

LOCATION MAP

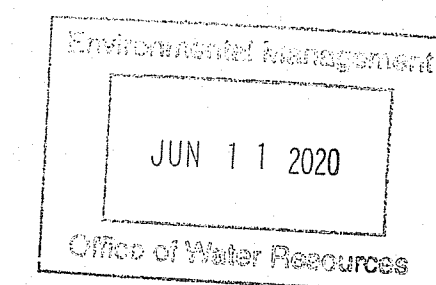


SCALE: 1"=1,200'

NAVSTA NEWPORT SOLAR BREAKERS - TANK FARM 4

PREPARED FOR:

BQ ENERGY LLC
400 MARKET STREET INDUSTRIAL PARK, SUITE 32
WAPPINGERS FALLS, NY 12590



PREPARED BY:

CRAWFORD & ASSOCIATES
ENGINEERING, P.C.
4411 Route 9, Hudson, New York 12534, (518) 828-2700

IN COLLABORATION WITH:



C&A #: 4715.05

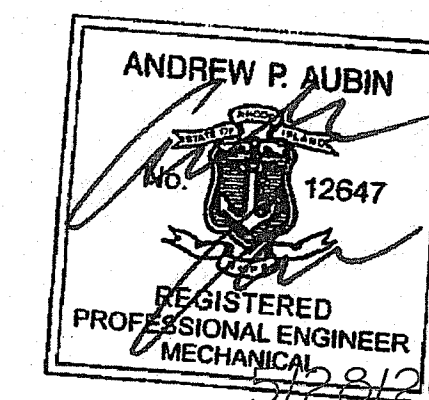
DATE: FEBRUARY 22, 2019

REVISED: MAY 27, 2020

90% DESIGN REVISED FOR RIDEM REVIEW

DRAWINGS:

T-0.0	TITLE PAGE	(SHEET 1 OF 16)
C-1.0	EXISTING CONDITIONS SITE PLAN - SECTION 1	(SHEET 2 OF 16)
C-1.1	EXISTING CONDITIONS SITE PLAN - SECTION 2	(SHEET 3 OF 16)
C-1.2	PROPOSED OVERALL LAYOUT PLAN - SECTION 1	(SHEET 4 OF 16)
C-1.3	PROPOSED OVERALL LAYOUT PLAN - SECTION 2	(SHEET 5 OF 16)
C-1.4	PROPOSED SITE LAYOUT DETAILS	(SHEET 6 OF 16)
C-1.5	SITE REMOVALS PLAN - SECTION 1	(SHEET 7 OF 16)
C-1.6	SITE REMOVALS PLAN - SECTION 2	(SHEET 8 OF 16)
C-1.7	PROPOSED FENCE LAYOUT PLAN - SECTION 1	(SHEET 9 OF 16)
C-1.8	PROPOSED FENCE LAYOUT PLAN - SECTION 2	(SHEET 10 OF 16)
C-1.9	PROPOSED GRADING & DRAINAGE PLAN	(SHEET 11 OF 16)
C-1.10	PROPOSED EROSION & SEDIMENT CONTROL PLAN	(SHEET 12 OF 16)
C-1.11	PROPOSED LIMITS OF DISTURBANCE - SECTION 1	(SHEET 13 OF 16)
C-1.12	PROPOSED LIMITS OF DISTURBANCE - SECTION 2	(SHEET 14 OF 16)
C-5.0	EROSION & SEDIMENT CONTROL DETAILS	(SHEET 15 OF 16)
C-5.1	CIVIL DETAILS	(SHEET 16 OF 16)



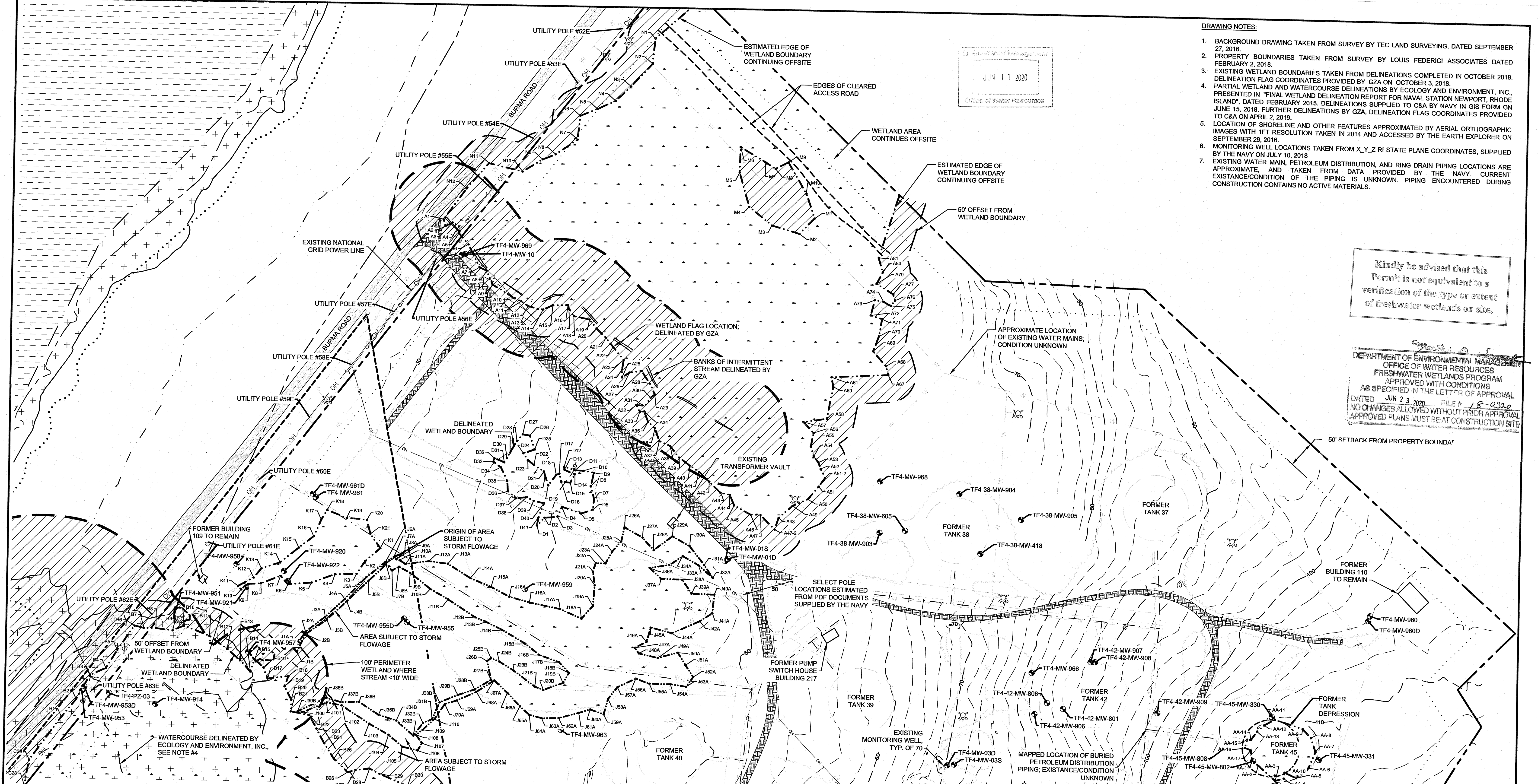
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED JUN 23 2020 FILE # 18-320
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

- DRAWING NOTES:**
- BACKGROUND DRAWING TAKEN FROM SURVEY BY TEC LAND SURVEYING, DATED SEPTEMBER 27, 2016.
 - PROPERTY BOUNDARIES TAKEN FROM SURVEY BY LOUIS FEDERICI ASSOCIATES DATED FEBRUARY 2, 2018.
 - EXISTING WETLAND BOUNDARIES TAKEN FROM DELINEATIONS COMPLETED IN OCTOBER 2018. DELINEATION FLAG COORDINATES PROVIDED BY GZA ON OCTOBER 3, 2018.
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UNIVERSITY OF RHODE ISLAND
 JUN 11 2020
 Office of Water Resources

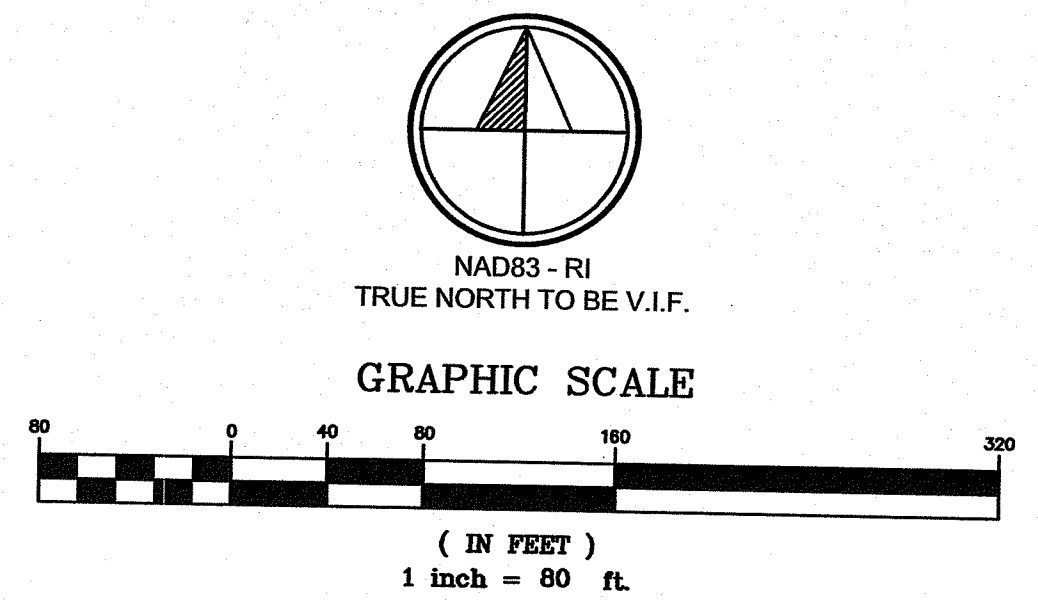
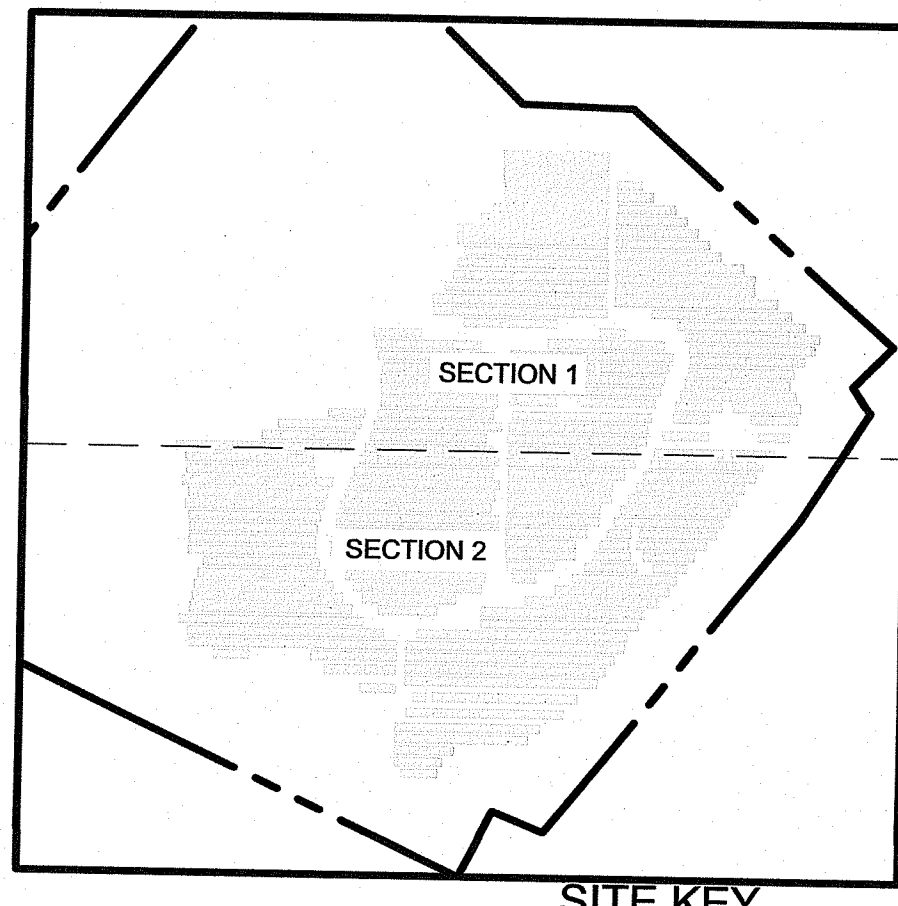
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- LEGEND**
- EXISTING CONTOUR 2' INTERVAL
 - - - EXISTING CONTOUR 10' INTERVAL
 - PROPERTY BOUNDARY
 - REQUIRED SETBACKS FROM PROPERTY BOUNDARY
 - EXISTING/PROPOSED DRIVEWAY
 - EXISTING STONE WALL
 - DELINEATED WETLAND BOUNDARY
 - 50' PERIMETER WETLAND
 - RIVERBANK WETLAND
 - EXISTING WATERCOURSE
 - EXISTING/PROPOSED SWALE CENTERLINE
 - EXISTING 100YR FLOOD BOUNDARY
 - EXISTING 500YR FLOOD BOUNDARY
 - EXISTING CERCLA LAND USE CONTROL BOUNDARY
 - EXISTING RING DRAIN PIPING
 - EXISTING PETROLEUM DISTRIBUTION PIPING
 - EXISTING/PROPOSED WATER LINE
 - EXISTING/PROPOSED TREETLINE
 - EXISTING/PROPOSED OVERHEAD ELECTRIC
 - EXISTING/PROPOSED UTILITY POLE

- EXISTING MONITORING WELL
- EXISTING BUILDING
- ▨ NARRAGANSETT BAY HATCH
- ▨ WETLAND HATCH
- ▨ 100YR FLOOD HATCH
- ▨ PERIMETER/RIVERBANK WETLAND HATCH
- 62 WETLAND DELINEATION FLAG LOCATION AND NUMBER
- ▨ EXISTING ACCESS ROAD HATCH
- ▨ GRAVEL HATCH



ASSESSOR PLAT: 43
 LOT NUMBER: 1

SHEET 2 OF 16

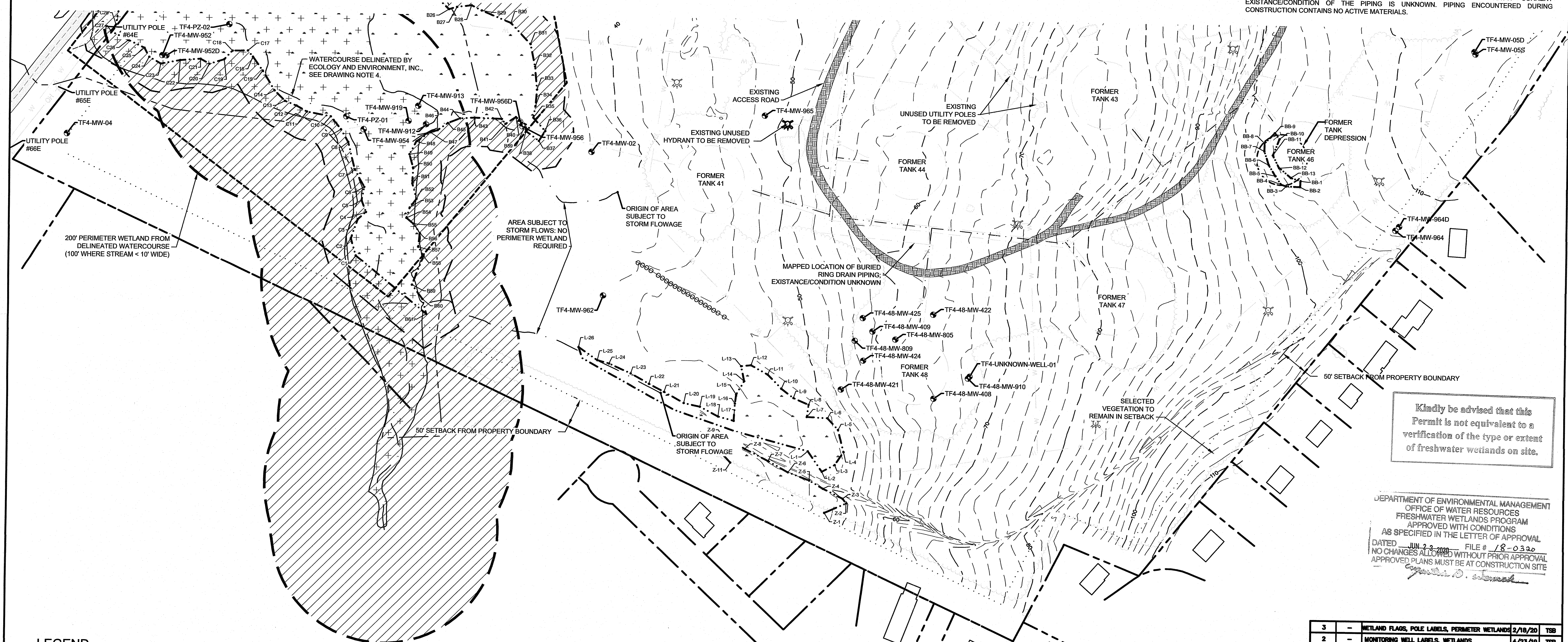
ANDREW P. AUBIN
 12647
 REGISTERED PROFESSIONAL ENGINEER
 MECHANICAL
 5/28/2020

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3	---	WETLAND FLAGS, POLE LABELS, PERIMETER WETLANDS	2/18/20	TSS
2	---	MONITORING WELL LABELS, PLATMATS, WETLANDS	4/23/19	TSS
REV. NO.	ZONE		DATE	BY
NAVSTA NEWPORT SOLAR BREAKERS - TANK FARM 4 TOWN OF PORTSMOUTH NEWPORT COUNTY, RI EXISTING CONDITIONS SITE PLAN SECTION 1				
BQ ENERGY LLC PROJECT DEVELOPER 400 Market Street Industrial Park, Suite 32 Wappingers Falls, NY 12590				
CRAWFORD & ASSOCIATES ENGINEERING, P.C. 4411 Route 9, Suite 200, Hudson New York 12534 www.crawfordandassociates.com				
DATE	2/22/2019	DRAWN BY:	TSS	AS WORK/4775.05/040/4775.05 TANK FARM 4 SITE PLAN
SCALE	AS SHOWN	CHECKED BY:	JSC	C&A JOB#
		APPROVED BY:	JSC	4775.05
				DRAWING: C-1.0

Environmental Management
 JUN 11 2020
 Office of Water Resources

- DRAWING NOTES:**
1. BACKGROUND DRAWING TAKEN FROM SURVEY BY TEC LAND SURVEYING, DATED SEPTEMBER 27, 2016.
 2. PROPERTY BOUNDARIES TAKEN FROM SURVEY BY LOUIS FEDERICI ASSOCIATES DATED FEBRUARY 2, 2018.
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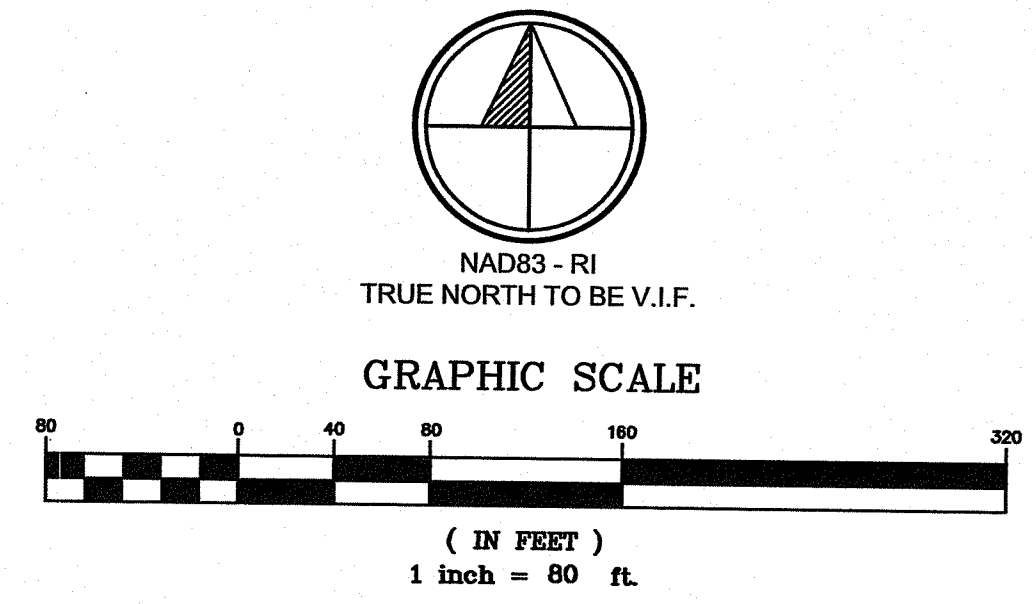
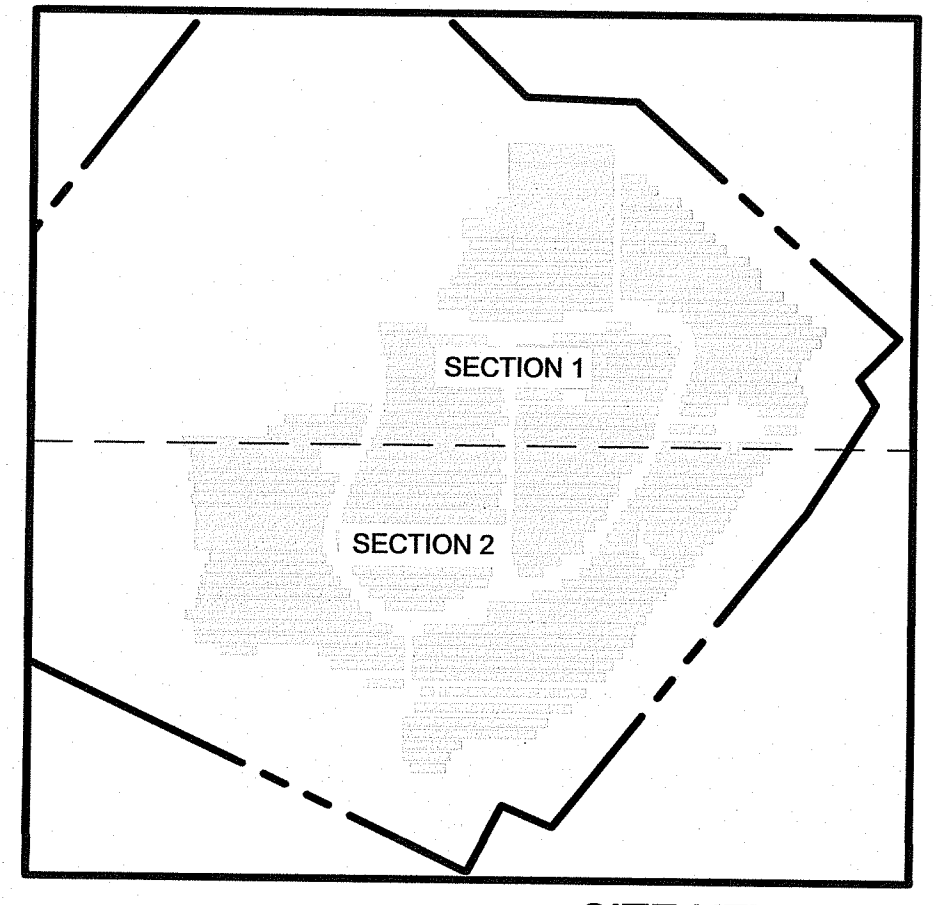


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 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
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LEGEND

	PROPERTY BOUNDARY		EXISTING BUILDING
	REQUIRED SETBACKS FROM PROPERTY BOUNDARY		NARRAGANSETT BAY HATCH
	EXISTING/PROPOSED DRIVEWAY		WETLAND HATCH
	EXISTING/PROPOSED FENCE		100YR FLOOD HATCH
	DELINEATED WETLAND BOUNDARY		PERIMETER/RIVERBANK WETLAND HATCH
	50' PERIMETER WETLAND		WETLAND DELINEATION FLAG LOCATION AND NUMBER
	RIVERBANK WETLAND		EXISTING ACCESS ROAD HATCH
	EXISTING WATERCOURSE		GRAVEL HATCH
	EXISTING/PROPOSED SWALE CENTERLINE		
	EXISTING 100YR FLOOD BOUNDARY		
	EXISTING 500YR FLOOD BOUNDARY		
	EXISTING CERCLA LAND USE CONTROL BOUNDARY		
	EXISTING/PROPOSED TREELINE		
	EXISTING/PROPOSED OVERHEAD ELECTRIC		
	EXISTING/PROPOSED WATER LINE		
	EXISTING/PROPOSED UNDERGROUND ELECTRIC		
	EXISTING/PROPOSED UTILITY POLE		
	EXISTING MONITORING WELL		



SHEET 3 OF 16

ANDREW P. AUBIN
 No. 12647
 REGISTERED PROFESSIONAL ENGINEER
 MECHANICAL
 5/28/2020

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ASSESSOR PLAT: 43
 LOT NUMBER: 1

3	WETLAND FLAGS, POLE LABELS, PERIMETER WETLANDS	2/18/20	TSB
2	MONITORING WELL LABELS, WETLANDS	4/23/19	TSB
1	ADDED STREAM DELINEATION NOTE	3/18/19	TSB
REV. No.	ZONE	DATE	BY

NAVSTA NEWPORT
 SOLAR BREAKERS - TANK FARM 4
 TOWN OF PORTSMOUTH NEWPORT COUNTY, RI
 EXISTING CONDITIONS SITE PLAN
 SECTION 2

BQ ENERGY LLC
 PROJECT DEVELOPER
 400 Market Street Industrial Park, Suite 32
 Waplington Falls, NY 12590

CRAWFORD & ASSOCIATES
 ENGINEERING, P.C.
 4411 Route 9, Suite 200, Hudson New York 12534
 www.crawfordandassociates.com
 tel: (518) 828-2700
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DATE	DRAWN BY	REV. No.	SCALE	C&A JOB#	DRAWING
2/22/2019	TSB	1	AS SHOWN	4715.05	C-1.1

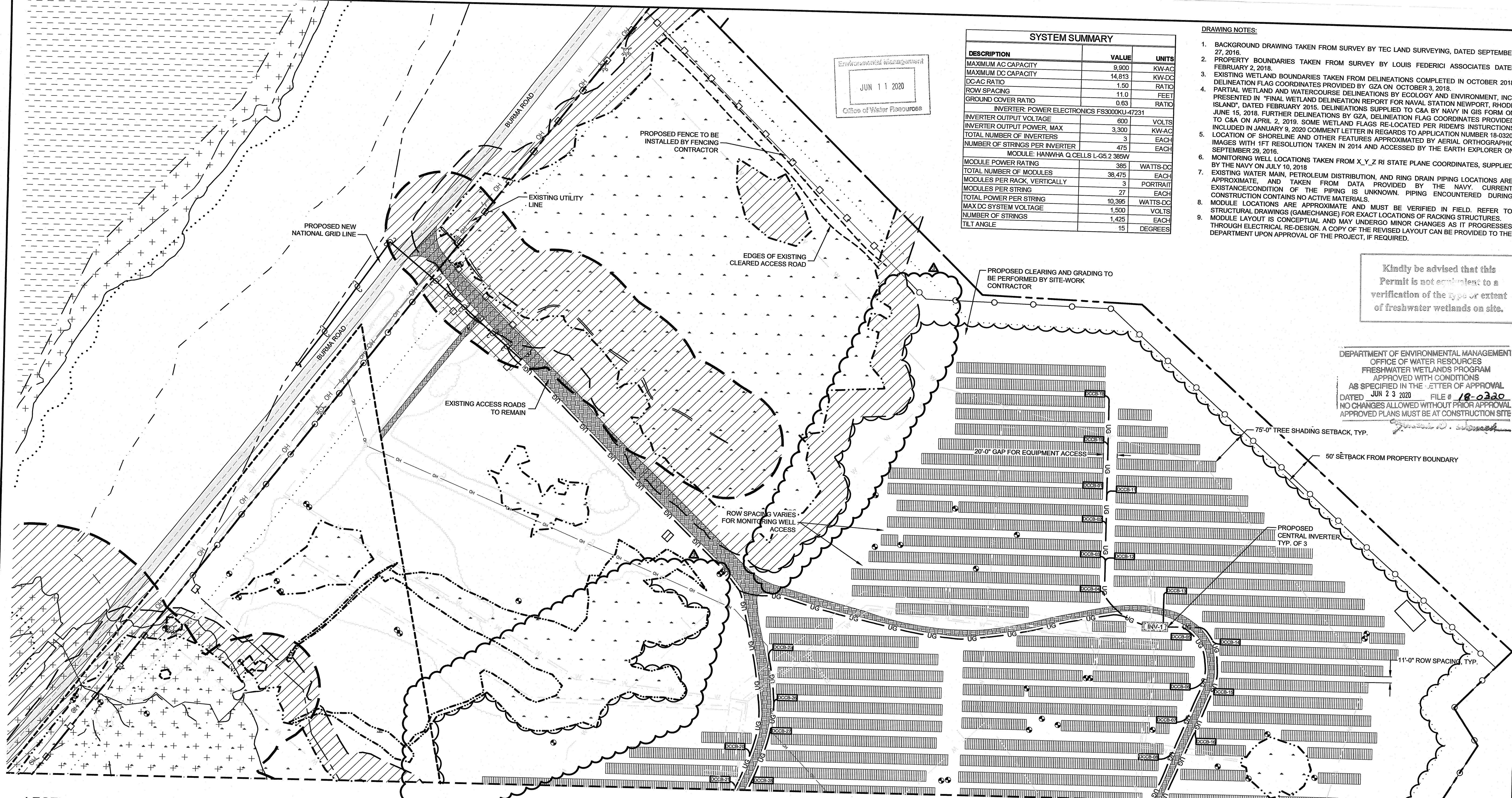
Environmental Management
Office of Water Resources
JUN 11 2020

SYSTEM SUMMARY		
DESCRIPTION	VALUE	UNITS
MAXIMUM AC CAPACITY	9,900	KW-AC
MAXIMUM DC CAPACITY	14,813	KW-DC
DC:AC RATIO	1.50	RATIO
ROW SPACING	11.0	FEET
GROUND COVER RATIO	0.63	RATIO
INVERTER: POWER ELECTRONICS FS3000KU-47231		
INVERTER OUTPUT VOLTAGE	600	VOLTS
INVERTER OUTPUT POWER, MAX	3,300	KW-AC
TOTAL NUMBER OF INVERTERS	3	EACH
NUMBER OF STRINGS PER INVERTER	475	EACH
MODULE: HANWHA Q CELLS L-G5.2 385W		
MODULE POWER RATING	385	WATTS-DC
TOTAL NUMBER OF MODULES	38,475	EACH
MODULES PER RACK, VERTICALLY	3	PORTRAIT
MODULES PER STRING	27	EACH
TOTAL POWER PER STRING	10,395	WATTS-DC
MAX DC SYSTEM VOLTAGE	1,500	VOLTS
NUMBER OF STRINGS	1,425	EACH
TLT ANGLE	15	DEGREES

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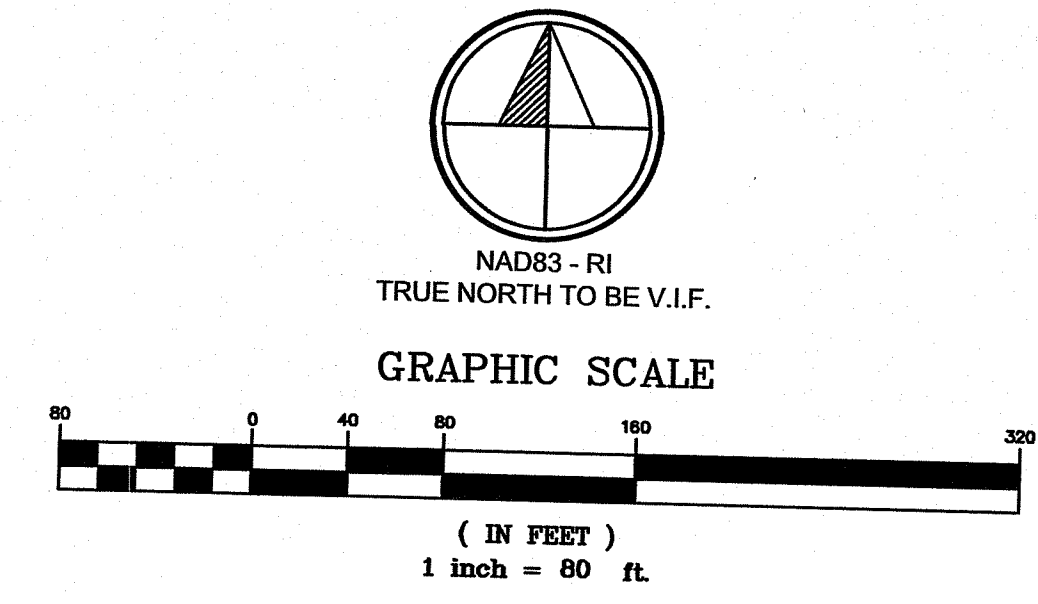
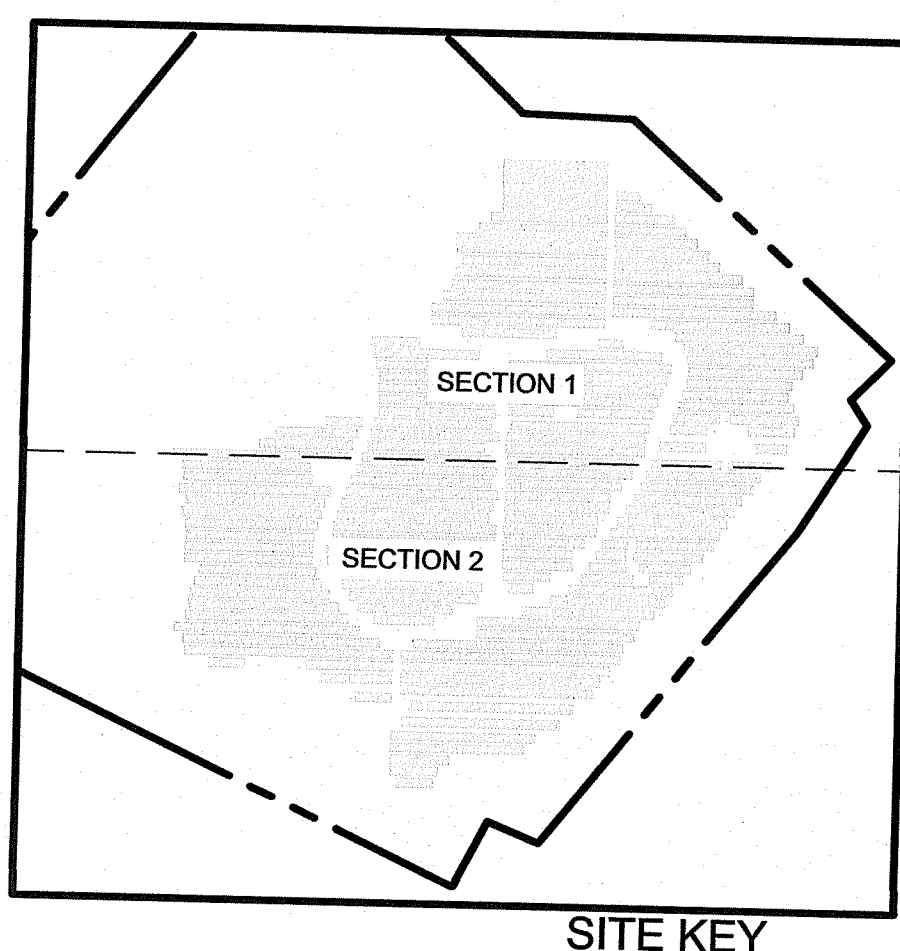
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OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
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DATED JUN 23 2020 FILE # 18-0320
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LEGEND

	PROPERTY BOUNDARY		EXISTING MONITORING WELL
	REQUIRED SETBACKS FROM PROPERTY BOUNDARY		EXISTING BUILDING
	EXISTING/PROPOSED DRIVEWAY		NARRAGANSETT BAY HATCH
	EXISTING/PROPOSED FENCE		WETLAND HATCH
	DELINEATED WETLAND BOUNDARY		100YR FLOOD HATCH
	50' PERIMETER WETLAND		PERIMETER/RIVERBANK WETLAND HATCH
	RIVERBANK WETLAND		EXISTING ACCESS ROAD HATCH
	EXISTING WATERCOURSE		GRAVEL HATCH
	EXISTING/PROPOSED SWALE CENTERLINE		
	EXISTING 100YR FLOOD BOUNDARY		
	EXISTING 500YR FLOOD BOUNDARY		
	EXISTING CERCLA LAND USE CONTROL BOUNDARY		
	EXISTING/PROPOSED TREELINE		
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	EXISTING/PROPOSED WATER LINE		
	EXISTING/PROPOSED UNDERGROUND ELECTRIC		
	EXISTING/PROPOSED UTILITY POLE		



SHEET 4 OF 16

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5/28/2020

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3	-	REVISED PROPOSED TREELINE PER RIDEM COMMENT	5/27/20	TSS
REV. No.	ZONE		DATE	BY

NAVSTA NEWPORT
SOLAR BREAKERS - TANK FARM 4
TOWN OF PORTSMOUTH NEWPORT COUNTY, RI

PROPOSED OVERALL LAYOUT PLAN
SECTION 1

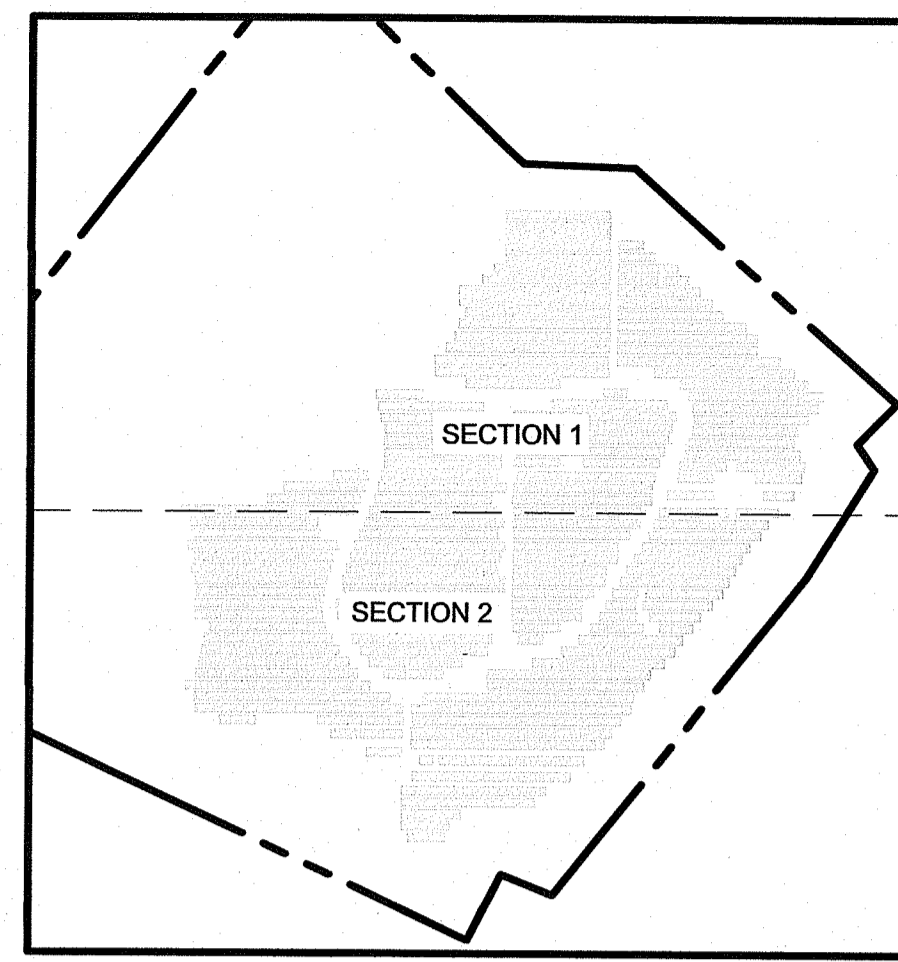
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DATE	2/22/2019	DESIGNED BY	TSS/JSC	C&A JOB#	4715.05	DRAWING	C-1.2
SCALE	AS SHOWN	CHECKED BY	JSC				

LEGEND

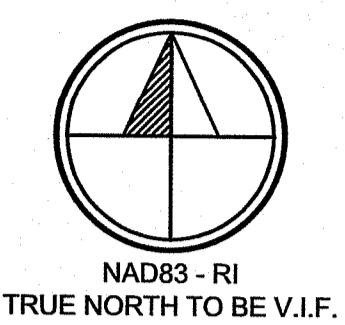
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- W --- EXISTING/PROPOSED WATER LINE
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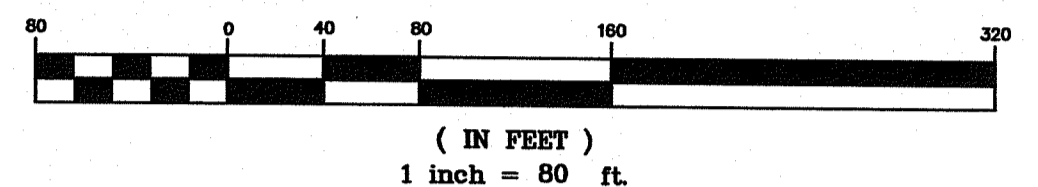
SITE KEY

SCALE: 1" = 500'

Environmental Management
JUN 11 2020
Office of Water Resources



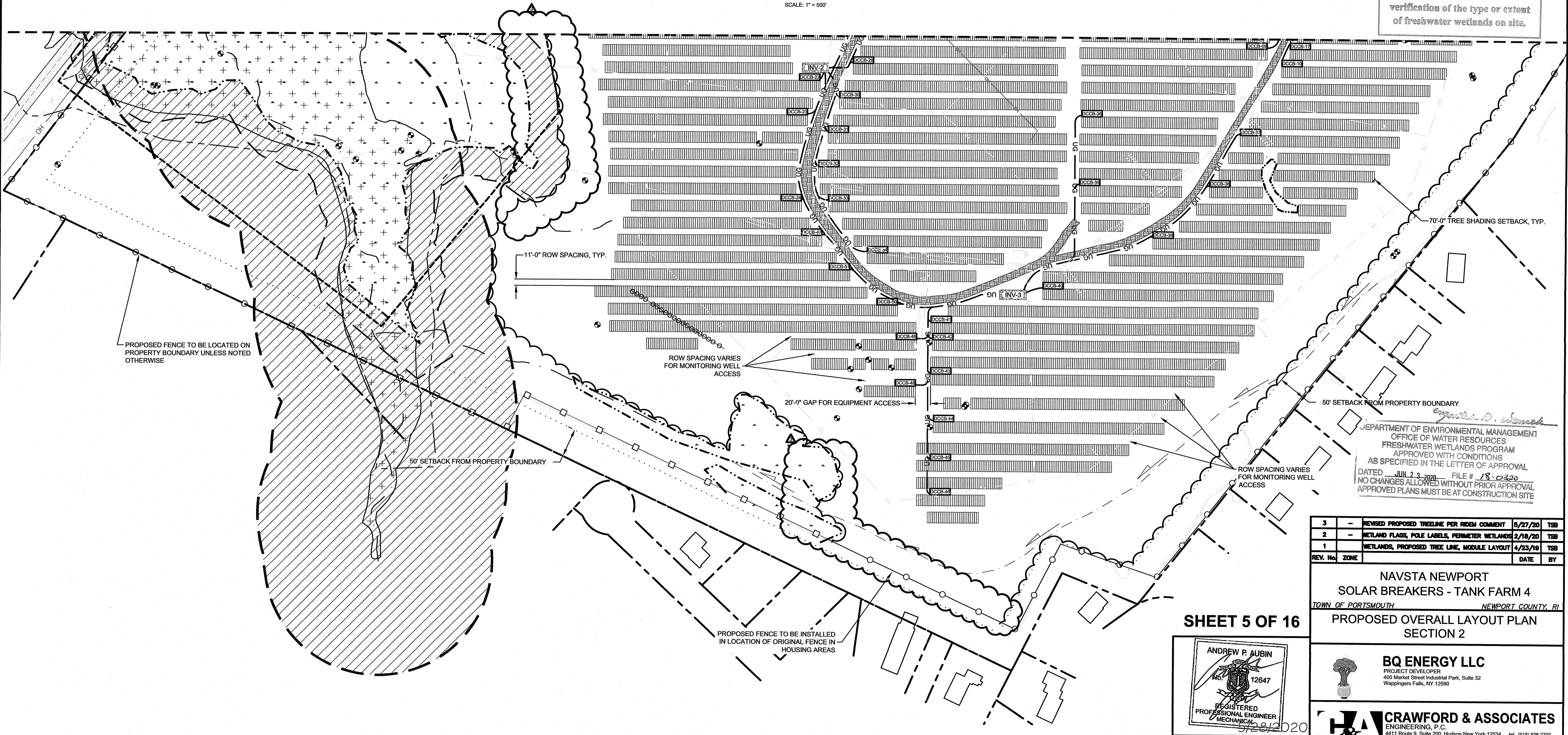
GRAPHIC SCALE



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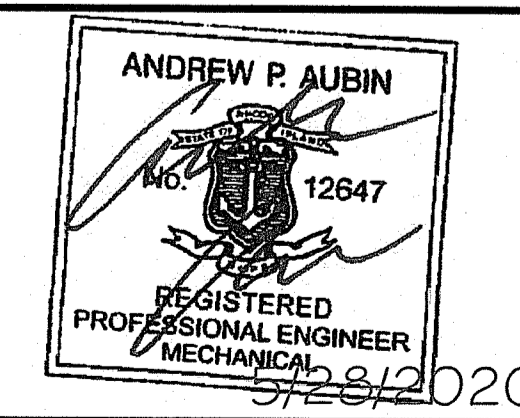
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1	-	WETLANDS, PROPOSED TREE LINE, MODULE LAYOUT	4/23/19	TSS
REV. No.	ZONE		DATE	BY

SHEET 5 OF 16



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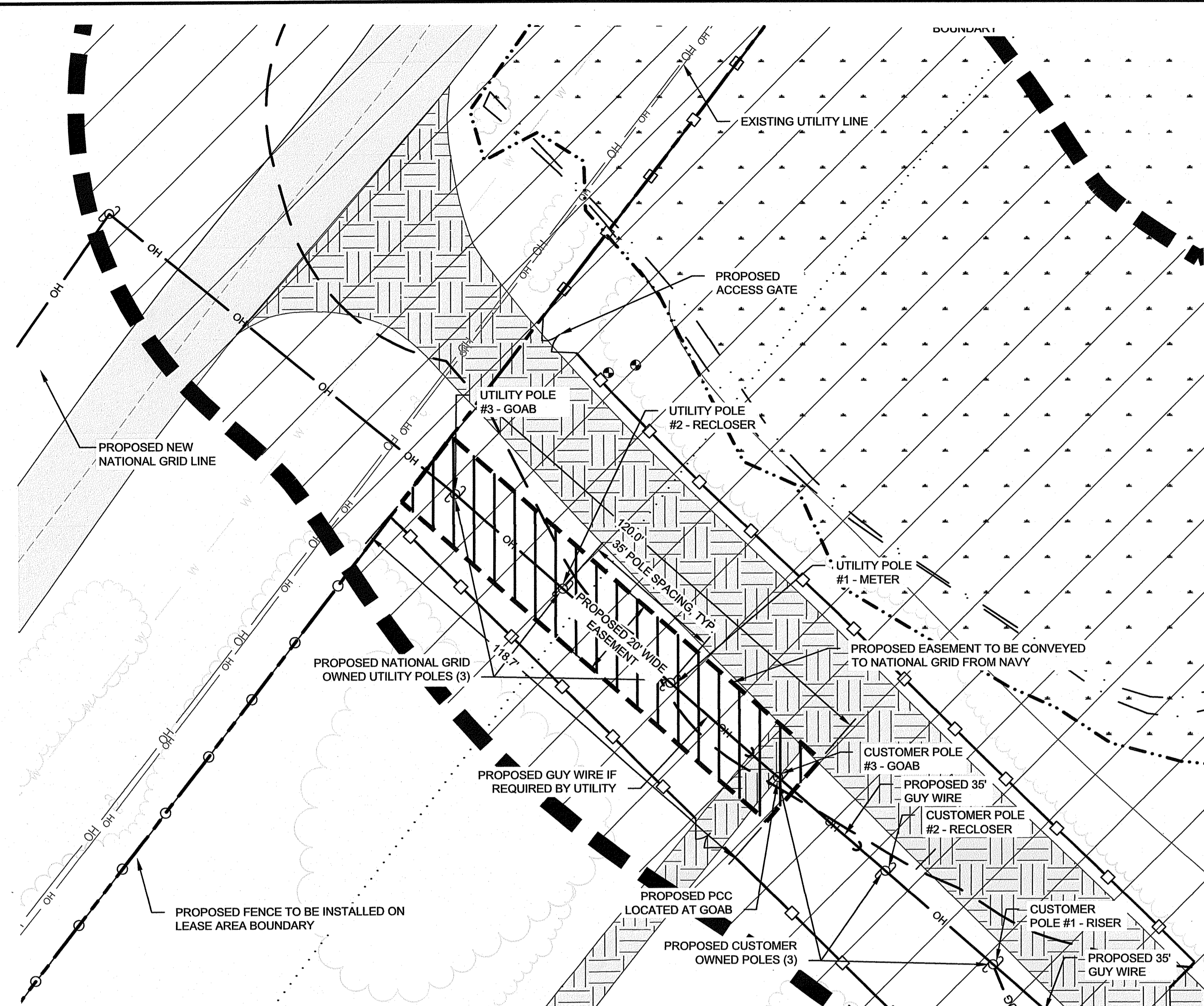
NAVSTA NEWPORT
SOLAR BREAKERS - TANK FARM 4
TOWN OF PORTSMOUTH NEWPORT COUNTY, RI
PROPOSED OVERALL LAYOUT PLAN
SECTION 2

BQ ENERGY LLC
PROJECT DEVELOPER
400 Market Street Industrial Park, Suite 32
Wappingers Falls, NY 12590

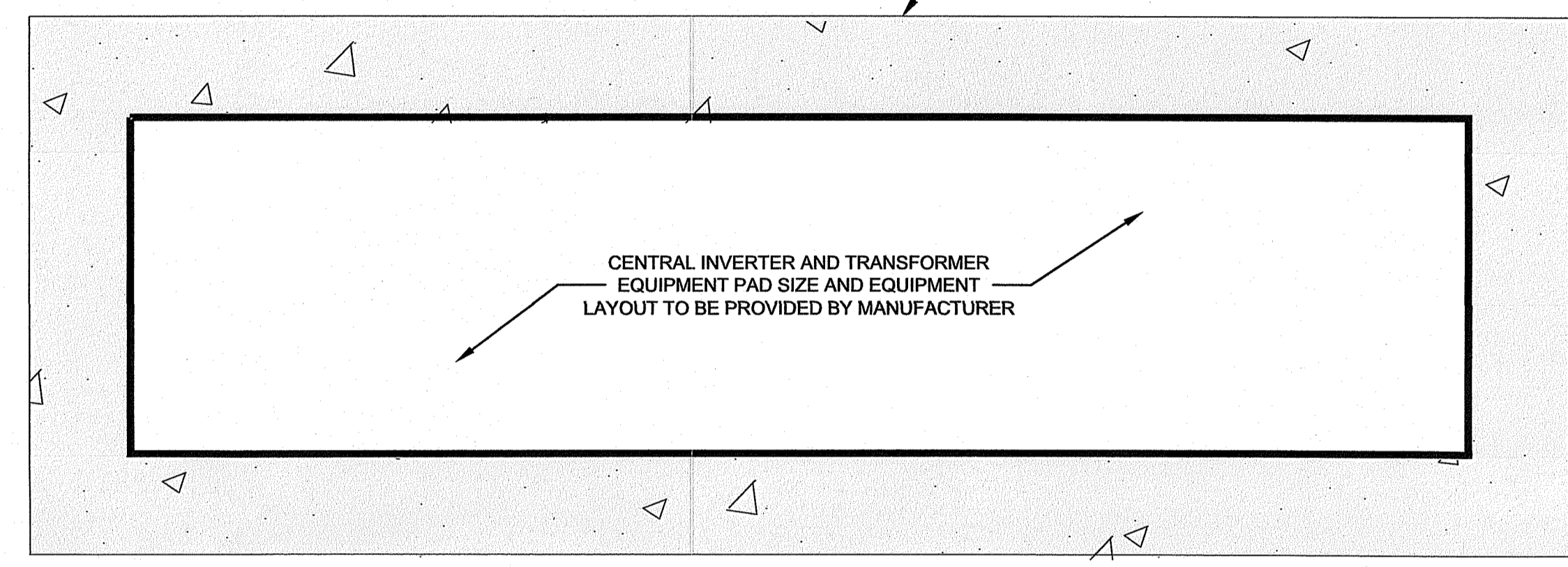
CRAWFORD & ASSOCIATES
ENGINEERING, P.C.
4411 Route 9, Suite 200, Hudson New York 12534
www.crawfordandassociates.com

DATE	DRAWN BY:	TSS	IN WORK\4715.05\PM\4715.05 TANK FARM 4 SITE.dwg
2/22/2019	DESIGNED BY:	TSS/JSC	
SCALE	CHECKED BY:	JSC	
AS SHOWN	APPROVED BY:		
	C&A JOB#	4715.05	
	DRAWING:	C-1.3	

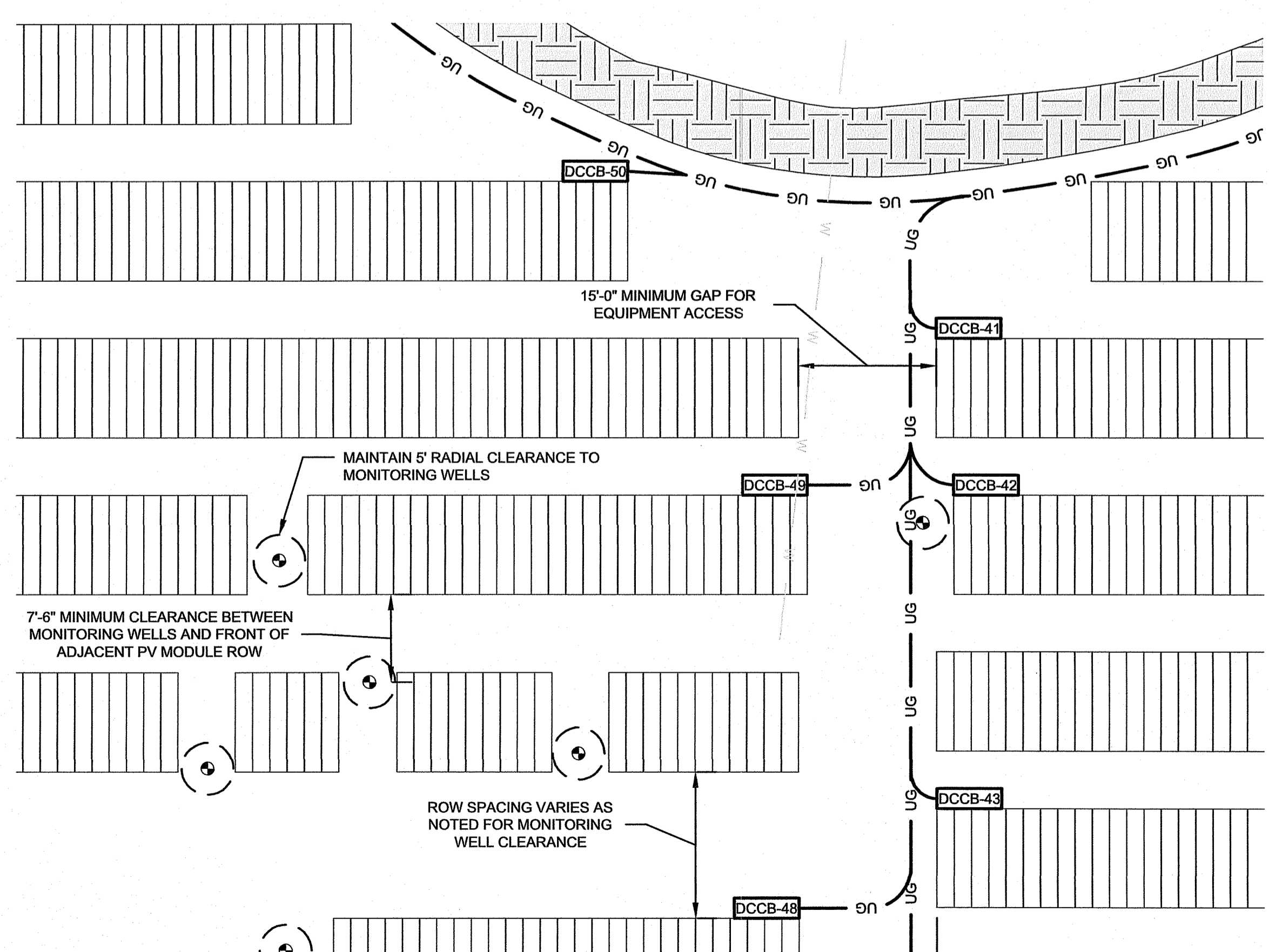
5/20/2020 8:47 AM
TED BOWEN



A UTILITY POLE LAYOUT
C1.2 SCALE: 1"=20'



C EQUIPMENT PAD LAYOUT
C1.2 SCALE: 1"=4'



B TYPICAL PV LAYOUT AROUND MONITORING WELLS
C1.2 SCALE: 1"=20'

- DRAWING NOTES:**
- BACKGROUND DRAWING TAKEN FROM SURVEY BY TEC LAND SURVEYING, DATED SEPTEMBER 27, 2016.
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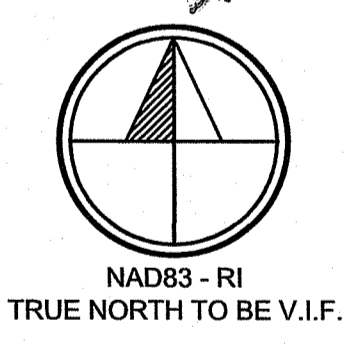
LEGEND

	EXISTING/PROPOSED DRIVEWAY
	EXISTING/PROPOSED EDGE OF PAVEMENT
	EXISTING/PROPOSED FENCE
	STATE WETLAND BOUNDARY
	50' PERIMETER WETLAND
	EXISTING/PROPOSED TREELINE
	EXISTING/PROPOSED OVERHEAD ELECTRIC
	EXISTING/PROPOSED WATER LINE
	EXISTING/PROPOSED UTILITY POLE
	EXISTING MONITORING WELL
	WETLAND HATCH
	WETLAND/STREAM PERIMETER WETLAND HATCH
	EXISTING ACCESS ROAD HATCH
	GRAVEL HATCH
	PAVEMENT HATCH

Environmental Management
JUN 11 2020
Office of Water Resources

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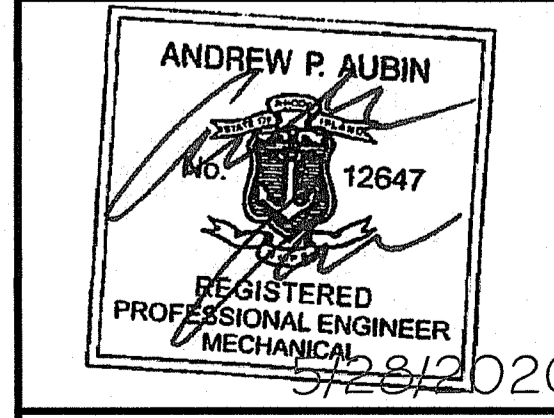
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED JUN 23 2020 FILE # 18-0320
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE



REV. No.	ZONE	UTILITY POLES/PROPOSED EASEMENTS	DATE	BY
1	-	UTILITY POLES/PROPOSED EASEMENTS	2/16/20	TSS

NAVSTA NEWPORT
SOLAR BREAKERS - TANK FARM 4
TOWN OF PORTSMOUTH NEWPORT COUNTY, RI
PROPOSED SITE LAYOUT DETAILS

SHEET 6 OF 16



BQ ENERGY LLC
PROJECT DEVELOPER
400 Market Street Industrial Park, Suite 32
Wappingers Falls, NY 12590

CRAWFORD & ASSOCIATES
ENGINEERING, P.C.
4411 Route 9, Suite 200, Hudson New York 12534
tel: (518) 828-2700
fax: (518) 828-2723
www.crawfordandassociates.com

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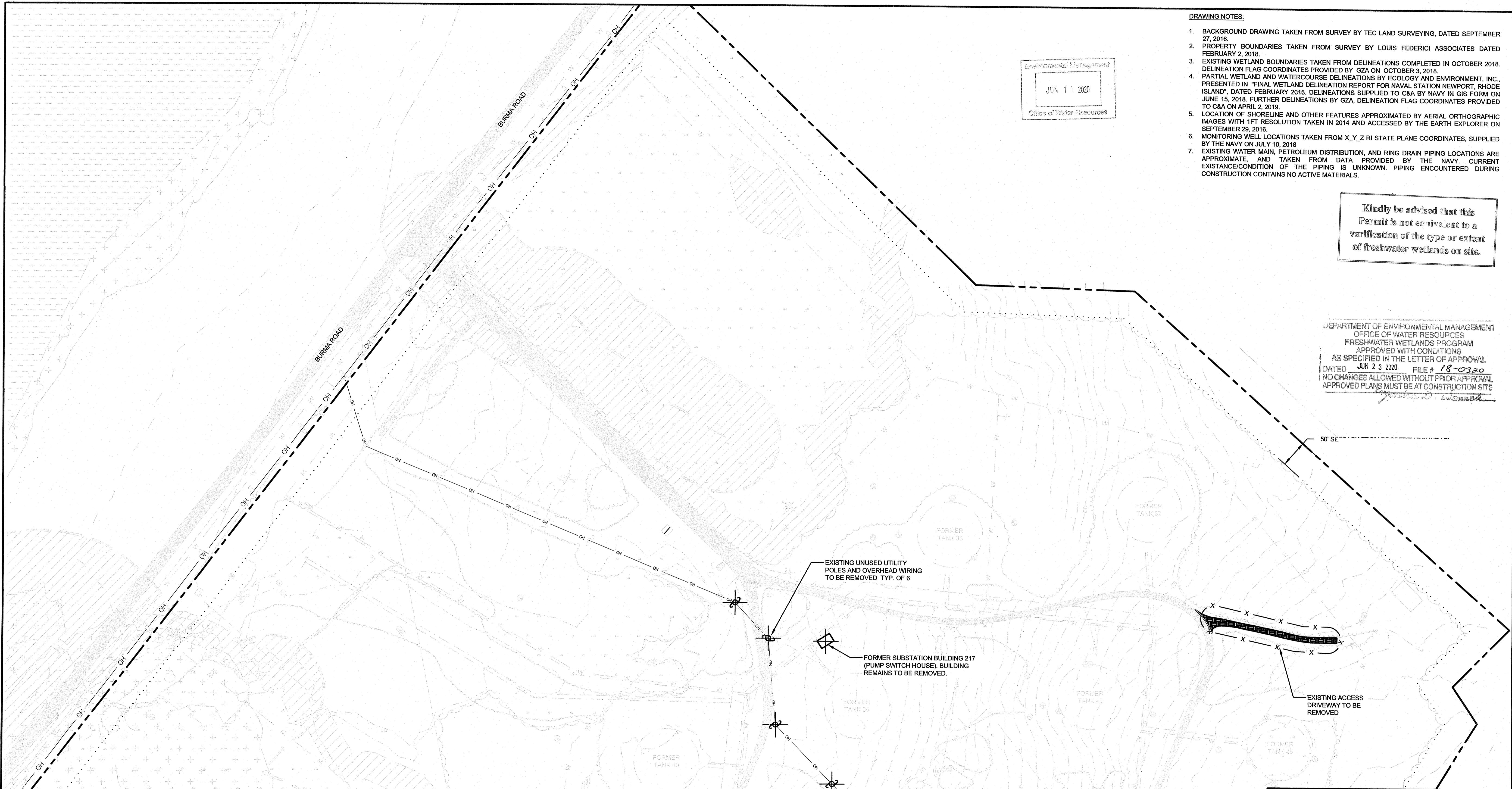
DATE 2/22/2019	DRAWN BY: TSS	NO. WORK/14715.05/14715.05 TANK FARM 4 SITE.Dwg
SCALE AS SHOWN	CHECKED BY: JSC	C&A JOB# 4715.05
	APPROVED BY:	DRAWING: C-1.4

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Environmental Management
 JUN 11 2020
 Office of Water Resources

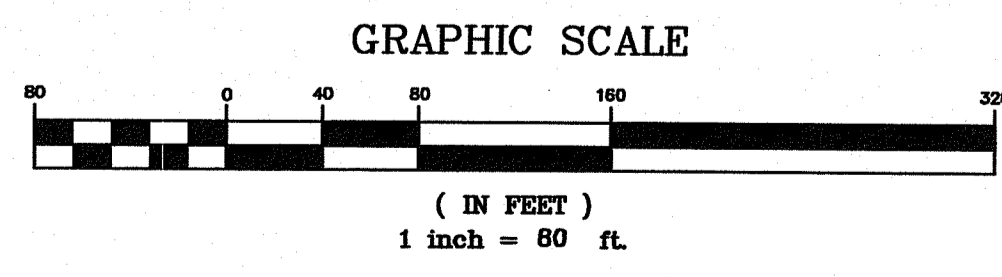
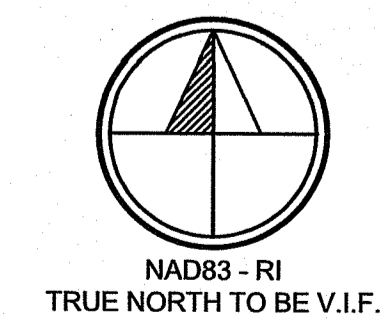
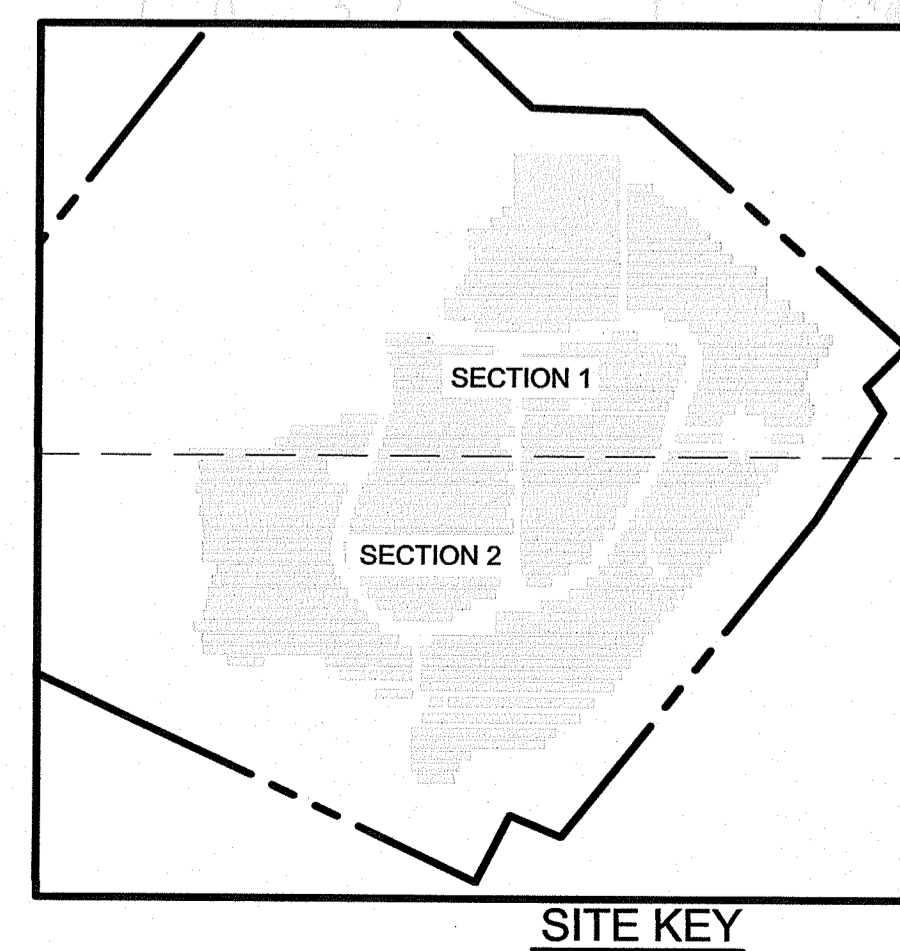
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DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
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LEGEND

- EXISTING UTILITY POLE
- EXISTING HYDRANT
- ITEM TO BE DEMOLISHED
- DEMOLITION AREA



SHEET 7 OF 16

ANDREW P. AUBIN
 PROJECT DEVELOPER
 REG. NO. 12647
 REGISTERED PROFESSIONAL ENGINEER
 MECHANICAL
 020

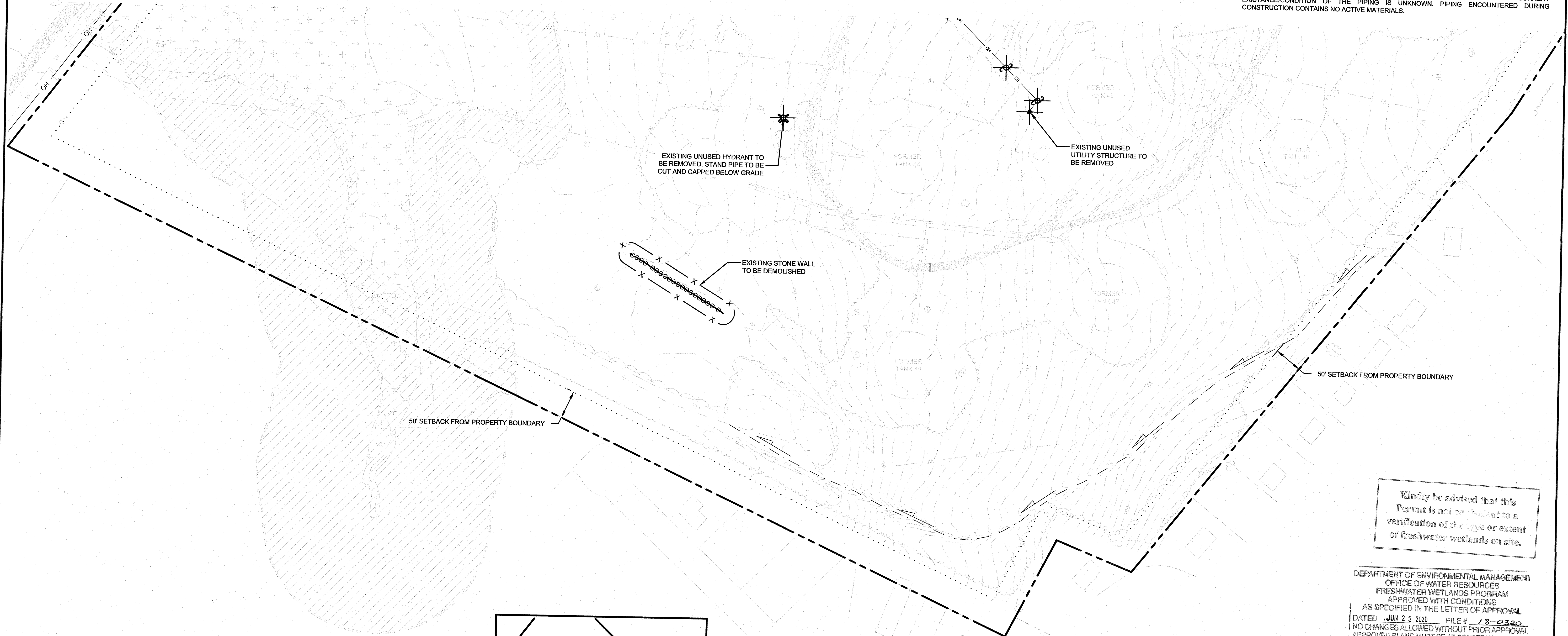
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1	-	NOTED BUILDING 217	3/18/19	TSB	
REV. No.	ZONE		DATE	BY	
NAVSTA NEWPORT SOLAR BREAKERS - TANK FARM 4 TOWN OF PORTSMOUTH NEWPORT COUNTY, RI					
SITE REMOVALS PLAN SECTION 1					
BQ ENERGY LLC PROJECT DEVELOPER 400 Market Street Industrial Park, Suite 32 Wappingers Falls, NY 12590					
CRAWFORD & ASSOCIATES ENGINEERING, P.C. 4411 Route 9, Suite 200, Hudson New York 12534 tel: (518) 828-2700 www.crawfordandassociates.com fax: (518) 828-2723					
DATE	DRAWN BY:	TSB	AS \WORK\4715.05\DWG\4715.05 TANK FARM 4 SITE.DWG © COPYRIGHT		
2/22/2019	DESIGNED BY:	TSB/JSC			
SCALE	CHECKED BY:	JSC			
AS SHOWN	APPROVED BY:				
		C&A JOB#	4715.05	DRAWING:	C-1.5

15/06/2020 9:48 AM

Environmental Management
 JUN 11 2020
 Office of Water Resources

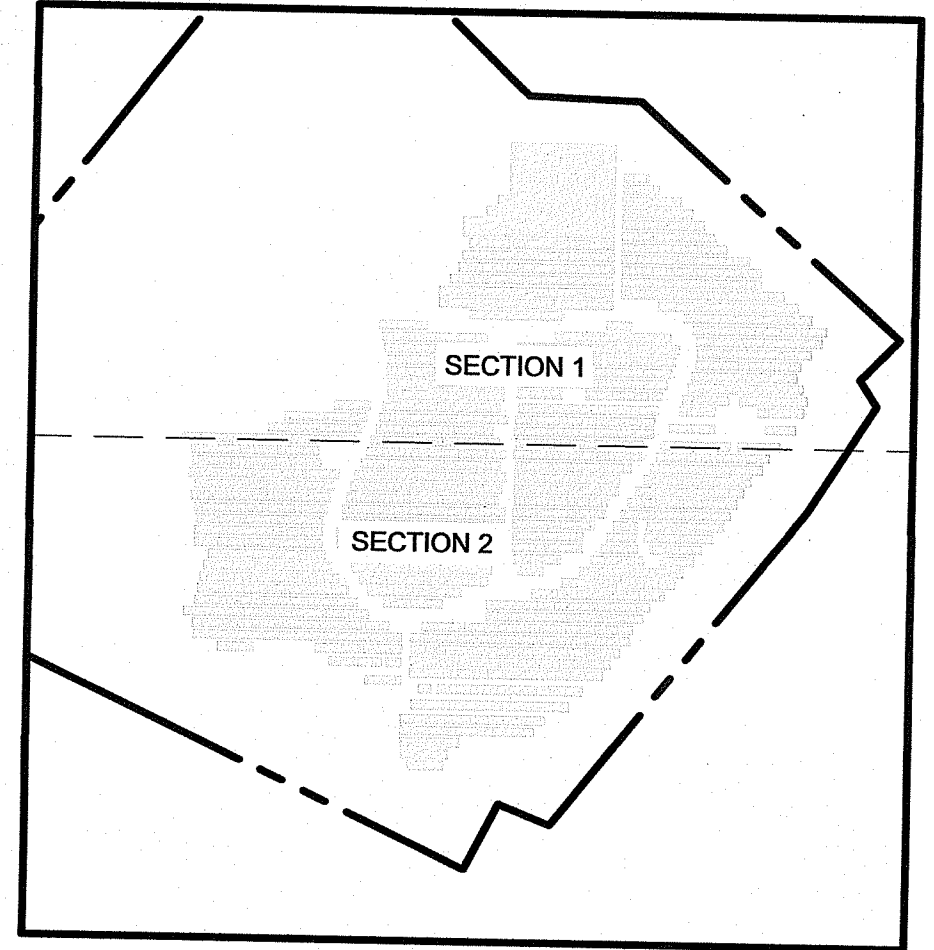
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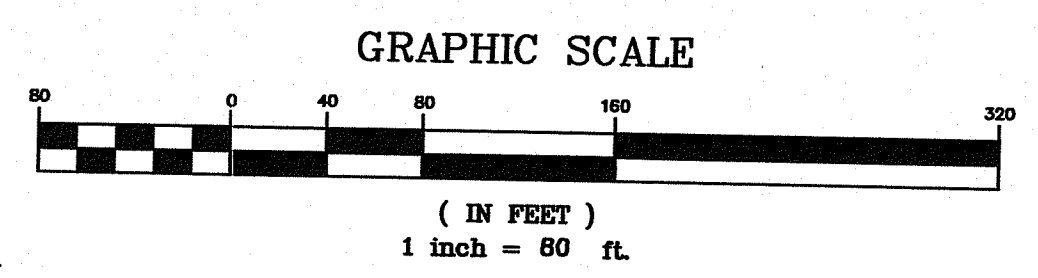
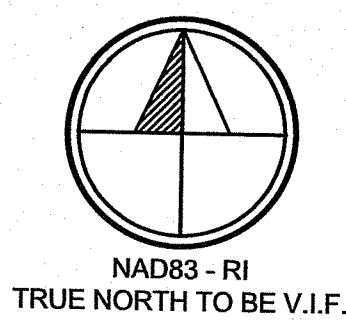
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DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED JUN 23 2020 FILE # 18-0320
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 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

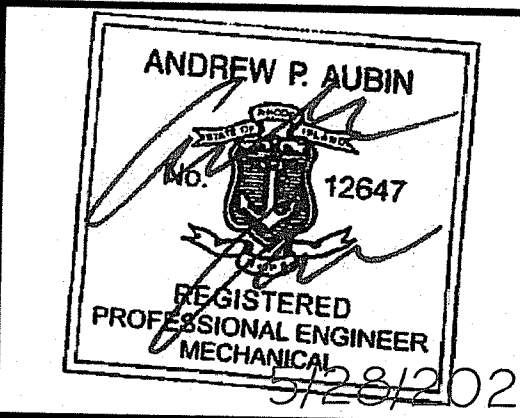
- LEGEND**
- EXISTING UTILITY POLE
 - EXISTING HYDRANT
 - ITEM TO BE DEMOLISHED
 - DEMOLITION AREA



SITE KEY
 SCALE: 1" = 50'



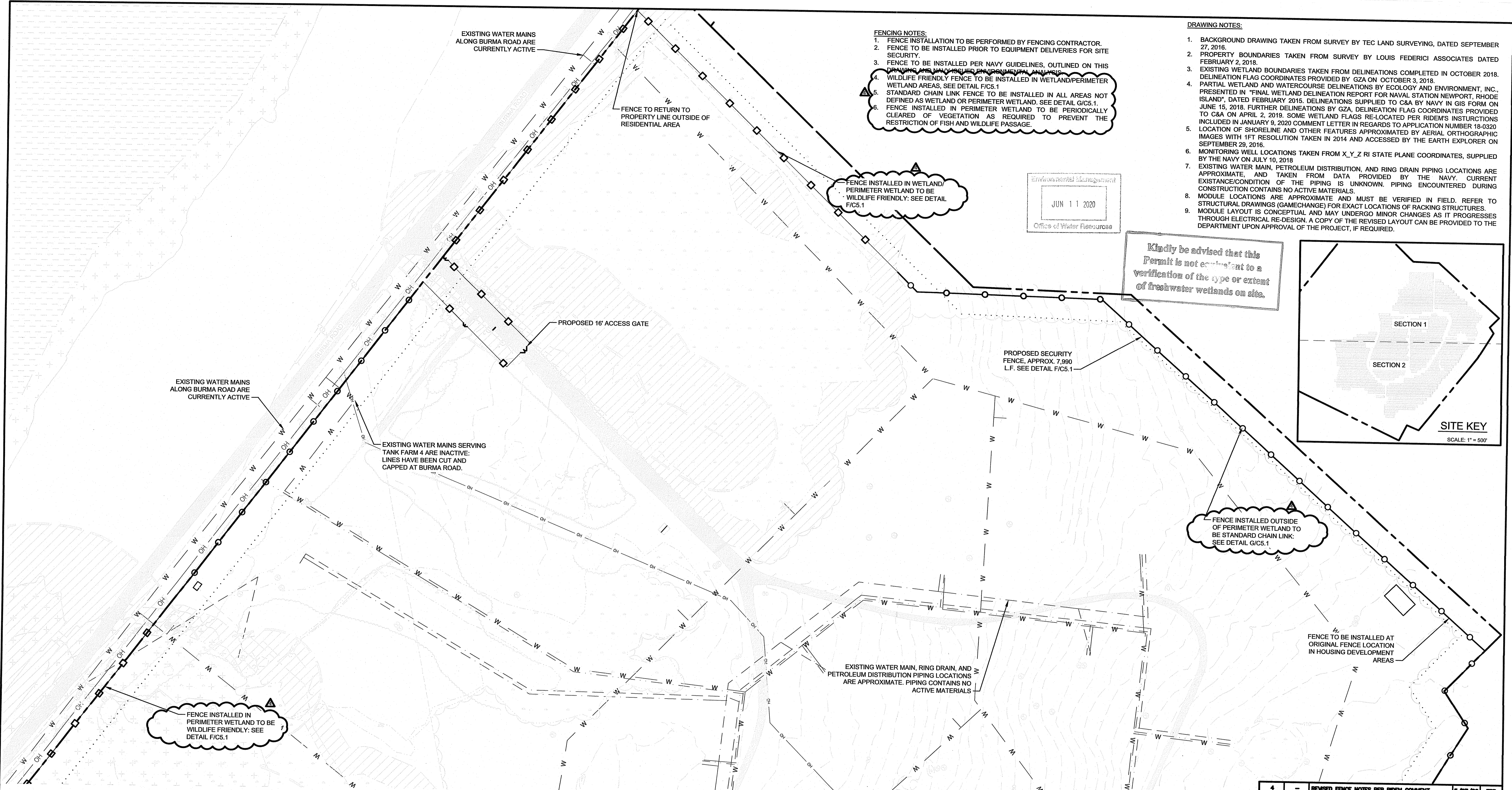
SHEET 8 OF 16



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REV. No.	ZONE	DATE	BY
NAVSTA NEWPORT SOLAR BREAKERS - TANK FARM 4 <small>TOWN OF PORTSMOUTH NEWPORT COUNTY, RI</small>			
SITE REMOVALS PLAN SECTION 2			
 BQ ENERGY LLC <small>PROJECT DEVELOPER 400 Market Street Industrial Park, Suite 32 Wappingers Falls, NY 12590</small>			
 CRAWFORD & ASSOCIATES <small>ENGINEERING, P.C. 4411 Route 9, Suite 200, Hudson New York 12534 tel: (518) 828-2700 fax: (518) 828-2723 www.crawfordandassociates.com</small>			
DATE	DRAWN BY:	FILE #	DRAWING
2/22/2019	TSS	18-0320	C-1.6
SCALE	CHECKED BY:	C&A JOB#	
AS SHOWN	JSC	4715.05	
	APPROVED BY:		

5/29/2020 8:42 AM

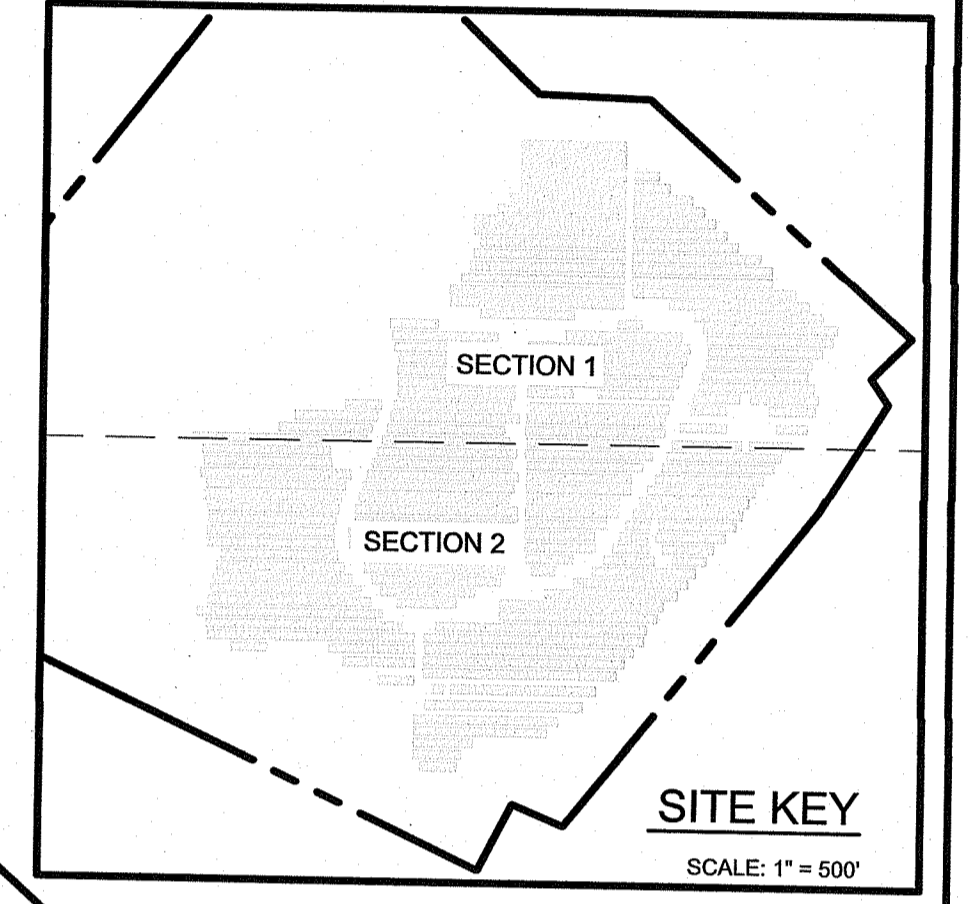


- FENCING NOTES:**
1. FENCE INSTALLATION TO BE PERFORMED BY FENCING CONTRACTOR.
 2. FENCE TO BE INSTALLED PRIOR TO EQUIPMENT DELIVERIES FOR SITE SECURITY.
 3. FENCE TO BE INSTALLED PER NAVY GUIDELINES, OUTLINED ON THIS DRAWING AND NAVY ISSUED ENVIRONMENTAL ANALYSIS.
 4. WILDLIFE FRIENDLY FENCE TO BE INSTALLED IN WETLAND/PERIMETER WETLAND AREAS, SEE DETAIL F/C5.1
 5. STANDARD CHAIN LINK FENCE TO BE INSTALLED IN ALL AREAS NOT DEFINED AS WETLAND OR PERIMETER WETLAND. SEE DETAIL G/C5.1.
 6. FENCE INSTALLED IN PERIMETER WETLAND TO BE PERIODICALLY CLEARED OF VEGETATION AS REQUIRED TO PREVENT THE RESTRICTION OF FISH AND WILDLIFE PASSAGE.

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 9. MODULE LAYOUT IS CONCEPTUAL AND MAY UNDERGO MINOR CHANGES AS IT PROGRESSES THROUGH ELECTRICAL RE-DESIGN. A COPY OF THE REVISED LAYOUT CAN BE PROVIDED TO THE DEPARTMENT UPON APPROVAL OF THE PROJECT, IF REQUIRED.

Environmental Management
 JUN 11 2020
 Office of Water Resources

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FENCE INSTALLED IN PERIMETER WETLAND TO BE WILDLIFE FRIENDLY. SEE DETAIL F/C5.1

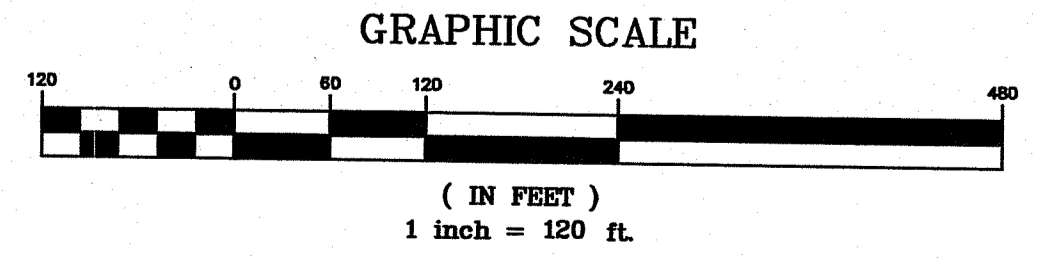
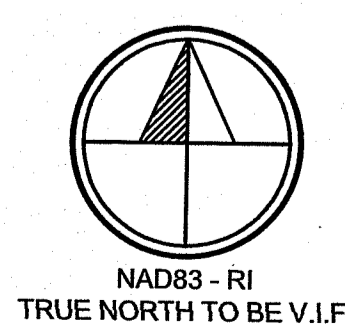
FENCE INSTALLED IN WETLAND/PERIMETER WETLAND TO BE WILDLIFE FRIENDLY. SEE DETAIL F/C5.1

FENCE INSTALLED OUTSIDE OF PERIMETER WETLAND TO BE STANDARD CHAIN LINK. SEE DETAIL G/C5.1

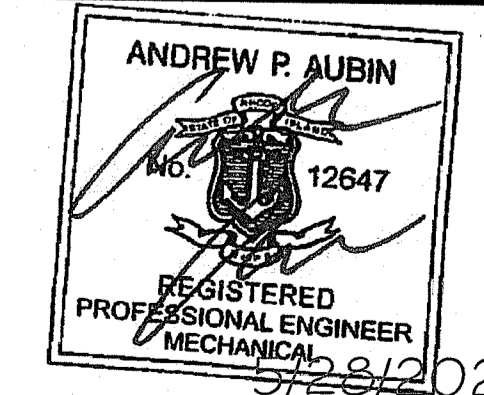
FENCE TO BE INSTALLED AT ORIGINAL FENCE LOCATION IN HOUSING DEVELOPMENT AREAS

- LEGEND**
- EXISTING CONTOUR 2' INTERVAL
 - EXISTING CONTOUR 10' INTERVAL
 - PROPERTY BOUNDARY
 - REQUIRED SETBACKS FROM PROPERTY BOUNDARY
 - PROPOSED CONTOUR 10' INTERVAL
 - EXISTING/PROPOSED FENCE
 - PROPOSED WILDLIFE FRIENDLY FENCE
 - EXISTING/PROPOSED WATER LINE
 - EXISTING RING DRAIN PIPING
 - EXISTING PETROLEUM DISTRIBUTION PIPING

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
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SHEET 9 OF 16



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REV. No.	ZONE	DATE	BY
4	-	5/27/20	TSS
3	-	2/18/20	TSS

NAVSTA NEWPORT
SOLAR BREAKERS - TANK FARM 4
 TOWN OF PORTSMOUTH NEWPORT COUNTY, RI

PROPOSED FENCE LAYOUT PLAN
SECTION 1

BQ ENERGY LLC
 PROJECT DEVELOPER
 400 Market Street Industrial Park, Suite 32
 Wappingers Falls, NY 12590

CRAWFORD & ASSOCIATES
 ENGINEERING, P.C.
 4411 Route 9, Suite 200, Hudson New York 12534
 www.crawfordandassociates.com

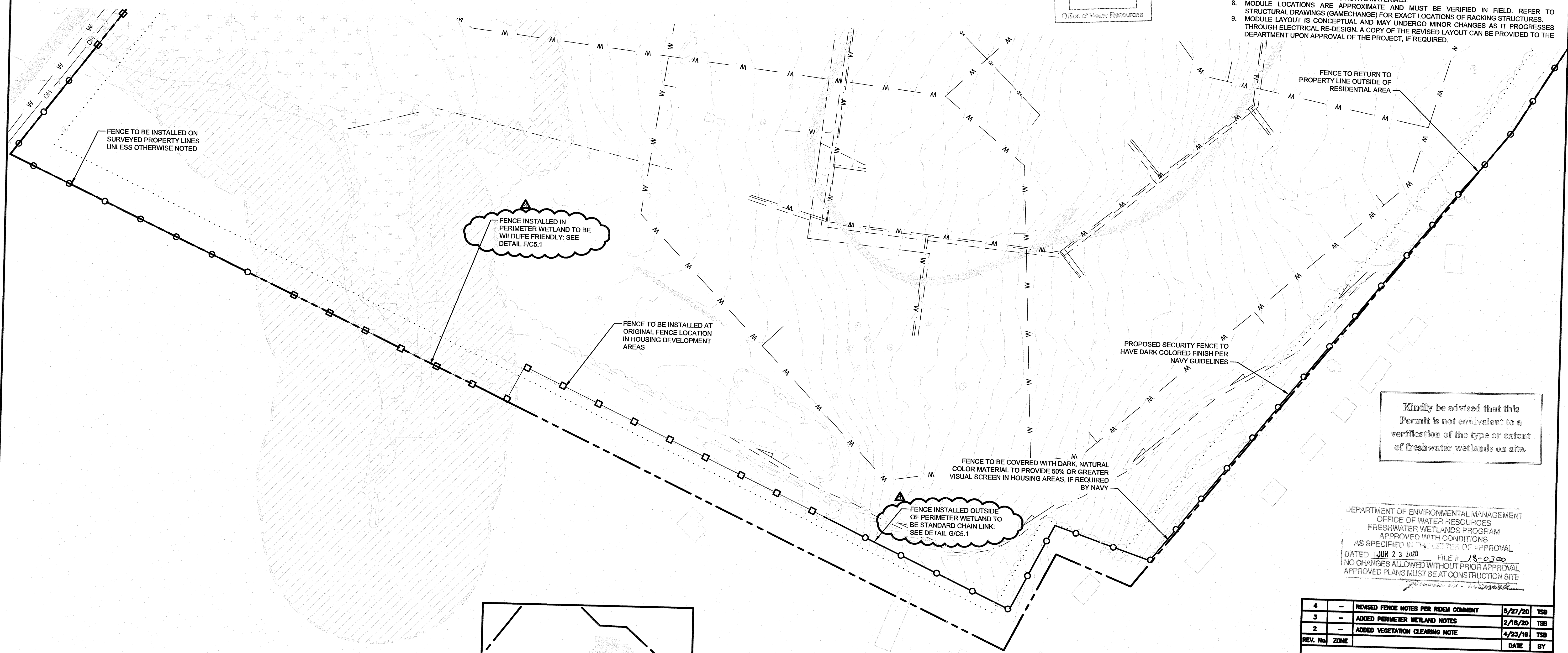
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CHECKED BY	DESIGNED BY	C&A JOB#	DRAWING#
JSC	TSS/JSC	4715.05	C-1.7

2/22/2020 9:49 AM

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Environmental Management
 JUN 11 2020
 Office of Water Resources



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DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
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4	-	REVISED FENCE NOTES PER RIDEM COMMENT	5/27/20	TSB
3	-	ADDED PERIMETER WETLAND NOTES	2/18/20	TSB
2	-	ADDED VEGETATION CLEARING NOTE	4/23/19	TSB
REV. No.	ZONE		DATE	BY

NAVSTA NEWPORT
 SOLAR BREAKERS - TANK FARM 4
 TOWN OF PORTSMOUTH NEWPORT COUNTY, RI
 PROPOSED FENCE LAYOUT PLAN
 SECTION 2

BQ ENERGY LLC
 PROJECT DEVELOPER
 400 Market Street Industrial Park, Suite 32
 Wappingers Falls, NY 12590

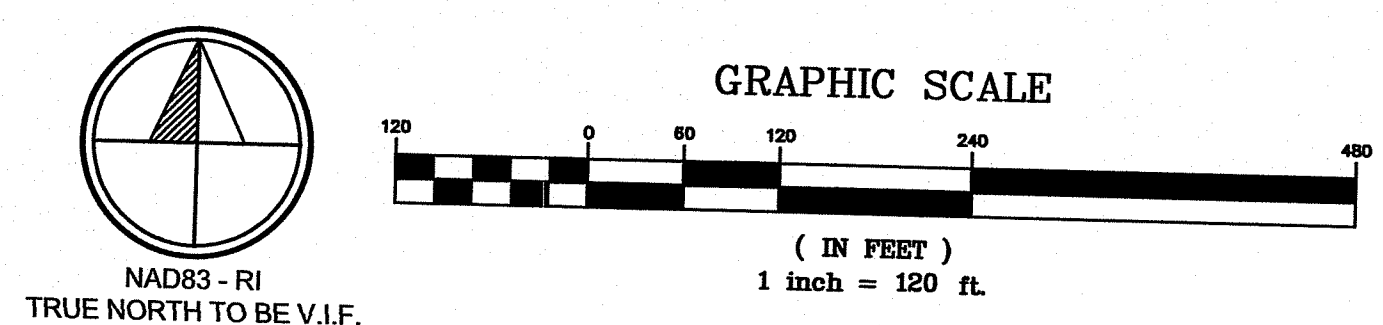
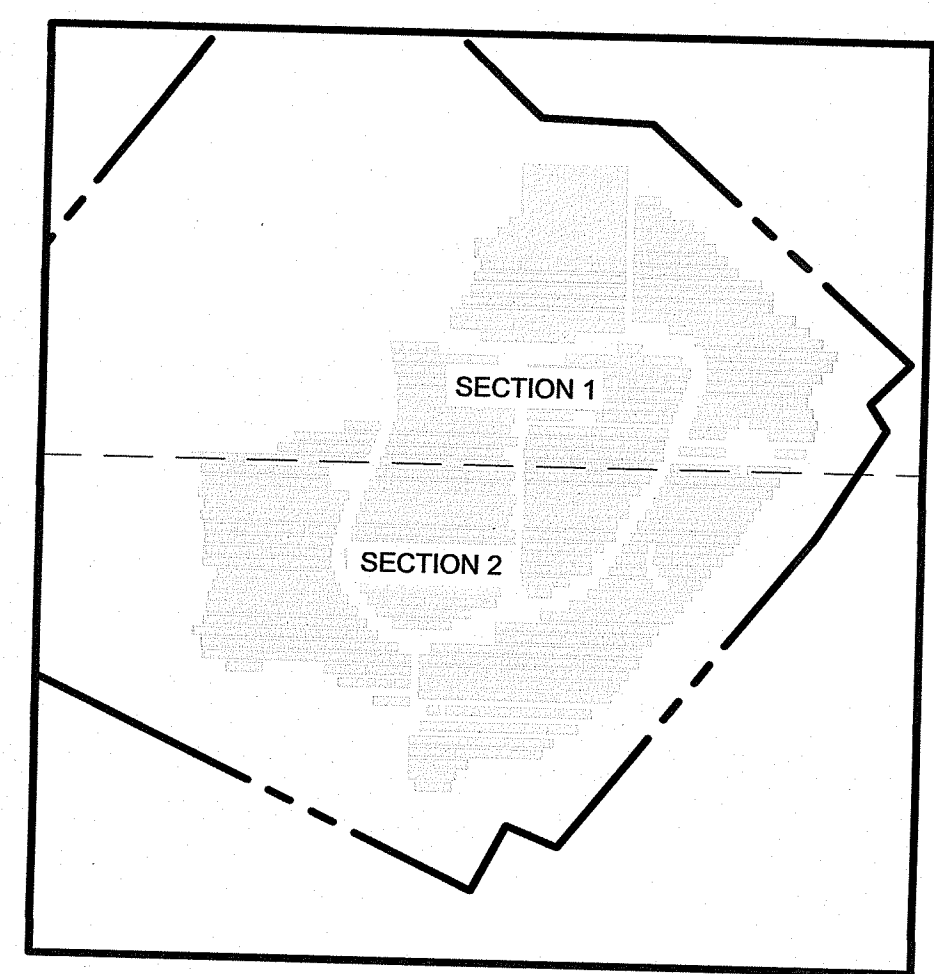
CRAWFORD & ASSOCIATES
 ENGINEERING, P.C.
 4411 Route 9, Suite 200, Hudson New York 12534 tel: (518) 828-2700
 www.crawfordandassociates.com fax: (518) 828-2723

SHEET 10 OF 16

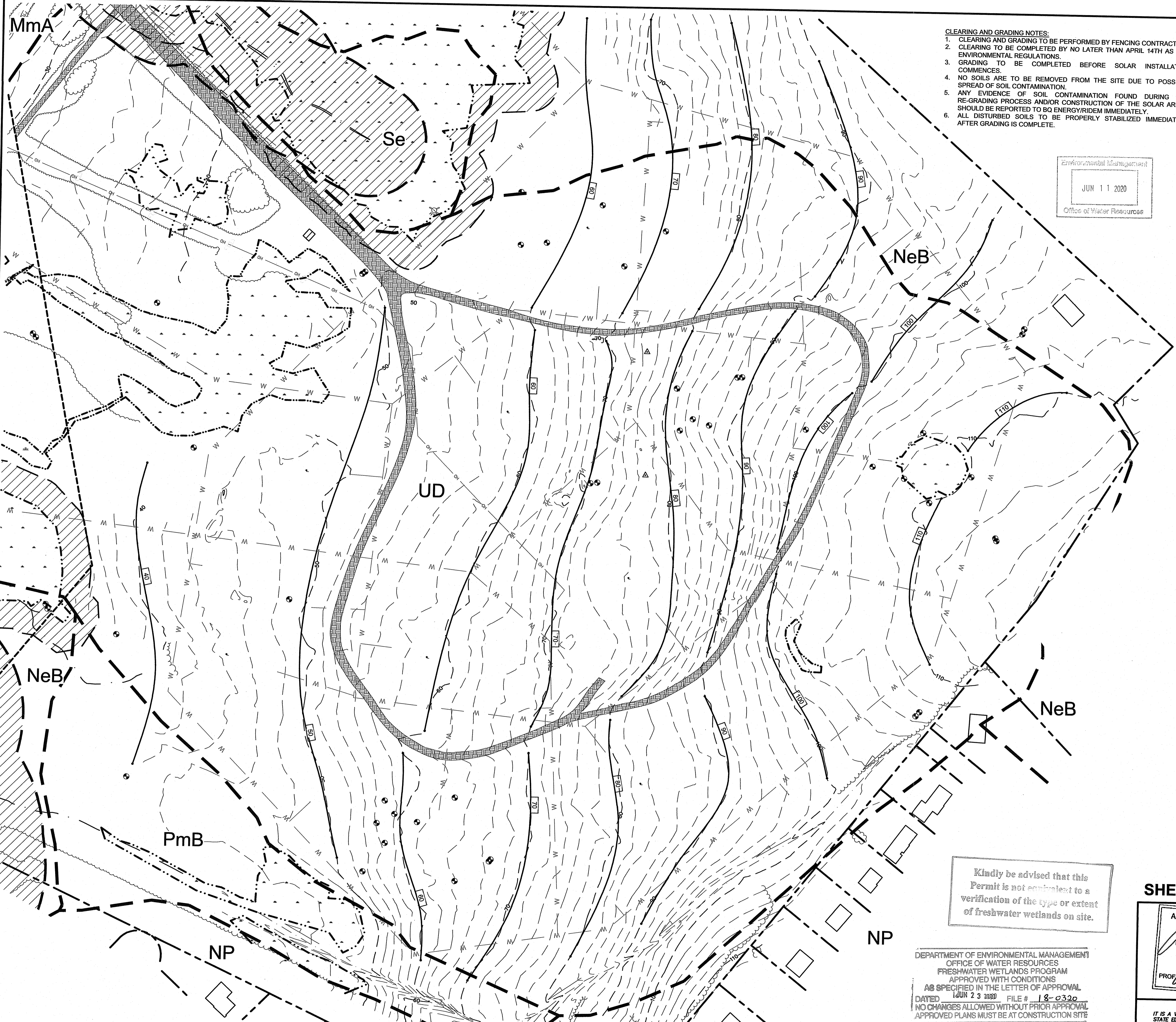
ANDREW P. AUBIN
 12647
 REGISTERED PROFESSIONAL ENGINEER
 MECHANICAL
 5/28/2020

IT IS A VIOLATION OF THE RHODE ISLAND STATE EDUCATION LAW FOR ANY PERSON TO ALTER THESE PLANS, SPECIFICATIONS OR REPORTS IN ANY WAY, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER.

- LEGEND**
- EXISTING CONTOUR 2' INTERVAL
 - EXISTING CONTOUR 10' INTERVAL
 - PROPERTY BOUNDARY
 - REQUIRED SETBACKS FROM PROPERTY BOUNDARY
 - PROPOSED CONTOUR 10' INTERVAL
 - EXISTING/PROPOSED FENCE
 - PROPOSED WILDLIFE FRIENDLY FENCE
 - EXISTING/PROPOSED WATER LINE
 - EXISTING RING DRAIN PIPING
 - EXISTING PETROLEUM DISTRIBUTION PIPING



DATE	2/22/2019	DRAWN BY	TSP	FILE #	18-0320
DESIGNED BY	TSP/JSC	C&A JOB#	4715.05	DRAWING	C-1.8
CHECKED BY	JSC	SCALE	AS SHOWN		
APPROVED BY					



- CLEARING AND GRADING NOTES:**
1. CLEARING AND GRADING TO BE PERFORMED BY FENCING CONTRACTOR.
 2. CLEARING TO BE COMPLETED BY NO LATER THAN APRIL 14TH AS PER ENVIRONMENTAL REGULATIONS.
 3. GRADING TO BE COMPLETED BEFORE SOLAR INSTALLATION COMMENCES.
 4. NO SOILS ARE TO BE REMOVED FROM THE SITE DUE TO POSSIBLE SPREAD OF SOIL CONTAMINATION.
 5. ANY EVIDENCE OF SOIL CONTAMINATION FOUND DURING THE RE-GRADING PROCESS AND/OR CONSTRUCTION OF THE SOLAR ARRAY SHOULD BE REPORTED TO BQ ENERGY/RIDEM IMMEDIATELY.
 6. ALL DISTURBED SOILS TO BE PROPERLY STABILIZED IMMEDIATELY AFTER GRADING IS COMPLETE.

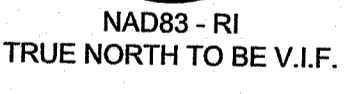
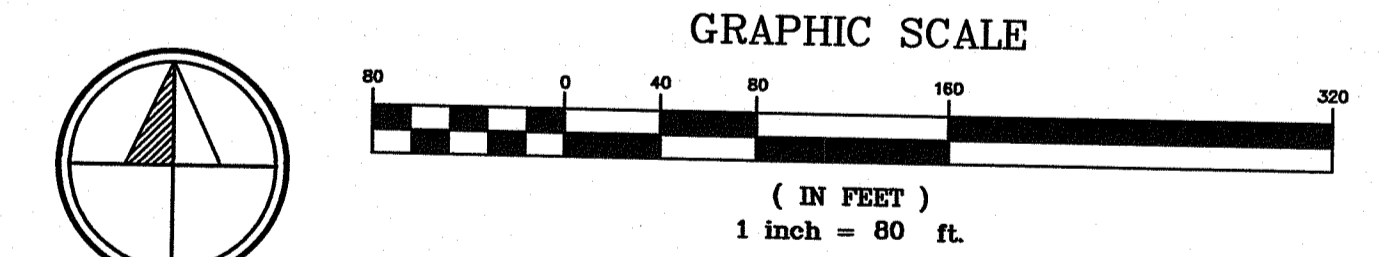
Environmental Management
 JUN 11 2020
 Office of Water Resources

- DRAWING NOTES:**
1. BACKGROUND DRAWING TAKEN FROM SURVEY BY TEC LAND SURVEYING, DATED SEPTEMBER 27, 2016.
 2. PROPERTY BOUNDARIES TAKEN FROM SURVEY BY LOUIS FEDERICI ASSOCIATES DATED FEBRUARY 2, 2018.
 3. EXISTING WETLAND BOUNDARIES TAKEN FROM DELINEATIONS COMPLETED IN OCTOBER 2018.
 4. WATERCOURSE DELINEATED BY ECOLOGY AND ENVIRONMENT, INC. PRESENTED IN "FINAL WETLAND DELINEATION REPORT FOR NAVAL STATION NEWPORT, RHODE ISLAND" DATED FEBRUARY 2015. DELINEATIONS SUPPLIED TO C&A BY NAVY IN GIS FORM ON JUNE 15, 2016. FURTHER DELINEATIONS BY GZA. DELINEATION FLAG COORDINATES PROVIDED TO C&A ON APRIL 2, 2019.
 5. MONITORING WELL LOCATIONS TAKEN FROM X_Y_Z RI STATE PLANE COORDINATES, SUPPLIED BY THE NAVY ON JULY 10, 2018.

LEGEND

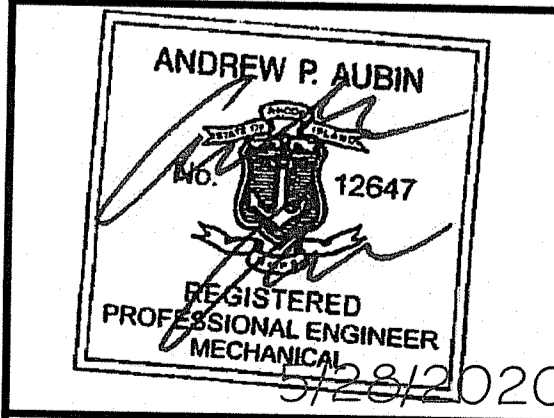
	EXISTING CONTOUR 2' INTERVAL
	EXISTING CONTOUR 10' INTERVAL
	PROPOSED CONTOUR 10' INTERVAL
	PROPERTY LEASE BOUNDARY
	EXISTING/PROPOSED DRIVEWAY
	SOIL TYPE BOUNDARY
	WETLAND BOUNDARY
	STATE WETLAND 50' PERIMETER WETLAND
	EXISTING WATERCOURSE
	EXISTING CERCLA LAND USE CONTROL BOUNDARY
	EXISTING/PROPOSED TREELINE
	EXISTING BUILDING
	WETLAND HATCH
	50' PERIMETER WETLAND HATCH
	EXISTING ACCESS ROAD HATCH

- SOILS NOTES:**
1. APPROXIMATE SOILS BOUNDARIES TAKEN FROM THE USDA NRCS WEB SOIL SURVEY, ACCESSED OCTOBER 24, 2018.
 2. SOIL TYPES CORRESPOND TO THE FOLLOWING:
- | SYMBOL | NAME | HYDROLOGIC RATING |
|--------|---|-------------------|
| Se | STISSING SILT LOAM | D |
| UD | UDORTHENTS-URBAN LAND COMPLEX | A |
| PmB | PITTS TOWN SILT LOAM, 3 TO 8 PERCENT SLOPES | C |
| NeB | NEWPORT SILT LOAM, 3 TO 8 PERCENT SLOPES | C |
| NP | NEWPORT-URBAN LAND COMPLEX | C |
| MmA | MERRIMAC FINE SANDY LOAM, 0 TO 3 PERCENT SLOPES | A |



Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED JUN 23 2020 FILE # 18-c32c
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE



SHEET 11 OF 16

2	-	PROPOSED GRADING CONTOURS	4/19/19	TSB
1	-	UPDATED CLEARING AND GRADING NOTES	3/18/19	TSB
REV. No.	ZONE		DATE	BY

NAVSTA NEWPORT
 SOLAR BREAKERS - TANK FARM 4
 TOWN OF PORTSMOUTH NEWPORT COUNTY, RI

PROPOSED GRADING & DRAINAGE PLAN

BQ ENERGY LLC
 PROJECT DEVELOPER
 400 Market Street Industrial Park, Suite 32
 Wappingers Falls, NY 12590

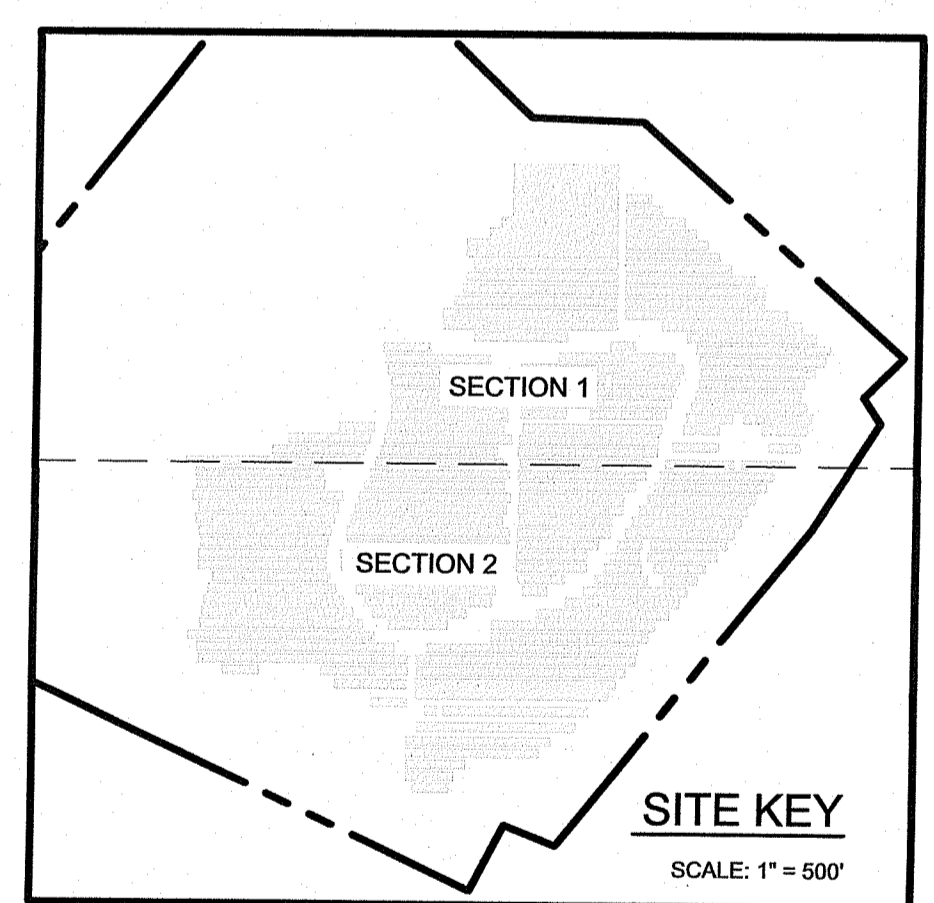
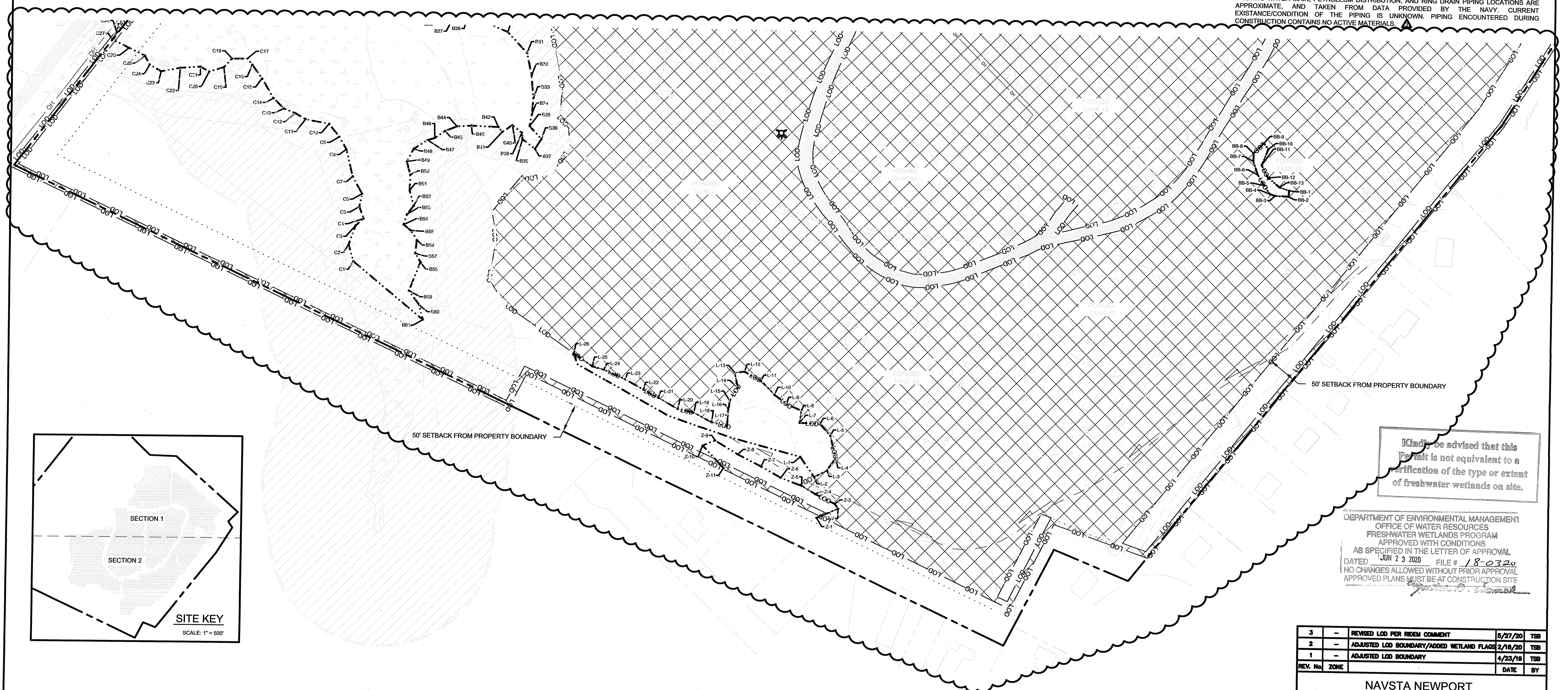
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DATE	DESIGNED BY	CHECKED BY	APPROVED BY	SCALE	C&A JOB#	DRAWING
2/22/2019	TSB/JSC	JSC		AS SHOWN	4715.05	C-1.9

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Environmental Management
 JUN 11 2020
 Office of Water Resources

- DRAWING NOTES:**
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 3. EXISTING WETLAND BOUNDARIES TAKEN FROM DELINEATIONS COMPLETED IN OCTOBER 2018. DELINEATION FLAG COORDINATES PROVIDED BY GZA ON OCTOBER 3, 2018.
 4. PARTIAL WETLAND AND WATERCOURSE DELINEATIONS BY ECOLOGY AND ENVIRONMENT, INC., PRESENTED IN "FINAL WETLAND DELINEATION REPORT FOR NAVAL STATION NEWPORT, RHODE ISLAND", DATED FEBRUARY 2015. DELINEATIONS SUPPLIED TO C&A BY NAVY IN GIS FORM ON JUNE 15, 2018. FURTHER DELINEATIONS BY GZA, DELINEATION FLAG COORDINATES PROVIDED TO C&A ON APRIL 2, 2019.
 5. LOCATION OF SHORELINE AND OTHER FEATURES APPROXIMATED BY AERIAL ORTHOGRAPHIC IMAGES WITH 1FT RESOLUTION TAKEN IN 2014 AND ACCESSED BY THE EARTH EXPLORER ON SEPTEMBER 29, 2016.
 6. MONITORING WELL LOCATIONS TAKEN FROM X,Y,Z RI STATE PLANE COORDINATES, SUPPLIED BY THE NAVY ON JULY 10, 2018.
 7. EXISTING WATER MAIN, PETROLEUM DISTRIBUTION, AND RING DRAIN PIPING LOCATIONS ARE APPROXIMATE, AND TAKEN FROM DATA PROVIDED BY THE NAVY. CURRENT EXISTENCE/CONDITION OF THE PIPING IS UNKNOWN. PIPING ENCOUNTERED DURING CONSTRUCTION CONTAINS NO ACTIVE MATERIALS.

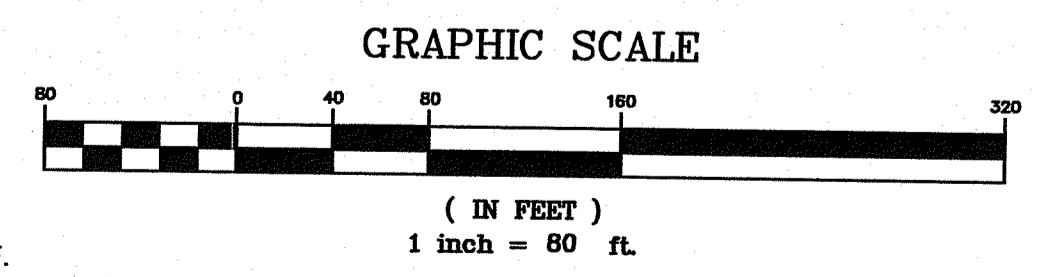
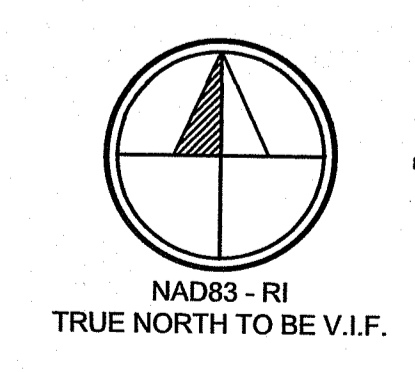


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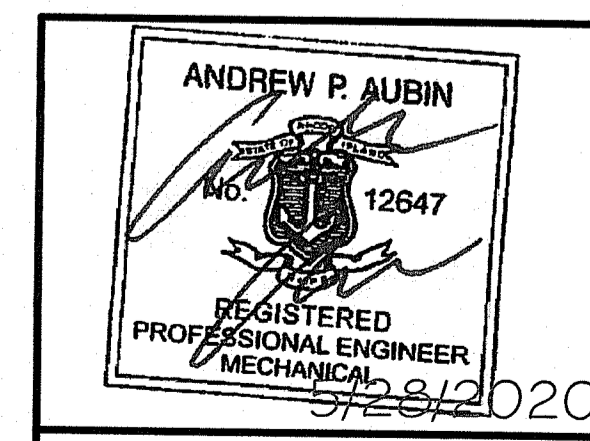
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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 JUN 23 2020 FILE # 18-0320
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 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

LEGEND

- LOD — LOD — PROPOSED LIMIT OF DISTURBANCE
- [Hatched Box] PROPOSED LIMIT OF DISTURBANCE HATCH



SHEET 14 OF 16



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3	—	REVISED LOD PER RIDEM COMMENT	5/27/20	TSB
2	—	ADJUSTED LOD BOUNDARY/ADDED WETLAND FLAGS	2/18/20	TSB
1	—	ADJUSTED LOD BOUNDARY	4/23/19	TSB
REV. No.	ZONE		DATE	BY

NAVSTA NEWPORT
 SOLAR BREAKERS - TANK FARM 4
 TOWN OF PORTSMOUTH NEWPORT COUNTY, RI

PROPOSED LIMITS OF DISTURBANCE SECTION 2

BQ ENERGY LLC
 PROJECT DEVELOPER
 400 Market Street Industrial Park, Suite 32
 Wappingers Falls, NY 12590

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DATE	DRAWN BY	DESIGNED BY	C&A JOB#	DRAWING
2/22/2019	TSB	TSB/JSC	4715.05	C-1.12
SCALE	CHECKED BY	APPROVED BY		
AS SHOWN	JSC			

5/27/2020 9:49 AM TSD: BQENERG

EROSION & SEDIMENT CONTROL GENERAL NOTES:

- ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST VERSION OF THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK.
- ALL CONTRACTORS AND SUBCONTRACTORS TAKING PART IN SITE WORK THAT INVOLVES PHYSICAL GROUND DISTURBANCE ON THE PROJECT SITE SHALL SIGN AND DATE A COPY OF THE CERTIFICATION STATEMENT, WHICH IS LOCATED IN THE STORMWATER MANAGEMENT PLAN (SMP) BEFORE UNDERTAKING ANY CONSTRUCTION ACTIVITY.
- THE SEDIMENT MEASURES DETAILED ON THE EROSION AND SEDIMENT CONTROL PLAN SHALL BE IN PLACE PRIOR TO CONSTRUCTION STARTUP FOR EACH CONSTRUCTION PHASE. ONCE MEASURES ARE IN PLACE, ALL MEASURES SHALL BE PROPERLY MAINTAINED AND/OR REPLACED AS NECESSARY, AND THEN REMOVED FROM THE SITE BY THE CONTRACTOR ONCE THE SITE IS STABILIZED.
- FOLLOWING THE COMMENCEMENT OF CONSTRUCTION, INSPECTIONS SHALL BE CONDUCTED PER THE FOLLOWING SCHEDULE. CONTRACTORS AND SUB CONTRACTORS ARE RESPONSIBLE FOR HAVING A "TRAINED INDIVIDUAL(S)" ON SITE DAILY WHEN SOIL DISTURBANCE ACTIVITIES ARE BEING PERFORMED TO INSPECT EROSION AND SEDIMENT CONTROL MEASURES.
 - FOR CONSTRUCTION SITES WHERE SOIL DISTURBANCE ACTIVITIES ARE ON-GOING, THE QUALIFIED INSPECTOR SHALL CONDUCT A SITE INSPECTION AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS.
 - FOR CONSTRUCTION SITES WHERE SOIL DISTURBANCE ACTIVITIES ARE ON-GOING AND THE OWNER OR OPERATOR HAS RECEIVED AUTHORIZATION TO DISTURB GREATER THAN FIVE (5) ACRES OF SOIL AT ANY ONE TIME, THE QUALIFIED INSPECTOR SHALL CONDUCT AT LEAST TWO (2) SITE INSPECTIONS EVERY SEVEN (7) CALENDAR DAYS.
 - THE TWO (2) INSPECTIONS SHALL BE SEPARATED BY A MINIMUM OF TWO (2) FULL CALENDAR DAYS.
- BASED ON THE SEMI-WEEKLY SITE INSPECTIONS, THE EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE SMP SHALL BE REVISED AS SITE CONDITIONS WARRANT. THE CONTRACTOR SHALL IMPLEMENT THESE REVISIONS AS SOON AS PRACTICABLE.
- THE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR UNTIL THE FINAL SURFACE TREATMENTS ARE INSTALLED AND THE VEGETATED AREAS HAVE BEEN STABILIZED WITH AT LEAST 80% VEGETATIVE COVER. THE PROPERTY OWNER WILL ASSUME RESPONSIBILITY FOR MAINTAINING THE EROSION AND SEDIMENT SYSTEM(S) THEREAFTER.
- CONSTRUCTION SHALL PROCEED IN ACCORDANCE WITH THE CONSTRUCTION PHASING SCHEDULE SHOWN ON THE PLANS.
- AS PRACTICABLE, EXISTING VEGETATION SHALL BE PRESERVED. SITE PREPARATION ACTIVITIES SHALL BE PLANNED TO MINIMIZE THE AREA AND DURATION OF SOIL DISTURBANCE. ALL UNNECESSARY REMOVAL OF WOODY VEGETATION SHALL BE AVOIDED.
- INLET PROTECTION MEASURES SHALL BE INSTALLED AROUND STORM DRAIN INLETS TO PREVENT SEDIMENT LADEN WATER FROM ENTERING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY EROSION AND SEDIMENT CONTROL PRACTICES ONCE THE CONSTRUCTION PHASE HAS BEEN STABILIZED AND FUNCTIONING PROPERLY AS ACCEPTED BY THE ENGINEER.
- DUST CONTROL AT DRIVING AREAS - THE SITE MAY BE SPRAYED WITH WATER UNTIL THE SURFACE IS WET. THIS IS ESPECIALLY EFFECTIVE ON HAUL ROADS AND ACCESS ROUTES.
- THE TOWN OF PORTSMOUTH, RI, OR THE SITE ENGINEER MAY REQUEST ADDITIONAL MEASURES TO MINIMIZE THE POTENTIAL FOR ONSITE OR OFFSITE EROSION PROBLEMS THAT MAY OCCUR DURING CONSTRUCTION.
- COPIES OF THE SOIL EROSION AND SEDIMENT CONTROL PLANS, SMP AND SESC INSPECTION REPORTS MUST BE MAINTAINED ON SITE UNTIL NOTICE OF TERMINATION HAS BEEN FILED.

MULCHING AND SEEDING NOTES:

- STABILIZING MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT NOT MORE THAN 14 DAYS SHALL ELAPSE WITHOUT STABILIZATION AFTER WORK HAS CEASED. ACCEPTABLE TEMPORARY STABILIZATION INCLUDES MULCH, STRAW, HAY, EROSION CONTROL FABRIC, OR OTHER FUNCTIONAL EQUIVALENT.
- TEMPORARY EROSION CONTROL PROTECTION BY MULCHING SHALL BE CARRIED OUT WITHIN 14 DAYS OF FILL PLACEMENT TO FINAL FINISHED GRADE IN ORDER TO AVOID ALL POSSIBLE CONTAMINATION OF PONDS, STREAMS, OR OTHER WATERCOURSES. PLACEMENT OF JUTE MESH OVER THE MULCH IS RECOMMENDED TO PROVIDE POSITIVE "TRACKING" OF THE MULCH AND INCREASED PROTECTION AGAINST EROSION.
- DISTURBED AREAS SHALL BE REVEGETATED IN ACCORDANCE WITH RECOMMENDATIONS CONTAINED IN THE LATEST VERSION OF THE RHODE ISLAND GUIDELINES.

SEEDING PLAN:

SEEDING TO REDUCE EROSION AND SEDIMENT TRANSPORT AFTER CONSTRUCTION COMPLETION.

SEED APPLICATION: 3.5-5 LBS. PER 1,000/SF

LOW GROW SOLAR ARRAY MIX:
50% RELIANT IV HARD FESCUE
25% MARCO POLO SHEEP FESCUE
25% VIKING H20 HARD FESCUE

TEMPORARY SEEDING:

TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED ON SOILS EXPOSED FOR A PERIOD GREATER THAN ONE MONTH BUT LESS THAN 12 MONTHS. TEMPORARY SEEDING SHALL CORRESPOND WITH SECTION FOUR - "SEEDING FOR TEMPORARY VEGETATIVE COVER" IN RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK.

TURF ESTABLISHMENT:

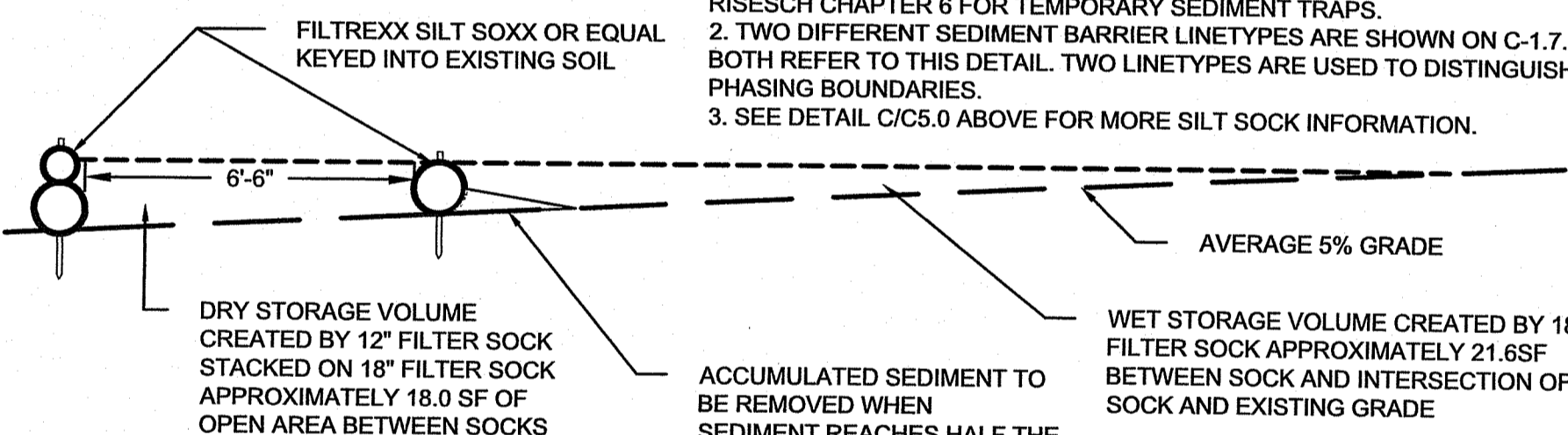
- EXISTING MULCH AND PLANTER BEDS SHALL BE RE-ESTABLISHED TO EXISTING CONDITIONS AS APPLICABLE.
- SEEDING OF PERMANENT LAWNS SHALL OCCUR BETWEEN MARCH 15 (IF SOIL IS FROST-FREE AND NOT EXCESSIVELY MOIST) TO MAY 15 OR AUGUST 15 TO OCTOBER 15.
- TOP SOIL (4 INCHES MINIMUM) SHALL CONSIST OF NATURAL LOAM TOPSOIL, FREE FROM SUBSOIL, PARTIALLY DECOMPOSED ORG. OR INORGANIC FERTILIZERS, STIFF CLAY, HARD PAN, SODS, OR OTHER UNDESIRABLE MATERIALS.
- THE FERTILIZATION TO ESTABLISH AND MAINTAIN THE VEGETATIVE COVER AT THE SITE SHALL BE A SLOW RELEASE FERTILIZER, APPLIED AT MINIMAL RATES AS NEEDED, AND SHALL CONFORM TO THE APPLICABLE STATE AND LOCAL LAWS.
- WITHIN 30 DAYS AFTER SEEDING, COVER THE SEEDING AREAS WITH A UNIFORM LAYER OF STRAW MULCH AT THE RATE OF 50 POUNDS PER 1000 SQ. FT. OF SEEDING AREA.
- THE CONTRACTOR SHALL PROVIDE NECESSARY WATERING, FERTILIZER, MULCHING, ETC., REQUIRED TO ESTABLISH AND MAINTAIN SEEDED AREAS UNTIL SAME ARE ACCEPTED BY THE OWNER'S FIELD REPRESENTATIVE.

MAINTENANCE PLAN:

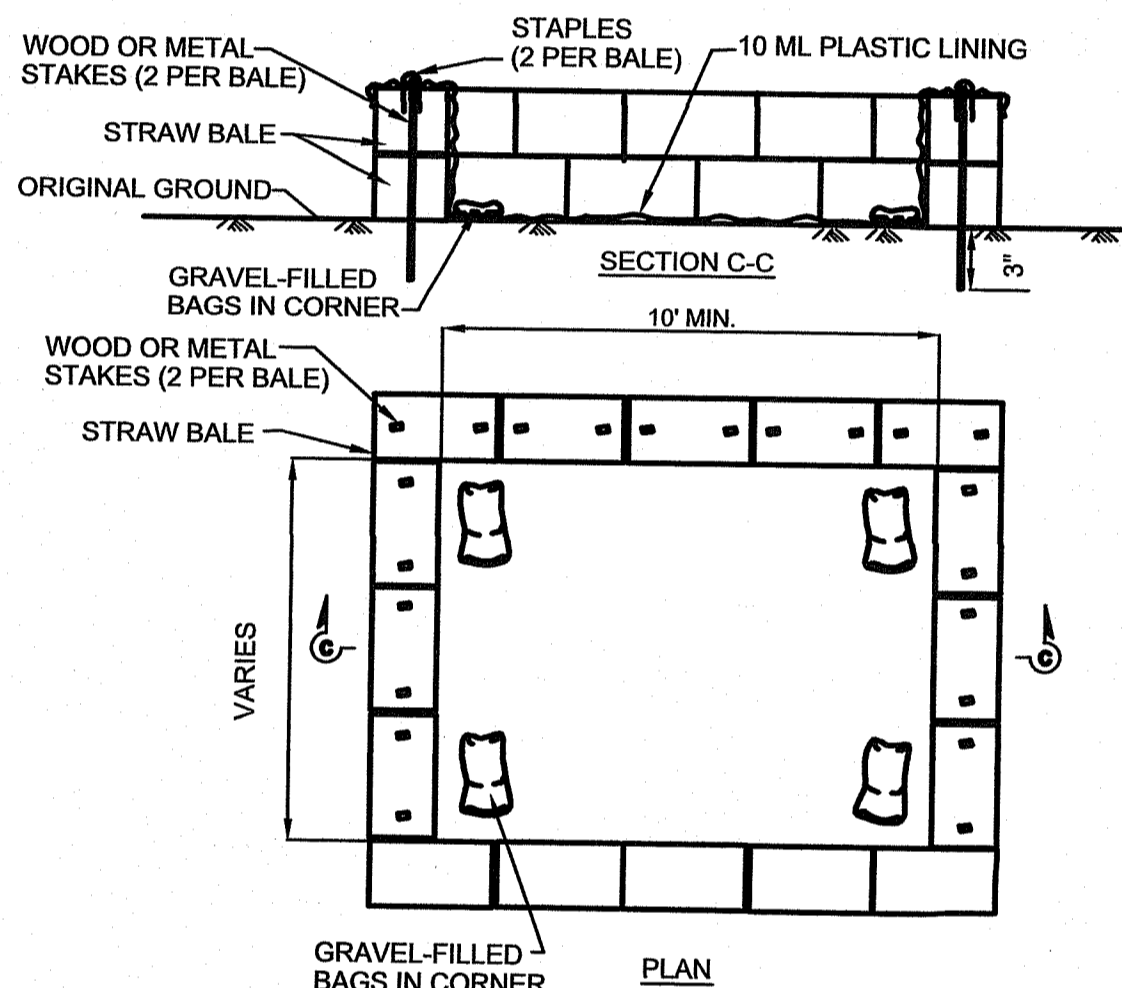
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OPERATION AND MAINTENANCE OF THE NEW DEVELOPMENT PROJECT AND PROJECT ACCESS DURING CONSTRUCTION.
- NO EARTHWORK ACTIVITIES SHALL COMMENCE UNTIL STRAW WATTLES HAVE BEEN INSTALLED AS SHOWN ON DRAWINGS.
- AREAS TO BE LEFT EXPOSED TO EROSION FOR MORE THAN 14 DAYS SHALL BE TEMPORARILY STABILIZED.
- PAVED AREAS SHALL BE KEPT FREE OF SEDIMENT, AND SHALL BE CLEANED PERIODICALLY AS REQUIRED BY CONSTRUCTION ACTIVITIES.
- THE CONTRACTOR IS RESPONSIBLE TO INSPECT AND REPAIR EROSION AND SEDIMENT CONTROL MEASURES AS REQUIRED TO PREVENT DAMAGE OR SEDIMENTATION.
- UPON COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER, REMOVE AND DISPOSE OF TEMPORARY EROSION CONTROL MEASURES. CLEAN SEDIMENT AND DEBRIS FROM TEMPORARY MEASURES AND FROM PERMANENT STORM DRAIN AND SANITARY SEWER SYSTEMS.

NOTES:

- VOLUMES CAN BE CALCULATED FROM THE BELOW CROSS SECTIONAL AREAS AND ON LENGTH OF TRAP. THE MINIMUM INSTALLED LENGTH OF THE TRAP SHOULD BE 500' TO CREATE THE REQUIRED VOLUMES AS OUTLINED IN RISESCH CHAPTER 6 FOR TEMPORARY SEDIMENT TRAPS.
- TWO DIFFERENT SEDIMENT BARRIER LINETYPES ARE SHOWN ON C-1.7. BOTH REFER TO THIS DETAIL. TWO LINETYPES ARE USED TO DISTINGUISH PHASING BOUNDARIES.
- SEE DETAIL C5.0 ABOVE FOR MORE SILT SOCK INFORMATION.

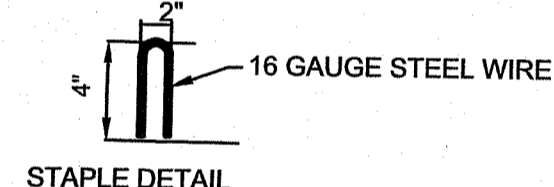


F TEMPORARY SEDIMENT BARRIER (TRAP)
SCALE: N.T.S.

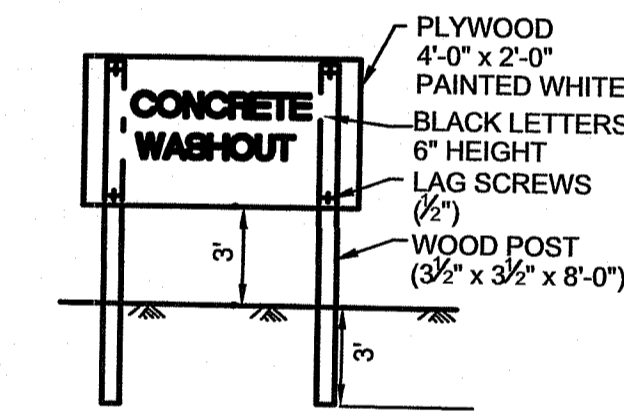


NOTES:

- TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE LOCATED A MINIMUM OF 50 FEET FROM STORM DRAIN INLETS, OPEN DRAINAGE FACILITIES, AND WATER COURSES. EACH FACILITY SHOULD BE LOCATED AWAY FROM CONSTRUCTION TRAFFIC OR ACCESS AREAS TO PREVENT DISTURBANCE OR TRACKING.
- A SIGN SHOULD BE INSTALLED ADJACENT TO EACH WASHOUT FACILITY TO INFORM CONCRETE EQUIPMENT OPERATORS TO UTILIZE THE PROPER FACILITIES.
- TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE CONSTRUCTED ABOVE GRADE. TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE CONSTRUCTED AND MAINTAINED IN SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
- TEMPORARY WASHOUT FACILITIES SHOULD HAVE A TEMPORARY PIT OR BERMED AREAS OF SUFFICIENT VOLUME TO COMPLETELY CONTAIN ALL LIQUID AND WASTE CONCRETE MATERIALS GENERATED DURING WASHOUT PROCEDURES.
- WASHOUT OF CONCRETE TRUCKS SHOULD BE PERFORMED IN DESIGNATED AREAS ONLY. ONLY CONCRETE FROM MIXER TRUCK CHUTES SHOULD BE WASHED INTO CONCRETE WASH OUT.
- ONCE CONCRETE WASTES ARE WASHED INTO THE DESIGNATED AREA AND ALLOWED TO HARDEN, THE CONCRETE SHOULD BE BROKEN UP, REMOVED, AND DISPOSED OF PER SOLID WASTE MANAGEMENT STANDARDS. DISPOSE OF HARDENED CONCRETE ON A REGULAR BASIS.
- TEMPORARY ABOVE GRADE WASHOUT FACILITIES SHOULD BE CONSTRUCTED AS SHOWN IN THIS DETAIL.

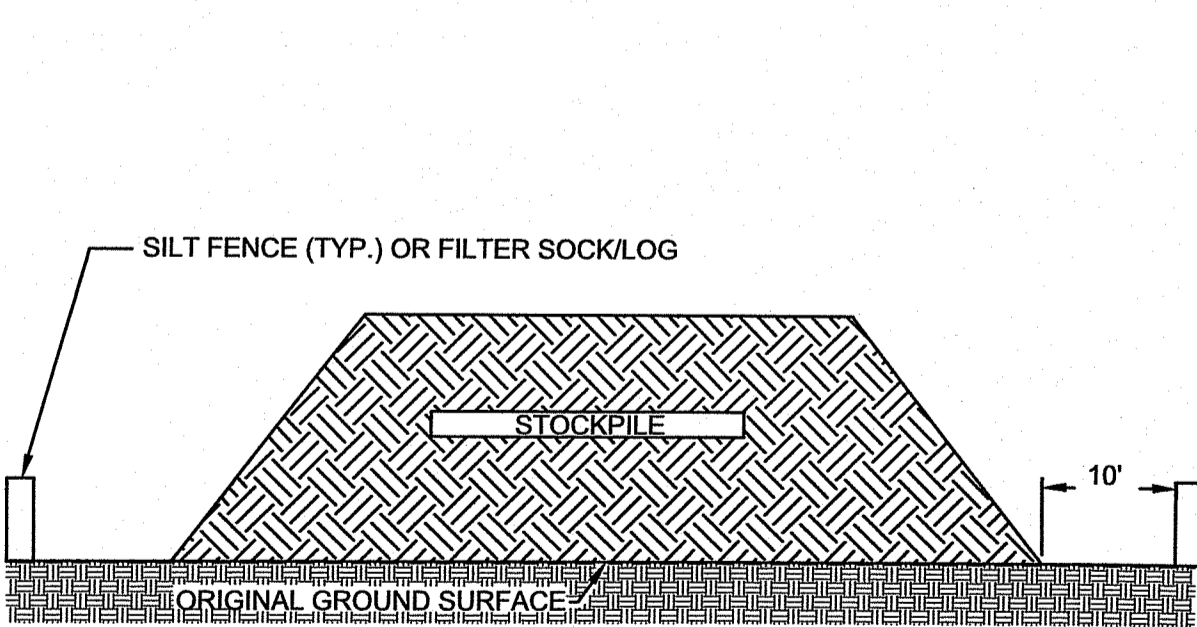


STAPLE DETAIL



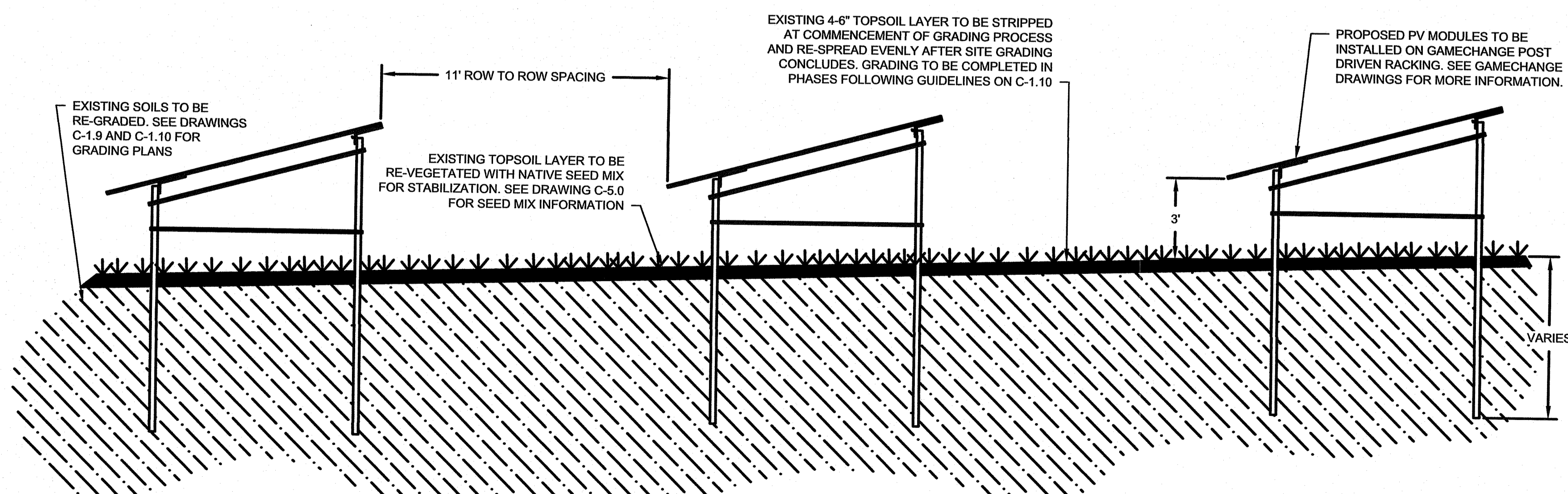
CONCRETE WASHOUT SIGN DETAIL

B CONCRETE WASHOUT DETAIL
SCALE: N.T.S.

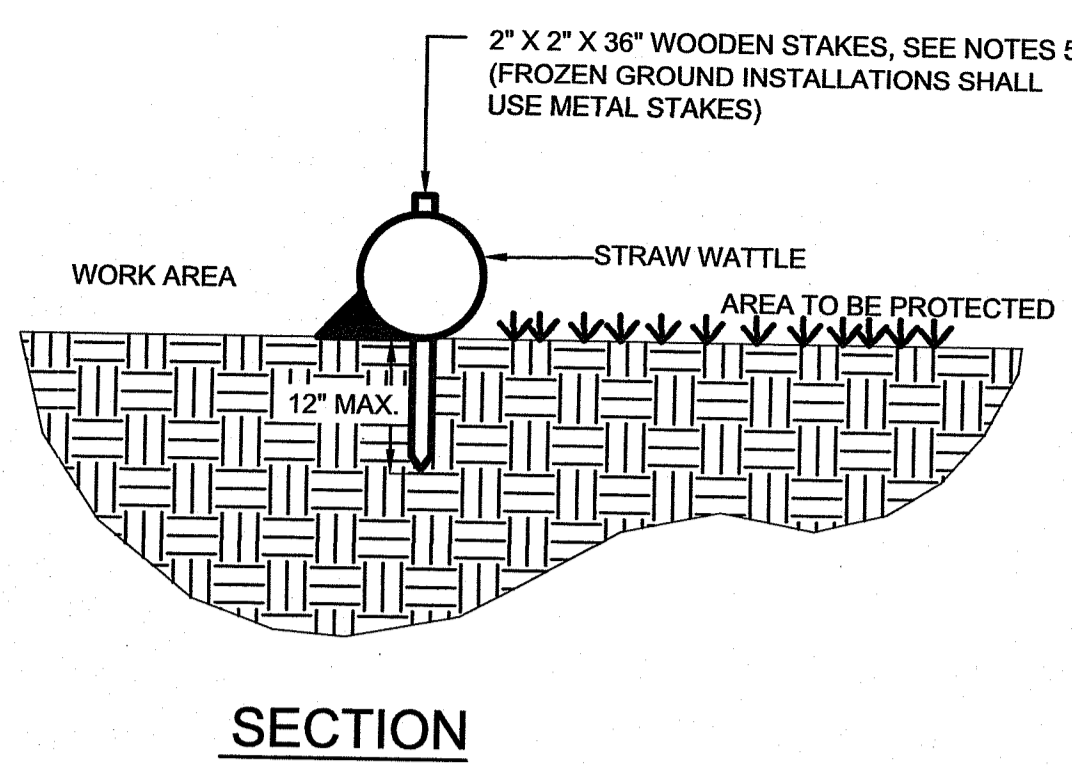


- NOTES:**
- AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE. IN NO CASE SHALL MATERIALS BE STOCKPILED WITHIN 25 FEET OF ANY DITCH, STREAM, OR OTHER SURFACE WATER.
 - MAXIMUM SLOPE OF STOCKPILE SHALL BE 1:2.
 - BEFORE SOIL IS STOCKPILED EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AROUND AT LEAST THREE SIDES INCLUDING THE DOWN-GRADIENT SIDE. IT IS NOT ACCEPTABLE TO INSTALL PROTECTION AFTER THE STOCKPILE HAS BEEN CREATED.
 - SILT FENCE OR FILTER SOCKLOG TO EXTEND AROUND ENTIRE PERIMETER OF STOCKPILE OR TO EXTEND AROUND DOWNSTREAM PORTION IF STOCKPILE IS ON SLOPE.

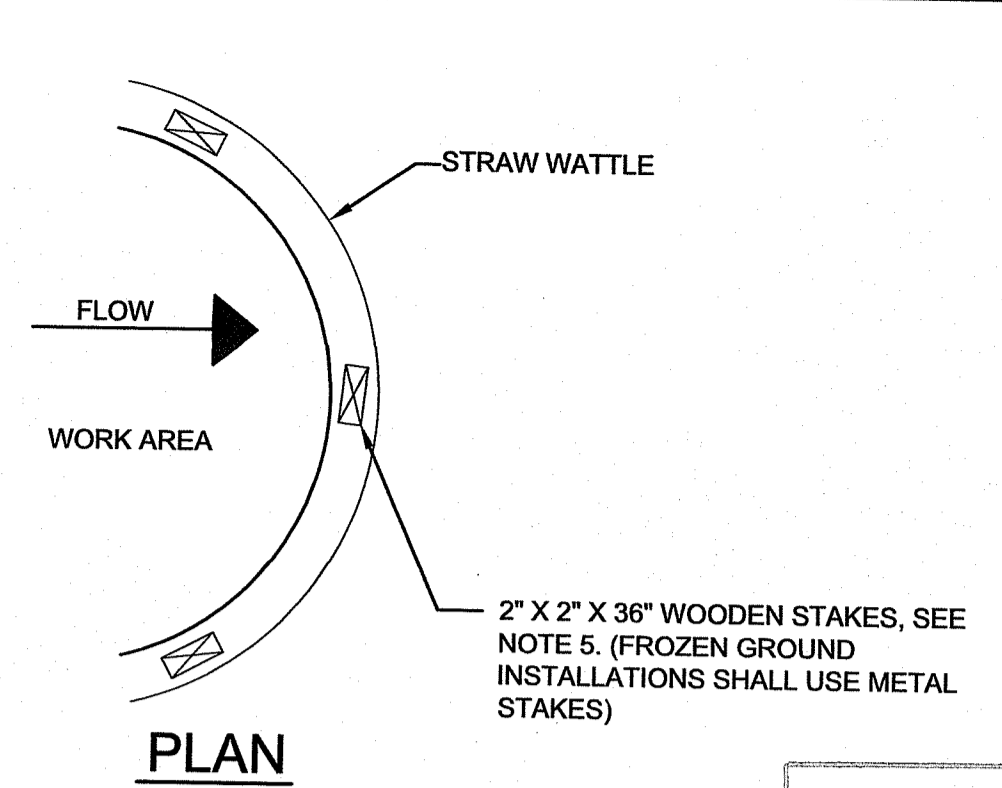
A STABILIZED STOCKPILE DETAIL
SCALE: N.T.S.



E ARRAY PROFILE WITH PV RACK STRUCTURES
SCALE: N.T.S.



SECTION



PLAN

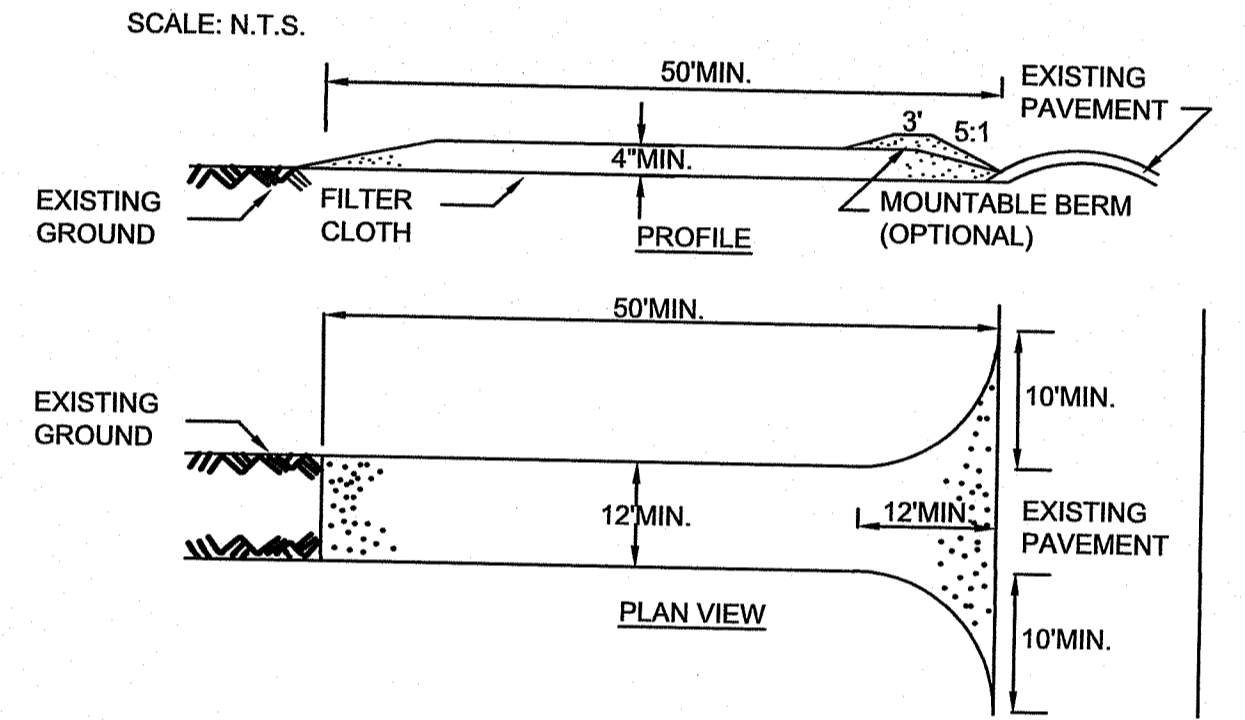
INSTALLATION NOTES:

- LAND SURFACE SHOULD BE PREPARED BY MOWING GRASS OR MAKING SOIL OR PAVED SURFACES SMOOTH.
- STRAW WATTLES SHALL BE PLACED PERPENDICULAR TO STORM WATER FLOW, ACROSS THE SLOPE, SWALE, DITCH OR CHANNEL.
- STRAW WATTLES SHALL BE PLACED ON CONTOURS.
- ON SOIL AND VEGETATED SURFACES, UNDER SHEET FLOW CONDITIONS, STRAW WATTLES SHALL BE STAKED ON 4-FT CENTERS. UNDER CONCENTRATED FLOW CONDITIONS STRAW WATTLES SHALL BE STAKED ON 3-FT CENTERS.
- STAKES SHALL BE DRIVEN THROUGH THE CENTER OF THE STRAW WATTLES AND INSTALLED A MINIMUM OF 8 INCHES AND A MAXIMUM OF 12 INCHES INTO THE EXISTING SOIL, LEAVING A MINIMUM STAKE HEIGHT OF 2 INCHES ABOVE THE STRAW WATTLE.
- EDGES OF THE STRAW WATTLES SHALL BE TURNED UPSLOPE TO PREVENT FLOW AROUND THE ENDS OF THE WATTLES.

REMOVAL NOTES:

- UPON REMOVAL OF THE STRAW WATTLES, THE CONTRACTOR SHALL REMOVE ALL SEDIMENT ACCUMULATION PRIOR TO THE REMOVAL OF THE WATTLE. THE STRAW WATTLES SHALL BE REMOVED IN THEIR ENTIRETY.
- THE DISTURBED AREA SHALL BE SEEDED, FERTILIZED, AND MULCHED TO ENSURE THE VEGETATIVE COVER IS FULLY RESTORED.
- MONITOR THE VEGETATIVE RESTORATION AREA UNTIL EXPOSED AREAS ARE FULLY STABILIZED WITH VEGETATIVE COVER.
- THE FILTER MATERIAL MAY BE SPREAD OVER THE LANDSCAPE OR INCORPORATED INTO THE SOIL AT THE END OF THE PROJECT, THEREBY INCREASING SOIL QUALITY AND REDUCING WASTE.
- THE WATTLE MESH SHALL BE PROPERLY DISPOSED.

C STRAW WATTLE DETAIL
SCALE: N.T.S.



NOTES:

- WHERE NECESSARY, STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED TO PREVENT SOIL AND SEDIMENT FROM BEING TRACKED ON TO ROADWAYS.
- PERMANENT TRAFFIC CORRIDORS SHALL BE ESTABLISHED AND "ROUTES OF CONVENIENCE" SHALL BE AVOIDED. CONSTRUCTION TRAFFIC SHALL NOT CROSS STREAMS OR DITCHES EXCEPT AT SUITABLE CROSSING FACILITIES, AND SHALL NOT OPERATE UNNECESSARILY WITHIN WATERWAYS OR DRAINAGE DITCHES.
- IF INTERNAL CONSTRUCTION ROADS ARE A SOURCE OF SEDIMENT-LADEN RUNOFF TO SENSITIVE AREAS, MEASURES SHALL BE TAKEN TO STABILIZE THE INTERNAL ROADWAYS AS SOON AS PRACTICABLE.
- STONE SIZE - USE RI DOT 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
- THICKNESS - NOT LESS THAN FOUR (4) INCHES.
- WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
- FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
- SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
- 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 TRACTED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
- WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
- PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

D CONSTRUCTION ENTRANCE DETAIL
SCALE: N.T.S.

2	-	REVISED TURF ESTABLISHMENT NOTE #4	2/18/20	TSS
1	-	ADDED ARRAY PROFILE/SEDIMENT BARRIER DETAIL	4/23/19	TSS
REV. No	ZONE		DATE	BY

NAVSTA NEWPORT
SOLAR BREAKERS - TANK FARM 4
TOWN OF PORTSMOUTH NEWPORT COUNTY, RI

EROSION & SEDIMENT CONTROL DETAILS

BQ ENERGY LLC
PROJECT DEVELOPER
400 Market Street Industrial Park, Suite 32
Wappingers Falls, NY 12590

CRAWFORD & ASSOCIATES
ENGINEERING, P.C.
4411 Route 9, Suite 200, Hudson New York 12534
www.crawfordandassociates.com

ANDREW P. AUBIN
No. 12647
REGISTERED PROFESSIONAL ENGINEER
MECHANICAL
3/28/2020

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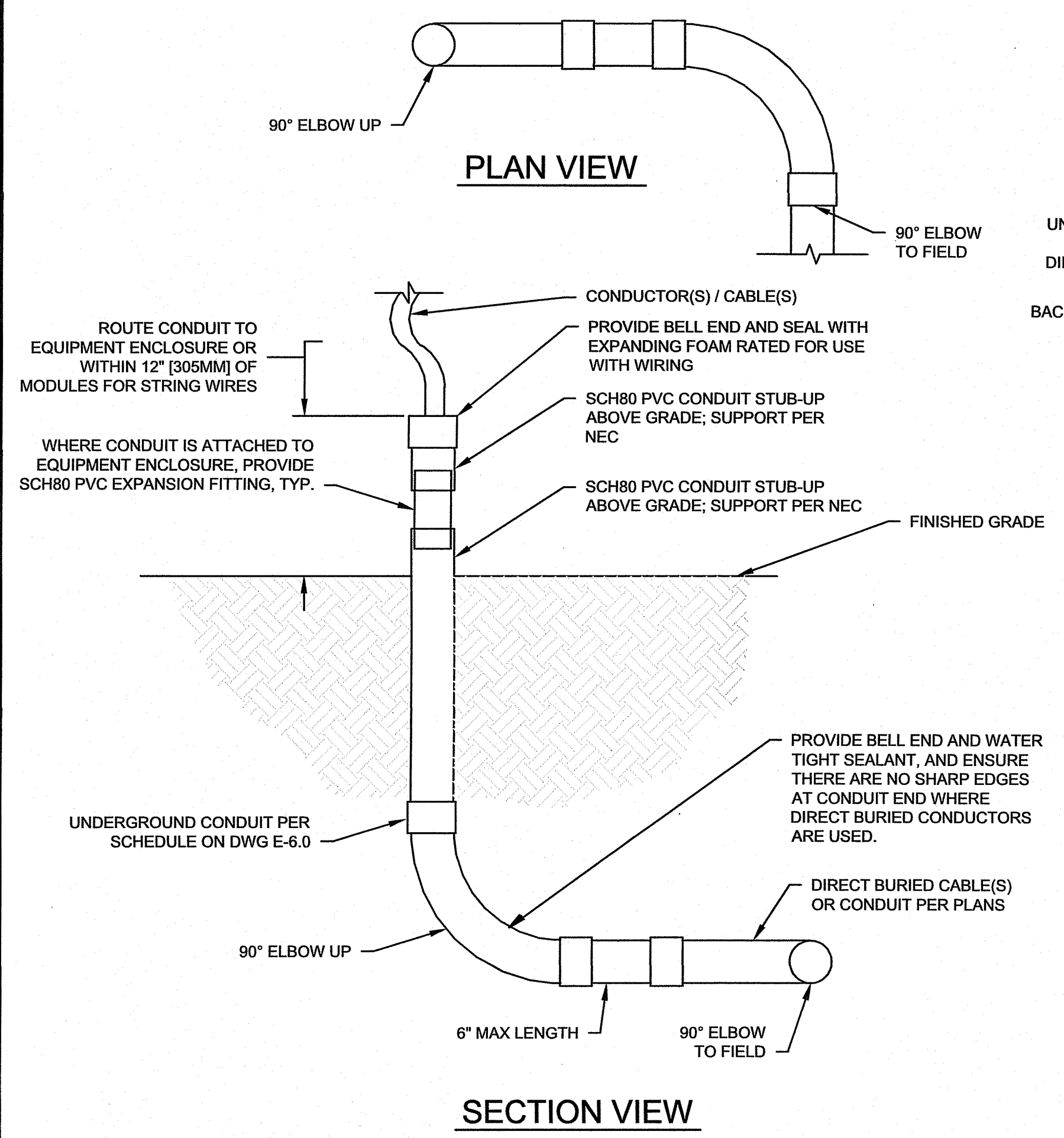
DATE	2/22/2019	DRAWN BY	TSS	NO. 14715.05/14715.05 CIVIL DETAILS - TANK
SCALE	AS SHOWN	CHECKED BY	JSC	C&A JOB# 4715.05
DATE	2/22/2019	DESIGNED BY	TSS/JSC	DRAWING: C-5.0
SCALE	AS SHOWN	APPROVED BY	JSC	

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

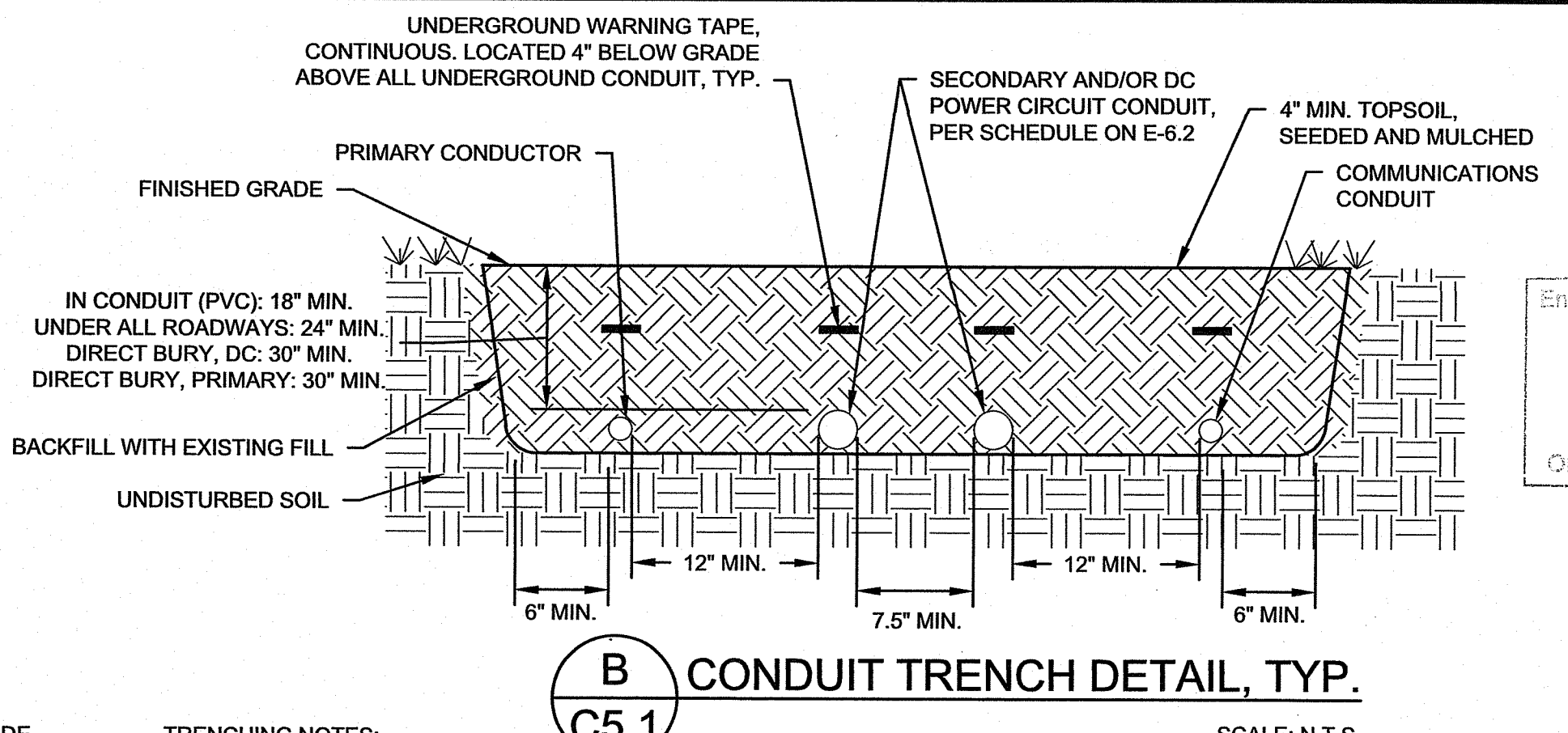
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL.
DATED JUN 23 2020 FILE # 18-0320
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

SHEET 15 OF 16

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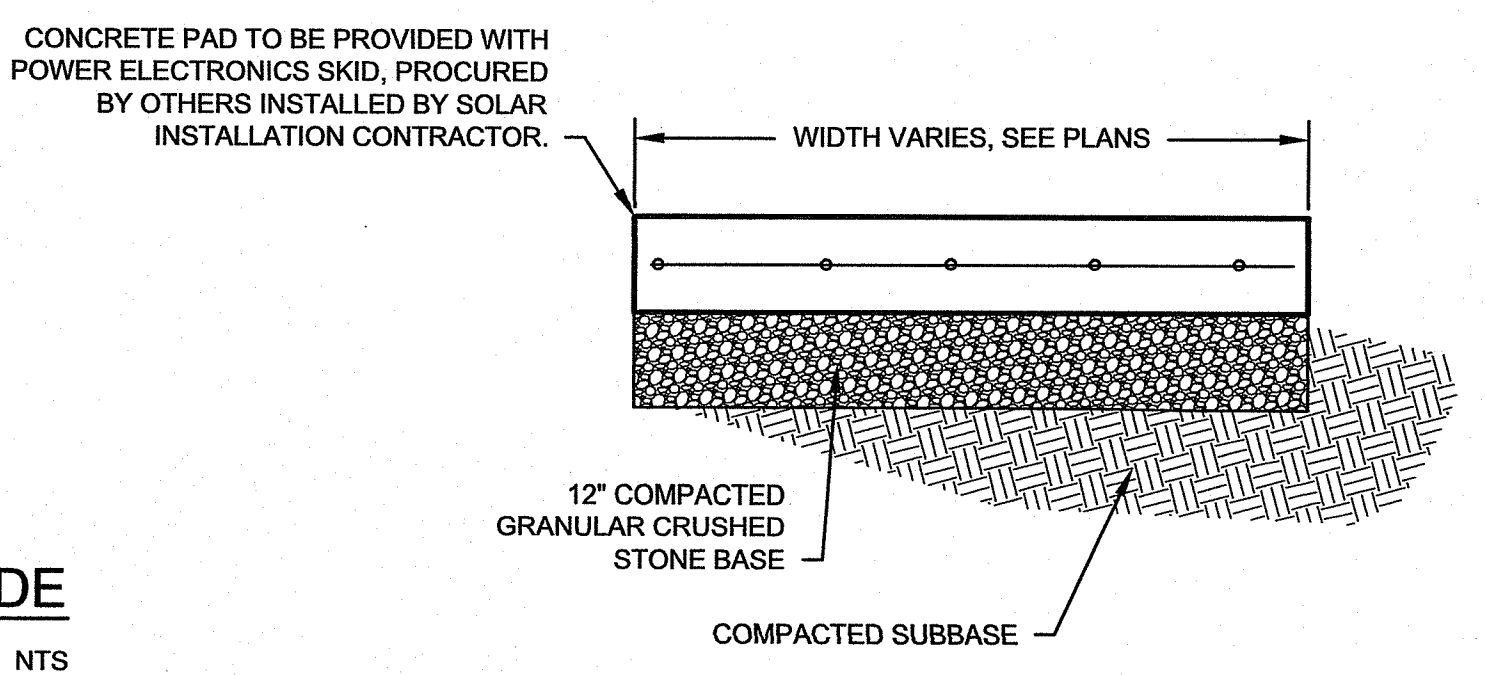


A TYPICAL CONDUIT STUB-UP AND TRANSITION BELOW GRADE
C5.1 NTS

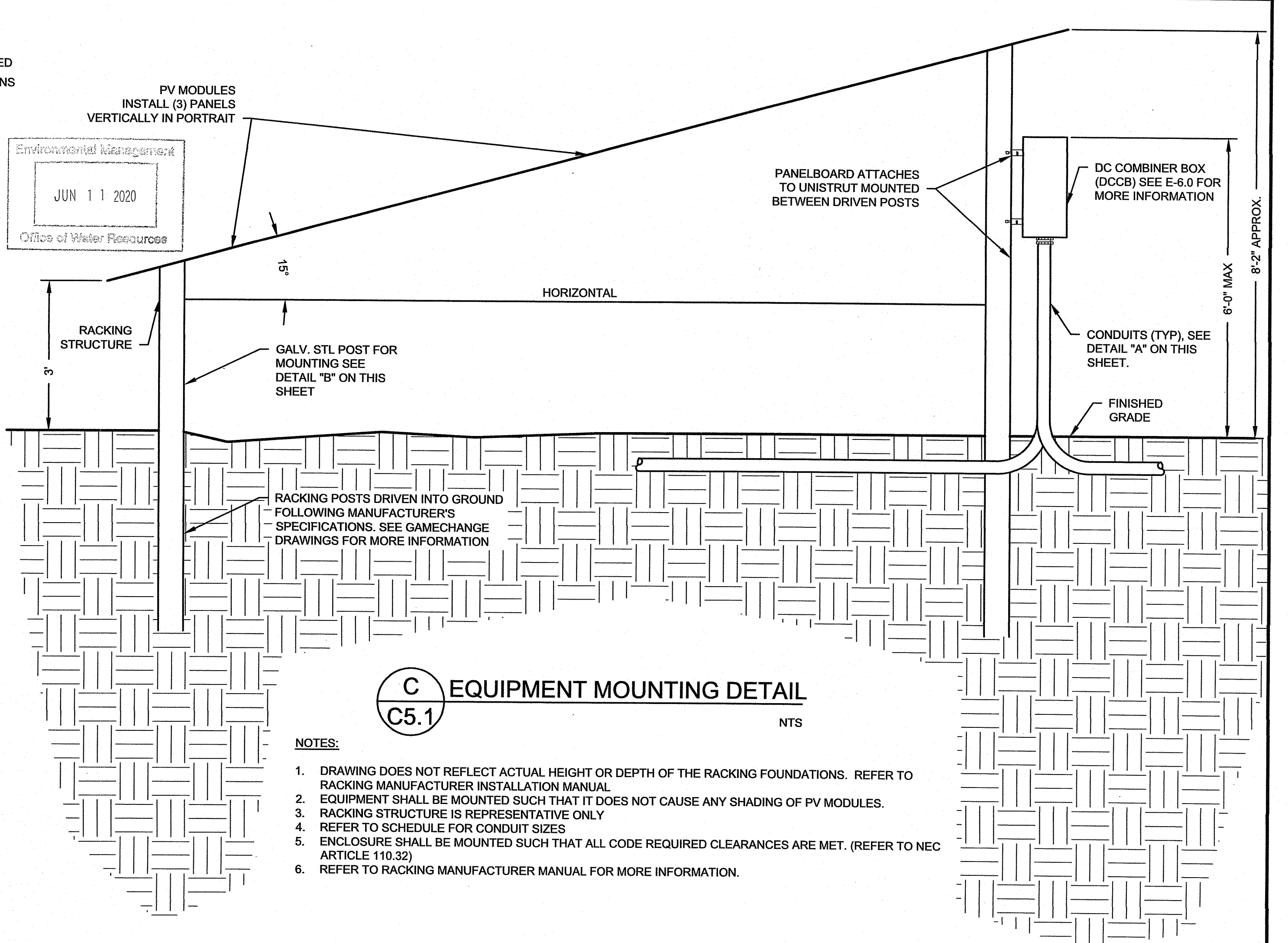


B CONDUIT TRENCH DETAIL, TYP.
C5.1 SCALE: N.T.S.

- TRENCHING NOTES:**
1. VEHICLE ACTIVITY AND SURFACE LOADING OVER THE BURIED CONDUIT OR CONDUCTORS SHALL NOT EXCEED THE RATED CRUSH TEST CAPACITY.
 2. BACKFILL MATERIAL SHALL BE SPOILS FROM EXCAVATION COMPACTED PER GEOTECHNICAL REPORT. NATIVE BACKFILL MATERIAL ONLY ACCEPTABLE IF IT CAN PASS THROUGH A 1/4" SCREEN. 3" OF SAND BEDDING MAY BE USED IF NATIVE BACKFILL IS INADEQUATE.
 3. NECESSARY EXCAVATION AND COMPACTION OF TRENCHING SHALL BE PERFORMED PER THE GEOTECHNICAL REPORT RECOMMENDATIONS.
 4. THE NUMBER OF CONDUITS/CIRCUITS SHOWN IS REPRESENTATIVE AND WILL VARY PER THE PLANS AND SCHEDULES.
 5. 12" MIN. CLEARANCE SHALL BE MAINTAINED BETWEEN POWER AND DATA WIRING.
 6. EDGE OF TRENCH SHALL BE A MIN. OF 3' CLEAR FROM THE EDGE OF EQUIPMENT PAD UNLESS APPROVED BY E.O.R.
 7. TRENCHING WITHIN LANDFILL EXTENTS SHALL BE LIMITED TO A DEPTH OF 12" OR LESS.
 8. ALL CONDUIT INSTALLATION TO CONFORM TO NEC TABLES 300.5 AND 300.50.
 9. IF MEDIUM VOLTAGE CONDUCTORS CROSS OTHER CONDUCTORS IN TRENCH, IT SHALL OCCUR AT 90° PERPENDICULAR CROSSING. THERE SHALL BE A MIN. 12" SEPARATION IN CONDUCTORS.

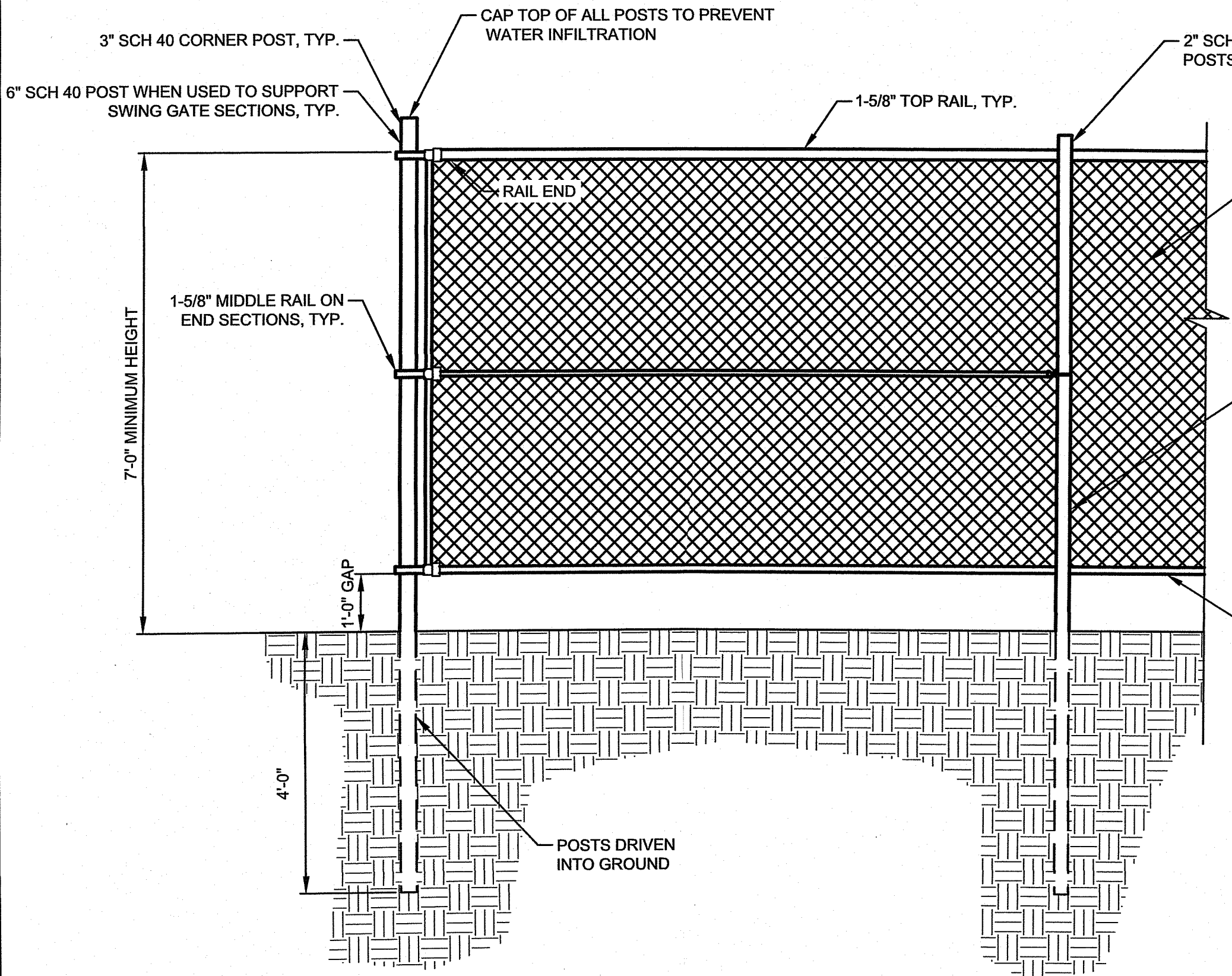


E CONCRETE PAD DETAIL
C5.1 SCALE: N.T.S.

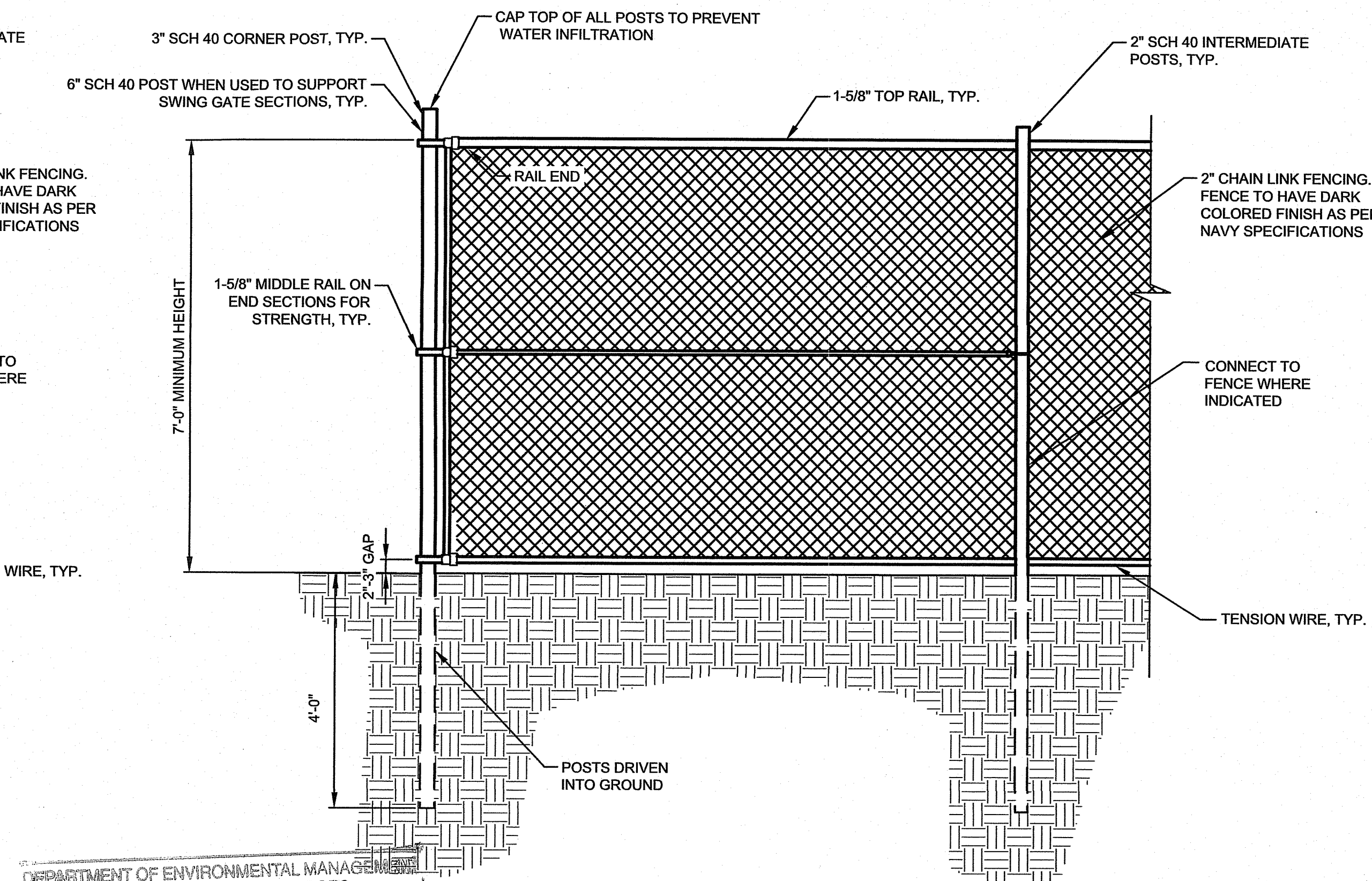


C EQUIPMENT MOUNTING DETAIL
C5.1 NTS

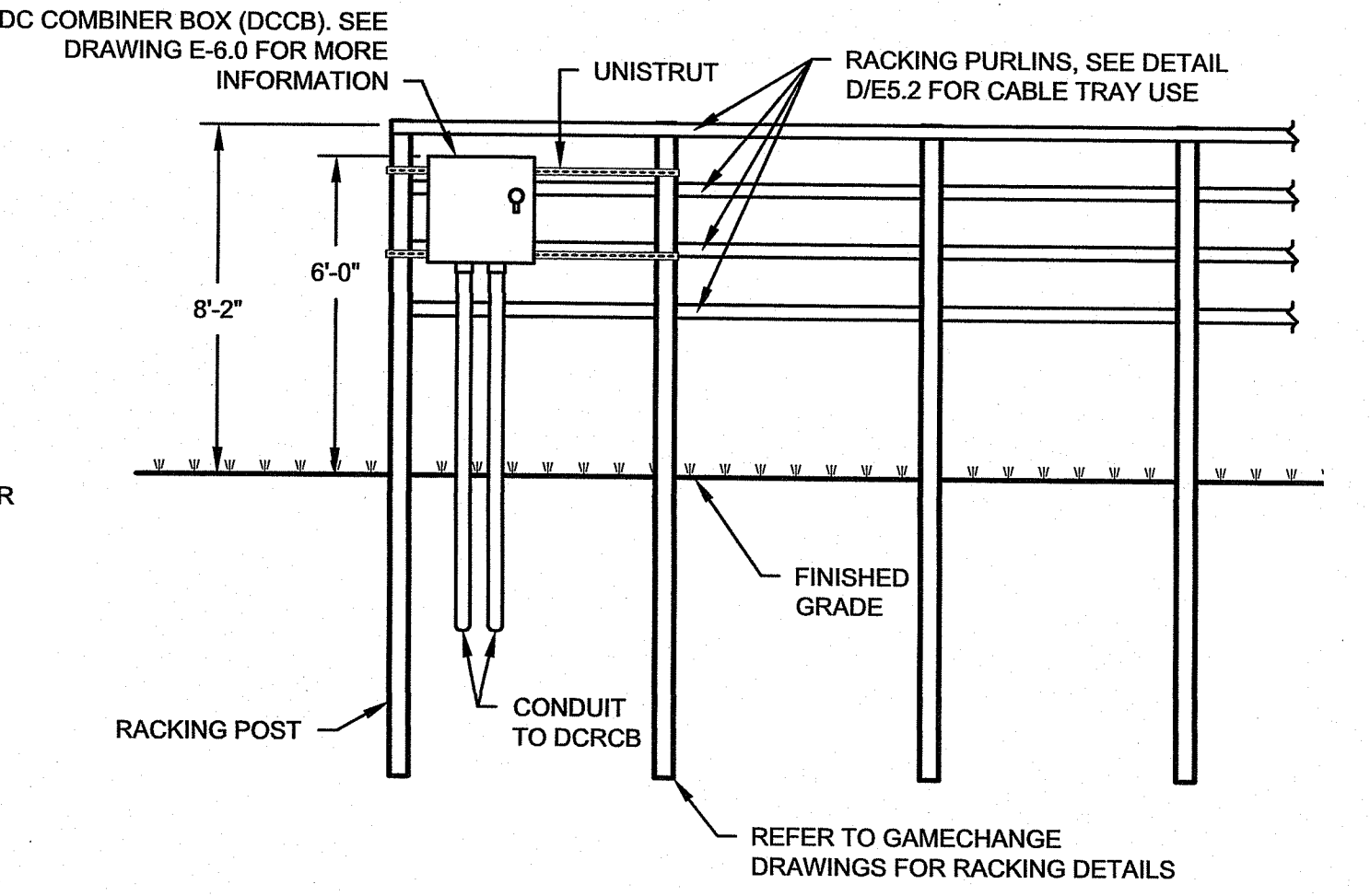
- NOTES:**
1. DRAWING DOES NOT REFLECT ACTUAL HEIGHT OR DEPTH OF THE RACKING FOUNDATIONS. REFER TO RACKING MANUFACTURER INSTALLATION MANUAL.
 2. EQUIPMENT SHALL BE MOUNTED SUCH THAT IT DOES NOT CAUSE ANY SHADING OF PV MODULES.
 3. RACKING STRUCTURE IS REPRESENTATIVE ONLY.
 4. REFER TO SCHEDULE FOR CONDUIT SIZES.
 5. ENCLOSURE SHALL BE MOUNTED SUCH THAT ALL CODE REQUIRED CLEARANCES ARE MET. (REFER TO NEC ARTICLE 110.32)
 6. REFER TO RACKING MANUFACTURER MANUAL FOR MORE INFORMATION.



F WILD LFE FRIENDLY CHAIN LINK FENCE DETAIL
C5.1 N.T.S.



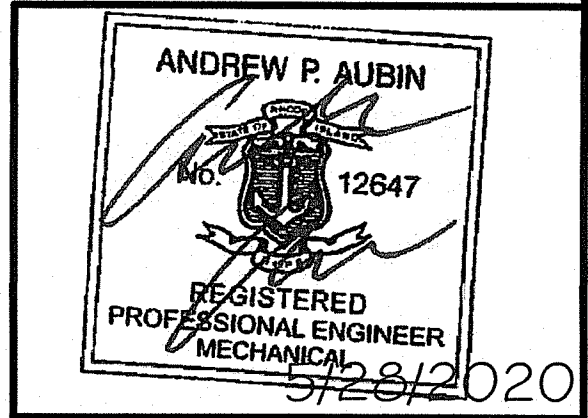
G CHAIN LINK FENCE WITH DRIVEN POSTS DETAIL
C5.1 N.T.S.



D POST DRIVEN RACKING DETAIL
C5.1 NTS

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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SHEET 16 OF 16



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REV. No.	ZONE	ADDED STANDARD CHAIN LINK FENCE DETAIL	DATE	BY
1	-	ADDED STANDARD CHAIN LINK FENCE DETAIL	4/23/19	TSP

NAVSTA NEWPORT
SOLAR BRAKERS - TANK FARM 4
TOWN OF PORTSMOUTH NEWPORT COUNTY, RI

CIVIL DETAILS

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DATE	DRAWN BY	DESIGNED BY	C&A JOB#	DRAWING
2/22/2019	TSP	TSP/JSC	4715.05	C-5.1
SCALE	CHECKED BY	APPROVED BY		
AS SHOWN	JSC			