03 - CIVIL/WETLAND MITIGATION
INDEX OF DRAWINGS

DRAWING NUMBER	DRAWING TITLE	DRAWING NUMBER	DRAWING TITLE
ENV-01	ENVIRONMENTAL INDEX		
GEN-01	GENERAL NOTES		
INX-01	INDEX PLAN		
INV-01	INVASIVE SPECIES REMOVAL PLAN		
CSP-01 THRU CSP-03	SITE PLANS		
GRD-01 THRU GRD-05	GRADING PLANS		
XSC-01	CROSS SECTION		
DET-01 THRU DET-04	DETAIL SHEET		
LDS-01 THRU LDS-04	PLANTING PLANS		

DESIGNED BY:
PARSONS BRINCKERHOFF

Anthony A Moretti
PB Americas, Inc.
2014.06.06
15:46:01 -04'00'

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/5/2014

DESIGNER/DRAFTER: REB/MCD
CHECKED BY: RAC

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\FA..CGR..CPS..0170-2296..164...03..SSC...02.dgn

SIGNATURE/BLOCK:

PROJECT TITLE:
NEW HAVEN HARTFORD SPRINGFIELD
RAIL PROGRAM
PIGEON HILL WETLAND MITIGATION SITE

TOWN: WINDSOR

DRAWING TITLE:
ENVIRONMENTAL
SUBSET COVER SHEET

PROJECT NO. 170-3293
DRAWING NO. SSC-03
SHEET NO. 03.01

Connecticut Department of Transportation
QA/QC Format Check

NOTES:

1. REMOVE BARN BEFORE ACCESS ROAD CONSTRUCTION.

2. INFORMATION REGARDING THE LOCATION OF EXISTING UTILITIES HAS BEEN BASED UPON AVAILABLE INFORMATION AND MAY BE INCOMPLETE, AND WHERE SHOWN SHOULD BE CONSIDERED APPROXIMATE. NO GUARANTEE TO THE ACCURACY OF THE EXISTING UTILITIES FACILITIES SHOWN IN THIS PROJECT IS EXPRESSED OR IMPLIED UNLESS OTHERWISE NOTED. CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG", 1-800-922- 4455. CONTRACTOR SHALL MAINTAIN MARKINGS WHERE NEEDED DURING PROJECT. ALL UTILITY LOCATIONS THAT DO NOT MATCH THE VERTICAL OR HORIZONTAL CONTROL SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION. THE CONTRACTOR SHALL VERIFY LOCATIONS OF UTILITIES AND SERVICE LATERALS PRIOR TO CONSTRUCTION. ANY CONFLICTS WITH LOCATIONS OF LIGHT POLES, TREES, ETC. SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION PRIOR TO CONSTRUCTION.

3. THE CONTRACTOR SHALL PROTECT EXISTING UTILITIES AND STRUCTURES. THOSE OF WHICH HAVE BEEN DAMAGED SHALL BE PROMPTLY REPAIRED TO EXISTING OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE. MDC MAY BE CONTACTED AT 860-278-7850.

4. ANY PUBLIC OR PRIVATE PROPERTY DISTURBED AS A RESULT OF CONSTRUCTION OPERATIONS SHALL BE RESTORED AS QUICKLY AS POSSIBLE AND THE SATISFACTION OF THE ENGINEER.

5. RIM OR FRAME ELEVATIONS OF ALL UTILITY STRUCTURES SHALL BE ADJUSTED TO MEET FINISHED SURFACES. PRIVATE UTILITIES WHO ARE RESPONSIBLE FOR ADJUSTING THEIR OWN STRUCTURES SHALL BE NOTIFIED AT LEAST 2 WEEKS IN ADVANCE BY THE CONTRACTOR.

6. ACCESS TO PRIVATE PROPERTIES MUST BE MAINTAINED AT ALL TIMES. FOR SECURITY REASONS ALL PRIVATELY OWNED FENCING THAT IS TO BE REMOVED SHALL BE REPLACED WITHIN 72 HOURS OF REMOVAL.

7. HAZARDOUS MATERIALS:
   A. IT IS PREFERABLE THAT FUELING AND MAINTENANCE OF EQUIPMENT AND/OR VEHICLES OCCUR OFF-SITE IN A GARAGE OR OTHER SUITABLE AREA. IF OFF-SITE REFUELING AND/OR MAINTENANCE IS NOT FEASIBLE OR PRACTICAL, THESE ACTIVITIES SHALL OCCUR IN AN AREA WHERE SPILLAGE CAN BE CONTAINED OR REMOVED, NO LESS THAN 50 FEET FROM A WATERCOURSE. ABSORBENT SPILL BLANKET MATERIAL SHOULD BE PLACED NEXT TO THE REFUELING/MAINTENANCE ACTIVITY TO BE USED TO CONTAIN AND REMOVE ANY POTENTIAL SPILLAGE.

   B. ALL FUEL, OIL, PAINT, OR OTHER HAZARDOUS MATERIAL SHALL BE STORED IN A SECONDARY CONTAINER AND REMOVED TO A LOCKED INDOOR AREA WITH AN IMPERVIOUS FLOOR DURING NONWORK HOURS.

   C. AN AMPLE SUPPLY OF ABSORBENT SPILL RESPONSE MATERIAL (BOOMS, BLANKETS, ETC.) SHALL BE AVAILABLE AT CONSTRUCTION SITES AT ALL TIMES TO CLEAN UP POTENTIAL SPILLS OF HAZARDOUS MATERIALS SUCH AS GASOLINE AND OIL.

   D. SPILLS OF HAZARDOUS MATERIALS SHALL BE REPORTED IMMEDIATELY TO: CT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION, OIL AND CHEMICAL SPILLS UNIT AT (860) 424-3338.

SEDIMENTATION AND EROSION CONTROL MEASURES:

1. THE CONTRACTOR SHALL INSTALL TEMPORARY SEDIMENTATION AND EROSION CONTROL DEVICES AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

2. EROSION AND SEDIMENT CONTROL MEASURES WILL BE CONSTRUCTED IN ACCORDANCE WITH THE CONNECTICUT DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROADS, BRIDGES AND INCIDENTAL CONSTRUCTION", FORM 816, 2004, WITH THE SUPPLEMENTAL SPECIFICATIONS ATTACHED TO THE CONTRACT, 2002 CONNECTICUT GUIDELINES FOR EROSION AND SEDIMENT CONTROL, DEP BULLETIN 34, AND THE PROJECT SPECIFICATIONS.

3. THESE GUIDELINES SHALL APPLY TO ALL WORK CONSISTING OF ANY AND ALL TEMPORARY AND/OR PERMANENT MEASURES TO CONTROL WATER POLLUTION AND SOIL EROSION, AS MAY BE REQUIRED, DURING THE CONSTRUCTION OF THE PROJECT.

4. IN GENERAL FOR ALL CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL PROCEED IN SUCH A MANNER SO AS NOT TO POLLUTE ANY WETLANDS, WATERCOURSE, WATERBODY, AND CONDUIT CARRYING WATER, ETC. THE CONTRACTOR SHALL LIMIT, INSOFAR AS POSSIBLE, THE SURFACE AREA OF EARTH MATERIALS EXPOSED BY CONSTRUCTION METHODS AND IMMEDIATELY PROVIDE PERMANENT AND TEMPORARY POLLUTION CONTROL MEASURES TO PREVENT CONTAMINATION OF ADJACENT WETLANDS, WATERCOURSES, AND WATERBODIES, AND TO PREVENT, INSOFAR AS POSSIBLE, EROSION ON THE SITE.

5. DEBRIS AND OTHER WASTE RESULTING FROM THE CONTRACTOR'S EQUIPMENT MAINTENANCE AND CONSTRUCTION SHALL NOT BE DISCARDED ON SITE.

6. THROUGHOUT THE DURATION OF THE WORK, THE CONTRACTOR MUST MAINTAIN ON SITE A SUPPLY OF ABSORBENT PADS AND OTHER APPROVED MATERIALS NEEDED TO TREAT ANY HAZARDOUS SPILL OR CONTAMINATION. ALL SPILLS OR CONTAMINATIONS MUST BE REPORTED IMMEDIATELY TO THE DEEP HAZARDOUS MATERIALS OFFICE AT 866-337-7745 OR 860-424-3338 AS WELL AS LOCAL AUTHORITIES.

7. ALL SEDIMENTATION AND EROSION CONTROL DEVICES SHALL BE INSPECTED DURING CONSTRUCTION BY THE CONTRACTOR ON A DAILY BASIS AND FOLLOWING ALL STORMS. THE CONTRACTOR SHALL MAINTAIN AND MAKE REPAIRS AND REMOVE SEDIMENT AS REQUIRED AND AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE PERFORMED WITHIN 24 HOURS FOLLOWING ALL STORM EVENTS. THERE SHALL BE NO SEPARATE PAYMENT FOR THIS WORK.

8. THE CONTRACTOR SHALL CLEAN SEDIMENT AND DEBRIS FROM ALL DRAINAGE STRUCTURES AND PIPES AT THE COMPLETION OF CONSTRUCTION AND AS REQUIRED TO KEEP THE SYSTEM FUNCTIONING PROPERLY DURING CONSTRUCTION.

9. FOLLOWING COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL REPAIR ALL ERODED AREAS AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL REPAIR ALL ERODED OR DISPLACED RIPRAP AND CLEAN SEDIMENT COVERED STONES.

6. ANY SEDIMENT REMOVED DURING THE SEDIMENTATION AND EROSION CONTROL MAINTENANCE SHALL BE TAKEN TO THE WASTE STOCKPILE AREA FOR TESTING.

7. THERE SHALL BE NO SEPARATE PAYMENT FOR SEDIMENTATION AND EROSION CONTROL MAINTENANCE DURING CONSTRUCTION.

8. DURING THE REMOVAL OF INVASIVE SPECIES OR BY CLEARING AND GRUBBING, ALL TRUCKS LEAVING THE SITE SHOULD BE RINSED.

GENERAL STAGING OF PROJECT:

THE CONSTRUCTION OF THE TEMPORARY SEDIMENTATION BASINS, IF REQUIRED MUST BE COMPLETED BY THE CONTRACTOR BEFORE ANY OTHER WORK BEGINS AT THE SITE. EXTREME CAUTION MUST BE TAKEN TO LIMIT THE EXTENT OF DISTURBED AREAS. WORK SHALL BE CONDUCTED BY THE CONTRACTOR IN THE FOLLOWING ORDER:

1. INSTALL ANTI-TRACKING PADS AS DIRECTED BY THE ENGINEER.

2. INSTALL SEDIMENTATION CONTROL SYSTEM AROUND ALL EXISTING CATCH BASINS AND DRAINS, EACH STOCKPILE AND STORAGE AREA AND IN OTHER AREAS AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

3. CONSTRUCT TEMPORARY SEDIMENTATION BASINS.

4. DEMOLISH OLD TOBACCO BARN.

5. CONSTRUCT WSA

6. OVER EXCAVATE AOEC #1

7. BACKFILL EXCAVATION

8. CLEAR & GRUB FOR PROPOSED ACCESS ROADS, DURING GRUBBING OPERATIONS, INSTALL CHECK DAMS AT ANY EVIDENT CONCENTRATED FLOW DISCHARGE POINTS.

9. CONSTRUCT ACCESS ROADS, TEMPORARY CONSTRUCTION AREAS, AND TEMPORARY STREAM CROSSING, PLACE TIMBER MATS 10. STABILIZE ALL DISTURBED AREAS.

11. REMOVE INVASIVE PLANTS, STABILIZE AREA DISTURBED BY REMOVAL.

12. CONSTRUCT STREAM BANK IMPROVEMENTS, STABILIZE AREA DISTURBED WITH WETLAND GRASS ESTABLISHMENT.

13. REMOVE TEMPORARY ACCESS ROADS AND TIMBER MATS, CLEAR TEMPORARY CONSTRUCTION AREAS, REMOVE TEMPORARY STREAM CROSSING.

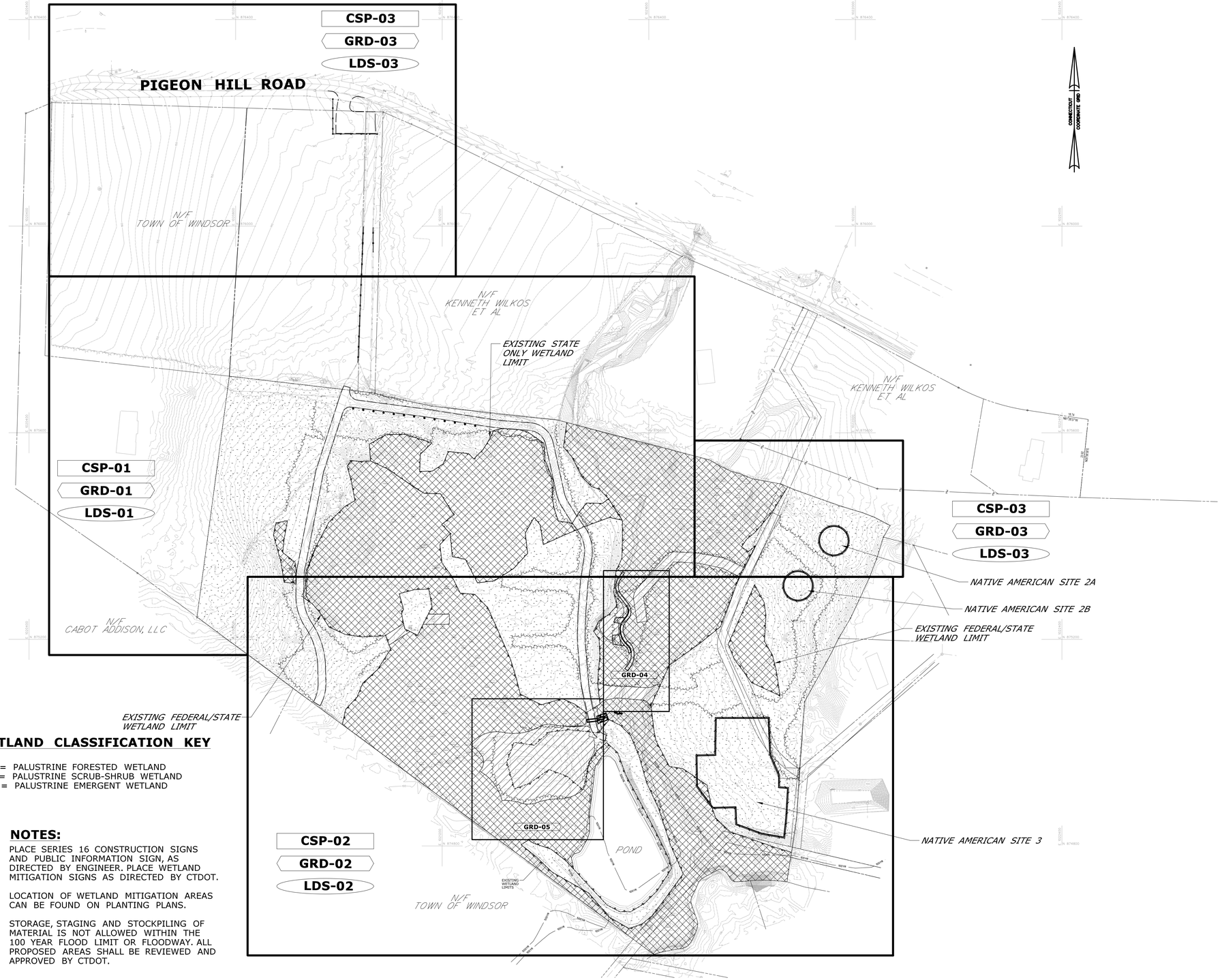
14. STABILIZE ALL DISTURBED AREAS.

15. CONSTRUCT WETLAND RESTORATION AREA, STABILIZE AREA DISTURBED WITH WETLAND GRASS ESTABLISHMENT.

15. PLANT TREES AND SHRUBS.

16. REMOVE WSA.

17. RESTORE DISTURBED AREAS AND REMOVE EROSION CONTROL DEVICES.



LEGEND

CSP-04	= SITE PLAN
GRD-04	= GRADING PLAN
LDS-04	= PLANTING PLAN
	= AREA OF WETLAND ENHANCEMENT
	= AREA OF WETLAND RESTORATION
	= AREA OF UPLAND ENHANCEMENT

WETLAND CLASSIFICATION KEY

PFO = PALUSTRINE FORESTED WETLAND
PSS = PALUSTRINE SCRUB-SHRUB WETLAND
PEM = PALUSTRINE EMERGENT WETLAND

WETLAND MITIGATION SCHEDULE

WETLAND MITIGATION AREA	ENHANCED AREA (SF)	CREATED AREA (SF)	TOTAL AREAS (SF)
EAST	159,220	10,710	169,930 = 3.90 AC.
WEST	240,520	31,330	271,850 = 6.24 AC.
TOTAL	410,660	42,040	441,780 = 10.14 AC.

UPLAND BUFFER PLANTING AREA 328,940 = 7.55 AC.

NOTES:

1. PLACE SERIES 16 CONSTRUCTION SIGNS AND PUBLIC INFORMATION SIGN, AS DIRECTED BY ENGINEER. PLACE WETLAND MITIGATION SIGNS AS DIRECTED BY CTDOT.
2. LOCATION OF WETLAND MITIGATION AREAS CAN BE FOUND ON PLANTING PLANS.
3. STORAGE, STAGING AND STOCKPILING OF MATERIAL IS NOT ALLOWED WITHIN THE 100 YEAR FLOOD LIMIT OR FLOODWAY. ALL PROPOSED AREAS SHALL BE REVIEWED AND APPROVED BY CTDOT.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/5/2014

DESIGNER/DRAFTER: REB/MCD
CHECKED BY: RAC
SCALE IN FEET 0 100 200
SCALE 1"=100'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\FA..CGR..CPS..0170-2296..164..03..LIN..01.DGN

SIGNATURE/BLOCK:

STATE OF CONNECTICUT LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE:
NEW HAVEN HARTFORD SPRINGFIELD
RAIL PROGRAM
PIGEON HILL WETLAND MITIGATION SITE

TOWN: WINDSOR

DRAWING TITLE: INDEX PLAN

PROJECT NO. 170-3293
DRAWING NO. INX-01
SHEET NO. 03.03

LEGEND

- REMOVAL OF REED CANARY GRASS *
- REMOVAL OF PURPLE LOOSESTRIFE
- REMOVAL OF REMAINNG INVASIVE SPECIES AS NEEDED

* AREAS OF 2' OVER EXCAVATION AND WETLAND RE-ESTABLISHMENT

NOTES:

1. ADDITIONAL SPECIES OF INVASIVE PLANTS ARE PRESENT WITHIN THE MITIGATION LIMITS. THE CONTRACTOR IS REQUIRED TO TREAT THESE AREAS IN ACCORDANCE WITH THE "CONTROL AND REMOVAL OF INVASIVE VEGETATION" SPECIAL PROVISION.
2. THE CONTRACTOR IS DIRECTED TO PROVIDE REMOVAL OF INVASIVE SPECIES FOR ENTIRE PROPERTY BUT EXACT LIMITS WILL BE DETERMINED BY EXISTING INVASIVES SPECIES LOCATED IN THE FIELD BY CTDOT.
3. IF REMOVAL OF INVASIVE SPECIES IS LOCATED IN EXISTING WETLANDS AND REMOVAL OF THE PLANT REQUIRES EXCAVATION, THEN RESTORATION OF THAT SHALL BE COMPLETED PER "WETLAND CREATION" SPECIAL PROVISION.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/5/2014

DESIGNER/DRAFTER: REB/MCD
CHECKED BY: RAC
SCALE IN FEET
0 100 200
SCALE 1"=100'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\FA..CGR..CPS..0170-2296..164...03...INV..01.DGN

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT INSTITUTE OF MATERIALS LICENSED PROFESSIONAL ENGINEER

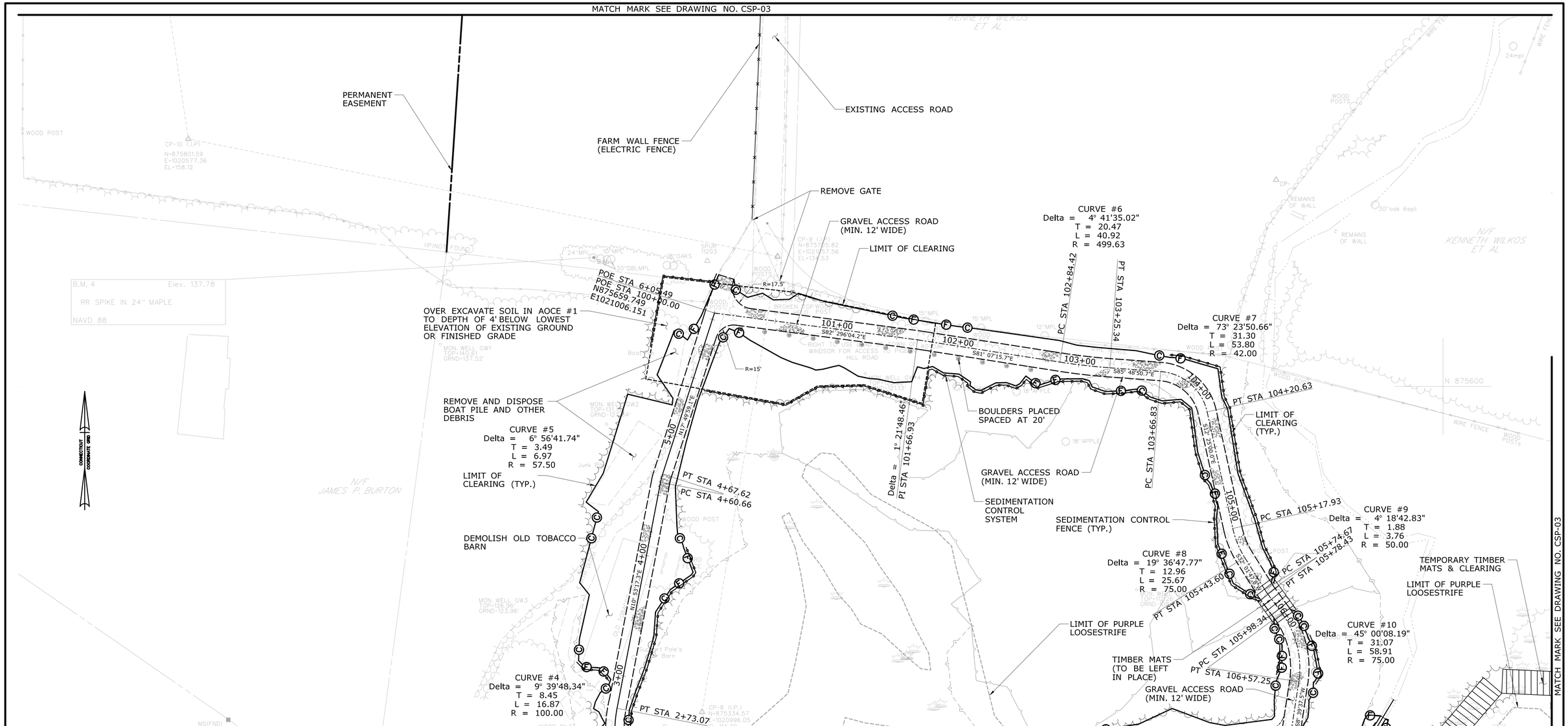
PROJECT TITLE:
NEW HAVEN HARTFORD SPRINGFIELD RAIL PROGRAM
PIGEON HILL WETLAND MITIGATION SITE

TOWN: WINDSOR

DRAWING TITLE: INVASIVE SPECIES REMOVAL PLAN

PROJECT NO. 170-3293
DRAWING NO. INV-01
SHEET NO. 03.04

MATCH MARK SEE DRAWING NO. CSP-03



MATCH MARK SEE DRAWING NO. CSP-02

NOTE:

1. SEE DRAWING GEN-01 FOR GENERAL NOTES

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/5/2014

DESIGNER/DRAFTER: REB/MCD

CHECKED BY: RAC

SCALE IN FEET 0 40 80

SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\FA_CGR_CPS_0170-2296_164_03_CSP_01.DGN

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT ANTHONY A. MUSTETT LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE:

NEW HAVEN HARTFORD SPRINGFIELD RAIL PROGRAM
PIGEON HILL WETLAND MITIGATION SITE

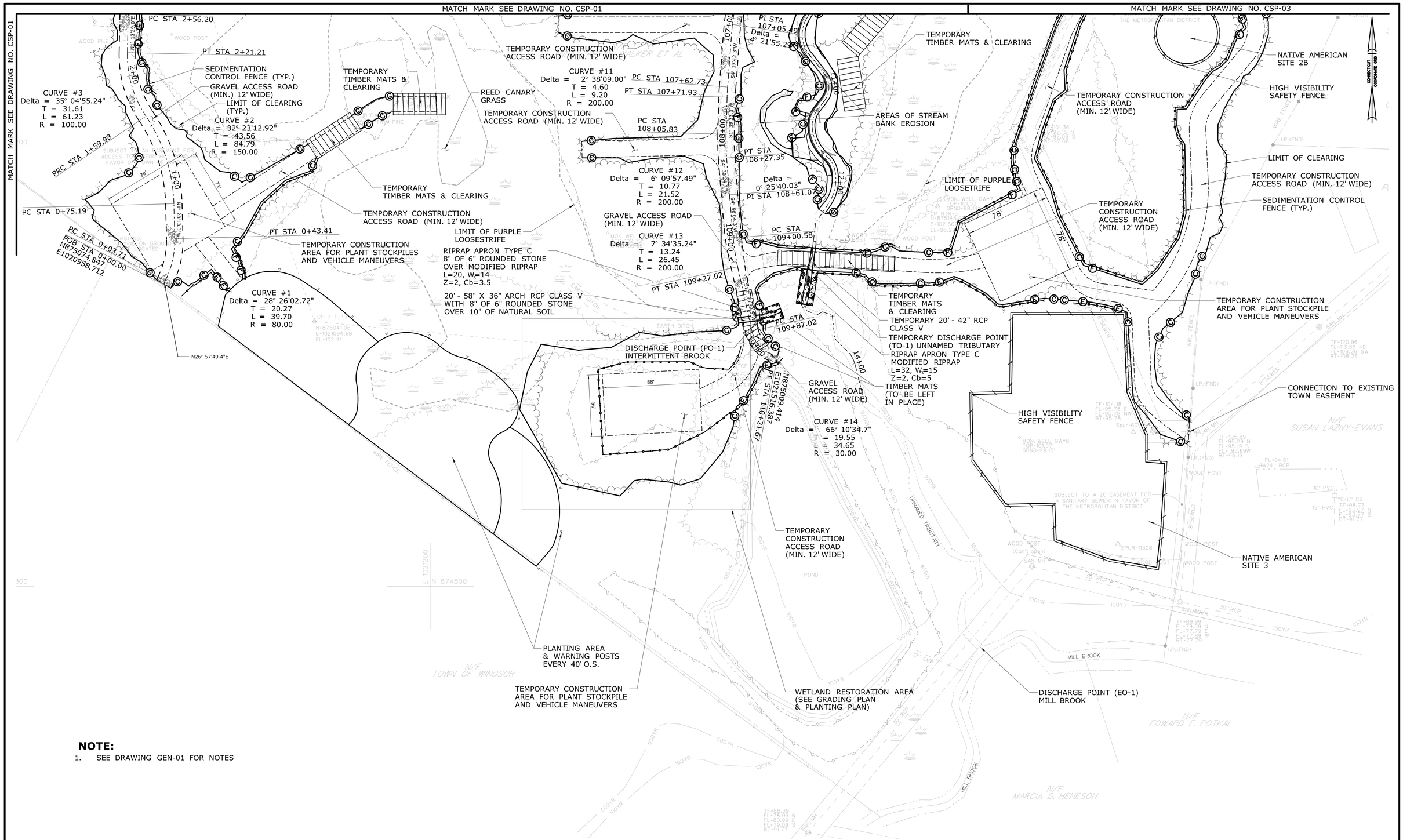
TOWN: **WINDSOR**

DRAWING TITLE: **SITE PLAN**

PROJECT NO. **170-3293**

DRAWING NO. **CSP-01**

SHEET NO. **03.05**



NOTE:

1. SEE DRAWING GEN-01 FOR NOTES

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/6/2014

DESIGNER/DRAFTER: REB/MCD
CHECKED BY: RAC
SCALE IN FEET 0 40 80
SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\FA..CGR..CPS..0170-2296..164...03..CSP..02.DGN

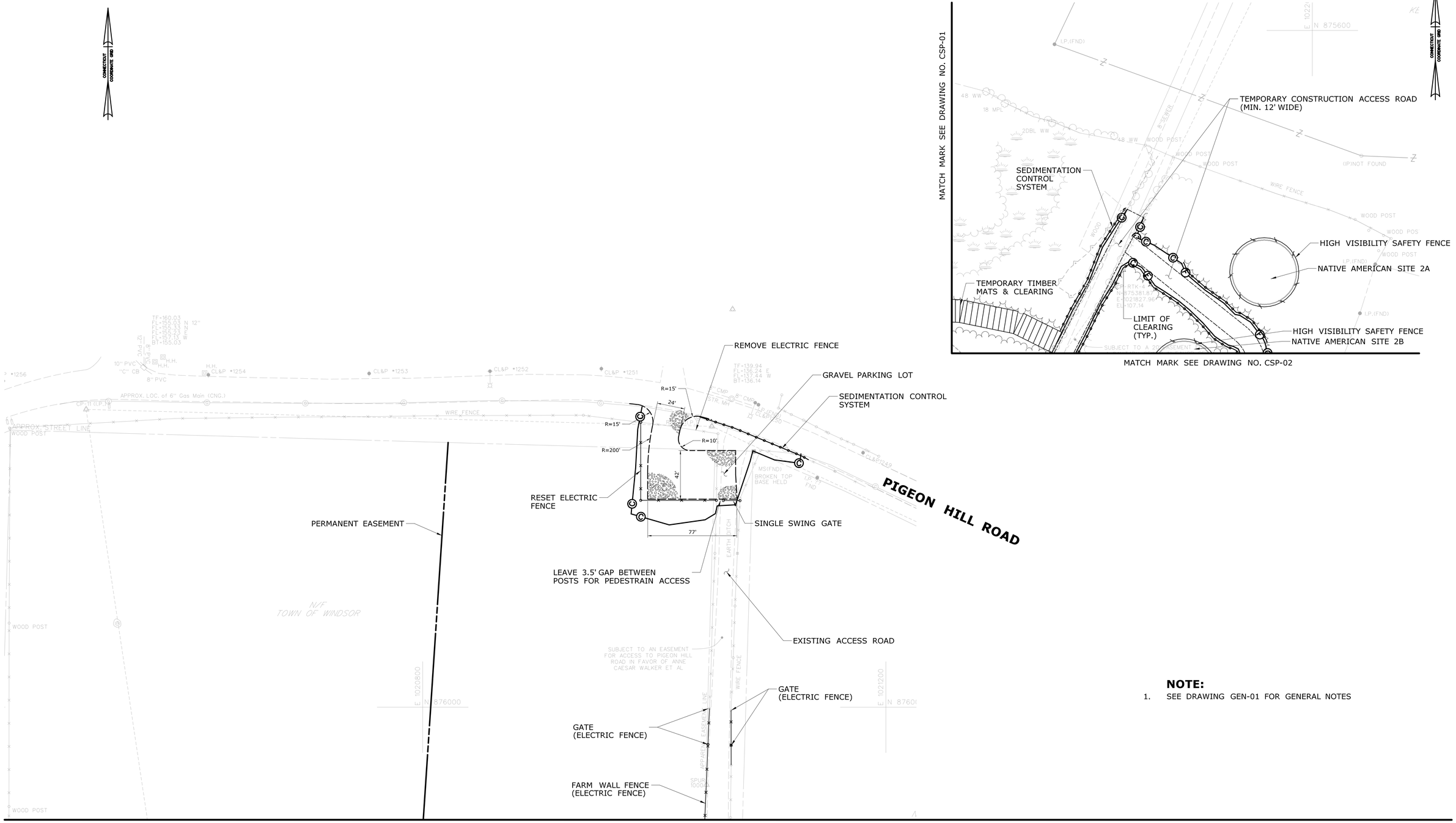
SIGNATURE/BLOCK:

PROJECT TITLE:
NEW HAVEN HARTFORD SPRINGFIELD RAIL PROGRAM
PIGEON HILL WETLAND MITIGATION SITE

TOWN: WINDSOR

DRAWING TITLE: SITE PLAN

PROJECT NO. 170-3293
DRAWING NO. CSP-02
SHEET NO. 03.06



NOTE:

1. SEE DRAWING GEN-01 FOR GENERAL NOTES

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/5/2014

DESIGNER/DRAFTER: REB/MCD

CHECKED BY: RAC

SCALE IN FEET 0 40 80

SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\FA..CGR..CPS..0170-2296..164...03..CSP..03.DGN

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT ANTHONY A. MINELLI LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE:
NEW HAVEN HARTFORD SPRINGFIELD RAIL PROGRAM
PIGEON HILL WETLAND MITIGATION SITE

TOWN: WINDSOR

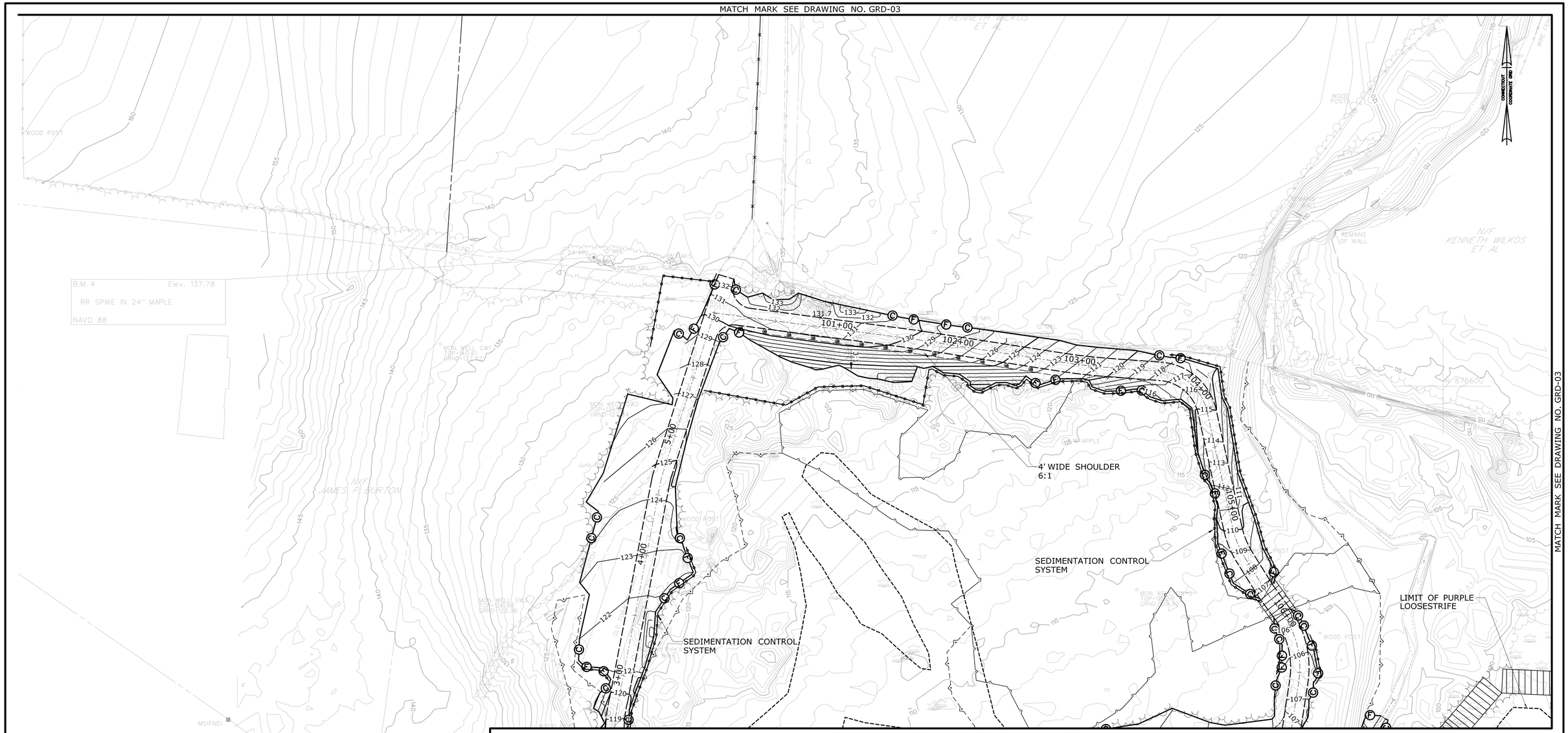
DRAWING TITLE: SITE PLAN

PROJECT NO. 170-3293

DRAWING NO. CSP-03

SHEET NO. 03.07

MATCH MARK SEE DRAWING NO. GRD-03



MATCH MARK SEE DRAWING NO. GRD-03

MATCH MARK SEE DRAWING NO. GRD-02

MATCH MARK SEE DRAWING NO. GRD-02

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/5/2014

DESIGNER/DRAFTER: **REB/SMD**

CHECKED BY: **RAC**

SCALE IN FEET
0 40 80
SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\FA..CGR..CPS..0170-2296..164...03..CGR...01.DGN

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
ANTHONY R. CIOTTI
LICENSED
PROFESSIONAL ENGINEER

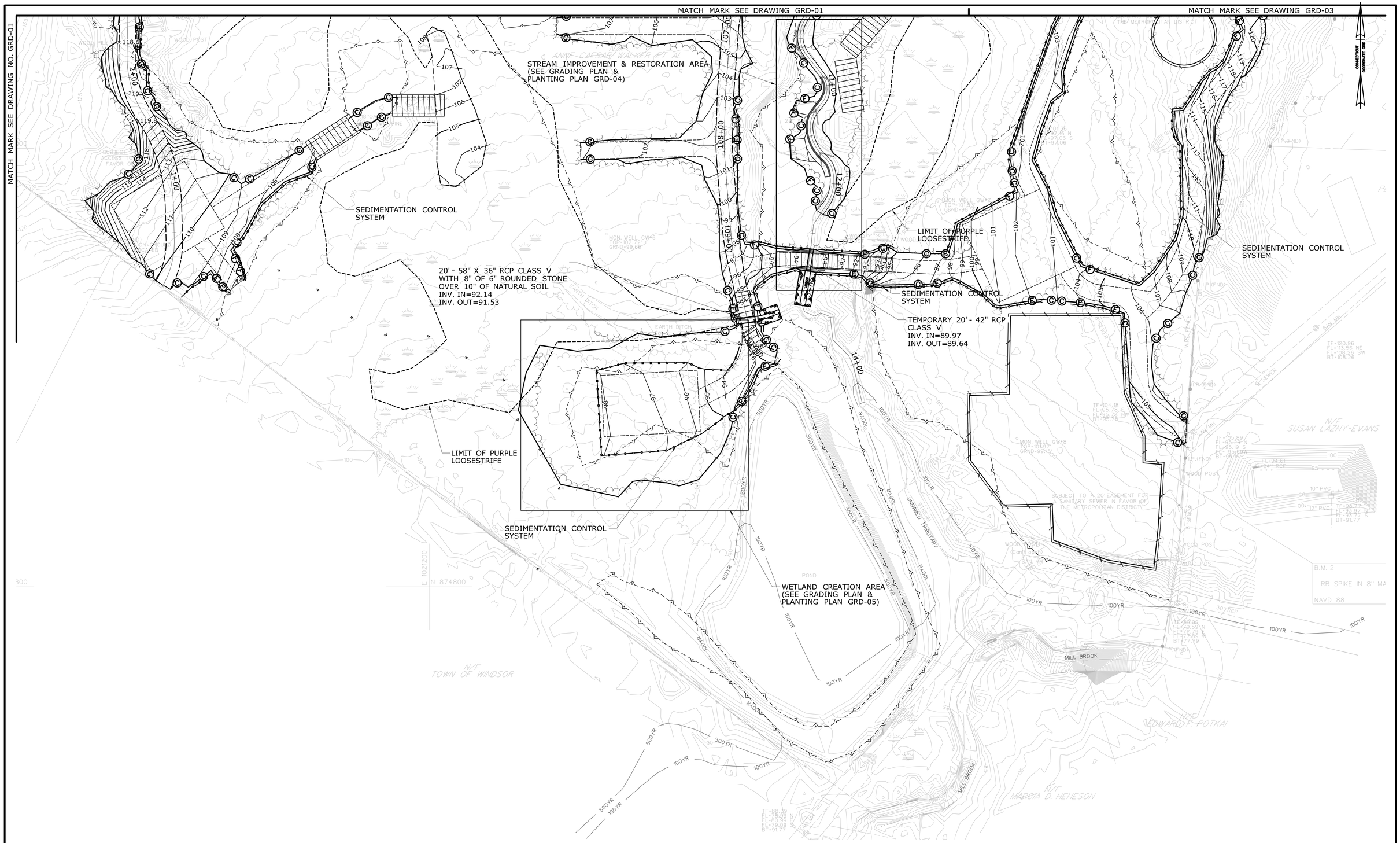
PROJECT TITLE:
NEW HAVEN HARTFORD SPRINGFIELD RAIL PROGRAM
PIGEON HILL WETLAND MITIGATION SITE

TOWN: **WINDSOR**

DRAWING TITLE: **GRADING PLAN**

PROJECT NO. **170-3293**
DRAWING NO. **GRD-01**
SHEET NO. **03.08**

MATCH MARK SEE DRAWING GRD-04



REV.	DATE	REVISION DESCRIPTION	SHEET NO.
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/5/2014

DESIGNER/DRAFTER: **REB/SMD**

CHECKED BY: **RAC**

SCALE IN FEET 0 40 80

SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\FA..CGR..CPS..0170-2296..164...03..CGR...02.DGN

SIGNATURE/BLOCK:

STATE OF CONNECTICUT · RICHARD A. CUTTS · LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE:

NEW HAVEN HARTFORD SPRINGFIELD RAIL PROGRAM
PIGEON HILL WETLAND MITIGATION SITE

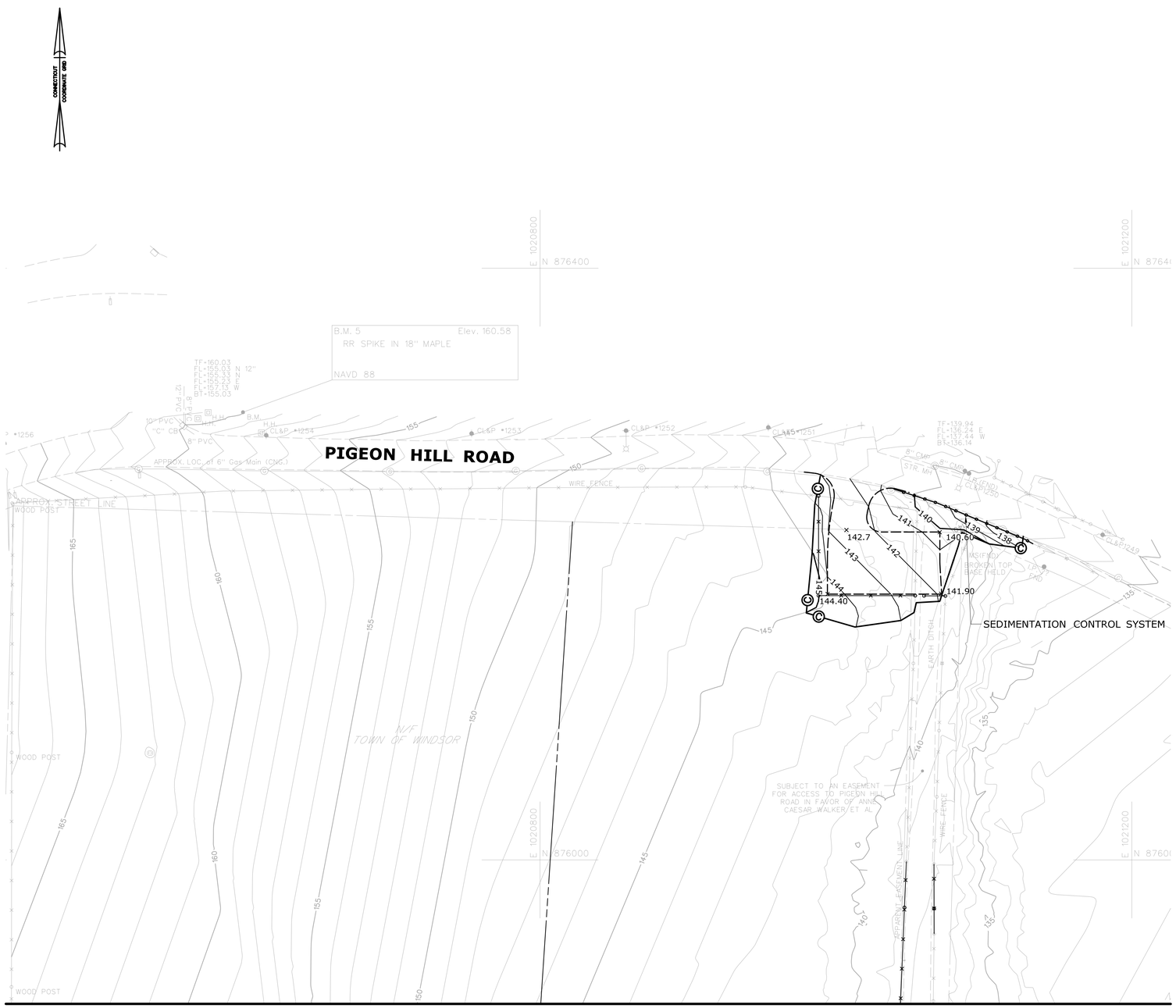
TOWN: **WINDSOR**

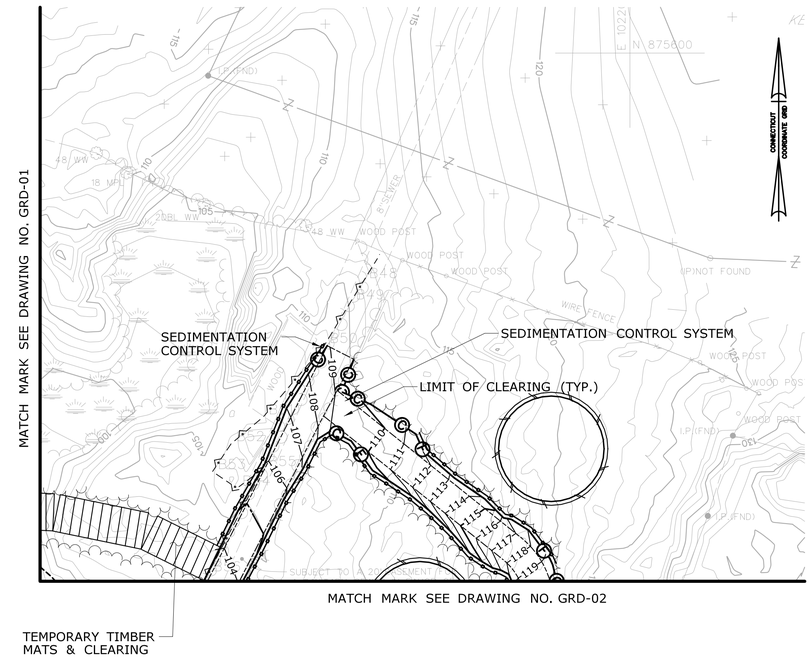
DRAWING TITLE: **GRADING PLAN**

PROJECT NO. **170-3293**

DRAWING NO. **GRD-02**

SHEET NO. **03.09**





REV.	DATE	REVISION DESCRIPTION	SHEET NO.
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/5/2014

DESIGNER/DRAFTER: **REB/SMD**

CHECKED BY: **RAC**

SCALE IN FEET 0 40 80

SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\FA..CGR..CPS..0170-2296..164...03..CGR...03.DGN

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT ANTHONY A. MORETTI LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE:
NEW HAVEN HARTFORD SPRINGFIELD RAIL PROGRAM
PIGEON HILL WETLAND MITIGATION SITE

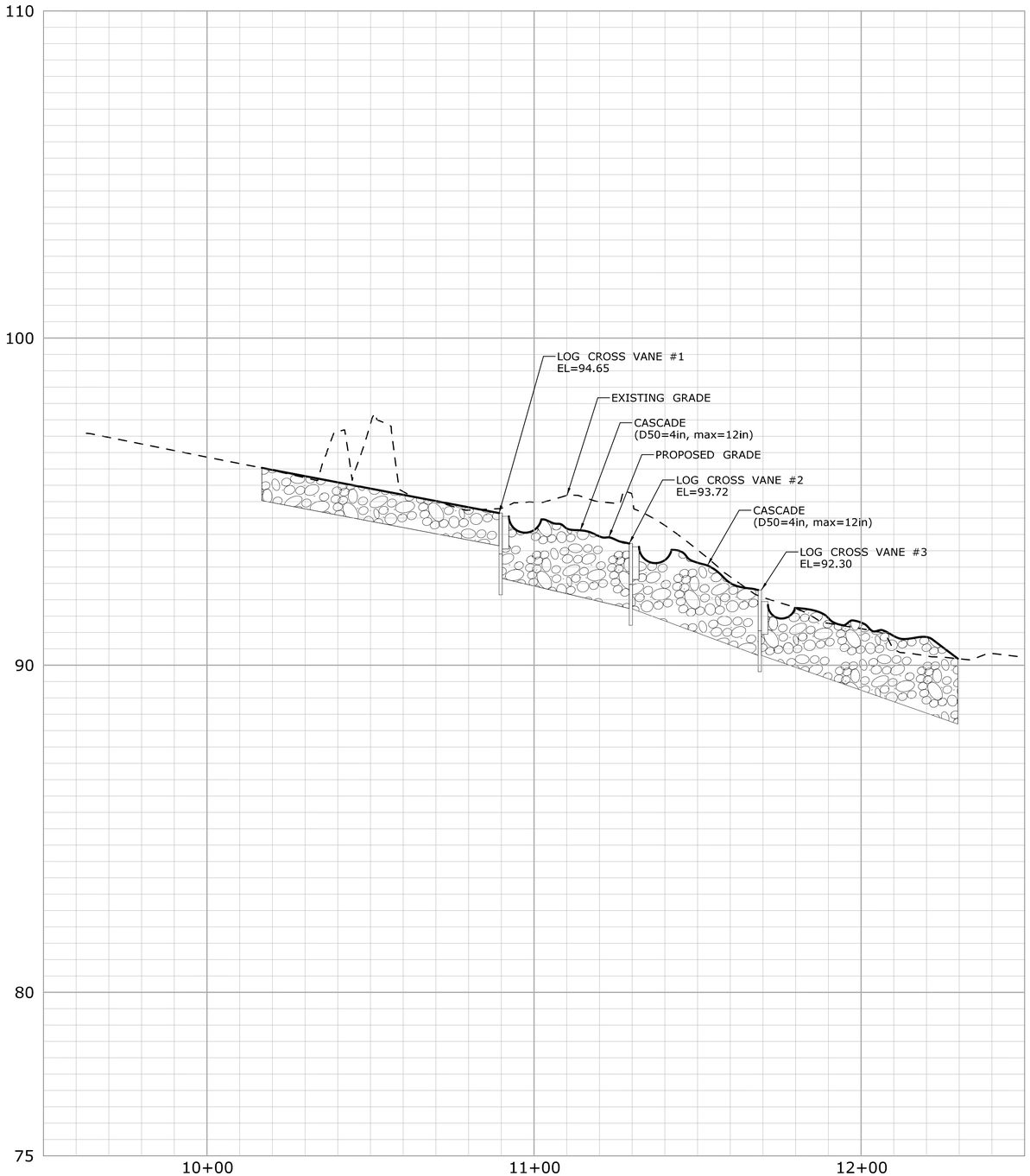
TOWN: **WINDSOR**

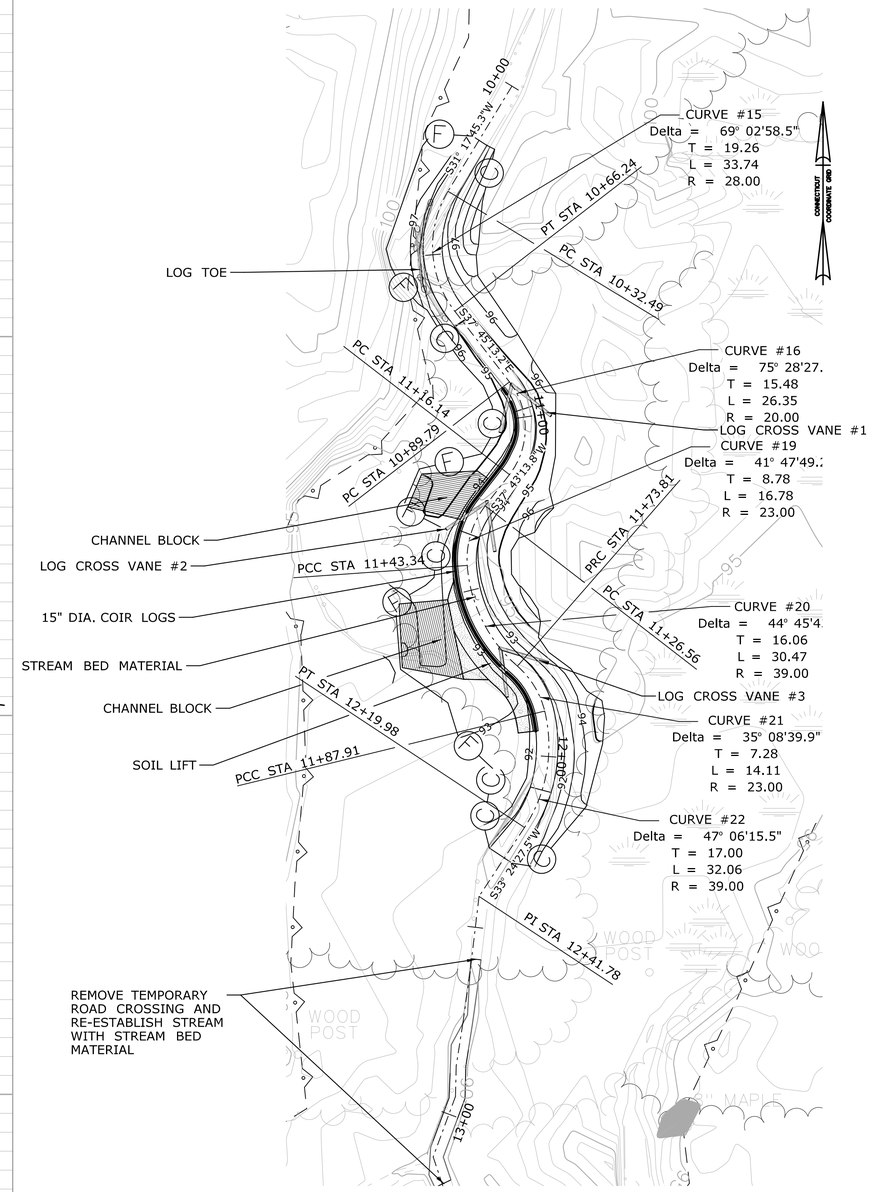
DRAWING TITLE: **GRADING PLAN**

PROJECT NO. **170-3293**

DRAWING NO. **GRD-03**

SHEET NO. **03.10**





STREAM BANK IMPROVEMENT GRADING PLAN

NOTES

1) ALL DISTURBED SLOPES SHALL BE STABILIZED WITH STABILIZATION MATTING AND WETLAND GRASS ESTABLISHMENT.

2) CHANNEL BLOCK ELEVATIONS TO BE FIELD VERIFIED.

3) LOG CROSS VANES, COIR LOGS, CHANNEL BLOCKS, AND SOIL LIFT ARE PAID UNDER THE ITEM "STREAMBANK STABILIZATION TREATMENT TYPE 1"

LEGEND

- LOG CROSS VANE
- SOIL LIFT
- COIR LOG
- CHANNEL BLOCK
- LOG TOE

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/6/2014

DESIGNER/DRAFTER: REB/SMD
CHECKED BY: RAC
HORIZ. SCALE IN FEET 0 20 40
VERT. SCALE IN FEET 0 2 4

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\FA..CGR..CPS..0170-2296..164...03..CGR...04.DGN

SIGNATURE/BLOCK:

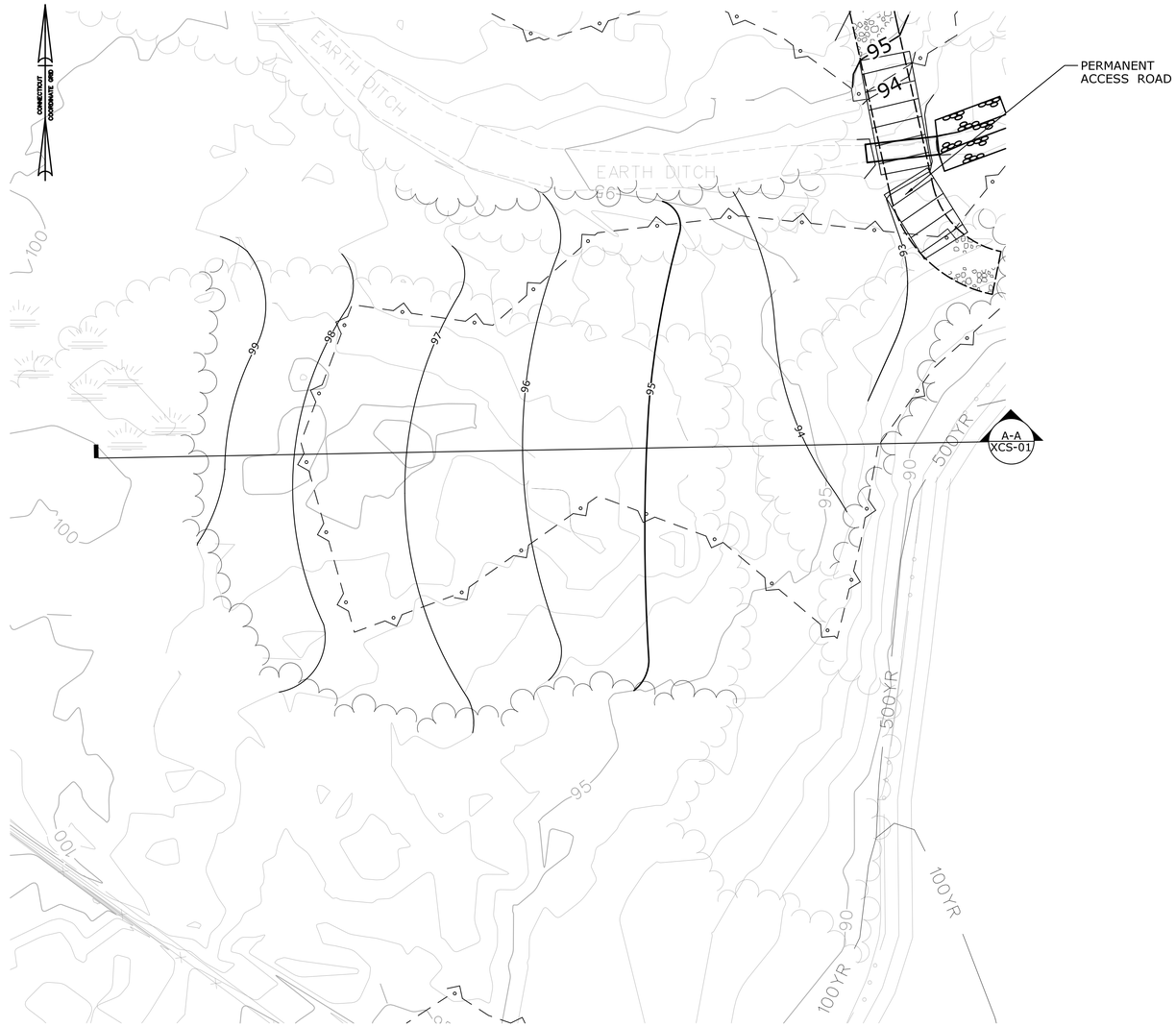
STATE OF CONNECTICUT
ANTHONY A. MINELLI
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:
NEW HAVEN HARTFORD SPRINGFIELD RAIL PROGRAM
PIGEON HILL WETLAND MITIGATION SITE

TOWN: WINDSOR

DRAWING TITLE: GRADING PLAN & PROFILE

PROJECT NO. 170-3293
DRAWING NO. GRD-04
SHEET NO. 03.11



WETLAND RESTORATION
GRADING

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/5/2014

DESIGNER/DRAFTER: **REB/SMD**
CHECKED BY: **RAC**
SCALE IN FEET
0 20 40
SCALE 1"=20'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\FA..CGR..CPS..0170-2296..164...03..CGR...05.DGN

SIGNATURE/ BLOCK:

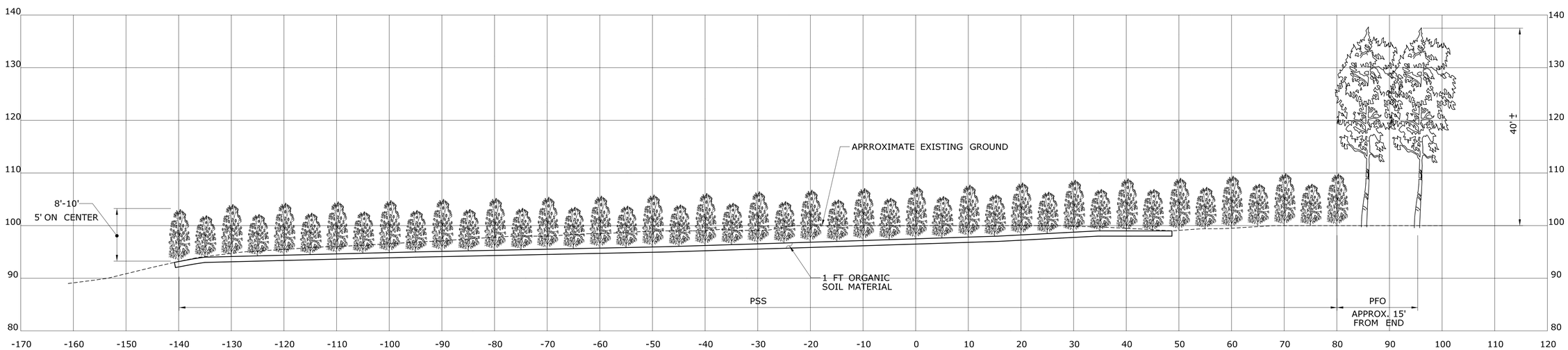
STATE OF CONNECTICUT ANTHONY M. MARCHETTI LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE:
NEW HAVEN HARTFORD SPRINGFIELD RAIL PROGRAM
PIGEON HILL WETLAND MITIGATION SITE

TOWN: **WINDSOR**

DRAWING TITLE: **GRADING PLAN**

PROJECT NO. **170-3293**
DRAWING NO. **GRD-05**
SHEET NO. **03.12**



SECTION A-A

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/5/2014

DESIGNER/DRAFTER: **MCD**

CHECKED BY: **RPB**

HORRZ SCALE: 1"=10'
VERT. SCALE: 1"=10'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\FA..CGR..CPS..0170-2296..164...03..CXS...01.DGN

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
ANTHONY A. MARCELLETTI
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE:

NEW HAVEN HARTFORD SPRINGFIELD RAIL PROGRAM
PIGEON HILL WETLAND MITIGATION SITE

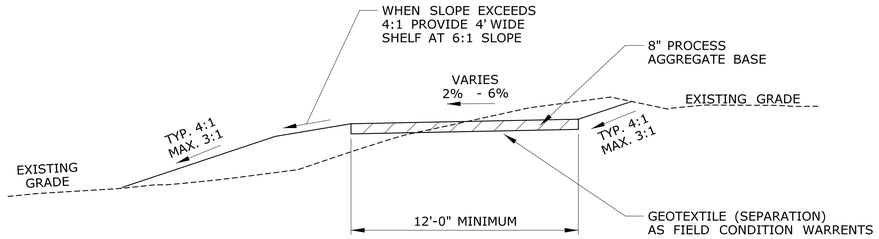
TOWN: **NEW HAVEN HARTFORD SPRINGFIELD**

DRAWING TITLE: **CROSS SECTION**

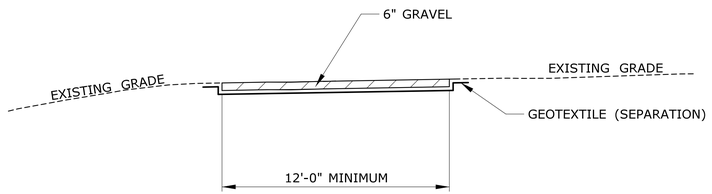
PROJECT NO. **170-3293**

DRAWING NO. **XCS-01**

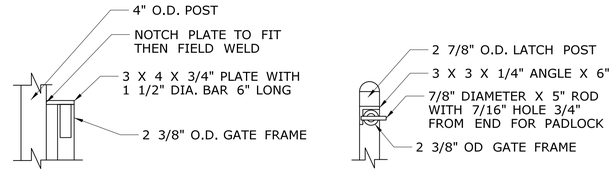
SHEET NO. **03.13**



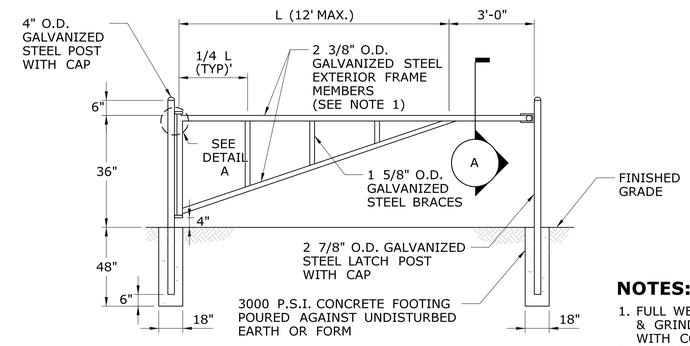
GRAVEL ACCESS ROAD (PERMANENT)



TEMPORARY CONSTRUCTION ACCESS ROAD



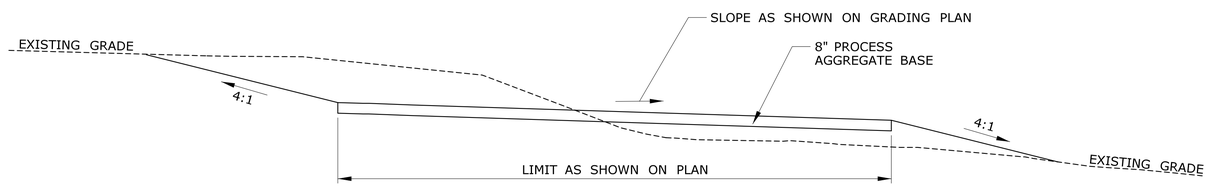
DETAIL A SECTION A



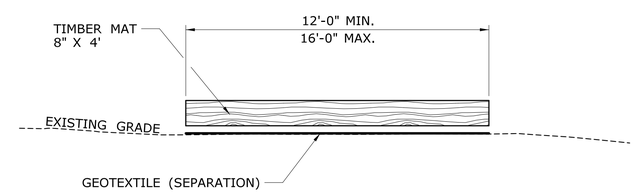
NOTES:

1. FULL WELD ALL JOINTS. CHIP, BRUSH & GRIND SMOOTH TOUCH-UP WITH COLD GALVANIZED PAINT.
2. PROVIDE SECOND STEEL LATCH POST WITH CAP ADJACENT TO EDGE OF DRIVE TO SECURE GATE IN THE OPEN POSITION.

SINGLE SWING GATE



GRAVEL PARKING LOT



TIMBER SUPPORT MAT

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
			-

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/5/2014

DESIGNER/DRAFTER: REB/SMD
CHECKED BY: RAC
NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\FA..CGR..CPS..0170-2296..164..03..CMD...01.DGN

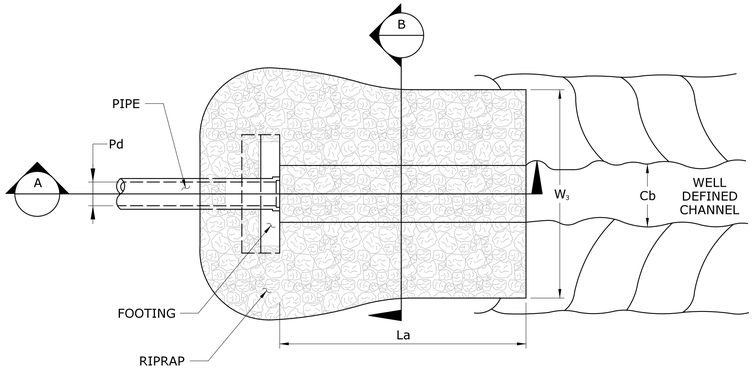
SIGNATURE/ BLOCK:

PROJECT TITLE:
NEW HAVEN HARTFORD SPRINGFIELD
RAIL PROGRAM
PIGEON HILL WETLAND MITIGATION SITE

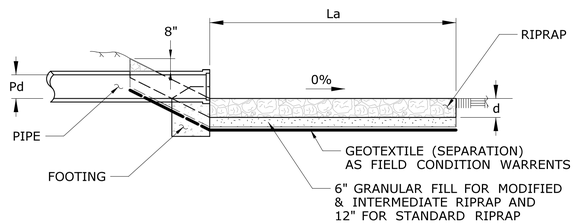
TOWN: WINDSOR

DRAWING TITLE: DETAILS

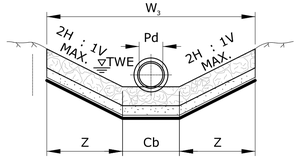
PROJECT NO. 170-3293
DRAWING NO. DET-01
SHEET NO. 03.14



PLAN VIEW



SECTION A-A

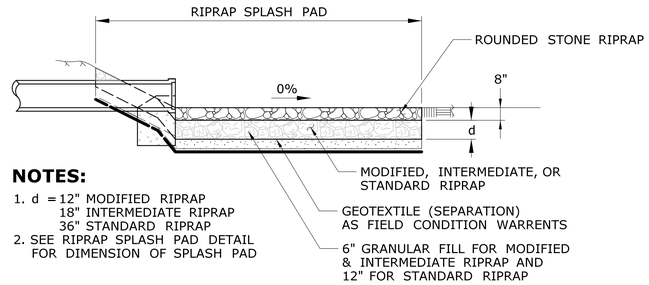


SECTION B-B

NOTES:

1. La = LENGTH OF RIPRAP APRON
   W_3 = WIDTH OF RIRPAP APRON
   Cb = WIDTH OF CHANNEL BOTTOM
   Z = WIDTH OF RIPRAP SIDE SLOPE
   Pd = PIPE DIAMETER
   d = 12" MODIFIED RIPRAP
   18" INTERMEDIATE RIPRAP
   36" STANDARD RIPRAP
   TWE = TAILWATER ELEVATION

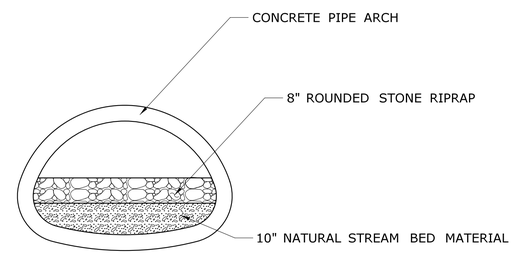
TYPE C RIPRAP APRON



NOTES:

1. d = 12" MODIFIED RIPRAP
   18" INTERMEDIATE RIPRAP
   36" STANDARD RIPRAP
2. SEE RIPRAP SPLASH PAD DETAIL FOR DIMENSION OF SPLASH PAD

ROUNDED STONE OVER RIPRAP APRON



CONCRETE PIPE ARCH W/ROUNDED STONE

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
			-

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/5/2014

DESIGNER/DRAFTER: REB/SMD
CHECKED BY: RAC
NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\FA..CGR..CPS..0170-2296..164...03..CMD...02.dgn

SIGNATURE/BLOCK:

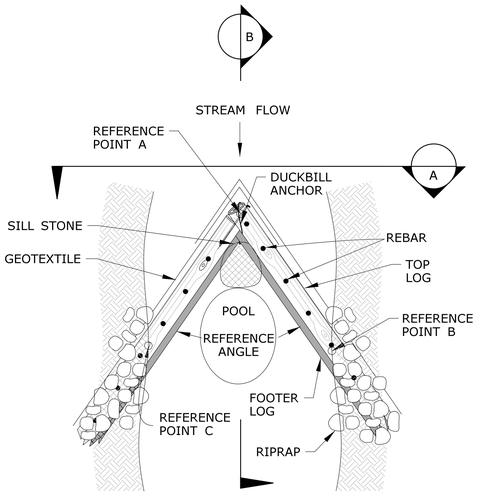
STATE OF CONNECTICUT
ANTHONY L. MORETTI
LICENSED
PROFESSIONAL ENGINEER

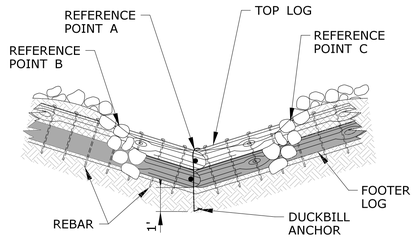
PROJECT TITLE:
NEW HAVEN HARTFORD SPRINGFIELD
RAIL PROGRAM
PIGEON HILL WETLAND MITIGATION SITE

TOWN: WINDSOR

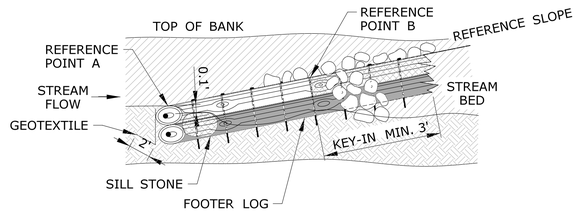
DRAWING TITLE: DETAILS

PROJECT NO. 170-3293
DRAWING NO. DET-02
SHEET NO. 03.15





SECTION A-A



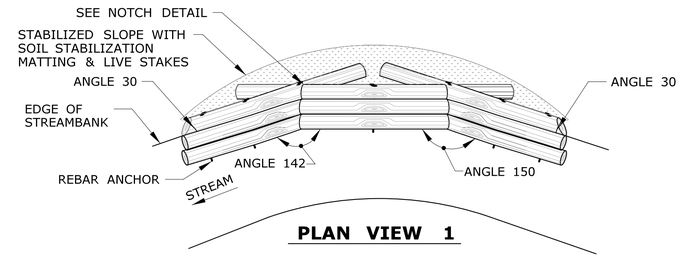
SECTION B-B

LOG CROSS VANE

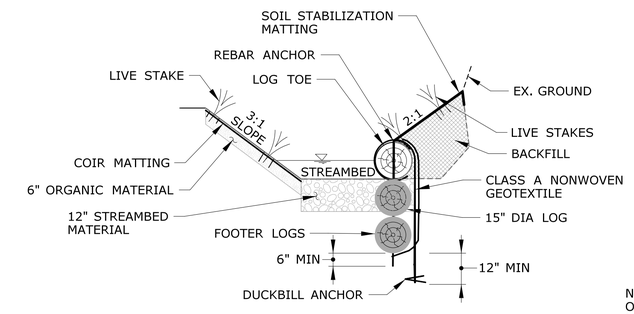
NOTES:

1. LOG VANES ARE TO BE CONSTRUCTED USING FOUR LOGS: TWO TOP LOGS AND TWO FOOTER LOGS.
2. LOGS ARE TO BE SECURED TO ONE ANOTHER IN ONE OF TWO METHODS:
   1) LOGS TO BE NOTCHED AT THE APEX OF THE V-SHAPE TO CREATE A TIGHT FIT BETWEEN LOGS.
   2) LOGS TO BE ABUTTED AT THE APEX OF THE V-SHAPE TO CREATE A TIGHT FIT BETWEEN THE LOGS AND SECURED TO ONE ANOTHER WITH REBAR. FOR BOTH OPTIONS, THE LOGS AT THE TOP OF THE LOG VANE SHOULD FIT TIGHTLY TOGETHER TO FORM A LOW FLOW CHANNEL OVER THE CENTER OF LOG VANE.
3. LOGS ARE TO CONSIST OF NATIVE HARDWOOD AND SHOULD BE FREE OF ROT, LIMBS, AND VOIDS.
4. TOP LOGS AND FOOTER LOGS ARE TO BE CONNECTED WITH REBAR. THE REBAR IS TO BE BENT TO 90°.
5. REBAR SHOULD CONSIST OF #2 BARS OR LARGER AND PLACED EVERY 3'.
6. GEOTEXTILE IS TO BE AFFIXED TO THE UPSTREAM SIDE OF THE LOGS USING STANDARD STAPLES. GEOTEXTILE IS TO EXTEND A MINIMUM OF 2-FEET IN FRONT OF THE LOGS ALONG THE CHANNEL BOTTOM.
7. LOGS ARE TO BE EMBEDDED A MINIMUM OF 3' INTO BANKS.
8. RIPRAP PROTECTION SHALL BE PLACED UPSTREAM AND DOWNSTREAM OF THE LOGS AT A DISTANCE OF THREE TIMES THE LOG DIAMETER AND AT THE TIE IN TO THE BANKS. RIPRAP PROTECTION SHOULD EXTEND OVER THE KEYED-IN LOGS.
9. LOGS ARE TO BE SECURED TO THE STREAMBED USING DUCKBILL ANCHORS. THE ANCHORS ARE TO BE SECURED TO THE LOG CROSS VANE AT THE APEX OF THE V- SHAPE, AND ANCHOR IS TO BE DRIVEN TO A DEPTH OF 12" BELOW THE LOWEST FOOTER LOG.
10. SILL STONE TO BE PLACED IMMEDIATELY DOWNSTREAM AND ABUTTING THE LOG APEX. STONE TO BE EXTENDED 2' DOWNSTREAM FROM THE APEX AND BURIED 1' MINIMUM. TOP ELEVATION OF SILL STONE TO BE PLACED 0.1' BELOW TOP REFERENCE POINT A.

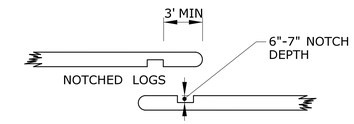
LOG CROSS VANE (LCV)							
LCV#	LOG LENGTH (FT)	LOG DIA. (IN)	REFERENCE POINT A (ELEV)	REFERENCE POINT B (ELEV)	REFERENCE POINT C (ELEV)	REFERENCE SLOPE (FT/FT)	REFERENCE ANGLE (DEG)
1	12-18	12-15	94.65	95.07	95.07	0.04	60
2	12-18	12-15	93.72	94.00	94.00	0.02	60
3	12-18	12-15	92.30	92.58	92.58	0.02	60



PLAN VIEW 1



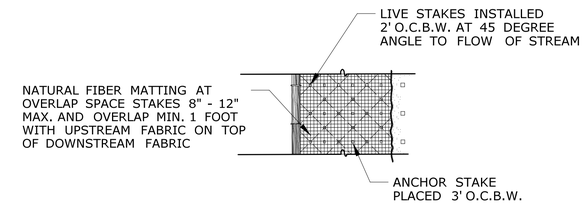
TYPICAL SECTION



NOTCH DETAIL

NOTES:

1. NOTCH CANNOT EXCEED 50% OF LOG DIAMETER.
2. NOTCH WIDTH WILL BE DETERMINED BY SIZE OF ADJACENT LOG.
3. NOTCH WIDTH SHOULD VARY BETWEEN 12 AND 15".
4. NOTCH SHALL BE FLUSH WITH THE ADJACENT LOG. THERE SHOULD BE NO GAP BETWEEN THE LOGS.



PLAN VIEW 2

LOG TOE PROTECTION DETAILS

NOTES:

1. LOGS TO BE 12" TO 15" IN DIAMETER AND 12' TO 18' LONG. LOGS ARE TO BE STRAIGHT AND FREE FROM ANY LARGE KNOTS. LOGS MUST BE HARDWOODS. NO PINE LOGS ALLOWED.
2. REBAR ANCHORS ARE TO BE PLACED EVERY 3 FEET.
3. LOG TOE SHALL BE CONSTRUCTED WITH 1 TOP LOG AND 2 FOOTER LOGS. THE TOP LOG SHALL BE PARTIALLY EMBEDDED IN THE STREAM BED, PROTRUDING 6-INCHES ABOVE THE BED. LOGS SHALL BE ROUGH HEWN NOTCHED AT JOINTS WITH ADJACENT LOGS. THE NOTCHING SHALL BE PERFORMED TO ALLOW A TIGHT CONTACT SURFACE BETWEEN ADJACENT LOGS.
4. DUCKBILL ANCHORS MOUNTED TO -INCH DIAMETER GALVANIZED STEEL ROPE SHALL BE USED TO ANCHOR THE LOGS. A MINIMUM OF TWO ANCHORS SHALL BE USED PER TOP LOG. THE DUCKBILL ANCHORS SHALL BE DRIVEN TO A DEPTH OF AT LEAST 12-INCHES BELOW THE LOWEST FOOTER LOG. THE WIRE ROPE SHALL BE WRAPPED AROUND THE TOP LOG AND SECURED USING THREE GALVANIZED STEEL CABLE CLAMPS.
5. THE EXPOSED ENDS OF THE TOP LOG SHALL BE ROUGH HEWN TO AN ANGLE OF 30 DEGREES OR SHALLOWER TO TAPER INTO THE STREAMBANK/BED. THE TAPER SHALL BE PERFORMED SUCH THAT THE ENDS OF THE LOG TOE DO NOT PROVIDE AN ABRUPT BLOCKAGE TO FLOWS.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
			-

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/5/2014

DESIGNER/DRAFTER: REB/SMD
CHECKED BY: RAC
NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\FA..CGR..CPS..0170-2296..164...03..CMD...03.dgn

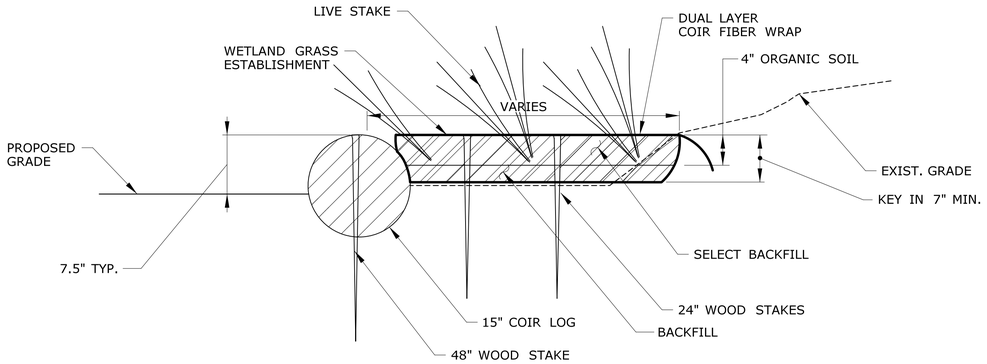
SIGNATURE/BLOCK:

PROJECT TITLE:
NEW HAVEN HARTFORD SPRINGFIELD RAIL PROGRAM
PIGEON HILL WETLAND MITIGATION SITE

TOWN: WINDSOR

DRAWING TITLE: MITIGATION DETAILS

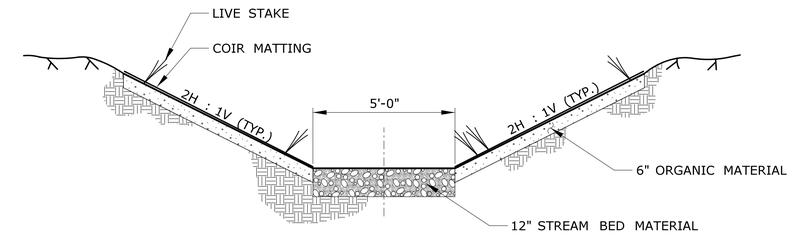
PROJECT NO. 170-3293
DRAWING NO. DET-03
SHEET NO. 03.16



SOIL LIFTS WITH COIR LOGS

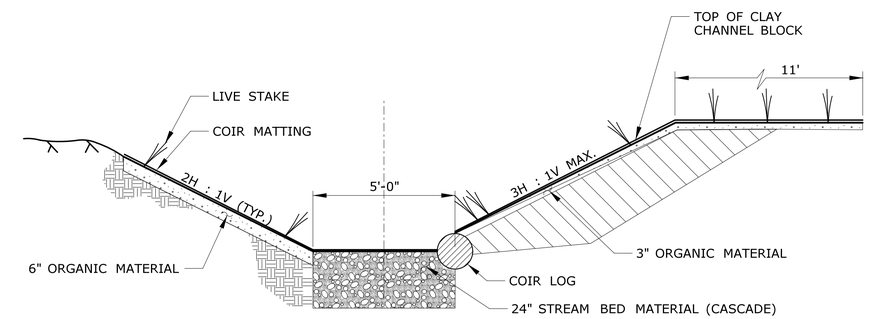
NOTES:

1. THE COIR LOG SHALL BE PARTIALLY EMBEDDED IN THE STREAMBED, PROTRUDING 7.5-INCHES ABOVE THE BED. THE ENDS OF ADJACENT COIR LOGS SHALL BE TIED WITH COIR TWINE. WHERE A COIR LOG DOES NOT ABUT ANOTHER COIR LOG, THE END SHALL BE BENT TOWARDS THE SHORE AND EMBEDDED DOWN INTO THE BANK/BED.
2. THE COIR LOG SHALL BE SECURED TO THE STREAMBED BY DRIVING 48-INCH WOODEN STAKES 1 FOOT 6-INCHES ON CENTER ALONG ITS LENGTH. STAKES SHALL BE LEVEL WITH THE TOP OF THE COIR LOG.
3. PRIOR TO PLACING FILL, THE DUAL LAYER COIR MATTING SHALL BE PLACED ALONG THE BOTTOM OF LIFT AND STRETCHED IN FRONT FOR FUTURE WRAPPING. THE OUTER LAYER SHALL CONSIST OF A DEGRADABLE, WOVEN COIR FIBER MATTING. THE INNER LAYER SHALL CONSIST OF A BIODEGRADABLE, NONWOVEN COIR BLANKET.
4. THE LIFT SHALL BE FILLED WITH SELECT BACKFILL AND 4-INCHES OF TOPSOIL THAT IS COMPACTED AND SMOOTHED OVER THE FULL WIDTH OF THE AREA.
5. THE SEED MIXTURE SHALL BE SPREAD ACROSS THE EXPOSED FACE OF THE SOIL LIFT.
6. THE FABRIC ON EACH LIFT SHALL BE WRAPPED OVER THE FACE OF THE SOIL LIFT, STRETCHED, SMOOTHED, AND SECURED WITH 24-INCH WOODEN STAKES. THE WOODEN STAKES SHALL BE DRIVEN THROUGH THE ENTIRE DEPTH OF THE SOIL LIFT. THE UPSLOPE END OF THE LIFT SHALL BE KEYED IN A MINIMUM OF 6-INCHES.
7. LIVE STAKES SHALL BE INSTALLED INTO THE LIFT ON A TRIANGULAR PATTERN WITH 24-INCH SPACING ON CENTER.



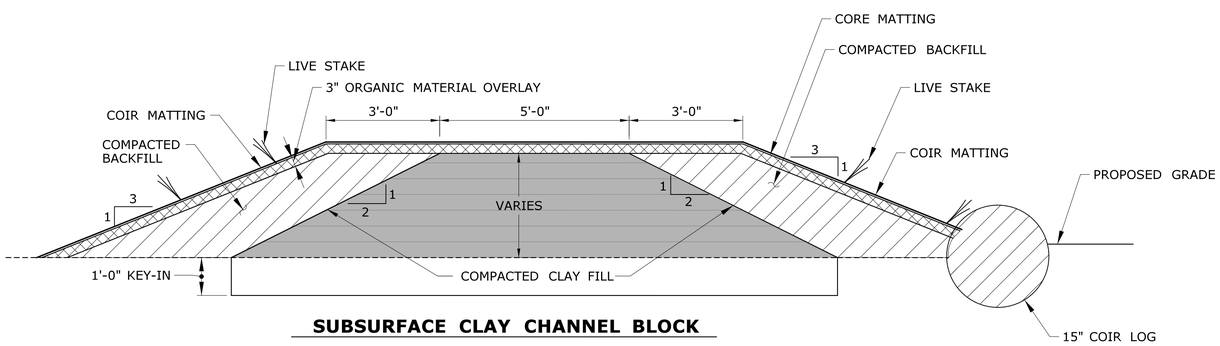
TYPICAL CHANNEL SECTION - UPSTREAM OF LOG CROSS VANES

(LOOKING DOWNSTREAM)



TYPICAL CHANNEL SECTION WITH COIR LOG AND CHANNEL BLOCK

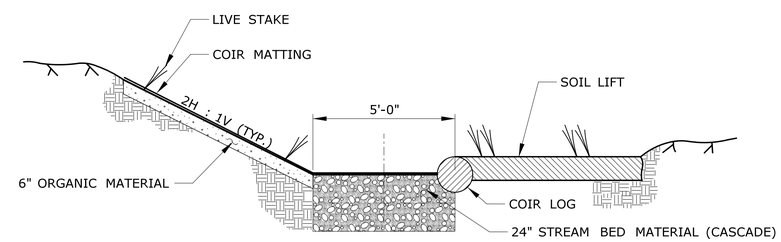
(LOOKING DOWNSTREAM)



SUBSURFACE CLAY CHANNEL BLOCK

NOTES:

1. CLAY BLOCK SHALL BE KEYED IN A MINIMUM OF 1 FOOT INTO THE STREAMBED AND A MINIMUM OF 1 FOOT INTO THE STREAMBANKS. CLAY FILL SHALL BE COMPACTED IN 12-INCH LIFTS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY.
2. COMPACTED BACKFILL SHALL BE PLACED ON THE CLAY BLOCK SIDE SLOPES WITH A MINIMUM TOP WIDTH OF 3 FEET AND SIDE SLOPES OF 3:1.
3. A 3-INCH ORGANIC MATERIAL OVERLAY SHALL BE PLACED OVER THE CLAY FILL AND BACKFILL TO BRING THE STRUCTURE UP TO GRADE.
4. COIR FIBER MATTING SHALL BE INSTALLED ALONG THE FINISHED SURFACE OF THE STRUCTURE. LIVE STAKES SHALL BE INSTALLED INTO THE LIFT ON A TRIANGULAR PATTERN WITH 24-INCH SPACING ON CENTER.
5. COIR LOGS AND SOIL LIFT SHALL BE INSTALLED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.



TYPICAL CHANNEL SECTION WITH COIR LOG AND SOIL LIFT

(LOOKING DOWNSTREAM)

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
			-

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/5/2014

DESIGNER/DRAFTER: REB/SMD
CHECKED BY: RAC
NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\FA..CGR..CPS..0170-2296..164...03..CMD...04.DGN

SIGNATURE/BLOCK:

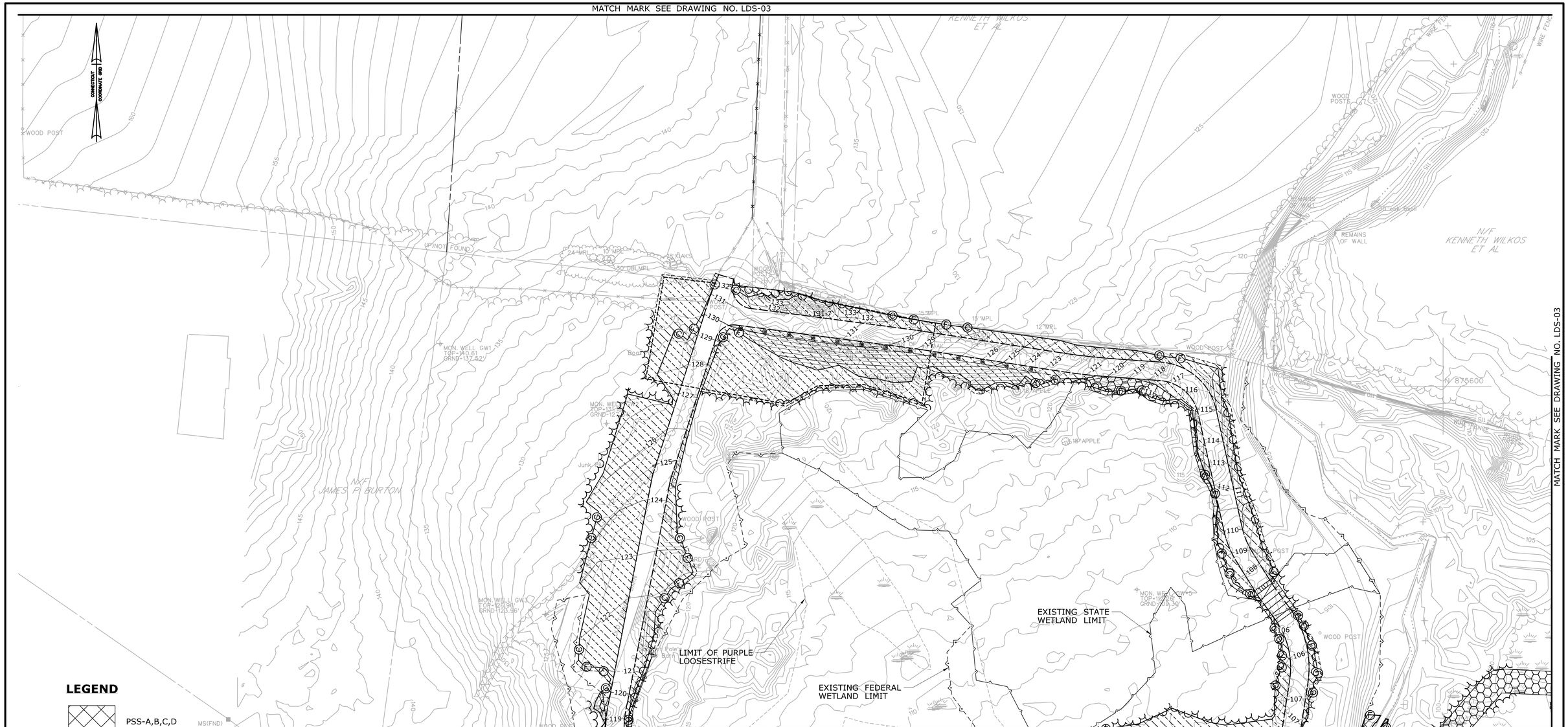
PROJECT TITLE:
NEW HAVEN HARTFORD SPRINGFIELD RAIL PROGRAM
PIGEON HILL WETLAND MITIGATION SITE

TOWN: WINDSOR

DRAWING TITLE: MITIGATION DETAILS

PROJECT NO. 170-3293
DRAWING NO. DET-04
SHEET NO. 03.17

MATCH MARK SEE DRAWING NO. LDS-03



LEGEND

- PSS-A,B,C,D
- PFO-A,B,C,D
- WETLAND GRASS ESTABLISHMENT
- CONSERVATION SEEDING FOR SLOPES

MATCH MARK SEE DRAWING NO. LDS-02

MATCH MARK SEE DRAWING NO. LDS-03

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/5/2014

DESIGNER/DRAFTER: REB/DH/MCD

CHECKED BY: RAC

SCALE IN FEET 0 40 80

SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\FA..CGR..CPS..0170-2296..164...03..LND...01.DGN

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT ANTHONY R. MARCELLI LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE:

NEW HAVEN HARTFORD SPRINGFIELD RAIL PROGRAM
PIGEON HILL WETLAND MITIGATION SITE

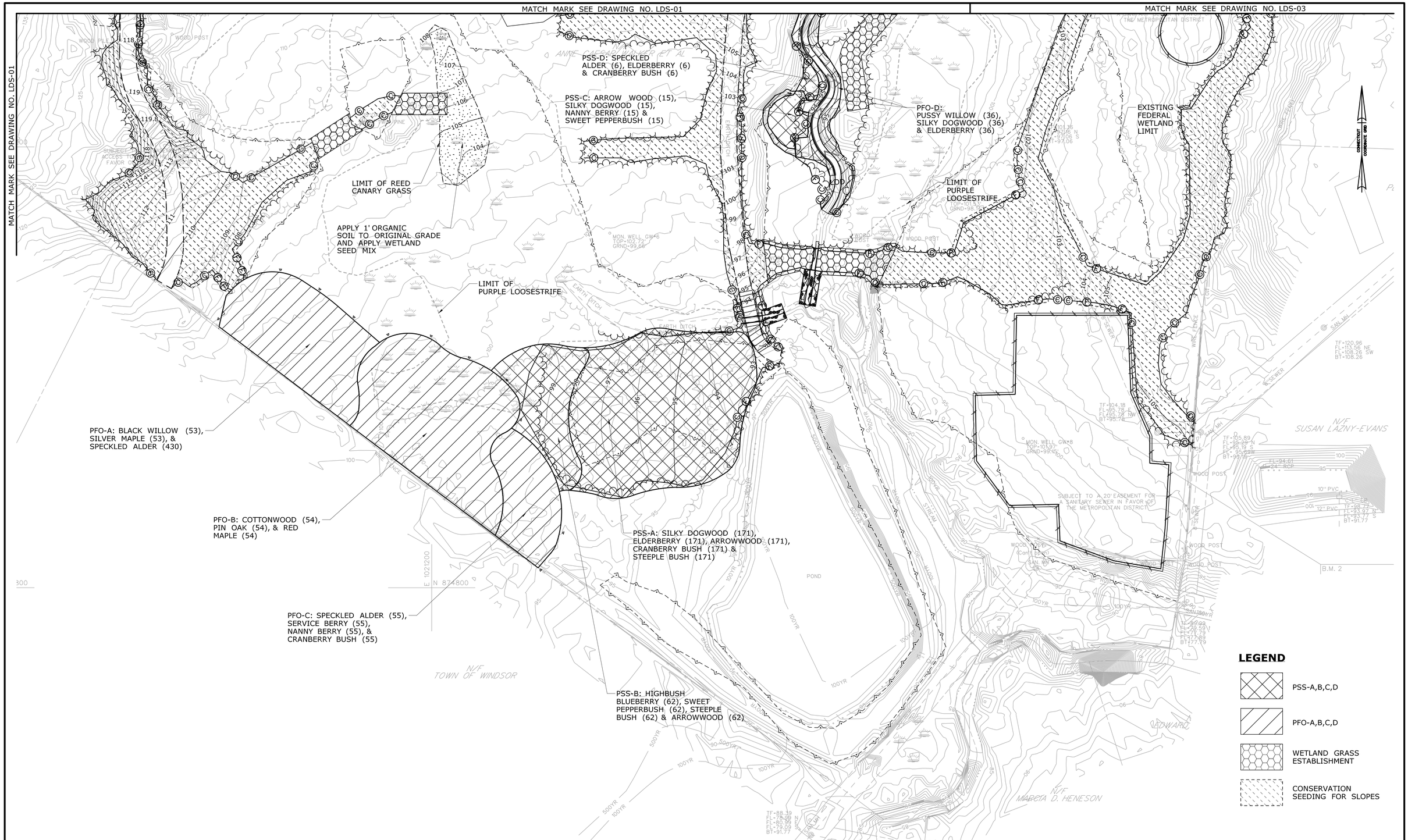
TOWN: **WINDSOR**

DRAWING TITLE: **PLANTING PLAN**

PROJECT NO. **170-3293**

DRAWING NO. **LDS-01**

SHEET NO. **03.18**



REV.	DATE	REVISION DESCRIPTION	SHEET NO.
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/6/2014

DESIGNER/DRAFTER: RB/DH/MCD
CHECKED BY: RAC
SCALE IN FEET 0 40 80
SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\FA_CGR_CPS_0170-2296_164_-03_LND_-02.DGN

SIGNATURE/BLOCK:

PROJECT TITLE:
NEW HAVEN HARTFORD SPRINGFIELD RAIL PROGRAM
PIGEON HILL WETLAND MITIGATION SITE

TOWN: WINDSOR

DRAWING TITLE: PLANTING PLAN

PROJECT NO. 170-3293
DRAWING NO. LDS-02
SHEET NO. 03.19

MATCH MARK SEE DRAWING LND-01

MATCH MARK SEE DRAWING LND-01

MATCH MARK SEE DRAWING LDS-02

LEGEND

- PSS-A,B,C,D
- PFO-A,B,C,D
- WETLAND GRASS ESTABLISHMENT
- CONSERVATION SEEDING FOR SLOPES

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/5/2014

DESIGNER/DRAFTER: REB/DH/MCD

CHECKED BY: RAC

SCALE IN FEET 0 40 80

SCALE 1"=40'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\FA_CGR_CPS_0170-2296_164_03_LND_03.DGN

SIGNATURE/BLOCK:

STATE OF CONNECTICUT LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE:

NEW HAVEN HARTFORD SPRINGFIELD RAIL PROGRAM
PIGEON HILL MITIGATION

TOWN: **NEW HAVEN HARTFORD SPRINGFIELD**

DRAWING TITLE: **PLANTING PLAN**

PROJECT NO. **170-2296**

DRAWING NO. **LDS-03**

SHEET NO. **03.20**

Pigeon Hill Wetland Plantings

BOTANICAL NAME	COMMON NAME	INDICATOR	SIZE	SPACING	PFO-A	PFO-C	PFO-B	PFO-D	PSS-A	PSS-B	PSS-C	PSS-D	TOTAL
TREES					**QUANTITIES**								
ACER RUBRUM	RED MAPLE	FAC	2"-2 1/2" Cal. B.B	10' O.C.			54						**54**
ACER SACCHARINUM	SILVER MAPLE	FACW	18" – 24" HT B.B.	10' O.C.	53								**53**
POPULUS DELTOIDES	COTTONWOOD	FACW	2 - 3' HT B.B.	10' O.C.			54						**54**
QUERCUS PALUSTRIS	PIN OAK	FACW	24"-36' HT CONTAINER	10' O.C.			54						**54**
SALIX NIGRA	BLACK WILLOW	FACW	18" – 24" HT B.B.	10' O.C.	53								**53**
													268
SHRUBS													
ALNUS INCANA	SPECKLED ALDER	FACW	18" – 24" HT B.B.	5' O.C.	430	55						6	**491**
AMELANCHIER CANADENSIS	SERVICE BERRY	FAC	4'-5' HT B.B.	5' O.C.		55							**55**
CLETHRA ALNIFOLIA	SWEET PEPPERBUSH	FAC	2'-3' HT B.B.	5' O.C.						62	15		**77**
CORNUS AMOMUM	SILKY DOGWOOD	FACW	18" – 24" HT CONTAINER	5' O.C.				36	171		15		**222**
SALIX DISCOLOR	PUSSY WILLOW	FACW	2 - 3' HT B.B.	5' O.C.				36					**36**
SAMBUCUS CANADENSIS	ELDERBERRY	FACW	18" – 24" HT CONTAINER	5' O.C.				36	171			6	**213**
SPIRAEA TOMENTOSA	STEEPLEBUSH	FACW	18" – 24" HT CONTAINER	5' O.C.					171	62			**233**
VACCINIUM CORYMBOSUM	HIGHBUSH BLUEBERRY	FACW	18" – 24" HT CONTAINER	5' O.C.						62			**62**
VIBURNUM DENTATUM	ARROWWOOD	FACW	2'-3' HT B.B.	5' O.C.					171	62	15		**248**
VIBURNUM LENTAGO	NANNYBERRY	FAC	3'-4' HT B.B.	5' O.C.		55					15		**70**
VIBURNUM TRILOBUM	CRANBERRYBUSH	FACW	18" – 24" HT CONTAINER	5' O.C.		55			171			6	**232**
													1939

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 6/5/2014

DESIGNER/DRAFTER: **REB/DH**

CHECKED BY: **RAC**

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: ...\FA..CGR..CPS..0170-2296..164...03..LND...04.DGN

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT ANTHONY A. MORETTI LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE:
NEW HAVEN HARTFORD SPRINGFIELD RAIL PROGRAM
PIGEON HILL MITIGATION

TOWN: **NEW HAVEN HARTFORD SPRINGFIELD**

DRAWING TITLE: **PLANTING SCHEDULE**

PROJECT NO. **170-3293**

DRAWING NO. **LDS-04**

SHEET NO. **03.21**