



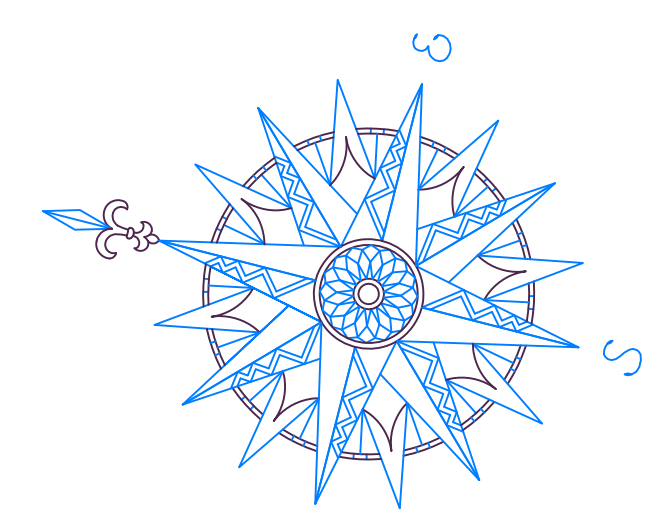




LOT 9  
ALGONQUIN GAS TRANSMISSION, LLC  
VOL. 332, P. 1093

LEGEND

- PROPERTY LINE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- TREE LINE
- PROPOSED STORM DRAINAGE
- WETLAND LINE
- WETLAND FLAG
- WETLANDS AREA
- EASEMENT
- EXISTING FENCE
- PROPOSED FENCE



NOTES

1. TOPOGRAPHICAL MAPPING, PROPERTY SURVEY AND EXISTING FEATURES ARE BASED ON A SURVEY PREPARED BY RIORRAN LAND SURVEYING DATED 5/10/14.
2. WETLANDS LOCATIONS AS SHOWN WERE FLAGGED BY DEAN GUSTAFSON, SOIL SCIENTIST AND LOCATED BY RIORRAN LAND SURVEYING.
3. VERTICAL DATUM IS NAVD83.
4. HORIZONTAL DATUM IS NAD83/87 COORDINATE SYSTEM.

NO.	REVISION	DATE

*Previous Editions Obsolete*

LEGEND-POWER PLANT

1. STACK
2. HEAT RECOVERY STEAM GENERATOR (HRSG)
3. AQUEOUS AMMONIUM STORAGE TANK/UNLOADING AREA
4. BLOWDOWN TANK
5. AUXILIARY COOLING SYSTEM FAN COOLER
6. AIR COOLED CONDENSER
7. DEMINERALIZED WATER TREATERS
8. DEMINERALIZED WATER STORAGE TANKS
9. FIRE/SERVICE WATER STORAGE TANK
10. COMBUSTION TURBINE GENERATOR (CTG)
11. CTG STEP-UP TRANSFORMER
12. ISOLATION/EXCITATION TRANSFORMERS
13. CONTROL HOUSE
14. SWITCHYARD
15. GAS METERING/REGULATION STATION
16. ELECTRICAL/BATTERY ROOMS/WAREHOUSE/MAINTENANCE SHOP GROUND FLOOR
17. STEAM TURBINE GENERATOR WITH ENCLOSURE
18. GAS HEATER, FILTER AND METERING
19. STORM WATER DETENTION POND
20. CONDENSATE RECOVERY PUMPS/VACUUM PUMPS
21. FIRE PROTECTION FOAM SYSTEM
22. ACC ELECTRICAL PDC
23. FUEL OIL STORAGE TANK WITH SECONDARY STEEL CONTAINMENT (1,500,000 GAL.)
24. FUEL OIL UNLOADING AREA
25. FUEL OIL FORWARDING PUMP SKID
26. GEMS ENCLOSURE
27. CHEM FEED
28. SOLER FEED WATER PUMPS ENCLOSURE
29. AUXILIARY BOILER ROOM (GROUND FLOOR)
30. STANDBY DIESEL GENERATOR
31. LOAD COMMUTATING INVERTER (LCI) AND EXCITER COMPARTMENT
32. PACKAGE ELECTRONIC AND ELECTRICAL CONTROL COMPARTMENT (PECC)
33. BATTERY COMPARTMENT
34. STEP-UP TRANSFORMER
35. EQUIPMENT REMOVAL AREA
36. GAS COMPRESSORS
37. EXCITATION TRANSFORMER
38. P. ECONOMIZER RECIRCULATION PUMP
39. AMMONIA VAPORIZER SKID
40. FUEL GAS ABSOLUTE SEPARATOR
41. LIQUE OIL MODULE
42. LIQUID FUEL OIL FILTRATION SKID
43. CT FIRE PROTECTION (WATER MIST)
44. AUXILIARY COOLING PUMP AREA
45. POWER DISTRIBUTION CENTER (PDC)
46. UNIT AUXILIARY TRANSFORMER
47. GENERATOR CIRCUIT BREAKER
48. H2/CO2 STORAGE
49. WATER WASH SKID
50. WATER WASH DRAIN TANK
51. DUCT BURNER BLOWER SKID
52. DUCT BURNER GAS CONTROL SKID
53. DEMINERALIZED WATER PUMPS AREA
54. FIRE WATER PUMP HOUSE AND SERVICE WATER PUMPS AREA

STORMWATER MANAGEMENT & GRADING PLAN

CPV TOWANTIC ENERGY CENTER

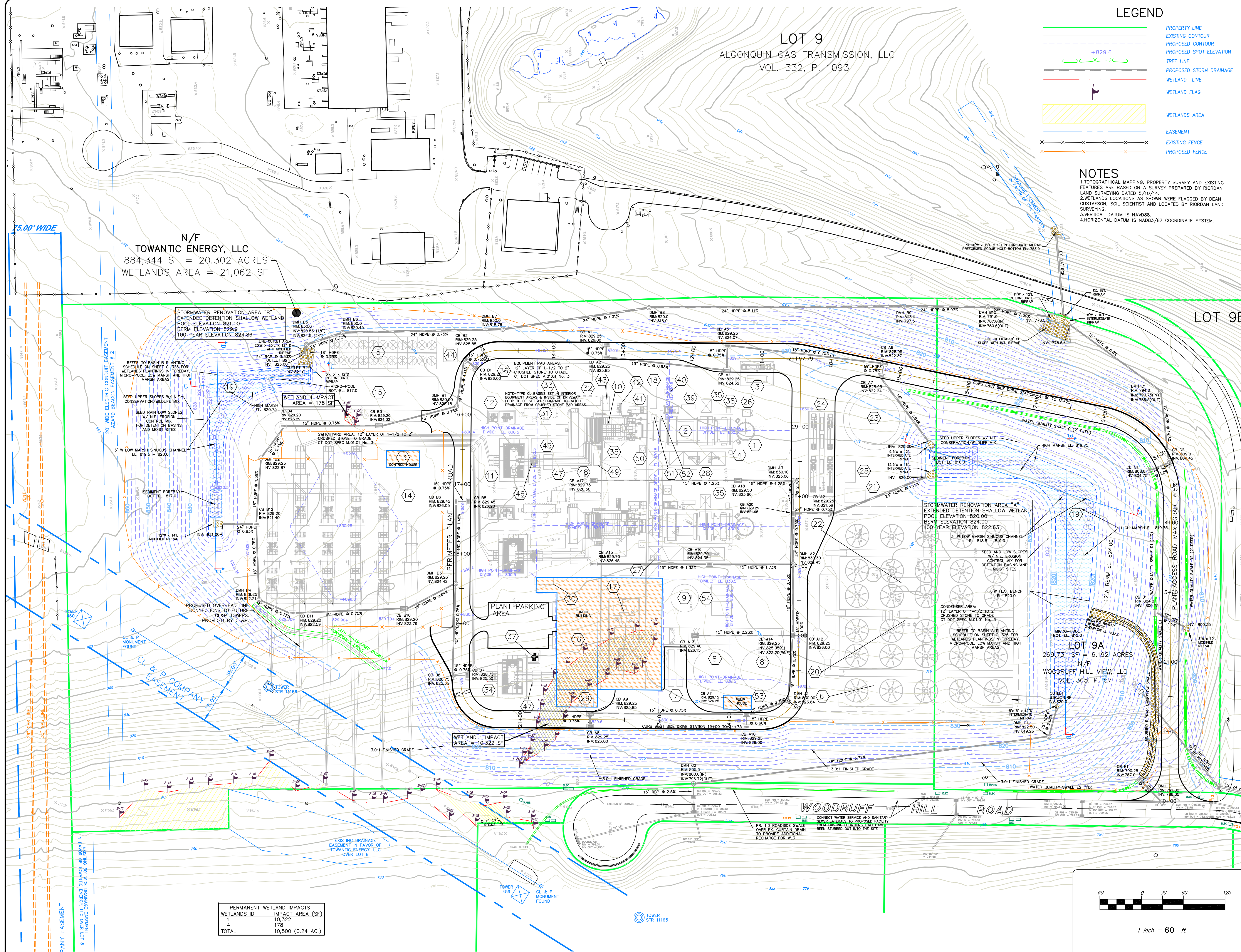
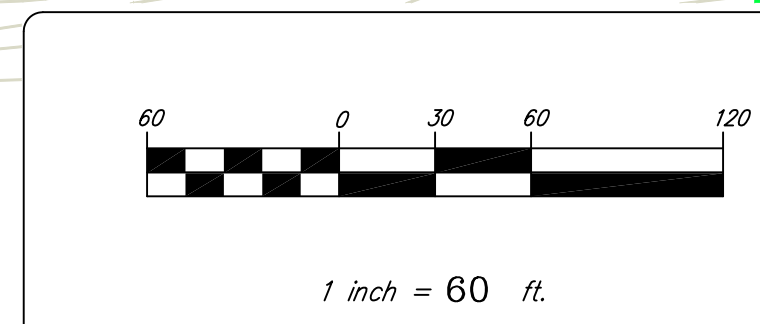
OXFORD CONNECTICUT



CORNERSTONE PROFESSIONAL PARK, SUITE D-101  
43 SHERMAN HILL ROAD  
WOODBURY CONNECTICUT  
(203) 266-0778

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SCALE: 1" = 60'  
DATE: 30 JUN 15  
PROJ. NO.: 98132  
CADD FILE NAME: 98132  
DRAWING NO.:

C 310



N/F  
TOWANTIC ENERGY, LLC  
884,344 SF = 20.302 ACRES  
WETLANDS AREA = 21,062 SF

STORMWATER RENOVATION AREA "B"  
EXTENDED DETENTION SHALLOW WETLAND  
POOL ELEVATION 821.00  
BERM ELEVATION 829.9  
100-YEAR ELEVATION 824.86

WETLAND 4 IMPACT  
AREA = 178 SF

WETLAND 1 IMPACT  
AREA = 10,322 SF

LOT 9A  
269,731 SF = 6.192 ACRES  
N/F  
WOODRUFF HILL VIEW, LLC  
VOL. 363, P. 57

PERMANENT WETLAND IMPACTS	WETLANDS ID	IMPACT AREA (SF)
1	10,322	
4	178	
TOTAL		10,500 (0.24 AC.)

TOWER STR 11165

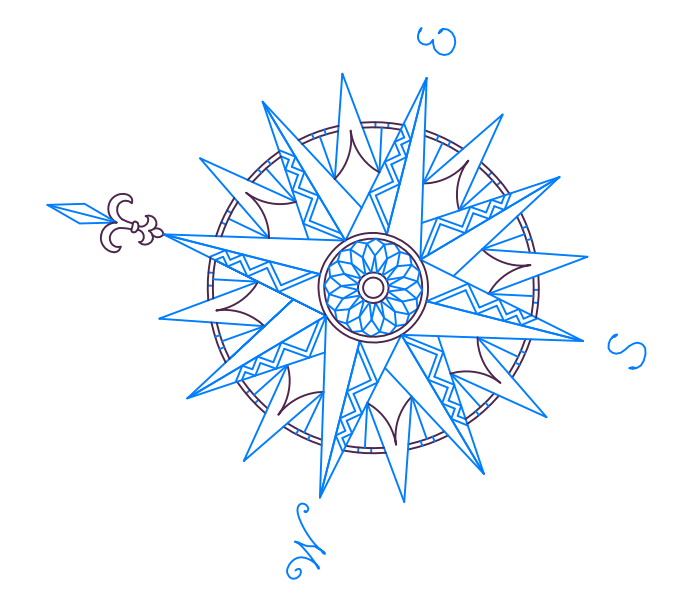
# CONSTRUCTION SEQUENCE

## PHASE 1: (30 - 60 DAY DURATION)

- FIELD STAKEOUT THE LIMITS OF ALL CONSTRUCTION ACTIVITIES ASSOCIATED WITH PHASE 1.
- INSTALL ANTI-TRACKING PAD AT CONSTRUCTION ENTRANCE AS SHOWN ON THE PLAN. INSTALL WATER BARS AND HAYBALE BARRIERS AS NECESSARY TO CONTROL DRAINAGE ALONG THE ENTRY DRIVE. AT THE END OF EACH WORKING DAY, ANY ACCUMULATED SILT SHALL BE SWEEPED FROM THE EXISTING TOWN ROADS.
- CLEAR ALL VEGETATION WITHIN THE CONSTRUCTION AREA. DO NOT REMOVE STUMPS UNTIL EROSION CONTROL MEASURES ARE IN PLACE.
- HAYBALES AND/OR SILTATION FENCE AND OTHER EROSION CONTROL FEATURES WILL BE PLACED AS SHOWN ON THE ENCLOSED PHASE 1 PLAN PRIOR TO THE START OF ANY CONSTRUCTION.
- INSTALL TEMPORARY FILTER BERM IN EXISTING STORMWATER BASIN ON LOT 9B PER DETAILS.
- REMOVE STUMPS ONLY FROM CONSTRUCTION AREA FOR PHASE 1.
- STRIP & STOCKPILE TOPSOIL (+/- 8,000 CUBIC YARDS) AS SHOWN ON PLANS. EXCESS MATERIAL MAY BE STOCKPILED OFF-SITE.
- CREATE TEMPORARY CLEAN WATER DIVERSIONS AS NECESSARY TO MINIMIZE OVERLAND FLOW.
- CONSTRUCT TEMPORARY SEDIMENT TRAPS 1A AND 1B AT THE DRIVEWAY ENTRANCE.
- BEGIN MASS EARTH EXCAVATION INTO THE SITE WORKING EAST THEN NORTH INTO THE SITE. CUT MATERIAL WILL BE USED TO FILL EASTERN SIDE OF DRIVEWAY, EXCESS CUT MATERIAL WILL BE REMOVED FROM THE SITE.
- INSTALL STORM DRAINAGE STRUCTURES IN THE PHASE 1 CONSTRUCTION AREA BUT DO NOT ALLOW DRAINAGE INTO STRUCTURES UNTIL AREA IS STABILIZED. CONSTRUCTION STORMWATER MUST FLOW TO TSTs LOCATED AT BOTTOM OF DRIVEWAY AS INDICATED ON THE SITE PLANS.
- ROUGH GRADE STORMWATER RENOVATION AREA "A" SO THAT IT CAN BE USED AS A TST DURING THE CONSTRUCTION ASSOCIATED WITH PHASE 2. INSTALL TEMPORARY BERM IN THE MIDDLE OF THE BASIN TO CREATE TSTs 2A & 2B.
- CONSTRUCT OUTLETS TO TSTs AND PERFORATED RISER ON THE OUTLET STRUCTURE PER THE DETAIL ON SHEET C321. A TEMPORARY PERFORATED RISER OUTLET WILL BE PROVIDED FOR TST 2B AS INDICATED ON THE SITE PLANS.
- CONSTRUCT EMERGENCY MODIFIED RIPRAP OVERFLOW SWALE FROM BASIN.
- PLACE STORMWATER FILTRATION TRAILER INTO POSITION AS NECESSARY.
- PLACE BINDER COURSE ON DRIVEWAY FROM STATION 0+00 TO 10+50.
- PLACE TOPSOIL AND SEED ALL DISTURBED AREAS THAT ARE NOT SUBJECT TO FUTURE CONSTRUCTION DISTURBANCE.
- INSTALL EROSION CONTROL BLANKETS ON ANY SLOPES STEEPER THAN 3:1 AND HYDRO-SEED ALL DISTURBED AREAS WITH SLOPES OF 3:1 OR LESS THAT ARE NOT SUBJECT TO FUTURE CONSTRUCTION DISTURBANCE. ALL EROSION & SEDIMENT CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL THE PHASE 1 CONSTRUCTION AREA IS PERMANENTLY STABILIZED.
- REMOVE EROSION CONTROL MEASURES AND DIRECT STORMWATER INTO CATCH BASINS ALONG ACCESS DRIVEWAY AFTER THE AREA IS FULLY STABILIZED AND TRIBUTARY VEGETATION IS ESTABLISHED.

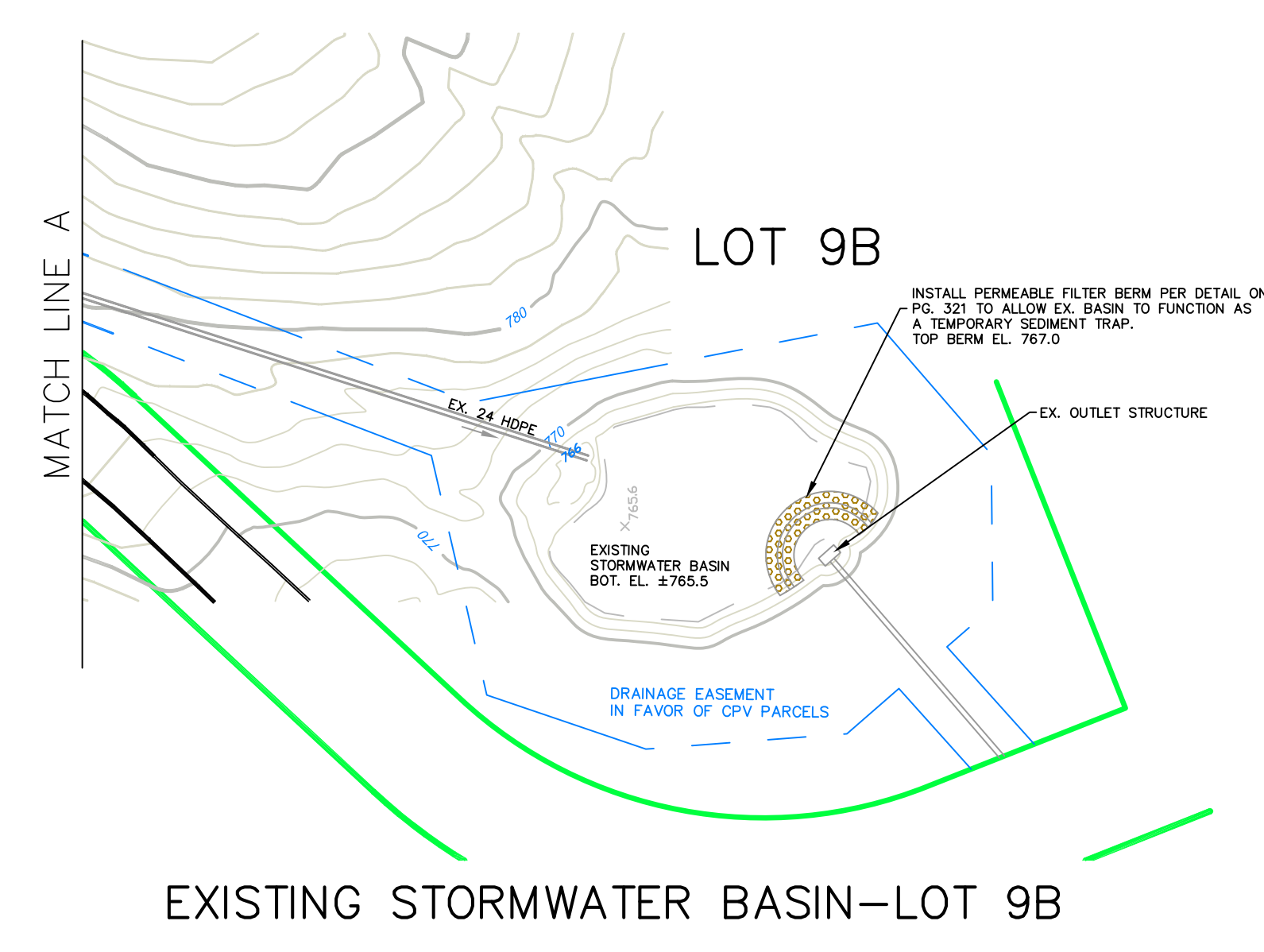
## LEGEND

	PROPERTY LINE		TEMP. WATER DIVERSION SWALE
	EXISTING CONTOUR		CONSTRUCTION ENTRANCE
	PROPOSED CONTOUR-CURRENT PHASE		LIMITS OF CLEARING/CONSTRUCTION
	FINISHED GRADE-PREVIOUS PHASE		FULL PROJECT LIMITS
	PROPOSED STORM DRAINAGE		SILT FENCE
	WETLAND LINE		STAKED HAY BALES
	WETLAND FLAG		BALED FILTER AND SILT SACK
	WETLANDS AREA		TEMPORARY SOIL STOCKPILE
	EASEMENT		TEMPORARY SEDIMENT TRAP
	EXISTING FENCE		TEMPORARY SEEDING
	STONE CHECK DAM		EROSION CONTROL BLANKET
	WATER BAR WITH HAYBALES TRAP		AREAS TO BE HYDRO-SEEDED
	PERM. WATER QUALITY SWALE		

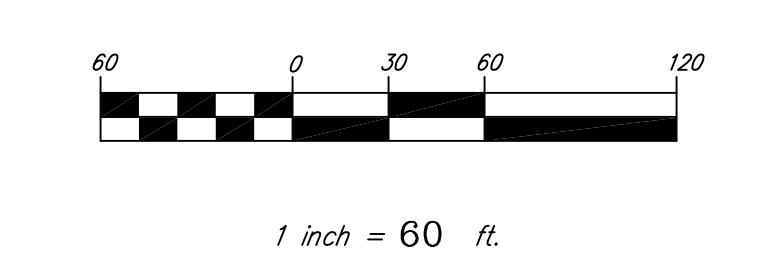
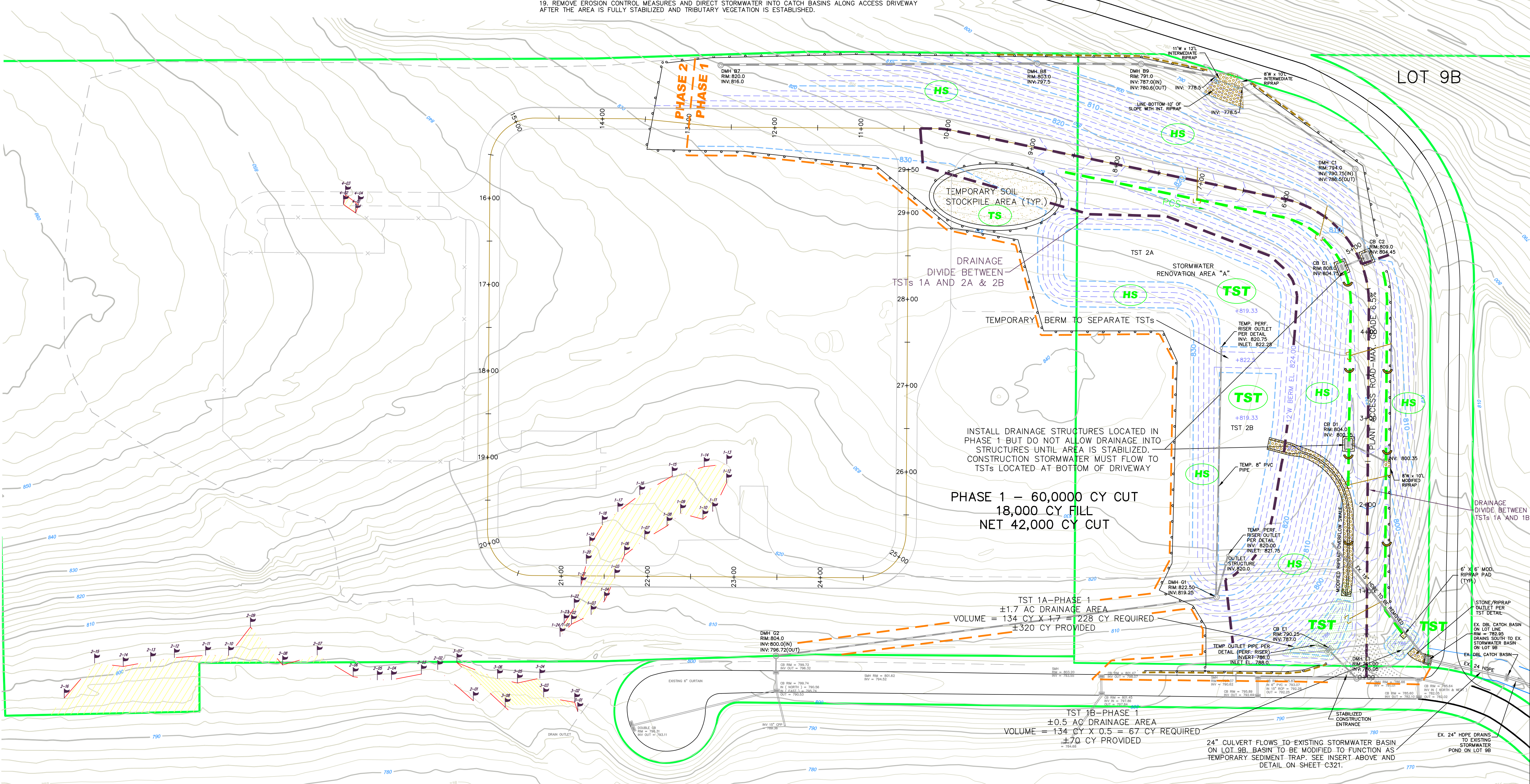


NO.	REVISION	DATE

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EXISTING STORMWATER BASIN-LOT 9B



## EROSION & SEDIMENT CONTROL PLAN PHASE 1

## CPV TOWANTIC ENERGY CENTER

OXFORD CONNECTICUT



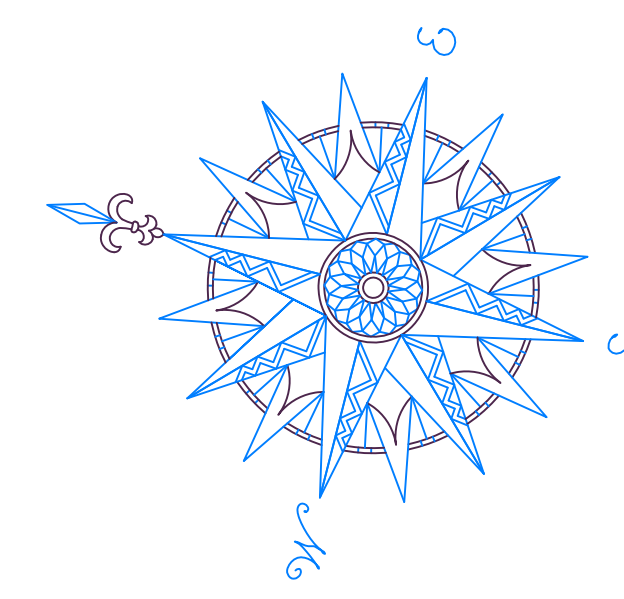
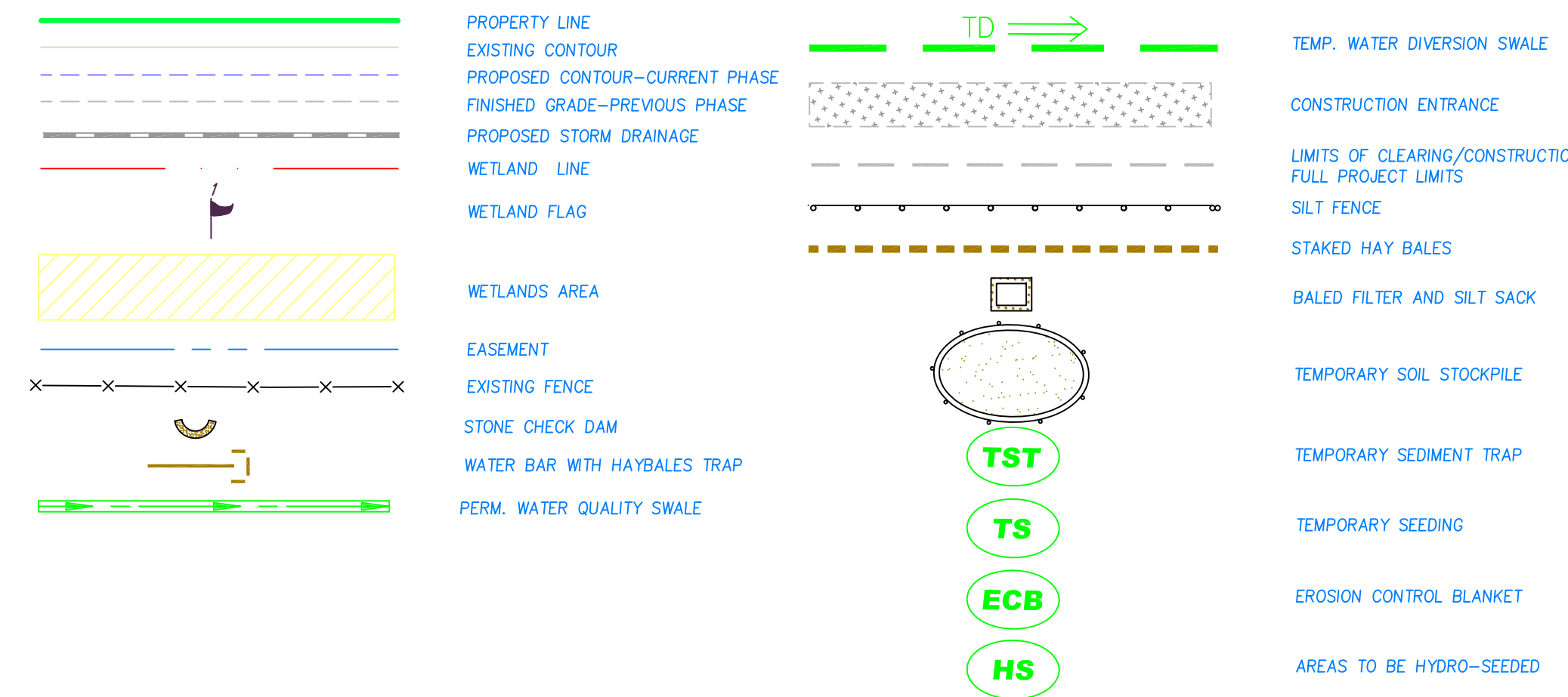
CORNERSTONE PROFESSIONAL PARK, SUITE D-101  
43 SHERMAN HILL ROAD  
WOODBURY CONNECTICUT  
(203) 266-0778

	DRAWN: BB	APPROVED: CJ
	SCALE: 1" = 60'	
	DATE: 10 JUN 15	
	PROJ. NO.: 98132	
	CADD FILE NAME: 98132	
<b>C 315</b>		

# CONSTRUCTION SEQUENCE

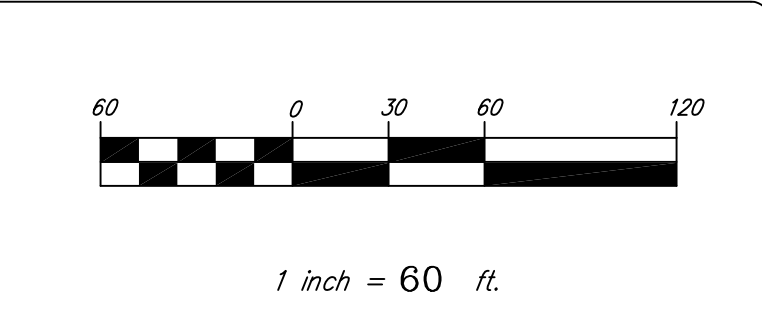
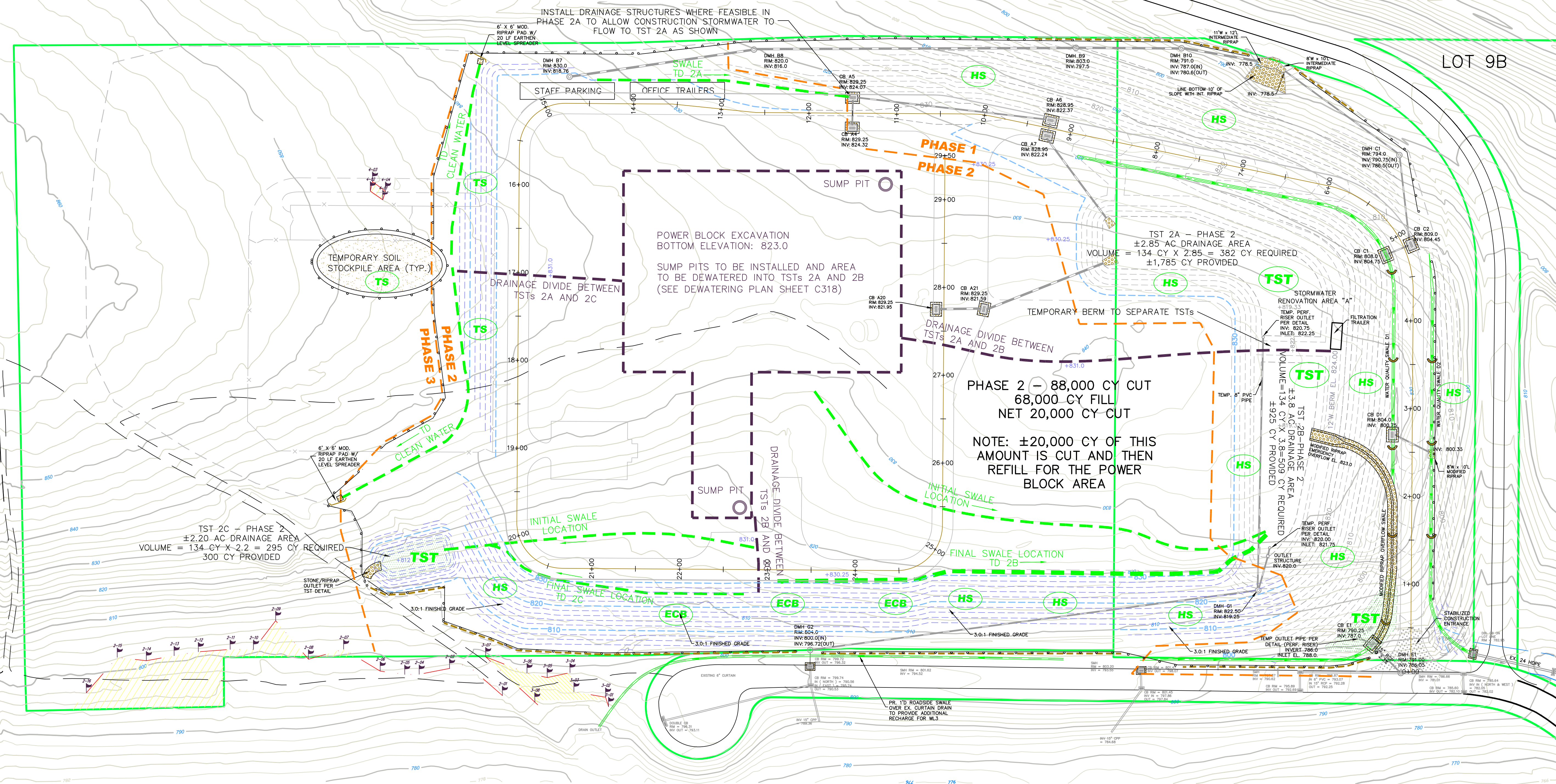
- PHASE II: (270 - 365 DAY DURATION)
- FIELD STAKEOUT THE LIMITS OF ALL CONSTRUCTION ACTIVITIES ASSOCIATED WITH PHASE 2.
  - INSTALL HAYBALES AND/OR SILTATION FENCE AROUND BOUNDARY OF THE CONSTRUCTION AREA AS SHOWN ON THE ENCLOSED PHASE 2 PLAN.
  - CREATE TEMPORARY CLEAN WATER DIVERSION TO MINIMIZE OVERLAND FLOW ONTO THE CONSTRUCTION AREA AS INDICATED ON THE SITE PLANS.
  - REMOVE STUMPS ONLY FROM THE CONSTRUCTION AREA FOR PHASE 2.
  - STRIP & STOCKPILE TOPSOIL (+/-14,000 CUBIC YARDS) AS SHOWN ON PLANS. MATERIAL MAY BE STOCKPILED IN PHASE 2. EXCESS MATERIAL MAY BE STOCKPILED OFF-SITE.
  - COMMENCE EARTHWORK AND GRADING FOR TEMPORARY SEDIMENTATION TRAP 2C (NOTE TSTs 2A AND 2B WERE CONSTRUCTED IN PHASE 1).
  - CONSTRUCT TEMPORARY DIVERSION SWALES AND INSTALLED STORM DRAINAGE STRUCTURES AS INDICATED ON SITE PLANS TO DIVERT STORMWATER FROM THE CONSTRUCTION AREAS INTO TSTs 2A, 2B AND 2C.
  - BEGIN MASS EARTH EXCAVATION INTO THE SITE WORKING FROM SOUTH TO NORTH. CUT MATERIAL WILL BE USED TO FILL EASTERN SIDE AND WESTERN FILL AREAS OF THE SITE. EXCESS CUT MATERIAL WILL BE REMOVED FROM THE SITE.
  - INSTALL STAFF PARKING AREA AND OFFICE TRAILERS.
  - BEGIN MASS EARTH EXCAVATION OF THE POWER BLOCK AREA. THIS AREA WILL BE CUT APPROXIMATELY 7' BELOW THE FINISHED GRADE ELEVATION OF THE PLANT CREATING A DEPRESSION WHICH WILL TRAP STORMWATER. THIS AREA WILL BE DEWATERED BY INSTALLING SUMPS ON NORTHEAST AND WEST SIDES OF THE EXCAVATION THAT WILL BE PUMPED INTO TSTs AFTER STORM EVENTS.
  - MATERIAL FROM THE POWER BLOCK EXCAVATION WILL BE STOCKPILED AND THEN REDEPOSITED & COMPACTED INTO THE EXCAVATION AREA AFTER THE ASSOCIATED FOUNDATION AND UTILITY WORK HAS BEEN COMPLETED.
  - INSTALL STORM DRAINAGE STRUCTURES WHERE FEASIBLE IN THE PHASE 2 CONSTRUCTION AREA. THE MAJORITY OF STORM DRAINAGE STRUCTURES IN THE PHASE 2 AREA WILL BE INSTALLED AFTER THE DEEPER FOUNDATION AND UTILITY WORK ASSOCIATED WITH THE POWER BLOCK CONSTRUCTION ARE COMPLETED.
  - PLACE TOPSOIL AND SEED ALL DISTURBED AREAS THAT ARE NOT SUBJECT TO FUTURE CONSTRUCTION DISTURBANCE.
  - INSTALL EROSION CONTROL BLANKETS ON ANY SLOPES STEEPER THAN 3:1 AND HYDRO-SEED ALL DISTURBED AREAS WITH SLOPES OF 3:1 OR LESS THAT ARE NOT SUBJECT TO FUTURE CONSTRUCTION DISTURBANCE. ALL EROSION & SEDIMENT CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL THE PHASE 2 CONSTRUCTION AREA IS PERMANENTLY STABILIZED.
  - PLACE BINDER COURSE ON DRIVEWAY AREA AFTER ALL OTHER IMPROVEMENTS ARE COMPLETE.
  - WHEN THE EXISTING STORMWATER BASIN ON LOT 9B IS NO LONGER NEEDED TO OPERATE AS A TEMPORARY SEDIMENT TRAP, REMOVE THE PERMEABLE FILER BERM, REMOVE ANY SEDIMENT BUILD-UP. REESTABLISH BOTTOM OF BASIN AT ORIGINAL GRADE AND SEED WITH N.E. EROSION CONTROL MIX FOR DETENTION BASINS AND MOIST SITES.
  - REMOVE EROSION CONTROL MEASURES AND DIRECT STORMWATER INTO CATCH BASINS AFTER THE AREA IS FULLY STABILIZED AND TRIBUTARY VEGETATION IS ESTABLISHED.

## LEGEND



NO.	REVISION	DATE

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**EROSION & SEDIMENT CONTROL PLAN PHASE 2**

**CPV TOWANTIC ENERGY CENTER**

OXFORD CONNECTICUT

**CIVIL C1**

CORNERSTONE PROFESSIONAL PARK, SUITE D-101  
43 SHERMAN HILL ROAD  
WOODBURY CONNECTICUT  
(203) 266-0778

STATE OF CONNECTICUT  
CIVIL ENGINEER  
No. 0666  
LICENSED PROFESSIONAL ENGINEER

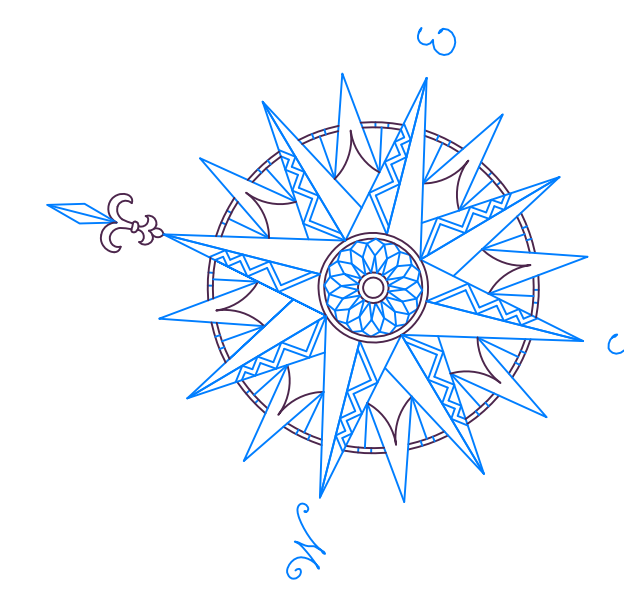
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CADD FILE NAME: 98132  
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# CONSTRUCTION SEQUENCE

- PHASE III: (180 - 270 DAY DURATION)
- FIELD STAKEOUT THE LIMITS OF ALL CONSTRUCTION ACTIVITIES ASSOCIATED WITH PHASE 3.
  - INSTALL HAYBALES AND/OR SILTATION FENCE AROUND BOUNDARY OF THE CONSTRUCTION AREA AS SHOWN ON THE ENCLOSED PHASE 3 PLAN.
  - CREATE TEMPORARY CLEAN WATER DIVERSION TO MINIMIZE OVERLAND FLOW ONTO THE CONSTRUCTION AREA AS INDICATED ON THE SITE PLANS.
  - REMOVE STUMPS ONLY FROM THE CONSTRUCTION AREA FOR PHASE 3.
  - STRIP & STOCKPILE TOPSOIL (+/-5,600 CUBIC YARDS) EXCESS MATERIAL MAY BE STOCKPILED OFF-SITE.
  - COMMENCE EARTHWORK AND GRADING FOR TEMPORARY SEDIMENTATION TRAP 3A2 (NOTE TSTs 2C FROM PHASE 2 WILL BE CLEANED OUT AND REUSED AS TST 3A1 FOR PHASE 3).
  - CONSTRUCT TEMPORARY DIVERSION SWALES AND INSTALLED STORM DRAINAGE STRUCTURES AS INDICATED ON SITE PLANS TO DIVERT STORMWATER FROM THE CONSTRUCTION AREAS INTO TSTs 3A1 & 3A2.
  - BEGIN MASS EARTH EXCAVATION INTO THE SITE WORKING NORTH INTO THE SITE. EXCESS CUT MATERIAL WILL BE REMOVED FROM THE SITE.
  - ROUGH GRADE STORMWATER RENOVATION AREA "B" SO THAT IT CAN BE USED AS A TST 3B ONCE PHASE 3 HAS REACHED SUBGRADE AND DRAINAGE WILL PITCH TO THE NORTH TOWARDS THE RENOVATION AREA.
  - CONSTRUCT THE RENOVATION AREA OUTLETS AND PERFORATED RISER ON THE OUTLET STRUCTURE PER THE DETAIL ON SHEET C321. CONSTRUCT POND DISCHARGE OUTLET PIPING TO STORM DRAINAGE ALONG THE EASTERN PROPERTY LINE PREVIOUSLY INSTALLED IN PHASE 2.
  - PLACE TOPSOIL AND SEED ALL DISTURBED AREAS THAT ARE NOT SUBJECT TO FUTURE CONSTRUCTION DISTURBANCE.
  - INSTALL EROSION CONTROL BLANKETS ON ANY SLOPES STEEPER THAN 3:1 AND HYDRO-SEED ALL DISTURBED AREAS WITH SLOPES OF 3:1 OR LESS THAT ARE NOT SUBJECT TO FUTURE CONSTRUCTION DISTURBANCE. ALL EROSION & SEDIMENT CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL THE PHASE 3 CONSTRUCTION AREA IS PERMANENTLY STABILIZED.
  - PLACE BINDER COURSE ON DRIVEWAY AREA AFTER ALL OTHER SUBSURFACE IMPROVEMENTS ARE COMPLETE.
  - REMOVE EROSION CONTROL MEASURES AND DIRECT STORMWATER INTO CATCH BASINS AFTER THE AREA IS FULLY STABILIZED AND TRIBUTARY VEGETATION IS ESTABLISHED.

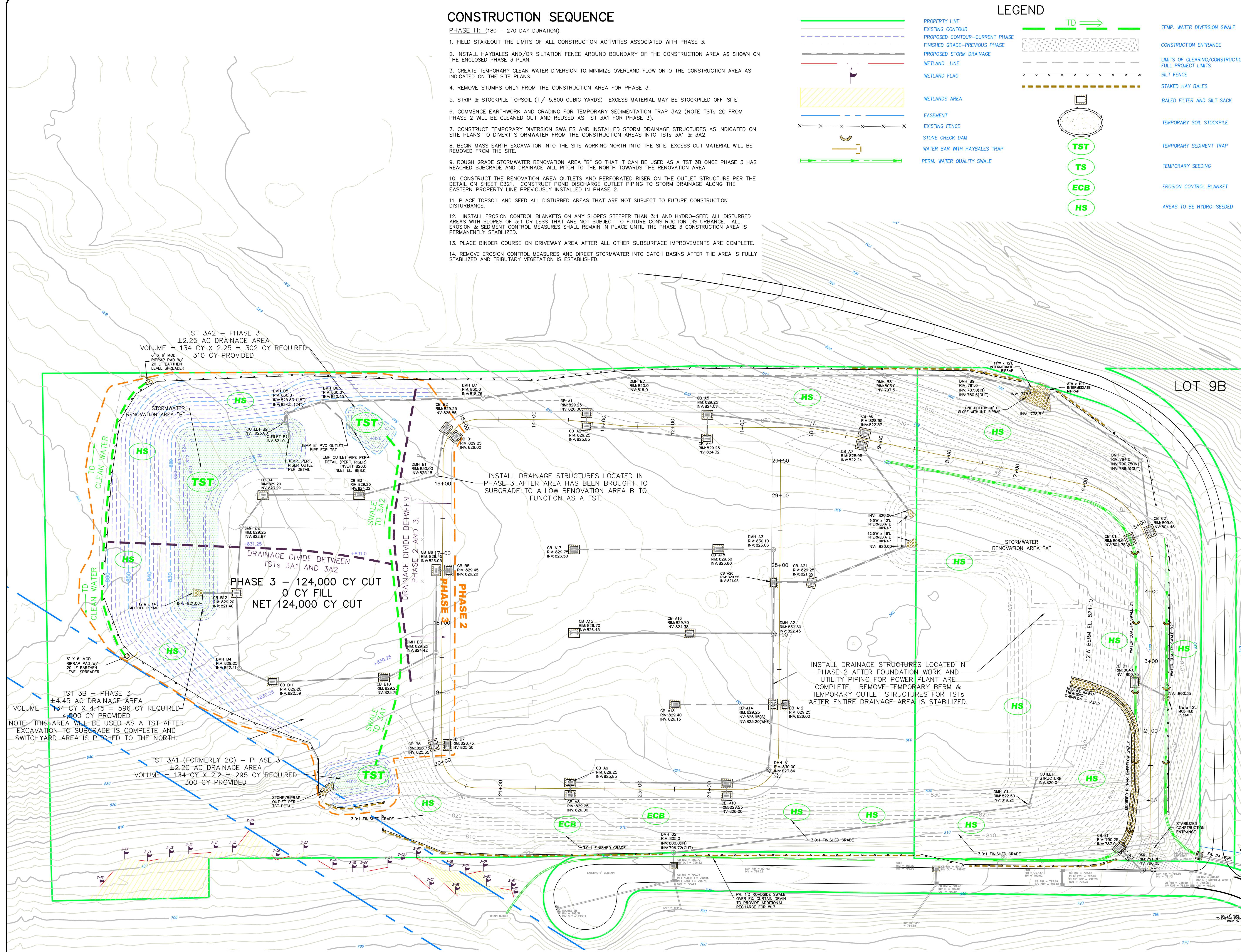
### LEGEND

- PROPERTY LINE
- EXISTING CONTOUR
- PROPOSED CONTOUR-CURRENT PHASE
- FINISHED GRADE-PREVIOUS PHASE
- PROPOSED STORM DRAINAGE
- WETLAND LINE
- WETLAND FLAG
- WETLANDS AREA
- EASEMENT
- EXISTING FENCE
- STONE CHECK DAM
- PERM. WATER QUALITY SWALE
- TEMP. WATER DIVERSION SWALE
- CONSTRUCTION ENTRANCE
- LIMITS OF CLEARING/CONSTRUCTION
- FULL PROJECT LIMITS
- SILT FENCE
- STAKED HAY BALES
- BALED FILTER AND SILT SACK
- TEMPORARY SOIL STOCKPILE
- TEMPORARY SEDIMENT TRAP
- TEMPORARY SEEDING
- EROSION CONTROL BLANKET
- AREAS TO BE HYDRO-SEEDED



NO.	REVISION	DATE

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## EROSION & SEDIMENT CONTROL PLAN PHASE 3

## CPV TOWANTIC ENERGY CENTER

OXFORD CONNECTICUT

# CIVIL 1

CORNERSTONE PROFESSIONAL PARK, SUITE D-101  
43 SHERMAN HILL ROAD  
WOODBURY CONNECTICUT (203) 266-0778

STATE OF CONNECTICUT  
COURT OF PROFESSIONAL REGULATION  
REGISTERED PROFESSIONAL ENGINEER  
NO. 06666

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DRAWING NO.: **C 317**

# DEWATERING PLAN

THE FOLLOWING GENERAL PRINCIPLES SHALL BE ADHERED TO WHEN DEWATERING OF AREAS OF THE CONSTRUCTION SITE IS NECESSARY:

DEWATERING METHODS SHALL FOLLOW THE GENERAL PRINCIPLES AND GUIDELINES CONTAINED IN THE 2002 CT EROSION & SEDIMENT CONTROL MANUAL.

WHEN DEWATERING OF AN EXCAVATED SITE IS REQUIRED SUMP PITS SHALL BE INSTALLED IN ACCORDANCE WITH ENCLOSED DETAILS TO MINIMIZE THE SEDIMENT BEING PUMPED FROM THE EXCAVATED AREA.

THE BOTTOM ELEVATION OF SUMP PITS SHALL BE A MINIMUM OF 2 FEET BELOW THE ELEVATION OF THE ADJACENT WORK AREA.

SURFACE WATERS SHALL BE DIVERTED AWAY FROM AREAS NEEDING DEWATERING.

PUMPS AND INTAKE SUMPS SHALL BE LOCATED IN AREAS WHICH WILL NOT REQUIRE CONSTANT MOVING.

LOCATE PUMP DISCHARGE FACILITIES (PORTABLE, PERMANENT OR BIO-FILTERING STRUCTURES) SUCH THAT A MINIMUM DISTURBANCE OF EXISTING WETLANDS AND WATERCOURSES IS INCURRED.

PROVIDE PROTECTION AT OUTLETS FROM PUMPING OPERATIONS TO DISSIPATE PUMPING SURGES AND PREVENT EROSION AT THE POINT OF DISCHARGE.

INSPECT THE PUMPING SUMP, PUMP INTAKE PROTECTION AND PUMP DISCHARGE CONDITIONS FREQUENTLY FOR PROPER FUNCTIONING OF EQUIPMENT.

THE FOLLOWING SITE SPECIFIC METHODS SHALL BE ADHERED TO WHEN DEWATERING OF AREAS OF THE CONSTRUCTION SITE IS NECESSARY:

THE LARGEST AREA ANTICIPATED TO REQUIRE DEWATERING IS THE POWER BLOCK EXCAVATION AREA SHOWN ON SHEET C316. SUMP PITS WILL BE PLACED IN THE SOUTHEAST AND SOUTHWEST CORNERS OF THE EXCAVATION AS INDICATED ON THE SITE PLANS.

GROUNDWATER WILL BE PUMPED FROM THE SUMP PITS INTO TEMPORARY SEDIMENT TRAPS 2A AND 2B WHICH WILL ACT AS PUMPING SETTLING BASINS DURING DEWATERING ACTIVITIES. DEWATERING ACTIVITIES SHALL OCCUR WHEN THERE IS NO RAINFALL OCCURRING AS THE BASINS ARE TO FUNCTION ONLY AS TEMPORARY SEDIMENT TRAPS DURING RAINFALL EVENTS.

SHOULD ADDITIONAL DEWATERING OF THE CONSTRUCTION SITE BE REQUIRED THEN ADDITIONAL DEWATERING BASINS SHALL BE SIZED AND CONSTRUCTED IN ACCORDANCE WITH THE ENCLOSED DETAIL ON SHEET C321 AND SHALL BE LOCATED ON THE SITE BY THE DESIGN ENGINEER.

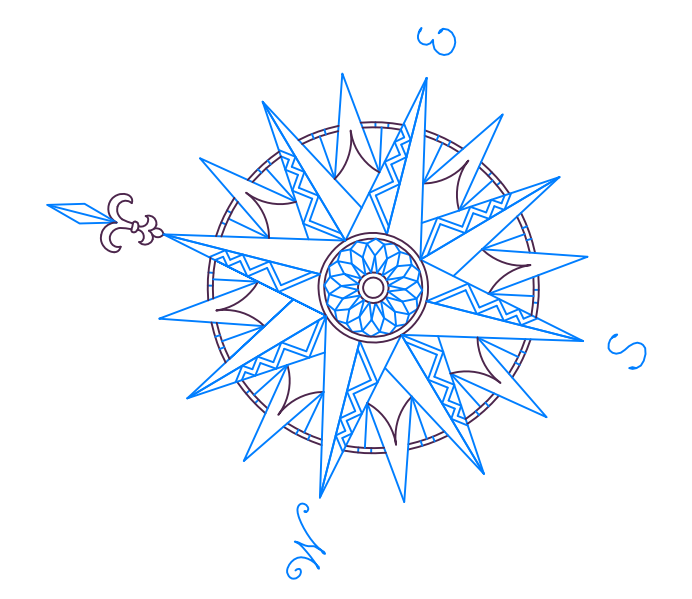
DURING DEWATERING ACTIVITIES AND STORM EVENTS RESULTING IN ANY DISCHARGE FROM THE TEMPORARY SEDIMENT TRAPS THE TURBIDITY OF THE WATER LEAVING THE SITE SHALL BE MONITORED.

AT THE DISCRETION OF THE CERTIFIED PROFESSIONAL IN CHARGE OF EROSION CONTROL INSPECTIONS, ADDITIONAL MEASURES SHALL BE IMPLEMENTED TO REDUCED TURBIDITY IF NECESSARY. THESE MEASURES MAY INCLUDE:

- FLOCCULANTS
- PORTABLE FILTRATION SYSTEMS
- PORTABLE SEDIMENT TANKS
- ADDITIONAL E&S MEASURES SUCH AS STRAW WATTLE LOGS
- JET-SPRAY HYDRAULIC EROSION CONTROL PRODUCTS

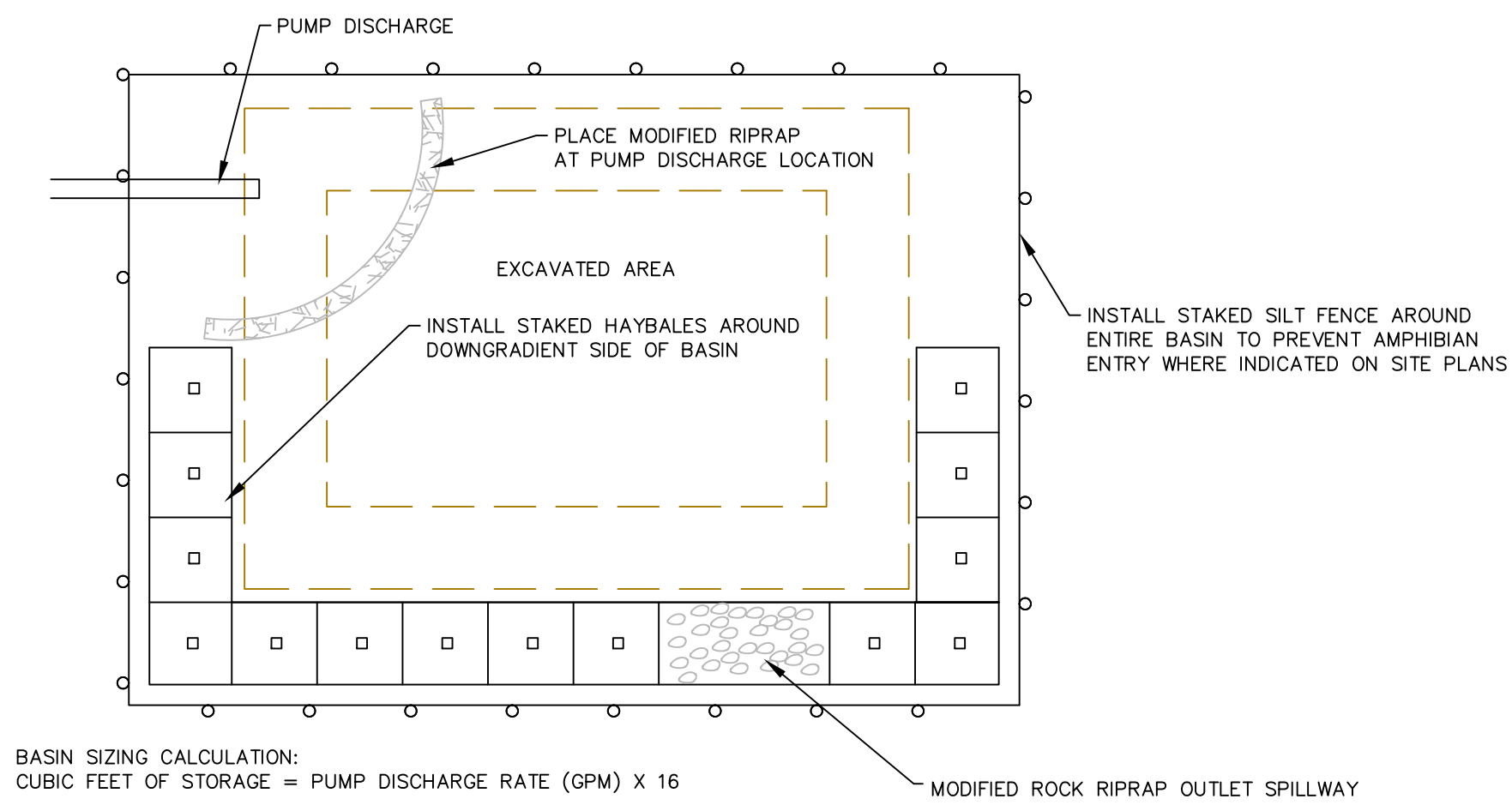
## LEGEND

- PROPERTY LINE
- - - EXISTING CONTOUR
- - - FINISHED GRADE
- - - PROPOSED STORM DRAINAGE
- - - WETLAND LINE
- ▨ WETLANDS AREA
- - - EASEMENT
- X X X X X EXISTING FENCE



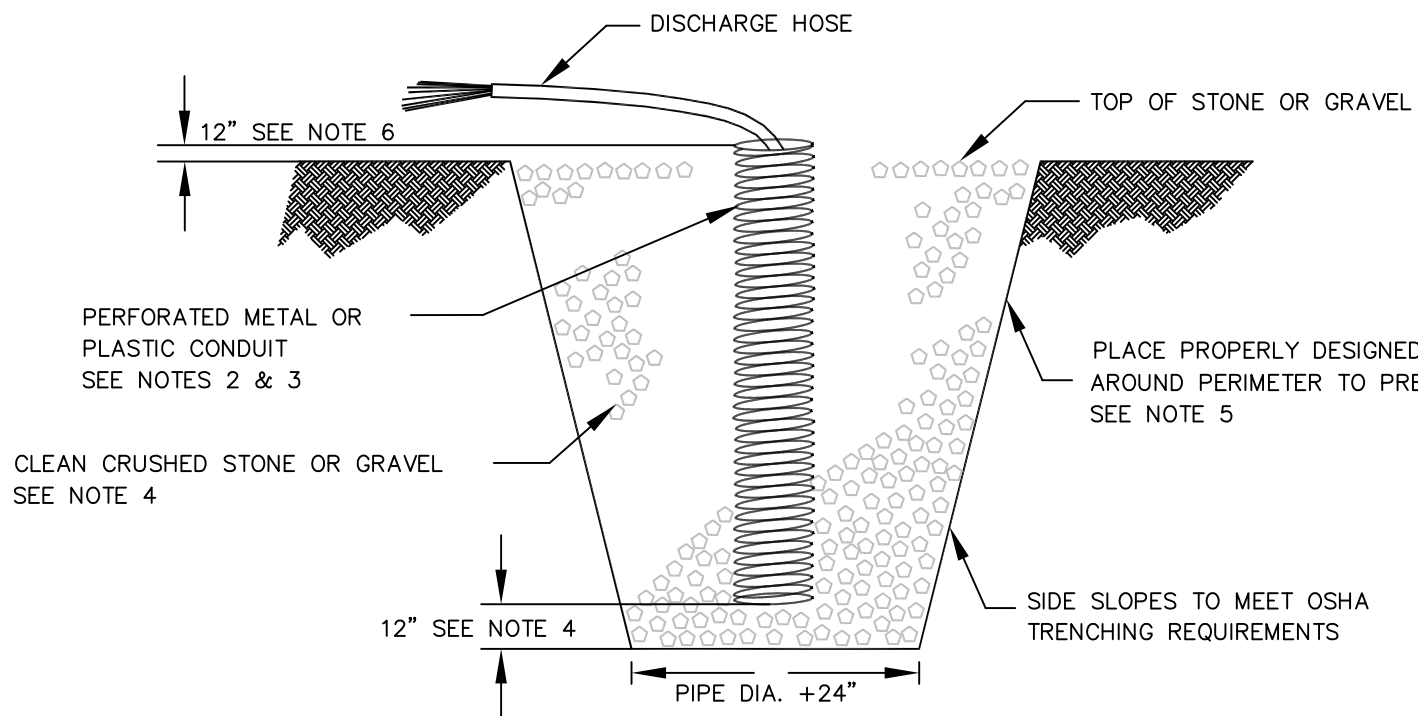
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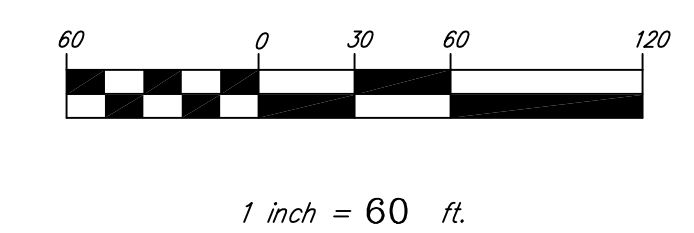
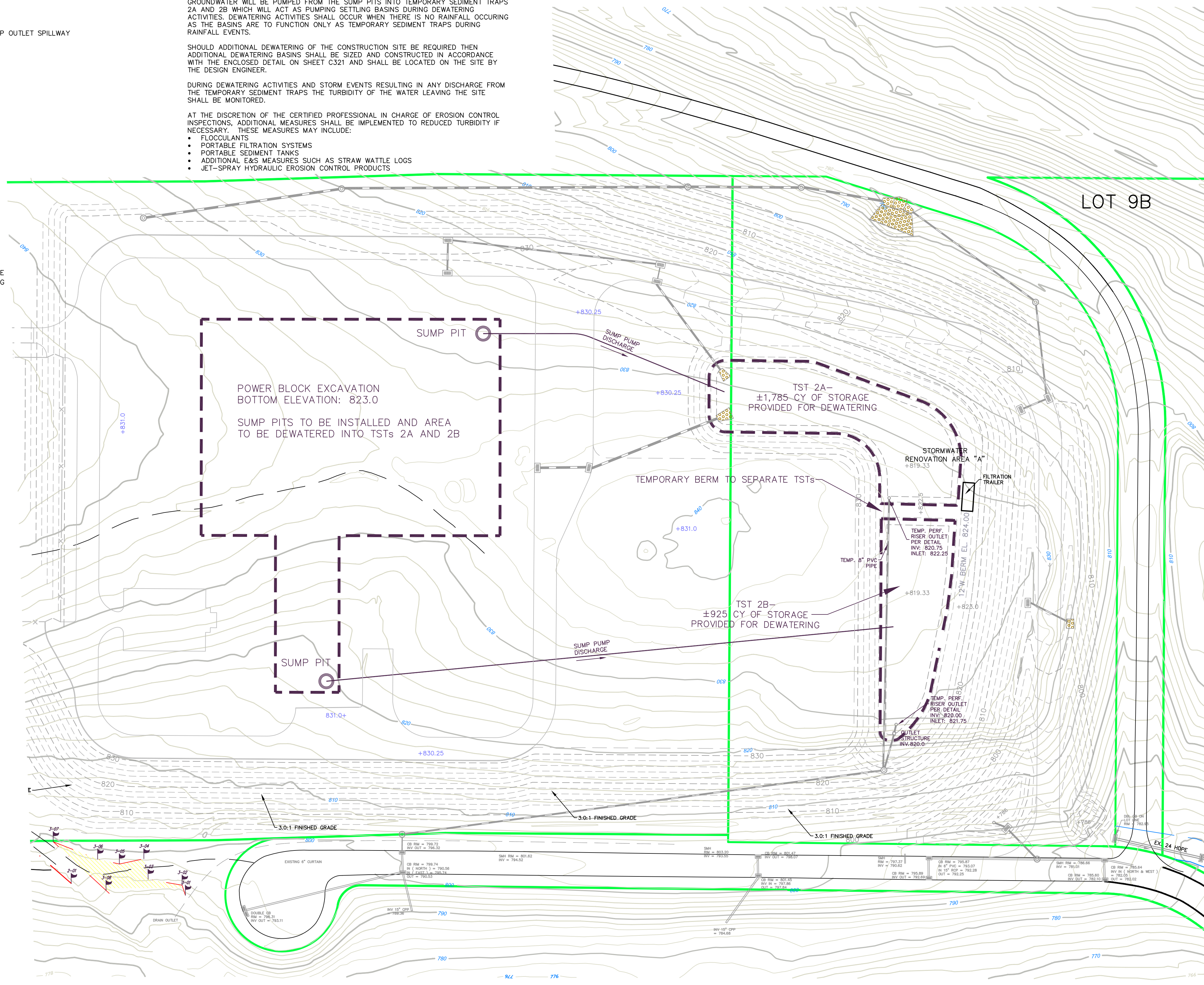
BASIN SIZING CALCULATION:  
CUBIC FEET OF STORAGE = PUMP DISCHARGE RATE (GPM) X 16

**DEWATERING SETTLING BASIN**  
N.T.S.



**TYPICAL SECTION OF SUMP PIT**  
N.T.S.

1. OVERALL SUMP PIT DIMENSIONS SHALL BE COMPATIBLE WITH ANTICIPATED SEEPAGE RATES AND PUMP SIZE TO BE USED.
2. THE STANDPIPE DIAMETER AND NUMBER OF PERFORATIONS SHALL BE COMPATIBLE WITH THE PUMP SIZE BEING USED.
3. PERFORATIONS IN THE STANDPIPE SHALL BE EITHER CIRCULAR OR SLOTS. PERFORATION SIZE SHALL NOT EXCEED 1/2" IN DIAMETER.
4. CRUSHED STONE OR GRAVEL SHALL BE NO SMALLER THAN CT DOT #67 SIZE NOR LARGER THAN CT DOT #3 SIZE. CRUSHED STONE SHALL EXTEND A MINIMUM OF 12" BELOW THE BOTTOM OF THE STANDPIPE.
5. IF EXCESSIVE MOVEMENT OF FINE SOIL PARTICLES FROM THE SURROUNDING EXISTING SOILS IS ANTICIPATED, A PROPERLY DESIGNED GEOTEXTILE SHALL BE PLACED BETWEEN THE EXISTING SOILS AND THE CRUSHED STONE OR GRAVEL BACKFILL.
6. THE STANDPIPE SHALL EXTEND A MINIMUM OF 12" ABOVE THE SURROUNDING GROUND.



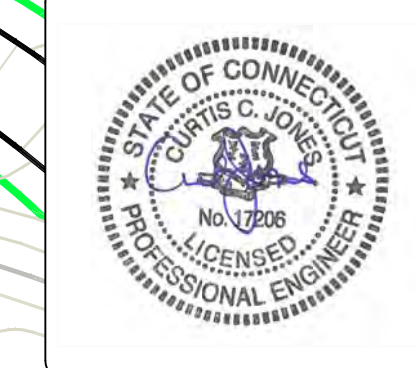
## DEWATERING PLAN & DETAILS

## CPV TOWANTIC ENERGY CENTER

OXFORD CONNECTICUT



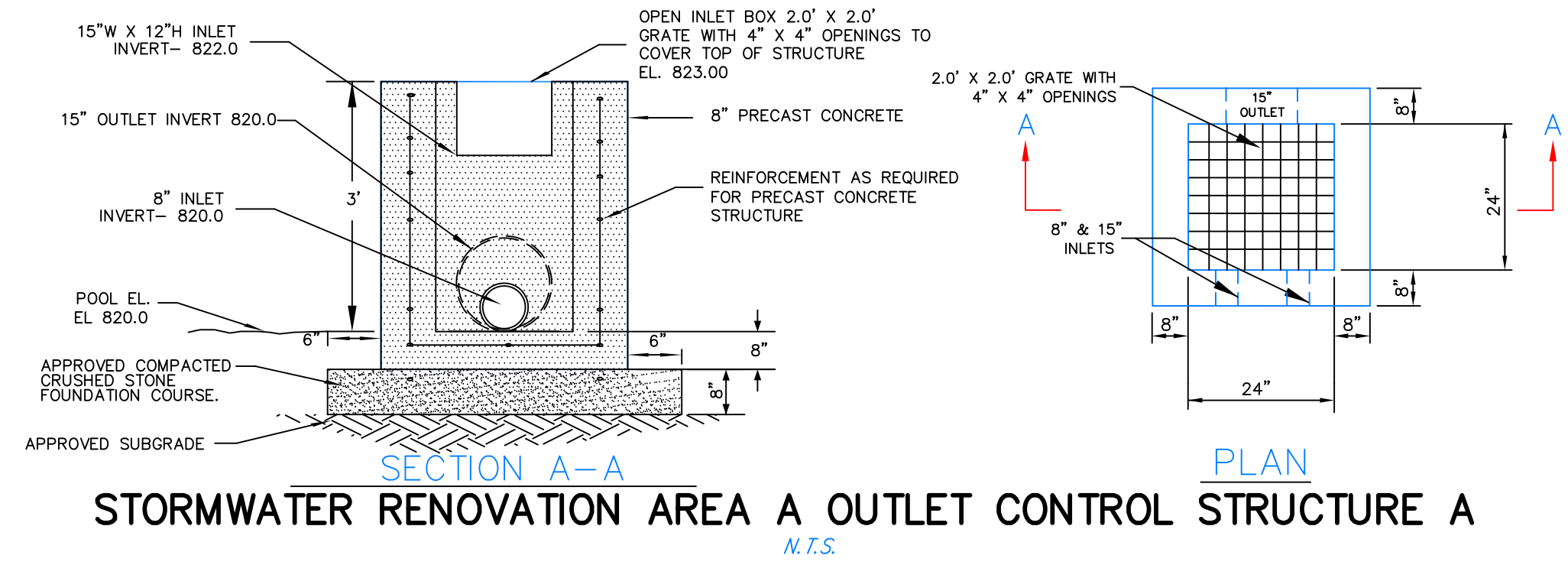
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43 SHERMAN HILL ROAD  
WOODBURY CONNECTICUT (203) 266-0778



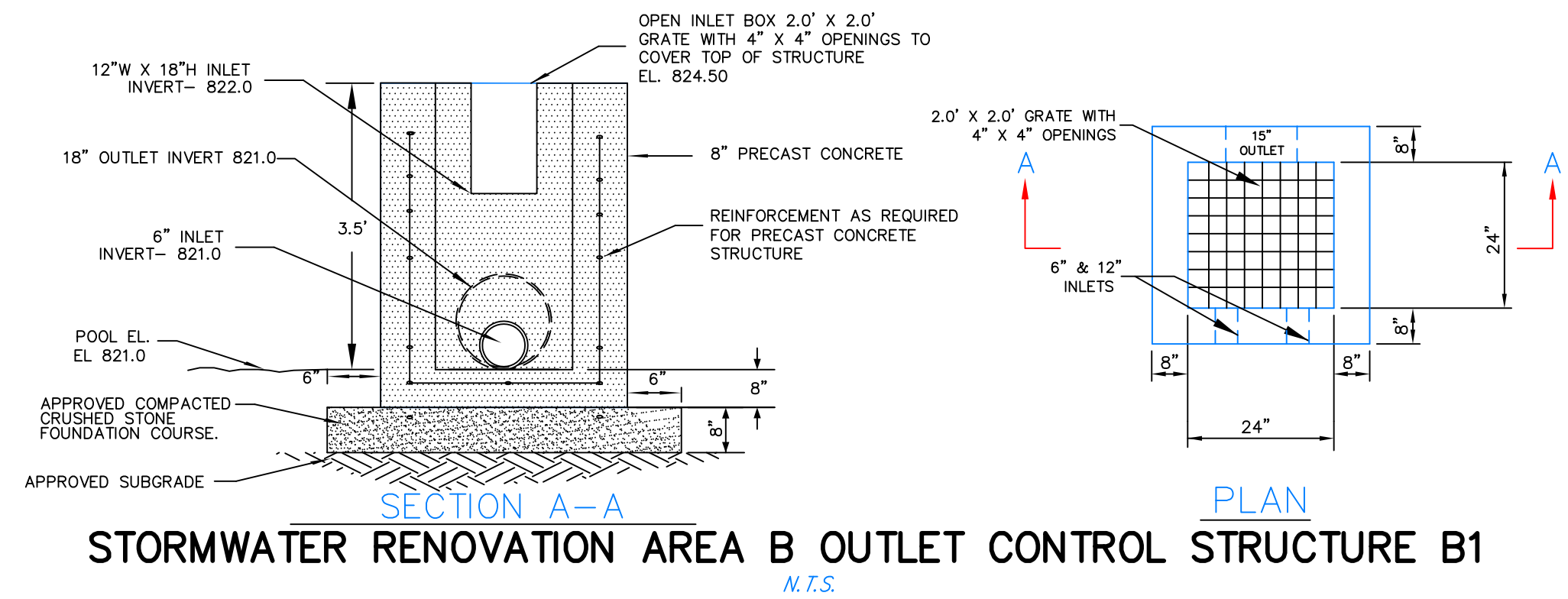
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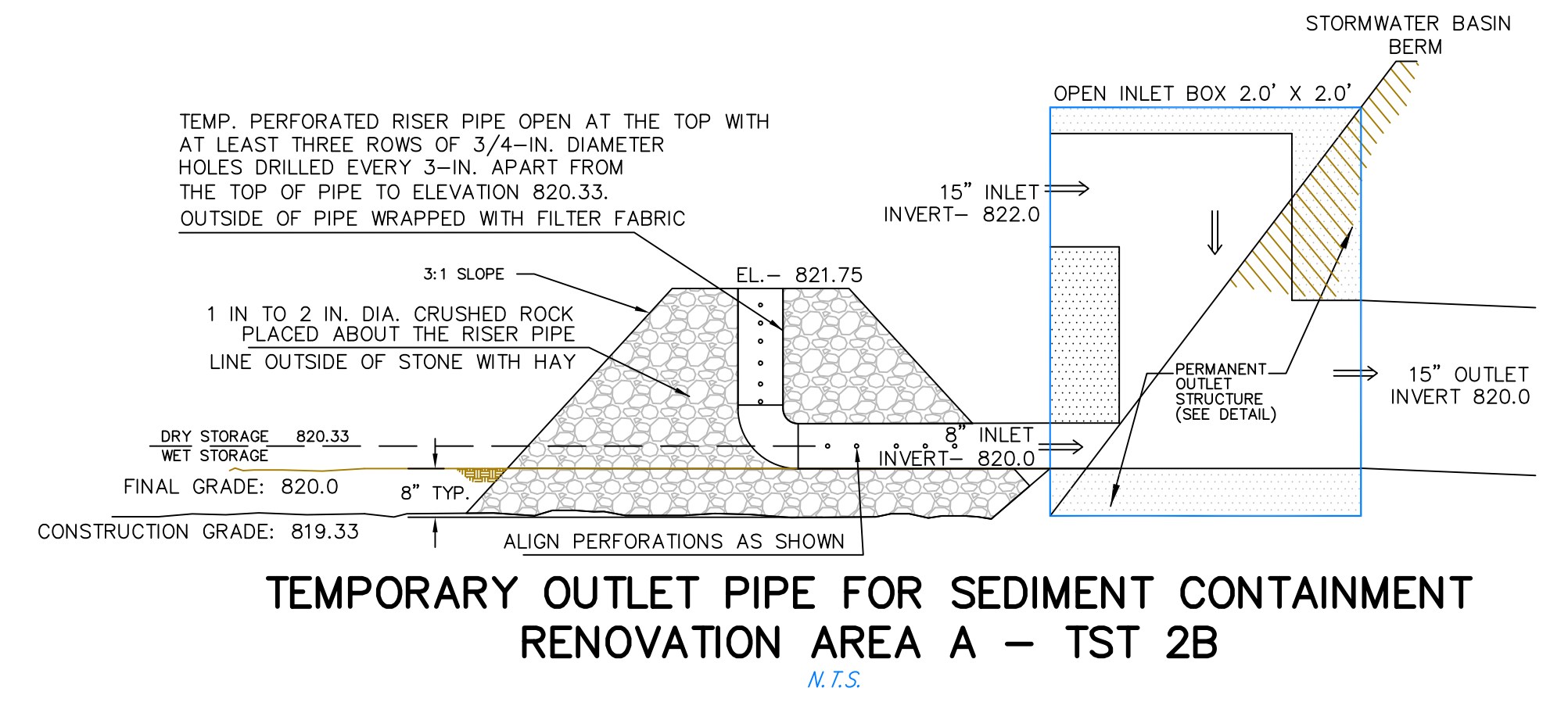




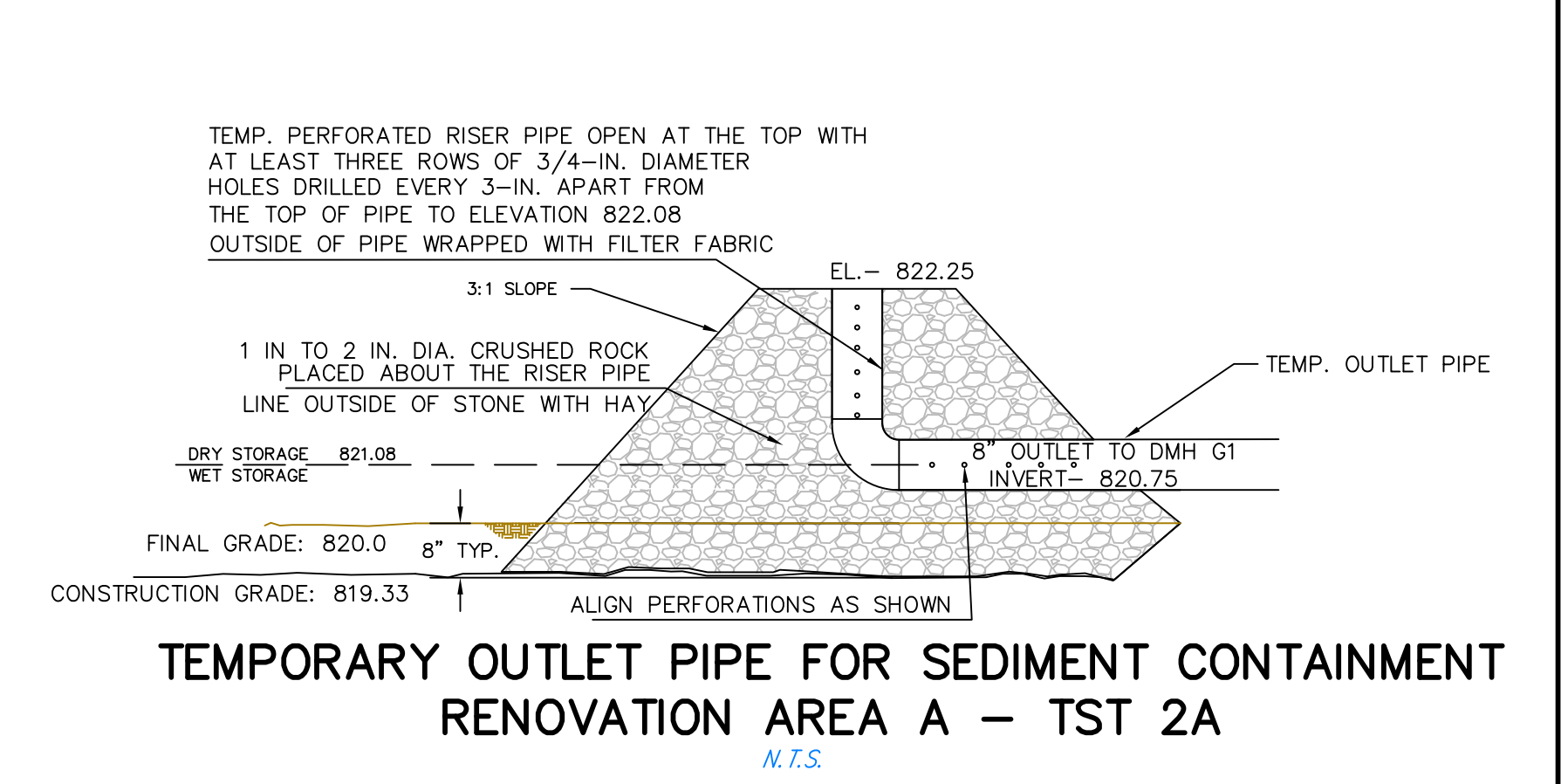
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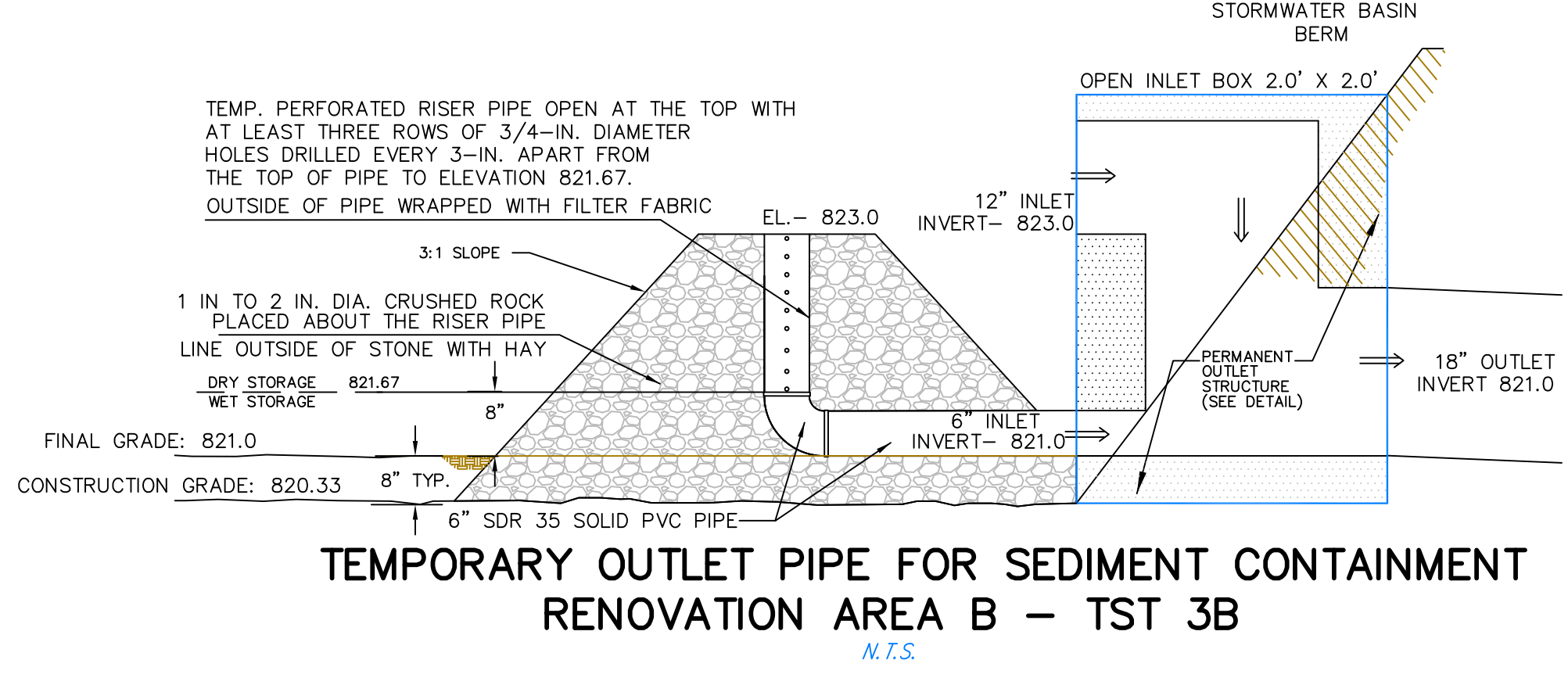
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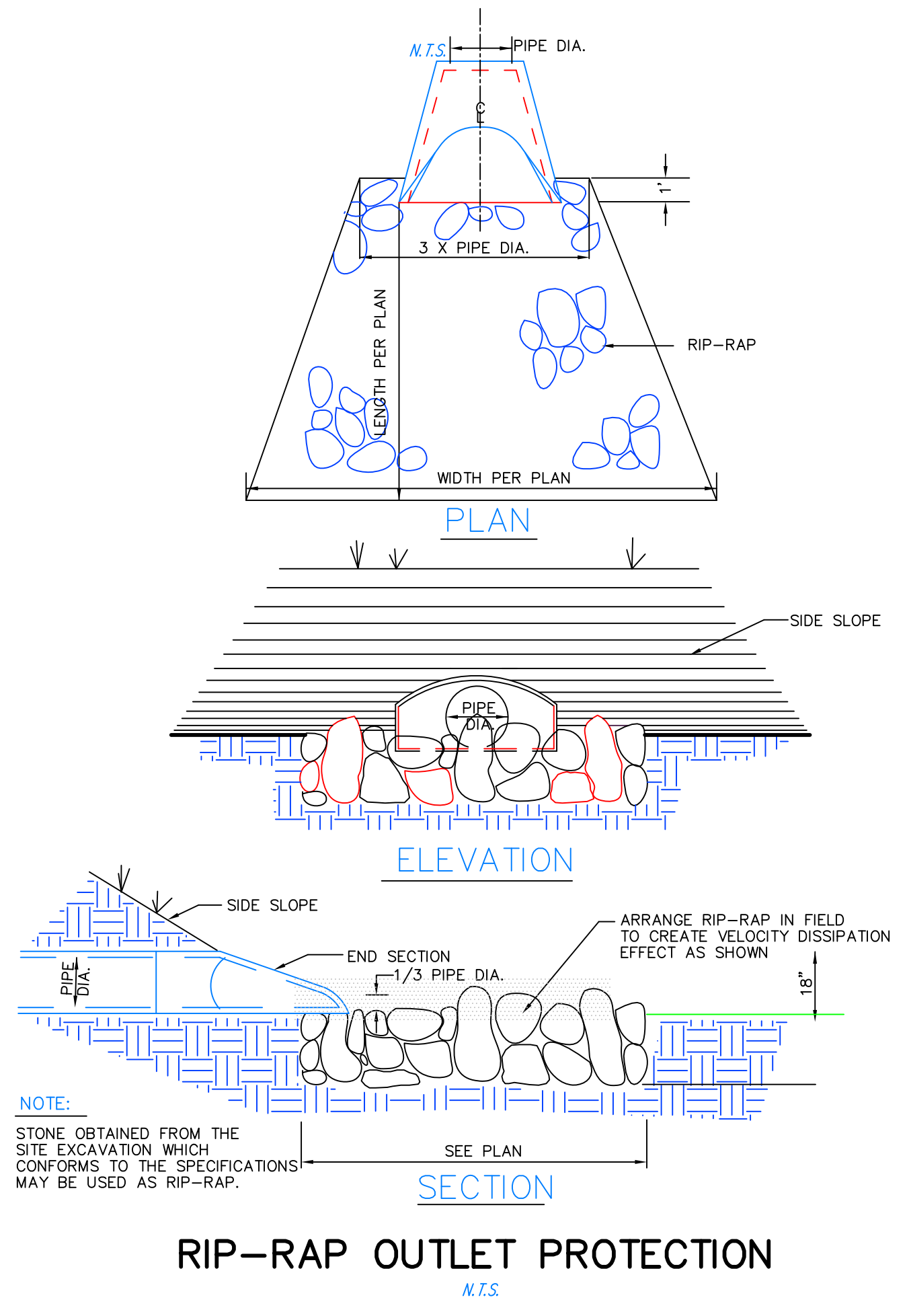
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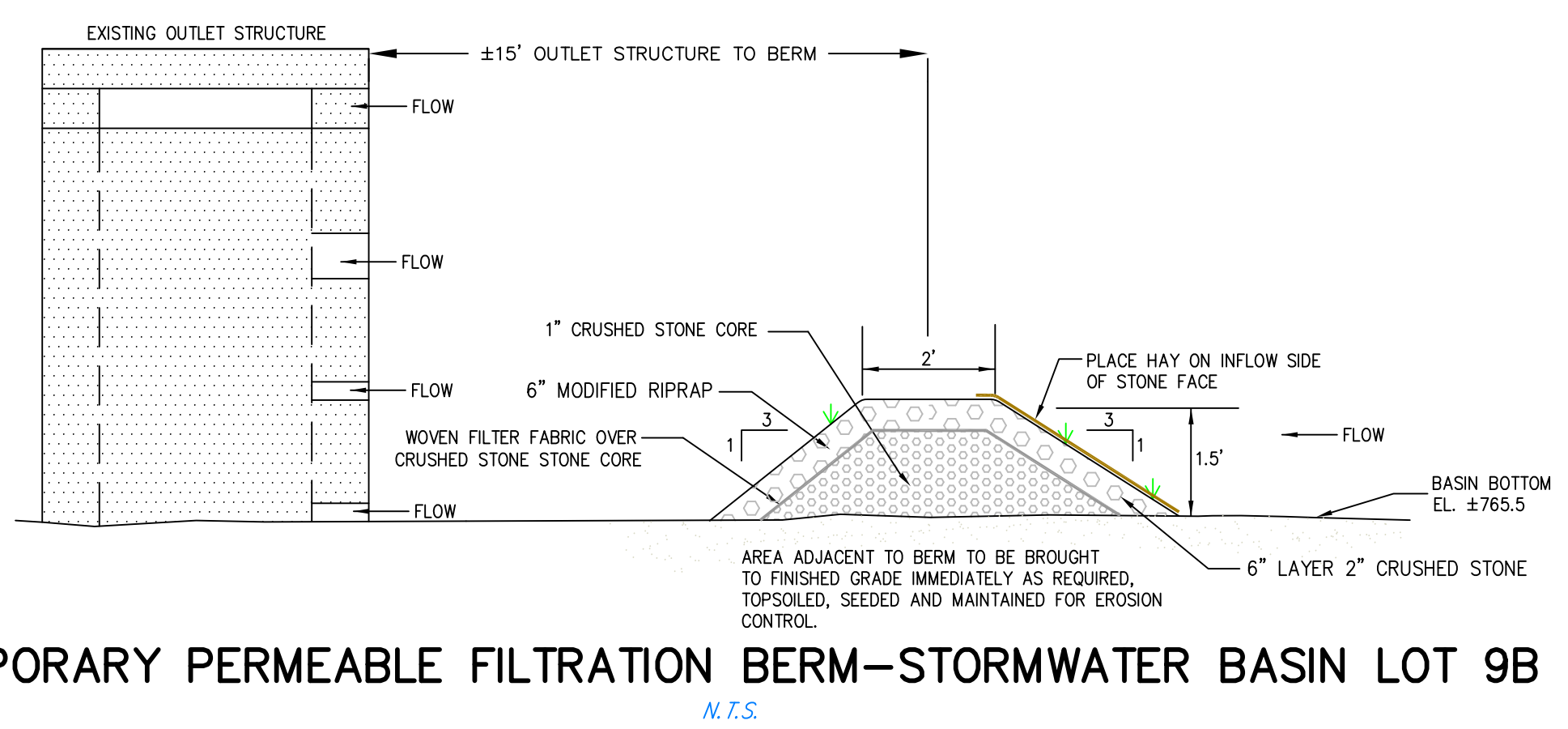
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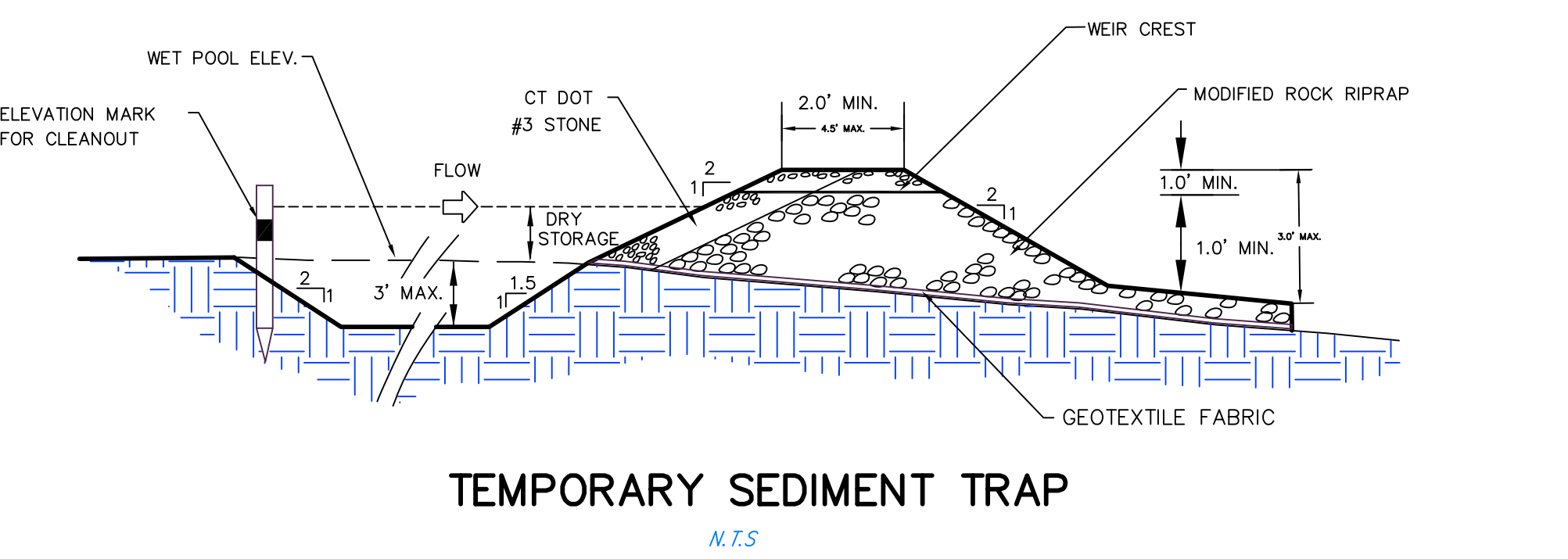
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N.T.S.



**RIP-RAP OUTLET PROTECTION**  
N.T.S.



**TEMPORARY PERMEABLE FILTRATION BERM-STORMWATER BASIN LOT 9B**  
N.T.S.



**TEMPORARY SEDIMENT TRAP**  
N.T.S.

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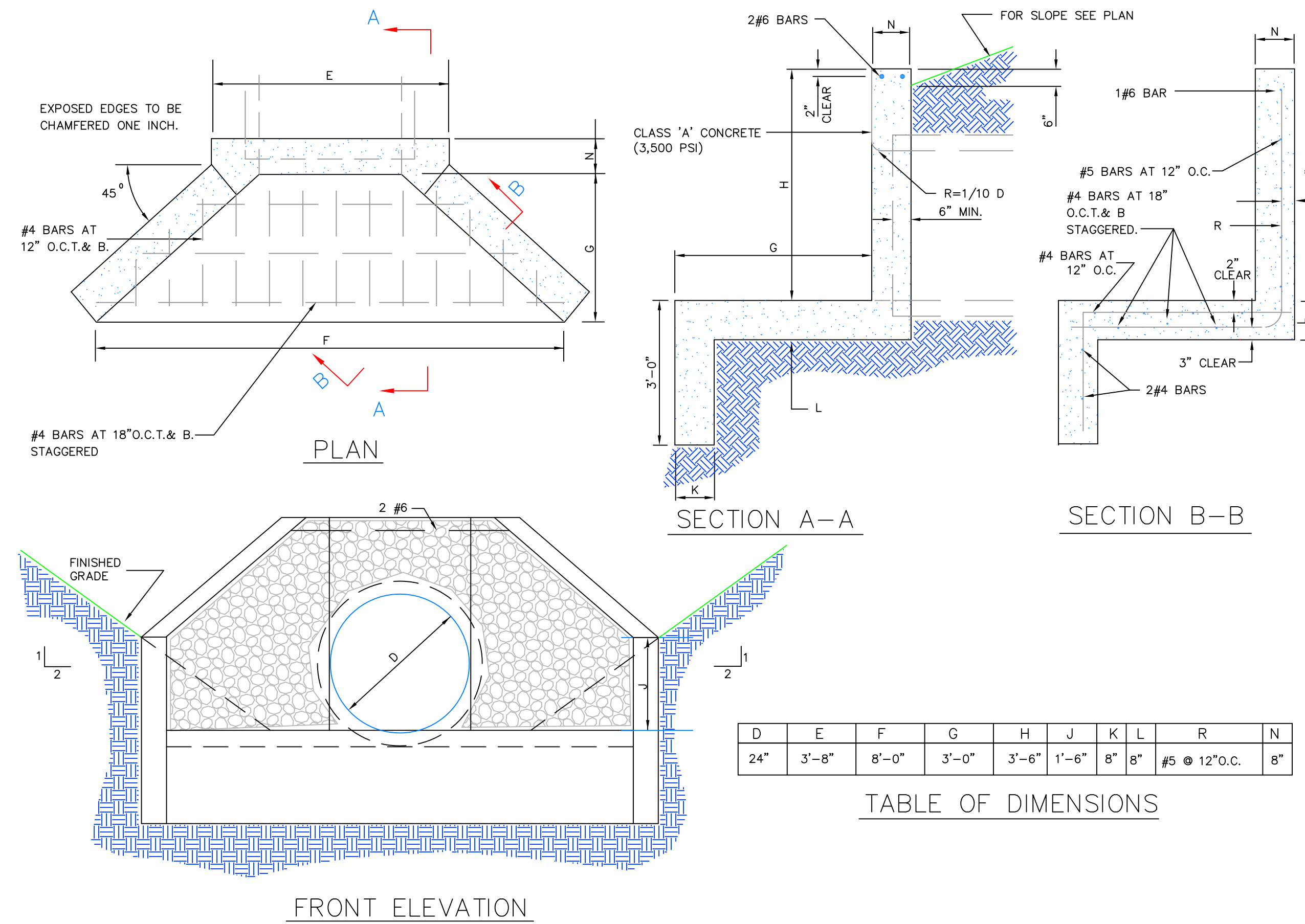
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**CPV TOWANTIC ENERGY CENTER**

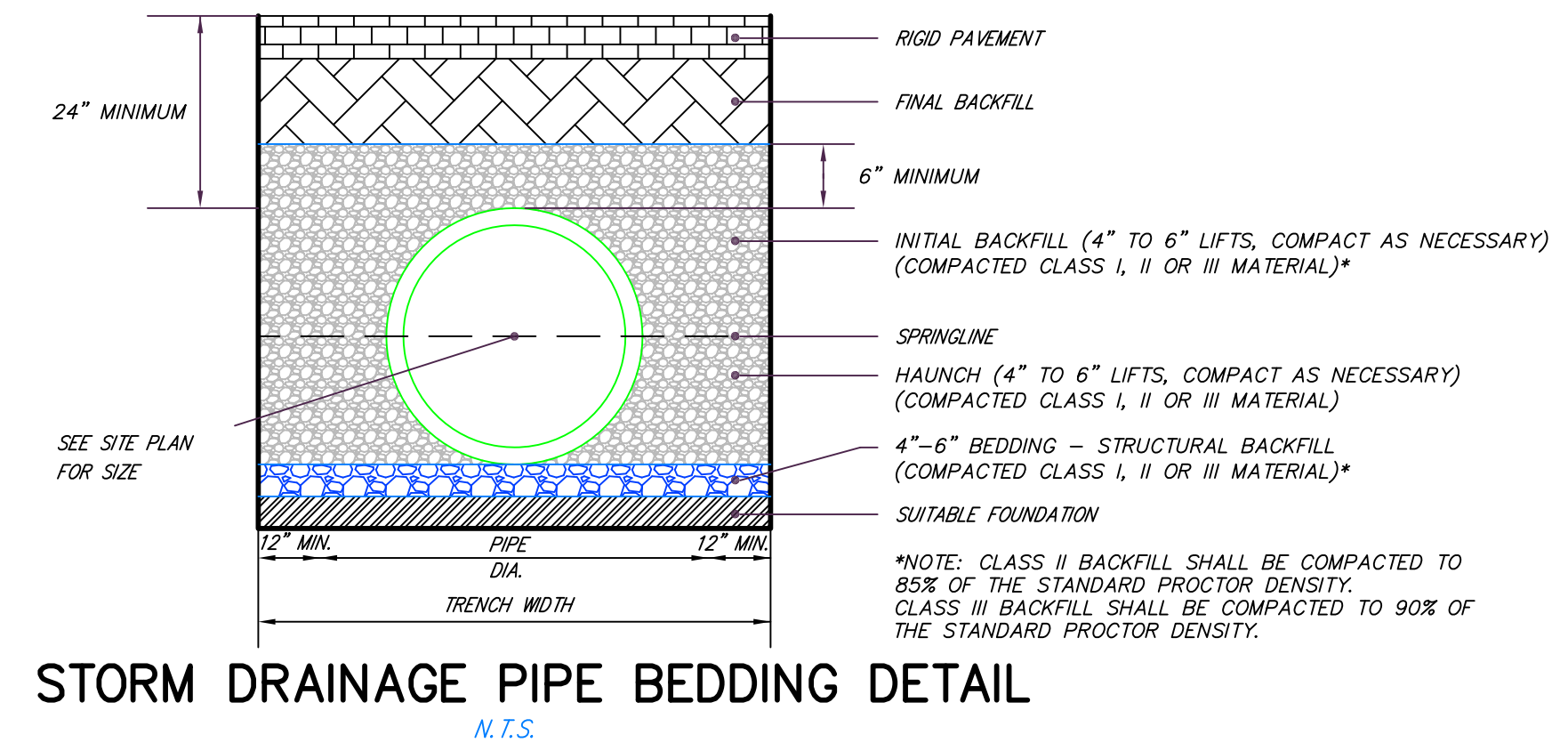
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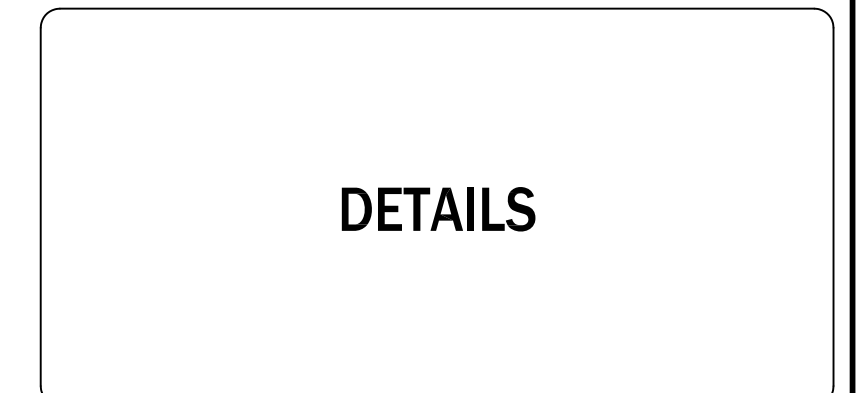
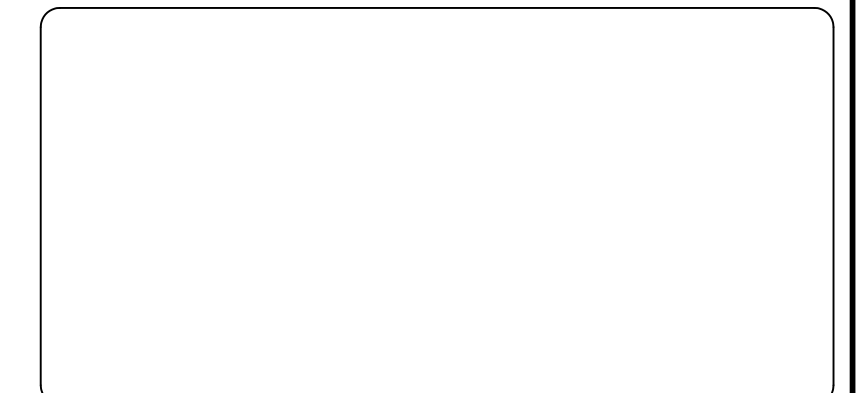


**STORMWATER RENOVATION AREA B OUTLET STRUCTURE B2**  
*N.T.S.*



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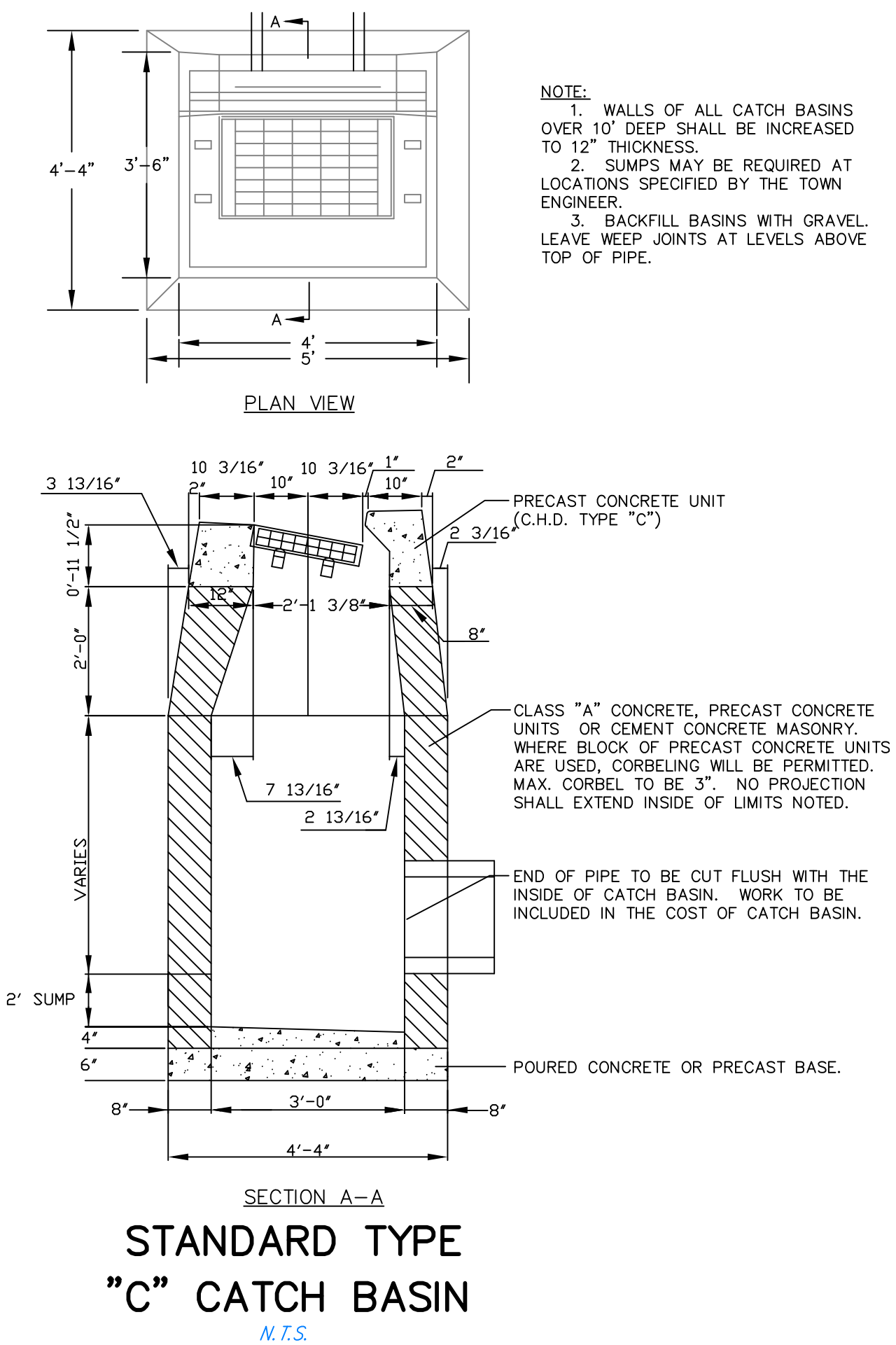
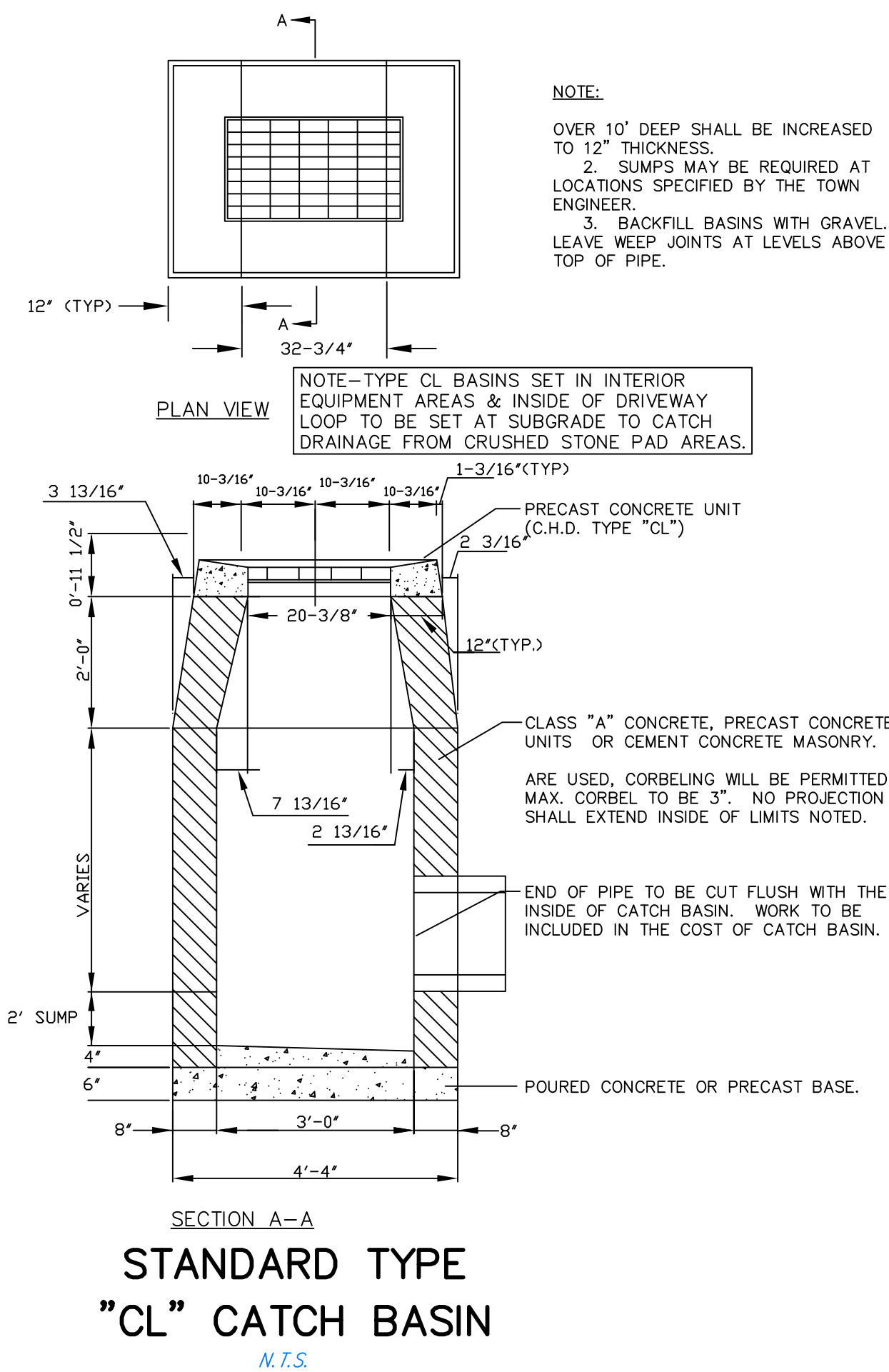
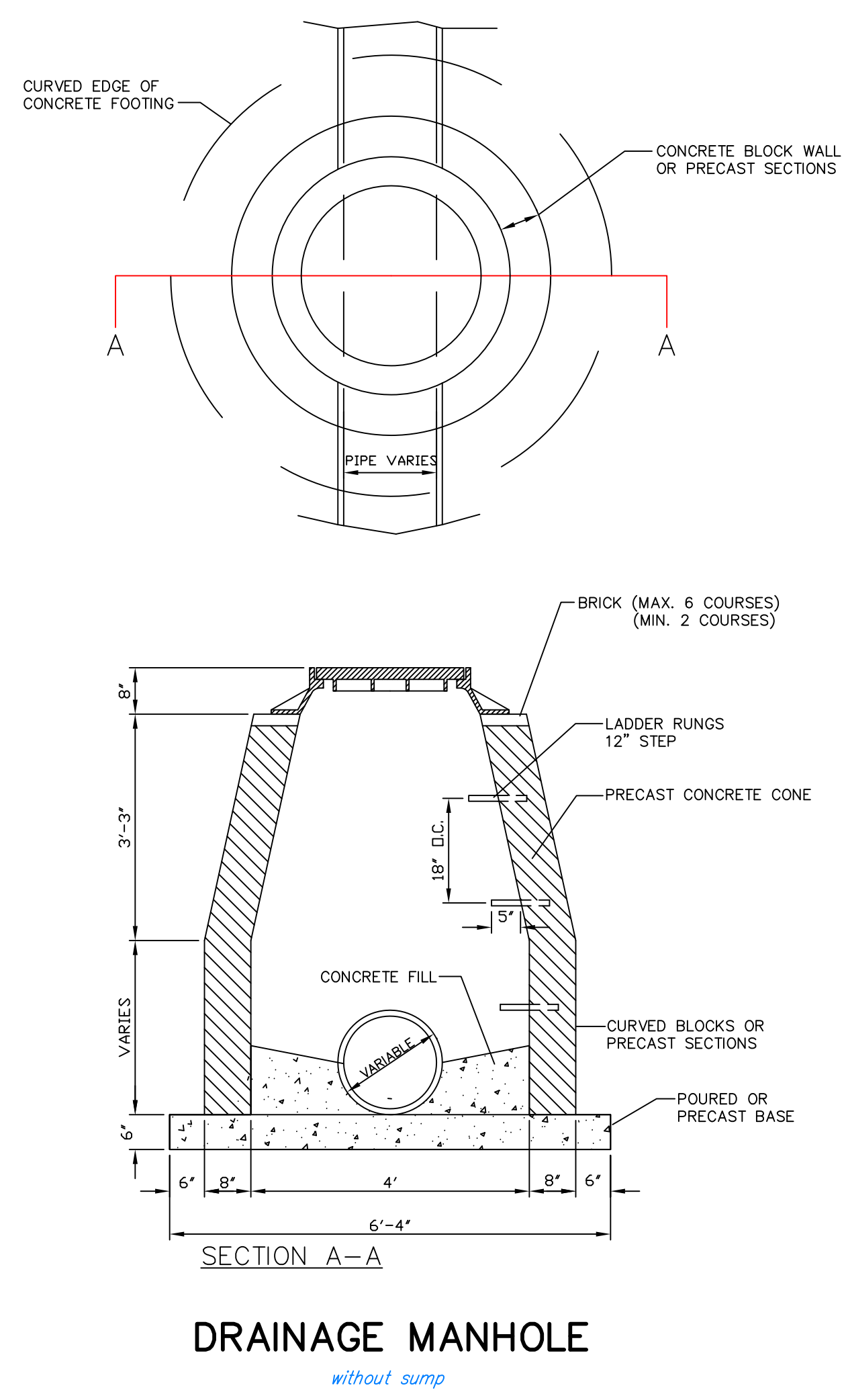


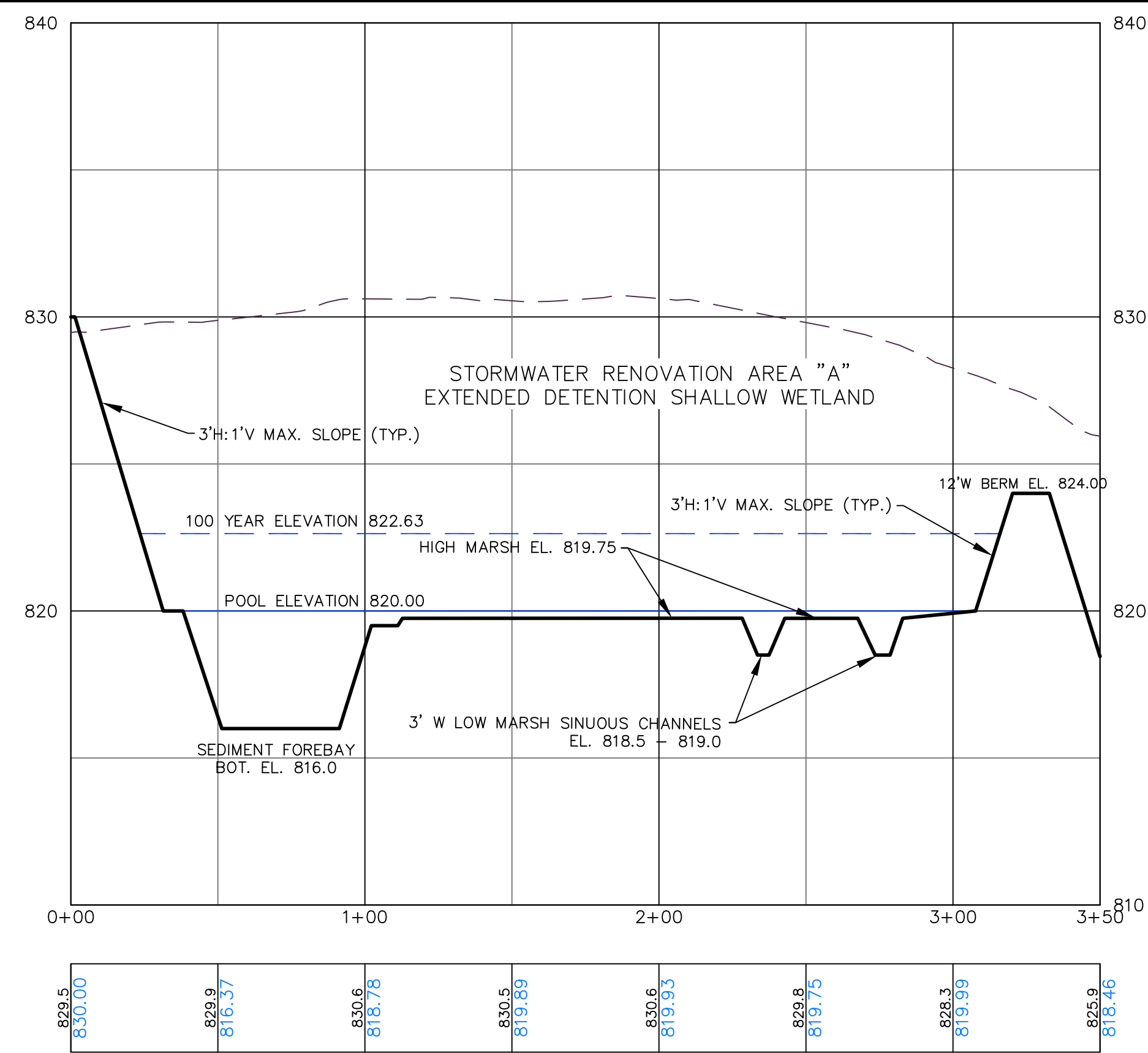
**DETAILS**

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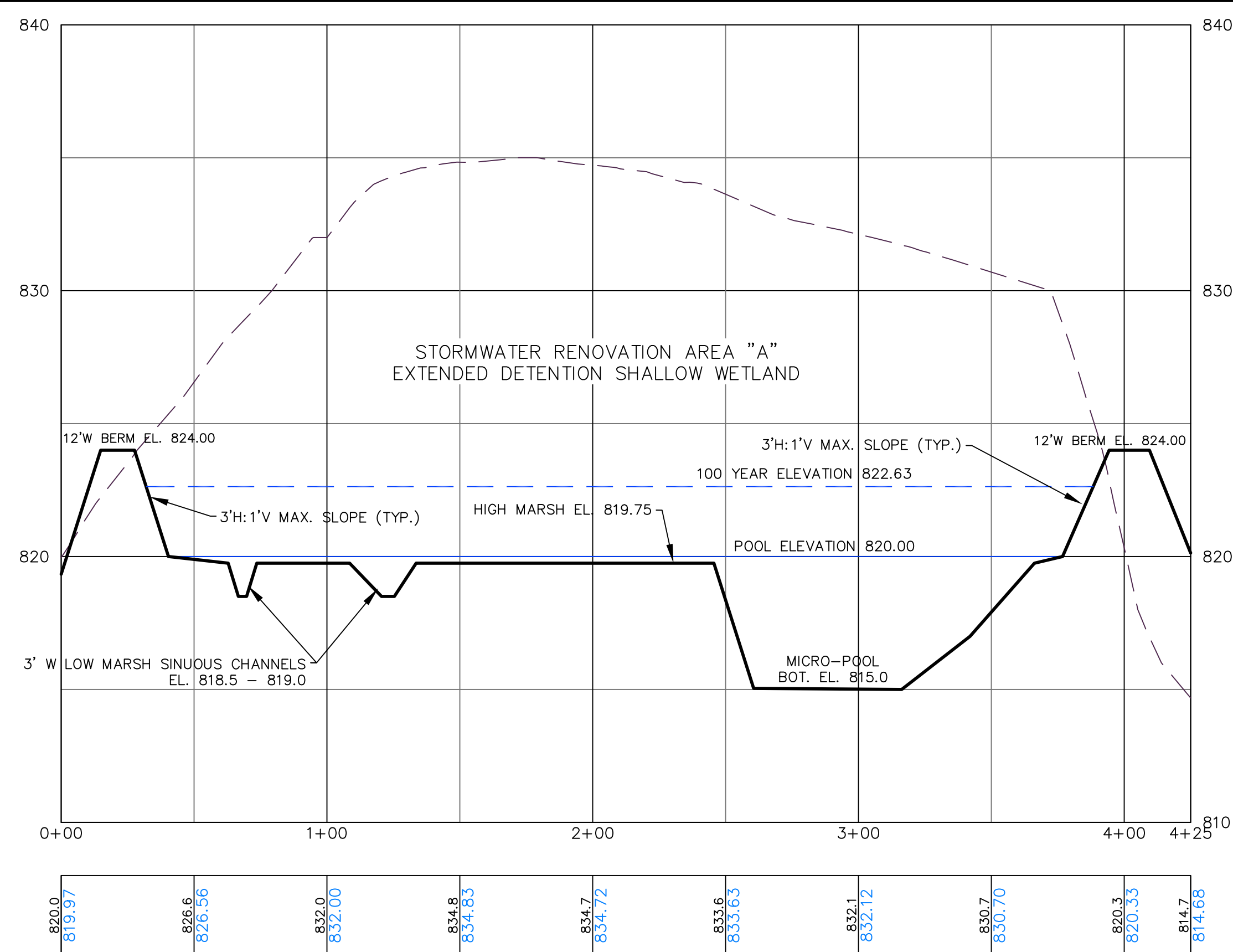
**Civil C1**  
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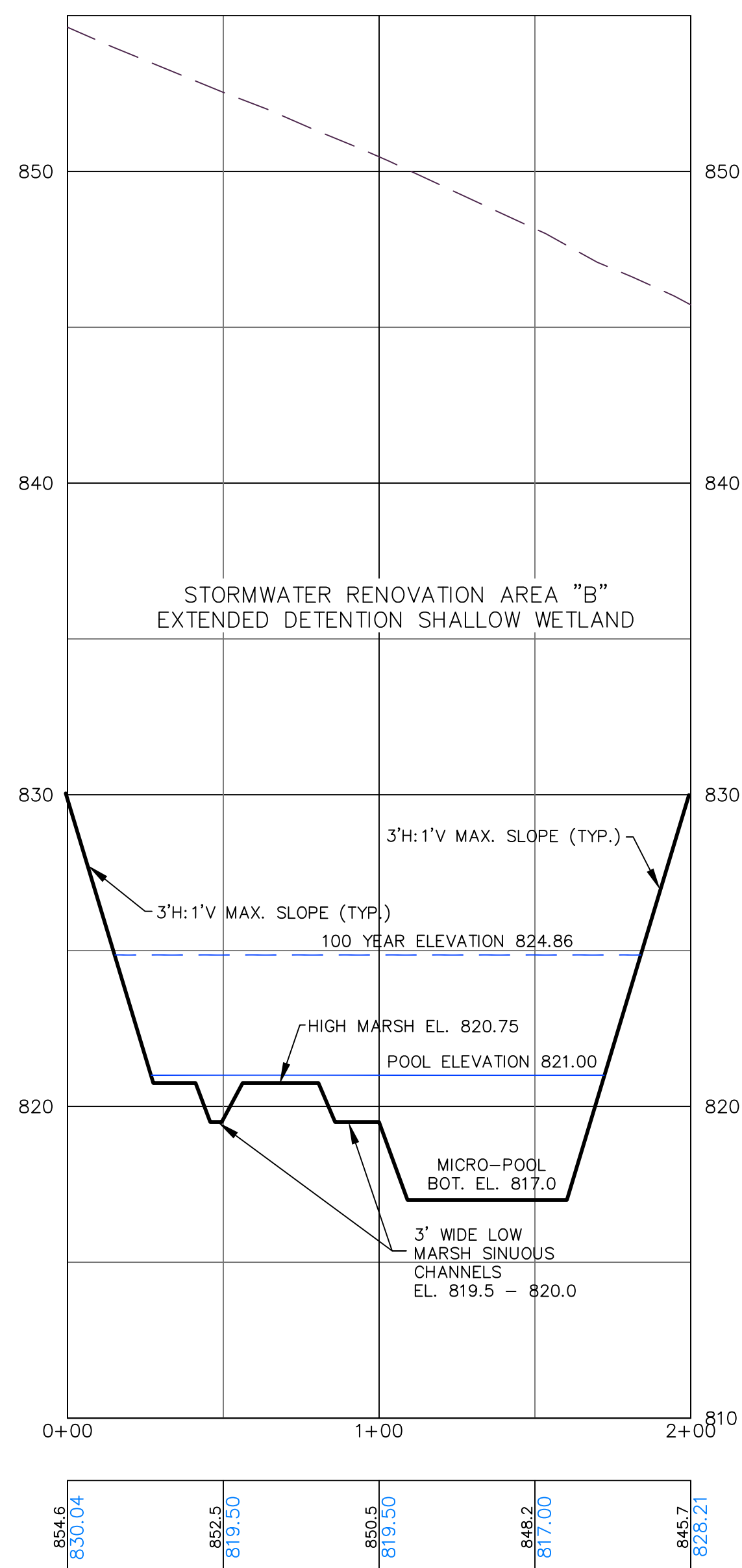




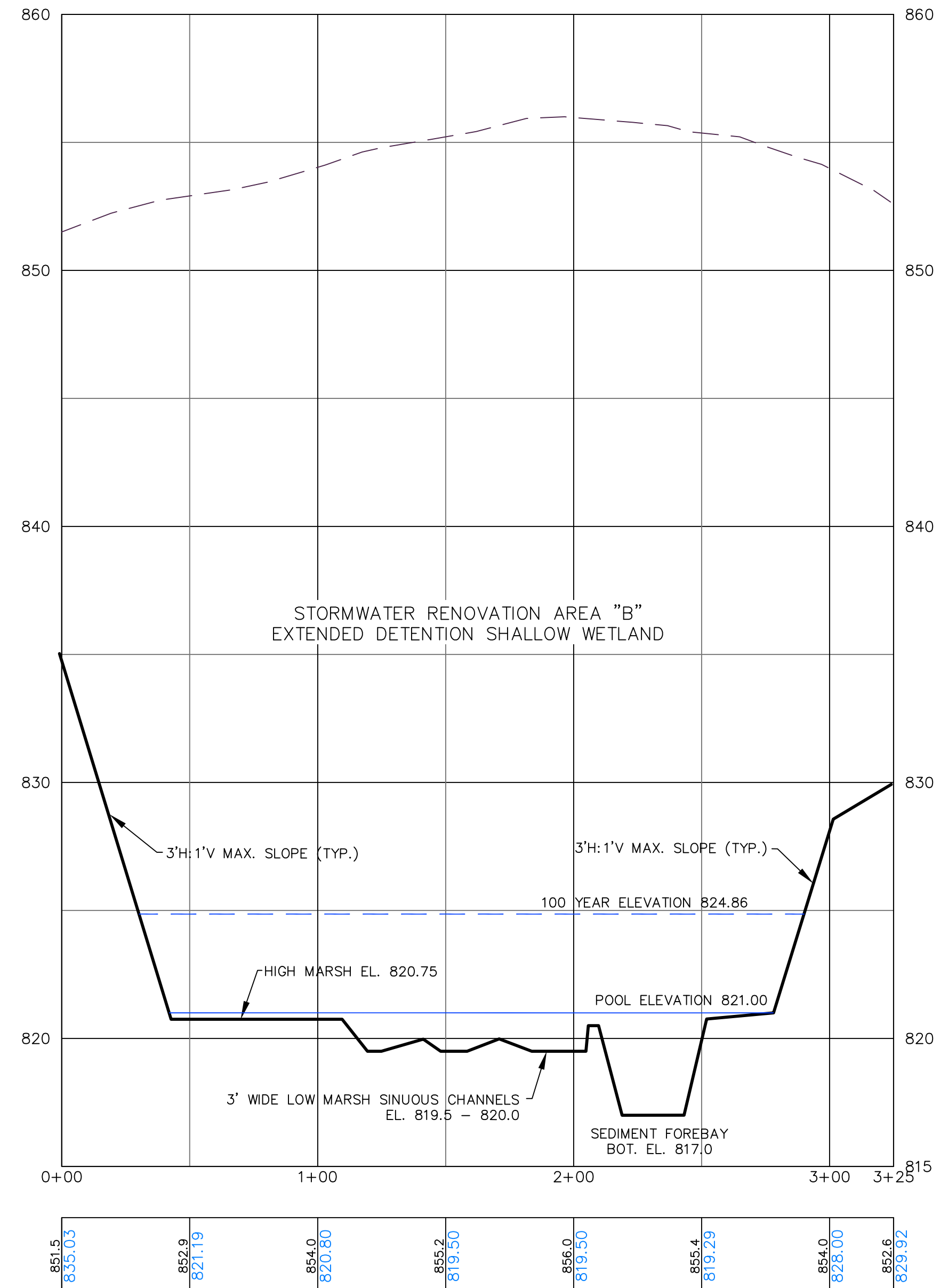
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

PLANTING SCHEDULE FOR EXTENDED DETENTION SHALLOW WETLAND BASIN A

Quantity	Botanical Name	Common Name	Size	Spacing
<b>Low Marsh</b>				
250	<i>Peltandra virginica</i> <sup>2</sup>	Arrow Arum	2" plug	2 ft on center
250	<i>Pontederia cordata</i> <sup>2</sup>	Pickeralweed	2" plug	2 ft on center
300	<i>Sagittaria latifolia</i> <sup>1</sup>	Northern Arrowhead	2" plug	2 ft on center
300	<i>Schoenoplectus acutus</i> <sup>3</sup>	Hardstem Bulrush	2" plug	2 ft on center
<b>High Marsh</b>				
850	<i>Carex comosa</i>	Bearded Sedge	2" plug	2 ft on center
850	<i>Juncus effusus</i>	Soft Rush	2" plug	2 ft on center
850	<i>Panicum virgatum</i>	Switchgrass	2" plug	2 ft on center
850	<i>Schoenoplectus pungens</i>	Three Square Bulrush	2" plug	2 ft on center
<b>Forebay</b>				
75	<i>Peltandra virginica</i> <sup>2</sup>	Arrow Arum	2" plug	2 ft on center
75	<i>Pontederia cordata</i> <sup>2</sup>	Pickeralweed	2" plug	2 ft on center
75	<i>Sagittaria latifolia</i> <sup>1,2</sup>	Northern Arrowhead	2" plug	2 ft on center
75	<i>Schoenoplectus acutus</i> <sup>3</sup>	Hardstem Bulrush	2" plug	2 ft on center
<b>Micropool</b>				
100	<i>Peltandra virginica</i> <sup>2</sup>	Arrow Arum	2" plug	2 ft on center
100	<i>Pontederia cordata</i> <sup>2</sup>	Pickeralweed	2" plug	2 ft on center
100	<i>Sagittaria latifolia</i> <sup>1,2</sup>	Northern Arrowhead	2" plug	2 ft on center
100	<i>Schoenoplectus acutus</i> <sup>3</sup>	Hardstem Bulrush	2" plug	2 ft on center

- Notes:
1. Don't plant in Fall.
  2. Plant in areas of inundation up to 12" deep.
  3. Plant in areas of inundation up to 36" deep.
  4. Marsh areas and a 5-foot wide shelf around the outer perimeter of the forebay and micropool shall consist of a minimum of 10 inches of topsoil with at least 8 percent organic carbon by weight.

PLANTING SCHEDULE FOR EXTENDED DETENTION SHALLOW WETLAND BASIN B

Quantity	Botanical Name	Common Name	Size	Spacing
<b>Low Marsh</b>				
200	<i>Peltandra virginica</i> <sup>2</sup>	Arrow Arum	2" plug	2 ft on center
200	<i>Pontederia cordata</i> <sup>2</sup>	Pickeralweed	2" plug	2 ft on center
150	<i>Sagittaria latifolia</i> <sup>1</sup>	Northern Arrowhead	2" plug	2 ft on center
150	<i>Schoenoplectus acutus</i> <sup>3</sup>	Hardstem Bulrush	2" plug	2 ft on center
<b>High Marsh</b>				
250	<i>Carex comosa</i>	Bearded Sedge	2" plug	2 ft on center
250	<i>Juncus effusus</i>	Soft Rush	2" plug	2 ft on center
250	<i>Panicum virgatum</i>	Switchgrass	2" plug	2 ft on center
200	<i>Schoenoplectus pungens</i>	Three Square Bulrush	2" plug	2 ft on center
<b>Forebay</b>				
50	<i>Peltandra virginica</i> <sup>2</sup>	Arrow Arum	2" plug	2 ft on center
50	<i>Pontederia cordata</i> <sup>2</sup>	Pickeralweed	2" plug	2 ft on center
50	<i>Sagittaria latifolia</i> <sup>1,2</sup>	Northern Arrowhead	2" plug	2 ft on center
50	<i>Schoenoplectus acutus</i> <sup>3</sup>	Hardstem Bulrush	2" plug	2 ft on center
<b>Micropool</b>				
100	<i>Peltandra virginica</i> <sup>2</sup>	Arrow Arum	2" plug	2 ft on center
50	<i>Pontederia cordata</i> <sup>2</sup>	Pickeralweed	2" plug	2 ft on center
50	<i>Sagittaria latifolia</i> <sup>1,2</sup>	Northern Arrowhead	2" plug	2 ft on center
50	<i>Schoenoplectus acutus</i> <sup>3</sup>	Hardstem Bulrush	2" plug	2 ft on center

- Notes:
1. Don't plant in Fall.
  2. Plant in areas of inundation up to 12" deep.
  3. Plant in areas of inundation up to 36" deep.
  4. Marsh areas and a 5-foot wide shelf around the outer perimeter of the forebay and micropool shall consist of a minimum of 10 inches of topsoil with at least 8 percent organic carbon by weight.

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STORMWATER RENOVATION AREA CROSS SECTIONS & PLANTING SCHEDULES

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OXFORD CONNECTICUT

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43 SHERMAN HILL ROAD  
WOODBURY CONNECTICUT (203) 266-0778

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# EROSION CONTROL NARRATIVE

## GENERAL PRINCIPLES

THE FOLLOWING GENERAL PRINCIPLES SHALL BE MAINTAINED AS EFFECTIVE MEANS OF MINIMIZING EROSION AND SEDIMENTATION DURING THE DEVELOPMENT PROCESS.

STRIPPING AWAY OF VEGETATION, REGRADING OR OTHER DEVELOPMENT SHALL BE DONE IN SUCH A WAY AS TO MINIMIZE EROSION.

GRADING AND DEVELOPMENT PLANS SHALL PRESERVE IMPORTANT NATURAL FEATURES, KEEP CUT AND FILL OPERATIONS TO A MINIMUM, AND INSURE CONFORMITY WITH TOPOGRAPHY SO AS TO CREATE THE LEAST EROSION POTENTIAL AND ADEQUATELY HANDLE THE VOLUME AND VELOCITY OF SURFACE WATER RUNOFF.

WHENEVER FEASIBLE, NATURAL VEGETATION SHALL BE RETAINED, PROTECTED AND SUPPLEMENTED WHEREVER INDICATED ON THE SITE DEVELOPMENT PLAN.

THE UNDISTURBED AREA AND THE DURATION OF EXPOSURE SHALL BE KEPT TO A PRACTICAL MINIMUM. DISTURBED SOILS SHALL BE STABILIZED AS QUICKLY AS POSSIBLE.

TEMPORARY VEGETATION AND/OR MULCHING SHALL BE USED TO PROTECT EXPOSED CRITICAL AREAS DURING DEVELOPMENT WHEN EXPECTED TO BE EXPOSED IN EXCESS OF 30 DAYS.

THE PERMANENT (FINAL) VEGETATION AND MECHANICAL EROSION CONTROL MEASURES SHALL BE INSTALLED AS SOON AS PRACTICAL DURING CONSTRUCTION.

SEDIMENT IN THE RUNOFF WATER SHALL BE TRAPPED UNTIL THE DISTURBED AREAS IS STABILIZED BY THE USE OF DEBRIS BASINS, SEDIMENT BASINS, SILT TRAPS OR SIMILAR MEASURES.

ALL TRACTS OR DEVELOPMENTS SHALL BE FINALLY GRADED TO PROVIDE PROPER DRAINAGE AWAY FROM BUILDINGS AND DISPOSE OF IT WITHOUT PONDING, AND ALL LAND WITHIN A DEVELOPMENT SHALL BE GRADED TO DRAIN AND DISPOSE OF SURFACE WATER WITHOUT PONDING.

WHERE DRAINAGE SWALES ARE USED TO DIVERT SURFACE WATERS AWAY FROM BUILDINGS, THEY SHALL BE SODDED OR PLANTED.

CONCENTRATION OF SURFACE RUNOFF SHALL BE ONLY PERMITTED BY PIPING AND/OR THROUGH DRAINAGE SWALES OR NATURAL WATERCOURSES.

## EXCAVATION AND FILLS ---

SLOPES CREATED BY CUTS OR FILLS SHALL NOT BE STEEPER THAN 2:1 AND SHALL BE RESTABILIZED BY TEMPORARY OR PERMANENT MEASURES, AS REQUIRED DURING THE DEVELOPMENT PROCESS.

ADEQUATE PROVISIONS SHALL BE MADE TO PREVENT SURFACE WATER FROM DAMAGING THE CUT FACE OF EXCAVATIONS OR THE SLOPING SURFACES OF FILLS.

CUT AND FILLS SHALL NOT ENDANGER ADJOINING PROPERTY.

ALL FILLS SHALL BE COMPACTED TO PROVIDE STABILITY OF MATERIAL AND TO PREVENT UNDESIRABLE SETTLEMENT. THE FILL SHALL BE SPREAD IN A SERIES OF LAYERS EACH NOT EXCEEDING TWELVE (12) INCHES IN THICKNESS AND SHALL BE COMPACTED BY A SHEEP ROLLER OR OTHER APPROVED METHOD AFTER EACH LAYER IS SPREAD.

FILLS SHALL NOT ENCRoACH ON NATURAL WATERCOURSES, CONSTRUCTED CHANNELS OR REGULATED FLOOD PLAIN AREAS, UNLESS PERMITTED BY LICENSE OR PERMIT FROM AUTHORITY HAVING JURISDICTION.

FILLS PLACED ADJACENT TO NATURAL WATERCOURSES, CONSTRUCTED CHANNELS OR FLOOD PLAINS SHALL HAVE SUITABLE PROTECTION AGAINST EROSION DURING PERIODS OF FLOODING.

GRADING SHALL NOT BE DONE IN SUCH A WAY AS TO DIVERT WATER ONTO THE PROPERTY OF ANOTHER LANDOWNER WITHOUT THEIR EXPRESS WRITTEN CONSENT.

DURING GRADING OPERATIONS, NECESSARY MEASURES FOR DUST CONTROL SHALL BE EXERCISED.

SEDIMENTATION AND EROSION CONTROL SHALL BE IMPLEMENTED IN ACCORDANCE WITH THE GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL (2002) - STATE OF CONNECTICUT DEP BULLETIN 34 OR MOST RECENT EDITION.

## RESPONSIBILITY FOR THE PLAN

WHENEVER SEDIMENTATION IS CAUSED BY STRIPPING VEGETATION AND/OR GRADING, IT SHALL BE THE RESPONSIBILITY OF THE PERSON, CORPORATION OR OTHER ENTITY HAVING RESPONSIBILITY TO REMOVE SEDIMENTATION FROM ALL LOWER PROPERTIES, DRAINAGE SYSTEMS AND WATERCOURSES AND TO REPAIR ANY DAMAGE AT THEIR EXPENSE AS QUICKLY AS POSSIBLE.

MAINTENANCE OF ALL DRAINAGE FACILITIES AND WATERCOURSES WITHIN ANY SUBDIVISION OR LAND DEVELOPMENT SHALL BE THE RESPONSIBILITY OF THE CONNECTICUT POWER VENTURES PROJECT MANAGER UNTIL THEY ARE ACCEPTED BY THE TOWN. ALL CONTROL MEASURES WILL BE MAINTAINED IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD. SURFACE INLETS SHALL BE KEPT OPEN AND FREE OF SEDIMENT AND DEBRIS. THE SYSTEM SHALL BE CHECKED AFTER EVERY MAJOR STORM AND SEDIMENT SHALL BE DISPOSED OF AT AN APPROVED LOCATION CONSISTENT WITH THE PLAN.

IT SHALL BE THE RESPONSIBILITY OF ANY PERSON, CORPORATION OR OTHER ENTITY ENGAGING IN ANY ACT ON OR NEAR ANY STREAM, WATERCOURSE OR SWALE OR UPON THE FLOOD PLAIN OR RIGHT-OF-WAY THEREOF TO MAINTAIN AS NEARLY AS POSSIBLE IN ITS PRESENT STATE THAT SAME STREAM, WATERCOURSE, SWALE, FLOOD PLAIN OR RIGHT-OF-WAY FOR THE DURATION OF THE ACTIVITY AND TO RETURN IT TO ITS ORIGINAL OR EQUAL CONDITION AFTER SUCH ACTIVITY IS COMPLETED.

MAINTENANCE OF DRAINAGE FACILITIES OR WATERCOURSES ORIGINATING AND COMPLETELY ON PRIVATE PROPERTY SHALL BE THE RESPONSIBILITY OF THE CONNECTICUT POWER VENTURES, INC. THEIR POINT OF OPEN DISCHARGE AT THE PROPERTY LINE OR AT A COMMUNAL WATERCOURSE WITHIN PROPERTY.

NO PERSON, CORPORATION OR OTHER ENTITY SHALL BLOCK, IMPEDE THE FLOW OF, ALTER, CONSTRUCT ANY STRUCTURE OR DEPOSIT ANY MATERIAL OR THING OR COMMIT ANY ACT WHICH AFFECTS NORMAL OR FLOOD FLOW IN ANY COMMUNAL STREAM OR WATERCOURSE WITHOUT HAVING OBTAINED PRIOR APPROVAL FROM THE TOWN.

AN ADEQUATE RIGHT-OF-WAY AND/OR EASEMENT SHALL BE PROVIDED FOR ALL DRAINAGE FACILITIES AND WATERCOURSES WHICH ARE PROPOSED EITHER FOR ACCEPTANCE BY THE TOWN OR PROVIDED BY OTHER PROPERTY OWNERS FOR THE CONVENIENCE OF THE OWNER.

## SEEDBED PREPARATION

FINE GRADE AND RAKE SURFACE TO REMOVE STONES LARGER THAN 2" IN DIAMETER. INSTALL NEEDED EROSION CONTROL DEVICES SUCH AS SURFACE WATER DIVERSIONS. GRADE STABILIZATION STRUCTURES, SEDIMENT BASINS OR DRAINAGE CHANNELS TO MAINTAIN GRASSSED AREAS. APPLY LIMESTONE AT A RATE OF 2 TONS/AC. OR 90 LBS/1000 SF UNLESS OTHERWISE REQUIRED ACCORDING TO SOIL TEST RESULTS. APPLY FERTILIZERS WITH 10-10-10 AT A RATE OF 300 LBS./AC. OR 7.5 LBS/1000 SF. AT LEAST 50% OF THE NITROGEN SHALL BE FROM ORGANIC SOURCES. WORK LIME AND FERTILIZER INTO SOIL UNIFORMITY TO A DEPTH OF 4" WITH A WHISK, SPRINGTOOTH HARROW OR OTHER SUITABLE EQUIPMENT FOLLOWING THE CONTOUR LINES.

## SEED APPLICATION

APPLY GRASS MIXTURES AT RATES SPECIFIED BY HAND, CYCLONE SEEDER OR HYDROSEEDER. INCREASE SEED MIXTURE BY 10% IF HYDROSEEDER IS USED. LIGHTLY DRAG OR ROLL THE SEEDED SURFACE TO COVER SEED. SEEDING FOR SELECTED FINE GRASSES SHOULD BE DONE BETWEEN APRIL 1 AND JUNE 1 OR BETWEEN AUGUST 15 AND OCTOBER 15. IF SEEDING CANNOT BE DONE DURING THESE TIMES, REPEAT MULCHING PROCEDURE BELOW UNTIL SEEDING CAN TAKE PLACE OR SEED WITH A QUICK GERMINATING SEED MIXTURE TO STABILIZE SLOPES. A QUICK GERMINATING SEED MIXTURE (DOMESTIC RYE) CAN BE APPLIED BETWEEN JUNE 15 THROUGH AUGUST 15 AS APPROVED BY THE ARCHITECT OR ENGINEER.

## MULCHING

IMMEDIATELY FOLLOWING SEEDING, MULCH THE SEEDDED SURFACE WITH STRAW, HAY OR WOOD FIBER AT A RATE OF 1.5 TO 2 TONS/AC. EXCEPT AS OTHERWISE SPECIFIED ELSEWHERE. MULCHES SHOULD BE FREE OF WEEDS AND COARSE MATTER. SPREAD MULCH BY HAND OR MULCH BLOWER. PUNCH MULCH INTO SOIL SURFACE WITH TRACK MACHINE OR DISK HARROW SET STRAIGHT UP. MULCH MATERIAL SHOULD BE "TUCKED" APPROXIMATELY 2- 3" INTO THE SOIL SURFACE. CHEMICAL MULCH BINDERS OR NETTING, IN COMBINATION WITH THE STRAW, HAY OR WOOD FIBERS, WILL BE USED WHERE DIFFICULT SLOPES DO NOT ALLOW HARROWING BY MACHINES.

## GRASS SEED MIXTURES

TEMPORARY COVERS	PERMANENT COVERS	
PERENNIAL RYEGRASS	20 LBS./AC.	CREeping RED FESCUE 40 LBS./AC.
ANNUAL RYEGRASS	20 LBS./AC.	CANADA BLUEGRASS 20 LBS./AC.

# GENERAL NOTES

1. A PROJECT MANAGER FROM COMPETITIVE POWER VENTURES, INC. IS THE RESPONSIBLE PARTY FOR IMPLEMENTING THE EROSION AND SEDIMENT CONTROL PLAN. THE RESPONSIBILITY INCLUDES THE INSTALLATION AND MAINTENANCE OF CONTROL MEASURES AND INFORMING ALL PARTIES ENGAGED ON THE CONSTRUCTION SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN. THE ON-SITE CONSTRUCTION MANAGER SHALL BE RESPONSIBLE FOR HAVING THE EROSION CONTROL MEASURES CHECKED WEEKLY AND AFTER EVERY STORM. ALL ITEMS IDENTIFIED DURING INSPECTION AS THOSE REQUIRING MAINTENANCE/REPLACEMENT SHALL BE COMPLETED IMMEDIATELY.

2. PRIOR TO INITIATING CONSTRUCTION, A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED AND CONDUCTED INCLUDING THE FOLLOWING ATTENDEES: THE PROJECT MANAGER FROM COMPETITIVE POWER VENTURES, INC. ON-SITE CONSTRUCTION MANAGER, SITE CONTRACTOR, TOWN ENGINEER, AND OTHERS AS MAY BE REQUIRED BY THE CT SITING COUNCIL.

3. THE CUMULATIVE POST PEAK DEVELOPMENT RUN-OFF RATES WILL BE KEPT TO LESS THAN THE PRE-DEVELOPMENT RUN-OFF RATES FROM THE SITE THROUGH THE USE OF ON-SITE DETENTION BASINS.

4. EXISTING WETLANDS AND WATERCOURSES DOWN SLOPE FROM THE PROJECT SITE SHALL BE PROTECTED FROM SEDIMENT POLLUTION BY INSTALLING APPROPRIATE EROSION AND SEDIMENT CONTROL DEVICES, AS INDICATED ON THE VARIOUS EROSION CONTROL PLANS.

5. THE CONTRACTOR SHALL PRESERVE EXISTING VEGETATION. TEMPORARY MULCHING AND SEEDING SHALL BE USED TO PREVENT AND MINIMIZE EROSION.

6. TO REDUCE EROSION HAZARDS, CONSTRUCTION SHALL BE PHASED AS INDICATED ON THIS SHEET AND CONTRACT DRAWINGS TO MINIMIZE LAND DISTURBANCE AT ANY GIVEN TIME. WHERE CONSTRUCTION ACTIVITIES HAVE PERMANENTLY CEASED OR HAVE TEMPORARILY BEEN SUSPENDED FOR MORE THAN SEVEN DAYS, SOIL STABILIZATION MUST BE IMPLEMENTED WITHIN THREE DAYS. AREAS WHICH REMAIN INACTIVE FOR AT LEAST THIRTY DAYS SHALL RECEIVE TEMPORARY SEEDING IN ACCORDANCE WITH THE GUIDELINES.

7. THE CONTRACTOR MUST INSTALL ANY ADDITIONAL TEMPORARY AND/OR PERMANENT MEASURES WHICH MAY BE NECESSARY TO CONTROL EROSION/SEDIMENTATION ON- AND OFF-SITE DEPENDING ON WEATHER CONDITIONS AND WORK SEQUENCE.

8. THE PAVED AREAS SHALL BE KEPT TO A MINIMUM TO MINIMIZE IMPERVIOUS AREAS.

9. DEWATERING WASTEWATERS SHALL BE DISCHARGED BY INFILTRATION INTO THE GROUND WHERE POSSIBLE AND DEWATERING SHALL BE DONE IN ACCORDANCE WITH THE DETAILS AND NOTES CONTAINED IN THIS PLAN SET AND IN ACCORDANCE WITH THE GUIDELINES.

10. THE CONTRACTOR MUST ENSURE THAT NO LITTER, DEBRIS, BUILDING MATERIALS OR SIMILAR MATERIALS ARE DISCHARGED IN THE WATERS OF THE STATE.

# TEMPORARY SEDIMENT TRAPS

1. TEMPORARY SEDIMENTATION TRAPS WILL BE INSTALLED DURING CONSTRUCTION AS INDICATED ON SHEETS C315-C317 OF THE PLAN SET. EACH SEDIMENTATION TRAP SHALL BE FITTED WITH A TEMPORARY OUTLET EITHER IN THE FORM OF A PERFORATED RISER PIPE OR A STONE FILTRATION WEIR IN ACCORDANCE WITH THE DETAILS PROVIDED IN THE PLAN SET.

2. SEDIMENT WHICH HAS ACCUMULATED IN THE TEMPORARY SEDIMENT TRAPS SHALL BE REMOVED AFTER REACHING A DEPTH OF 6" OR GREATER.

3. AFTER TRIBUTARY DRAINAGE AREAS HAVE BEEN STABILIZED, THE ACCUMULATED SEDIMENT WITHIN THE BASINS SHALL BE REMOVED. TEMPORARY SEDIMENTATION TRAPS 2A/2B & 3B SHALL BE CONVERTED INTO PERMANENT STORMWATER RENOVATION BASINS.

# PERMANENT EROSION CONTROL MEASURES

ALL PERMANENT EROSION CONTROL MEASURES SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE RECOMMENDATIONS OF THE "GUIDELINES". THE FOLLOWING PERMANENT EROSION CONTROL MEASURES HAVE BEEN DESIGNED AS PART OF THE EROSION AND SEDIMENT CONTROL PLAN:

1. PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON ALL EXPOSED/DISTURBED AREAS THAT ARE NOT SUBJECT TO OTHER RESTORATION (PAVING, RIPRAP, ETC). INSTALLATION AND MAINTENANCE REQUIREMENTS OF CHAPTER 6 OF THE "GUIDELINES" SHALL BE FOLLOWED. EXPOSED AREAS SHALL BE LOAMED, LIMED, FERTILIZED AND SEEDED. LIMESTONE AND FERTILIZER SHALL BE APPLIED IN ACCORDANCE WITH THE RESULTS OF SOIL TESTING OR AS RECOMMENDED BY THE "GUIDELINES". ALL PERMANENT SEEDING WILL BE DONE IN THE SPRING OR LATE SUMMER (BEFORE OCTOBER 31). ANY AREAS TO BE SEEDED OUTSIDE OF THIS TIME FRAME SHALL BE COVERED WITH AN EROSION CONTROL BLANKET OR OTHERWISE STABILIZED UNTIL GROWTH CAN BE ESTABLISHED. SEEDING MIXTURES SHALL BE SELECTED IN ACCORDANCE WITH FIGURES 6-2 OR 6-3 OF THE "GUIDELINES" OR AS RECOMMENDED BY THE SOIL CONSERVATION SERVICE. HYDROSEEDING SHALL BE USED WHERE INDICATED ON THE PLANS AND IN CRITICAL AREAS. MULCH SHALL BE APPLIED AND ANCHORED AS RECOMMENDED UNDER "EROSION AND SEDIMENT CONTROL DEVICES" ABOVE. SLOPES STEEPER THAN 3:1 SHALL RECEIVE NORTH AMERICAN GREEN SC150BN STRAW/COCONUT TURF REINFORCEMENT BLANKET OR APPROVED EQUAL.

2. THE RIPRAP APRONS AND PLUNGE POOLS SHALL BE CONSTRUCTED AND STABILIZED AT THE PIPE OUTLETS PRIOR TO DIRECTING RUNOFF TO EITHER STORMWATER RENOVATION AREA AND AT ALL STORM DRAINAGE OUTLETS.

# TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES

THE FOLLOWING ARE PLANNED AS TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES DURING CONSTRUCTION:

1. A CRUSHED STONE STABILIZED CONSTRUCTION ENTRANCE SHALL BE PLACED AT THE SITE ACCESS ONTO WOODRUFF HILL ROAD.

2. FILTER FABRIC SILT FENCE SHALL BE INSTALLED ALONG THE DOWN GRADIENT SIDE OF ALL FILL SECTIONS. SILT FENCE WILL BE MAINTAINED IN PLACE UNTIL THE TRIBUTARY AREA PROTECTED BY THE FENCE IS REVEGETATED OR STABILIZED BY PERMANENT MEASURES. SYNTHETIC FILTER FABRIC, POST MATERIAL, SPACING AND EMBEDMENT AND TRENCH DETAILS, SHALL BE AS SHOWN ON THE DRAWINGS. FILTER BARRIER SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL GREATER THAN 0.1 INCH AND AT LEAST DAILY DURING PROLONGED RAINFALL. REFER TO THE CHAPTER 7 OF THE "GUIDELINES" FOR ADDITIONAL MAINTENANCE REQUIREMENTS.

3. DUST CONTROL SHALL BE USED TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES AND REDUCE THE PRESENCE OF DUST WHICH MAY CAUSE OFF-SITE DAMAGE, BE A HEALTH HAZARD TO HUMANS, WILDLIFE AND PLANT LIFE. THE NEED FOR DUST CONTROL WILL BE MINIMIZED BY REDUCING AREA OF LAND DISTURBANCE AT ANY ONE TIME, MAINTAINING AS MUCH VEGETATION AS PRACTICABLE, USE OF MULCHING AND TEMPORARY VEGETATIVE COVER. THE CONTRACTOR SHALL USE MECHANICAL SWEEPERS ON PAVED AREAS AND SILT TRAPS NEAR SOURCES OF DUST. THE EXPOSED SOIL AREAS SHALL BE PERIODICALLY MOISTENED. SPRAY-ON ADHESIVES DILUTED IN WATER MAY BE USED.

4. TEMPORARY SOIL STOCKPILES SHALL BE PROTECTED BY A SEDIMENT BARRIER. SIDE SLOPES OF THE STOCKPILES SHALL NOT EXCEED 2 TO 1. THE STOCKPILES SHALL BE STABILIZED WITHIN THIRTY DAYS OF FORMATION OF THE STOCKPILE BY TEMPORARY SEEDING OR COVERING WITH MULCH.

5. ORGANIC MULCHES (HAY OR STRAW), OR NETTING AND MATS ARE TO BE USED TO PREVENT EROSION BY PROTECTING THE EXPOSED SOIL, AND TO PROMOTE THE GROWTH OF VEGETATION. ORGANIC MULCH MATERIALS AND APPLICATION RATES SHALL BE IN ACCORDANCE WITH FIGURE 7-1 OF THE 2002 GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL OF THE STATE OF CONNECTICUT ("GUIDE"). STRAW OR HAY MULCH MUST BE ANCHORED IMMEDIATELY AFTER SPREADING USING A TRACTOR-DRAWN MULCH ANCHORING TOOL, LIQUID MULCH BINDERS, NETTING OR OTHER MEANS OF ANCHORING ALLOWED BY THE "GUIDE". MULCHES MUST BE INSPECTED PERIODICALLY AND, IN PARTICULAR, AFTER RAINSTORMS, AND RE-APPLIED IMMEDIATELY IF EROSION IS OBSERVED.

6. TEMPORARY VEGETATIVE COVERS SHALL BE INSTALLED ON ALL DISTURBED AREAS NOT INTENDED FOR PRIMARY CONSTRUCTION AND HAVING THE POTENTIAL TO PRODUCE SEDIMENT AND CAUSE ON- AND OFF-SITE DAMAGES. SUCH AREAS BASED ON RECOMMENDATIONS SHALL BE COVERED WITH TOPSOIL AND SEEDED OF FIGURE 6-1 OF THE "GUIDELINES". FOR ADDITIONAL SEEDING REQUIREMENTS REFER TO CHAPTER 6 OF THE "GUIDELINES".

7. STONE CHECK DAMS SHALL BE INSTALLED AT ANY EVIDENT CONCENTRATED FLOW DISCHARGE POINTS.

8. STORM DRAIN CATCH BASIN INLET PROTECTION SHALL BE PROVIDED THROUGH THE USE OF FILTER FABRIC FENCE OR STONE BARRIERS AROUND THE CATCH BASINS AS INDICATED ON THE SEDIMENT AND EROSION CONTROL DRAWINGS. THE BARRIERS SHALL ONLY BE REMOVED WHEN THE TRIBUTARY DRAINAGE AREA HAS BEEN STABILIZED.

9. SILT SACK SHALL BE INSTALLED UNDER THE CATCH BASIN GRATE AS INDICATED ON THE DETAIL. WHEN THE RESTRAINT CORD IS NO LONGER VISIBLE, THE SILT SACK IS FULL AND SHOULD BE EMPTIED. SILT SACK SHOULD BE INSPECTED EVERY 2-3 WEEKS AND AFTER EVERY RAIN EVENT OCCURS.

# STORM DRAINAGE SYSTEM MAINTENANCE

## STORMWATER RENOVATION AREAS (EXTENDED DETENTION SHALLOW WETLANDS):

SEMIANNUAL:  
1. CUT OR MOW GRASS LINED SWALES IN SPRING & FALL. SWALES ADJACENT TO THE PROPOSED ROADWAY OR UNITS MAY BE MOWED MORE FREQUENTLY.  
2. CLEAN AND REMOVE DEBRIS FROM INLET AND OUTLET STRUCTURES.

ANNUAL:  
1. INSPECT SEDIMENT FOREBAY AREA. REMOVE SEDIMENT ONCE IT HAS BUILT UP TO A DEPTH 12" OR GREATER IN THE FOREBAYS FOR BASINS A & B.  
2. REMOVE EXCESS LEAVES AND DEBRIS. PLANT MATTER SHALL BE LEFT IN PLACE OVER WINTER MONTHS TO INSULATE THE SOIL AND ADD ORGANIC MATTER TO THE SOIL. REMOVAL CRITERIA SHALL INCLUDE WHEN PLANT MATTER IS SMOTHERING OR KILLING VEGETATION AND AESTHETICS.  
3. PRUNE TREES AND SHRUBS AS NEEDED.  
4. FOR ADDITIONAL MAINTENANCE REQUIREMENTS OF BASIN PLANTINGS AND REMOVAL OF INVASIVE SPECIES FROM THE STORMWATER RENOVATION AREAS PLEASE REFER TO NOTES ENTITLED "EXTENDED DETENTION SHALLOW WETLANDS BASIN" ON SHEET C331).

CATCH BASINS, PIPING, SWALES AND LEVEL SPREADERS:  
CATCH BASINS, STORM DRAINAGE PIPING, SWALES AND LEVEL SPREADERS WILL BE INSPECTED ON AN ANNUAL BASIS. ANY FLOATABLES, TRASH, DEBRIS OR SEDIMENT BUILD UP SHALL BE REMOVED BY A LICENSED CONTRACTOR. GRASS-LINED SWALES AND LEVEL SPREADERS WILL BE MOWED.

THE ON-SITE CATCH BASINS, STORM DRAINAGE MANHOLES, SWALES, STORMWATER RENOVATION BASINS AND ALL ASPECTS OF THE STORM DRAINAGE SYSTEM MUST BE MAINTAINED IN GOOD WORKING CONDITION IN ACCORDANCE WITH THE INTENT OF THESE PLANS.

RESPONSIBILITY:  
THE OWNER OF THE PROPERTY WILL BE RESPONSIBLE FOR THE LONG TERM MAINTENANCE OF THE STORM DRAINAGE SYSTEM AS LISTED ABOVE. MAINTENANCE REPORTS INDICATING THAT THE SYSTEM HAS BEEN MAINTAINED IN ACCORDANCE WITH THE INTENT OF THE PLAN SHALL BE SUBMITTED TO THE TOWN LAND USE OFFICES & ON A SEMIANNUAL BASIS AFTER THE MAINTENANCE & INSPECTIONS HAVE OCCURRED.

# CONSTRUCTION OF STORMWATER RENOVATION AREA BERMS

## A. MATERIALS

1. FILL MATERIAL SHALL BE FREE OF FROZEN MATERIAL, SOD, BRUSH, ROOTS, STUMPS AND OTHER ORGANIC MATERIAL. EARTH EMBANKMENTS SHALL CONTAIN NO STONES OVER SIX INCHES IN DIAMETER. THE MATERIAL USED IN THE CORE PORTION OF THE EMBANKMENT SHALL BE THE MOST IMPERVIOUS MATERIAL OBTAINED FROM THE BORROW AREAS, AS REQUIRED. THE MORE PERVIOUS MATERIALS SHALL BE USED IN THE OUTER FILL PORTION OF THE EMBANKMENT AS SHOWN ON THE PLANS.

2. THE IMPERVIOUS CORE FILL MATERIAL SHALL BE GLACIAL TILL. TO BE PROVIDED IN SUFFICIENT QUANTITIES TO COMPLETE THE WORK. FILL TO BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT. GLACIAL TILL TO CONSIST OF HARD AND DURABLE PARTICLES OR FRAGMENTS AND SHALL BE FREE FROM ORGANIC MATTER AND OTHER OBJECTIONABLE MATERIALS. GLACIAL TILL SHALL CONFORM TO THE FOLLOWING GRADATION REQUIREMENTS.

U. S. Standard Sieve Size	Percentage Passing By Weight
3 inch	100
No. 4	60- 95
No. 10	50- 95
No. 40	30- 95
No. 100	20- 65
No. 200	10- 40

## B. BERM FOUNDATION PREPARATION

1. ALL TREE CLEARING SHALL BE FLAGGED PRIOR TO ANY CUTTING OR CLEARING.  
2. THE AREA WHERE THE BERM IS TO BE CONSTRUCTED SHALL BE CLEARED AND GRUBBED OF ALL TOPSOIL AND OTHER ORGANIC MATERIALS TO A DEPTH OF AT LEAST 24". UNLESS OTHERWISE SPECIFIED ON THE PLANS, BERM FOUNDATION AREAS SHALL BE SCARIFIED TO A MINIMUM DEPTH OF THREE INCHES PRIOR TO PLACEMENT OF FILL MATERIAL.

## C. PLACEMENT OF FILL

1. ALL EROSION CONTROL MEASURES SHALL BE ERECTED PRIOR TO PLACEMENT/EXCAVATION OF MATERIAL.

2. NO FILL SHALL BE PLACED UNTIL THE FOUNDATION PREPARATION AND EXCAVATIONS IN THE FOUNDATION HAVE BEEN COMPLETED AND APPROVED BY THE ENGINEER. NO FILL SHALL BE PLACED ON A FROZEN SURFACE NOR SHALL FROZEN MATERIAL BE INCORPORATED.

3. EMBANKMENT MATERIAL SHALL BE PLACED IN HORIZONTAL LAYERS IN 12 INCH LOOSE LIFTS. DURING CONSTRUCTION, THE SURFACE OF THE FILL SHALL BE SLOPED TO DRAIN. EACH LAYER OR LIFT SHALL EXTEND OVER THE ENTIRE AREA OF THE FILL.

4. THE FILL SHALL BE FREE FROM LENSES, POCKETS, STREAKS, OR LAYERS OF MATERIAL DIFFERING SUBSTANTIALLY IN TEXTURE OR GRADATION FROM THE SURROUNDING MATERIAL. THE MORE PERVIOUS MATERIAL SHALL BE PLACED IN THE OUTSIDE PORTION OF THE BERM OR AS INDICATED ON THE DRAWINGS. FINISHED FILL SHALL BE SHAPED AND GRADED TO THE LINES AND GRADE SHOWN ON THE DRAWINGS.

5. PIPE BACKFILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED 6- 8 INCH LOOSE LIFTS AND SHALL BE BROUGHT UP UNIFORMLY AROUND THE OUTLET PIPE AND FLARED END SECTION.

## D. MOISTURE CONTROL

1. THE MOISTURE CONTENT OF MATERIALS IN THE BERM SHALL BE CONTROLLED TO MEET THE REQUIREMENTS OF SECTION E "COMPACTION OF BERM". WHEN NECESSARY, MOISTURE SHALL BE ADDED BY THE USE OF APPROVED SPRINKLING EQUIPMENT. WATER SHALL BE ADDED UNIFORMLY AND EACH LAYER SHALL BE THOROUGHLY DISKED OR HARROWED TO PROVIDE PROPER MIXING. ANY LAYER FOUND TOO WET FOR COMPACTION SHALL BE ALLOWED TO DRY BEFORE ROLLING, PLACING OR ROLLING OF MATERIALS ON EARTH FILLS WILL NOT BE PERMITTED DURING OR IMMEDIATELY AFTER RAINFALLS WHICH INCREASE THE MOISTURE CONTENT BEYOND THE LIMIT OF SATISFACTORY COMPACTION. THE EARTH FILL SHALL BE BROUGHT UP UNIFORMLY AND ITS TOP SHALL BE KEPT GRADED AND SLOPED SO THAT A MINIMUM OF RAIN WATER WILL BE RETAINED THEREON. COMPACTED EARTH FILL DAMAGED BY RUNOFF SHALL BE REPLACED IMMEDIATELY BY THE CONTRACTOR.

## E. COMPACTION

1. BERM MATERIAL SHALL BE COMPACTED TO 95% OF THE STANDARD PROCTOR DENSITY AT OR NEAR OPTIMUM MOISTURE CONTENT AND BY THE COMPACTION EQUIPMENT SPECIFIED HEREIN. THE COMPACTION EQUIPMENT SHALL TRAVERSE THE ENTIRE SURFACE OF EACH LAYER OF FILL MATERIAL.

2. APPROVED TAMPING ROLLERS SHALL BE USED FOR COMPACTION ALL PARTS OF THE BERM. THE CONTRACTOR SHALL DEMONSTRATE THE EFFECTIVENESS OF THE ROLLER BY ACTUAL SOIL COMPACTION TEST RESULTS OF THE SOIL TO BE USED IN THE BERM WITH LABORATORY WORK PERFORMED BY AN APPROVED SOIL TESTING LABORATORY. COMPACTION TESTS SHALL INCLUDE MODIFIED PROCTOR AND NUCLEAR DENSITY TESTS MADE AT THE ENGINEER'S DISCRETION. A MINIMUM OF THREE PROCTOR TESTS SHALL BE PERFORMED AND DENSITY TESTS SHALL BE PERFORMED EVERY 1500 SQUARE FEET.

3. PIPE BACKFILL SHALL BE COMPACTED BY HAND TAMPING WITH MECHANICAL TAMPERS. HEAVY EQUIPMENT SHALL NOT BE OPERATED WITHIN THREE FEET OF ANY STRUCTURE. EQUIPMENT SHALL NOT BE ALLOWED TO OPERATE OVER THE OUTLET CULVERTS UNTIL THERE IS AT LEAST TWO FEET OF COVER OVER THE PIPES.

## F. FINISHING EMBANKMENTS

1. THE BERM SHALL BE CONSTRUCTED TO THE ELEVATIONS, LINES AND GRADES AND CROSS SECTIONS AS SHOWN ON THE PLANS. THE BERM SHALL BE MAINTAINED IN A MANNER SATISFACTORY TO THE ENGINEER AND THE TOWN AND SURFACES SHALL BE COMPACT AND ACCURATELY GRADED BEFORE TOPSOIL IS PLACED ON THEM.

2. THE TOPSOIL SHALL BE PLACED AT A DEPTH OF 5-6" OVER THE DISTURBED AREA AFTER COMPLETION OF CONSTRUCTION.

3. DISTURBED AREAS SHALL BE SEEDDED WITH "NEW ENGLAND ENVIRONMENTAL EROSION CONTROL MIX FOR DETENTION BASINS AND MOST SITES" OR APPROVED EQUAL AT A RATE OF 1 LB. PER 5000 SQUARE FEET OR AT A RATE RECOMMENDED BY THE MANUFACTURER.

4. SEEDDED AREAS SHALL BE STABILIZED WITH HAY OR MULCH UNTIL VEGETATION IS FIRMLY ESTABLISHED.

5. SEEDDED AREAS SHALL BE MONITORED WEEKLY FOR EROSION AND ANY AREAS THAT REQUIRE RESEEDING SHALL BE RESEED COMPLETELY AND IMMEDIATELY.

NO.	REVISION	DATE

Previous Editions Obsolete

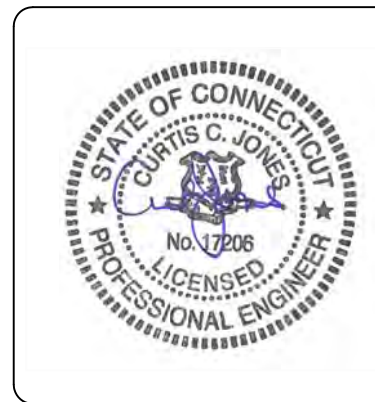
# EROSION CONTROL NARRATIVE & CONSTRUCTION SEQUENCE

# CPV TOWANTIC ENERGY CENTER

OXFORD CONNECTICUT



CORNERSTONE PROFESSIONAL PARK, SUITE D-101  
43 SHERMAN HILL ROAD  
WOODBURY (203) 266-0778 CONNECTICUT



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SCALE: N.T.S.  
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## CONSTRUCTION SEQUENCE

### PHASE I: (30 – 60 DAY DURATION)

- FIELD STAKEOUT THE LIMITS OF ALL CONSTRUCTION ACTIVITIES ASSOCIATED WITH PHASE I.
- INSTALL ANTI-TRACKING PAD AT CONSTRUCTION ENTRANCE AS SHOWN ON THE PLAN. INSTALL WATER BARS AND HAYBALE BARRIERS AS NECESSARY TO CONTROL DRAINAGE ALONG THE ENTRY DRIVE. AT THE END OF EACH WORKING DAY, ANY ACCUMULATED SILT SHALL BE SWEEPED FROM THE EXISTING TOWN ROADS.
- CLEAR ALL VEGETATION WITHIN THE CONSTRUCTION AREA. DO NOT REMOVE STUMPS UNTIL EROSION CONTROL MEASURES ARE IN PLACE.
- HAYBALES AND/OR SILTATION FENCE AND OTHER EROSION CONTROL FEATURES WILL BE PLACED AS SHOWN ON THE ENCLOSED PHASE 1 PLAN PRIOR TO THE START OF ANY CONSTRUCTION.
- INSTALL TEMPORARY FILTER BERM IN EXISTING STORMWATER BASIN ON LOT 9B PER DETAILS.
- REMOVE STUMPS ONLY FROM CONSTRUCTION AREA FOR PHASE 1.
- STRIP & STOCKPILE TOPSOIL (+/- 8,000 CUBIC YARDS) AS SHOWN ON PLANS. EXCESS MATERIAL MAY BE STOCKPILED OFF-SITE.
- CREATE TEMPORARY CLEAN WATER DIVERSIONS AS NECESSARY TO MINIMIZE OVERLAND FLOW.
- CONSTRUCT TEMPORARY SEDIMENT TRAPS 1A AND 1B AT THE DRIVEWAY ENTRANCE.
- BEGIN MASS EARTH EXCAVATION INTO THE SITE WORKING EAST THEN NORTH INTO THE SITE. CUT MATERIAL WILL BE USED TO FILL EASTERN SIDE OF DRIVEWAY, EXCESS CUT MATERIAL WILL BE REMOVED FROM THE SITE.
- INSTALL STORM DRAINAGE STRUCTURES IN THE PHASE 1 CONSTRUCTION AREA BUT DO NOT ALLOW DRAINAGE INTO STRUCTURES UNTIL AREA IS STABILIZED. CONSTRUCTION STORMWATER MUST FLOW TO TSTs LOCATED AT BOTTOM OF DRIVEWAY AS INDICATED ON THE SITE PLANS.
- ROUGH GRADE STORMWATER RENOVATION AREA "A" SO THAT IT CAN BE USED AS A TST DURING THE CONSTRUCTION ASSOCIATED WITH PHASE 2. INSTALL TEMPORARY BERM IN THE MIDDLE OF THE BASIN TO CREATE TSTs 2A & 2B.
- CONSTRUCT OUTLETS TO TSTs AND PERFORATED RISER ON THE OUTLET STRUCTURE PER THE DETAIL ON SHEET C321. A TEMPORARY PERFORATED RISER OUTLET WILL BE PROVIDED FOR TST 2B AS INDICATED ON THE SITE PLANS.
- CONSTRUCT EMERGENCY MODIFIED RIPRAP OVERFLOW SWALE FROM BASIN.
- PLACE STORMWATER FILTRATION TRAILER INTO POSITION AS NECESSARY.
- PLACE BINDER COURSE ON DRIVEWAY FROM STATION 0+00 TO 10+50.
- PLACE TOPSOIL AND SEED ALL DISTURBED AREAS THAT ARE NOT SUBJECT TO FUTURE CONSTRUCTION DISTURBANCE.
- INSTALL EROSION CONTROL BLANKETS ON ANY SLOPES STEEPER THAN 3:1 AND HYDRO-SEED ALL DISTURBED AREAS WITH SLOPES OF 3:1 OR LESS THAT ARE NOT SUBJECT TO FUTURE CONSTRUCTION DISTURBANCE. ALL EROSION & SEDIMENT CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL THE PHASE 1 CONSTRUCTION AREA IS PERMANENTLY STABILIZED.
- REMOVE EROSION CONTROL MEASURES AND DIRECT STORMWATER INTO CATCH BASINS ALONG ACCESS DRIVEWAY AFTER THE AREA IS FULLY STABILIZED AND TRIBUTARY VEGETATION IS ESTABLISHED.

### PHASE II: (270 – 365 DAY DURATION)

- FIELD STAKEOUT THE LIMITS OF ALL CONSTRUCTION ACTIVITIES ASSOCIATED WITH PHASE 2.
- INSTALL HAYBALES AND/OR SILTATION FENCE AROUND BOUNDARY OF THE CONSTRUCTION AREA AS SHOWN ON THE ENCLOSED PHASE 2 PLAN.
- CREATE TEMPORARY CLEAN WATER DIVERSION TO MINIMIZE OVERLAND FLOW ONTO THE CONSTRUCTION AREA AS INDICATED ON THE SITE PLANS.
- REMOVE STUMPS ONLY FROM THE CONSTRUCTION AREA FOR PHASE 2.
- STRIP & STOCKPILE TOPSOIL (+/-14,000 CUBIC YARDS) AS SHOWN ON PLANS. MATERIAL MAY BE STOCKPILED IN PHASE 2. EXCESS MATERIAL MAY BE STOCKPILED OFF-SITE.
- COMMENCE EARTHWORK AND GRADING FOR TEMPORARY SEDIMENTATION TRAP 2C (NOTE TSTs 2A AND 2B WERE CONSTRUCTED IN PHASE 1).
- CONSTRUCT TEMPORARY DIVERSION SWALES AND INSTALLED STORM DRAINAGE STRUCTURES AS INDICATED ON SITE PLANS TO DIVERT STORMWATER FROM THE CONSTRUCTION AREAS INTO TSTs 2A, 2B AND 2C.
- BEGIN MASS EARTH EXCAVATION INTO THE SITE WORKING FROM SOUTH TO NORTH. CUT MATERIAL WILL BE USED TO FILL EASTERN SIDE AND WESTERN FILL AREAS OF THE SITE, EXCESS CUT MATERIAL WILL BE REMOVED FROM THE SITE.
- INSTALL STAFF PARKING AREA AND OFFICE TRAILERS.
- BEGIN MASS EARTH EXCAVATION OF THE POWER BLOCK AREA. THIS AREA WILL BE CUT APPROXIMATELY 7" BELOW THE FINISHED GRADE ELEVATION OF THE PLANT CREATING A DEPRESSION WHICH WILL TRAP STORMWATER. THIS AREA WILL BE DEWATERED BY INSTALLING SUMPS ON NORTHEAST AND WEST SIDES OF THE EXCAVATION THAT WILL BE PUMPED INTO TSTs AFTER STORM EVENTS.
- MATERIAL FROM THE POWER BLOCK EXCAVATION WILL BE STOCKPILED AND THEN REDEPOSITED & COMPACTED INTO THE EXCAVATION AREA AFTER THE ASSOCIATED FOUNDATION AND UTILITY WORK HAS BEEN COMPLETED.
- INSTALL STORM DRAINAGE STRUCTURES WHERE FEASIBLE IN THE PHASE 2 CONSTRUCTION AREA. THE MAJORITY OF STORM DRAINAGE STRUCTURES IN THE PHASE 2 AREA WILL BE INSTALLED AFTER THE DEEPER FOUNDATION AND UTILITY WORK ASSOCIATED WITH THE POWER BLOCK CONSTRUCTION ARE COMPLETED.
- PLACE TOPSOIL AND SEED ALL DISTURBED AREAS THAT ARE NOT SUBJECT TO FUTURE CONSTRUCTION DISTURBANCE.
- INSTALL EROSION CONTROL BLANKETS ON ANY SLOPES STEEPER THAN 3:1 AND HYDRO-SEED ALL DISTURBED AREAS WITH SLOPES OF 3:1 OR LESS THAT ARE NOT SUBJECT TO FUTURE CONSTRUCTION DISTURBANCE. ALL EROSION & SEDIMENT CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL THE PHASE 2 CONSTRUCTION AREA IS PERMANENTLY STABILIZED. SPECIAL ATTENTION SHALL BE GIVEN TO AREAS WHERE PROPOSED GRADING IS STEEPER THAN 3:1, SPECIFICALLY IN THE AREA EAST OF THE WOODRUFF HILL ROAD CUL DE SAC.
- PLACE BINDER COURSE ON DRIVEWAY AREA AFTER ALL OTHER IMPROVEMENTS ARE COMPLETE.
- WHEN THE EXISTING STORMWATER BASIN ON LOT 9B IS NO LONGER NEEDED TO OPERATE AS A TEMPORARY SEDIMENT TRAP, REMOVE THE PERMEABLE FILTER BERM, REMOVE ANY SEDIMENT BUILD-UP, REESTABLISH BOTTOM OF BASIN AT ORIGINAL GRADE AND SEED WITH N.E. EROSION CONTROL MIX FOR DETENTION BASINS AND MOIST SITES.
- REMOVE EROSION CONTROL MEASURES AND DIRECT STORMWATER INTO CATCH BASINS AFTER THE AREA IS FULLY STABILIZED AND TRIBUTARY VEGETATION IS ESTABLISHED.

### PHASE III: (180 – 270 DAY DURATION)

- FIELD STAKEOUT THE LIMITS OF ALL CONSTRUCTION ACTIVITIES ASSOCIATED WITH PHASE 3.
- INSTALL HAYBALES AND/OR SILTATION FENCE AROUND BOUNDARY OF THE CONSTRUCTION AREA AS SHOWN ON THE ENCLOSED PHASE 3 PLAN.
- CREATE TEMPORARY CLEAN WATER DIVERSION TO MINIMIZE OVERLAND FLOW ONTO THE CONSTRUCTION AREA AS INDICATED ON THE SITE PLANS.
- REMOVE STUMPS ONLY FROM THE CONSTRUCTION AREA FOR PHASE 3.
- STRIP & STOCKPILE TOPSOIL (+/-5,600 CUBIC YARDS) EXCESS MATERIAL MAY BE STOCKPILED OFF-SITE.
- COMMENCE EARTHWORK AND GRADING FOR TEMPORARY SEDIMENTATION TRAP 3A2 (NOTE TSTs 2C FROM PHASE 2 WILL BE CLEANED OUT AND REUSED AS TST 3A1 FOR PHASE 3).
- CONSTRUCT TEMPORARY DIVERSION SWALES AND INSTALLED STORM DRAINAGE STRUCTURES AS INDICATED ON SITE PLANS TO DIVERT STORMWATER FROM THE CONSTRUCTION AREAS INTO TSTs 3A1 & 3A2.
- BEGIN MASS EARTH EXCAVATION INTO THE SITE WORKING NORTH INTO THE SITE. EXCESS CUT MATERIAL WILL BE REMOVED FROM THE SITE.
- ROUGH GRADE STORMWATER RENOVATION AREA "B" SO THAT IT CAN BE USED AS A TST 3B ONCE PHASE 3 HAS REACHED SUBGRADE AND DRAINAGE WILL PITCH TO THE NORTH TOWARDS THE RENOVATION AREA.
- CONSTRUCT THE RENOVATION AREA OUTLETS AND PERFORATED RISER ON THE OUTLET STRUCTURE PER THE DETAIL ON SHEET C321. CONSTRUCT POND DISCHARGE OUTLET PIPING TO STORM DRAINAGE ALONG THE EASTERN PROPERTY LINE PREVIOUSLY INSTALLED IN PHASE 2.
- PLACE TOPSOIL AND SEED ALL DISTURBED AREAS THAT ARE NOT SUBJECT TO FUTURE CONSTRUCTION DISTURBANCE.
- INSTALL EROSION CONTROL BLANKETS ON ANY SLOPES STEEPER THAN 3:1 AND HYDRO-SEED ALL DISTURBED AREAS WITH SLOPES OF 3:1 OR LESS THAT ARE NOT SUBJECT TO FUTURE CONSTRUCTION DISTURBANCE. ALL EROSION & SEDIMENT CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL THE PHASE 3 CONSTRUCTION AREA IS PERMANENTLY STABILIZED.
- PLACE BINDER COURSE ON DRIVEWAY AREA AFTER ALL OTHER SUBSURFACE IMPROVEMENTS ARE COMPLETE.
- REMOVE EROSION CONTROL MEASURES AND DIRECT STORMWATER INTO CATCH BASINS AFTER THE AREA IS FULLY STABILIZED AND TRIBUTARY VEGETATION IS ESTABLISHED.

## CONSTRUCTION SEQUENCE (CONT.)

### PHASE IV: (180 – 270 DAYS)

- COMPLETE ANY OUTSTANDING EARTHWORK OPERATIONS.
- LOAM, MULCH SEED AND FERTILIZE ALL REMAINING DISTURBED AREAS.
- PROVIDE PAINT STRIPING FOR PARKING AS INDICATED ON THE DRAWINGS. INSTALL SIGNS.
- CONVERT TEMPORARY SEDIMENTATION TRAPS "A" & "B" INTO STORMWATER RENOVATION AREAS BY REMOVING THE BASIN OUTLET RISER AND CLEANING THE BASIN OF DEPOSITED MATERIALS AND CONSTRUCTION STORMWATER WETLANDS IN ACCORDANCE WITH THE SITE PLANS.
- REMOVE ANY SILTATION FENCE, HAY BALES AND OTHER EROSION CONTROL MEASURES ONCE THE SITE IS PERMANENTLY STABILIZED.
- INSTALL CHAIN LINK SECURITY FENCE AND GATES AROUND THE SITE.
- INSTALL CHAIN LINK SECURITY FENCE AND GATES AROUND SWITCHYARD.

## WILDLIFE MITIGATION NOTES

TURTLE CONSERVATION: TO LIMIT THE POTENTIAL FOR IMPACTS TO EASTERN BOX TURTLES (A CONNECTICUT SPECIES OF SPECIAL CONCERN) RESULTING FROM THE CONSTRUCTION OF THE CPV TOWANTIC PROJECT, THE PERMITTEE SHALL ADHERE TO THE FOLLOWING PRECAUTIONARY MEASURES AT ANY TIME THAT WORK IS DONE DURING THE TURTLE'S ACTIVE PERIOD OF APRIL 1 TO NOVEMBER 1:

- PRIOR TO CONSTRUCTION:
- A SILT FENCING SHALL BE INSTALLED AROUND THE WORK AREA PRIOR TO CONSTRUCTION AND PRIOR TO THE BEGINNING OR AFTER THE CONCLUSION OF THE TURTLE HIBERNATION PERIOD NOVEMBER 1 TO APRIL 1.
  - THE AREA WITHIN THE PERIMETER OF THE SILT FENCE SHALL BE CANVASSED DAILY FOR A PERIOD OF 2 WEEKS FOR THE PRESENCE OF TURTLES AND ANY TURTLES FOUND WITHIN THE BOUNDS OF THE SILT FENCE SHALL BE RELOCATED OUTSIDE OF THE BOUNDS OF THE SILT FENCE.

- DURING CONSTRUCTION:
- WORK CREWS SHALL BE APPRAISED OF THE SPECIES DESCRIPTION AND POSSIBLE PRESENCE PRIOR TO CONSTRUCTION.
  - WORK CREWS SHALL SEARCH THE WORK AREA FOR EASTERN BOX TURTLES PRIOR TO THE START OF EACH CONSTRUCTION DAY.
  - ANY EASTERN BOX TURTLES ENCOUNTERED DURING THE WORK SHALL BE MOVED UNHARMED TO AN AREA IMMEDIATELY OUTSIDE OF THE FENCED WORK AREA AND ORIENTED IN THE SAME DIRECTION IT WAS WALKING WHEN FOUND.
  - ALL PRECAUTIONARY MEASURES SHOULD BE TAKEN TO AVOID DEGRADATION TO WETLAND HABITATS INCLUDING ANY WET MEADOWS AND SEASONAL POOLS.
  - WORK CONDUCTED IN THESE HABITATS DURING THE EARLY MORNING AND EVENING HOURS SHOULD OCCUR WITH SPECIAL CARE NOT TO HARM BASKING OR FORAGING INDIVIDUALS.
  - NO HEAVY MACHINERY OR VEHICLES SHALL BE PARKED IN ANY TURTLE HABITAT AND PRECAUTIONS SHALL BE TAKEN WHEN THE MACHINERY IS TRAVELING TO THE WORK AREA TO AVOID TURTLES.
  - ALL SILT FENCING SHALL BE REMOVED AFTER WORK IS COMPLETED WHEN SOILS ARE STABLE.
  - ALL REPTILE AND AMPHIBIAN MOVEMENT BETWEEN UPLANDS AND WETLANDS IS NOT RESTRICTED.

BAT CONSERVATION: TO LIMIT THE POTENTIAL FOR IMPACTS TO THE RED BAT, THE HOARY BAT AND THE SILVERHAIRED BAT. (THREE CONNECTICUT SPECIES OF SPECIAL CONCERN) RESULTING FROM THE CONSTRUCTION OF THE CPV TOWANTIC PROJECT, THE PERMITTEE SHALL ADHERE TO THE FOLLOWING PRECAUTIONARY MEASURES :

TREE CLEARING: TREE CLEARING ACTIVITIES SHALL BE COMPLETED BETWEEN AUGUST 16 AND APRIL 30 TO AVOID POTENTIAL IMPACT TO BAT ROOST HABITAT THROUGH THE REMOVAL OF POSSIBLE ROOSTING TREES PRIOR TO THE START OF THE BATS' ACTIVE ROOSTING SEASON (MAY 1 TO AUGUST 15).

## EXTENDED DETENTION SHALLOW WETLAND BASINS

BOTH STORMWATER RENOVATION AREAS HAVE BEEN DESIGNED AS EXTENDED DETENTION SHALLOW WETLAND BASIN SYSTEMS IN ACCORDANCE WITH THE RECOMMENDATIONS FOUND IN THE 2004 CONNECTICUT STORMWATER QUALITY MANUAL. THE EXTENDED DETENTION SHALLOW WETLAND BASINS ALSO PROVIDE MITIGATION FOR THE PROJECT'S UNAVOIDABLE WETLAND IMPACTS.

### CONSTRUCTION MONITORING

- THE PROJECT WETLAND MONITOR WITH EXPERIENCE IN WETLAND MITIGATION AND EXTENDED DETENTION SHALLOW WETLAND BASIN CONSTRUCTION MONITORING WILL SUPERVISE PLACEMENT OF TOPSOIL AND PLANTING ELEMENTS OF THE EXTENDED DETENTION SHALLOW WETLAND BASINS. ALL-POINTS TECHNOLOGY CORPORATION, P.C. (APT) WILL SERVE AS THE PROJECT WETLAND MONITOR FOR THIS PROJECT TO ENSURE THAT PLACEMENT OF TOPSOIL AND PLANTING OF THE EXTENDED DETENTION SHALLOW WETLAND BASINS ARE IMPLEMENTED PROPERLY. THE CONTRACTOR SHALL CONTACT DEAN GUSTAFSON, SENIOR WETLAND SCIENTIST AT APT, AT LEAST 5 BUSINESS DAYS PRIOR TO THE PRE-CONSTRUCTION MEETING. MR. GUSTAFSON CAN BE REACHED BY PHONE AT (860) 663-1697 EXT. 201 OR VIA EMAIL AT DGUSTAFSON@ALLPOINTSTECH.COM.
- THE PROJECT WETLAND MONITOR SHALL BE NOTIFIED A MINIMUM OF SEVEN (7) BUSINESS DAYS PRIOR TO ANY PHASE OF THE EXTENDED DETENTION SHALLOW WETLAND BASINS PROJECT INCLUDING EXCAVATION AND GRADING, SOIL TRANSFER AND PLANTING.
- A PRE-CONSTRUCTION MEETING WILL BE HELD ON SITE BETWEEN THE PROJECT WETLAND MONITOR AND CONTRACTOR(S) PERFORMING ALL ASPECTS OF THE EXTENDED DETENTION SHALLOW WETLAND BASINS CONSTRUCTION. THE PRIMARY INTENT OF THE PRE-APPLICATION MEETING IS TO DISCUSS THE GOALS OF THE EXTENDED DETENTION SHALLOW WETLAND BASINS AND IMPLEMENTATION OF REQUIRED ELEMENTS NECESSARY TO ACHIEVE PERMIT-REQUIRED GOALS AND SEQUENCE OF ELEMENTS.

### GENERAL NOTES

CONSTRUCTION OF THE EXTENDED DETENTION SHALLOW WETLAND BASINS HAS BEEN DESIGNED TO MINIMIZE EROSION AND MAXIMIZE THE ESTABLISHMENT OF PLANTED NATIVE VEGETATION. THE BASINS WILL BE CONSTRUCTED PER THE FOLLOWING:

- PRIOR TO ALL WORK, EROSION CONTROL MEASURES SHALL BE ESTABLISHED AS INDICATED ON SITE PLANS AND AS DETERMINED TO BE NECESSARY IN RESPONSE TO SITE CONDITIONS.
- THE EXTENDED DETENTION SHALLOW WETLAND BASINS SHALL ONLY BE CONSTRUCTED AFTER THE CONTRIBUTING DRAINAGE AREAS HAVE BEEN COMPLETELY STABILIZED SINCE THESE AREAS WILL BE USED AS TEMPORARY SEDIMENT BASINS DURING THE CONSTRUCTION PHASE OF THE PROJECT. THESE BASINS SHALL BE DE-WATERED, DREGGED AND RE-GRADED AS NECESSARY TO DESIGN DIMENSIONS AFTER THE CONTRIBUTING DRAINAGE AREAS HAVE BEEN COMPLETELY STABILIZED.
- EXTENDED DETENTION SHALLOW WETLAND BASINS SHALL BE COVERED WITH A MINIMUM OF 10 INCHES OF TOPSOIL WITHIN THE LOW MARSH AND HIGH MARSH PLANTING AREAS AND A 5-FOOT WIDE SHELF AROUND THE PERIMETER OF THE FOREBAY AND MICROPOOL. TOPSOIL FOR USE IN THE EXTENDED DETENTION SHALLOW WETLAND BASINS SHALL ONLY BE SOURCED FROM THE PROJECT SITE. TOPSOIL SHALL ONLY BE RECOVERED FROM WETLAND 1 AND FORESTED AREAS FROM THE PROJECT SITE, SEGREGATED SEPARATELY ON THE PROJECT SITE DURING CONSTRUCTION, AND AMENDED WITH ORGANIC MATTER SO THAT IT CONTAINS AT MINIMUM OF 8 PERCENT ORGANIC CARBON CONTENT BY WEIGHT. RECOVERED TOPSOIL SHALL BE FREE OF STUMPS AND LARGE ROCKS; SMALLER ROOT MATERIALS CAN REMAIN TO MINIMIZE SOIL COMPACTION. THE PROJECT WETLAND MONITOR WILL BE PROVIDED WITH LABORATORY TESTING RESULTS TO CONFIRM ORGANIC MATTER CONTENT OF TOPSOIL PRIOR TO PLACEMENT IN THE EXTENDED DETENTION SHALLOW WETLAND BASINS.
- TOPSOIL ORGANIC MATTER AMENDMENTS SHALL CONSIST OF CLEAN COMMERCIALY AVAILABLE COMPOST (FREE OF PHYSICAL/CHEMICAL CONTAMINANTS AND WEED SEEDS) AS THE PREFERRED ORGANIC MATTER AMENDMENT TO ACHIEVE THIS ORGANIC MATTER CONTENT STANDARD, THOUGH OTHER MATERIALS MAY BE USED IF APPROVED BY THE PROJECT WETLAND MONITOR.
- TOPSOIL SHALL BE PLACED WITHIN THE EXTENDED DETENTION SHALLOW WETLAND BASINS IN SUCH A MANNER AS TO MINIMIZE COMPACTION. NO MACHINERY SHOULD BE ALLOWED TO TRAVERSE OVER THE PLANTING SOIL FOLLOWING FINAL GRADING.
- FOLLOWING COMPLETION OF FINAL GRADING OF THE TOPSOIL, AN EROSION CONTROL BLANKET SHALL BE PROPERLY INSTALLED OVER THE ENTIRE PLANTABLE AREA IN THE EXTENDED DETENTION SHALLOW WETLAND BASINS BOTTOM TO STABILIZE THE TOPSOIL AND PREPARE IT FOR PLANTING.
- SOME ROCKS AND BOULDERS, UNCOVERED DURING THE EXCAVATION, MAY BE LEFT IN PLACE PROVIDED THAT THEY DO NOT SIGNIFICANTLY DECREASE THE PLANTABLE AREA OF THE EXTENDED DETENTION SHALLOW WETLANDS. THESE ROCKS AND BOULDERS WILL BE PLACED IN SUCH A WAY AS TO PROVIDE BASKING AREA, CREVICES AND CAVITIES THAT ENHANCE WILDLIFE HABITAT.
- SIX TO EIGHT INCHES OF TOPSOIL SHALL BE PLACED ON THE SIDE SLOPES ADJACENT TO THE EXTENDED DETENTION SHALLOW WETLAND BASINS AND PLANTED WITH A NATIVE SEED MIX CONTAINING VARIOUS GRASSES AND FORBS SUITED FOR STEEP SLOPES, QUICK ESTABLISHMENT OF PERMANENT VEGETATION TO STABILIZE SOILS AND LOW MAINTENANCE.
- EXTENDED DETENTION SHALLOW WETLAND BASINS PLANTINGS WILL TAKE PLACE ONCE THE ABOVE LISTED TASKS HAVE BEEN COMPLETED. THE SPECIES, SIZE, QUANTITY AND SPACING OF THE PLANTINGS WILL FOLLOW THE PLANTING SCHEDULES.
- THE PROJECT WETLAND MONITOR SHALL INSPECT THE PLANTING STOCK SPECIMENS FOR HEALTH, PEST, AND SUITABLE FOR USE WITHIN THE EXTENDED DETENTION SHALLOW WETLAND BASINS. UNSUITABLE SPECIMENS WILL BE REJECTED AND REPLACED WITH SUITABLE SPECIMENS. ANY PLANTING SUBSTITUTIONS MUST BE APPROVED BY THE PROJECT WETLAND MONITOR. PLANTING WITHIN THE EXTENDED DETENTION SHALLOW WETLAND BASINS AND ADJACENT SIDE SLOPES SHALL CONFORM TO THE PLANS OR WILL BE COMPLETED IN ACCORDANCE WITH DIRECTIONS PROVIDED IN THE FIELD BY THE PROJECT WETLAND MONITOR. ONLY PLANT MATERIALS NATIVE AND INDIGENOUS TO CONNECTICUT SHALL BE USED. NO CULTIVARS SHALL BE USED.
- ALL PLANT MATERIALS INSTALLED SHALL MEET OR EXCEED THE SPECIFICATIONS OF THE "AMERICAN STANDARDS FOR NURSERY STOCK" BY THE AMERICAN ASSOCIATION OF NURSERYMEN. ALL PLANT MATERIALS SHALL BE GUARANTEED FOR ONE YEAR FOLLOWING DATE OF FINAL ACCEPTANCE.
- TEMPORARY DEVICES AND STRUCTURES TO CONTROL EROSION AND SEDIMENTATION IN AND AROUND THE EXTENDED DETENTION SHALLOW WETLAND BASINS AND SIDE SLOPES SHALL BE PROPERLY MAINTAINED AT ALL TIMES. THE DEVICES AND STRUCTURES SHALL BE DISASSEMBLED AND PROPERLY DISPOSED OF AS SOON AS THE SITE IS STABLE BUT NO LATER THAN THE END OF THE THIRD GROWING SEASON. SEDIMENT COLLECTED BY THESE DEVICES WILL BE REMOVED AND PLACED UPLAND IN A MANNER THAT PREVENTS ITS EROSION AND TRANSPORT TO A WATERWAY OR WETLAND. IF MINOR GRADING IS REQUIRED IN THIS ZONE TO PROVIDE SURFACE HYDROLOGIC CONNECTION BETWEEN THE AREAS, IT WILL BE DONE BY HAND AND STABILIZED WITH MULCH.
- WATERFOWL PROTECTION SHALL BE INSTALLED AS NECESSARY TO PROTECT NEWLY PLANTED VEGETATION. THIS IS PARTICULARLY CRITICAL FOR NEWLY ESTABLISHED EMERGENTS AND HERBACEOUS PLANTS, AS PREDATION BY WATERFOWL (E.G., CANADA GEES) CAN QUICKLY DEGRADED WETLAND VEGETATION. WATERFOWL PROTECTION MAY CONSIST OF NETTING, HERRINGED OR STRIPING INSTALLED IN A CROSS-GROSS PATTERN OVER THE SURFACE AREA OF THE EXTENDED DETENTION SHALLOW WETLAND BASINS, ABOVE THE LEVEL OF THE EMERGENT PLANTS.
- THE USE OF FERTILIZER AND PESTICIDES IN THE EXTENDED DETENTION SHALLOW WETLAND BASINS IS PROHIBITED. HERBICIDE USAGE IN THE EXTENDED DETENTION SHALLOW WETLAND BASINS WILL ONLY OCCUR AS NECESSARY FOR THE CONTROL OF INVASIVE SPECIES. IN SUCH CASES, HERBICIDES APPROPRIATE FOR USAGE IN SENSITIVE WETLAND AND AQUATIC ENVIRONMENTS WILL BE USED BY A STATE-LICENSED PROFESSIONAL.

### POST-CONSTRUCTION MONITORING REQUIREMENTS

- IN ACCORDANCE WITH SECTION 401 WATER QUALITY CERTIFICATION UNDER CATEGORY 2 OF THE GENERAL PERMIT AUTHORIZATION ISSUED ON MARCH 12, 2015 BY THE CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION (DEEP; PGP-201409826/NAE-2014-2062) AND THE NEW ENGLAND DISTRICT COMPENSATORY MITIGATION GUIDANCE (2010), THE EXTENDED DETENTION SHALLOW WETLAND BASINS SHALL BE MONITORED BY THE PROJECT WETLAND MONITOR DURING CONSTRUCTION AND FOR A PERIOD OF FIVE GROWING SEASONS FOLLOWING CONSTRUCTION.
- POST CONSTRUCTION INSPECTIONS OF THE EXTENDED DETENTION SHALLOW WETLAND BASINS WILL BE PERFORMED BY THE PROJECT WETLAND MONITOR TWICE EACH YEAR: LATE SPRING/EARLY SUMMER AND LATE SUMMER/EARLY FALL. THE EXTENDED DETENTION SHALLOW WETLAND BASINS WILL BE INSPECTED GENERALLY IN ACCORDANCE WITH THE CORPS' MITIGATION GUIDANCE TO ASSESS THE GENERAL HEALTH OF PLANTINGS, SOIL STABILIZATION AND PRESENCE OF INVASIVE PLANTS. INVASIVE PLANTS WILL INCLUDE SUCH SPECIES AS NOTED IN APPENDIX D OF THE CORPS' MITIGATION GUIDANCE.
- MONITORING REPORTS FOLLOWING THE CORPS' MITIGATION GUIDANCE FORMAT WILL BE SUBMITTED BY THE PROJECT WETLAND MONITOR TO THE CORPS OF ENGINEERS NEW ENGLAND DISTRICT, DEEP AND CONNECTICUT SITING COUNCIL NO LATER THAN DECEMBER 15 OF EACH YEAR. THE REPORTS WILL PROVIDE DETAILS ON THE FOUR SUCCESS STANDARDS DESCRIBED BELOW. IF THERE ARE PROBLEMS THAT NEED TO BE ADDRESSED AND IF THE MEASURES TO CORRECT THEM REQUIRE PRIOR APPROVAL FROM THE CORPS OF ENGINEERS NEW ENGLAND DISTRICT, DEEP AND/OR CONNECTICUT SITING COUNCIL, CPV TOWANTIC, LLC WILL CONTACT THESE AGENCIES AS SOON AS THE NEED FOR CORRECTIVE ACTION IS DISCOVERED.
- THE MITIGATION AREAS WILL BE ASSESS USING FOUR SUCCESS STANDARDS, AS DESCRIBED AS FOLLOWS: 1) AT LEAST 80% OF THE AERIAL SURFACE OF THE EXTENDED DETENTION SHALLOW WETLANDS PLANTING AREAS (HIGH MARSH, LOW MARSH AND 5-FOOT FRINGES OF FOREBAY AND MICROPOOL) SHALL BE ESTABLISHED WITH NATIVE HYDROPHYTES; 2) DOCUMENTED PRESENCE OF WETLAND HYDROLOGY APPROPRIATE FOR EXTENDED DETENTION SHALLOW WETLAND BASINS (SOIL SATURATION WITHIN 12 INCHES OF THE SURFACE FOR A MINIMUM OF TWO CONSECUTIVE WEEKS DURING THE GROWING SEASON IN THE HIGH MARSH AND LOW MARSH AREAS); 3) CONTROL OF NON-NATIVE SPECIES WITH LESS THAN 10% TOTAL AERIAL COVERAGE BY END OF MONITORING PERIOD; AND, 4) ALL SLOPES AND SOILS WITHIN AND ADJACENT TO THE EXTENDED DETENTION SHALLOW WETLAND BASINS ARE PERMANENTLY STABILIZED WITH VEGETATION AND ANY EROSION CONTROL BARRIERS REMOVED NO LATER THAN THE END OF THE THIRD GROWING SEASON.
- MITIGATION AS SET FORTH IN CONDITION 2 OF THE SECTION 401 WATER QUALITY CERTIFICATION AUTHORIZATION ISSUED ON MARCH 12, 2015 BY THE DEEP (PGP-201409826/NAE-2014-2062) WILL NOT BE CONSIDERED FULFILLED UNTIL MITIGATION SUCCESS HAS BEEN DEMONSTRATED THROUGH ATTAINMENT OF THE FOUR (4) SUCCESS STANDARDS AND WRITTEN VERIFICATION FROM DEEP HAS BEEN RECEIVED.

NO.	REVISION	DATE

*Previous Editions Obsolete*

## EROSION CONTROL NARRATIVE & CONSTRUCTION SEQUENCE

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