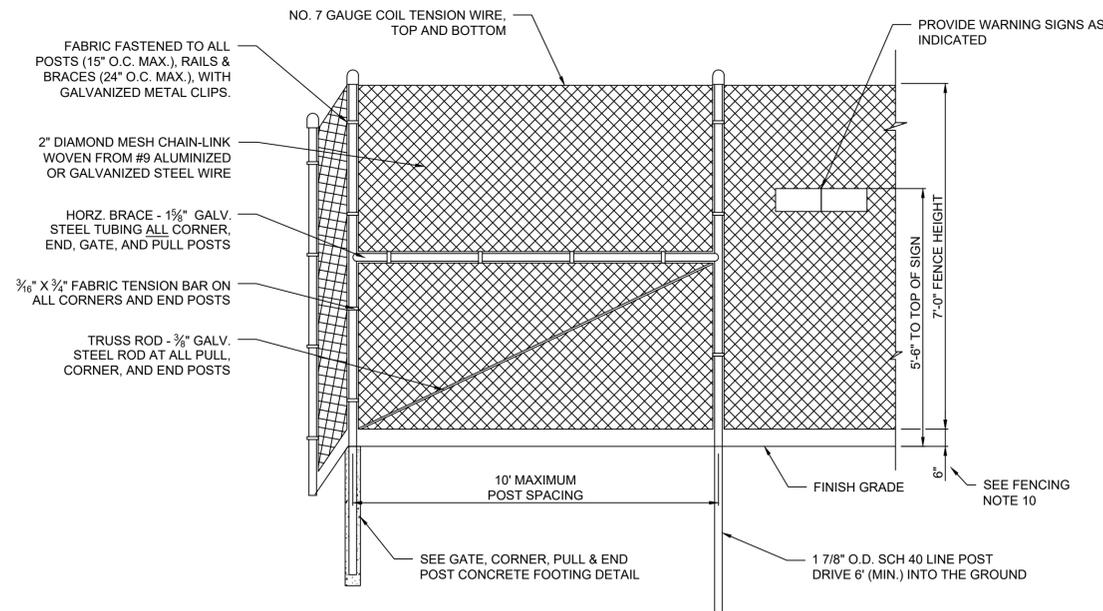
- NOTES:**
- DIMENSIONS: 18" X 12".
  - SIGNS SHALL BE 0.040" (MIN.) RUST-FREE ALUMINUM.
  - ATTACH TO OUTSIDE OF PERIMETER FENCE EVERY 200' MAX.



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

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

**4 SITE SIGNAGE**  
SCALE: NTS



**5 ARRAY FENCE DETAILS**  
SCALE: NTS



**PRELIMINARY**  
NOT FOR CONSTRUCTION



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REV	DESCRIPTION	DATE	DES	CHK	APP	
0	IFP SET	02/25/2022	RMK	SJW	SJW	



RMK DESIGNED
SJW DRAWN
SJW CHECKED
NAM APPROVED

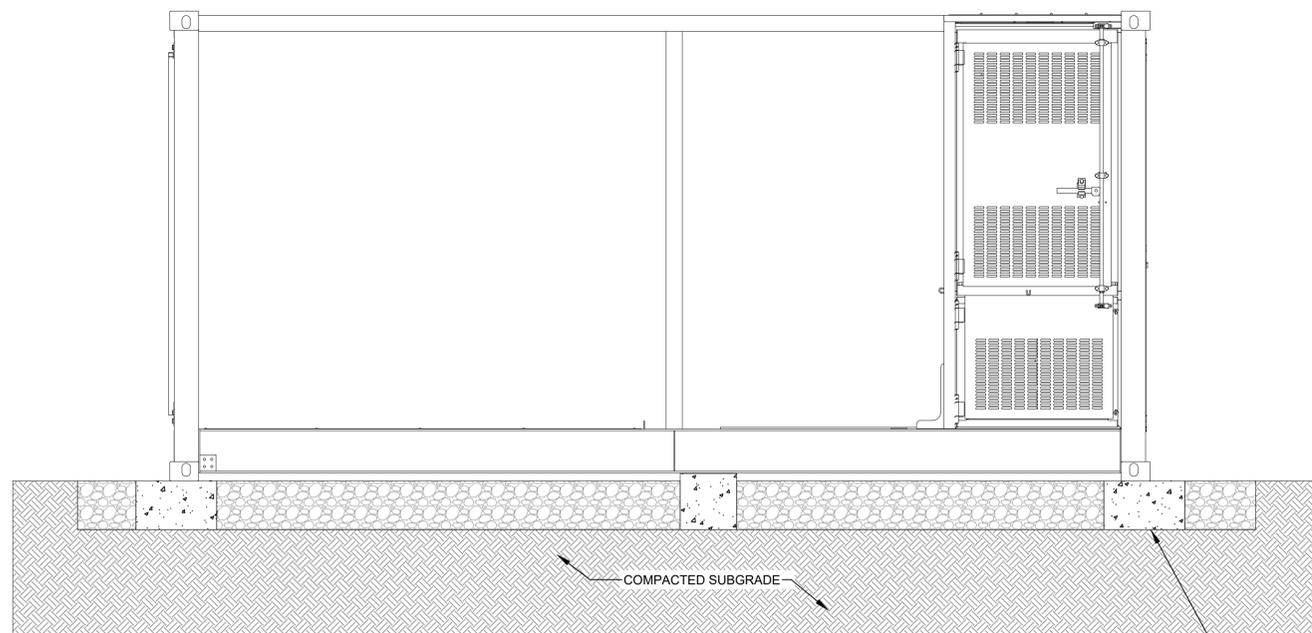
CIVIL AND FENCING DETAILS  
  
BR BENSON MINES SOLAR PROJECT  
NEW YORK STATE ENERGY RESEARCH  
AND DEVELOPMENT AUTHORITY  
CLIFTON, ST LAWRENCE COUNTY, NEW YORK

7/21  
DATE  
AS NOTED  
SCALE

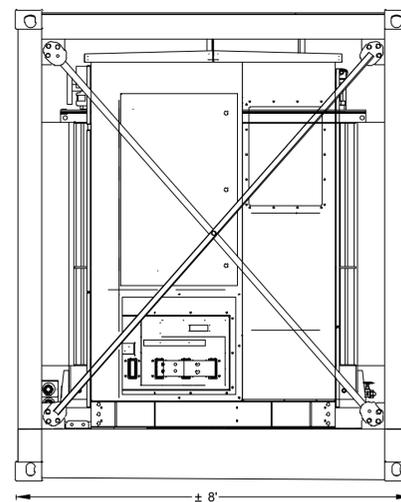


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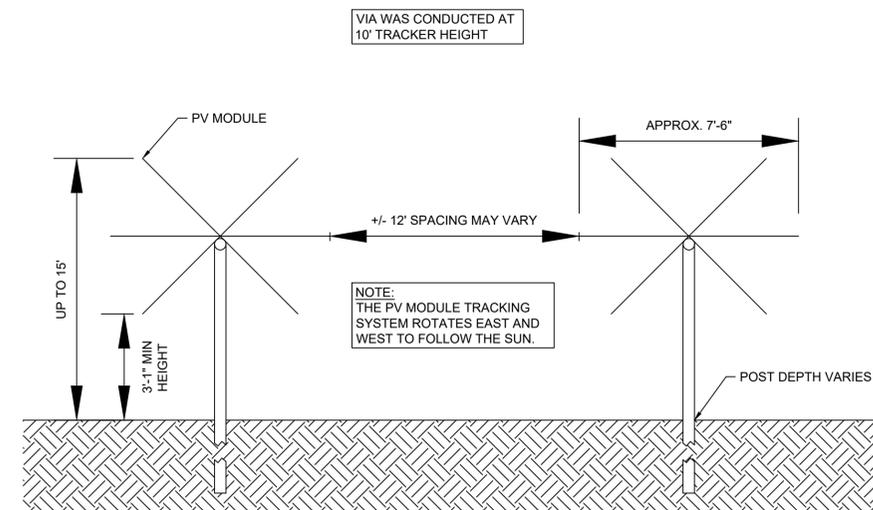
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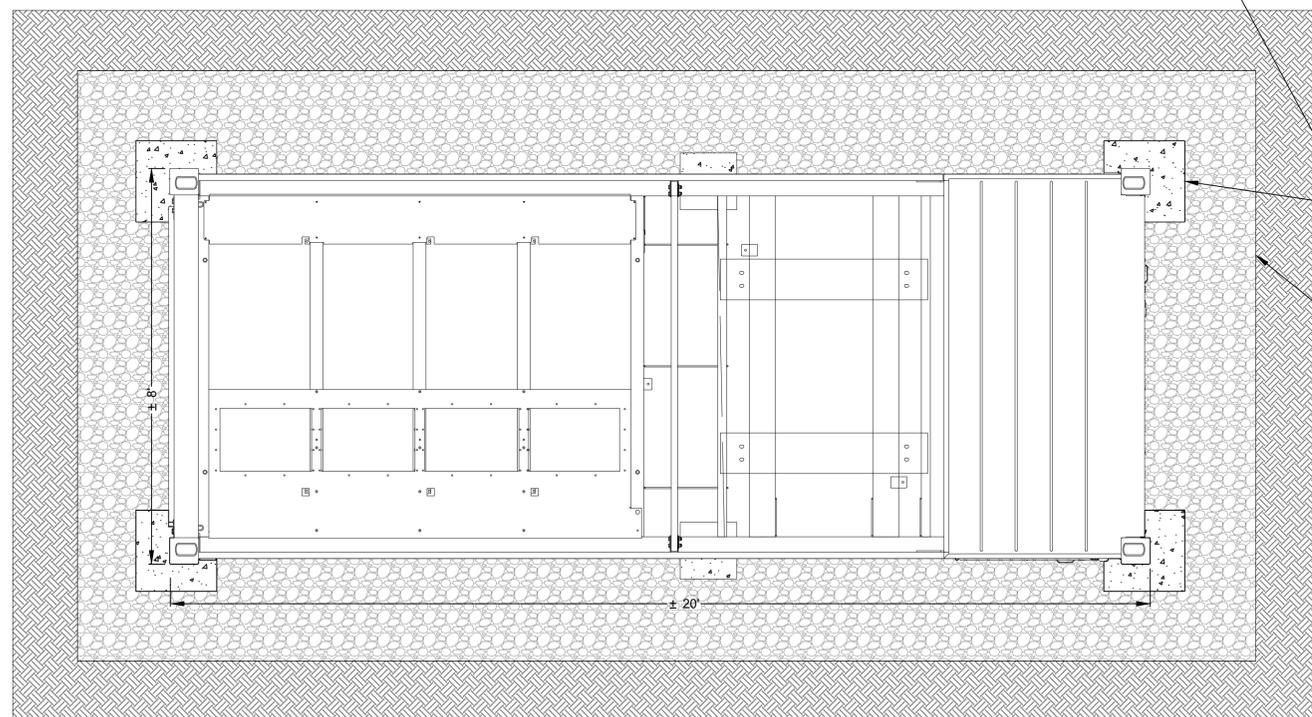
**SIDE VIEW**  
SCALE: NTS



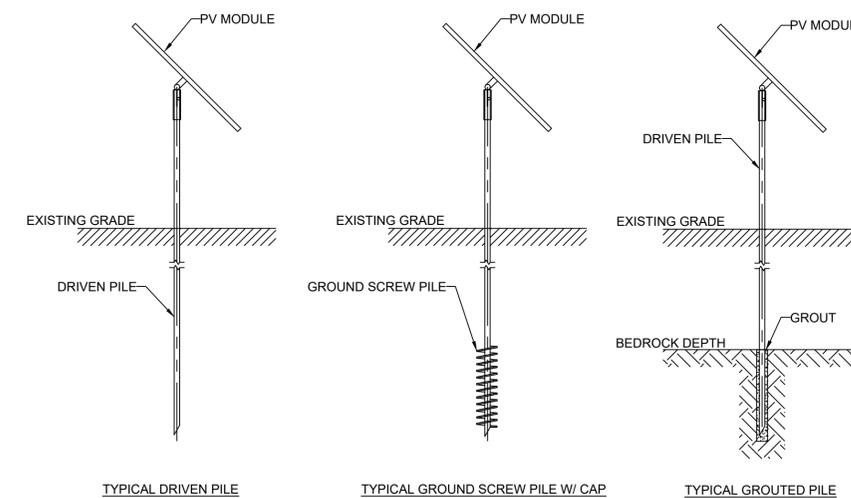
**FRONT VIEW**  
SCALE: NTS



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



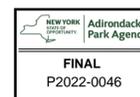
**PLAN VIEW**  
SCALE: NTS



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

- FOUNDATION DESIGN BY OTHERS, SHOWN FOR GENERAL REFERENCE ONLY.
- THE LOCATIONS AND SIZES OF THE CABLE ENTRIES AND THE OIL TRAY, IF APPLICABLE, MUST BE TAKEN INTO ACCOUNT FOR THE FOUNDATION DESIGN.
- SKIDTAINER DIMENSIONS ARE TYPICAL AND VARY BY MANUFACTURER.

**1 TYPICAL INVERTER SKID**  
SCALE: NTS



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ARRAY AND RACKING DETAILS

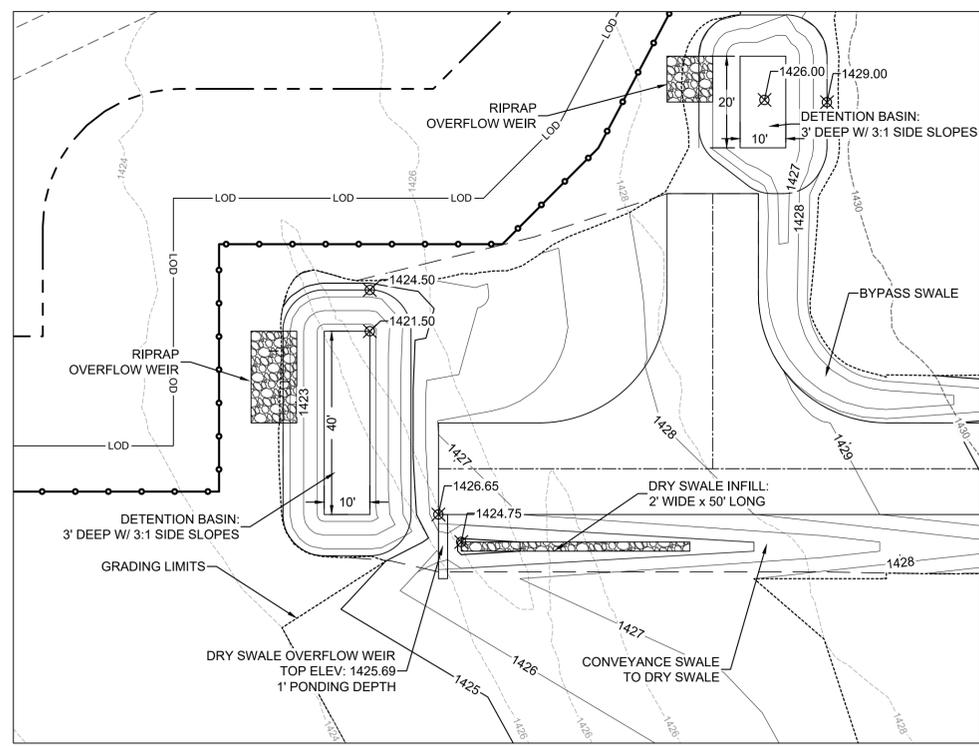
BR BENSON MINES SOLAR PROJECT  
NEW YORK STATE ENERGY RESEARCH  
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CLIFTON, ST LAWRENCE COUNTY, NEW YORK

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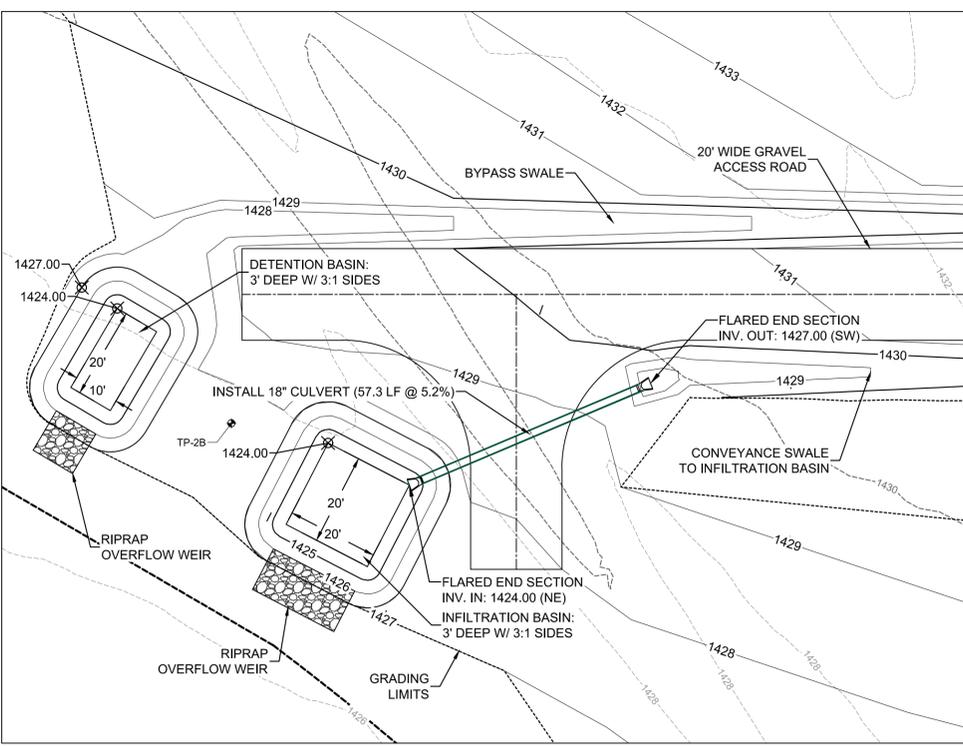


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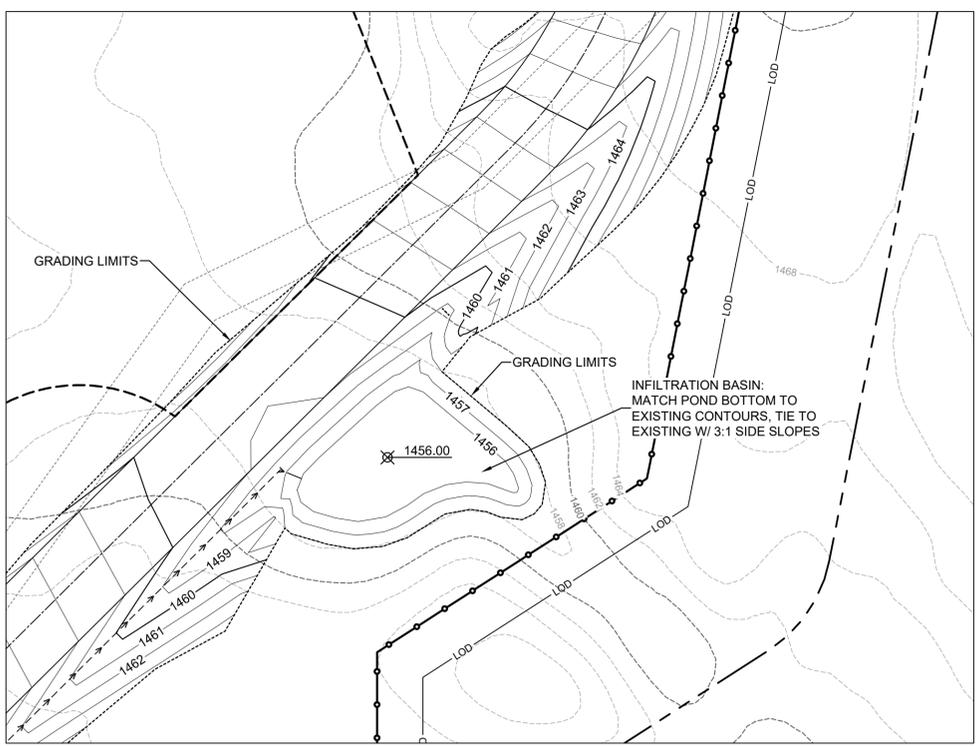
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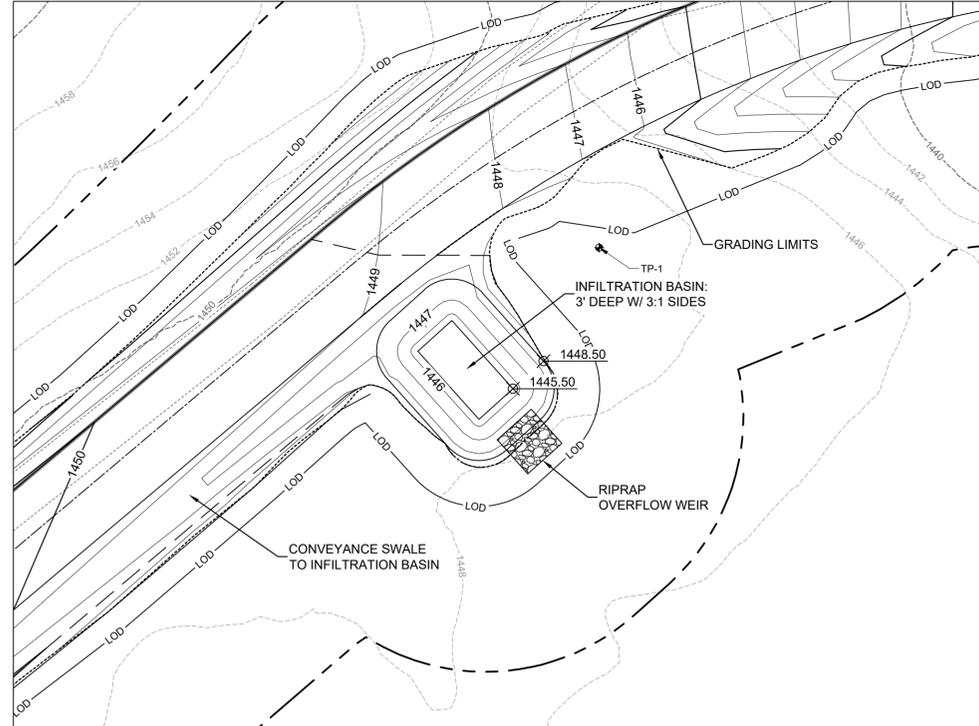
**1 DRY SWALE 1**  
SCALE: 1" = 20'



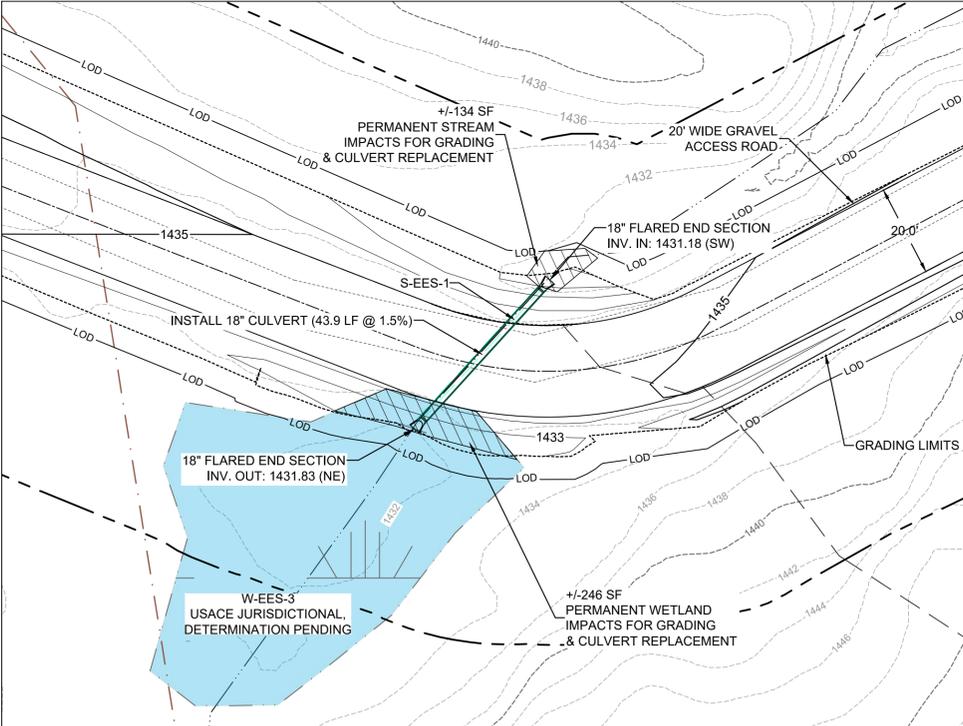
**2 INFILTRATION BASIN 2**  
SCALE: 1" = 20'



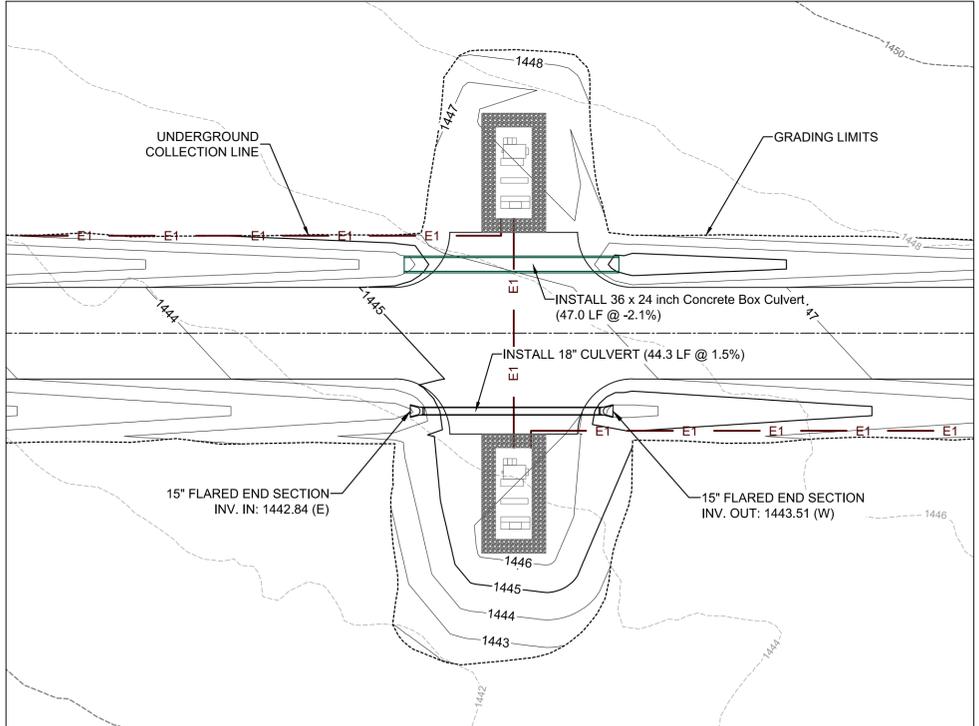
**3 INFILTRATION BASIN 3**  
SCALE: 1" = 20'



**4 INFILTRATION BASIN 4**  
SCALE: 1" = 20'

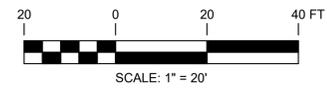


**5 CULVERT @ LOW WATER CROSSING**  
SCALE: 1" = 20'



**6 TYPICAL UNDERGROUND COLLECTION LINE CROSSING**  
SCALE: 1" = 20'

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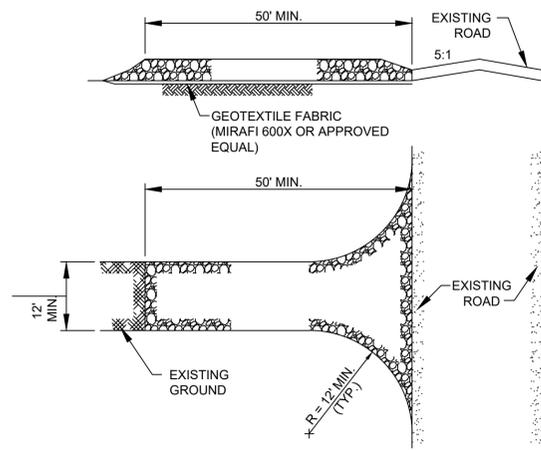
**HYDROLOGY DETAILS**  
  
BR BENSON MINES SOLAR PROJECT  
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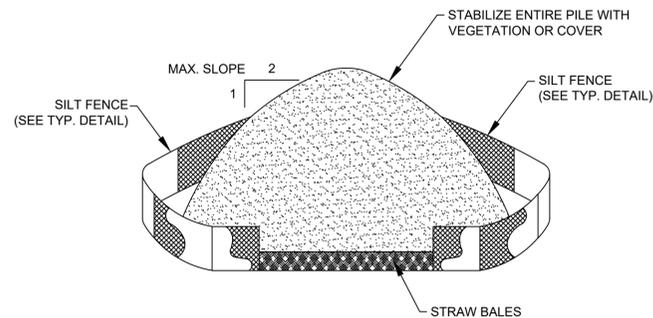
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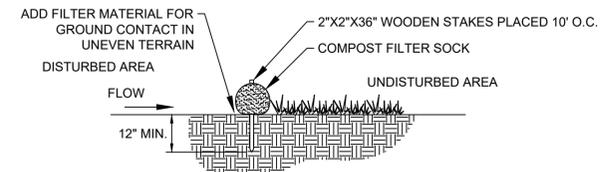
1. STONE SIZE - USE 1" - 4" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET.
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWELVE (12) FOOT MIN. BUT NOT LESS THAN THE FULL ROAD WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. PROVIDE TWENTY-FOUR (24) FOOT WIDTH IF THERE IS ONLY A SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE - SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

**1** STABILIZED CONSTRUCTION ENTRANCE  
SCALE: N.T.S.



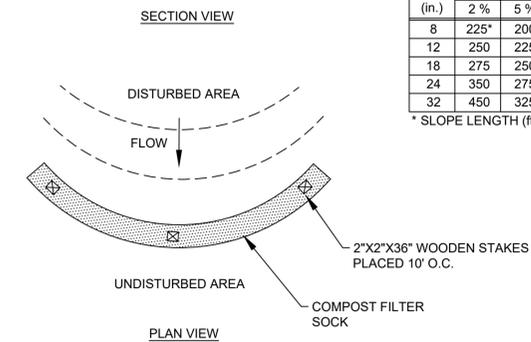
- INSTALLATION NOTES:**
1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
  2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2H:1V.
  3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING OR STRAW BALES, THEN STABILIZED WITH VEGETATION OR COVERED.

**2** TYPICAL TOPSOIL STOCKPILE  
SCALE: N.T.S.

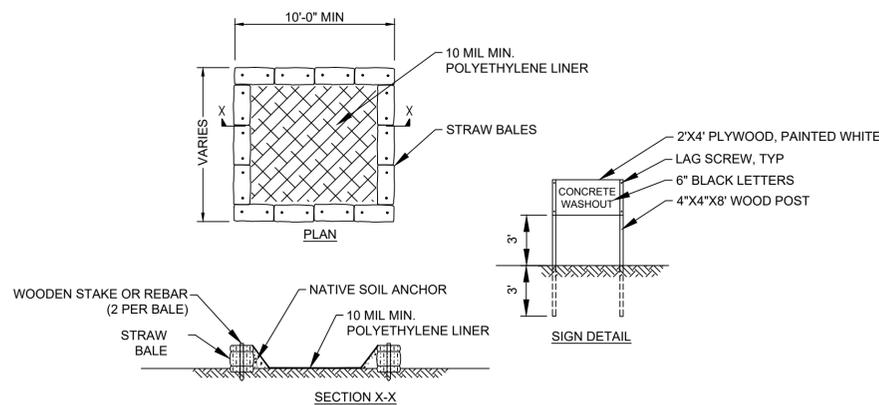


DIA. (in.)	MAXIMUM SLOPE LENGTH						
	2%	5%	10%	20%	25%	33%	50%
8	225'	200	100	50	20	--	--
12	250	225	125	65	50	40	25
18	275	250	150	70	55	45	30
24	350	275	200	130	100	60	35
32	450	325	275	150	120	75	50

\* SLOPE LENGTH (ft)

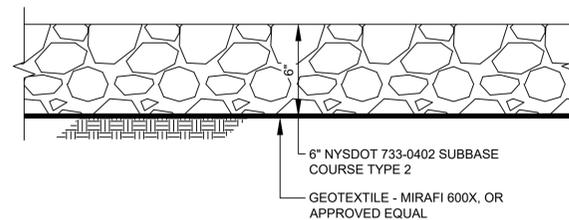


**3** TYPICAL COMPOST FILTER SOCK  
SCALE: N.T.S.

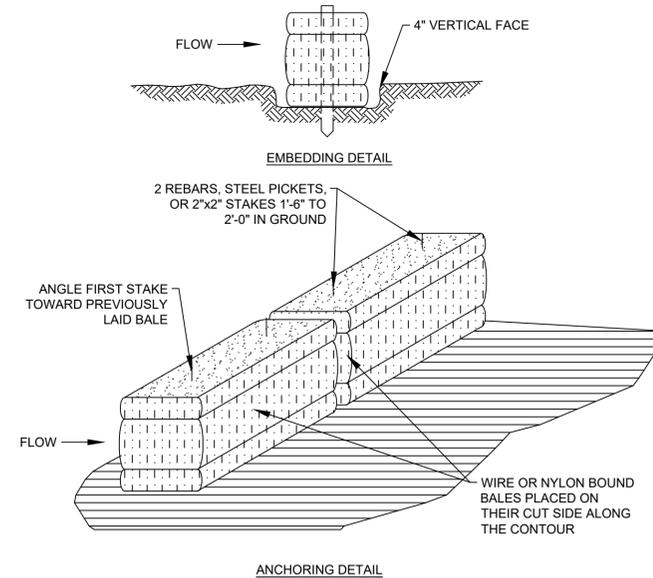


- NOTES:**
1. SUMP(S) SHALL BE LOCATED NEAR WORK SITES BUT SHALL BE PLACED AT A MIN. OF 100 FEET AWAY FROM WETLANDS, BUFFERS AND DRAINAGE SWALES AS PRACTICAL.
  2. SUMP(S) SHALL BE CLEANED AND WASTE CONCRETE REMOVED AND PROPERLY DISPOSED OF PERIODICALLY AND UPON COMPLETION OF WORK.

**4** TYPICAL CONCRETE WASHOUT  
SCALE: N.T.S.



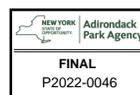
**5** TEMPORARY LAYDOWN YARD TYPICAL SECTION  
SCALE: N.T.S.



- NOTES:**
1. STRAW BALES SHALL BE USED ONLY AS REINFORCEMENT FOR SILT FENCE WHERE NEEDED.
  2. BALES SHALL BE PLACED IN A ROW AT THE TOE OF A SLOPE OR ON THE CONTOUR, WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
  3. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF (4) INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL.
  4. BALES SHALL BE SECURELY ANCHORED IN PLACE BY DRIVING EITHER TWO STAKES OR RE-BARS THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE TOP OF BALE.
  5. INSPECTIONS SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
  6. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

**6** STRAW BALE BARRIER  
SCALE: N.T.S.

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EROSION AND SEDIMENTATION CONTROL DETAILS

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CLIFTON, ST LAWRENCE COUNTY, NEW YORK

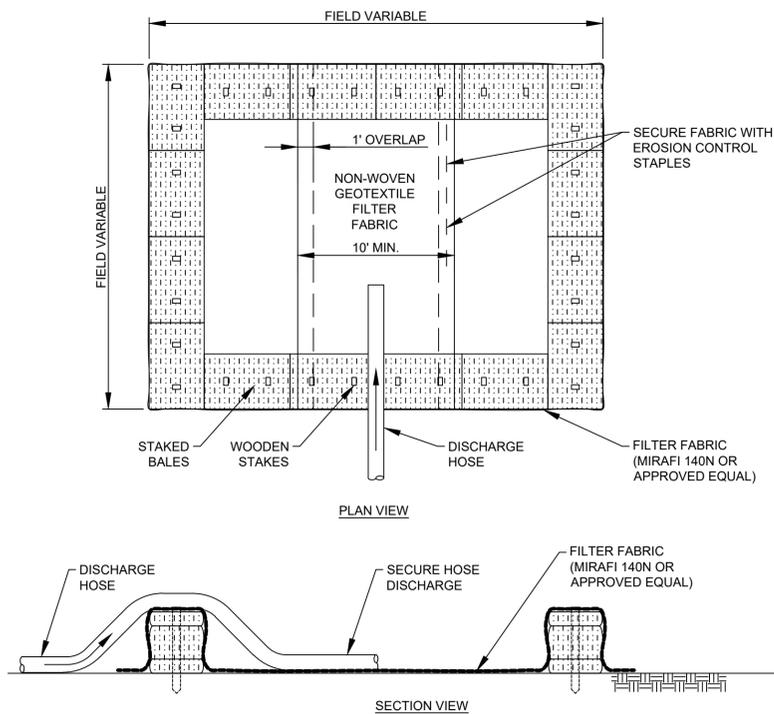
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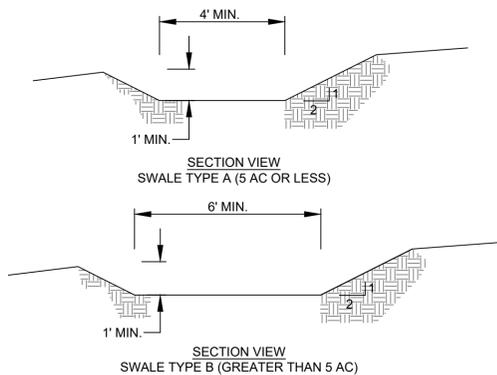
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- NOTES:**
1. NUMBER OF BALES MAY VARY DEPENDING ON SITE CONDITIONS.
  2. THE BASIN SHALL BE SIZED TO PREVENT DISCHARGE WATER FROM OVERTOPPING BASIN.
  3. THE BASIN SHALL BE PLACED AT A MIN. OF 100 FEET AWAY WETLANDS AS PRACTICAL.
  4. CLEAN AND REMOVE AS SOON AS DEWATERING IS COMPLETE.

**1 TYPICAL DEWATERING BASIN**  
SCALE: N.T.S.

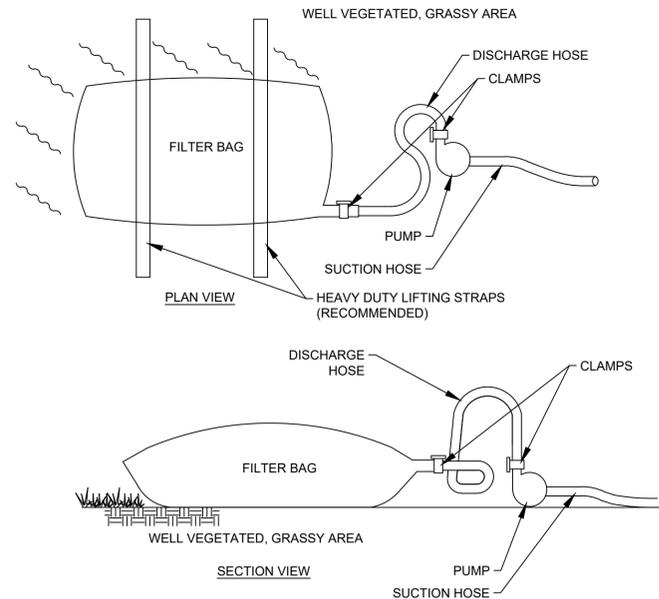


- NOTES:**
1. ALL CONSTRUCTION DITCHES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
  2. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
  3. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED STABILIZED AREA AT A NON-EROSIVE VELOCITY.
  4. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTION OF THE DITCH.
  5. DITCHES SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH IMPEDE NORMAL FLOW.
  6. FILLS SHALL BE COMPACTED BY EARTH MOVING EQUIPMENT.
  7. ALL EXCAVATED MATERIAL NOT NEEDED FOR CONSTRUCTION SHALL BE PLACED SUCH THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE DITCH.
  8. STABILIZATION SHALL BE AS PER THE FLOW CHANNEL STABILIZATION CHART BELOW:

CHANNEL GRADE	TYPE A DITCH (5 AC OR LESS)	TYPE B DITCH (GREATER THAN 5 AC)
0.5-3.0%	SEED & STRAW MULCH	SEED & STRAW MULCH
3.1-5.0%	SEED & STRAW MULCH	SEED AND COVER W/ RECP
5.1-8.0%	SEED AND COVER W/ RECP	LINED 4-8" RIP RAP OR GEOTEXTILE
8.1-10%	LINED 4-8" RIP RAP OR GEOTEXTILE	ENGINEERED DESIGN

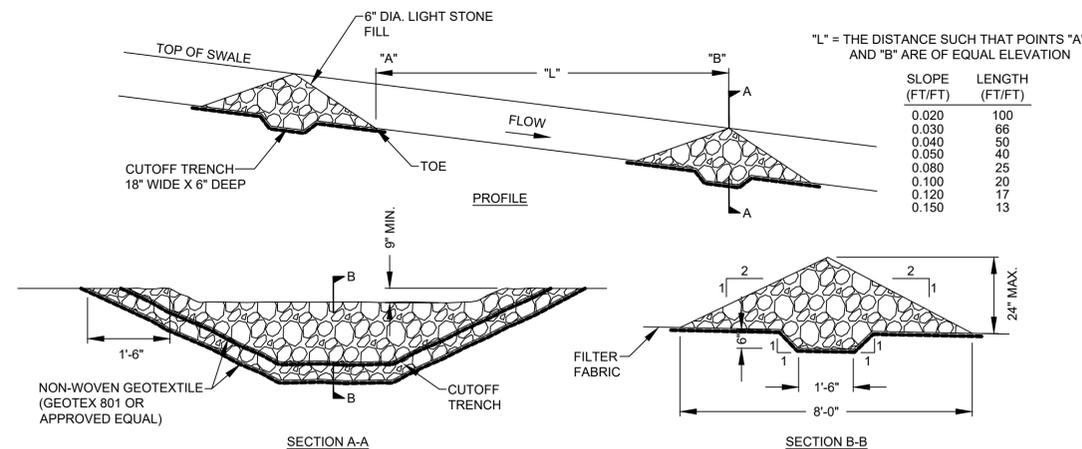
9. INSPECT AND PROVIDE MAINTENANCE AFTER EACH RAIN EVENT.
10. FIGURE IS BASED ON NYS STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.

**4 TEMPORARY SWALE DETAIL**  
SCALE: N.T.S.



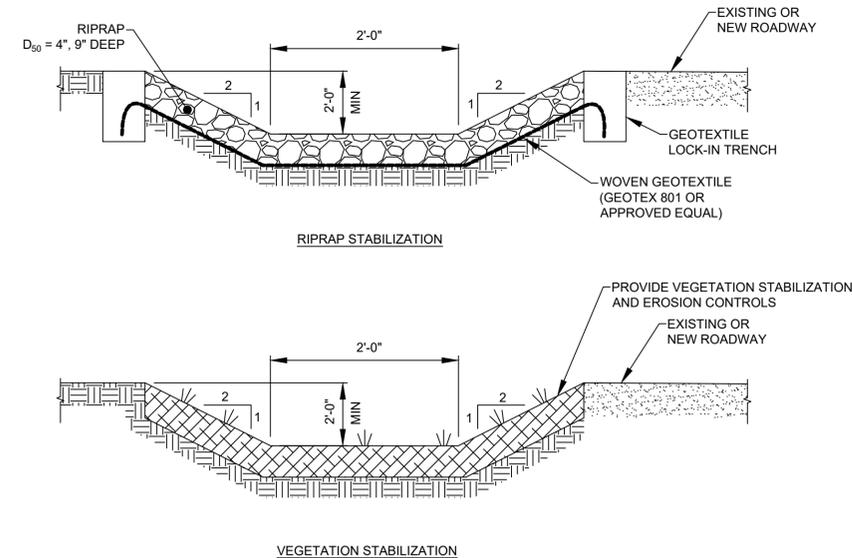
- NOTES:**
1. THE GEOTEXTILE MATERIAL USED TO CONSTRUCT THE FILTER BAG SHALL MEET OR EXCEED THE SPECIFICATIONS PROVIDED IN THE "NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL - 2016" OR LATEST EDITION. THE BAG SHALL BE SEWN WITH A DOUBLE NEEDLE MACHINE USING HIGH STRENGTH DOUBLE STICHED "J" TYPE SEAMS (ASTM D4884).
  2. GEOTEXTILE FILTER BAGS SHALL BE SIZED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS BASED ON THE PUMP DISCHARGE RATE.
  3. A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES MUST BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 75% FULL. THE ACCUMULATED SEDIMENT DISPOSAL SHALL BE MANAGED IN CONFORMANCE WITH THE PROJECT SWPPP.
  4. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. IT IS RECOMMENDED THAT BAGS BE PLACED ON STRAPS AS SHOWN TO FACILITATE REMOVAL.
  5. BAGS SHALL BE LOCATED IN A WELL-VEGETATED (GRASSY) AREA AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE THEIR DISCHARGE CAPACITY.
  6. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%. FOR SLOPES EXCEEDING 5%, CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.
  7. BAGS SHALL NOT BE PLACED WITHIN 50 FEET OF WETLANDS, STREAMS, OR OTHER SURFACE WATERS.
  8. NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. A COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS PLACED WHERE A GRASSY AREA IS NOT AVAILABLE. A COMPOST FILTER SOCK MUST BE PLACED BELOW ANY BAG DISCHARGING TO A SPECIAL PROTECTION SURFACE WATER.
  9. THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.
  10. THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 50 PERCENT OF THE MAXIMUM RATE SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PROVIDE FLOATING SUCTION SCREENS AT THE WATER SOURCE.
  11. FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

**2 SEDIMENT FILTER BAG**  
SCALE: N.T.S.



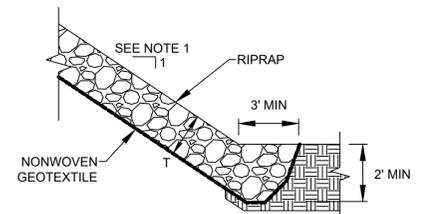
NOTE: INSTALL WHERE INDICATED ON SITE GRADING PLAN AND AS NEEDED BY SPACING REQUIREMENTS.

**5 TYPICAL CHECK DAM DETAIL**  
SCALE: N.T.S.



- NOTES:**
1. DRAINAGE SWALE PROFILE SHALL BE MODIFIED TO TRANSITION WHERE IT TIES INTO EXISTING SWALES. TRANSITION LENGTH SHALL BE COORDINATED WITH ON-SITE ENVIRONMENTAL INSPECTOR.
  2. SWALE SHALL DISCHARGE TO STABILIZED LEVEL SPREADERS, CONTAINMENT OR OTHER STRUCTURES PROVIDED TO CONTROL EROSION RUN-OFF.
  3. PROVIDE STABILIZATION AND EROSION CONTROLS AS REQUIRED BY THE ON-SITE ENVIRONMENTAL INSPECTOR IN ACCORDANCE WITH THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.

**3 TYPICAL DRAINAGE SWALE**  
SCALE: N.T.S.



- NOTES:**
1. RIPRAP GRADATION SHALL BE D50=6\"/>

**6 TYPICAL RIPRAP SLOPE DETAIL**  
SCALE: N.T.S.

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EROSION AND SEDIMENTATION CONTROL DETAILS

BR BENSON MINES SOLAR PROJECT  
NEW YORK STATE ENERGY RESEARCH  
AND DEVELOPMENT AUTHORITY  
CLIFTON, ST LAWRENCE COUNTY, NEW YORK

7/21  
DATE  
AS NOTED  
SCALE



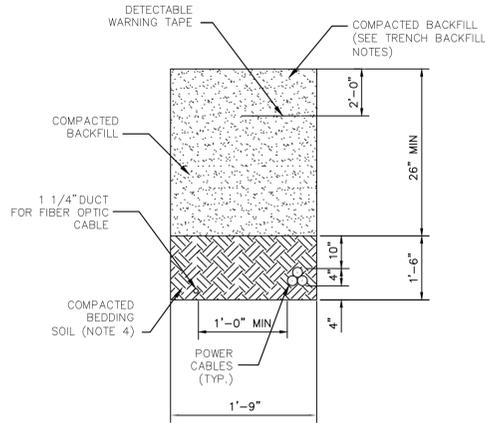
C-501

REV.  
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PRELIMINARY  
NOT FOR CONSTRUCTION

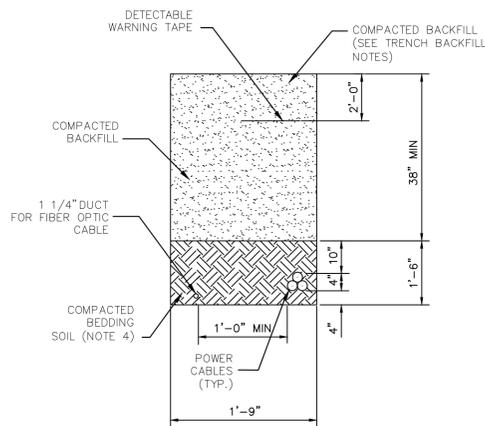




STANDARD TRENCH/ONE CIRCUIT (ST-1)

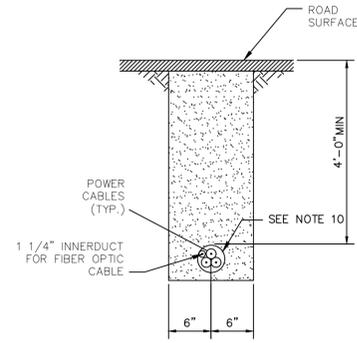
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**A** TRENCH DETAIL A-A  
SCALE: N.T.S.

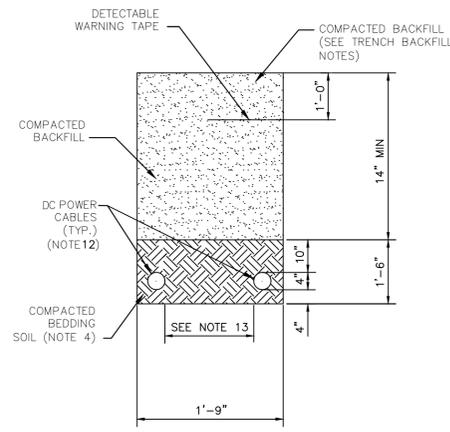


STANDARD TRENCH/ONE CIRCUIT  
AREAS OUTSIDE OF FENCE IN CROPLAND,  
HAYLAND, AND IMPROVED PASTURE

**C** TRENCH DETAIL C-C  
SCALE: N.T.S.



**B** TRENCH DETAIL B-B  
SCALE: N.T.S.



TYPICAL DC TRENCH  
SCALE: NONE

**D** TRENCH DETAIL D-D  
SCALE: N.T.S.

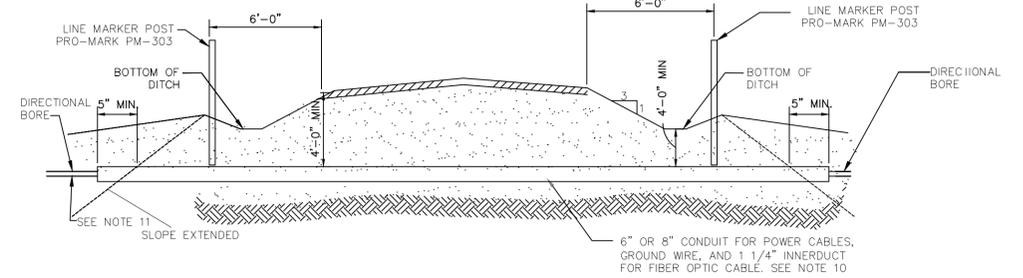
TRENCH BACKFILL NOTES

- BACKFILLING OPERATIONS SHALL NOT BE CONDUCTED UNDER FREEZING TEMPERATURE OR FROZEN SOIL CONDITIONS.
- 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.
- TOPSOIL CONSISTS OF ORGANIC SILT AND SILTY SAND IN ACCORDANCE WITH THE UNITES SOIL CLASSIFICATION SYSTEMS (USCS).
- 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".
- ALL THE LAYERS SHALL BE SUFFICIENTLY COMPACTED TO ACHIEVE THE NECESSARY THERMAL RESISTIVITY. COMPACTING BY FLOODING SHALL NOT BE PERMITTED.
- 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.
- COMPACTED BACKFILL ABOVE CABLE SHALL NOT HAVE ROCKS LARGER THAN 1.5" DIAMETER.
- ALL BACKFILL SHALL BE 140°C/M/W (TO BE VERIFIED BY AMPACITY MODELING) OR LESS, AT 2% MOISTURE CONTENT SHALL BE USED.
- ALL BACKFILL SHALL BE COMPACTED TO THE LESSOR OF 93 PERCENT OF THE ASTM D698 DRY-DENSITY VALUE OR THE NATIVE IN-SITU DENSITY.
- 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.
- ALL BACKFILL REQUIRED TO MATCH DENSITY OF EXISTING ADJACENT SOILS, TYP.
- ADD CONDUITS AS REQUIRED
- SEPARATION BETWEEN CIRCUITS WILL BE DETERMINED BASED ON THE AMPACITY CALCULATIONS DURING IFC DESIGN.

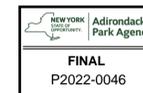
UNDERGROUND OR EMBEDDED UTILITIES MAY BE LOCATED WITHIN OR ADJACENT TO THE AREA IN WHICH EXCAVATION, DEMOLITION, FOUNDATION, OR MODIFICATION WORK IS TO BE PERFORMED.

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.



**1** ROADWAY CROSSING DETAIL - ONE CIRCUIT (RC-1)  
SCALE: N.T.S.

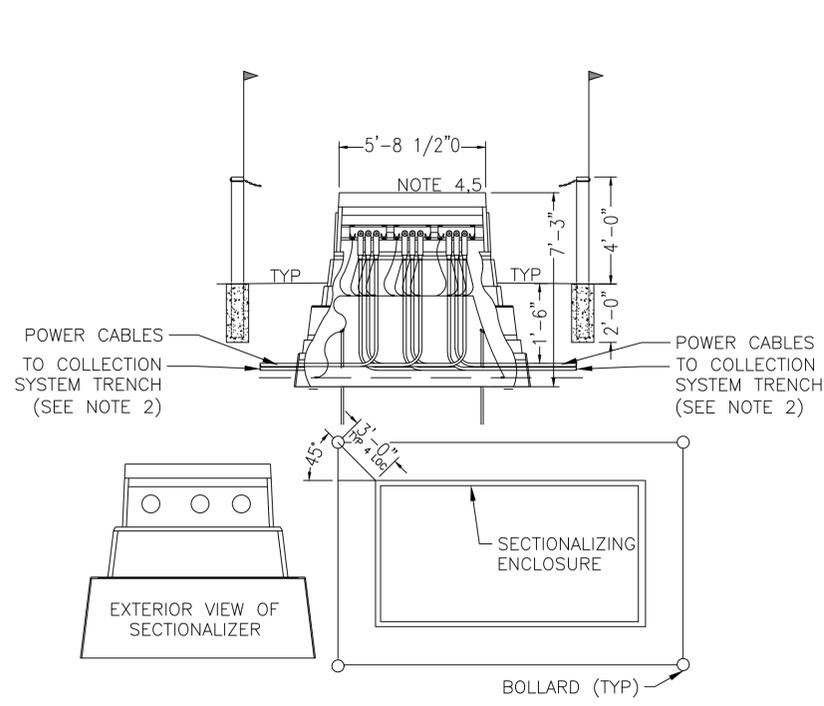


		10 MAXWELL DRIVE CLIFTON PARK, NY 12065		PROJECT NO: 444154		
REV	DESCRIPTION	DATE	DES	CHK	APP	
0	IFP SET	02/25/2022	AS	SJW	SJW	

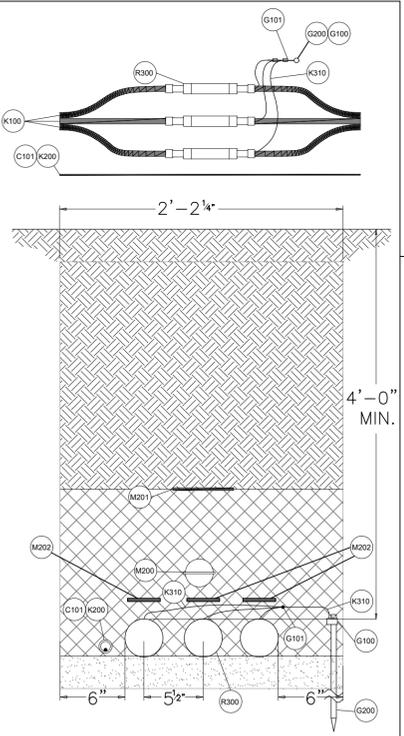


AS DESIGNED		TRENCH BORING AND CROSSING DETAILS  BR BENSON MINES SOLAR PROJECT NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY CLIFTON, ST LAWRENCE COUNTY, NEW YORK	C-600	REV. 0
SJW DRAWN				
SJW CHECKED				
NAM APPROVED				
7/21 DATE	AS NOTED SCALE			

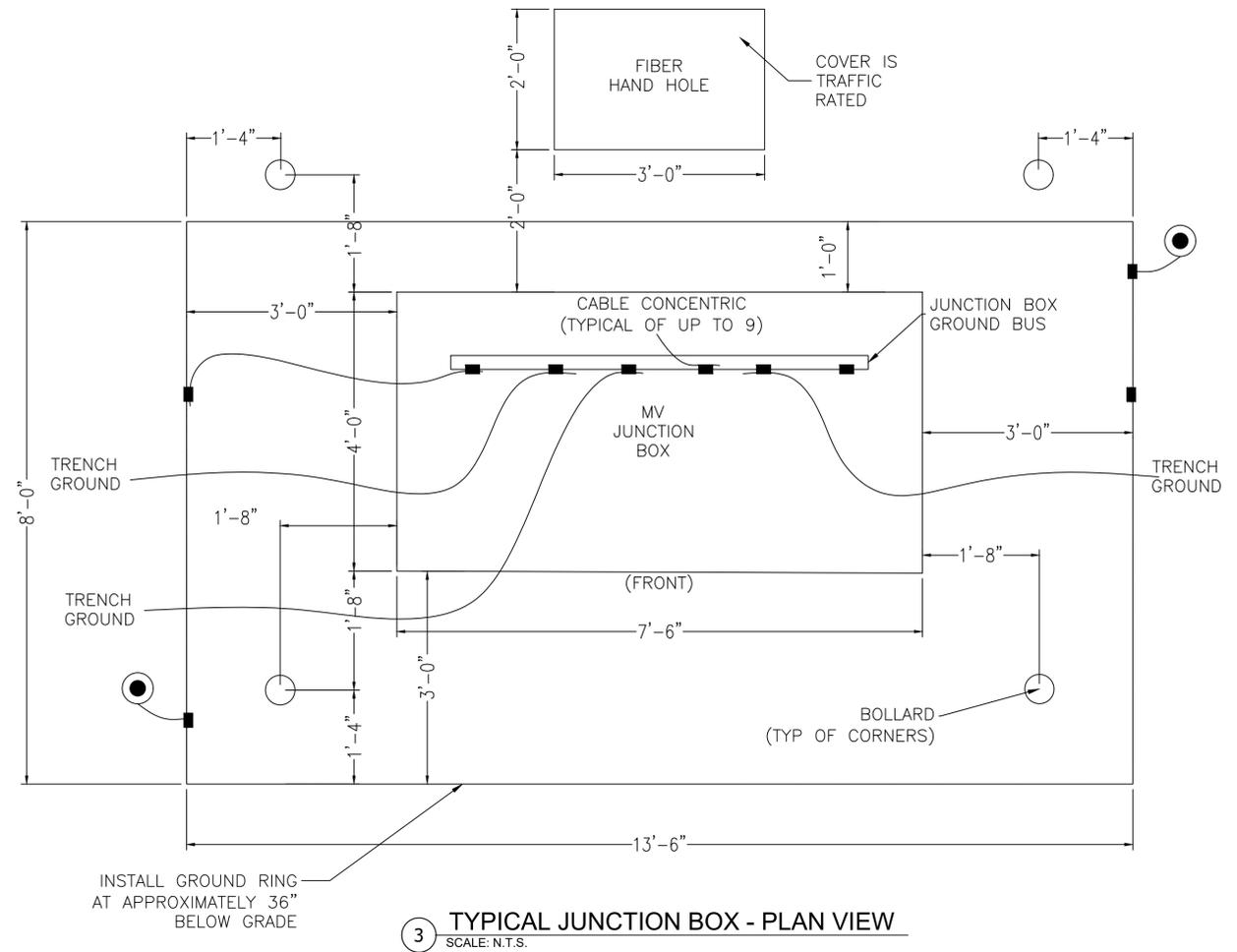
UNDER NEW YORK STATE EDUCATION LAW ARTICLE 145 (ENGINEERING), SECTION 7209 (2), IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.



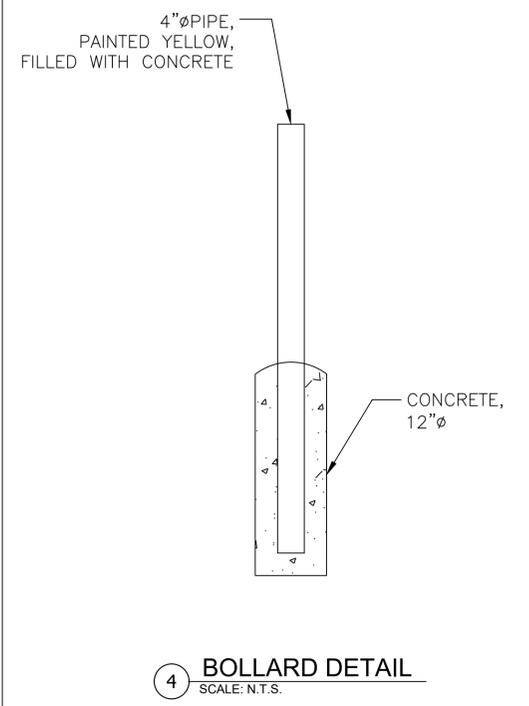
BILL OF MATERIALS		
MARK	QTY	DESCRIPTION
C101	A/R	HDPE INNER DUCT, 1.25" SDR 13.5
G100	1	GROUNDING CONNECTOR, COMPRESSION, #2 Cu TO GROUND ROD
G101	2	GROUNDING CONNECTOR, #2 AWG SOLID TO TRENCH GROUND
G200	1	GROUND ROD, 5/8" x 10' COPPER
K100	A/R	35kV CABLE PER CABLE SCHEDULE
K200	A/R	12F - FIBER OPTIC CABLE
K310	A/R	#2AWG SOLID Cu, BARE
M200	1	MARKER BALL
M201	A/R	WARNING TAPE
M202	3	PHASE MARKINGS
R300	3	SPLICE KIT, 35kV INLINE



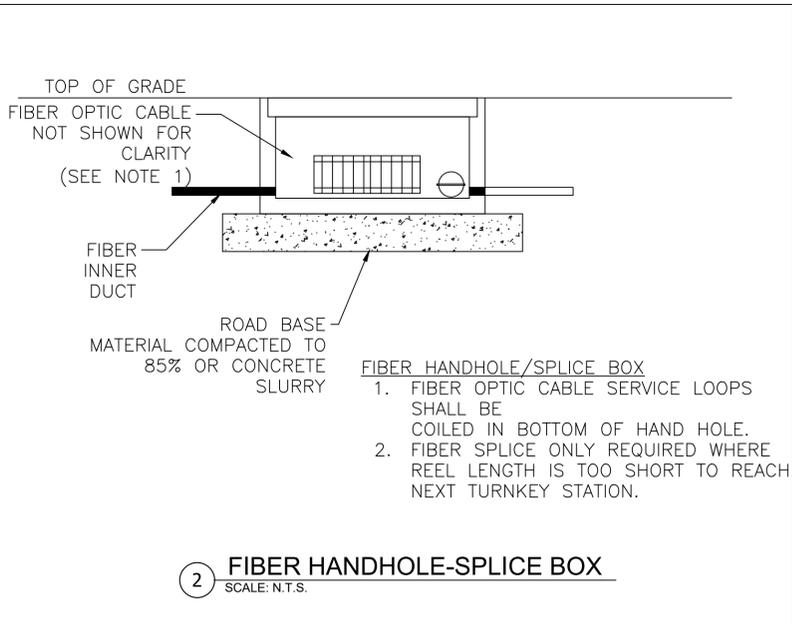
1 POWER CABLE SPLICE DETAIL  
SCALE: N.T.S.



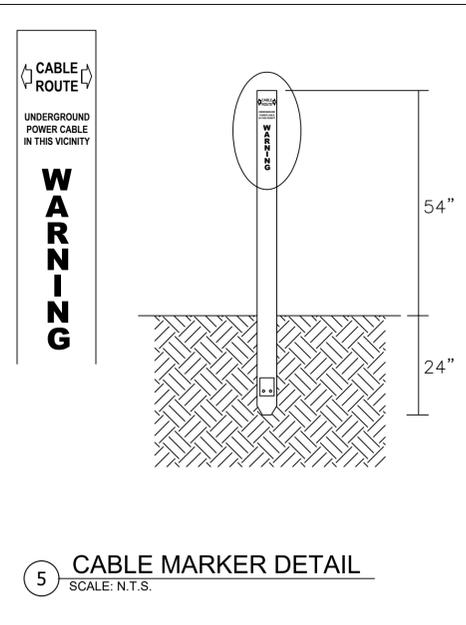
3 TYPICAL JUNCTION BOX - PLAN VIEW  
SCALE: N.T.S.



4 BOLLARD DETAIL  
SCALE: N.T.S.

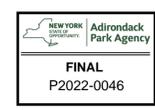


2 FIBER HANDHOLE-SPLICE BOX  
SCALE: N.T.S.



5 CABLE MARKER DETAIL  
SCALE: N.T.S.

- GENERAL NOTES:
- INSTALL IR VIEW PORT PER INSTALLATION INSTRUCTIONS FOR FLK-CLKT, IF POSSIBLE DISPLAY TO FACE ROADWAY
  - INSTALL ONE FULL COIL OF SLACK MV CABLE FOR EACH CIRCUIT, EACH PHASE, 500 KCMIL CABLE SHALL BE COILED INSIDE JUNCTION BOX, 750 KCMIL AND LARGER CABLE SHALL BE COILED OUTSIDE OF JUNCTION BOX, PROVIDE 3M 1422-XR/ID BALL MARKER. INSTALL NO DEEPER THAN 5'-0" AT EACH LOOP. AT THESE LOCATIONS PROVIDE A CONDUIT PAVEWAY/RACK TO HELP PULL IN SLACK CABLE.
  - ATTACH LABELS TO EACH CONDUCTOR IDENTIFYING PHASING AND CIRCUIT # OF THE CABLES. PROVIDE LABELS AT ENTRY AND EXIT.
  - CABLE TERMINATIONS NEAREST TO SUBSTATION SHALL HAVE SINGLE WRAP PHASING TAPE, SIDE AWAY FROM SUBSTATION SHALL HAVE DOUBLE WRAP PHASING TAPE.
  - THE FOLLOWING TAPE SHALL BE USED FOR PHASE INDICATION: RED TAPE FOR PHASE A, WHITE TAPE FOR PHASE B, AND BLUE FOR PHASE C.
  - FINISHED GRADE SHALL BE 2" ABOVE WHERE JUNCTION BOX SECTIONALIZER ATTACH.



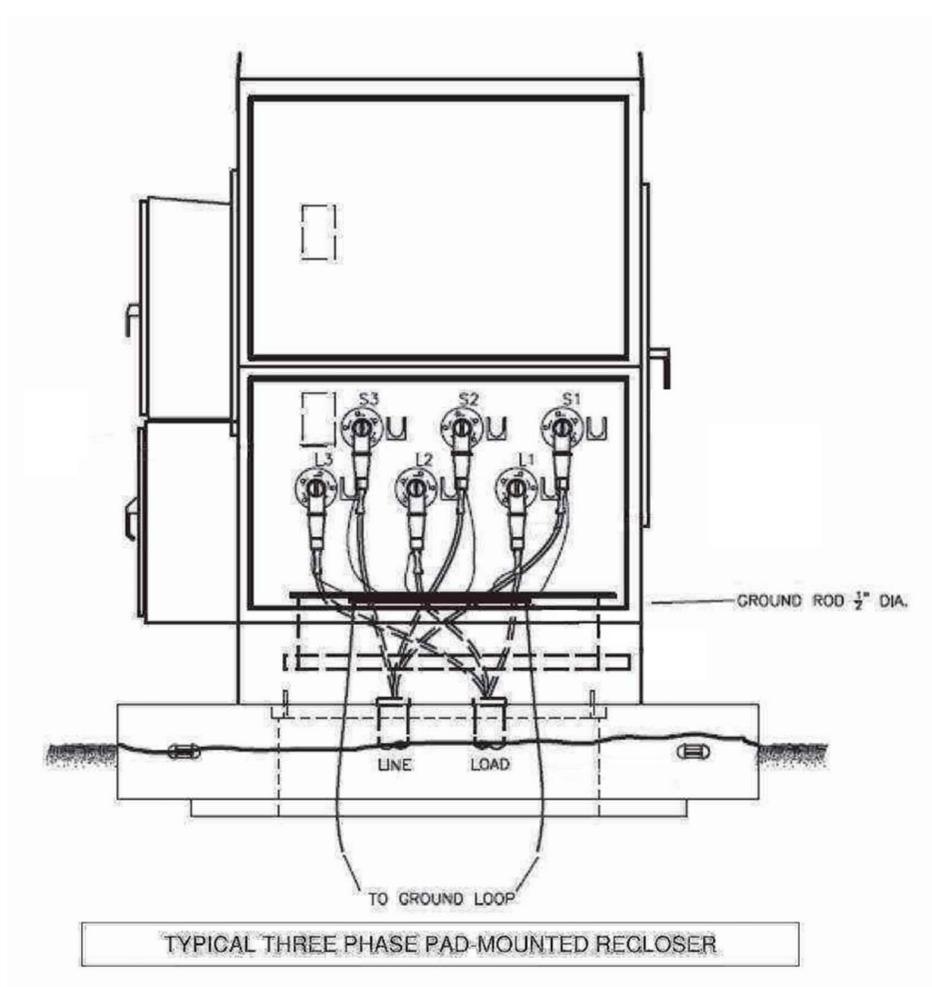
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<b>TRC</b>		10 MAXWELL DRIVE CLIFTON PARK, NY 12065		PROJECT NO: 444154		
REV	DESCRIPTION	DATE	DES	CHK	APP	
0	IFP SET	02/25/2022	AS	SJW	SJW	



AS DESIGNED	CABLE TERMINATION ENCLOSURE DETAILS	
SJW DRAWN	BR BENSON MINES SOLAR PROJECT	
SJW CHECKED	NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY	
NAM APPROVED	CLIFTON, ST LAWRENCE COUNTY, NEW YORK	
REVIEW 1	7/21 DATE AS NOTED SCALE	TRC
REVIEW 2		C-601

1:10/2022/08/01/10:00 AM/10:00 AM/10:00 AM/10:00 AM



 Adirondack Park Agency  
**FINAL**  
 P2022-0046

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.

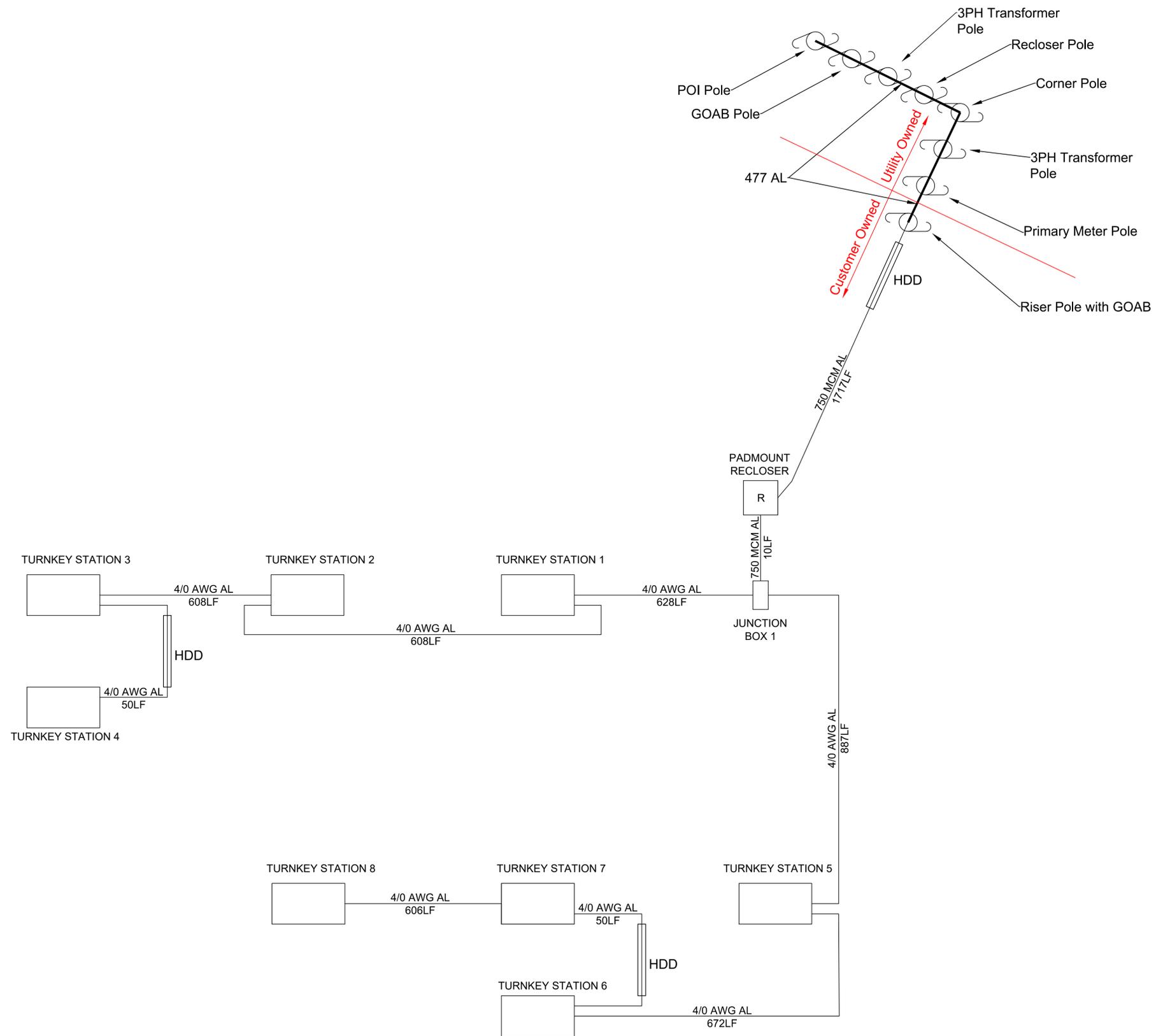
 10 MAXWELL DRIVE CLIFTON PARK, NY 12065		PROJECT NO: 444154			
REV	DESCRIPTION	DATE	DES	CHK	APP
0	IFP SET	02/25/2022	AS	SJW	SJW



AS DESIGNED
SJW DRAWN
SJW CHECKED
NAM APPROVED
- REVIEW 1
- REVIEW 2

RECLOSER DETAIL	
BR BENSON MINES SOLAR PROJECT NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY CLIFTON, ST LAWRENCE COUNTY, NEW YORK	
7/21 DATE AS NOTED SCALE	
C-602	REV. 0

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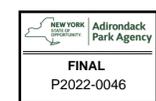


**LEGEND:**

-  PROPOSED INSTALL POLE
-  34.5kV OVERHEAD CONDUCTOR
-  34.5kV UNDERGROUND CABLE
-  TURNKEY STATION TRANSFORMER INTEGRATED
-  34.5kV ABOVE GROUND JUNCTION BOX
-  38KV PADMOUNT RECLOSER G&W VIPER-S TYPE

**NOTES:**

1. ALL COLLECTION CIRCUITS OPERATED AT 34.5kV



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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AS DESIGNED	-
SJW DRAWN	-
SJW CHECKED	-
NAM APPROVED	-
REVIEW 1	7/21
REVIEW 2	AS NOTED

COLLECTION ONE LINE DIAGRAM

BR BENSON MINES SOLAR PROJECT  
 NEW YORK STATE ENERGY RESEARCH  
 AND DEVELOPMENT AUTHORITY  
 CLIFTON, ST LAWRENCE COUNTY, NEW YORK



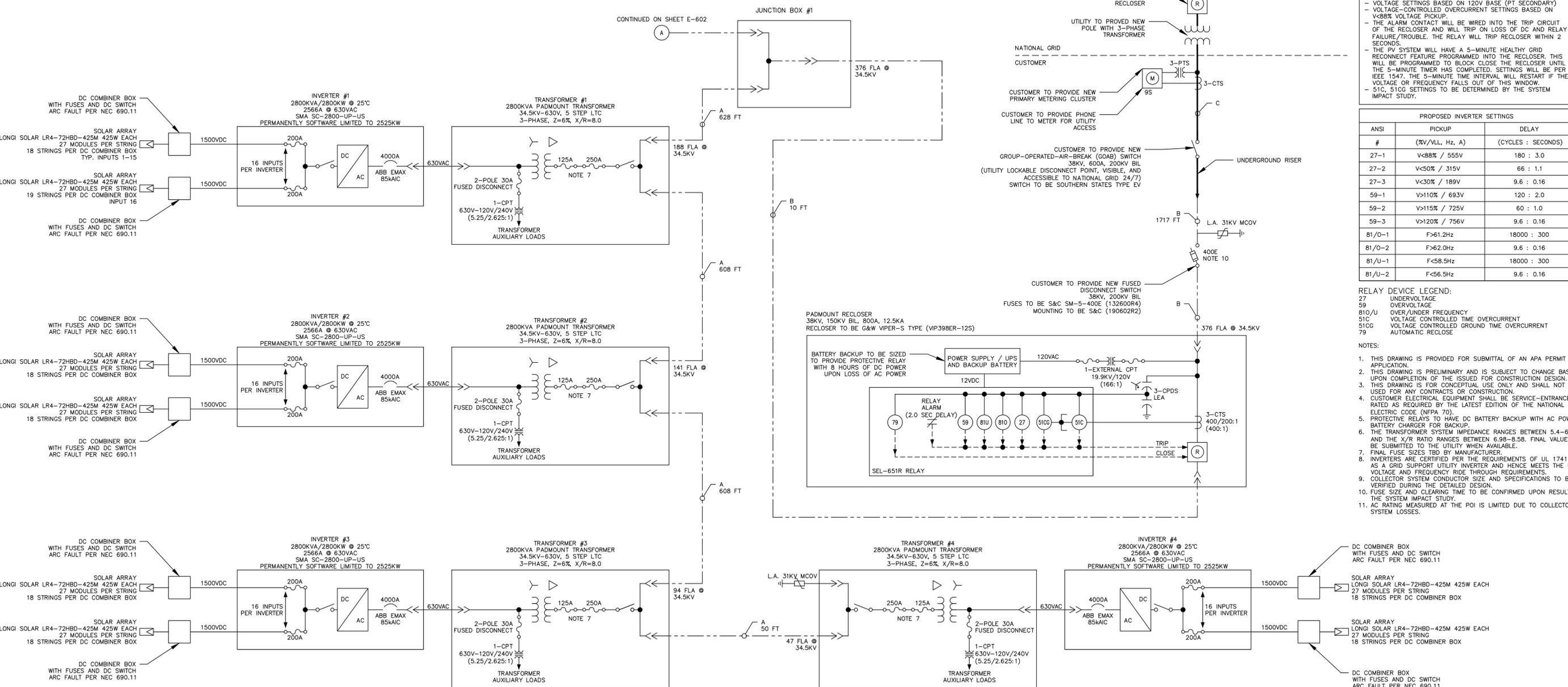
E-600      REV. 0

CONDUIT & WIRE SCHEDULE			
NO.	DESCRIPTION	CONDUCTORS	CONDUIT
A	FEEDER CIRCUIT	3 X 4/0 AL 35KV DISTRIBUTION CABLE	N/A
B	FEEDER CIRCUIT	3 X 750 KCMIL AL 35KV DISTRIBUTION CABLE	N/A
C	PRIMARY SERVICE	3 X 477 ACSR 18/1 (PELICAN) PHASE CONDUCTORS	N/A

**WARNING**  
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PV SYSTEM SPECIFICATIONS (THIS SHEET)	
PV MODULES	31,131 X LONGI SOLAR LR4-72HBD-425M 425W
DC RATING AT STC	13,230.68 KW
INVERTERS	(4) X SMA SC-2800 UP-US EACH PERMANENTLY SOFTWARE LIMITED TO 2525 KW
AC RATING	10,000.00 KW
DC/AC RATIO @ INVERTER	1.31
DC/AC RATIO @ POI	1.32

PV SYSTEM SPECIFICATIONS (TOTAL SYSTEM)	
PV MODULES	62,235 X LONGI SOLAR LR4-72HBD-425M 425W
DC RATING AT STC	26,449.88 KW
INVERTERS	(8) X SMA SC-2800 UP-US EACH PERMANENTLY SOFTWARE LIMITED TO 2525 KW
AC RATING	20,000.00 KW
DC/AC RATIO @ INVERTER	1.31
DC/AC RATIO @ POI	1.32



PROPOSED SEL-651R RELAY SETTINGS		
ANSI #	PICKUP (%V/VLN, Hz, A)	DELAY (CYCLES : SECONDS)
27-1	V<88% / 105V	120 : 2.0
27-2	V<50% / 60V	66 : 1.1
59-1	V>110% / 132V	120 : 2.0
59-2	V>120% / 144V	9.6 : 0.16
81/0-1	F>61.2Hz	18000 : 300
81/0-2	F>62.0Hz	9.6 : 0.16
81/U-1	F<58.5Hz	18000 : 300
81/U-2	F<56.5Hz	9.6 : 0.16
51C	73A PRI	2.0TD U5 (V<88%)
51CG	55A PRI	3.0TD U4 (V<88%)

NOTES:  
 - SETTINGS INCLUDE 3 CYCLE ESTIMATED RECLOSER OPENING TIME.  
 - VOLTAGE SETTINGS BASED ON 120V BASE (PT SECONDARY)  
 - VOLTAGE-CONTROLLED OVERCURRENT SETTINGS BASED ON V<88% VOLTAGE PICKUP.  
 - THE ALARM CONTACT WILL BE Wired INTO THE TRIP CIRCUIT OF THE RECLOSER AND WILL TRIP ON LOSS OF DC AND RELAY FAILURE/TROUBLE. THE RELAY WILL TRIP RECLOSER WITHIN 2 SECONDS.  
 - THE PV SYSTEM WILL HAVE A 5-MINUTE HEALTHY GRID RECONNECT FEATURE PROGRAMMED INTO THE RECLOSER. THIS WILL BE PROGRAMMED TO BLOCK CLOSE THE RECLOSER UNTIL THE 5-MINUTE TIMER HAS COMPLETED. SETTINGS WILL BE PER IEEE 1547. THE 5-MINUTE TIME INTERVAL WILL RESTART IF THE VOLTAGE OR FREQUENCY FALLS OUT OF THIS WINDOW.  
 - 51C, 51CG SETTINGS TO BE DETERMINED BY THE SYSTEM IMPACT STUDY.

PROPOSED INVERTER SETTINGS		
ANSI #	PICKUP (%V/VLL, Hz, A)	DELAY (CYCLES : SECONDS)
27-1	V<88% / 555V	180 : 3.0
27-2	V<50% / 315V	66 : 1.1
27-3	V<30% / 189V	9.6 : 0.16
59-1	V>110% / 693V	120 : 2.0
59-2	V>115% / 725V	60 : 1.0
59-3	V>120% / 756V	9.6 : 0.16
81/0-1	F>61.2Hz	18000 : 300
81/0-2	F>62.0Hz	9.6 : 0.16
81/U-1	F<58.5Hz	18000 : 300
81/U-2	F<56.5Hz	9.6 : 0.16

**RELAY DEVICE LEGEND:**  
 27 UNDERVOLTAGE  
 59 OVERVOLTAGE  
 81/0 UNDER FREQUENCY  
 81/U OVER FREQUENCY  
 51C VOLTAGE CONTROLLED TIME OVERCURRENT  
 51CG VOLTAGE CONTROLLED GROUND TIME OVERCURRENT  
 79 AUTOMATIC RECLOSE

- NOTES:
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  - THIS DRAWING IS PRELIMINARY AND IS SUBJECT TO CHANGE BASED UPON COMPLETION OF THE ISSUED FOR CONSTRUCTION DESIGN.
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  - CUSTOMER ELECTRICAL EQUIPMENT SHALL BE SERVICE-ENTRANCE RATED AS REQUIRED BY THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE (NECA 70).
  - PROTECTIVE RELAYS TO HAVE DC BATTERY BACKUP WITH AC POWERED BATTERY CHARGER FOR BACKUP.
  - THE TRANSFORMER SYSTEM IMPEDANCE RANGES BETWEEN 5.4-6.4%, AND THE X/R RATIO RANGES BETWEEN 6.98-8.58. FINAL VALUES TO BE SUBMITTED TO THE UTILITY WHEN AVAILABLE.
  - FINAL FUSE SIZES TBD BY MANUFACTURER.
  - INVERTERS ARE CERTIFIED PER THE REQUIREMENTS OF UL 1741 SA AS A GRID SUPPORT UTILITY INVERTER AND HENCE MEETS THE UTILITY VOLTAGE AND FREQUENCY RIDE THROUGH REQUIREMENTS.
  - COLLECTOR SYSTEM CONDUCTOR SIZE AND SPECIFICATIONS TO BE VERIFIED DURING THE DETAILED DESIGN.
  - FUSE SIZE AND CLEARING TIME TO BE CONFIRMED UPON RESULTS OF THE SYSTEM IMPACT STUDY.
  - AC RATING MEASURED AT THE POI IS LIMITED DUE TO COLLECTOR SYSTEM LOSSES.

Adirondack Park Agency  
 FINAL  
 P2022-0046

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**TRC** 10 MAXWELL DRIVE  
 CLIFTON PARK, NY 12065

PROJECT NO: 444154

REV	DESCRIPTION	DATE	DES	CHK	APP
0	IFP SET	02/25/2022	AS	SJW	SJW



AS DESIGNED  
 SJW DRAWN  
 SJW CHECKED  
 NAM APPROVED

ELECTRIC ONE-LINE DIAGRAM

BR BENSON MINES SOLAR PROJECT  
 NEW YORK STATE ENERGY RESEARCH  
 AND DEVELOPMENT AUTHORITY  
 CLIFTON, ST LAWRENCE COUNTY, NEW YORK

7/21 DATE  
 AS NOTED SCALE

**TRC** E-601

REV. 0



CONDUIT & WIRE SCHEDULE			
NO.	DESCRIPTION	CONDUCTORS	CONDUIT
A	FEEDER CIRCUIT	3 X 4/0 AL 35KV DISTRIBUTION CABLE	N/A

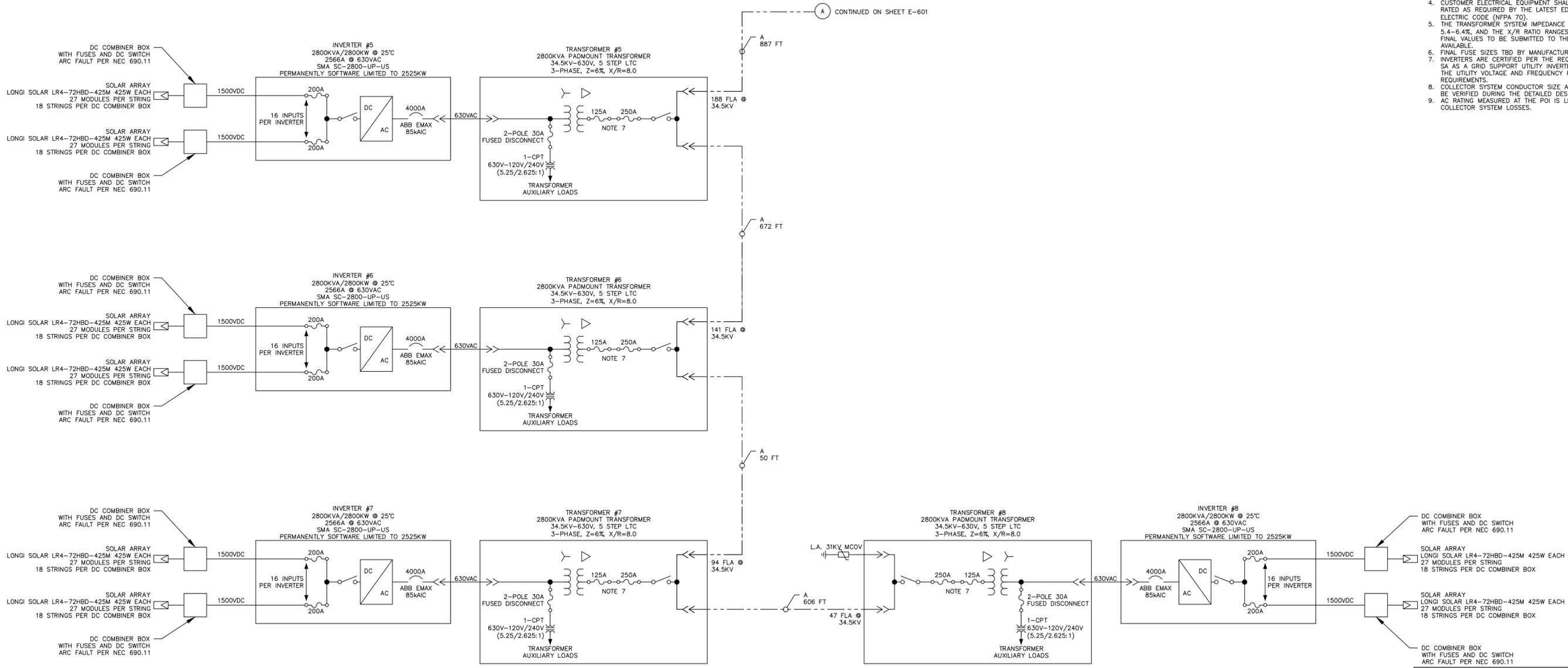
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PV SYSTEM SPECIFICATIONS (THIS SHEET)	
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AC RATING	10,000.00 KW
DC/AC RATIO @ INVERTER	1.31
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  - COLLECTOR SYSTEM CONDUCTOR SIZE AND SPECIFICATIONS TO BE VERIFIED DURING THE DETAILED DESIGN.
  - AC RATING MEASURED AT THE POI IS LIMITED DUE TO COLLECTOR SYSTEM LOSSES.



**PRELIMINARY**  
 NOT FOR CONSTRUCTION

Adirondack Park Agency  
**FINAL**  
 P2022-0046

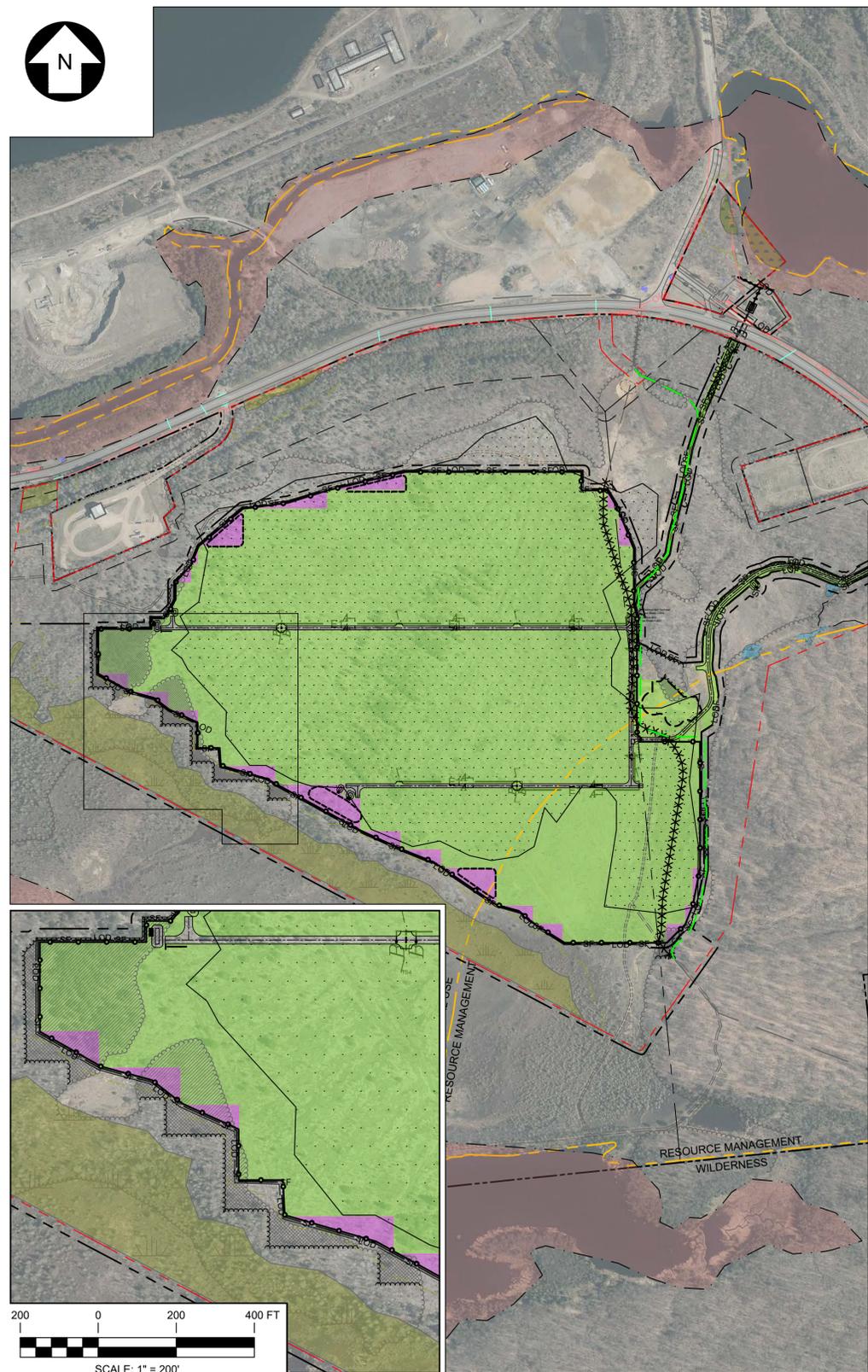
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<b>TRC</b>	10 MAXWELL DRIVE CLIFTON PARK, NY 12065	PROJECT NO: 444154
REV	DESCRIPTION	DATE DES CHK APP
0	IFP SET	02/25/2022 AS SJW SJW



AS DESIGNED	<b>ELECTRIC ONE-LINE DIAGRAM</b>  BR BENSON MINES SOLAR PROJECT NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY CLIFTON, ST LAWRENCE COUNTY, NEW YORK		E-602	REV. 0
SJW DRAWN				
SJW CHECKED				
NAM APPROVED				
7/21 DATE AS NOTED SCALE				





### POLLINATOR-FRIENDLY SEED MIX 1 ERNST MIX: ERNMX-186-1 OR SIMILAR (LOW GROWTH SOLAR FARM GRASS SEED MIX WITH POLLINATOR FRIENDLY NATIVE LOW GROWING POLLINATOR SPECIES OPTION)

NATIVE/NATURALIZED SOLAR FARM SEED MIX				
BOTANICAL NAME	COMMON NAME	MIX CONCENTRATION	RATE (LBS/ACRE)	RATE (LBS/1000 FT <sup>2</sup> )
FESTUCA RUBRA	CREeping RED FESCUE	34%	262	6
FESTUCA OVINA	SHEEP FESCUE	33%		
FESTUCA BREVIPILA 'BEACON'	HARD FESCUE 'BEACON'	10%		
FESTUCA OVINA VAR. DURIVUSCULA 'RHINO'	HARD FESCUE 'RHINO'	5%		
FESTUCA OVINA VAR. GLAUCA (F. ARVERNENSIS) (F. GLAUCA), 'BLUE RAY'	BLUE FESCUE 'BLUE RAY'	5%		
POA PRATENSIS 'ARGYLE'	KENTUCKY BLUEGRASS 'ARGYLE'	5%		
POA PRATENSIS 'SHAMROCK'	KENTUCKY BLUEGRASS 'SHAMROCK'	5%		
AGROSTIS PERENNANS, ALBANY PINE BUSH-NY ECOTYPE	AUTUMN BENTGRASS, ALBANY PINE BUSH-NY ECOTYPE	3%		

NOTE: GRASS SEED MIXES ARE COMPRISED OF GRASSES THAT ARE NATIVE AND/OR INDIGENOUS TO THE AREA AND/OR CONSIDERED FAVORABLE FOR WILDLIFE HABITAT AND SUSTAINABLE GROWTH. ADDITIONALLY, THE SOLAR FARM SEED MIX WAS DEVELOPED ESPECIALLY FOR THE USE OF WARM AND COOL SEASON NATIVE GRASS PLANTINGS AROUND SOLAR ARRAY FIELDS AND SHALL BE UTILIZED ACCORDINGLY. THE WARM AND COOL SEASON GRASSES WILL MINIMIZE EROSION CONCERNS BY PROVIDING A CONSISTENT GROUND COVER THROUGHOUT THE YEAR AND MATURE OUT TO A HEIGHT OF APPROXIMATELY 2 1/2 FEET HIGH MINIMIZING MOWING AND SHADING CONCERNS AS WELL. ALTERNATIVE SPECIES THAT CAN BE USED IN PLACE OF ERNMX-186-1 SPECIES ARE INCLUDED IN TABLE 1 SEED PICK TABLE.

THE SEED MIX ABOVE IS A SPECIFICALLY DEVELOPED MIX HOWEVER, POLLINATOR-FRIENDLY SPECIES SUCH AS NEW ENGLAND ASTER (ASTER NOVAE-ANGLIAE) AND BLACK-EYED SUSAN (RUBRICKIA HIRTA) WILL BE ADDED TO THIS MIX TO ENSURE THAT POLLINATOR SPECIES ARE AVAILABLE THROUGHOUT THE SOLAR ARRAY FIELDS WITHOUT INCREASING CONCERNS FOR EROSION, MOWING, AND/OR SHADING OF THE ARRAYS. SEED MIXES SHALL BE SOWN ONLY IN DISTURBED AREAS AS A RESULT OF CONSTRUCTION ACTIVITIES FOR STABILIZATION PER SWPPP.

EXISTING		PROPOSED	
---	PROPERTY BOUNDARY	---	PROJECT BOUNDARY
---	LEASE AREA	---	ESMT
---	STREAM	---	EASEMENT
---	RIGHT OF WAY	---	PAVED ROAD
---	GRAVEL ROAD	---	GRASS ROAD
---	APA LAND USE BOUNDARY	---	APA WETLAND SETBACK
---	GUARDRAIL	---	ABANDON TRAIL
---	OVERHEAD ELECTRIC	---	SNOWMOBILE PATH
---	CHAIN LINK FENCE	---	MINOR CONTOUR
---	MAJOR CONTOUR	---	MAJOR CONTOUR
---	TREELINE	---	CULVERT
---	LIMITS OF DISTURBANCE	---	SETBACK
---	SILT FENCE	---	COLLECTOR LINE
---	PV ARRAY	---	EQUIP. PADS & BOLLARDS
---	UTILITY POLE AND GUY	---	SIGN
---	FIRE HYDRANT	---	WATER VALVE
---	REFLECTOR POST	---	APA WETLAND
---	WETLAND	---	WETLAND
---	FLOODPLAIN	---	SUCCESSIONAL WOODY VEGETATION
---	TREE CLEARING	---	TREE CLEARING
---	SELECTIVE TREE CLEARING	---	SELECTIVE TREE CLEARING
---	BUILDING	---	BUILDING

### SEED PICK TABLE

Scientific Name	Species	Variety
<i>Andropogon gerardii</i>	Big bluestem	Niagara
<i>Andropogon hallii</i>	Sand bluestem	Goldstrike
<i>Elymus canadensis</i>	Canada wildrye	
	Purple Lovegrass	
<i>Eragrostis spectabilis</i>	Lovegrass	
<i>Eragrostis trichodes</i>	Sand lovegrass	Nebraska 27 or Bend
<i>Festuca arundinacea</i>	Tall Fescue	Firecracker SLS
	Perennial ryegrass	Amazing A+
<i>Lolium perenne</i>	Coastal panicgrass	Atlantic
<i>Panicum amarum</i>	Switchgrass	Blackwell, Shelter Pathfinder, or Trailblazer
<i>Panicum virgatum</i>	Canada bluegrass	Rubens, Compressa
<i>Poa compressa</i>	Little bluestem	Aldous or Camper
<i>Schizachyrium scoparium</i>	Rough dropseed	
<i>Sporobolus asper</i>	Sand dropseed	
<i>Sporobolus cryptandrus</i>		

### POLLINATOR-FRIENDLY SEED MIX 2 ERNST MIX: ERNMX-610 OR SIMILAR (WILDFLOWER HERBACEOUS LAYER AND GRASSES NORTHEAST NATIVE POLLINATOR SEED MIXES)

NORTHEAST NATIVE WILDFLOWER & GRASS MIX				
BOTANICAL NAME	COMMON NAME	MIX CONCENTRATION	RATE (LBS/ACRE)	RATE (LBS/1000 FT <sup>2</sup> )
SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	40%	20	0.46
ROUTELOJA CURTIPENDULA	SIDEOTS GRAMA	23.40%		
COSMOS BIPINNATUS	COSMOS	7.30%		
COREOPSIS LANCEOLATA	LANCELEAF COREOPSIS	3.50%		
ECHINACEA PURPUREA	PURPLE CONEFLOWER	3.50%		
ELYMUS VIRGINICUS	VIRGINIA WILDRYE	3%		
SORGHASTRUM NUTANS	INDIANGRASS	2.50%		
LUPINUS POLYPHYLLUS	BIGLEAF LUPINE	2.20%		
CHAMAECRISTA FASCICULATA	PARTRIDGE PEA	2%		
DELPHINIUM AJACIS	ROCKET LARKSPUR	2%		
RUBRICKIA HIRTA	BLACKEYED SUSAN	2%		
GAILLARDIA ARISTATA	BLANKET FLOWER	1.50%		
SENNA HEBCARPA	WILD SENNA	1%		
PENSTEMON DIGITALIS	TALL WHITE BEARDTONGUE	1%		
PAPAYER RHOEAS	SHIRLEY MIX (CORN POPPY, SHIRLEY MIX)	0.60%		
ANDROPOGON GERARDII	BIG BLUESTEM	0.50%		
ELYMUS CANADENSIS	CANADA WILDRYE	0.50%		
COREOPSIS TINCTORIA	PLAINS COREOPSIS	0.50%		
LIATRIS SPICATA	BLAZING STAR	0.40%		
ASCLEPIAS SYRIACA	COMMON MILKWEED	0.40%		
ASCLEPIAS TUBEROSA	BUTTERFLY MILKWEED	0.40%		
ZIZIA AUREA	GOLDEN ALEXANDERS	0.30%		
ASCLEPIAS INCARNATA	SWAMP MILKWEED	0.30%		
MONARDA FISTULOSA	WILD BERGAMONT	0.20%		
PENSTEMON LAEVIGATUS	APPALACHIAN BEARDTONGUE	0.20%		
SENNA MARILANDICA	MARYLAND SENNA	0.20%		
SOLIDAGO NEMORALIS	GRAY GOLDENROD	0.10%		
TRADESCANTIA OHIENSIS	OHIO SPIDERWORT	0.10%		
ASTER LAEVIS	SMOOTH BLUE ASTER	0.10%		
ASTER NOVAE-ANGLIAE	NEW ENGLAND ASTER	0.10%		
ASTER PRENANTHOIDES	ZIGZAG ASTER	0.10%		
HELIOPSIS HELIANTHOIDES	OXEYE SUNFLOWER	0.10%		

NOTE: NATIVE POLLINATOR SEED MIXES ARE INTENDED TO PROVIDE AN EXCELLENT WILDLIFE FOOD AND SHELTER THAT WILL ATTRACT A VARIETY OF POLLINATORS AND SONGBIRDS. THE NATIVE WILDFLOWERS AND GRASSES IN THIS MIX PROVIDE AN ATTRACTIVE DISPLAY OF COLOR FROM SPRING TO FALL. POLLINATOR SEED MIXES ARE INTENDED TO PROVIDE NECTAR AND FOOD SOURCES FOR A VARIETY OF POLLINATORS AND LARVA. THESE MIXES ARE COMPRISED OF A FAIRLY EVEN MIX OF NATIVE AND/OR INDIGENOUS WILDFLOWERS AND GRASSES.

THE POLLINATOR SEED MIX IS INTENDED TO BE SOWN - IN AREAS WHERE MOWING IS NOT NECESSARY AND THE POLLINATOR-FRIENDLY PLANT SPECIES ARE ABLE TO GROW TO THEIR NATURALLY OCCURRING HEIGHTS AND DEVELOP FLOWER. AREAS WITHIN THE PROJECT SITE THAT MAY BE CONSIDERED TO SOW THIS SEED MIX ARE OUTSIDE OF THE SOLAR ARRAY FIELD. SEED MIXES SHALL BE SOWN ONLY IN DISTURBED AREAS AS A RESULT OF CONSTRUCTION ACTIVITIES FOR STABILIZATION PER THE SWPPP.

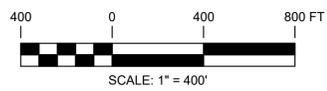
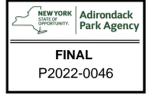
### GENERAL LANDSCAPE/SEEDING NOTES

- THE LANDSCAPE DEVELOPMENTS, NOTES, AND DETAILS ARE FOR LANDSCAPING INFORMATION ONLY. PLEASE REFER TO THE SITE LAYOUT PLAN, GRADING PLAN AND/OR UTILITIES PLAN FOR ALL OTHER INFORMATION.
- THE FACILITY OWNER/LESSEE SHALL MONITOR THAT ALL PLANTS, TREES, AND SHRUBS SHALL BE HEALTHY AND FREE OF DISEASE FOR THE LIFETIME OF THE PROJECT AFTER SUBSTANTIAL COMPLETION AND ACCEPTANCE BY ANY REQUIRED PERMITS. MAINTENANCE RESPONSIBILITIES INCLUDE INVASIVE SPECIES MONITORING, REMOVAL, AND SUPPLEMENTATION. MONITORING OF THE PROJECT SITE SHALL OCCUR IN THE SPRING AND THE FALL TO DETERMINE THE PRESENCE OF INVASIVE SPECIES. SHOULD ANY INVASIVE SPECIES BE IDENTIFIED WITHIN THE SEEDING AREAS, THE INVASIVE SPECIES SHALL BE REMOVED ACCORDING TO METHODS MOST LIKELY TO BE EFFECTIVE IN CONTROLLING THAT SPECIES AND SUPPLEMENTING ITS REPLACEMENT WITH APPROPRIATE SEED MIX IDENTIFIED (AND APPROVED) ON THIS PLAN AND/OR AN APPROVED EQUAL. ADDITIONAL MAINTENANCE RESPONSIBILITIES MAY INCLUDE: APPROVED CULTIVATING, SPRAYING, WEEDING, WATERING, PRUNING, FERTILIZING, MULCHING, AND ANY OTHER OPERATIONS NECESSARY TO MAINTAIN PLANT VIABILITY. MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER SEEDING AND CONTINUE FOR THE DURATION OF SOLAR ARRAY USE BY THE FACILITY OWNER/LESSEE AFTER FINAL ACCEPTANCE.
- THE FACILITY OWNER/LESSEE SHALL SUPPLY ALL LABOR, APPROVED SEEDING MIX, AND MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE THE WORK SHOWN ON THE DRAWING(S) AND LISTED IN THE PLANT SCHEDULE(S) AND/OR SEEDING TABLE(S). IN THE EVENT OF A DISCREPANCY BETWEEN QUANTITIES SHOWN IN THE PLANT SCHEDULE AND/OR SEEDING TABLE AND THOSE REQUIRED BY THE DRAWINGS, THE LARGER SHALL APPLY.
- NO SEED SHALL BE SOWN IN THE GROUND BEFORE ROUGH GRADING HAS BEEN COMPLETED AND APPROVED BY THE OWNER, CERTIFIED LANDSCAPE INSPECTOR, OR LANDSCAPE CONTRACTOR. SEED MIX SHALL BE SOWN ONLY IN DISTURBED AREAS FOR STABILIZATION PER THE SWPPP.
- TWO POLLINATOR FRIENDLY SEED MIXES FROM ERNST SEED MIXES WERE SELECTED FOR AREAS IN THE SITE THAT WOULD REQUIRE SEEDING TO MEET SWPPP AND NEW YORK SOIL STABILIZATION REQUIREMENTS. THE ERNST SEED MIXES ARE SPECIFIC TO THE NORTHEAST AND INCLUDE A VARIETY OF SPECIES THAT ARE SUITABLE TO A WIDE VARIETY OF SOIL TYPES AND WILL EASILY ESTABLISH IN DISTURBED AREAS. SEED MIX 1 IS A GRASS MIX TO BE USED THE MAJORITY OF THE DISTURBED AREAS AS A RESULT OF CONSTRUCTION ACTIVITIES IN SITE TO PROVIDE A CONSISTENT GROUND COVER AND MINIMIZE MOWING AND SHADING CONCERNS. THE MIX OF GRASS SPECIES ARE SUITED FOR A WIDE VARIETY OF SOILS AND MANY ARE TYPICALLY USED FOR EROSION CONTROL. ALTERNATIVE GRASS SPECIES THAT CAN BE USED IN PLACE OF THE SPECIES IN SEED MIX 1 ARE IN THE INCLUDED TABLE 1 SEED PICK TABLE. SEED MIX 2 IS A NATIVE POLLINATOR SEED MIX THAT WILL BE SEED ON THE EDGES OF THE SITE TO PROVIDE WILDLIFE HABITAT AND FOOD SOURCES. THIS SEED MIX IS COMPOSED OF SPECIES THAT ARE FOUND IN A WIDE VARIETY OF SOILS AND HABITATS. SPECIFIC SPECIES TO BE SEED FROM EACH SEED MIX WOULD BE IDENTIFIED BASED ON THE POST-CONSTRUCTION SOIL TESTING TO BE CONDUCTED PRIOR TO RESTORATION SEEDING AS PER THE SWPPP.
- COORDINATE SEEDING LOCATIONS WITH SITE UTILITIES. SEE SITE LAYOUT, GRADING AND/OR UTILITY PLANS FOR STORM, SANITARY, GAS, ELECTRIC, TELEPHONE AND WATER LINES. UTILITY LOCATIONS ARE APPROXIMATE. EXERCISE CARE WHEN DIGGING IN AREAS OF POTENTIAL CONFLICT WITH UNDERGROUND OR OVERHEAD UTILITIES. THE FACILITY OWNER/LESSEE IS RESPONSIBLE FOR ANY DAMAGE DUE TO FACILITY OWNER/LESSEE'S NEGLIGENCE AND SHALL REPLACE OR REPAIR ANY DAMAGE AT FACILITY OWNER/LESSEE'S EXPENSE.
- SOIL SHALL BE ADEQUATE ENOUGH TO ENSURE PROPER SOWING AND SUCCESSFUL ESTABLISHMENT OF SEED. FACILITY OWNER/LESSEE SHALL SUBMIT TOPSOIL TO A CERTIFIED TESTING LABORATORY TO DETERMINE PH, FERTILITY, ORGANIC CONTENT AND MECHANICAL COMPOSITION. THE FACILITY OWNER/LESSEE SHALL SUBMIT THE TEST RESULTS FROM REGIONAL EXTENSION OFFICE OF USDA TO THE OWNER, CERTIFIED LANDSCAPE INSPECTOR, OR LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL. FACILITY OWNER/LESSEE SHALL TO THE EXTENT REASONABLE INCORPORATE AMENDMENTS FOR GOOD PLANT GROWTH AND PROPER SOIL ACIDITY RECOMMENDED FROM THE SOIL TEST WHERE NEEDED.
  - NO PHOSPHOROUS SHALL BE USED AT PLANTING TIME UNLESS SOIL TESTING HAS BEEN COMPLETED AND TESTED BY A HORTICULTURAL TESTING LAB AND SOIL TESTS SPECIFICALLY INDICATE A PHOSPHOROUS DEFICIENCY THAT IS HARMFUL, OR WILL PREVENT NEW LAWNS/GRASSES AND PLANTINGS FROM ESTABLISHING PROPERLY. SEE RECOMMENDATIONS PHOSPHOROUS SHALL BE APPLIED AT THE MINIMUM RECOMMENDED LEVEL PRESCRIBED IN THE SOIL TEST FOLLOWING ALL APPLICABLE STANDARDS, REQUIREMENTS, AND/OR REGULATIONS.
  - ALL SLOPES GREATER THAN 3:1 RECEIVING A WILDFLOWER AND/OR GRASS SEEDING MIXTURE SHALL BE COVERED WITH AN EROSION CONTROL BLANKET OR OTHER APPROPRIATE EROSION CONTROL BEST MANAGEMENT PRACTICE BASED ON THE SITE CONDITIONS.
  - ALL WILDFLOWERS AND GRASSES SOWN SHALL BE ALLOWED TO GROW TO THEIR NATURALLY OCCURRING HEIGHTS WHENEVER POSSIBLE. NATIVE WILDFLOWERS AND/OR GRASSES CAN BE MOWED/MAINTAINED (WITHIN ACCEPTABLE AREAS IDENTIFIED OR TO BE DETERMINED) AS OFTEN AS NEEDED TO KEEP THE VEGETATION AT A DESIRED AND/OR MANAGEABLE/MANICURED HEIGHT.
- TREE CLEARING WILL BE LIMITED TO THE AREAS SHOWN ON THE SITE PLAN. ANY TREES OUTSIDE OF THE L.O.D. DURING CONSTRUCTION, OR OUTSIDE OF THE PROJECT FENCE LINE DURING OPERATION OF THE FACILITY THAT ARE CLOSE ENOUGH AND LARGE ENOUGH TO SHADE THE ARRAYS, WILL BE REMOVED, PRUNED, OR FELLED DEPENDING ON THEIR LOCATION. ANY NECESSARY TREE CLEARING ACTIVITY SHALL BE DONE IN CONFORMANCE WITH ANSI A300 (PART 1) - 2017 PRUNING STANDARDS, MAINTENANCE OF VEGETATION, AND SHALL ONLY BE DONE IN ACCORDANCE WITH ANY OTHER LOCAL, STATE, OR FEDERAL PERMITS THAT MAY BE REQUIRED. ANY NECESSARY TREE CLEARING ACTIVITY SHALL BE DONE UTILIZING BEST MANAGEMENT PRACTICES, INCLUDING THE FOLLOWING PARTICULAR TO THIS SITE:
  - ANY TREE FELLING OR PRUNING EFFORTS NECESSARY WITHIN THE 100 FOOT APA WETLAND BUFFER AREAS SHALL BE DONE USING HAND TOOLS AND SLASH LEFT IN PLACE TO BENEFIT WILDLIFE HABITATS.
  - NO MACHINES SHALL BE USED FOR TREE FELLING PURPOSES WITHIN THE 100 FOOT APA WETLAND BUFFER AREAS.
  - ANY TREE CLEARING OR PRUNING DONE OUTSIDE OF THE 100 FOOT APA WETLAND BUFFER AREAS CAN BE DONE USING MACHINERY AND THE SLASH MAY BE REMOVED.
- ALL PRUNING SHALL CONFORM TO THE TREE CARE INDUSTRY ASSOCIATION (TCIA) ANSI A300 (PART 1) - 2017 PRUNING STANDARDS. PRUNING STANDARDS SHALL RECOGNIZE BUT, ARE NOT LIMITED TO, THE FOLLOWING PRUNING OBJECTIVES: MANAGE RISK, MANAGE HEALTH, DEVELOP STRUCTURE, PROVIDE CLEARANCE, MANAGE SIZE OR SHAPE, IMPROVE AESTHETICS, MANAGE PRODUCTION OF FRUIT, FLOWERS, OR OTHER PRODUCTS, AND/OR MANAGE WILDLIFE HABITAT. DEVELOPING STRUCTURE SHALL IMPROVE BRANCH AND TRUNK ARCHITECTURE, PROMOTE OR SUBORDINATE CERTAIN LEADERS, STEMS, OR BRANCHES; PROMOTE DESIRABLE BRANCH SPACING; PROMOTE OR DISCOURAGE GROWTH IN A PARTICULAR DIRECTION (DIRECTIONAL PRUNING); MINIMIZE FUTURE INTERFERENCE WITH TRAFFIC, LINES OF SIGHT, INFRASTRUCTURE, OR OTHER PLANTS; RESTORE PLANTS FOLLOWING DAMAGE; AND/OR REJUVENATE SHRUBS. PROVIDING CLEARANCE SHALL ENSURE SAFE AND RELIABLE UTILITY SERVICES; MINIMIZE CURRENT INTERFERENCE WITH TRAFFIC, LINES OF SITE, INFRASTRUCTURE, OR OTHER PLANTS; RAISE CROWN(S) FOR MOVEMENT OF TRAFFIC OR LIGHT PENETRATION; ENSURE LINES OF SIGHT OR DESIRED VIEWS; PROVIDE ACCESS TO SITES, BUILDINGS, OR OTHER STRUCTURES; AND/OR COMPLY WITH REGULATIONS.
- THE UNDERGROUND GEN-TIE ROW CORRIDOR WILL BE MAINTAINED IN THE FOLLOWING MANNER:
  - IN A GENERALLY CLEAR CONDITION BY ROUTINELY REMOVING FALLEN WOODY MATERIAL WHEN FOUND.
  - THE FLOOR KEPT IN AN HERBACEOUS STATE BY ROUTINE MOWING TO KEEP WOODY VEGETATION EXCLUDED
  - HERBICIDES MAY BE USED VIA SQUIRT BOTTLE AS A CUT STUMP APPLICATION ON WOODY VEGETATION IN COMPLIANCE WITH THE HERBICIDE LABEL, STATE AND FEDERAL LAW
  - THE WOODED SIDES OF THE CORRIDOR WILL NOT BE ACTIVELY MANAGED ASIDE FROM MISCELLANEOUS PRUNING OR REMOVAL OF HAZARDOUS TREES OR LIMBS IN CONFORMANCE WITH ANSI A300 (PART 1) - 2017 PRUNING STANDARDS

PRELIMINARY  
NOT FOR CONSTRUCTION



ENLARGED AREA INDICATED BY OUTLINE KEY IN OVERALL PLAN.  
SEE THIS SHEET



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.

		10 MAXWELL DRIVE CLIFTON PARK, NY 12065		PROJECT NO: 444154		
REV	DESCRIPTION	DATE	DES	CHK	APP	
1	IFP SET APA COMMENTS	03/31/2022	RMK	SJW	SJW	
0	IFP SET	02/25/2022	RMK	SJW	SJW	



BW	DESIGNED
BW	DRAWN
JWH	CHECKED
NAM	APPROVED

LANDSCAPING PLAN  
BR BENSON MINES SOLAR PROJECT  
NEW YORK STATE ENERGY RESEARCH  
AND DEVELOPMENT AUTHORITY  
CLIFTON, ST LAWRENCE COUNTY, NEW YORK