

MASTER	BEN	CHMARK	100001	
(CONCRETE MONUMENT)				

	BERM STAKE OUT DATA					
POINT	STATION	OFFSET	NORTHING	EASTING	REMARKS	
1	16+41.51	369.89 LT	<i>544926.69</i>	<i>572842. 35</i>	POB BERM B	
2	16+96. 22	400.11 LT	544966 . 36	<i>572890.65</i>	PCC BERM B	
3	17+48 . 95	460.03 LT	<i>545034.88</i>	<i>572931.60</i>	PT BERM B	
4	17+69.73	495.15 LT	<i>545073.19</i>	<i>572945.64</i>	PC BERM B	
<u></u>	17+96.17	587.33 LT	<i>545168.65</i>	<i>572954.87</i>	PCC BERM B	
6	17+99. 23	671.58 LT	<i>545252.05</i>	<i>572942. 55</i>	PT BERM B	
Ø	17+97.92	700.86 LT	<i>545280.60</i>	<i>572935.</i> 94	PC BERM B	
8	17+79.49	767.92 LT	<i>545343.19</i>	<i>572905.61</i>	PCC BERM B	
9	16+90 . 55	852.84 LT	<i>545410.51</i>	<i>572802.70</i>	PCC BERM B	
<u> </u>	16+45.64	864.75 LT	<i>545414.04</i>	<i>572756.38</i>	POE BERM B	
$\underline{\hspace{0.5cm}}$	15+16 . 02	967.33 LT	<i>545491.33</i>	<i>572610.26</i>	POT BERM A	
②	<i>25+80.44</i>	722.41 LT	545444.17	<i>573701.48</i>	PC BERM A	
<u> </u>	<i>26+19.23</i>	674.38 LT	<i>545404.00</i>	<i>573748. 35</i>	PT BERM A	
<u>(4)</u>	26+26.07	183.39 LT	544922.44	<i>573844.42</i>	POE BERM A	
(5)	19+82.59	548.81 LT	<i>545164.69</i>	<i>573145.</i> 19	POB BERM C	
<u></u>	20+07.93	587.99 LT	<i>545207.82</i>	<i>573162.97</i>	PC BERM C	
\bigcirc	21+10.06	641.39 LT	<i>545278. 91</i>	<i>573253.68</i>	PCC BERM C	
<u>®</u>	22+44.85	609.31 LT	<i>545271.90</i>	<i>573392.06</i>	PT BERM C	
<u> </u>	<i>23+20.07</i>	574.45 LT	<i>545251.30</i>	<i>573472.37</i>	PC BERM C	
<u> </u>	<i>23+82.52</i>	548.61 LT	<i>545237. 25</i>	<i>573538.</i> 48	PRC BERM C	
<u> </u>	24+82.53	476.55 LT	<i>545184.59</i>	<i>573649.93</i>	PCC BERM C	
2	24+91.87	418.35 LT	<i>545129.07</i>	<i>573669.71</i>	PT BERM C	
23	24+71.42	363.03 LT	<i>545070.95</i>	<i>573659.66</i>	POE BERM C	

RIGHT-OF-WAY MONUMENT SCHEDULE				
NO.	STATION	OFFSET	NORTHING	EASTING
M- 1	10+59 . 05	32. 13' LT	<i>544488. 5937</i>	<i>572331.0730</i>
M-2	1 <i>4+30.50</i>	1022 . 56′ LT	<i>545530.0767</i>	<i>572516.1172</i>
M-3	<i>26+54. 23</i>	23. 11' LT	<i>544770.1170</i>	<i>573901.1012</i>
M-4	26+56.74	767. 29' LT	<i>545502.1740</i>	<i>573768. 3292</i>

 HORIZONTAL / VERTICAL CONTROL DATA

 NO.
 NORTHING
 EASTING
 ELEVATION

 100001
 545518. 1780 572516. 7934 65. 97

 100057
 544490. 6594 572329. 4492 68. 13

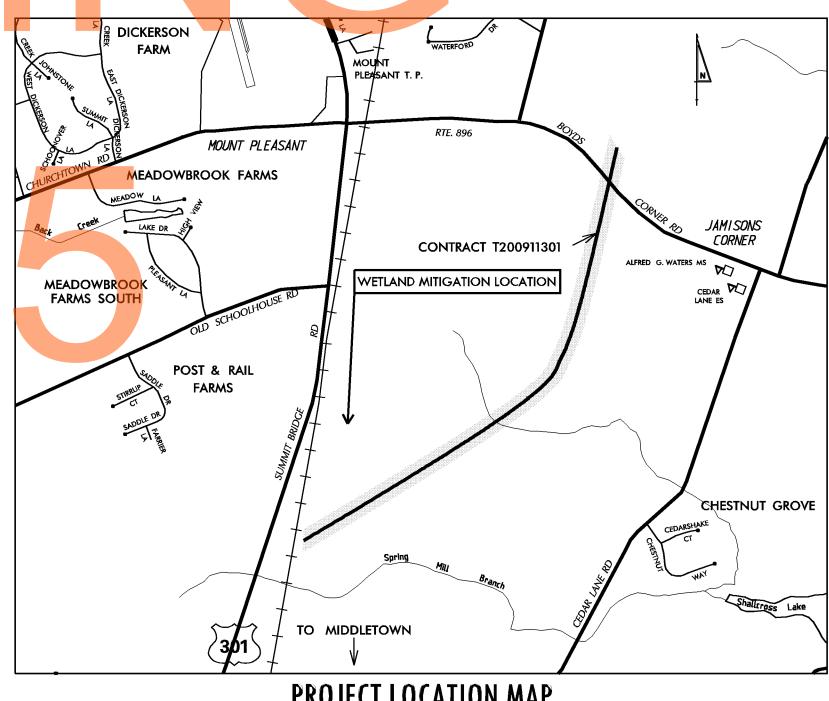
 CONSTRUCTION

 POINT
 STATION
 OFFSET
 NORTHING
 EASTING

 POB
 10+00.00
 0.00
 544446.2603
 572278.8523

 POE
 27+00.00
 0.00
 544755.5659
 573950.4772

CONSTRUCTION ALIGNMENT CONTROL-& ACCESS ROAD					
PO INT	STATION	OFFSET	NORTHING	EASTING	
POB	50+00.00	0.00	<i>544466. 5855</i>	<i>572388</i> . 6989	
PC	<i>51+30.42</i>	0.00	<i>544595. 6556</i>	<i>572370.</i> 0056	
PI	51+46.54	1. 29 LT	544611.6101	<i>572367. 6949</i>	
PT	<i>51+62.38</i>	0.00	<i>544627. 4825</i>	<i>572370. 5150</i>	
PC	60+08.51	0.00	<i>545460. 5573</i>	<i>572518. 5306</i>	
PI	<i>60+43. 52</i>	13.16 LT	<i>545495. 0348</i>	<i>572524.6563</i>	
PT	60+66.03	0.00	<i>545493. 5227</i>	<i>572559</i> . <i>6411</i>	
POE	61+16.03	0.00	<i>545491. 3636</i>	<i>572609. 5945</i>	



PROJECT LOCATION MAP

Prepared by: RUMMEL, KLEPPER & KAHL, LLP

WM-1

220

240

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
100 100 200

FEET

US 301, NORFOLK SOUTHERN RR TO SR 896

CONTRACT
BRIDGE NO.

T200911301

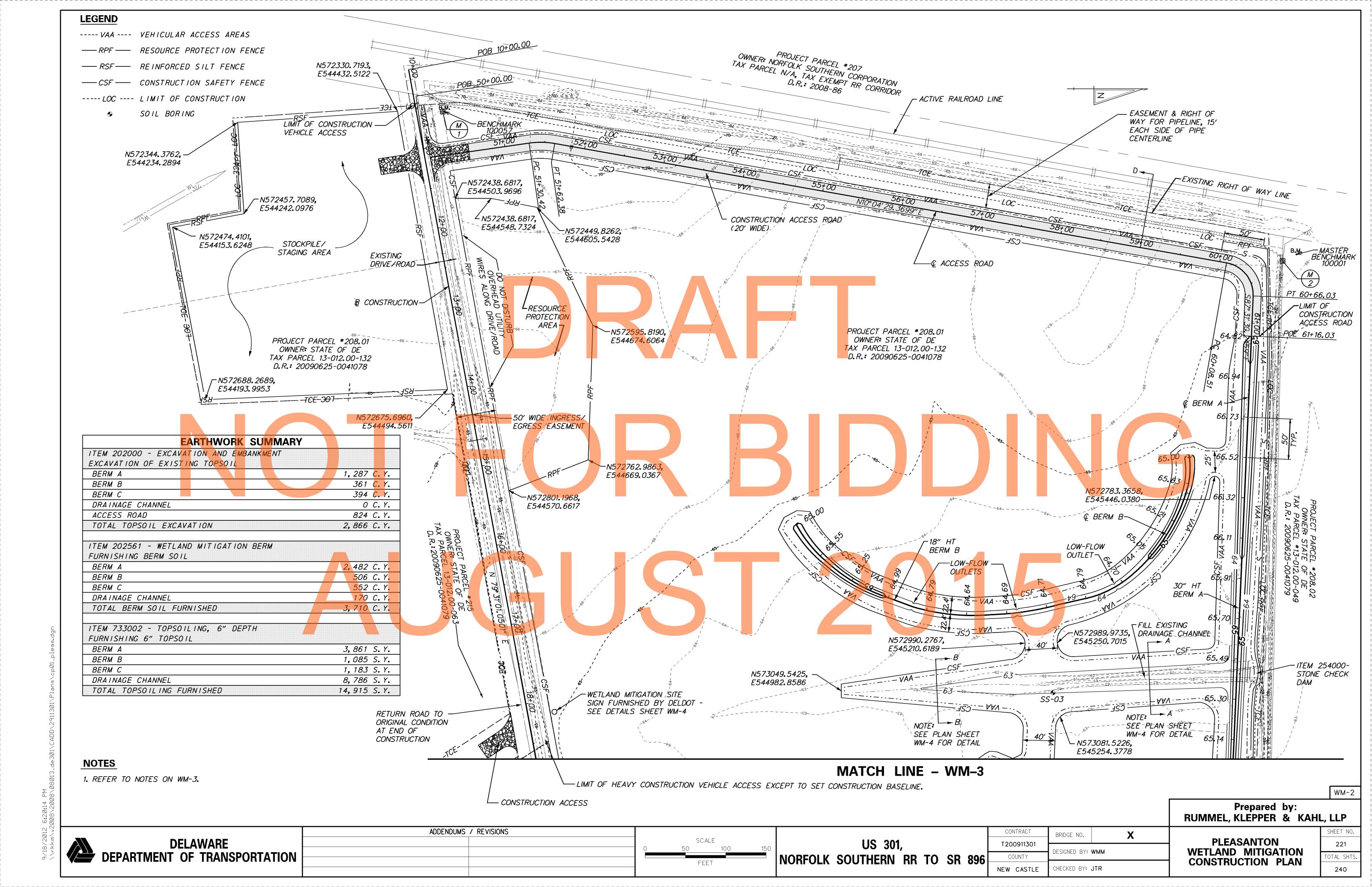
COUNTY

DESIGNED BY: WMM

NEW CASTLE

CHECKED BY: JTR

PLEASANTON
WETLAND MITIGATION
HORIZONTAL AND VERTICAL
CONTROL PLAN



2. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE MASTER BENCHMARK DURING CONSTRUCTION.

3. THE BENCHMARK SHALL NOT BE RESET OR RE-EVALUATED FOR ELEVATIONS. ALL GRADING ELEVATIONS SHALL BE REFERENCED TO THE BENCHMARK DATUM.

4. TOPOGRAPHIC SURVEY COMPILED FROM PHOTOGRAMMETRY CONDUCTED BY AERO-METRIC, INC. IN 2006, AND FROM GROUND SURVEY BY CENTURY ENGINEERING, INC. IN 2009.

5. CONSTRUCTION VEHICLES ARE ONLY PERMITTED IN AREAS DESIGNATED BY THE VAA LINE. CONSTRUCTION VEHICLES ARE PROHIBITED FROM DRIVING ON ANY OTHER PORTION OF THE CONSTRUCTION SITE.

6. THE CONSTRUCTION TOLERANCE SHALL BE WITHIN 0.1 FEET OF SPECIFIED ELEVATIONS AND SHALL BE STRICTLY ADHERED TO FOR ALL EXCAVATION/GRADING OPERATIONS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER. ONLY AT THE DIRECTION OF THE ENGINEER SHALL THE CONTRACTOR MODIFY THE GRADING SPECIFIED IN THESE DESIGN PLANS.

7. REFER TO SHEET WM-6 FOR ADDITIONAL NOTES APPLICABLE TO CONSTRUCTION.

8. EARTHWORK SUMMARY TABLE IS LOCATED ON SHEET WM-2.

9. SOIL PROFILE INFORMATION FOR SOIL BORINGS SS-03, SS-05, AND SS-07 IS LOCATED ON SHEET WM-4.

10. THE CONTRACTOR MUST ALWAYS MAINTAIN ACCESS ALONG THE EXISTING DRIVE/ROAD FOR THE PRIVATE PROPERTIES LOCATED ALONG THE DRIVE/ROAD.

11. THE EXISTING DRIVE/ROAD SHALL BE RESTORED FULLY TO ITS ORIGINAL PAVED CONDITION AT THE COMPLETION OF THE CONTRACT BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

12. THE STOCKPILE/STAGING AREA SHALL BE FULLY RESTORED TO ITS ORIGINAL CONDITION BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. ALL STOCKPILED MATERIAL SHALL BE REMOVED AND THE AREA RETURNED TO PRECONSTRUCTION GRADES. WHERE EXCAVATED BELOW ORIGINAL GRADE, THE CONTRACTOR SHALL ENSURE A MINIMUM OF 4" OF TOPSOIL (FRIABLE LOAM TOPSOIL FREE FROM HEAVY CLAY AND FOREIGN MATERIALS HARMFUL TO PLANT GROWTH, SUCH AS FRAGMENTS OF HOT-MIX, CONCRETE PAVEMENT AND SURFACE TREATMENT WITH A MINIMUM OF 3% ORGANIC MATTER) REMAINS IN THE STOCKPILE /STAGING AREA. THE RESTORED STOCKPILE/STAGING AREA SHALL BE SEEDED IN ACCORDANCE WITH DELAWARE STANDARD SPECIFICATION ITEM 734551- NATIVE GRASS SEEDING: NO MOW MIX.

13. ALL CONSTRUCTION ACCESS SHALL BE FROM THE US 301 MAINLINE WORK AREA. ACCESS ACROSS NORFOLK SOUTHERN RAILROAD IS PROHIBITED.

14. MONUMENTS M-1 THROUGH M-4 ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND SHALL BE INSTALLED BY OTHERS.

15. REMOVAL OF THE CONSTRUCTION ACCESS ROAD SHALL BE PAID FOR UNDER ITEM 202000-

MITIGATION SITE PERFORMED BY DELDOT OR THEIR DESIGNATED REPRESENTATIVE. THE LIMITS OF THE AS-BUILT TOPOGRAPHIC SURVEY SHALL INCLUDE ALL DISTURBED AREAS AND DETAILED AS-BUILT INFORMATION OF OUTLET STRUCTURES OR OTHER DEVICES WITHIN THE LIMITS OF THE DISTURBED AREA. THE AS-BUILT PLAN SHALL BE INTENDED TO SHOW THE ACTUAL FINISHED GROUND CONTOURS AS THEY EXIST AT THE TIME OF FINAL EXCAVATION TO SUBGRADE PRIOR TO PLACING TOPSOIL, FINAL GRADING AFTER TOPSOIL HAS BEEN PLACED AND DETAILS OF ALL OUTLET DEVICES AND OTHER STRUCTURES ASSOCIATED WITH THE WETLAND MITIGATION SITE. THE TOLERANCE FOR FINAL EXCAVATED SUBGRADES AND FINAL WETLAND MITIGATION CONTOURS SHALL BE PLUS OR MINUS ONE-TENTH (0.1) OF A FOOT. IF ANY CHANGES OCCUR TO THE AS-BUILT CONDITIONS BEFORE SUBSEQUENT PHASES OF WORK ARE PERFORMED, THE CONTRACTOR SHALL CORRECT THE CHANGED CONDITIONS AND THE AS-BUILT PLAN PROCESS FOR THE AREA WHERE THE CHANGED CONDITIONS OCCURRED SHALL BE RE-ESTABLISHED.

THE AS-BUILT SURVEYS AND AS-BUILT PLANS SHALL BE DEV<mark>ELOPED</mark> IN THE F<mark>OL</mark>LOWING MAN<mark>INE</mark>R:

a. DELDOT AND THE CONTRACTOR SHALL AGREE ON ORIGINAL GROUND ELEVATIONS PRIOR TO ANY WORK BEING PERFORMED THAT WOULD ALTER ORIGINAL GROUND CONDITIONS.

b. DELDOT AND THE CONTRACTOR SHALL CONFIRM THE MASTER SURVEY CONTROL POINT/BENCHMARK THAT WILL BE USED FOR THE DURATION OF THE PROJECT.

C. AS THE CONTRACTOR PERFORMS WORK TOWARDS AN AS-BUILT MILESTONE AS IDENTIFIED IN THE PLANS,
THE CONTRACTOR SHALL PROVIDE DELDOT A MINIMUM 5 CALENDAR DAY ADVANCE NOTICE THAT THE FINAL
CONDITIONS ARE READY FOR THE AS-BUILT TOPOGRAPHIC SURVEY TO BE PERFORMED.

d. DELDOT OR THEIR DESIGNATED REPRESENTATIVE WILL THEN PERFORM SURVEY ON THE FINAL CONDITIONS AND PREPARE AN AS-BUILT PLAN. THE AS-BUILT SURVEY WILL BE OBTAINED AT AN ESTIMATED RATE OF 5 ACRES OF CONTIGUOUS AREA PER WORKING DAY. DELDOT WILL THEN PREPARE AN AS-BUILT PLAN BASED ON THE SURVEY INFORMATION. THE AS-BUILT SURVEY AND PLAN WILL GENERALLY CONFORM WITH THE FOLLOWING PARAMETERS:

i. SPOT ELEVATION INTERVALS AND MAXIMUM DISTANCES BETWEEN SPOT ELEVATIONS SHALL BE 20 FEET WITHIN THE VAA. SPOT ELEVATION INTERVALS AND MAXIMUM DISTANCES BETWEEN SPOT ELEVATIONS SHALL BE 50 FEET FOR ALL OTHER AREAS. ADDITIONAL SPOT ELEVATIONS SHALL BE OBTAINED AS REQUIRED TO IDENTIFY ALL BREAKS IN GRADE, AND OTHER FEATURES OF THE WETLAND MITIGATION SITE, INCLUDING BERMS, LOW FLOW OUTLETS. ETC.

ii. SPOT ELEVATIONS SHALL BE OBTAINED AND SHOWN ON THE AS-BUILT PLAN TO ONE-HUNDREDTH (0.01) OF A FOOT.
THE AS-BUILT PLAN SHALL BE PREPARED CONFORMING TO DELDOT CADD STANDARDS. THESE DRAWINGS SHALL BE AT
THE SAME SCALE AS THE CONTRACT PLAN SHEETS. CONTOURS SHALL BE SHOWN AT HALF-FOOT INTERVALS WITHIN
THE VAA AND AT ONE-FOOT INTERVALS FOR AREAS OUTSIDE OF THE VAA.

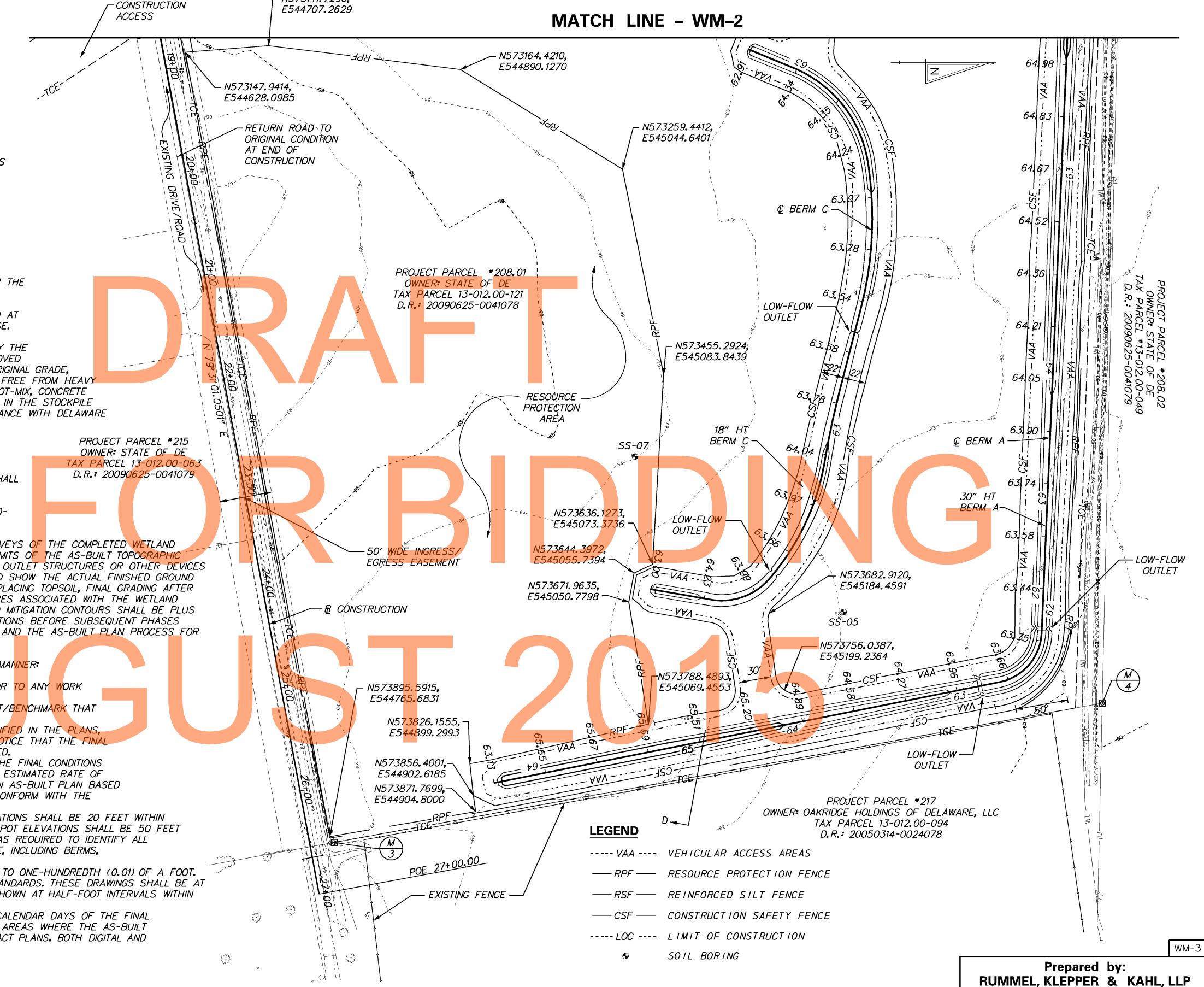
ADDENDUMS / REVISIONS

e. DELDOT WILL PROVIDE THE AS-BUILT PLAN TO THE CONTRACTOR WITHIN SEVEN (7) CALENDAR DAYS OF THE FINAL AS-BUILT SURVEY INFORMATION BEING OBTAINED. THE AS-BUILT PLAN WILL IDENTIFY AREAS WHERE THE AS-BUILT CONDITIONS DO NOT CONFORM TO THE LINES AND GRADES PROVIDED IN THE CONTRACT PLANS. BOTH DIGITAL AND PAPER FORMATS OF THE AS-BUILT PLAN WILL BE PROVIDED.

NOTES CONTINUED ON SHEET WM-4.

DELAWARE

DEPARTMENT OF TRANSPORTATION



US 301,

NORFOLK SOUTHERN RR TO SR 896

FEET

X

PLEASANTON

WETLAND MITIGATION

CONSTRUCTION PLAN

222

TAL SHTS

240

BRIDGE NO.

DESIGNED BY: WMM

CHECKED BY: JTR

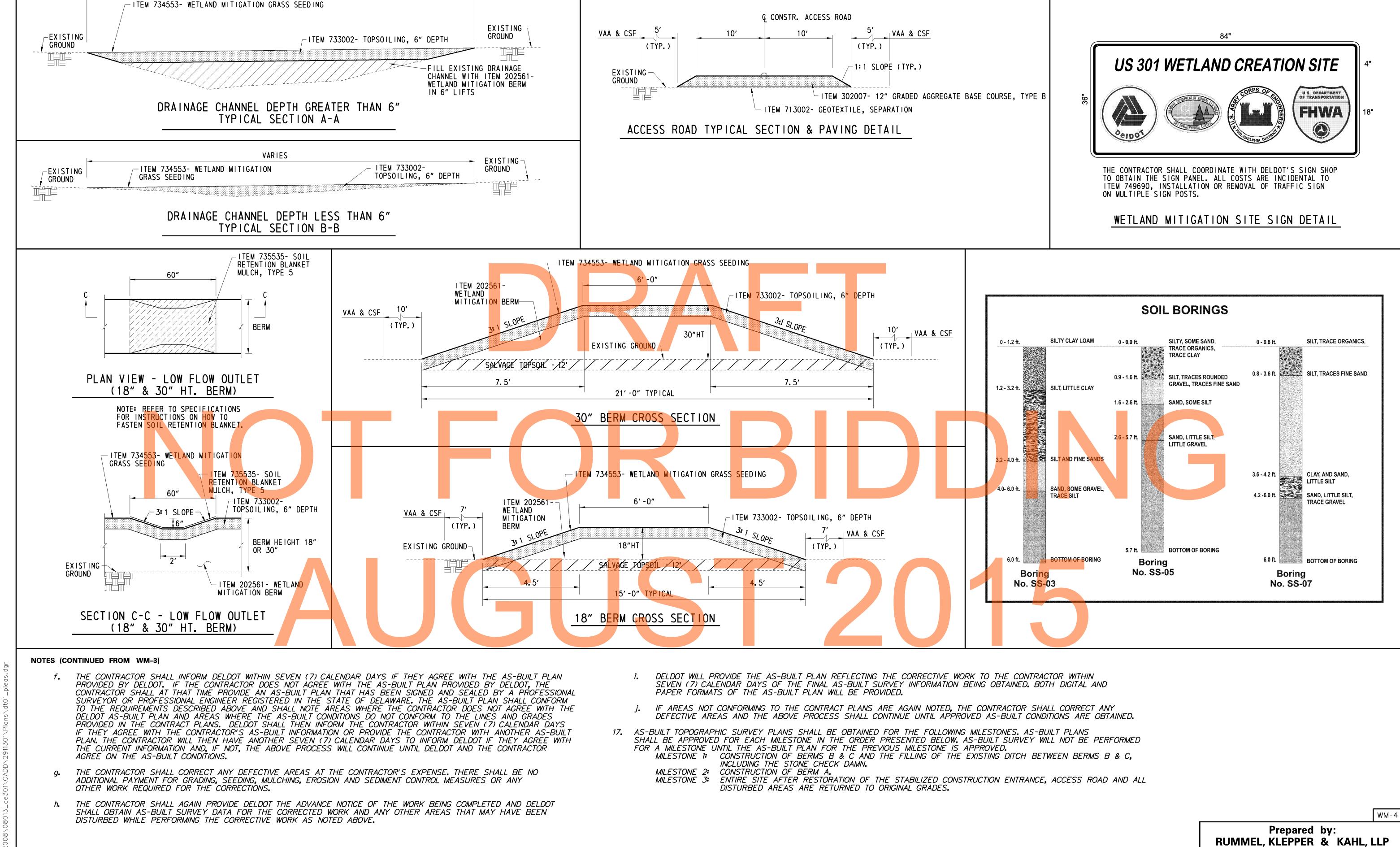
T200911301

COUNTY

NEW CASTLE

- N573141.7296.

9/18/2012 3:19:19 PM \\rkkm\v2008\2008\08013_de301\CADD\



US 301, NORFOLK SOUTHERN RR TO SR 896

CONTRAC1 X BRIDGE NO. T200911301 DESIGNED BY: WMM COUNTY CHECKED BY: JTR NEW CASTLE

PLEASANTON WETLAND MITIGATION **CONSTRUCTION DETAILS**

223

TAL SHTS

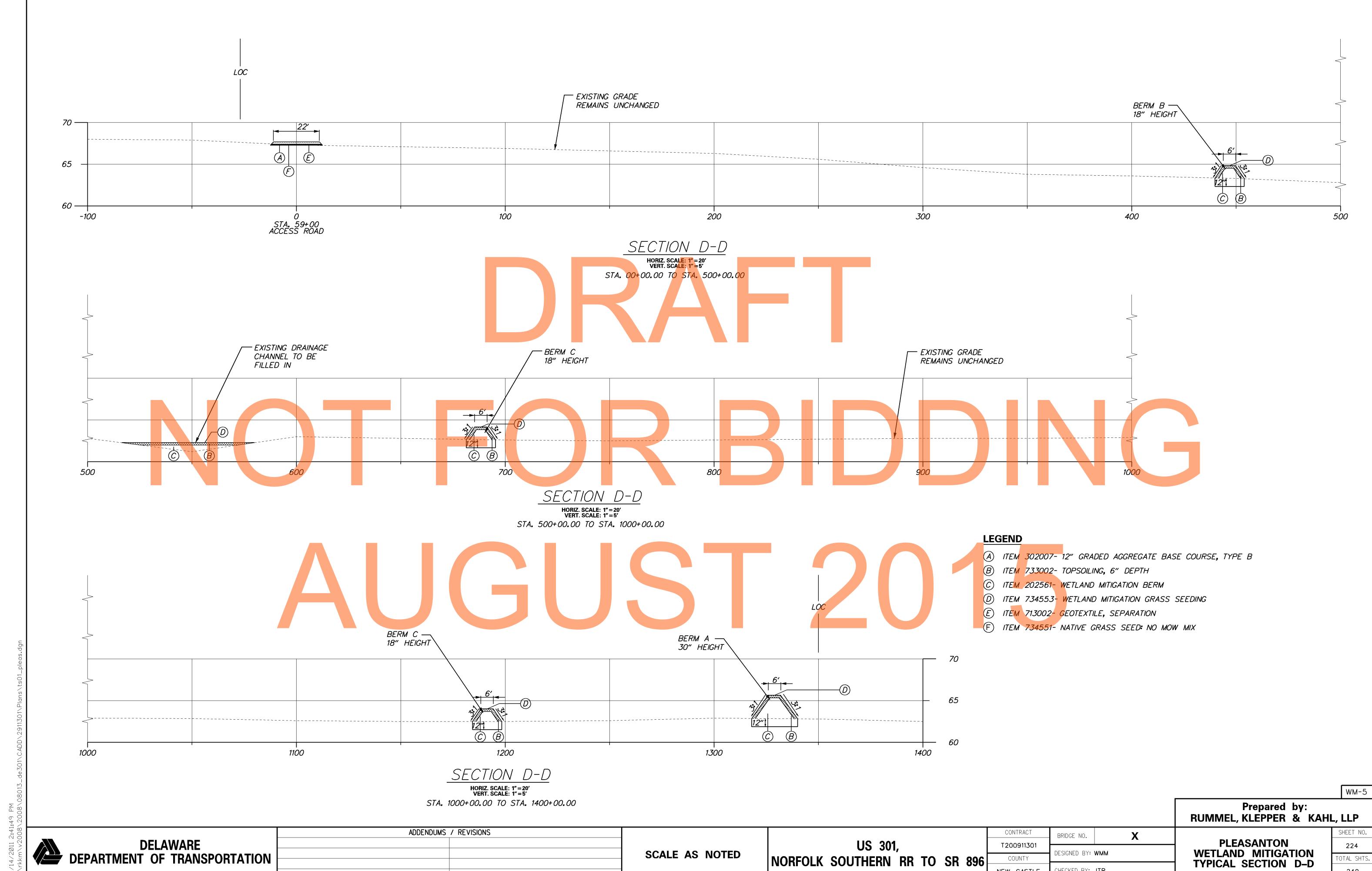
240

NOT TO SCALE

DELAWARE DEPARTMENT OF TRANSPORTATION

VARIES

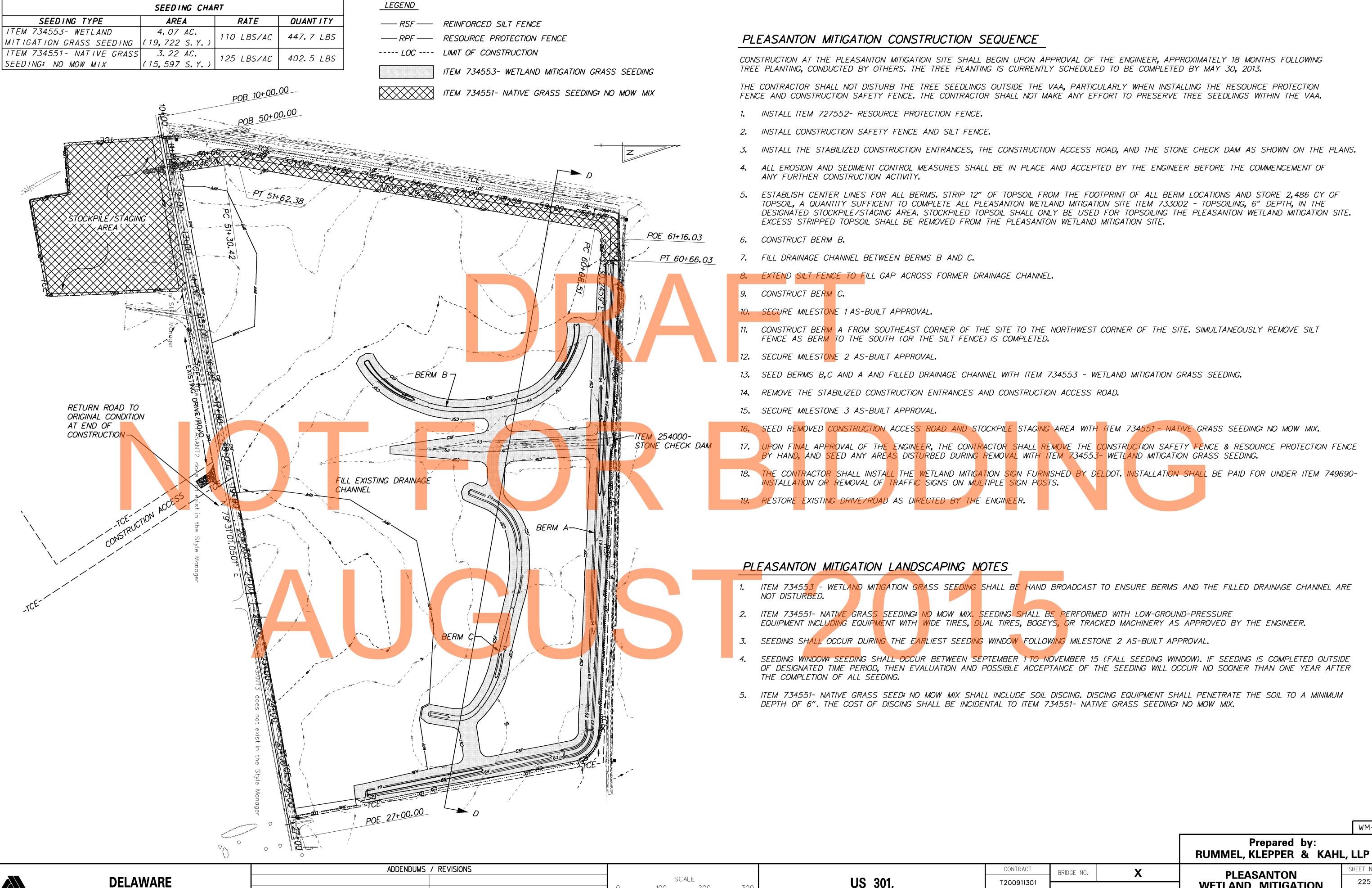
ADDENDUMS / REVISIONS



240

NEW CASTLE

CHECKED BY: JTR



DEPARTMENT OF TRANSPORTATION

PLEASANTON TAL SHTS

WM-6

US 301, T200911301 DESIGNED BY: WMM NORFOLK SOUTHERN RR TO SR 896 COUNTY CHECKED BY: JTR NEW CASTLE

WETLAND MITIGATION **CONSTRUCTION PHASING**

Prepared by:

AND LANDSCAPING PLAN