BORROW SITE/WETLAND MITIGATION NOTES

1. HORIZONTAL AND VERTICAL CONTROL FOR THE PROPOSED WORK SHALL BE BASED ON SURVEY CONTROL POINT IDENTIFIED AS "MASTER BENCHMARK LEVELS NORTH". REFER TO THE HORIZONTAL AND VERTICAL CONTROL PLAN SHEET WM-3.

2. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE MASTER BENCHMARK AND OTHER IDENTIFIED BENCHMARKS DURING CONSTRUCTION.

3. THE CONTRACTOR MAY ENCOUNTER GROUND WATER DURING EXCAVATION, DEWATERING OPERATIONS SHALL COMPLY WITH SPECIAL PROVISION 202572 - BORROW AREA EROSION AND SEDIMENT CONTROL AND DEWATERING.

4. INFORMATION ON THE ELEVATION OF GROUNDWATER AT THE 12 MONITORING WELLS SPREAD ACROSS THE LEVELS ROAD BORROW SOURCE/WETLAND MITIGATION SITE CAN BE FOUND IN THE REPORT: "US 301 LEVELS ROAD MITIGATION SITE GEOTECHNICAL DATA".

5. MONITORING WELLS SHALL BE ABANDONED BY A WELL DRILLER LICENSED IN DELAWARE IN ACCORDANCE WITH THE PROVISIONS IN ITEM 211521 - ABANDONMENT OF WELLS.

6. PHYSICAL REMOVAL AND DISPOSAL OF THE ABANDONED WELLS SHALL BE PAID FOR UNDER ITEM 202000 - EXCAVATION AND EMBANKMENT.

7. THE CONTRACTOR SHALL STRIP THE TOP 9" OF AGRICULTURAL SOIL FROM THE AREA TO BE EXCAVATED AT THE LEVELS ROAD BORROW SOURCE AND PLACE THIS MATERIAL IN THE TOPSOIL STOCKPILE AREA DESIGNATED ON THE PLAN (WM-4 AND 7). STRIPPING THE AGRICULTURAL SOIL AND PLACING IN THE DESIGNATED STOCKPILE AREA SHALL BE PAID FOR UNDER ITEM 202000 - EXCAVATION AND EMBANKMENT.

8. ONLY AGRICULTURAL SOILS SHALL BE CONSIDERED TOPSOIL AND PLACED IN THE TOPSOIL STOCKPILE. AGRICULTURAL SOIL IS DEFINED AS THE TOP 9" OF SOIL OBTAINED FROM AN ACTIVE FARM FIELD OR RECENTLY ABANDONED FARM FIELD (LESS THAN 2 YEARS FALLOW OR ABANDONED). THE SOURCE OF THE AGRICULTURAL SOIL MUST HAVE BEEN IN CROP.

9. THE STOCKPILED TOPSOIL SHALL BE QUARANTINED, STABILIZED WITH ITEM 734553 - WETLAND MITIGATION GRASS SEEDING, AND ONLY AVAILABLE FOR USE AT THE LEVELS ROAD MITIGATION SITE FOR PLACEMENT UNDER THE PROVISIONS OF ITEM 733008 - TOPSOILING, 18" DEPTH, ITEM 733002 - TOPSOILING, 6" DEPTH, ITEM 733001 - TOPSOILING, 4" DEPTH, AND ITEM 733007 - TOPSOILING, 2" DEPTH.

10. TOPSOIL TO BE PLACED UNDER ITEM 733008 - TOPSOILING, 18" DEPTH, ITEM 733001 - TOPSOILING, 4" DEPTH, AND ITEM 733007 - TOPSOILING, 2" DEPTH SHALL BE AMENDED WITH COMPOST PRIOR TO PLACEMENT. THE STOCKPILED TOPSOIL SHALL BE AMENDED WITH COMPOST AT THE RATE OF ONE (1) PART COMPOST TO NINETEEN (19) PARTS STOCKPILED TOPSOIL BY VOLUME. COMPOST AMENDMENT SHALL BE CONDUCTED AND PAID FOR UNDER ITEM 732505 - SOIL COMPOSTING.

11. THE ZONE 9 EARTHWORK SUMMARY INDICATES THE VOLUME OF TOPSOIL REQUIRED TO CONSTRUCT THE WETLAND MITIGATION SITE AND COMPOST IS NOT INCLUDED ON THE EARTHWORK SUMMARY.

12. THERE IS AN INSUFFICIENT VOLUME OF TOPSOIL STRIPPED FROM THE EXCAVATION AREA TO MEET THE APPLICATION REQUIREMENTS AT THE LEVELS ROAD MITIGATION SITE. THE CONTRACTOR SHALL BRING IN ADDITIONAL SALVAGED AGRICULTURAL SOILS. THESE IMPORTED MATERIALS SHALL MEET THE DEFINITION OF AGRICULTURAL SOILS PROVIDED ABOVE. THE STRIPPING AND TRANSPORT OF ADDITIONAL AGRICULTURAL SOILS TO THE STOCKPILE SHALL BE PAID FOR UNDER ITEM 202000 - EXCAVATION AND EMBANKMENT.

13. TO SATISFY THE MITIGATION REQUIREMENTS OF THE US 301 PROJECT, THE CONTRACTOR SHALL EXCAVATE THE SITE TO MEET THE ELEVATION 32 WETLAND FINISHED GRADING EXTENT AS INDICATED ON THE CONSTRUCTION PLANS.

14. INFORMATION ON THE BORROW MATERIAL TO BE EXCAVATED CAN BE FOUND IN THE REPORT: "US 301 LEVELS ROAD MITIGATION SITE GEOTECHNICAL DATA".

15. SHOULD LESS BORROW MATERIAL BE REQUIRED, THE CONTRACTOR MAY INCREASE A PORTION OR ALL OF THE BORROW SITE SIDE SLOPE FROM 5:1 TO A MAXIMUM OF 4:1. IF THE SLOPE IS INCREASED FOR ONLY A PORTION OF THE BORROW SITE, MAXIMUM 4:1 SLOPES SHALL BE USED TO THE EXTENT REQUIRED FROM BETWEEN STAKE OUT POINT 253 TO 261 FIRST, FROM BETWEEN STAKE OUT POINT 262 TO 264 SECOND, FROM BETWEEN STAKE OUT POINT 247 TO 253 THIRD, AND FROM BETWEEN STAKE OUT POINT 261 TO 262 FOURTH AND THE TRANSITION FROM A 5:1 SIDE SLOPE TO ANY STEEPER (4:1 MAX) SIDE SLOPE SHALL BE A MINIMUM OF 50 FEET WIDE. UPON COMPLETION OF BORROW ACTIVITIES ALL SIDE SLOPES SHALL HAVE SMOOTH LINES AND GRADES. REPRESENTING A NATURALIZED CONDITION AND SHALL NOT APPEAR DISTURBED, OR ARTIFICIAL, AS SOLELY DETERMINED BY THE ENGINEER.

THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER TO MONITOR THE AMOUNT OF EARTHWORK REQUIRED FROM THE BORROW SITE TO MEET THE PROJECT REQUIREMENTS. THE STOCKPILE LOCATION IS ONLY TO BE USED FOR MATERIALS THAT ARE EXCAVATED TO ACHIEVE THE MINIMUM REQUIREMENTS OF THE MITIGATION SITE THAT ARE IN EXCESS OF THE REQUIREMENTS FOR THE ROAD CONSTRUCTION. SIDE SLOPES AT 5:1 SHALL BE PROVIDED AROUND THE ENTIRE SITE EXCEPT THAT INITIAL EXCAVATION OF THE SIDE SLOPES SHALL BE PERFORMED TO 4:1 BETWEEN THE FOLLOWING STAKEOUT POINTS AND THE SLOPES WITHIN THESE LIMITS SHALL ONLY BE EXCAVATED TO BETWEEN 4:1 AND 5:1 WHEN APPROVED BY THE ENGINEER. THE INITIAL 4:1 SIDE SLOPES SHALL BE EXCAVATED TO A SLOPE BETWEEN 4:1 AND 5:1 TO THE EXTENT APPROVED BETWEEN STAKE OUT POINT 261 TO 262 FIRST, BETWEEN STAKE OUT POINT 247 TO 253 SECOND, BETWEEN STAKE OUT POINT 262 TO 264 THIRD, AND BETWEEN STAKE OUT POINT 253 TO 261 FOURTH. TRANSITIONS BETWEEN 5:1 SLOPES AND ANY STEEPER SLOPE SHALL BE A MINIMUM OF 50 FEET WIDE. UPON COMPLETION OF BORROW ACTIVITIES ALL SIDE SLOPES SHALL HAVE SMOOTH LINES AND GRADES REPRESENTING A NATURALIZED CONDITION AND SHALL NOT APPEAR DISTURBED, OR ARTIFICIAL, AS SOLELY DETERMINED BY THE ENGINEER.

16. SHOULD ADDITIONAL BORROW MATERIAL BE REQUIRED, THE CONTRACTOR MAY EXCAVATE TO THE WEST, TOWARDS THE AREA OF THE DESIGNATED TOPSOIL STOCKPILE, WITHIN THE EXISTING LOC. THIS AREA SHALL NOT BE EXCAVATED BELOW ELEVATION 35.0 FEET, AND ALL SURROUNDING SLOPES SHALL BE NO STEEPER THAN 5:1. UPON THE COMPLETION OF BORROW ACTIVITIES, THE AREA OF EXPANDED EXCAVATION SHALL BE GRADED WITH CONTINUOUS SMOOTH LINES AND GRADES REPRESENTING A NATURALIZED CONDITION AND SHALL NOT APPEAR DISTURBED, MOUNDED OR PILED, AS SOLELY DETERMINED BY THE ENGINEER. THE EXPANDED EXCAVATION SHALL BE COVERED WITH 6" OF TOPSOIL IN ACCORDANCE WITH ITEM 733002 - TOPSOILING, 6" DEPTH AND SEEDED WITH ITEM 734551 - NATIVE GRASS SEEDING: NO MOW MIX THE CONTRACTOR SHALL SUBMIT A REVISED GRADING PLAN TO THE ENGINEER FOR APPROVAL.

17. EXCEPT FOR THE DESIGNED DITCHES AND TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES, THE SUBGRADE OF THE BOTTOM OF THE SITE SHALL NOT BE EXCAVATED BELOW ELEVATION 30.5. THE SIDESLOPES SHALL NOT BE OVEREXCAVATED BEYOND THE FINAL SIDESLOPE GRADES EXCEPT FOR THAT NEEDED TO PLACE THE DESIGNED TOPSOIL DEPTH.

18. TRASH, CONSTRUCTION DEBRIS, ROOT MAT, PILE CUTOFFS, ASPHALT MILLINGS AND OTHER CONSTRUCTION WASTE GENERATED ON THE CONTRACT SHALL NOT BE BURIED IN THE BORROW SITE OR THE SIDE SLOPES OF THE BORROW SITE. TOPSOIL, AND AGRICULTURAL SOILS SHALL NOT BE BURIED IN THE BORROW SITE OR THE SIDE SLOPES OF THE BORROW SITE.

19. UNSUITABLE MATERIALS GENERATED FROM WITHIN THE BORROW SITE SHALL BE REMOVED AND DISPOSED OF AT AN APPROVED LOCATION OUTSIDE THE BORROW SITE.

20. THE CONTRACTOR SHALL ENSURE THAT A MINIMUM 6" DEPTH OF AGRICULTURAL SOILS REMAINS IN THE TOPSOIL STOCKPILE AREA AT THE CONCLUSION OF TOPSOILING.

21. ITEM 737503 - BEDDING FOR REFORESTATION, SHALL BE INITIATED WITHIN 3 CALENDAR DAYS OF THE COMPLETION OF SEEDING WITH ITEM 734553 - WETLAND MITIGATION GRASS SEEDING. BEDDING OF THE SITE SHALL BE COMPLETED WITHIN 30 CALENDAR DAYS.

22. THE CONTRACTOR WILL NEED TEMPORARY STRUCTURES TO CROSS THE WETLAND DITCHES WITH EQUIPMENT. THE SIZE AND TYPE OF THESE CROSSING STRUCTURES SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. THESE CROSSING STRUCTURES SHALL BE REMOVED IN THEIR ENTIRETY AT THE CONCLUSION OF WORK AND ALL DISTURBED AREAS RESTORED AND STABILIZED. THE COST OF THESE TEMPORARY CROSSINGS, RESTORATION AND STABILIZATION SHALL BE INCLUDED IN THE COST OF ITEM 737503 - BEDDING FOR REFORESTATION.

23. NO SOIL STOCKPILES SHALL REMAIN IN THE LEVELS ROAD MITIGATION SITE, INCLUDING IN THE TOPSOIL STOCKPILE AREA AT THE CONCLUSION OF THE MITIGATION SITE CONSTRUCTION. IN PARTICULAR, THE TOPSOIL STOCKPILE AREA SHALL BE RETURNED TO ORIGINAL GRADES FOLLOWING TOPSOILING OPERATIONS AND ANY EXCESS SOIL SHALL BE HAULED OFF SITE AND PROPERLY DISPOSED OF.

BORROW SITE/WETLAND MITIGATION NOTES CONT.

24. UNDER NO CONDITION SHALL TEMPORARY SEEDING DRY GROUND OR TEMPORARY SEEDING WET GROUND BE PLACED ON EXCAVATED OR EXISTING GROUND BELOW ELEVATION 35.

25. SEDIMENT REMOVED FROM SEDIMENT CONTROL DEVICES SHALL BE REMOVED FROM THE MITIGATION SITE AND PROPERLY DISPOSED OF.

26. THE CONTRACTOR SHALL COORDINATE WITH DELDOT TO HAVE AS-BUILT TOPOGRAPHIC SURVEYS OF THE COMPLETED WETLAND 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 DEVELOPED IN THE FOLLOWING MANNER:

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 ELEVATIONS INTERVALS AND MAXIMUM DISTANCES BETWEEN SPOT ELEVATIONS SHALL BE TWENTY (20) FEET WITHIN THE WETLAND MITIGATION FLOOR AND ON THE UPLAND SIDE SLOPES EXTENDING A MINIMUM OF SIXTY (60) FEET UPSLOPE BEYOND THE WETLAND MITIGATION FLOOR. SPOT ELEVATION INTERVALS AND MAXIMUM DISTANCES BETWEEN SPOT ELEVATIONS SHALL BE FIFTY (50) FEET FOR ALL OTHER AREAS. ADDITIONAL SPOT ELEVATIONS SHALL BE OBTAINED AS REQUIRED TO IDENTIFY ALL BREAKS IN GRADE, DITCHES, AND OTHER FEATURES OF THE WETLAND MITIGATION SITE, INCLUDING DITCHES, OUTLET STRUCTURES, BERMS, 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 (0.5) FOOT INTERVALS WITHIN THE WETLAND MITIGATION FLOOR AND AT ONE (1) FOOT INTERVALS FOR AREAS OUTSIDE OF THE WETLAND FLOOR.

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.

f. THE CONTRACTOR SHALL INFORM DELDOT WITHIN SEVEN (7) CALENDAR DAYS IF THEY AGREE WITH THE AS-BUILT PLAN PROVIDED BY DELDOT. IF THE CONTRACTOR DOES NOT AGREE WITH THE AS-BUILT PLAN PROVIDED BY DELDOT, THE CONTRACTOR SHALL AT THAT TIME PROVIDE AN AS-BUILT PLAN THAT HAS BEEN SIGNED AND SEALED BY A PROFESSIONAL SURVEYOR OR PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF DELAWARE. THE AS-BUILT PLAN SHALL CONFORM TO THE REQUIREMENTS DESCRIBED ABOVE AND SHALL NOTE AREAS WHERE THE CONTRACTOR DOES NOT AGREE WITH THE DELDOT AS-BUILT PLAN AND AREAS WHERE THE AS-BUILT CONDITIONS DO NOT CONFORM TO THE LINES AND GRADES PROVIDED IN THE CONTRACT PLANS. DELDOT SHALL THEN INFORM THE CONTRACTOR WITHIN SEVEN (7) CALENDAR DAYS IF THEY AGREE WITH THE CONTRACTOR'S AS-BUILT INFORMATION OR PROVIDE THE CONTRACTOR WITH ANOTHER AS-BUILT PLAN. THE CONTRACTOR WILL THEN HAVE ANOTHER SEVEN (7) CALENDAR DAYS TO INFORM DELDOT IF THEY AGREE WITH THE CURRENT INFORMATION AND, IF NOT, THE ABOVE PROCESS WILL CONTINUE UNTIL DELDOT AND THE CONTRACTOR AGREE ON THE AS-BUILT CONDITIONS.

g. THE CONTRACTOR SHALL CORRECT ANY DEFECTIVE AREAS AT THE CONTRACTOR'S EXPENSE. THERE SHALL BE NO ADDITIONAL PAYMENT FOR GRADING, SEEDING, MULCHING, EROSION AND SEDIMENT CONTROL MEASURES OR ANY OTHER WORK REQUIRED FOR THE CORRECTIONS.

h. THE CONTRACTOR SHALL AGAIN PROVIDE DELDOT THE ADVANCE NOTICE OF THE WORK BEING COMPLETED AND DELDOT SHALL OBTAIN AS-BUILT SURVEY DATA FOR THE CORRECTED WORK AND ANY OTHER AREAS THAT MAY HAVE BEEN DISTURBED WHILE PERFORMING THE CORRECTIVE WORK AS NOTED ABOVE.

i. DELDOT WILL PROVIDE THE AS-BUILT PLAN REFLECTING THE CORRECTIVE WORK TO THE CONTRACTOR WITHIN SEVEN (7) CALENDAR DAYS OF THE FINAL AS-BUILT SURVEY INFORMATION BEING OBTAINED. BOTH DIGITAL AND PAPER FORMATS OF THE AS-BUILT PLAN WILL BE PROVIDED.

j. IF AREAS NOT CONFORMING TO THE CONTRACT PLANS ARE AGAIN NOTED, THE CONTRACTOR SHALL CORRECT ANY DEFECTIVE AREAS AND THE ABOVE PROCESS SHALL CONTINUE UNTIL APPROVED AS-BUILT CONDITIONS ARE OBTAINED.

27. AS-BUILT TOPOGRAPHIC SURVEY PLANS SHALL BE OBTAINED FOR THE FOLLOWING MILESTONES. AS-BUILT PLANS SHALL BE APPROVED FOR EACH MILESTONE IN THE ORDER PRESENTED BELOW. AS-BUILT SURVEY WILL NOT BE PERFORMED FOR A MILESTONE UNTIL THE AS-BUILT PLAN FOR THE PREVIOUS MILESTONE IS APPROVED.

a. MILESTONE 1: OUTLET AREA INCLUDING INLET PONDS, AND BEAVER DAM BYPASS DEVICES, OUTLETS, MANHOLES, AND ENERGY DISSIPATERS.

b. MILESTONE 2: THE FINAL EXCAVATED SUBGRADE ELEVATIONS. THE CONTRACTOR MAY REQUEST THAT THE AS-BUILT PLAN PROCESS FOR MILESTONE 2 BE PERFORMED FOR INCREMENTAL SECTIONS IN MINIMUM 10 ACRE SECTIONS. THE FIRST SECTION THAT MUST BE OBTAINED AND APPROVED PRIOR TO SUBMITTING SUBSEQUENT SECTIONS SHALL INCLUDE AN AREA THAT IS EQUALLY SURROUNDING THE AREA OF THE OUTFALL AND OUTFALL DEVICES. THE AS-BUILT PLANS FOR THIS FIRST AREA SHALL BE APPROVED BEFORE AS-BUILT SURVEY DATA WOULD BE OBTAINED IN SUBSEQUENT INCREMENTAL SECTIONS. THE NEXT INCREMENTAL SECTION SHALL BE CONTIGUOUS TO THE FIRST SECTION AND THE AS-BUILT PLAN ALSO APPROVED PRIOR TO SUBMISSION OF THE NEXT SECTION. SUBSEQUENT SECTIONS SHALL BE CONTIGUOUS TO THE PREVIOUSLY APPROVED SECTIONS AND SUBJECT TO THE SAME APPROVAL PROCESS. THE AS-BUILT PLAN FOR THE ENTIRE SITE SHALL BE APPROVED PRIOR TO CONDUCTING SUBSOIL TILLAGE OPERATIONS ITEM 202555 AND PLACING ANY MATERIALS TOPSOIL ON THE SUBGRADE UNLESS OTHERWISE APPROVED BY THE ENGINEER.

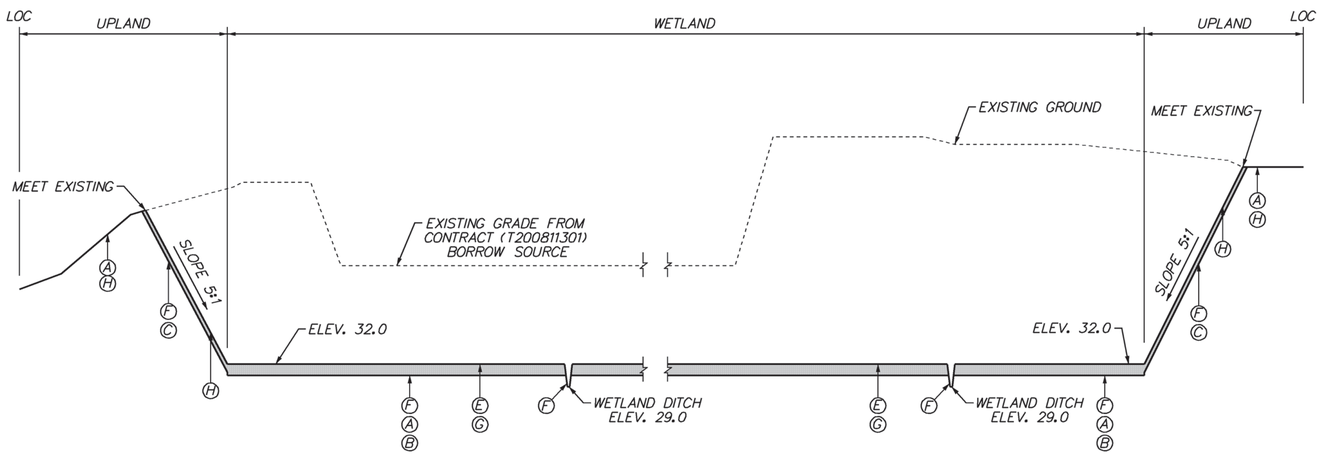
c. MILESTONE 3: THE FINAL ELEVATIONS AFTER PLACEMENT OF THE TOPSOIL AND EXCAVATION OF THE LOW FLOW OUTLET CHANNELS INCLUDING CONFIRMATION OF THE DATA FOR THE MASTER SURVEY CONTROL POINT/BENCHMARK. THE AS-BUILT PLAN FOR THE ENTIRE SITE SHALL BE APPROVED PRIOR TO PERFORMING BED HARROWING WORK UNDER ITEM 737503 - BEDDING FOR REFORESTATION UNLESS OTHERWISE APPROVED BY THE ENGINEER.

NOTES

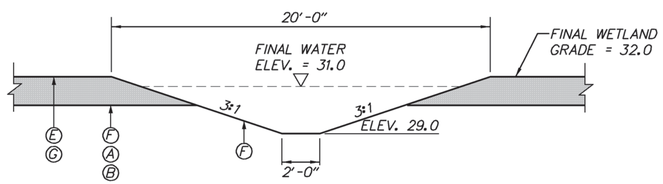
WM-1

Unofficial Web Copy

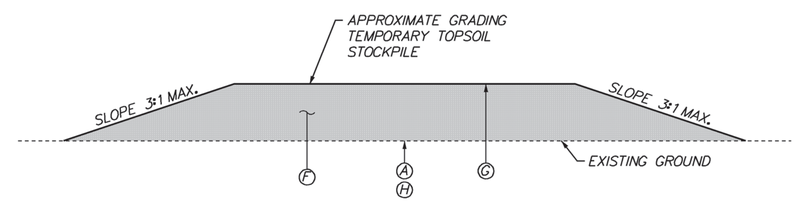
LEGEND	
A	ITEM 202555 SUBSOIL TILLAGE
B	ITEM 733008 TOPSOILING, 18" DEPTH
C	ITEM 733002 TOPSOILING, 6" DEPTH
E	ITEM 737503 BEDDING FOR REFORESTATION
F	ITEM 202000 EXCAVATION AND EMBANKMENT
G	ITEM 734553 WETLAND MITIGATION GRASS SEEDING
H	ITEM 734551 NATIVE GRASS SEEDING: NO MOW MIX
I	ITEM 735537 SOIL RETENTION BLANKET MULCH, TYPE 7
J	ITEM 735536 SOIL RETENTION BLANKET MULCH, TYPE 6
K	ITEM 713003 GEOTEXTILE, RIPRAP
L	ITEM 712006 RIPRAP, R-5
M	ITEM 763654 BEAVER DAM BYPASS DEVICE
N	ITEM 733007 TOPSOILING, 2" DEPTH
O	ITEM 302012 DELAWARE #57 STONE
P	ITEM 733001 TOPSOILING, 4" DEPTH



WETLAND MITIGATION



WETLAND DITCH



TOPSOIL STOCKPILE

TYPICAL SECTIONS

WM-2

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.
T200911303	DESIGNED BY: MRS
COUNTY	
NEW CASTLE	CHECKED BY: JTR

BORROW SITE / WETLAND MITIGATION PLAN

SHEET NO. 803

TOTAL SHTS. 1256

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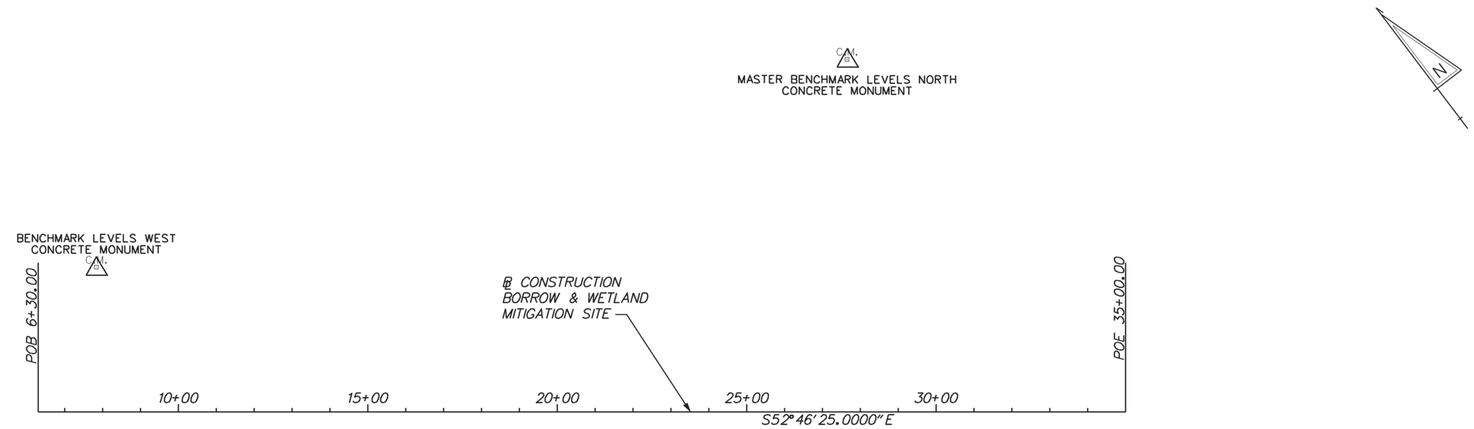
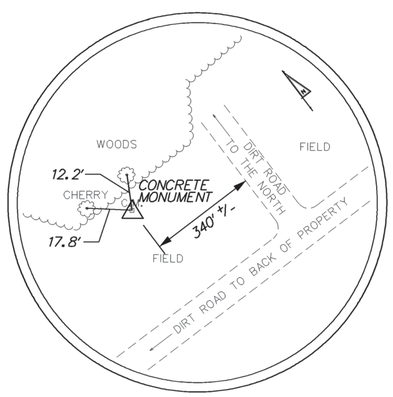
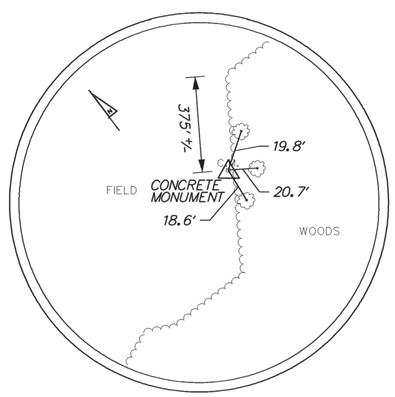
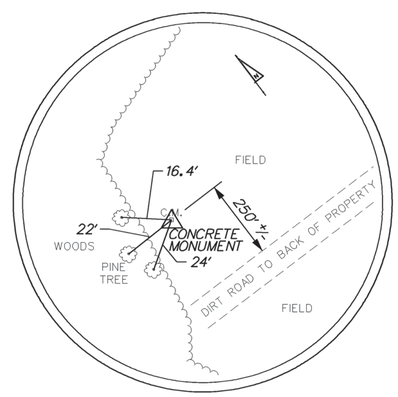




MASTER BENCH MARK LEVELS NORTH
(CONCRETE MONUMENT)
N: 527,947.7452
E: 561,047.6768
ELEV: 57.68'



BENCH MARK LEVELS SOUTH
(CONCRETE MONUMENT)
N: 526,500.0072
E: 559,754.3716
ELEV: 51.16'



BENCH MARK LEVELS WEST
(CONCRETE MONUMENT)
N: 528,709.3594
E: 559,137.6626
ELEV: 60.00'

BENCHMARK LEVELS SOUTH
CONCRETE MONUMENT

NOTE:

1. ALL ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM, 1988 (NAVD 88)
   HORIZONTAL DATUM: NORTH AMERICAN DATUM, 1983 (2007)

2. THE MASTER BENCH MARK ON THIS PLAN SHALL BE UTILIZED TO DETERMINE ALL GRADING FOR THE MITIGATION SITE AND ALL WORK UNDER ITEM 202000 - EXCAVATION AND EMBANKMENT TO OCCUR AT THE LEVELS ROAD BORROW AND MITIGATION SITE.

HORIZONTAL / VERTICAL CONTROL DATA

POINT	STATION	OFFSET	NORTHING	EASTING	ELEVATION
NORTH	27+64.97	931.61'	527947.7452	561047.6768	57.68'
SOUTH	26+11.01	1003.56'	526500.0072	559754.3716	51.16'
WEST	7+83.37	382.55'	528709.3594	559137.6626	60.00'

CONSTRUCTION ALIGNMENT CONTROL

POINT	STATION	OFFSET	NORTHING	EASTING
POB	6+30.00	0.00	528497.5398	558784.1116
POE	35+00.00	0.00	526761.2876	561069.3530

HORIZONTAL AND VERTICAL CONTROLS

WM-3

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 200 400 600
FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT: T200911303
COUNTY: NEW CASTLE
BRIDGE NO.
DESIGNED BY: MRS
CHECKED BY: JTR

BORROW SITE / WETLAND MITIGATION PLANS

SHEET NO. 804
TOTAL SHTS. 1256

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142
APPOQUINIMINK SCHOOL DISTRICT
T.M.#23-048.00-035
INS.#20050617-0058778

156
PAUL F. AND CHRISTINE A. MULVENA, H/W
T.M.#13-021.00-035
D.R.1072-0241

137
POOLE VENTURES, LLC
T.M.#23-065.00-005
INS.#20050331-0030404

SANDY BRANCH

R/W

TP-1-27A

MONITORING WELL DND

TP-1-10W

TP-02

WITHIN THE LIMITS INDICATED EROSION AND SEDIMENT CONTROL SHALL BE PER ITEM 202572 - BORROW AREA EROSION AND SEDIMENT CONTROL AND DEWATERING

LOC

RSF

TP-1-07W

LIMITS OF PROPOSED CONTRACT T200911303 WETLAND MITIGATION GRADING

MONITORING WELL DND

TP-01

TOPSOIL STOCKPILE

TRUCK ACCESS AREA

TP-04

5:1 SLOPE (TYPICAL)

℄ WETLAND DITCH

TP-07

MATCHLINE – SEE SHEET WM-5

MATCHLINE – SEE SHEET WM-7

KEY MAP

GRADING PLAN

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 50 100 150 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303 / COUNTY NEW CASTLE	BRIDGE NO. / DESIGNED BY: MRS / CHECKED BY: JTR	BORROW SITE / WETLAND MITIGATION PLAN	WM-4 / SHEET NO. 805 / TOTAL SHTS. 1256

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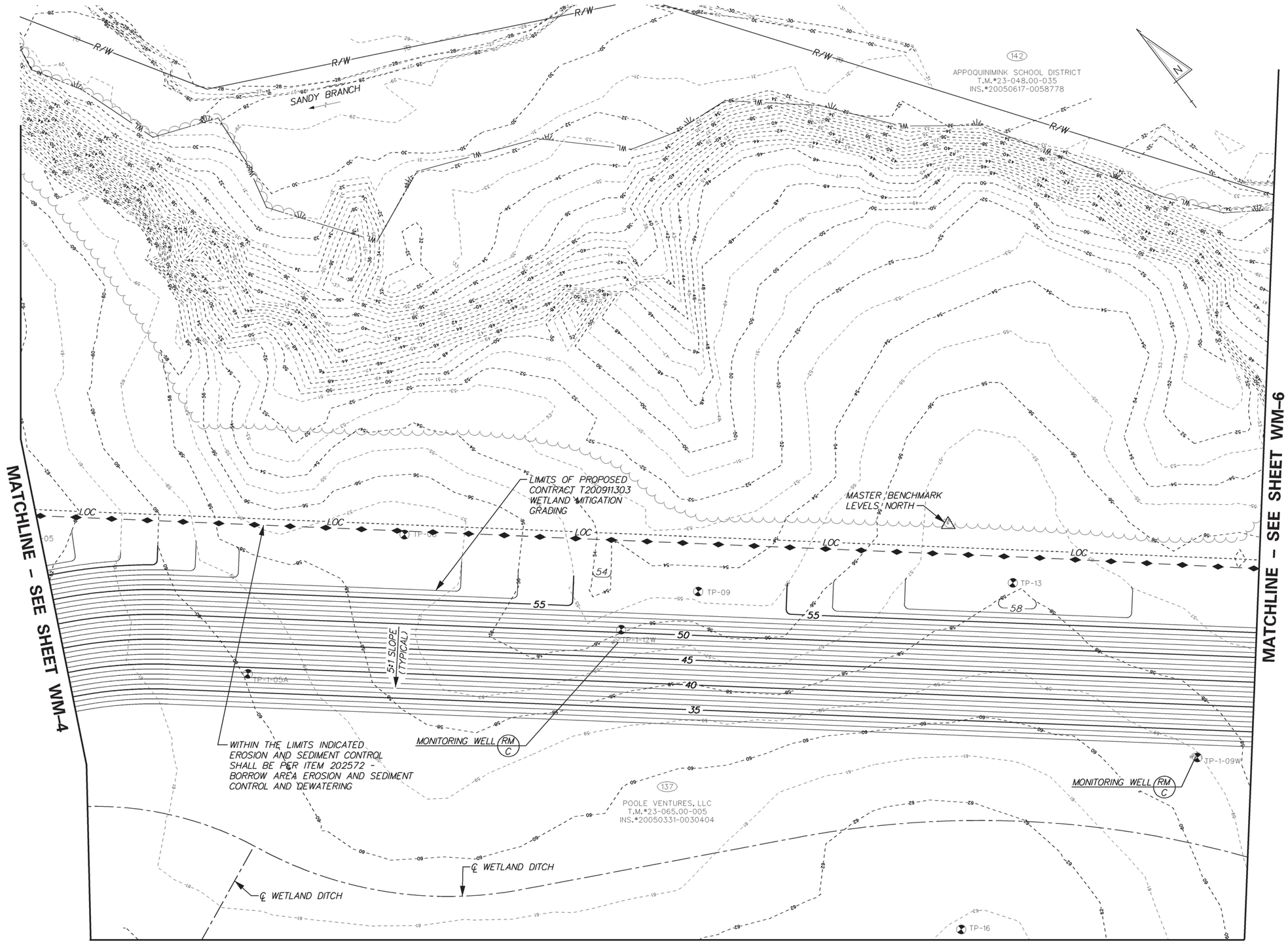

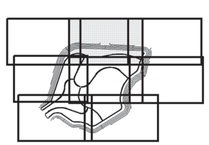

KEY MAP

GRADING PLAN

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 50 100 150 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303 / COUNTY NEW CASTLE	BRIDGE NO. / DESIGNED BY: MRS / CHECKED BY: JTR	BORROW SITE / WETLAND MITIGATION PLAN	WM-5 / SHEET NO. 806 / TOTAL SHTS. 1256

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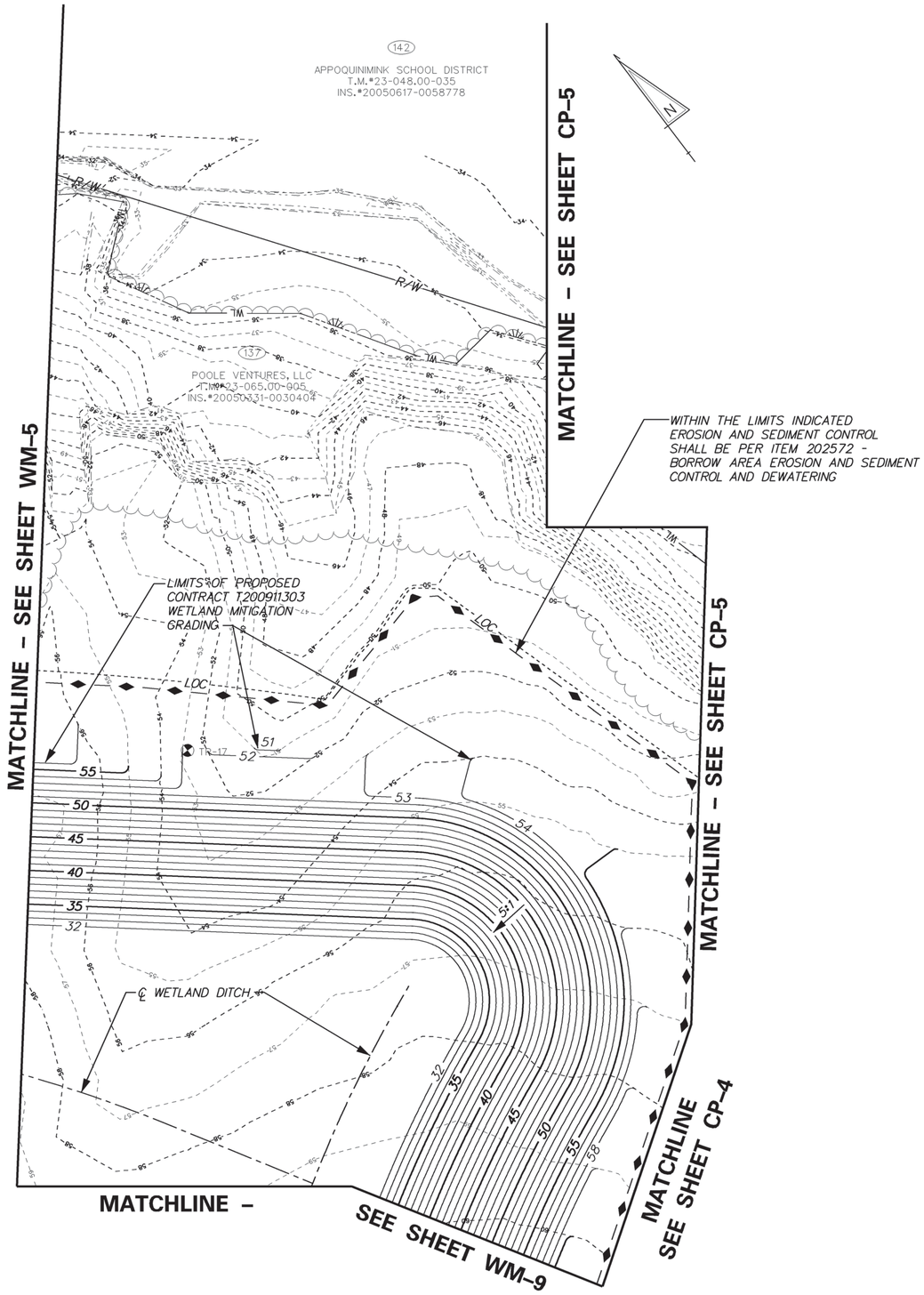

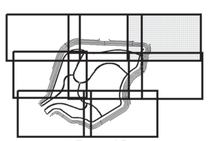

GRADING PLAN

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 50 100 150 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303 / COUNTY NEW CASTLE	BRIDGE NO. / DESIGNED BY: MRS / CHECKED BY: JTR	BORROW SITE / WETLAND MITIGATION PLAN	WM-6 / SHEET NO. 807 / TOTAL SHTS. 1256

7/24/2012 10:12:04 AM
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MATCHLINE – SEE SHEET WM–4

POOLE VENTURES, LLC
T.M.#23-065.00-005
INS.#20050331-0030404

BENCH MARK LEVELS WEST

TOPSOIL STOCKPILE

WITHIN THE LIMITS INDICATED EROSION AND SEDIMENT CONTROL SHALL BE PER ITEM 202572 - BORROW AREA EROSION AND SEDIMENT CONTROL AND DEWATERING

LIMITS OF PROPOSED CONTRACT T200911303 WETLAND MITIGATION GRADING

TP-1-16A

TP-1-04W

RM C MONITORING WELL

TP-03

TP-1-15A

TP-1-03W

RM O MONITORING WELL

TOPSOIL STOCKPILE CONTRACT T200811301

B CONSTRUCTION BORROW, & WETLAND MITIGATION SITE

CONTRACT T200811301 BORROW SOURCE DESIGN GRADING

℄ WETLAND DITCH

DUCTILE IRON PIPE OF BEAVER DAM BYPASS DEVICE

TP-14

POB 6+30.00

7+00 8+00 9+00 10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00

50'

5:1

MATCHLINE – SEE SHEET WM–8

MATCHLINE – SEE SHEET WM–10

KEY MAP

GRADING PLAN

WM-7

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 50 100 150 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: MRS	
COUNTY		
NEW CASTLE	CHECKED BY: JTR	

BORROW SITE / WETLAND MITIGATION PLAN

SHEET NO. 808

TOTAL SHTS. 1256

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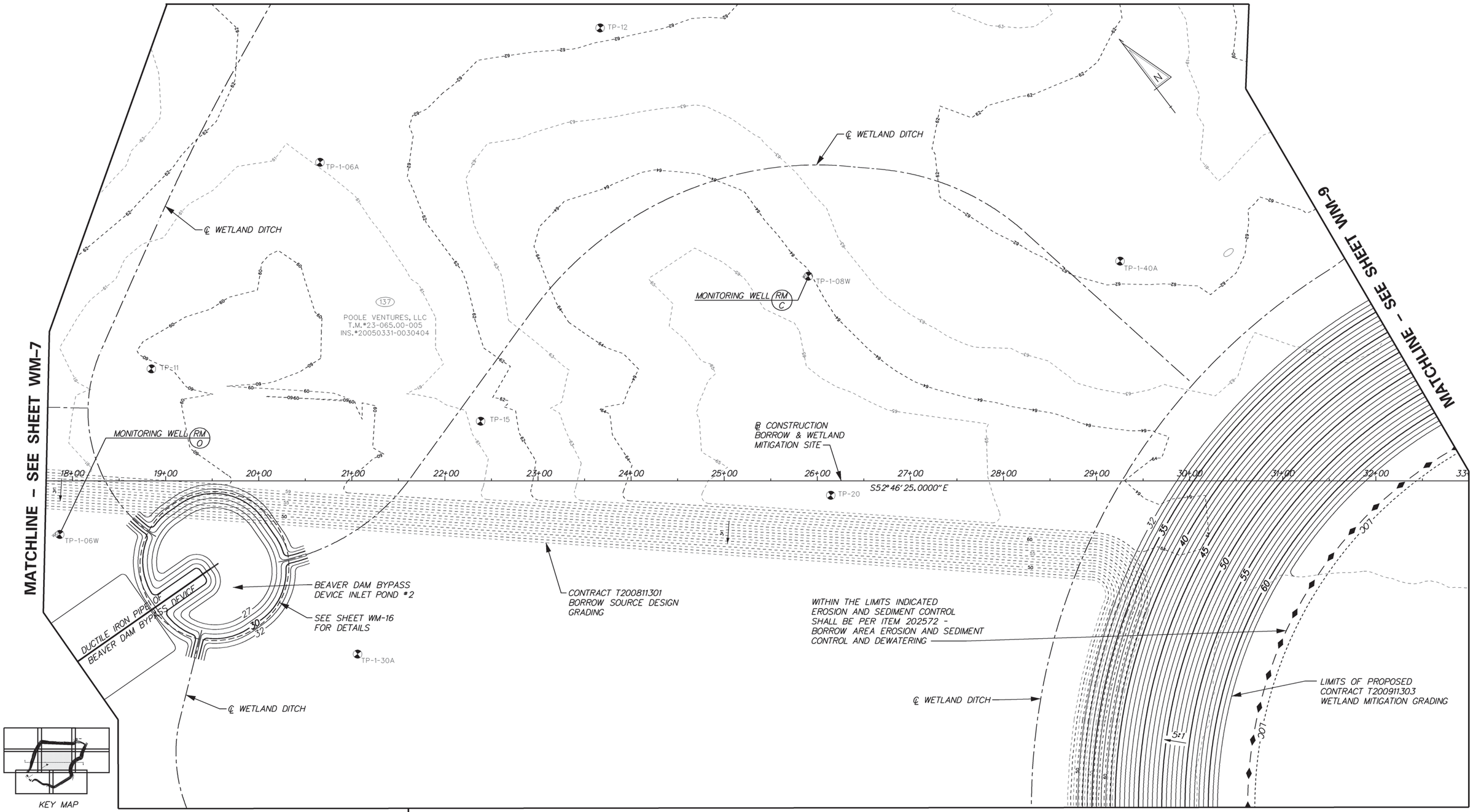
MATCHLINE – SEE SHEET WM–5

MATCHLINE – SEE SHEET WM–7

MATCHLINE – SEE SHEET WM–9



MATCHLINE – SEE SHEET WM–10

MATCHLINE – SEE SHEET WM–11

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 50 100 150 FEET

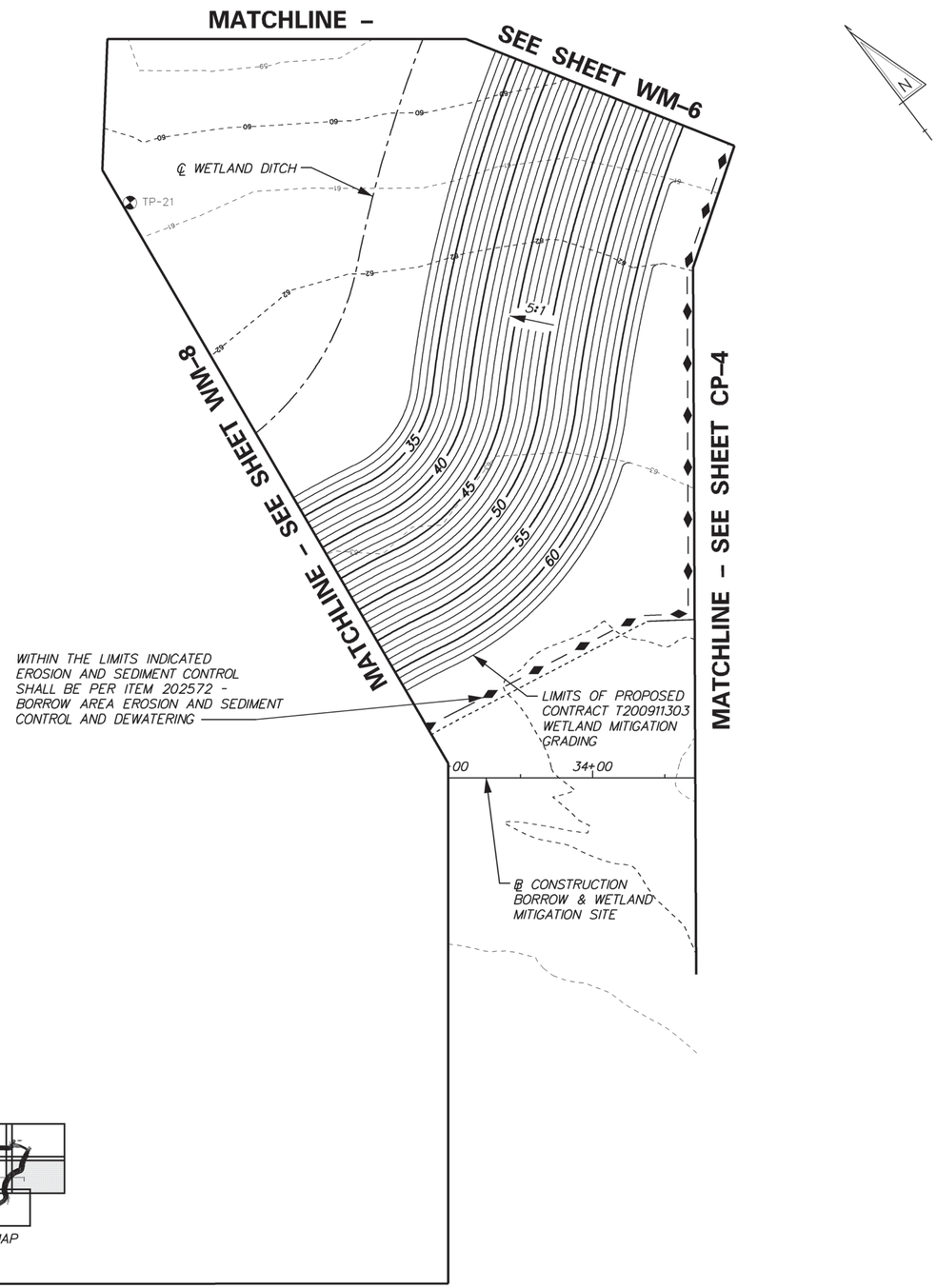
US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

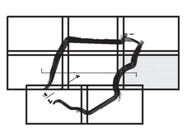
CONTRACT	BRIDGE NO.
T200911303	DESIGNED BY: MRS
COUNTY	
NEW CASTLE	CHECKED BY: JTR

GRADING PLAN

BORROW SITE / WETLAND MITIGATION PLAN

WM-8
SHEET NO.
809
TOTAL SHTS.
1256





GRADING PLAN

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 50 100 150 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303 / COUNTY NEW CASTLE	BRIDGE NO. / DESIGNED BY: MRS / CHECKED BY: JTR	BORROW SITE / WETLAND MITIGATION PLAN	WM-9 / SHEET NO. 810 / TOTAL SHTS. 1256

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MATCHLINE – SEE SHEET WM-7

MATCHLINE – SEE SHEET WM-8

LIMITS OF PROPOSED CONTRACT T200911303 WETLAND MITIGATION GRADING

WITHIN THE LIMITS INDICATED EROSION AND SEDIMENT CONTROL SHALL BE PER ITEM 202572 - BORROW AREA EROSION AND SEDIMENT CONTROL AND DEWATERING

℄ WETLAND DITCH

℄ WETLAND DITCH

DUCTILE IRON PIPE OF BEAVER DAM BYPASS DEVICE

RM 0 MONITORING WELL

TP-1-02W

INLET POND #1

BEAVER DAM BYPASS DEVICES

SEE SHEET WM-15 FOR DETAILS

UNNAMED TRIBUTARY OF SANDY BRANCH

SEE SHEET WM-17 FOR DETAILS

LOW FLOW OUTLET CHANNEL

137.01

PUGLISI FARMS/DELAWARE LLC
T.M.#13-021.00-010
INS.#20080325-0019377

300' D.P.&L. EASEMENT

℄ WETLAND DITCH

TP-1-20A

WITHIN THE LIMITS INDICATED EROSION AND SEDIMENT CONTROL SHALL BE PER ITEM 202572 - BORROW AREA EROSION AND SEDIMENT CONTROL AND DEWATERING

℄ WETLAND DITCH

TP-18

CONTRACT T200811301 BORROW SOURCE DESIGN GRADING

TP-19

℄ WETLAND DITCH

137

POOLE VENTURES, LLC
T.M.#23-065.00-005
INS.#20050331-0030404

TP-22

MONITORING WELL RM 0

TP-1-01W

LIMITS OF PROPOSED CONTRACT T200911303 WETLAND MITIGATION GRADING

136

RICHARD R. MONEY
T.M.#23-036.08-015
INS.#R.101928

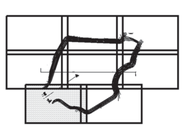
MATCHLINE – SEE SHEET WM-11

NOTE:

1. FOR ALL BEAVER DAM BYPASS DEVICE AND LOW FLOW OUTLET CHANNEL RIPRAP OUTFALL STRUCTURES, THE VOIDS IN THE RIPRAP SHALL BE CHOKED WITH ITEM 302012 - DELAWARE #57 STONE TO PREVENT THE LOSS OF TOPSOIL, FILLED WITH ITEM 733001 - TOPSOILING, 4" DEPTH SO THE RIPRAP IS BARELY VISIBLE, AND SEEDED WITH ITEM 734553 - WETLAND MITIGATION GRASS SEEDING.

2. ITEM 735536- SOIL RETENTION BLANKET MULCH, TYPE 6 SHALL BE INSTALLED FROM THE SILT FENCE TO 40 FEET BEYOND THE LOCATION WHERE EXISTING GRADE IS MET AT ELEVATION 32.0.

LEGEND	
	ITEM 735536 - SOIL RETENTION BLANKET MULCH, TYPE 6



KEY MAP

GRADING PLAN

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 50 100 150 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO.	BORROW SITE / WETLAND MITIGATION PLAN	WM-10
				COUNTY NEW CASTLE	DESIGNED BY: MRS		SHEET NO. 811
					CHECKED BY: JTR		TOTAL SHTS. 1256

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MATCHLINE – SEE SHEET WM–8

MATCHLINE – SEE SHEET WM–10

MONITORING WELL RM 0

TP-1-11W

TP-23

TP-1-05W

TP-25

CONTRACT T200811301
BORROW SOURCE
DESIGN GRADING

℄ WETLAND DITCH

℄ WETLAND DITCH

137
POOLE VENTURES, LLC
T.M.#23-065.00-005
INS.#20050331-0030404

WITHIN THE LIMITS INDICATED
EROSION AND SEDIMENT CONTROL
SHALL BE PER ITEM 202572 -
BORROW AREA EROSION AND SEDIMENT
CONTROL AND DEWATERING

TP-24

LIMITS OF PROPOSED
CONTRACT T200911303
WETLAND MITIGATION
GRADING

TP-13W

DND MONITORING WELL

R/W

BENCHMARK
LEVELS - SOUTH

UNNAMED TRIBUTARY
OF SANDY BRANCH

136
RICHARD P. MONEY
T.M.#13-026.00-015
W.R.101509

KEY MAP

GRADING PLAN

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 50 100 150 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303 / COUNTY NEW CASTLE	BRIDGE NO. / DESIGNED BY: MRS / CHECKED BY: JTR	BORROW SITE / WETLAND MITIGATION PLAN

WM-11
SHEET NO.
812
TOTAL SHTS.
1256

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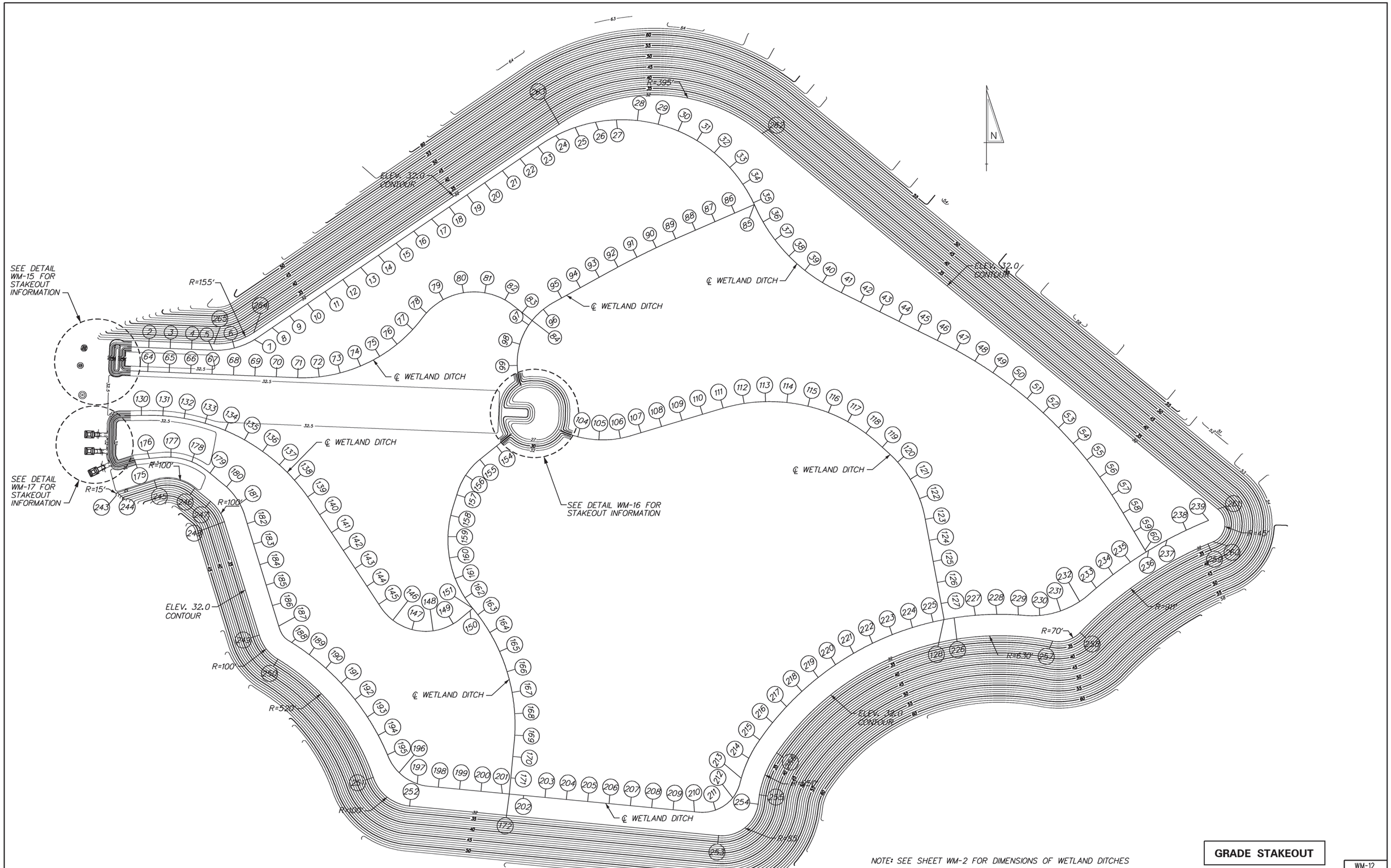

NOTE: SEE SHEET WM-2 FOR DIMENSIONS OF WETLAND DITCHES

GRADE STAKEOUT

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 100 200 300 FEET	**US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD**	CONTRACT T200911303 / COUNTY NEW CASTLE	BRIDGE NO. / DESIGNED BY: MRS / CHECKED BY: JTR	**BORROW SITE / WETLAND MITIGATION PLAN**	WM-12 / SHEET NO. 813 / TOTAL SHTS. 1256

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WETLAND DITCH STAKE OUT DATA

POINT	NORTHING	EASTING	ELEVATION	COMMENTS
1	527780.25	558832.25	29.0	WETLAND DITCH BOTTOM @ ℄
2	527778.21	558882.21	29.0	WETLAND DITCH BOTTOM @ ℄
3	527776.16	558932.17	29.0	WETLAND DITCH BOTTOM @ ℄
4	527774.12	558982.13	29.0	WETLAND DITCH BOTTOM @ ℄
5	527772.08	559032.09	29.0	WETLAND DITCH BOTTOM @ ℄
6	527777.22	559082.04	29.0	WETLAND DITCH BOTTOM @ ℄
7	527796.75	559128.33	29.0	WETLAND DITCH BOTTOM @ ℄
8	527824.76	559169.80	29.0	WETLAND DITCH BOTTOM @ ℄
9	527852.93	559211.11	29.0	WETLAND DITCH BOTTOM @ ℄
10	527881.10	559252.42	29.0	WETLAND DITCH BOTTOM @ ℄
11	527909.27	559293.73	29.0	WETLAND DITCH BOTTOM @ ℄
12	527937.45	559335.04	29.0	WETLAND DITCH BOTTOM @ ℄
13	527965.62	559376.35	29.0	WETLAND DITCH BOTTOM @ ℄
14	527993.79	559417.66	29.0	WETLAND DITCH BOTTOM @ ℄
15	528021.96	559458.97	29.0	WETLAND DITCH BOTTOM @ ℄
16	528050.13	559500.28	29.0	WETLAND DITCH BOTTOM @ ℄
17	528078.30	559541.59	29.0	WETLAND DITCH BOTTOM @ ℄
18	528106.48	559582.90	29.0	WETLAND DITCH BOTTOM @ ℄
19	528134.65	559624.21	29.0	WETLAND DITCH BOTTOM @ ℄
20	528162.82	559665.51	29.0	WETLAND DITCH BOTTOM @ ℄
21	528190.99	559706.82	29.0	WETLAND DITCH BOTTOM @ ℄
22	528219.16	559748.13	29.0	WETLAND DITCH BOTTOM @ ℄
23	528247.34	559789.44	29.0	WETLAND DITCH BOTTOM @ ℄
24	528272.62	559831.45	29.0	WETLAND DITCH BOTTOM @ ℄
25	528291.61	559876.54	29.0	WETLAND DITCH BOTTOM @ ℄
26	528303.93	559923.90	29.0	WETLAND DITCH BOTTOM @ ℄
27	528309.32	559972.57	29.0	WETLAND DITCH BOTTOM @ ℄
28	528307.67	560021.58	29.0	WETLAND DITCH BOTTOM @ ℄
29	528298.96	560069.90	29.0	WETLAND DITCH BOTTOM @ ℄
30	528283.34	560116.56	29.0	WETLAND DITCH BOTTOM @ ℄
31	528261.10	560160.57	29.0	WETLAND DITCH BOTTOM @ ℄
32	528232.64	560201.00	29.0	WETLAND DITCH BOTTOM @ ℄
33	528198.52	560236.97	29.0	WETLAND DITCH BOTTOM @ ℄
34	528159.41	560267.67	29.0	WETLAND DITCH BOTTOM @ ℄
35	528116.11	560292.41	29.0	WETLAND DITCH BOTTOM @ ℄
36	528071.46	560314.85	29.0	WETLAND DITCH BOTTOM @ ℄
37	528029.85	560342.53	29.0	WETLAND DITCH BOTTOM @ ℄
38	527992.03	560375.17	29.0	WETLAND DITCH BOTTOM @ ℄
39	527958.56	560412.28	29.0	WETLAND DITCH BOTTOM @ ℄
40	527929.98	560453.27	29.0	WETLAND DITCH BOTTOM @ ℄
41	527906.42	560497.35	29.0	WETLAND DITCH BOTTOM @ ℄
42	527884.09	560542.08	29.0	WETLAND DITCH BOTTOM @ ℄
43	527861.75	560586.81	29.0	WETLAND DITCH BOTTOM @ ℄
44	527839.41	560631.55	29.0	WETLAND DITCH BOTTOM @ ℄
45	527817.07	560676.28	29.0	WETLAND DITCH BOTTOM @ ℄
46	527794.74	560721.01	29.0	WETLAND DITCH BOTTOM @ ℄
47	527771.86	560765.47	29.0	WETLAND DITCH BOTTOM @ ℄
48	527746.88	560808.78	29.0	WETLAND DITCH BOTTOM @ ℄
49	527719.77	560850.78	29.0	WETLAND DITCH BOTTOM @ ℄
50	527690.60	560891.38	29.0	WETLAND DITCH BOTTOM @ ℄
51	527659.43	560930.47	29.0	WETLAND DITCH BOTTOM @ ℄
52	527626.35	560967.96	29.0	WETLAND DITCH BOTTOM @ ℄
53	527591.44	561003.74	29.0	WETLAND DITCH BOTTOM @ ℄
54	527554.78	561037.74	29.0	WETLAND DITCH BOTTOM @ ℄
55	527516.47	561069.86	29.0	WETLAND DITCH BOTTOM @ ℄
56	527476.60	561100.02	29.0	WETLAND DITCH BOTTOM @ ℄
57	527435.27	561128.16	29.0	WETLAND DITCH BOTTOM @ ℄
58	527392.62	561154.25	29.0	WETLAND DITCH BOTTOM @ ℄
59	527349.60	561179.72	29.0	WETLAND DITCH BOTTOM @ ℄
60	527306.57	561205.19	29.0	WETLAND DITCH BOTTOM @ ℄
63	527724.29	558829.97	29.0	WETLAND DITCH BOTTOM @ ℄
64	527722.25	558879.92	29.0	WETLAND DITCH BOTTOM @ ℄
65	527720.21	558929.88	29.0	WETLAND DITCH BOTTOM @ ℄
66	527718.17	558979.84	29.0	WETLAND DITCH BOTTOM @ ℄
67	527716.13	559029.80	29.0	WETLAND DITCH BOTTOM @ ℄
68	527714.09	559079.76	29.0	WETLAND DITCH BOTTOM @ ℄
69	527712.04	559129.72	29.0	WETLAND DITCH BOTTOM @ ℄
70	527710.00	559179.67	29.0	WETLAND DITCH BOTTOM @ ℄
71	527707.98	559229.63	29.0	WETLAND DITCH BOTTOM @ ℄
72	527710.04	559279.55	29.0	WETLAND DITCH BOTTOM @ ℄
73	527719.19	559328.66	29.0	WETLAND DITCH BOTTOM @ ℄
74	527735.23	559375.97	29.0	WETLAND DITCH BOTTOM @ ℄

WETLAND DITCH STAKE OUT DATA

POINT	NORTHING	EASTING	ELEVATION	COMMENTS
75	527757.85	559420.52	29.0	WETLAND DITCH BOTTOM @ ℄
76	527786.58	559461.39	29.0	WETLAND DITCH BOTTOM @ ℄
77	527820.84	559497.75	29.0	WETLAND DITCH BOTTOM @ ℄
78	527859.29	559529.68	29.0	WETLAND DITCH BOTTOM @ ℄
79	527889.93	559568.89	29.0	WETLAND DITCH BOTTOM @ ℄
80	527906.05	559615.98	29.0	WETLAND DITCH BOTTOM @ ℄
81	527905.88	559665.75	29.0	WETLAND DITCH BOTTOM @ ℄
82	527889.43	559712.72	29.0	WETLAND DITCH BOTTOM @ ℄
83	527860.06	559753.09	29.0	WETLAND DITCH BOTTOM @ ℄
84	527841.75	559776.13	29.0	WETLAND DITCH BOTTOM @ ℄
85	528111.90	560294.43	29.0	WETLAND DITCH BOTTOM @ ℄
86	528091.91	560248.59	29.0	WETLAND DITCH BOTTOM @ ℄
87	528071.93	560202.76	29.0	WETLAND DITCH BOTTOM @ ℄
88	528051.95	560156.93	29.0	WETLAND DITCH BOTTOM @ ℄
89	528031.92	560111.11	29.0	WETLAND DITCH BOTTOM @ ℄
90	528011.07	560065.67	29.0	WETLAND DITCH BOTTOM @ ℄
91	527989.10	560020.76	29.0	WETLAND DITCH BOTTOM @ ℄
92	527966.00	559976.41	29.0	WETLAND DITCH BOTTOM @ ℄
93	527941.99	559932.55	29.0	WETLAND DITCH BOTTOM @ ℄
94	527917.89	559888.75	29.0	WETLAND DITCH BOTTOM @ ℄
95	527893.78	559844.94	29.0	WETLAND DITCH BOTTOM @ ℄
96	527867.83	559802.29	29.0	WETLAND DITCH BOTTOM @ ℄
97	527831.27	559768.48	29.0	WETLAND DITCH BOTTOM @ ℄
98	527786.09	559747.54	29.0	WETLAND DITCH BOTTOM @ ℄
99	527736.66	559741.51	29.0	WETLAND DITCH BOTTOM @ ℄
101	527640.80	559774.61	29.0	WETLAND DITCH BOTTOM @ ℄
102	527613.25	559792.85	29.0	WETLAND DITCH BOTTOM @ ℄
104	527570.38	559882.70	29.0	WETLAND DITCH BOTTOM @ ℄
105	527563.13	559932.08	29.0	WETLAND DITCH BOTTOM @ ℄
106	527566.70	559981.85	29.0	WETLAND DITCH BOTTOM @ ℄
107	527579.69	560030.10	29.0	WETLAND DITCH BOTTOM @ ℄
108	527594.05	560077.99	29.0	WETLAND DITCH BOTTOM @ ℄
109	527608.41	560125.89	29.0	WETLAND DITCH BOTTOM @ ℄
110	527622.77	560173.78	29.0	WETLAND DITCH BOTTOM @ ℄
111	5276 37.11	560221.68	29.0	WETLAND DITCH BOTTOM @ ℄
112	527647.87	560270.47	29.0	WETLAND DITCH BOTTOM @ ℄
113	527652.22	560320.25	29.0	WETLAND DITCH BOTTOM @ ℄
114	527650.10	560370.17	29.0	WETLAND DITCH BOTTOM @ ℄
115	527641.52	560419.39	29.0	WETLAND DITCH BOTTOM @ ℄
116	527626.59	560467.07	29.0	WETLAND DITCH BOTTOM @ ℄
117	527605.49	560512.36	29.0	WETLAND DITCH BOTTOM @ ℄
118	527578.52	560554.42	29.0	WETLAND DITCH BOTTOM @ ℄
119	527546.21	560592.53	29.0	WETLAND DITCH BOTTOM @ ℄
120	527511.51	560628.50	29.0	WETLAND DITCH BOTTOM @ ℄
121	527471.34	560658.14	29.0	WETLAND DITCH BOTTOM @ ℄
122	527426.39	560679.88	29.0	WETLAND DITCH BOTTOM @ ℄
123	527378.21	560692.99	29.0	WETLAND DITCH BOTTOM @ ℄
124	527329.07	560702.23	29.0	WETLAND DITCH BOTTOM @ ℄
125	527279.93	560711.47	29.0	WETLAND DITCH BOTTOM @ ℄
126	527230.80	560720.71	29.0	WETLAND DITCH BOTTOM @ ℄
127	527181.66	560729.95	29.0	WETLAND DITCH BOTTOM @ ℄
128	527146.19	560736.62	29.0	WETLAND DITCH BOTTOM @ ℄
129	527619.47	558825.68	29.0	WETLAND DITCH BOTTOM @ ℄
130	527619.91	558865.05	29.0	WETLAND DITCH BOTTOM @ ℄
131	527619.19	558915.03	29.0	WETLAND DITCH BOTTOM @ ℄
132	527613.21	558964.64	29.0	WETLAND DITCH BOTTOM @ ℄
133	527601.77	559013.29	29.0	WETLAND DITCH BOTTOM @ ℄
134	527585.00	559060.37	29.0	WETLAND DITCH BOTTOM @ ℄
135	527563.12	559105.30	29.0	WETLAND DITCH BOTTOM @ ℄
136	527536.39	559147.52	29.0	WETLAND DITCH BOTTOM @ ℄
137	527505.14	559186.52	29.0	WETLAND DITCH BOTTOM @ ℄
138	527469.76	559221.82	29.0	WETLAND DITCH BOTTOM @ ℄
139	527430.69	559252.97	29.0	WETLAND DITCH BOTTOM @ ℄
140	527389.12	559280.76	29.0	WETLAND DITCH BOTTOM @ ℄
141	527347.42	559308.34	29.0	WETLAND DITCH BOTTOM @ ℄
142	527305.71	559335.92	29.0	WETLAND DITCH BOTTOM @ ℄
143	527264.01	559363.50	29.0	WETLAND DITCH BOTTOM @ ℄
144	527222.30	559391.08	29.0	WETLAND DITCH BOTTOM @ ℄
145	527180.60	559418.66	29.0	WETLAND DITCH BOTTOM @ ℄
146	527143.12	559451.33	29.0	WETLAND DITCH BOTTOM @ ℄
147	527121.05	559495.83	29.0	WETLAND DITCH BOTTOM @ ℄
148	527118.05	559545.40	29.0	WETLAND DITCH BOTTOM @ ℄

WETLAND DITCH STAKE OUT DATA

POINT	NORTHING	EASTING	ELEVATION	COMMENTS
149	527134.59	559592.24	29.0	WETLAND DITCH BOTTOM @ ℄
150	527165.40	559631.55	29.0	WETLAND DITCH BOTTOM @ ℄
151	527170.61	559637.80	29.0	WETLAND DITCH BOTTOM @ ℄
152	527612.02	559771.03	29.0	WETLAND DITCH BOTTOM @ ℄
154	527549.14	559693.27	29.0	WETLAND DITCH BOTTOM @ ℄
155	527517.70	559654.40	29.0	WETLAND DITCH BOTTOM @ ℄
156	527480.77	559621.01	29.0	WETLAND DITCH BOTTOM @ ℄
157	527435.34	559600.58	29.0	WETLAND DITCH BOTTOM @ ℄
158	527387.42	559586.36	29.0	WETLAND DITCH BOTTOM @ ℄
159	527337.92	559579.95	29.0	WETLAND DITCH BOTTOM @ ℄
160	527288.13	559583.49	29.0	WETLAND DITCH BOTTOM @ ℄
161	527240.03	559596.85	29.0	WETLAND DITCH BOTTOM @ ℄
162	527195.55	559619.51	29.0	WETLAND DITCH BOTTOM @ ℄
163	527155.71	559649.67	29.0	WETLAND DITCH BOTTOM @ ℄
164	527114.22	559677.52	29.0	WETLAND DITCH BOTTOM @ ℄
165	527069.75	559700.31	29.0	WETLAND DITCH BOTTOM @ ℄
166	527022.91	559717.72	29.0	WETLAND DITCH BOTTOM @ ℄
167	526974.35	559729.52	29.0	WETLAND DITCH BOTTOM @ ℄
168	526924.74	559735.53	29.0	WETLAND DITCH BOTTOM @ ℄
169	526874.77	559735.68	29.0	WETLAND DITCH BOTTOM @ ℄
170	526824.97	559731.25	29.0	WETLAND DITCH BOTTOM @ ℄
171	526775.20	559726.49	29.0	WETLAND DITCH BOTTOM @ ℄
172	526737.40	559722.88	29.0	WETLAND DITCH BOTTOM @ ℄
174	527511.84	558834.97	29.0	WETLAND DITCH BOTTOM @ ℄
175	527516.42	558849.34	29.0	WETLAND DITCH BOTTOM @ ℄
176	527519.69	558884.10	29.0	WETLAND DITCH BOTTOM @ ℄
177	527522.74	558933.95	29.0	WETLAND DITCH BOTTOM @ ℄
178	527511.85	558982.51	29.0	WETLAND DITCH BOTTOM @ ℄
179	527485.75	559024.90	29.0	WETLAND DITCH BOTTOM @ ℄
180	527453.98	559063.51	29.0	WETLAND DITCH BOTTOM @ ℄
181	527414.87	559094.29	29.0	WETLAND DITCH BOTTOM @ ℄
182	527368.17	559111.84	29.0	WETLAND DITCH BOTTOM @ ℄
183	527320.38	559126.56	29.0	WETLAND DITCH BOTTOM @ ℄
184	527272.60	559141.28	29.0	WETLAND DITCH BOTTOM @ ℄
185	527224.82	559156.00	29.0	WETLAND DITCH BOTTOM @ ℄
186	527177.03	559170.72	29.0	WETLAND DITCH BOTTOM @ ℄
187	527129.25	559185.44	29.0	WETLAND DITCH BOTTOM @ ℄
188	527091.16	559215.18	29.0	WETLAND DITCH BOTTOM @ ℄
189	527062.89	559256.41	29.0	WETLAND DITCH BOTTOM @ ℄
190	527031.12	559295.00	29.0	WETLAND DITCH BOTTOM @ ℄
191	526996.10	559330.65	29.0	WETLAND DITCH BOTTOM @ ℄
192	526958.08	559363.11	29.0	WETLAND DITCH BOTTOM @ ℄
193	526917.37	559392.11	29.0	WETLAND DITCH BOTTOM @ ℄
194	526874.27	559417.43	29.0	WETLAND DITCH BOTTOM @ ℄
195	526829.12	559438.87	29.0	WETLAND DITCH BOTTOM @ ℄
196	526787.62	559466.06	29.0	WETLAND DITCH BOTTOM @ ℄
197	526761.37	559508.16	29.0	WETLAND DITCH BOTTOM @ ℄
198	526753.22	559557.32	29.0	WETLAND DITCH BOTTOM @ ℄
199	526748.47	559607.10	29.0	WETLAND DITCH BOTTOM @ ℄
200	526743.71	559656.87	29.0	WETLAND DITCH BOTTOM @ ℄
201	526738.96	559706.64	29.0	WETLAND DITCH BOTTOM @ ℄
202	526734.20	559756.42	29.0	WETLAND DITCH BOTTOM @ ℄
203	526729.44	559806.19	29.0	WETLAND DITCH BOTTOM @ ℄
204	526724.69	559855.96	29.0	WETLAND DITCH BOTTOM @ ℄
205	526719.93	559905.74	29.0	WETLAND DITCH BOTTOM @ ℄
206	526715.18	559955.51	29.0	WETLAND DITCH BOTTOM @ ℄
207	526710.42	560005.28	29.0	WETLAND DITCH BOTTOM @ ℄
208	526705.66	560055.06	29.0	WETLAND DITCH BOTTOM @ ℄
209	526700.91	560104.83	29.0	WETLAND DITCH BOTTOM @ ℄
210	526696.15	560154.60	29.0	WETLAND DITCH BOTTOM @ ℄
211	526700.17	560203.92	29.0	WETLAND DITCH BOTTOM @ ℄
212	526728.97	560244.02	29.0	WETLAND DITCH BOTTOM @ ℄
213	526774.33	560263.91	29.0	WETLAND DITCH BOTTOM @ ℄
214	526821.02	560281.63	29.0	WETLAND DITCH BOTTOM @ ℄
215	526864.13	560306.85	29.0	WETLAND DITCH BOTTOM @ ℄
216	526904.13	560336.83	29.0	WETLAND DITCH BOTTOM @ ℄
217	526941.82	560369.67	29.0	WETLAND DITCH BOTTOM @ ℄
218	526977.00	560405.19	29.0	WETLAND DITCH BOTTOM @ ℄
219	527009.46	560443.20	29.0	WETLAND DITCH BOTTOM @ ℄
220	527039.05	560483.49	29.0	WETLAND DITCH BOTTOM @ ℄
221	527065.60	560525.85	29.0	WETLAND DITCH BOTTOM @ ℄
222	527088.97	560570.04	29.0	WETLAND DITCH BOTTOM @ ℄

GRADE STAKEOUT

WETLAND DITCH STAKE OUT DATA

POINT	NORTHING	EASTING	ELEVATION	COMMENTS
223	527109.03	560615.83	29.0	WETLAND DITCH BOTTOM @ ℄
224	527125.66	560662.97	29.0	WETLAND DITCH BOTTOM @ ℄
225	527138.79	560711.20	29.0	WETLAND DITCH BOTTOM @ ℄
226	527148.35	560760.27	29.0	WETLAND DITCH BOTTOM @ ℄
227	527154.27	560809.90	29.0	WETLAND DITCH BOTTOM @ ℄
228	527156.53	560859.84	29.0	WETLAND DITCH BOTTOM @ ℄
229	527155.11	560909.81	29.0	WETLAND DITCH BOTTOM @ ℄
230	527153.96	560959.72	29.0	WETLAND DITCH BOTTOM @ ℄
231	527164.47	561008.47	29.0	WETLAND DITCH BOTTOM @ ℄
232	527186.71	561053.11	29.0	WETLAND DITCH BOTTOM @ ℄
233	527218.17	561091.92	29.0	WETLAND DITCH BOTTOM @ ℄
234	527249.38	561130.97	29.0	WETLAND DITCH BOTTOM @ ℄
235	527278.52	561171.59	29.0	WETLAND DITCH BOTTOM @ ℄
236	527305.51	561213.68	29.0	WETLAND DITCH BOTTOM @ ℄
237	527330.27	561257.11	29.0	WETLAND DITCH BOTTOM @ ℄
238	527352.74	561301.77	29.0	WETLAND DITCH BOTTOM @ ℄
239	527375.74	561353.91	29.0	WETLAND DITCH BOTTOM @ ℄

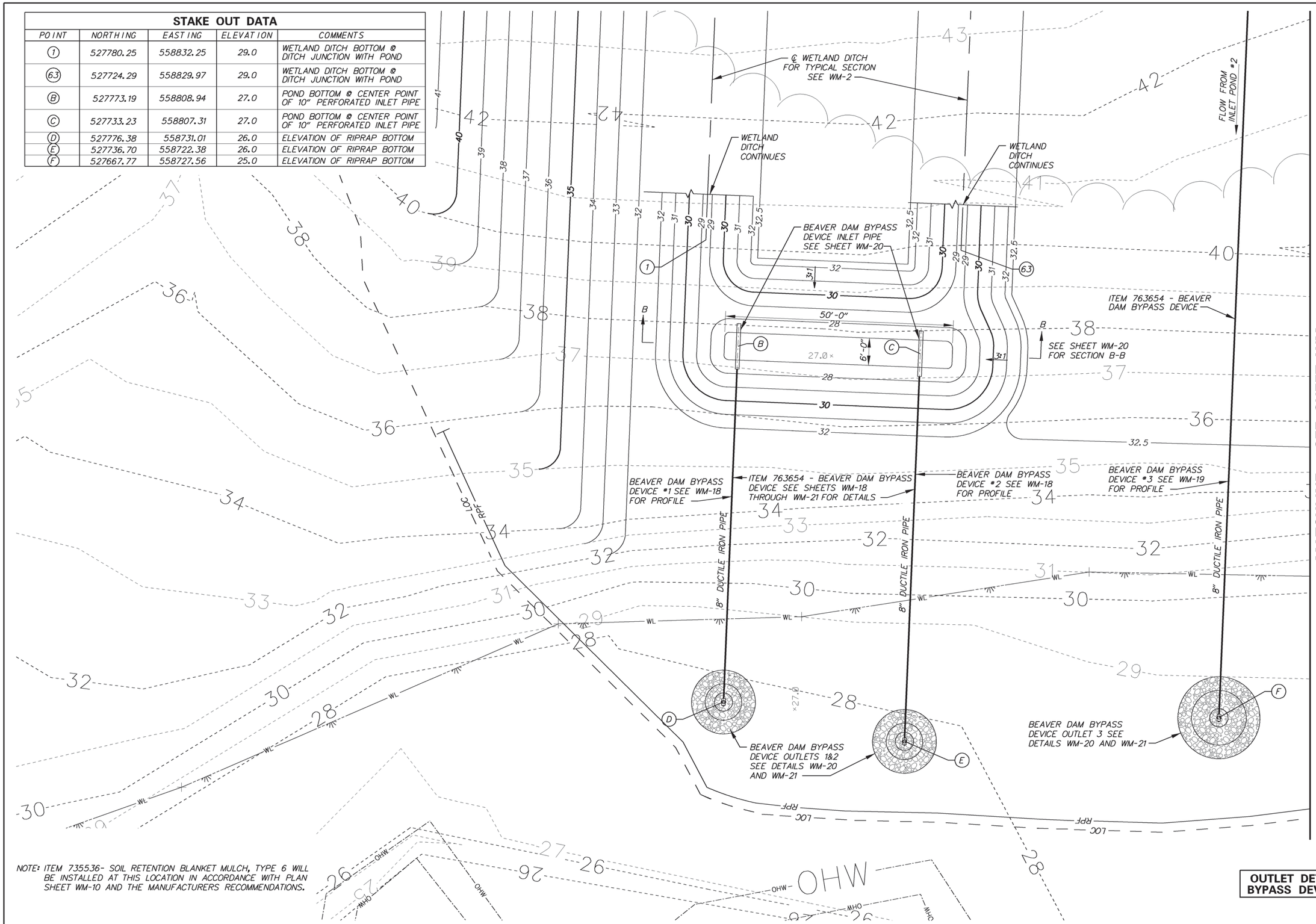
WETLAND GRADING STAKE OUT DATA

POINT	NORTHING	EASTING	REMARKS	ELEVATION	COMMENTS
243	527433.80	558806.30	POB/PC	32.0	EXTENT 32.0' FINAL GRADE
244	527440.61	558809.33	PT	32.0	EXTENT 32.0' FINAL GRADE
245	527468.18	558895.34	PC	32.0	EXTENT 32.0' FINAL GRADE
246	527450.45	558989.07	PT	32.0	EXTENT 32.0' FINAL GRADE
247	527420.45	559025.85	PC	32.0	EXTENT 32.0' FINAL GRADE
248	527372.40	559058.22	PT	32.0	EXTENT 32.0' FINAL GRADE
249	527108.10	559139.63	PC	32.0	EXTENT 32.0' FINAL GRADE
250	527052.03	559183.36	PCC	32.0	EXTENT 32.0' FINAL GRADE
251	526776.41	559405.54	PCC	32.0	EXTENT 32.0' FINAL GRADE
252	526709.37	559490.59	PT	32.0	EXTENT 32.0' FINAL GRADE
253	526640.55	560210.89	PC	32.0	EXTENT 32.0' FINAL GRADE
254	526713.70	560303.20	PT	32.0	EXTENT 32.0' FINAL GRADE
255	526735.62	560306.18	PC	32.0	EXTENT 32.0' FINAL GRADE
256	526833.71	560346.60	PCC	32.0	EXTENT 32.0' FINAL GRADE
257	527094.18	560989.83	PCC	32.0	EXTENT 32.0' FINAL GRADE
258	527114.32	561054.13	PCC	32.0	EXTENT 32.0' FINAL GRADE
259	527320.69	561352.38	PT	32.0	EXTENT 32.0' FINAL GRADE
260	527325.91	561364.57	PC	32.0	EXTENT 32.0' FINAL GRADE
261	527402.00	561375.46	PT	32.0	EXTENT 32.0' FINAL GRADE
262	528277.70	560312.56	PC	32.0	EXTENT 32.0' FINAL GRADE
263	528299.18	559838.84	PT	32.0	EXTENT 32.0' FINAL GRADE
264	527813.85	559127.18	PC	32.0	EXTENT 32.0' FINAL GRADE
265	527787.03	559033.52	PT	32.0	EXTENT 32.0' FINAL GRADE
266	527797.89	558767.91	PC	32.0	EXTENT 32.0' FINAL GRADE
267	527801.97	558763.19	POE	32.0	EXTENT 32.0' FINAL GRADE

GRADE STAKEOUT

STAKE OUT DATA

POINT	NORTHING	EASTING	ELEVATION	COMMENTS
1	527780.25	558832.25	29.0	WETLAND DITCH BOTTOM @ DITCH JUNCTION WITH POND
6.3	527724.29	558829.97	29.0	WETLAND DITCH BOTTOM @ DITCH JUNCTION WITH POND
B	527773.19	558808.94	27.0	POND BOTTOM @ CENTER POINT OF 10" PERFORATED INLET PIPE
C	527733.23	558807.31	27.0	POND BOTTOM @ CENTER POINT OF 10" PERFORATED INLET PIPE
D	527776.38	558731.01	26.0	ELEVATION OF RIPRAP BOTTOM
E	527736.70	558722.38	26.0	ELEVATION OF RIPRAP BOTTOM
F	527667.77	558727.56	25.0	ELEVATION OF RIPRAP BOTTOM



NOTE: ITEM 735536- SOIL RETENTION BLANKET MULCH, TYPE 6 WILL BE INSTALLED AT THIS LOCATION IN ACCORDANCE WITH PLAN SHEET WM-10 AND THE MANUFACTURERS RECOMMENDATIONS.

OUTLET DETAIL – BEAVER DAM BYPASS DEVICE INLET POND #1

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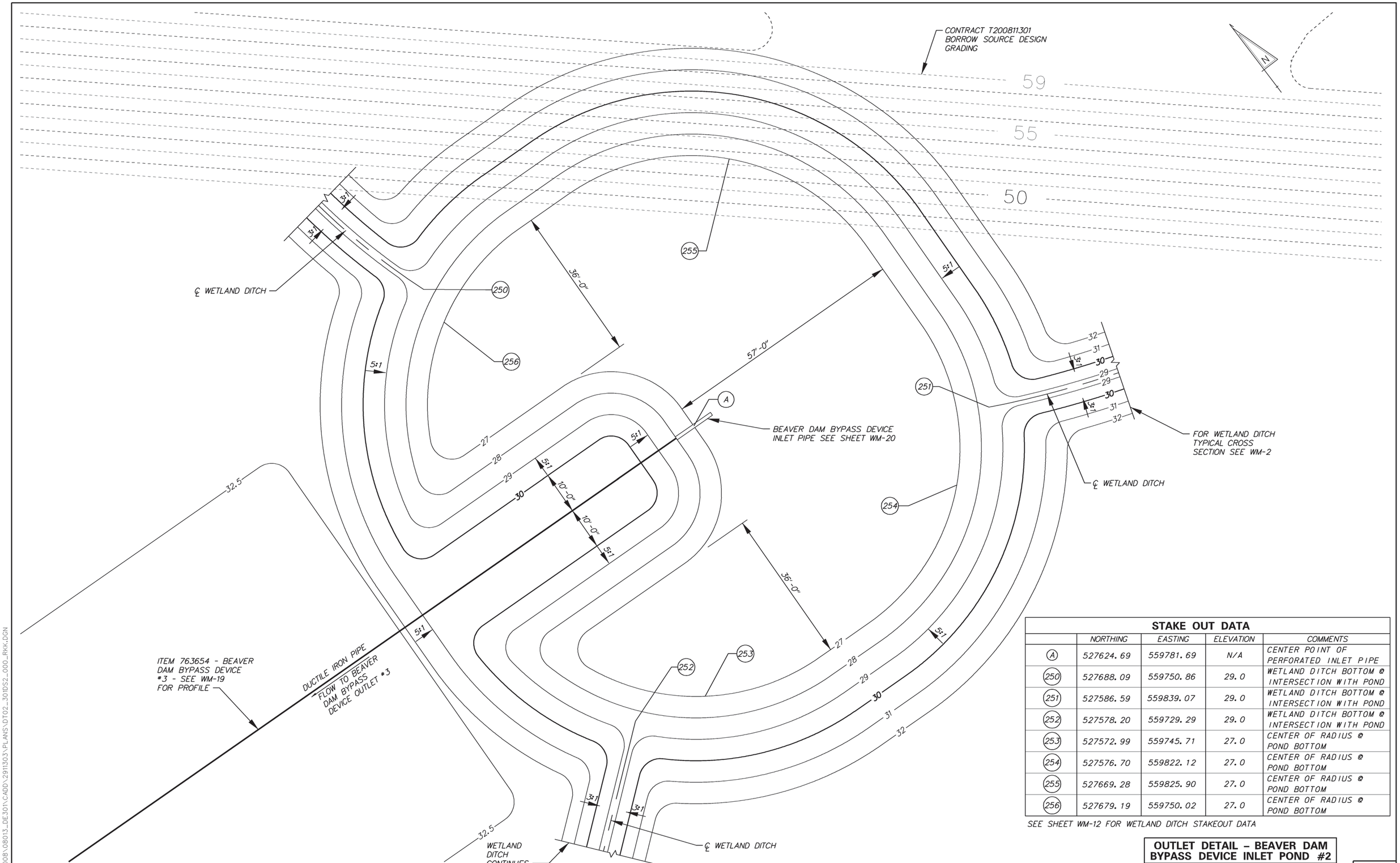
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 10 20 30 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303 / COUNTY NEW CASTLE	BRIDGE NO. / DESIGNED BY: MRS / CHECKED BY: JTR	BORROW SITE / WETLAND MITIGATION PLAN

WM-15
SHEET NO.
816
TOTAL SHTS.
1256



STAKE OUT DATA

	NORTHING	EASTING	ELEVATION	COMMENTS
A	527624.69	559781.69	N/A	CENTER POINT OF PERFORATED INLET PIPE
250	527688.09	559750.86	29.0	WETLAND DITCH BOTTOM @ INTERSECTION WITH POND
251	527586.59	559839.07	29.0	WETLAND DITCH BOTTOM @ INTERSECTION WITH POND
252	527578.20	559729.29	29.0	WETLAND DITCH BOTTOM @ INTERSECTION WITH POND
253	527572.99	559745.71	27.0	CENTER OF RADIUS @ POND BOTTOM
254	527576.70	559822.12	27.0	CENTER OF RADIUS @ POND BOTTOM
255	527669.28	559825.90	27.0	CENTER OF RADIUS @ POND BOTTOM
256	527679.19	559750.02	27.0	CENTER OF RADIUS @ POND BOTTOM

SEE SHEET WM-12 FOR WETLAND DITCH STAKEOUT DATA

OUTLET DETAIL – BEAVER DAM BYPASS DEVICE INLET POND #2

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

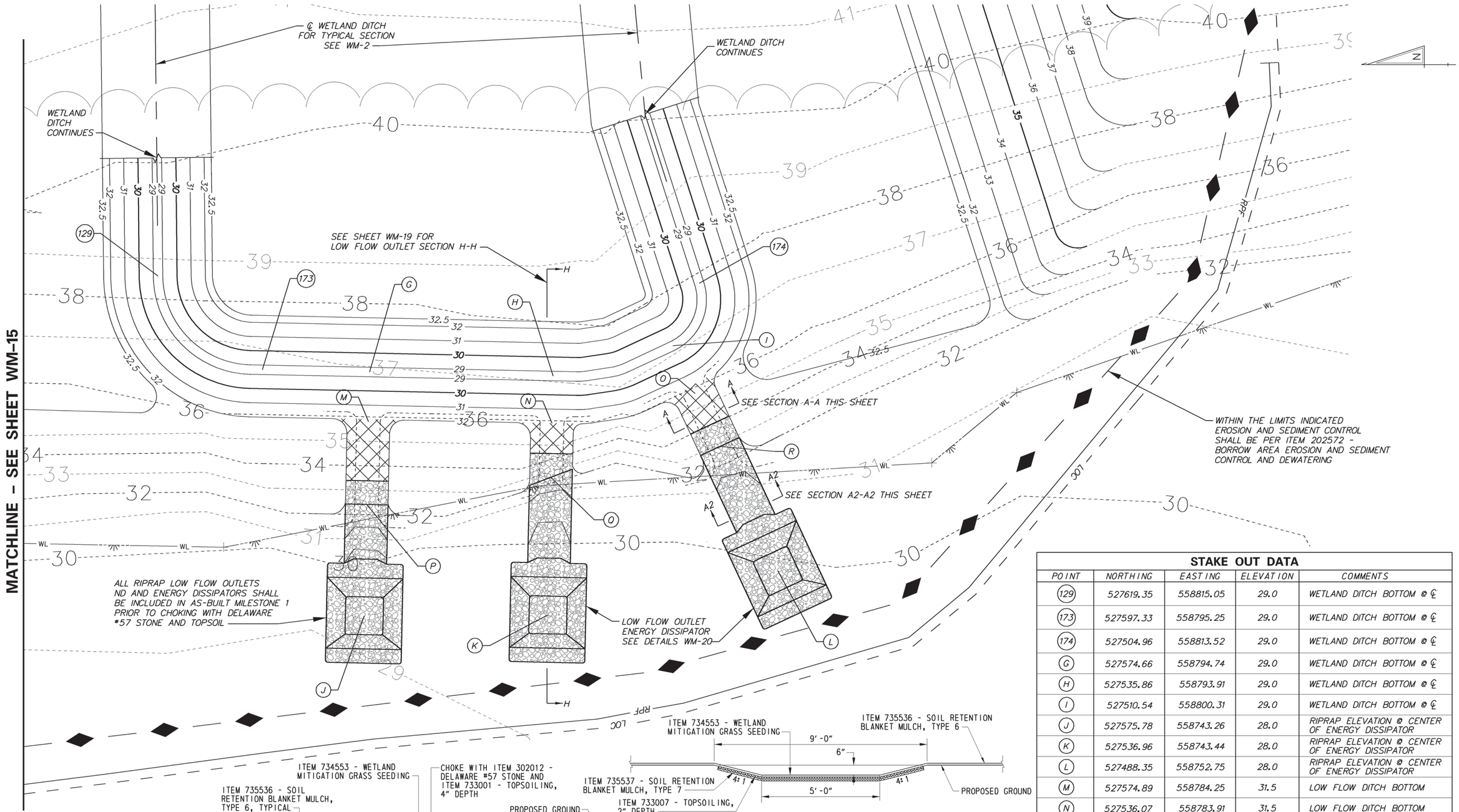
SCALE 0 10 20 30 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: MRS	
COUNTY		
NEW CASTLE	CHECKED BY: JTR	

BORROW SITE / WETLAND MITIGATION PLAN

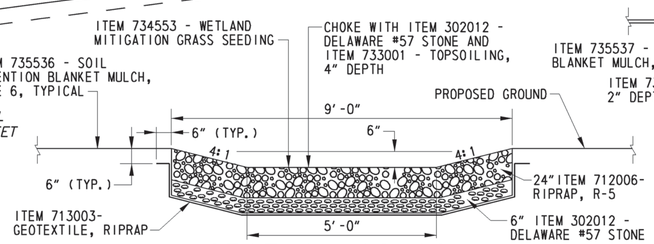
WM-16
SHEET NO.
817
TOTAL SHTS.
1256



NOTE:
ITEM 735536- SOIL RETENTION BLANKET MULCH, TYPE 6 SHALL BE INSTALLED IN ACCORDANCE WITH THE LIMITS ON PLAN SHEET WM-10 AND THE MANUFACTURER'S RECOMMENDATIONS.

LEGEND

	ITEM 712006-RIPRAP, R-5
	ITEM 735537-SOIL RETENTION BLANKET MULCH, TYPE 7



SECTION A2-A2
LOW FLOW OUTLET CHANNELS
NTS

SECTION A-A
LOW FLOW OUTLET CHANNELS
NTS

STAKE OUT DATA

POINT	NORTHING	EASTING	ELEVATION	COMMENTS
129	527619.35	558815.05	29.0	WETLAND DITCH BOTTOM @ ℄
173	527597.33	558795.25	29.0	WETLAND DITCH BOTTOM @ ℄
174	527504.96	558813.52	29.0	WETLAND DITCH BOTTOM @ ℄
G	527574.66	558794.74	29.0	WETLAND DITCH BOTTOM @ ℄
H	527535.86	558793.91	29.0	WETLAND DITCH BOTTOM @ ℄
I	527510.54	558800.31	29.0	WETLAND DITCH BOTTOM @ ℄
J	527575.78	558743.26	28.0	RIPRAP ELEVATION @ CENTER OF ENERGY DISSIPATOR
K	527536.96	558743.44	28.0	RIPRAP ELEVATION @ CENTER OF ENERGY DISSIPATOR
L	527488.35	558752.75	28.0	RIPRAP ELEVATION @ CENTER OF ENERGY DISSIPATOR
M	527574.89	558784.25	31.5	LOW FLOW DITCH BOTTOM
N	527536.07	558783.91	31.5	LOW FLOW DITCH BOTTOM
O	527505.83	558790.23	31.5	LOW FLOW DITCH BOTTOM
P	527575.26	558766.74	31.5	LOW FLOW DITCH BOTTOM AT SLOPE BREAK
Q	527536.32	558772.50	31.5	LOW FLOW DITCH BOTTOM AT SLOPE BREAK
R	527500.60	558779.02	31.5	LOW FLOW DITCH BOTTOM AT SLOPE BREAK

OUTLET DETAIL
LOW FLOW OUTLET CHANNELS

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 10 20 30 FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.
T200911303	DESIGNED BY: MRS
COUNTY	CHECKED BY: JTR
NEW CASTLE	

BORROW SITE / WETLAND MITIGATION PLAN

WM-17
SHEET NO.
818
TOTAL SHTS.
1256

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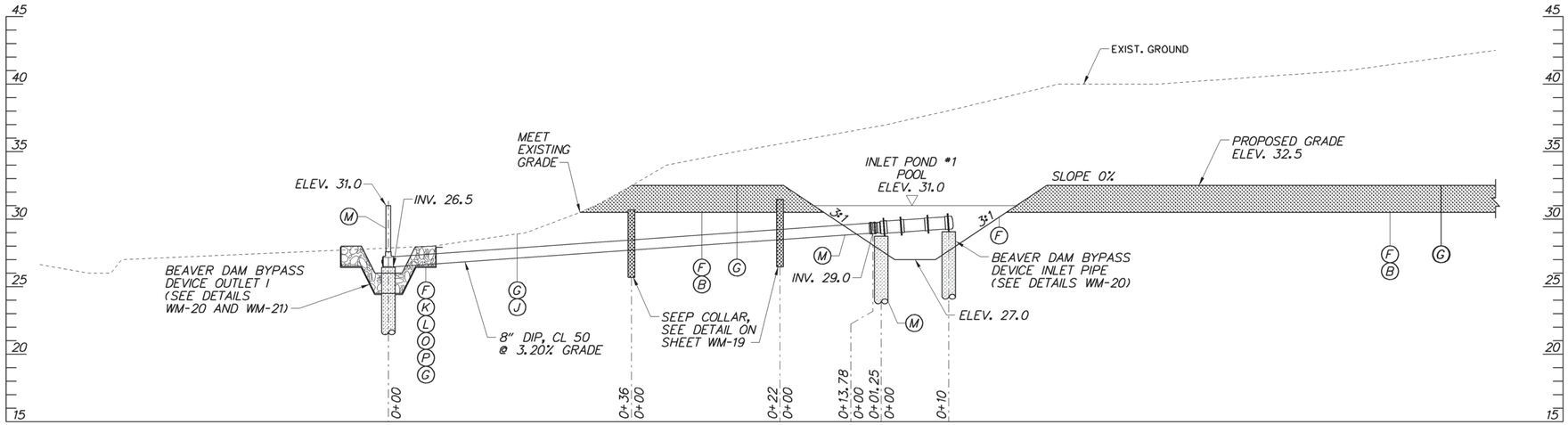
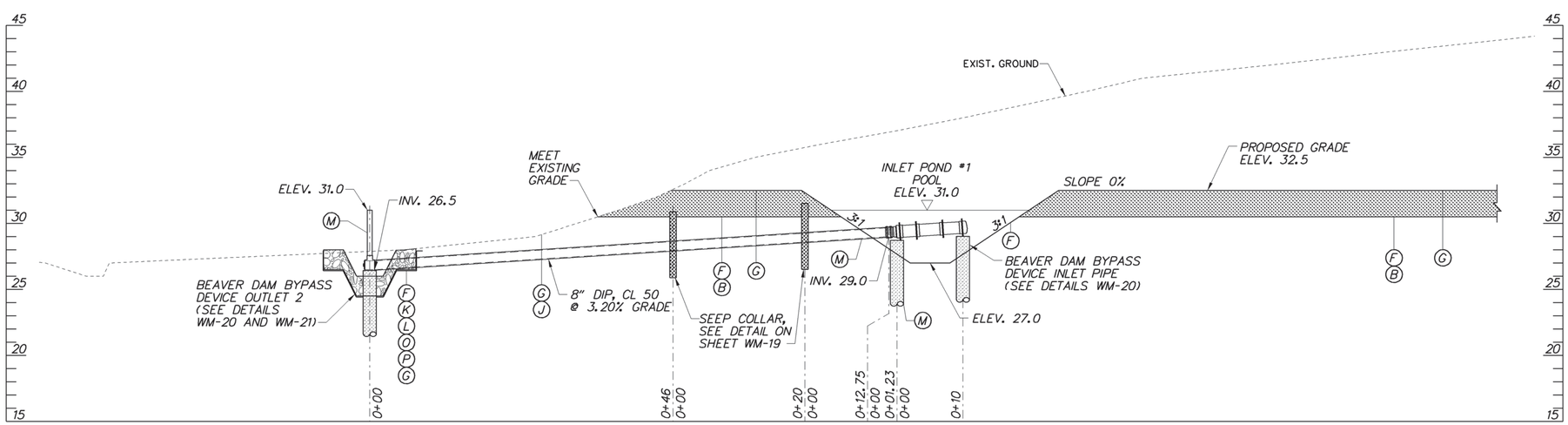


PROFILE - BEAVER DAM BYPASS DEVICE #1

SCALE
0 10 20 30
FEET

SEE SHEET WM-15 FOR OUTLET SECTION LOCATION

LEGEND	
A	ITEM 202555 SUBSOIL TILLAGE
B	ITEM 733008 TOPSOILING, 18" DEPTH
C	ITEM 733002 TOPSOILING, 6" DEPTH
E	ITEM 737503 BEDDING FOR REFORESTATION
F	ITEM 202000 EXCAVATION AND EMBANKMENT
G	ITEM 734553 WETLAND MITIGATION GRASS SEEDING
H	ITEM 734551 NATIVE GRASS SEEDING: NO MOW MIX
I	ITEM 735537 SOIL RETENTION BLANKET MULCH, TYPE 7
J	ITEM 735536 SOIL RETENTION BLANKET MULCH, TYPE 6
K	ITEM 713003 GEOTEXTILE, RIPRAP
L	ITEM 712006 RIPRAP, R-5
M	ITEM 763654 BEAVER DAM BYPASS DEVICE
N	ITEM 733007 TOPSOILING, 2" DEPTH
O	ITEM 302012 DELAWARE #57 STONE
P	ITEM 733001 TOPSOILING, 4" DEPTH



PROFILE - BEAVER DAM BYPASS DEVICE #2

SCALE
0 10 20 30
FEET

SEE SHEET WM-15 FOR OUTLET SECTION LOCATION

VERTICAL SCALE FEET 15 10 5 0

PROFILES

WM-18

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE AS NOTED

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.
T200911303	DESIGNED BY: MRS
COUNTY	
NEW CASTLE	CHECKED BY: JTR

BORROW SITE / WETLAND MITIGATION PLAN

SHEET NO. 819

TOTAL SHTS. 1256

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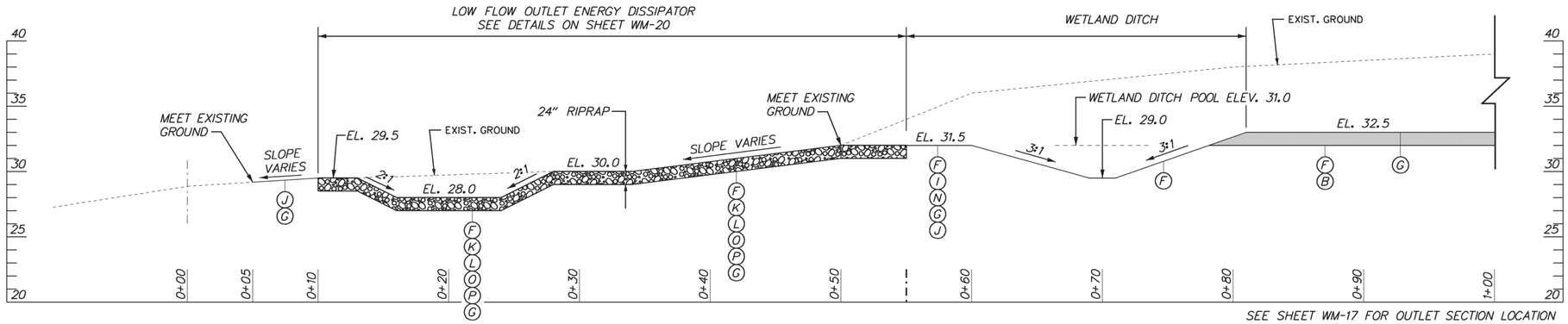
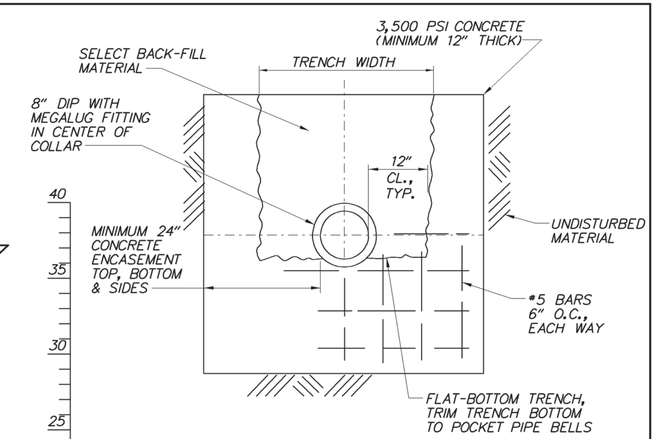


SEE SHEET WM-17 FOR OUTLET SECTION LOCATION

SECTION H-H - LOW FLOW OUTLET CHANNELS

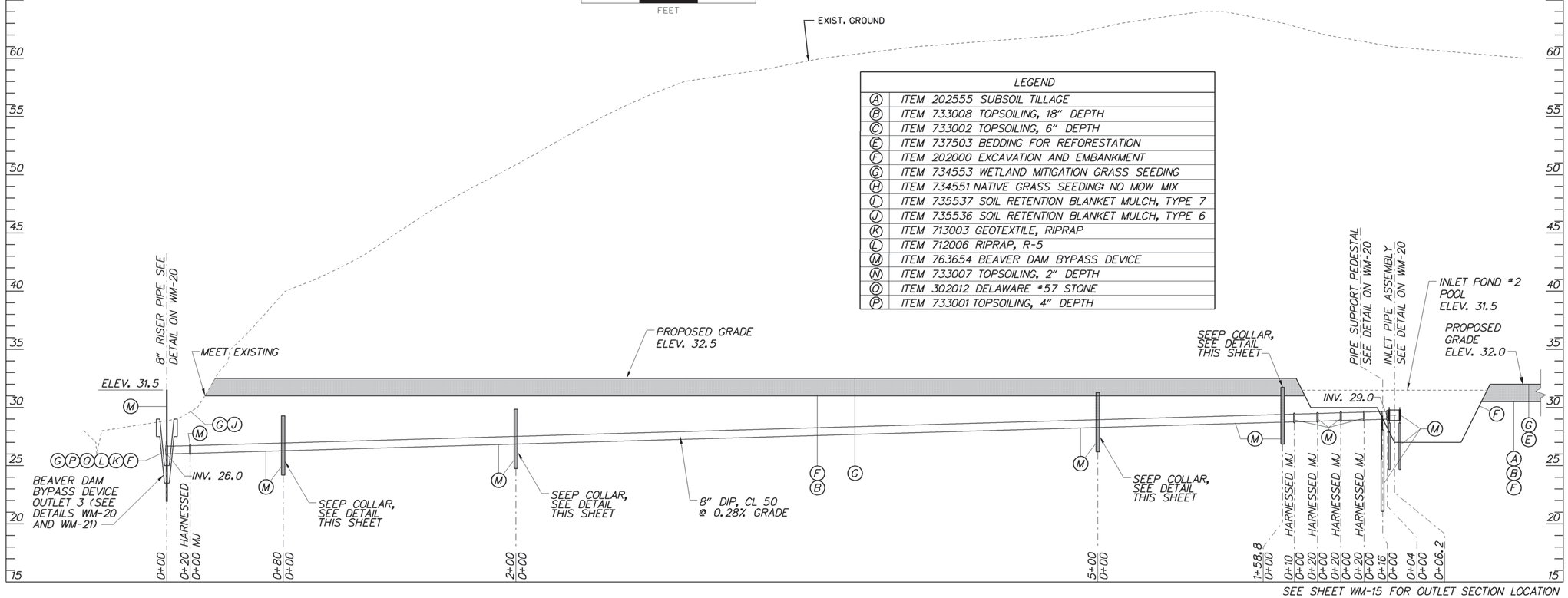


SEEP COLLAR

NOT TO SCALE

SCALE 0 5 10 15 FEET

LEGEND	
A	ITEM 202555 SUBSOIL TILLAGE
B	ITEM 733008 TOPSOILING, 18" DEPTH
C	ITEM 733002 TOPSOILING, 6" DEPTH
E	ITEM 737503 BEDDING FOR REFORESTATION
F	ITEM 202000 EXCAVATION AND EMBANKMENT
G	ITEM 734553 WETLAND MITIGATION GRASS SEEDING
H	ITEM 734551 NATIVE GRASS SEEDING: NO MOW MIX
I	ITEM 735537 SOIL RETENTION BLANKET MULCH, TYPE 7
J	ITEM 735536 SOIL RETENTION BLANKET MULCH, TYPE 6
K	ITEM 713003 GEOTEXTILE, RIPRAP
L	ITEM 712006 RIPRAP, R-5
M	ITEM 763654 BEAVER DAM BYPASS DEVICE
N	ITEM 733007 TOPSOILING, 2" DEPTH
O	ITEM 302012 DELAWARE #57 STONE
P	ITEM 733001 TOPSOILING, 4" DEPTH



SEE SHEET WM-15 FOR OUTLET SECTION LOCATION

PROFILE - BEAVER DAM BYPASS DEVICE #3

SCALE 0 50 100 150 FEET

VERTICAL SCALE FEET 0 5 10 15

PROFILES

WM-19

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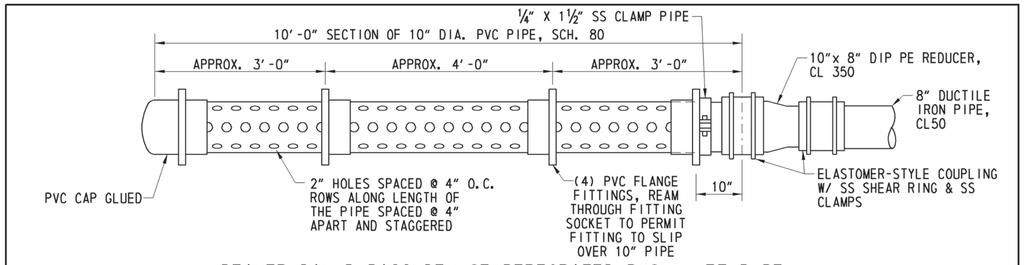
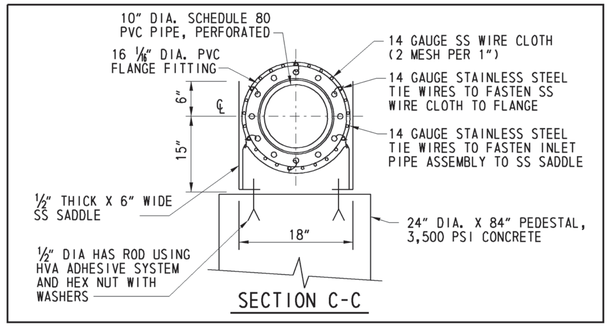
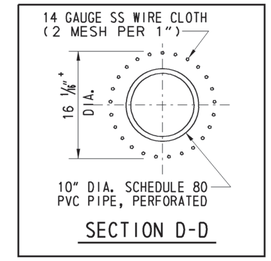
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303 / COUNTY NEW CASTLE	BRIDGE NO. / DESIGNED BY: MRS / CHECKED BY: JTR
BORROW SITE / WETLAND MITIGATION PLAN	SHEET NO. 820	TOTAL SHTS. 1256			



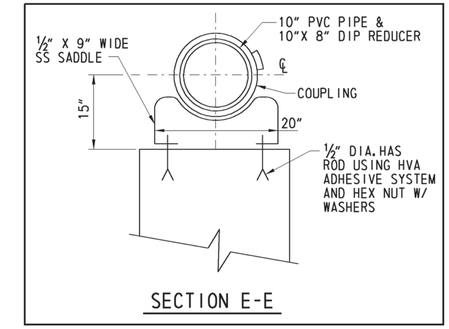
BEAVER DAM BYPASS DEVICE PERFORATED PVC INLET PIPE



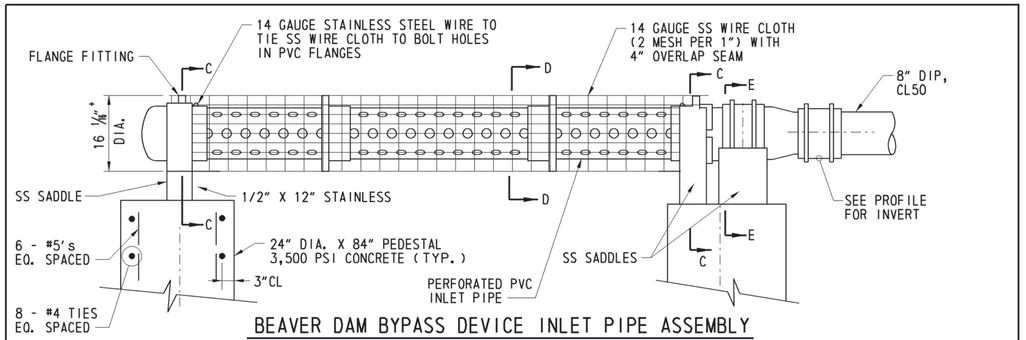
SECTION C-C



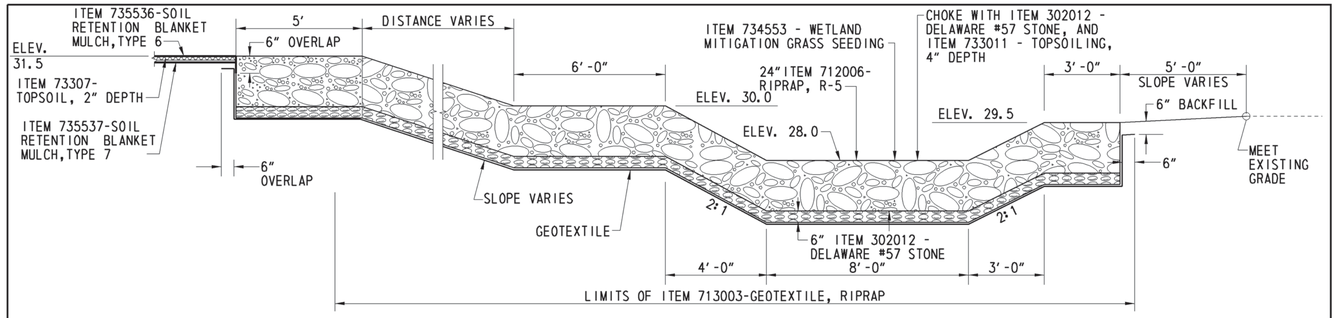
SECTION D-D



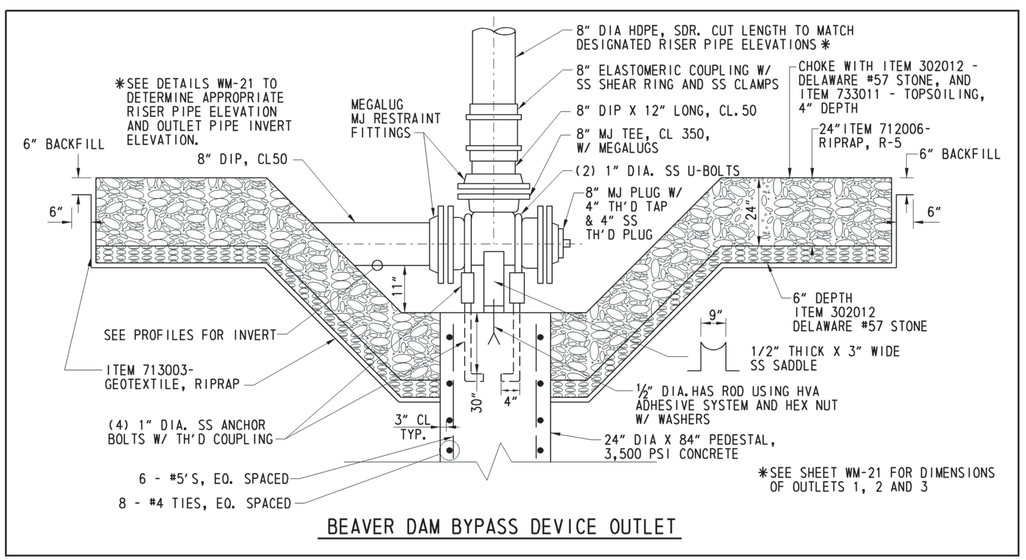
SECTION E-E



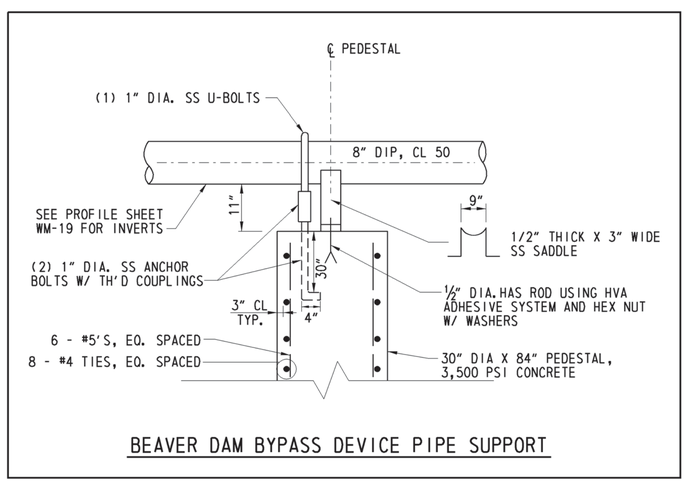
BEAVER DAM BYPASS DEVICE INLET PIPE ASSEMBLY



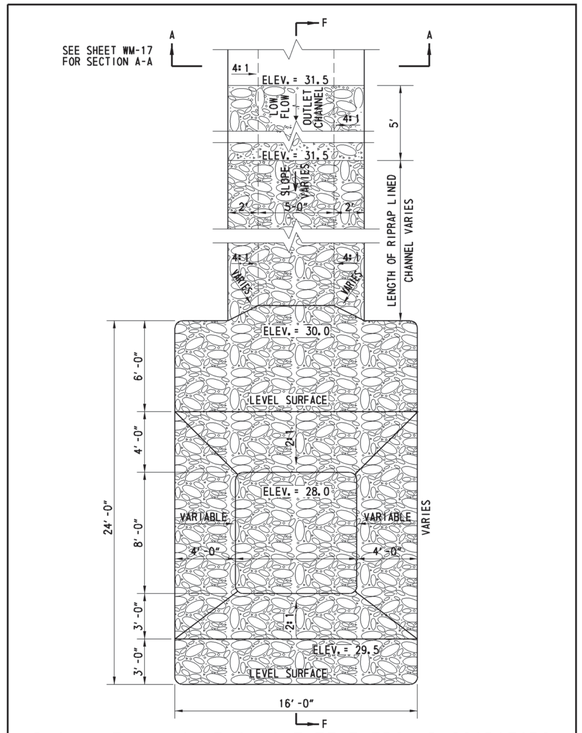
SECTION F-F - LOW FLOW OUTLET CHANNEL ENERGY DISSAPATORS



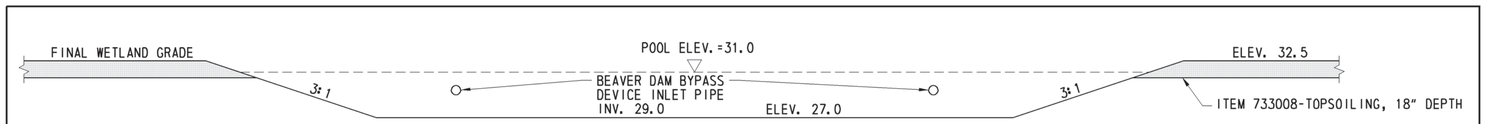
BEAVER DAM BYPASS DEVICE OUTLET



BEAVER DAM BYPASS DEVICE PIPE SUPPORT



PLAN VIEW - LOW FLOW OUTLET ENERGY DISSAPATORS



SECTION B-B - BEAVER DAM BYPASS DEVICE INLET POND #1 CROSS-SECTION

NOTE: ON THIS SHEET ALL STRUCTURES SHOWN WITHOUT A DESIGNATED ITEM NUMBER ARE PART OF ITEM 763654-BEAVER DAM BYPASS DEVICE.

SUBMIT SHOP DRAWINGS FOR ALL SADDLE FABRICATION

OUTLET DETAILS

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303 / COUNTY NEW CASTLE	BRIDGE NO. / DESIGNED BY: MRS / CHECKED BY: JTR
BORROW SITE / WETLAND MITIGATION PLAN	WM-20	SHEET NO. 821	TOTAL SHTS. 1256		

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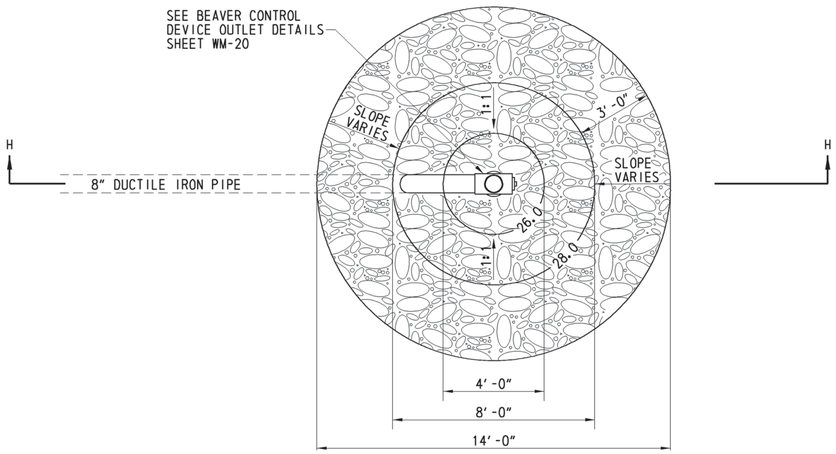
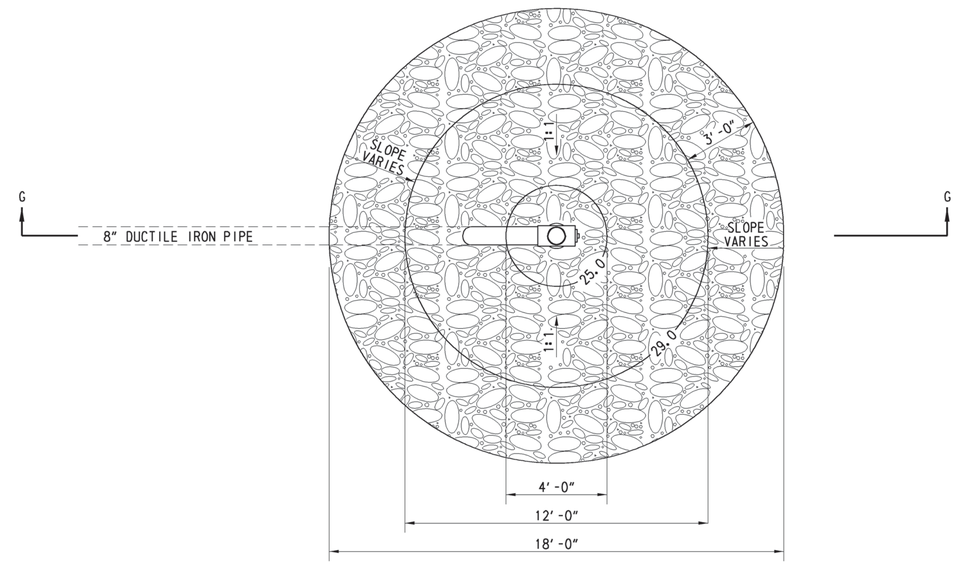
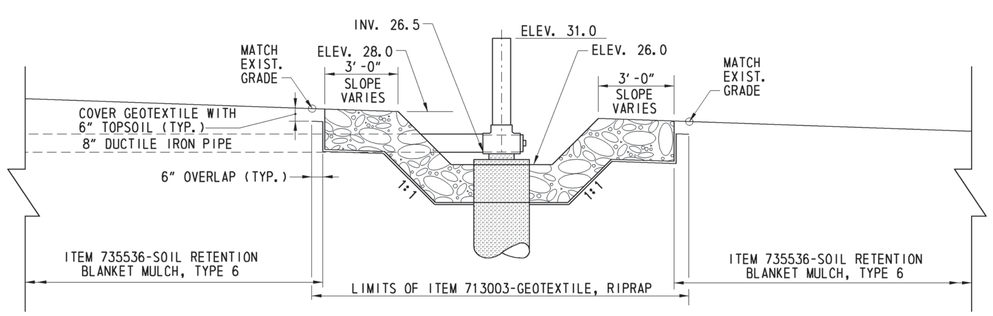


PLAN VIEW - BEAVER DAM BYPASS DEVICE OUTLETS 1 & 2

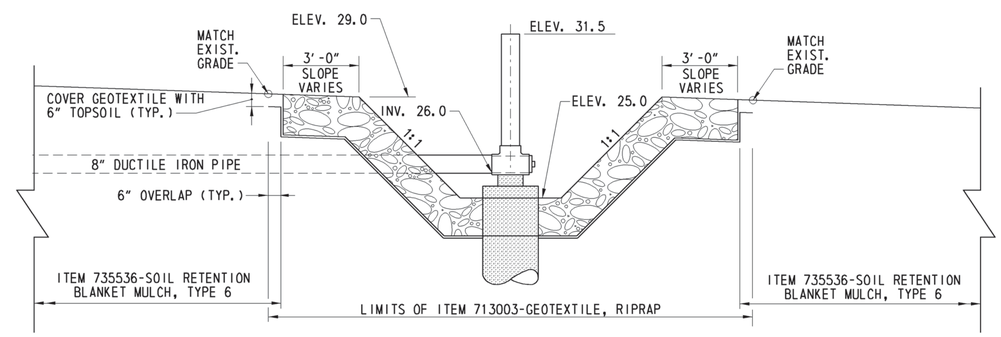


PLAN VIEW - BEAVER DAM BYPASS DEVICE OUTLET 3

NOTE: SEE SHEET WM-20 FOR
STRUCTURE DETAILS



SECTION H-H - BEAVER DAM BYPASS DEVICE OUTLETS 1 & 2



SECTION G-G - BEAVER DAM BYPASS DEVICE OUTLET 3

NOTE: ON THIS SHEET ALL STRUCTURES
SHOWN WITHOUT A DESIGNATED
ITEM NUMBER ARE PART OF ITEM
763654-BEAVER DAM BYPASS DEVICE.

OUTLET DETAILS

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO.	BORROW SITE / WETLAND MITIGATION PLAN	WM-21
				COUNTY NEW CASTLE	DESIGNED BY: MRS		SHEET NO. 822
					CHECKED BY: JTR		TOTAL SHTS. 1256

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LEVELS ROAD CONTRACTOR PHASING NOTES

1. THE LEVELS ROAD BORROW/MITIGATION SITE SHALL SERVE AS A BORROW SOURCE FOR TWO CONTRACTS: T200811301-US 301, MARYLAND STATE LINE TO LEVELS ROAD; AND T200911303-US 301, LEVELS ROAD TO SUMMIT BRIDGE ROAD. CONTRACTOR ACCESS TO THE AREAS OF THE LEVELS ROAD BORROW/MITIGATION SITE SHOWN ON THIS PLAN IS AS FOLLOWS:

   a. CONTRACT T200811301 SHALL HAVE ACCESS TO AREA 2 FROM NOTICE TO PROCEED FOR THE NUMBER OF CALENDAR DAYS SHOWN IN THE PROSPECTIVE BIDDERS NOTE IN THE BID PROPOSAL PACKAGE AFTER WHICH AREA 2 SHALL BE AVAILABLE TO CONTRACT T200911303.

   b. CONTRACT T200811301 SHALL HAVE ACCESS TO AREA 3 FROM NOTICE TO PROCEED FOR THE NUMBER OF CALENDAR DAYS SHOWN IN THE PROSPECTIVE BIDDERS NOTE IN THE BID PROPOSAL PACKAGE AFTER WHICH AREA 3 SHALL BE AVAILABLE TO CONTRACT T200911303.

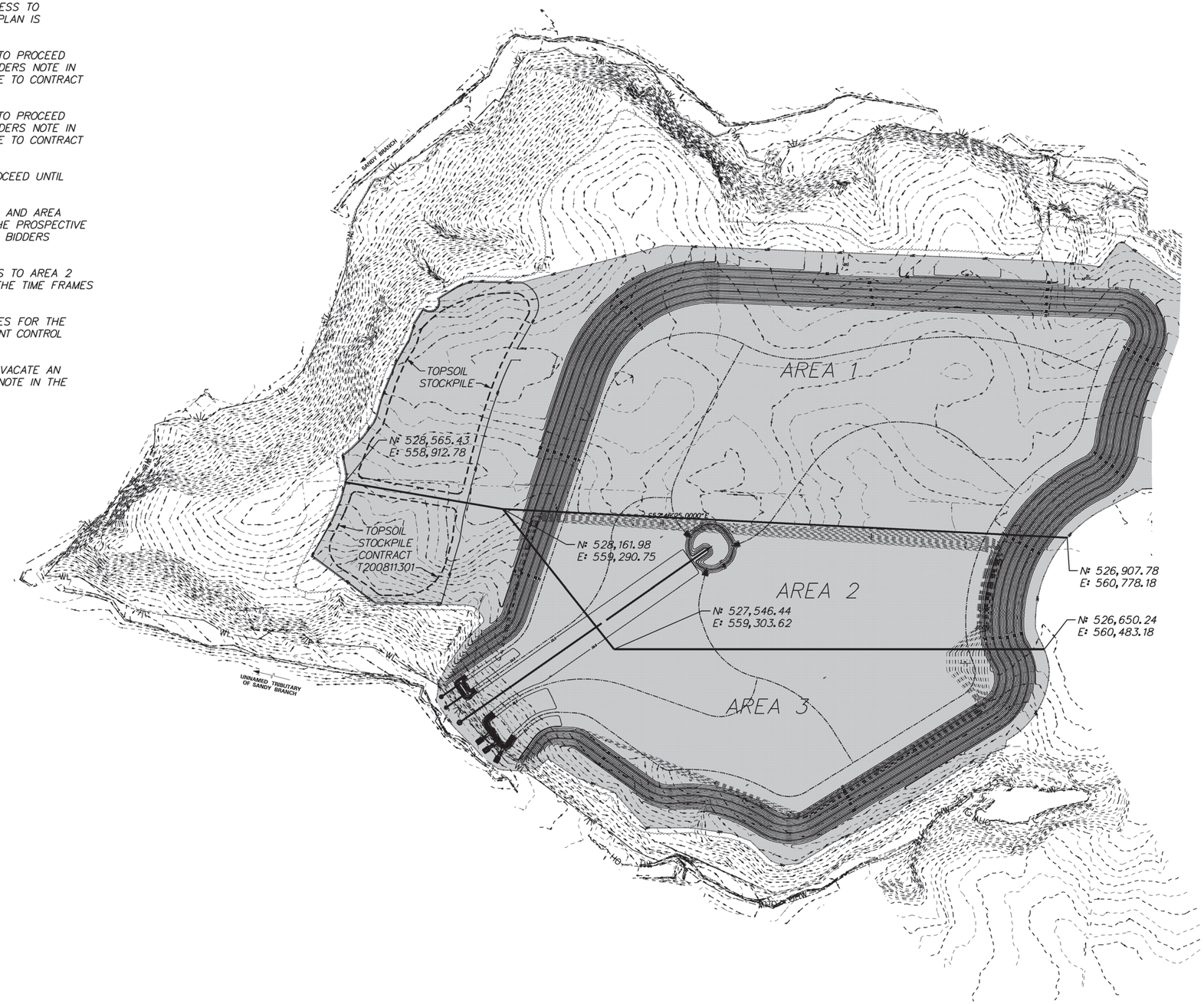
   c. CONTRACT T200911303 SHALL ACCESS TO AREA 1 FROM NOTICE TO PROCEED UNTIL THE COMPLETION OF THAT CONTRACT.

2. CONTRACT T200811301 SHALL SCHEDULE AND STAGE WORK SUCH THAT AREA 2 AND AREA 3 SHALL BE STABILIZED AND VACATED BY THE TIME FRAMES IDENTIFIED IN THE PROSPECTIVE BIDDERS NOTE IN THE BID PROPOSAL PACKAGE. REFER TO THE PROSPECTIVE BIDDERS NOTE IN THE BID PROPOSAL PACKAGE FOR ADDITIONAL INFORMATION.

3. CONTRACT T200911303 SHALL SCHEDULE AND STAGE WORK SUCH THAT ACCESS TO AREA 2 AND AREA 3 IS NOT NECESSARY UNTIL THE AREAS BECOME AVAILABLE PER THE TIME FRAMES FOR CONTRACT T200811301 TO COMPLETE WORK IN THOSE AREAS.

4. EACH CONTRACTOR SHALL MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES FOR THE AREAS THEY OCCUPY PER ITEM 202572-BORROW AREA EROSION AND SEDIMENT CONTROL AND DEWATERING.

5. WITH APPROVAL OF THE ENGINEER, CONTRACT T200811301 MAY STABILIZE AND VACATE AN AREA PRIOR TO THE TIME FRAMES IDENTIFIED IN THE PROSPECTIVE BIDDERS NOTE IN THE BID PROPOSAL PACKAGE.



BORROW SITE CONSTRUCTION PHASING

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 200 400 600 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303 / COUNTY NEW CASTLE	BRIDGE NO. / DESIGNED BY: MRS / CHECKED BY: JTR	BORROW SITE / WETLAND MITIGATION PLAN

WM-22
SHEET NO. 823
TOTAL SHTS. 1256

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LEVELS ROAD BORROW AND MITIGATION CONSTRUCTION SEQUENCE

THE LEVELS ROAD SITE WILL BE UTILIZED AS A BORROW SOURCE BY BOTH CONTRACT T200811301 AND THIS CONTRACT. BOTH CONTRACTS WILL EXCAVATE BORROW MATERIAL SIMULTANEOUSLY, WITH THE AREA EXCAVATED UNDER CONTRACT T200811301 TURNED OVER TO THIS CONTRACT FOR THE FINAL EXCAVATION OF BORROW MATERIAL AND DEVELOPMENT OF THE SITE INTO THE MITIGATION WETLAND. THE PHASING OF THE EXCAVATION IS OUTLINED ON THE BORROW PHASING PLAN, WM-22.

1. INSTALL ITEM 727552 - RESOURCE PROTECTION FENCE IN ACCORDANCE WITH THE ENVIRONMENTAL COMPLIANCE PLANS.

2. INSTALL ALL DEWATERING AND SEDIMENT AND EROSION CONTROL MEASURES IN ACCORDANCE WITH ITEM 202572 - BORROW AREA EROSION AND SEDIMENT CONTROL AND DEWATERING. E&S MEASURES WILL BE IMPLEMENTED TO ACCOMMODATE THE PHASING OF THE BORROW OPERATIONS.

3. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE APPROVED BY THE ENGINEER BEFORE THE COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES.

4. ABANDON THE GROUNDWATER MONITORING WELLS AS INDICATED ON THE PLANS AND IN ACCORDANCE WITH DELDOT ITEM 211521 - ABANDONMENT OF WELLS.

5. CLEAR AND GRUB AS NECESSARY.

6. REMOVE THE UPPER 9 INCHES OF AGRICULTURAL SOIL FROM THE EXCAVATION AREA AND PLACE IN THE DESIGNATED TOPSOIL STOCKPILE AREA.

7. STAKE OUT ALL WETLAND DITCHES, PONDS AND STRUCTURES AS SHOWN ON THE PLANS.

8. EXCAVATE THE WETLAND DITCHES AND BEAVER DAM BYPASS DEVICE INLET PONDS.

9. INSTALL PIPES AND ALL STRUCTURES COMPRISING ITEM 763654 - BEAVER DAM BYPASS DEVICE, AND THE ENERGY DISSAPATORS ASSOCIATED WITH THE LOW FLOW OUTLET CHANNELS.

10. SECURE MILESTONE 1 AS-BUILT APPROVAL.

11. EXCAVATE TO SUBGRADE OF THE WETLAND WHICH IS 18 INCHES BELOW THE FINAL WETLAND GRADE, AND 6 INCHES BELOW THE SIDE SLOPE FINAL GRADE.

12. SECURE MILESTONE 2 AS-BUILT APPROVAL.

13. AMEND TOPSOIL WITH COMPOST AT THE RATE OF NINETEEN (19) PARTS TOPSOIL TO ONE (1) PART COMPOST PER ITEM 732505 - SOIL COMPOSTING.

14. PLACE ITEM 733008 - TOPSOILING, 18" DEPTH.

15. PLACE ITEM 733002 - TOPSOILING, 6" DEPTH.

16. EXCAVATE THE LOW-FLOW OUTLET CHANNELS AS INDICATED ON THE PLANS. THIS WORK WILL BE PAID FOR UNDER ITEM 202000 - EXCAVATION AND EMBANKMENT. ITEM 735537 - SOIL RETENTION BLANKET MULCH, TYPE 7 SHALL BE INSTALLED IN THE LOW FLOW OUTLET CHANNELS IN ACCORDANCE WITH THE PLANS AND THE MANUFACTURER'S RECOMMENDATIONS, AND 2 INCHES OF STOCKPILED TOPSOIL WILL BE PLACED TO COVER THE TYPE 7 SOIL RETENTION BLANKET, IN ACCORDANCE WITH ITEM 733007 - TOPSOILING, 2" DEPTH.

17. SECURE MILESTONE 3 AS-BUILT APPROVAL.

18. UPON APPROVAL OF THE FINAL WETLAND GRADE AND LOW-FLOW OUTLET CHANNELS BY THE ENGINEER, THE CONTRACTOR SHALL SEED THE WETLAND BOTTOM AND SIDE SLOPES WHERE TOPSOIL HAS BEEN PLACED IN ACCORDANCE WITH THE LANDSCAPE PLAN WM-24.

19. ITEM 735536 - SOIL RETENTION BLANKET MULCH, TYPE 6 SHALL BE INSTALLED IN THE LOCATIONS INDICATED ON THE PLANS AND IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.

20. BED THE SITE IN ACCORDANCE WITH THE PROVISIONS OF ITEM 737503- BEDDING FOR REFORESTATION AND THE FINAL BEDDING PLANS AND NOTES. BEDDING SHALL BE CONDUCTED UNDER DEWATERED CONDITION.

21. CONTRACTOR SHALL CEASE DEWATERING ACTIVITIES, DISMANTLE DEWATERING STRUCTURES AND RESTORE AREAS DISTURBED BY DEWATERING TO MATCH THE SURROUNDING GRADE OR MEET PROPOSED WETLAND GRADING AS DIRECTED BY THE ENGINEER. THESE DISTURBED AREAS SHALL BE SEEDED IN ACCORDANCE WITH THE LANDSCAPE PLAN WM-24.

22. THE CONTRACTOR SHALL TILL ALL THE NON-WOODED, DITURBED UPLAND AREAS OUTSIDE OF THE WETLAND EXCEPT FOR THE SIDE SLOPES IN ACCORDANCE WITH ITEM 202555 - SUBSOIL TILLAGE. THESE AREAS WILL THEN BE SEEDED WITH ITEM 734551 - NATIVE GRASS SEEDING: NO-MOW MIX IN ACCORDANCE WITH THE LANDSCAPE PLAN.

CONSTRUCTION PHASING, MOT AND EROSION CONTROL, SEQUENCE OF CONSTRUCTION

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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 1"=200' 0 200 400 600 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303 / COUNTY NEW CASTLE	BRIDGE NO. / DESIGNED BY: MRS / CHECKED BY: JTR	BORROW SITE / WETLAND MITIGATION PLAN

WM-23
SHEET NO.
824
TOTAL SHTS.
1256

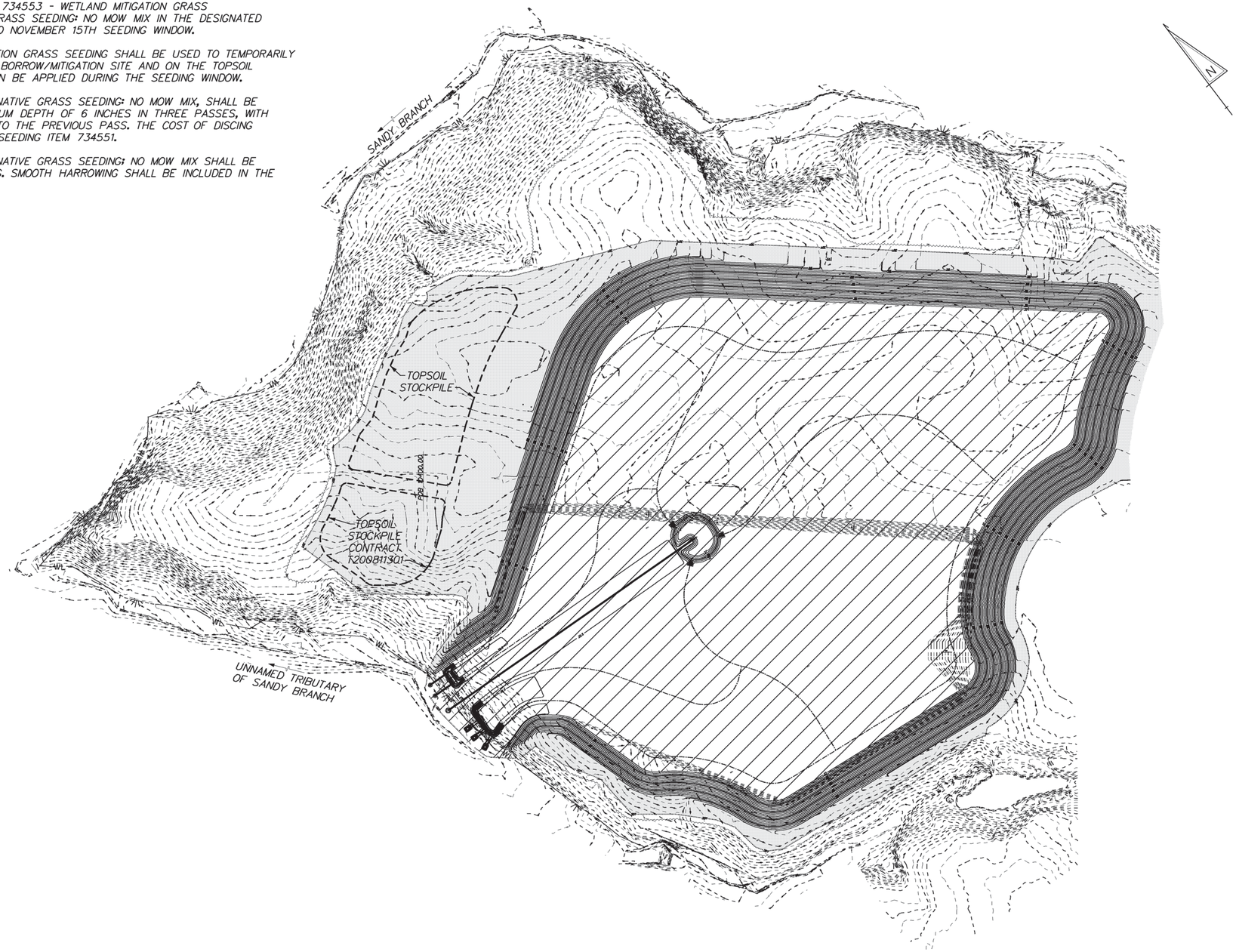
SEEDING NOTES

1. THE CONTRACTOR SHALL INSTALL ITEM 734553 - WETLAND MITIGATION GRASS SEEDING AND ITEM 734551 - NATIVE GRASS SEEDING: NO MOW MIX IN THE DESIGNATED AREAS DURING THE SEPTEMBER 1ST TO NOVEMBER 15TH SEEDING WINDOW.

2. ONLY ITEM 734553 - WETLAND MITIGATION GRASS SEEDING SHALL BE USED TO TEMPORARILY STABILIZE DISTURBED GROUND IN THE BORROW/MITIGATION SITE AND ON THE TOPSOIL STOCKPILE UNTIL PERMANENT SEED CAN BE APPLIED DURING THE SEEDING WINDOW.

3. ALL AREAS RECEIVING ITEM 734551 - NATIVE GRASS SEEDING: NO MOW MIX, SHALL BE DISCED. DISCING SHALL BE TO A MINIMUM DEPTH OF 6 INCHES IN THREE PASSES, WITH EACH PASS AT A 90 DEGREE ANGLE TO THE PREVIOUS PASS. THE COST OF DISCING SHALL BE INCLUDED IN THE COST OF SEEDING ITEM 734551.

4. ALL AREAS RECEIVING ITEM 734551 - NATIVE GRASS SEEDING: NO MOW MIX SHALL BE SMOOTH HARROWED FOLLOWING DISKING. SMOOTH HARROWING SHALL BE INCLUDED IN THE COST OF ITEM 734551.



LEGEND

WETLAND SEEDING - 60.5 AC (292,597 SY)
ITEM 734553 - WETLAND MITIGATION GRASS SEEDING

UPLAND SEEDING - 42.5 AC (205,806 SY)
ITEM - 734551 - NATIVE GRASS SEEDING: NO MOW MIX
(UPLAND AREAS AND SIDE SLOPES DOWN TO ELEV. 32.0)

LANDSCAPE PLAN

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 200 400 600 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303 / COUNTY NEW CASTLE	BRIDGE NO. / DESIGNED BY: MRS / CHECKED BY: JTR	BORROW SITE / WETLAND MITIGATION PLAN	WM-24 / SHEET NO. 825 / TOTAL SHTS. 1256

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BEDDING NOTES

1. THE CONTRACTOR SHALL PERFORM BEDDING WITHIN TOE OF SLOPE AREA (ELEV. 32.0) IN ACCORDANCE WITH ITEM 737503 - BEDDING FOR REFORESTATION.

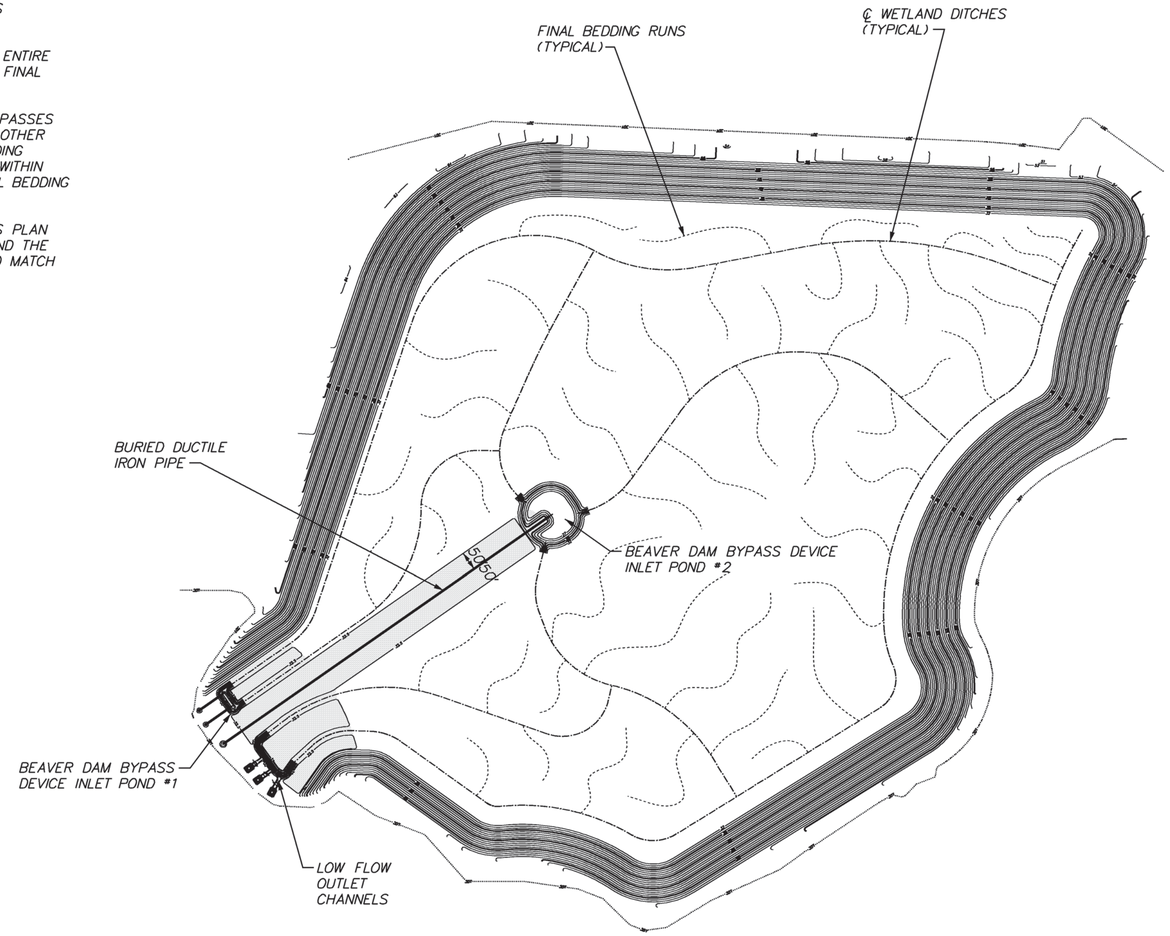
2. NO SUBSOIL TILLAGE OR BEDDING SHALL BE PERFORMED WITHIN APPROX. TWO HUNDRED FEET (200') OF THE BEAVER DAM BYPASS DEVICE INLET POND #1 AND LOW FLOW OUTLET CHANNELS, AS SHOWN ON THIS SHEET.

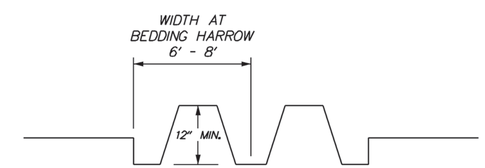
3. NO SUBSOIL TILLAGE OR BEDDING SHALL BE PERFORMED WITHIN APPROXIMATELY FIFTY FEET (50') OF THE BURIED PIPE RUN FROM BEAVER DAM BYPASS DEVICE INLET POND #2 TO THE OUTLET, AS SHOWN ON THIS SHEET.

4. THE CONTRACTOR SHALL PASS THE BEDDING HARROW OVER THE ENTIRE AREA TO BE BEDDED THREE (3) TIMES BEFORE CONDUCTING THE FINAL BEDDING RUNS.

5. EACH FINAL BEDDING RUN SHALL CONSIST OF TWO (2) PARALLEL PASSES OF THE BEDDING HARROW AND IMMEDIATELY ADJACENT TO EACH OTHER TO FORM A CONTINUOUS CHANNEL AS SHOWN IN THE FINAL BEDDING SECTION. THESE FINAL BEDDING RUNS SHALL BE INITIATED FROM WITHIN THE DITCH NETWORK TO ALLOW FREE DRAINAGE FROM THIS FINAL BEDDING RUN INTO THE DRAINAGE CHANNELS.

6. THE LOCATIONS OF THE FINAL BEDDING RUNS AS SHOWN ON THIS PLAN ARE APPROXIMATE, BUT THE DENSITY OF FINAL BEDDING RUNS AND THE EXTENT OF AREA COVERED BY THE FINAL BEDDING RUNS SHOULD MATCH PLAN.





FINAL BEDDING SECTION
N. T. S.

LEGEND

NO BEDDING FOR REFORESTATION OR SUBSOIL TILAGE IN THIS AREA

BEDDING FOR REFORESTATION PLAN

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 200 400 600 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303 / COUNTY NEW CASTLE	BRIDGE NO. / DESIGNED BY: MRS / CHECKED BY: JTR	BORROW SITE / WETLAND MITIGATION PLAN	WM-25 / SHEET NO. 826 / TOTAL SHTS. 1256

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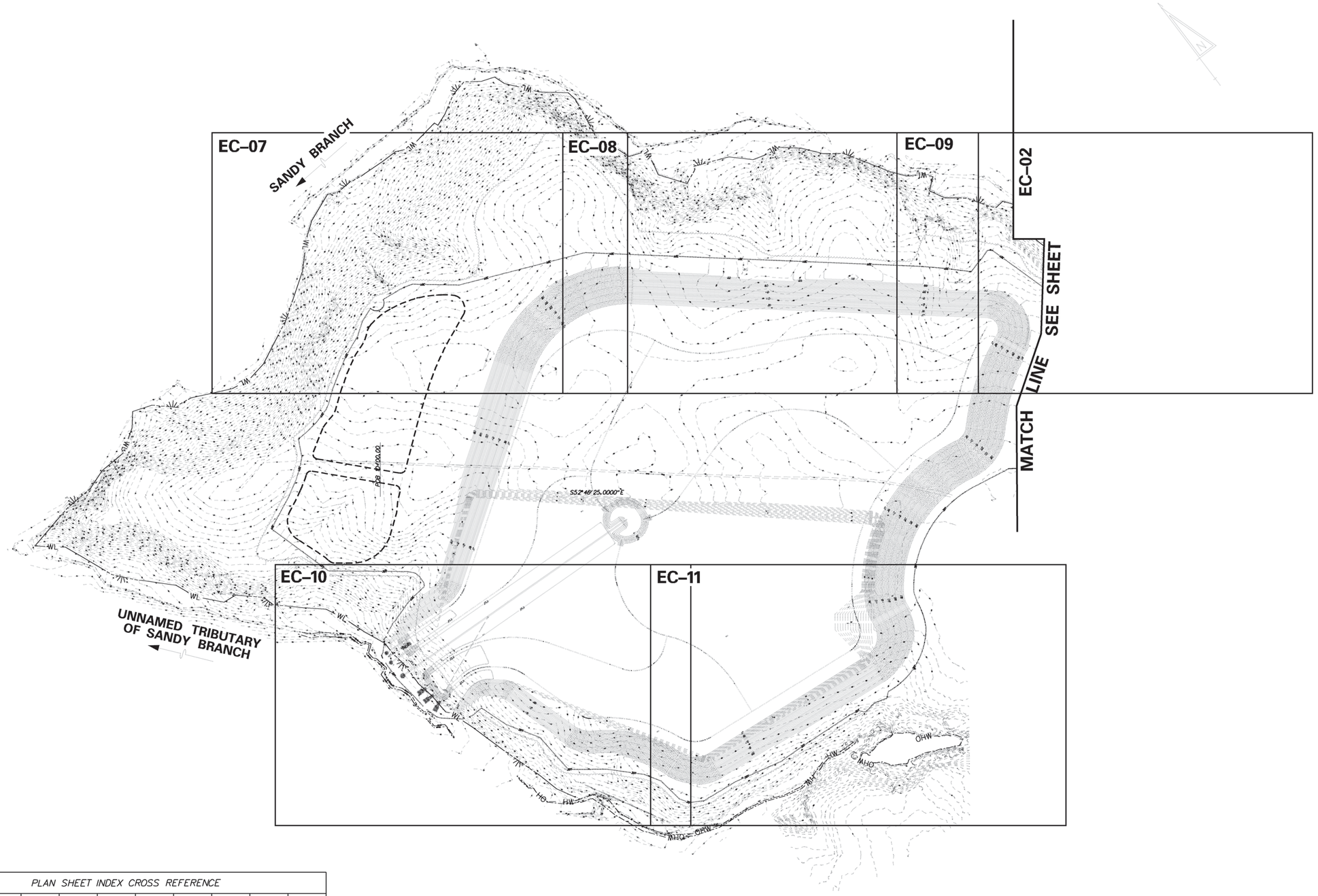

PLAN SHEET INDEX CROSS REFERENCE								
BORROW SITE GRADING PLAN SHEET NO.	805	806	807	808	809	810	811	812
ENVIRONMENTAL COMPLIANCE SHEET NO.	833/ EC-7	834/ EC-8	835/ EC-9	N/A	N/A	N/A	836/ EC-10	837/ EC-11

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 200 400 600 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.
T200911303	DESIGNED BY: MRS
COUNTY	
NEW CASTLE	CHECKED BY: JTR

ENVIRONMENTAL COMPLIANCE PLAN SHEET INDEX

EC-1
SHEET NO.
827
TOTAL SHTS.
1256

WETLANDS DELINEATED BY RUMMEL, KLEPPER, & KAHL, LLP. IN JUNE 2005 THROUGH MAY 2011 IN ACCORDANCE WITH THE 1987 USACE WETLAND DELINEATION MANUAL AND APPLICABLE REGIONAL SUPPLEMENTS.

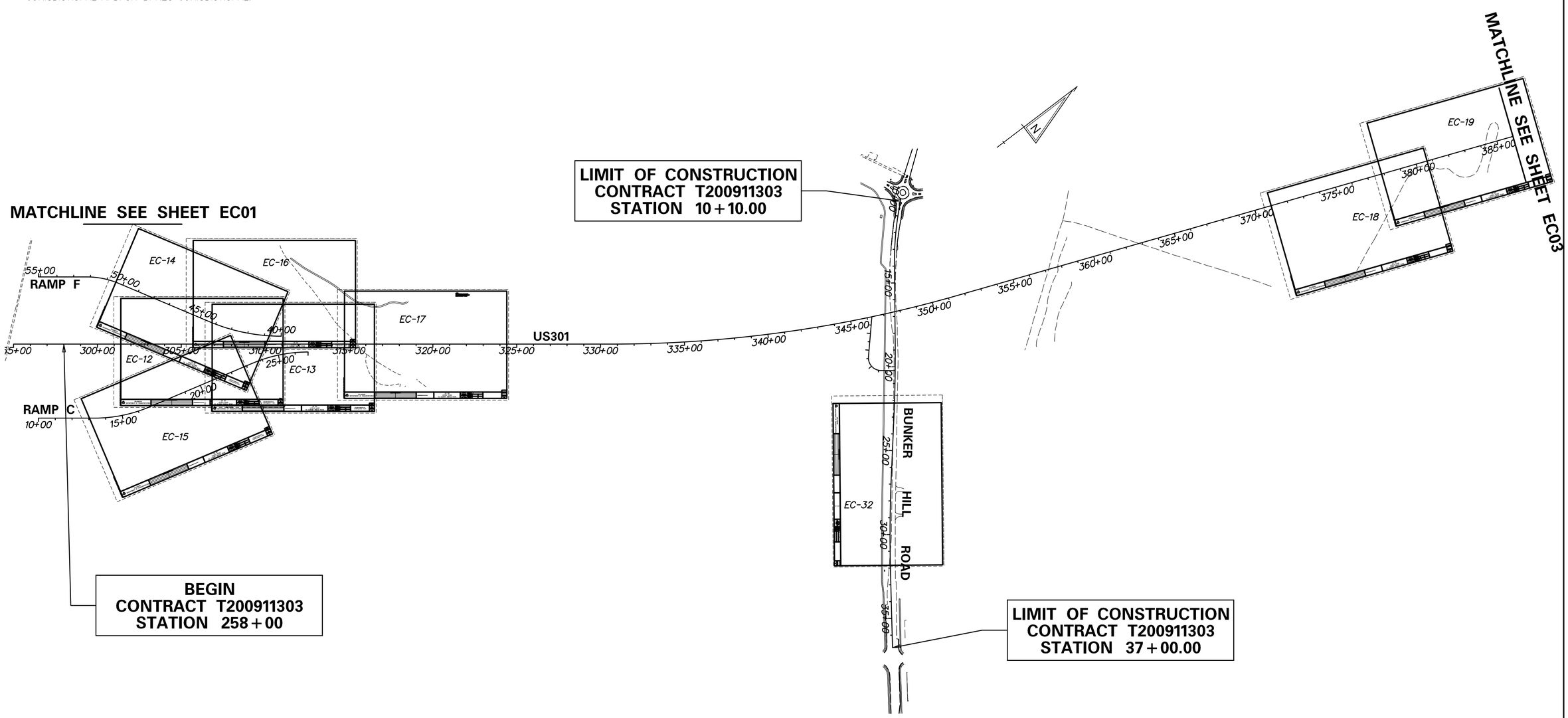
PRELIMINARY JURISDICTIONAL DETERMINATION AUGUST 18, 2009. WETLAND IDENTIFIERS (ALPHANUMERIC LABELS) CORRESPOND TO THE US 301 WETLAND DELINEATION REPORT AND ARE CONSISTENT WITH THE JURISDICTIONAL DETERMINATION.

SHEETS PREPARED BY: AECOM
DATE: APRIL 16, 2010

SHEETS LAST UPDATED: AUGUST 17, 2015

ALL IDENTIFIED WATERS/WETLANDS ON THESE ENVIRONMENTAL COMPLIANCE SHEETS ARE USACE JURISDICTIONAL AND/OR DNREC JURISDICTIONAL.

PLAN SHEET INDEX CROSS REFERENCE									
CONSTRUCTION PLAN	69	70	72	74	75	76	88 89	90	131
ENVIRONMENTAL COMPLIANCE	838/ EC-12	839/ EC-13	840/ EC-14	841/ EC-15	842/ EC-16	843/ EC-17	844/ EC-18	845/ EC-19	858/ EC-32



DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 300 600 900 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO.	ENVIRONMENTAL COMPLIANCE PLAN SHEET INDEX	EC-02 SHEET NO. 828
				COUNTY NEW CASTLE	DESIGNED BY: AW JW		TOTAL SHTS. 1256
					CHECKED BY: JF SF		

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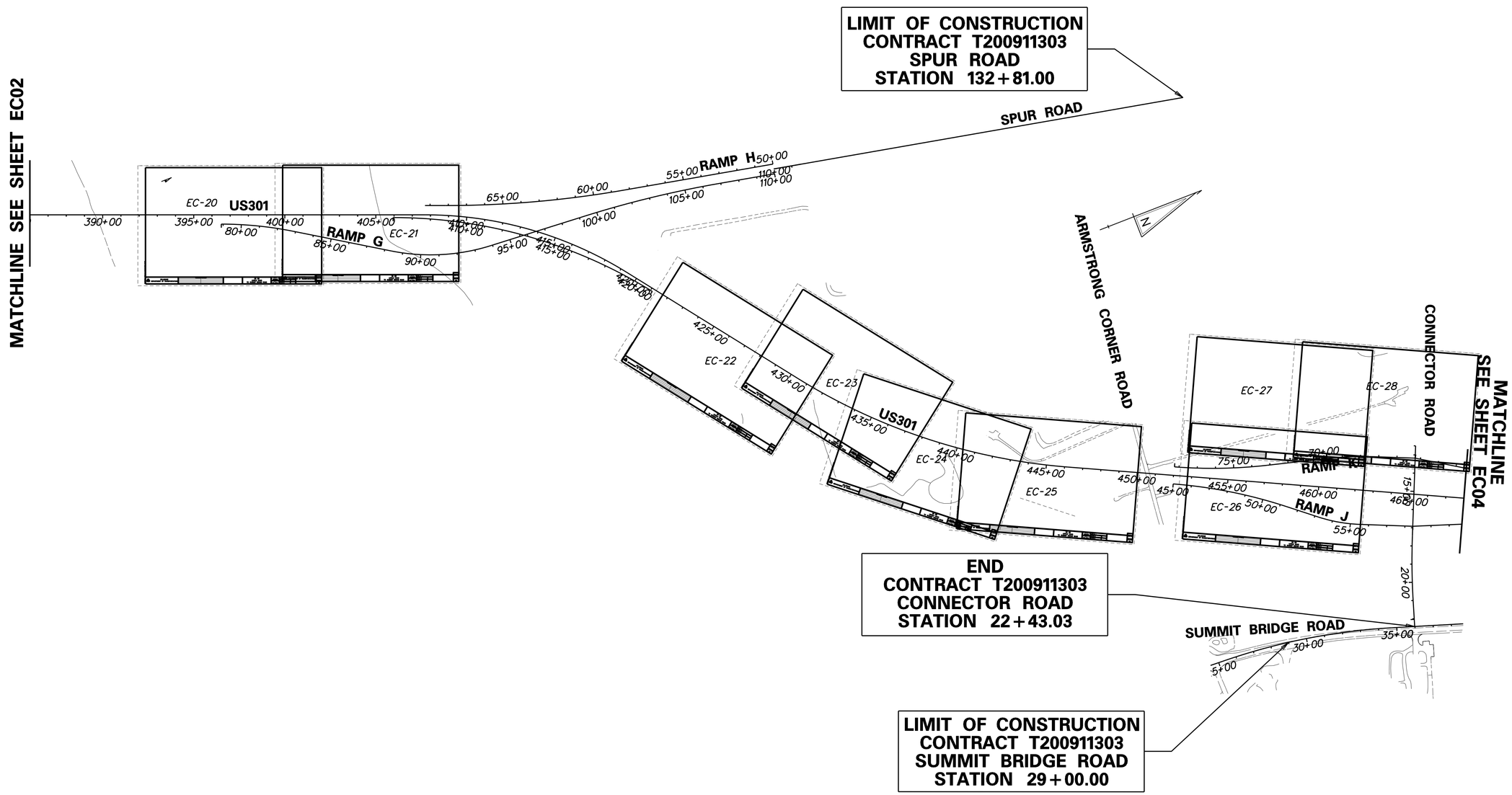
PLAN SHEET INDEX CROSS REFERENCE									
CONSTRUCTION PLAN	93	95	104	106	108	110	112	113	116
ENVIRONMENTAL COMPLIANCE	846/ EC-20	847/ EC-21	848/ EC-22	849/ EC-23	850/ EC-24	851/ EC-25	852/ EC-26	853/ EC-27	854/ EC-28



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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 300 600 900
FEET

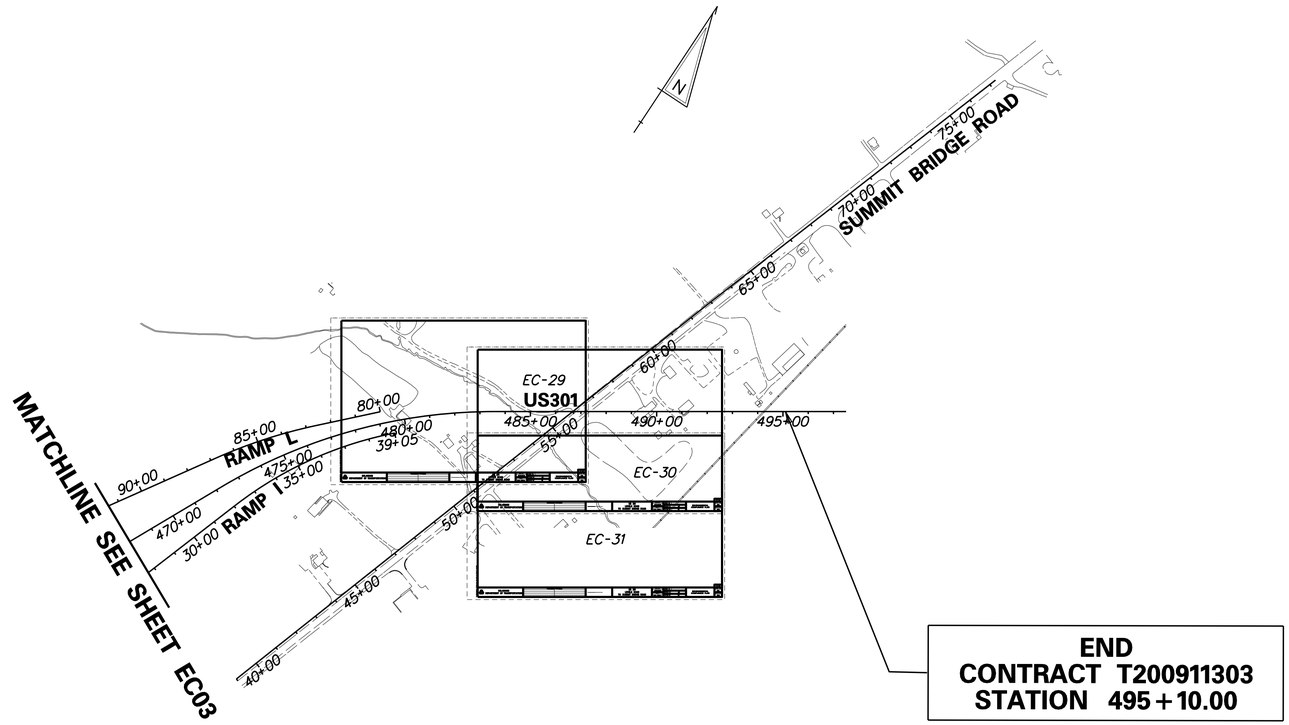
US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: AW	JW
COUNTY	CHECKED BY: JF	SF
NEW CASTLE		

ENVIRONMENTAL
COMPLIANCE
PLAN SHEET INDEX

EC-03
SHEET NO.
829
TOTAL SHTS.
1256

PLAN SHEET INDEX CROSS REFERENCE			
CONSTRUCTION PLAN	123	124	125
ENVIRONMENTAL COMPLIANCE	855/ EC-29	856/ EC-30	857/ EC-31



DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 300 600 900 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO.	ENVIRONMENTAL COMPLIANCE PLAN SHEET INDEX	EC-04 SHEET NO.
				COUNTY NEW CASTLE	DESIGNED BY: AW JW		830 TOTAL SHTS.
					CHECKED BY: JF SF		1256

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ENVIRONMENTAL COMPLIANCE NOTES:

1. GENERAL NOTES:

A. THE PURPOSE OF THESE ENVIRONMENTAL COMPLIANCE SHEETS IS TO IDENTIFY THOSE ITEMS ASSOCIATED WITH ENVIRONMENTAL COMPLIANCE. IMPACT CALCULATIONS ARE FOR AGENCY REPORTING PURPOSES ONLY AND ARE NOT TO BE USED FOR BIDDING PURPOSES.

B. AN ENVIRONMENTAL MONITOR WILL BE RESPONSIBLE FOR REVIEWING ENVIRONMENTAL COMPLIANCE. CONTACT INFORMATION FOR THE PROJECT'S ENVIRONMENTAL MONITOR WILL BE PROVIDED AT THE PRE-CONSTRUCTION MEETINGS AND MAY ALSO BE OBTAINED BY CALLING THE DELDOT ENVIRONMENTAL STUDIES SECTION AT (302) 760-2264. THE PRESENCE OF THE DEPARTMENT'S ENVIRONMENTAL MONITOR DOES NOT ALLEVIATE OR NULLIFY ANY OF THE CONTRACTOR'S OBLIGATIONS TO FULLY COMPLY WITH ALL ENVIRONMENTAL PERMITS AND/OR REGULATIONS.

C. IF A DEPARTURE FROM THE APPROVED PLANS IS NECESSARY, THE CONTRACTOR SHALL CONTACT THE ENGINEER AND ENVIRONMENTAL MONITOR IMMEDIATELY. THE ENVIRONMENTAL MONITOR SHALL COORDINATE WITH THE APPROPRIATE RESOURCE AGENCIES INCLUDING BUT NOT LIMITED TO THE ARMY CORPS OF ENGINEERS (USACE), DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL (DNREC), STATE HISTORIC PRESERVATION OFFICE (SHPO), AND MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE). WORK SHALL NOT PROCEED UNTIL ALL THE NECESSARY APPROVALS, PERMITS OR MODIFICATIONS ARE OBTAINED. THIS RESOURCE AGENCY APPROVAL IS IN ADDITION TO ANY APPROVAL THAT NEEDS TO BE DERIVED FROM THE ENGINEER. THE ENVIRONMENTAL MONITOR CANNOT APPROVE ANY CHANGE INDEPENDENT FROM THE ENGINEER. APPROVAL MAY TAKE A SIGNIFICANT AMOUNT OF TIME TO COMPLETE AND ALL CHANGES MAY NOT BE APPROVED. THE CONTRACTOR SHALL HAVE NO CLAIM AGAINST THE DEPARTMENT FOR COSTS OR DELAYS ASSOCIATED WITH RESOURCE AGENCY APPROVAL OR REJECTION OF CHANGES OR DEVIATIONS FROM THESE PLANS.

D. USE OF THESE SHEETS DOES NOT ALLEVIATE THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL CONDITIONS SET FORTH IN THE ENVIRONMENTAL STATEMENT AND PERMITS.

E. THE IDENTIFIED PERMANENT AND TEMPORARY IMPACTS TO JURISDICTIONAL RESOURCES SHOWN ON THE ENVIROMENTAL COMPLIANCE SHEETS ARE THE ONLY AUTHORIZED IMPACTS.

2. NATURAL AND CULTURAL RESOURCE ISSUES:

A. PERMIT REQUIREMENTS / APPROVALS*

USACE - INDIVIDUAL PERMIT CENAP-OP-R-2006-6071-1 (PROVISIONAL PENDING WQ CERTIFICATION); PROVISIONAL APPROVAL AUGUST 18, 2009; EXPIRES DECEMBER 31, 2019**
DNREC SUBAQUEOUS LAND PERMIT PENDING**
DNREC WATER QUALITY CERTIFICATION PENDING**
DELAWARE COASTAL ZONE MANAGEMENT FEDERAL CONSISTENCY CERTIFICATION SEPTEMBER 14, 2007; NO EXPIRATION**
NEW CASTLE COUNTY FLOODPLAIN APPROVAL PENDING**

* THE PERMITS/APPROVALS LISTED ARE THOSE REQUIRED FOR THIS PROJECT. THE ENVIRONMENTAL STUDIES SECTION IS RESPONSIBLE FOR COORDINATING/OBTAINING THESE PERMITS/APPROVALS.

** THE CONTRACTOR MUST ENSURE THAT THESE PERMITS/APPROVALS ARE IN THEIR POSSESSION PRIOR TO THE BEGINNING OF CONSTRUCTION AND ENSURE THESE PERMITS/APPROVALS ARE DISPLAYED ON-SITE DURING THE ENTIRE CONSTRUCTION PERIOD.

B. CONSTRUCTION RESTRICTIONS:

ENDANGERED SPECIES: NONE

FISHERIES: NONE

MIGRATORY BIRDS: NONE

C. PROTECTION OF RESOURCES:

I. ITEM 727552-RESOURCE PROTECTION FENCE (WITH ASSOCIATED SIGNAGE) SHALL BE USED ALONG THE LIMIT OF CONSTRUCTION (LOC) AND OTHER AREAS SHOWN ON THE PLANS WHERE WETLANDS, WATERS OR CULTURAL RESOURCES EXIST. RESOURCE PROTECTION FENCE SHALL BE INSTALLED IMMEDIATELY AFTER STAKEOUT OF LOC AND PRIOR TO INSTALLATION OF EROSION AND SEDIMENT CONTROLS. THE CONTRACTOR SHALL STAKEOUT THE LOCATION OF THE RESOURCE PROTECTION FENCE AND THE ENVIRONMENTAL MONITOR WILL BE RESPONSIBLE FOR CONFIRMING OR ADJUSTING THE FENCING LOCATIONS PRIOR TO CONSTRUCTION. IMPROPERLY PLACED FENCE SHALL BE RE-INSTALLED AT CONTRACTOR EXPENSE. ANY ADDITIONAL RESOURCE PROTECTION FENCE AS REQUESTED BY THE ENVIRONMENTAL MONITOR AND CONFIRMED BY THE ENGINEER SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE. RESOURCE PROTECTION FENCE SIGNAGE SHALL BE PROVIDED BY DELDOT AND INSTALLED BY THE CONTRACTOR ALONG THE FENCE NO GREATER THAN 100 FEET APART AND WITH A MINIMUM OF 2 SIGNS PER CONTINUOUS FENCE RUN AS INDICATED IN THE SPECIAL PROVISIONS. RESOURCE PROTECTION FENCE SHALL BE PAID FOR UNDER ITEM 727552-RESOURCE PROTECTION FENCE.

II. THE PURPOSE OF ITEM 727552-RESOURCE PROTECTION FENCE IS TO PREVENT IMPACTS TO SENSITIVE RESOURCES DURING CONSTRUCTION. ACCESS INTO THESE AREAS IS STRICTLY PROHIBITED. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL EMPLOYEES UNDERSTAND AND COMPLY WITH THE PURPOSE OF THE RESOURCE PROTECTION FENCE.

III. THE INSTALLATION OF THE RIGHT-OF-WAY FENCE AND RESOURCE PROTECTION FENCE ARE THE ONLY CONSTRUCTION ACTIVITIES THAT ARE AUTHORIZED TO OCCUR OUTSIDE OF THE LOC.

IV. RESOURCE PROTECTION FENCE SHALL BE INSTALLED BY HAND AS PER THE DETAILS AND SPECIFICATIONS OF ITEM 727552-RESOURCE PROTECTION FENCE. THERE SHALL BE NO GRUBBING FOR THE INSTALLATION OF RESOURCE PROTECTION FENCE. RIGHT-OF-WAY FENCE SHALL BE INSTALLED BY HAND IN SENSITIVE AREAS, INCLUDING WETLANDS, FORESTS, AND CULTURAL RESOURCE AREAS PROTECTED BY RESOURCE PROTECTION FENCE. THERE SHALL BE NO GRUBBING FOR THE INSTALLATION OF RIGHT-OF-WAY FENCE IN SENSITIVE AREAS. WHERE CLEARING IS NECESSARY FOR FENCE INSTALLATION, VEGETATION SHALL BE CUT FLUSH WITH THE GROUND (I.E., NO DISTURBANCE OF THE ROOT MAT). ENVIRONMENTAL IMPACTS SHALL BE MINIMIZED DURING THE INSTALLATION OF THE RESOURCE PROTECTION FENCE AND RIGHT-OF-WAY FENCE AND THE REMOVAL OF THE RESOURCE PROTECTION FENCE. ACCESS AND INSTALLATION/REMOVAL OF RESOURCE PROTECTION FENCE AND INSTALLATION OF RIGHT-OF-WAY FENCE SHALL BE COORDINATED WITH THE ENVIRONMENTAL MONITOR.

D. STREAM RESTORATION AND SLOPE RIPRAP TREATMENT:

I. THE CONTRACTOR SHALL FOLLOW THE SPECIAL PROVISIONS OF ITEM 712531-CHANNEL BED FILL, IN REGARDS TO THE SALVAGING OF ON-SITE NATURAL STREAM BOTTOM MATERIAL OR THE FURNISHING OF OFF-SITE MATERIAL. IF A SEPARATE SPECIAL PROVISION OR MATERIAL GRADATION HAS BEEN DETAILED ON THE PLANS FOR A SPECIFIC CHANNEL LOCATION, THAT SPECIFICATION OR GRADATION SHALL BE UTILIZED FOR CHANNEL BED FILL AT THE INDICATED LOCATION(S). PIPES WITH DIAMETERS ≥60" SHALL BE RECESSED A MINIMUM OF 12" BELOW THE STREAMBED ELEVATION. PIPES < 60" SHALL BE RECESSED A MINIMUM OF 4 INCHES OR 20% OF THE DIAMETER OF THE PIPE, WHICHEVER IS GREATER. BOX CULVERTS SHALL BE RECESSED 12" BELOW THE STREAMBED ELEVATION. ALL RIPRAP SHALL BE PLACED SUCH THAT THE TOP OF THE RIPRAP IS PLACED TO MATCH THE INVERT ELEVATION OF THE PIPE OR CULVERT AND CHOKED WITH BORROW TYPE 'B' SO THAT ALL OF THE VOIDS IN THE RIPRAP ARE FILLED WITH MATERIAL. PAYMENT UNDER ITEM 209002-BORROW TYPE 'B'. THE RIPRAP SHALL THEN BE COVERED WITH CHANNEL BED FILL TO MATCH EXISTING UPSTREAM/DOWNSTREAM CHANNEL BED ELEVATIONS. PAYMENT UNDER ITEM 712531-CHANNEL BED FILL.

PIPES AND RIPRAP SHALL BE RECESSED IN STREAMS LOCATED AT THE FOLLOWING CROSSINGS:

SPRING MILL BRANCH OF DRAWYER CREEK STA 484+00

PIPES AND RIPRAP SHALL NOT BE RECESSED AND RIPRAP SHALL BE CHOKED WITH ITEM 712531-CHANNEL BED FILL TO CREATE A SMOOTH STREAM BOTTOM IN STREAMS LOCATED AT THE FOLLOWING CROSSINGS:

SPRING MILL BRANCH OF DRAWYER CREEK - RAMP K STA 67+50
SPRING MILL BRANCH OF DRAWYER CREEK - RAMP K STA 75+60

STREAMS LOCATED AT THE FOLLOWING CROSSINGS ARE NOT ASSOCIATED WITH PIPES, BUT RIPRAP SHALL BE RECESSED 1 FOOT BELOW THE STREAMBED ELEVATIONS AND BACKFILLED WITH ITEM 712531-CHANNEL BED FILL:

SANDY BRANCH STA 304+00
UNNAMED TRIBUTARY TO SANDY BRANCH STA 313+00

II. OTHER AREAS OF THE CHANNEL BOTTOM AFFECTED BY CONSTRUCTION (INCLUDING, BUT NOT LIMITED TO, THE LOCATION OF SUMP PITS, STABILIZED OUTFALLS, TEMPORARY PIPES AND/OR SANDBAG DIKES AND DIVERSIONS) SHALL BE RESTORED TO PREDISTURBANCE CONDITIONS. ANY CAVITIES OR SCOUR HOLES RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE FILLED WITH CHANNEL BED FILL. PAYMENT UNDER ITEM 712531-CHANNEL BED FILL.

III. WHEN ALL EROSION AND SEDIMENT CONTROL MEASURES ARE REMOVED AND THE STREAM RETURNS TO ITS NATURAL FLOW CONDITIONS, THE FLOW MUST REMAIN ABOVE GROUND AND ABOVE THE RIPRAP (I.E. THE FLOW CANNOT BE 'LOST' IN THE RIPRAP OR BENEATH THE STRUCTURE). IF THIS IS NOT ACHIEVED, THE CONTRACTOR WILL BE REQUIRED TO TAKE CORRECTIVE ACTION AT THE CONTRACTOR'S EXPENSE.

IV. ALL RIPRAP ON THE STREAM BANK, ABOVE THE ORDINARY HIGH WATER MARK, SHALL BE PLACED AS DESCRIBED BELOW:

CHOKE THE RIPRAP WITH ENOUGH ITEM 302012-DELAWARE #57 STONE TO PREVENT THE LOSS OF TOPSOIL THROUGH THE RIPRAP AS APPROVED BY THE ENGINEER. FILL THE REMAINING VOIDS WITH TOPSOIL SO THAT THE RIPRAP IS BARELY VISIBLE. REGARDLESS OF DEPTH, THIS SHALL BE PAID FOR UNDER ITEM 733001-TOPSOILING, 4" DEPTH. APPLY AN ADDITIONAL 4 INCH LAYER OF TOPSOIL (ITEM 733001-TOPSOILING, 4" DEPTH). SEED WITH ITEM 734531-STREAMBANK SEED MIX FROM ABOVE THE ORDINARY HIGH WATER MARK TO THE TOP OF THE SLOPE. IMMEDIATELY FOLLOWING THE SEEDING, INSTALL ITEM 735535-SOIL RETENTION BLANKET MULCH, TYPE 5. ALL WORK, STARTING WITH TOPSOIL PLACEMENT THROUGH SEEDING AND MULCHING, SHALL BE COMPLETED PRIOR TO ANY RAIN EVENT. RIPRAP AND ALL OTHER ITEMS SHALL BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.

STREAMBANK RIPRAP SHALL BE TREATED AS DESCRIBED ABOVE IN STREAMS LOCATED AT THE FOLLOWING CROSSINGS:

SANDY BRANCH STA 304+00
UNNAMED TRIBUTARY TO SANDY BRANCH STA 313+00
SPRING MILL BRANCH OF DRAWYER CREEK STA 484+00
SPRING MILL BRANCH OF DRAWYER CREEK - RAMP K STA 67+50
SPRING MILL BRANCH OF DRAWYER CREEK - RAMP K STA 75+60

V. THE CHANNEL AND STREAM BANK SEGMENTS ENTERING AND EXITING THE BRIDGES, PIPES AND CULVERTS SHALL NOT BE WIDENED BEYOND THE DIMENSIONS SHOWN ON THE PLANS. THE CHANNEL WIDTHS, CHANNEL BANKS AND SIDE-SLOPES SHALL NOT BE WIDENED OR RE-CONTOURED TO ACCOMMODATE EASIER CONSTRUCTION OR ACCESS.

E. STAGING, STOCKPILING AND DISPOSAL:

I. NO STOCKPILING OR STORAGE OF EQUIPMENT, MATERIALS OR STRUCTURAL STEEL; NO STAGING AREA; AND NO INSTALLATION OF ANCILLARY FACILITIES SUCH AS CONCRETE OR ASPHALT PLANTS OR CONSTRUCTION TRAILERS SHALL BE PERMITTED ON ANY CULTURAL RESOURCE SITE OR WITHIN WETLANDS OR STREAMS OUTSIDE OF IDENTIFIED STORAGE AREAS APPROVED BY THE SHPO OR THE USACE. NO CONSTRUCTION MATERIALS, AGGREGATES, OR EARTH SHALL BE STOCKPILED OR STORED IN A MANNER THAT WOULD AFFECT WETLANDS OR STREAMS. STOCKPILES SHALL HAVE EROSION AND SEDIMENT CONTROLS APPROVED BY DELDOT.

II. ALL EXCESS EXCAVATED MATERIALS NOT USED IN HIGHWAY OR COMPENSATORY MITIGATION SITE CONSTRUCTION SHALL BE DISPOSED OF IN UPLAND, NON-WETLAND, NON-CULTURAL RESOURCE SITE(S). THE EXCAVATED MATERIAL SHALL BE PROPERLY CONTAINED AND STABILIZED TO PREVENT ITS ENTRY INTO ANY ADJACENT WETLANDS OR WATERWAYS. OUTSIDE OF ANY LOCATION DESIGNATED ON PLANS FOR DISPOSAL, NO DISPOSAL/WASTING OPERATION SHALL COMMENCE UNTIL WRITTEN APPROVAL OF THE DISPOSAL SITE(S) IS OBTAINED BY THE ENGINEER FROM THE USACE AND THE SHPO. THE CONTRACTOR SHALL SUBMIT THE PROPOSED DISPOSAL SITE LOCATIONS(S) TO THE ENGINEER. THE ENGINEER WILL SUBMIT THE PROPOSED DISPOSAL SITE INFORMATION TO THE SHPO AND USACE FOR APPROVAL. THE DEPARTMENT WILL NOT CONSIDER ANY DELAYS OR MONETARY CLAIMS OF ANY NATURE RESULTING FROM DELAYS IN APPROVAL OR REJECTION OF DISPOSAL SITES OR FROM THE CONTRACTOR'S FAILURE OR DIFFICULTY IN FINDING ACCEPTABLE DISPOSAL SITES TO MEET THE TIME FRAMES AND CAPACITIES REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PLANS, EROSION AND SEDIMENTATION CONTROL MEASURES, ETC. REQUIRED BY THE APPROPRIATE REGULATORY AGENCY FOR UTILIZING OFF-SITE SPOIL AREAS.

F. MINIMIZATION AND RESTORATION OF TEMPORARY IMPACTS:

ALL TEMPORARY IMPACTS SHOWN ON THESE SHEETS SHALL BE RESTORED AS SPECIFIED IN THE MISCELLANEOUS PROJECT NOTES TO PREDISTURBANCE GRADE AND CONDITION AND STABILIZED. THE AREA SHALL BE PLANTED AS SHOWN IN THE MOT SHEETS AND NOTED ON THESE EC SHEETS. STREAMS SHALL BE RESTORED TO PREDISTURBANCE PATTERN AND PROFILE.

G. CULTURAL RESOURCES:

IF ANY UNANTICIPATED DISCOVERIES OF ARCHAEOLOGICAL OR HUMAN REMAINS OCCUR DURING CONSTRUCTION, ALL WORK SHALL BE IMMEDIATELY SUSPENDED IN THE AREA OF THE DISCOVERY AND THE ENVIRONMENTAL MONITOR SHALL BE CONTACTED. THE ENVIRONMENTAL MONITOR WILL CONTACT DELDOT CULTURAL RESOURCES, SHPO AND USACE TO COMMENCE THE NECESSARY FEDERAL AND STATE COORDINATION. WORK SHALL NOT RESUME UNTIL APPROPRIATE RESOURCE AGENCY COORDINATION, INVESTIGATION AND/OR RECOVERY IS COMPLETE.

H. SOIL AND EARTH DISTURBANCE:

I. ITEM 251001-REINFORCED SILT FENCE SHALL BE USED DUE TO THE HIGH PROBABILITY OF OVERBANK FLOODING IN THE FOLLOWING LOCATIONS:

SANDY BRANCH AT MAINLINE STATION 301+00 TO 306+00

II. THERE SHALL BE NO GRUBBING UNDER BRIDGES EXCEPT WHERE NECESSARY TO CONSTRUCT PROJECT COMPONENTS SUCH AS FOUNDATIONS, SLOPE PROTECTION AND UTILITIES. BRIDGE LOCATIONS ARE AS FOLLOWS:

SANDY BRANCH STA 304+00
UNNAMED TRIBUTARY TO SANDY BRANCH STA 313+00

I. FLOODPLAIN:

NEW RIPRAP PLACED IN THE FLOODPLAIN BENEATH BRIDGES SHALL BE BURIED. RIPRAP FLOODPLAIN LOCATIONS ARE AS FOLLOWS :

SANDY BRANCH STA 304+00
UNNAMED TRIBUTARY TO SANDY BRANCH STA 313+00

PERMANENT WETLAND IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
10-W1	RIPRAP	153.93	0.0035	N/A	USACE
10-W2	RIPRAP	153.93	0.0035	N/A	USACE
10-W3	RIPRAP	254.47	0.0058	N/A	USACE
10-W4	RIPRAP	420.22	0.0097	N/A	USACE
10-W5	RIPRAP	483.39	0.0111	N/A	USACE
10-W6	RIPRAP	438.95	0.0101	N/A	USACE
10-W7	EXCAVATION	68.76	0.0016	N/A	USACE
10-W8	EXCAVATION	145.68	0.0033	N/A	USACE
10-W9	EXCAVATION	135.38	0.0031	N/A	USACE
12-W1	SHADING	3,487.26	0.0801	N/A	USACE
12-W2	RIPRAP	508.63	0.0117	N/A	USACE
-	-	-	-	-	-
12-W4	RIPRAP	274.63	0.0063	N/A	USACE
12-W5	SHADING	3,133.76	0.0719	N/A	USACE
12-W6	SHADING	2,748.63	0.0631	N/A	USACE
12-W7	FILL	207.75	0.0048	N/A	USACE
12-W8	RIPRAP	372.96	0.0086	N/A	USACE
12-W9	SHADING	5,292.23	0.1215	N/A	USACE
12-W10	SHADING	4,035.76	0.0926	N/A	USACE
12-W11	FILL	356.08	0.0082	N/A	USACE
12-W12	SHADING	1,012.12	0.0232	N/A	USACE
12-W13	RIPRAP	158.85	0.0036	N/A	USACE
12-W14	RIPRAP	163.17	0.0037	N/A	USACE
13-W1	SHADING	2,974.54	0.0683	N/A	USACE
13-W2	SHADING	2,436.66	0.0559	N/A	USACE
13-W3	SHADING	587.69	0.0135	N/A	USACE
13-W4	FILL	419.25	0.0096	N/A	USACE
13-W5	SHADING	2,080.89	0.0478	N/A	USACE
-	-	-	-	-	-
13-W7	SHADING	3,076.57	0.0706	N/A	USACE
14-W1	SHADING	1,214.43	0.0279	N/A	USACE
14-W2	SHADING	1,973.55	0.0453	N/A	USACE
14-W3	RIPRAP	221.94	0.0051	N/A	USACE
15-W1	FILL	3,747.47	0.0860	N/A	USACE
15-W2	RIPRAP	512.20	0.0118	N/A	USACE
15-W3	RIPRAP	323.20	0.0074	N/A	USACE
20-W1	EXCAVATION	489.53	0.0112	N/A	USACE
21-W1	FILL	17,052.88	0.3915	N/A	USACE
21-W2	EXCAVATION	8,768.82	0.2013	N/A	USACE
21-W3	RIPRAP	329.02	0.0076	N/A	USACE
23-W1	FILL	145,195.59	3.3332	N/A	USACE
23-W2	RIPRAP	170.94	0.0039	N/A	USACE
23-W3	RIPRAP	124.15	0.0029	N/A	USACE
24-W1	FILL	129,084.74	2.9634	N/A	USACE
24-W2	RIPRAP	124.75	0.0029	N/A	USACE
24-W3	RIPRAP	36.99	0.0008	N/A	USACE
24-W4	RIPRAP	519.24	0.0119	N/A	USACE
24-W5	RIPRAP	519.24	0.0119	N/A	USACE
24-W6	RIPRAP	498.77	0.0115	N/A	USACE
24-W7	EXCAVATION	9,326.11	0.2141	N/A	USACE
25-W1	FILL	9,518.25	0.2185	N/A	USACE
26-W1	FILL	1,630.42	0.0374	N/A	USACE
26-W2	RIPRAP	165.13	0.0038	N/A	USACE
26-W3	EXCAVATION	2,430.00	0.0558	N/A	USACE
29-W1	FILL	2,798.92	0.0643	N/A	USACE
29-W2	FILL	16,849.14	0.3868	N/A	USACE
29-W3	FILL	381.78	0.0088	N/A	USACE
29-W4	RIPRAP	102.19	0.0023	N/A	USACE
29-W5	RIPRAP	18.96	0.0004	N/A	USACE
29-W6	EXCAVATION	10,669.05	0.2449	N/A	USACE
29-W7	RIPRAP	115.20	0.0026	N/A	USACE
29-W8	RIPRAP	64.51	0.0015	N/A	USACE
29-W9	EXCAVATION	1,010.06	0.0232	N/A	USACE
30-W1	FILL	4,329.75	0.0994	N/A	USACE
30-W2	FILL	2,340.42	0.0537	N/A	USACE
30-W3	FILL	2,369.92	0.0544	N/A	USACE
31-W1	FILL	9,717.80	0.2231	N/A	USACE
31-W2	RIPRAP	360.87	0.0083	N/A	USACE
31-W3	RIPRAP	97.14	0.0022	N/A	USACE
TOTAL PERMANENT WETLAND IMPACTS		420,785.21	9.6596	-	-

TEMPORARY OPEN WATER IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
12-OT1	TEMPORARY ACCESS	185.18	0.0043	13.72	DNREC/USACE
12-OT2	E&S AREA	586.92	0.0135	43.48	DNREC/USACE
12-OT3	E&S AREA	994.37	0.0228	73.66	USACE
12-OT4	E&S AREA	1,408.31	0.0323	104.32	USACE
12-OT5	E&S AREA	1,867.45	0.0429	138.33	DNREC/USACE
12-OT6	TEMPORARY ACCESS	507.52	0.0117	37.59	DNREC/USACE
12-OT7	E&S AREA	704.07	0.0162	52.15	DNREC/USACE
13-OT1	TEMPORARY ACCESS	212.49	0.0049	15.74	DNREC/USACE
13-OT2	E&S AREA	536.19	0.0123	39.72	DNREC/USACE
13-OT3	E&S AREA	532.22	0.0122	39.42	USACE
13-OT4	E&S AREA	208.54	0.0048	15.45	DNREC/USACE
13-OT5	E&S AREA	206.06	0.0047	15.26	USACE
13-OT6	TEMPORARY ACCESS	112.20	0.0026	8.31	USACE
13-OT7	TEMPORARY ACCESS	75.57	0.0017	5.60	DNREC/USACE
13-OT8	E&S AREA	103.83	0.0024	7.69	DNREC/USACE
13-OT9	E&S AREA	334.69	0.0078	24.79	DNREC/USACE
14-OT1	TEMPORARY ACCESS	120.27	0.0028	8.95	DNREC/USACE
14-OT2	TEMPORARY ACCESS	274.07	0.0063	20.40	DNREC/USACE
14-OT3	TEMPORARY ACCESS	1,130.18	0.0259	84.14	USACE
15-OT1	TEMPORARY ACCESS	281.93	0.0065	20.99	DNREC/USACE
15-OT2	E&S AREA	241.27	0.0055	17.96	DNREC/USACE
15-OT3	TEMPORARY ACCESS	31.88	0.0007	2.37	DNREC/USACE
15-OT4	E&S AREA	395.63	0.0091	29.45	DNREC/USACE
19-OT1	TEMPORARY ACCESS	364.28	0.0084	27.12	DNREC
19-OT2	E&S AREA	27.72	0.0006	2.06	DNREC
19-OT3	TEMPORARY ACCESS	49.90	0.0011	3.71	DNREC
19-OT4	E&S AREA	35.58	0.0008	2.65	DNREC
19-OT5	TEMPORARY ACCESS	58.86	0.0014	4.38	DNREC
27-OT1	E&S AREA	229.58	0.0053	17.09	DNREC/USACE
27-OT2	TEMPORARY ACCESS	115.67	0.0027	8.61	DNREC/USACE
28-OT1	TEMPORARY ACCESS	183.58	0.0042	13.67	DNREC/USACE
28-OT2	TEMPORARY ACCESS	245.48	0.0056	18.27	DNREC/USACE
28-OT3	E&S AREA	118.73	0.0027	8.84	DNREC/USACE
28-OT4	E&S AREA	112.52	0.0026	8.38	DNREC/USACE
28-OT5	TEMPORARY ACCESS	16.60	0.0004	1.24	DNREC/USACE
29-OT1	TEMPORARY ACCESS	167.66	0.0038	12.48	DNREC/USACE
29-OT2	E&S AREA	67.41	0.0015	5.02	DNREC/USACE
29-OT3	TEMPORARY ACCESS	456.51	0.0105	33.98	DNREC/USACE
31-OT1	E&S AREA	331.36	0.0076	24.67	DNREC/USACE
31-OT2	E&S AREA	109.95	0.0025	8.19	DNREC/USACE
31-OT3	E&S AREA	97.22	0.0022	7.24	DNREC/USACE
31-OT4	TEMPORARY ACCESS	123.94	0.0028	9.23	DNREC/USACE
TOTAL DNREC		9,580.05	0.1314	425.94	-
TOTAL USACE		13,427.05	0.1645	533.15	-

PERMANENT OPEN WATER IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
12-01	SHADING	1,408.31	0.0323	N/A	DNREC
12-02	SHADING	994.37	0.0228	N/A	DNREC
-	-	-	-	-	-
12-04	FILL	157.10	0.0036	11.64	DNREC/USACE
13-01	SHADING	112.20	0.0026	N/A	DNREC
13-02	SHADING	206.06	0.0047	N/A	DNREC
13-03	SHADING	532.22	0.0122	N/A	DNREC
-	-	-	-	-	-
14-01	SHADING	1,130.18	0.0259	N/A	DNREC
15-01	RIPRAP	1,372.20	0.0315	102.15	DNREC/USACE
15-02	EXCAVATION	3,375.20	0.0775	251.26	DNREC/USACE
15-03	FILL	988.94	0.0227	73.62	DNREC/USACE
15-04	RIPRAP	79.17	0.0018	5.89	DNREC/USACE
19-01	EXCAVATION	147.16	0.0034	10.96	DNREC
24-01	FILL	1,791.06	0.0411	65.67	USACE
24-02	RIPRAP	127.82	0.0029	4.69	USACE
24-03	FILL	990.66	0.0227	36.32	USACE
24-04	NON-VIABLE REMNANT	704.53	0.0162	25.83	USACE
26-01	EXCAVATION	161.95	0.0037	12.06	USACE
26-02	RIPRAP	87.02	0.0020	6.48	USACE
26-03	EXCAVATION	250.22	0.0057	18.63	USACE
27-01	EXCAVATION	834.37	0.0192	62.11	USACE
27-02	EXCAVATION	48.40	0.0011	3.60	DNREC/USACE
28-01	RIPRAP	90.64	0.0021	6.75	DNREC/USACE
29-01	FILL	1,393.17	0.0320	103.71	DNREC/USACE
29-02	RIPRAP	83.86	0.0019	6.24	DNREC/USACE
29-03	EXCAVATION	217.45	0.0050	16.19	DNREC/USACE
29-04	RIPRAP	82.79	0.0019	6.16	DNREC/USACE
29-05	EXCAVATION	34.15	0.0008	2.54	DNREC/USACE
30-01	FILL	704.50	0.0162	52.45	DNREC/USACE
30-02	FILL	541.14	0.0124	40.28	DNREC/USACE
31-01	FILL	950.24	0.0218	70.74	DNREC/USACE
31-02	RIPRAP	69.50	0.0016	5.17	DNREC/USACE
31-03	RIPRAP	88.31	0.0020	6.57	DNREC/USACE
31-04	RIPRAP	96.71	0.0022	7.20	DNREC/USACE
TOTAL DNREC		14,903.97	0.3420	783.12	-
TOTAL USACE		15,321.10	0.3516	1,003.95	-

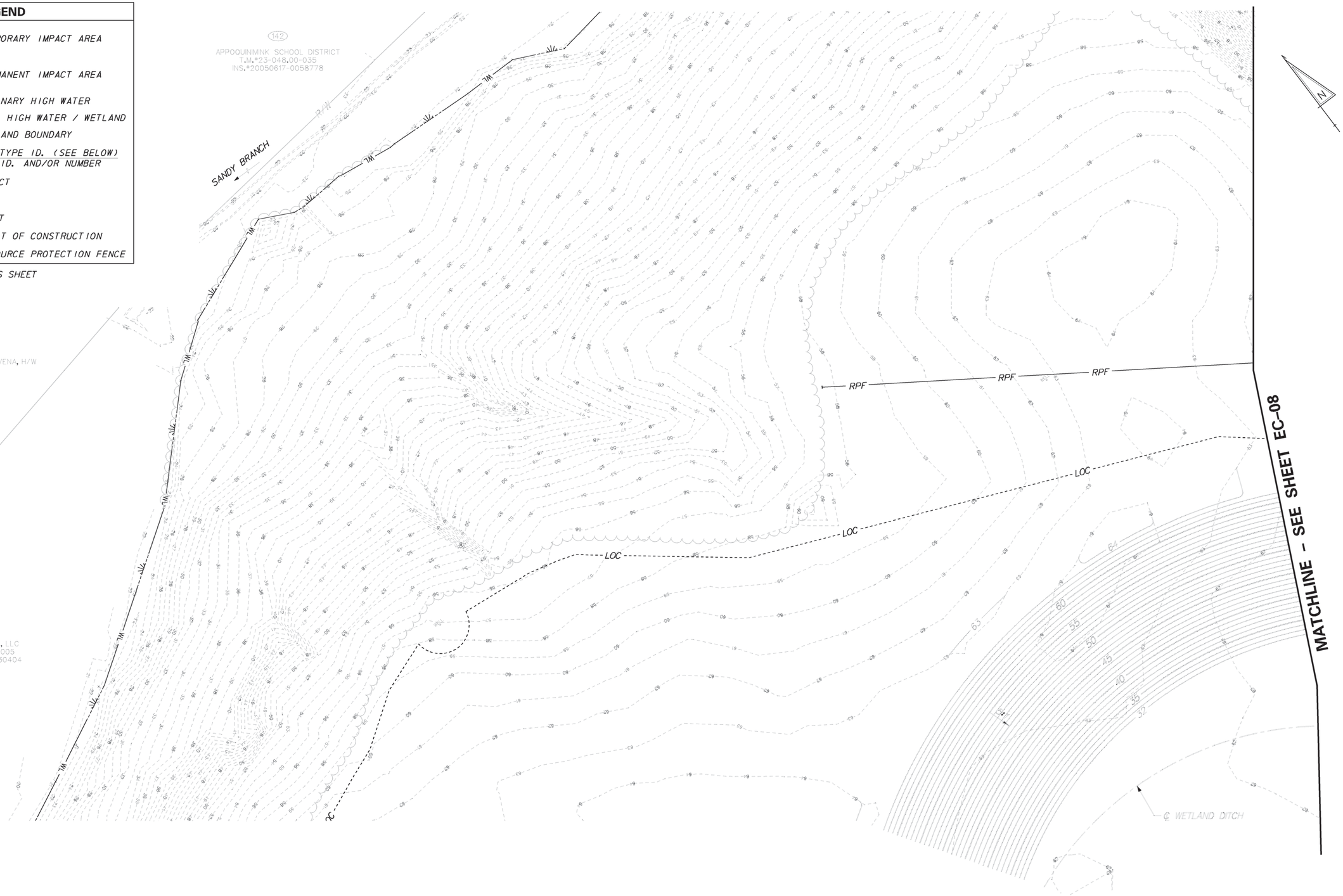
TEMPORARY WETLAND IMPACT AREA SCHEDULE

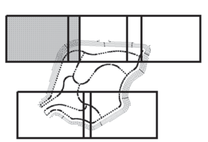
IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
10-WT1	TEMPORARY ACCESS	16,544.40	0.3798	N/A	USACE
12-WT1	E&S AREA	2,192.38	0.0503	N/A	USACE
12-WT2	E&S AREA	600.05	0.0138	N/A	USACE
12-WT3	TEMPORARY ACCESS	1,398.42	0.0321	N/A	USACE
12-WT4	TEMPORARY ACCESS	3,514.73	0.0807	N/A	USACE
12-WT5	TEMPORARY ACCESS	3,443.62	0.0791	N/A	USACE
12-WT6	E&S AREA	181.42	0.0042	N/A	USACE
12-WT7	TEMPORARY ACCESS	1,286.84	0.0295	N/A	USACE
12-WT8	E&S AREA	2,025.83	0.0465	N/A	USACE
12-WT9	TEMPORARY ACCESS	722.77	0.0166	N/A	USACE
12-WT10	TEMPORARY ACCESS	158.12	0.0036	N/A	USACE
12-WT11	TEMPORARY ACCESS	140.86	0.0032	N/A	USACE
13-WT1	TEMPORARY ACCESS	7,468.03	0.1714	N/A	USACE
13-WT2	TEMPORARY ACCESS	6,821.54	0.1566	N/A	USACE
13-WT3	E&S AREA	373.30	0.0086	N/A	USACE
13-WT4	E&S AREA	370.47	0.0085	N/A	USACE
13-WT5	E&S AREA	337.98	0.0078	N/A	USACE
13-WT6	E&S AREA	389.73	0.0089	N/A	USACE
13-WT7	TEMPORARY ACCESS	1,923.30	0.0442	N/A	USACE
13-WT8	TEMPORARY ACCESS	1,659.36	0.0381	N/A	USACE
13-WT9	TEMPORARY ACCESS	484.13	0.0111	N/A	USACE
13-WT10	TEMPORARY ACCESS	383.18	0.0088	N/A	USACE
14-WT1	TEMPORARY ACCESS	164.05	0.0038	N/A	USACE
14-WT2	TEMPORARY ACCESS	206.72	0.0047	N/A	USACE
14-WT3	TEMPORARY ACCESS	266.03	0.0061	N/A	USACE
14-WT4	TEMPORARY ACCESS	484.20	0.0111	N/A	USACE
15-WT1	TEMPORARY ACCESS	2,788.10	0.0640	N/A	USACE
15-WT2	E&S AREA	256.25	0.0059	N/A	USACE
TOTAL TEMPORARY WETLAND IMPACTS		56,585.81	1.2990	-	-

LEGEND

- TEMPORARY IMPACT AREA
- PERMANENT IMPACT AREA
- OHW — ORDINARY HIGH WATER
- OHW/WL — ORD. HIGH WATER / WETLAND
- WL — WETLAND BOUNDARY
- XX / ?X — IMPACT AREA TYPE ID. (SEE BELOW) / IMPACT AREA ID. AND/OR NUMBER
- O = OPEN WATER IMPACT
- W = WETLAND IMPACT
- T = TEMPORARY IMPACT
- LOC — LIMIT OF CONSTRUCTION
- RPF — RESOURCE PROTECTION FENCE

NOTE: NO IMPACTS ON THIS SHEET





KEY MAP

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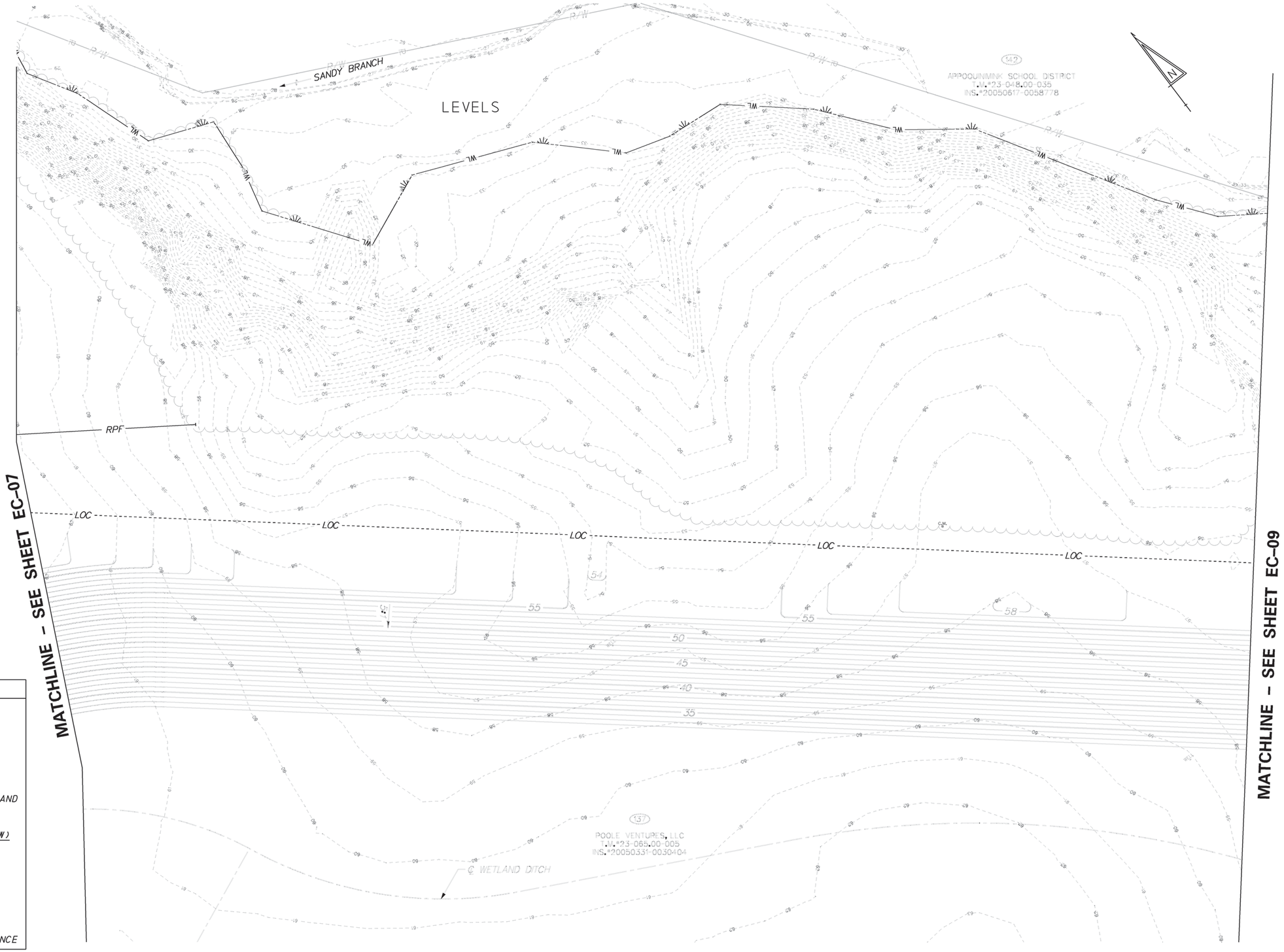
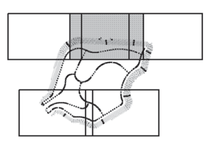
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 50 100 150 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO.	ENVIRONMENTAL COMPLIANCE PLAN	EC-7 SHEET NO. 833
				COUNTY NEW CASTLE	DESIGNED BY: MRS		TOTAL SHTS. 1256
					CHECKED BY: JTR		





KEY MAP

LEGEND

	TEMPORARY IMPACT AREA
	PERMANENT IMPACT AREA
OHW	ORDINARY HIGH WATER
OHW/WL	ORD. HIGH WATER / WETLAND
WL	WETLAND BOUNDARY
XX / ?X	IMPACT AREA TYPE ID. (SEE BELOW) / IMPACT AREA ID. AND/OR NUMBER
O = OPEN WATER IMPACT	
W = WETLAND IMPACT	
T = TEMPORARY IMPACT	
LOC	LIMIT OF CONSTRUCTION
RPF	RESOURCE PROTECTION FENCE

NOTE: NO IMPACTS ON THIS SHEET

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

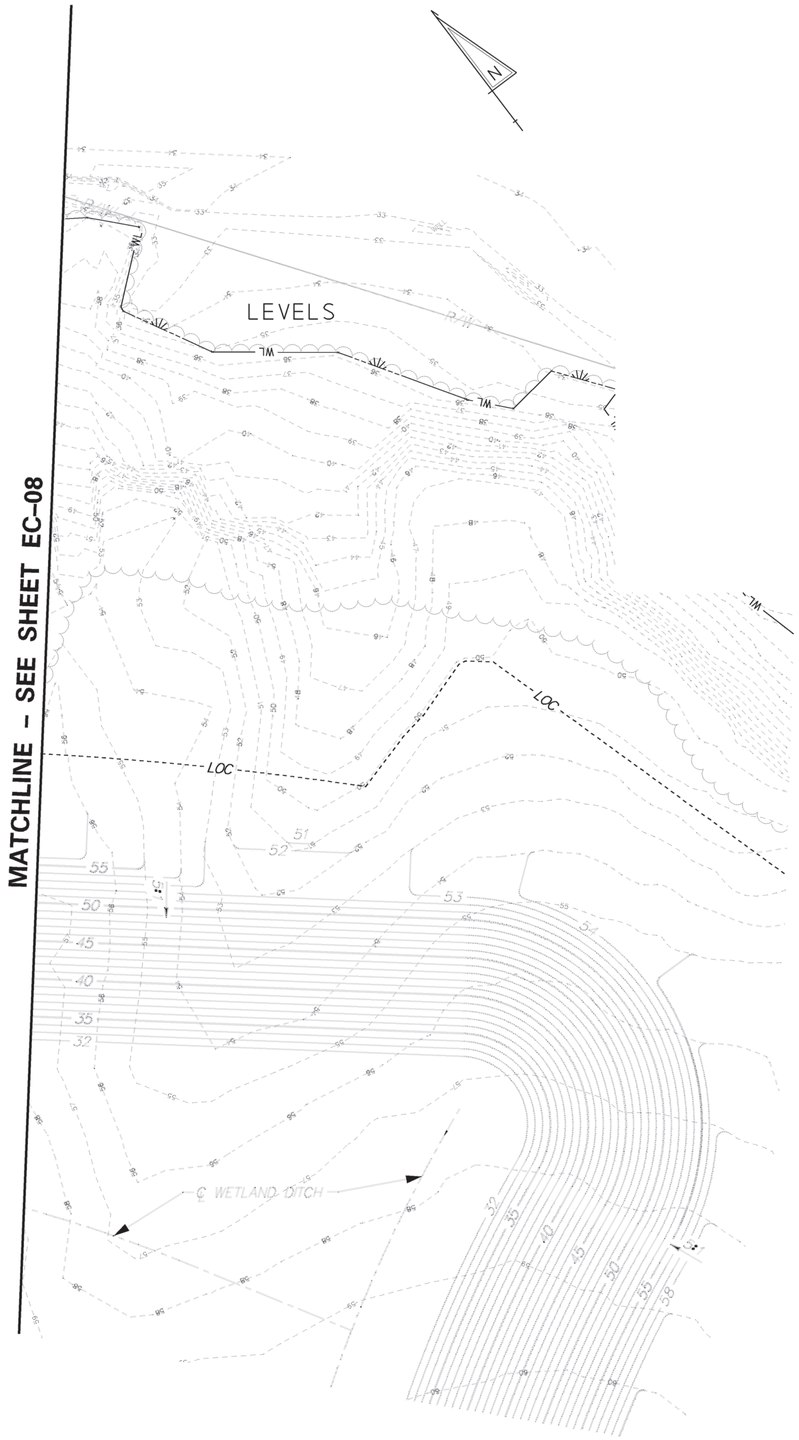
SCALE 0 50 100 150 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.
T200911303	DESIGNED BY: MRS
COUNTY	
NEW CASTLE	CHECKED BY: JTR

ENVIRONMENTAL COMPLIANCE PLAN

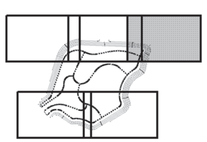
EC-8	SHEET NO.
834	TOTAL SHTS.
1256	



LEGEND

	TEMPORARY IMPACT AREA
	PERMANENT IMPACT AREA
OHW	ORDINARY HIGH WATER
OHW/WL	ORD. HIGH WATER / WETLAND
WL	WETLAND BOUNDARY
XX / ?X	IMPACT AREA TYPE ID. (SEE BELOW) / IMPACT AREA ID. AND/OR NUMBER
O = OPEN WATER IMPACT	
W = WETLAND IMPACT	
T = TEMPORARY IMPACT	
LOC	LIMIT OF CONSTRUCTION
RPF	RESOURCE PROTECTION FENCE

NOTE: NO IMPACTS ON THIS SHEET



KEY MAP

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

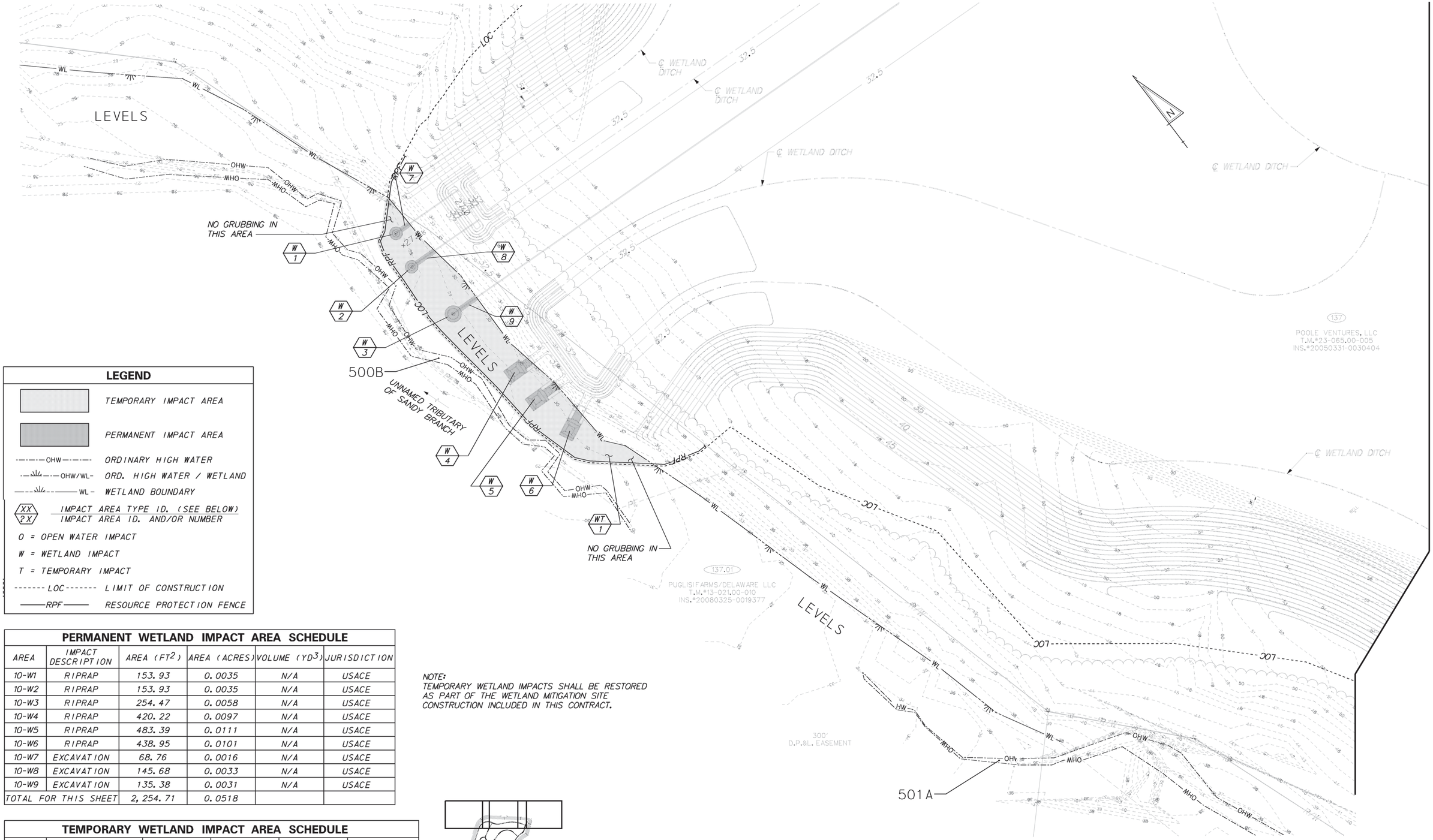
SCALE 0 50 100 150 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.
T200911303	DESIGNED BY: MRS
COUNTY	
NEW CASTLE	CHECKED BY: JTR

ENVIRONMENTAL COMPLIANCE PLAN

	EC-9
SHEET NO.	835
TOTAL SHTS.	1256



LEGEND

- TEMPORARY IMPACT AREA
- PERMANENT IMPACT AREA
- OHW — ORDINARY HIGH WATER
- OHW/WL — ORD. HIGH WATER / WETLAND
- WL — WETLAND BOUNDARY
- XX / ?X — IMPACT AREA TYPE ID. (SEE BELOW) / IMPACT AREA ID. AND/OR NUMBER
- O = OPEN WATER IMPACT
- W = WETLAND IMPACT
- T = TEMPORARY IMPACT
- LOC — LIMIT OF CONSTRUCTION
- RPF — RESOURCE PROTECTION FENCE

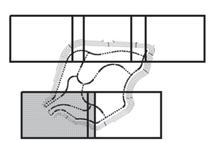
PERMANENT WETLAND IMPACT AREA SCHEDULE

AREA	IMPACT DESCRIPTION	AREA (FT^2)	AREA (ACRES)	VOLUME (YD^3)	JURISDICTION
10-W1	RIPRAP	153.93	0.0035	N/A	USACE
10-W2	RIPRAP	153.93	0.0035	N/A	USACE
10-W3	RIPRAP	254.47	0.0058	N/A	USACE
10-W4	RIPRAP	420.22	0.0097	N/A	USACE
10-W5	RIPRAP	483.39	0.0111	N/A	USACE
10-W6	RIPRAP	438.95	0.0101	N/A	USACE
10-W7	EXCAVATION	68.76	0.0016	N/A	USACE
10-W8	EXCAVATION	145.68	0.0033	N/A	USACE
10-W9	EXCAVATION	135.38	0.0031	N/A	USACE
TOTAL FOR THIS SHEET		2,254.71	0.0518		

NOTE:
TEMPORARY WETLAND IMPACTS SHALL BE RESTORED AS PART OF THE WETLAND MITIGATION SITE CONSTRUCTION INCLUDED IN THIS CONTRACT.

TEMPORARY WETLAND IMPACT AREA SCHEDULE

AREA	IMPACT DESCRIPTION	AREA (FT^2)	AREA (ACRES)	VOLUME (YD^3)	JURISDICTION
10-WT1	TEMPORARY ACCESS	16,544.40	0.3798	N/A	USACE
TOTAL FOR THIS SHEET		16,544.40	0.3798		



KEY MAP

MATCHLINE – SEE SHEET EC-10

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 50 100 150 FEET

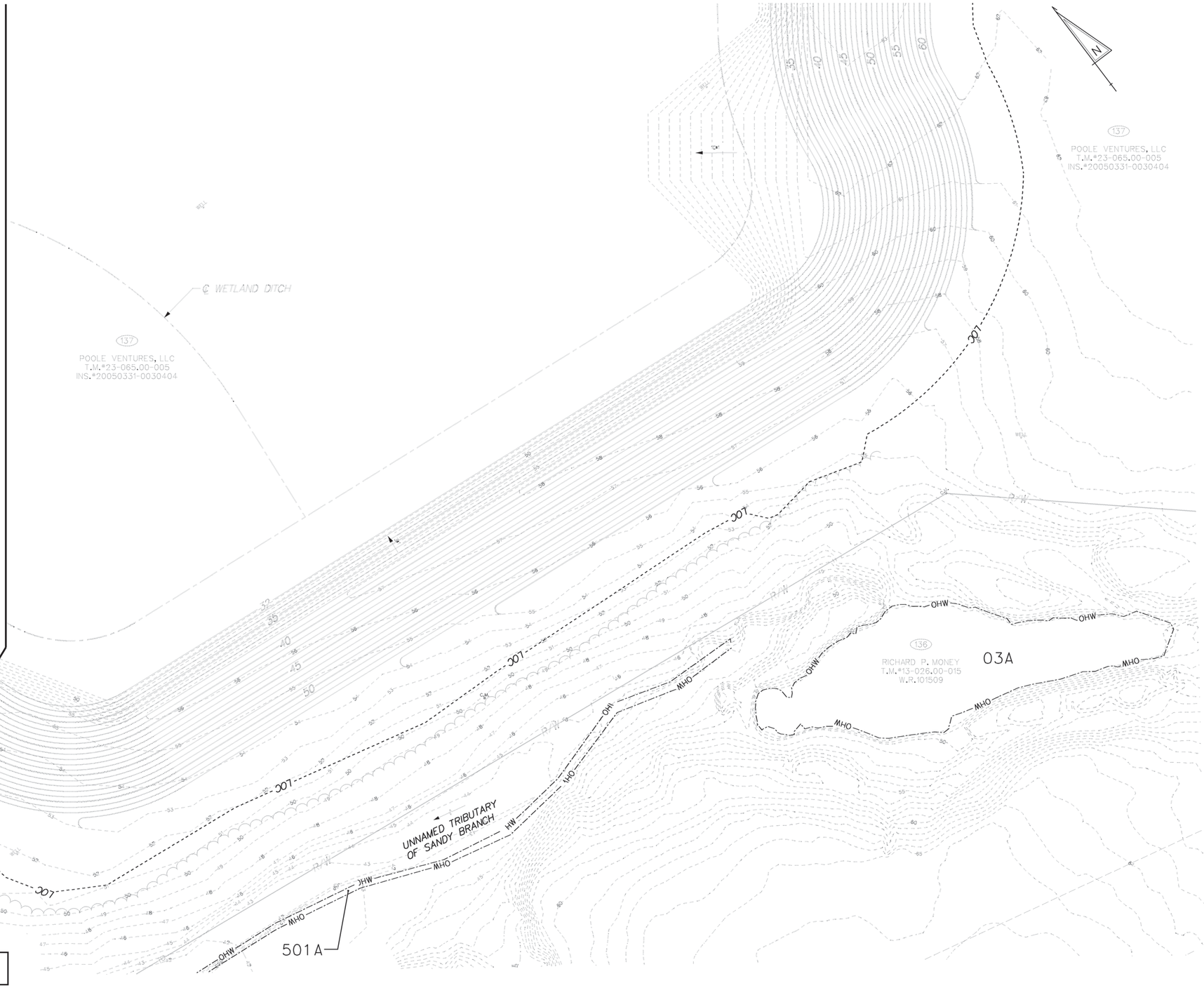
US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.
T200911303	DESIGNED BY: MRS
COUNTY	
NEW CASTLE	CHECKED BY: JTR

ENVIRONMENTAL COMPLIANCE PLAN

SHEET NO.	TOTAL SHTS.
EC-10	836
	1256

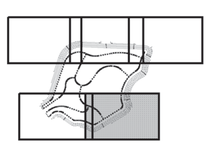
MATCHLINE – SEE SHEET EC-10



LEGEND

	TEMPORARY IMPACT AREA
	PERMANENT IMPACT AREA
OHW	ORDINARY HIGH WATER
OHW/WL	ORD. HIGH WATER / WETLAND
WL	WETLAND BOUNDARY
XX / ?X	IMPACT AREA TYPE ID. (SEE BELOW) / IMPACT AREA ID. AND/OR NUMBER
O = OPEN WATER IMPACT	
W = WETLAND IMPACT	
T = TEMPORARY IMPACT	
LOC	LIMIT OF CONSTRUCTION
RPF	RESOURCE PROTECTION FENCE

NOTE: NO IMPACTS ON THIS SHEET



KEY MAP

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

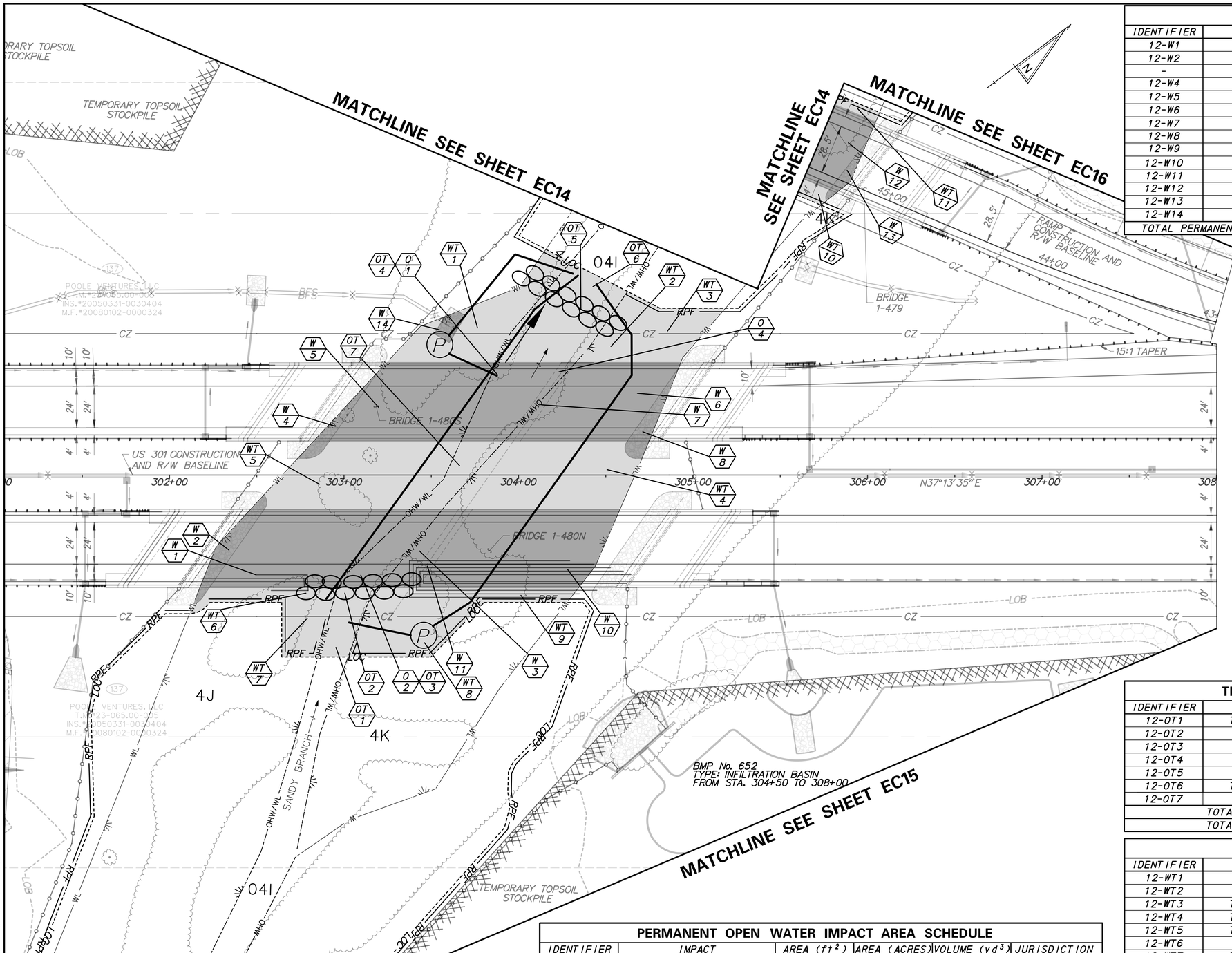
SCALE 0 50 100 150 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.
T200911303	DESIGNED BY: MRS
COUNTY	
NEW CASTLE	CHECKED BY: JTR

ENVIRONMENTAL COMPLIANCE PLAN

	EC-11
SHEET NO.	837
TOTAL SHTS.	1256



PERMANENT WETLAND IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
12-W1	SHADING	3,487.26	0.0801	N/A	USACE
12-W2	RIPRAP	508.63	0.0117	N/A	USACE
-	-	-	-	-	-
12-W4	RIPRAP	274.63	0.0063	N/A	USACE
12-W5	SHADING	3,133.76	0.0719	N/A	USACE
12-W6	SHADING	2,748.63	0.0631	N/A	USACE
12-W7	FILL	207.75	0.0048	N/A	USACE
12-W8	RIPRAP	372.96	0.0086	N/A	USACE
12-W9	SHADING	5,292.23	0.1215	N/A	USACE
12-W10	SHADING	4,035.76	0.0926	N/A	USACE
12-W11	FILL	356.08	0.0082	N/A	USACE
12-W12	SHADING	1,012.12	0.0232	N/A	USACE
12-W13	RIPRAP	158.85	0.0036	N/A	USACE
12-W14	RIPRAP	163.17	0.0037	N/A	USACE
TOTAL PERMANENT WETLAND IMPACTS		21,751.83	0.4993	N/A	USACE

LEGEND

- TEMPORARY IMPACT AREA
- PERMANENT IMPACT AREA
- OHW — ORDINARY HIGH WATER
- POHW — PROPOSED ORDINARY HIGH WATER
- OHW/WL — ORD. HIGH WATER / WETLAND
- WL — WETLAND BOUNDARY
- XX / ?X — IMPACT AREA TYPE ID. (SEE BELOW) / IMPACT AREA ID. AND/OR NUMBER
- O = OPEN WATER IMPACT
- W = WETLAND IMPACT
- T = TEMPORARY IMPACT
- LOC — LIMIT OF CONSTRUCTION
- RPF — RESOURCE PROTECTION FENCE

NOTE:
THERE SHALL BE NO GRUBBING UNDER BRIDGES EXCEPT WHERE NECESSARY TO CONSTRUCT PROJECT COMPONENTS SUCH AS FOUNDATIONS, SLOPE PROTECTION AND UTILITIES.

NOTE:
TEMPORARY WETLAND IMPACTS AT WT1, WT2, WT3, WT4, WT5, WT6, WT7, WT8, WT9, WT10, AND WT11 SHALL BE RESTORED. REFER TO EC NOTE NO.2F FOR ADDITIONAL DETAILS.

TEMPORARY OPEN WATER IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
12-OT1	TEMPORARY ACCESS	185.18	0.0043	13.72	DNREC/USACE
12-OT2	E&S AREA	586.92	0.0135	43.48	DNREC/USACE
12-OT3	E&S AREA	994.37	0.0228	73.66	USACE
12-OT4	E&S AREA	1,408.31	0.0323	104.32	USACE
12-OT5	E&S AREA	1,867.45	0.0429	138.33	DNREC/USACE
12-OT6	TEMPORARY ACCESS	507.52	0.0117	37.59	DNREC/USACE
12-OT7	E&S AREA	704.07	0.0162	52.15	DNREC/USACE
TOTAL DNREC		3,851.14	0.0886	285.27	-
TOTAL USACE		6,253.82	0.1437	463.25	-

TEMPORARY WETLAND IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
12-WT1	E&S AREA	2,192.38	0.0503	N/A	USACE
12-WT2	E&S AREA	600.05	0.0138	N/A	USACE
12-WT3	TEMPORARY ACCESS	1,398.42	0.0321	N/A	USACE
12-WT4	TEMPORARY ACCESS	3,514.73	0.0807	N/A	USACE
12-WT5	TEMPORARY ACCESS	3,443.62	0.0791	N/A	USACE
12-WT6	E&S AREA	181.42	0.0042	N/A	USACE
12-WT7	TEMPORARY ACCESS	1,286.84	0.0295	N/A	USACE
12-WT8	E&S AREA	2,025.83	0.0465	N/A	USACE
12-WT9	TEMPORARY ACCESS	722.77	0.0166	N/A	USACE
12-WT10	TEMPORARY ACCESS	158.12	0.0036	N/A	USACE
12-WT11	TEMPORARY ACCESS	140.86	0.0032	N/A	USACE
TOTAL TEMPORARY WETLAND IMPACTS		15,665.04	0.3596	N/A	USACE

PERMANENT OPEN WATER IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
12-01	SHADING	1,408.31	0.0323	N/A	DNREC
12-02	SHADING	994.37	0.0228	N/A	DNREC
-	-	-	-	-	-
12-04	FILL	157.10	0.0036	11.64	DNREC/USACE
TOTAL DNREC		2,559.78	0.0587	11.64	-
TOTAL USACE		157.10	0.0036	11.64	-

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: AW	JW
COUNTY	CHECKED BY: JF	SF
NEW CASTLE		

ENVIRONMENTAL COMPLIANCE PLAN

EC-12
SHEET NO.
838
TOTAL SHTS.
1256

TEMPORARY WETLAND IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
13-WT1	TEMPORARY ACCESS	7,468.03	0.1714	N/A	USACE
13-WT2	TEMPORARY ACCESS	6,821.54	0.1566	N/A	USACE
13-WT3	E&S AREA	373.30	0.0086	N/A	USACE
13-WT4	E&S AREA	370.47	0.0085	N/A	USACE
13-WT5	E&S AREA	337.98	0.0078	N/A	USACE
13-WT6	E&S AREA	389.73	0.0089	N/A	USACE
13-WT7	TEMPORARY ACCESS	1,923.30	0.0442	N/A	USACE
13-WT8	TEMPORARY ACCESS	1,659.36	0.0381	N/A	USACE
13-WT9	TEMPORARY ACCESS	484.13	0.0111	N/A	USACE
13-WT10	TEMPORARY ACCESS	383.18	0.0088	N/A	USACE
TOTAL TEMPORARY WETLAND IMPACTS		20,211.02	0.4640	N/A	USACE

PERMANENT WETLAND IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
13-W1	SHADING	2,974.54	0.0683	N/A	USACE
13-W2	SHADING	2,436.66	0.0559	N/A	USACE
13-W3	SHADING	587.69	0.0135	N/A	USACE
13-W4	FILL	419.25	0.0096	N/A	USACE
13-W5	SHADING	2,080.89	0.0478	N/A	USACE
-	-	-	-	-	-
13-W7	SHADING	3,076.57	0.0706	N/A	USACE
TOTAL PERMANENT WETLAND IMPACTS		11,575.60	0.2657	N/A	USACE

TEMPORARY OPEN WATER IMPACT AREA SCHEDULE

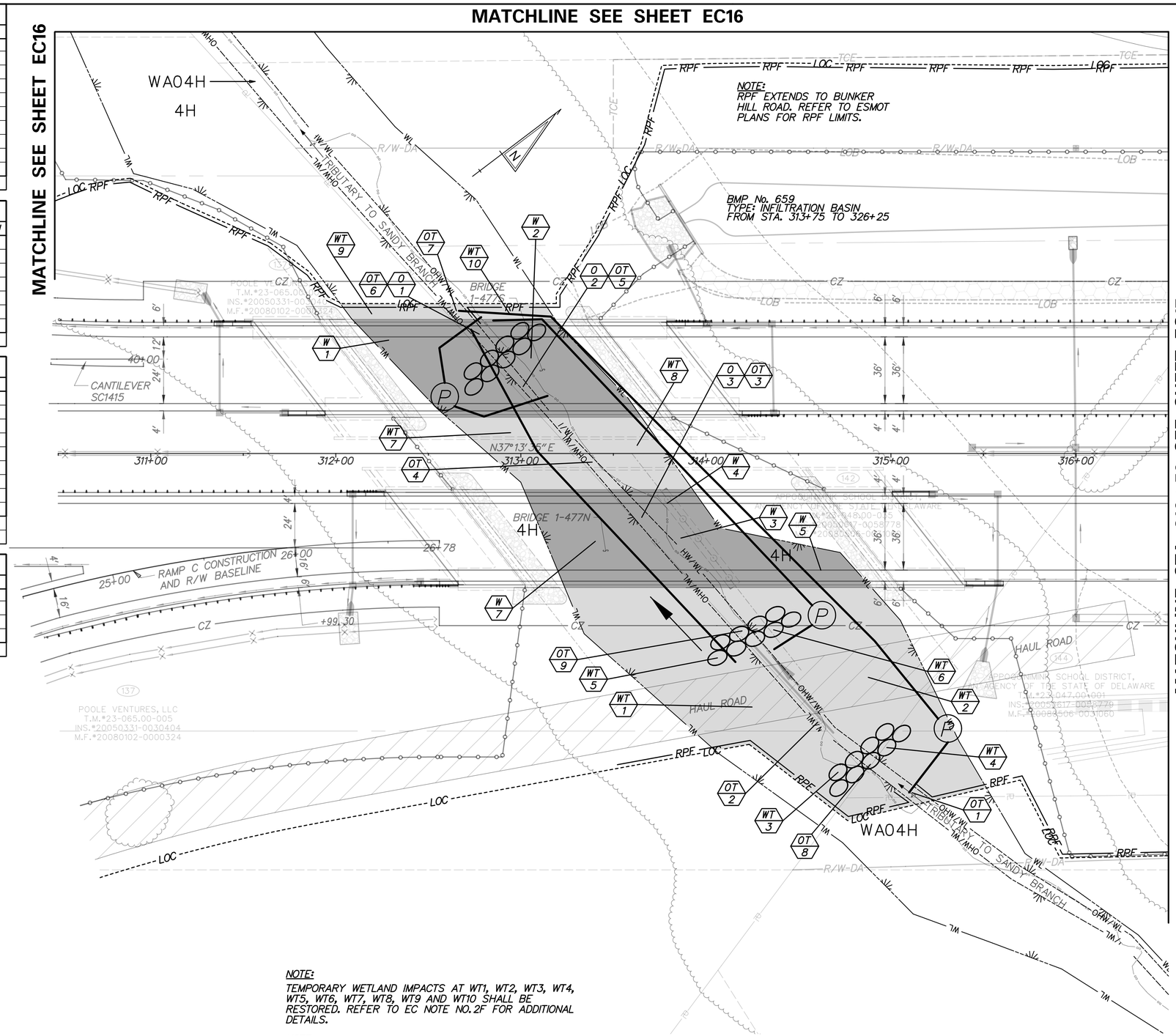
IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
13-OT1	TEMPORARY ACCESS	212.49	0.0049	15.74	DNREC/USACE
13-OT2	E&S AREA	536.19	0.0123	39.72	DNREC/USACE
13-OT3	E&S AREA	532.22	0.0122	39.42	USACE
13-OT4	E&S AREA	208.54	0.0048	15.45	DNREC/USACE
13-OT5	E&S AREA	206.06	0.0047	15.26	USACE
13-OT6	TEMPORARY ACCESS	112.20	0.0026	8.31	USACE
13-OT7	TEMPORARY ACCESS	75.57	0.0017	5.60	DNREC/USACE
13-OT8	E&S AREA	103.83	0.0024	7.69	DNREC/USACE
13-OT9	E&S AREA	334.69	0.0078	24.79	DNREC/USACE
TOTAL DNREC		1,471.31	0.0338	108.99	-
TOTAL USACE		2,321.79	0.0533	171.98	-

PERMANENT OPEN WATER IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
13-01	SHADING	112.20	0.0026	N/A	DNREC
13-02	SHADING	206.06	0.0047	N/A	DNREC
13-03	SHADING	532.22	0.0122	N/A	DNREC
-	-	-	-	-	-
TOTAL PERMANENT OPEN WATER IMPACTS		850.48	0.0195	N/A	DNREC

LEGEND

- TEMPORARY IMPACT AREA
- PERMANENT IMPACT AREA
- OHW — ORDINARY HIGH WATER
- POHW — PROPOSED ORDINARY HIGH WATER
- OHW/WL — ORD. HIGH WATER / WETLAND
- WL — WETLAND BOUNDARY
- XX / 2X — IMPACT AREA TYPE ID. (SEE BELOW) / IMPACT AREA ID. AND/OR NUMBER
- O = OPEN WATER IMPACT
- W = WETLAND IMPACT
- T = TEMPORARY IMPACT
- LOC — LIMIT OF CONSTRUCTION
- RPF — RESOURCE PROTECTION FENCE



NOTE:
TEMPORARY WETLAND IMPACTS AT WT1, WT2, WT3, WT4, WT5, WT6, WT7, WT8, WT9 AND WT10 SHALL BE RESTORED. REFER TO EC NOTE NO.2F FOR ADDITIONAL DETAILS.

NOTE:
THERE SHALL BE NO GRUBBING UNDER BRIDGES EXCEPT WHERE NECESSARY TO CONSTRUCT PROJECT COMPONENTS SUCH AS FOUNDATIONS, SLOPE PROTECTION AND UTILITIES.

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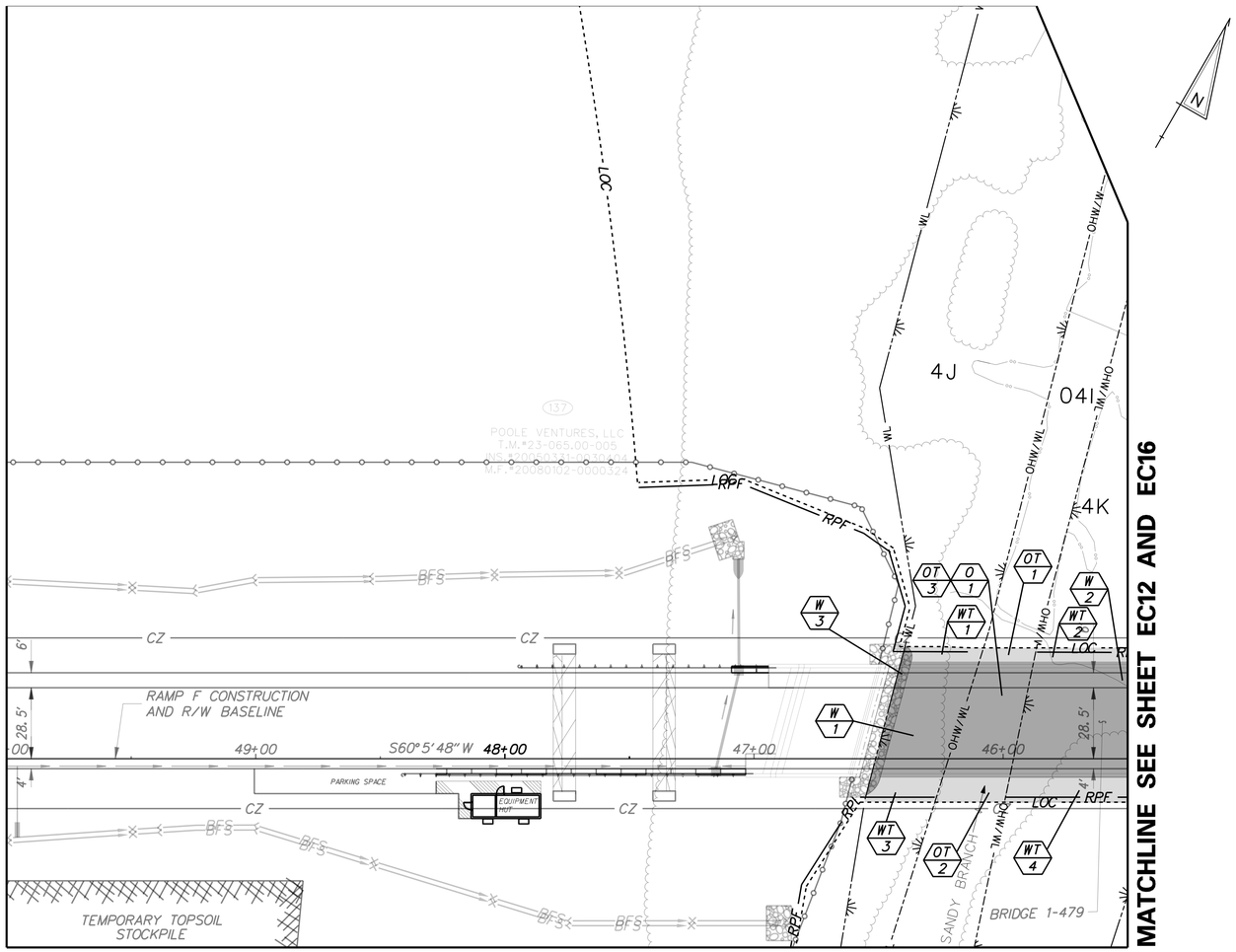
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO.	ENVIRONMENTAL COMPLIANCE PLAN	EC-13
				COUNTY NEW CASTLE	DESIGNED BY: AW JW		SHEET NO. 839
					CHECKED BY: JF SF		TOTAL SHTS. 1256



MATCHLINE SEE SHEET EC12

TEMPORARY OPEN WATER IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
14-OT1	TEMPORARY ACCESS	120.27	0.0028	8.95	DNREC/USACE
14-OT2	TEMPORARY ACCESS	274.07	0.0063	20.40	DNREC/USACE
14-OT3	TEMPORARY ACCESS	1,130.18	0.0259	84.14	USACE
TOTAL DNREC		394.34	0.0091	29.36	-
TOTAL USACE		1,524.52	0.0350	113.49	-

TEMPORARY WETLAND IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
14-WT1	TEMPORARY ACCESS	164.05	0.0038	N/A	USACE
14-WT2	TEMPORARY ACCESS	206.72	0.0047	N/A	USACE
14-WT3	TEMPORARY ACCESS	266.03	0.0061	N/A	USACE
14-WT4	TEMPORARY ACCESS	484.20	0.0111	N/A	USACE
TOTAL TEMPORARY WETLAND IMPACTS		1,121.00	0.0257	N/A	USACE

PERMANENT WETLAND IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
14-W1	SHADING	1,214.43	0.0279	N/A	USACE
14-W2	SHADING	1,973.55	0.0453	N/A	USACE
14-W3	RIPRAP	221.94	0.0051	N/A	USACE
TOTAL PERMANENT WETLAND IMPACTS		3,409.92	0.0783	N/A	USACE

PERMANENT OPEN WATER IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
14-01	SHADING	1,130.18	0.0259	N/A	DNREC
TOTAL DNREC		1,130.18	0.0259	N/A	-

LEGEND

- TEMPORARY IMPACT AREA
- PERMANENT IMPACT AREA
- OHW — ORDINARY HIGH WATER
- POHW — PROPOSED ORDINARY HIGH WATER
- OHW/WL — ORD. HIGH WATER / WETLAND
- WL — WETLAND BOUNDARY
- XX / ?X — IMPACT AREA TYPE ID. (SEE BELOW) / IMPACT AREA ID. AND/OR NUMBER
- O = OPEN WATER IMPACT
- W = WETLAND IMPACT
- T = TEMPORARY IMPACT
- LOC — LIMIT OF CONSTRUCTION
- RPF — RESOURCE PROTECTION FENCE

NOTE:
THERE SHALL BE NO GRUBBING UNDER BRIDGES EXCEPT WHERE NECESSARY TO CONSTRUCT PROJECT COMPONENTS SUCH AS FOUNDATIONS, SLOPE PROTECTION AND UTILITIES.

NOTE:
TEMPORARY WETLAND IMPACTS AT WT1, WT2, WT3, WT4, SHALL BE RESTORED. REFER TO EC NOTE NO.2F FOR ADDITIONAL DETAILS.

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

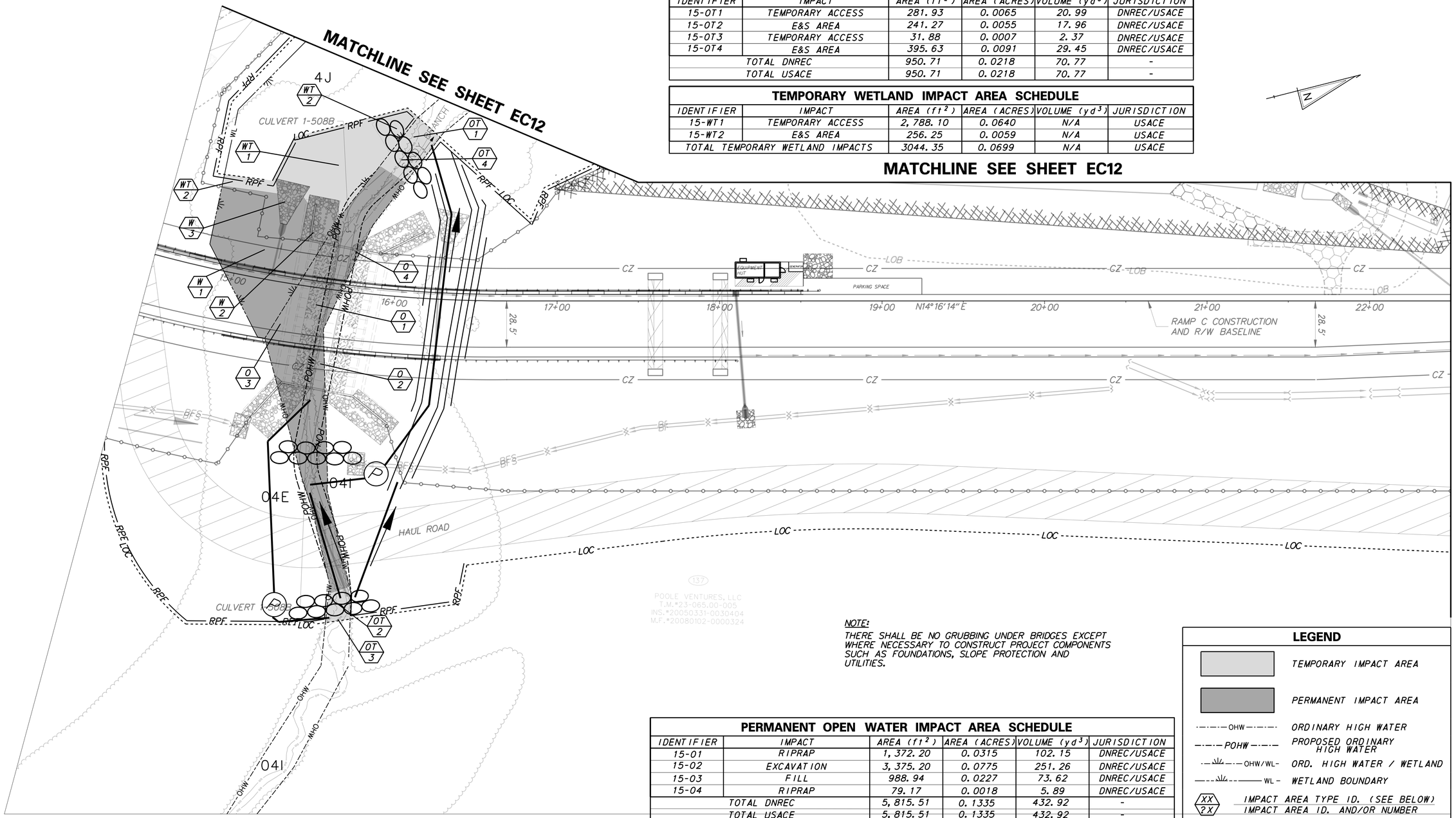
CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: AW	JW
COUNTY	CHECKED BY: JF	SF
NEW CASTLE		

ENVIRONMENTAL COMPLIANCE PLAN

EC-14
SHEET NO. 840
TOTAL SHTS. 1256

TEMPORARY OPEN WATER IMPACT AREA SCHEDULE					
IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
15-OT1	TEMPORARY ACCESS	281.93	0.0065	20.99	DNREC/USACE
15-OT2	E&S AREA	241.27	0.0055	17.96	DNREC/USACE
15-OT3	TEMPORARY ACCESS	31.88	0.0007	2.37	DNREC/USACE
15-OT4	E&S AREA	395.63	0.0091	29.45	DNREC/USACE
TOTAL DNREC		950.71	0.0218	70.77	-
TOTAL USACE		950.71	0.0218	70.77	-

TEMPORARY WETLAND IMPACT AREA SCHEDULE					
IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
15-WT1	TEMPORARY ACCESS	2,788.10	0.0640	N/A	USACE
15-WT2	E&S AREA	256.25	0.0059	N/A	USACE
TOTAL TEMPORARY WETLAND IMPACTS		3044.35	0.0699	N/A	USACE



NOTE:
THERE SHALL BE NO GRUBBING UNDER BRIDGES EXCEPT WHERE NECESSARY TO CONSTRUCT PROJECT COMPONENTS SUCH AS FOUNDATIONS, SLOPE PROTECTION AND UTILITIES.

PERMANENT OPEN WATER IMPACT AREA SCHEDULE					
IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
15-01	RIPRAP	1,372.20	0.0315	102.15	DNREC/USACE
15-02	EXCAVATION	3,375.20	0.0775	251.26	DNREC/USACE
15-03	FILL	988.94	0.0227	73.62	DNREC/USACE
15-04	RIPRAP	79.17	0.0018	5.89	DNREC/USACE
TOTAL DNREC		5,815.51	0.1335	432.92	-
TOTAL USACE		5,815.51	0.1335	432.92	-

PERMANENT WETLAND IMPACT AREA SCHEDULE					
IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
15-W1	FILL	3,747.47	0.0860	N/A	USACE
15-W2	RIPRAP	512.20	0.0118	N/A	USACE
15-W3	RIPRAP	323.20	0.0074	N/A	USACE
TOTAL PERMANENT WETLAND IMPACTS		4,582.87	0.1052	N/A	USACE

NOTE:
TEMPORARY WETLAND IMPACTS AT WT1, SHALL BE RESTORED. REFER TO EC NOTE NO.2F FOR ADDITIONAL DETAILS.

LEGEND

- TEMPORARY IMPACT AREA
- PERMANENT IMPACT AREA
- OHW — ORDINARY HIGH WATER
- POHW — PROPOSED ORDINARY HIGH WATER
- OHW/WL — ORD. HIGH WATER / WETLAND
- WL — WETLAND BOUNDARY
- XX — IMPACT AREA TYPE ID. (SEE BELOW)
- ?X — IMPACT AREA ID. AND/OR NUMBER
- O = OPEN WATER IMPACT
- W = WETLAND IMPACT
- T = TEMPORARY IMPACT
- LOC — LIMIT OF CONSTRUCTION
- RPF — RESOURCE PROTECTION FENCE

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

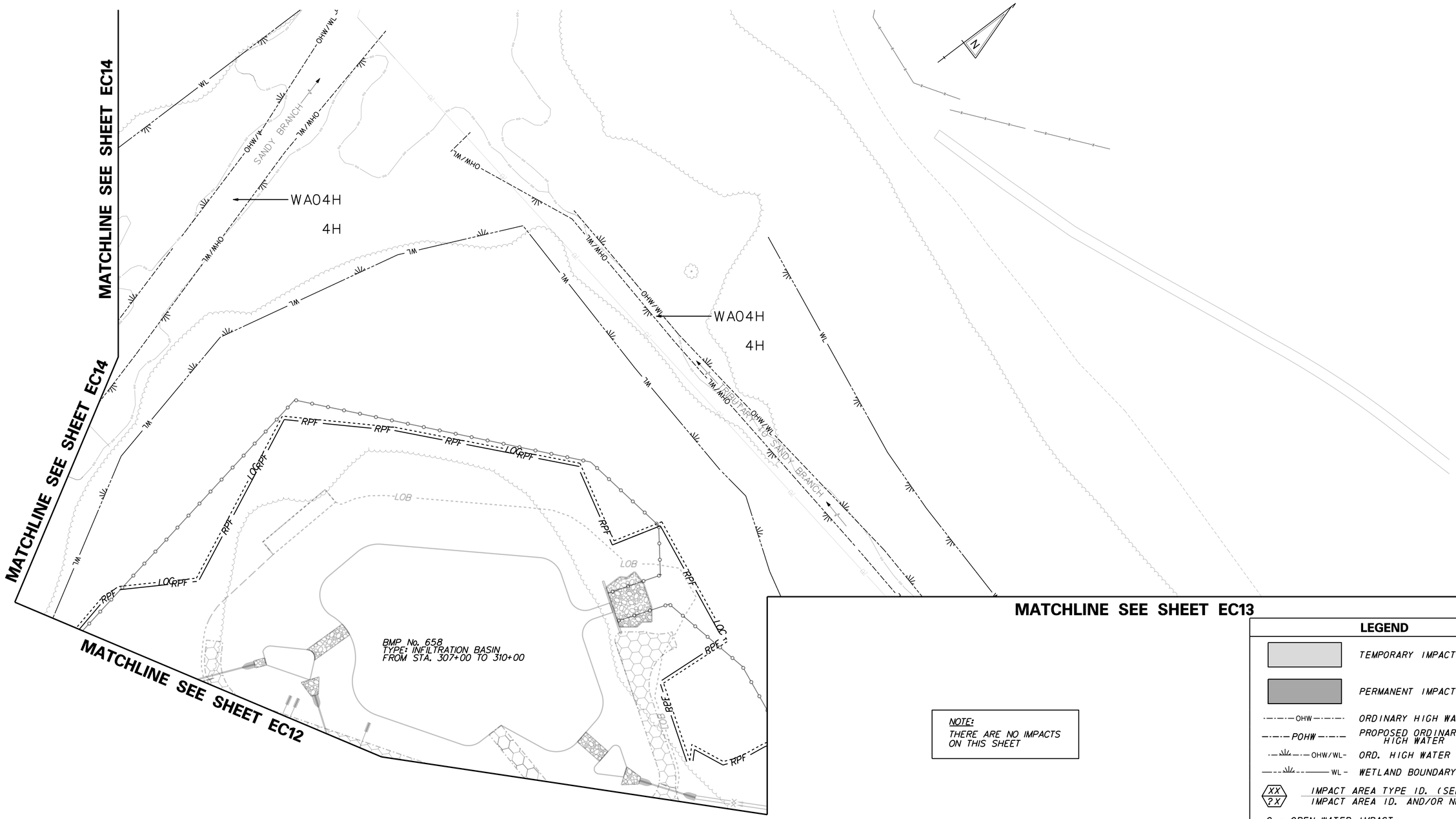
SCALE 0 30 60 90 FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT T200911303
COUNTY NEW CASTLE
BRIDGE NO.
DESIGNED BY: AW JW
CHECKED BY: JF SF

ENVIRONMENTAL COMPLIANCE PLAN

EC-15
SHEET NO. 841
TOTAL SHTS. 1256



NOTE:
THERE ARE NO IMPACTS ON THIS SHEET

LEGEND

	TEMPORARY IMPACT AREA
	PERMANENT IMPACT AREA
OHW	ORDINARY HIGH WATER
POHW	PROPOSED ORDINARY HIGH WATER
OHW/WL	ORD. HIGH WATER / WETLAND
WL	WETLAND BOUNDARY
XX / ?X	IMPACT AREA TYPE ID. (SEE BELOW) / IMPACT AREA ID. AND/OR NUMBER
O = OPEN WATER IMPACT	
W = WETLAND IMPACT	
T = TEMPORARY IMPACT	
LOC	LIMIT OF CONSTRUCTION
RPF	RESOURCE PROTECTION FENCE

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	T200911303
COUNTY	NEW CASTLE
BRIDGE NO.	
DESIGNED BY:	AW
CHECKED BY:	SF

ENVIRONMENTAL COMPLIANCE PLAN

	EC-16
SHEET NO.	842
TOTAL SHTS.	1256

MATCHLINE STA 316+50 SEE SHEET EC13

NOTE:
RPF EXTENDS TO BUNKER HILL ROAD. REFER TO ESMOT PLANS FOR RPF LIMITS.

BMP No. 659
TYPE: INFILTRATION BASIN
FROM STA. 313+75 TO 326+25

US 301 CONSTRUCTION AND R/W BASELINE

N37°13' 35" E

317+00 318+00 319+00 320+00 321+00 322+00

+50.00

SEE UTILITY RELOCATION PLANS

APPOQUINIMINK SCHOOL DISTRICT, AN AGENCY OF THE STATE OF DELAWARE
T.M.#23-047.00-001
INS.#20050617-0058779
M.F.#20080506-0031060

SPRING ARBOR HOMES, LP
T.M.#23-048.00-033
INS.#20050531-0051086
M.F.#20060726-0071031

LEGEND

	TEMPORARY IMPACT AREA
	PERMANENT IMPACT AREA
OHW	ORDINARY HIGH WATER
POHW	PROPOSED ORDINARY HIGH WATER
OHW/WL	ORD. HIGH WATER / WETLAND
WL	WETLAND BOUNDARY
XX / ?X	IMPACT AREA TYPE ID. (SEE BELOW) / IMPACT AREA ID. AND/OR NUMBER
O = OPEN WATER IMPACT	
W = WETLAND IMPACT	
T = TEMPORARY IMPACT	
LOC	LIMIT OF CONSTRUCTION
RPF	RESOURCE PROTECTION FENCE

NOTE:
THERE ARE NO IMPACTS ON THIS SHEET

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

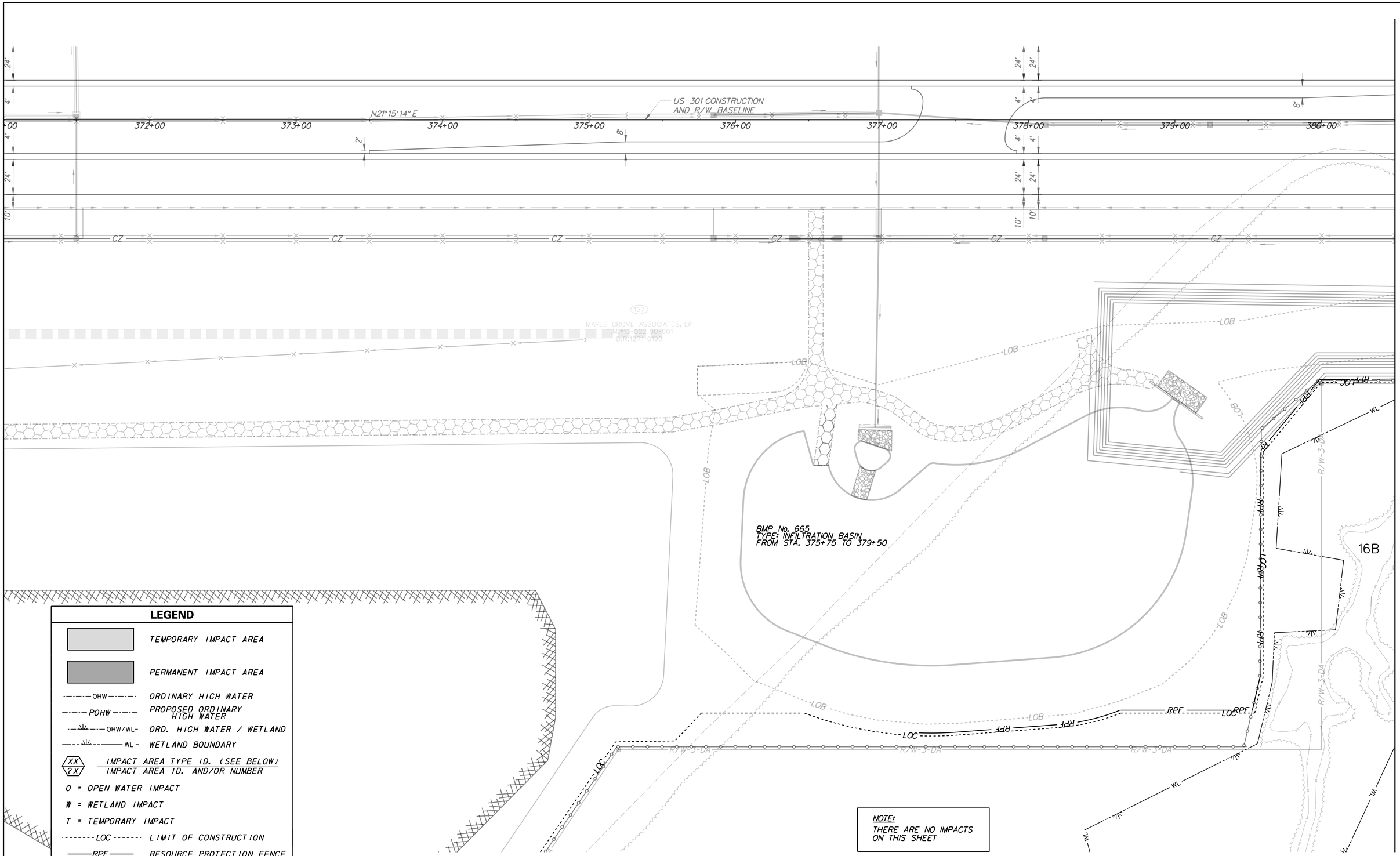
SCALE 0 30 60 90 FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	AW
COUNTY	CHECKED BY:	SF
NEW CASTLE		

ENVIRONMENTAL COMPLIANCE PLAN

EC-17	
SHEET NO.	843
TOTAL SHTS.	1256



LEGEND

	TEMPORARY IMPACT AREA
	PERMANENT IMPACT AREA
OHW	ORDINARY HIGH WATER
POHW	PROPOSED ORDINARY HIGH WATER
OHW/WL	ORD. HIGH WATER / WETLAND
WL	WETLAND BOUNDARY
XX / ?X	IMPACT AREA TYPE ID. (SEE BELOW) / IMPACT AREA ID. AND/OR NUMBER
O = OPEN WATER IMPACT	
W = WETLAND IMPACT	
T = TEMPORARY IMPACT	
LOC	LIMIT OF CONSTRUCTION
RPF	RESOURCE PROTECTION FENCE

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

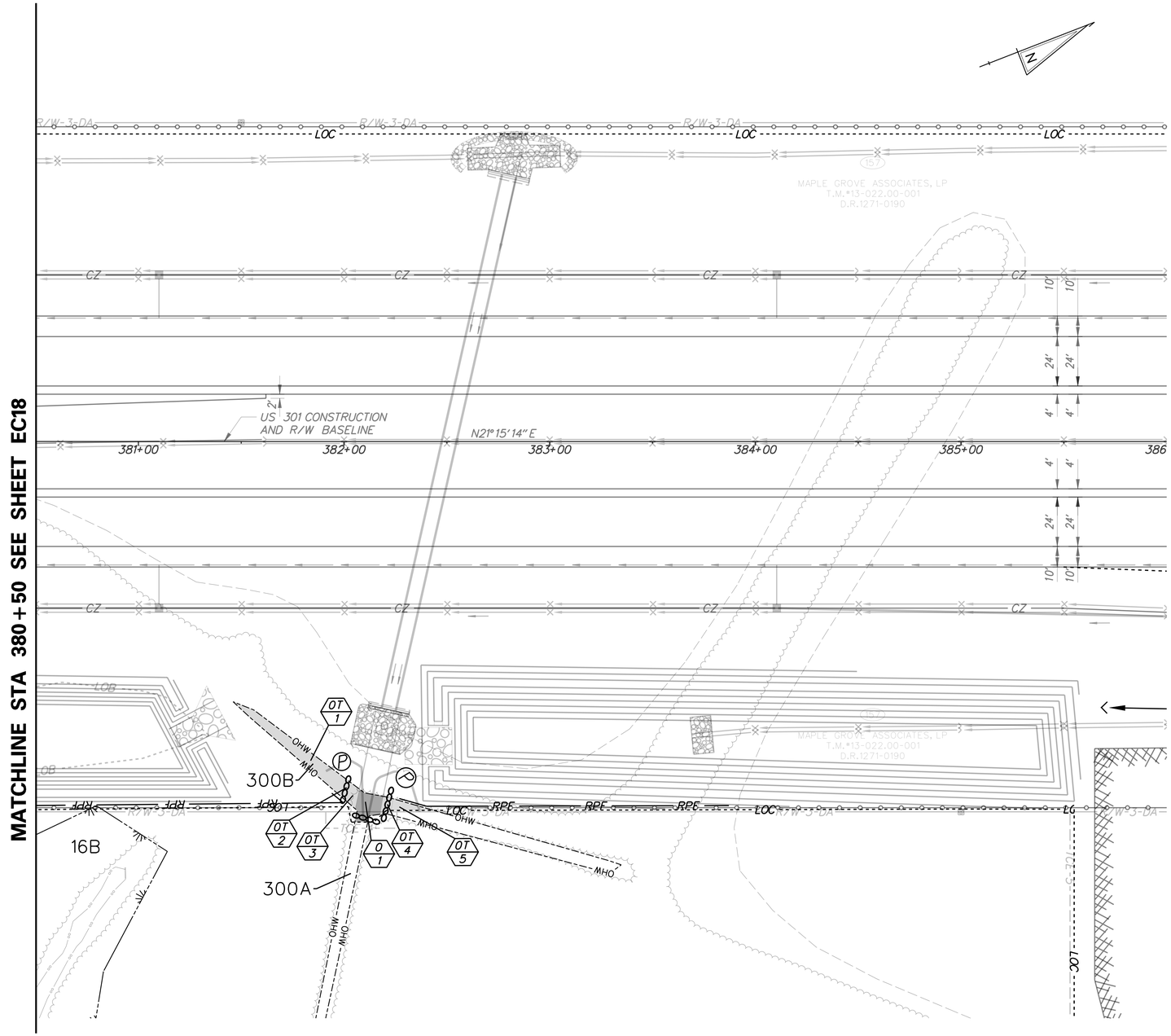
CONTRACT	T200911303
COUNTY	NEW CASTLE
BRIDGE NO.	
DESIGNED BY: AW	JW
CHECKED BY: JF	SF

ENVIRONMENTAL COMPLIANCE PLAN

	EC-18
SHEET NO.	844
TOTAL SHTS.	1256

LEGEND

- TEMPORARY IMPACT AREA
- PERMANENT IMPACT AREA
- OHW — ORDINARY HIGH WATER
- POHW — PROPOSED ORDINARY HIGH WATER
- OHW/WL — ORD. HIGH WATER / WETLAND
- WL — WETLAND BOUNDARY
- XX / ?X — IMPACT AREA TYPE ID. (SEE BELOW) / IMPACT AREA ID. AND/OR NUMBER
- O = OPEN WATER IMPACT
- W = WETLAND IMPACT
- T = TEMPORARY IMPACT
- LOC — LIMIT OF CONSTRUCTION
- RPF — RESOURCE PROTECTION FENCE



PERMANENT OPEN WATER IMPACT AREA SCHEDULE					
IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
19-01	EXCAVATION	147.16	0.0034	10.96	DNREC
TOTAL DNREC		147.16	0.0034	10.96	-

TEMPORARY OPEN WATER IMPACT AREA SCHEDULE					
IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
19-OT1	TEMPORARY ACCESS	364.28	0.0084	27.12	DNREC
19-OT2	E&S AREA	27.72	0.0006	2.06	DNREC
19-OT3	TEMPORARY ACCESS	49.90	0.0011	3.71	DNREC
19-OT4	E&S AREA	35.58	0.0008	2.65	DNREC
19-OT5	TEMPORARY ACCESS	58.86	0.0014	4.38	DNREC
TOTAL DNREC		536.34	0.0123	39.93	-

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT T200911303 | COUNTY NEW CASTLE | BRIDGE NO. | DESIGNED BY: AW | CHECKED BY: SF

ENVIRONMENTAL COMPLIANCE PLAN

EC-19 | SHEET NO. 845 | TOTAL SHTS. 1256

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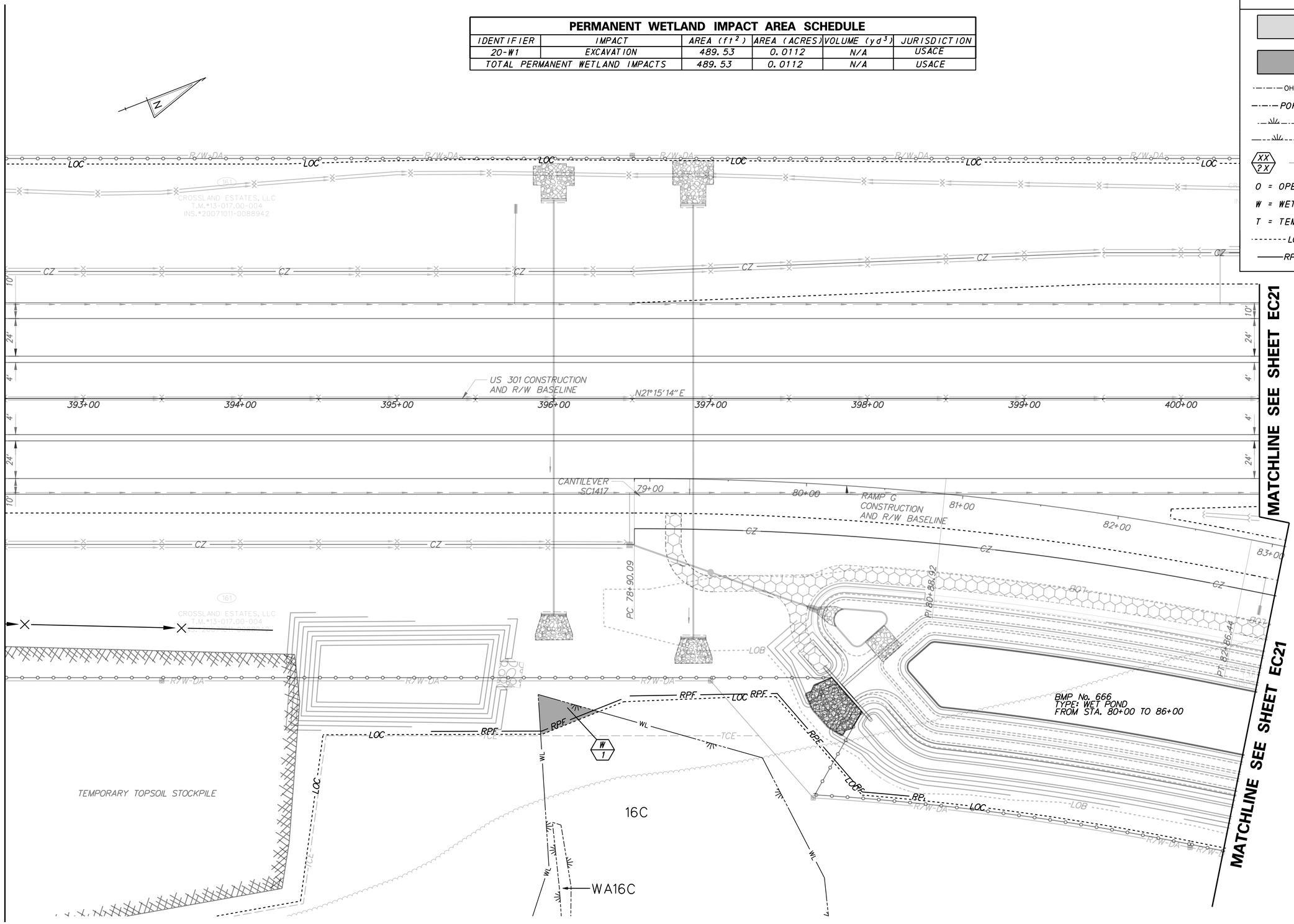
PERMANENT WETLAND IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
20-W1	EXCAVATION	489.53	0.0112	N/A	USACE
TOTAL PERMANENT WETLAND IMPACTS		489.53	0.0112	N/A	USACE



LEGEND

- TEMPORARY IMPACT AREA
- PERMANENT IMPACT AREA
- OHW — ORDINARY HIGH WATER
- POHW — PROPOSED ORDINARY HIGH WATER
- OHW/WL — ORD. HIGH WATER / WETLAND
- WL — WETLAND BOUNDARY
- XX / 2X — IMPACT AREA TYPE ID. (SEE BELOW) / IMPACT AREA ID. AND/OR NUMBER
- O = OPEN WATER IMPACT
- W = WETLAND IMPACT
- T = TEMPORARY IMPACT
- LOC — LIMIT OF CONSTRUCTION
- RPF — RESOURCE PROTECTION FENCE

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: AW	JW
COUNTY	CHECKED BY: JF	SF
NEW CASTLE		

ENVIRONMENTAL COMPLIANCE PLAN

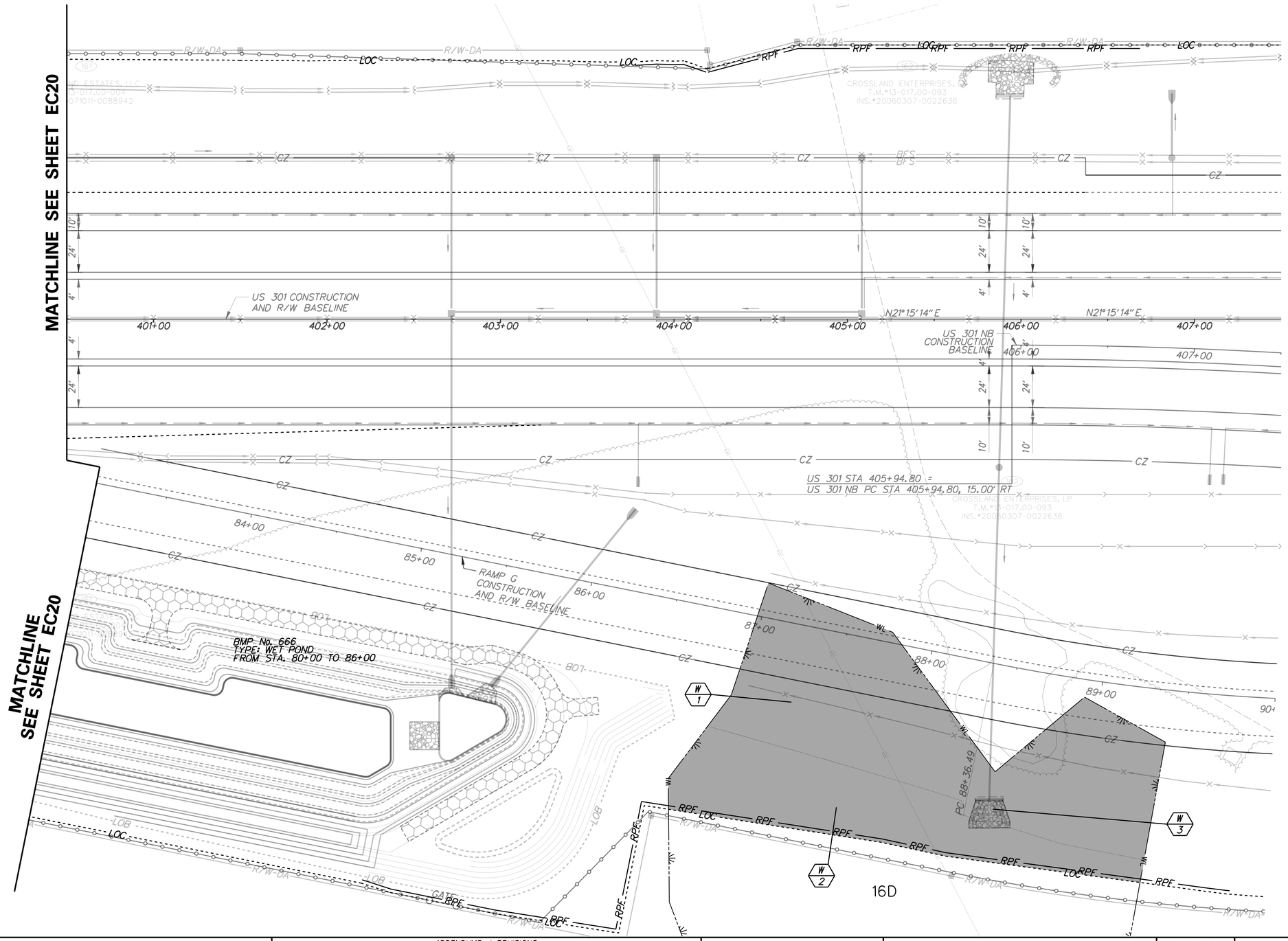
EC-20
SHEET NO.
846
TOTAL SHTS.
1256

PERMANENT WETLAND IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
21-W1	FILL	17,052.88	0.3915	N/A	USACE
21-W2	EXCAVATION	8,768.82	0.2013	N/A	USACE
21-W3	RIPRAP	329.02	0.0076	N/A	USACE
TOTAL PERMANENT WETLAND IMPACTS		26,150.72	0.6003	N/A	USACE

LEGEND

- TEMPORARY IMPACT AREA
- PERMANENT IMPACT AREA
- OHW — ORDINARY HIGH WATER
- POHW — PROPOSED ORDINARY HIGH WATER
- OHW/WL — ORD. HIGH WATER / WETLAND
- WL — WETLAND BOUNDARY
- XX / ?X — IMPACT AREA TYPE ID. (SEE BELOW) / IMPACT AREA ID. AND/OR NUMBER
- O = OPEN WATER IMPACT
- W = WETLAND IMPACT
- T = TEMPORARY IMPACT
- LOC — LIMIT OF CONSTRUCTION
- RPF — RESOURCE PROTECTION FENCE



DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: AW	JW
COUNTY	CHECKED BY: JF	SF
NEW CASTLE		

ENVIRONMENTAL COMPLIANCE PLAN

EC-21
SHEET NO.
847
TOTAL SHTS.
1256

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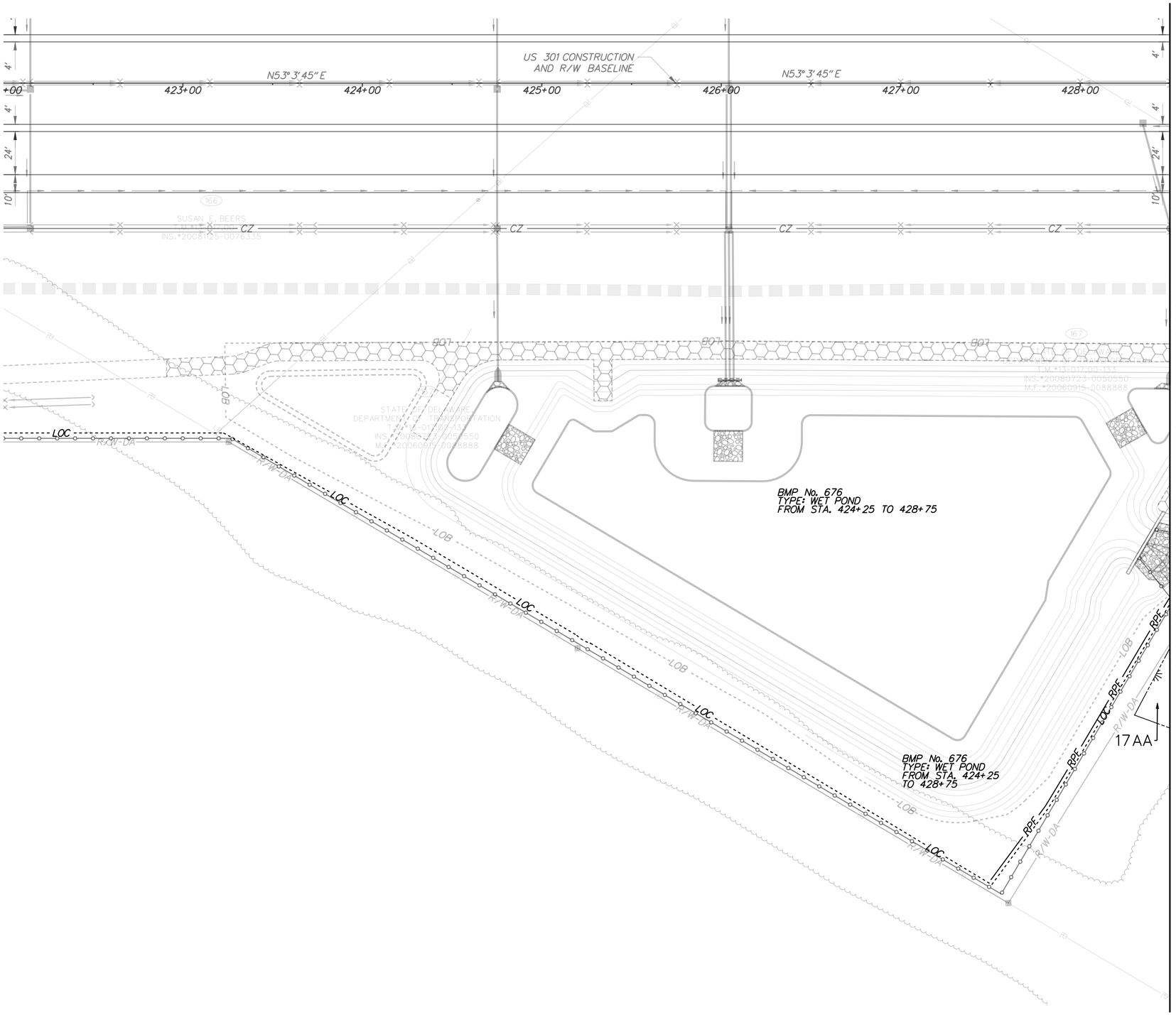

MATCHLINE STA 428+50 SEE SHEET EC23

LEGEND

	TEMPORARY IMPACT AREA
	PERMANENT IMPACT AREA
OHW	ORDINARY HIGH WATER
POHW	PROPOSED ORDINARY HIGH WATER
OHW/WL	ORD. HIGH WATER / WETLAND
WL	WETLAND BOUNDARY
XX / ?X	IMPACT AREA TYPE ID. (SEE BELOW) / IMPACT AREA ID. AND/OR NUMBER
O = OPEN WATER IMPACT	
W = WETLAND IMPACT	
T = TEMPORARY IMPACT	
LOC	LIMIT OF CONSTRUCTION
RPF	RESOURCE PROTECTION FENCE

NOTE:
THERE ARE NO IMPACTS ON THIS SHEET

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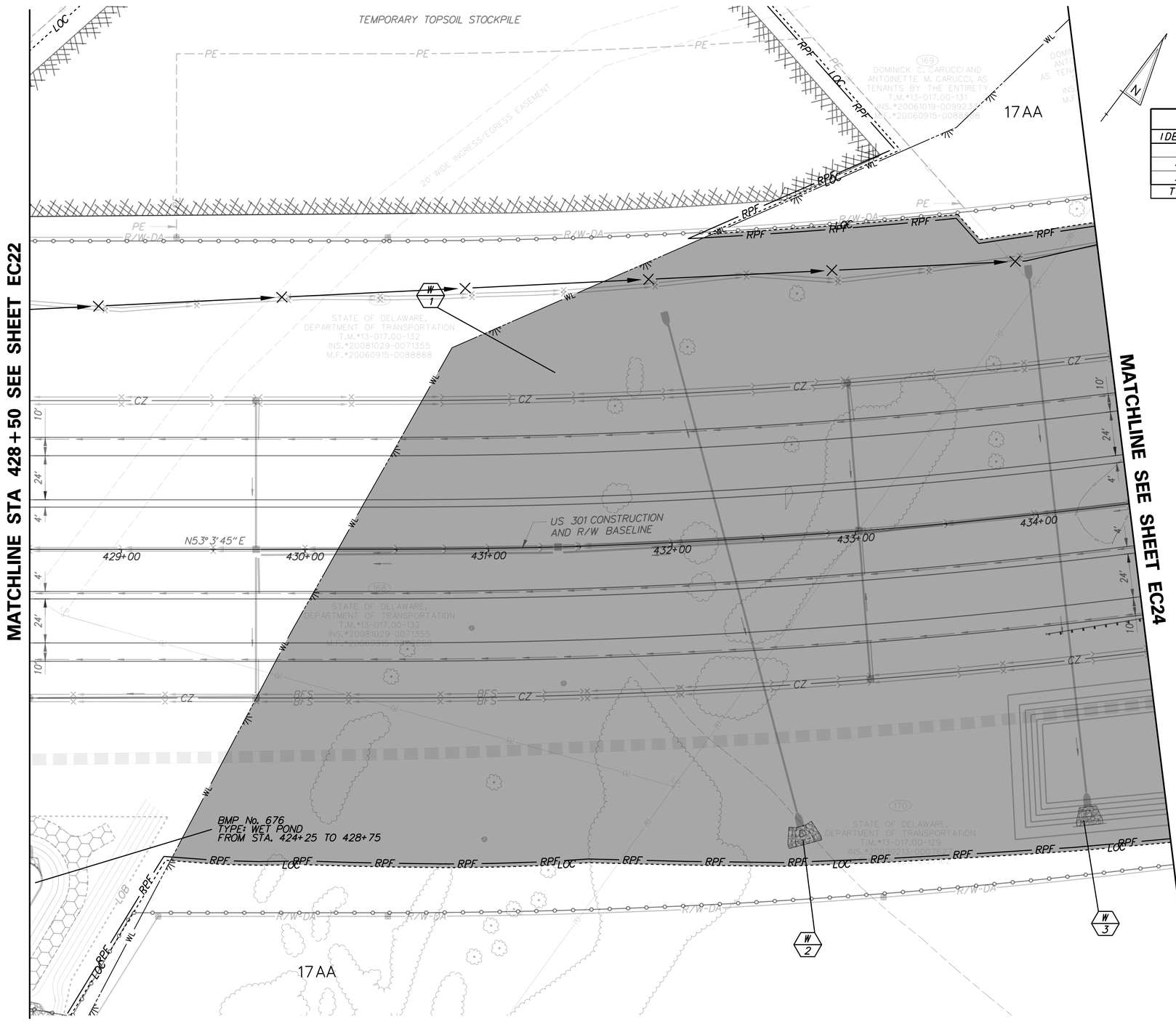
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO.	ENVIRONMENTAL COMPLIANCE PLAN
				COUNTY NEW CASTLE	DESIGNED BY: AW	
					CHECKED BY: SF	

EC-22
SHEET NO. 848
TOTAL SHTS. 1256



PERMANENT WETLAND IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
23-W1	FILL	145,195.59	3.3332	N/A	USACE
23-W2	RIPRAP	170.94	0.0039	N/A	USACE
23-W3	RIPRAP	124.15	0.0029	N/A	USACE
TOTAL PERMANENT WETLAND IMPACTS		145,490.68	3.3400	N/A	USACE

LEGEND

- TEMPORARY IMPACT AREA
- PERMANENT IMPACT AREA
- OHW — ORDINARY HIGH WATER
- POHW — PROPOSED ORDINARY HIGH WATER
- OHW/WL — ORD. HIGH WATER / WETLAND
- WL — WETLAND BOUNDARY
- XX / ?X — IMPACT AREA TYPE ID. (SEE BELOW) / IMPACT AREA ID. AND/OR NUMBER
- O = OPEN WATER IMPACT
- W = WETLAND IMPACT
- T = TEMPORARY IMPACT
- LOC — LIMIT OF CONSTRUCTION
- RPF — RESOURCE PROTECTION FENCE

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

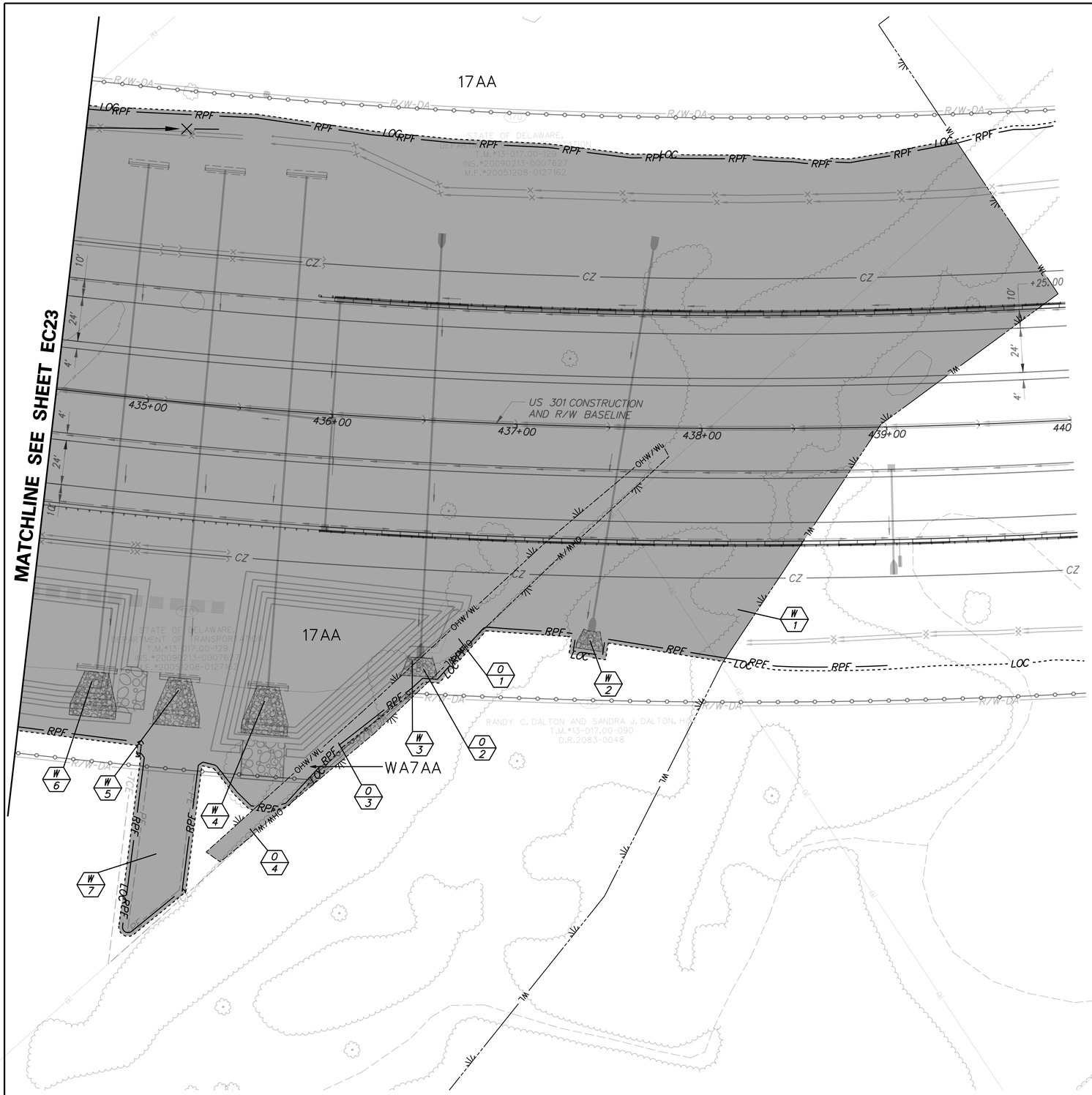
SCALE 0 30 60 90 FEET

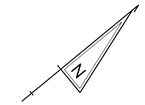
US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: AW	JW
COUNTY	CHECKED BY: JF	SF
NEW CASTLE		

ENVIRONMENTAL COMPLIANCE PLAN

EC-23
SHEET NO. 849
TOTAL SHTS. 1256





LEGEND

	TEMPORARY IMPACT AREA
	PERMANENT IMPACT AREA
OHW	ORDINARY HIGH WATER
POHW	PROPOSED ORDINARY HIGH WATER
OHW/WL	ORD. HIGH WATER / WETLAND
WL	WETLAND BOUNDARY
XX / ?X	IMPACT AREA TYPE ID. (SEE BELOW) / IMPACT AREA ID. AND/OR NUMBER
O = OPEN WATER IMPACT	
W = WETLAND IMPACT	
T = TEMPORARY IMPACT	
LOC	LIMIT OF CONSTRUCTION
RPF	RESOURCE PROTECTION FENCE

PERMANENT OPEN WATER IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
24-01	FILL	1,791.06	0.0411	65.67	USACE
24-02	RIPRAP	127.82	0.0029	4.69	USACE
24-03	FILL	990.66	0.0227	36.32	USACE
24-04	NON-VIABLE REMNANT	704.53	0.0162	25.83	USACE
TOTAL USACE		3,614.07	0.0830	132.52	-

PERMANENT WETLAND IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
24-W1	FILL	129,084.74	2.9634	N/A	USACE
24-W2	RIPRAP	124.75	0.0029	N/A	USACE
24-W3	RIPRAP	36.99	0.0008	N/A	USACE
24-W4	RIPRAP	519.24	0.0119	N/A	USACE
24-W5	RIPRAP	519.24	0.0119	N/A	USACE
24-W6	RIPRAP	498.77	0.0115	N/A	USACE
24-W7	EXCAVATION	9,326.11	0.2141	N/A	USACE
TOTAL PERMANENT WETLAND IMPACTS		140,109.84	3.2165	N/A	USACE

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

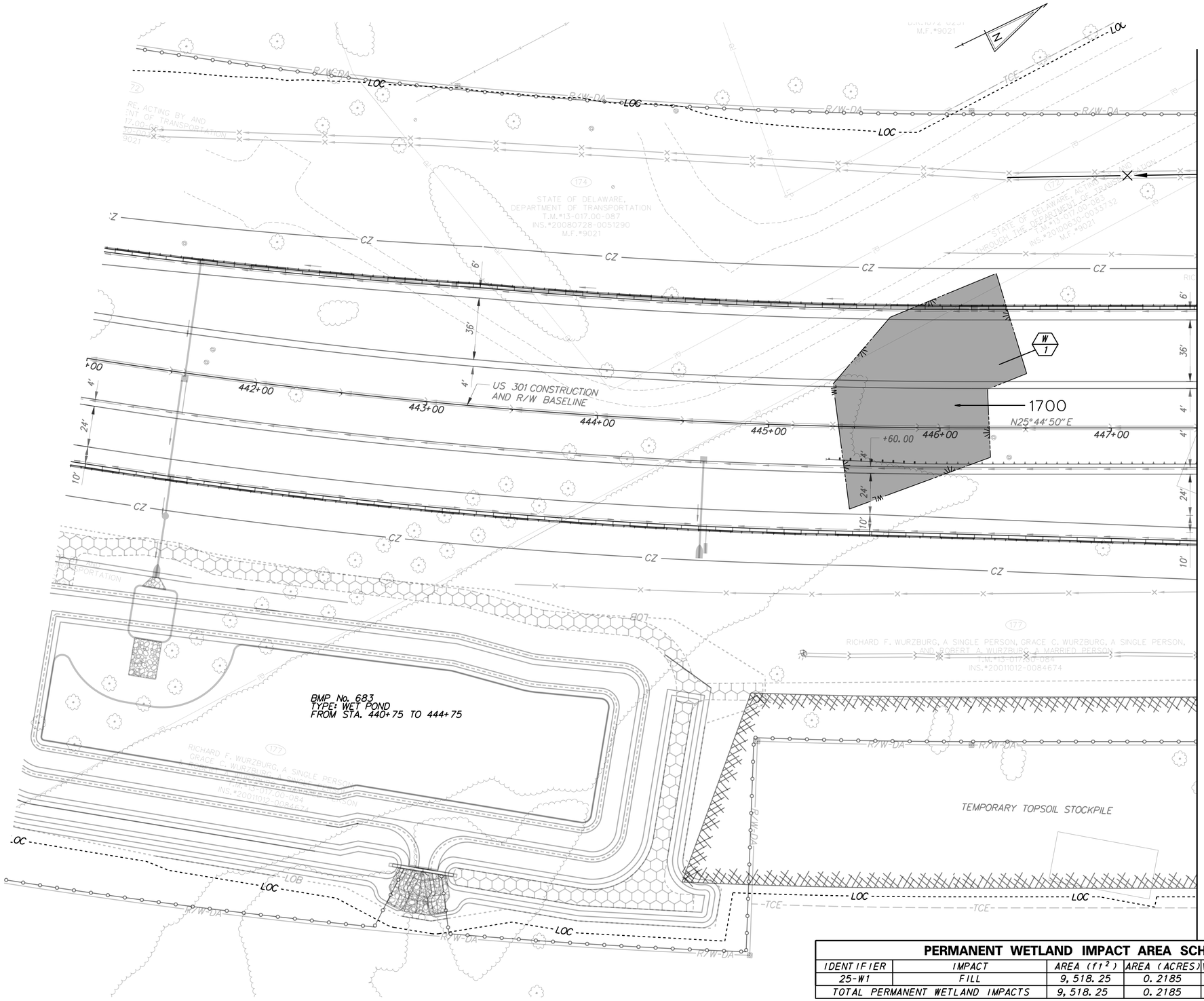
SCALE 0 30 60 90 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	T200911303
COUNTY	NEW CASTLE
BRIDGE NO.	
DESIGNED BY:	AW JW
CHECKED BY:	JF SF

ENVIRONMENTAL COMPLIANCE PLAN

	EC-24
SHEET NO.	850
TOTAL SHTS.	1256



LEGEND

	TEMPORARY IMPACT AREA
	PERMANENT IMPACT AREA
OHW	ORDINARY HIGH WATER
POHW	PROPOSED ORDINARY HIGH WATER
OHW/WL	ORD. HIGH WATER / WETLAND
WL	WETLAND BOUNDARY
XX / ?X	IMPACT AREA TYPE ID. (SEE BELOW) / IMPACT AREA ID. AND/OR NUMBER
O = OPEN WATER IMPACT	
W = WETLAND IMPACT	
T = TEMPORARY IMPACT	
LOC	LIMIT OF CONSTRUCTION
RPF	RESOURCE PROTECTION FENCE

PERMANENT WETLAND IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
25-W1	FILL	9,518.25	0.2185	N/A	USACE
TOTAL PERMANENT WETLAND IMPACTS		9,518.25	0.2185	N/A	USACE

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

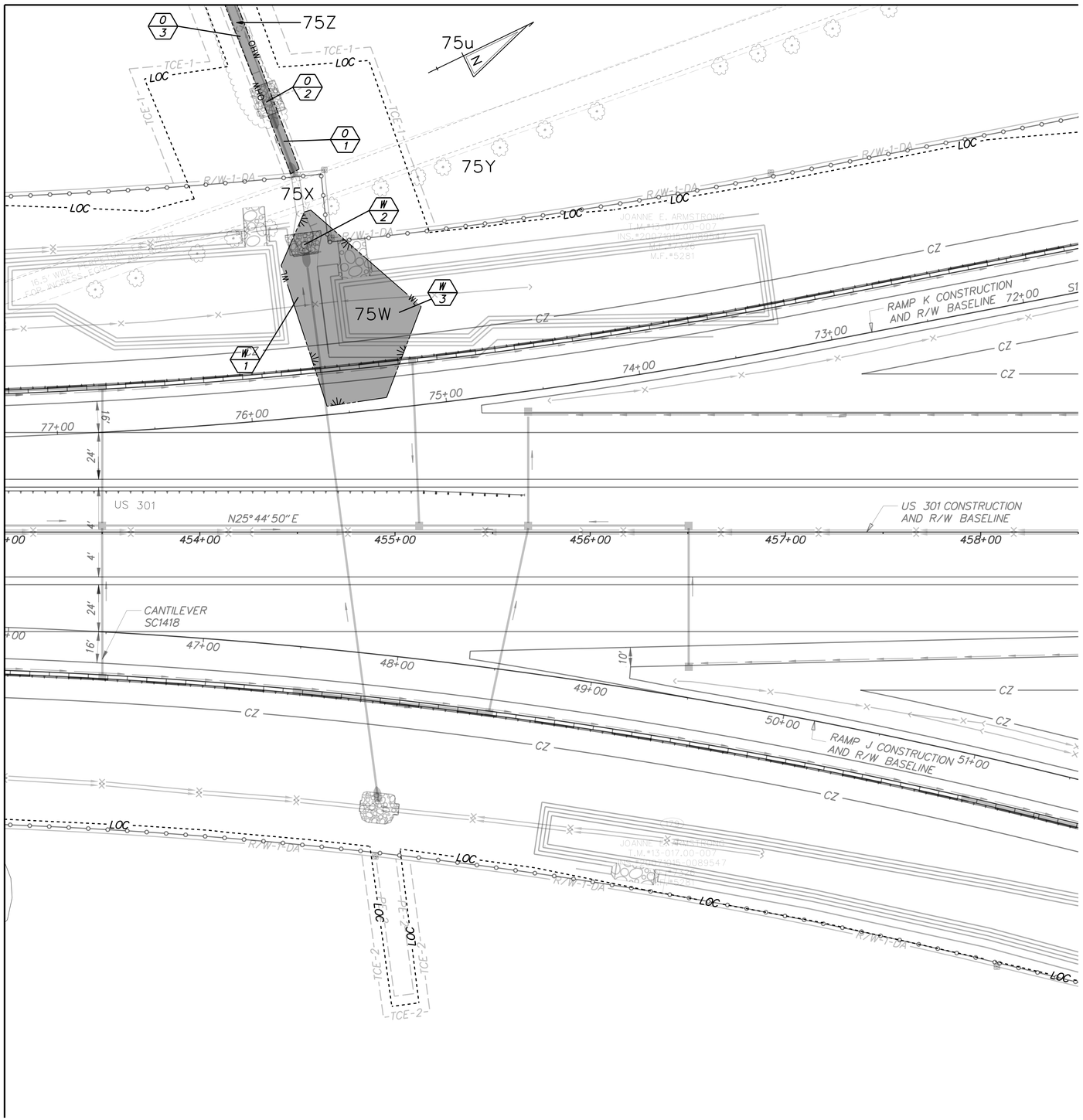
US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT T200911303
COUNTY NEW CASTLE
BRIDGE NO.
DESIGNED BY: AW JW
CHECKED BY: JF SF

ENVIRONMENTAL COMPLIANCE PLAN

EC-25
SHEET NO. 851
TOTAL SHTS. 1256

MATCHLINE SEE SHEET EC27



LEGEND

	TEMPORARY IMPACT AREA
	PERMANENT IMPACT AREA
—·—·— OHW —·—·—	ORDINARY HIGH WATER
—·—·— POHW —·—·—	PROPOSED ORDINARY HIGH WATER
—·—·— OHW/WL —	ORD. HIGH WATER / WETLAND
— — — WL —	WETLAND BOUNDARY
XX / ?X	IMPACT AREA TYPE ID. (SEE BELOW) / IMPACT AREA ID. AND/OR NUMBER
O = OPEN WATER IMPACT	
W = WETLAND IMPACT	
T = TEMPORARY IMPACT	
·····LOC·····	LIMIT OF CONSTRUCTION
——RPF——	RESOURCE PROTECTION FENCE

PERMANENT OPEN WATER IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
26-01	EXCAVATION	161.95	0.0037	12.06	USACE
26-02	RIPRAP	87.02	0.0020	6.48	USACE
26-03	EXCAVATION	250.22	0.0057	18.63	USACE
TOTAL USACE		499.19	0.0115	37.16	-

PERMANENT WETLAND IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
26-W1	FILL	1,630.42	0.0374	N/A	USACE
26-W2	RIPRAP	165.13	0.0038	N/A	USACE
26-W3	EXCAVATION	2,430.00	0.0558	N/A	USACE
TOTAL PERMANENT WETLAND IMPACTS		4,225.55	0.0970	N/A	USACE

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

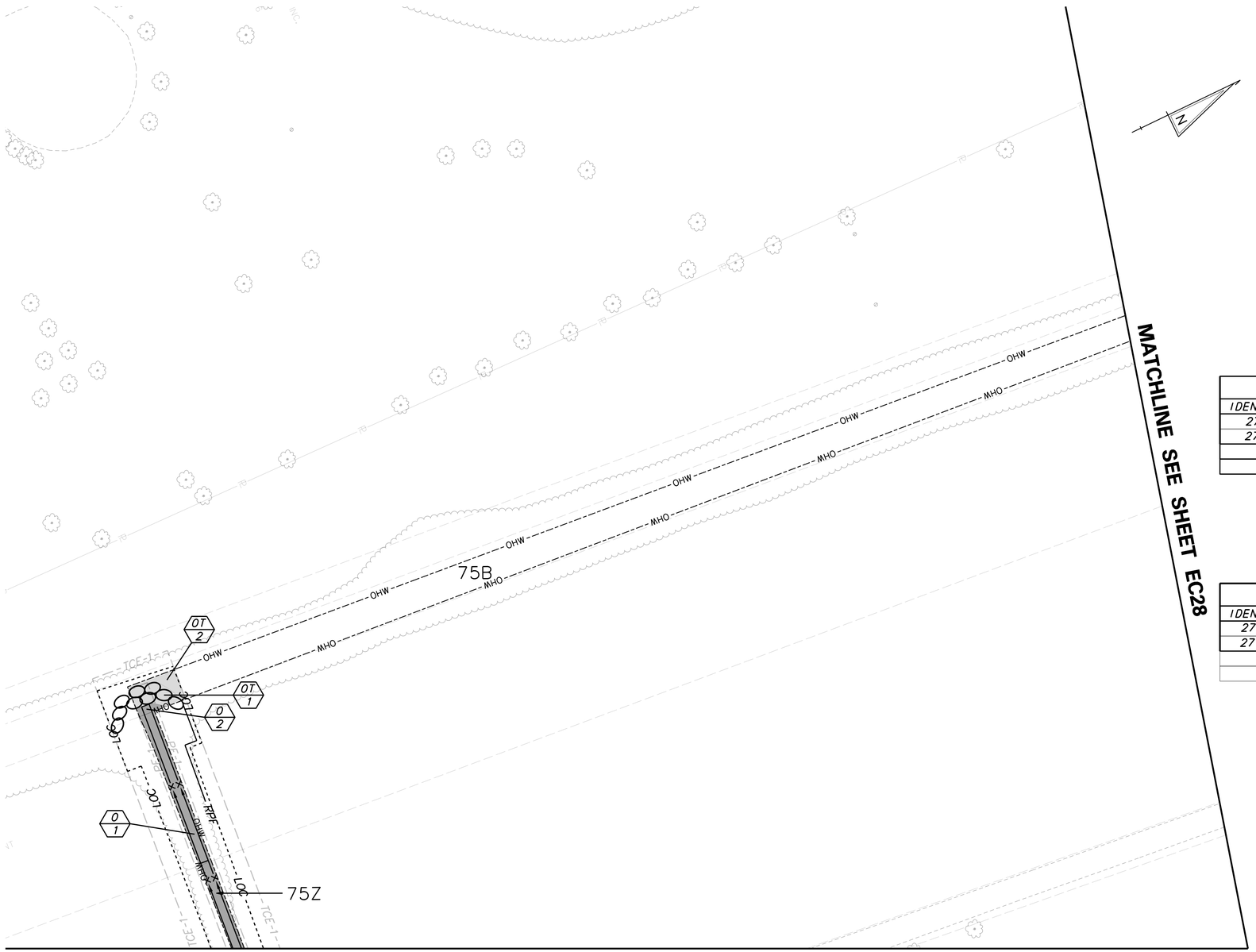
CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: AW	JW
COUNTY	CHECKED BY: JF	SF
NEW CASTLE		

ENVIRONMENTAL COMPLIANCE PLAN

EC-26

SHEET NO. 852

TOTAL SHTS. 1256



LEGEND

	TEMPORARY IMPACT AREA
	PERMANENT IMPACT AREA
OHW	ORDINARY HIGH WATER
POHW	PROPOSED ORDINARY HIGH WATER
OHW/WL	ORD. HIGH WATER / WETLAND
WL	WETLAND BOUNDARY
XX / ?X	IMPACT AREA TYPE ID. (SEE BELOW) / IMPACT AREA ID. AND/OR NUMBER
O = OPEN WATER IMPACT	
W = WETLAND IMPACT	
T = TEMPORARY IMPACT	
LOC	LIMIT OF CONSTRUCTION
RPF	RESOURCE PROTECTION FENCE

PERMANENT OPEN WATER IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
27-01	EXCAVATION	834.37	0.0192	62.11	USACE
27-02	EXCAVATION	48.40	0.0011	3.60	DNREC/USACE
TOTAL DNREC		48.40	0.0011	3.60	-
TOTAL USACE		882.77	0.0203	65.71	-

TEMPORARY OPEN WATER IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
27-OT1	E&S AREA	229.58	0.0053	17.09	DNREC/USACE
27-OT2	TEMPORARY ACCESS	115.67	0.0027	8.61	DNREC/USACE
TOTAL DNREC		345.25	0.0080	25.70	-
TOTAL USACE		345.25	0.0080	25.70	-

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

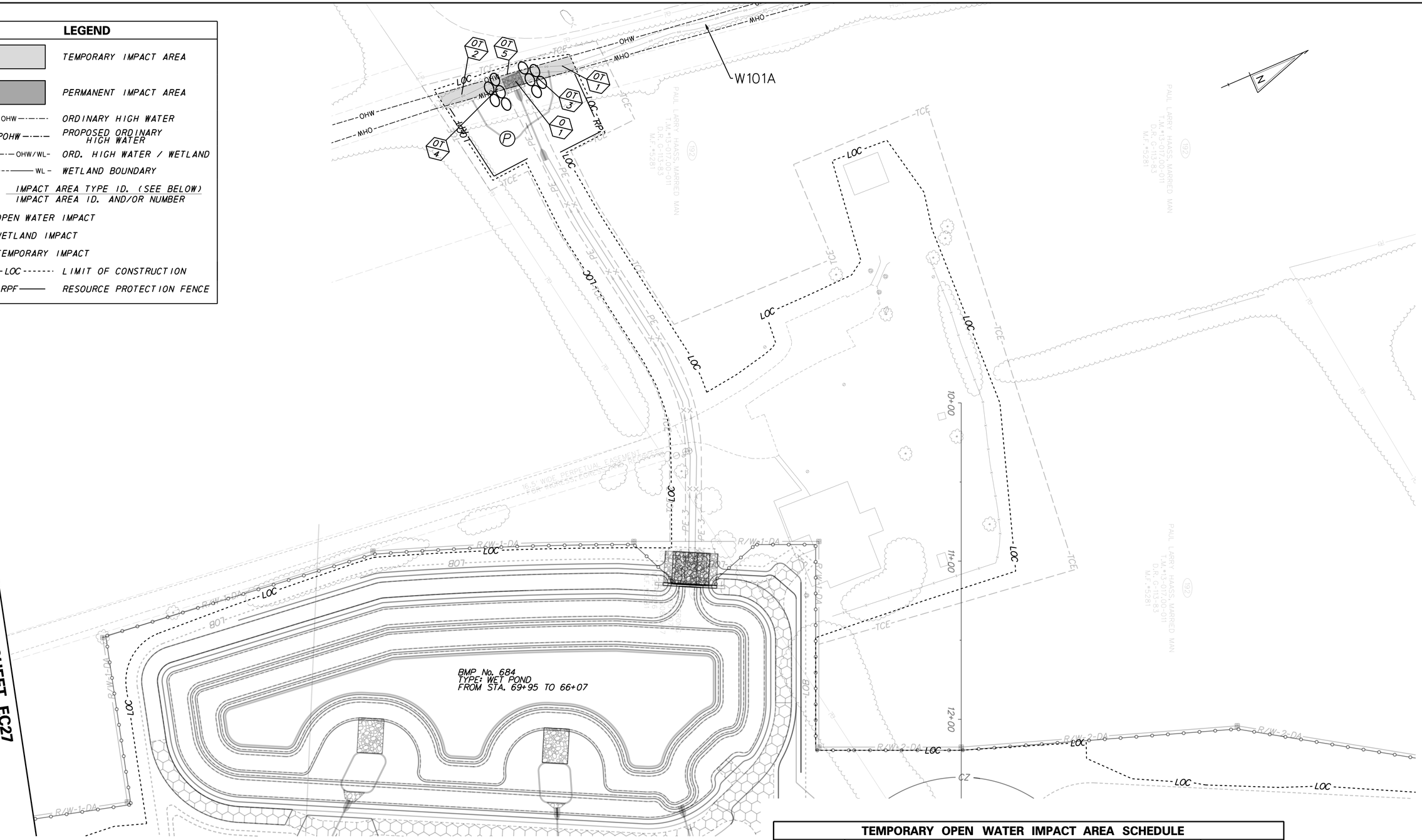
CONTRACT T200911303
COUNTY NEW CASTLE
BRIDGE NO.
DESIGNED BY: AW
CHECKED BY: SF

ENVIRONMENTAL COMPLIANCE PLAN

EC-27
SHEET NO. 853
TOTAL SHTS. 1256

LEGEND

	TEMPORARY IMPACT AREA
	PERMANENT IMPACT AREA
OHW	ORDINARY HIGH WATER
POHW	PROPOSED ORDINARY HIGH WATER
OHW/WL	ORD. HIGH WATER / WETLAND
WL	WETLAND BOUNDARY
XX / ?X	IMPACT AREA TYPE ID. (SEE BELOW) / IMPACT AREA ID. AND/OR NUMBER
O = OPEN WATER IMPACT	
W = WETLAND IMPACT	
T = TEMPORARY IMPACT	
LOC	LIMIT OF CONSTRUCTION
RPF	RESOURCE PROTECTION FENCE



PERMANENT OPEN WATER IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
28-01	RIPRAP	90.64	0.0021	6.75	DNREC/USACE
TOTAL DNREC & USACE		90.64	0.0021	6.75	-

TEMPORARY OPEN WATER IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
28-OT1	TEMPORARY ACCESS	183.58	0.0042	13.67	DNREC/USACE
28-OT2	TEMPORARY ACCESS	245.48	0.0056	18.27	DNREC/USACE
28-OT3	E&S AREA	118.73	0.0027	8.84	DNREC/USACE
28-OT4	E&S AREA	112.52	0.0026	8.38	DNREC/USACE
28-OT5	TEMPORARY ACCESS	16.60	0.0004	1.24	DNREC/USACE
TOTAL DNREC & USACE		676.91	0.0155	50.39	-

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

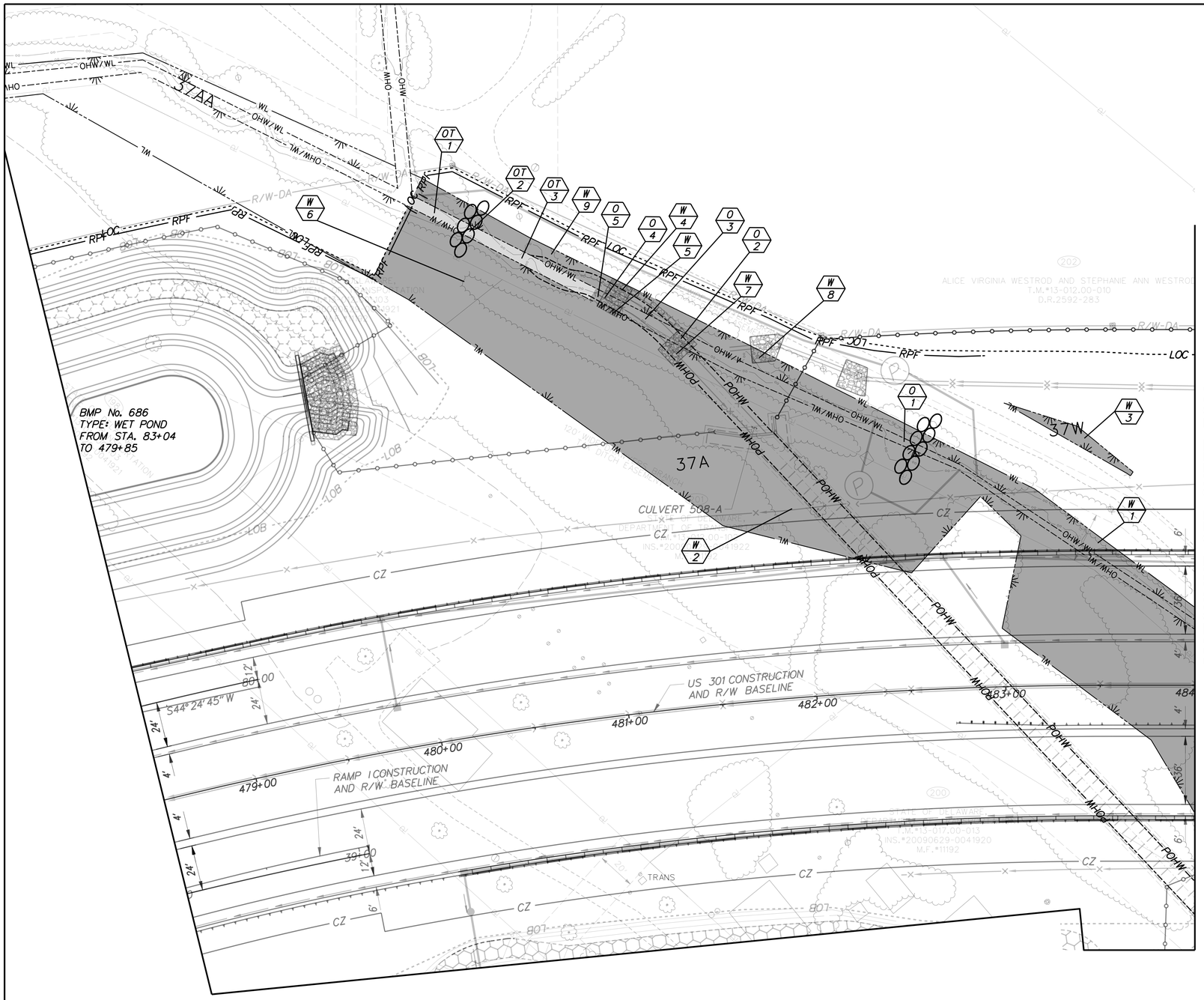
SCALE 0 30 60 90 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	T200911303
COUNTY	NEW CASTLE
BRIDGE NO.	
DESIGNED BY:	AW
CHECKED BY:	SF

ENVIRONMENTAL COMPLIANCE PLAN

	EC-28
SHEET NO.	854
TOTAL SHTS.	1256



MATCHLINE SEE SHEET EC30

LEGEND

	TEMPORARY IMPACT AREA
	PERMANENT IMPACT AREA
OHW	ORDINARY HIGH WATER
POHW	PROPOSED ORDINARY HIGH WATER
OHW/WL	ORD. HIGH WATER / WETLAND
WL	WETLAND BOUNDARY
XX / ?X	IMPACT AREA TYPE ID. (SEE BELOW) / IMPACT AREA ID. AND/OR NUMBER
O = OPEN WATER IMPACT	
W = WETLAND IMPACT	
T = TEMPORARY IMPACT	
LOC	LIMIT OF CONSTRUCTION
RPF	RESOURCE PROTECTION FENCE

PERMANENT OPEN WATER IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
29-01	FILL	1,393.17	0.0320	103.71	DNREC/USACE
29-02	RIPRAP	83.86	0.0019	6.24	DNREC/USACE
29-03	EXCAVATION	217.45	0.0050	16.19	DNREC/USACE
29-04	RIPRAP	82.79	0.0019	6.16	DNREC/USACE
29-05	EXCAVATION	34.15	0.0008	2.54	DNREC/USACE
TOTAL DNREC & USACE		1,811.42	0.0416	134.84	-

PERMANENT WETLAND IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
29-W1	FILL	2,798.92	0.0643	N/A	USACE
29-W2	FILL	16,849.14	0.3868	N/A	USACE
29-W3	FILL	381.78	0.0088	N/A	USACE
29-W4	RIPRAP	102.19	0.0023	N/A	USACE
29-W5	RIPRAP	18.96	0.0004	N/A	USACE
29-W6	EXCAVATION	10,669.05	0.2449	N/A	USACE
29-W7	RIPRAP	115.20	0.0026	N/A	USACE
29-W8	RIPRAP	64.51	0.0015	N/A	USACE
29-W9	EXCAVATION	1,010.06	0.0232	N/A	USACE
TOTAL PERMANENT WETLAND IMPACTS		32,009.81	0.7348	N/A	USACE

TEMPORARY OPEN WATER IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
29-OT1	TEMPORARY ACCESS	167.66	0.0038	12.48	DNREC/USACE
29-OT2	E&S AREA	67.41	0.0015	5.02	DNREC/USACE
29-OT3	TEMPORARY ACCESS	456.51	0.0105	33.98	DNREC/USACE
TOTAL DNREC & USACE		691.58	0.0158	51.48	-

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: AW	JW
COUNTY	CHECKED BY: JF	SF
NEW CASTLE		

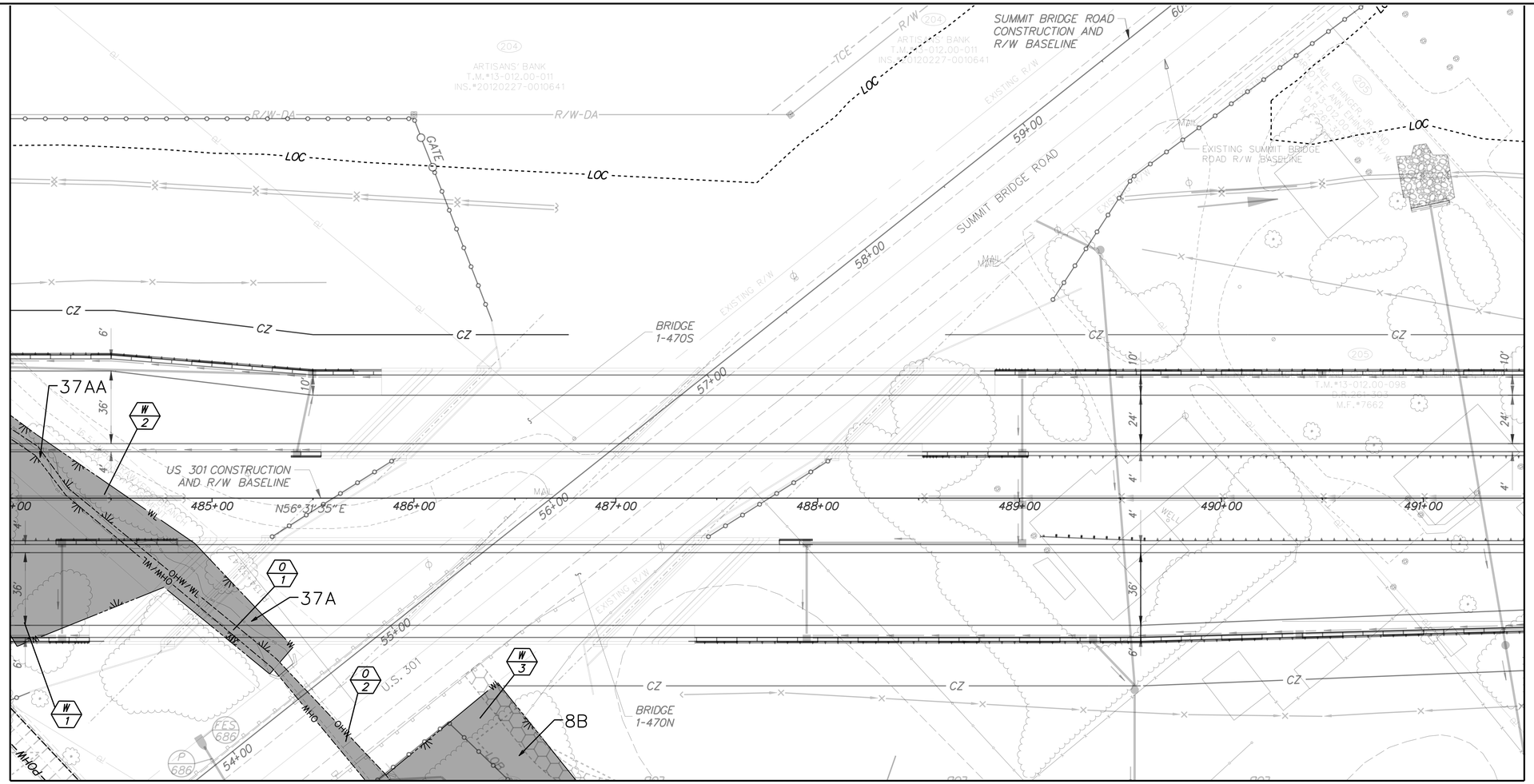
ENVIRONMENTAL COMPLIANCE PLAN

EC-29

SHEET NO. 855

TOTAL SHTS. 1256

MATCHLINE SEE SHEET EC29



MATCHLINE SEE SHEET EC31

LEGEND

- TEMPORARY IMPACT AREA
- PERMANENT IMPACT AREA
- OHW — ORDINARY HIGH WATER
- POHW — PROPOSED ORDINARY HIGH WATER
- OHW/WL — ORD. HIGH WATER / WETLAND
- WL — WETLAND BOUNDARY
- XX / ?X — IMPACT AREA TYPE ID. (SEE BELOW) / IMPACT AREA ID. AND/OR NUMBER
- O = OPEN WATER IMPACT
- W = WETLAND IMPACT
- T = TEMPORARY IMPACT
- LOC — LIMIT OF CONSTRUCTION
- RPF — RESOURCE PROTECTION FENCE

PERMANENT OPEN WATER IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
30-01	FILL	704.50	0.0162	52.45	DNREC/USACE
30-02	FILL	541.14	0.0124	40.28	DNREC/USACE
TOTAL DNREC & USACE		1,245.64	0.0286	92.73	-

PERMANENT WETLAND IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
30-W1	FILL	4,329.75	0.0994	N/A	USACE
30-W2	FILL	2,340.42	0.0537	N/A	USACE
30-W3	FILL	2,369.92	0.0544	N/A	USACE
TOTAL PERMANENT WETLAND IMPACTS		9,040.09	0.2075	N/A	USACE

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

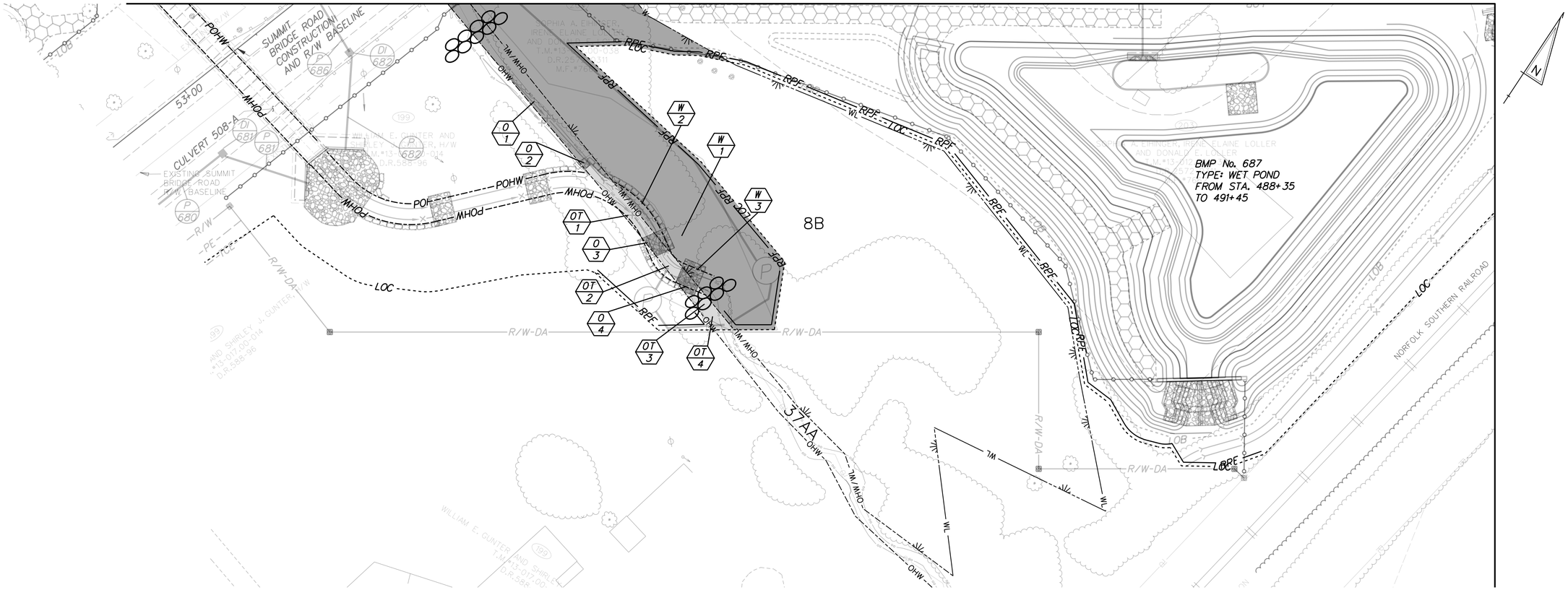
US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: AW	JW
COUNTY		
NEW CASTLE	CHECKED BY: JF	SF

ENVIRONMENTAL COMPLIANCE PLAN

EC-30
SHEET NO. 856
TOTAL SHTS. 1256

MATCHLINE SEE SHEET EC30



LEGEND

	TEMPORARY IMPACT AREA
	PERMANENT IMPACT AREA
OHW	ORDINARY HIGH WATER
POHW	PROPOSED ORDINARY HIGH WATER
OHW/WL	ORD. HIGH WATER / WETLAND
WL	WETLAND BOUNDARY
XX / ?X	IMPACT AREA TYPE ID. (SEE BELOW) / IMPACT AREA ID. AND/OR NUMBER
O = OPEN WATER IMPACT	
W = WETLAND IMPACT	
T = TEMPORARY IMPACT	
LOC	LIMIT OF CONSTRUCTION
RPF	RESOURCE PROTECTION FENCE

PERMANENT OPEN WATER IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
31-01	FILL	950.24	0.0218	70.74	DNREC/USACE
31-02	RIPRAP	69.50	0.0016	5.17	DNREC/USACE
31-03	RIPRAP	88.31	0.0020	6.57	DNREC/USACE
31-04	RIPRAP	96.71	0.0022	7.20	DNREC/USACE
TOTAL DNREC & USACE		1,204.76	0.0277	89.68	-

TEMPORARY OPEN WATER IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
31-OT1	E&S AREA	331.36	0.0076	24.67	DNREC/USACE
31-OT2	E&S AREA	109.95	0.0025	8.19	DNREC/USACE
31-OT3	E&S AREA	97.22	0.0022	7.24	DNREC/USACE
31-OT4	TEMPORARY ACCESS	123.94	0.0028	9.23	DNREC/USACE
TOTAL		662.47	0.0152	49.33	-

PERMANENT WETLAND IMPACT AREA SCHEDULE

IDENTIFIER	IMPACT	AREA (ft^2)	AREA (ACRES)	VOLUME (yd^3)	JURISDICTION
31-W1	FILL	9,717.80	0.2231	N/A	USACE
31-W2	RIPRAP	360.87	0.0083	N/A	USACE
31-W3	RIPRAP	97.14	0.0022	N/A	USACE
TOTAL PERMANENT WETLAND IMPACTS		10,175.80	0.2336	N/A	USACE

NOTE:
REFER TO STREAM RELOCATION AND RESTORATION PLANS (SHEETS 870-872).

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: AW	JW
COUNTY	CHECKED BY: JF	SF
NEW CASTLE		

ENVIRONMENTAL COMPLIANCE PLAN

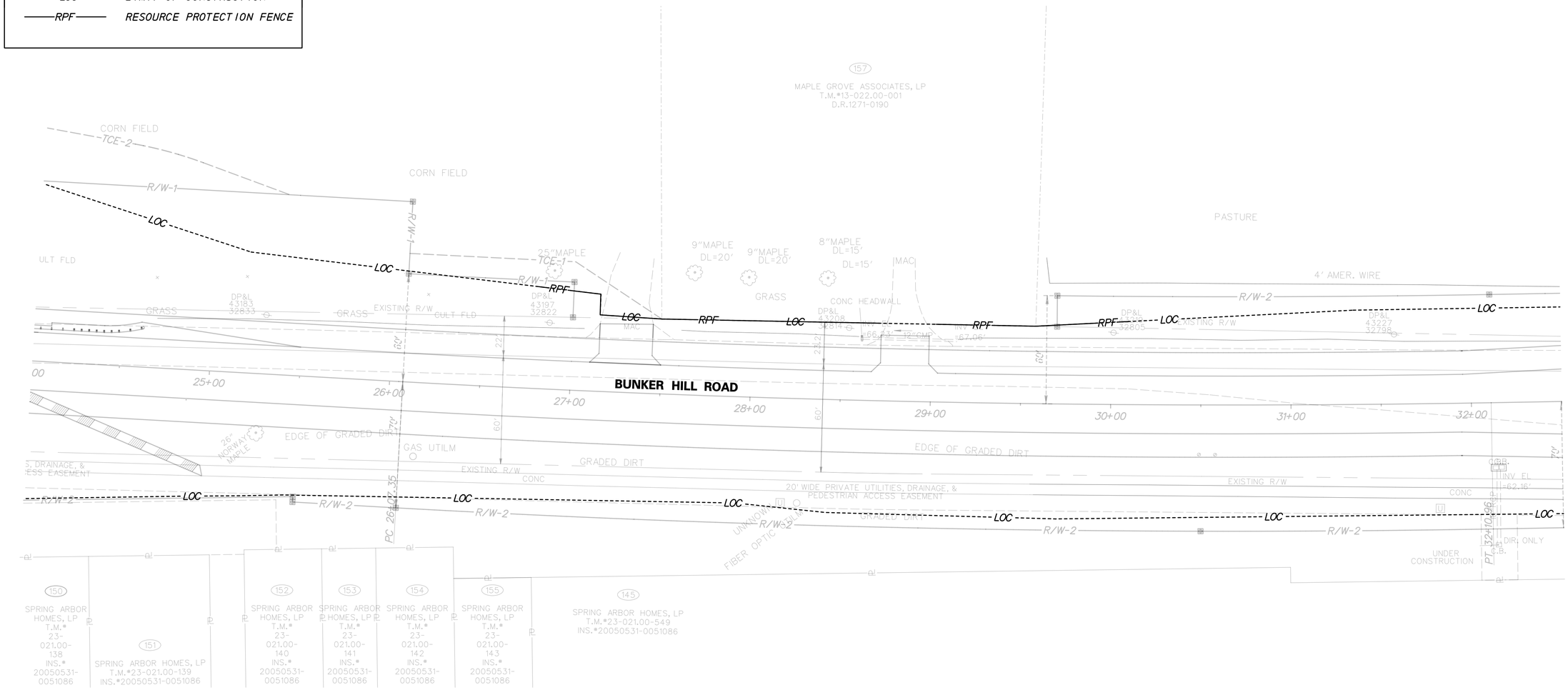
EC-31	
SHEET NO.	857
TOTAL SHTS.	1256

LEGEND

	TEMPORARY IMPACT AREA
	PERMANENT IMPACT AREA
OHW	ORDINARY HIGH WATER
OHW/WL	ORD. HIGH WATER / WETLAND
WL	WETLAND BOUNDARY
XX / ?X	IMPACT AREA TYPE ID. (SEE BELOW) / IMPACT AREA ID. AND/OR NUMBER
O = OPEN WATER IMPACT	
W = WETLAND IMPACT	
T = TEMPORARY IMPACT	
LOC	LIMIT OF CONSTRUCTION
RPF	RESOURCE PROTECTION FENCE

ENVIRONMENTAL COMPLIANCE NOTES

1. THERE ARE NO IMPACTS ON THIS SHEET.



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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

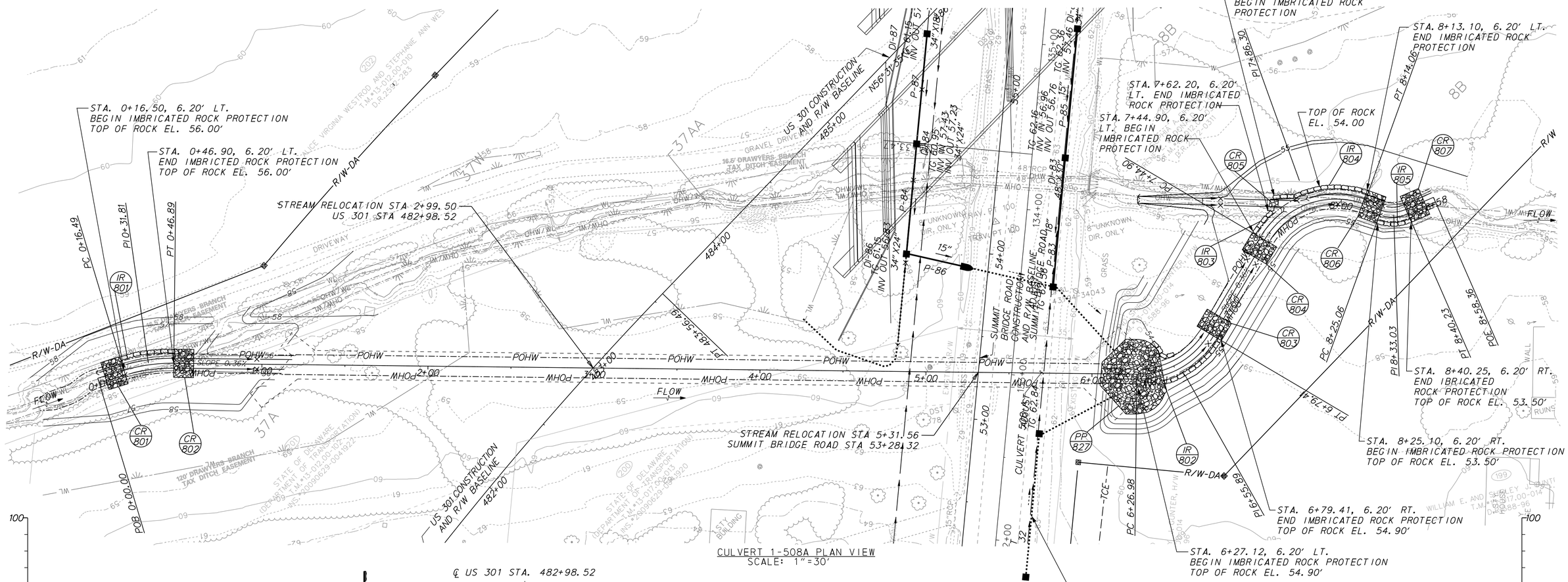
SCALE 0 30 60 90 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	T200911303
COUNTY	NEW CASTLE
BRIDGE NO.	
DESIGNED BY:	JL
CHECKED BY:	MT

ENVIRONMENTAL COMPLIANCE PLAN

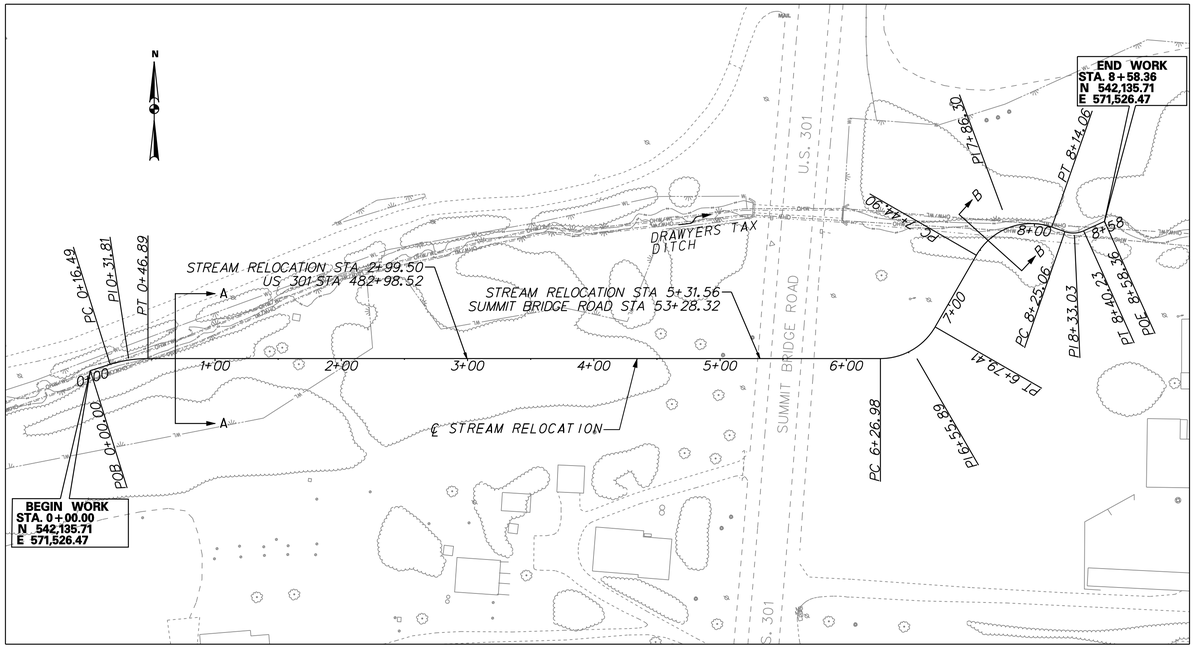
	EC-32
SHEET NO.	858
TOTAL SHTS.	1256



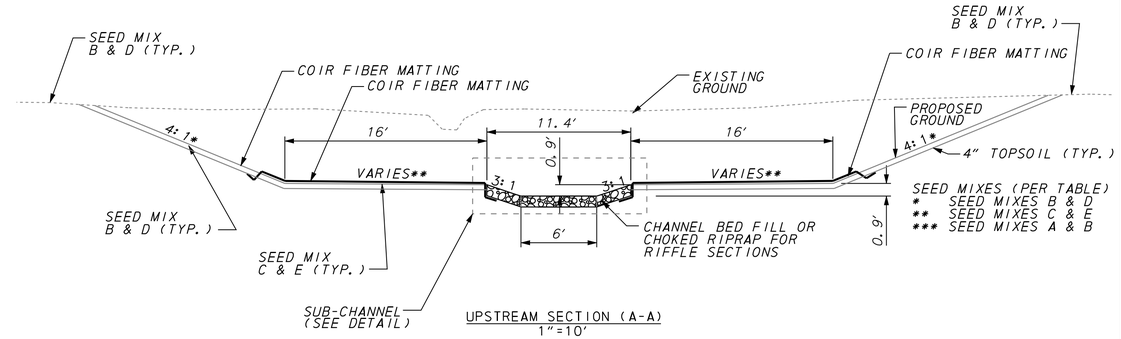
NOTES:
1. SEE SHEET SR02 FOR GEOMETRY SECTIONS AND DETAILS.
2. SEE STRUCTURAL PLANS FOR ADDITIONAL DETAIL ON 1-508A STRUCTURE.

CULVERT C2-1 PROFILE VIEW
SCALE: 1"=30'

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO.	STREAM RELOCATION AND RESTORATION PLANS	SR-01
			COUNTY NEW CASTLE	DESIGNED BY: B.S.M.		SHEET NO. 859
				CHECKED BY: A.T.N.		TOTAL SHTS. 1256

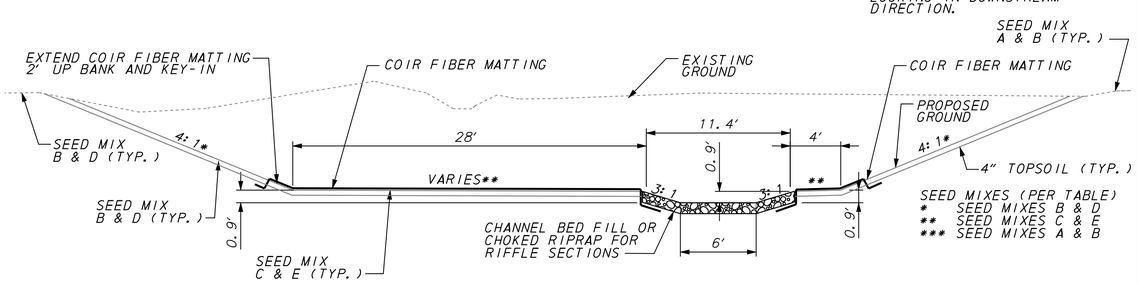


STREAM GEOMETRY
1"=60'



UPSTREAM SECTION (A-A)
1"=10'

NOTE:
SECTIONS A-A AND B-B ARE LOOKING IN DOWNSTREAM DIRECTION.



DOWNSTREAM SECTION (B-B)
1"=10'

SEED MIX.	ITEM AND DESCRIPTION
A.	734013-PERMANENT GRASS SEEDING, DRY GROUND (SY)
B.	734017-TEMPORARY GRASS SEEDING, DRY GROUND (SY)
C.	734018-TEMPORARY GRASS SEEDING, WET GROUND (SY)
D.	734551-NATIVE GRASS SEEDING: NO MOW MIX (SY)
E.	734552-WET GROUND EROSION CONTROL GRASS SEEDING-FLATS (SY)

B/L CONSTRUCTION - STREAM RELOCATION

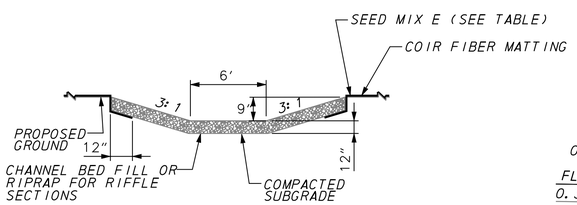
CURVE	POINT NO.	STATION	NORTH	EAST	BEARING
	101	POB 0+00.00	542,205.790	570,717.640	N 85° 54' 04" E
100	102	PC 0+16.49	542,206.970	570,734.090	N 85° 54' 04" E
	103	PI 0+31.81	542,208.060	570,749.370	
	104	PT 0+46.89	542,204.530	570,764.270	S 76° 40' 51" E
101	105	PC 6+26.98	542,070.900	571,328.750	S 76° 40' 51" E
	106	PI 6+55.89	542,064.240	571,356.890	
	107	PT 6+79.41	542,085.300	571,376.700	N 43° 14' 09" E
102	108	PC 7+44.90	542,133.010	571,421.560	N 43° 14' 09" E
	109	PI 7+86.30	542,163.180	571,449.920	
	110	PT 8+14.06	542,140.940	571,484.850	S 57° 30' 15" E
103	111	PC 8+25.06	542,135.030	571,494.120	S 57° 30' 15" E
	112	PI 8+33.03	542,130.750	571,500.840	
	113	PT 8+40.23	542,132.260	571,508.670	N 79° 02' 37" E
	114	POE 8+58.36	542,135.710	571,526.470	N 79° 02' 37" E

CURVE DATA

CURVE	DELTA	Dc	RADIUS	TANGENT	LENGTH	EXTERNAL
100	17° 25' 05" Right	57° 17' 45"	100.00'	15.32'	30.40'	1.17
101	60° 05' 00" Left	114° 35' 30"	50.00'	28.92'	52.43'	7.76
102	79° 15' 37" Right	114° 35' 30"	50.00'	41.41'	69.17'	14.92
103	43° 27' 08" Left	286° 28' 44"	20.00'	7.97'	15.17'	1.53

GENERAL NOTES:

1. KEY IN FOR MATTING SHALL BE A MINIMUM OF 1 FOOT FROM GRADE BREAK AND SHALL BE 8" DEEP X 8" WIDE (MIN.) UNLESS OTHERWISE NOTED OR DIRECTED BY THE ENGINEER.



SUB-CHANNEL (TYP.)
1"=10'

SUB CHANNEL:

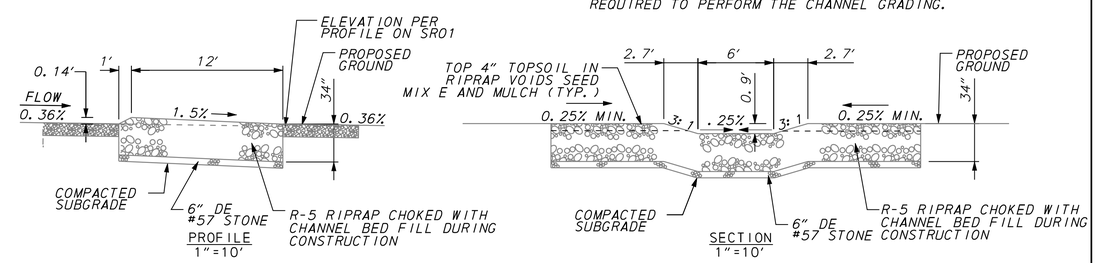
1. EXCAVATION OF SUB-CHANNEL SHALL REQUIRE AN ADDITIONAL 12 INCHES OF EXVATION FOR PLACEMENT OF CHANNEL BED FILL OR 34" FOR CONSTRUCTED RIFFLES (PER SEPARATE DETAIL).
2. COMPACT SUBGRADE WITHIN THE EXCAVATED AREA AND BACKFILL WITH CHANNEL BED FILL. IN THE EVENT THAT ADEQUATE CHANNEL BED FILL IS NOT AVAILABLE ON-SITE, THE CONTRACTOR SHALL SUPPLEMENT AVAILABLE MATERIALS WITH ROUNDED RIVER GRAVEL FROM OFF-SITE SOURCES. ADDITIONAL MATERIALS SHALL CONFORM WITH ITEM 712531. THE CONTRACTOR SHALL BE REQUIRED TO PROVE TO THE ENGINEER THAT ADEQUATE CHANNEL BED FILL IS NOT AVAILABLE ON SITE AND PROVIDE A QUANTITY FOR THE ENGINEERS APPROVAL. WRITTEN APPROVAL BY THE ENGINEER SHALL BE REQUIRED PRIOR TO PLACEMENT OF THE OFF-SITE MATERIALS.
3. THE 3:1 SLOPES SHALL BE COVERED WITH COIR FIBER MATTING.
4. THE SUB CHANNEL SHALL BE PAID AT THE UNIT BID PRICE PER SQUARE YARD FOR CHANNEL BED FILL. THE UNIT PRICE SHALL INCLUDE EXCAVATION, STOCKPILE OF CHANNEL BED FILL, SUBGRADE COMPACTION, AND PLACEMENT OF CHANNEL BED FILL.
5. THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, EQUIPMENT, LABOR, AND INCIDENTALS REQUIRED TO INSTALL THE SUB-CHANNEL.

CHANNEL GRADING

1. EXCAVATE SECTION TO ELEVATION FOR OVER BANK AREA AND SUB-CHANNEL.
2. CONSTRUCT SUB-CHANNEL WITH BED FEATURES INCLUDING IMBRICATED ROCK (IR) PROTECTION, CONSTRUCTED RIFFLES(CR), AND PRE-FORMED SCOUR HOLE PER THE DETAILS.
3. UPON COMPLETION OF BED FEATURES, PLACE 4" OF TOPSOIL ON THE SLOPES AND OVERBANK AREAS.
4. INSTALL COIR FIBER MATTING FROM EDGE OF STREAM, ACROSS OVERBANK AREA, AND 2' UP EXTERIOR SLOPE AS SHOWN IN DETAIL. MATTING SHALL BE INSTALLED PER DELDOT STANDARDS (OR MANUFACTURERS AS APPROVED BY ENGINEER)

CHANNEL GRADING (CONT):

4. SEED AND MULCH ALL SURFACES AS INDICATED ON SECTIONS A-A AND B-B.
5. THE ITEMS IN CHANNEL GRADING SHALL BE PAID AT THE UNIT BID PRICE FOR EACH ITEM:
   A. 203000-CHANNEL EXCAVATION (CY)
   B. 733001-TOPSOIL, 4" DEPTH (SY)
   C. 735538-COIR FIBER MATTING (SY)
   D. 737509-PLANTING EMERGENT MARSH(LS)
   E. GRASSES (SEE SEED MIX TABLE)
   F. CHANNEL FEATURES SHALL BE PAID AS OUTLINED IN THE FOLLOWING DETAILS
5. THE UNIT BID PRICE FOR EACH ITEM SHALL INCLUDE ALL MATERIALS, EQUIPMENT, LABOR, AND INCIDENTALS REQUIRED TO PERFORM THE CHANNEL GRADING.



CONSTRUCTED RIFFLE (CR) DETAIL
1"=10'

CONSTRUCTED RIFFLE :

1. EXCAVATE SUB-CHANNEL TO GRADE AND EXCAVATE FOR PLACEMENT OF CONSTRUCTED RIFFLE (CR).
2. COMPACT SUBGRADE WITHIN THE EXCAVATED AREA AND BACKFILL WITH RIPRAP (PER PLAN - LOW POINT SHALL BE IN THE CENTER OF THE CHANNEL).
3. THE CONTRACTOR SHALL PROVIDE ITEM 712531 -CHANNEL BED FILL TO CHOKE THE RIPRAP WITHIN THE CONSTRUCTED RIFFLE. THE CHOKE MATERIAL SHALL CONSIST OF WELL GRADED ROUNDED RIVER GRAVEL WITH SAND. NO MORE THAN 15% OF THE GRADATION SHALL CONSIST OF SAND. APPLICATION OF THE CHOKE MATERIAL MAY BE INSTALLED AS A SLURRY, IN LIFTS, OR AS DIRECTED BY THE ENGINEER. COMPLETE FILL OF VOIDS SHALL BE REQUIRED WITH ANY APPLICATION.

CONSTRUCTED RIFFLE (CONT):

4. THE CONSTRUCTED RIFFLE (CR) SHALL BE PAID AT THE UNIT BID PRICE FOR SPECIAL RIPRAP (CONSTRUCTED RIFFLE) PER SQUARE YARD. THE UNIT PRICE SHALL INCLUDE EXCAVATION, SUBGRADE COMPACTION, NO. 57 STONE, TOPSOIL (WITHIN RIPRAP), RIPRAP, STRAW MULCH, SEED, AND CHANNEL BED FILL (CHOKE MATERIAL).
5. THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, EQUIPMENT, LABOR, AND INCIDENTALS REQUIRED TO INSTALL THE CONSTRUCTED RIFFLE.

DELAWARE DEPARTMENT OF TRANSPORTATION

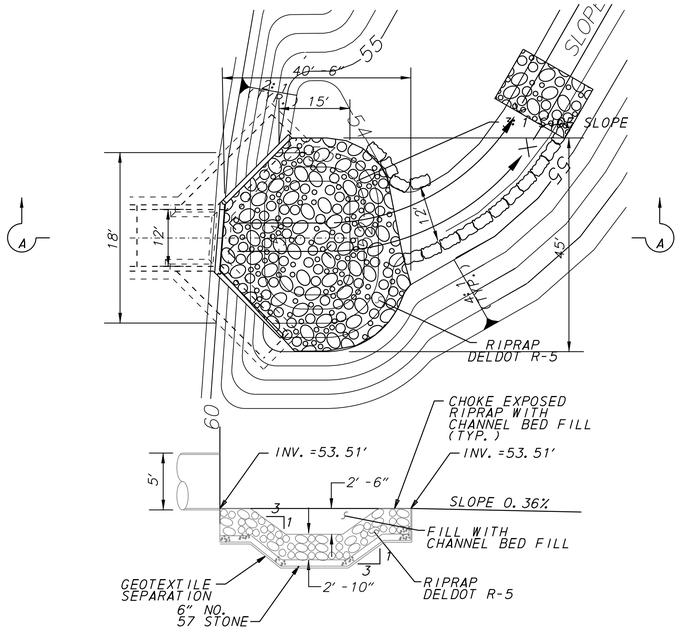
ADDENDUMS / REVISIONS

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: B.S.M.	
COUNTY		
NEW CASTLE	CHECKED BY: A.T.N.	

STREAM RELOCATION AND RESTORATION PLANS

SR-02
SHEET NO.
860
TOTAL SHTS.
1256



PLUNGE POOL(PP)
NOT TO SCALE

PLUNGE POOL:

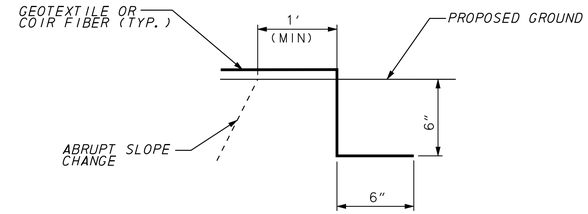
1. EXCAVATE SUB-CHANNEL TO GRADE AND EXCAVATE FOR PLACEMENT OF PLUNGE POOL.
2. PLACE GEOTEXTILE (RIPRAP) WITHIN EXCAVATED AREA AND PLACE 6" LAYER OF DE NO. 57 STONE.
3. INSTALL RIPRAP TO THE DIMENSIONS OF THE DETAIL AND THE CONTOURS SHOWN PER PLAN. CHOKE RIPRAP WITH CHANNEL BED FILL. AFTER INSPECTION OF PLUNGE POOL DIMENSIONS BY DELDOT INSPECTOR, BACKFILL PLUNGE POOL WITH CHANNEL BED FILL.
4. PLUNGE POOL SHALL BE PAID AT THE UNIT PRICE PER SQUARE YARD FOR RIPRAP SPECIAL (PLUNGE POOL). UNIT PRICE SHALL INCLUDE EXCAVATION, GEOTEXTILE, NO. 57 STONE, CHANNEL BED FILL (CHOKE AND BACKFILL MATERIAL), AND RIPRAP AS SHOWN PER DETAIL.
5. THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, EQUIPMENT, LABOR, AND INCIDENTALS REQUIRED TO INSTALL THE PLUNGE POOL.

GENERAL ROCK CHARACTERISTICS:

1. GENERAL ROCK CHARACTERISTICS SHALL APPLY TO ALL ROCK UTILIZED FOR STREAM RESTORATION ON SHEETS SR-01 TO SR-03.
2. ROCK SHALL HAVE A MIMIMUM UNIT WEIGHT OF 165 LB/FT3.
3. ROCK SHALL BE BROWN TO GRAY/GREEN IN COLOR. OTHER COLORS SHALL BE APPROVED BY SAMPLE PRIOR TO DELIVERY TO SITE. USE OF VERY LIGHT COLORED ROCK (WHITE, LIGHT GRAY, ETC...) SHALL NOT BE APPROVED.
4. ROCK SHALL BE NON-WEATHERING ROCK THAT WILL NOT EASILY ERODE OR CRUMBLE.
5. ROCKS SHALL BE PROTECTED FROM FAILURE DURING CONSTRUCTION. CONTRACTOR SHALL BRACE OR SHORE ROCK PRIOR TO COMPLETION OF CHANNEL WORK. THE COST OF BRACING AND/OR SHORING SHALL BE CONSIDERED INCIDENTAL TO THE ITEMS REQUIRING ROCK AND RIPRAP. FAILURE OF CHANNEL FEATURES SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE PRIOR TO FINAL APPROVAL BY THE ENGINEER.
6. ACCEPTANCE OF ROCK FEATURES, PLUNGE POOL, IMBRICATED ROCK, AND CONSTRUCTED RIFFLES SHALL NOT BE APPROVED PRIOR TO INSTALLATION OF COIR FIBER MATTING, 90% STABILIZATION OF WET GROUND EROSION CONTROL SEEDING-FLATS AND NATIVE GRASS SEEDING: NO MOW MIX, AND PLANTING OF EMERGENT MARSH.
7. WHERE IMBRICATED (BLOCKY) ROCK IS REQUIRED, TRIANGULAR OR ROUNDED ROCK SHALL NOT BE ACCEPTED BY THE ENGINEER. CHINKING ROCKS SHALL BE INCIDENTAL TO THE PLACEMENT AND TIGHT FIT OF THE IMBRICATED ROCKS. CHINKING MATERIAL SHALL BE PLACED FROM BEHIND IMBRICATED ROCKS PRIOR TO PLACEMENT OF BACKFILL.

PLANTING, SMOOTH ALDER 737523 (PART OF LUMP SUM (LS) ITEM)					
QUANTITY	KEY	BOTANICAL NAME	COMMON NAME	SIZE AND ROOT CONDITION	COMMENTS
720	ALSE2	ALNUS SERRULATA	SMOOTH ALDER	24" HEIGHT, B.R.	SPACE 10' OC

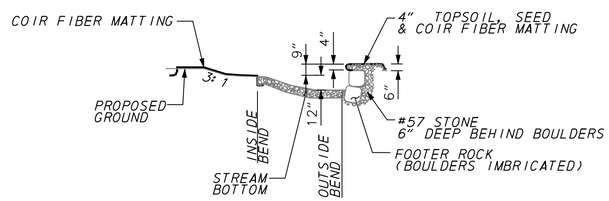
B.R. = BARE ROOT



MATTING, GEOTEXTILE, AND FABRIC
KEY-IN DETAIL
NOT TO SCALE

MATTING KEY-IN

1. DIMENSIONS SHOWN FOR KEY-INS ARE MINIMUMS.
2. KEY-IN SHALL BE INCIDENTAL TO THE INSTALLATION OF ALL GEOTEXTILE, MATTINGS, AND FABRICS SHOWN ON THE PLANS.



IMBRICATED ROCK (IR) PROTECTION
1"=10'

IMBRICATED ROCK PROTECTION:

1. EXCAVATE SUB-CHANNEL TO GRADE AND EXCAVATE FOR PLACEMENT OF IMBRICATED FOOTER ROCK.
2. PLACE GEOTEXTILE (RIPRAP) WITHIN EXCAVATED AREA.
3. INSTALL FOOTER ROCK AT A 10-20 DEGREE ANGLE WITH TOP SLOPE AWAY FROM CHANNEL.
4. PLACE #57 STONE BEHIND FOOTER ROCK AND LEVEL WITH TOP ROCK.
5. BACKFILL CHANNEL BED FILL ALONG TOE OF FOOTER ROCK AND COMPACT
6. PLACE TOP ROCK ON FOOTER ROCK (CONNECTIONS FOR TOP ROCKS SHALL BE OFFSET FROM FOOTER ROCK CONNECTIONS - IN BRICK FASHION) AND BACKFILL REMAINING #57 STONE.
7. INSTALL COIR MATTING OVER TOP ROCK. PLACE 4" OF TOPSOIL OVER ROCK AND #57 STONE. FOLD COIR MAT OVER TOPSOIL AND KEY COIR MATTING INTO EXISTING GROUND. SEED AND MULCH. SEED SHALL CONSIST OF BOTH TEMPORARY AND NATIVE GRASS SEEDING: NO MOW MIX.
8. FOOTER AND TOP ROCKS SHALL BE BLOCKY ANGULAR IMBRICATED ROCKS THAT FIT TIGHTLY TOGETHER. MINIMUM ROCK DIMENSIONS ARE 3.5'(L) X3.0'(W)X2'(D).
9. IMBRICATED ROCK (IR) PROTECTION SHALL BE PAID AT THE UNIT PRICE PER TON FOR ROCK SPECIAL (IMBRICATED ROCK). UNIT PRICE SHALL INCLUDE EXCAVATION, GEOTEXTILE, FOOTER ROCK, AND TOP ROCK.
10. THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, EQUIPMENT, LABOR, AND INCIDENTALS REQUIRED TO INSTALL THE IMBRICATED ROCK TOE PROTECTION.

RIPRAP SPECIAL: CONSTRUCTED RIFFLE (CR) SCHEDULE ITEM 712521				
NO.	TYPE	AREA (SY)	LENGTH	WIDTH
801	R-5	25	13	17
802	R-5	25	13	17
803	R-5	25	13	17
804	R-5	25	13	17
805	R-5	25	13	17
806	R-5	25	13	17
807	R-5	25	13	17

ROCK SPECIAL: IMBRICATED ROCK (IR) PROTECTION SCHEDULE ITEM 712528					
NO.	TYPE	WT (TON)	LENGTH	WIDTH	HEIGHT
801	Block	30	35	2.5	4
802	Block	55	65	2.5	4
803	Block	22	25	2.5	4
804	Block	51	60	2.5	4
805	Block	22	25	2.5	4

RIPRAP SPECIAL: PLUNGE POOL (PP) SCHEDULE 712521				
NO.	TYPE	AREA (SY)	LENGTH	WIDTH
801	R-5	150	SEE DETAIL	

CHANNEL BED FILL 712531	
TOTAL	VOLUME (CY)
(SR ONLY)	110

GEOTEXTILE: RIPRAP 713003	
TOTAL	AREA (SY)
(SR ONLY)	620

DELAWARE NO. 57 STONE 302012	
TOTAL	WEIGHT (TON)
(SR ONLY)	40

TEMP. GRASS SEED: DRY GROUND 734017	
TOTAL	AREA (SY)
(SR ONLY)	1500

COIR FIBER MATTING 735538	
TOTAL	AREA (SY)
(SR ONLY)	3880

WET GROUND EROSION CONTROL GRASS SEEDING - FLATS 734552	
TOTAL	AREA (SY)
(SR ONLY)	2100

TEMP. GRASS SEED: WET GROUND 734018	
TOTAL	AREA (SY)
(SR ONLY)	2100

CHANNEL EXCAVATION 203000	
TOTAL	VOLUME (CY)
(SR ONLY)	1900

PERMANENT GRASS SEEDING DRY GROUND 734013	
TOTAL	AREA (SY)
(SR ONLY)	2100

TOPSOIL: 4" DEPTH 732000	
TOTAL	AREA (SY)
(SR ONLY)	3880

NATIVE GRASS SEEDING: NO MOW MIX 734551	
TOTAL	AREA (SY)
(SR ONLY)	1500

	CHANNEL BED FILL OUTSIDE CULVERT	
	(in)	(mm)
D_5	0.079	2
D_{16}	3.50	89
D_{50}	5.00	127
D_{84}	7.00	178
D_{95}	9.50	241

	CHANNEL BED FILL INSIDE CULVERT	
	(in)	(mm)
D_5	0.079	2
D_{16}	4.20	107
D_{50}	6.00	152
D_{84}	8.40	213
D_{95}	11.40	290

REM. AND DISPOSE OF EXCESS MAT'L*	
TOTAL	VOLUME (CY)
(SR ONLY)	2100

* - USE ONLY AS DIRECTED BY ENGINEER

PLANTING SMOOTH ALDER:

1. PLANTING OF SMOOTH ALDER SHALL BE PAID UNDER ITEM 737523 PLANTING FOR CULVERTS 1-508A AND 1-508B AND MEET ALL REQUIREMENTS OF SECTION 737-PLANTING.
2. PLANTING SHALL CONSIST OF ALNUS SERRULATA (SMOOTH ALDER) AT A 10 FOOT SPACING ON CENTER THROUGHOUT THE GRADED OVERBANK AND AREAS WITH 4:1 SIDE SLOPES.
3. PLANTS SHALL BE 12- TO 24-INCH BARE-ROOT SEEDLINGS.
4. NO MEASUREMENT SHALL BE MADE AND PAYMENT SHALL BE LUMP SUM AND INCLUDES ALL MATERIALS, EQUIPMENT, LABOR, AND INCIDENTALS (FERTILIZER, STAKING, DEER PROTECTION, ETC...PER SECTION 737) REQUIRED FOR PLANTING.

BACKFILL OF EXISTING CHANNEL:

1. THE EXISTING CHANNEL SHALL BE EXCAVATED AND BACKFILLED BY THE CONTRACTOR.
2. DURING EXISTING CHANNEL EXCAVATION, CONTRACTOR SHALL REMOVE EXISTING CHANNEL BED FILL TO A MINIMUM DEPTH OF 2 FEET. STREAM BANKS SHALL BE EXCAVATED A MINIMUM OF 6 INCHES. REMOVAL OF SATURATED/WET SOILS GREATER THAN THE MINIMUMS SHOWN SHALL BE ALLOWED ONLY AS DIRECTED BY THE ENGINEER. THE EXISTING STREAM BED MATERIAL SHALL BE STOCKPILED FOR USE UNDER ITEM CHANNEL BED FILL OR STOCKPILED FOR USE IN PROPOSED ROADWAY EMBANKMENT AS DIRECTED BY THE ENGINEER. ANY MATERIAL DEEMED UNSUITABLE SHALL BE DISPOSED OF OFFSITE OR PLACED IN UPLAND AREA AND SEEDED AS DIRECTED BY THE ENGINEER. REMOVAL OF UNSUITABLE MATERIAL SHALL BE INCIDENTAL TO CHANNEL EXCAVATION.
3. EXISTING CHANNEL SHALL BE BACKFILLED AND COMPACTED TO MEET THE CONSTRUCTION REQUIREMENTS FOR ROADWAY EMBANKMENT. CHANNEL EXCAVATION, BACKFILL, AND STOCKPILE SHALL BE PAID AT THE UNIT BID PRICE FOR CHANNEL EXCAVATION.

CHOKING RIPRAP:

1. CHOKE RIPRAP IN ACCORDANCE WITH THE STREAM RESTORATION AND SLOPE RIPRAP TREATMENT NOTES FOUND ON SHEET EC-05.
2. FOR ESTIMATING PURPOSES CONTRACTOR SHALL ASSUME 40% VOID SPACE IN THE RIPRAP.
3. WITHIN STREAM RESTORATION PLANS (SR-01 TO SR-03), CHOKING OF RIPRAP SHALL BE CONSIDERED INCIDENTAL TO RIPRAP UNLESS OTHERWISE INDICATED ON THE PLANS OR SPECIFICATIONS.

MOT GENERAL NOTES

1. SEE SHEET 8 FOR ATTSSA REQUIREMENTS FOR THIS PROJECT.

2. CONSTRUCTION SHALL OCCUR ONLY BETWEEN THE HOURS OF 8:30 AM AND 4:00 PM FOR DAYTIME CONSTRUCTION OPERATIONS AND BETWEEN 6:00 PM AND 6:00 AM FOR NIGHTTIME CONSTRUCTION OPERATIONS.

3. MAINTENANCE OF TRAFFIC FOR LANE CLOSURES AND SHOULDER CLOSURES ON EXISTING ROADWAYS SHALL CONFORM TO THE FOLLOWING APPLICATIONS BASED ON TYPE OF OPERATION:
   PAVING OPERATIONS - TA-10
   UTILITY TRENCH WORK - TA-10
   PATCHING - TA-10
   PERMANENT STRIPING - TA-17B
   CONE RECOVERY - TA-17
   SHOULDER WORK (NO LANE CLOSURE) - TA-3

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS WORK WITH OTHER CONTRACTORS IN THE AREA.

5. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF EXISTING PAVEMENT WITHIN THE PROJECT LIMITS FOR THE DURATION OF THE CONTRACT OR AS DIRECTED BY THE ENGINEER. THE COST OF ALL TEMPORARY ROADS, DETOURS AND PAVEMENT WIDENING SHALL BE PAID UNDER THE RESPECTIVE BID ITEMS AND NOT UNDER "HOT-MIX TRM" ITEM. THE USE OF ITEM 402000 SHALL BE USED ONLY AS DIRECTED BY THE ENGINEER OR AS INDICATED ON PLANS.

6. THE CONTRACTOR SHALL SUPPLY MESSAGE BOARDS UNDER ITEM 743004 - FURNISH AND MAINTAIN MESSAGE BOARD. MOVING THE MESSAGE BOARDS TO DIFFERENT LOCATIONS DURING CONSTRUCTION WILL BE INCIDENTAL TO ITEM 743004. AT A MINIMUM, MESSAGE BOARDS SHALL BE POSTED TWO WEEKS PRIOR TO THE START OF CONSTRUCTION AND CHANGES IN TRAFFIC PATTERNS. SIX PLASTIC DRUMS SHALL BE PLACED IN FRONT OF THE MESSAGE BOARD WITH ONE TYPE B WARNING LIGHT PLACED ON THE FIRST TWO DRUMS.

7. A TRUCK MOUNTED ATTENUATOR, TYPE II - ITEM 743010 SHALL ALSO BE REQUIRED WHEN TRAFFIC IS PRESENT DURING THE FOLLOWING OPERATIONS:
   -TEMPORARY/PERMANENT PAVEMENT MARKING;
   -PATCHING;
   -MILLING OPERATION;
   -PAVING;
   -FOR OTHER OPERATIONS AS DIRECTED BY THE ENGINEER.

8. ENTRANCE AND SIDE ROAD TIE-IN AREAS SHALL BE CONSTRUCTED ONLY TO THE EXTENT THAT CAN BE PAVED OR TEMPORARILY STABILIZED WITH GRADED AGGREGATE BASE AT THE END OF A WORK DAY.

9. GRADING AND MAINTENANCE BASE COURSE THAT IS BEING USED AS A TRAVELWAY, DRIVEWAY, ACCESS RAMP, ETC. SHALL BE INCIDENTAL TO ITEM 743000 - MAINTENANCE OF TRAFFIC. EXCESS BASE COURSE MATERIAL SHALL BE PUSHED AHEAD AND USED IN THE NEXT SEGMENT AND SHALL BE INCIDENTAL TO THE PARTICULAR BASE COURSE PAY ITEM. NO SEPARATE PAYMENT SHALL BE MADE FOR TEMPORARY ROADWAY MATERIAL (TRM) USED TO PROTECT THE EDGE DROP-OFFS, UNLESS THE MATERIAL IS EVENTUALLY UTILIZED AS PART OF A PERMANENT ROADWAY AT WHICH TIME THE MATERIAL WOULD BE PAID FOR UNDER THE RESPECTIVE CONTRACT MATERIAL ITEM. CONSTRUCTION OF A PLANNED RUNAROUND OR DETOUR WOULD BE ELIGIBLE FOR PAYMENT AS SPECIFIED IN THE CONTRACT.

10. THIS PRODUCT IS CONSIDERED A SIGNIFICANT PROJECT AS DEFINED BY DELDOT'S WORK ZONE MOBILITY PROCEDURES AND GUIDELINES. A TYPE B TRANSPORTATION MANAGEMENT PLAN (TMP) HAS BEEN PREPARED AND IS AVAILABLE FOR VIEWING BY CONTACTING THE DEPARTMENT'S SAFETY PROGRAMS MANAGER AT (302)659-4060. ALL MONITORING REQUIREMENTS OF THE TMP SHALL BE CONDUCTED BY DELDOT FORCES UNLESS OTHERWISE DIRECTED BY THE ENGINEER. MODIFICATIONS TO THE TMP SHALL BE COMPLETED BY THE CONTRACTOR IF CHANGES TO THE TIME RESTRICTIONS OR THE TRAFFIC CONTROL PLAN ARE DESIRED. THE MODIFIED TMP SHALL BE PREPARED BY A PROFESSIONAL ENGINEER, REGISTERED IN THE STATE OF DELAWARE.

11. AT THE END OF EACH DAY, THE CONTRACTOR SHALL CLEAN THE ROADWAY OF ANY MATERIAL TRACKED ONTO THE ROAD FROM HAULING OPERATIONS. THE METHOD OF CLEANING THE ROADWAY SHALL BE SUCH THAT AIRBORNE DUST IS MINIMIZED AND SHALL BE APPROVED BY THE ENGINEER.

12. TRAFFIC OFFICERS:

   A. FOR NIGHT-TIME CLOSURES OF ANY ROAD OR RAMP, PROVIDE ONE TRAFFIC OFFICER AT EACH CLOSURE POINT SHOWN IN THE APPLICABLE DETOUR PLANS. TRAFFIC OFFICER SHALL BE PLACED BEHIND THE CLOSURE BARRICADE WITH THE FRONT OF VEHICLE FACING APPROACHING TRAFFIC AND ALL EMERGENCY LIGHTS SHALL BE ACTIVATED. TRAFFIC OFFICER SHALL PROVIDE A REPORT TO THE CONTRACTOR AT THE END OF THE DAY'S ACTIVITY IDENTIFYING THE NUMBER OF VEHICLES THAT ATTEMPTED TO NOT FOLLOW THE DETOUR.

   B. THE CONTRACTOR SHALL PROVIDE THREE TRAFFIC OFFICERS FOR A FOUR-HOUR PERIOD TWICE PER MONTH TO PERFORM SPEED ENFORCEMENT ALONG ROADWAYS WITHIN THE PROJECT LIMITS. AT THE END OF THE DAY'S ENFORCEMENT ACTIVITY, THE TRAFFIC OFFICERS SHALL PROVIDE A REPORT TO THE CONTRACTOR IDENTIFYING THE NUMBER OF VEHICLES STOPPED, NUMBER AND TYPE OF CITATIONS GIVEN AND THE RANGE OF SPEEDS OF THOSE VEHICLES STOPPED. ENFORCEMENT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.

   C. THE CONTRACTOR SHALL PROVIDE ONE TRAFFIC OFFICER FOR NIGHTTIME MOBILE PAVEMENT MARKING OPERATIONS ON SR 1, US 13 OR US 301.

   D. THE CONTRACTOR SHALL PROVIDE ONE TRAFFIC OFFICER FOR MAJOR PHASE CHANGE TRAFFIC SWITCHES ON EXISTING US 301, US 13 OR SR 1.

   E. THE CONTRACTOR SHALL PROVIDE TWO TRAFFIC OFFICERS FOR ANY ROLLING ROAD BLOCK OPERATION IN ACCORDANCE WITH TA-35H.

   F. SEE PROJECT DETOUR PLANS FOR ADDITIONAL TRAFFIC OFFICER REQUIREMENTS.

   G. THE CONTRACTOR SHALL PROVIDE ONE TRAFFIC OFFICER FOR ANY OPERATION WHERE AN EXISTING SIGNALIZED INTERSECTION IS PLACED IN FLASH-MODE. THE TRAFFIC OFFICER IS THE ONLY INDIVIDUAL THAT CAN PLACE A TRAFFIC SIGNAL IN FLASH-MODE AND THE TRAFFIC OFFICER MUST STAY ON LOCATION UNTIL THE SIGNAL IS PLACED BACK IN STOP-AND-GO OPERATION IN ACCORDANCE WITH DELDOT'S TEMPORARY TRAFFIC CONTROL WITHIN INTERSECTIONS MEMORANDUM (WWW.MUTCD.DELDOT.GOV).

   H. ADDITIONAL USAGE OF TRAFFIC OFFICERS OUTSIDE OF THE ABOVE REQUIREMENTS SHALL BE APPROVED BY THE ENGINEER IN CONSULTATION WITH THE TRAFFIC SAFETY SECTION.

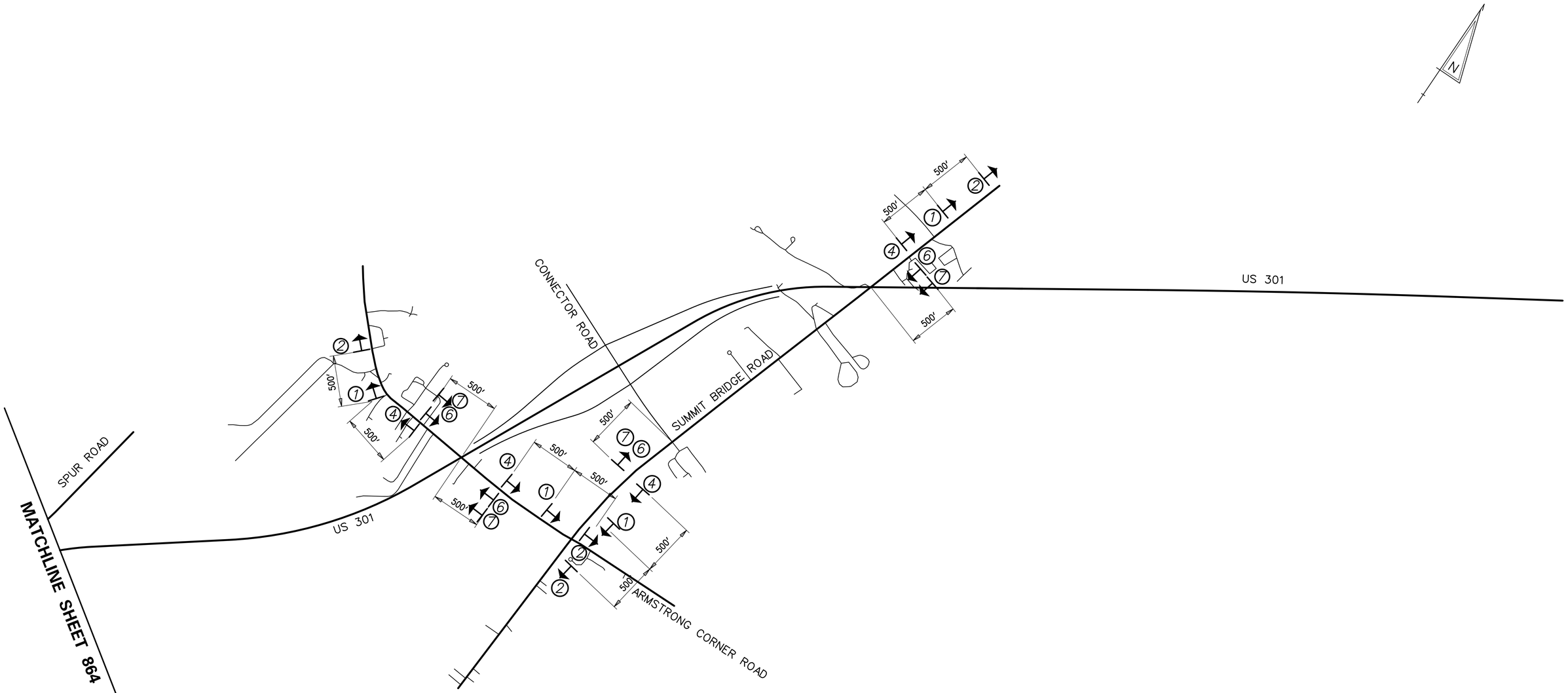
PROPOSED ADVANCE NOTIFICATION REQUIREMENTS: AT LEAST TEN (10) CALENDAR DAYS BEFORE A ROAD CLOSURE OR MAJOR CHANGE IN THE ROADWAY CONFIGURATION OR TRAVEL PATTERN, THE CONTRACTOR SHALL USE AN ADVANCE WARNING SIGN OR PORTABLE CHANGEABLE MESSAGE SIGN TO WARN MOTORISTS OF THE PENDING CHANGES. THIS SIGN SHALL REMAIN IN PLACE AT LEAST TEN (10) BUT NO MORE THAN FOURTEEN (14) CALENDAR DAYS BEFORE A MAJOR CHANGE IN THE ROADWAY CONFIGURATION OR TRAVEL PATTERN.

THE CONTRACTOR IS REQUIRED TO SUBMIT REQUESTS FOR TRAFFIC RESTRICTIONS TO THE GEC AND DELDOT IN ACCORDANCE WITH THE TABLE BELOW:

ADVANCE NOTIFICATION		
TYPE OF RESTRICTION	MINIMUM ADVANCE NOTICE	MAXIMUM ADVANCE NOTICE
1	30 DAYS	45 DAYS
2, 3, 4	10 DAYS	14 DAYS

TYPE 1: PLANNED AND ACCEPTABLE CLOSURES OF AN ARTERIAL OR LOCAL STREET, TRAFFIC SWITCHES, NEW RAMP OPENINGS, OR CHANGED TRAFFIC PATTERNS.
TYPE 2: A LANE(S) CLOSURE THAT WOULD HAVE SIGNIFICANT IMPACT ON TRAFFIC, SUCH AS TEMPORARILY STOPPING TRAFFIC COMPLETELY (TRAFFIC DRAGS), CLOSING 2 OR MORE LANES, CLOSING AN EXIT OR ENTRANCE RAMP AT FREEWAY INTERCHANGES, OR FLAGGING OPERATIONS.
TYPE 3: A LANE CLOSURE THAT WOULD HAVE MINOR OR NO IMPACT ON THE FLOW OF TRAFFIC, SUCH AS CLOSING ONE LANE ON A THREE-LANE FREEWAY DURING OFF-PEAK HOURS.
TYPE 4: A LANE CLOSURE THAT WOULD CLOSE A SHOULDER (RIGHT OR LEFT)

FOR TYPE 1 CLOSURES, THE CONTRACTOR SHALL MAKE PROVISIONS IN THE TEMPORARY TRAFFIC CONTROL PLAN FOR LOCAL TRAFFIC TO ACCESS PROPERTIES AND BUSINESSES AT ALL TIMES ON THE CLOSED ARTERIAL OR LOCAL STREET.
TYPE 1 AND 2 CLOSURES WILL REQUIRE EXTENSIVE MEDIA AND STAKEHOLDER NOTIFICATION EFFORT AND COORDINATION AMONG VARIOUS LOCAL AND STATE AGENCIES.



WARNING SIGN LEGEND

BEGIN HIGHER FINES ZONE	ROAD WORK 1500 FT	ROAD WORK 500 FT	ROAD WORK AHEAD	END ROAD WORK	END HIGHER FINES ZONE
R2-10 36" X 48"	W20-1 48" X 48"	W20-1 48" X 48"	W20-1 48" X 48"	G20-2A 48" X 24"	R2-11 36" X 48"
1	2	4	5	6	7

NOTES:

1. SEE INDIVIDUAL PHASING PLANS FOR PLACEMENT OF TEMPORARY WARNING SIGNS, FINAL LOCATION OF ALL PERMANENT WARNING SIGNS SHALL BE COORDINATED WITH THE ENGINEER.
2. ALL WARNING SIGNS SHOWN ON THIS SHEET ARE TO BE DISPLAYED THROUGHOUT THE DURATION OF THE CONTRACT AND ARE TO BE PAID FOR UNDER ITEM 743024 - TEMPORARY WARNING SIGNS AND PLAQUES.
3. ANY EXISTING SIGNS THAT CONFLICT WITH CONSTRUCTION WARNING SIGNS SHALL BE COVERED AS NEEDED, AS DIRECTED BY THE ENGINEER.

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

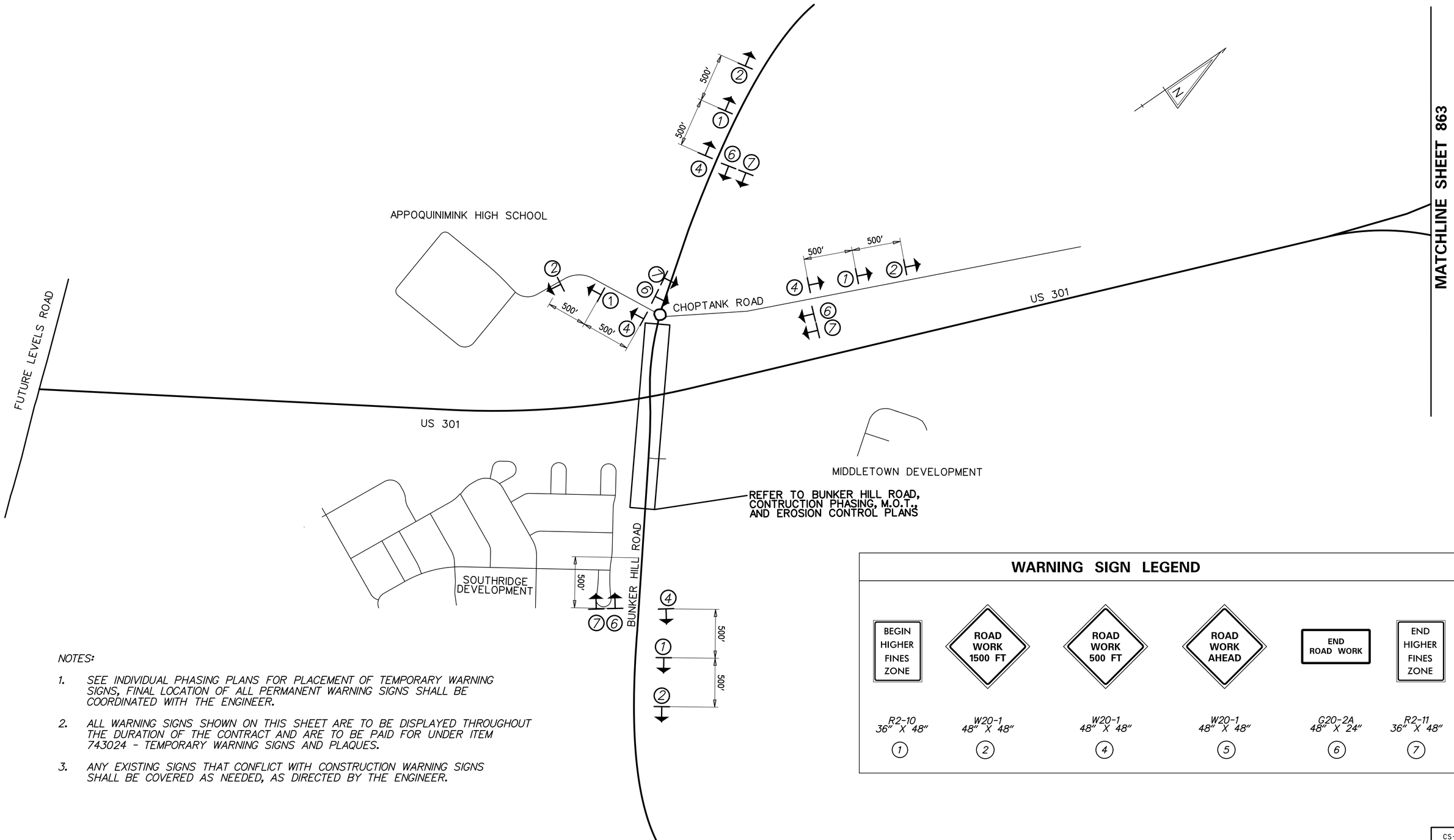
US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.
T200911303	DESIGNED BY: BAS
COUNTY	
NEW CASTLE	CHECKED BY: JJW

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 1

CS-02
SHEET NO. 863
TOTAL SHTS. 1256

$DATE$
$FILENAME$ 9040 US301\CIVIL\PLANS\2A\BALT\CS\CS-02.DGN



WARNING SIGN LEGEND

BEGIN HIGHER FINES ZONE	ROAD WORK 1500 FT	ROAD WORK 500 FT	ROAD WORK AHEAD	END ROAD WORK	END HIGHER FINES ZONE
R2-10 36" X 48"	W20-1 48" X 48"	W20-1 48" X 48"	W20-1 48" X 48"	G20-2A 48" X 24"	R2-11 36" X 48"
1	2	4	5	6	7

NOTES:

1. SEE INDIVIDUAL PHASING PLANS FOR PLACEMENT OF TEMPORARY WARNING SIGNS, FINAL LOCATION OF ALL PERMANENT WARNING SIGNS SHALL BE COORDINATED WITH THE ENGINEER.
2. ALL WARNING SIGNS SHOWN ON THIS SHEET ARE TO BE DISPLAYED THROUGHOUT THE DURATION OF THE CONTRACT AND ARE TO BE PAID FOR UNDER ITEM 743024 - TEMPORARY WARNING SIGNS AND PLAQUES.
3. ANY EXISTING SIGNS THAT CONFLICT WITH CONSTRUCTION WARNING SIGNS SHALL BE COVERED AS NEEDED, AS DIRECTED BY THE ENGINEER.

$DATE$
$FILENAME$ US301\CIVIL\PLANS\2A\BALT\CS\CS-03.DGN

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.
T200911303	DESIGNED BY: BAS
COUNTY	
NEW CASTLE	CHECKED BY: JJW

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN - PHASE 1

CS-03
SHEET NO.
864
TOTAL SHTS.
1256

EROSION AND SEDIMENT CONTROL GENERAL NOTES (ALL PHASES)

REVIEW AND OR APPROVAL OF THE SEDIMENT AND STORMWATER MANAGEMENT PLAN SHALL NOT RELIEVE THE CONTRACTOR FROM HIS OR HER RESPONSIBILITIES FOR COMPLIANCE WITH THE REQUIREMENTS OF THE SEDIMENT AND STORMWATER REGULATIONS, NOR SHALL IT RELIEVE THE CONTRACTOR FROM ERRORS OR OMISSIONS IN THE APPROVED PLAN.

NO DISTURBED AREA SHALL BE UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO AN APPROVED SEDIMENT CONTROL DEVICE. AREAS PAVED SHOULD BE STABILIZED WITH STONE. PERVIOUS AREAS SHOULD BE STABILIZED WITH SOIL STABILIZATION MATTING.

INSTALL ALL RESOURCE PROTECTION FENCING AS SHOWN ON ENVIRONMENTAL COMPLIANCE AND CONSTRUCTION PHASING, M.O.T., AND EROSION AND SEDIMENT CONTROL PLANS PRIOR TO EARTH DISTURBANCE ACTIVITIES.

INSTALL ALL REINFORCED SILT FENCE AS SHOWN ON THE CONSTRUCTION PHASING, M.O.T.,AND EROSION AND SEDIMENT CONTROL PLANS, UPSLOPE OF EXISTING WETLAND AREAS BEFORE MAJOR EARTH MOVING ACTIVITIES.

ROADWAY AND SHOULDER WORK SHALL BE PERFORMED IN SUCH A MANNER SUCH THAT POSITIVE DRAINAGE OF THE ROADWAY SURFACE IS MAINTAINED THROUGHOUT CONSTRUCTION. ALL WORK AND MATERIALS TO PROVIDE AND MAINTAIN THIS DRAINAGE SHALL BE INCIDENTAL TO ITEM 763500 - MAINTENANCE OF TRAFFIC.

TEMPORARY RIPRAP INSTALLATION WILL BE PAID UNDER ITEM 712005 - RIPRAP, R-4. REMOVAL OF TEMPORARY RIPRAP WILL BE PAID UNDER ITEM 202000 - EXCAVATION AND EMBANKMENT.

LEGEND	
SF	STANDARD SILT FENCE
	RIPRAP OUTLET PROTECTION
	DRAINAGE AREA
	STORM DRAIN PIPE
	EROSION CONTROL BLANKET
IP	INLET PROTECTION
	STABILIZED CONSTRUCTION ENTRANCE
	STONE CHECK DAM
	STONE CHECK DAM FOR CULVERT INFLOW PROTECTION
	TEMP. DITCH
ED	EARTH DIKE
RSF	REINFORCED SILT FENCE
RPF	RESOURCE PROTECTION FENCE
CF	CONSTRUCTION FENCE
	TEMPORARY SLOPE DRAIN

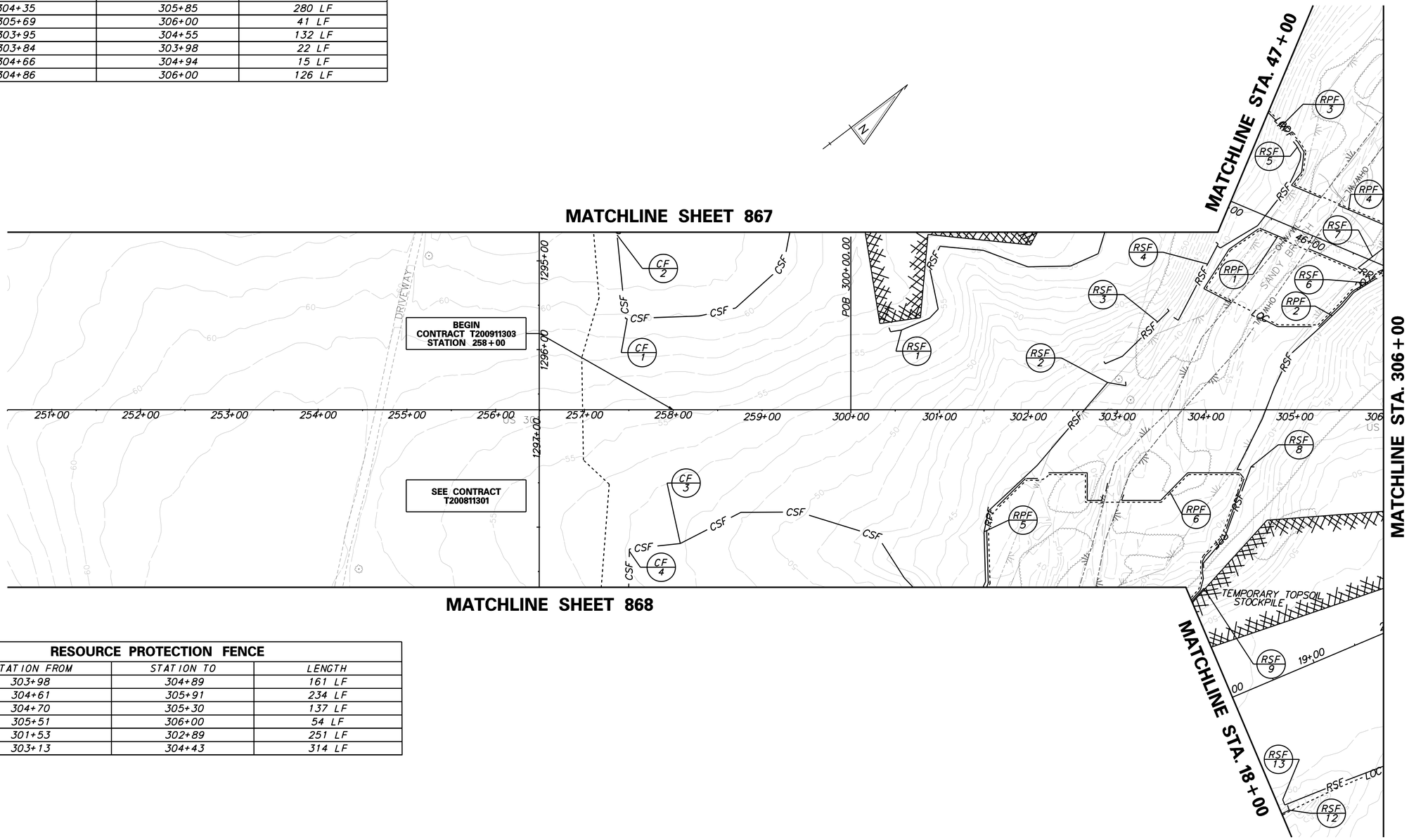
SEQUENCE OF CONSTRUCTION

STAGE 1 - INSTALLATION OF PERIMETER CONTROLS, BUNKER HILL ROAD CONSTRUCTION AND SUMMIT BRIDGE ROAD CULVERT INSTALLATION

1. PLACE ALL PERTINENT TEMPORARY TRAFFIC CONTROL DEVICES AND PERMANENT WARNING SIGNS AS PER THE PERMANENT WARNING SIGN LOCATION PLAN.
2. CLEAN WATER DRAINAGE FROM SECTION 3 CONSTRUCTION SOUTH OF LEVELS ROAD SHALL BE MAINTAINED THROUGH SECTION 2 CONSTRUCTION WITHOUT SEDIMENT CONTAMINATION.
3. BEFORE CLEARING AND GRUBBING FOR PERIMETER EROSION AND SEDIMENT CONTROLS, RESOURCE PROTECTION FENCE WILL BE INSTALLED PER PLANS TO PROTECT ENVIRONMENTAL RESOURCES.
4. CLEAR AND GRUB ONLY AS NECESSARY FOR INSTALLATION OF PERIMETER E&S FEATURES. NO GRUBBING UNDER AND BETWEEN BRIDGES 1-480 OR UNDER AND ADJACENT TO BRIDGE 1-479.
5. INSTALL ALL STAGE 1 PERIMETER E&S CONTROLS AS SHOWN ON THE PLANS INCLUDING SEDIMENT TRAPS AND BASINS, AND IDENTIFIED DIVERSION DITCHES AND CROSS CULVERTS.
6. SEDIMENT TRAPS AND BASIN SHALL BE FULLY CONSTRUCTED INCLUDING OUTFALLS AND STABILIZED PRIOR TO CONSTRUCTION ACTIVITIES WITHIN CONTRIBUTING DRAINAGE AREAS.
7. DIVERSION DITCHES, CULVERTS AND ROCK OUTLET PROTECTION SHALL BE CONSTRUCTED DOWNSTREAM TO UPSTREAM TO MAINTAIN DRAINAGE. ONLY CONSTRUCT IN SECTIONS THAT CAN BE FINISHED AND STABILIZED BY THE END OF THE WORK DAY. DIRECT CLEAN WATER THROUGH CULVERTS AS SHOWN ON PLANS WITH DIVERSION DITCHES OR EROSION CONTROL DEVICES. CULVERTS SHALL BE COVERED WITH AT LEAST 2' OF FILL AT LOCATIONS WHERE HEAVY EQUIPMENT WILL TRAVERSE THE CULVERT. 1' OF FILL WILL BE MAINTAINED AT ALL OTHER LOCATIONS ALONG THE CULVERTS. DIVERSION DITCHES SHALL BE STABILIZED PER DELDOT TEMPORARY STABILIZATION DETAILS PROVIDED. CULVERTS P-815, P-816, P-817, P-819, P-820 AND P-821 FROM STA. 432+00 TO STA. 438+00 WILL NOT BE CONSTRUCTED IN STAGE 1 TO ALLOW FOR DRAINAGE TO SEDIMENT TRAPS IN THE AREA. CONSTRUCTION OF THESE CULVERTS WILL BE INSTALLED IN STAGE 2 DURING MAJOR EARTH MOVING OPERATIONS.
8. ONCE PERIMETER CONTROLS ARE INSTALLED, BEGIN REMAINING CLEARING AND GRUBBING ACTIVITIES.
9. INSTALL REMAINING EROSION AND SEDIMENT CONTROLS AS SHOWN AND AS OUTLINED IN THE EROSION AND SEDIMENT CONTROL PLANS. FUTURE INFILTRATION AREAS THAT ARE SECTIONED OFF BY CONSTRUCTION FENCE SHALL NOT BE USED FOR SEDIMENT CONTROL OR STOCKPILING AND USE OF HEAVY EQUIPMENT SHALL BE AVOIDED WITHIN THE AREAS.
10. BEGIN CONSTRUCTION OF PHASE 1 OF BUNKER HILL ROAD. REFER TO BUNKER HILL ROAD CONSTRUCTION PHASING, MOT AND ECP.
11. BEGIN CONSTRUCTION OF PHASE 1 OF SUMMIT BRIDGE ROAD. REFER TO SUMMIT BRIDGE ROAD CONSTRUCTION PHASING, MOT AND ECP INCLUDING CONSTRUCTION OF ALL CULVERTS UNDER SUMMIT BRIDGE ROAD.
12. MAINTAIN SEDIMENT AND EROSION CONTROL STRUCTURES THROUGH STAGE 2 UNLESS OTHERWISE SHOWN AS REVISED PER PHASE 2 EROSION AND SEDIMENT CONTROL PLANS.

REINFORCED SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
1	300+43	302+86	351 LF
2	301+49	303+10	310 LF
3	302+85	303+57	100 LF
4	303+63	304+14	107 LF
5	304+13	305+09	165 LF
6	304+35	305+85	280 LF
7	305+69	306+00	41 LF
8	303+95	304+55	132 LF
9	303+84	303+98	22 LF
12	304+66	304+94	15 LF
13	304+86	306+00	126 LF

CONSTRUCTION FENCE			
NO.	STATION FROM	STATION TO	LENGTH
1	257+48	259+31	234 LF
2	257+37	259+31	98 LF
3	257+51	300+90	363 LF
4	257+50	257+51	43 LF



RESOURCE PROTECTION FENCE			
NO.	STATION FROM	STATION TO	LENGTH
1	303+98	304+89	161 LF
2	304+61	305+91	234 LF
3	304+70	305+30	137 LF
4	305+51	306+00	54 LF
5	301+53	302+89	251 LF
6	303+13	304+43	314 LF

NOTES:

1) FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

2) IF CONSTRUCTION OF DRAINAGE FROM US 301 SECTION 3 THROUGH SECTION 2 TO SANDY BRANCH IS COMPLETED BETWEEN STAGES 1 AND 2, REFER TO STAGE 2 OF THE CONSTRUCTION PHASING PLANS FOR EROSION AND SEDIMENT CONTROL FEATURES BASED ON NEW DRAINAGE PATTERNS.

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 60 120 180
FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	JW
COUNTY		
NEW CASTLE	CHECKED BY:	SF

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 1

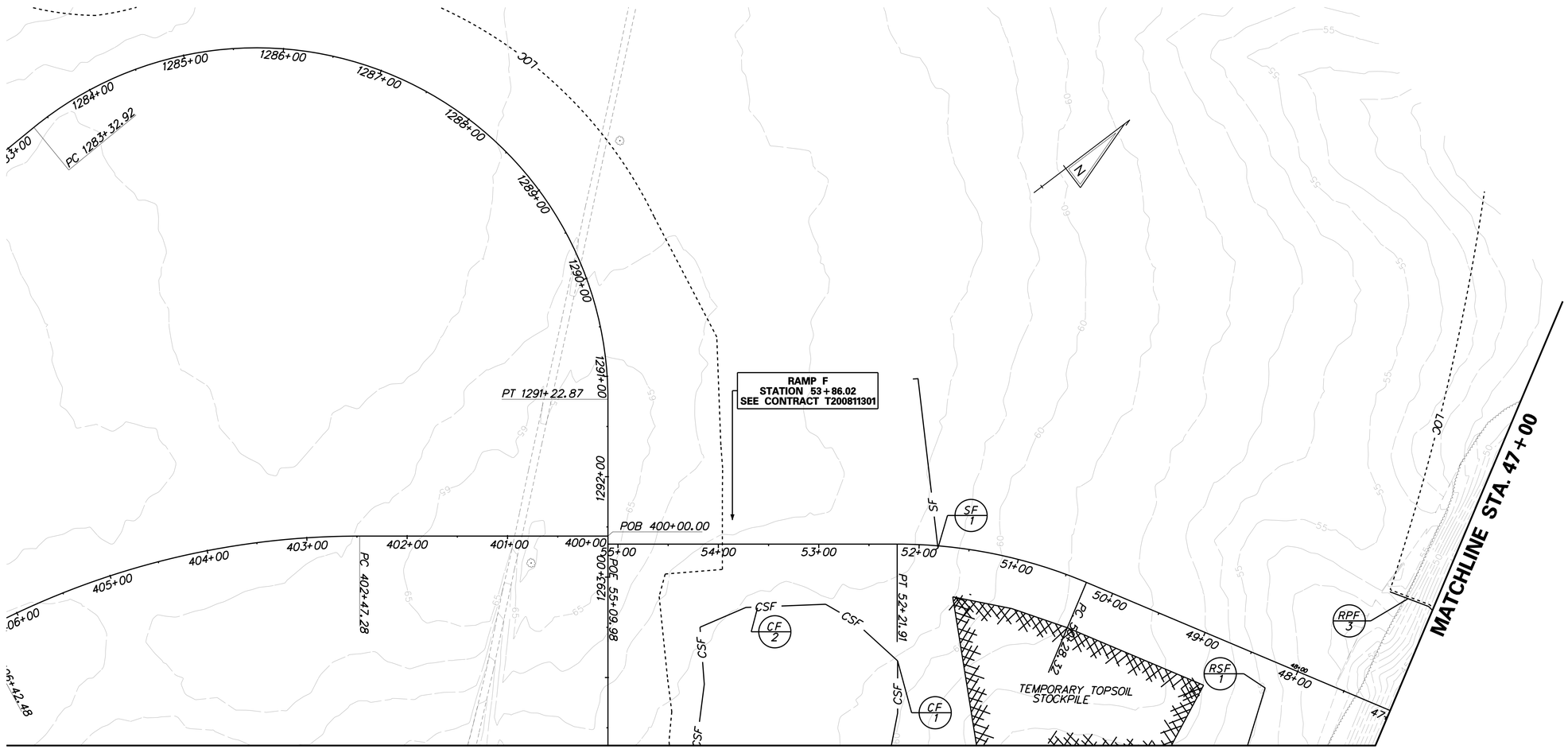
CS-05
SHEET NO.
866
TOTAL SHTS.
1256

SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
1	51+82	52+11	179 LF

REINFORCED SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
1	48+17	48+33	60 LF

CONSTRUCTION FENCE			
NO.	STATION FROM	STATION TO	LENGTH
1	52+21	52+28	85 LF
2	54+21	54+22	340 LF

RESOURCE PROTECTION FENCE			
NO.	STATION FROM	STATION TO	LENGTH
3	47+00	47+46	46 LF



MATCHLINE SHEET 866

NOTES:

1) FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

2) IF CONSTRUCTION OF DRAINAGE FROM US 301 SECTION 3 THROUGH SECTION 2 TO SANDY BRANCH IS COMPLETED BETWEEN STAGES 1 AND 2, REFER TO STAGE 2 OF THE CONSTRUCTION PHASING PLANS FOR EROSION AND SEDIMENT CONTROL FEATURES BASED ON NEW DRAINAGE PATTERNS.

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

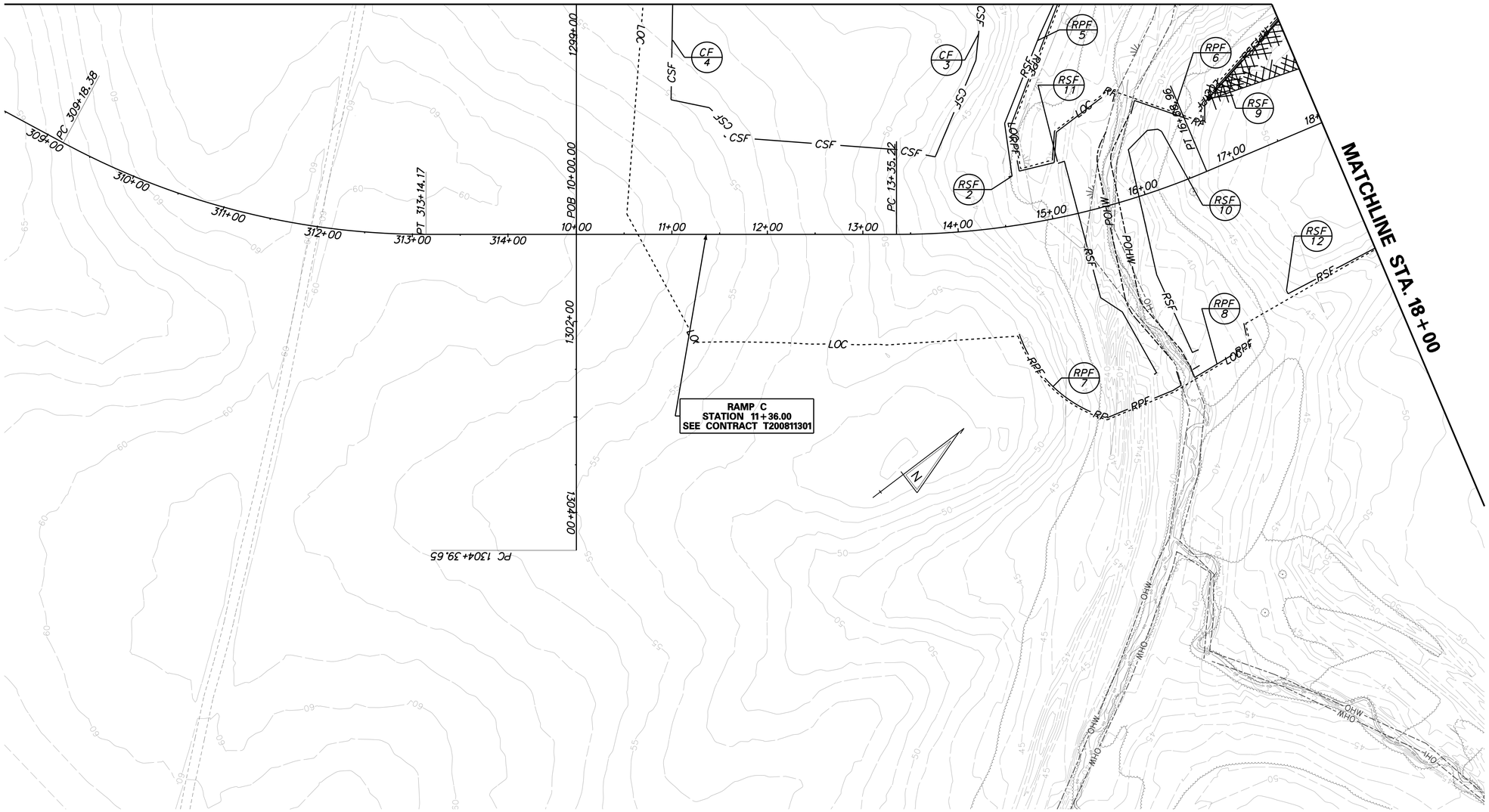
US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	JW
COUNTY		
NEW CASTLE	CHECKED BY:	SF

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 1

CS-06
SHEET NO.
867
TOTAL SHTS.
1256

MATCHLINE SHEET 866



RESOURCE PROTECTION FENCE			
NO.	STATION FROM	STATION TO	LENGTH
5	14+72	16+03	353 LF
6	16+14	18+00	231 LF
7	14+50	15+90	230 LF
8	15+92	16+48	100 LF

REINFORCED SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
2	14+61	14+59	194 LF
9	16+86	18+00	138 LF
10	15+87	16+40	275 LF
11	15+18	15+61	260 LF
12	16+97	18+00	107 LF

CONSTRUCTION FENCE			
NO.	STATION FROM	STATION TO	LENGTH
3	13+89	14+70	169 LF
4	10+99	13+89	401 LF

NOTES:

1) FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

2) IF CONSTRUCTION OF DRAINAGE FROM US 301 SECTION 3 THROUGH SECTION 2 TO SANDY BRANCH IS COMPLETED BETWEEN STAGES 1 AND 2, REFER TO STAGE 2 OF THE CONSTRUCTION PHASING PLANS FOR EROSION AND SEDIMENT CONTROL FEATURES BASED ON NEW DRAINAGE PATTERNS.

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT T200911303 | COUNTY NEW CASTLE | BRIDGE NO. | DESIGNED BY: JW | CHECKED BY: SF

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 1

CS-07 | SHEET NO. 868 | TOTAL SHTS. 1256

REINFORCED SILT FENCE

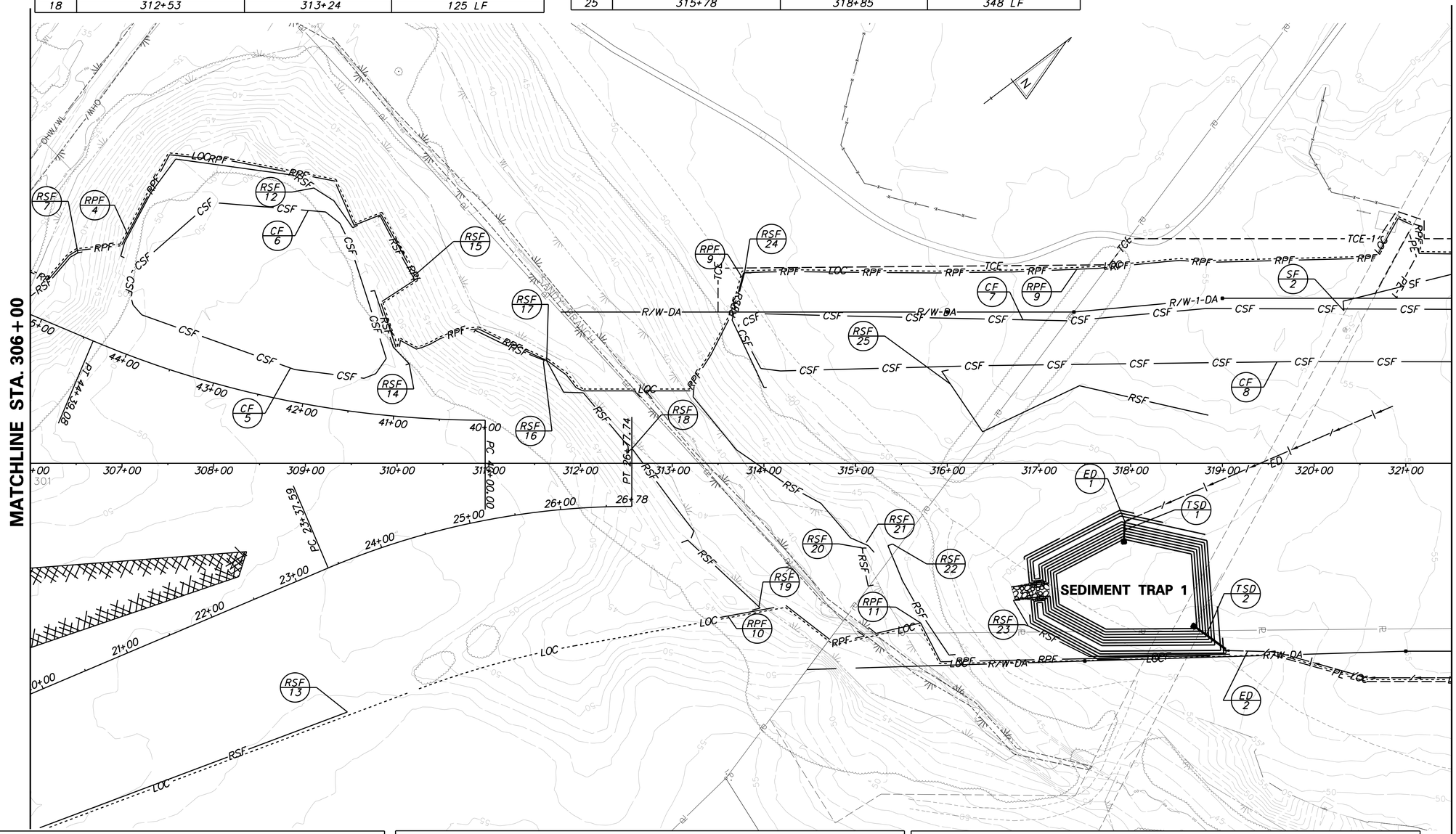
NO.	STATION FROM	STATION TO	LENGTH
7	44+88	45+13	76 LF
12	41+51	44+44	351 LF
13	20+15	22+96	370 LF
14	40+87	41+40	99 LF
15	40+86	41+46	84 LF
16	310+86	311+64	88 LF
17	311+63	312+53	152 LF
18	312+53	313+24	125 LF

REINFORCED SILT FENCE

NO.	STATION FROM	STATION TO	LENGTH
19	313+11	313+99	125 LF
20	315+07	315+19	53 LF
21	313+31	315+20	276 LF
22	315+35	316+09	150 LF
23	316+71	319+04	268 LF
24	313+65	314+04	145 LF
25	315+78	318+85	348 LF

CONSTRUCTION FENCE

NO.	STATION FROM	STATION TO	LENGTH
5	41+11	44+29	339 LF
6	41+11	44+29	415 LF
7	313+72	321+50	782 LF
8	313+72	321+50	807 LF



SILT FENCE

NO.	STATION FROM	STATION TO	LENGTH
2	320+31	321+50	131 LF

EARTH DIKE

NO.	STATION FROM	STATION TO	LENGTH
1	317+91	320+83	318 LF
2	318+93	321+50	256 LF

RESOURCE PROTECTION FENCE

NO.	STATION FROM	STATION TO	LENGTH
4	306+00	312+66	980 LF
9	312+71	321+50	1032 LF
10	313+52	315+00	190 LF
11	315+15	319+09	425 LF

TEMPORARY SLOPE DRAIN

NO.	PIPE SIZE	LENGTH	DA
1	18"	30 LF	1.16
2	2-30"	50 LF	11.5

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

SEDIMENT TRAP OUTFALL QUANTITIES

ITEM NO.	ITEM	QTY.	UNITS
712005	RIP RAP, R-4	81	SY

TEMPORARY SEDIMENT TRAP

NO.	D. AREA	LENGTH	WIDTH	DEPTH	OUT. TYPE	OUT. EL.	CLEAN EL.	TOP EL.	WEIR WIDTH
1	12.66	190	150	6	RST	50.2	48.8	53.0	14

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT: T200911303
COUNTY: NEW CASTLE
BRIDGE NO.:
DESIGNED BY: JW
CHECKED BY: SF

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 1

CS-08
SHEET NO. 869
TOTAL SHTS. 1256

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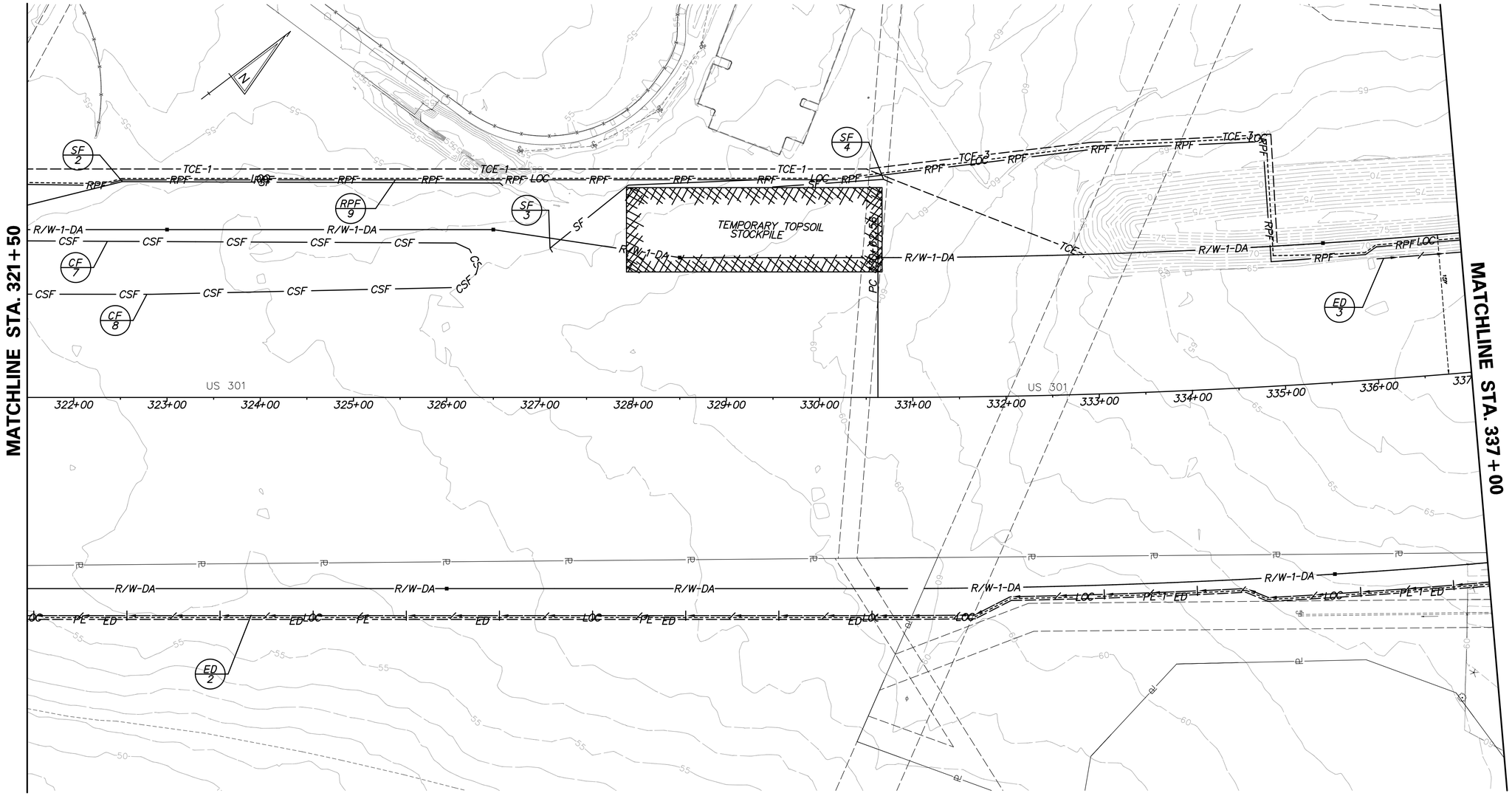
EARTH DIKE			
NO.	STATION FROM	STATION TO	LENGTH
2	321+50	337+00	1575 LF
3	336+07	337+00	91 LF

SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
2	321+50	326+60	514 LF
3	327+10	329+45	265 LF
4	329+49	330+77	129 LF

CONSTRUCTION FENCE			
NO.	STATION FROM	STATION TO	LENGTH
7	321+50	326+33	496 LF
8	321+50	326+33	495 LF

RESOURCE PROTECTION FENCE			
NO.	STATION FROM	STATION TO	LENGTH
9	321+50	337+00	1665 LF



NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	JW
COUNTY		
NEW CASTLE	CHECKED BY:	SF

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 1

CS-09
SHEET NO.
870
TOTAL SHTS.
1256

EARTH DIKE

NO.	STATION FROM	STATION TO	LENGTH
2	337+00	337+38	39 LF
3	337+00	341+09	404 LF
4	348+12	349+91	82 LF
5	349+40	351+81	249 LF
6	351+81	352+50	69 LF
7	352+17	352+50	33 LF
29	345+68	345+74	98 LF

SILT FENCE

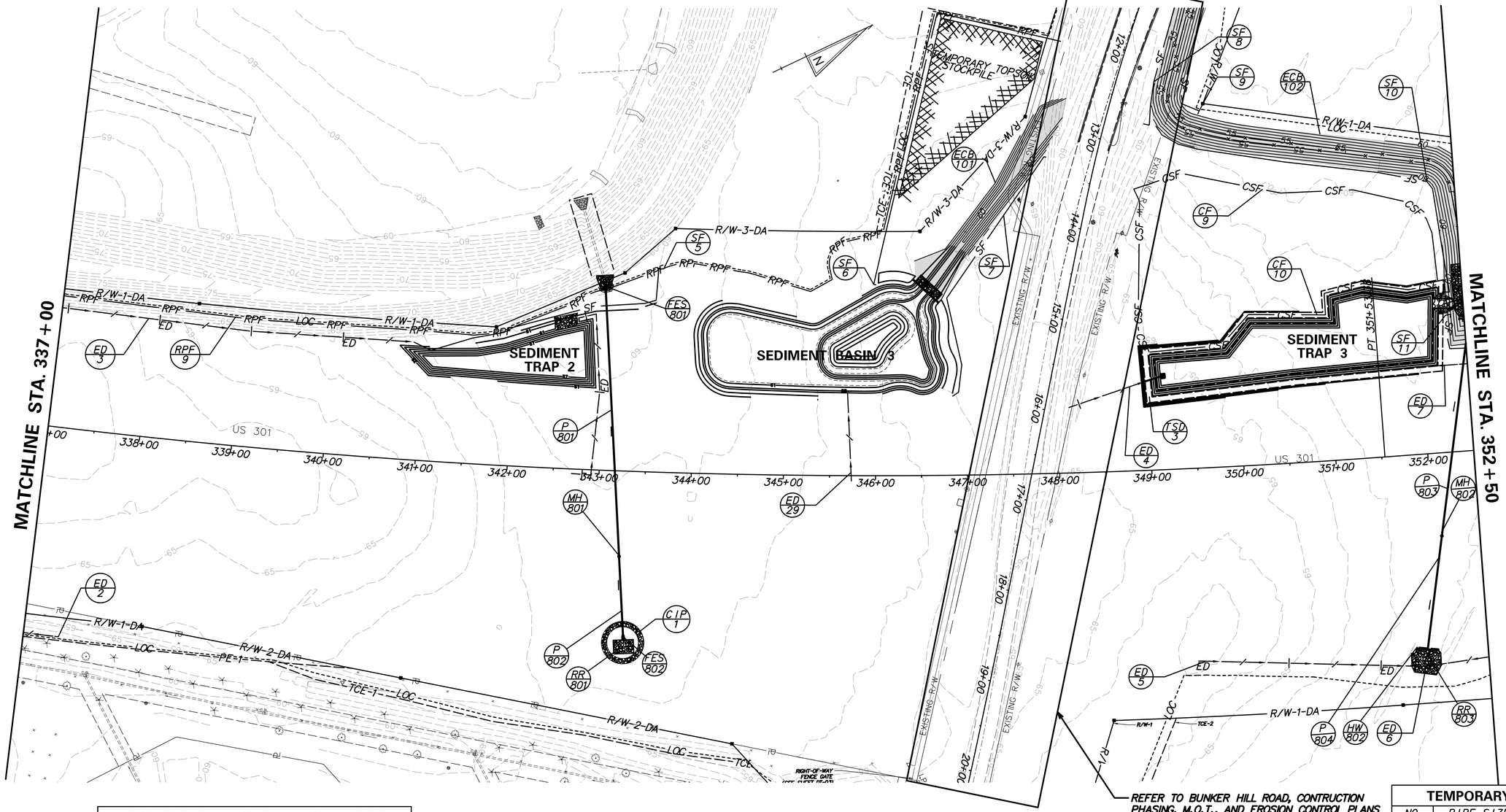
NO.	STATION FROM	STATION TO	LENGTH
5	341+09	343+63	291 LF
6	345+98	348+14	443 LF
7	346+79	347+94	300 LF
8	349+07	349+47	137 LF
9	349+51	349+82	130 LF
10	349+20	352+36	440 LF
11	352+30	352+50	61 LF

EROSION CONTROL BLANKET

NO.	SY	LENGTH	WIDTH	TYPE
101	796	257 LF	47 LF	3
102	6212	121 LF	32 LF	3

CONSTRUCTION FENCE

NO.	STATION FROM	STATION TO	LENGTH
9	348+91	352+22	500 LF
10	348+91	352+24	440 LF



REFER TO BUNKER HILL ROAD, CONTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS

TEMPORARY SLOPE DRAIN

NO.	PIPE SIZE	LENGTH	DA
3	12"	22	0.5

SEDIMENT TRAP OUTFALL QUANTITIES

ITEM NO.	ITEM	QTY.	UNITS
302011	DELAWARE NO. 3 STONE	18	TON
712005	RIP RAP, R-4	41	SY

TEMPORARY SEDIMENT BASIN

NO.	D. AREA	LENGTH	WIDTH	DEPTH	OUT. TYPE	OUT. EL.	CLEAN EL.
3	3.9	160	130	6.5	TSB	60.9	60.3

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

TEMPORARY SEDIMENT TRAP

NO.	D. AREA	LENGTH	WIDTH	DEPTH	OUT. TYPE	OUT. EL.	CLEAN EL.	TOP EL.	WEIR WIDTH
2	4.3	72	200	4	SST	60.0	58.5	61.0	20
3	9.3	320	100	5.5	RST	59.5	58.3	62.5	10

STONE CHECK DAM FOR CULVERT INFLOW PROTECTION

NO.	D. AREA	STATION	QTY.	UNITS
1	4.5 AC	343+35, RT	23	TON

RESOURCE PROTECTION FENCE

NO.	STATION FROM	STATION TO	LENGTH
9	337+00	348+00	1321 LF

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.
T200911303	DESIGNED BY: BAS
COUNTY: NEW CASTLE	CHECKED BY: JJW

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 1

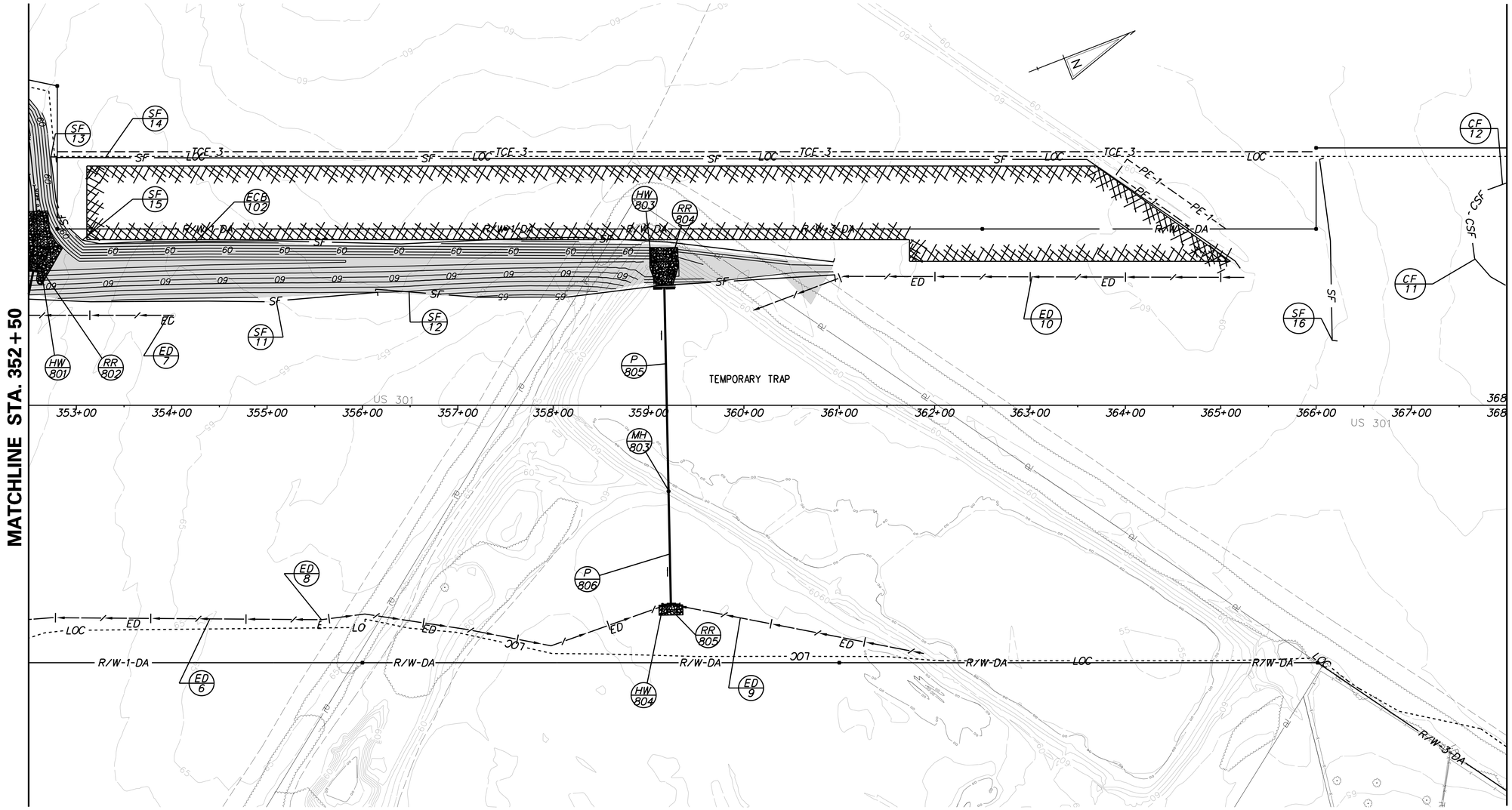
CS-10
SHEET NO. 871
TOTAL SHTS. 1256

$DATE$
$FULLNAME$ 60049040 US301\CIVIL\PLANS\2A\CP\AETCS-10.DGN

CONSTRUCTION FENCE			
NO.	STATION FROM	STATION TO	LENGTH
11	367+60	368+00	94 LF
12	367+60	368+00	53 LF

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
102	6212	715 LF	40 LF	3

EARTH DIKE			
NO.	STATION FROM	STATION TO	LENGTH
6	352+50	355+58	308 LF
7	352+50	354+03	152 LF
8	355+58	359+27	369 LF
9	359+27	361+90	261 LF
10	360+00	365+25	520 LF



SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
11	352+50	356+17	370 LF
12	356+15	360+97	492 LF
13	352+74	353+07	103 LF
14	352+79	365+20	1282 LF
15	353+07	360+96	794 LF
16	366+04	366+23	201 LF

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 60 120 180
FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	JW
COUNTY	CHECKED BY:	SF
NEW CASTLE		

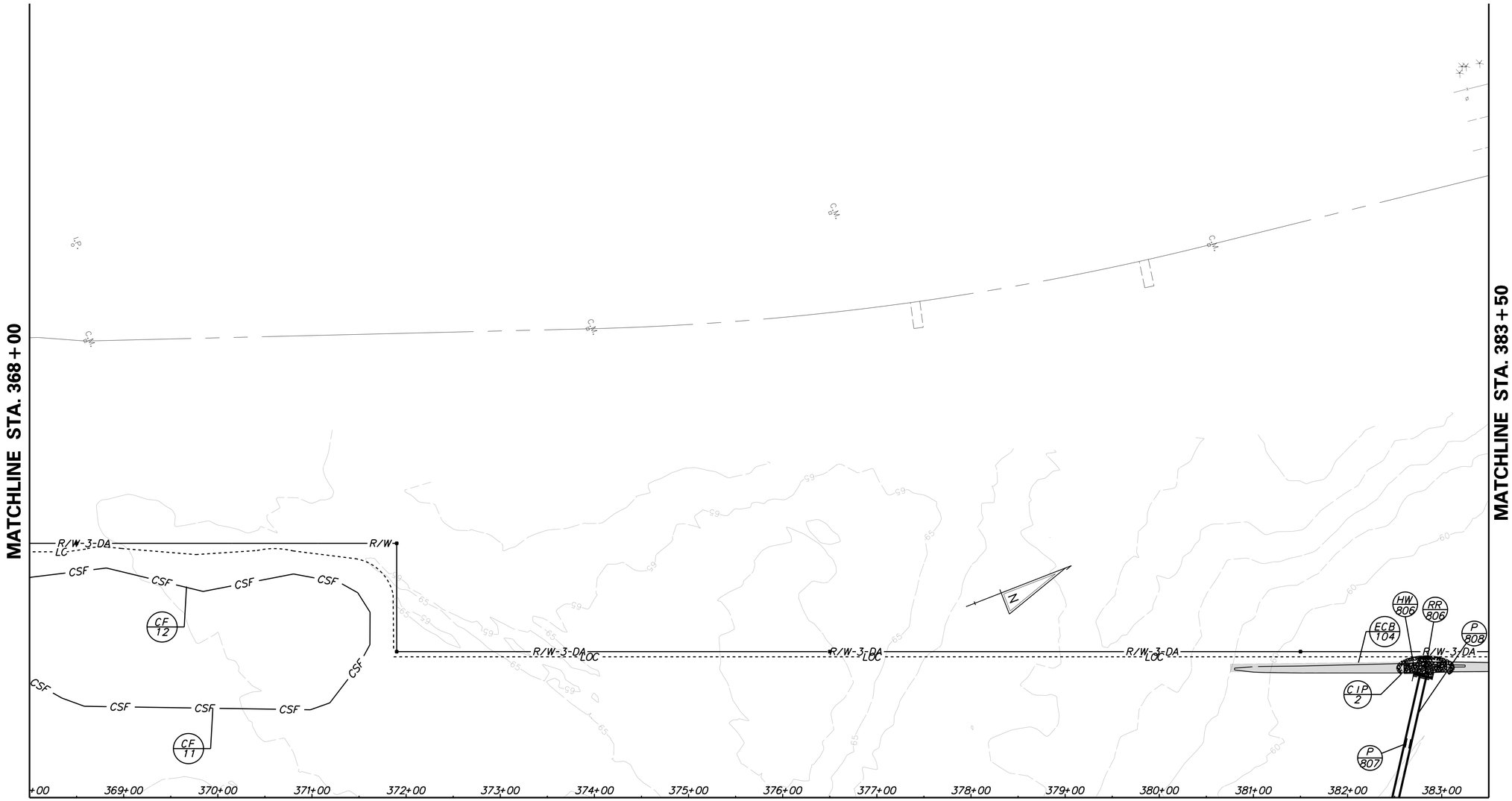
CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 1

CS-11
SHEET NO.
872
TOTAL SHTS.
1256

CONSTRUCTION FENCE			
NO.	STATION FROM	STATION TO	LENGTH
11	368+00	371+62	437 LF
12	368+00	371+62	382 LF

STONE CHECK DAM FOR CULVERT INFLOW PROTECTION				
NO.	D. AREA	STATION	QTY.	UNITS
2	15.6 AC	382+82, LT	19	TON

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
104	303	275 LF	11 LF	3



MATCHLINE SHEET 874

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	JW
COUNTY	CHECKED BY:	SF
NEW CASTLE		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 1

CS-12
SHEET NO.
873
TOTAL SHTS.
1256

TEMPORARY SEDIMENT TRAP									
NO.	D. AREA	LENGTH	WIDTH	DEPTH	OUT. TYPE	OUT. EL.	CLEAN EL.	TOP EL.	WEIR WIDTH
4	9.3	290	130	5	RST	58.0	57.0	61.0	10
5	4.5	300	70	5	SST	60.5	58.3	62.0	18

EARTH DIKE			
NO.	STATION FROM	STATION TO	LENGTH
13	375+52	378+43	290 LF
14	381+14	382+40	128 LF

SILT FENCE			
NO	STATION FROM	STATION TO	LENGTH
17	375+68	381+58	779 LF
18	382+35	383+50	125 LF

RESOURCE PROTECTION FENCE			
NO.	STATION FROM	STATION TO	LENGTH
12	377+25	382+00	678 LF
13	382+27	383+50	125 LF

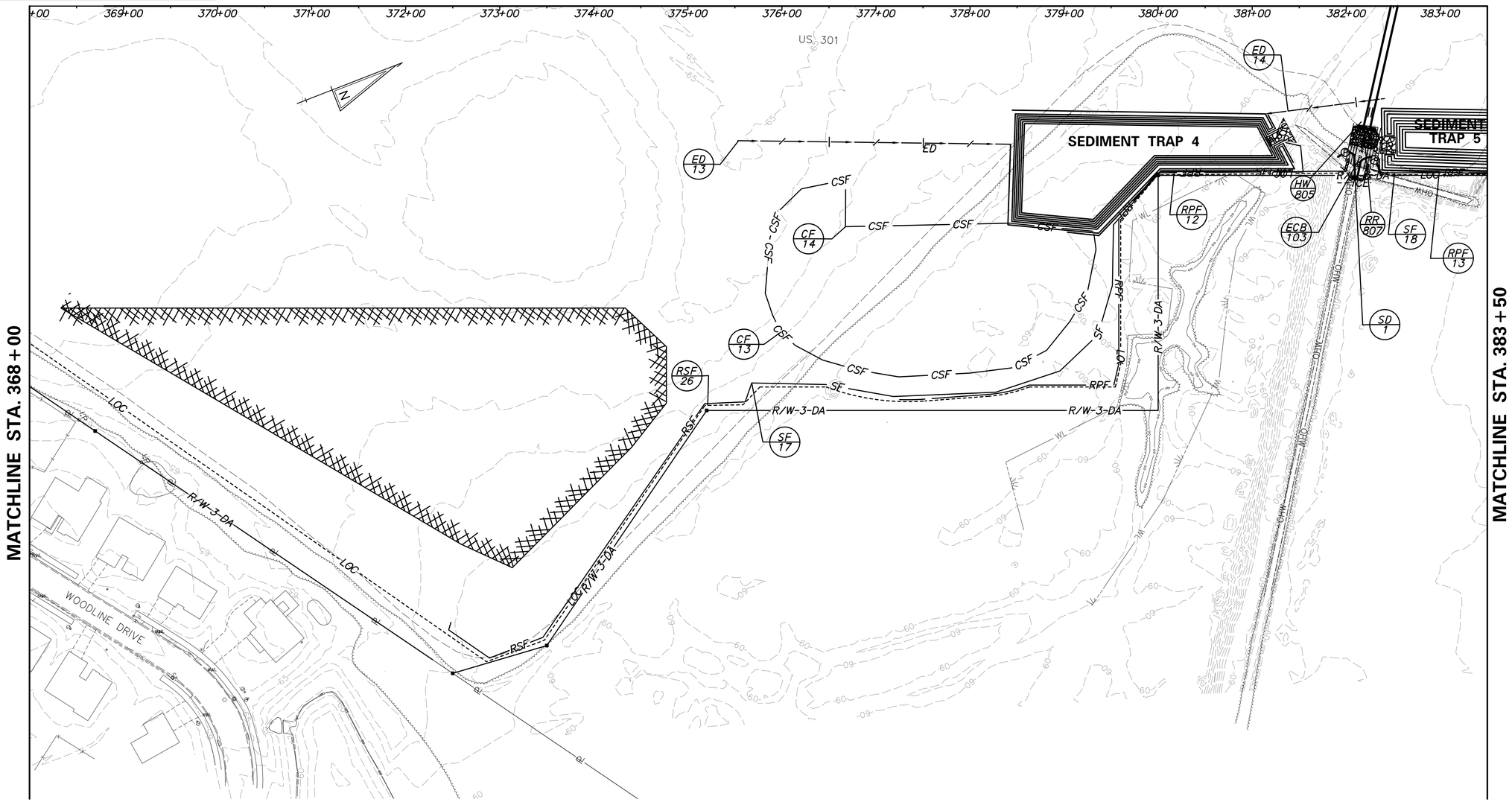
CONSTRUCTION FENCE			
NO.	STATION FROM	STATION TO	LENGTH
13	375+87	379+30	545 LF
14	375+87	379+30	425 LF

REINFORCED SILT FENCE			
NO	STATION FROM	STATION TO	LENGTH
26	372+46	375+68	489 LF

SEDIMENT TRAP OUTFALL QUANTITIES			
ITEM NO.	ITEM	QTY.	UNITS
712005	RIP RAP, R-4	106	SY

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
103	114	45 LF	27 LF	3

MATCHLINE SHEET 873



NOTE:
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STREAM DIVERSION QUANTITIES			
ITEM NO.	ITEM	QTY.	UNITS
909005	STREAM DIVERSION	1	LS

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 60 120 180
FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.
T200911303	DESIGNED BY: BAS
COUNTY	
NEW CASTLE	CHECKED BY: JJW

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 1

CS-13
SHEET NO.
874
TOTAL SHTS.
1256

$DATE$
$FULLNAME$ 32.60049040 US301\CIVIL\PLANS\2A\CPYAET\CS-13.DGN

TEMPORARY SEDIMENT TRAP									
NO.	D. AREA	LENGTH	WIDTH	DEPTH	OUT. TYPE	OUT. EL.	CLEAN EL.	TOP EL.	WEIR WIDTH
6	3.99	139	67.2	4	SST	59	57.5	60.0	16

TEMPORARY SEDIMENT BASIN							
NO.	D. AREA	LENGTH	WIDTH	DEPTH	OUT. TYPE	OUT. EL.	CLEAN EL.
7	5.75'	480	110	2	TSB	61.25	60.9

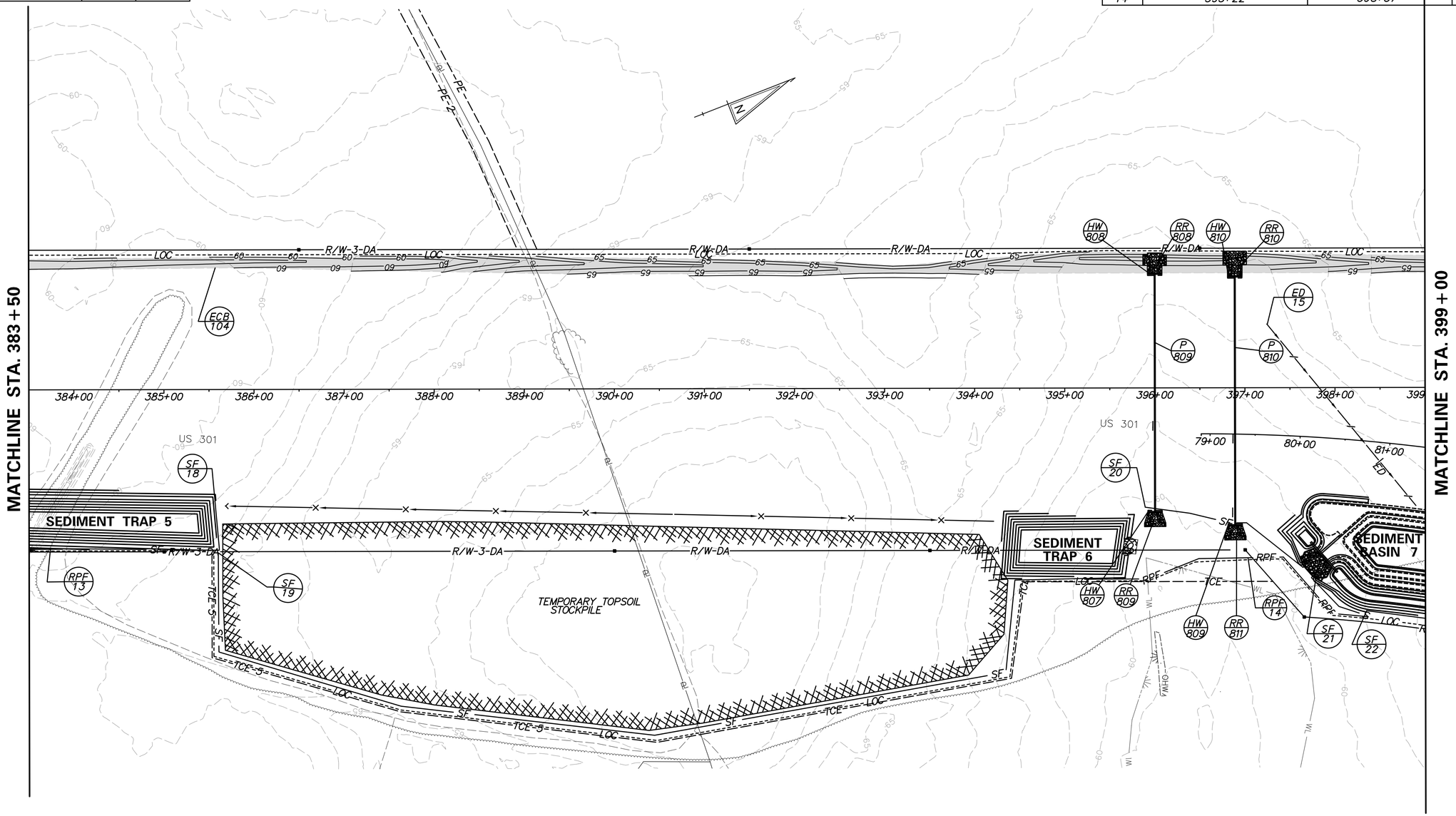
SEDIMENT TRAP OUTFALL QUANTITIES			
ITEM NO.	ITEM	QTY.	UNITS
302011	DELAWARE NO. 3 STONE	14	TON

EARTH DIKE			
NO.	STATION FROM	STATION TO	LENGTH
15	397+24	398+90	261 LF

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
104	2630	1550 LF	31 LF	3

SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
18	363+50	385+61	215 LF
19	385+61	395+67	1226 LF
20	395+89	397+70	202 LF
21	397+78	398+39	93 LF
22	398+34	399+00	66 LF

RESOURCE PROTECTION FENCE			
NO.	STATION FROM	STATION TO	LENGTH
13	383+50	383+87	37 LF
14	395+22	398+37	347 LF



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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.
T200911303	DESIGNED BY: BAS
COUNTY	CHECKED BY: JJW
NEW CASTLE	

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 1

CS-14
SHEET NO.
875
TOTAL SHTS.
1256

$DATE$
$FIGFILE$ 2\60049040 US301\CIVIL\PLANS\2A\CP\AET\CS-14.DGN

EROSION CONTROL BLANKET

NO.	SY	LENGTH	WIDTH	TYPE
104	1770	879 LF	18 LF	3

TEMPORARY SEDIMENT BASIN

NO.	D. AREA	LENGTH	WIDTH	DEPTH	OUT. TYPE	OUT. EL.	CLEAN EL.
9C	3.1	125	330	3.5	TSB	64.12	63.7

RESOURCE PROTECTION FENCE

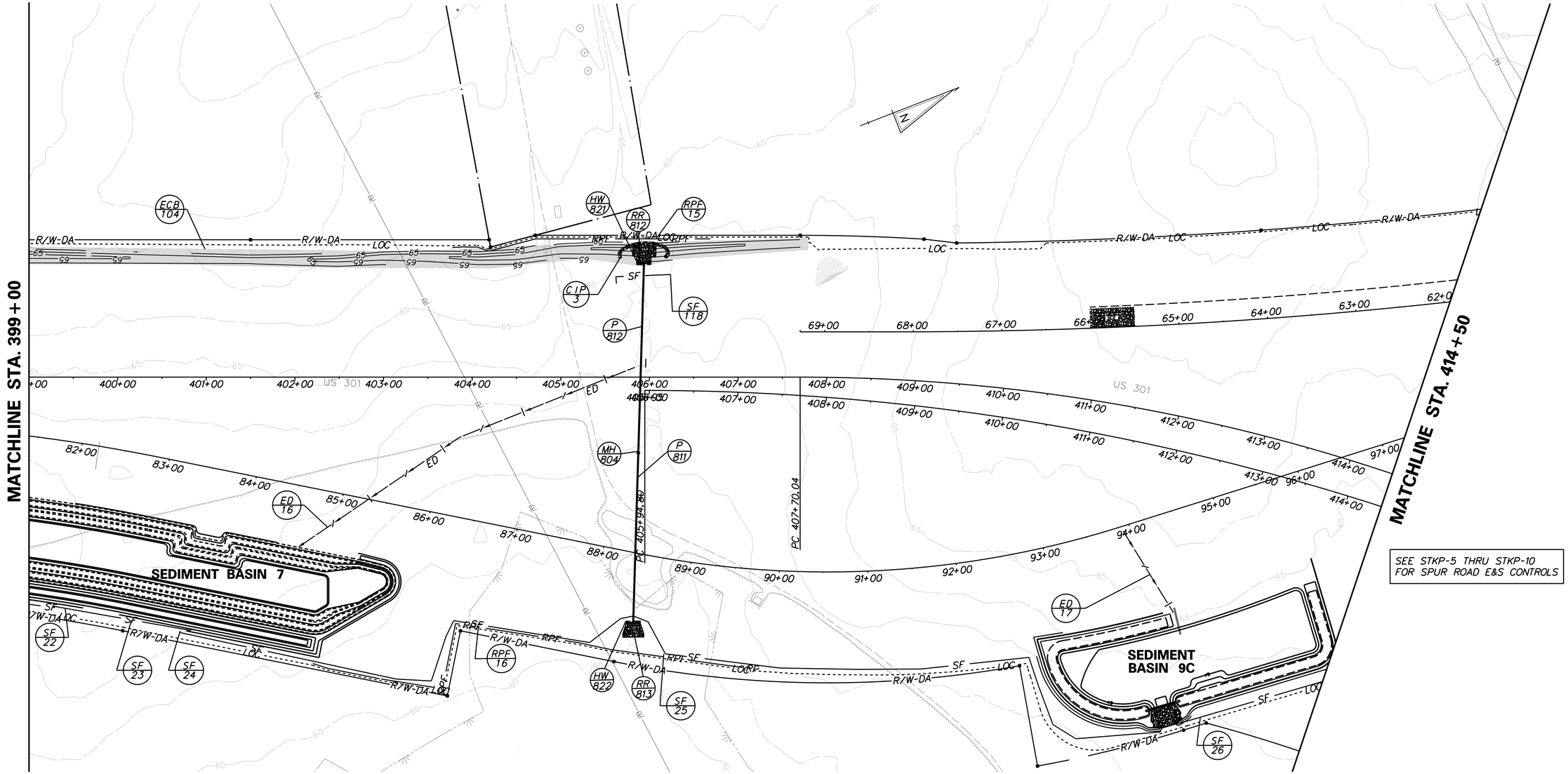
NO.	STATION FROM	STATION TO	LENGTH
15	403+77	406+75	293 LF
16	402+20	407+25	567 LF

EARTH DIKE

NO.	STATION FROM	STATION TO	LENGTH
16	402+04	405+83	433 LF
17	411+58	412+37	108 LF

SILT FENCE

NO.	STATION FROM	STATION TO	LENGTH
22	399+00	399+21	31 LF
23	399+27	400+83	158 LF
24	400+70	405+81	579 LF
25	405+81	412+64	679 LF
26	412+74	414+50	178 LF
118	405+62	406+24	77 LF



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STONE CHECK DAM FOR CULVERT INFLOW PROTECTION

NO.	D. AREA	STATION	QTY.	UNITS
3	11.8 AC	405+94, LT	19	TON

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	JW
COUNTY	CHECKED BY:	SF
NEW CASTLE		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 1

CS-15
SHEET NO. 876
TOTAL SHTS. 1256

TEMPORARY SEDIMENT TRAP									
NO.	D. AREA	LENGTH	WIDTH	DEPTH	OUT. TYPE	OUT. EL.	CLEAN EL.	TOP EL.	WEIR WIDTH
7	4.4	162	77	4	SST	65	63.25	66.0	18

REINFORCED SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
27	415+63	419+60	388 LF
28	424+04	429+20	715 LF

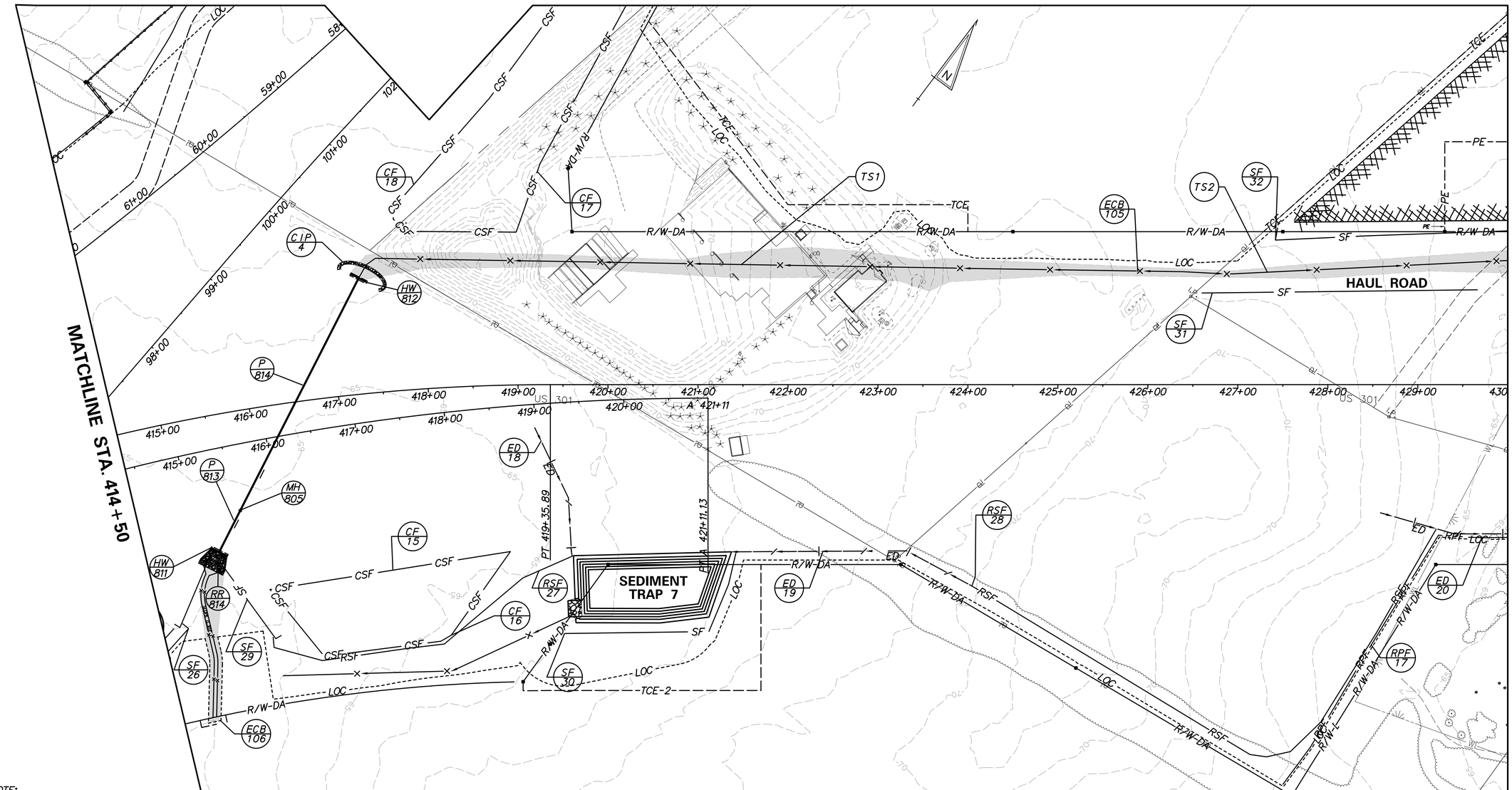
EARTH DIKE			
NO.	STATION FROM	STATION TO	LENGTH
18	419+17	419+60	146 LF
19	421+37	424+00	277 LF
20	428+58	430+00	146 LF

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
105	13900	1890 LF	50 LF	3
106	200	666 LF	33 LF	2

STONE CHECK DAM FOR CULVERT INFLOW PROTECTION				
NO.	D. AREA	STATION	QTY.	UNITS
4	4.17	417+50	19	TON

RESOURCE PROTECTION FENCE			
NO.	STATION FROM	STATION TO	LENGTH
17	427+67	430+00	405 LF

MATCHLINE SHEET NO. 878



NOTE:
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TEMPORARY SWALE				
NO.	TYPE	b	d	QTY. (LF)
1	B	6	1	928
2	B	6	1	361

SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
26	414+50	414+81	43 LF
29	414+53	415+72	237 LF
30	419+52	421+42	253 LF
31	426+59	429+66	315 LF
32	427+42	430+00	272 LF

CONSTRUCTION FENCE			
NO.	STATION FROM	STATION TO	LENGTH
15	415+90	418+87	270 LF
16	415+90	418+87	354 LF
17	417+47	420+21	423 LF
18	417+47	419+43	302 LF

SEDIMENT TRAP OUTFALL QUANTITIES			
ITEM NO.	ITEM	QTY.	UNITS
302011	DELAWARE NO. 3 STONE	16	TON

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 60 120 180
FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.
T200911303	DESIGNED BY: BAS
COUNTY	
NEW CASTLE	CHECKED BY: JJW

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 1

CS-16
SHEET NO.
877
TOTAL SHTS.
1256

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$UCSVIEW
$UCSORTHO
$UCSFOLLOW
$UCSICON
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$GRIDPAT
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$LIMMAX
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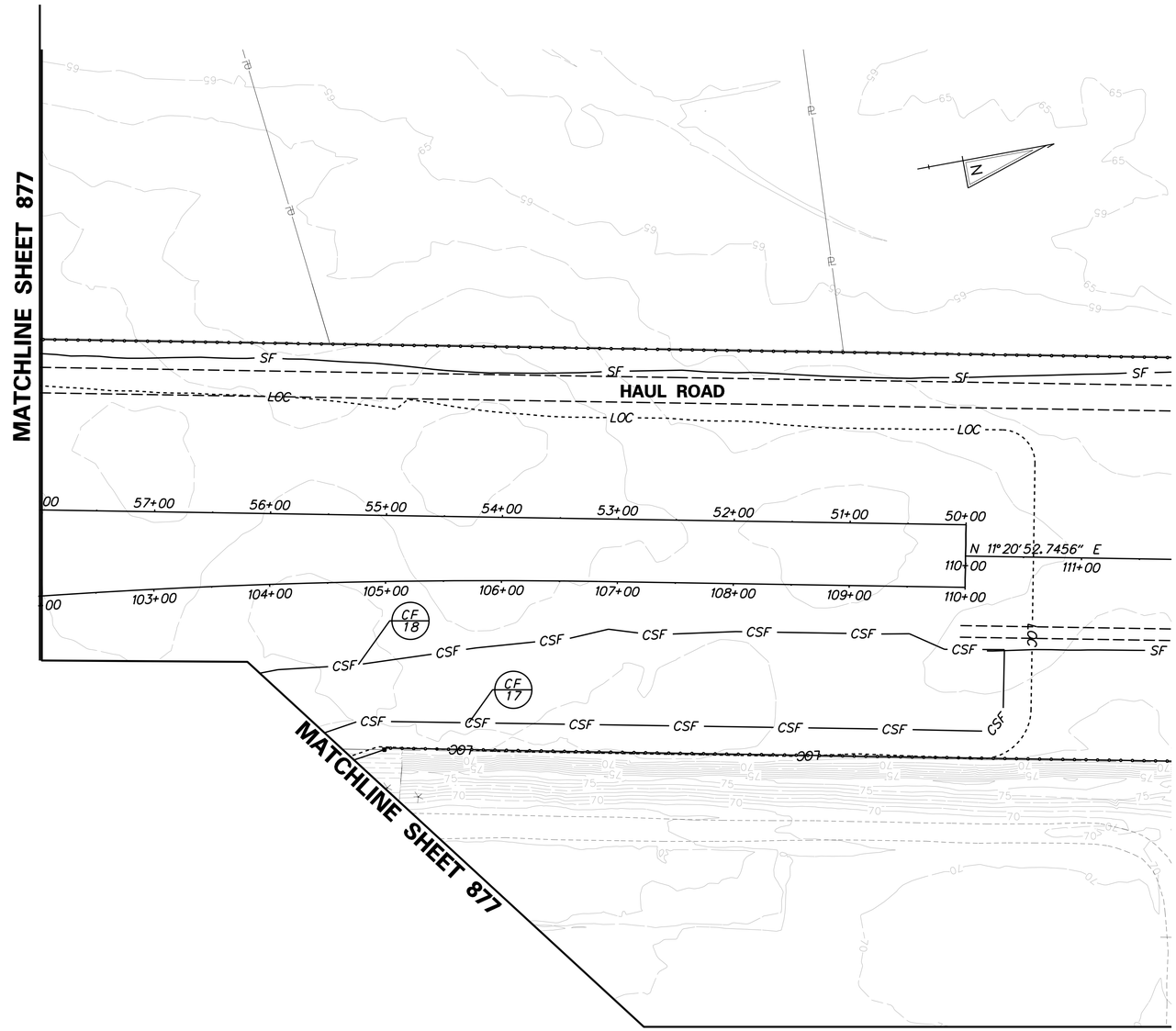
CONSTRUCTION FENCE			
NO.	STATION FROM	STATION TO	LENGTH
17	420+21	424+42	651 LF
18	419+43	423+15	650 LF



SEE STKP-5 THRU STKP-10
FOR SPUR ROAD E&S CONTROLS

NOTE:
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P:\CADD2\60049040 US301\CIVIL\PLANS\2A\CP\AET\CS-17.DGN

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 60 120 180
FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	T200911303	BRIDGE NO.	
COUNTY	NEW CASTLE	DESIGNED BY:	JW
		CHECKED BY:	SF

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 1

	CS-17
SHEET NO.	878
TOTAL SHTS.	1256

SEDIMENT BASIN SCHEDULE

NO.	D. AREA	LENGTH	WIDTH	DEPTH	OUT. TYPE	OUT. EL.	CLEAN EL.
11	5	184	450	2	TSB	66.1	65.8

TEMPORARY SEDIMENT TRAP

NO.	D. AREA	LENGTH	WIDTH	DEPTH	OUT. TYPE	OUT. EL.	CLEAN EL.	TOP EL.	WEIR WIDTH
8	4.9	142	80	4	SST	63	61.6	64.0	20
9	3.8	98	123	4	SST	63	61.7	64.0	15

EROSION CONTROL BLANKET

NO.	SY	LENGTH	WIDTH	TYPE
105	6000	1550 LF	60 LF	3

RESOURCE PROTECTION FENCE

NO.	STATION FROM	STATION TO	LENGTH
17	430+00	438+97	1190 LF
18	432+39	440+17	1050 LF

TEMPORARY SWALE

NO.	TYPE	b	d	QTY. (LF)
2	B	6	1	928

SEDIMENT TRAP OUTFALL QUANTITIES

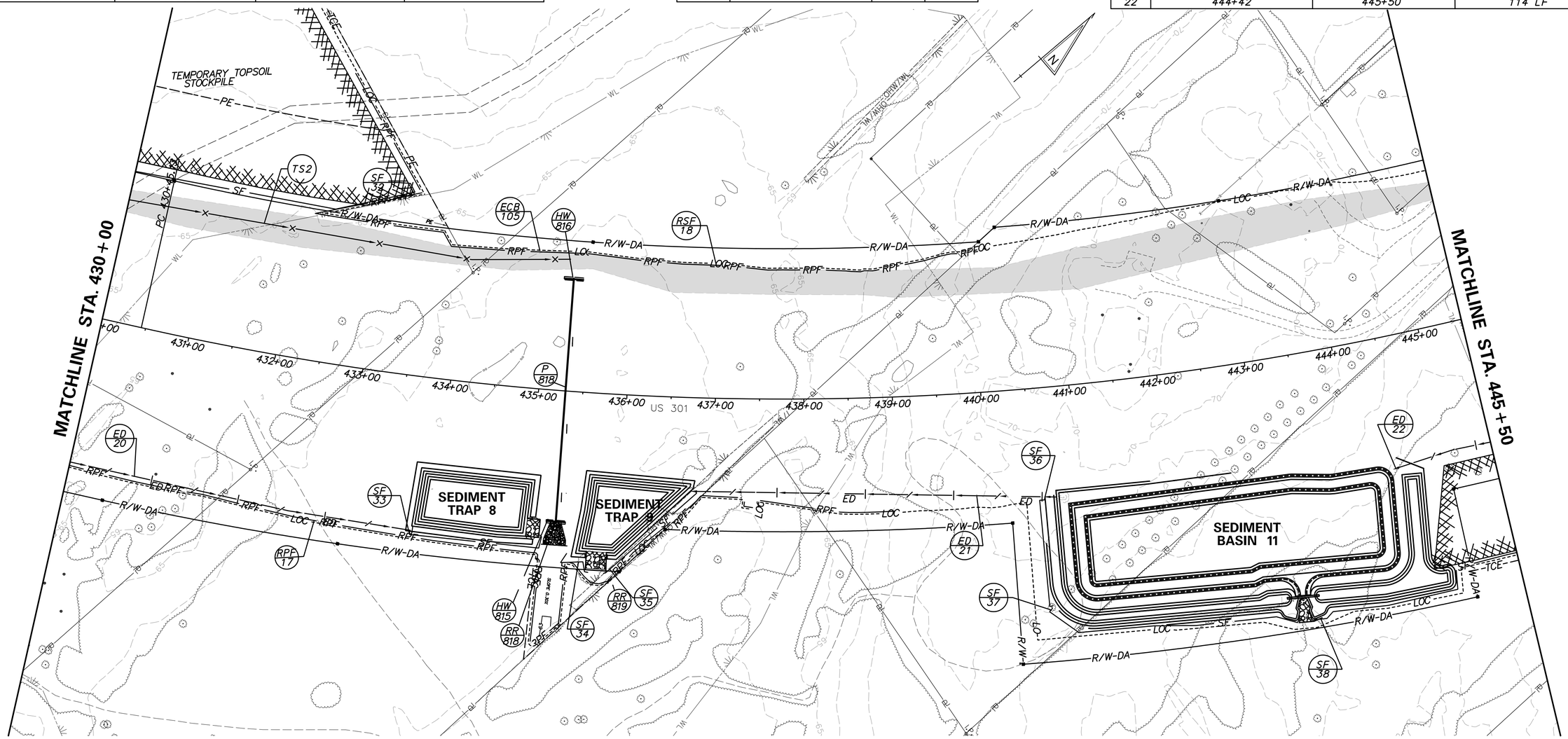
ITEM NO.	ITEM	QTY.	UNITS
302011	DELAWARE NO. 3 STONE	42	TON

SILT FENCE

NO.	STATION FROM	STATION TO	LENGTH
32	430+00	433+32	333 LF
33	433+75	435+16	167 LF
34	435+45	435+68	53 LF
35	435+85	436+82	141 LF
36	440+56	440+61	130 LF
37	440+57	443+15	301 LF
38	443+26	445+50	272 LF

EARTH DIKE

NO.	STATION FROM	STATION TO	LENGTH
20	430+00	433+77	396 LF
21	436+76	440+75	413 LF
22	444+42	445+50	114 LF



NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

$DATE$
$FIGNAME$ 2:60049040 US301\CIVIL\PLANS\2A\CPAET\CS-18.DGN

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 60 120 180
FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.
T200911303	DESIGNED BY: BAS
COUNTY	
NEW CASTLE	CHECKED BY: JJW

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 1

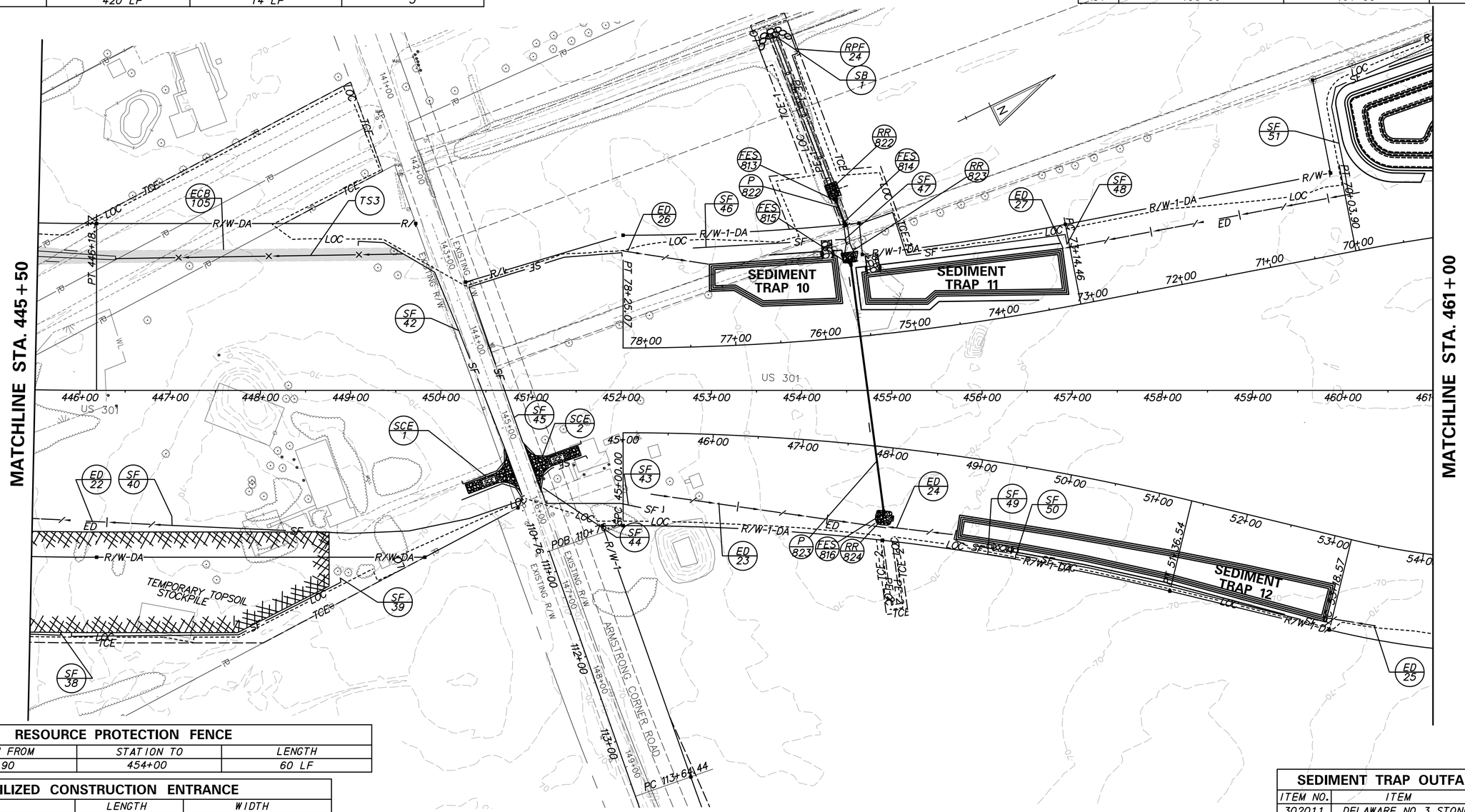
CS-18	
SHEET NO.	879
TOTAL SHTS.	1256

TEMPORARY SEDIMENT TRAP									
NO.	D. AREA	LENGTH	WIDTH	DEPTH	OUT. TYPE	OUT. EL.	CLEAN EL.	TOP EL.	WEIR WIDTH
10	2.7	52	144	3	SST	68	67.0	69.0	11
11	3.4	56	230	3	SST	68	66.9	69.0	14
12	5.0	31	422	3	SST	69	67.9	70.0	20

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
105	6791	420 LF	14 LF	3

SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
38	445+50	445+82	37 LF
39	446+00	448+88	321 LF
40	447+02	450+98	418 LF
42	449+08	450+31	402 LF
43	451+19	452+40	136 LF
44	451+23	451+69	88 LF

SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
45	451+61	452+01	457 LF
46	452+80	454+13	134 LF
47	454+37	454+49	14 LF
48	454+61	456+94	280 LF
49	455+69	456+07	53 LF
50	456+38	459+86	362 LF
51	406+06	461+00	240 LF



RESOURCE PROTECTION FENCE			
NO.	STATION FROM	STATION TO	LENGTH
24	453+90	454+00	60 LF

STABILIZED CONSTRUCTION ENTRANCE			
NO.	STA.	LENGTH	WIDTH
1	450+89	50	30
2	451+09	50	30

TEMPORARY SWALE				
NO.	TYPE	b	d	QTY. (LF)
3	B	6	1	318

EARTH DIKE			
NO.	STATION FROM	STATION TO	LENGTH
22	445+50	447+02	155 LF
23	452+44	454+95	262 LF
24	454+95	455+68	73 LF
25	459+79	460+36	58 LF
26	452+02	452+98	97 LF
27	456+89	460+13	335 LF

SEDIMENT TRAP OUTFALL QUANTITIES			
ITEM NO.	ITEM	QTY.	UNITS
302011	DELAWARE NO. 3 STONE	57	TON

SANDBAG DIKE			
NO.	STA.	OFFSET	QUANTITY
1	453+73	381 LT	10 CY

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.
T200911303	DESIGNED BY: BAS
COUNTY	
NEW CASTLE	CHECKED BY: JJW

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 1

CS-19
SHEET NO. 880
TOTAL SHTS. 1256

$DATE$
$FULLNAME$ US301\CIVIL\PLANS\2A\CPV\AET\CS-19.DGN

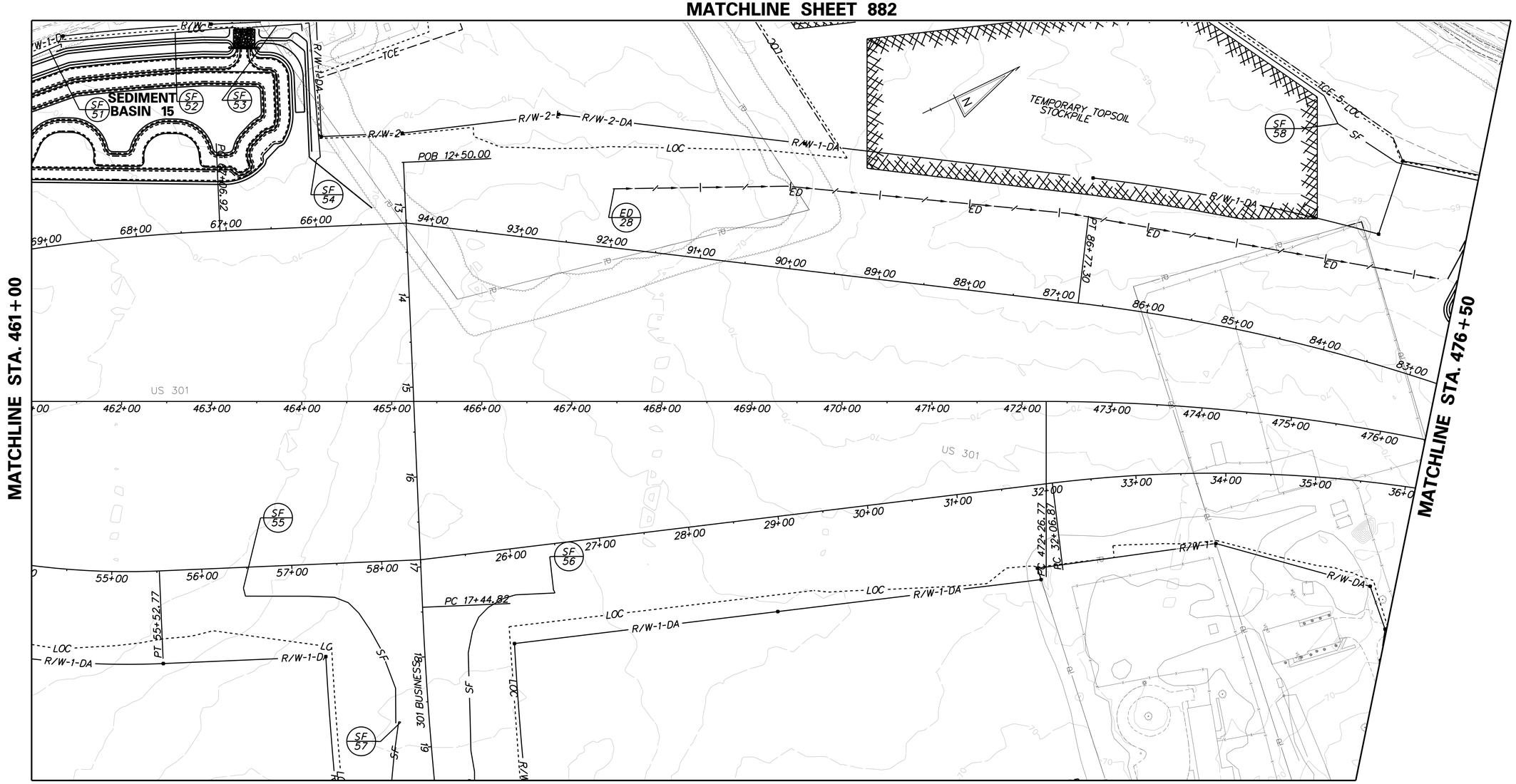
SEDIMENT BASIN SCHEDULE							
NO.	D. AREA	LENGTH	WIDTH	DEPTH	OUT. TYPE	OUT. EL.	CLEAN EL.
11	10.5	165	400	3.4	TSB	68.7	68.2

SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
51	461+00	461+33	40 LF
52	461+29	463+27	209 LF
53	463+45	464+00	71 LF
54	464+03	464+20	159 LF

SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
55	463+35	465+04	273 LF
56	465+85	466+81	281 LF
57	464+99	465+10	69 LF
58	473+85	476+50	348 LF

EARTH DIKE			
NO.	STATION FROM	STATION TO	LENGTH
28	467+48	476+30	924 LF

MATCHLINE SHEET 882



MATCHLINE SHEET 884

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	JW
COUNTY	CHECKED BY:	SF
NEW CASTLE		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 1

CS-20
SHEET NO.
881
TOTAL SHTS.
1256

SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
58	471+66	472+28	189 LF
59	472+57	476+50	186 LF

RESOURCE PROTECTION FENCE			
NO.	STATION FROM	STATION TO	LENGTH
19	67+30	67+50	70 LF
25	67+75	68+20	70 LF

STREAM DIVERSION QUANTITIES			
ITEM NO.	ITEM	QTY.	UNITS
909005	STREAM DIVERSION	1	LS

SANDBAG DIKE			
NO.	STATION	OFFSET	QUANTITY
SB-1	68+24	505 LT	10 CY
SB-2	68+45	516 LT	10 CY

MATCHLINE SHEET 881

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

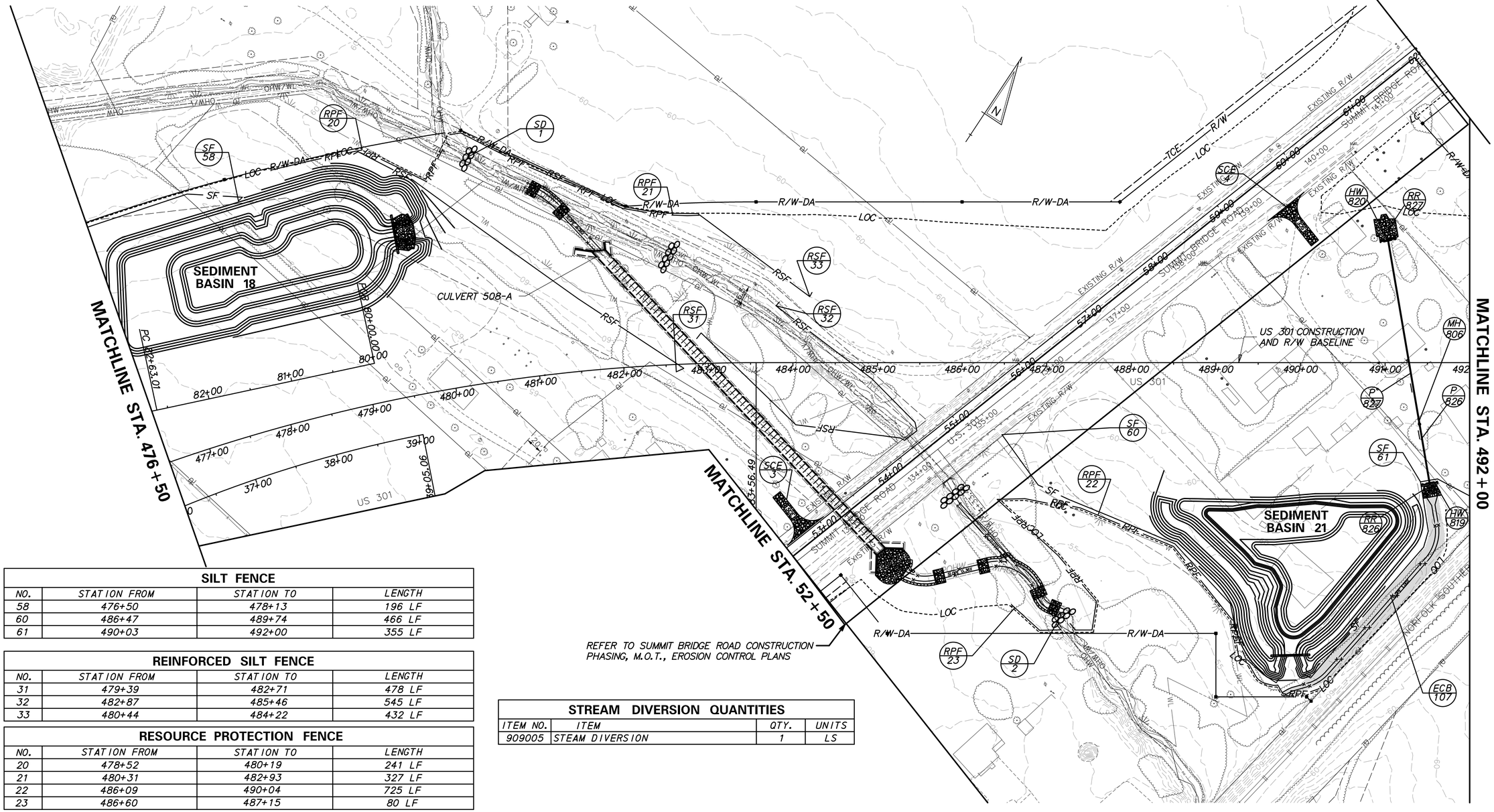
$DATE$
$FIGURE$ 2\60049040 US301\CIVIL\PLANS\2A\CP\AET\CS-21.DGN

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 60 120 180 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO.	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 1	CS-21
				COUNTY NEW CASTLE	DESIGNED BY: BAS		SHEET NO. 882
					CHECKED BY: JJW		TOTAL SHTS. 1256

SEDIMENT BASIN SCHEDULE							
NO.	D. AREA	LENGTH	WIDTH	DEPTH	OUT. TYPE	OUT. EL.	CLEAN EL.
18	12.6	411	150	4	TSB	64.7	64.1
21	4.3	234	324	2	TSB	58.8	58.4

STABILIZED CONSTRUCTION ENTRANCE			
NO.	STA.	LENGTH	WIDTH
3	483+56	50	30
4	490+17	50	30

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
107	720	325 LF	20 LF	3



SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
58	476+50	478+13	196 LF
60	486+47	489+74	466 LF
61	490+03	492+00	355 LF

REINFORCED SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
31	479+39	482+71	478 LF
32	482+87	485+46	545 LF
33	480+44	484+22	432 LF

RESOURCE PROTECTION FENCE			
NO.	STATION FROM	STATION TO	LENGTH
20	478+52	480+19	241 LF
21	480+31	482+93	327 LF
22	486+09	490+04	725 LF
23	486+60	487+15	80 LF

REFER TO SUMMIT BRIDGE ROAD CONSTRUCTION PHASING, M.O.T., EROSION CONTROL PLANS

STREAM DIVERSION QUANTITIES			
ITEM NO.	ITEM	QTY.	UNITS
909005	STEAM DIVERSION	1	LS

NOTE:
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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.
T200911303	DESIGNED BY: BAS
COUNTY	
NEW CASTLE	CHECKED BY: JJW

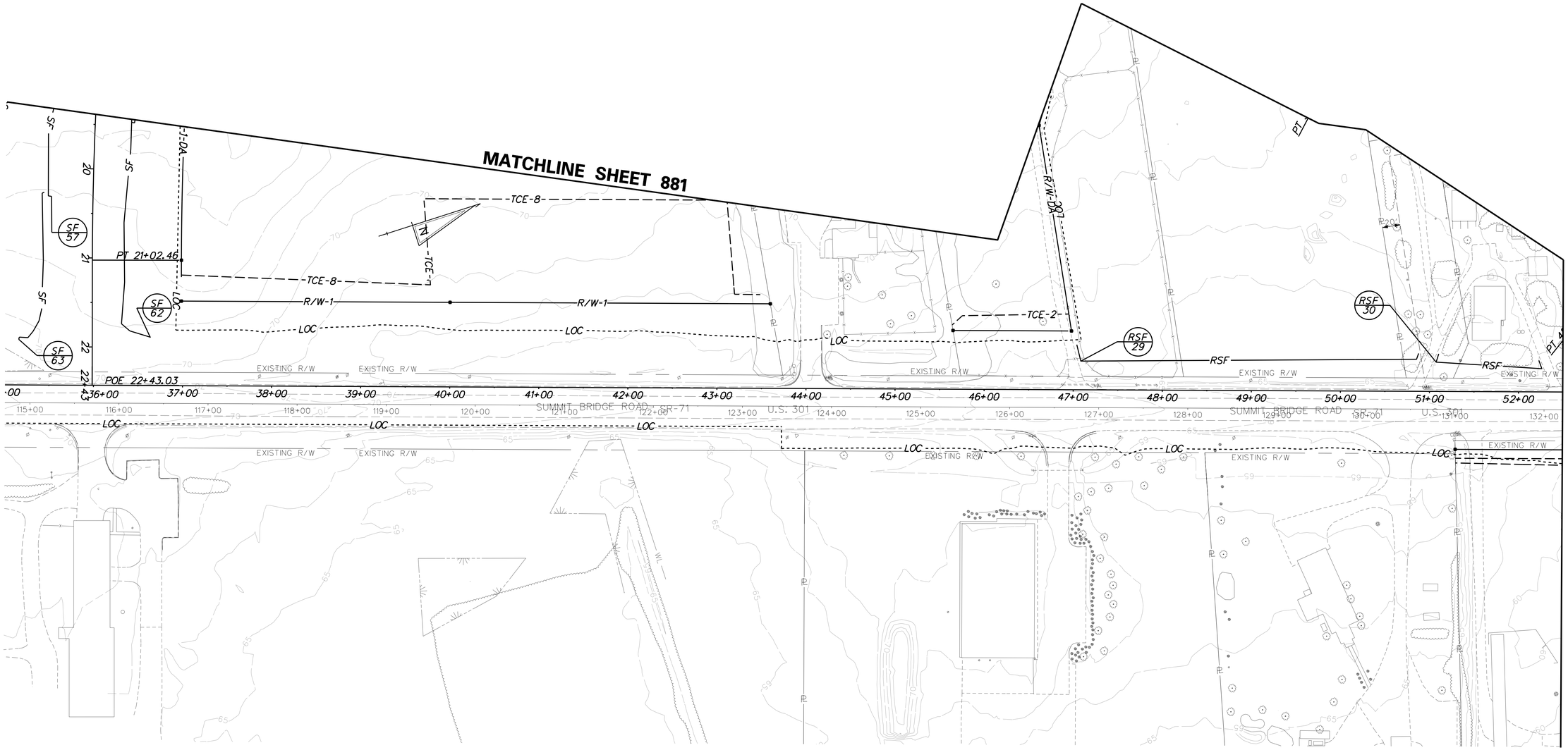
CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 1

CS-22
SHEET NO.
883
TOTAL SHTS.
1256

$DATE$
$PLOTDATE$ $USER$ CWD $FULLPATH$

SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
57	19+38	20+31	103 LF
62	19+38	21+89	272 LF
63	20+27	21+91	182 LF

REINFORCED SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
29	47+04	50+86	403 LF
30	51+06	52+23	139 LF



NOTE:
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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

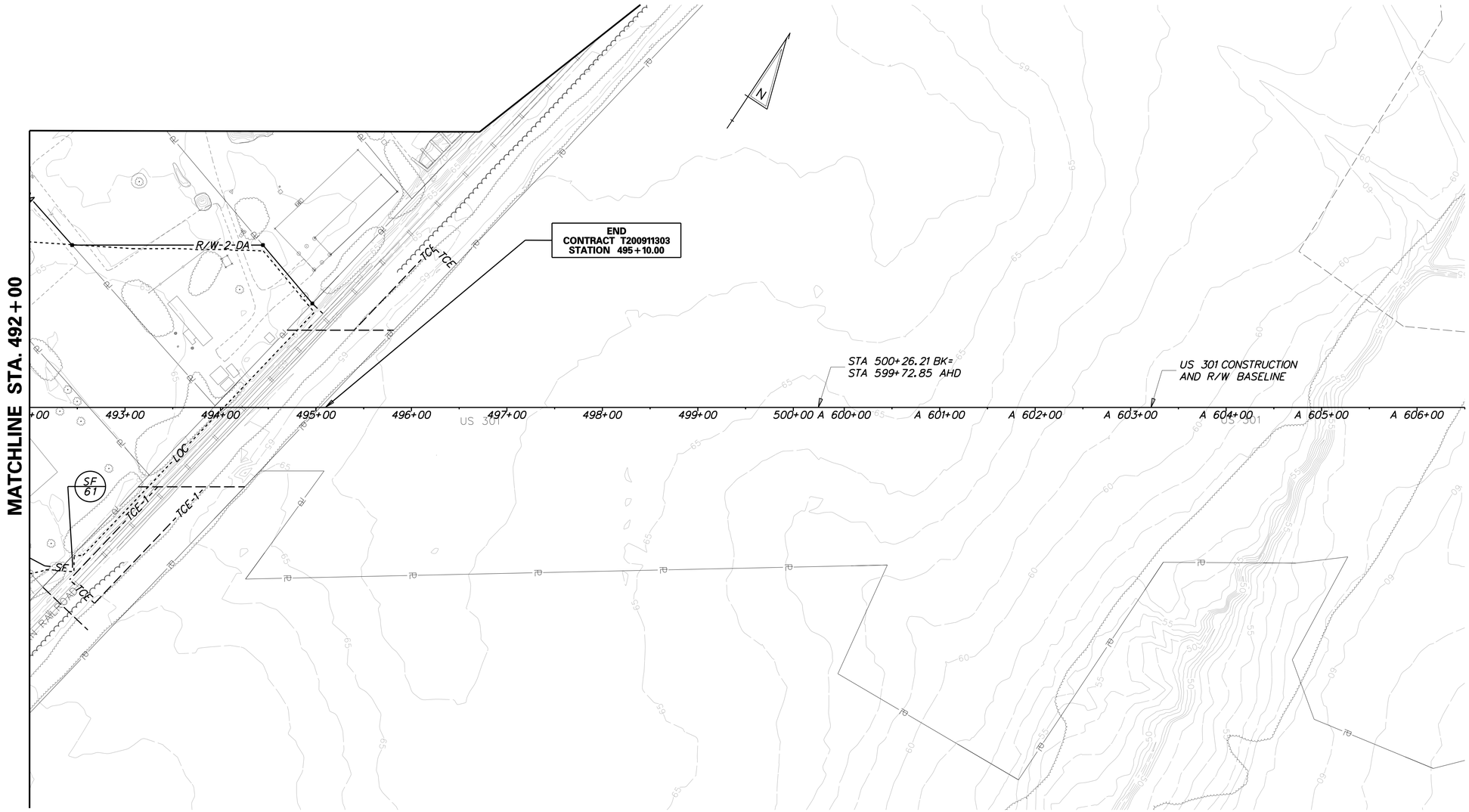
US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	JW
COUNTY	CHECKED BY:	SF
NEW CASTLE		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 1

CS-23
SHEET NO.
884
TOTAL SHTS.
1256

SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
61	492+00, RT	492+45	53 LF



NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 60 120 180 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO.	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 1	CS-24
				COUNTY NEW CASTLE	DESIGNED BY: JW		SHEET NO. 885
					CHECKED BY: SF		TOTAL SHTS. 1256

SEQUENCE OF CONSTRUCTION

STAGE 2 - SANITARY RELOCATION, EARTH BERM CONSTRUCTION AND ROADWAY/BRIDGE EMBANKMENT TO F BORROW ELEVATION

1. BEGIN PHASE 2 CONSTRUCTION OF BUNKER HILL ROAD AND US 301 MAINLINE. MAINTAIN PHASE 1 AND INSTALL PHASE 2 EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN IN THE PHASE 2 PLANS. REFER TO BUNKER HILL ROAD CONSTRUCTION PHASING, MOT AND ECP.

2. INSTALL HAUL ROAD FROM BORROW SITE TO BUNKER HILL ROAD INCLUDING TEMPORARY CROSSINGS OVER SANDY BRANCH AND REVISE EXISTING OR INSTALL NEW PERIMETER CONTROLS AS SHOWN ON PLANS.

3. INSTALL SANITARY LINE RELOCATION PER PLANS.

4. STRIP TOPSOIL AND STOCKPILE IN LOCATIONS AS SHOWN ON PLANS. STOCKPILE AREAS SHALL BE SURROUNDED WITH SILT FENCE OR REINFORCED SILT FENCE AND WILL BE STABILIZED WITH TEMPORARY SEEDING.

5. COMMENCE EARTHWORK ACTIVITIES ASSOCIATED WITH EARTH BERMS AND UNDERCUTTING. ROADWAY FILL BETWEEN STA. 328+28 AND 353+88 AND BETWEEN STA. 427+14 TO 440+25 MUST BE CONSTRUCTED CONCURRENTLY WITH BERM CONSTRUCTION. MAINTAIN POSITIVE DRAINAGE TO EROSION AND SEDIMENT CONTROL FEATURES INCLUDING MODIFICATION TO GRADING OF SEDIMENT TRAPS AND BASINS AS SHOWN IN THE PHASE 2 PLANS. IF AREA DOES NOT FLOW TO AN APPROVED EROSION AND SEDIMENT CONTROL DEVICE, STABILIZE WITH EROSION CONTROL BLANKET IN THE SAME WORKING FINAL GRADE OF EARTH BERMS, STABILIZE ALL SLOPES WITH EROSION CONTROL BLANKET.

6. COMMENCE EARTH MOVING OPERATIONS TO F BORROW ELEVATIONS FOR ROADWAY AND BRIDGES ALLOWING FOR POSITIVE DRAINAGE TO EROSION AND SEDIMENT CONTROL FEATURES INCLUDING MODIFICATION TO GRADING OF SEDIMENT TRAPS AND BASINS AS SHOWN IN THE PHASE 2 PLANS. FILL OPERATIONS WILL ALSO INCLUDE CONSTRUCTION OF MSE WALLS FOR BRIDGES 1-468, 1-476, 1-472, 1-475, 1-507 PER STRUCTURE PLANS AND DETAILS. AS FILL REACTION F BORROW ELEVATIONS, STABILIZE ROADWAY AREAS WITH STONE AND GRADED AREAS WITH EROSION CONTROL BLANKET AND TEMPORARY SEEDING.

7. DURING EARTH MOVING OPERATIONS, SEDIMENT TRAPS 1, 7, 8, 9, 10 AND 11 WILL BE REMOVED. CONSTRUCT BERM AT STA. 316+00, RT TO 337+00, RT FROM NORTH TO SOUTH MAINTAINING DRAINAGE INTO SEDIMENT TRAP 1 BEFORE REMOVING TRAP. FOR FILL STA. 430+00 TO STA 441+00, FILL AREAS FROM STA. 430+00 TO STA 435+00 MAINTAINING POSITIVE DRAINAGE TO SEDIMENT TRAPS 8 AND 9. CONSTRUCT REMAINING CULVERTS THAT WERE NOT INSTALLED IN STAGE 1 OF CONSTRUCTION DURING FILL OPERATIONS IN THIS AREA.

8. CONSTRUCT DRAINAGE PIPES, INLETS, AND ROCK OUTLET PROTECTION FROM DOWNSTREAM TO UPSTREAM. IF NO INLET PROTECTION IS SHOWN ON PHASE 2, COVER INLET TO NOT ALLOW RUNOFF INTO DRAINAGE SYSTEM. SUMP AREAS WILL BE DRAINED WITH PORTABLE SEDIMENT TANKS OR OTHER APPROVED DEWATERING DEVICES. ALLOW ROADSIDE DITCHES TO DRAIN TO OUTFALLS AND NOT TO INFILTRATION AREAS UNTIL FINAL STABILIZATION. DO NOT ALLOW AREAS TO DRAIN TO FUTURE INFILTRATION AREAS UNTIL SITE IS COMPLETELY STABILIZED. WHEN TEMPORARY PIPES ARE USED, USE APPROVED SEDIMENT CONTROL DEVICES AT UPSTREAM ENDS OF THE STORM DRAIN SYSTEM TO TREAT UNSTABILIZED AREAS.

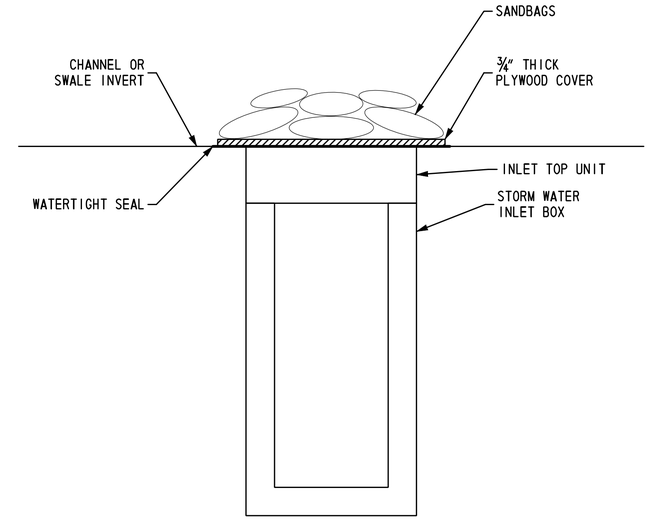
9. DURING FILL OPERATIONS, INSTALL P-69 INCLUDING FES-30 AND FES-31, P-82 INCLUDING DI-76 AND HW-82, P-180 INCLUDING FES-53 AND FES-54, P-184 INCLUDING DI-181 AND FES-181 AND P-302 AND P-163 INCLUDING MH-3, MH-13 AND HW-133. INSTALL INLET PROTECTION AT INLETS AND MAINTAIN POSITIVE DRAINAGE THROUGH STRUCTURES. CONSTRUCT TEMPORARY DITCH DOWNSTREAM OF FES-54 TO MAINTAIN DRAINAGE TO SEDIMENT TRAP 12.

10. INSTALL REMAINING CULVERTS AND ROCK OUTLET PROTECTION AND INFLOW/OUTFALL DITCHES THROUGH TRENCH EXCAVATION WHEN FILL HAS REACHED 4 FEET AS SHOWN ON THE PHASE 2 PLANS. STABILIZE DITCHES WITH EROSION CONTROL BLANKET.

11. MAINTAIN SEDIMENT AND EROSION CONTROL STRUCTURES THROUGH STAGE 3 AND 4 OF CONSTRUCTION. AS SEDIMENT TRAPS ARE REMOVED, REMOVE SEDIMENT FROM BOTTOM OF FACILITY AND FILL TRAP PER SPECIFICATION 251. REMOVE OUTFALL STRUCTURES AND REUSE RIP-RAP AT PERMANENT OUTFALLS.

BRIDGE CONSTRUCTION

1. FOR BRIDGE AND CULVERT CONSTRUCTION WITHIN STREAMS, SEE STREAM DIVERSION PLANS ON SHEETS 859-861. .



ITEM 905501 - TEMPORARY STORM WATER INLET COVER

N. T. S.

1) USE WATERPROOF CAULK TO CREATE A WATERPROOF SEAL BETWEEN THE PLYWOOD COVER AND INLET TOP UNIT.

P:\CADD2\60049040 US301\CIVIL\PLANS\2A\CP\AET\CS-25.DGN

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO.	CONSTRUCTION PHASING M.O.T. AND EROSION CONTROL NOTES - STAGE 2	CS-25
				COUNTY NEW CASTLE	DESIGNED BY: JW		SHEET NO. 886
					CHECKED BY: SF		TOTAL SHTS. 1256

TEMPORARY PIPE			
NO.	SIZE	TYPE	LENGTH
T-1	18"	CMP	70 LF
T-2	24"	CMP	70 LF

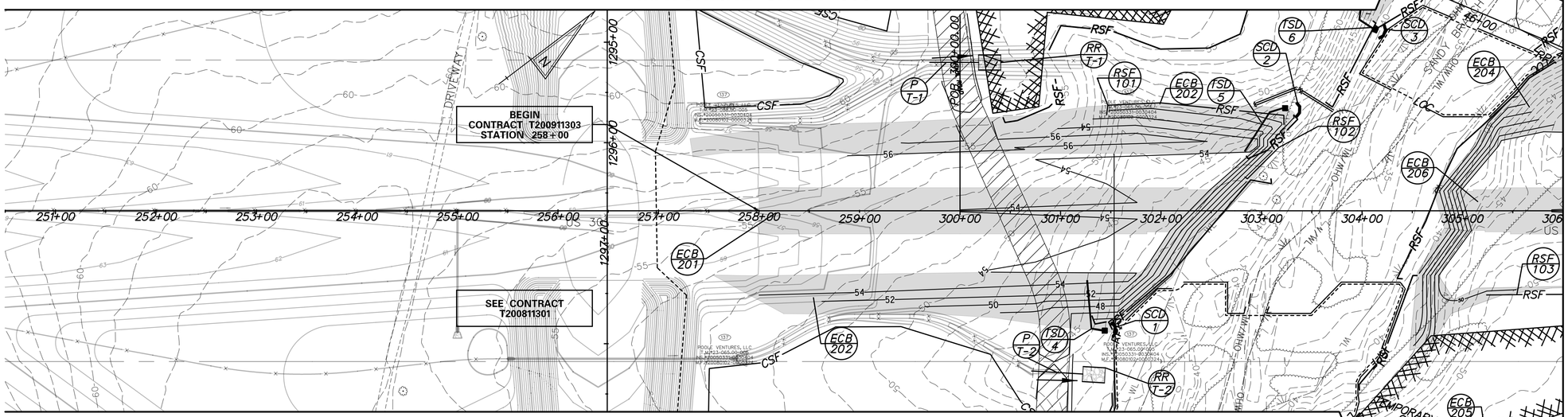
REINFORCED SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
101	301+46	303+22	195 LF
102	302+84	303+17	52 LF
103	305+24	306+00	76 LF
104	303+83	303+98	196 LF

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
201	2183	420 LF	60 LF	2
202	4820	600 LF	50 LF	3
203	2546	24 LF	120 LF	3
204	1196	50 LF	350 LF	3
205	607	180 LF	30 LF	3
206	474	90 LF	60 LF	2
207	3608	180 LF	30 LF	3
208	87	120 LF	6 LF	3

SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
101	304+50	306+00	164 LF

SEEDING QUANTITIES			
ITEM NO.	ITEM	QTY.	UNITS
908017	TEMPORARY GRASS SEEDING	18481	SY

MATCHLINE SHEET 888



MATCHLINE SHEET 889

TEMPORARY RIPRAP OUTLET PROTECTION						
NO.	SY	LENGTH	WIDTH	TYPE	CY	DEPTH
RR T-1	337	22 LF	15 LF	R-4	16	14"
RR T-2	337	22 LF	15 LF	R-4	16	14"

STONE CHECK DAM				
NO.	LENGTH	HEIGHT	QTY.	UNITS
1	20	2'	5	TON
2	20	2'	5	TON
3	20	2'	5	TON

TEMPORARY SLOPE DRAIN			
NO.	PIPE SIZE	LENGTH	DA
4	18"	60'	0.90
5	18"	60'	1.10
6	18"	67'	0.70

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 60 120 180
FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: BAS	
COUNTY		
NEW CASTLE	CHECKED BY: JJW	

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 2

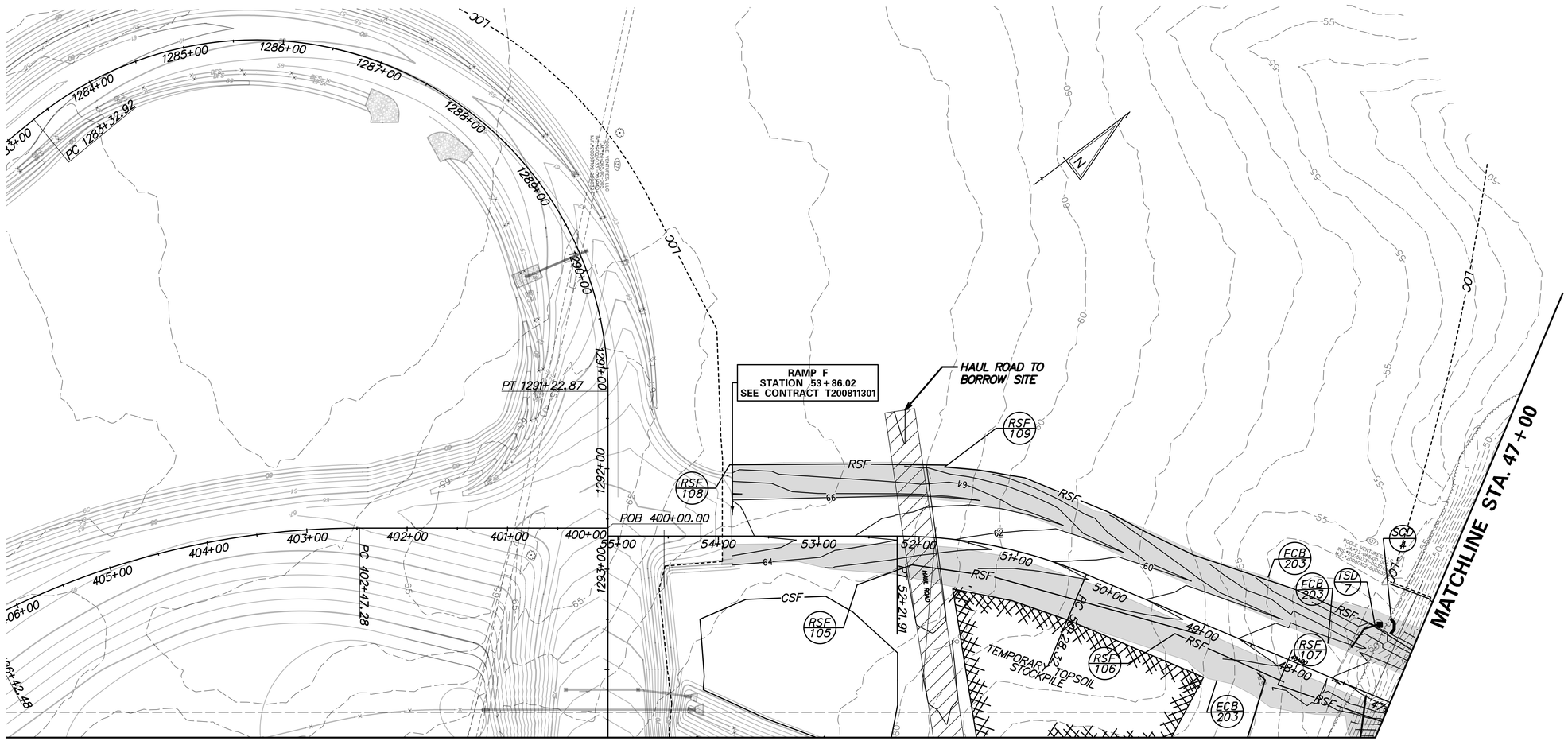
CS-26
SHEET NO.
887
TOTAL SHTS.
1256

$DATE$
$FOLDER$ P:\60049040 US301\CIVIL\PLANS\2A\CP\AET\CS-26.DGN

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
203	5401	700 LF	40 LF	3

SEEDING QUANTITIES			
ITEM NO.	ITEM	QTY.	UNITS
908017	TEMPORARY GRASS SEEDING	8065	SY

REINFORCED SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
105	49+00	57+62	354 LF
106	48+06	49+24	118 LF
107	47+00	48+10	109 LF
108	51+78	53+89	216 LF
109	47+00	51+80	505 LF



MATCHLINE SHEET 887

STONE CHECK DAM				
NO.	LENGTH	HEIGHT	QTY.	UNITS
4	20'	2'	5	TON

TEMPORARY SLOPE DRAIN			
NO.	PIPE SIZE	LENGTH	DA
7	12"	36'	0.40

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 60 120 180
FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.
T200911303	DESIGNED BY: BAS
COUNTY	
NEW CASTLE	CHECKED BY: JJW

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 2

CS-27
SHEET NO.
888
TOTAL SHTS.
1256

$DATE$
$FULLNAME$ 60049040 US301\CIVIL\PLANS\2A\CP\AETCS-27.DGN

TEMPORARY PIPE			
NO.	SIZE	TYPE	LENGTH
T-3	24"	CMP	50 LF
T-4	18"	CMP	50 LF
T-6	48"	CMP	70 LF

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
205	3611	700 LF	50 LF	3
207	3292	750 LF	50 LF	3
208	364	700 LF	30 LF	3

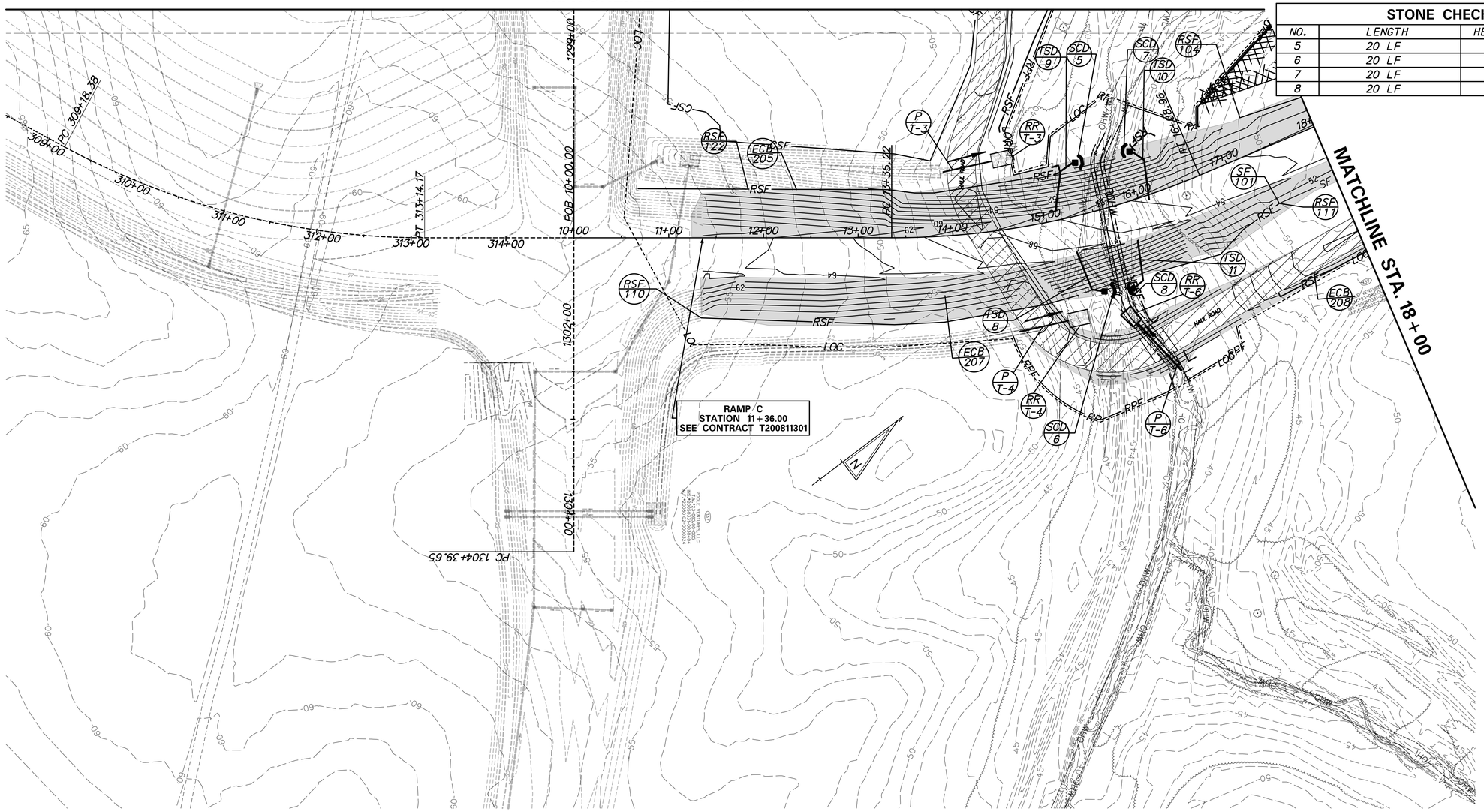
SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
101	17+35	18+00	68 LF

REINFORCED SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
104	16+84	18+00	69 LF
110	11+34	14+16	401 LF
111	16+00	17+35	146 LF
122	10+60	15+20	442 LF

SEEDING QUANTITIES			
ITEM NO.	ITEM	QTY.	UNITS
908017	TEMPORARY GRASS SEEDING	7567	SY

STONE CHECK DAM				
NO.	LENGTH	HEIGHT	QTY.	UNITS
5	20 LF	2'	5	TON
6	20 LF	2'	5	TON
7	20 LF	2'	5	TON
8	20 LF	2'	5	TON

MATCHLINE SHEET 887



TEMPORARY SLOPE DRAIN			
NO.	PIPE SIZE	LENGTH	DA
8	12"	60 LF	0.44
9	12"	53 LF	0.35
10	12"	56 LF	0.32
11	12"	55 LF	0.50

TEMPORARY RIPRAP OUTLET PROTECTION						
NO.	SY	LENGTH	WIDTH	TYPE	CY	DEPTH
RR T-3	37	22	15	R-4	16	14"
RR T-4	37	22	15	R-4	16	14"
RR T-6	28	18	14	R-4	12	14"

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 60 120 180
FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	JW
COUNTY	CHECKED BY:	SF
NEW CASTLE		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 2

CS-28
SHEET NO.
889
TOTAL SHTS.
1256

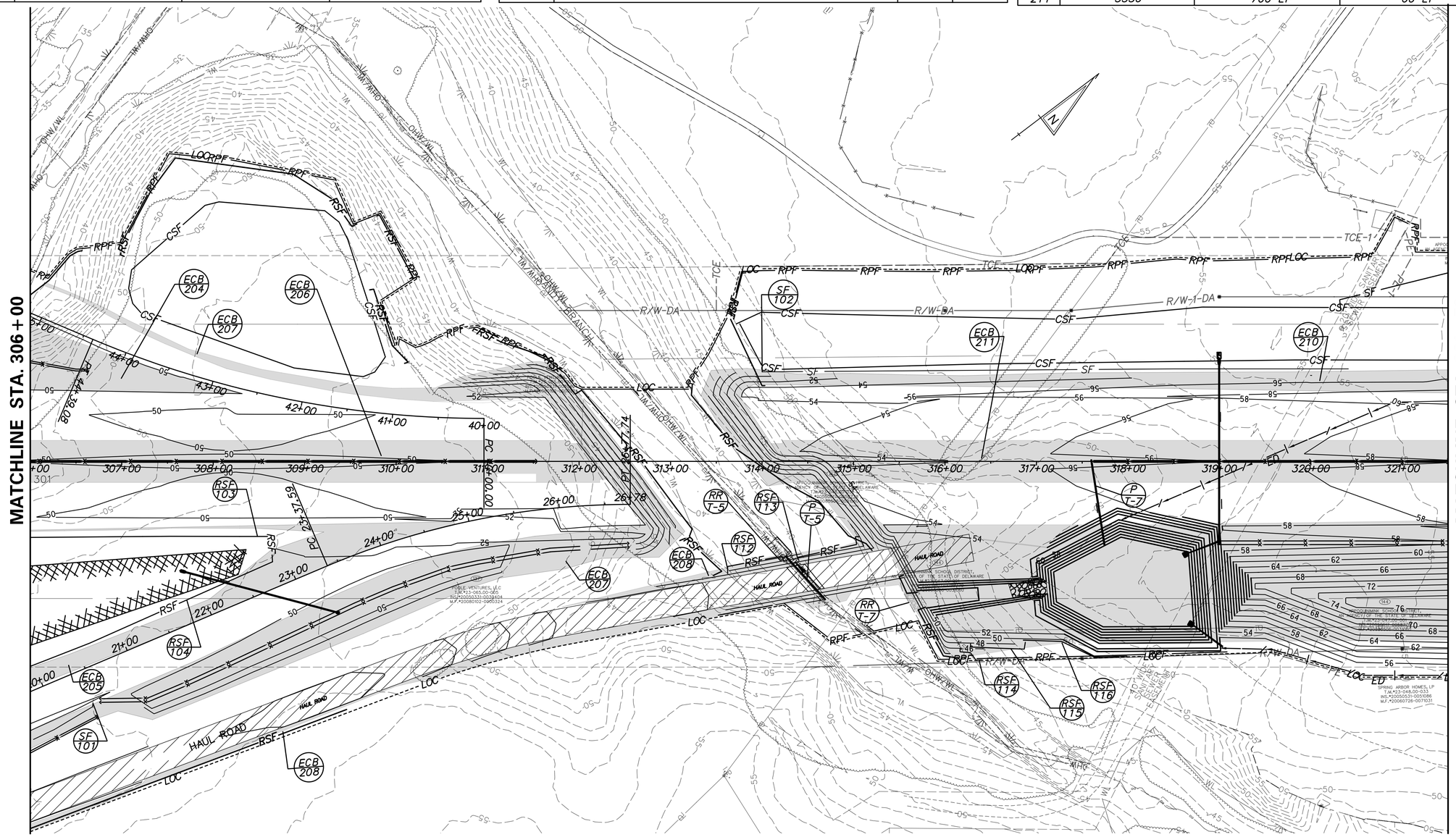
P:\CADD2\60049040_US301\CIVIL\PLANS\2A\CP\AET\CS-28.DGN

REINFORCED SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
103	306+00	308+65	291 LF
104	306+00	308+65	288 LF
112	313+63	314+24	75 LF
113	314+38	315+07	83 LF
114	316+16	316+39	30 LF
115	316+28	316+88	70 LF
116	316+80	317+99	122 LF

TEMPORARY PIPE			
NO.	SIZE	TYPE	LENGTH
T-5	60"	CMP	70 LF
T-7	18"	CMP	94 LF

SEEDING QUANTITIES			
ITEM NO.	ITEM	QTY.	UNITS
908017	TEMPORARY GRASS SEEDING	26295	SY

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
204	846	240 LF	60 LF	3
205	1373	480 LF	50 LF	3
206	3138	600 LF	60 LF	2
207	3700	720 LF	60 LF	3
208	10183	150 LF	140 LF	3
210	2054	800 LF	40 LF	3
211	3556	700 LF	60 LF	2



TEMPORARY RIPRAP OUTLET PROTECTION						
NO.	SY	LENGTH	WIDTH	TYPE	CY	DEPTH
RR T-5	37	22	15	R-4	16	14"
RR T-7	45	16	25	R-4	20	14"

SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
101	306+00	306+69	82 LF
102	314+00	320+41	641 LF

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

P:\CADD2\60049040 US301\CIVIL\PLANS\2A\CP\AET\CS-29.DGN

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	JW
COUNTY	CHECKED BY:	SF
NEW CASTLE		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 2

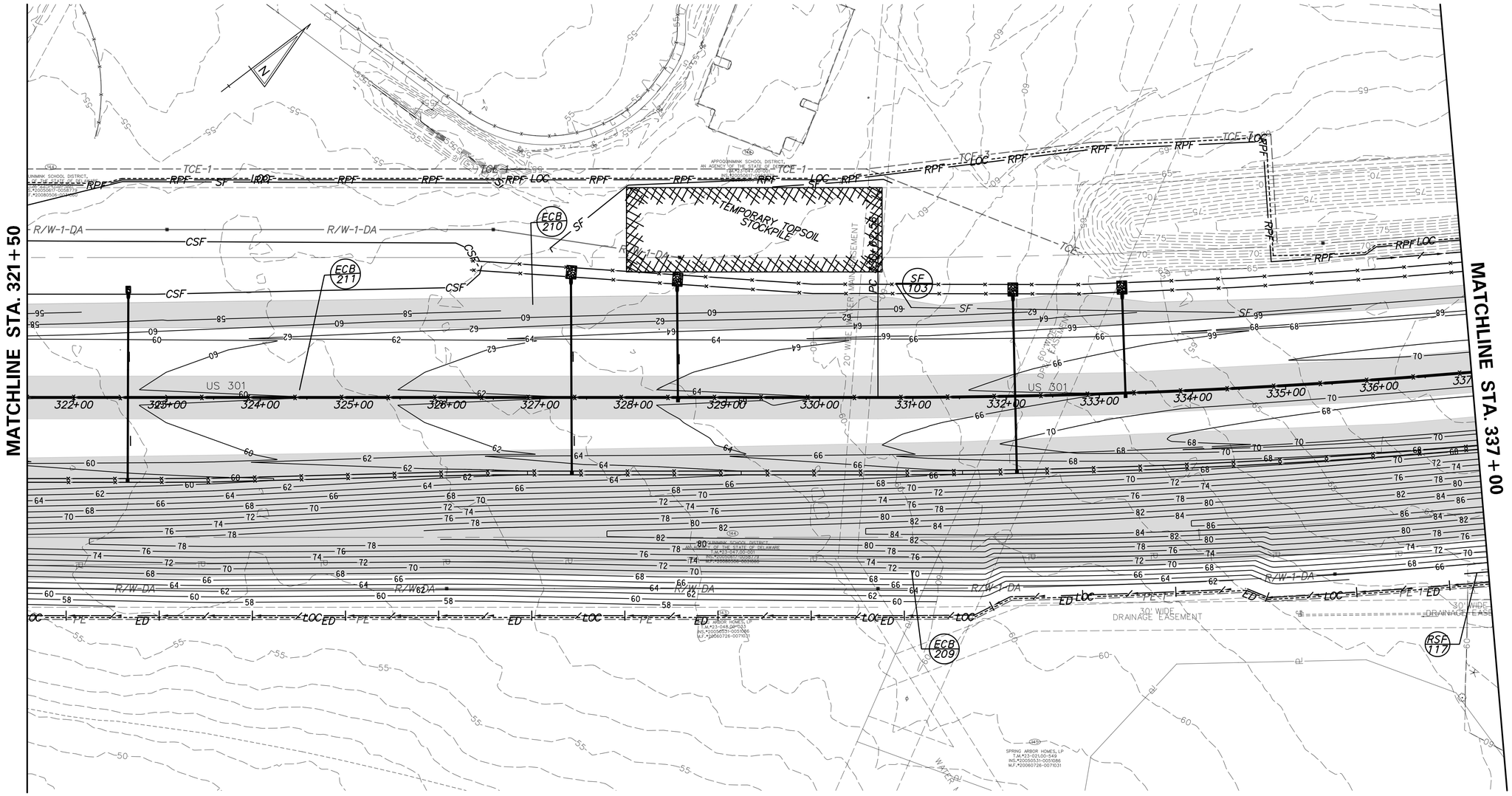
CS-29
SHEET NO.
890
TOTAL SHTS.
1256

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
209	23416	1550 LF	145 LF	3
210	4833	1550 LF	30 LF	3
211	7880	1550 LF	50 LF	2

REINFORCED SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
117	336+79	337+00	26 LF

SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
103	331+00	337+00	595 LF

SEEDING QUANTITIES			
ITEM NO.	ITEM	QTY.	UNITS
908017	TEMPORARY GRASS SEEDING	38884	SY



NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 60 120 180
FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: BAS	
COUNTY	CHECKED BY: JJW	
NEW CASTLE		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 2

CS-30
SHEET NO.
891
TOTAL SHTS.
1256

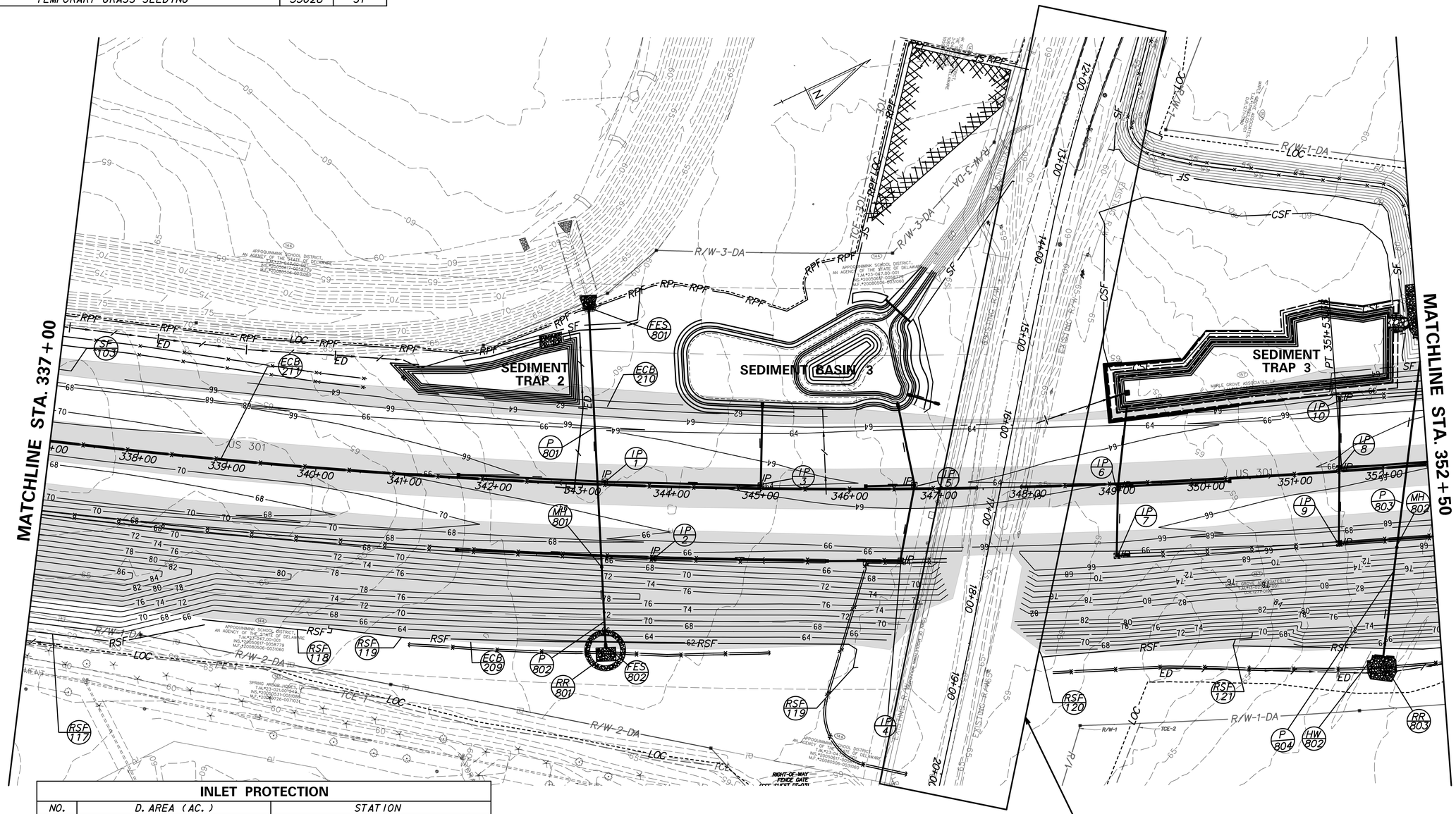
$DATE$
$FIGURE$ 2\60049040 US301\CIVIL\PLANS\2A\CP\AET\CS-30.DGN

SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
103	337+00	337+14	14 LF

SEEDING QUANTITIES			
ITEM NO.	ITEM	QTY.	UNITS
908017	TEMPORARY GRASS SEEDING	35628	SY

REINFORCED SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
117	337+00	338+94	202 LF
118	338+94	340+31	150 LF
119	340+28	346+09	625 LF
120	348+08	350+42	249 LF
121	350+20	352+50	242 LF

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
209	22364	1550 LF	145 LF	3
210	3865	1550 LF	50 LF	3
211	7876	1550 LF	60 LF	2



REFER TO BUNKER HILL ROAD, CONTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS

INLET PROTECTION		
NO.	D. AREA (AC.)	STATION
1	1.14	343+24, ME
2	1.18	343+82, RT
3	0.27	345+00, ME
4	0.22	346+57, RT
5	0.45	346+74, ME
6	0.70	349+00, ME
7	0.50	349+00, RT
8	1.52	351+50, ME
9	3.18	351+50, RT
10	1.09	351+50, LT

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: BAS	
COUNTY	CHECKED BY: JJW	
NEW CASTLE		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 2

CS-31
SHEET NO.
892
TOTAL SHTS.
1256

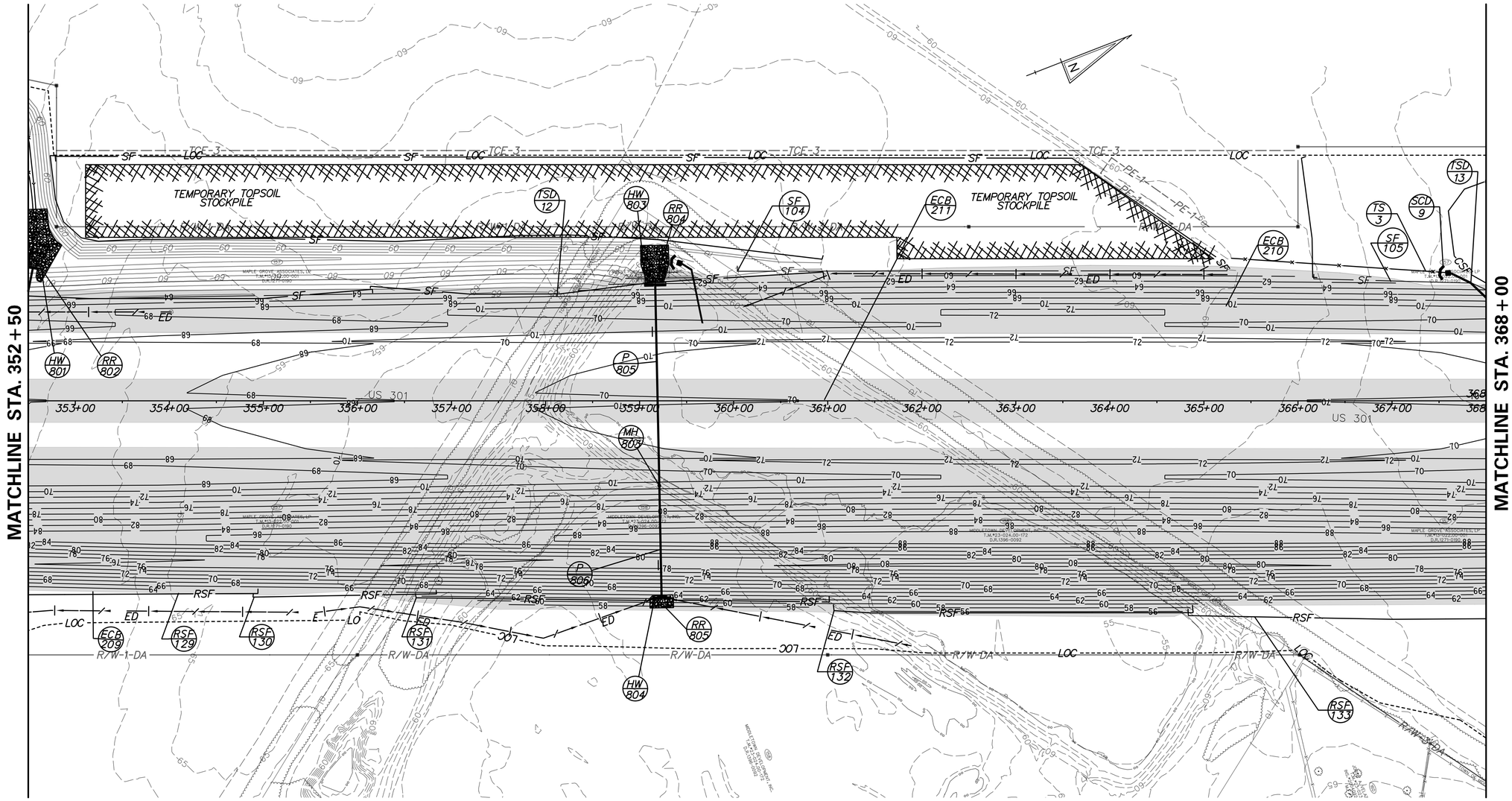
$DATE$
$FILENAME$ 60049040 US301\CIVIL\PLANS\2A\CPYAETYCS-31.DGN

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
209	28920	1550 LF	145 LF	3
210	10000	1550 LF	50 LF	3
211	7920	1550 LF	60 LF	2

REINFORCED SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
129	352+50	354+94	249 LF
130	354+89	356+84	202 LF
131	356+62	361+02	454 LF
132	361+06	364+89	396 LF
133	364+83	368+00	323 LF

SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
104	360+04	365+25	530 LF
105	366+17	368+00	190 LF

SEEDING QUANTITIES			
ITEM NO.	ITEM	QTY.	UNITS
908017	TEMPORARY GRASS SEEDING	46840	SY



TEMPORARY SLOPE DRAIN			
NO.	PIPE SIZE	LENGTH	DA
12	21"	70	2.00
13	18"	90	0.96

TEMPORARY SWALE				
NO.	TYPE	b	d	QTY. (LF)
3	A	4'	1'	233

STONE CHECK DAM				
NO.	LENGTH	HEIGHT	QTY.	UNITS
9	20 LF	2'	5	TON

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

$DATE$
$FIGCAD2\60049040 US301\CIVIL\PLANS\2A\CP\AET\CS-32.DGN

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 60 120 180
FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: BAS	
COUNTY		
NEW CASTLE	CHECKED BY: JJW	

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 2

CS-32
SHEET NO.
893
TOTAL SHTS.
1256

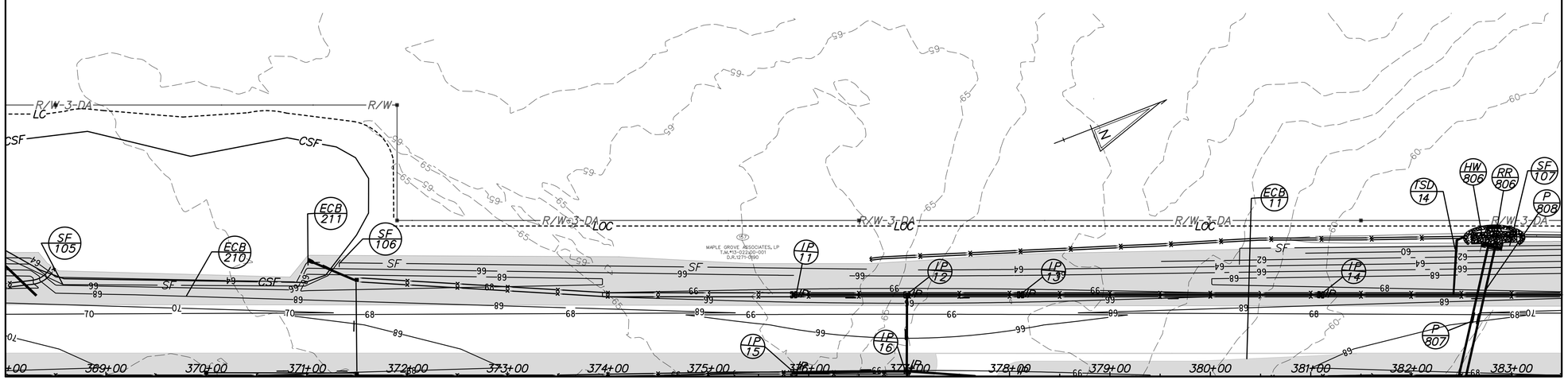
SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
105	368+00	371+33	349 LF
106	371+32	376+58	529 LF
107	380+29	383+50	337 LF

INLET PROTECTION		
NO.	D. AREA (AC.)	STATION
11	0.90	375+85 LT
12	0.90	377+00 LT
13	0.90	378+11 LT
14	0.46	381+10 LT
15	0.50	375+85 ME
16	0.25	377+00 ME

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
210	8260	1550 LF	83 LF	3
211	3575	1550 LF	70 LF	2

SEEDING QUANTITIES			
ITEM NO.	ITEM	QTY.	UNITS
908017	TEMPORARY GRASS SEEDING	22017	SY

MATCHLINE STA. 368+00



MATCHLINE STA. 383+50

MATCHLINE SHEET 895

TEMPORARY SLOPE DRAIN			
NO.	PIPE SIZE	LENGTH	DA
14	21"	65 LF	1.70

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

$DATE$
$FIGCAD$ 2/2/2 60049040 US301\CIVIL\PLANS\2A\CP\AET\CS-33.DGN

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 60 120 180
FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: BAS	
COUNTY		
NEW CASTLE	CHECKED BY: JJW	

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 2

CS-33
SHEET NO.
894
TOTAL SHTS.
1256

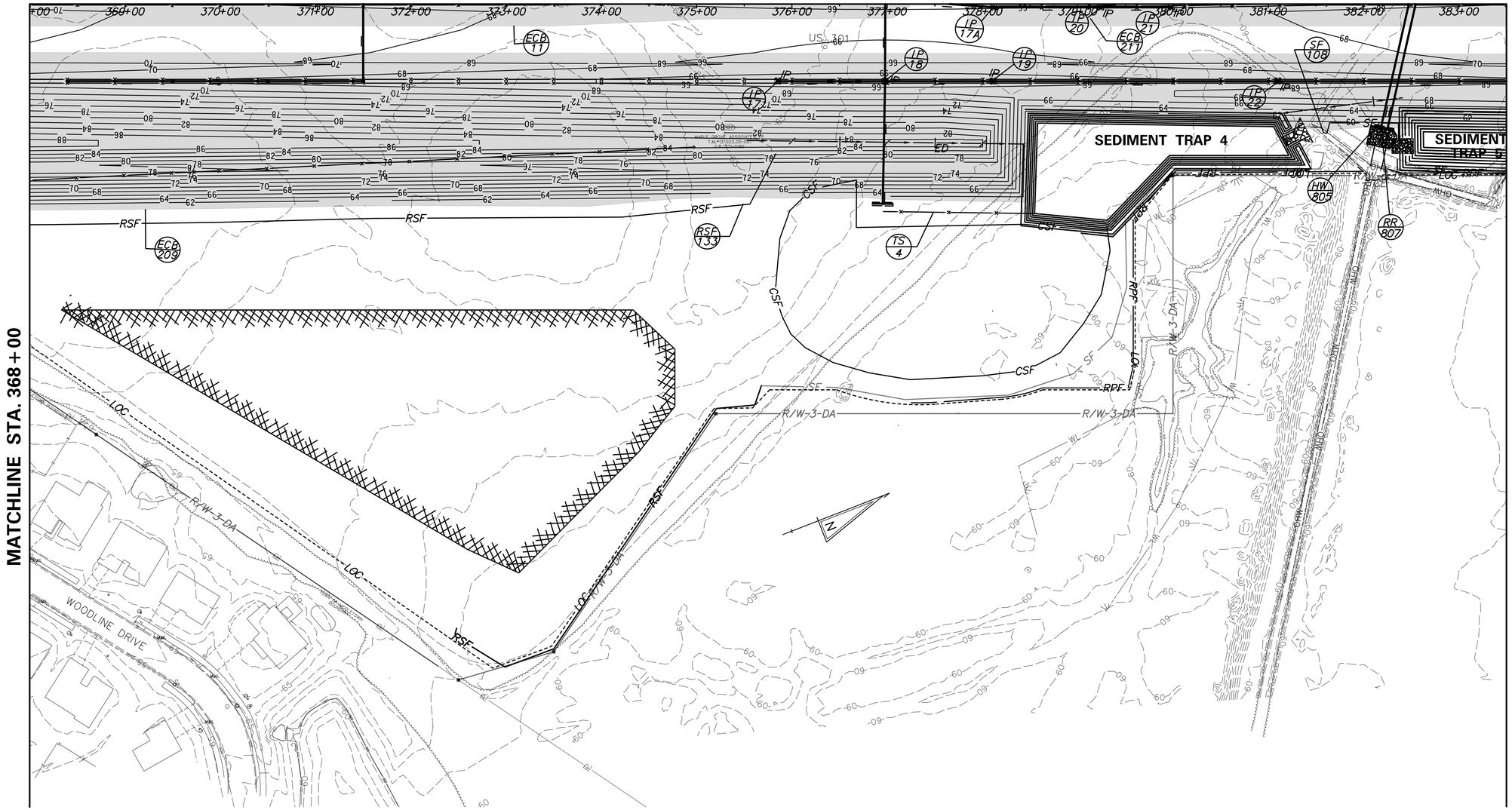
EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
209	22620	1550 LF	160 LF	3
211	3550	1550 LF	52 LF	2

SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
108	381+57	382+40	110 LF

REINFORCED SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
133	368+00	375+83	817 LF

SEEDING QUANTITIES			
ITEM NO.	ITEM	QTY.	UNITS
908017	TEMPORARY GRASS SEEDING	37241	SY

MATCHLINE SHEET 894



INLET PROTECTION		
NO.	D. AREA (AC.)	STATION
17	1.19	375+83, RT
17A	0.13	378+12, ME
18	0.40	377+00, RT
19	0.55	378+00, RT
20	0.31	379+24, ME
21	1.50	380+00, ME
22	0.46	381+10, RT

TEMPORARY SWALE				
NO.	TYPE	b	d	QTY. (LF)
4	A	4'	1'	159

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.
T200911303	DESIGNED BY: BAS
COUNTY	CHECKED BY: JJW
NEW CASTLE	

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 2

CS-34
SHEET NO. 895
TOTAL SHTS. 1256

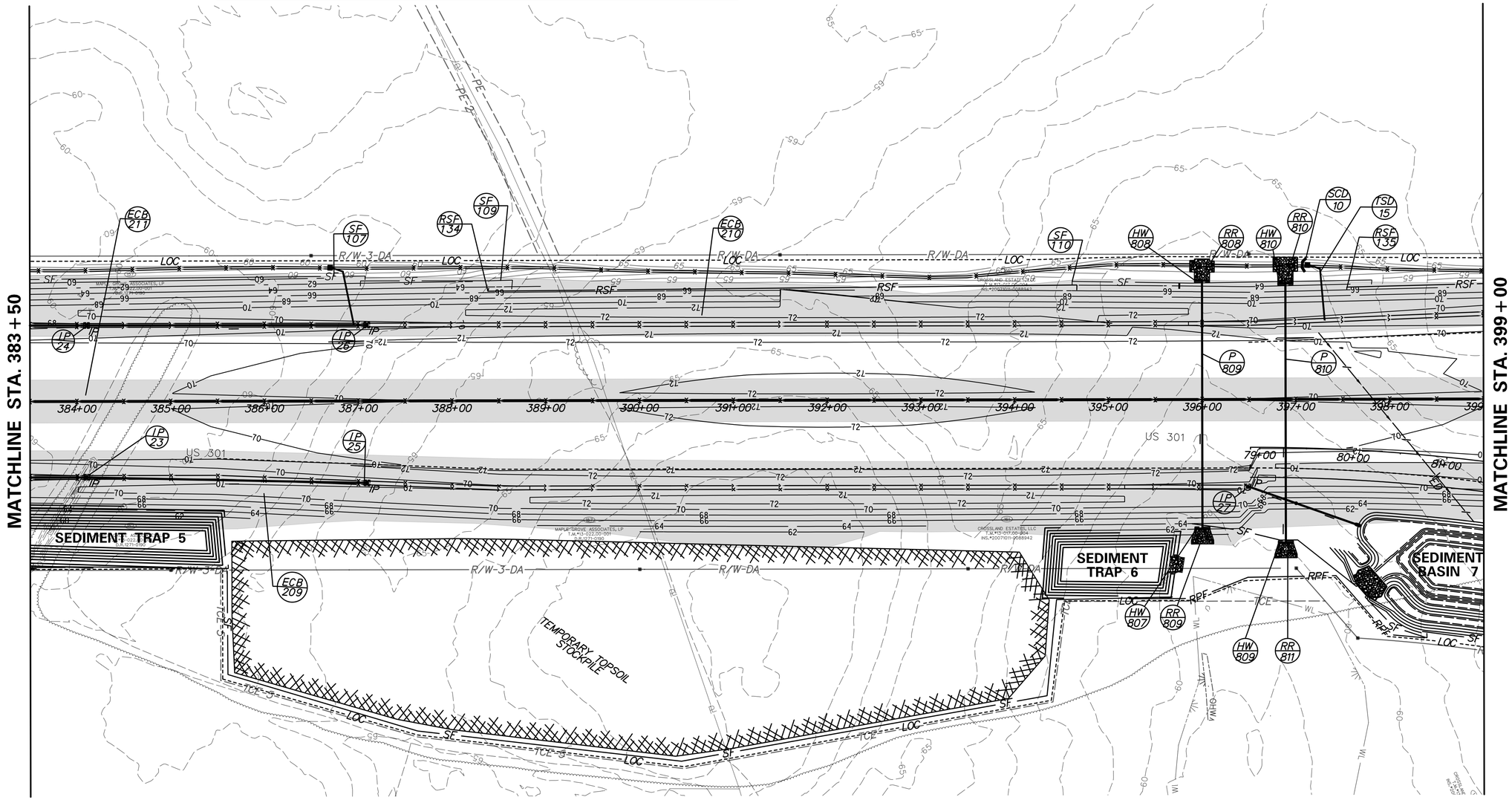
$DATE$
$FIGPATH$ 2\60049040 US301\CIVIL PLANS\2A\CP\AET\CS-34.DGN

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
209	13500	1550 LF	92 LF	3
210	9940	1550 LF	50 LF	3
211	7925	1550 LF	60 LF	2

SEEDING QUANTITIES			
ITEM NO.	ITEM	QTY.	UNITS
908017	TEMPORARY GRASS SEEDING	49835	SY

REINFORCED SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
134	388+39	394+67	636 LF
135	397+55	399+00	148 LF

SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
107	383+50	387+08	362 LF
109	387+03	388+65	177 LF
110	394+62	397+82	328 LF



INLET PROTECTION		
NO.	D. AREA (AC.)	STATION
23	0.50	384+12, RT
24	0.47	384+12, LT
25	0.83	387+10, RT
26	0.74	387+10, LT
27	0.93	396+49, RT

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

STONE CHECK DAM				
NO.	LENGTH	HEIGHT	QTY.	UNITS
10	20 LF	2'	5	TON

TEMPORARY SLOPE DRAIN			
NO.	PIPE SIZE	LENGTH	DA
15	18"	66 LF	1.00 AC

TEMPORARY SEDIMENT BASIN							
NO.	D. AREA	LENGTH	WIDTH	DEPTH	OUT. TYPE	OUT. EL.	CLEAN EL.
7	16.6	480	110	5	TSB	62.2	61.5

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.
T200911303	DESIGNED BY: BAS
COUNTY	
NEW CASTLE	CHECKED BY: JJW

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 2

CS-35
SHEET NO. 896
TOTAL SHTS. 1256

$DATE$
$FILENAME$ 2\60049040 US301\CIVIL\PLANS\2A\GP\AET\CS-35.DGN

EROSION CONTROL BLANKET

NO.	SY	LENGTH	WIDTH	TYPE
209	26770	1550 LF	160 LF	3
210	10275	1550 LF	60 LF	3
211	9380	1550 LF	60 LF	2
212	3080	420 LF	120 LF	3

SEEDING QUANTITIES

ITEM NO.	ITEM	QTY.	UNITS
908017	TEMPORARY GRASS SEEDING	49505	SY

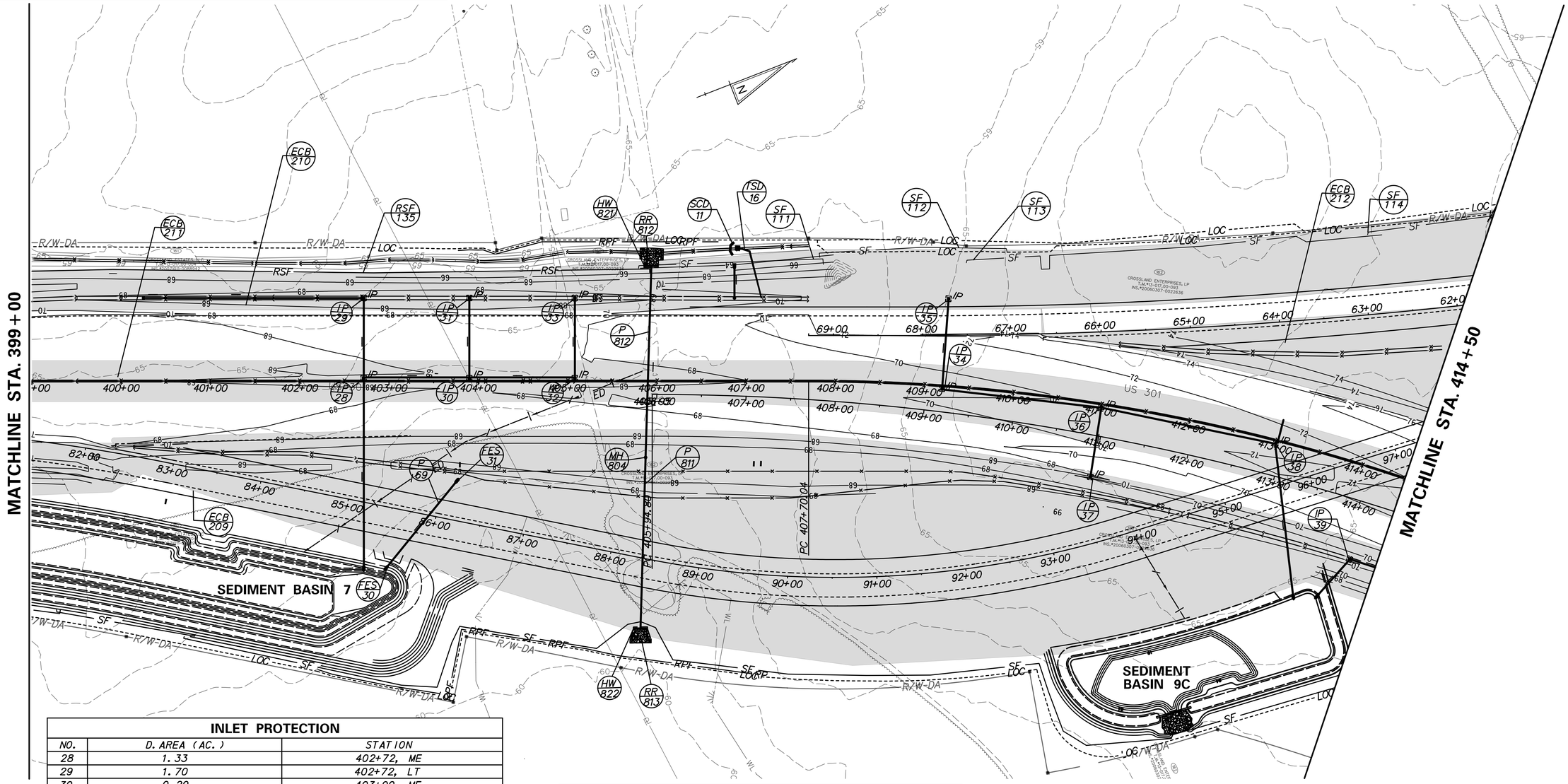
NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

SILT FENCE

NO.	STATION FROM	STATION TO	LENGTH
111	405+81	407+85	215 LF
112	407+81	409+77	219 LF
113	409+36	413+51	471 LF
114	413+37	414+50	145 LF

REINFORCED SILT FENCE

NO.	STATION FROM	STATION TO	LENGTH
135	399+00	405+92	696 LF



INLET PROTECTION

NO.	D. AREA (AC.)	STATION
28	1.33	402+72, ME
29	1.70	402+72, LT
30	0.29	403+90, ME
31	0.41	403+90, LT
32	0.84	405+08, ME
33	0.46	405+08, LT
34	0.41	409+21, ME
35	0.54	409+21, LT
36	0.46	411+00, ME
37	0.86	411+00, LT
38	0.92	413+00, ME
39	0.11	414+08, RT

STONE CHECK DAM

NO.	LENGTH	HEIGHT	QTY.	UNITS
11	20 LF	2'	5	TON

TEMPORARY SLOPE DRAIN

NO.	PIPE SIZE	LENGTH	DA
16	12"	67 LF	0.50 AC

TEMPORARY SEDIMENT BASIN

NO.	D. AREA	LENGTH	WIDTH	DEPTH	OUT. TYPE	OUT. EL.	CLEAN EL.
9C	4.6	125	330	3.5	TSB	64.5	64.0

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 60 120 180
FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.
T200911303	
COUNTY	DESIGNED BY: BAS
NEW CASTLE	CHECKED BY: JJW

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 2

CS-36
SHEET NO.
897
TOTAL SHTS.
1256

$DATE$
$FIGURE$ CAD 2\60049040 US301\CIVIL\PLANS\2A\CP\AET\CS-36.DGN

TEMPORARY SEDIMENT BASIN							
NO.	D. AREA	LENGTH	WIDTH	DEPTH	OUT. TYPE	OUT. EL.	CLEAN EL.
10	13.9	575	308	5	TSB	67.1	66.6

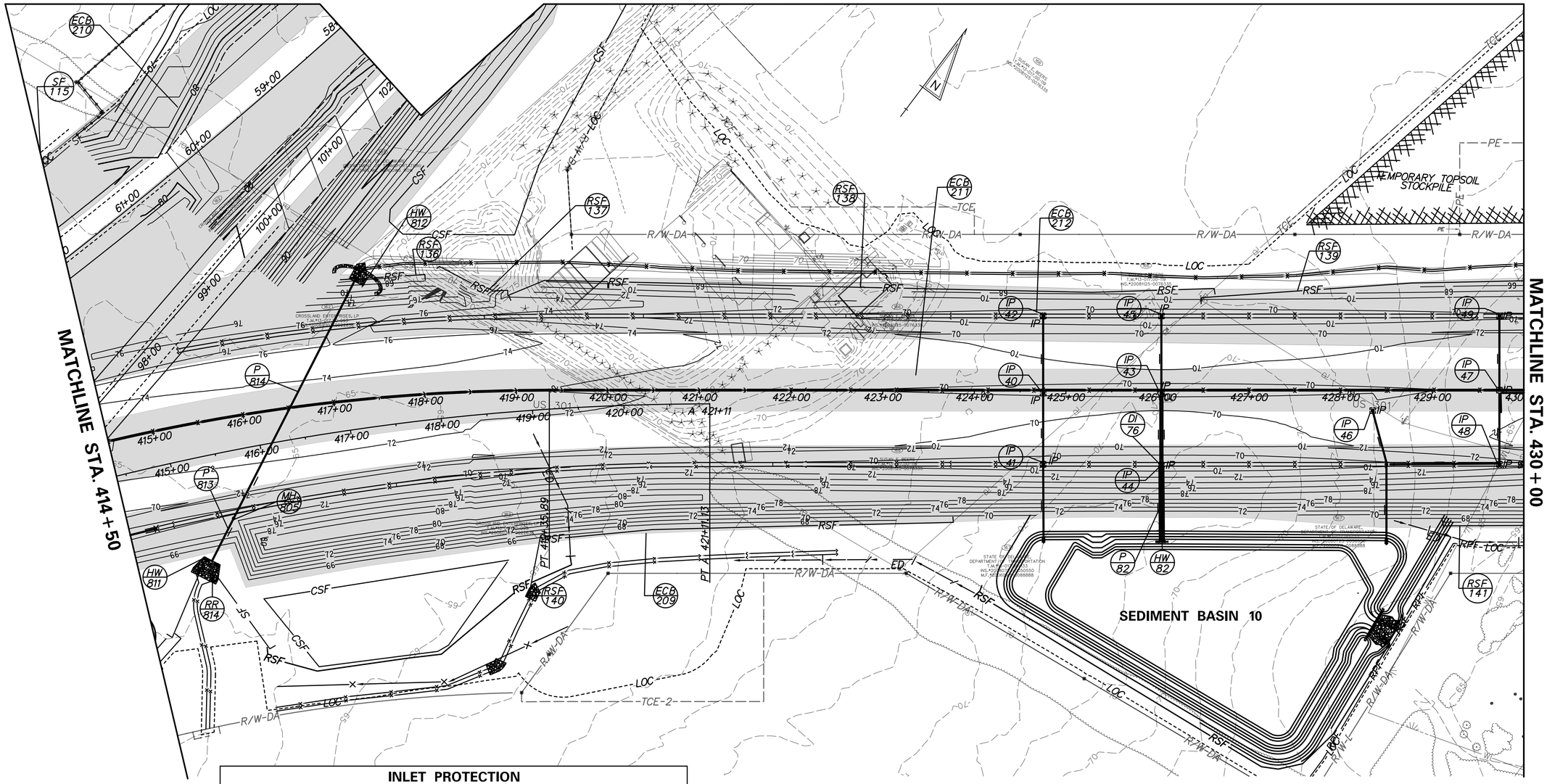
SEE STKP-5 THRU STKP-10 FOR SPUR ROAD, GRADING AND E&S CONTROLS

REINFORCED SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
136	417+21	418+08	99 LF
137	418+21	418+95	91 LF
138	418+94	426+63	786 LF
139	426+48	430+00	360 LF
140	418+98	423+77	461 LF
141	429+11	430+00	96 LF

SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
115	414+50	416+45	273 LF

SEEDING QUANTITIES			
ITEM NO.	ITEM	QTY.	UNITS
908017	TEMPORARY GRASS SEEDING	47839	SY

MATCHLINE SHEET 899



INLET PROTECTION		
NO.	D. AREA (AC.)	STATION
40	1.30	424+76, ME
41	0.50	424+76, RT
42	0.88	424+76, LT
43	0.43	426+05, ME
44	0.90	426+05, RT
45	0.73	426+05, LE
46	0.74	428+36, ME
47	0.60	429+74, ME
48	0.43	429+74, RT
49	0.47	429+74, LT

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
209	15100	1580 LF	107 LF	3
210	2697	379 LF	75 LF	3
211	8860	1580 LF	60 LF	2
212	18422	1580 LF	80 LF	3

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

P:\CADD2\60049040 US301\CIVIL\PLANS\2A\CPYAETYCS-37.DGN

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

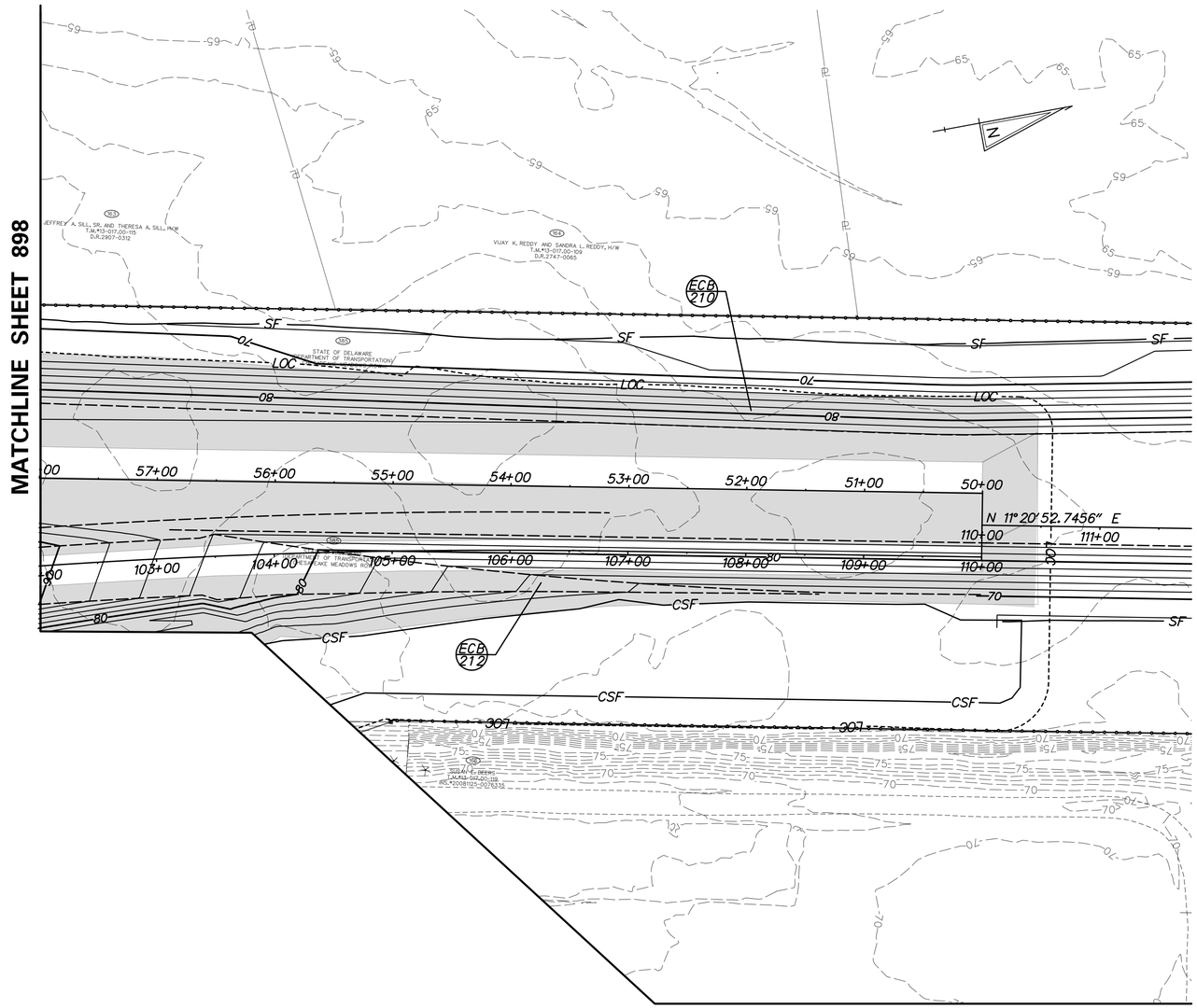
CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	JW
COUNTY	CHECKED BY:	SF
NEW CASTLE		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 2

CS-37
SHEET NO.
898
TOTAL SHTS.
1256

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
210	5973	850 LF	65 LF	3
212	8397	850 LF	75 LF	3

SEEDING QUANTITIES			
ITEM NO.	ITEM	QTY.	UNITS
908017	TEMPORARY GRASS SEEDING	14370	SY



SEE STKP-5 THRU STKP-10 FOR SPUR ROAD, GRADING AND E&S CONTROLS

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: BAS	
COUNTY		
NEW CASTLE	CHECKED BY: JJW	

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 2

CS-38
SHEET NO.
899
TOTAL SHTS.
1256

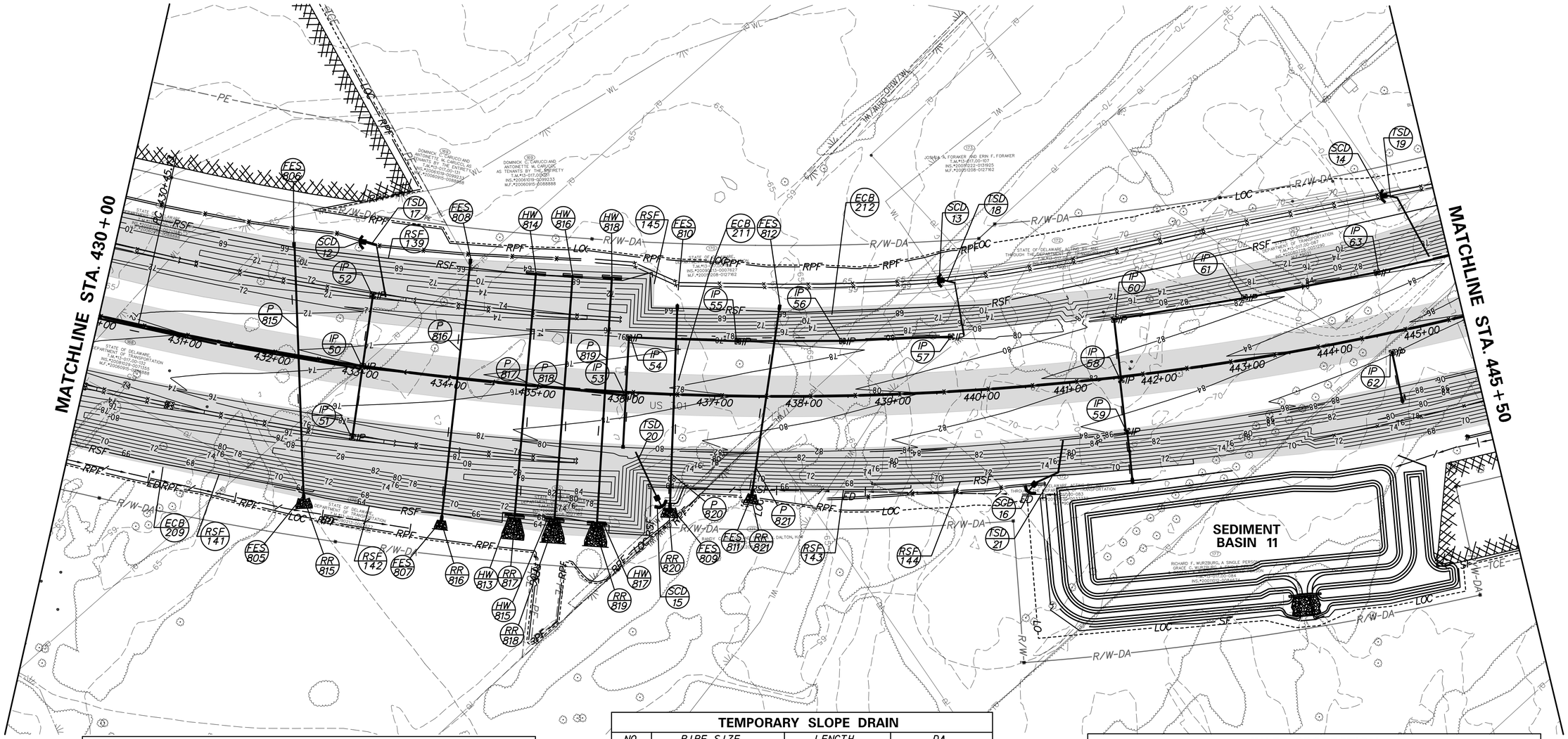
$DATE$
$PLOTDATE$
$USER$
CAD\2\60049040 US301\CIVIL\PLANS\2A\CP\AET\CS-38.DGN

REINFORCED SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
139	430+00	436+25	609 LF
141	430+00	432+71	281 LF
142	432+55	436+34	476 LF
143	436+32	439+18	302 LF
144	438+75	442+27	372 LF
145	436+26	445+50	1371 LF

STONE CHECK DAM				
NO.	LENGTH	HEIGHT	QTY.	UNITS
12	20 LF	2'	5	TON
13	20 LF	2'	5	TON
14	20 LF	2'	5	TON
15	20 LF	2'	5	TON
16	20 LF	2'	5	TON

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
209	12500	1590 LF	115 LF	3
211	7925	1563 LF	115 LF	3
212	9215	1563 LF	60 LF	2

SEEDING QUANTITIES			
ITEM NO.	ITEM	QTY.	UNITS
908017	TEMPORARY GRASS SEEDING	36840	SY



INLET PROTECTION		
NO.	D. AREA (AC.)	STATION
50	0.53	433+00, ME
51	0.50	433+00, RT
52	0.43	433+00, LT
53	1.00	436+00, ME
54	0.11	436+00, LT
55	0.10	437+26, LT
56	0.10	438+46, LT

TEMPORARY SLOPE DRAIN			
NO.	PIPE SIZE	LENGTH	DA
17	18"	75 LF	0.70 AC
18	21"	70 LF	1.70 AC
19	18"	90 LF	1.30 AC
20	18"	55 LF	0.70 AC
21	12"	65 LF	0.50 AC

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

INLET PROTECTION		
NO.	D. AREA (AC.)	STATION
57	0.16	439+71, LT
58	0.54	441+59, ME
59	0.15	441+59, RT
60	0.14	441+59, LT
61	0.16	443+11, LT
62	0.85	444+64, ME
63	0.16	444+64, LT

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 60 120 180
FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.
T200911303	DESIGNED BY: BAS
COUNTY	
NEW CASTLE	CHECKED BY: JJW

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 2

CS-39
SHEET NO.
900
TOTAL SHTS.
1256

$DATE$
$FIGPATH$\60049040_US301\CIVIL\PLANS\2A\CP\AET\CS-39.DGN

EROSION CONTROL BLANKET

NO.	SY	LENGTH	WIDTH	TYPE
209	3860	500 LF	60 LF	3
211	2150	500 LF	60 LF	2
212	2480	500 LF	60 LF	3
213	5115	800 LF	60 LF	3
214	4950	800 LF	60 LF	2
215	5175	800 LF	60 LF	3
216	3225	660 LF	120 LF	3
217	3360	660 LF	120 LF	3

SEEDING QUANTITIES

ITEM NO.	ITEM	QTY.	UNITS
908017	TEMPORARY GRASS SEEDING	34125	SY

EARTH DIKE

NO.	STATION FROM	STATION TO	LENGTH
101	455+68	460+42	516 LF

SILT FENCE

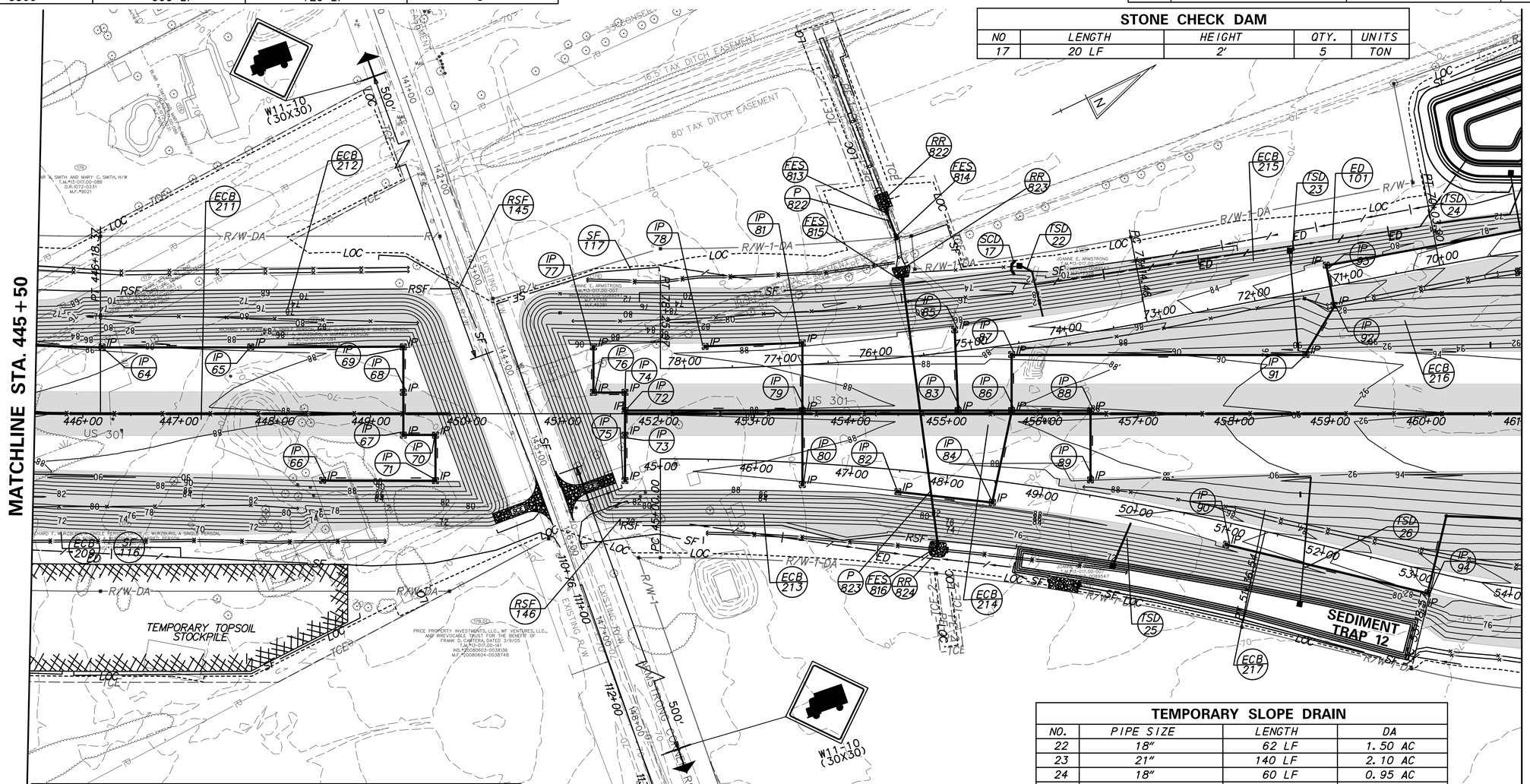
NO.	STATION FROM	STATION TO	LENGTH
116	447+00	450+84	407 LF
117	452+05	458+04	641 LF

REINFORCED SILT FENCE

NO.	STATION FROM	STATION TO	LENGTH
145	445+50	449+90	439 LF
146	451+60	455+73	427 LF

STONE CHECK DAM

NO	LENGTH	HEIGHT	QTY.	UNITS
17	20 LF	2'	5	TON



INLET PROTECTION

NO.	D. AREA (AC)	STATION
64	0.15	446+19, LT
65	0.16	447+76, LT
66	0.03	448+50, RT
67	0.04	449+35, ME
68	0.02	449+35, ME
69	0.10	449+35, LT
70	0.04	449+69, ME
71	0.16	449+69, RT
72	0.12	451+66, ME
73	0.02	451+66, ME
74	0.01	451+66, ME
75	0.13	451+66, RT

INLET PROTECTION

NO.	D. AREA (AC)	STATION
76	0.02	451+33, ME
77	0.10	451+33, LT
78	0.11	77+79, RT
79	0.22	453+50, ME
80	0.19	46+50, RT
81	0.11	76+77, RT
82	0.12	47+50, RT
83	0.27	455+13, ME
84	0.17	481+50, RT
85	0.21	75+16, RT

TEMPORARY SLOPE DRAIN

NO.	PIPE SIZE	LENGTH	DA
22	18"	62 LF	1.50 AC
23	21"	140 LF	2.10 AC
24	18"	60 LF	0.95 AC
25	18"	42 LF	1.20 AC
26	18"	130 LF	0.90 AC

INLET PROTECTION

NO.	D. AREA (AC)	STATION
86	0.07	455+69, ME
87	0.63	455+69, LT
88	0.97	456+50, ME
89	0.56	456+50, RT
90	0.11	51+00, RT
91	0.43	458+76, LT
92	0.28	71+18, LT
93	0.19	71+18, LT
94	0.11	53+15, RT

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 60 120 180
FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.
T200911303	DESIGNED BY: BAS
COUNTY	
NEW CASTLE	CHECKED BY: JJW

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 2

CS-40
SHEET NO.
901
TOTAL SHTS.
1256

$DATE$
$FIGURE$ CAD 2\60049040 US301\CIVIL\PLANS\2A\CP\AET\CS-40.DGN

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
213	1655	550 LF	30 LF	3
214	1700	300 LF	60 LF	2
215	5170	1600 LF	30 LF	3
216	4920	360 LF	120 LF	3
217	5770	360 LF	120 LF	3
218	5300	1000 LF	60 LF	2
219	13200	960 LF	100 LF	3
220	5560	1200 LF	30 LF	3

TEMPORARY SWALE				
NO.	TYPE	b	d	QTY. (LF)
5	A	4′	1′	147

TEMPORARY SLOPE DRAIN			
NO.	PIPE SIZE	LENGTH	DA
27	18″	35 LF	1.10 AC
28	18″	147 LF	0.80 AC
29	12″	49 LF	0.50 AC

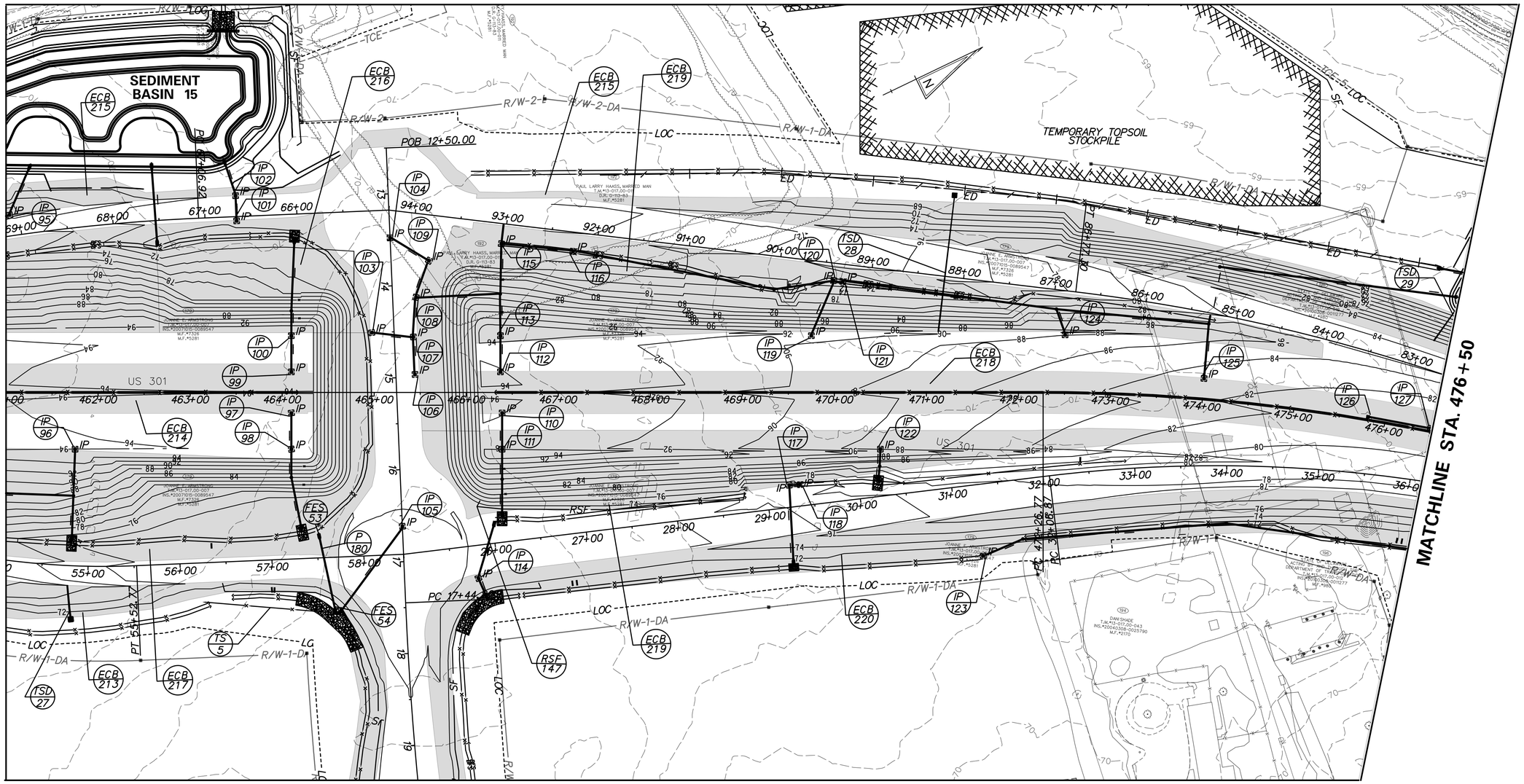
INLET PROTECTION		
NO.	D. AREA (AC)	STATION
95	0.06	461+04, LT
96	0.16	461+75, RT
97	0.05	461+10, RT
98	0.12	461+10, RT
99	0.05	464+10, LT
100	0.12	464+10, LT
101	0.30	463+51, LT
102	0.06	463+49, LT
103	0.12	464+91, LT
104	0.10	465+17, LT
105	0.26	465+30, RT
106	0.12	465+47, LT

INLET PROTECTION		
NO.	D. AREA (AC)	STATION
107	0.04	465+40, LT
108	0.05	465+43, LT
109	0.02	465+59, LT
110	0.02	466+39, RT
111	0.10	466+39, RT
112	0.02	466+37, LT
113	0.10	466+37, LT
114	0.70	466+12, RT
115	0.40	466+38, LT
116	0.62	467+16, LT
117	0.07	469+51, RT
118	0.07	469+66, RT

INLET PROTECTION		
NO.	D. AREA (AC)	STATION
119	0.28	469+75, LT
120	0.62	469+99, LT
121	0.84	470+09, LT
122	0.33	470+50, RT
123	0.30	471+62, RT
124	0.09	472+50, LT
125	0.75	474+00, LT
126	0.85	475+81, LT
127	0.44	476+50, LT

MATCHLINE SHEET 903

MATCHLINE STA. 461+00



MATCHLINE STA. 476+50

MATCHLINE SHEET 905

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

REINFORCED SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
147	466+13	469+03	304 LF

SEEDING QUANTITIES			
ITEM NO.	ITEM	QTY.	UNITS
908017	TEMPORARY GRASS SEEDING	43275	SY

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 60 120 180
FEET

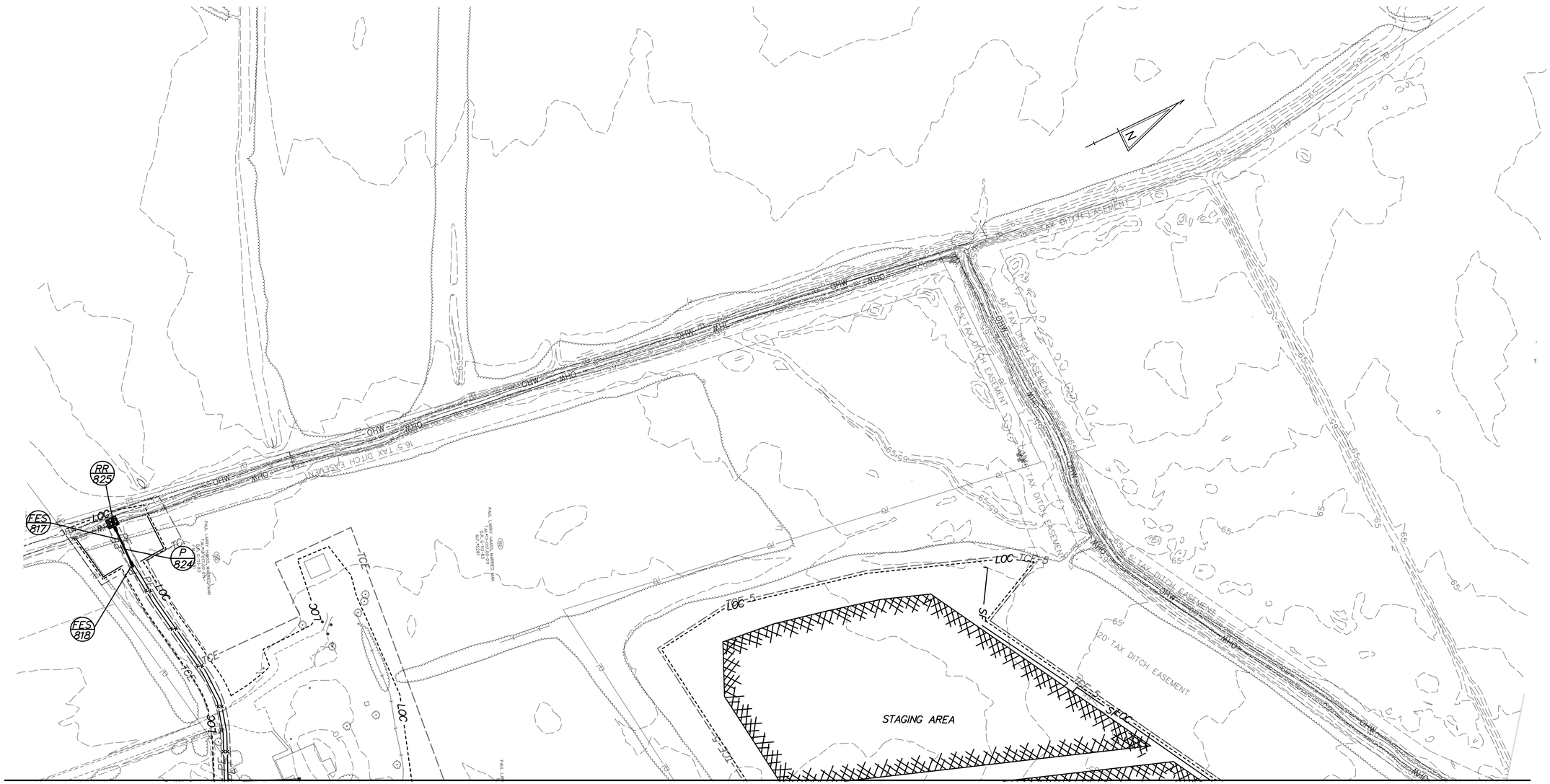
US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.
T200911303	DESIGNED BY: BAS
COUNTY	
NEW CASTLE	CHECKED BY: JJW

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 2

CS-41
SHEET NO.
902
TOTAL SHTS.
1256

$DATE$
$FIGURE$ 2\60049040 US301\CIVIL\PLANS\2A\CP\AET\CS-41.DGN



MATCHLINE SHEET 902

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

SEEDING QUANTITIES

ITEM NO.	ITEM	QTY.	UNITS
908017	TEMPORARY GRASS SEEDING	7000	SY

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 60 120 180
FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.
T200911303	DESIGNED BY: BAS
COUNTY	CHECKED BY: JJW
NEW CASTLE	

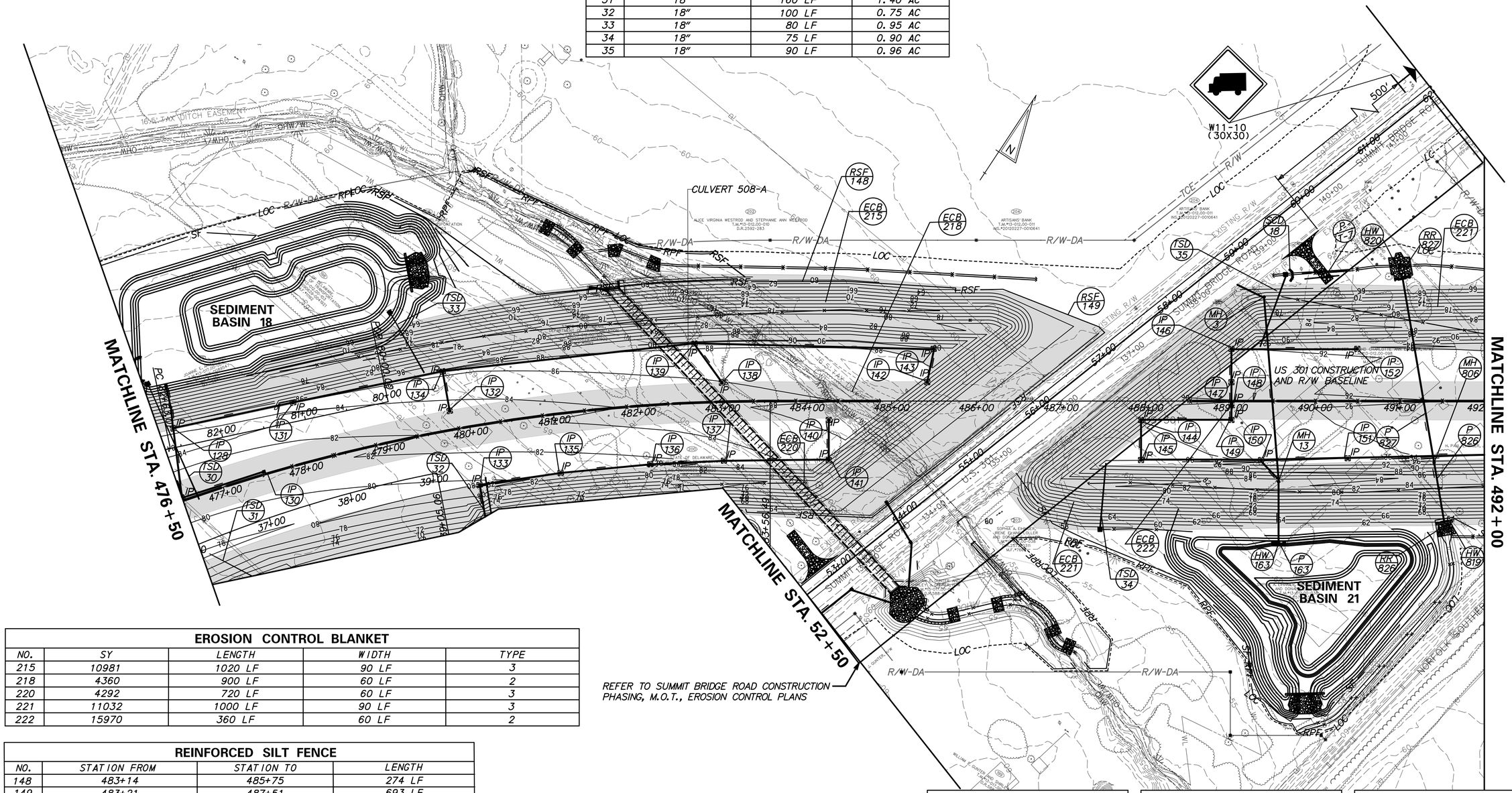
CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 2

CS-42	
SHEET NO.	903
TOTAL SHTS.	1256

$DATE$
$FILENAME$ 2\60049040_US301\CIVIL\PLANS\2A\CP\AET\CS-42.DGN

TEMPORARY SLOPE DRAIN			
NO.	PIPE SIZE	LENGTH	DA
30	18"	147 LF	1.30 AC
31	18"	160 LF	1.40 AC
32	18"	100 LF	0.75 AC
33	18"	80 LF	0.95 AC
34	18"	75 LF	0.90 AC
35	18"	90 LF	0.96 AC

STONE CHECK DAM				
NO.	LENGTH	HEIGHT	QTY.	UNITS
18	20 LF	2'	5	TON



EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
215	10981	1020 LF	90 LF	3
218	4360	900 LF	60 LF	2
220	4292	720 LF	60 LF	3
221	11032	1000 LF	90 LF	3
222	15970	360 LF	60 LF	2

REFER TO SUMMIT BRIDGE ROAD CONSTRUCTION PHASING, M.O.T., EROSION CONTROL PLANS

REINFORCED SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
148	483+14	485+75	274 LF
149	483+21	487+51	693 LF

SEEDING QUANTITIES			
ITEM NO.	ITEM	QTY.	UNITS
908017	TEMPORARY GRASS SEEDING	56678	SY

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

INLET PROTECTION		
NO.	D. AREA (AC)	STATION
128	0.03	476+64, LT
130	0.50	477+51, LT
131	0.04	478+06, LT
132	0.70	479+80, LT
133	0.10	480+00, RT
134	0.06	479+80, LT
135	0.11	481+00, RT
136	0.10	482+10, RT

INLET PROTECTION		
NO.	D. AREA (AC)	STATION
137	0.12	483+00, RT
138	0.49	483+00, LT
139	0.08	482+70, LT
140	0.07	485+26, RT
141	0.36	485+26, RT
142	0.07	485+42, LT
143	0.26	485+50, LT
144	0.05	487+95, RT

INLET PROTECTION		
NO.	D. AREA (AC)	STATION
145	0.14	487+95, RT
146	0.12	489+01, LT
147	0.05	489+01, LT
148	0.10	489+01, RT
149	0.05	489+01, RT
150	0.10	489+36, RT
151	0.20	490+39, RT
152	0.26	490+50, LT

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.
T200911303	DESIGNED BY: BAS
COUNTY	CHECKED BY: JJW
NEW CASTLE	

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 2

CS-43
SHEET NO.
904
TOTAL SHTS.
1256

$DATES
$FIGDATE$ 2/2/2021 \60049040 US301\CIVIL\PLANS\2A\CP\AET\CS-43.DGN

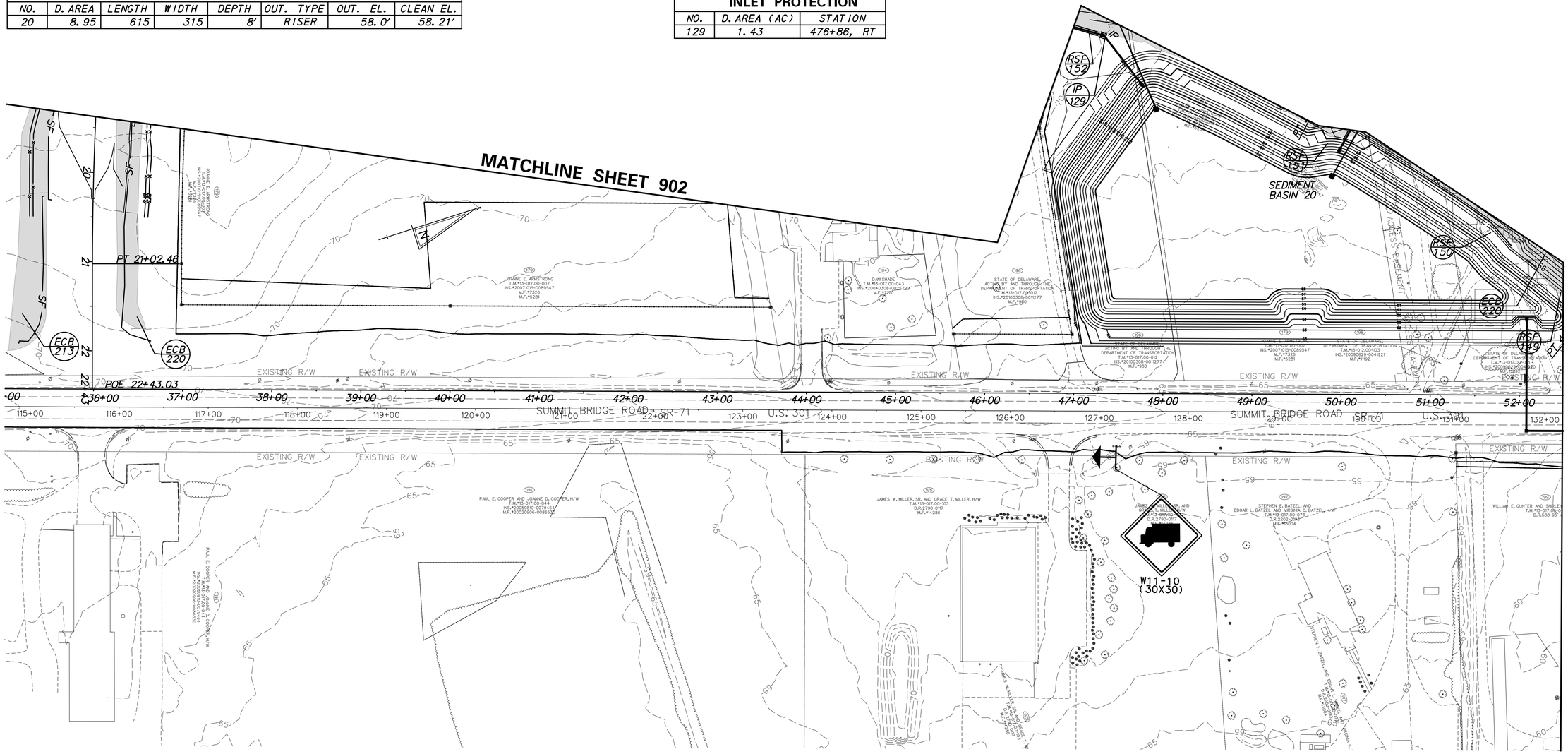
REINFORCED SILT FENCE			
NO.	STATION FROM	STATION TO	LENGTH
149	52+40	52+50	15 LF
150	51+20	52+50	142 LF
151	49+50	52+20	323 LF
152	47+10	50+00	307 LF

SEDIMENT BASIN SCHEDULE							
NO.	D. AREA	LENGTH	WIDTH	DEPTH	OUT. TYPE	OUT. EL.	CLEAN EL.
20	8.95	615	315	8'	RISER	58.0'	58.21'

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
213	950	240 LF	30 LF	3
220	1150	240 LF	20 LF	3

SEEDING QUANTITIES			
ITEM NO.	ITEM	QTY.	UNITS
908017	TEMPORARY GRASS SEEDING	2096	SY

INLET PROTECTION		
NO.	D. AREA (AC)	STATION
129	1.43	476+86, RT



NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.
T200911303	DESIGNED BY: BAS
COUNTY	CHECKED BY: JJW
NEW CASTLE	

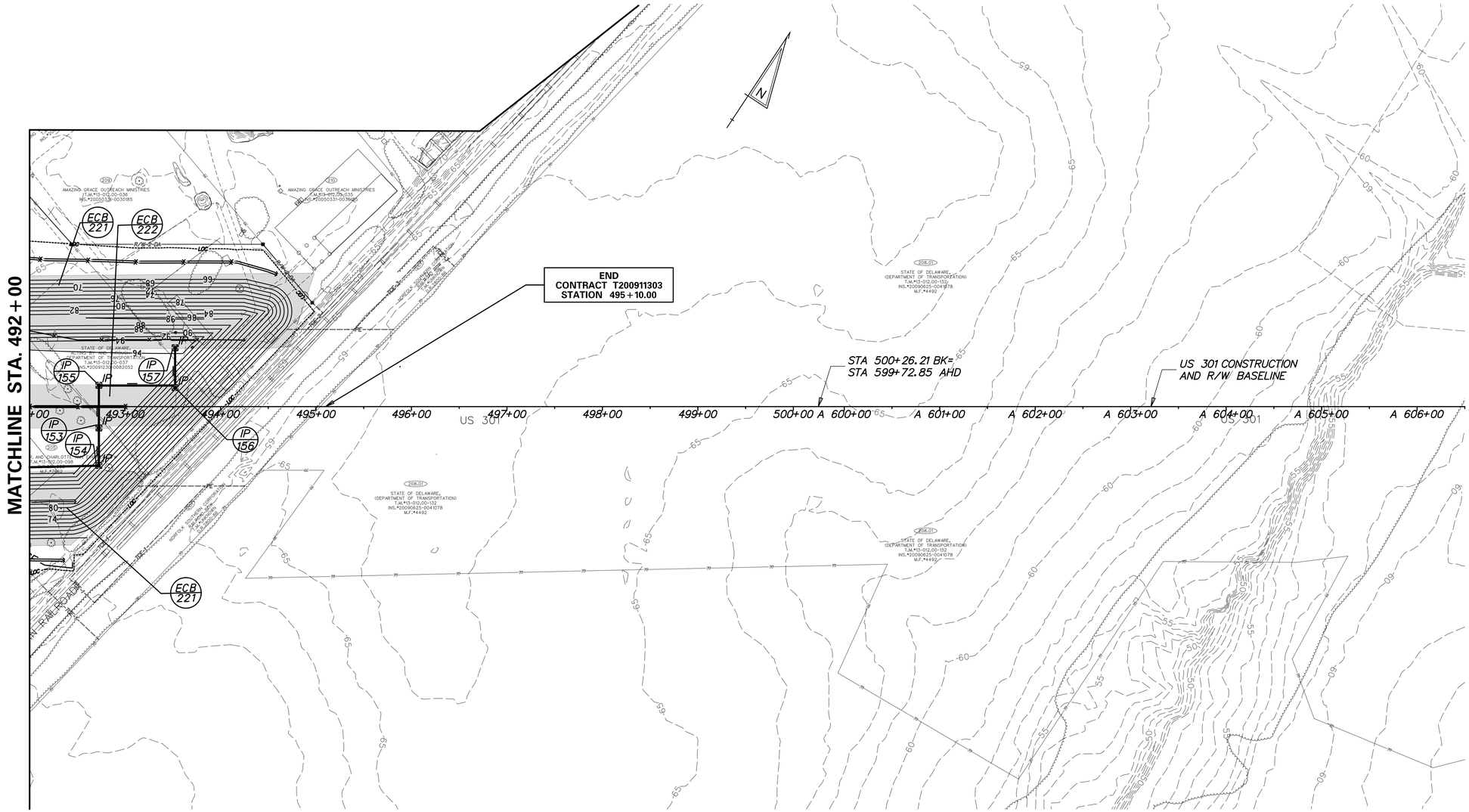
CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 2

CS-44
SHEET NO.
905
TOTAL SHTS.
1256

$DATES
$FIGDB\2\60049040 US301\CIVIL\PLANS\2A\CP\AET\CS-44.DGN

SEEDING QUANTITIES			
ITEM NO.	ITEM	QTY.	UNITS
908017	TEMPORARY GRASS SEEDING	4120	SY

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
220	3200	833 LF	130 LF	2
221	920	833 LF	60 LF	3



INLET PROTECTION		
NO.	D. AREA (AC)	STATION
153	0.02	492+73, RT
154	0.08	492+73, RT
155	0.01	492+73, LT
156	0.01	493+52, LT
157	0.01	493+52, LT

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 60 120 180
FEET

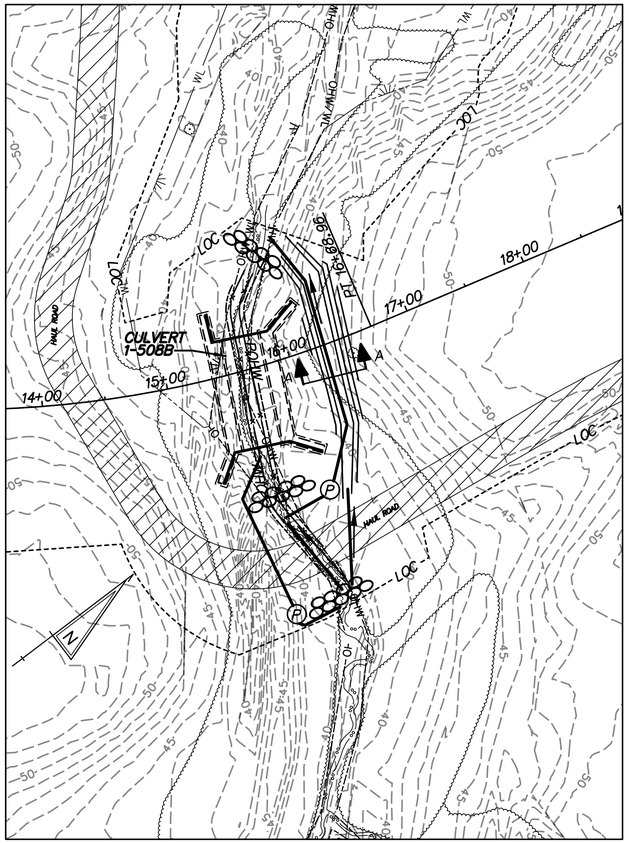
US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.
T200911303	DESIGNED BY: BAS
COUNTY	CHECKED BY: JJW
NEW CASTLE	

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 2

CS-45
SHEET NO.
906
TOTAL SHTS.
1256

$DATE$
$FIGURE$ 92-60049040 US301\CIVIL\PLANS\2A\CPYAET\CS-45.DGN



CULVERT 1-508B CONSTRUCTION SEQUENCE:

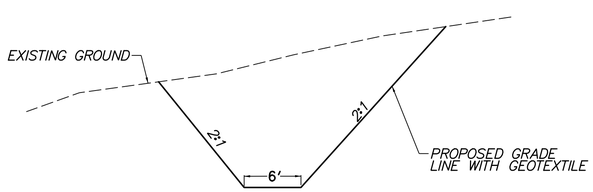
1. CONSTRUCT STREAM DIVERSION CHANNEL NORTH OF PROPOSED CULVERT 1-508B.

2. INSTALL PUMP AROUND FOR STREAM DIVERSION INCLUDING SANDBAG DAMS FOR TEMPORARY PIPE UNDER THE FUTURE HAUL ROAD CONSTRUCTION AND COMPLETION OF STREAM CHANNEL DIVERSION AT EXISTING STREAM LOCATION.

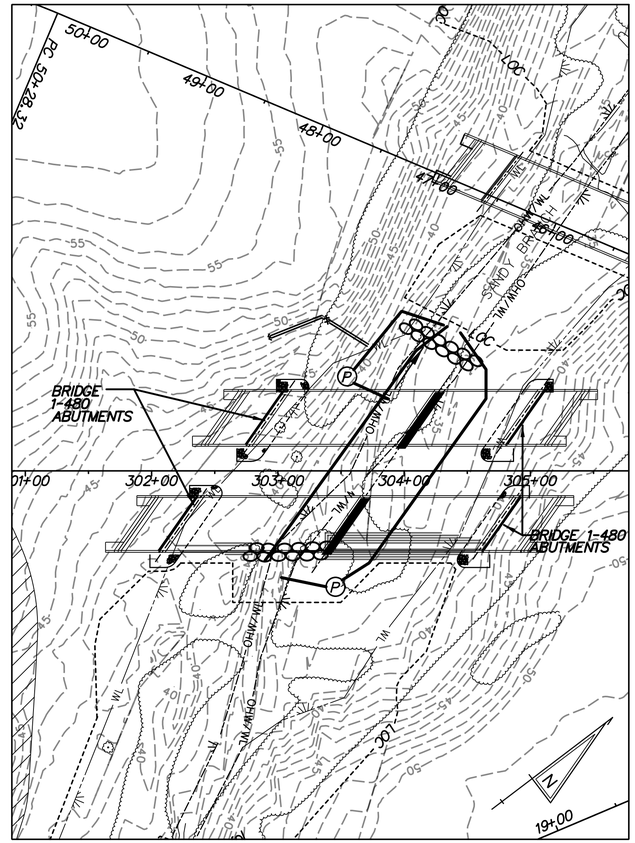
3. INSTALL BOTH TEMPORARY PIPES AT THE FUTURE HAUL ROAD BUT WITH ONLY THE TEMPORARY PIPE TO THE STREAM DIVERSION CHANNEL ACTIVE. ALLOW STREAM TO FLOW AROUND CONSTRUCTION AREA. DEWATER CONSTRUCTION AREA WITH SUMP PIT.

4. BEGIN CONSTRUCTION OF CULVERT 1-508B.

5. WHEN CULVERT HAS BEEN CONSTRUCTED AND FILL OPERATIONS ALONG RAMP C IMPEDE ON STREAM DIVERSION CHANNEL, SWITCH STREAM FLOW THROUGH SECOND TEMPORARY PIPE AND ALLOW FLOW THROUGH CULVERT 508B AND COMPLETE RAMP FILL OPERATIONS.



SECTION A-A



BRIDGE 1-480 PIER CONSTRUCTION SEQUENCE:

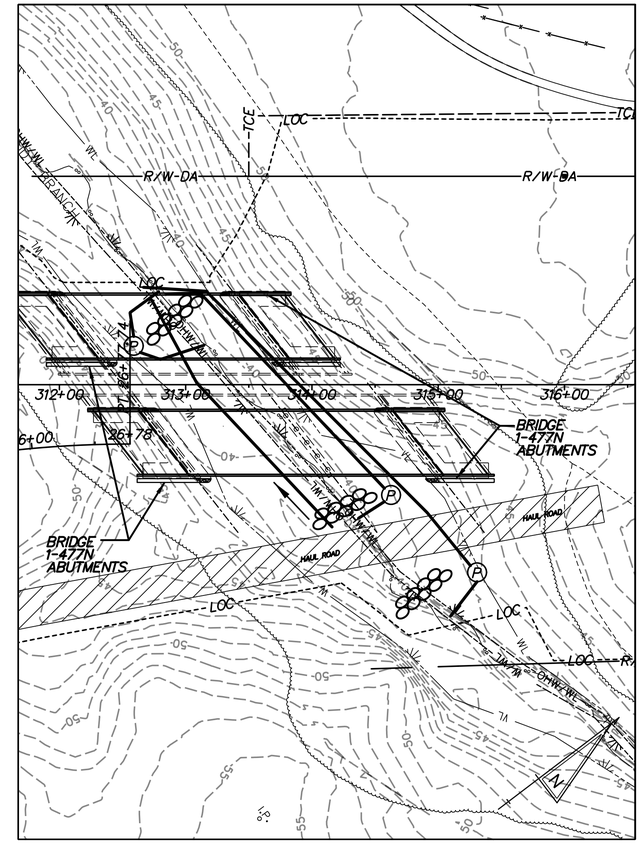
1. INSTALL UPSTREAM PUMP AROUND FOR STREAM DIVERSION INCLUDING SANDBAG DAM.

2. SET UP SECOND PUMP AROUND FOR STREAM DIVERSION INCLUDING SANGBAG DAM. DEWATER CONSTRUCTION AREA WITH SUMP PIT.

3. CONSTRUCT PIERS.

4. REMOVE PUMP AROUND STREAM DIVERSION, SANDBAGS AND SUMP PIT.

STREAM DIVERSION QUANTITIES			
ITEM NO.	ITEM	QTY.	UNITS
909005	STREAM DIVERSION	1	LS



BRIDGE 1-477 PIER CONSTRUCTION SEQUENCE:

1. INSTALL UPSTREAM PUMP AROUND FOR STREAM DIVERSION INCLUDING SANDBAG DAM, AND TEMPORARY PIPE FOR FUTURE HAUL ROAD LOCATION.

2. SET UP SECOND PUMP AROUND FOR STREAM DIVERSION INCLUDING SANGBAG DAM AND OVERFLOW DIVERSION PIPE ON THE WEST SIDE OF THE HAUL ROAD. REMOVE UPSTREAM PUMP AROUND AND SANDBAG DAM. DEWATER CONSTRUCTION AREA WITH SUMP PIT.

3. CONSTRUCT INSTREAM PIER.

4. REMOVE PUMP AROUND STREAM DIVERSION, SANDBAGS AND SUMP PIT.

GENERAL NOTES:

1. DIVERSION DITCHES SHALL BE CONSTRUCTED PER DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK SPECIFICATIONS FOR STREAM DIVERSION, PG 3.5.2-1 AND 3.5.2-2.

2. CARE MUST BE TAKEN TO INSPECT THE STREAM DIVERSION AT THE END OF EACH WORK DAY.

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 60 120 180
FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	JW
COUNTY		
NEW CASTLE	CHECKED BY:	SF

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STREAM DIVERSION PLANS

CS-46
SHEET NO.
907
TOTAL SHTS.
1256

SEQUENCE OF CONSTRUCTION

STAGE 3 - FINAL CONSTRUCTION

1. MAINTAIN EROSION AND SEDIMENT CONTROLS THROUGH FINAL CONSTRUCITON AND STABILIZATION OF FINAL CONSTRUCTION.

2. CONSTRUCT ROADWAY DRAINAGE PIPES, INLETS, AND ROCK OUTLET PROTECTION FROM DOWNSTREAM TO UPSTREAM. IF NO INLET PROTECTION IS SHOWN ON PHASE 3, COVER INLET TO NOT ALLOW RUNOFF INTO DRAINAGE SYSTEM. SUMP AREAS WILL BE DRAINED WITH PORTABLE SEDIMENT TANKS OR OTHER APPROVED DEWATERING DEVICES. ALLOW ROADSIDE DITCHES TO DRAIN TO OUTFALLS AND NOT TO INFILTRATION AREAS UNTIL FINAL STABILIZATION. DO NOT ALLOW AREAS TO DRAIN TO FUTURE INFILTRATION AREAS UNTIL SITE IS COMPLETELY STABILIZED. WHEN TEMPORARY PIPES ARE USED, USE APPROVED SEDIMENT CONTROL DEVICES AT UPSTREAM ENDS OF THE STORM DRAIN SYSTEM TO TREAT UNSTABILIZED AREAS.

3. CONSTRUCT FINAL US 301 TYPICAL ROADWAY SECTION TO THE LIMITS SHOWN INCLUDING CONDUITS, UNDERDRAIN AND SIGNAGE.

4. FINISH CONSTRUCTION OF ROADWAY AND TIE INS.

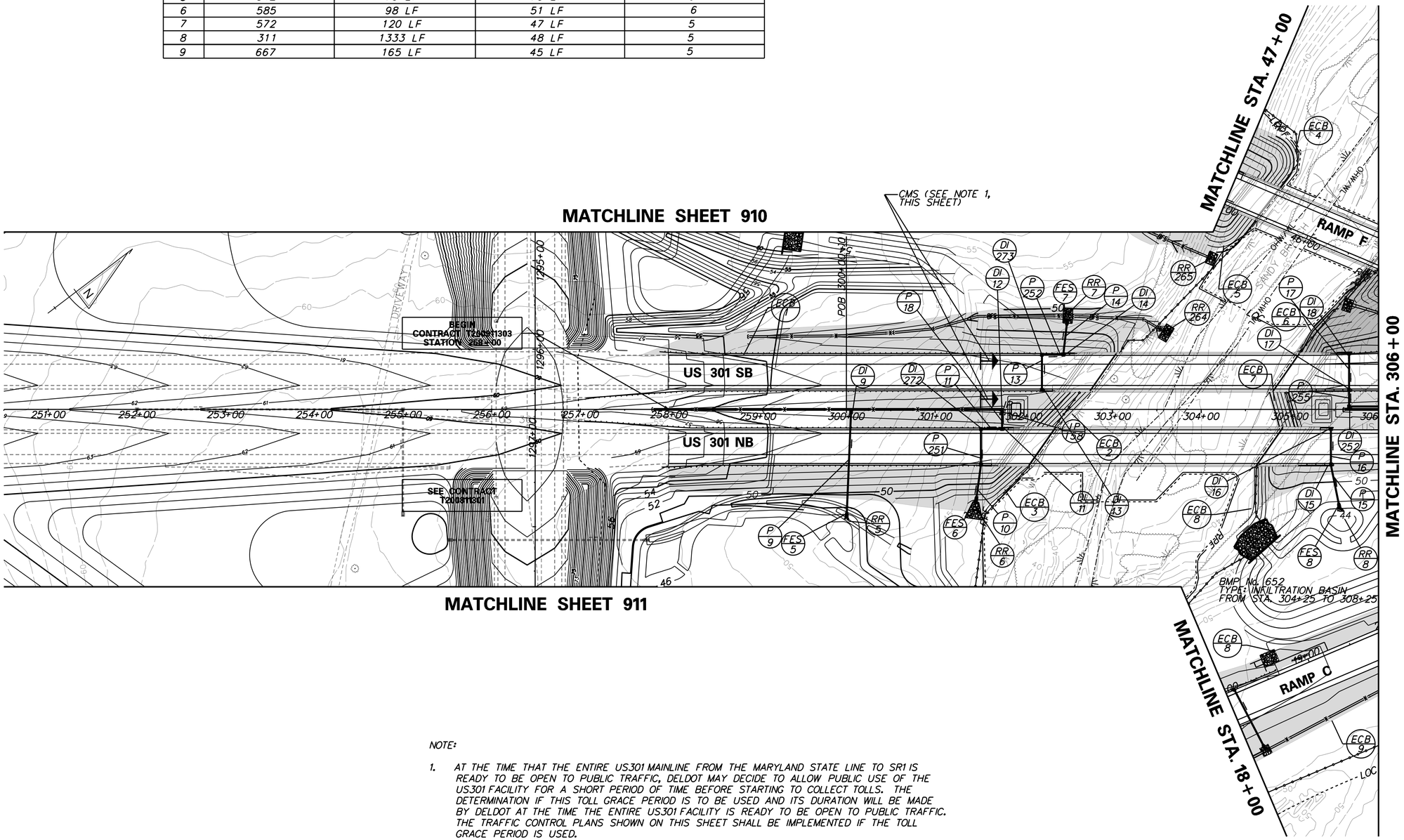
5. AT COMPLETION OF CONSTRUCTION ACTIVITY AND ONCE THE CONTRIBUTING DRAINAGE AREAS HAVE BEEN STABILIZED, THE CONTRACTOR MUST CONTACT THE ENGINEER FOR INSPECTION OF THE SITE , THE ENGINEER MUST GRANT APPROVAL PRIOR TO THE START OF ANY SEDIMENT TRAP/BASIN CONVERSION IN DELAWARE. CONVERT SEDIMENT BASINS TO FINAL SWM BASIN DESIGNS PER PLAN AND PROJECT SPECIFICATIONS.
CONVERSION OF SEDIMENT TRAPS/BASINS SHALL BE CARRIED OUT IN SUCH A MANNER THAT SEDIMENT POLLUTION IS ABATED.
   A. SEDIMENT REMOVAL & DISPOSAL: THE SEDIMENT SHALL BE DEWATERED, REMOVED FROM THE TRAP/BASIN AND PLACED IN SUCH A MANNER THAT IT WILL NOT ERODE FROM THE SITE. THE SEDIMENT SHALL NOT BE DEPOSITED DOWNSTREAM FROM THE TRAP/BASIN OR ADJACENT TO A STREAM OR FLOODPLAIN. SEDIMENT SHALL NOT BE ALLOWED TO FLUSH INTO A STREAM OR DRAINAGE WAY. THE SEDIMENT SHALL BE PLACED AT THE STOCKPILE SITE & SEDIMENT DISTRIBUTION AREA AS DESIGNATED ON THE PROJECT PLANS. STABILIZE ANY RESULTING DISTURBANCE IMMEDIATELY.
   B. AFTER PERMANENT STABILIZATION OF ALL DISTRIBUTED CONTRIBUTORY DRAINAGE AREAS THE OUTLET STRUCTURES MUST BE MODIFIED IN ACCORDANCE WITH APPROVED STORMWATER MANAGEMENT DESIGN PLANS. ADDITIONAL GRADING MAY ALSO BE NECESSARY TO PROVIDE THE REQUIRED STORAGE VOLUME IN THE BASIN. CONVERSION TO PERMANENT SWM FACILITY CAN ONLY TAKE PLACE AFTER ALL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED TO THE SATISFACTION OF THE INSPECTION AUTHORITY AND STORM DRAINS HAVE BEEN FLUSHED.
      1. MULCH, SEED AND LANDSCAPE PROPOSED PERVIOUS AREAS
      2. AFTER FINAL STABILIZATION (MINIMUM OF 70% UNIFORM PERENNIAL GROWTH) OF DISTURBED AREAS, THE CONTRACTOR MUST CONTACT THE ENGINEER FOR INSPECTION OF THE SITE. THE ENGINEER MUST GRANT APPROVAL PRIOR TO THE REMOVAL OF THE EROSION AND SEDIMENT CONTROL MEASURES. THE CONTRACTOR SHALL CONDUCT A FINAL INSPECTION AND REMOVE ALL SEDIMENT AND DEBRIS FROM INLETS.

6. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED, AND MULCH PRIOR TO REMOVAL OF SEDIMENT CONTROL DEVICES.

7. UPON APPROVAL OF SEDIMENT CONTROL INSPECTOR, REMOVAL SEDIMENT CONTROLS.

INLET PROTECTION		
NO.	D. AREA	STATION
158	0.8	301+76, RT

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
1	2423	627 LF	47 LF	6
2	1292	259 LF	46 LF	5
3	1734	455 LF	47 LF	5
4	317	58 LF	54 LF	6
5	342	79 LF	70 LF	6
6	585	98 LF	51 LF	6
7	572	120 LF	47 LF	5
8	311	1333 LF	48 LF	5
9	667	165 LF	45 LF	5



NOTE:

1. AT THE TIME THAT THE ENTIRE US301 MAINLINE FROM THE MARYLAND STATE LINE TO SR1 IS READY TO BE OPEN TO PUBLIC TRAFFIC, DELDOT MAY DECIDE TO ALLOW PUBLIC USE OF THE US301 FACILITY FOR A SHORT PERIOD OF TIME BEFORE STARTING TO COLLECT TOLLS. THE DETERMINATION IF THIS TOLL GRACE PERIOD IS TO BE USED AND ITS DURATION WILL BE MADE BY DELDOT AT THE TIME THE ENTIRE US301 FACILITY IS READY TO BE OPEN TO PUBLIC TRAFFIC. THE TRAFFIC CONTROL PLANS SHOWN ON THIS SHEET SHALL BE IMPLEMENTED IF THE TOLL GRACE PERIOD IS USED.

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

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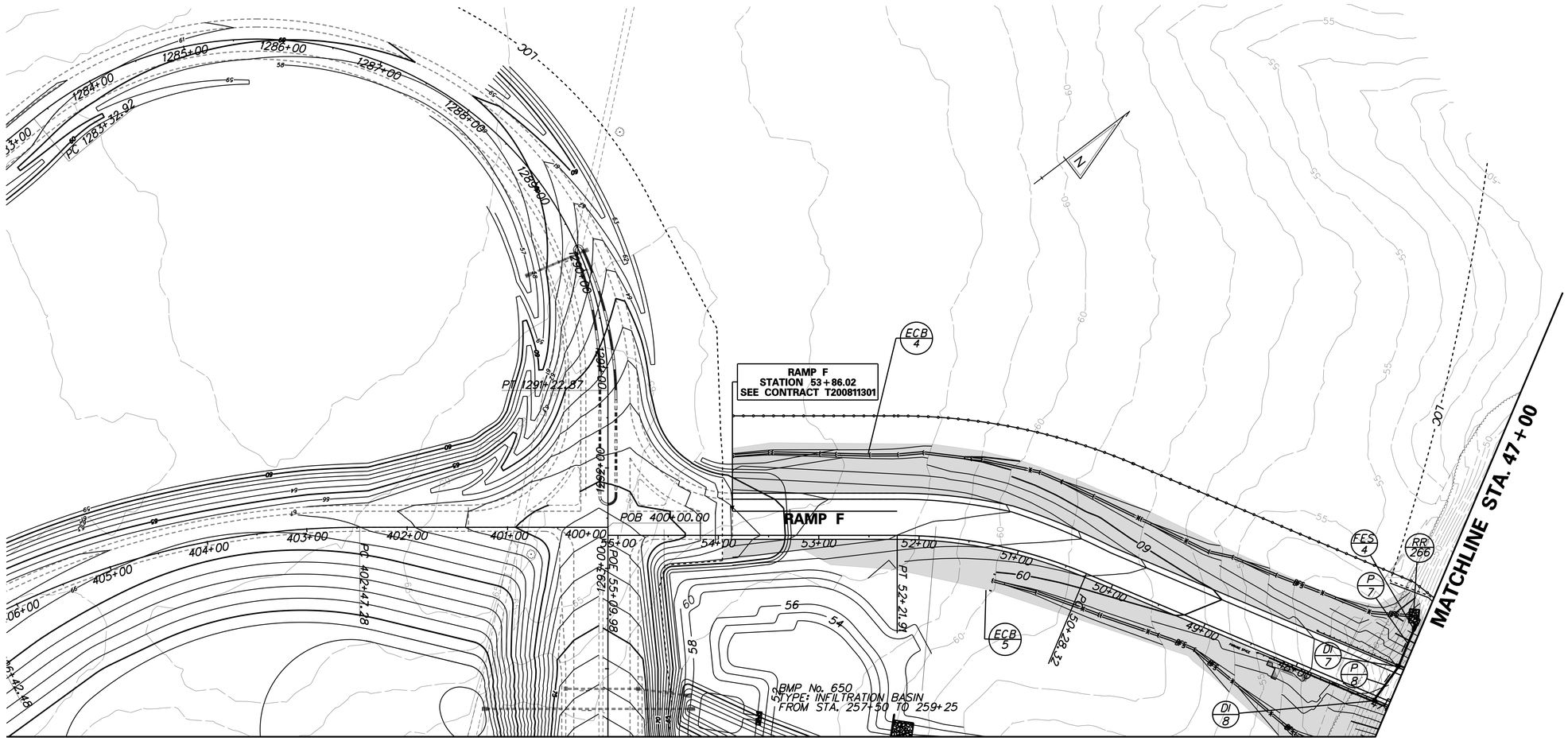
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 60 120 180 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO.	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 3	CS-48 SHEET NO. 909
				COUNTY NEW CASTLE	DESIGNED BY: JW		TOTAL SHTS. 1256
					CHECKED BY: SF		

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
4	3761	760 LF	50 LF	6
5	2859	685 LF	75 LF	6



NOTE:
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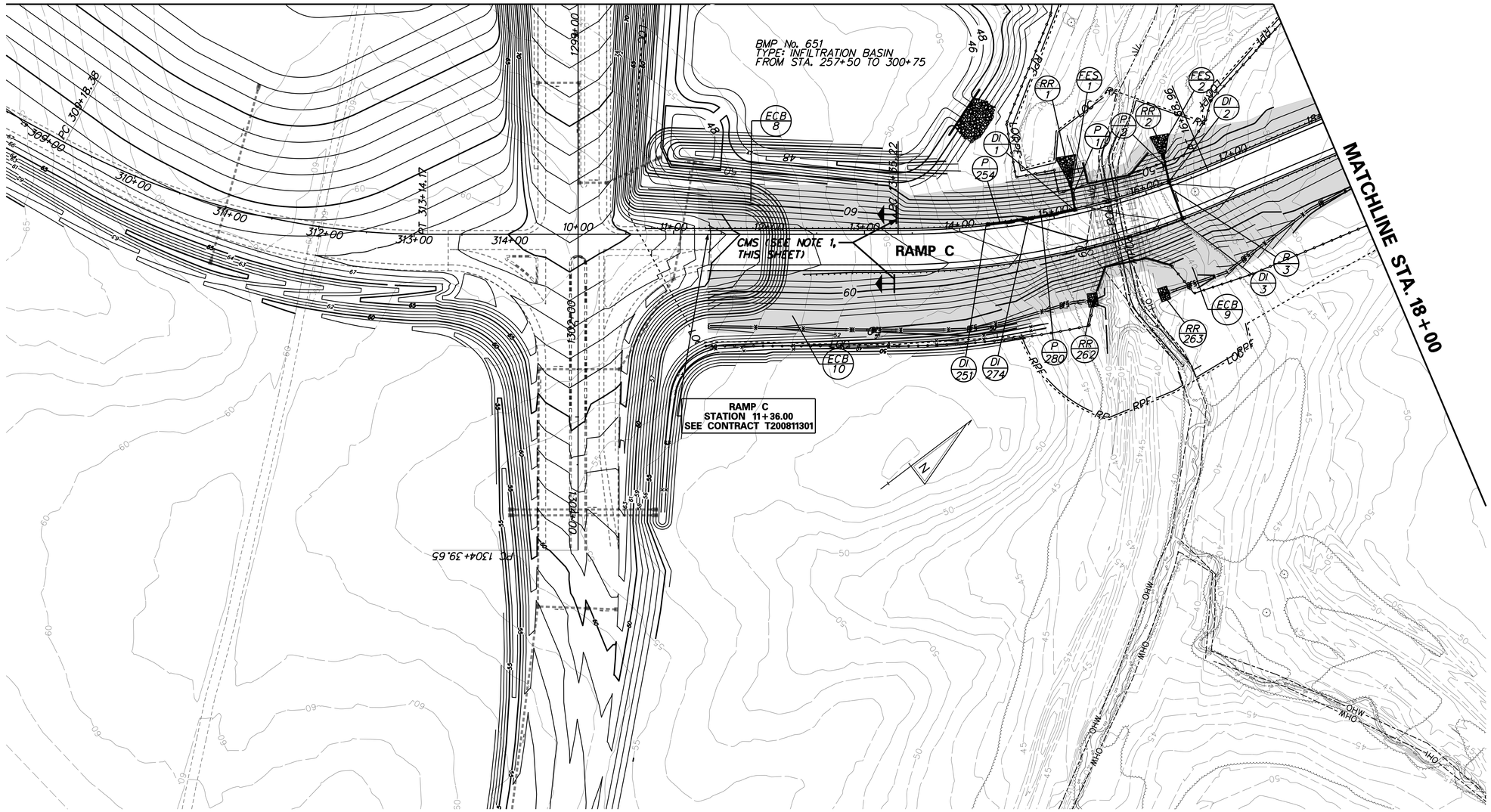
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 60 120 180 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO.	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 3	CS-49
				COUNTY NEW CASTLE	DESIGNED BY: JW		SHEET NO. 910
					CHECKED BY: SF		TOTAL SHTS. 1256

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
8	3074	720 LF	64 LF	5
9	1843	282 LF	74 LF	5
10	3111	408 LF	76 LF	5

MATCHLINE SHEET 909



NOTE:

1. AT THE TIME THAT THE ENTIRE US301 MAINLINE FROM THE MARYLAND STATE LINE TO SR1 IS READY TO BE OPEN TO PUBLIC TRAFFIC, DELDOT MAY DECIDE TO ALLOW PUBLIC USE OF THE US301 FACILITY FOR A SHORT PERIOD OF TIME BEFORE STARTING TO COLLECT TOLLS. THE DETERMINATION IF THIS TOLL GRACE PERIOD IS TO BE USED AND ITS DURATION WILL BE MADE BY DELDOT AT THE TIME THE ENTIRE US301 FACILITY IS READY TO BE OPEN TO PUBLIC TRAFFIC. THE TRAFFIC CONTROL PLANS SHOWN ON THIS SHEET SHALL BE IMPLEMENTED IF THE TOLL GRACE PERIOD IS USED.

NOTE:
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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	JW
COUNTY	CHECKED BY:	SF
NEW CASTLE		

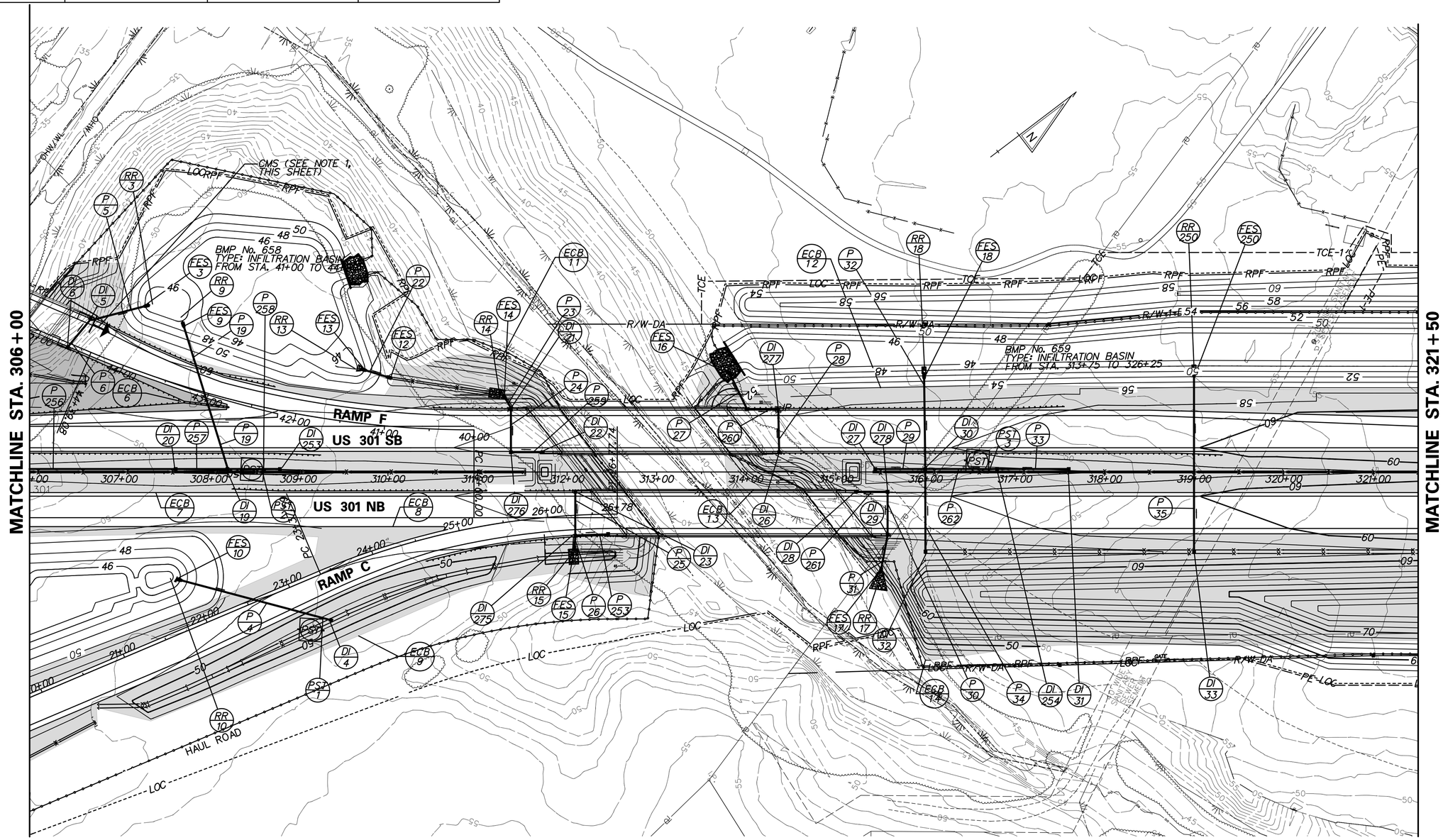
CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 3

CS-50
SHEET NO.
911
TOTAL SHTS.
1256

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
6	1162	18 LF	18 LF	6
7	3310	720 LF	64 LF	5
8	1427	282 LF	74 LF	5
9	3491	408 LF	76 LF	5
11	1902	282 LF	74 LF	5

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
12	2543	18 LF	18 LF	5
13	3881	720 LF	64 LF	5
14	8353	282 LF	74 LF	5

PORTABLE SEDIMENT TANK	
NO.	STATION
1	22+53, RT
2	308+49, RT
3	314+58, RT



NOTE:
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NOTE:

1. AT THE TIME THAT THE ENTIRE US301 MAINLINE FROM THE MARYLAND STATE LINE TO SR1 IS READY TO BE OPEN TO PUBLIC TRAFFIC, DELDOT MAY DECIDE TO ALLOW PUBLIC USE OF THE US301 FACILITY FOR A SHORT PERIOD OF TIME BEFORE STARTING TO COLLECT TOLLS. THE DETERMINATION IF THIS TOLL GRACE PERIOD IS TO BE USED AND ITS DURATION WILL BE MADE BY DELDOT AT THE TIME THE ENTIRE US301 FACILITY IS READY TO BE OPEN TO PUBLIC TRAFFIC. THE TRAFFIC CONTROL PLANS SHOWN ON THIS SHEET SHALL BE IMPLEMENTED IF THE TOLL GRACE PERIOD IS USED.

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 60 120 180
FEET

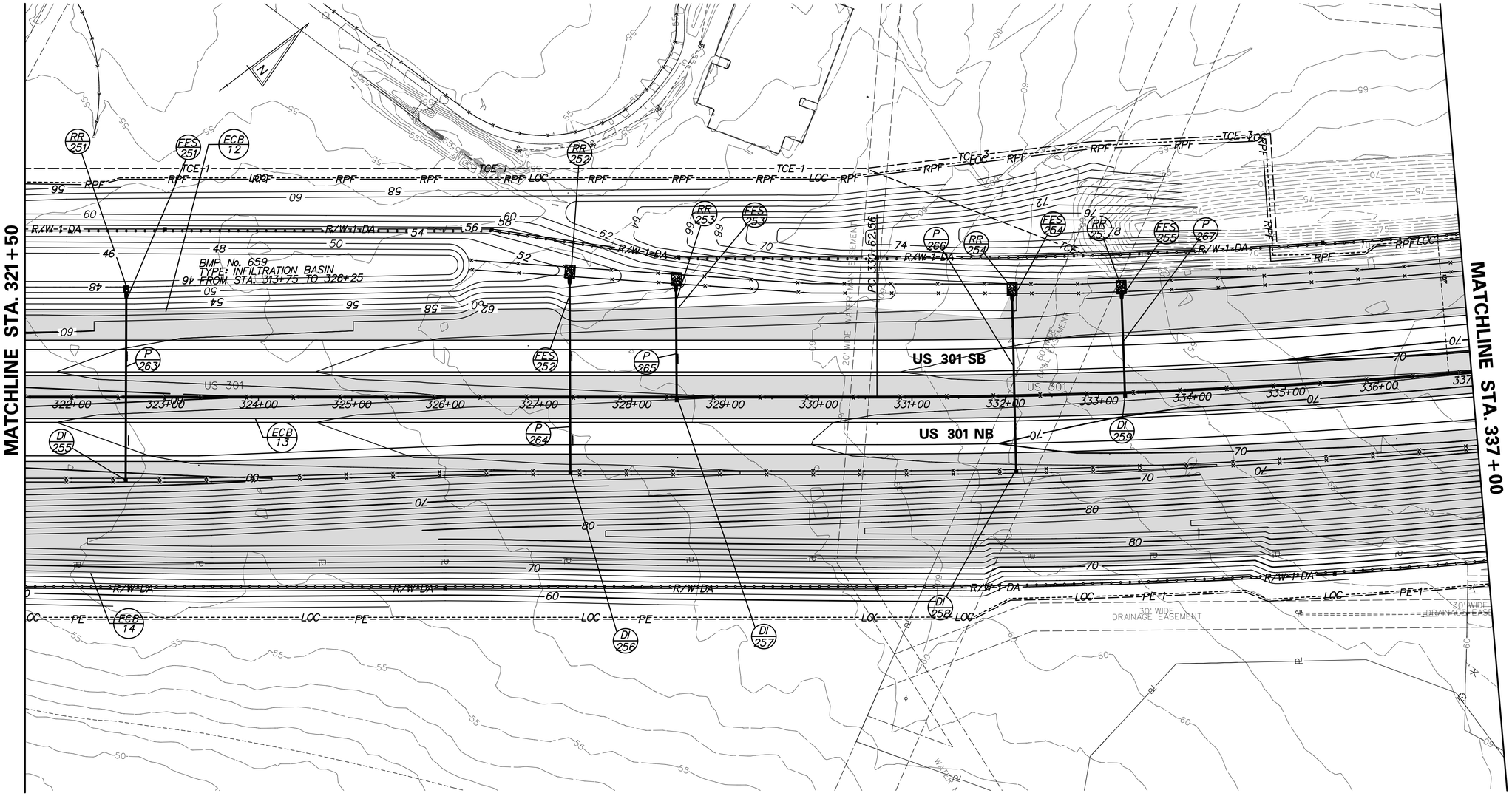
US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	JW
COUNTY		
NEW CASTLE	CHECKED BY:	SF

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 3

CS-51
SHEET NO.
912
TOTAL SHTS.
1256

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
12	7827	1545 LF	65 LF	5
13	7880	1550 LF	45 LF	5
14	21211	1560 LF	120 LF	5



NOTE:
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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

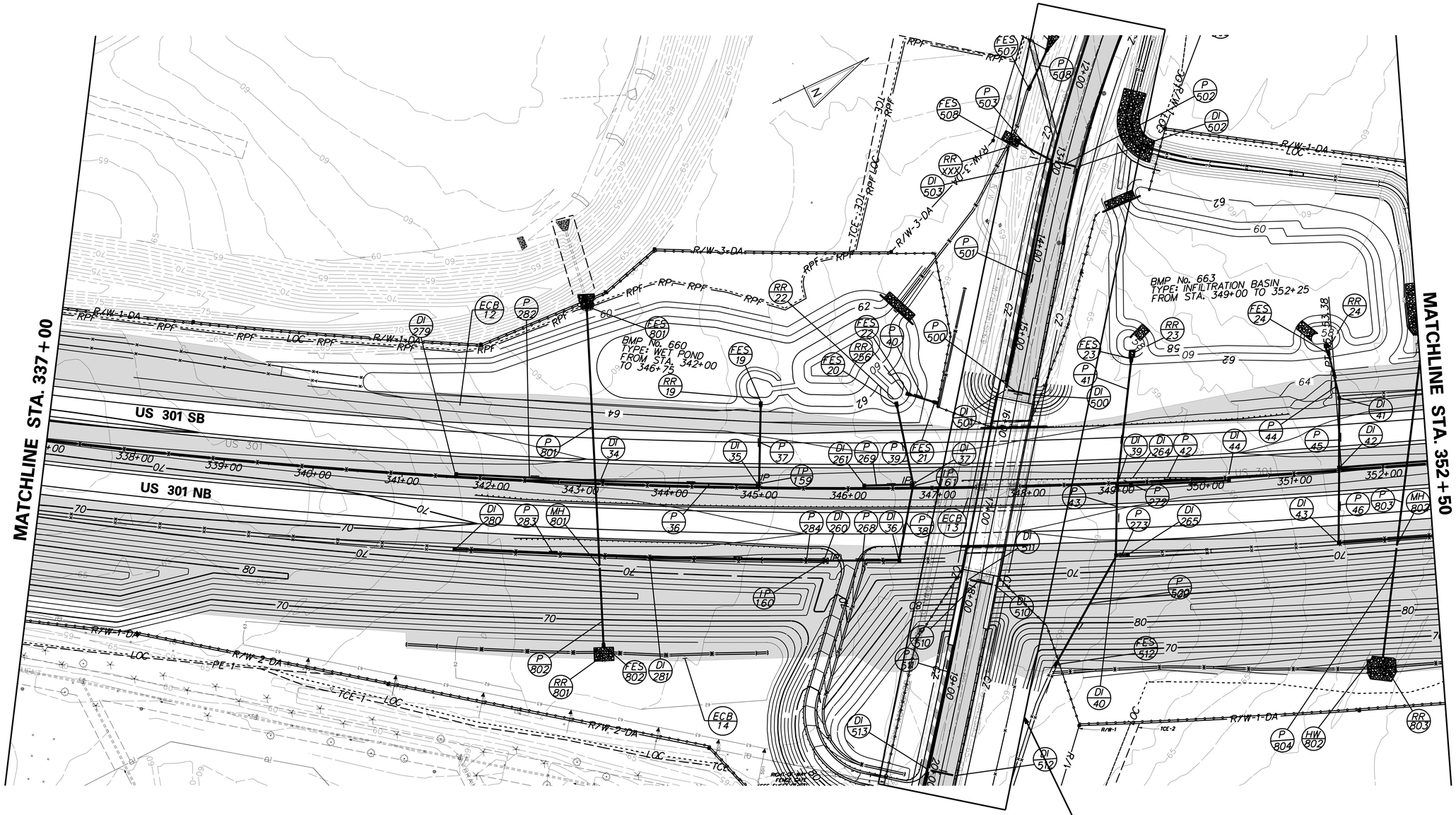
CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	JW
COUNTY	CHECKED BY:	SF
NEW CASTLE		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 3

CS-52
SHEET NO.
913
TOTAL SHTS.
1256

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
12	7798	1530 LF	58 LF	5
13	7879	1550 LF	45 LF	5
14	23002	1572 LF	162 LF	5

INLET PROTECTION		
NO.	D. AREA	STATION
159	2.0	345+00, LT
160	1.75	345+76, RT
161	0.5	346+72, LT



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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

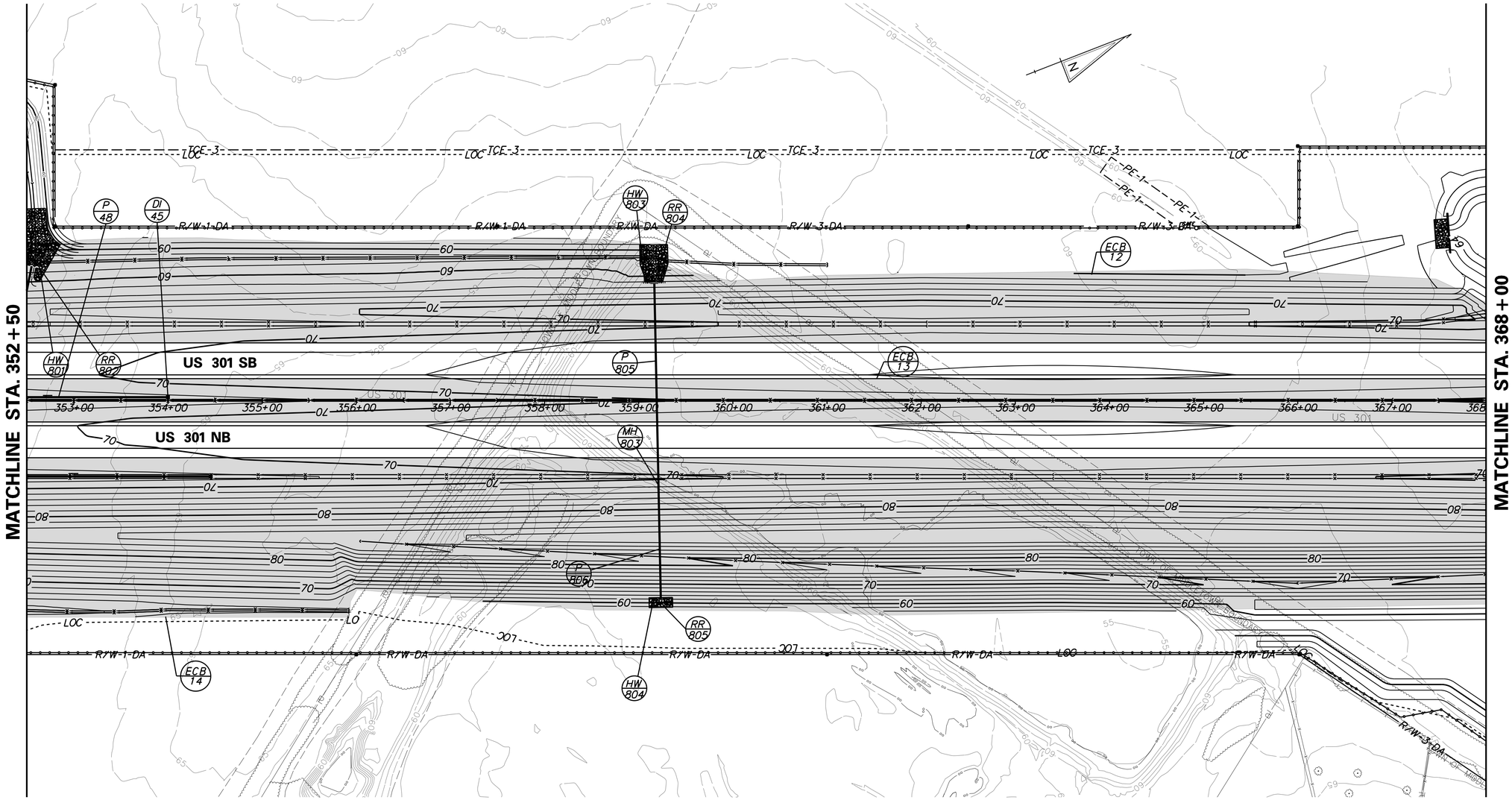
US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	JW
COUNTY	CHECKED BY:	SF
NEW CASTLE		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 3

CS-53
SHEET NO.
914
TOTAL SHTS.
1256

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
12	16544	1550 LF	127 LF	5
13	7922	1550 LF	46 LF	5
14	27913	1550 LF	200 LF	5



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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

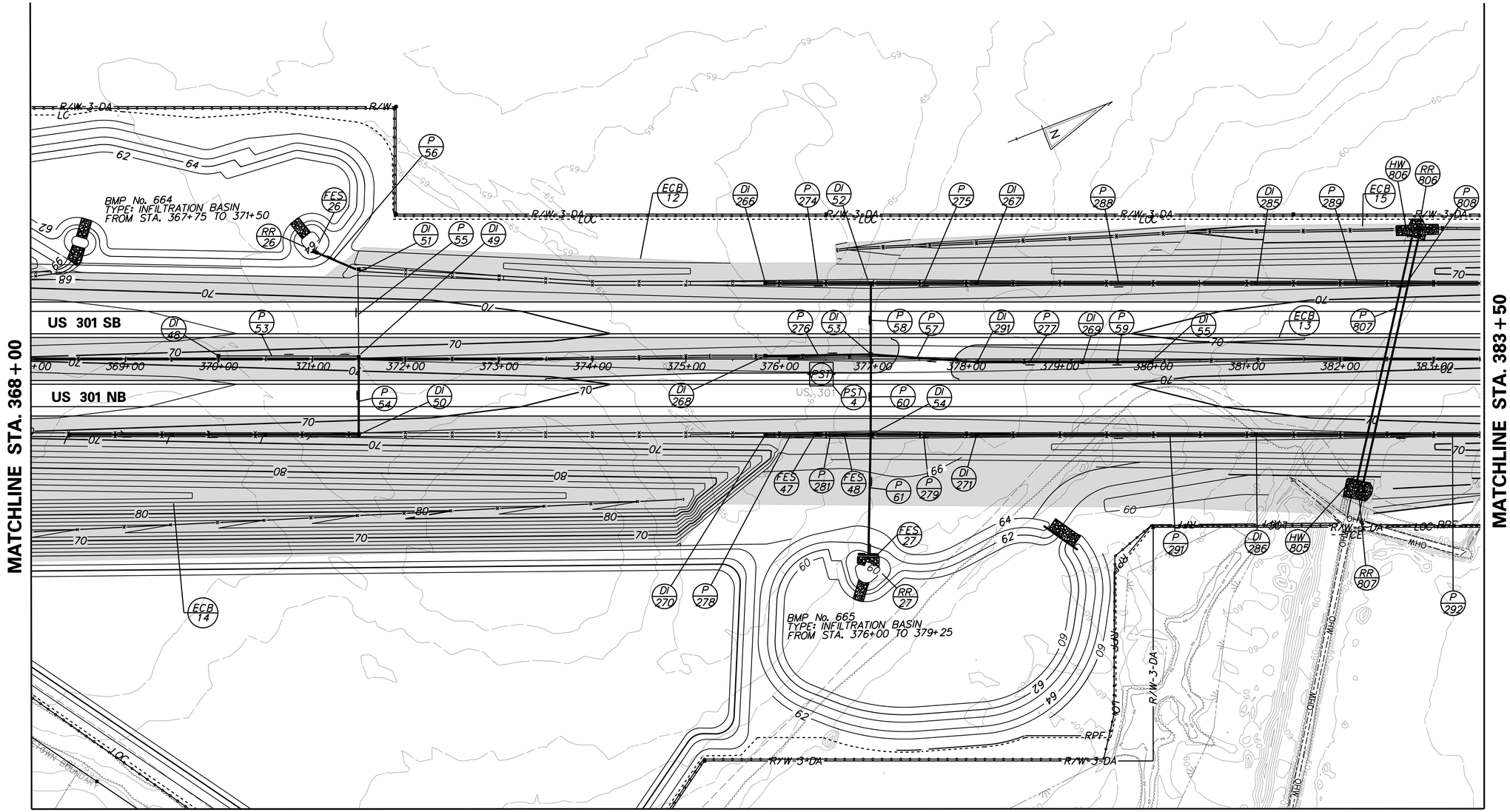
US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	JW
COUNTY	CHECKED BY:	SF
NEW CASTLE		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 3

CS-54
SHEET NO.
915
TOTAL SHTS.
1256

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
12	9300	1483 LF	83 LF	5
13	3573	1550 LF	23 LF	5
15	5026	60 LF	85 LF	6



MATCHLINE SHEET 917

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

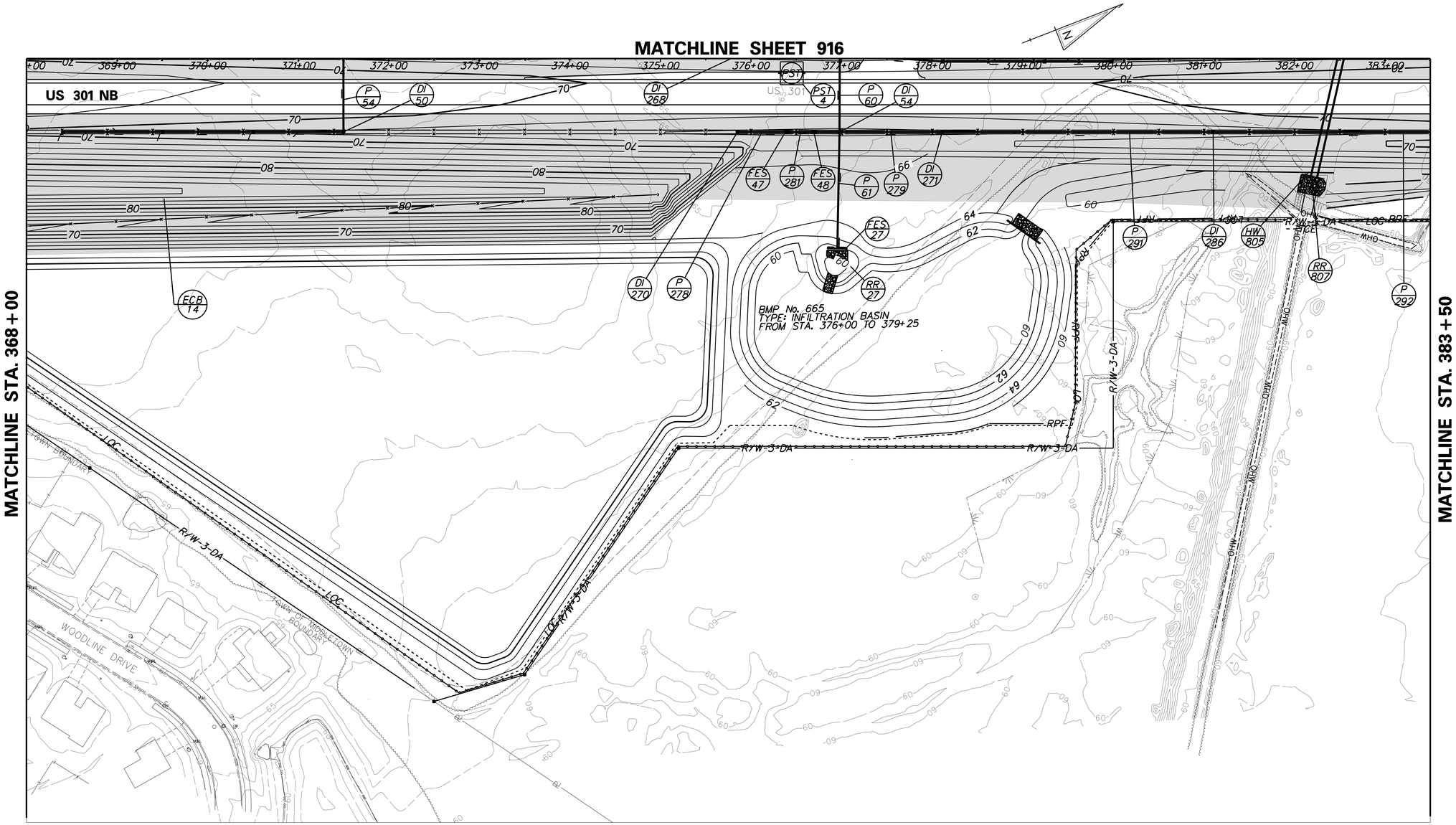
CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	JW
COUNTY	CHECKED BY:	SF
NEW CASTLE		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 3

CS-55
SHEET NO.
916
TOTAL SHTS.
1256

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
13	3544	1550 LF	23 LF	5
14	20303	1550 LF	189 LF	5

PORTABLE SEDIMENT TANK	
NO.	STATION
4	376+45, RT



NOTE:
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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

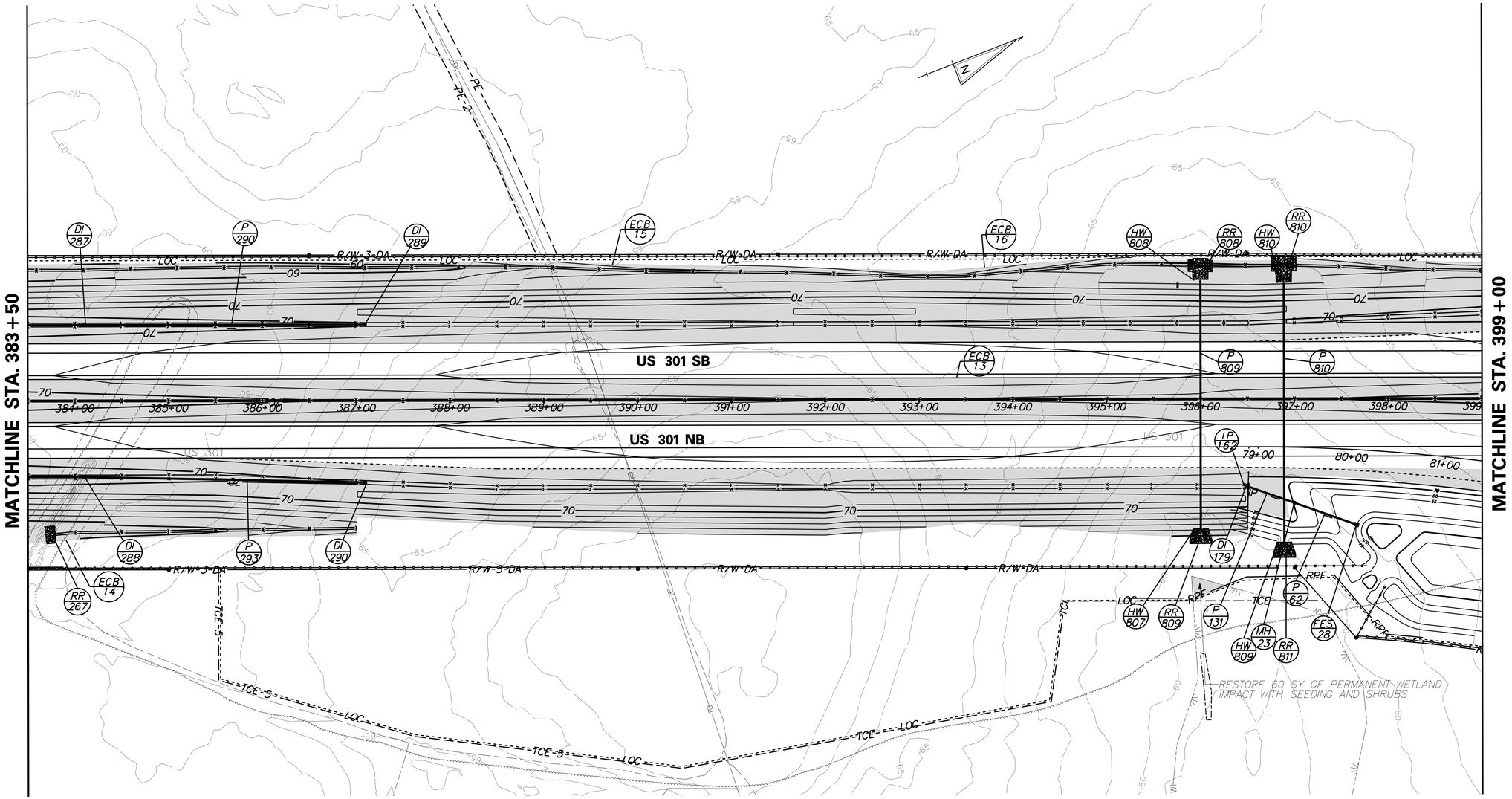
CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	JW
COUNTY	CHECKED BY:	SF
NEW CASTLE		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 3

CS-56
SHEET NO.
917
TOTAL SHTS.
1256

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
13	7922	1550 LF	46 LF	5
14	10736	1550 LF	74 LF	5
15	8884	957 LF	87 LF	6
16	5515	593 LF	91 LF	5

INLET PROTECTION		
NO.	D. AREA	STATION
162	4.5	396+50, RT



NOTE:
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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	JW
COUNTY		
NEW CASTLE	CHECKED BY:	SF

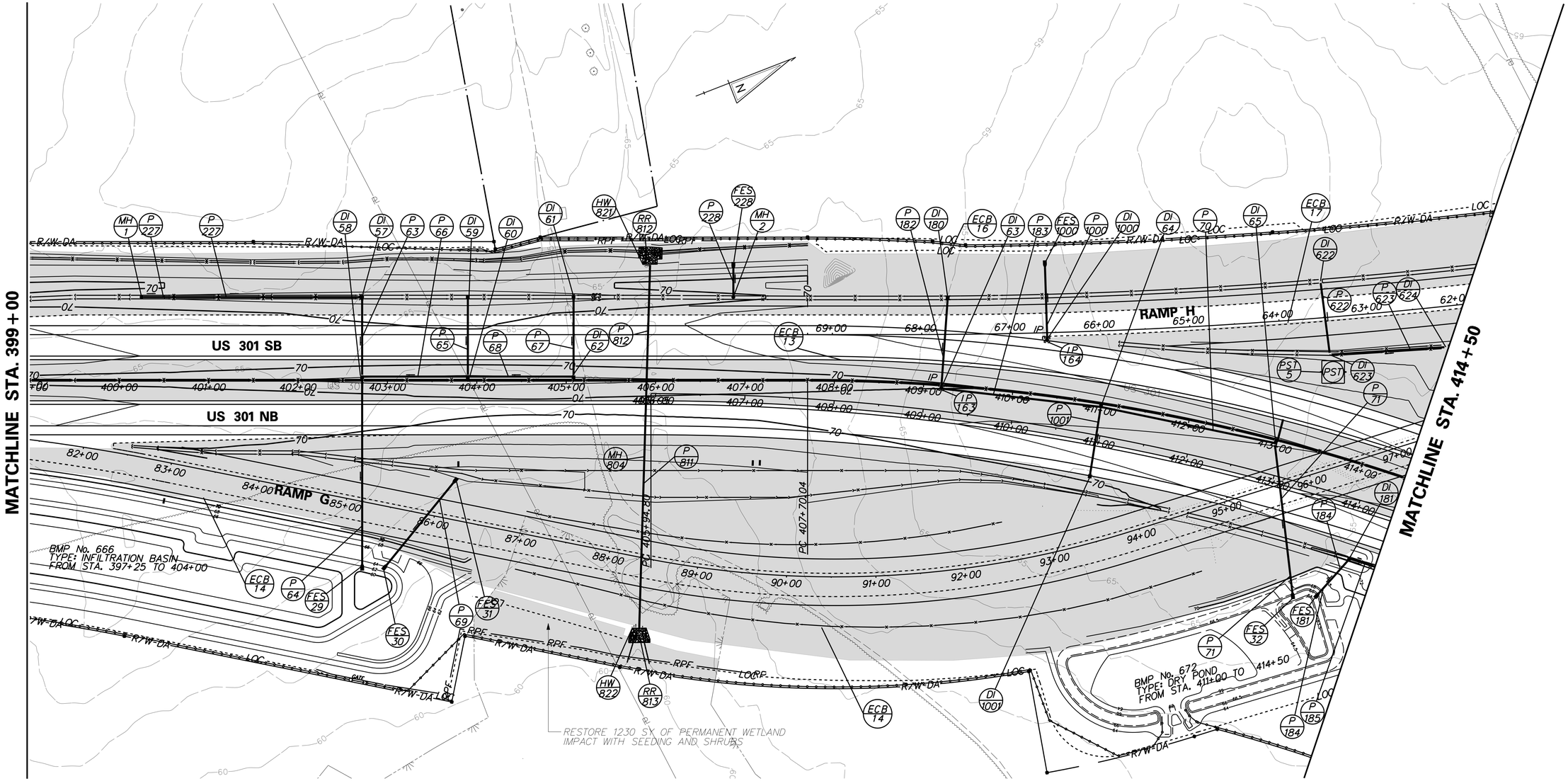
CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 3

CS-57
SHEET NO.
918
TOTAL SHTS.
1256

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
13	9379	1547 LF	73 LF	5
14	24712	1520 LF	246 LF	5
16	12696	1620 LF	69 LF	5
17	3081	440 LF	137 LF	5

PORTABLE SEDIMENT TANK	
NO.	STATION
5	413+43, LT

INLET PROTECTION		
NO.	D. AREA	STATION
163	1.6	409+20, LT
164	0.1	410+32, LT



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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 60 120 180
FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	JW
COUNTY	CHECKED BY:	SF
NEW CASTLE		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 3

CS-58
SHEET NO.
919
TOTAL SHTS.
1256

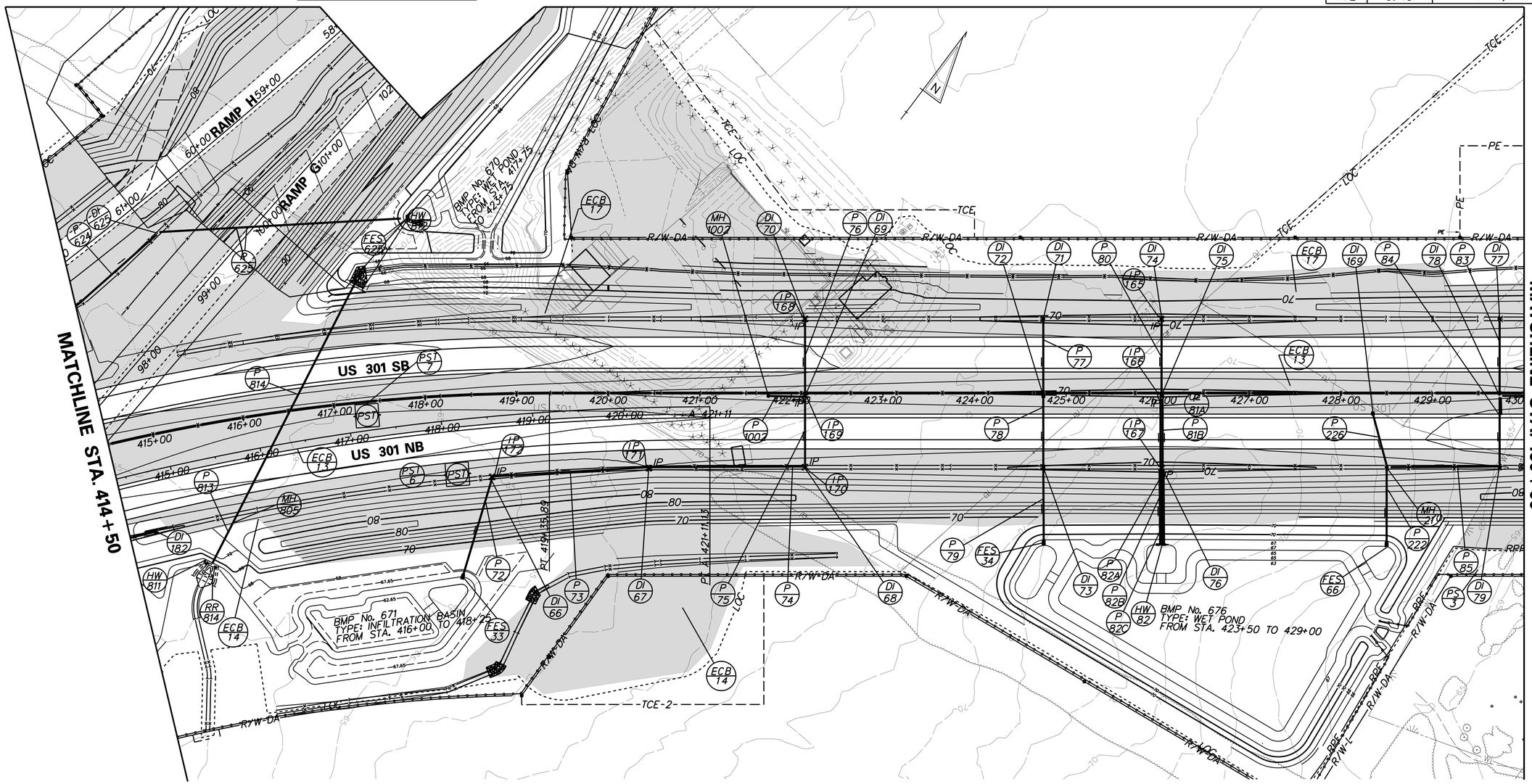
EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
13	8863	1550 LF	47 LF	5
14	17742	1524 LF	101 LF	5
17	22868	1570 LF	60 LF	5

PERMANENT SEEDING				
NO.	SY	LENGTH	WIDTH	TYPE
3	480	80 LF	20 LF	WET GROUND EROSION CONTROL SEEDING-FLATS

INLET PROTECTION		
NO.	D. AREA	STATION
165	1. 8	426+00, LT
166	2. 1	426+00, LT
167	1. 7	426+00, RT
168	0. 38	422+15, LT
169	0. 32	422+15, RT
170	0. 51	422+15, RT
171	0. 34	420+45, RT
172	0. 45	418+70, RT

SEE STKP-5 THRU STKP-10 FOR SPUR ROAD, GRADING AND E&S CONTROLS

MATCHLINE SHEET 921



PORTABLE SEDIMENT TANK	
NO.	STATION
6	418+11, RT
7	417+00, RT

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

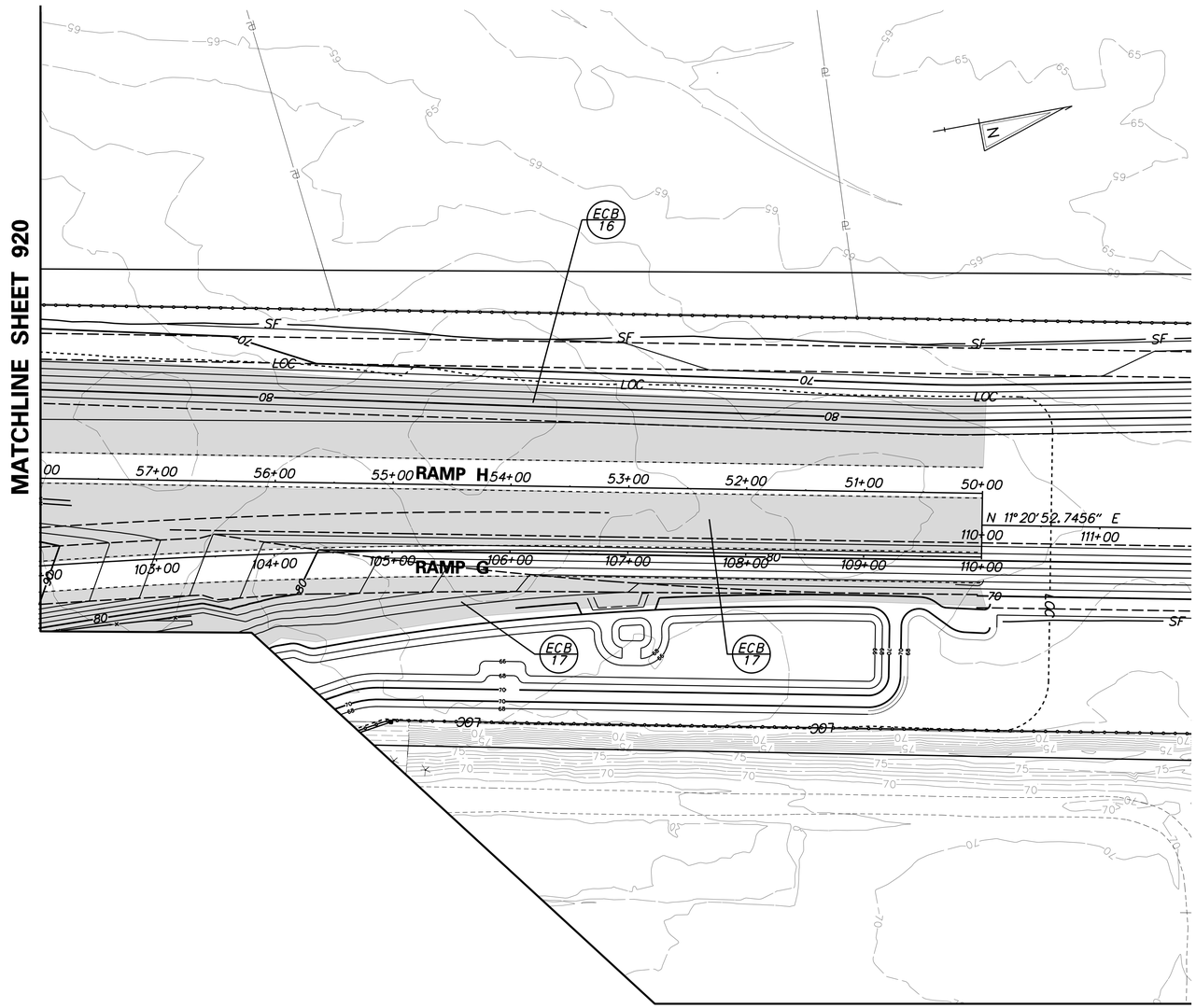
US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	JW
COUNTY	CHECKED BY:	SF
NEW CASTLE		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 3

CS-59
SHEET NO.
920
TOTAL SHTS.
1256

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
16	5709	800 LF	75 LF	5
17	7227	800 LF	50 LF	5



SEE STKP-5 THRU STKP-10 FOR SPUR ROAD, GRADING AND E&S CONTROLS

MATCHLINE SHEET 920

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	JW
COUNTY	CHECKED BY:	SF
NEW CASTLE		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 3

CS-60
SHEET NO.
921
TOTAL SHTS.
1256

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
13	7922	1550 LF	47 LF	5
14	13485	1584 LF	79 LF	5
16	14091	1506 LF	64 LF	5

INLET PROTECTION		
NO.	D. AREA	STATION
173	0.5	433+02, RT

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

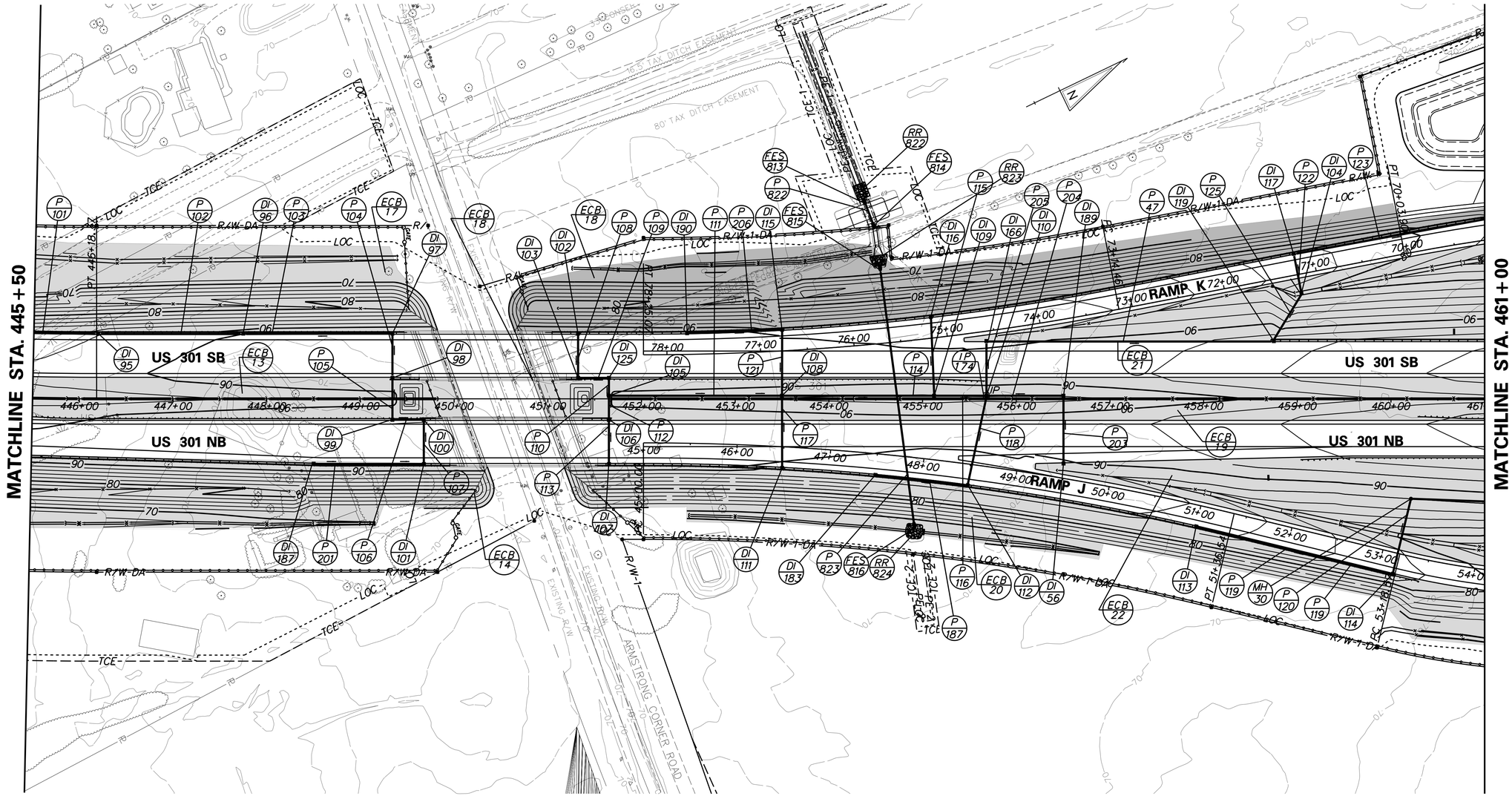
CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	JW
COUNTY	CHECKED BY:	SF
NEW CASTLE		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 3

CS-61
SHEET NO.
922
TOTAL SHTS.
1256

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
13	2315	466 LF	47 LF	5
14	3696	494 LF	78 LF	5
17	4233	421 LF	85 LF	5
18	6362	1050 LF	87 LF	5
19	5119	1016 LF	45 LF	5
20	5403	987 LF	70 LF	5
21	3189	556 LF	102 LF	6
22	3316	483 LF	118 LF	5

INLET PROTECTION		
NO.	D. AREA	STATION
174	0.4	453+50, RT



NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	JW
COUNTY	CHECKED BY:	SF
NEW CASTLE		

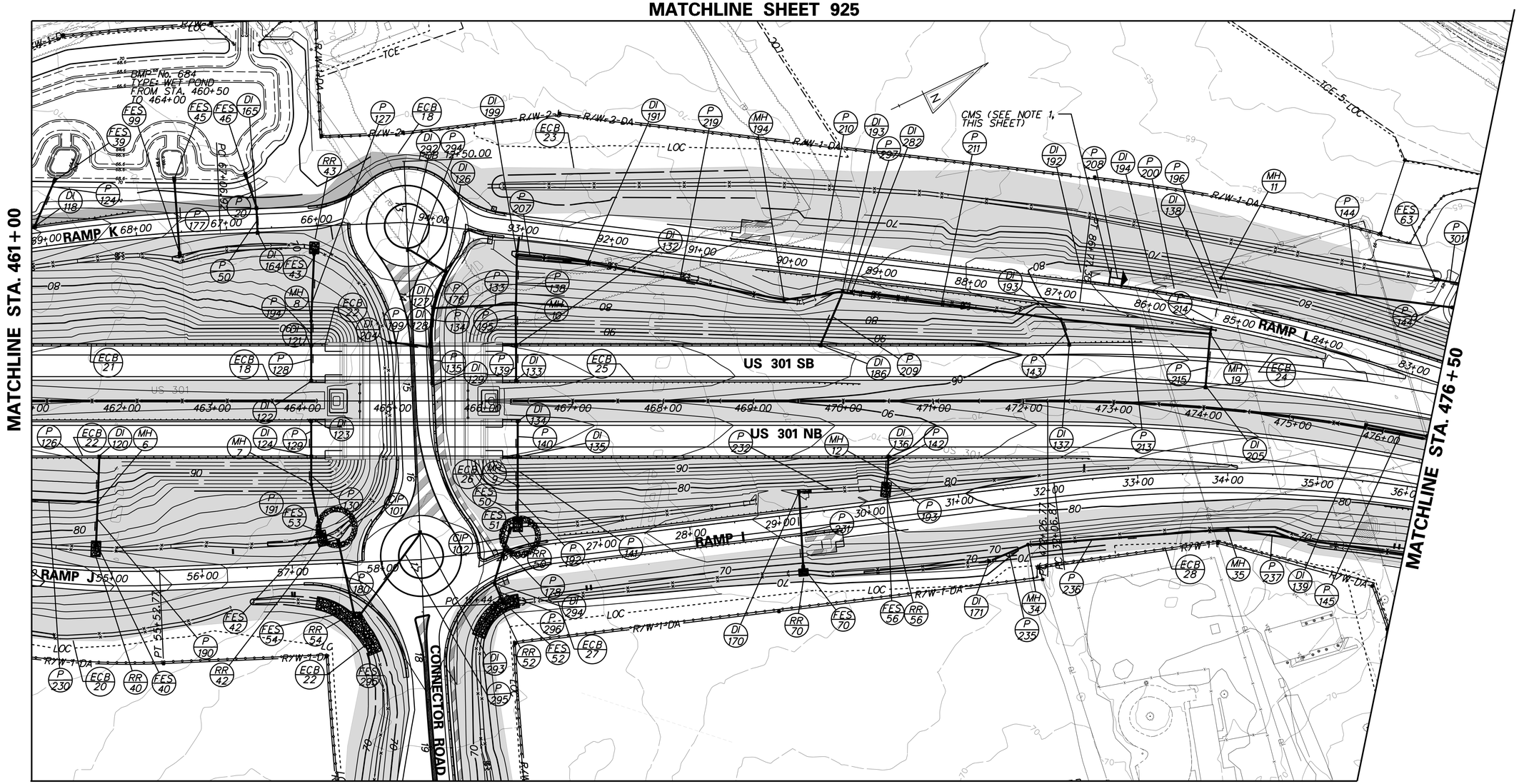
CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 3

CS-62
SHEET NO.
923
TOTAL SHTS.
1256

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
18	727	551 LF	32 LF	5
19	1856	368 LF	46 LF	5
20	3135	383 LF	59 LF	5
21	4953	168 LF	113 LF	6
22	5038	394 LF	121 LF	5
23	9739	1297 LF	91 LF	5
24	7123	985 LF	117 LF	5
25	5461	1072 LF	46 LF	5
26	4807	880 LF	94 LF	5
27	3750	831 LF	48 LF	5
28	2461	422 LF	63 LF	6

STONE CHECK DAM FOR CULVERT INFLOW PROTECTION				
NO.	D. AREA	STATION	QTY.	UNITS
101	3.8	464+40, RT	23	TON
102	1.5	466+32, RT	23	TON

MATCHLINE SHEET 925



MATCHLINE SHEET 927

NOTE:

1. AT THE TIME THAT THE ENTIRE US301 MAINLINE FROM THE MARYLAND STATE LINE TO SR1 IS READY TO BE OPEN TO PUBLIC TRAFFIC, DELDOT MAY DECIDE TO ALLOW PUBLIC USE OF THE US301 FACILITY FOR A SHORT PERIOD OF TIME BEFORE STARTING TO COLLECT TOLLS. THE DETERMINATION IF THIS TOLL GRACE PERIOD IS TO BE USED AND ITS DURATION WILL BE MADE BY DELDOT AT THE TIME THE ENTIRE US301 FACILITY IS READY TO BE OPEN TO PUBLIC TRAFFIC. THE TRAFFIC CONTROL PLANS SHOWN ON THIS SHEET SHALL BE IMPLEMENTED IF THE TOLL GRACE PERIOD IS USED.

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

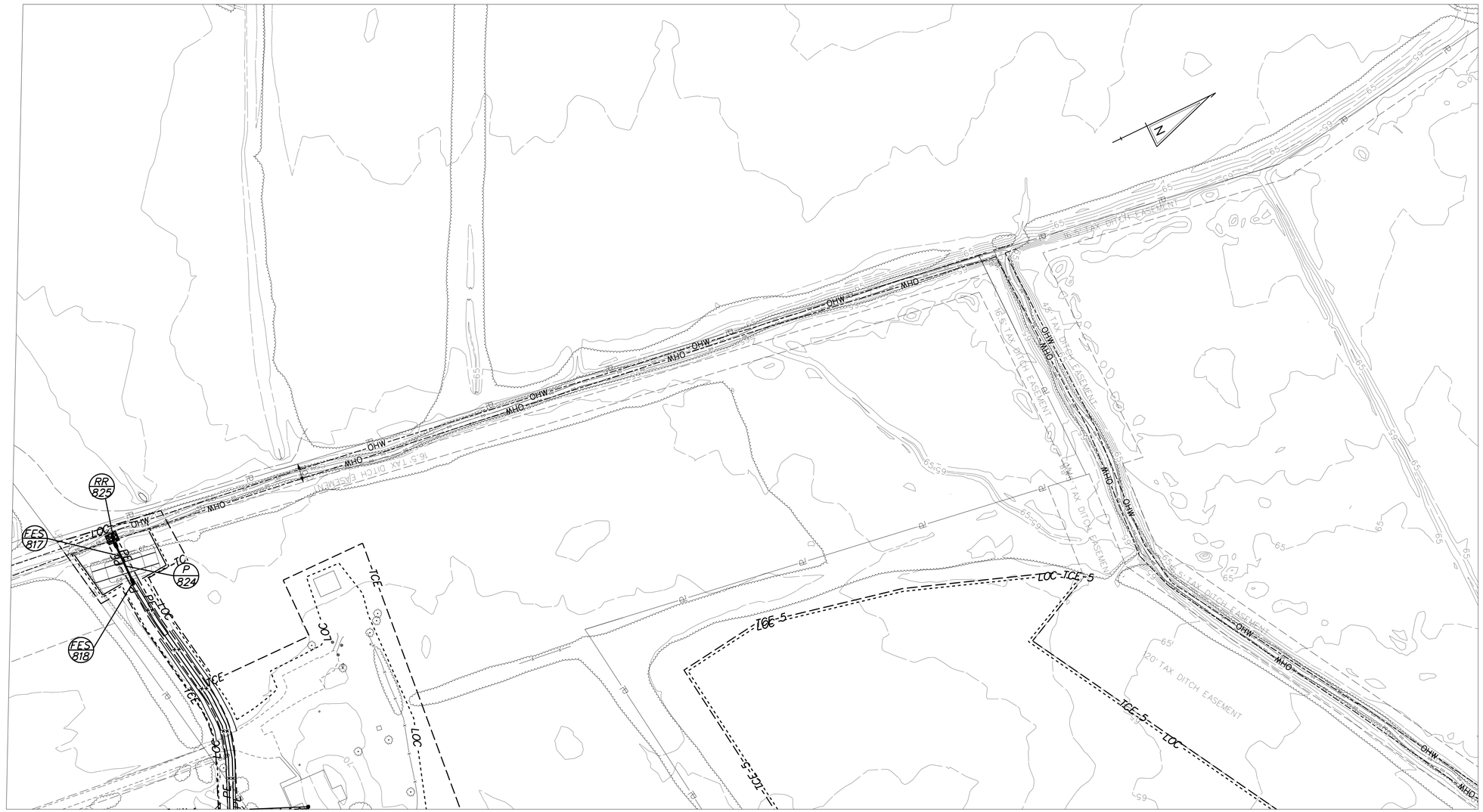
SCALE 0 60 120 180 FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	JW
COUNTY	CHECKED BY:	SF
NEW CASTLE		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 3

CS-63
SHEET NO.
924
TOTAL SHTS.
1256



MATCHLINE SHEET 925

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 60 120 180 FEET	**US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD**	CONTRACT T200911303	BRIDGE NO.	**CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 3**	CS-64
				COUNTY NEW CASTLE	DESIGNED BY: JW		SHEET NO. 925
					CHECKED BY: SF		TOTAL SHTS. 1256

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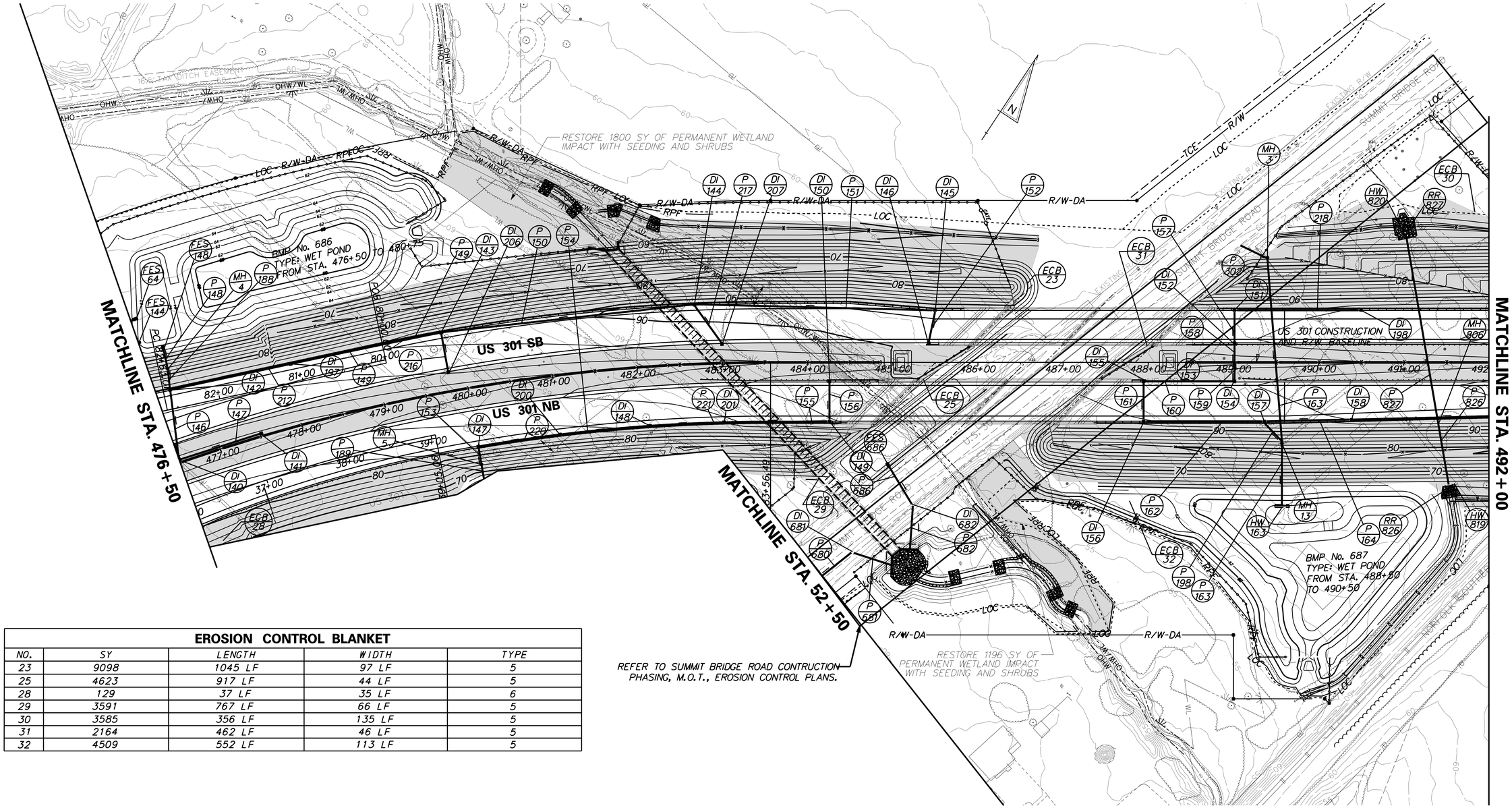

REFER TO SUMMIT BRIDGE ROAD CONTRUCTION PHASING, M.O.T., EROSION CONTROL PLANS.

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
23	9098	1045 LF	97 LF	5
25	4623	917 LF	44 LF	5
28	129	37 LF	35 LF	6
29	3591	767 LF	66 LF	5
30	3585	356 LF	135 LF	5
31	2164	462 LF	46 LF	5
32	4509	552 LF	113 LF	5

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

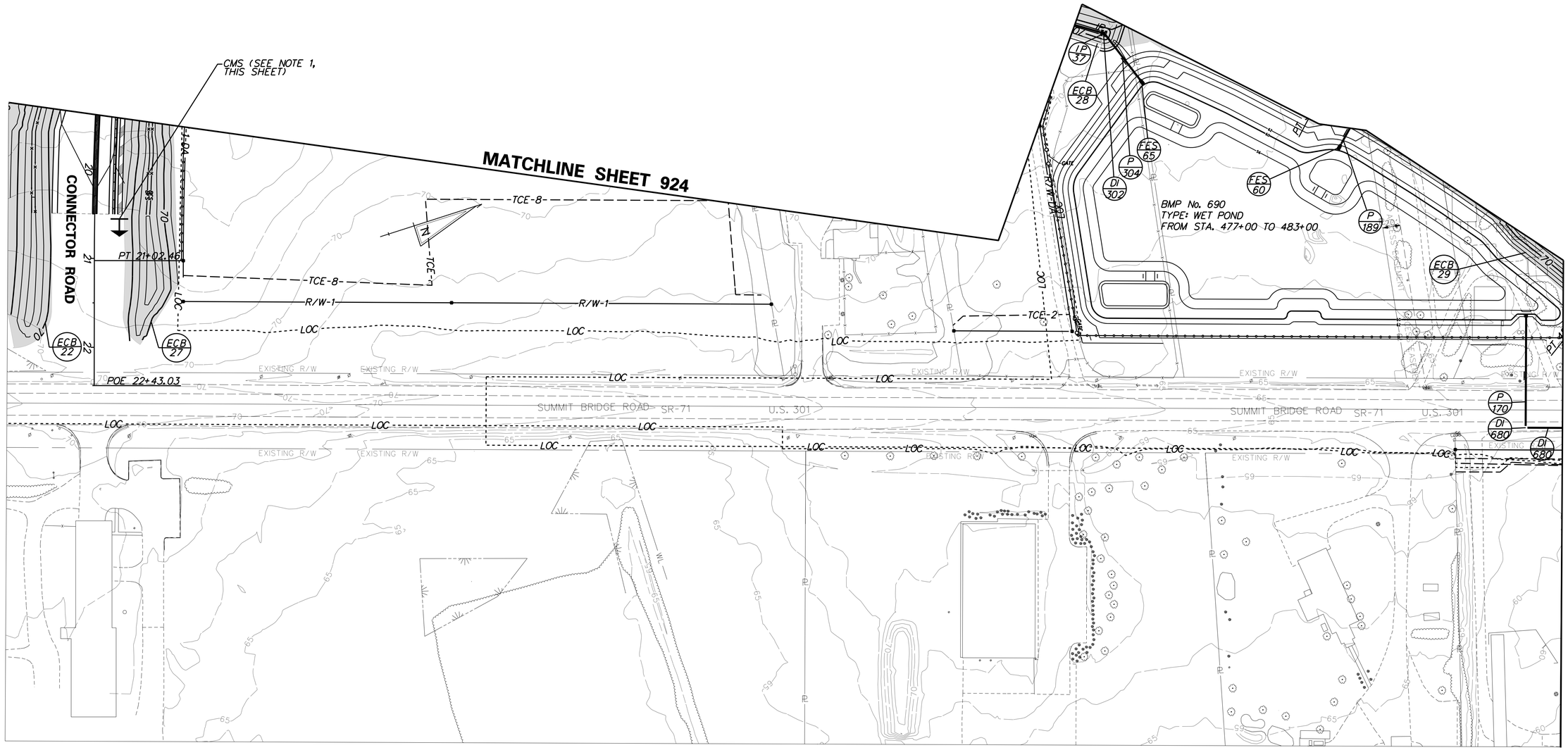
US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	JW
COUNTY	CHECKED BY:	SF
NEW CASTLE		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 3

CS-65
SHEET NO. 926
TOTAL SHTS. 1256

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
22	1461	260 LF	40 LF	6
27	1457	233 LF	25 LF	5
28	142	36 LF	35 LF	5
29	264	280 LF	22 LF	5



NOTE:

1. AT THE TIME THAT THE ENTIRE US301 MAINLINE FROM THE MARYLAND STATE LINE TO SR1 IS READY TO BE OPEN TO PUBLIC TRAFFIC, DELDOT MAY DECIDE TO ALLOW PUBLIC USE OF THE US301 FACILITY FOR A SHORT PERIOD OF TIME BEFORE STARTING TO COLLECT TOLLS. THE DETERMINATION IF THIS TOLL GRACE PERIOD IS TO BE USED AND ITS DURATION WILL BE MADE BY DELDOT AT THE TIME THE ENTIRE US301 FACILITY IS READY TO BE OPEN TO PUBLIC TRAFFIC. THE TRAFFIC CONTROL PLANS SHOWN ON THIS SHEET SHALL BE IMPLEMENTED IF THE TOLL GRACE PERIOD IS USED.

NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

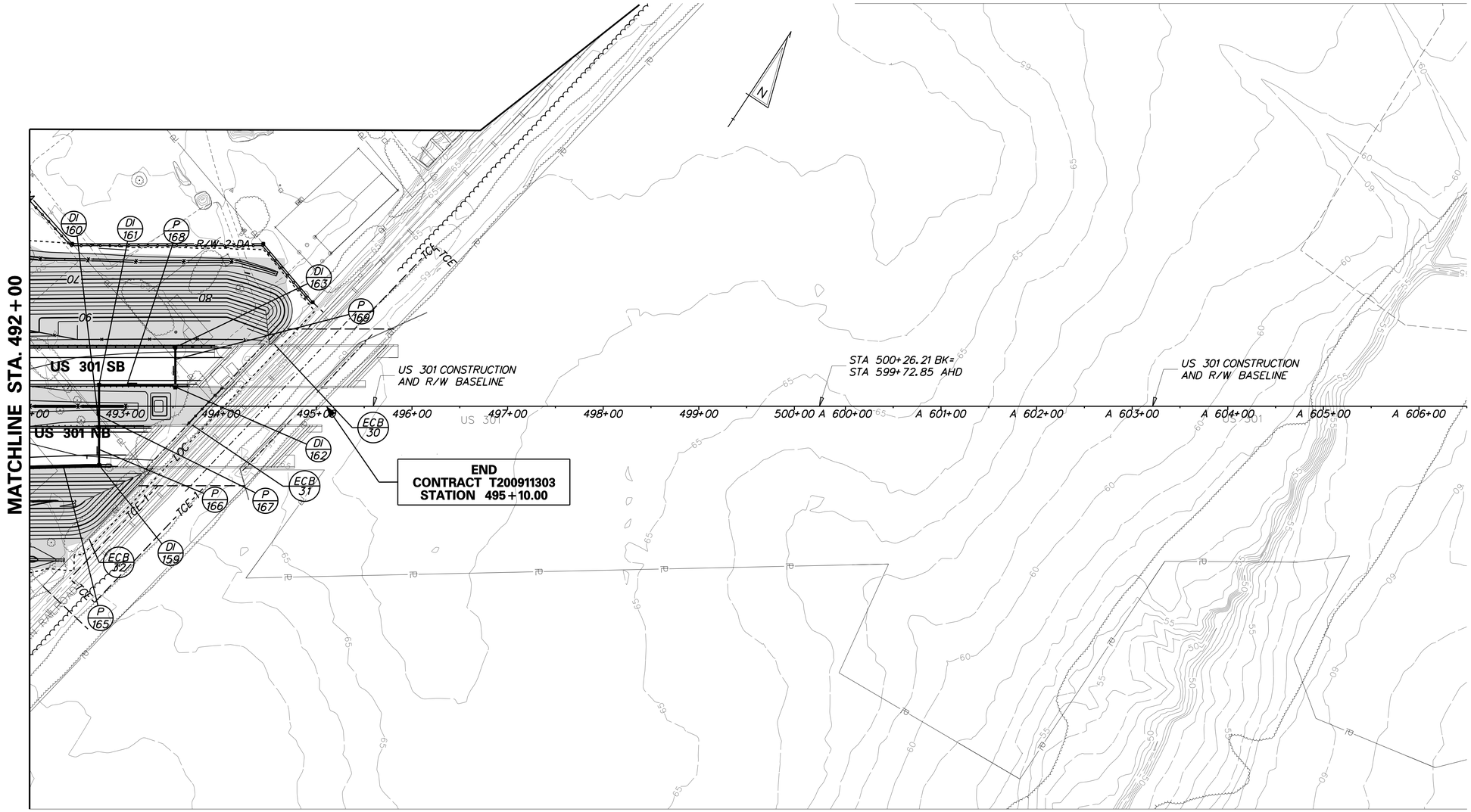
US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	JW
COUNTY	CHECKED BY:	SF
NEW CASTLE		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 3

CS-66
SHEET NO.
927
TOTAL SHTS.
1256

EROSION CONTROL BLANKET				
NO.	SY	LENGTH	WIDTH	TYPE
30	2807	272 LF	32 LF	5
31	925	190 LF	46 LF	5
32	48	100 LF	96 LF	5



NOTE:
FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

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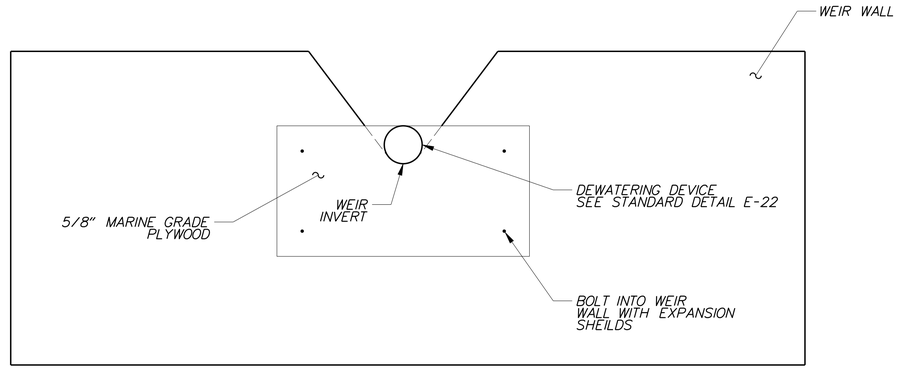
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 60 120 180 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO.	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – STAGE 3	CS-67
				COUNTY NEW CASTLE	DESIGNED BY: JW		SHEET NO. 928
					CHECKED BY: SF		TOTAL SHTS. 1256

NOTE:

1. ALONG WITH BOLTS, ATTACHED PLYWOOD TO WALL WITH A WATER TIGHT SEAL.
2. AFTER REMOVAL OF PLYWOOD REPAIR HOLES WITH GROUT.
3. COST OF PLYWOOD AND OTHER MATERIALS IS INCIDENTAL TO THE COST OF THE DEWATERING DEVICE.

SED. BASIN NO.	WEIR INVERT EL.	DEWATERING DEVICE EL.
3	60.85'	59.5'
7 PHASE 1	61.25'	60.63'
7 PHASE 2	62.22'	60.63'
9 PHASE 1	64.18'	63.08'
9 PHASE 2	64.48'	63.08'
10	67.09'	66.08'
11	NO BLOCKAGE	65.5'
15	68.69'	67.64'
18	64.73'	63.08'
20	BLOCK RISER WEIR COMPLETELY	58.00'
21	58.78'	58.04'



DEWATERING DEVICE DETAIL

SCALE: NONE

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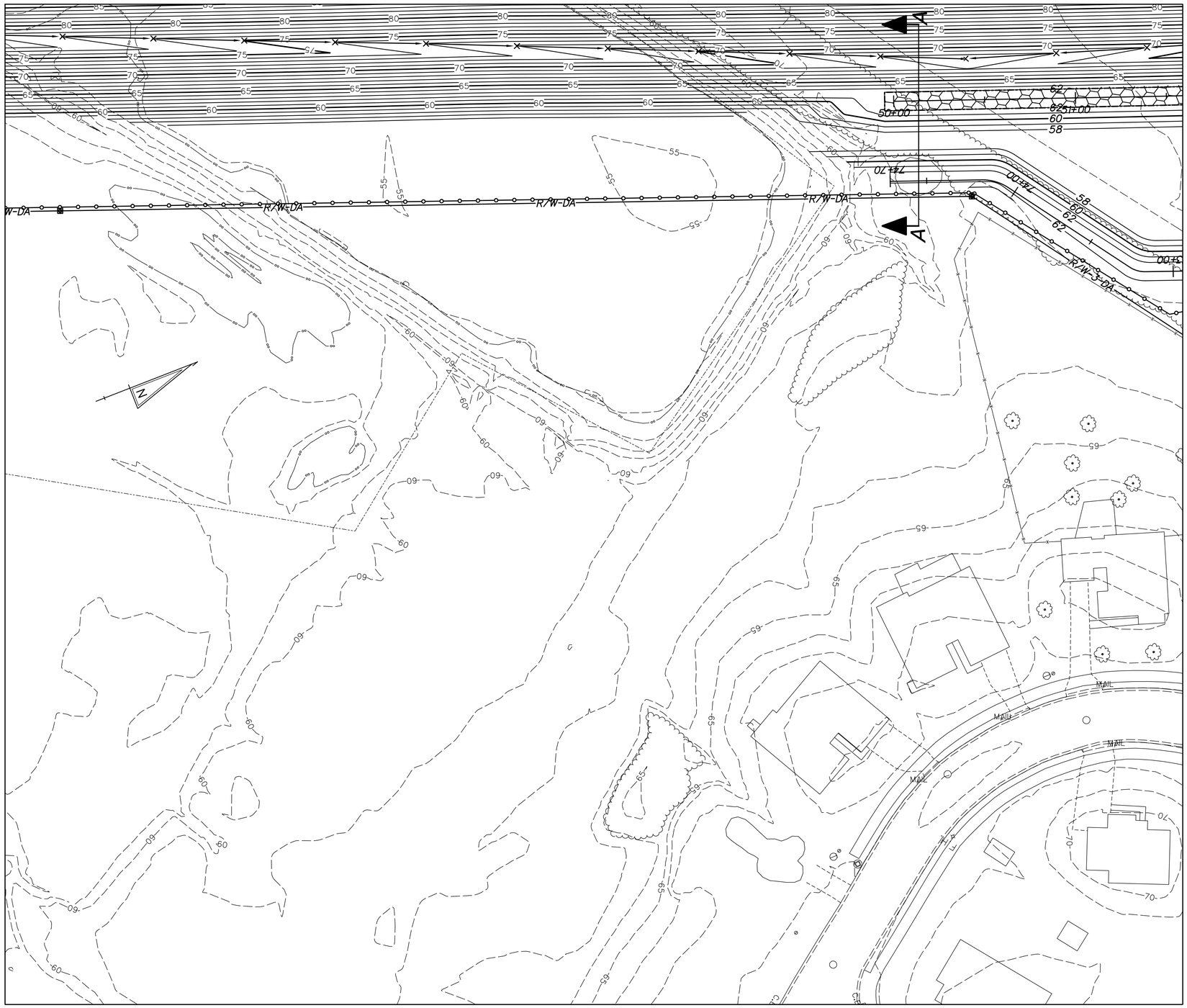
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO.	EROSION AND SEDIMENT CONTROL DETAILS
				COUNTY NEW CASTLE	DESIGNED BY: JW	
					CHECKED BY: SF	

CS-68
SHEET NO. 929
TOTAL SHTS. 1256



MATCH LINE CS-70

GRADING DETAIL FOR STORMWATER STORAGE AREA STA. 372

PLAN

POND CONSTRUCTION SEQUENCE AND NOTES

THE STORAGE AREA SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE FOLLOWING SECTIONS OF THE STANDARD SPECIFICATIONS:

SECTION 271 - STORMWATER MANAGEMENT POND

1. REMOVE THE TEMPORARY TOPSOIL STOCKPILE.
2. CLEAR AND GRUB FOR INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS.
3. INSTALL PERIMETER SEDIMENT CONTROLS AS SHOWN ON EROSION SEDIMENT CONTROL PLANS
4. CLEAR AND GRUB REMAINING AREA FOR STORAGE AREA CONSTRUCTION.
5. EXCAVATE THE STORAGE AREA AND COMPLETE THE EMBANKMENT, GRADES AND DETAILS SHOWN IN THE CONSTRUCTION PLANS. DURING EXCAVATION, THE CONTRACTOR SHALL SALVAGE AND STOCKPILE SOILS CLASSIFIED AS CH, CL, AND GM PER THE UNIFIED SOIL CLASSIFIED SYSTEM TO BE USED TO CONSTRUCT EMBANKMENT AND TO LINE THE STORAGE AREA. THE ABOVE CLASSIFIED SOILS MAY BE OBTAINED FROM ELSEWHERE WITHIN THE PROJECT LIMITS, IF NECESSARY.
6. STABILIZE ALL BARE AREAS.
   NOTE: SEE EROSION AND SEDIMENT CONTROL PLANS FOR LOCATION OF EROSION AND SEDIMENT CONTROL MEASURES.
7. THE CONTRATOR SHALL PROVIDE 'AS-BUILT' DRAWINGS OF ALL STORMWATER MANAGEMENT FACILITIES SUCH AS STORAGE AREA, INFILTRATION BASINS, BIOFILTRATION SWALES, ETC. 'AS-BUILT' DRAWINGS SHALL SHOW THE ACTUAL FINISHED GROUND CONTOURS, OUTLET STRUCTURE DIMENSIONS AND ELEVATIONS, ETC. AS THEY EXIST AT THE COMPLETION OF THE PROJECT. THESE DRAWINGS SHALL BE SIGNED BY A PROFESSIONAL ENGINEER OR LAND SURVEYOR.

PLANTING SCHEDULE

PERMANENT GRASS SEEDING - WET GROUND UP TO ELEVATION 59.72'
PERMANENT GRASS SEEDING - DRY GROUND ABOVE ELEVATION 59.72'

GRADING QUANTITIES			
ITEM NO.	ITEM	QTY.	UNITS.
202000	EXCAVATION AND EMBANKMENT	44538	CY
908010	TOPSOILING, 6" DEPTH	11862	SY
908014	PERMANENT GRASS SEEDING, DRY GROUND	11455	SY
908015	PERMANENT GRASS SEEDING, WET GROUND	23940	SY

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 30 60 90
FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	JW
COUNTY		
NEW CASTLE	CHECKED BY:	SF

EROSION AND
SEDIMENT CONTROL
DETAIL

CS-69
SHEET NO.
930
TOTAL SHTS.
1256

GRADING DETAIL FOR STORMWATER STORAGE AREA STA. 372

PLAN

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO.	EROSION AND SEDIMENT CONTROL DETAIL	CS-70
				COUNTY NEW CASTLE	DESIGNED BY: JW		SHEET NO. 931
					CHECKED BY: SF		TOTAL SHTS. 1256

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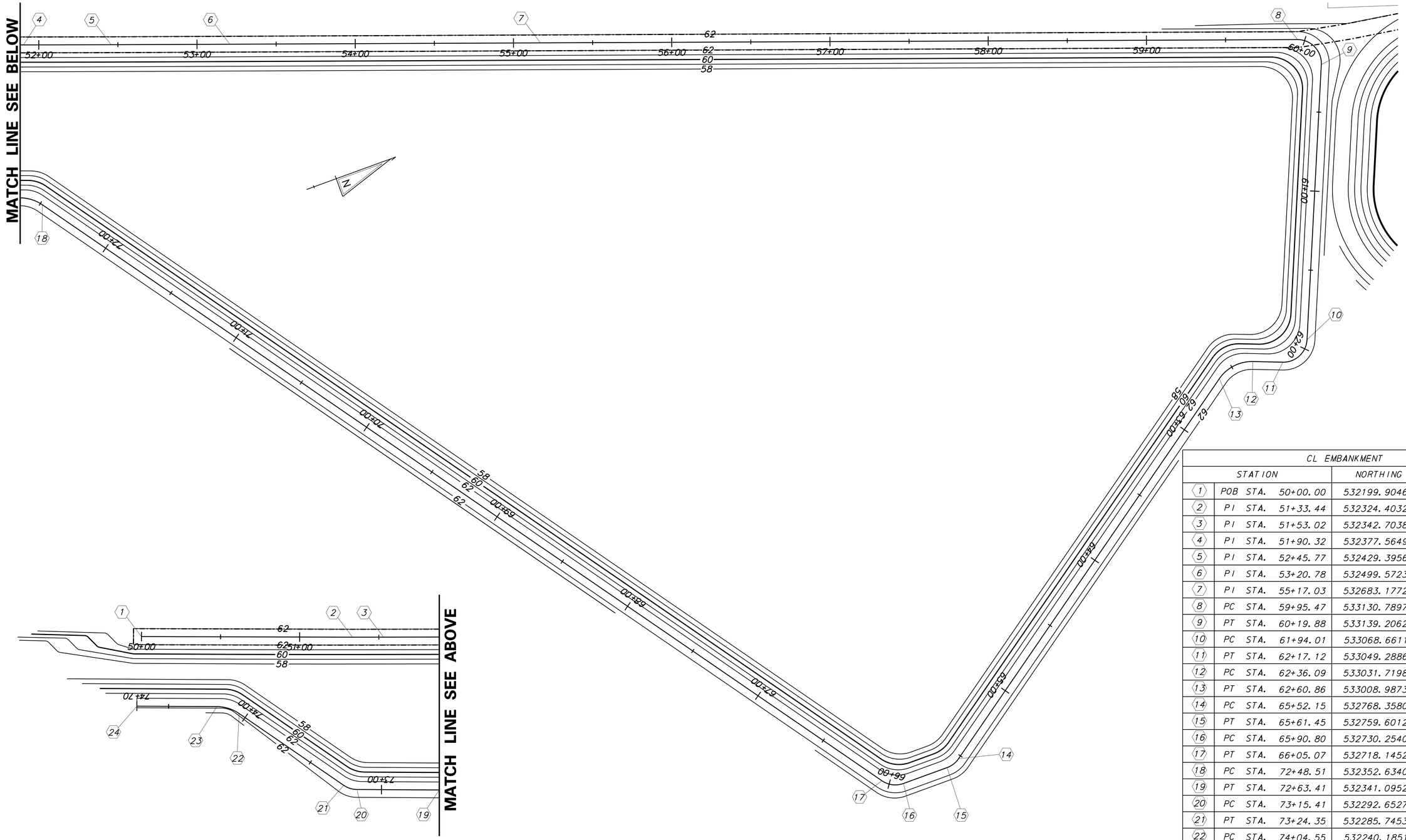

CL EMBANKMENT				
	STATION		NORTHING	EASTING
1	POB	STA. 50+00.00	532199.9046	565298.2205
2	PI	STA. 51+33.44	532324.4032	565346.2473
3	PI	STA. 51+53.02	532342.7038	565353.2200
4	PI	STA. 51+90.32	532377.5649	565366.4798
5	PI	STA. 52+45.77	532429.3956	565386.1732
6	PI	STA. 53+20.78	532499.5723	565412.6681
7	PI	STA. 55+17.03	532683.1772	565481.9764
8	PC	STA. 59+95.47	533130.7897	565650.9439
9	PT	STA. 60+19.88	533139.2062	565671.0541
10	PC	STA. 61+94.01	533068.6611	565830.2593
11	PT	STA. 62+17.12	533049.2886	565838.0743
12	PC	STA. 62+36.09	533031.7198	565830.9179
13	PT	STA. 62+60.86	533008.9873	565853.3879
14	PC	STA. 65+52.15	532768.3580	565998.9633
15	PT	STA. 65+61.45	532759.6012	566001.6165
16	PC	STA. 65+90.80	532730.2540	566001.1547
17	PT	STA. 66+05.07	532718.1452	565994.6773
18	PC	STA. 72+48.51	532352.6340	565465.1233
19	PT	STA. 72+63.41	532341.0952	565456.0147
20	PC	STA. 73+15.41	532292.6527	565437.1728
21	PT	STA. 73+24.35	532285.7453	565431.7138
22	PC	STA. 74+04.55	532240.1851	565365.7061
23	PT	STA. 74+19.46	532228.6602	565356.6028
24	POE	STA. 74+70.05	532181.5054	565338.2911

GRADING DETAIL FOR STORMWATER STORAGE AREA STA. 372
STAKEOUT

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

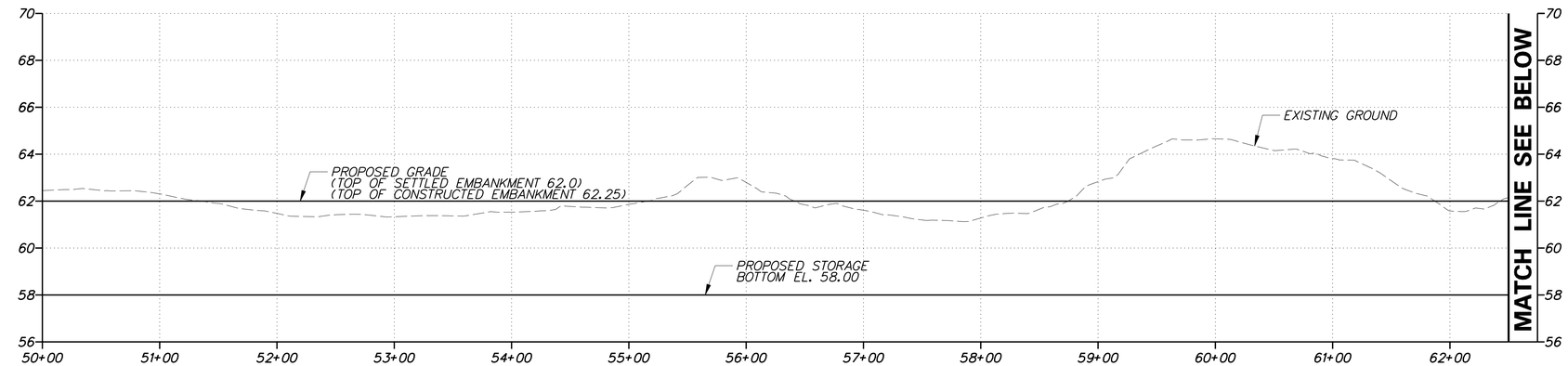
SCALE 0 30 60 90 FEET

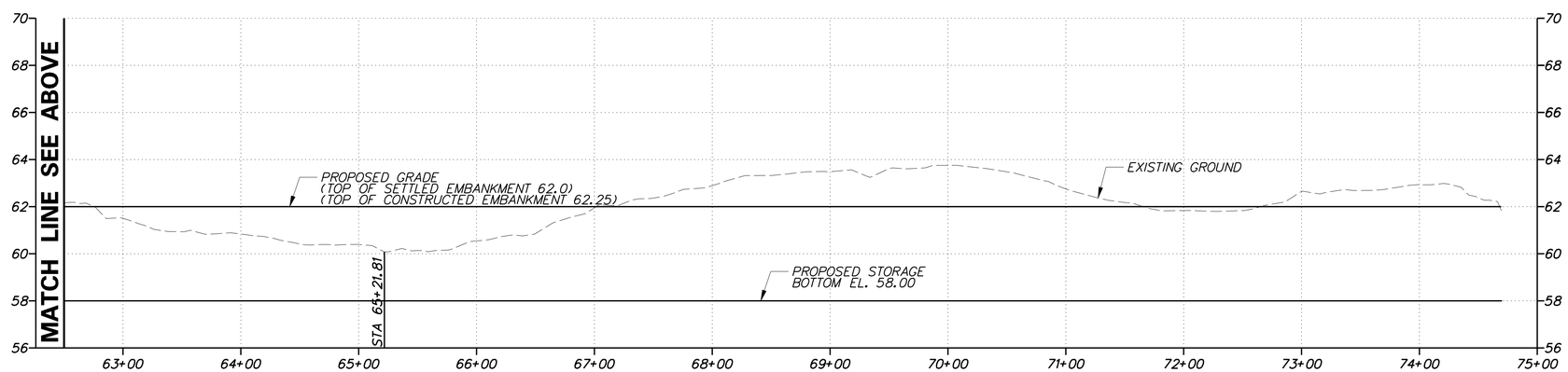
US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	JW
COUNTY	CHECKED BY:	SF
NEW CASTLE		

EROSION AND SEDIMENT CONTROL DETAIL

CS-71
SHEET NO.
932
TOTAL SHTS.
1256





C9

GRADING DETAIL FOR STORMWATER STORAGE AREA STA. 372
EMBANKMENT PROFILE FOR EXCESS STORAGE AREA

HORIZONTAL SCALE: 1" = 60'

0 60 120 180

FEET

VERTICAL SCALE: 1" = 3'

0 3 6 9

FEET

CS-72

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	AS SHOWN	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO.	EROSION AND SEDIMENT CONTROL DETAIL	SHEET NO. 933
				COUNTY NEW CASTLE	DESIGNED BY: JW		TOTAL SHTS. 1256
					CHECKED BY: SF		

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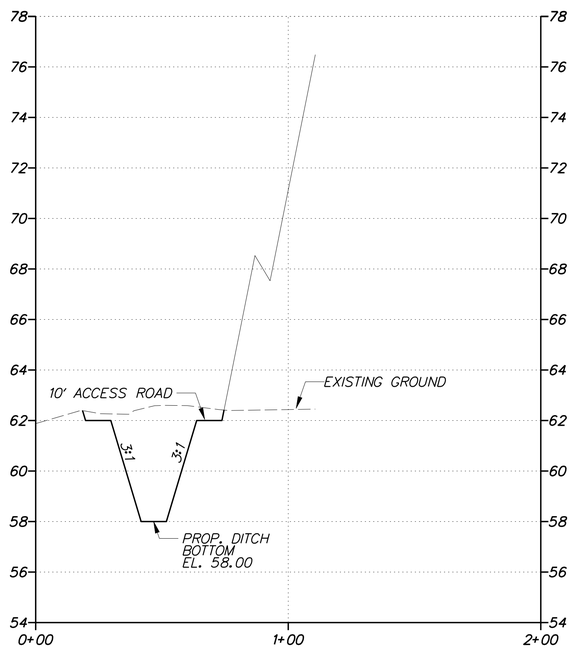
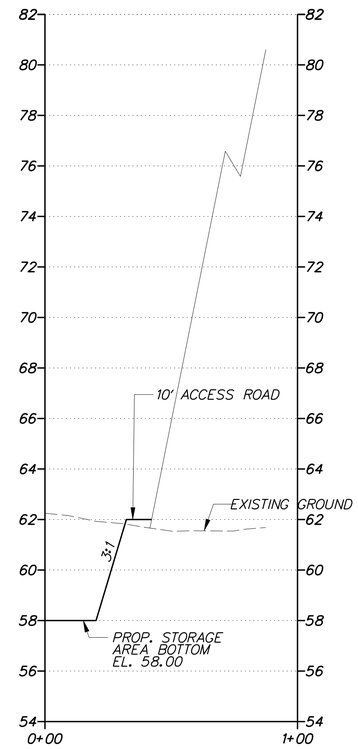
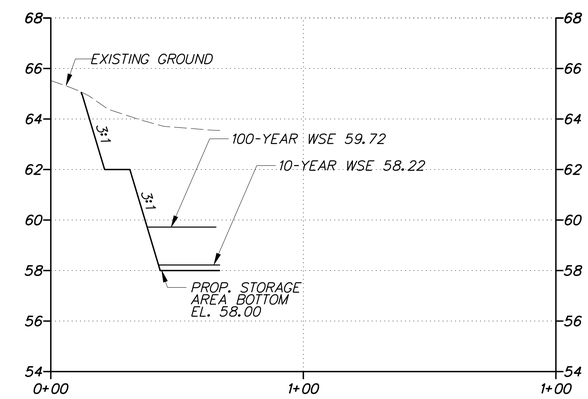


SECTION A-A



SECTION B-B



SECTION C-C

65

GRADING DETAIL FOR STORMWATER STORAGE AREA STA. 372

HORIZONTAL SCALE: 1" = 30'

0 30 60 90

FEET

VERTICAL SCALE: 1" = 3'

0 3 6 9

FEET

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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	AS SHOWN	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO.	EROSION AND SEDIMENT CONTROL DETAIL	CS-73
				COUNTY NEW CASTLE	DESIGNED BY: JW		SHEET NO. 934
					CHECKED BY: SF		TOTAL SHTS. 1256

CHANGEABLE MESSAGE BOARDS

CMS-1 — PRIOR TO DETOUR
(10 DAYS PRIOR TO BEGINNING OF DETOUR)

ARMSTNG CRNR RD TO CLOSE	X:XX PM –X:XX AM XX/XX/XX

CMS-1 — DURING DETOUR
(UP TO 5 DAYS AFTER IMPLEMENTATION OF DETOUR)

ARMSTNG CRNR RD CLOSED	FOLLOW DETOUR

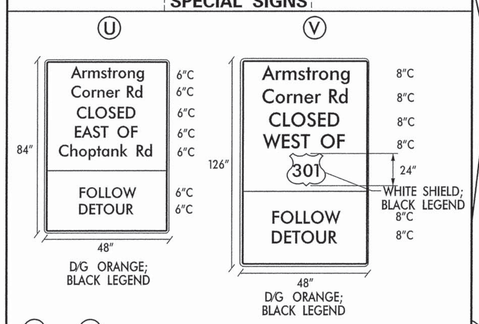
CMS-2 — PRIOR TO DETOUR
(10 DAYS PRIOR TO BEGINNING OF DETOUR)

ARMSTNG CRNR RD TO CLOSE	X:XX PM –X:XX AM XX/XX/XX

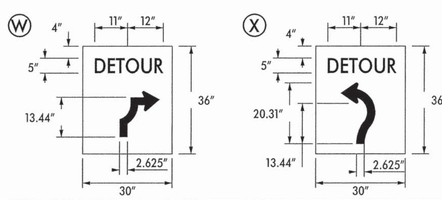
CMS-2 — DURING DETOUR
(UP TO 5 DAYS AFTER IMPLEMENTATION OF DETOUR)

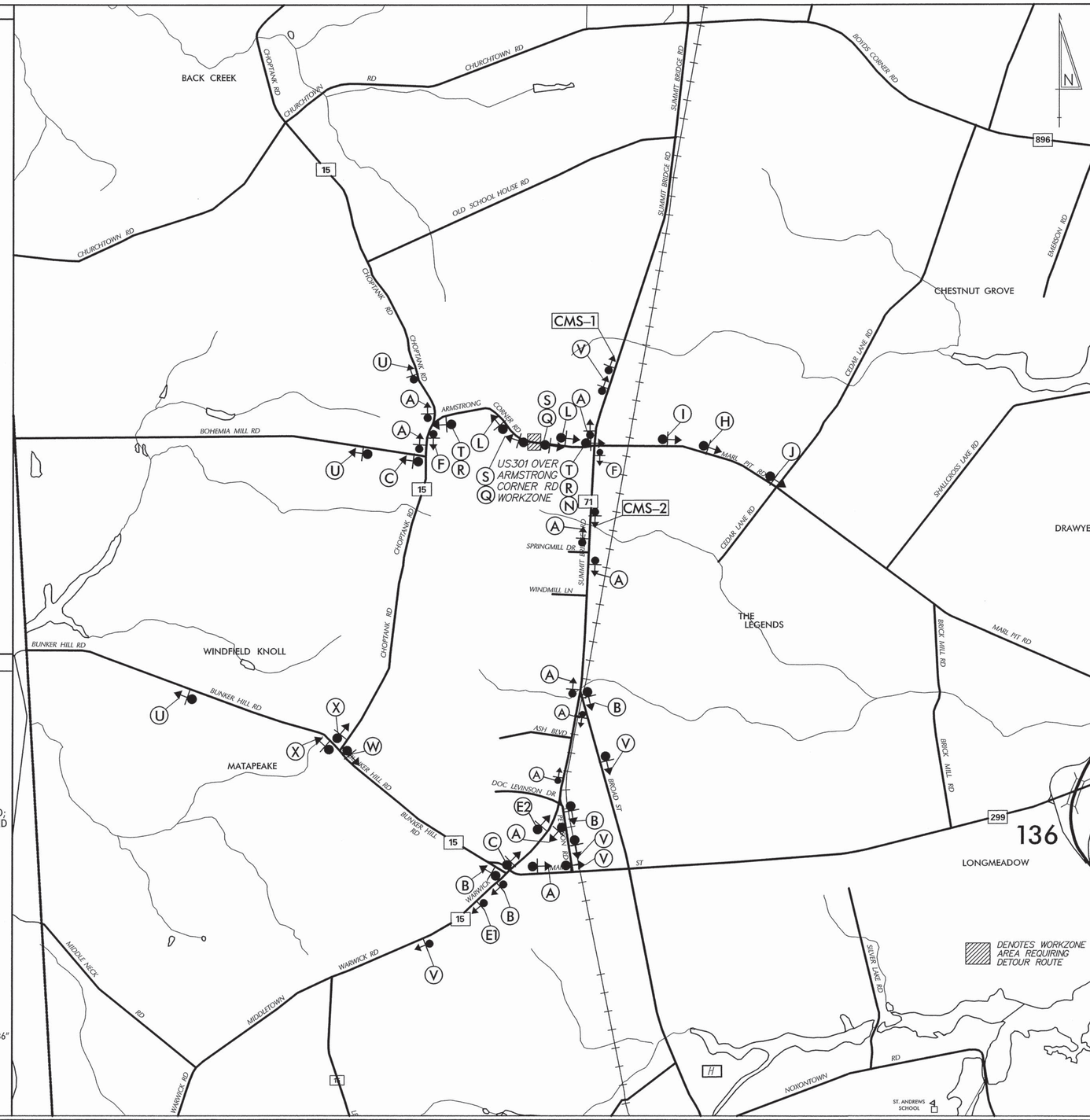
ARMSTNG CRNR RD CLOSED	FOLLOW DETOUR

SPECIAL SIGNS

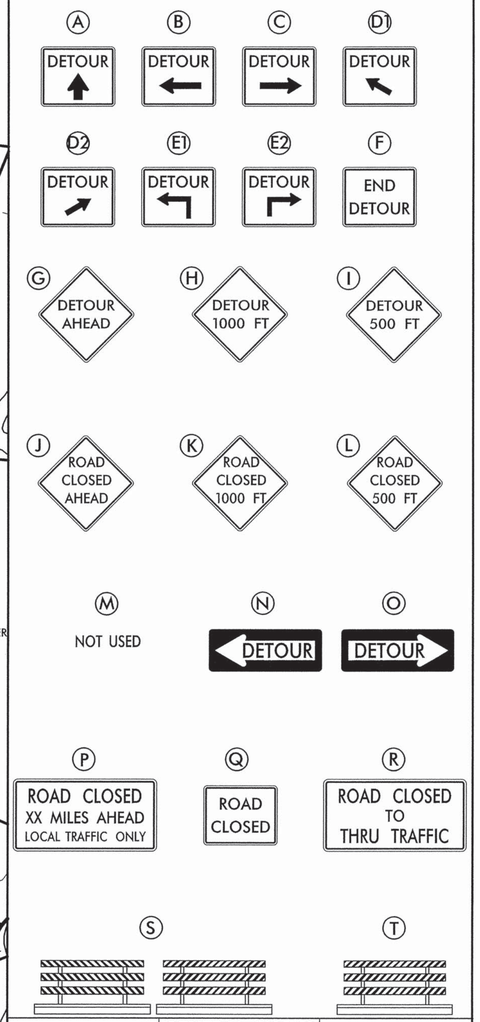


U AND V SIGNS MUST BE MOUNTED ON TWO 4X6 WOOD POSTS. THE POSTS SHALL BE GROUND MOUNTED AND BREAKAWAY IN ACCORDANCE WITH NCHRP 350.





LEGEND



GENERAL NOTES

1. ALL DETOUR SIGNING INCLUDING, TRAILBLAZERS, ARE TO BE SUPPLIED AND MAINTAINED BY THE GENERAL CONTRACTOR IN COMPLIANCE TO THE DELAWARE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
2. THE CONTRACTOR SHALL COMPLY WITH GUIDELINES IN THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (DE- MUTCD PART 6) FOR LIGHTS, BARRICADES AND SIGNS. (AS PER LATEST REVISION)
3. FIELD CONDITIONS MAY DICTATE CHANGES AT SOME TIME DURING THE LIFE OF THE CONTRACT. IN THE EVENT OF OMISSIONS OR CORRECTIONS, THE SIGNING PROVISIONS OF THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES WILL PREVAIL.
4. SIGNS J THROUGH L AND P THROUGH R, THE WORD "ROAD" SHOULD BE CHANGED TO RAMP, R/R OR BRIDGE WHERE APPLICABLE.
5. WARNING SIGNS SHOULD BE MOUNTED ON BREAKAWAY POSTS AND HAVE RETROREFLECTIVE FLUORESCENT SHEETING.
6. "S" BARRICADES SHALL COMPLETELY RUN THE FULL WIDTH OF ROADWAY.
7. BARRICADES SHALL BE A MINIMUM OF 6 FEET WIDE UNLESS DIRECTED BY THE ENGINEER.
8. CONTRACTOR TO COORDINATE WITH DELAWARE STATE POLICE AND SUPPLY LIGHT PLANT AT THE FOLLOWING LOCATIONS:
   - MARL PIT ROAD AND CEDAR LANE ROAD
   - MARL PIT ROAD AND US13
9. DOUBLE POST DETOUR SIGNS ON MULTI LANE SECTIONS OF HIGHWAY IN MEDIAN AND ROADSIDE WHERE INDICATED ON PLAN.

RECOMMENDED _____ DATE: 8/18/15	RECOMMENDED _____ DATE:	RECOMMENDED _____ DATE:	APPROVED CHIEF SAFETY OFFICER _____ DATE: 8/18/15	APPROVED TRAFFIC ENGINEER _____ DATE: 8/18/15

CS-74

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUM / REVISIONS

NOT TO SCALE

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	PERMIT NO.	X
T200911303	DESIGNED BY:	JE
COUNTY	CHECKED BY:	ER
NEW CASTLE		

DETOUR PLAN US 301 MAINLINE OVER ARMSTRONG CORNER RD

SHEET NO. 935
TOTAL SHTS. 1256

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CHANGEABLE MESSAGE BOARDS

CMS-1 — PRIOR TO DETOUR
(10 DAYS PRIOR TO BEGINNING OF DETOUR)

US301 TO CLOSE	XX:XX PM –X:XX AM XX/XX/XX

CMS-1 — DURING DETOUR
(UP TO 5 DAYS AFTER IMPLEMENTATION OF DETOUR)

US301 CLOSED	FOLLOW DETOUR AHEAD

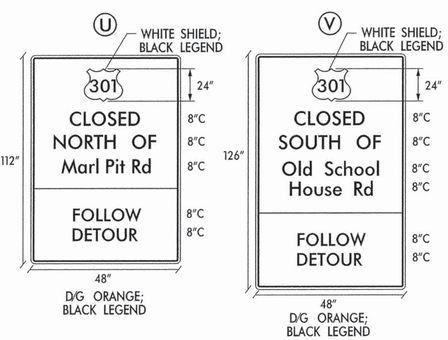
CMS-2 — PRIOR TO DETOUR
(10 DAYS PRIOR TO BEGINNING OF DETOUR)

US301 TO CLOSE	XX:XX PM –X:XX AM XX/XX/XX

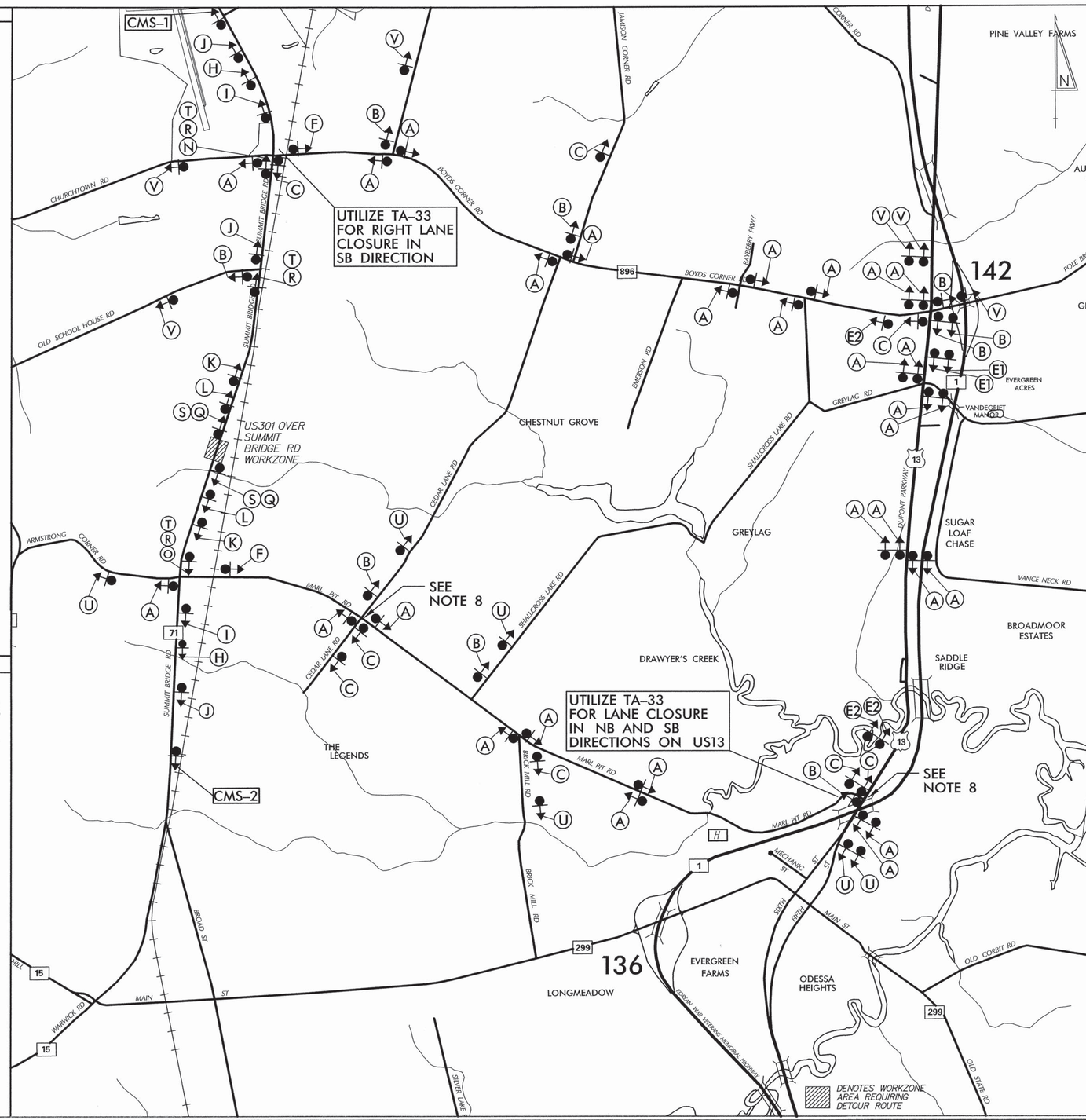
CMS-2 — DURING DETOUR
(UP TO 5 DAYS AFTER IMPLEMENTATION OF DETOUR)

US301 CLOSED	FOLLOW DETOUR AHEAD

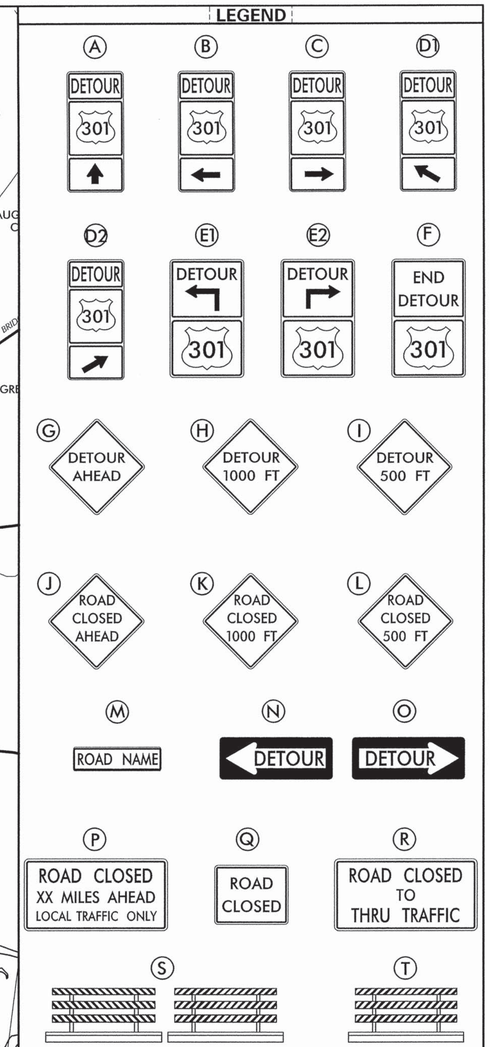
SPECIAL SIGNS



(U) AND (V) SIGNS MUST BE MOUNTED ON TWO 4X6 WOOD POSTS. THE POSTS SHALL BE GROUND MOUNTED AND BREAKAWAY IN ACCORDANCE WITH NCHRP 350.



LEGEND



GENERAL NOTES

1. ALL DETOUR SIGNING INCLUDING, TRAILBLAZERS, ARE TO BE SUPPLIED AND MAINTAINED BY THE GENERAL CONTRACTOR IN COMPLIANCE TO THE DELAWARE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
2. THE CONTRACTOR SHALL COMPLY WITH GUIDELINES IN THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (DE- MUTCD PART 6) FOR LIGHTS, BARRICADES AND SIGNS. (AS PER LATEST REVISION)
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5. WARNING SIGNS SHOULD BE MOUNTED ON BREAKAWAY POSTS AND HAVE RETROREFLECTIVE FLUORESCENT SHEETING.
6. "S" BARRICADES SHALL COMPLETELY RUN THE FULL WIDTH OF ROADWAY.
7. BARRICADES SHALL BE A MINIMUM OF 6 FEET WIDE UNLESS DIRECTED BY THE ENGINEER.
8. CONTRACTOR TO COORDINATE WITH DELAWARE STATE POLICE AND SUPPLY LIGHT PLANT AT THE FOLLOWING LOCATIONS:
   - MARL PIT ROAD AND CEDAR LANE ROAD
   - MARL PIT ROAD AND US13
9. DOUBLE POST DETOUR SIGNS ON MULTILANE SECTIONS OF HIGHWAY IN MEDIAN AND ROADSIDE WHERE INDICATED ON PLAN.

RECOMMENDED _____ DATE: 8/18/15 | RECOMMENDED _____ DATE: _____ | RECOMMENDED _____ DATE: _____ | APPROVED CHIEF SAFETY OFFICER _____ DATE: 8/18/15 | APPROVED TRAFFIC ENGINEER _____ DATE: 8/18/15

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUM / REVISIONS

NOT TO SCALE

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	T200911303
COUNTY	NEW CASTLE
PERMIT NO.	X
DESIGNED BY:	JE
CHECKED BY:	ER

DETOUR PLAN US 301 MAINLINE OVER SUMMIT BRIDGE RD DE 71

	CS-75
SHEET NO.	936
TOTAL SHTS.	1256

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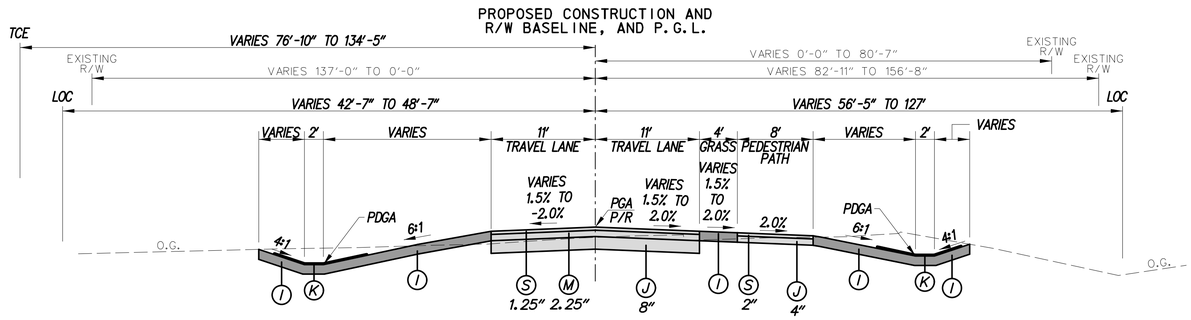
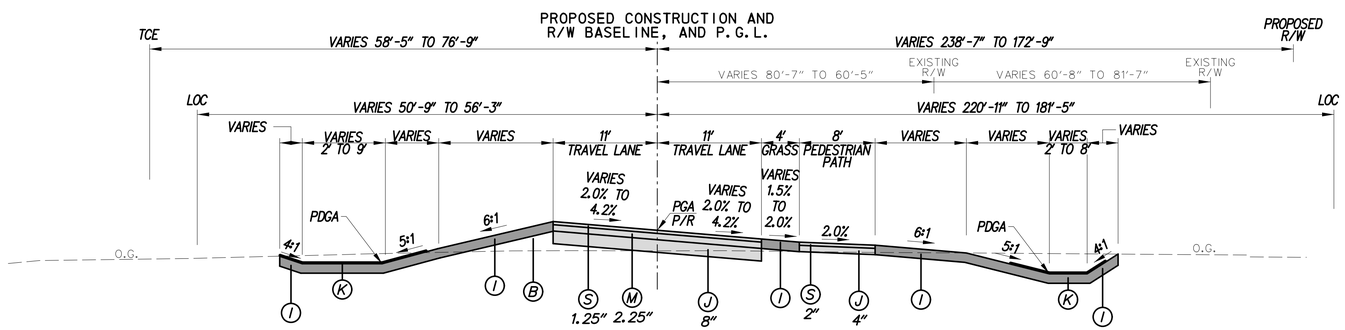


TYPICAL NORMAL SECTION BUNKER HILL TEMPORARY ROAD

STA. 900+00.00 TO STA. 905+92.23



TYPICAL SUPERELEVATED RIGHT SECTION BUNKER HILL TEMPORARY ROAD

STA. 905+92.23 TO STA. 912+25.86

LEGEND

- (A) ITEM *209001, BORROW TYPE A
- (B) ITEM *209006, BORROW TYPE F
- (C) ITEM *304502, SOIL CEMENT BASE COURSE
- (D) ITEM *304501, PERMEABLE TREATED BASE, 4"
- (E) ITEM *501006, PORTLAND CEMENT CONCRETE PAVEMENT
- (F) ITEM *715001, PERFORATED PIPE UNDERDRAIN
- (G) ITEM *705002, P.C.C. SIDEWALK, 6"
- (H) ITEM *701016, INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (I) ITEM *908010, TOPSOILING, 6" DEPTH
  ITEM *908014, PERMANENT GRASS SEEDING, DRY GROUND
- (J) ITEM *302007, GRADED AGGREGATE BASE COURSE, TYPE B
- (K) ITEM *735535 SOIL RETENTION BLANKET MULCH, TYPE 5 UNLESS OTHERWISE NOTED IN DT-16
- (L) ITEM *401801, WMA SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE)
- (M) ITEM *401810, WMA SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (N) ITEM *401819, WMA SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (O) ITEM *705001, P.C.C. SIDEWALK, 4"
- (P) ITEM *701010, PORTLAND CEMENT CONCRETE CURB, TYPE 1
- (Q) ITEM *701013, PORTLAND CEMENT CONCRETE CURB, TYPE 1-2 (SEE CONSTRUCTION DETAILS)
- (R) ITEM *401504, HOT MIX, HOT-LAID BITUMINOUS CONCRETE PAVEMENT TYPE C, 2" THICK
- (S) ITEM *401827, WMA SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATED STONE)
- (T) ITEM *401833, WMA SUPERPAVE, TYPE C, 160 GYRATIONS, PG 76-22 (NON-CARBONATE STONE)
- (U) ITEM *401517, STONE MATRIX ASPHALT
- (V) ITEM *401663, SUPERPAVE BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (W) ITEM *401816, WMA SUPERPAVE, TYPE B, 160 GYRATIONS, PG 76-22
- (X) ITEM *743017, PORTABLE BARRIER
- (Y) ITEM *701022, INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3
- (Z) ITEM *701011, PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (AA) ITEM *701021, INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 2
- (BB) ITEM *760507, PROFILE MILLING, HOT MIX
- (CC) ITEM *760006, PAVEMENT MILLING, HOT MIX, 2" DEPTH
- (DD) ITEM *760016, RUMBLE STRIPS, HOT MIX
- (EE) ITEM *401813, WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 70-22

*FILL SLOPE RATIO CHART	
HEIGHT OF EMBANKMENT	SLOPE RATIO
0-5'	6:1
>5'-10'	4:1
>10'-15'	3:1
>15'	2:1 WITH GUARDRAIL

NOTES:

1. THE ALGEBRIAC DIFFERENCE BETWEEN THE TRAVEL LANE SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR ADDITIONAL INFORMATION ON VARYING CROSS-SLOPE AND PAVEMENT WIDTHS.
4. SEE ROADSIDE GRADING TREATMENT DETAILS FOR CHANGES IN TYPICAL ROADSIDE TREATMENT.
5. SEE TYPICAL MAINLINE SUPERELEVATION TRANSITION DETAILS FOR ADDITIONAL MEDIAN INFORMATION IN SUPERELEVATED SECTIONS.
6. SEE CROSS-SECTIONS FOR ALL VARYING CROSS-SLOPE RATES AND SIDE SLOPE RATES.
7. SEE ROADWAY PLANS AND SWM PLANS FOR SWM POND AND BMP LOCATIONS.
8. SEE ROADWAY PLANS AND BRIDGE PLANS FOR BRIDGE LOCATIONS.
9. AREAS NOT RECEIVING TOPSOIL SHOULD BE HYDRO SEEDED.
10. ITEMS SHOWN AS DASHED TO BE CONSTRUCTED UNDER SEPERATE CONTRACT.
11. DURING CONSTRUCTION PLACE SUPERPAVE, TYPE B HOT MIX IN 2 EQUAL LIFTS.

P.G.L. - PROFILE GRADE LINE.
P.G.A. - POINT OF GRADE APPLICATION.
P/R - POINT OF ROTATION.
PDGA - POINT OF DITCH GRADE APPLICATION.
PFGA - POINT OF FILL GRADE APPLICATION.

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

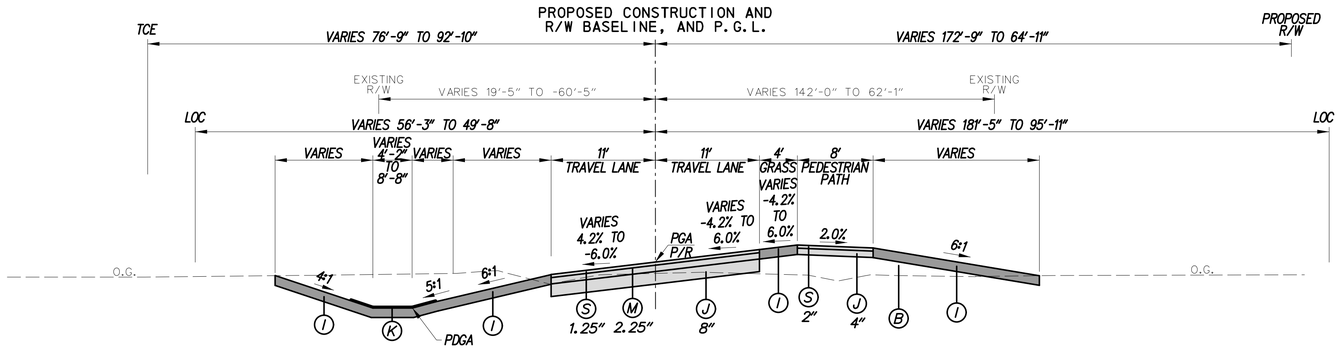
NOT TO SCALE

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	AG
COUNTY		
NEW CASTLE	CHECKED BY:	MT

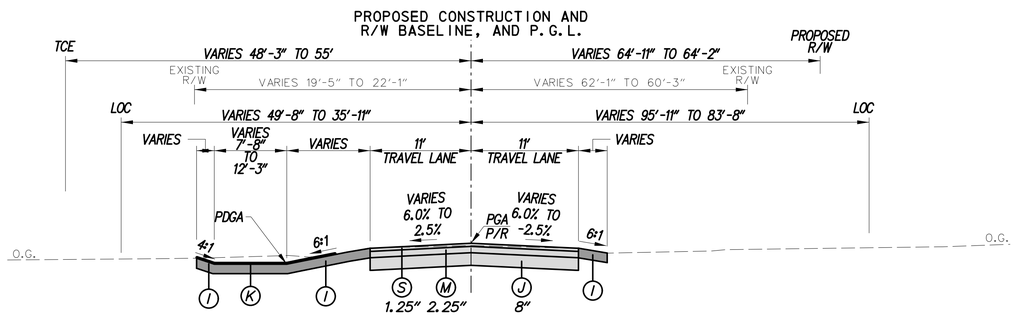
CONSTRUCTION PHASING, M.O.T, AND EROSION CONTROL PLAN

CS-76
SHEET NO.
937
TOTAL SHTS.
1256



TYPICAL SUPERELEVATED LEFT SECTION BUNKER HILL TEMPORARY ROAD

STA. 912+25.86 TO STA. 915+32.73



TYPICAL NORMAL SECTION BUNKER HILL TEMPORARY ROAD

STA. 915+32.73 TO STA. 916+97.73

LEGEND

- (A) ITEM #209001, BORROW TYPE A
- (B) ITEM #209006, BORROW TYPE F
- (C) ITEM #304502, SOIL CEMENT BASE COURSE
- (D) ITEM #304501, PERMEABLE TREATED BASE, 4"
- (E) ITEM #501006, PORTLAND CEMENT CONCRETE PAVEMENT
- (F) ITEM #715001, PERFORATED PIPE UNDERDRAIN
- (G) ITEM #705002, P.C.C. SIDEWALK, 6"
- (H) ITEM #701016, INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (I) ITEM #908010, TOPSOILING, 6" DEPTH
  ITEM #908014, PERMANENT GRASS SEEDING, DRY GROUND
- (J) ITEM #302007, GRADED AGGREGATE BASE COURSE, TYPE B
- (K) ITEM #735535 SOIL RETENTION BLANKET MULCH, TYPE 5 UNLESS OTHERWISE NOTED IN DT-16
- (L) ITEM #401801, WMA SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE)
- (M) ITEM #401810, WMA SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (N) ITEM #401819, WMA SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (O) ITEM #705001, P.C.C. SIDEWALK, 4"
- (P) ITEM #701010, PORTLAND CEMENT CONCRETE CURB, TYPE 1
- (Q) ITEM #701013, PORTLAND CEMENT CONCRETE CURB, TYPE 1-2 (SEE CONSTRUCTION DETAILS)
- (R) ITEM #401504, HOT MIX, HOT-LAID BITUMINOUS CONCRETE PAVEMENT TYPE C, 2" THICK
- (S) ITEM #401827, WMA SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATED STONE)
- (T) ITEM #401833, WMA SUPERPAVE, TYPE C, 160 GYRATIONS, PG 76-22 (NON-CARBONATE STONE)
- (U) ITEM #401517, STONE MATRIX ASPHALT
- (V) ITEM #401663, SUPERPAVE BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (W) ITEM #401816, WMA SUPERPAVE, TYPE B, 160 GYRATIONS, PG 76-22
- (X) ITEM #743017, PORTABLE BARRIER
- (Y) ITEM #701022, INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3
- (Z) ITEM #701011, PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (AA) ITEM #701021, INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 2
- (BB) ITEM #760507, PROFILE MILLING, HOT MIX
- (CC) ITEM #760006, PAVEMENT MILLING, HOT MIX, 2" DEPTH
- (DD) ITEM #760016, RUMBLE STRIPS, HOT MIX
- (EE) ITEM #401813, WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 70-22

NOTES:

1. THE ALGEBRIAC DIFFERENCE BETWEEN THE TRAVEL LANE SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR ADDITIONAL INFORMATION ON VARYING CROSS-SLOPE AND PAVEMENT WIDTHS.
4. SEE ROADSIDE GRADING TREATMENT DETAILS FOR CHANGES IN TYPICAL ROADSIDE TREATMENT.
5. SEE TYPICAL MAINLINE SUPERELEVATION TRANSITION DETAILS FOR ADDITIONAL MEDIAN INFORMATION IN SUPERELEVATED SECTIONS.
6. SEE CROSS-SECTIONS FOR ALL VARYING CROSS-SLOPE RATES AND SIDE SLOPE RATES.
7. SEE ROADWAY PLANS AND SWM PLANS FOR SWM POND AND BMP LOCATIONS.
8. SEE ROADWAY PLANS AND BRIDGE PLANS FOR BRIDGE LOCATIONS.
9. AREAS NOT RECEIVING TOPSOIL SHOULD BE HYDRO SEEDED.
10. ITEMS SHOWN AS DASHED TO BE CONSTRUCTED UNDER SEPERATE CONTRACT.
11. DURING CONSTRUCTION PLACE SUPERPAVE, TYPE B HOT MIX IN 2 EQUAL LIFTS.

P.G.L. - PROFILE GRADE LINE.
P.G.A. - POINT OF GRADE APPLICATION.
P/R - POINT OF ROTATION.
PDGA - POINT OF DITCH GRADE APPLICATION.
PFGA - POINT OF FILL GRADE APPLICATION.

*FILL SLOPE RATIO CHART	
HEIGHT OF EMBANKMENT	SLOPE RATIO
0-5'	6:1
>5'-10'	4:1
>10'-15'	3:1
>15'	2:1 WITH GUARDRAIL

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

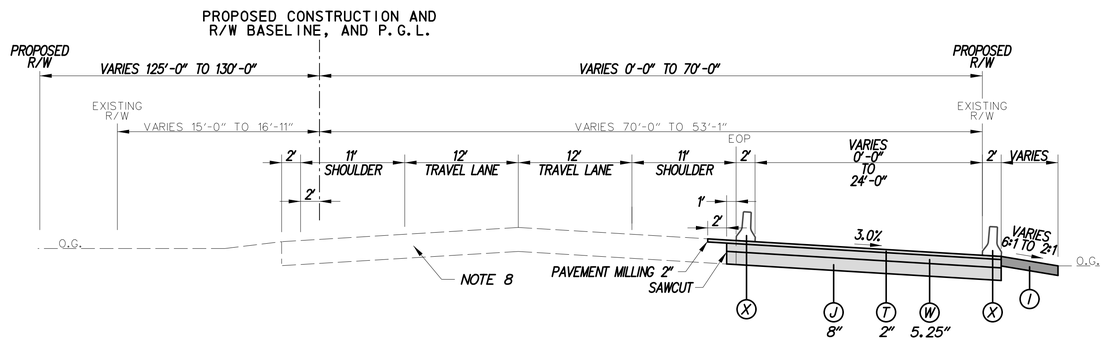
NOT TO SCALE

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	AG
COUNTY		
NEW CASTLE	CHECKED BY:	MT

CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLAN

CS-77
SHEET NO.
938
TOTAL SHTS.
1256



TYPICAL NORMAL SECTION: SUMMIT BRIDGE ROAD TEMPORARY WIDENING

STA. 43+30.06 TO STA. 62+46.06

LEGEND

- (A) ITEM *209001, BORROW TYPE A
- (B) ITEM *209006, BORROW TYPE F
- (C) ITEM *304502, SOIL CEMENT BASE COURSE
- (D) ITEM *304501, PERMEABLE TREATED BASE, 4"
- (E) ITEM *501006, PORTLAND CEMENT CONCRETE PAVEMENT
- (F) ITEM *715001, PERFORATED PIPE UNDERDRAIN
- (G) ITEM *705002, P.C.C. SIDEWALK, 6"
- (H) ITEM *701016, INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (I) ITEM *908010, TOPSOILING, 6" DEPTH
  ITEM *908014, PERMANENT GRASS SEEDING, DRY GROUND
- (J) ITEM *302007, GRADED AGGREGATE BASE COURSE, TYPE B
- (K) ITEM *735535 SOIL RETENTION BLANKET MULCH, TYPE 5 UNLESS OTHERWISE NOTED IN DT-16
- (L) ITEM *401801, WMA SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE)
- (M) ITEM *401810, WMA SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (N) ITEM *401819, WMA SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (O) ITEM *705001, P.C.C. SIDEWALK, 4"
- (P) ITEM *701010, PORTLAND CEMENT CONCRETE CURB, TYPE 1
- (Q) ITEM *701013, PORTLAND CEMENT CONCRETE CURB, TYPE 1-2 (SEE CONSTRUCTION DETAILS)
- (R) ITEM *401504, HOT MIX, HOT-LAID BITUMINOUS CONCRETE PAVEMENT TYPE C, 2" THICK
- (S) ITEM *401827, WMA SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATED STONE)
- (T) ITEM *401833, WMA SUPERPAVE, TYPE C, 160 GYRATIONS, PG 76-22 (NON-CARBONATE STONE)
- (U) ITEM *401517, STONE MATRIX ASPHALT
- (V) ITEM *401663, SUPERPAVE BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (W) ITEM *401816, WMA SUPERPAVE, TYPE B, 160 GYRATIONS, PG 76-22
- (X) ITEM *743017, PORTABLE BARRIER
- (Y) ITEM *701022, INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3
- (Z) ITEM *701011, PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (AA) ITEM *701021, INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 2
- (BB) ITEM *760507, PROFILE MILLING, HOT MIX
- (CC) ITEM *760006, PAVEMENT MILLING, HOT MIX, 2" DEPTH
- (DD) ITEM *760016, RUMBLE STRIPS, HOT MIX
- (EE) ITEM *401813, WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 70-22

*FILL SLOPE RATIO CHART	
HEIGHT OF EMBANKMENT	SLOPE RATIO
0-5'	6:1
>5'-10'	4:1
>10'-15'	3:1
>15'	2:1 WITH GUARDRAIL

NOTES:

1. THE ALGEBRIAC DIFFERENCE BETWEEN THE TRAVEL LANE SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR ADDITIONAL INFORMATION ON VARYING CROSS-SLOPE AND PAVEMENT WIDTHS.
4. SEE ROADSIDE GRADING TREATMENT DETAILS FOR CHANGES IN TYPICAL ROADSIDE TREATMENT.
5. SEE TYPICAL MAINLINE SUPERELEVATION TRANSITION DETAILS FOR ADDITIONAL MEDIAN INFORMATION IN SUPERELEVATED SECTIONS.
6. SEE CROSS-SECTIONS FOR ALL VARYING CROSS-SLOPE RATES AND SIDE SLOPE RATES.
7. SEE ROADWAY PLANS AND SWM PLANS FOR SWM POND AND BMP LOCATIONS.
8. SEE ROADWAY PLANS AND BRIDGE PLANS FOR BRIDGE LOCATIONS.
9. AREAS NOT RECEIVING TOPSOIL SHOULD BE HYDRO SEEDED.
10. ITEMS SHOWN AS DASHED TO BE CONSTRUCTED UNDER SEPERATE CONTRACT.
11. DURING CONSTRUCTION PLACE SUPERPAVE, TYPE B HOT MIX IN 2 EQUAL LIFTS.
12. EXISTING PAVEMENT IS 8" HOT-MIX ASPHALT OVER 8.25" PORTLAND CEMENT CONCRETE.

P.G.L. - PROFILE GRADE LINE.
P.G.A. - POINT OF GRADE APPLICATION.
P/R - POINT OF ROTATION.
PDGA - POINT OF DITCH GRADE APPLICATION.
PFGA - POINT OF FILL GRADE APPLICATION.

SEQUENCE OF CONSTRUCTION

1. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN.
2. INSTALL DRUMS ALONG EDGE OF PHASE 1 CONSTRUCTION AREA.
3. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN.
4. WHILE TRUCK CROSSING IS ACTIVE UTILIZE TRAFFIC CONTROL CONFORMING TO TA-14B OF THE DELAWARE MUTCD.
5. CONSTRUCT TEMPORARY DRAINAGE, CONSTRUCT AND PLUG PERMANENT DRAINAGE P520 AND FES512.
6. CONSTRUCT BUNKER HILL TEMPORARY ROAD, TEMPORARY WIDENING, AND TEMPORARY PATH AS SHOWN.
7. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED AND MULCH PRIOR TO REMOVAL OF SEDIMENT CONTROL DEVICES.
8. REMOVE/RELOCATE DRUMS AS NEEDED PRIOR TO SWITCH TO PHASE 2-1 TRAFFIC CONTROL.

CONSTRUCTION PHASING LEGEND

- WORK AREA THIS PHASE
- TEMPORARY CONSTRUCTION
- EROSION CONTROL BLANKET
- EXISTING TRAFFIC FLOW ARROW
- TEMPORARY WHITE PAVEMENT MARKING ARROW

DRAINAGE PIPE SCHEDULE

NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INT. EL.	DIS. EL.
897	18" HDPE		300	0.0050	64.20	62.70
899	18" HDPE		20	0.0100	55.45	55.26
900	18" HDPE		100	0.0115	58.50	57.40
901	15" HDPE		50	0.0034	63.51	63.27
902	15" HDPE		50	0.0015	63.49	63.31
903	15" HDPE		50	0.0062	62.32	62.06
904	15" HDPE		50	0.0062	63.05	62.94

STONE CHECK DAM

NO.	D. AREA	DEPTH	STATION
300	2.27	1.00	902+27
301	0.56	1.00	903+30
302	0.59	1.00	903+73
303	0.40	1.00	906+16
304	0.28	1.00	906+36
305	1.06	1.00	19+06
306	0.31	1.00	910+46
307	0.50	1.00	21+24

FLARED END SECTION SCHEDULE

NO.	SIZE / TYPE	SLOPE	SAFETY GRATE
896	18" HDPE	0.0050	NO
897	18" HDPE	0.0050	NO
898	18" HDPE	0.0100	NO
899	18" HDPE	0.0100	NO
900	18" HDPE	0.0115	NO
901	18" HDPE	0.0115	NO
902	15" HDPE	0.0340	NO
903	15" HDPE	0.0340	NO
904	15" HDPE	0.0015	NO
905	15" HDPE	0.0015	NO
906	15" HDPE	0.0062	NO
907	15" HDPE	0.0062	NO
908	15" HDPE	0.0062	NO
909	15" HDPE	0.0062	NO

SILT FENCE

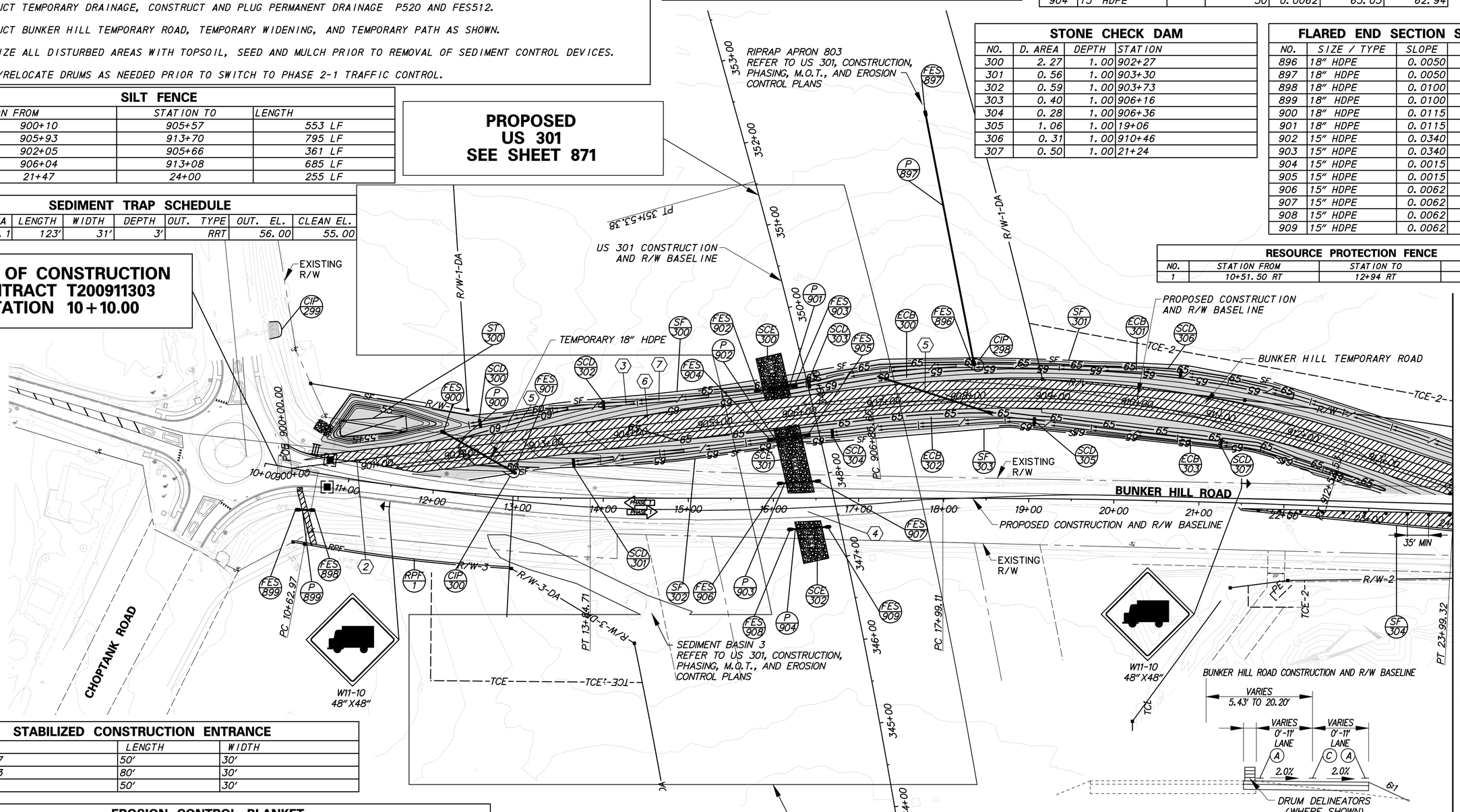
NO	STATION FROM	STATION TO	LENGTH
300	900+10	905+57	553 LF
301	905+93	913+70	795 LF
302	902+05	905+66	361 LF
303	906+04	913+08	685 LF
304	21+47	24+00	255 LF

SEDIMENT TRAP SCHEDULE

NO.	D. AREA	LENGTH	WIDTH	DEPTH	OUT. TYPE	OUT. EL.	CLEAN EL.
300	2.1	123'	31'	3'	RRT	56.00	55.00

RESOURCE PROTECTION FENCE

NO.	STATION FROM	STATION TO	LENGTH
1	10+51.50 RT	12+94 RT	254 LF



STABILIZED CONSTRUCTION ENTRANCE

NO.	STA.	LENGTH	WIDTH
300	905+77	50'	30'
301	905+83	80'	30'
302	16+41	50'	30'

EROSION CONTROL BLANKET

NO.	SY	LENGTH	WIDTH	TYPE
300	3574	1300'	15'	3
301	761	1140'	6'	5
302	574	860'	6'	5
303	2113	1100'	15'	3

CULVERT INLET PROTECTION

NO.	D. AREA	STATION
298	0.72	908+10
299	2.40	900+00
300	1.49	902+60

EXISTING BUNKER HILL ROAD WIDENING

STATION 21+50.32 TO STA 24+71.32

BUNKER HILL ROAD

NOTE: FOR BUNKER HILL TEMPORARY ROAD ALIGNMENT SEE HORIZONTAL AND VERTICAL CONTROL PLAN. FOR BUNKER HILL TEMPORARY ROAD TYPICAL SECTIONS SEE SHEET 951-952.

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301 LEVELS ROAD TO BUNKER HILL ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	EM
COUNTY		
NEW CASTLE	CHECKED BY:	MT

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 1

CS-79
SHEET NO.
940
TOTAL SHTS.
1256

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SEQUENCE OF CONSTRUCTION

1. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN.
2. INSTALL DRUMS ALONG EDGE OF PHASE 1 CONSTRUCTION AREA.
3. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN.
4. WHILE TRUCK CROSSING IS ACTIVE UTILIZE TRAFFIC CONTROL CONFORMING TO TA-14B OF THE DELAWARE MUTCD.
5. CONSTRUCT TEMPORARY DRAINAGE.
6. CONSTRUCT BUNKER HILL TEMPORARY ROAD, TEMPORARY WIDENING, AND TEMPORARY PATH AS SHOWN.
7. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED AND MULCH PRIOR TO REMOVAL OF SEDIMENT CONTROL DEVICES.
8. REMOVE/RELOCATE DRUMS AS NEEDED PRIOR TO SWITCH TO PHASE 2-1 TRAFFIC CONTROL.

CONSTRUCTION PHASING LEGEND

	WORK AREA THIS PHASE
	TEMPORARY CONSTRUCTION
	EROSION CONTROL BLANKET
	EXISTING TRAFFIC FLOW ARROW
	TEMPORARY WHITE PAVEMENT MARKING ARROW

SILT FENCE

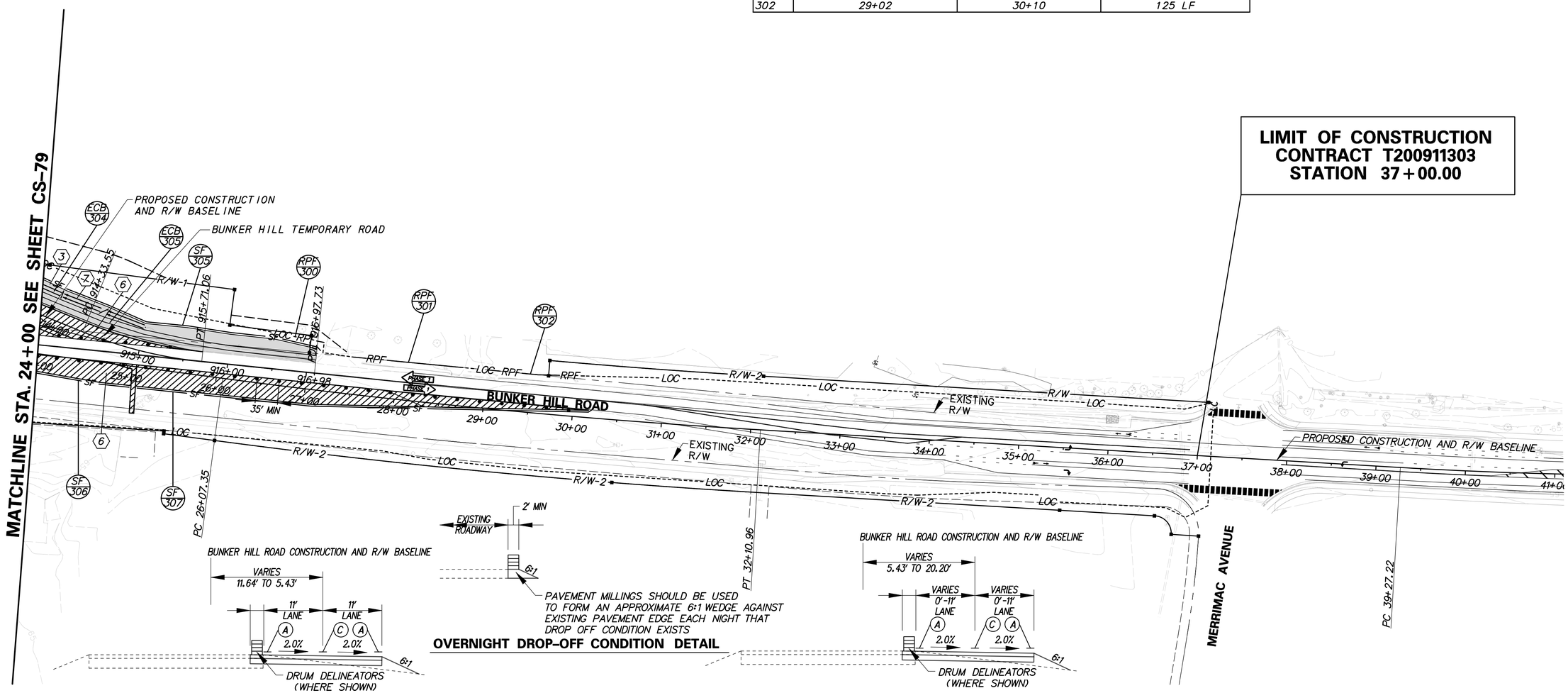
NO	STATION FROM	STATION TO	LENGTH
305	913+70	916+97	324 LF
306	25+00	25+05	105 LF
307	25+14	30+22	510 LF

EROSION CONTROL BLANKET

NO.	SY	LENGTH	WIDTH	TYPE
304	51	75'	6'	5
305	757	300'	15'	3

RESOURCE PROTECTION FENCE

NO	STATION FROM	STATION TO	LENGTH
300	26+80	27+14	37 LF
301	27+49	28+71	121 LF
302	29+02	30+10	125 LF



NOTE: FOR BUNKER HILL TEMPORARY ROAD ALIGNMENT SEE HORIZONTAL AND VERTICAL CONTROL PLAN. FOR BUNKER HILL TEMPORARY ROAD TYPICAL SECTIONS SEE SHEET 951-952.

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301 LEVELS ROAD TO BUNKER HILL ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	EM
COUNTY		
NEW CASTLE	CHECKED BY:	MT

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 1

CS-80
SHEET NO.
941
TOTAL SHTS.
1256

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SEQUENCE OF CONSTRUCTION

1. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN.
2. REMOVE EXISTING STRIPING AS NECESSARY, PLACE TEMPORARY PAVEMENT STRIPING AS SHOWN.
3. REMOVE EXISTING TRAFFIC ISLAND AT TIE-IN OF TEMPORARY ROADWAY.
4. SHIFT TRAFFIC TO THE LANES DESIGNATED FOR PHASE 2-1A.
5. INSTALL DRUMS ALONG EDGE OF PHASE 2-1A CONSTRUCTION AREA.
6. WHILE TRUCK CROSSING IS ACTIVE UTILIZE TRAFFIC CONTROL CONFORMING TO TA-14B OF THE DELAWARE MUTCD.
7. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN.
8. CONSTRUCT REMAINDER BUNKER HILL TEMPORARY ROAD AS SHOWN UNDER SHORT TERM LANE CLOSURE AND LANE SHIFT CONFORMING TO TA-10 OF THE DELAWARE MUTCD WITH THE ADDITIONAL FLAGGERS SHOWN. FLAGGERS SHALL CONTROL TRAFFIC FLOW ON ALL APPROACHES OF THE ONE-LANE ROUNDABOUT. A LEAD FLAGGER SHALL BE DESIGNATED AND RADIO COMMUNICATION SHALL BE USED BY THE FLAGGERS. A SUPPLEMENTAL FLAGGER SHALL BE USED IN THE ROUNDABOUT ISLAND TO HELP DIRECT TRAFFIC. WORK MUST BE COMPLETED BY END OF CONSTRUCTION DAY.
9. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED AND MULCH PRIOR TO REMOVAL OF SEDIMENT CONTROL DEVICES.
10. REMOVE/RELOCATE DRUMS AS NEEDED PRIOR TO SWITCH TO PHASE 2-1B TRAFFIC CONTROL.

CONSTRUCTION PHASING LEGEND

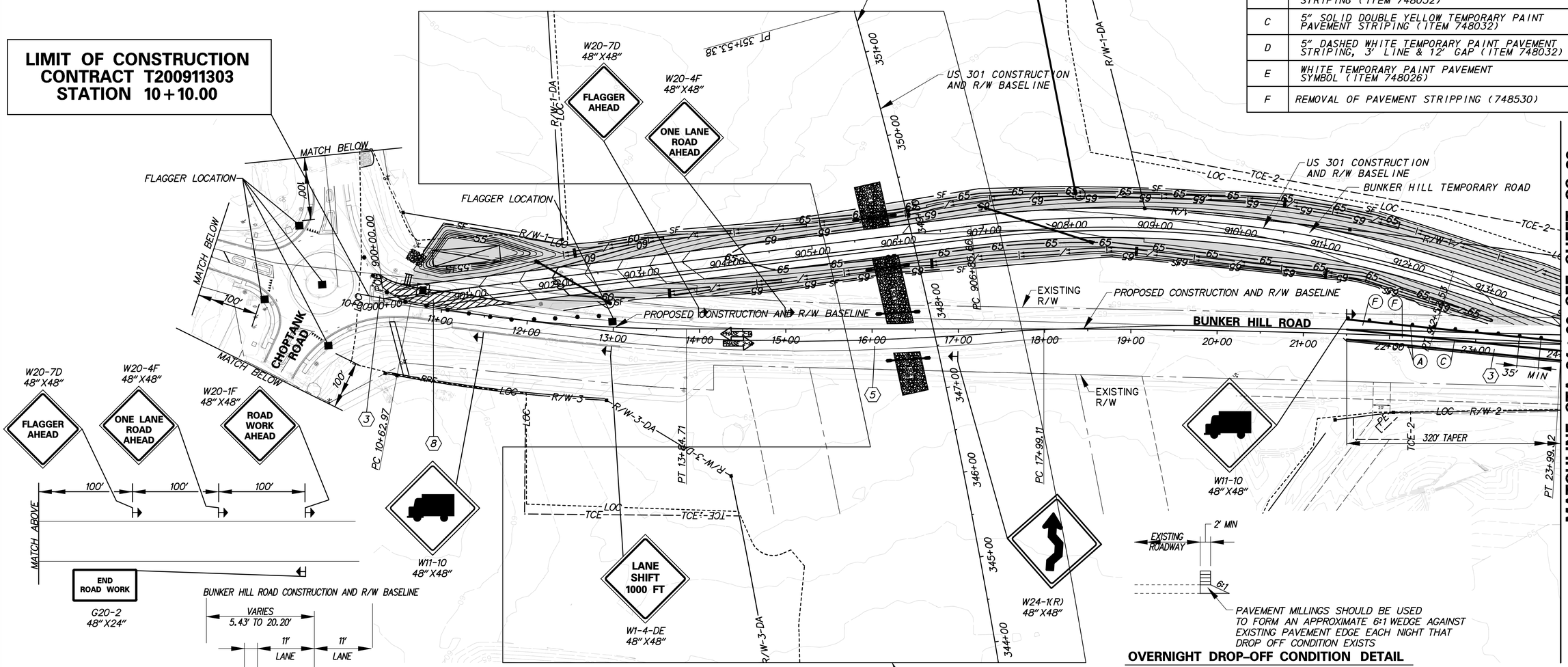
	WORK AREA THIS PHASE
	TEMPORARY CONSTRUCTION
	EROSION CONTROL BLANKET
	EXISTING TRAFFIC FLOW ARROW
	TEMPORARY WHITE PAVEMENT MARKING ARROW

TEMPORARY PAVEMENT MARKINGS LEGEND

SYMBOL	ITEM	QUANTITY
A	5" SOLID WHITE TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	500 LF
B	5" SOLID YELLOW TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	0 LF
C	5" SOLID DOUBLE YELLOW TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	500 LF
D	5" DASHED WHITE TEMPORARY PAINT PAVEMENT STRIPING, 3' LINE & 12' GAP (ITEM 748032)	0 LF
E	WHITE TEMPORARY PAINT PAVEMENT SYMBOL (ITEM 748026)	0 SF
F	REMOVAL OF PAVEMENT STRIPPING (748530)	375 SF

PROPOSED US 301 SEE SHEET 892

LIMIT OF CONSTRUCTION CONTRACT T200911303 STATION 10+10.00



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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301 LEVELS ROAD TO BUNKER HILL ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	EM
COUNTY		
NEW CASTLE	CHECKED BY:	MT

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN - PHASE 2-1A

CS-81
SHEET NO.
942
TOTAL SHTS.
1256

SEQUENCE OF CONSTRUCTION

1. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN.
2. REMOVE EXISTING STRIPING AS NECESSARY, PLACE TEMPORARY PAVEMENT STRIPING AS SHOWN.
3. REMOVE EXISTING TRAFFIC ISLAND AT TIE-IN OF TEMPORARY ROADWAY.
4. SHIFT TRAFFIC TO THE LANES DESIGNATED FOR PHASE 2-1A.
5. INSTALL DRUMS ALONG EDGE OF PHASE 2-1A CONSTRUCTION AREA.
6. WHILE TRUCK CROSSING IS ACTIVE UTILIZE TRAFFIC CONTROL CONFORMING TO TA-14B OF THE DELAWARE MUTCD.
7. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN.
8. CONSTRUCT REMAINDER BUNKER HILL TEMPORARY ROAD AS SHOWN UNDER SHORT TERM LANE CLOSURE AND LANE SHIFT CONFORMING TO TA-10 OF THE DELAWARE MUTCD WITH THE ADDITIONAL FLAGGERS SHOWN. FLAGGERS SHALL CONTROL TRAFFIC FLOW ON ALL APPROACHES OF THE ONE-LANE ROUNDABOUT. A LEAD FLAGGER SHALL BE DESIGNATED AND RADIO COMMUNICATION SHALL BE USED BY THE FLAGGERS. A SUPPLEMENTAL FLAGGER SHALL BE USED IN THE ROUNDABOUT ISLAND TO HELP DIRECT TRAFFIC. WORK MUST BE COMPLETED BY END OF CONSTRUCTION DAY.
9. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED AND MULCH PRIOR TO REMOVAL OF SEDIMENT CONTROL DEVICES.
10. REMOVE/RELOCATE DRUMS AS NEEDED PRIOR TO SWITCH TO PHASE 2-1B TRAFFIC CONTROL.

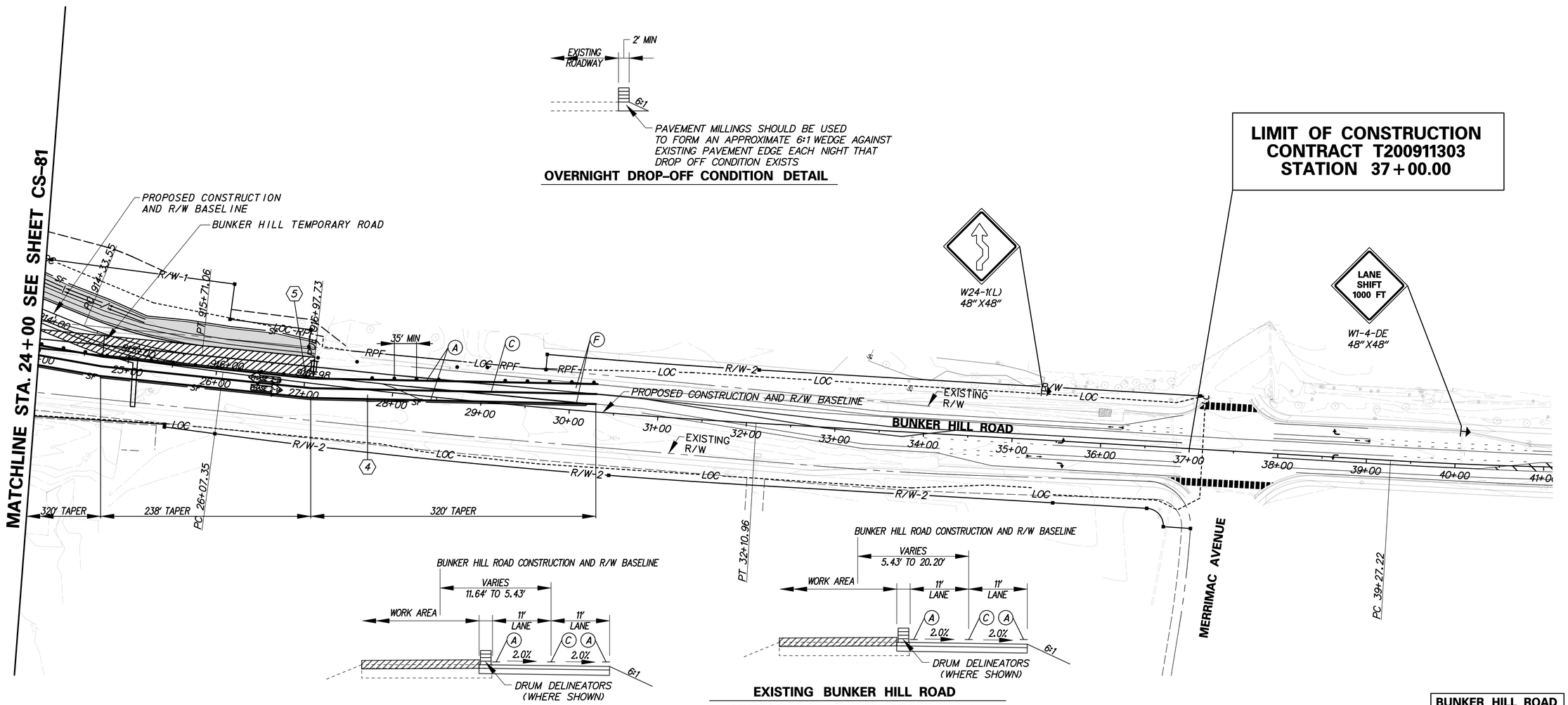
CONSTRUCTION PHASING LEGEND

	WORK AREA THIS PHASE
	TEMPORARY CONSTRUCTION
	EROSION CONTROL BLANKET
	EXISTING TRAFFIC FLOW ARROW
	TEMPORARY WHITE PAVEMENT MARKING ARROW

TEMPORARY PAVEMENT MARKINGS LEGEND

SYMBOL	ITEM	QUANTITY
A	5" SOLID WHITE TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	1258 LF
B	5" SOLID YELLOW TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	0 LF
C	5" SOLID DOUBLE YELLOW TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	1258 LF
D	5" DASHED WHITE TEMPORARY PAINT PAVEMENT STRIPING, 3' LINE & 12' GAP (ITEM 748032)	0 LF
E	WHITE TEMPORARY PAINT PAVEMENT SYMBOL (ITEM 748026)	0 SF
F	REMOVAL OF PAVEMENT STRIPPING (ITEM 748530)	944 SF

OVERNIGHT DROP-OFF CONDITION DETAIL



EXISTING BUNKER HILL ROAD
STATION 24+71.32 TO STATION 27+09.00

EXISTING BUNKER HILL ROAD
STATION 27+09.00 TO STA 30+29.32

NOTE: FOR BUNKER HILL TEMPORARY ROAD ALIGNMENT SEE HORIZONTAL AND VERTICAL CONTROL PLANS.
FOR BUNKER HILL TEMPORARY ROAD TYPICAL SECTIONS SEE SHEET 951-952.

BUNKER HILL ROAD

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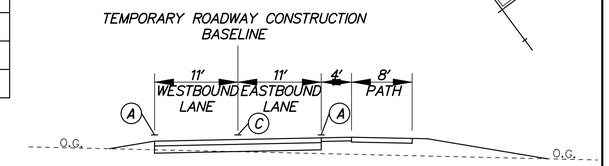
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 60 120 180 FEET	US 301 LEVELS ROAD TO BUNKER HILL ROAD	CONTRACT T200911303	BRIDGE NO.	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 2-1A	CS-82
				COUNTY NEW CASTLE	DESIGNED BY: EM		SHEET NO. 943
					CHECKED BY: MT		TOTAL SHTS. 1256

SEQUENCE OF CONSTRUCTION

1. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN.
2. REMOVE EXISTING STRIPING AS NECESSARY, PLACE TEMPORARY PAVEMENT STRIPING AS SHOWN.
3. SHIFT TRAFFIC TO THE LANES DESIGNATED FOR PHASE 2-1B.
4. INSTALL DRUMS ALONG EDGE OF PHASE 2-1B CONSTRUCTION AREA.
5. WHILE TRUCK CROSSING IS ACTIVE UTILIZE TRAFFIC CONTROL CONFORMING TO TA-14B OF THE DELAWARE MUTCD.
6. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN.
7. CONSTRUCT REMAINDER BUNKER HILL TEMPORARY ROAD AS SHOWN UNDER SHORT TERM LANE CLOSURE AND LANE SHIFT CONFORMING TO TA-10 OF THE DELAWARE MUTCD WITH THE ADDITIONAL FLAGGERS SHOWN. FLAGGERS SHALL CONTROL TRAFFIC FLOW ON ALL APPROACHES OF THE ONE-LANE ROUNDABOUT. A LEAD FLAGGER SHALL BE DESIGNATED AND RADIO COMMUNICATION SHALL BE USED BY THE FLAGGERS. A SUPPLEMENTAL FLAGGER SHALL BE USED IN THE ROUNDABOUT ISLAND TO HELP DIRECT TRAFFIC. WORK MUST BE COMPLETED BY END OF CONSTRUCTION DAY.
8. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED AND MULCH PRIOR TO REMOVAL OF SEDIMENT CONTROL DEVICES.
9. REMOVE/RELOCATE DRUMS AS NEEDED PRIOR TO SWITCH TO PHASE 2-2 TRAFFIC CONTROL.

CONSTRUCTION PHASING LEGEND

- WORK AREA THIS PHASE
- TEMPORARY CONSTRUCTION
- EROSION CONTROL BLANKET
- EXISTING TRAFFIC FLOW ARROW
- TEMPORARY WHITE PAVEMENT MARKING ARROW

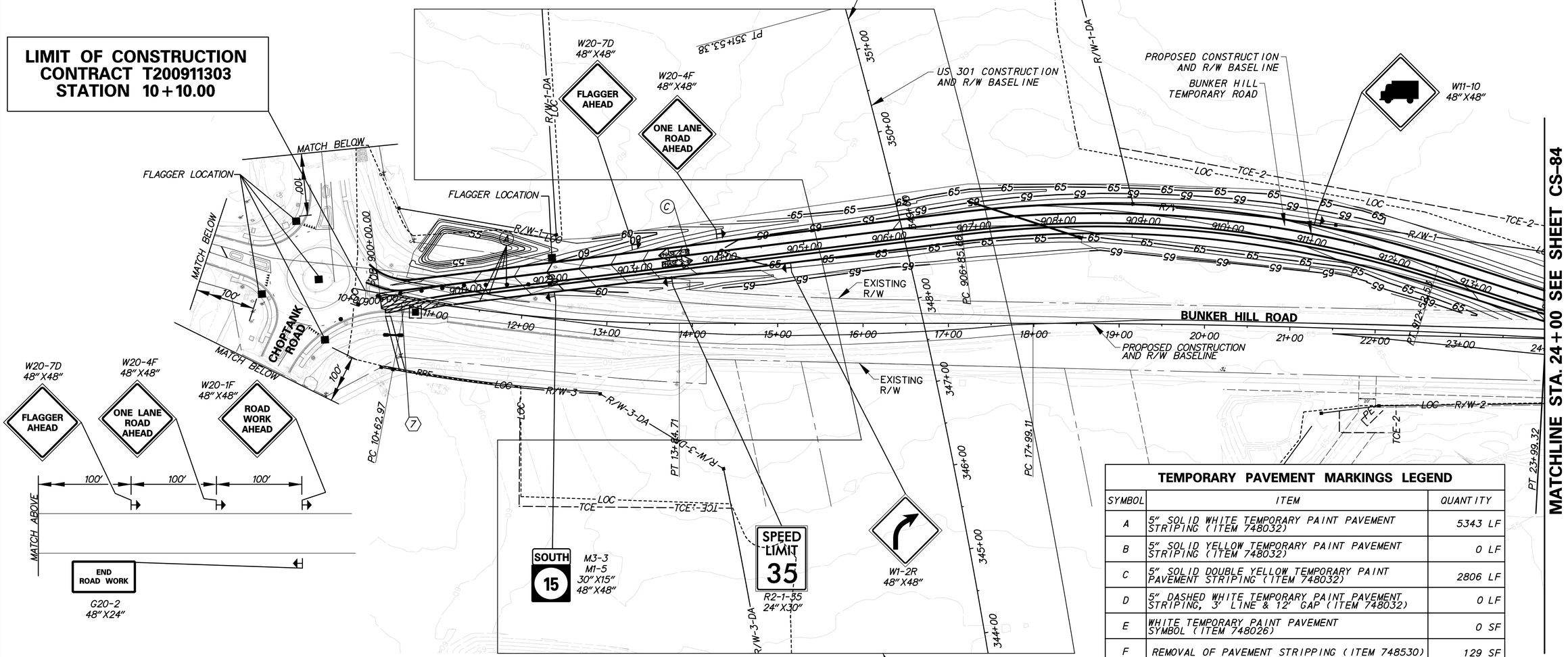


TEMPORARY ROADWAY

STA. 900+00.00 TO STA. 916+97.73

PROPOSED US 301 SEE SHEET 892

LIMIT OF CONSTRUCTION CONTRACT T200911303 STATION 10+10.00



MATCHLINE STA. 24+00 SEE SHEET CS-84

TEMPORARY PAVEMENT MARKINGS LEGEND

SYMBOL	ITEM	QUANTITY
A	5" SOLID WHITE TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	5343 LF
B	5" SOLID YELLOW TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	0 LF
C	5" SOLID DOUBLE YELLOW TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	2806 LF
D	5" DASHED WHITE TEMPORARY PAINT PAVEMENT STRIPING, 3' LINE & 12' GAP (ITEM 748032)	0 LF
E	WHITE TEMPORARY PAINT PAVEMENT SYMBOL (ITEM 748026)	0 SF
F	REMOVAL OF PAVEMENT STRIPPING (ITEM 748530)	129 SF

BUNKER HILL ROAD

REFER TO US 301, CONSTRUCTION, PHASING, M.O.T., AND EROSION CONTROL PLANS

NOTE: FOR BUNKER HILL TEMPORARY ROAD ALIGNMENT SEE HORIZONTAL AND VERTICAL CONTROL PLAN. FOR BUNKER HILL TEMPORARY ROAD TYPICAL SECTIONS SEE SHEET 951-952.

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301 LEVELS ROAD TO BUNKER HILL ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	EM
COUNTY		
NEW CASTLE	CHECKED BY:	MT

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN - PHASE 2-1B

CS-83
SHEET NO.
944
TOTAL SHTS.
1256

SEQUENCE OF CONSTRUCTION

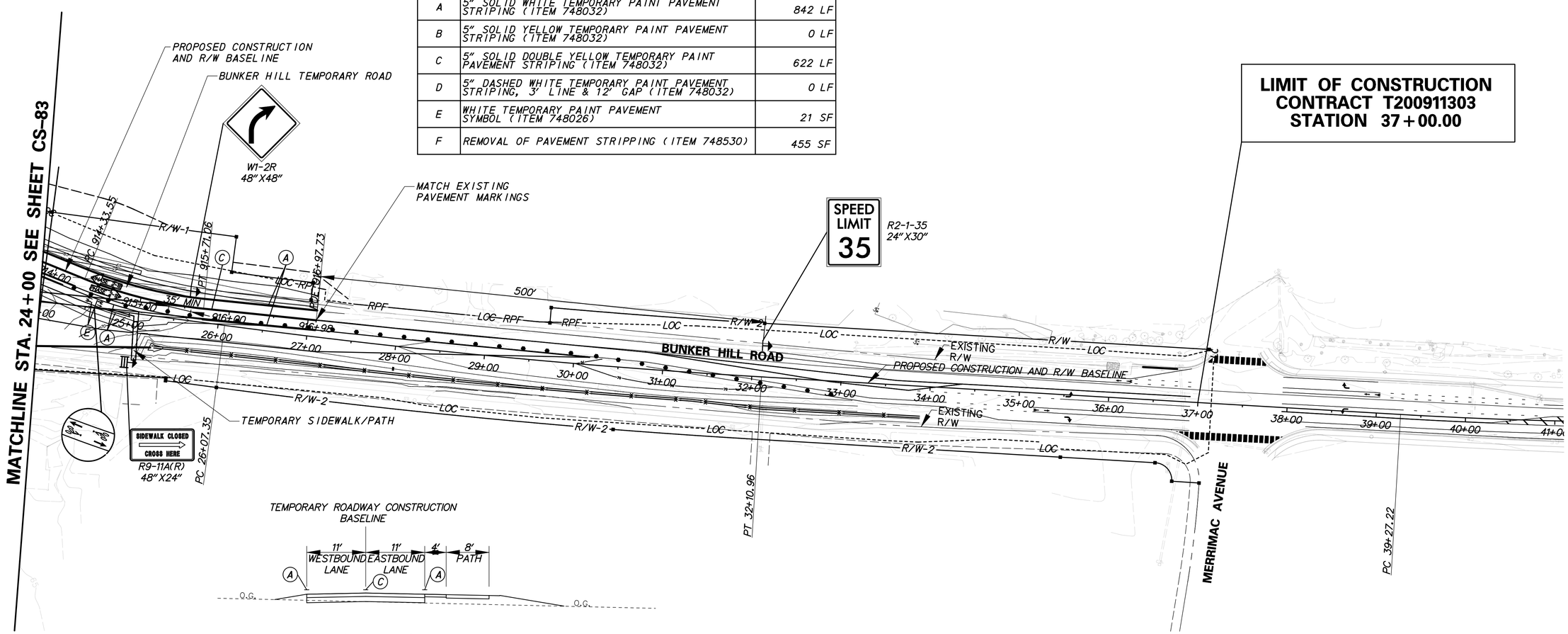
1. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN.
2. REMOVE EXISTING STRIPING AS NECESSARY, PLACE TEMPORARY PAVEMENT STRIPING AS SHOWN.
3. SHIFT TRAFFIC TO THE LANES DESIGNATED FOR PHASE 2-1B.
4. INSTALL DRUMS ALONG EDGE OF PHASE 2-1B CONSTRUCTION AREA.
5. WHILE TRUCK CROSSING IS ACTIVE UTILIZE TRAFFIC CONTROL CONFORMING TO TA-14B OF THE DELAWARE MUTCD.
6. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN.
7. CONSTRUCT REMAINDER BUNKER HILL TEMPORARY ROAD AS SHOWN UNDER SHORT TERM LANE CLOSURE AND LANE SHIFT CONFORMING TO TA-10 OF THE DELAWARE MUTCD WITH THE ADDITIONAL FLAGGERS SHOWN. FLAGGERS SHALL CONTROL TRAFFIC FLOW ON ALL APPROACHES OF THE ONE-LANE ROUNDABOUT. A LEAD FLAGGER SHALL BE DESIGNATED AND RADIO COMMUNICATION SHALL BE USED BY THE FLAGGERS. A SUPPLEMENTAL FLAGGER SHALL BE USED IN THE ROUNDABOUT ISLAND TO HELP DIRECT TRAFFIC. WORK MUST BE COMPLETED BY END OF CONSTRUCTION DAY.
8. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED AND MULCH PRIOR TO REMOVAL OF SEDIMENT CONTROL DEVICES.
9. REMOVE/RELOCATE DRUMS AS NEEDED PRIOR TO SWITCH TO PHASE 2-2 TRAFFIC CONTROL.

CONSTRUCTION PHASING LEGEND

	WORK AREA THIS PHASE
	TEMPORARY CONSTRUCTION
	EROSION CONTROL BLANKET
	EXISTING TRAFFIC FLOW ARROW
	TEMPORARY WHITE PAVEMENT MARKING ARROW

TEMPORARY PAVEMENT MARKINGS LEGEND

SYMBOL	ITEM	QUANTITY
A	5" SOLID WHITE TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	842 LF
B	5" SOLID YELLOW TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	0 LF
C	5" SOLID DOUBLE YELLOW TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	622 LF
D	5" DASHED WHITE TEMPORARY PAINT PAVEMENT STRIPING, 3' LINE & 12' GAP (ITEM 748032)	0 LF
E	WHITE TEMPORARY PAINT PAVEMENT SYMBOL (ITEM 748026)	21 SF
F	REMOVAL OF PAVEMENT STRIPPING (ITEM 748530)	455 SF



TEMPORARY ROADWAY

STA. 900+00.00 TO STA. 916+97.73

NOTE: FOR BUNKER HILL TEMPORARY ROAD ALIGNMENT SEE HORIZONTAL AND VERTICAL CONTROL PLANS. FOR BUNKER HILL TEMPORARY ROAD TYPICAL SECTIONS SEE SHEET 951-952.

BUNKER HILL ROAD

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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 60 120 180 FEET	US 301 LEVELS ROAD TO BUNKER HILL ROAD	CONTRACT T200911303	BRIDGE NO.	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 2-1B	CS-84
				COUNTY NEW CASTLE	DESIGNED BY: EM		SHEET NO. 945
					CHECKED BY: MT		TOTAL SHTS. 1256

SEQUENCE OF CONSTRUCTION

1. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN.
2. REMOVE EXISTING STRIPING AS NECESSARY, PLACE TEMPORARY PAVEMENT STRIPING AS SHOWN.
3. SHIFT TRAFFIC TO BUNKER HILL TEMPORARY ROAD AND LANES DESIGNATED FOR PHASE 2-2.
4. SHIFT PEDESTRIAN TRAFFIC FROM EXISTING PATH TO BUNKER HILL TEMPORARY ROAD PATH.
5. INSTALL DRUMS ALONG EDGE OF PHASE 2-2 CONSTRUCTION AREA.
6. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN.
7. WHILE TRUCK CROSSING IS ACTIVE UTILIZE TRAFFIC CONTROL CONFORMING TO TA-14B OF THE DELAWARE MUTCD.
8. CONSTRUCT PROPOSED BUNKER HILL ROAD AND BRIDGE AS SHOWN. INSTALL DRAINAGE INLET DI 300 AND ADJUST SWALE TO MAINTAIN DRAINAGE AS PROPOSED BUNKER HILL ROAD FILL IS PLACED.
9. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED AND MULCH PRIOR TO REMOVAL OF SEDIMENT CONTROL DEVICES.
10. REMOVE/RELOCATE DRUMS AS NEEDED PRIOR TO SWITCH TO PHASE 2-3A TRAFFIC CONTROL.

EROSION CONTROL BLANKET

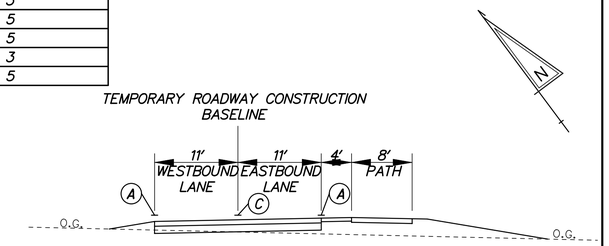
NO.	SY	LENGTH	WIDTH	TYPE
306	912	300′	20′	3
307	2920	600′	40′	3
308	210	315′	6′	5
309	545	200′	40′	3
310	2271	400′	40′	3
311	194	291′	6′	5
312	984	164′	6′	5
313	3808	700′	40′	3
314	197	295′	6′	5

STONE CHECK DAM

NO.	D. AREA	DEPTH	STATION
308	1.14	1.00	12+62
309	0.29	1.00	21+20
310	0.43	1.00	21+84

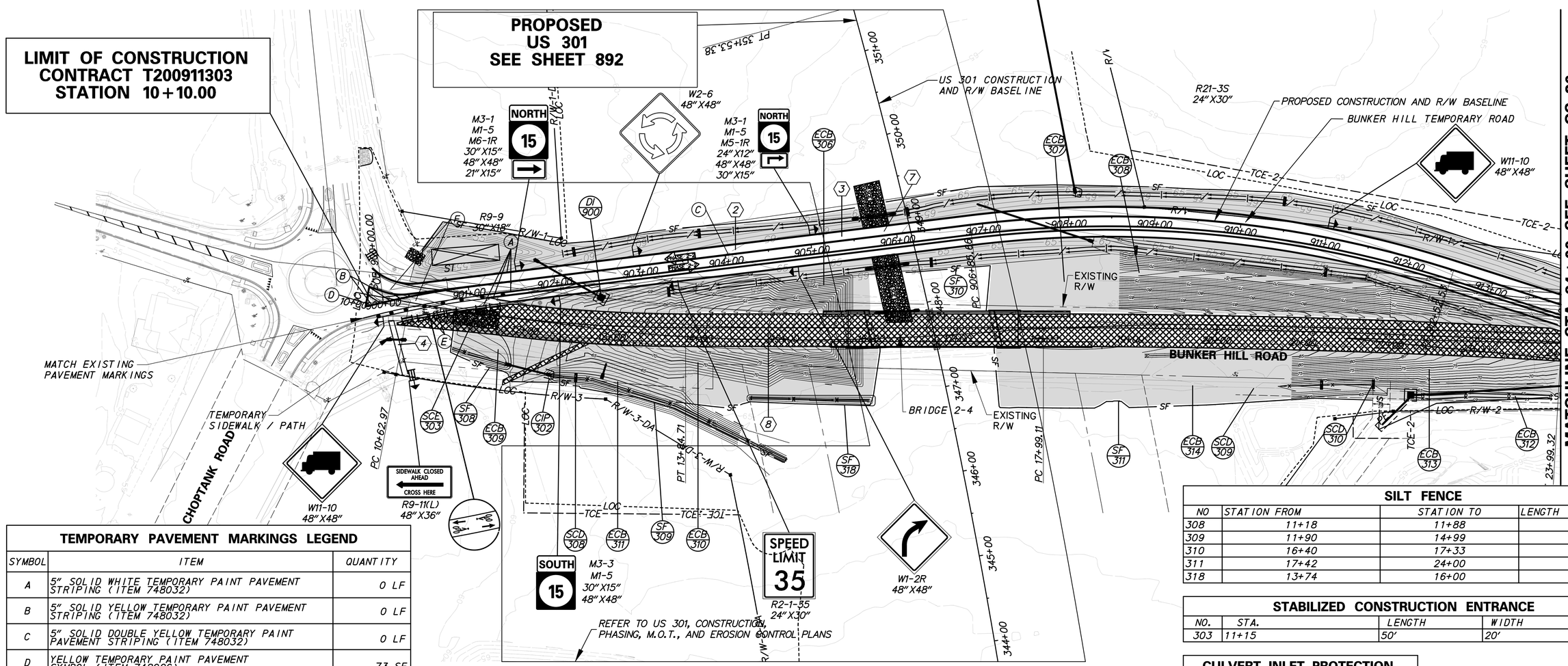
CONSTRUCTION PHASING LEGEND

- WORK AREA THIS PHASE
- TEMPORARY CONSTRUCTION
- EROSION CONTROL BLANKET
- EXISTING TRAFFIC FLOW ARROW
- TEMPORARY WHITE PAVEMENT MARKING ARROW



TEMPORARY ROADWAY

STA. 900+00.00 TO STA. 916+97.73



TEMPORARY PAVEMENT MARKINGS LEGEND

SYMBOL	ITEM	QUANTITY
A	5″ SOLID WHITE TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	0 LF
B	5″ SOLID YELLOW TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	0 LF
C	5″ SOLID DOUBLE YELLOW TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	0 LF
D	YELLOW TEMPORARY PAINT PAVEMENT SYMBOL (ITEM 748026)	73 SF
E	WHITE TEMPORARY PAINT PAVEMENT SYMBOL (ITEM 748026)	21 SF
F	REMOVAL OF PAVEMENT STRIPPING (ITEM 748530)	0 SF

DRAINAGE INLET SCHEDULE

NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G EL.	INV. EL.
900	902+48.13	25.80	34″ X 18″	1	60.50	58.43

SILT FENCE

NO	STATION FROM	STATION TO	LENGTH
308	11+18	11+88	106 LF
309	11+90	14+99	452 LF
310	16+40	17+33	150 LF
311	17+42	24+00	726 LF
318	13+74	16+00	294 LF

STABILIZED CONSTRUCTION ENTRANCE

NO.	STA.	LENGTH	WIDTH
303	11+15	50′	20′

CULVERT INLET PROTECTION

NO.	D. AREA	STATION
302	1.14	12+34

BUNKER HILL ROAD

NOTE: FOR BUNKER HILL TEMPORARY ROAD ALIGNMENT SEE HORIZONTAL AND VERTICAL CONTROL PLANS. FOR BUNKER HILL TEMPORARY ROAD TYPICAL SECTIONS SEE SHEET 951-952.

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301 LEVELS ROAD TO BUNKER HILL ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	EM
COUNTY		
NEW CASTLE	CHECKED BY:	MT

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 2-2

CS-85
SHEET NO.
946
TOTAL SHTS.
1256

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SEQUENCE OF CONSTRUCTION

1. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN.
2. REMOVE EXISTING STRIPING AS NECESSARY, PLACE TEMPORARY PAVEMENT STRIPING AS SHOWN.
3. SHIFT TRAFFIC TO BUNKER HILL TEMPORARY ROAD AND LANES DESIGNATED FOR PHASE 2-2.
4. SHIFT PEDESTRIAN TRAFFIC FROM EXISTING PATH TO BUNKER HILL TEMPORARY ROAD PATH.
5. INSTALL DRUMS ALONG EDGE OF PHASE 2-2 CONSTRUCTION AREA.
6. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN.
7. WHILE TRUCK CROSSING IS ACTIVE UTILIZE TRAFFIC CONTROL CONFORMING TO TA-14B OF THE DELAWARE MUTCD.
8. CONSTRUCT PROPOSED BUNKER HILL ROAD AND BRIDGE AS SHOWN. INSTALL DRAINAGE INLET DI 900 AND ADJUST SWALE TO MAINTAIN DRAINAGE AS BUNKER HILL ROAD FILL IS PLACED.
9. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED AND MULCH PRIOR TO REMOVAL OF SEDIMENT CONTROL DEVICES.
10. REMOVE/RELOCATE DRUMS AS NEEDED PRIOR TO SWITCH TO PHASE 2-3A TRAFFIC CONTROL.

CONSTRUCTION PHASING LEGEND

	WORK AREA THIS PHASE
	TEMPORARY CONSTRUCTION
	EROSION CONTROL BLANKET
	EXISTING TRAFFIC FLOW ARROW
	TEMPORARY WHITE PAVEMENT MARKING ARROW

STONE CHECK DAM

NO.	D. AREA	DEPTH	STATION
311	0.35	1.00	25+57
312	0.21	1.00	28+80
313	0.08	1.00	32+34
314	0.20	1.00	31+94

SILT FENCE

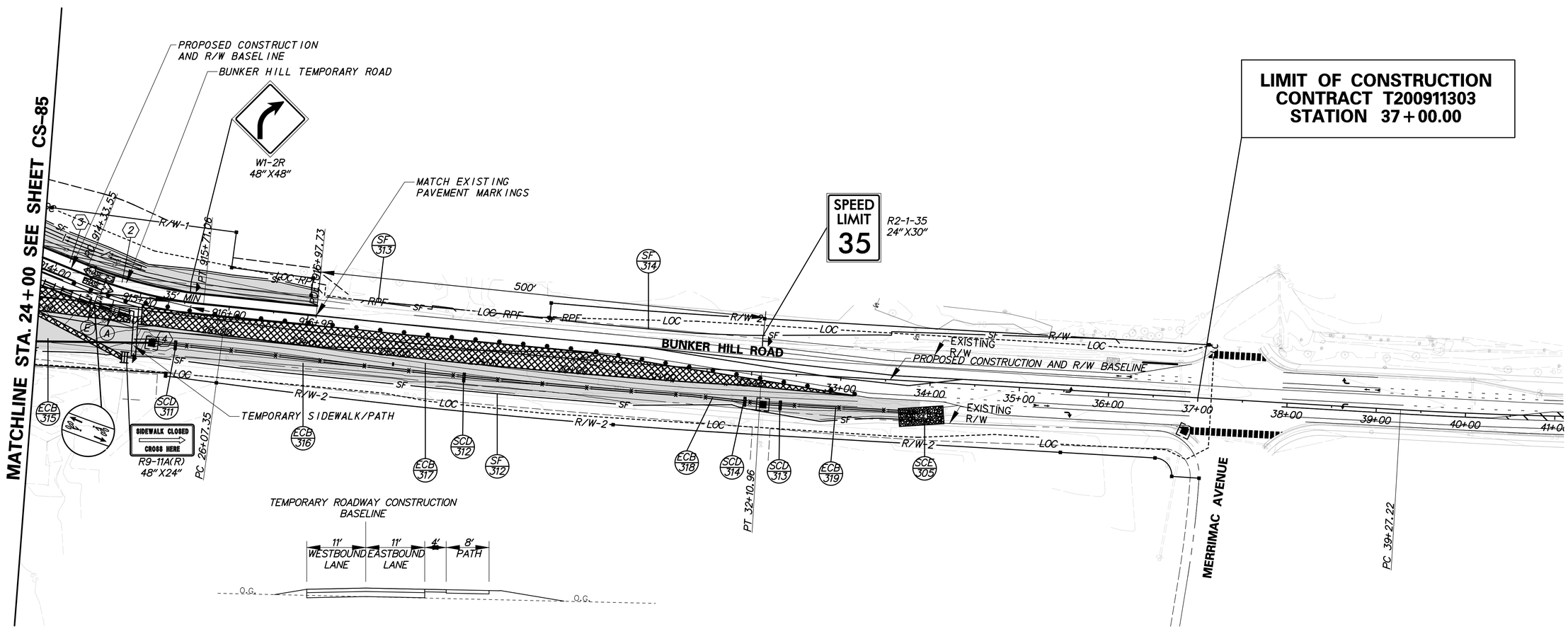
NO	STATION FROM	STATION TO	LENGTH
312	24+00	33+93	998 LF
313	27+57	28+63	110 LF
314	29+07	36+09	708 LF

EROSION CONTROL BLANKET

NO.	SY	LENGTH	WIDTH	TYPE
315	166	100′	15′	3
316	601	900′	6′	5
317	2406	900′	20′	3
318	53	80′	6′	5
319	118	176′	6′	5

STABILIZED CONSTRUCTION ENTRANCE

NO.	STA.	LENGTH	WIDTH
305	34+17	50′	20′



TEMPORARY ROADWAY

STA. 900+00.00 TO STA. 916+97.73

NOTE: FOR BUNKER HILL TEMPORARY ROAD ALIGNMENT SEE HORIZONTAL AND VERTICAL CONTROL PLANS. FOR BUNKER HILL TEMPORARY ROAD TYPICAL SECTIONS SEE SHEET 951-952.

BUNKER HILL ROAD

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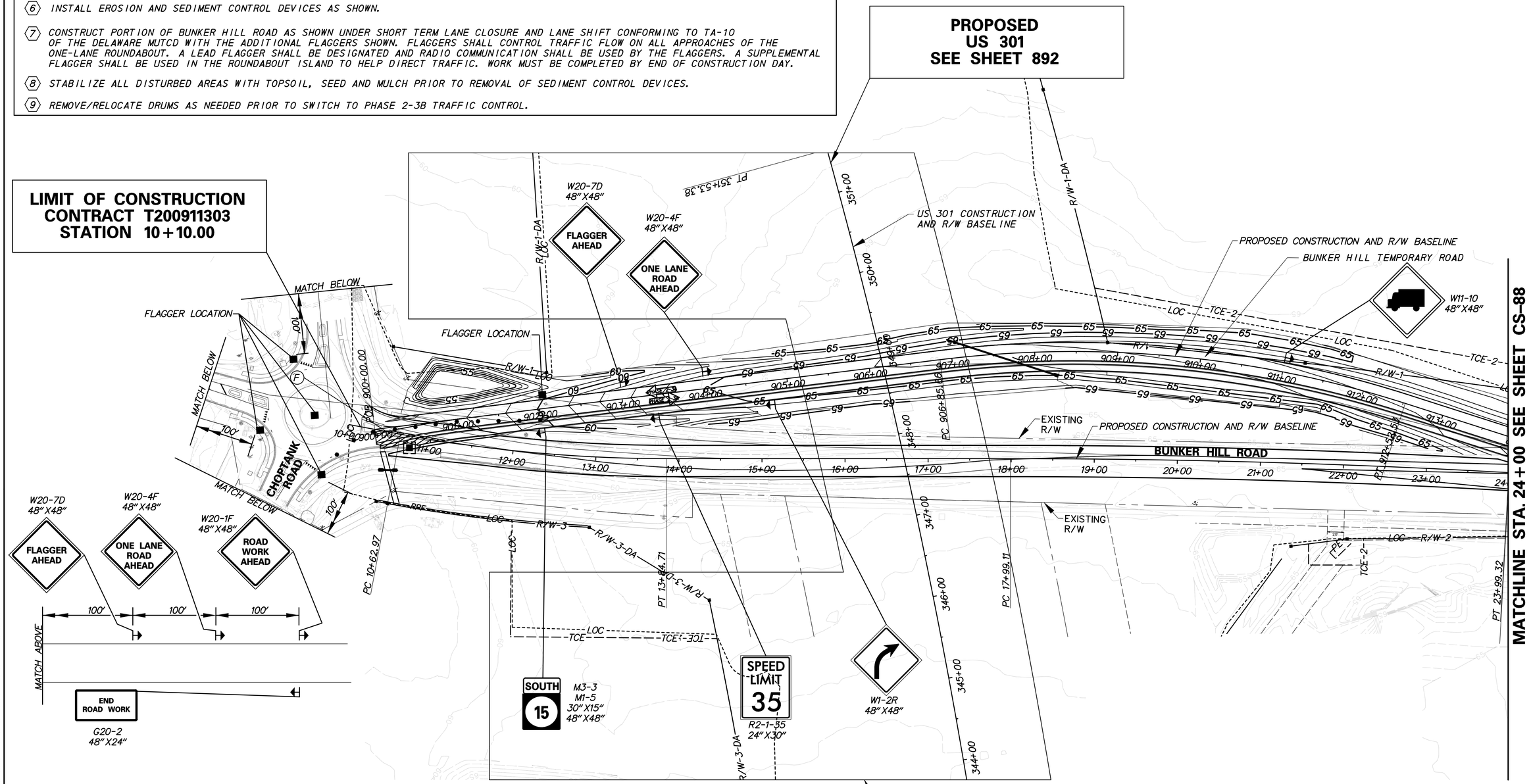
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 60 120 180 FEET	US 301 LEVELS ROAD TO BUNKER HILL ROAD	CONTRACT T200911303	BRIDGE NO.	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 2-2	CS-86
				COUNTY NEW CASTLE	DESIGNED BY: EM		SHEET NO. 947
					CHECKED BY: MT		TOTAL SHTS. 1256

SEQUENCE OF CONSTRUCTION

1. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN.
2. REMOVE EXISTING STRIPING AS NECESSARY, PLACE TEMPORARY PAVEMENT STRIPING AS SHOWN.
3. SHIFT TRAFFIC TO THE LANES DESIGNATED FOR PHASE 2-3A.
4. INSTALL DRUMS ALONG EDGE OF PHASE 2-3A CONSTRUCTION AREA.
5. WHILE TRUCK CROSSING IS ACTIVE UTILIZE TRAFFIC CONTROL CONFORMING TO TA-14B OF THE DELAWARE MUTCD.
6. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN.
7. CONSTRUCT PORTION OF BUNKER HILL ROAD AS SHOWN UNDER SHORT TERM LANE CLOSURE AND LANE SHIFT CONFORMING TO TA-10 OF THE DELAWARE MUTCD WITH THE ADDITIONAL FLAGGERS SHOWN. FLAGGERS SHALL CONTROL TRAFFIC FLOW ON ALL APPROACHES OF THE ONE-LANE ROUNDABOUT. A LEAD FLAGGER SHALL BE DESIGNATED AND RADIO COMMUNICATION SHALL BE USED BY THE FLAGGERS. A SUPPLEMENTAL FLAGGER SHALL BE USED IN THE ROUNDABOUT ISLAND TO HELP DIRECT TRAFFIC. WORK MUST BE COMPLETED BY END OF CONSTRUCTION DAY.
8. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED AND MULCH PRIOR TO REMOVAL OF SEDIMENT CONTROL DEVICES.
9. REMOVE/RELOCATE DRUMS AS NEEDED PRIOR TO SWITCH TO PHASE 2-3B TRAFFIC CONTROL.

CONSTRUCTION PHASING LEGEND

	WORK AREA THIS PHASE
	TEMPORARY CONSTRUCTION
	EROSION CONTROL BLANKET
	EXISTING TRAFFIC FLOW ARROW
	TEMPORARY WHITE PAVEMENT MARKING ARROW



REFER TO US 301, CONSTRUCTION, PHASING, M.O.T., AND EROSION CONTROL PLANS

NOTE: FOR BUNKER HILL TEMPORARY ROAD ALIGNMENT SEE HORIZONTAL AND VERTICAL CONTROL PLAN. FOR BUNKER HILL TEMPORARY ROAD TYPICAL SECTIONS SEE SHEET 951-952.

BUNKER HILL ROAD

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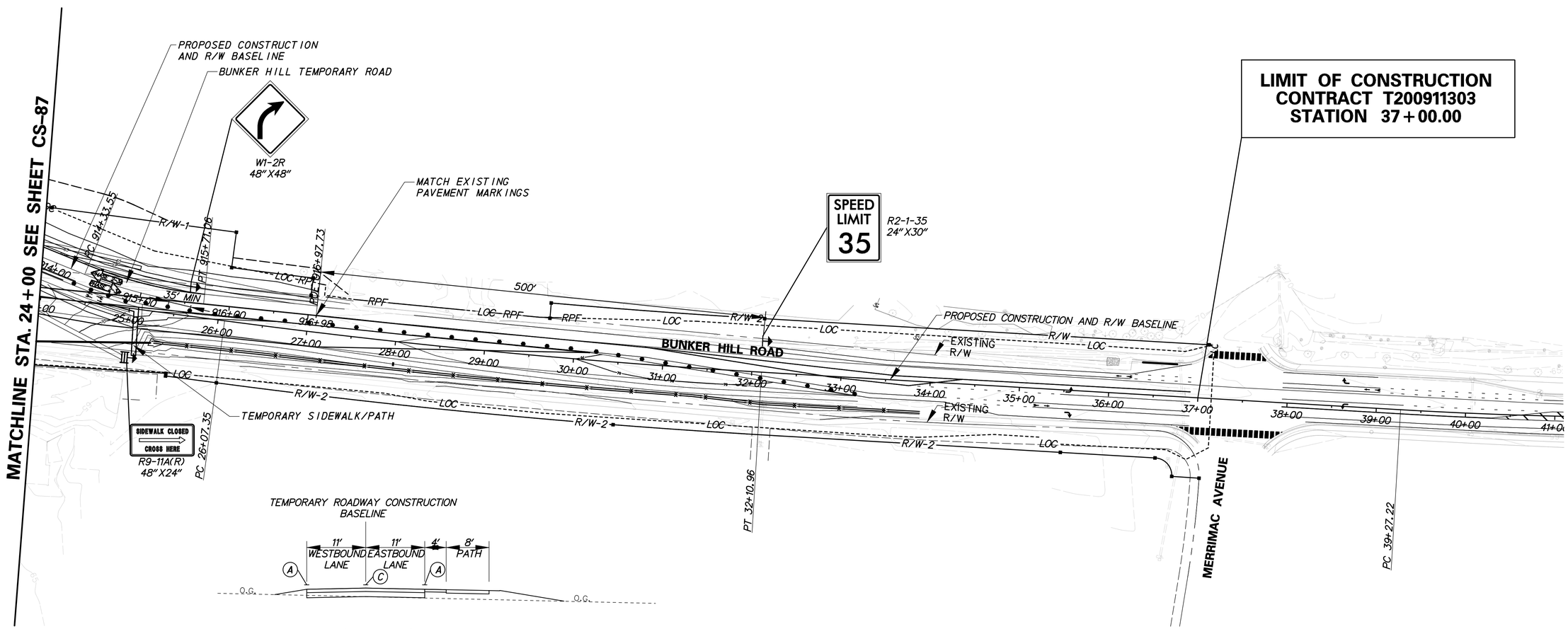
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 60 120 180 FEET	US 301 LEVELS ROAD TO BUNKER HILL ROAD	CONTRACT T200911303	BRIDGE NO.	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 2-3A	CS-87
				COUNTY NEW CASTLE	DESIGNED BY: EM		SHEET NO. 948
					CHECKED BY: MT		TOTAL SHTS. 1256

SEQUENCE OF CONSTRUCTION

1. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN.
2. REMOVE EXISTING STRIPING AS NECESSARY, PLACE TEMPORARY PAVEMENT STRIPING AS SHOWN.
3. SHIFT TRAFFIC TO THE LANES DESIGNATED FOR PHASE 2-3A.
4. INSTALL DRUMS ALONG EDGE OF PHASE 2-3A CONSTRUCTION AREA.
5. WHILE TRUCK CROSSING IS ACTIVE UTILIZE TRAFFIC CONTROL CONFORMING TO TA-14B OF THE DELAWARE MUTCD.
6. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN.
7. CONSTRUCT PORTION OF BUNKER HILL ROAD AS SHOWN UNDER SHORT TERM LANE CLOSURE AND LANE SHIFT CONFORMING TO TA-10 OF THE DELAWARE MUTCD WITH THE ADDITIONAL FLAGGERS SHOWN. FLAGGERS SHALL CONTROL TRAFFIC FLOW ON ALL APPROACHES OF THE ONE-LANE ROUNDABOUT. A LEAD FLAGGER SHALL BE DESIGNATED AND RADIO COMMUNICATION SHALL BE USED BY THE FLAGGERS. A SUPPLEMENTAL FLAGGER SHALL BE USED IN THE ROUNDABOUT ISLAND TO HELP DIRECT TRAFFIC. WORK MUST BE COMPLETED BY END OF CONSTRUCTION DAY.
8. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED AND MULCH PRIOR TO REMOVAL OF SEDIMENT CONTROL DEVICES.
9. REMOVE/RELOCATE DRUMS AS NEEDED PRIOR TO SWITCH TO PHASE 2-3B TRAFFIC CONTROL.

CONSTRUCTION PHASING LEGEND

	WORK AREA THIS PHASE
	TEMPORARY CONSTRUCTION
	EROSION CONTROL BLANKET
	EXISTING TRAFFIC FLOW ARROW
	TEMPORARY WHITE PAVEMENT MARKING ARROW



BUNKER HILL ROAD

NOTE: FOR BUNKER HILL TEMPORARY ROAD ALIGNMENT SEE HORIZONTAL AND VERTICAL CONTROL PLANS. FOR BUNKER HILL TEMPORARY ROAD TYPICAL SECTIONS SEE SHEET 951-952.

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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 60 120 180 FEET	US 301 LEVELS ROAD TO BUNKER HILL ROAD	CONTRACT T200911303	BRIDGE NO.	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 2–3A	CS-88
				COUNTY NEW CASTLE	DESIGNED BY: EM		SHEET NO. 949
					CHECKED BY: MT		TOTAL SHTS. 1256

SEQUENCE OF CONSTRUCTION

1. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN.
2. REMOVE EXISTING STRIPING AS NECESSARY, PLACE TEMPORARY PAVEMENT STRIPING AS SHOWN.
3. SHIFT TRAFFIC TO THE LANES DESIGNATED FOR PHASE 2-3B.
4. INSTALL DRUMS ALONG EDGE OF PHASE 2-3B CONSTRUCTION AREA.
5. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN.
6. CONSTRUCT PORTION OF BUNKER HILL ROAD AS SHOWN UNDER SHORT TERM LANE CLOSURE AND LANE SHIFT CONFORMING TO TA-10 OF THE DELAWARE MUTCD WITH THE ADDITIONAL FLAGGERS SHOWN. FLAGGERS SHALL CONTROL TRAFFIC FLOW ON ALL APPROACHES OF THE ONE-LANE ROUNDABOUT. A LEAD FLAGGER SHALL BE DESIGNATED AND RADIO COMMUNICATION SHALL BE USED BY THE FLAGGERS. A SUPPLEMENTAL FLAGGER SHALL BE USED IN THE ROUNDABOUT ISLAND TO HELP DIRECT TRAFFIC. WORK MUST BE COMPLETED BY END OF CONSTRUCTION DAY.
7. CONSTRUCT PROPOSED TRAFFIC ISLAND.
8. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED AND MULCH PRIOR TO REMOVAL OF SEDIMENT CONTROL DEVICES.
9. REMOVE/RELOCATE DRUMS AS NEEDED PRIOR TO SWITCH TO PHASE 2-4A TRAFFIC CONTROL.

CONSTRUCTION PHASING LEGEND

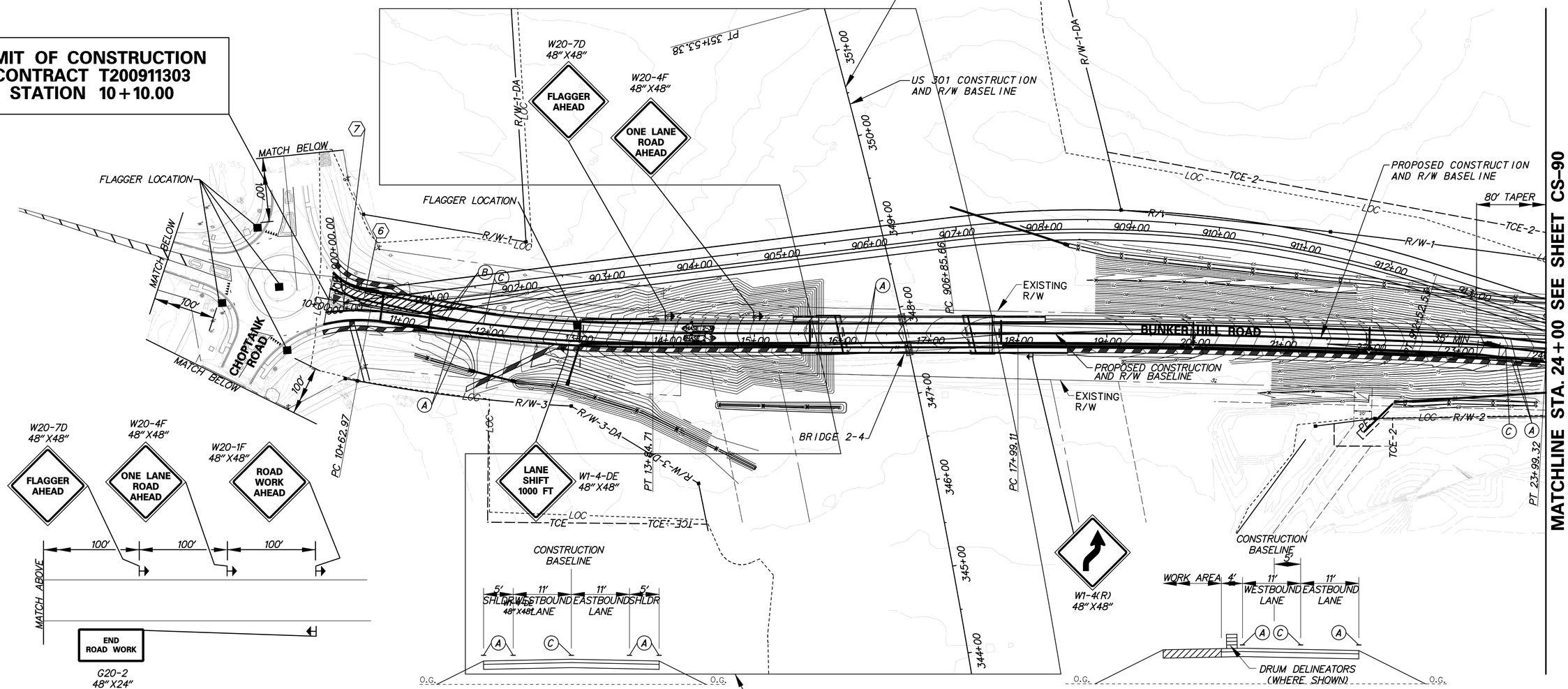
	WORK AREA THIS PHASE
	TEMPORARY CONSTRUCTION
	EROSION CONTROL BLANKET
	EXISTING TRAFFIC FLOW ARROW
	TEMPORARY WHITE PAVEMENT MARKING ARROW

TEMPORARY PAVEMENT MARKINGS LEGEND

SYMBOL	ITEM	QUANTITY
A	5" SOLID WHITE TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	3975 LF
B	5" SOLID YELLOW TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	306 LF
C	5" SOLID DOUBLE YELLOW TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	2780 LF
D	5" DASHED WHITE TEMPORARY PAINT PAVEMENT STRIPING, 3' LINE & 12' GAP (ITEM 748032)	0 LF
E	WHITE TEMPORARY PAINT PAVEMENT SYMBOL (ITEM 748026)	0 SF
F	REMOVAL OF PAVEMENT STRIPPING (ITEM 748530)	0 SF

PROPOSED US 301 SEE SHEET 892

LIMIT OF CONSTRUCTION CONTRACT T200911303 STATION 10+10.00



BUNKER HILL ROAD

STA. 12+00.00 TO STA. 23+20.00

BUNKER HILL ROAD

STA. 23+20.00 TO STA. 30+19.00

BUNKER HILL ROAD

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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 60 120 180 FEET	**US 301 LEVELS ROAD TO BUNKER HILL ROAD**	CONTRACT T200911303 / COUNTY NEW CASTLE	BRIDGE NO. / DESIGNED BY: EM / CHECKED BY: MT	**CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 2-3B**	CS-89 / SHEET NO. 950 / TOTAL SHTS. 1256

SEQUENCE OF CONSTRUCTION

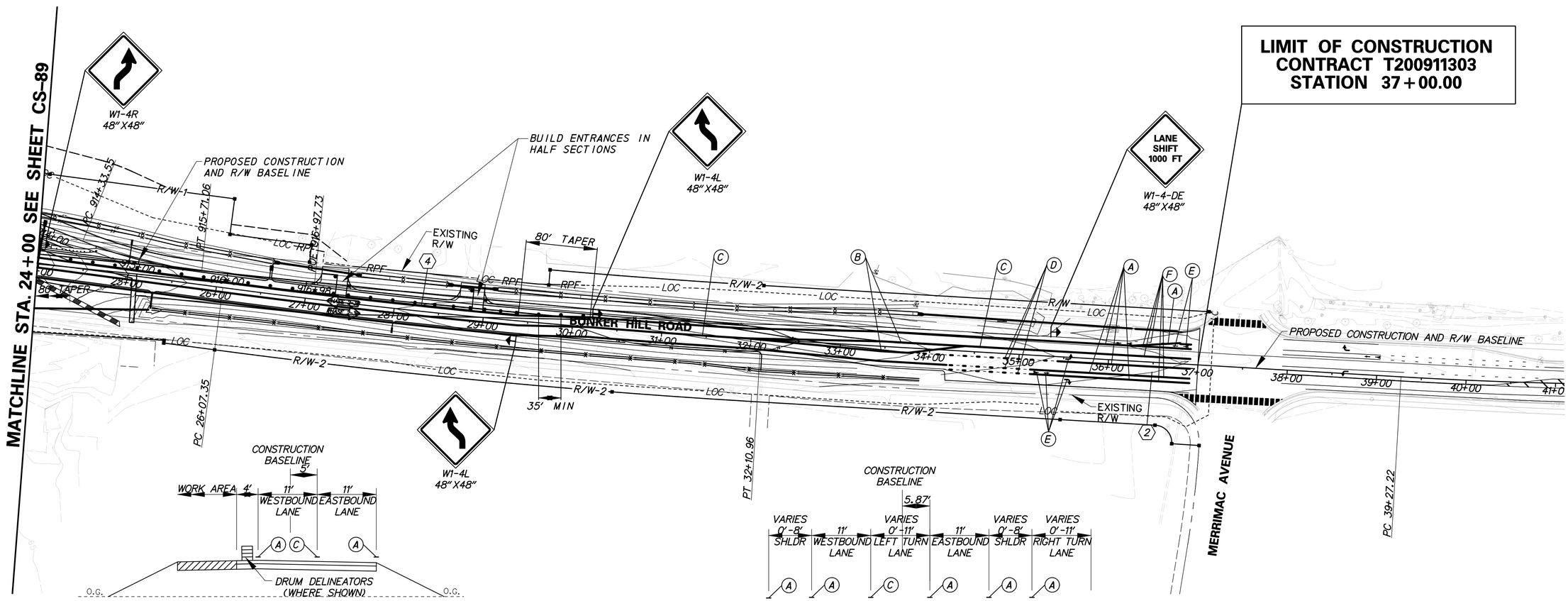
1. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN.
2. REMOVE EXISTING STRIPING AS NECESSARY, PLACE TEMPORARY PAVEMENT STRIPING AS SHOWN.
3. SHIFT TRAFFIC TO THE LANES DESIGNATED FOR PHASE 2-3B.
4. INSTALL DRUMS ALONG EDGE OF PHASE 2-3B CONSTRUCTION AREA.
5. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN.
6. CONSTRUCT PORTION OF BUNKER HILL ROAD AS SHOWN UNDER SHORT TERM LANE CLOSURE AND LANE SHIFT CONFORMING TO TA-10 OF THE DELAWARE MUTCD WITH THE ADDITIONAL FLAGGERS SHOWN. FLAGGERS SHALL CONTROL TRAFFIC FLOW ON ALL APPROACHES OF THE ONE-LANE ROUNDABOUT. A LEAD FLAGGER SHALL BE DESIGNATED AND RADIO COMMUNICATION SHALL BE USED BY THE FLAGGERS. A SUPPLEMENTAL FLAGGER SHALL BE USED IN THE ROUNDABOUT ISLAND TO HELP DIRECT TRAFFIC. WORK MUST BE COMPLETED BY END OF CONSTRUCTION DAY.
7. CONSTRUCT PROPOSED TRAFFIC ISLAND.
8. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED AND MULCH PRIOR TO REMOVAL OF SEDIMENT CONTROL DEVICES.
9. REMOVE/RELOCATE DRUMS AS NEEDED PRIOR TO SWITCH TO PHASE 2-4A TRAFFIC CONTROL.

CONSTRUCTION PHASING LEGEND

	WORK AREA THIS PHASE
	TEMPORARY CONSTRUCTION
	EROSION CONTROL BLANKET
	EXISTING TRAFFIC FLOW ARROW
	TEMPORARY WHITE PAVEMENT MARKING ARROW

TEMPORARY PAVEMENT MARKINGS LEGEND

SYMBOL	ITEM	QUANTITY
A	5" SOLID WHITE TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	2877 LF
B	5" SOLID YELLOW TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	543 LF
C	5" SOLID DOUBLE YELLOW TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	1982 LF
D	5" DASHED WHITE TEMPORARY PAINT PAVEMENT STRIPING, 3' LINE & 12' GAP (ITEM 748032)	72 LF
E	WHITE TEMPORARY PAINT PAVEMENT SYMBOL (ITEM 748026)	49 SF
F	REMOVAL OF PAVEMENT STRIPPING (ITEM 748530)	2528 SF



BUNKER HILL ROAD

STA. 23+20.00 TO STA. 30+19.00

BUNKER HILL ROAD

STA. 30+19.00 TO STA. 37+00.00

BUNKER HILL ROAD

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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 60 120 180 FEET	**US 301 LEVELS ROAD TO BUNKER HILL ROAD**	CONTRACT T200911303 / COUNTY NEW CASTLE	BRIDGE NO. / DESIGNED BY: EM / CHECKED BY: MT	**CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 2-3B**	CS-90 / SHEET NO. 951 / TOTAL SHTS. 1256

SEQUENCE OF CONSTRUCTION

1. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN.
2. REMOVE EXISTING STRIPING AS NECESSARY, PLACE TEMPORARY PAVEMENT STRIPING AS SHOWN.
3. SHIFT TRAFFIC TO BUNKER HILL ROAD LANES DESIGNATED FOR PHASE 2-4A.
4. INSTALL DRUMS ALONG EDGE OF PHASE 2-4A CONSTRUCTION AREA.
5. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN.
6. REMOVE BUNKER HILL TEMPORARY ROAD.
7. CONSTRUCT DRAINAGE SWALES ON NORTH SIDE OF BUNKER HILL ROAD.
8. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED AND MULCH PRIOR TO REMOVAL OF SEDIMENT CONTROL DEVICES.
9. REMOVE / RELOCATE DRUMS AS NEEDED PRIOR TO SWITCH TO PHASE 2-4B TRAFFIC CONTROL.

CONSTRUCTION PHASING LEGEND

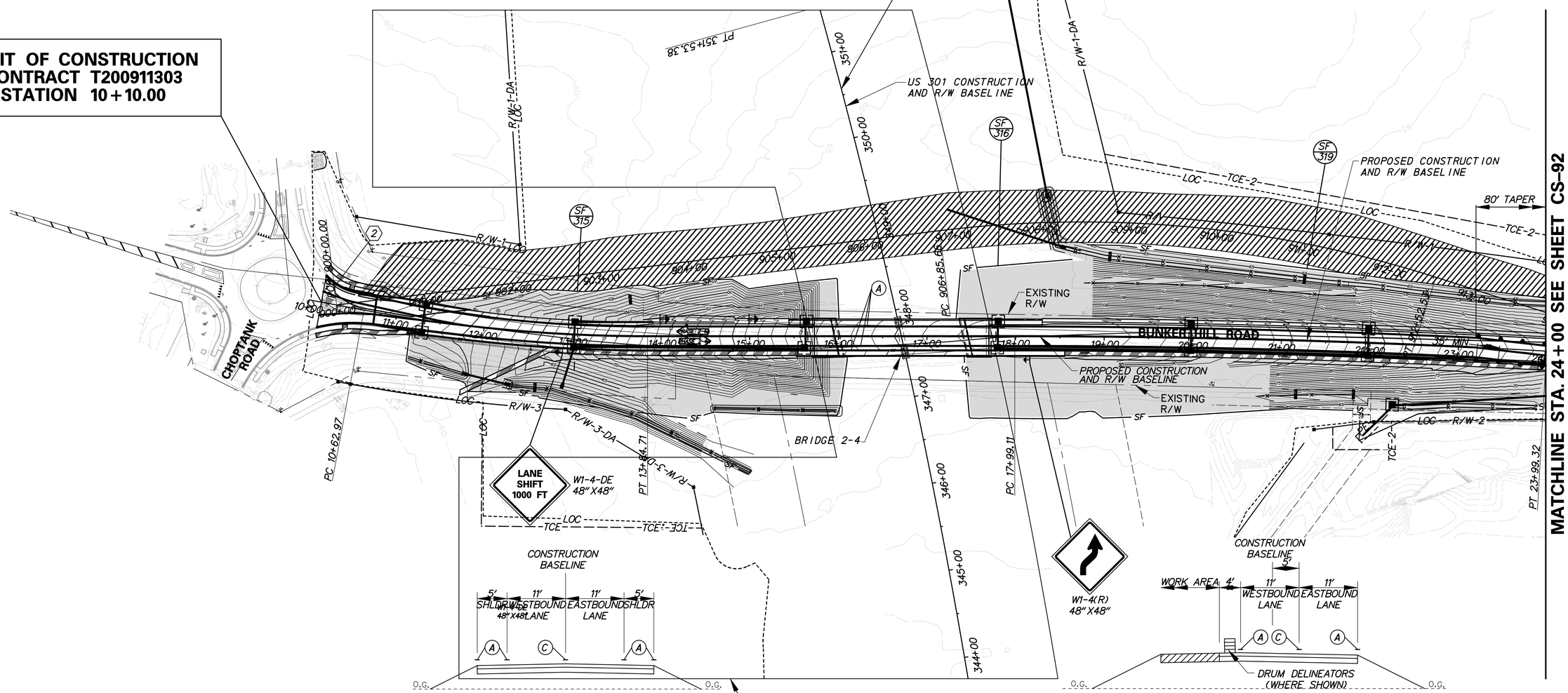
	WORK AREA THIS PHASE
	TEMPORARY CONSTRUCTION
	EROSION CONTROL BLANKET
	EXISTING TRAFFIC FLOW ARROW
	TEMPORARY WHITE PAVEMENT MARKING ARROW

PROPOSED US 301 SEE SHEET 892

SILT FENCE

NO	STATION FROM	STATION TO	LENGTH
315	11+36	16+00	511 LF
316	17+33	18+65	484 LF
319	18+83	24+00	517 LF

LIMIT OF CONSTRUCTION CONTRACT T200911303 STATION 10+10.00



BUNKER HILL ROAD

STA. 12+00.00 TO STA. 23+20.00

REFER TO US 301, CONSTRUCTION, PHASING, M.O.T., AND EROSION CONTROL PLANS

BUNKER HILL ROAD

STA. 23+20.00 TO STA. 30+19.00

BUNKER HILL ROAD

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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 60 120 180 FEET	**US 301 LEVELS ROAD TO BUNKER HILL ROAD**	CONTRACT T200911303	BRIDGE NO.	**CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 2-4A**
				COUNTY NEW CASTLE	DESIGNED BY: EM	
					CHECKED BY: MT	

CS-91
SHEET NO. 952
TOTAL SHTS. 1256

SEQUENCE OF CONSTRUCTION

1. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN.
2. REMOVE EXISTING STRIPING AS NECESSARY, PLACE TEMPORARY PAVEMENT STRIPING AS SHOWN.
3. SHIFT TRAFFIC TO BUNKER HILL ROAD LANES DESIGNATED FOR PHASE 2-4A.
4. INSTALL DRUMS ALONG EDGE OF PHASE 2-4A CONSTRUCTION AREA.
5. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN.
6. REMOVE BUNKER HILL TEMPORARY ROAD.
7. CONSTRUCT DRAINAGE SWALES ON NORTH SIDE OF BUNKER HILL ROAD.
8. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED AND MULCH PRIOR TO REMOVAL OF SEDIMENT CONTROL DEVICES.
9. REMOVE / RELOCATE DRUMS AS NEEDED PRIOR TO SWITCH TO PHASE 2-4B TRAFFIC CONTROL.

CONSTRUCTION PHASING LEGEND

	WORK AREA THIS PHASE
	TEMPORARY CONSTRUCTION
	EROSION CONTROL BLANKET
	EXISTING TRAFFIC FLOW ARROW
	TEMPORARY WHITE PAVEMENT MARKING ARROW

STONE CHECK DAM

NO.	D. AREA	DEPTH	STATION
315	0.62	1.00	24+60
316	0.17	1.00	29+27
317	0.24	1.00	32+58

CULVERT INLET PROTECTION

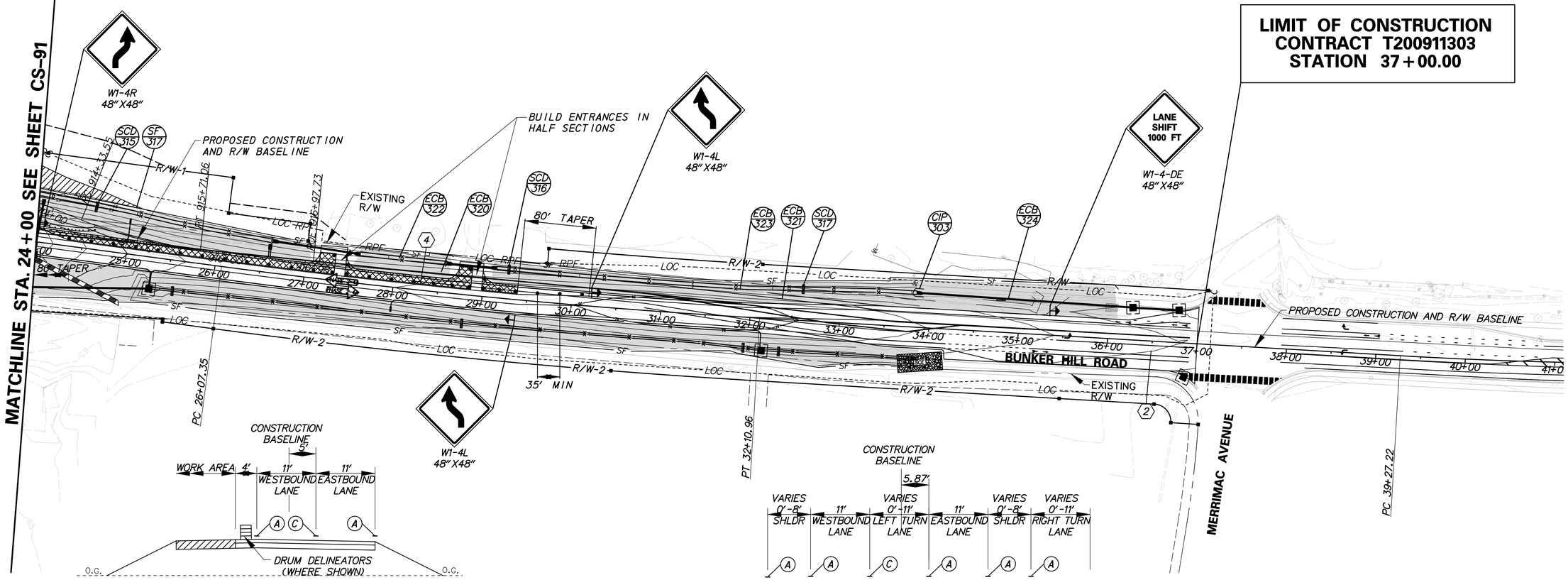
NO.	D. AREA	STATION
303	0.28	33+84

EROSION CONTROL BLANKET

NO.	SY	LENGTH	WIDTH	TYPE
320	273	100'	20'	3
321	1623	700'	20'	3
322	67	100'	6'	5
323	148	221'	6'	5
324	314	470'	6'	5

SILT FENCE

NO	STATION FROM	STATION TO	LENGTH
317	24+00	27+05	311 LF



BUNKER HILL ROAD

STA. 23+20.00 TO STA. 30+19.00

BUNKER HILL ROAD

STA. 30+19.00 TO STA. 37+00.00

BUNKER HILL ROAD

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301 LEVELS ROAD TO BUNKER HILL ROAD

CONTRACT	T200911303	BRIDGE NO.	
COUNTY	NEW CASTLE	DESIGNED BY:	EM
		CHECKED BY:	MT

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 2-4A

	CS-92
SHEET NO.	953
TOTAL SHTS.	1256

SEQUENCE OF CONSTRUCTION

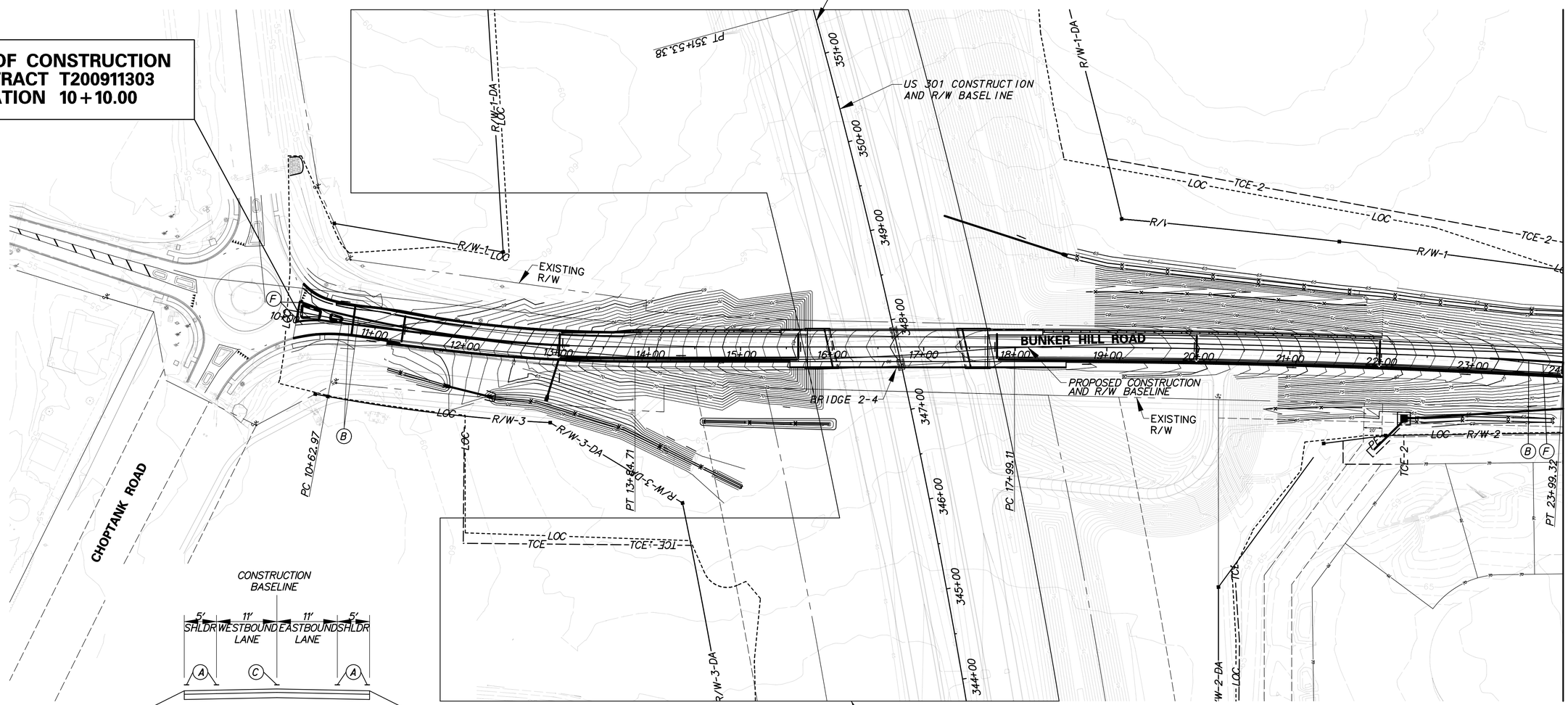
1. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN.
2. REMOVE EXISTING STRIPING AS NECESSARY, PLACE TEMPORARY PAVEMENT STRIPING AS SHOWN.
3. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN.
4. REMOVE TEMPORARY BARRIER.
5. PERFORM OVERLAY ON NORTH SIDE OF BUNKER HILL ROAD BETWEEN STATIONS 29+39.00 AND 37+00.00 WHILE MAINTAINING TRAFFIC ON SOUTH SIDE CONFORMING TO TA-10 OF THE DELAWARE MUTCD.
6. PERFORM OVERLAY ON SOUTH SIDE OF BUNKER HILL ROAD BETWEEN STATIONS 29+39.00 AND 37+00.00 WHILE MAINTAINING TRAFFIC ON NORTH SIDE CONFORMING TO TA-10 OF THE DELAWARE MUTCD.

CONSTRUCTION PHASING LEGEND

- WORK AREA THIS PHASE
- TEMPORARY CONSTRUCTION
- EROSION CONTROL BLANKET
- EXISTING TRAFFIC FLOW ARROW
- TEMPORARY WHITE PAVEMENT MARKING ARROW

TEMPORARY PAVEMENT MARKINGS LEGEND

SYMBOL	ITEM	QUANTITY
A	5" SOLID WHITE TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	164 LF
B	5" SOLID YELLOW TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	619 LF
C	5" SOLID DOUBLE YELLOW TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	162 LF
D	5" DASHED WHITE TEMPORARY PAINT PAVEMENT STRIPING, 3' LINE & 12' GAP (ITEM 748032)	0 LF
E	WHITE TEMPORARY PAINT PAVEMENT SYMBOL (ITEM 748026)	0 SF
F	REMOVAL OF PAVEMENT STRIPPING (ITEM 748530)	248 SF



BUNKER HILL ROAD

STA. 23+20.00 TO STA. 30+19.00

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 60 120 180 FEET	US 301 LEVELS ROAD TO BUNKER HILL ROAD	CONTRACT T200911303 / COUNTY NEW CASTLE	BRIDGE NO. / DESIGNED BY: EM / CHECKED BY: MT	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 2-4B

CS-93
SHEET NO.
954
TOTAL SHTS.
1256

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SEQUENCE OF CONSTRUCTION

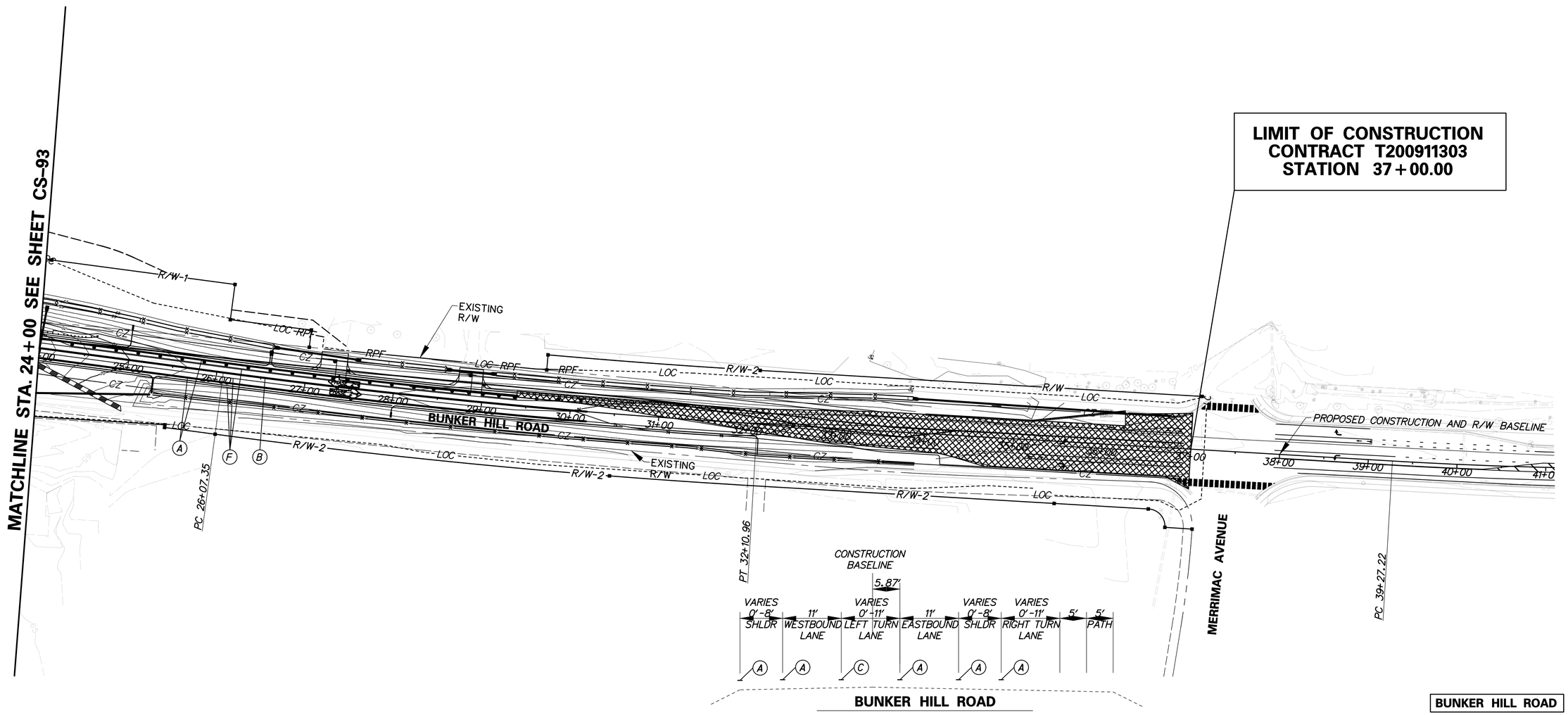
1. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN.
2. REMOVE EXISTING STRIPING AS NECESSARY, PLACE TEMPORARY PAVEMENT STRIPING AS SHOWN.
3. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN.
4. REMOVE TEMPORARY BARRIER.
5. PERFORM OVERLAY ON NORTH SIDE OF BUNKER HILL ROAD BETWEEN STATIONS 29+39.00 AND 37+00.00 WHILE MAINTAINING TRAFFIC ON SOUTH SIDE CONFORMING TO TA-10 OF THE DELAWARE MUTCD.
6. PERFORM OVERLAY ON SOUTH SIDE OF BUNKER HILL ROAD BETWEEN STATIONS 29+39.00 AND 37+00.00 WHILE MAINTAINING TRAFFIC ON NORTH SIDE CONFORMING TO TA-10 OF THE DELAWARE MUTCD.

CONSTRUCTION PHASING LEGEND

- WORK AREA THIS PHASE
- TEMPORARY CONSTRUCTION
- EROSION CONTROL BLANKET
- EXISTING TRAFFIC FLOW ARROW
- TEMPORARY WHITE PAVEMENT MARKING ARROW

TEMPORARY PAVEMENT MARKINGS LEGEND

SYMBOL	ITEM	QUANTITY
A	5" SOLID WHITE TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	1158 LF
B	5" SOLID YELLOW TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	0 LF
C	5" SOLID DOUBLE YELLOW TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	1238 LF
D	5" DASHED WHITE TEMPORARY PAINT PAVEMENT STRIPING, 3' LINE & 12' GAP (ITEM 748032)	0 LF
E	WHITE TEMPORARY PAINT PAVEMENT SYMBOL (ITEM 748026)	0 SF
F	REMOVAL OF PAVEMENT STRIPPING (ITEM 748530)	1905 SF



BUNKER HILL ROAD

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301 LEVELS ROAD TO BUNKER HILL ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	EM
COUNTY		
NEW CASTLE	CHECKED BY:	MT

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 2-4B

CS-94
SHEET NO.
955
TOTAL SHTS.
1256

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SEQUENCE OF CONSTRUCTION

1. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN.
2. REMOVE EXISTING STRIPING AS NECESSARY, PLACE TEMPORARY PAVEMENT STRIPING AS SHOWN.
3. SHIFT TRAFFIC TO NEW LANES DESIGNATED FOR PHASE 1-1.
4. INSTALL TEMPORARY BARRIER/DRUMS ALONG EDGE OF PHASE 1-1 CONSTRUCTION AREA.
5. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN.
6. CONSTRUCT PORTION OF CULVERT AND CROSS PIPE DRAINAGE.
7. CONSTRUCT PORTION OF PROPOSED MAINLINE BRIDGE ABUTMENT.
8. CONSTRUCT TEMPORARY CULVERT EXTENSION (SEE SHEET CS53).
9. CONSTRUCT TEMPORARY SUMMIT BRIDGE ROAD WIDENING AND PAVEMENT.
10. REMOVE / RELOCATE TEMPORARY BARRIER AS NEEDED PRIOR TO SWITCHING TO PHASE 1-2 TRAFFIC CONTROL.

CONSTRUCTION PHASING LEGEND

	WORK AREA THIS PHASE
	TEMPORARY CONSTRUCTION
	EROSION CONTROL BLANKET
	EXISTING TRAFFIC FLOW ARROW
	TEMPORARY WHITE PAVEMENT MARKING ARROW

SILT FENCE

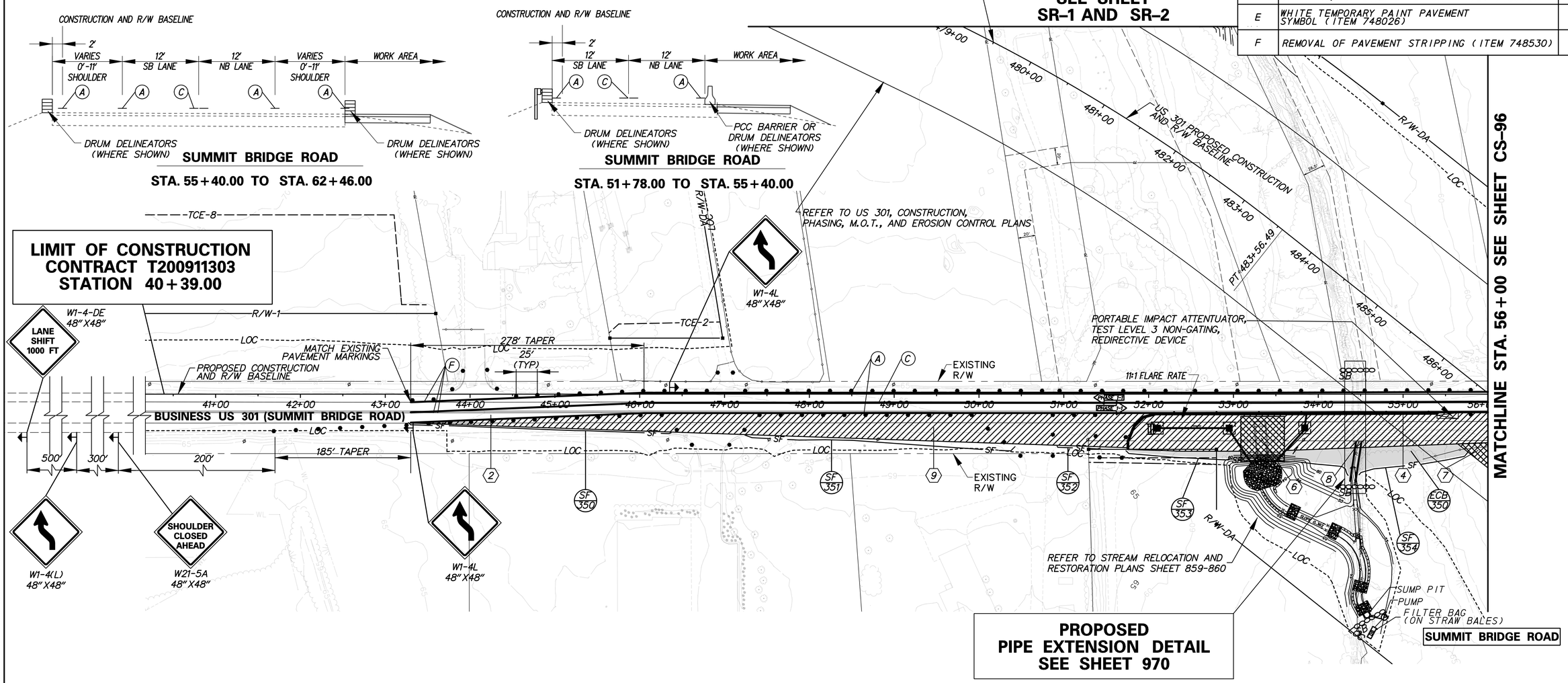
NO	STATION FROM	STATION TO	LENGTH
350	43+27	46+37	322 LF
351	47+23	50+42	270 LF
352	50+92	51+43	52 LF
353	51+73	54+35	262 LF
354	54+48	55+76	82 LF

EROSION CONTROL BLANKET

NO.	SY	LENGTH	WIDTH	TYPE
350	596	500'	10'	3

TEMPORARY PAVEMENT MARKINGS LEGEND

SYMBOL	ITEM	QUANTITY
A	5" SOLID WHITE TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	2540 LF
B	5" SOLID YELLOW TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	0 LF
C	5" SOLID DOUBLE YELLOW TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	2540 LF
D	5" DASHED WHITE TEMPORARY PAINT PAVEMENT STRIPING, 3' LINE & 12' GAP (ITEM 748032)	0 LF
E	WHITE TEMPORARY PAINT PAVEMENT SYMBOL (ITEM 748026)	0 SF
F	REMOVAL OF PAVEMENT STRIPPING (ITEM 748530)	1905 SF



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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 60 120 180 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO.	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 1-1	CS-95
				COUNTY NEW CASTLE	DESIGNED BY: EM		SHEET NO. 956
					CHECKED BY: MT		TOTAL SHTS. 1256

SEQUENCE OF CONSTRUCTION

1. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN ON THE FIRST CONSTRUCTION PHASING, MOT AND EROSION CONTROL SHEET.
2. REMOVE EXISTING STRIPING AS NECESSARY, PLACE TEMPORARY PAVEMENT STRIPING AS SHOWN.
3. SHIFT TRAFFIC TO NEW LANES DESIGNATED FOR PHASE 1-1.
4. INSTALL TEMPORARY BARRIER/DRUMS ALONG EDGE OF PHASE 1-1 CONSTRUCTION AREA.
5. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN.
6. CONSTRUCT PORTION OF CULVERT.
7. CONSTRUCT PORTION OF PROPOSED MAINLINE BRIDGE ABUTMENT.
8. CONSTRUCT TEMPORARY CULVERT EXTENSION.
9. CONSTRUCT TEMPORARY SUMMIT BRIDGE ROAD WIDENING AND PAVEMENT.
10. REMOVE / RELOCATE TEMPORARY BARRIER AS NEEDED PRIOR TO SWITCHING TO PHASE 1-2 TRAFFIC CONTROL.

CONSTRUCTION PHASING LEGEND

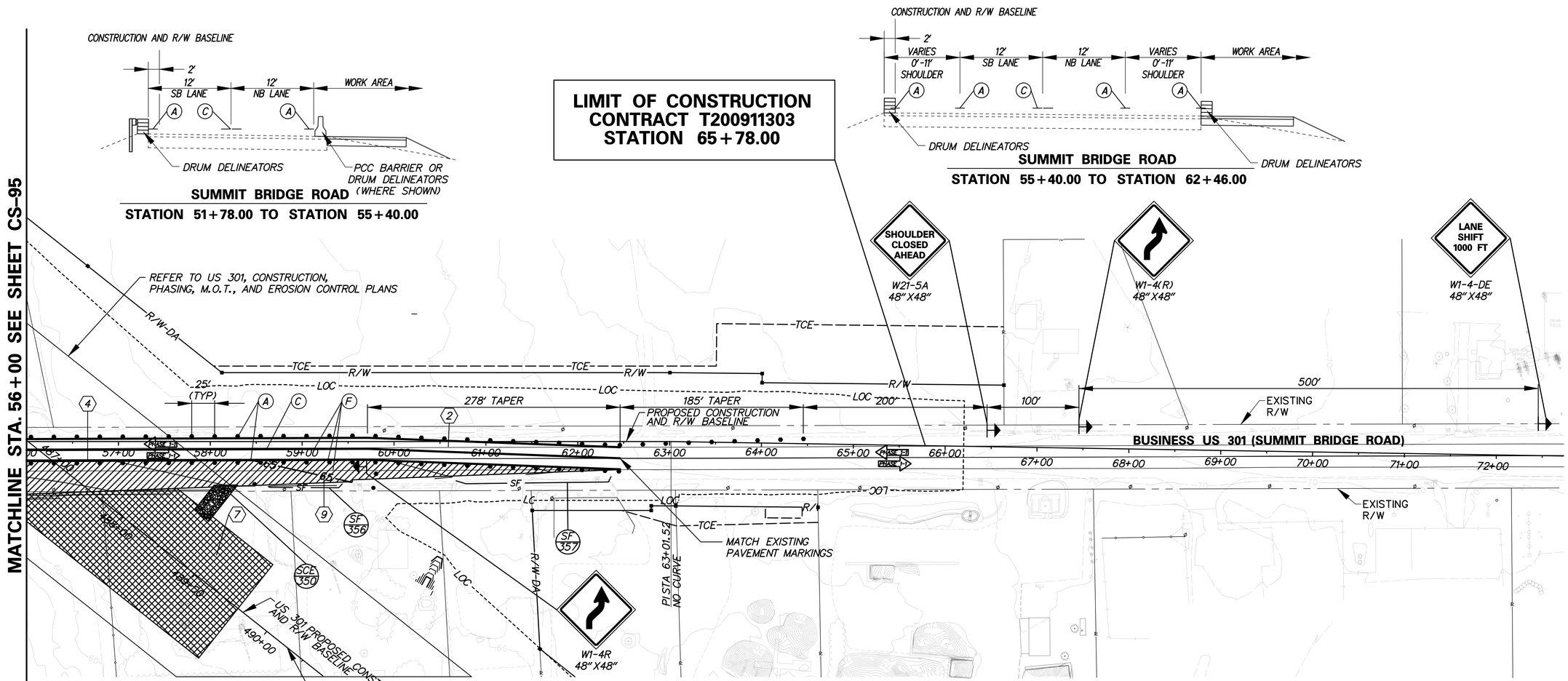
	WORK AREA THIS PHASE
	TEMPORARY CONSTRUCTION
	EROSION CONTROL PLANS
	EXISTING TRAFFIC FLOW ARROW
	TEMPORARY WHITE PAVEMENT MARKING ARROW

TEMPORARY PAVEMENT MARKINGS LEGEND

SYMBOL	ITEM	QUANTITY
A	5" SOLID WHITE TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	1292 LF
B	5" SOLID YELLOW TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	0 LF
C	5" SOLID DOUBLE YELLOW TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	1292 LF
D	5" DASHED WHITE TEMPORARY PAINT PAVEMENT STRIPING, 3' LINE & 12' GAP (ITEM 748032)	0 LF
E	WHITE TEMPORARY PAINT PAVEMENT SYMBOL (ITEM 748026)	0 SF
F	REMOVAL OF PAVEMENT STRIPPING (ITEM 748530)	646 SF

STABILIZED CONSTRUCTION ENTRANCE

NO.	STA.	LENGTH	WIDTH
350	58+17	50'	20'



SILT FENCE

NO	STATION FROM	STATION TO	LENGTH
356	58+63	59+43	83'
357	60+67	62+36	173'

SUMMIT BRIDGE ROAD

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY:	EM
COUNTY		
NEW CASTLE	CHECKED BY:	MT

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 1-1

CS-96
SHEET NO.
957
TOTAL SHTS.
1256

SEQUENCE OF CONSTRUCTION

1. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN.
2. REMOVE EXISTING STRIPING AS NECESSARY, PLACE TEMPORARY PAVEMENT STRIPING AS SHOWN.
3. SHIFT TRAFFIC TO NEW LANES DESIGNATED FOR PHASE 1-2.
4. INSTALL TEMPORARY BARRIER/DRUMS ALONG EDGE OF PHASE 1-2 CONSTRUCTION AREA.
5. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN.
6. CONSTRUCT PROPOSED 301 MAINLINE BRIDGE PIER, MEDIAN, AND PAVEMENT AS SHOWN.
7. CONSTRUCT PORTION OF CULVERT CROSS PIPE DRAINAGE AND ASSOCIATED TEMPORARY PAVEMENT AS SHOWN.
8. REMOVE / RELOCATE TEMPORARY BARRIER AS NEEDED PRIOR TO SWITCHING TO PHASE 1-3 TRAFFIC CONTROL.

CONSTRUCTION PHASING LEGEND

	WORK AREA THIS PHASE
	TEMPORARY CONSTRUCTION
	EROSION CONTROL BLANKET
	EXISTING TRAFFIC FLOW ARROW
	TEMPORARY WHITE PAVEMENT MARKING ARROW

STABILIZED CONSTRUCTION ENTRANCE

NO.	STA.	LENGTH	WIDTH
351	52+80	50'	20'

TEMPORARY PAVEMENT MARKINGS LEGEND

SYMBOL	ITEM	QUANTITY
A	5" SOLID WHITE TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	2540 LF
B	5" SOLID YELLOW TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	0 LF
C	5" SOLID DOUBLE YELLOW TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	2540 LF
D	5" DASHED WHITE TEMPORARY PAINT PAVEMENT STRIPING, 3' LINE & 12' GAP (ITEM 748032)	0 LF
E	WHITE TEMPORARY PAINT PAVEMENT SYMBOL (ITEM 748026)	0 SF
F	REMOVAL OF PAVEMENT STRIPPING (ITEM 748530)	1588 SF

FLARED END SECTION SCHEDULE

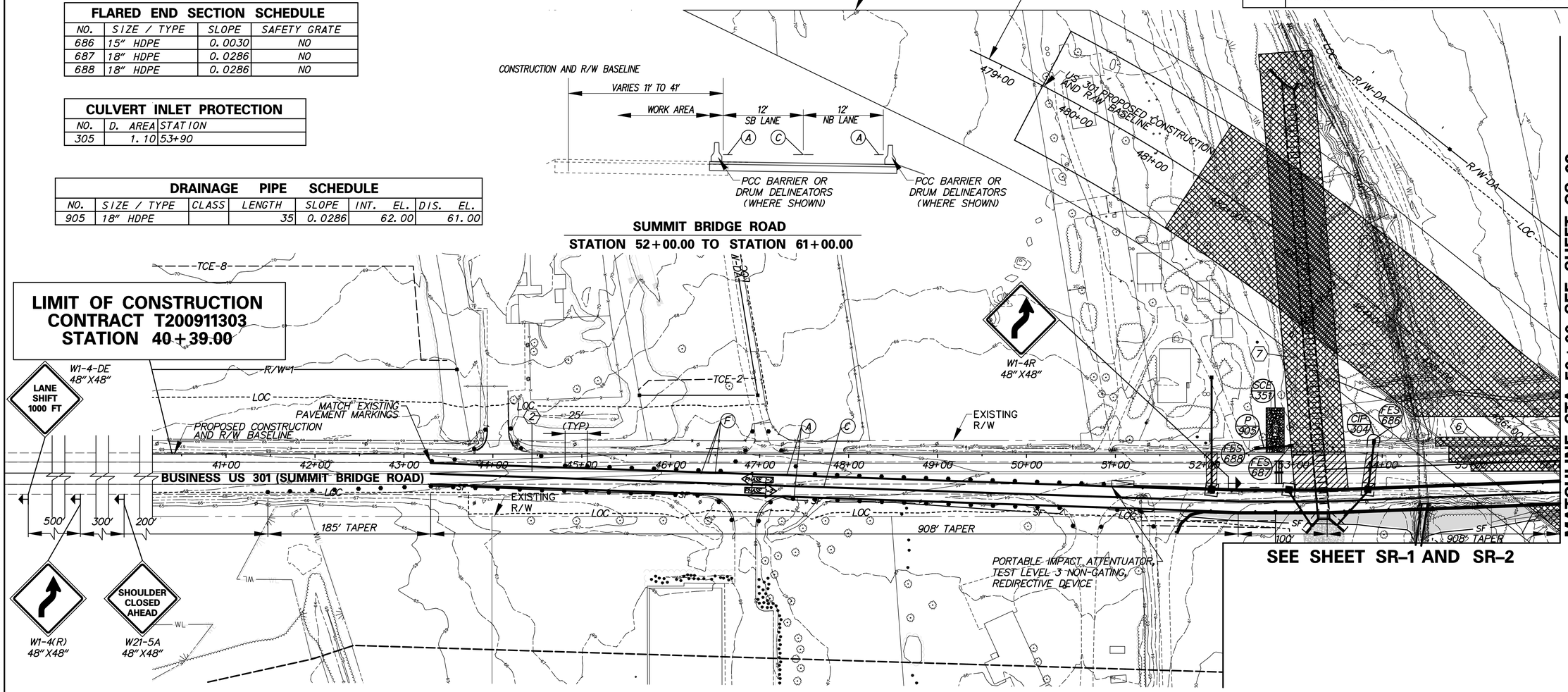
NO.	SIZE / TYPE	SLOPE	SAFETY GRATE
686	15" HDPE	0.0030	NO
687	18" HDPE	0.0286	NO
688	18" HDPE	0.0286	NO

CULVERT INLET PROTECTION

NO.	D. AREA	STATION
305	1.10	53+90

DRAINAGE PIPE SCHEDULE

NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INT. EL.	DIS. EL.
905	18" HDPE		35	0.0286	62.00	61.00



SUMMIT BRIDGE ROAD

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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 60 120 180 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO.	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 1-2	CS-97 SHEET NO. 958
				COUNTY NEW CASTLE	DESIGNED BY: EM		TOTAL SHTS. 1256
					CHECKED BY: MT		

SEQUENCE OF CONSTRUCTION

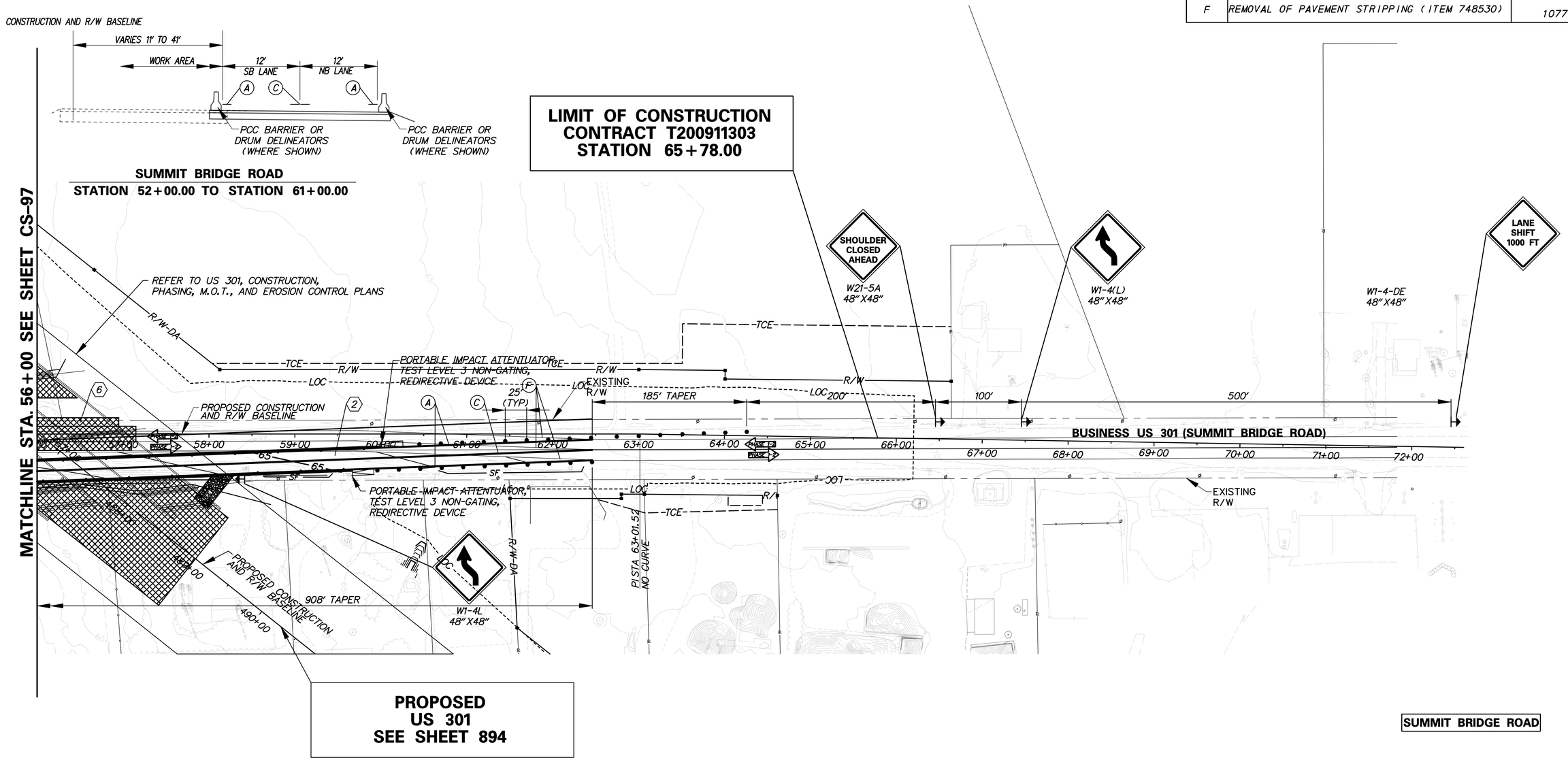
1. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN.
2. REMOVE EXISTING STRIPING AS NECESSARY, PLACE TEMPORARY PAVEMENT STRIPING AS SHOWN.
3. SHIFT TRAFFIC TO NEW LANES DESIGNATED FOR PHASE 1-2.
4. INSTALL TEMPORARY BARRIER/DRUMS ALONG EDGE OF PHASE 1-2 CONSTRUCTION AREA.
5. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN.
6. CONSTRUCT PROPOSED 301 MAINLINE BRIDGE PIER, MEDIAN, AND PAVEMENT AS SHOWN.
7. CONSTRUCT PORTION OF CULVERT AND TEMPORARY PAVEMENT AS SHOWN.
8. REMOVE / RELOCATE TEMPORARY BARRIER AS NEEDED PRIOR TO SWITCHING TO PHASE 1-3 TRAFFIC CONTROL.

CONSTRUCTION PHASING LEGEND

	WORK AREA THIS PHASE
	TEMPORARY CONSTRUCTION
	EROSION CONTROL BLANKET
	EXISTING TRAFFIC FLOW ARROW
	TEMPORARY WHITE PAVEMENT MARKING ARROW

TEMPORARY PAVEMENT MARKINGS LEGEND

SYMBOL	ITEM	QUANTITY
A	5" SOLID WHITE TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	1292 LF
B	5" SOLID YELLOW TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	0 LF
C	5" SOLID DOUBLE YELLOW TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	1292 LF
D	5" DASHED WHITE TEMPORARY PAINT PAVEMENT STRIPING, 3' LINE & 12' GAP (ITEM 748032)	0 LF
E	WHITE TEMPORARY PAINT PAVEMENT SYMBOL (ITEM 748026)	0 SF
F	REMOVAL OF PAVEMENT STRIPPING (ITEM 748530)	1077 SF



DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 60 120 180 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO.	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 1-2	CS-98
				COUNTY NEW CASTLE	DESIGNED BY: EM		SHEET NO. 959
					CHECKED BY: MT		TOTAL SHTS. 1256

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SEQUENCE OF CONSTRUCTION

1. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN.
2. REMOVE EXISTING STRIPING AS NECESSARY, PLACE TEMPORARY PAVEMENT STRIPING AS SHOWN.
3. SHIFT TRAFFIC TO NEW LANES DESIGNATED FOR PHASE 1-3.
4. INSTALL TEMPORARY BARRIER/DRUMS ALONG EDGE OF PHASE 1-3 CONSTRUCTION AREA.
5. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN.
6. RELOCATE EXISTING DRAWYERS BRANCH AND ABANDON EXISTING 48" CULVERTS

CONSTRUCTION PHASING LEGEND

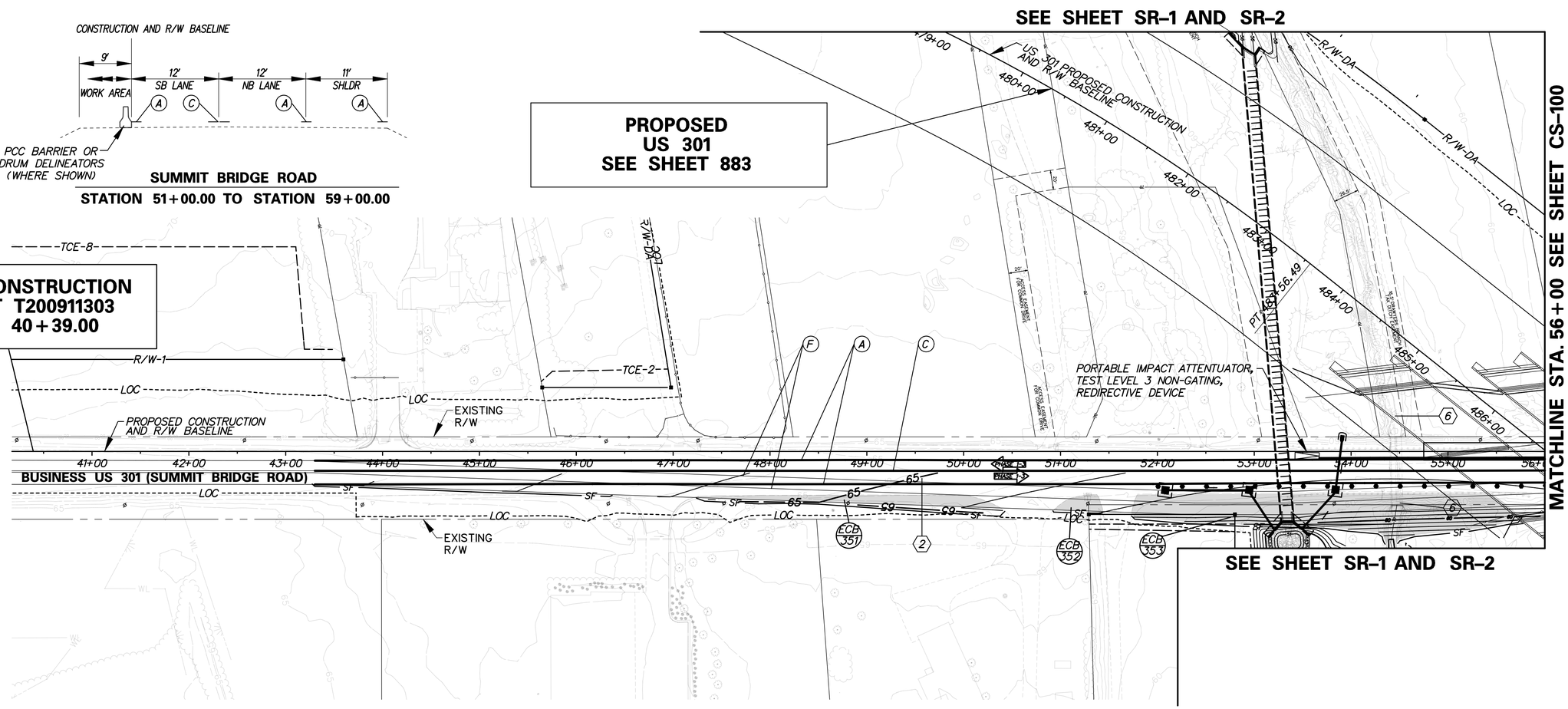
	WORK AREA THIS PHASE
	TEMPORARY CONSTRUCTION
	EROSION CONTROL BLANKET
	EXISTING TRAFFIC FLOW ARROW
	TEMPORARY WHITE PAVEMENT MARKING ARROW

TEMPORARY PAVEMENT MARKINGS LEGEND

SYMBOL	ITEM	QUANTITY
A	5" SOLID WHITE TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	2540 LF
B	5" SOLID YELLOW TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	0 LF
C	5" SOLID DOUBLE YELLOW TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	2540 LF
D	5" DASHED WHITE TEMPORARY PAINT PAVEMENT STRIPING, 3' LINE & 12' GAP (ITEM 748032)	0 LF
E	WHITE TEMPORARY PAINT PAVEMENT SYMBOL (ITEM 748026)	0 SF
F	REMOVAL OF PAVEMENT STRIPPING (ITEM 478530)	2117 SF

EROSION CONTROL BLANKET

NO.	SY	LENGTH	WIDTH	TYPE
351	248	400'	5'	3
352	68	50'	8'	3
353	1467	500'	20'	3



SUMMIT BRIDGE ROAD

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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 60 120 180 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO.	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 1–3	CS-99
				COUNTY NEW CASTLE	DESIGNED BY: EM		SHEET NO. 960
					CHECKED BY: MT		TOTAL SHTS. 1256

SEQUENCE OF CONSTRUCTION

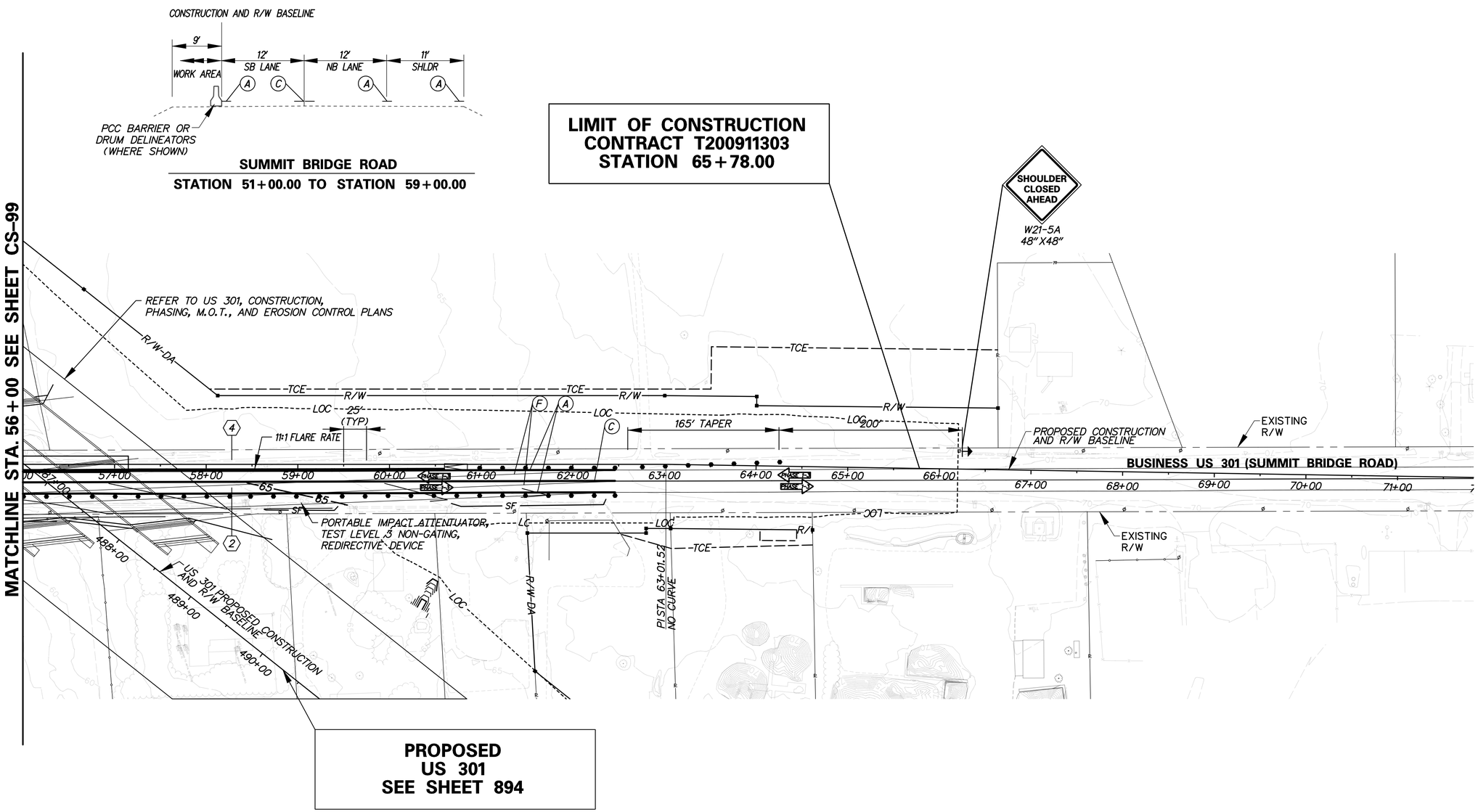
1. PLACE ALL PERMANENT WARNING SIGNS AS SHOWN.
2. REMOVE EXISTING STRIPING AS NECESSARY, PLACE TEMPORARY PAVEMENT STRIPING AS SHOWN.
3. SHIFT TRAFFIC TO NEW LANES DESIGNATED FOR PHASE 1-3.
4. INSTALL TEMPORARY BARRIER/BARRELS ALONG EDGE OF PHASE 1-3 CONSTRUCTION AREA.
5. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN.
6. RELOCATE EXISTING DRAWYERS BRANCH AND ABANDON EXISTING 48" CULVERTS

CONSTRUCTION PHASING LEGEND

	WORK AREA THIS PHASE
	TEMPORARY CONSTRUCTION
	EROSION CONTROL BLANKET
	EXISTING TRAFFIC FLOW ARROW
	TEMPORARY WHITE PAVEMENT MARKING ARROW

TEMPORARY PAVEMENT MARKINGS LEGEND

SYMBOL	ITEM	QUANTITY
A	5" SOLID WHITE TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	1292 LF
B	5" SOLID YELLOW TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	0 LF
C	5" SOLID DOUBLE YELLOW TEMPORARY PAINT PAVEMENT STRIPING (ITEM 748032)	1292 LF
D	5" DASHED WHITE TEMPORARY PAINT PAVEMENT STRIPING, 3' LINE & 12' GAP (ITEM 748032)	0 LF
E	WHITE TEMPORARY PAINT PAVEMENT SYMBOL (ITEM 748026)	0 SF
F	REMOVAL OF PAVEMENT STRIPPING (ITEM 748530)	1292 SF



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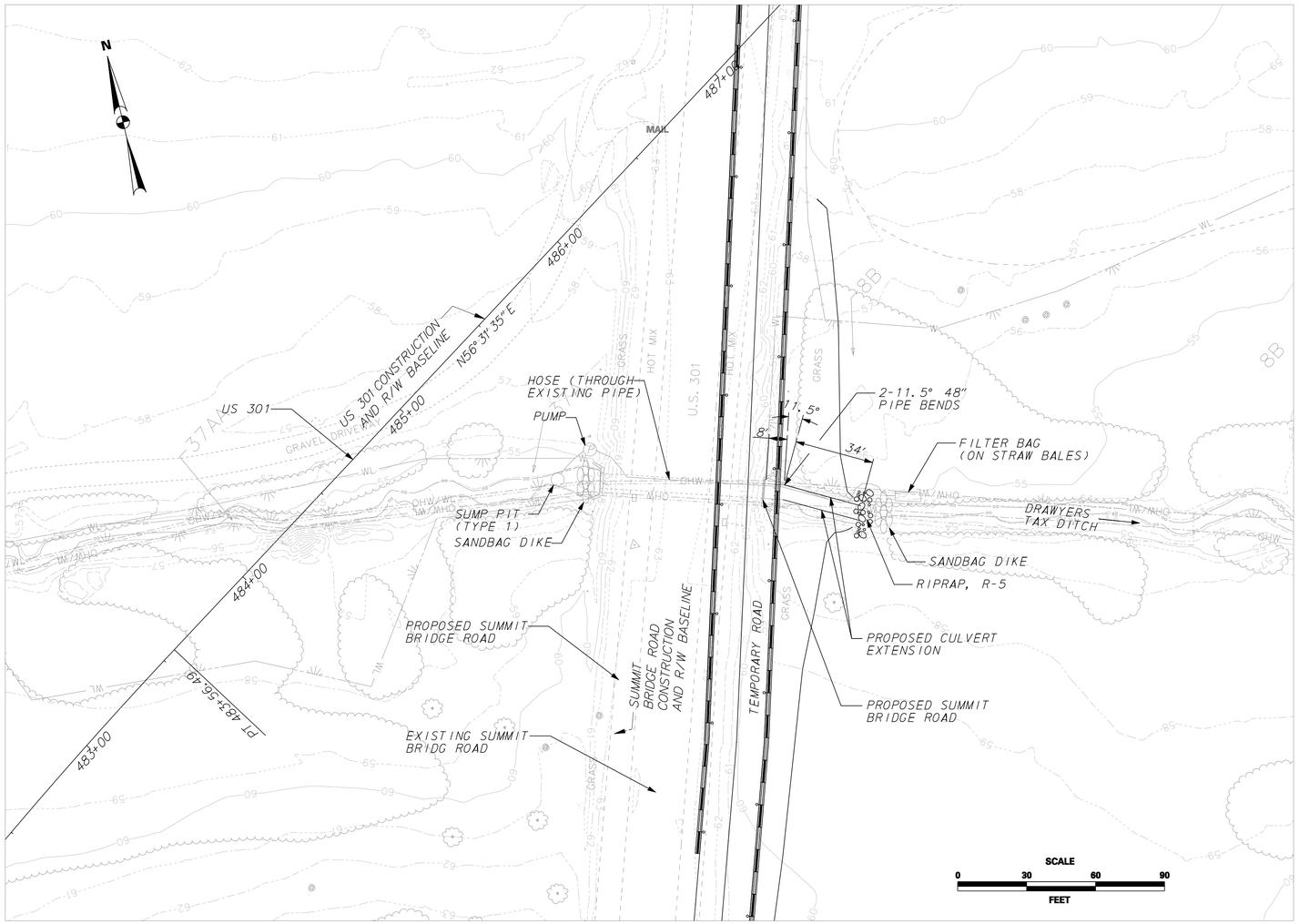
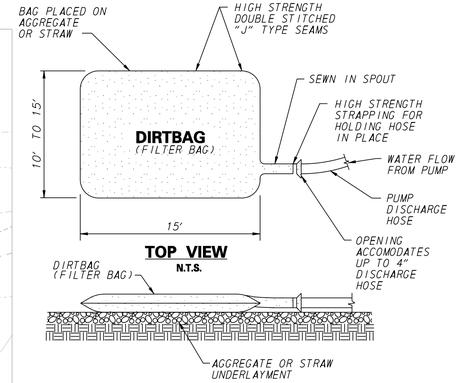
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 60 120 180 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO.	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 1–3
				COUNTY NEW CASTLE	DESIGNED BY: EM	
					CHECKED BY: MT	

CS-100
SHEET NO. 961
TOTAL SHTS. 1256



TEMPORARY PIPE EXTENSION

SCALE: 1"=30'



DIRTBAG® PLAN SHEET SYMBOL: DB

DIRTBAG® (OR APPROVED EQUAL) DETAIL

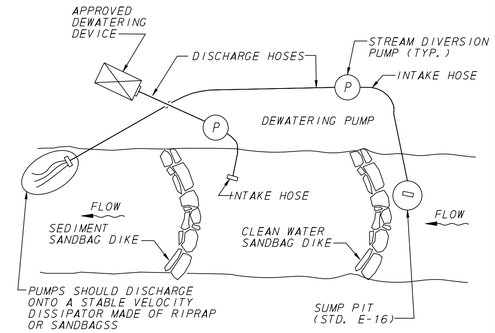
FILTER BAG SPECIFICATION:

1. FILTER BAG SHALL BE MADE OF NON-WOVEN GEOTEXTILE WITH A MINIMUM SURFACE AREA OF 225 SQUARE FEET PER SIDE.
2. ALL STRUCTURAL SEAMS SHALL BE SEWN WITH A DOUBLE STITCH USING A DOUBLE NEEDLE MACHINE WITH HIGH STRENGTH THREAD. SEAM STRENGTH SHALL WITHSTAND 100 LB/IN USING ASTM D-4884 TEST METHOD.
3. FILTER BAG SHALL HAVE A NOZZLE LARGE ENOUGH TO ACCOMMODATE A FOUR (4) INCH DIAMETER PUMP DISCHARGE HOSE.
4. NOZZLE SHALL BE SEALED TIGHTLY AROUND THE PUMP DISCHARGE HOSE WITH A STRAP OR SIMILAR DEVICE TO PREVENT UNFILTERED WATER FROM ESCAPING.
5. FILTER BAG SHALL BE PLACED ON A LEVEL OR GENTLY SLOPING (5% MAXIMUM) VEGETATED AREA.
6. FILTER BAG SHALL BE PLACED UPON A BASE OF STRAW BALES OR THREE (3) INCHES OF CLEAN STONE TO PROMOTE DEWATERING THROUGH BOTTOM SURFACE OF THE FILTER BAG.
7. PUMPING RATE SHALL BE CONTROLLED TO PREVENT EXCESSIVE PRESSURE WITHIN THE FILTER BAG. AS THE BAG BECOMES FILLED WITH SEDIMENT THE PUMPING RATE SHALL BE REDUCED.
8. THE FILTER BAG SHALL BE REMOVED AND DISPOSED OF AFTER IT IS FILLED WITH SEDIMENT AND HAS DEWATERED. THE DEWATERED SEDIMENT FROM THE BAG SHALL BE SPREAD IN AN UPLAND AREA AND STABILIZED WITHIN 24 HOURS.
9. THE GEOTEXTILE FABRIC SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS WITH PROPERTIES DETERMINED IN ACCORDANCE WITH THE FOLLOWING PROCEDURES:

WEIGHT	10 OZ/YD	ASTM D-3776
GRAB TENSILE	210 LBS	ASTM D-4632
PUNCTURE	150 LBS	ASTM D-4833
FLOW RATE	70 GAL/MIN/SQ FT	ASTM D-4491
PERMITIVITY (1/SEC)	1.3	ASTM D-4991
UV RESISTANCE	70%	ASTM D-4355
APPARENT OPENING SIZE (AOS)	40-80	ASTM D-4751

FILTER BAG

N.T.S.



PLAN VIEW

SECTION A–A

CROSS SECTION OF SANDBAG DIKE

STREAM DIVERSION

N.T.S.

STREAM DIVERSION QUANTITIES

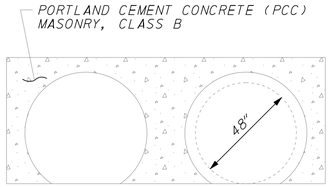
ITEM NO.	ITEM	QTY.	UNITS
909005	STREAM DIVERSION	1	LS

CONSTRUCTION SEQUENCE

1. SAW CUT AND REMOVE EXISTING APRON AS SHOWN. APRON REMOVAL SHALL BE INCIDENTAL TO CLEARING AND GRUBBING.
2. INSTALL EPOXY COATED REBAR DOWELS AS SHOWN. REBAR SHALL BE INCIDENTAL TO THE COST OF THE PCC TYPE B.
3. INSERT PIPES AS SHOWN SO NO GAP IS PRESENT (OR GROUT FOR SMALL GAPS AS DIRECTED BY THE ENGINEER).
4. FORM CONCRETE COLLAR AROUND PIPE AND PLACE CONCRETE. (USE VIBRATORY COMPACTOR TO ENSURE CONCRETE SURROUNDS REBAR AND PIPE).
5. CURE CONCRETE PER SPECIFICATIONS.

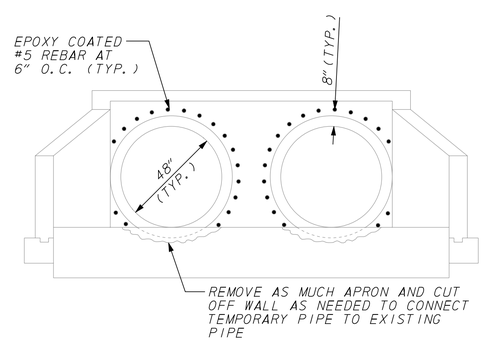
NOTES:

1. 11.5° BEND SHALL BE CONSTRUCTED USING PREFABRICATED ELBOW FOR 48" DIAMETER PIPE. BEND IS INCIDENTAL TO THE COST OF THE TEMPORARY DRAINAGE PIPE.
2. CONTRACTOR SHALL VERIFY WALL THICKNESS OF PIPE PRIOR TO ORDERING MATERIALS. FROM DESIGN PLANS, WALL THICKNESS IS ESTIMATED TO BE WALL B PER CONCRETE PIPE DESIGN MANUAL.



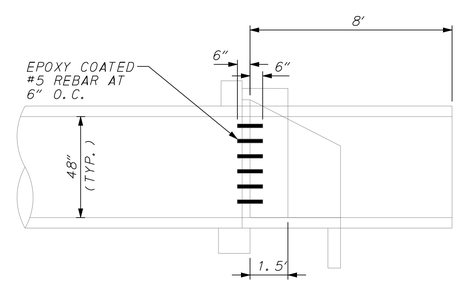
CONCRETE COLLAR

SCALE: 1"=10'



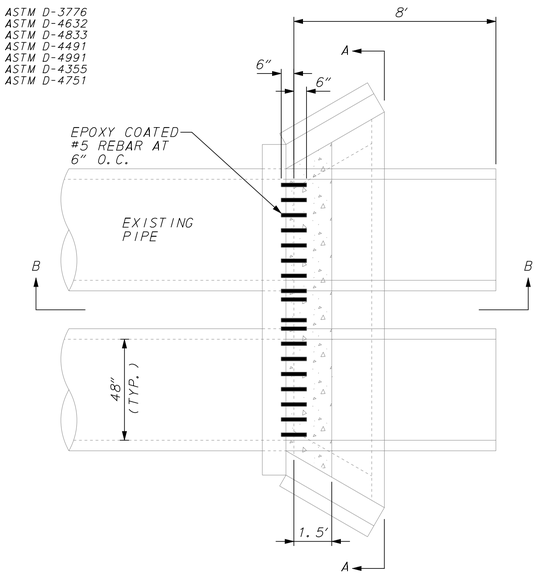
ENDWALL MODIFICATION SECTION A-A

SCALE: 1"=10'



ENDWALL MODIFICATION SECTION B-B

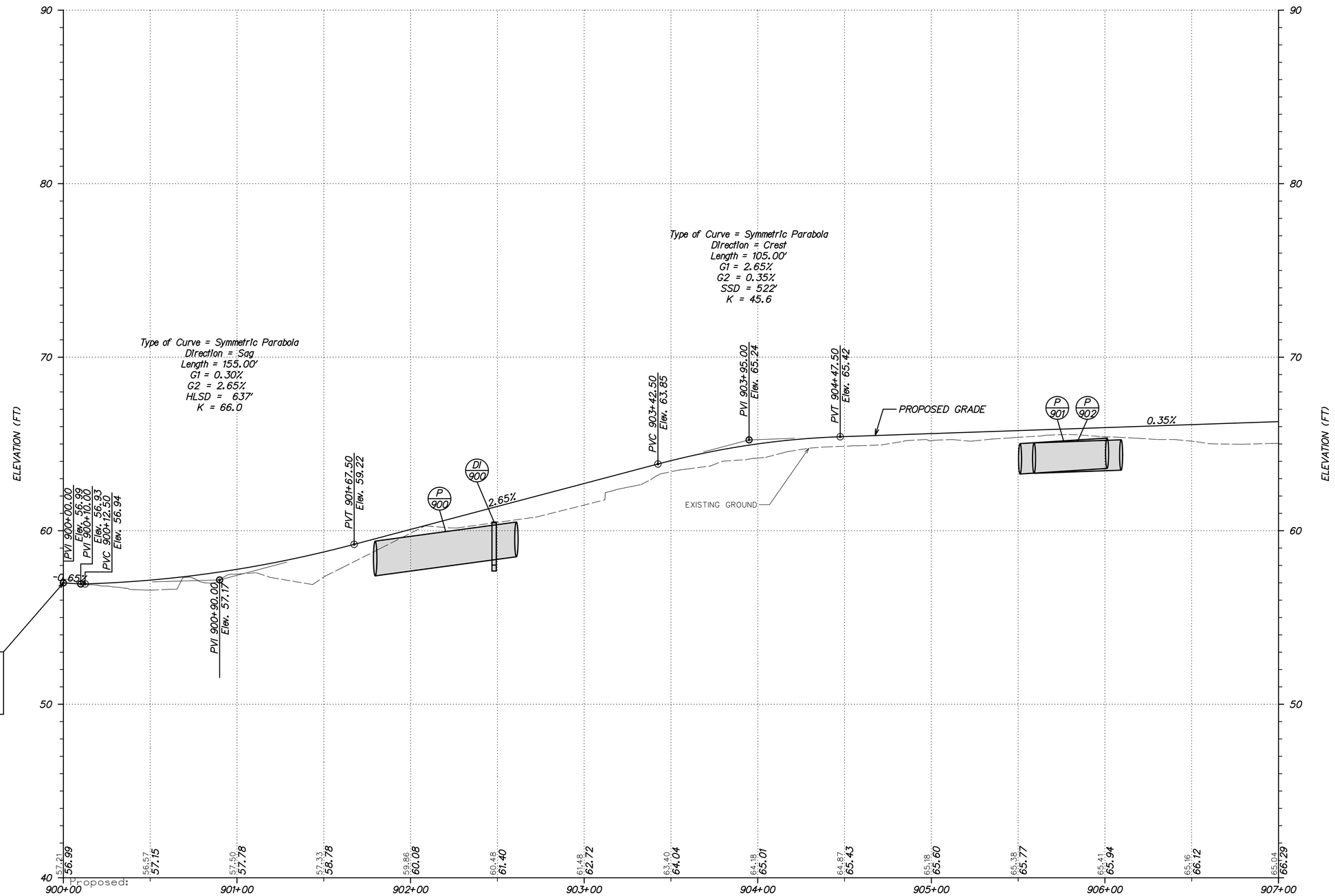
SCALE: 1"=10'



ENDWALL MODIFICATION

SCALE: 1"=10'

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO.	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS – PHASE 1
			COUNTY NEW CASTLE	DESIGNED BY: B.S.M.	SHEET NO. CS-101
				CHECKED BY: A.T.N.	TOTAL SHTS. 962 / 1256



LIMIT OF CONSTRUCTION
CONTRACT T200911303
STATION 900+00.00

BUNKER HILL TEMPORARY ROAD (SR 15)

VERTICAL SCALE FEET 0 3 6 9

CS-102

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

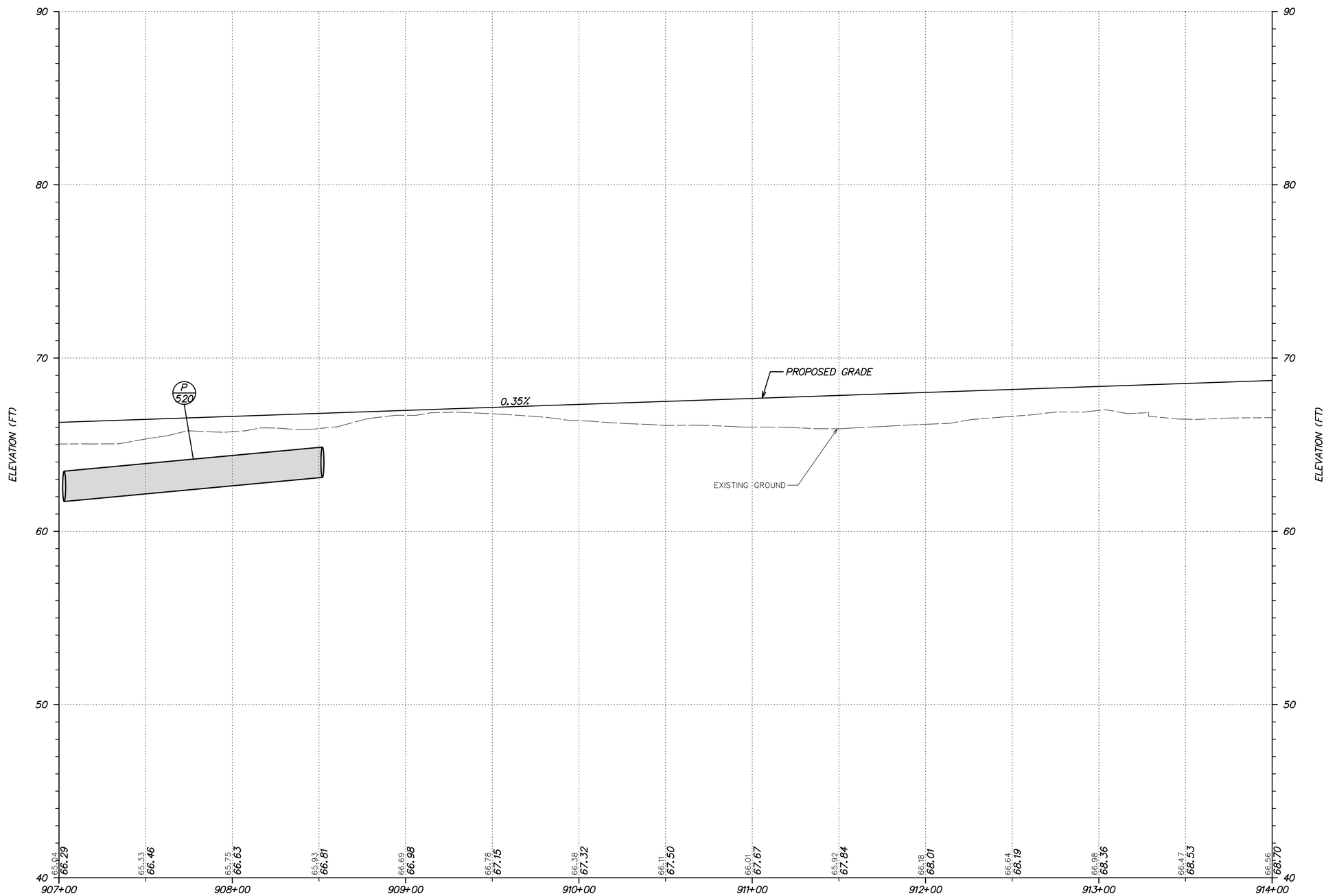
SCALE 0 30 60 90 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	T200911303
COUNTY	NEW CASTLE
BRIDGE NO.	
DESIGNED BY:	JL
CHECKED BY:	MT

CONSTRUCTION PHASING, M.O.T, AND EROSION CONTROL PLAN

SHEET NO.	963
TOTAL SHTS.	1256



BUNKER HILL TEMPORARY ROAD (SR 15)

VERTICAL SCALE FEET 0 3 6 9

CS-103

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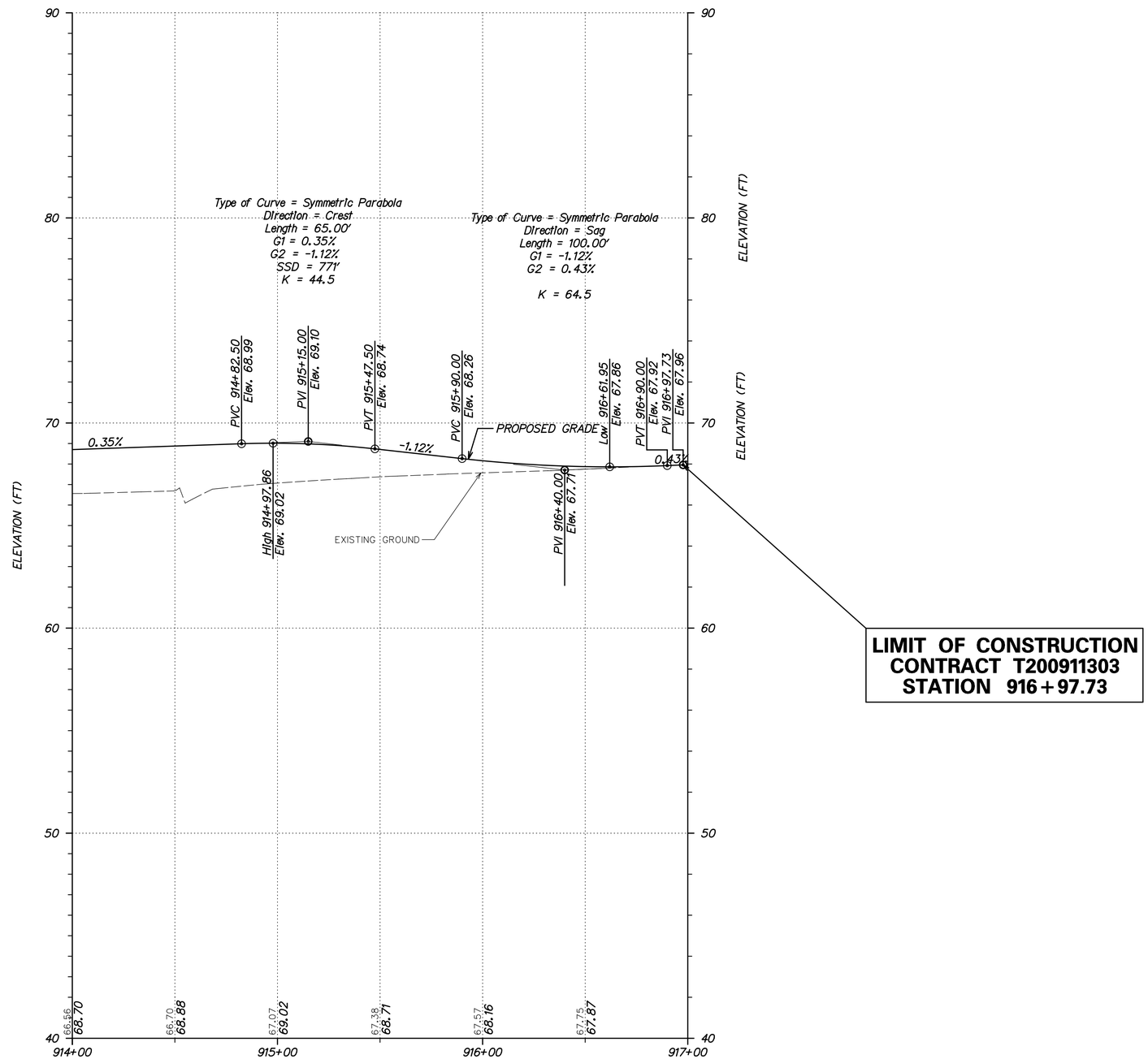
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	**US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD**	CONTRACT T200911303	BRIDGE NO.	**CONSTRUCTION PHASING, M.O.T, AND EROSION CONTROL PLAN**	SHEET NO. 964
				COUNTY NEW CASTLE	DESIGNED BY: JL		TOTAL SHTS. 1256
					CHECKED BY: MT		



BUNKER HILL TEMPORARY ROAD (SR 15)

VERTICAL SCALE FEET 0 3 6 9

CS-104

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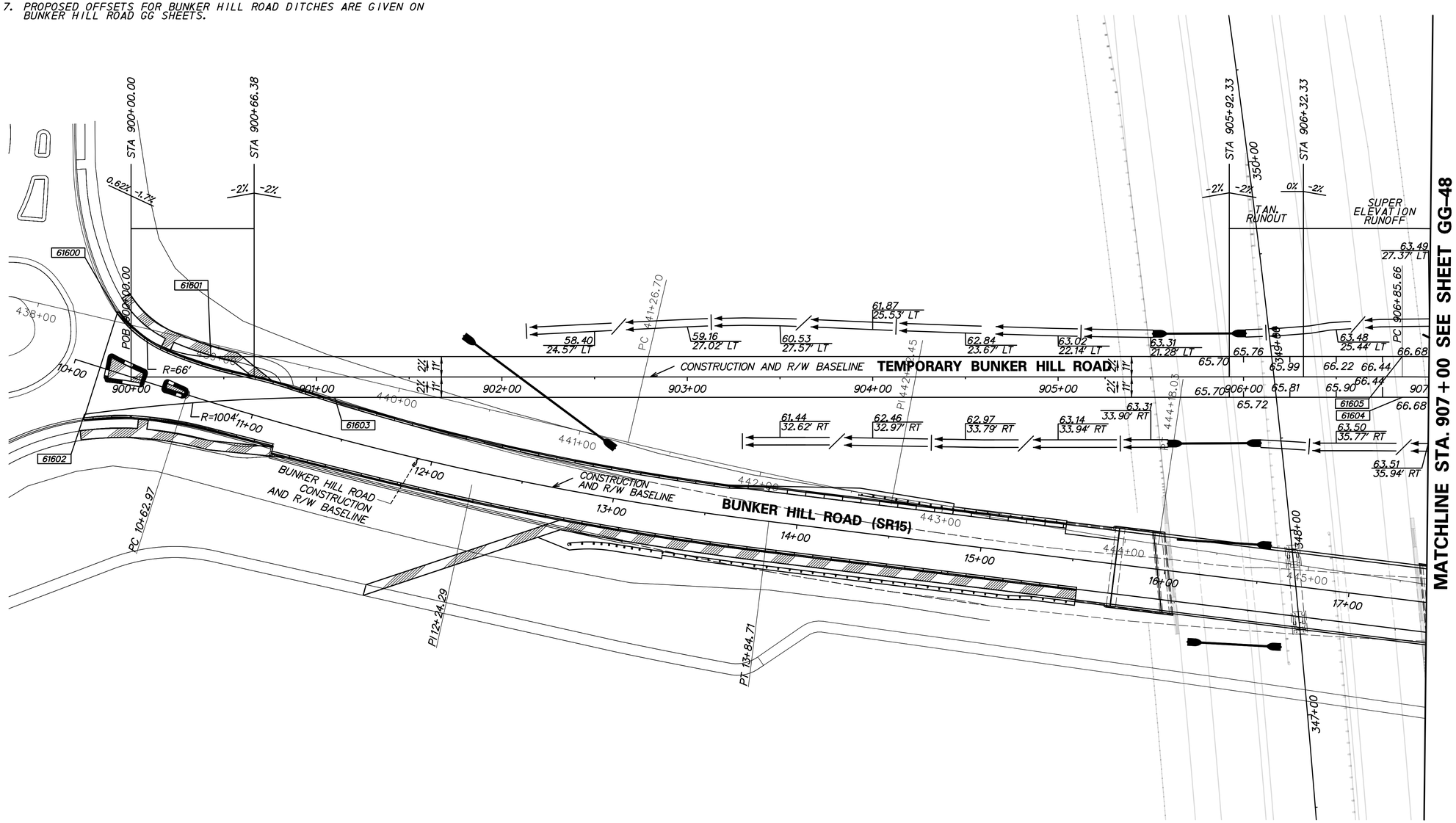
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO.	CONSTRUCTION PHASING, M.O.T, AND EROSION CONTROL PLAN	SHEET NO. 965
				COUNTY NEW CASTLE	DESIGNED BY: JL		TOTAL SHTS. 1256
					CHECKED BY: MT		

NOTES:

1. OFFSETS SHOWN IN THE GEOMETRY TABLES WITH A MINUS SIGN ARE TO THE LEFT OF THE CONSTRUCTION BASELINE.
2. RADII ARE GIVEN TO EDGE OF PAVEMENT.
3. UNLESS OTHERWISE NOTED, EDGE OF PAVEMENT ELEVATIONS AT INTERSECTIONS ARE GIVEN AT 10 FOOT INTERVALS.
4. ALL WORK REQUIRED FOR CALCULATING AND STAKING OF GRADES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND PAID FOR UNDER ITEM 763501-CONSTRUCTION ENGINEERING.
5. PROPOSED CURBS OR PAVEMENT THAT TIE INTO EXISTING PAVEMENT OR EXISTING CURBS SHALL MATCH THE EXISTING PAVEMENT OR CURB ELEVATION.
6. OFFSETS FOR TEMPORARY DITCH ARE STATIONED OFF OF THE BUNKER HILL ROAD TEMPORARY BASELINE.
7. PROPOSED OFFSETS FOR BUNKER HILL ROAD DITCHES ARE GIVEN ON BUNKER HILL ROAD GG SHEETS.

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
61600	10+14.00	-30.6003	531057.1416	563958.8966
61601	900+42.97	-11.0000	531011.8074	563991.0715
61602	10+13.57	-26.7651	531018.5154	563916.4822
61603	901+09.83	-11.0000	530959.5811	564038.2637
61604	906+85.66	11.0000	530674.4044	564538.5181
61605	906+85.66	-11.0000	530693.5159	564549.4135



DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO.	CONSTRUCTION PHASING, M.O.T, AND EROSION CONTROL PLAN	CS-105
				COUNTY NEW CASTLE	DESIGNED BY: JH		SHEET NO. 966
					CHECKED BY: MT		TOTAL SHTS. 1256

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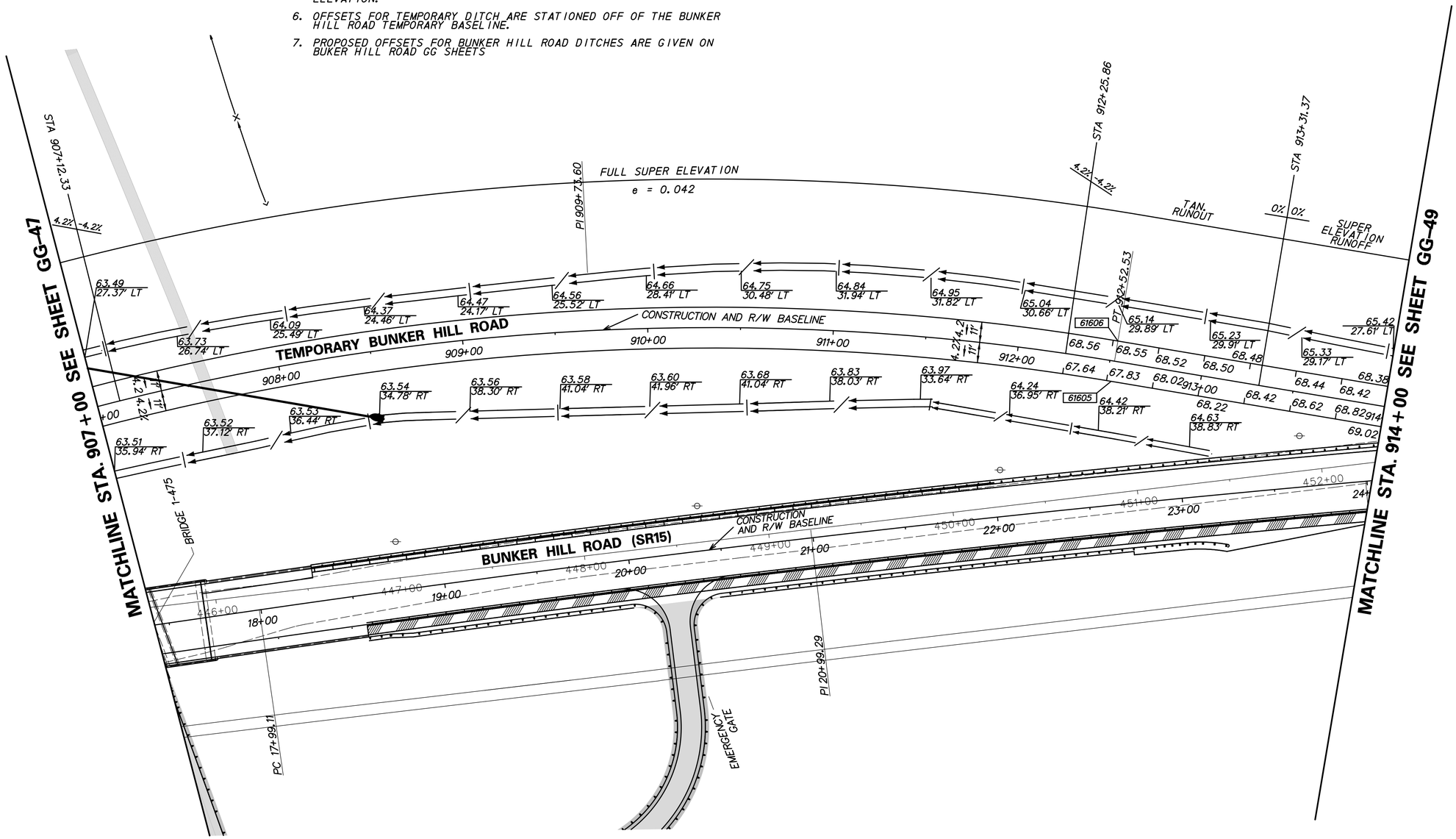
NOTES:

1. OFFSETS SHOWN IN THE GEOMETRY TABLES WITH A MINUS SIGN ARE TO THE LEFT OF THE CONSTRUCTION BASELINE.
2. RADII ARE GIVEN TO EDGE OF PAVEMENT.
3. UNLESS OTHERWISE NOTED, EDGE OF PAVEMENT ELEVATIONS AT INTERSECTIONS ARE GIVEN AT 10 FOOT INTERVALS.
4. ALL WORK REQUIRED FOR CALCULATING AND STAKING OF GRADES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND PAID FOR UNDER ITEM 763501-CONSTRUCTION ENGINEERING.
5. PROPOSED CURBS OR PAVEMENT THAT TIE INTO EXISTING PAVEMENT OR EXISTING CURBS SHALL MATCH THE EXISTING PAVEMENT OR CURB ELEVATION.
6. OFFSETS FOR TEMPORARY DITCH ARE STATIONED OFF OF THE BUNKER HILL ROAD TEMPORARY BASELINE.
7. PROPOSED OFFSETS FOR BUNKER HILL ROAD DITCHES ARE GIVEN ON BUKER HILL ROAD GG SHEETS

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
61605	912+52.53	11.0000	530300.6149	564952.4542
61606	912+52.53	-11.0000	530313.3970	564970.3600



DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO.	CONSTRUCTION PHASING, M.O.T, AND EROSION CONTROL PLAN	CS-106
				COUNTY NEW CASTLE	DESIGNED BY: JH		SHEET NO. 967
					CHECKED BY: MT		TOTAL SHTS. 1256

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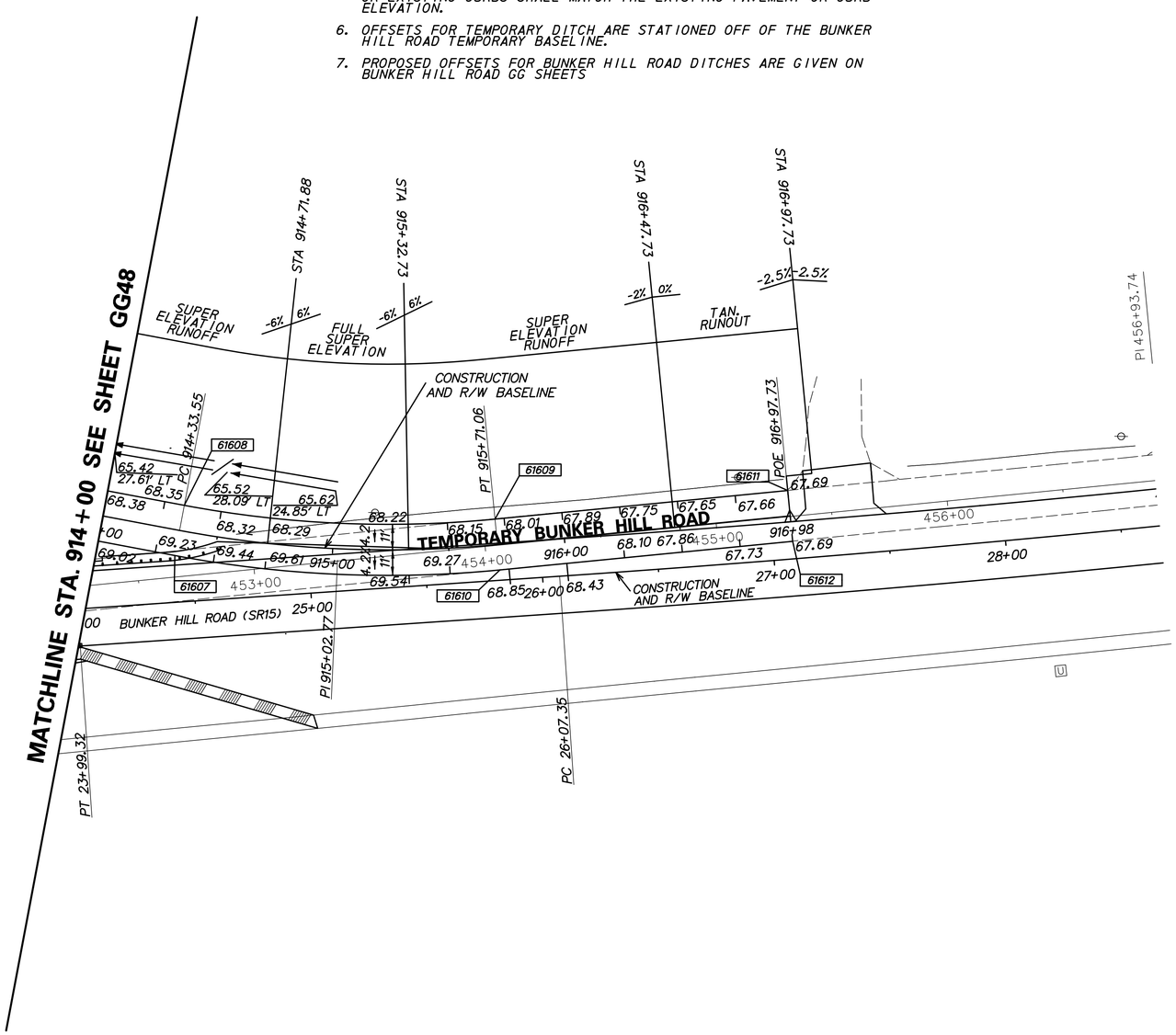
NOTES:

1. OFFSETS SHOWN IN THE GEOMETRY TABLES WITH A MINUS SIGN ARE TO THE LEFT OF THE CONSTRUCTION BASELINE.
2. RADII ARE GIVEN TO EDGE OF PAVEMENT.
3. UNLESS OTHERWISE NOTED, EDGE OF PAVEMENT ELEVATIONS AT INTERSECTIONS ARE GIVEN AT 10 FOOT INTERVALS.
4. ALL WORK REQUIRED FOR CALCULATING AND STAKING OF GRADES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND PAID FOR UNDER ITEM 763501-CONSTRUCTION ENGINEERING.
5. PROPOSED CURBS OR PAVEMENT THAT TIE INTO EXISTING PAVEMENT OR EXISTING CURBS SHALL MATCH THE EXISTING PAVEMENT OR CURB ELEVATION.
6. OFFSETS FOR TEMPORARY DITCH ARE STATIONED OFF OF THE BUNKER HILL ROAD TEMPORARY BASELINE.
7. PROPOSED OFFSETS FOR BUNKER HILL ROAD DITCHES ARE GIVEN ON BUNKER HILL ROAD GG SHEETS

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
61607	914+33.55	11.0000	530153.2819	565057.6275
61608	914+33.55	-11.0000	530166.0639	565075.5333
61609	915+71.06	-11.0000	530069.1337	565167.9802
61610	915+71.06	11.0000	530051.8528	565154.3651
61611	916+97.73	-11.0000	529990.7418	565267.4790
61612	916+97.73	11.0000	529973.4609	565253.8639



DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO.	CONSTRUCTION PHASING, M.O.T, AND EROSION CONTROL PLAN	CS-107
				COUNTY NEW CASTLE	DESIGNED BY: JH		SHEET NO. 968
					CHECKED BY: MT		TOTAL SHTS. 1256

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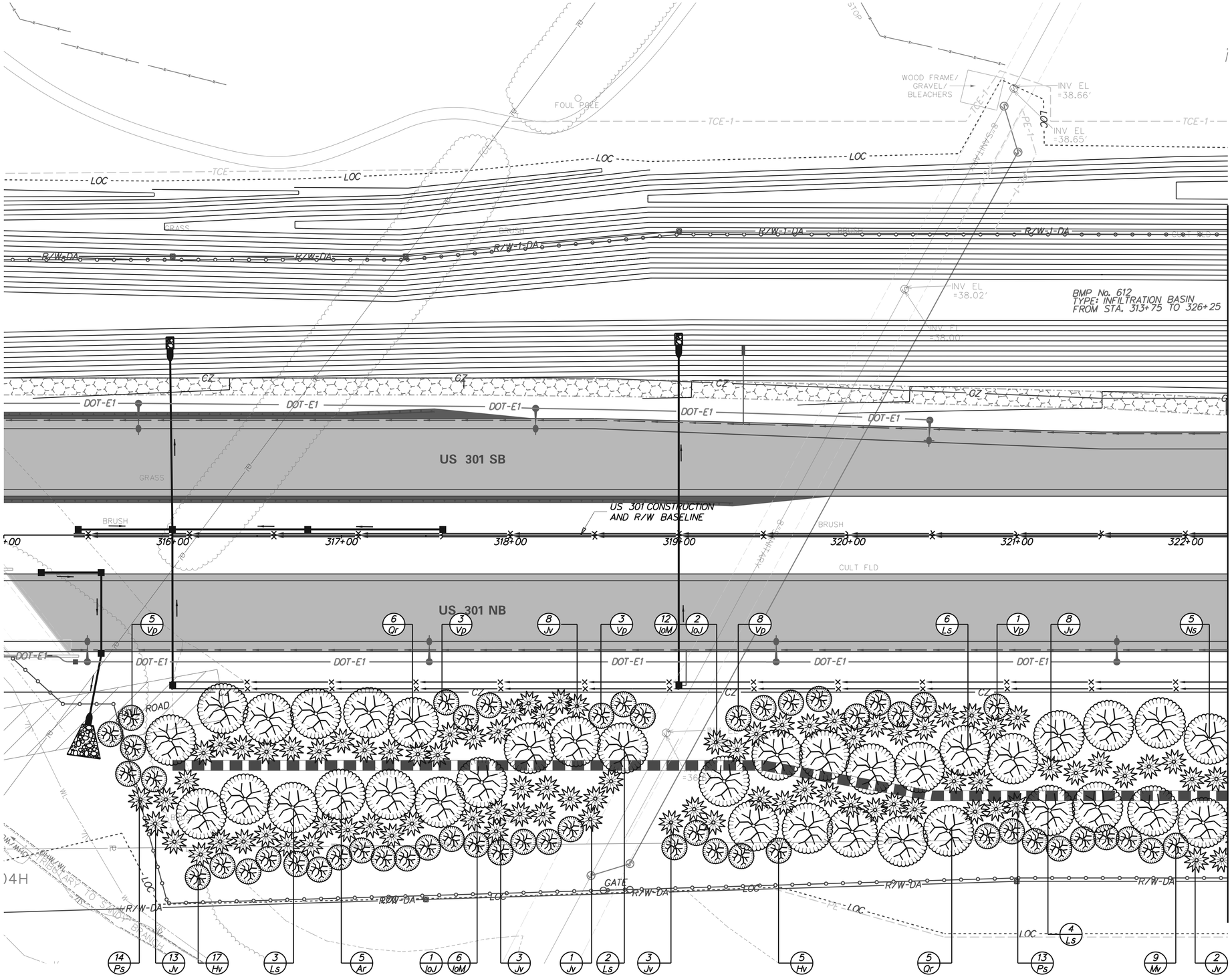


LANDSCAPE PLANTING SCHEDULE		
KEY	PLANTING DESCRIPTION	QUANTITY
	MAJOR DECIDUOUS TREES	
Ar	Acer rubrum 'Red Sunset'	5
Ls	Liquidambar styraciflua	15
Ns	Nyssa sylvatica	5
Or	Quercus rubra	11
	EVERGREEN TREES	
IoM	Ilex opaca 'Miss Helen'	18
IoJ	Ilex opaca 'Jersey Knight'	3
Jv	Juniperus virginiana	38
Ps	Pinus strobus	27
	MINOR DECIDUOUS TREES	
Hv	Hamamelis virginiana	22
Mv	Magnolia virginiana	9
Vp	Viburnum prunifolium	20

LANDSCAPE LEGEND

- Major Deciduous Tree
- Evergreen Tree
- Minor Deciduous Tree
- Mass Planting of Groundcovers
- Mass Planting of Shrubs

LANDSCAPE NOTES

Refer to Landscape Planting Schedule and Notes Sheet for summary of quantities and landscape notes.

Berm planting for visual mitigation to the Southridge community.

FOR INFORMATION ONLY/WORK BY OTHERS

LS-01

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

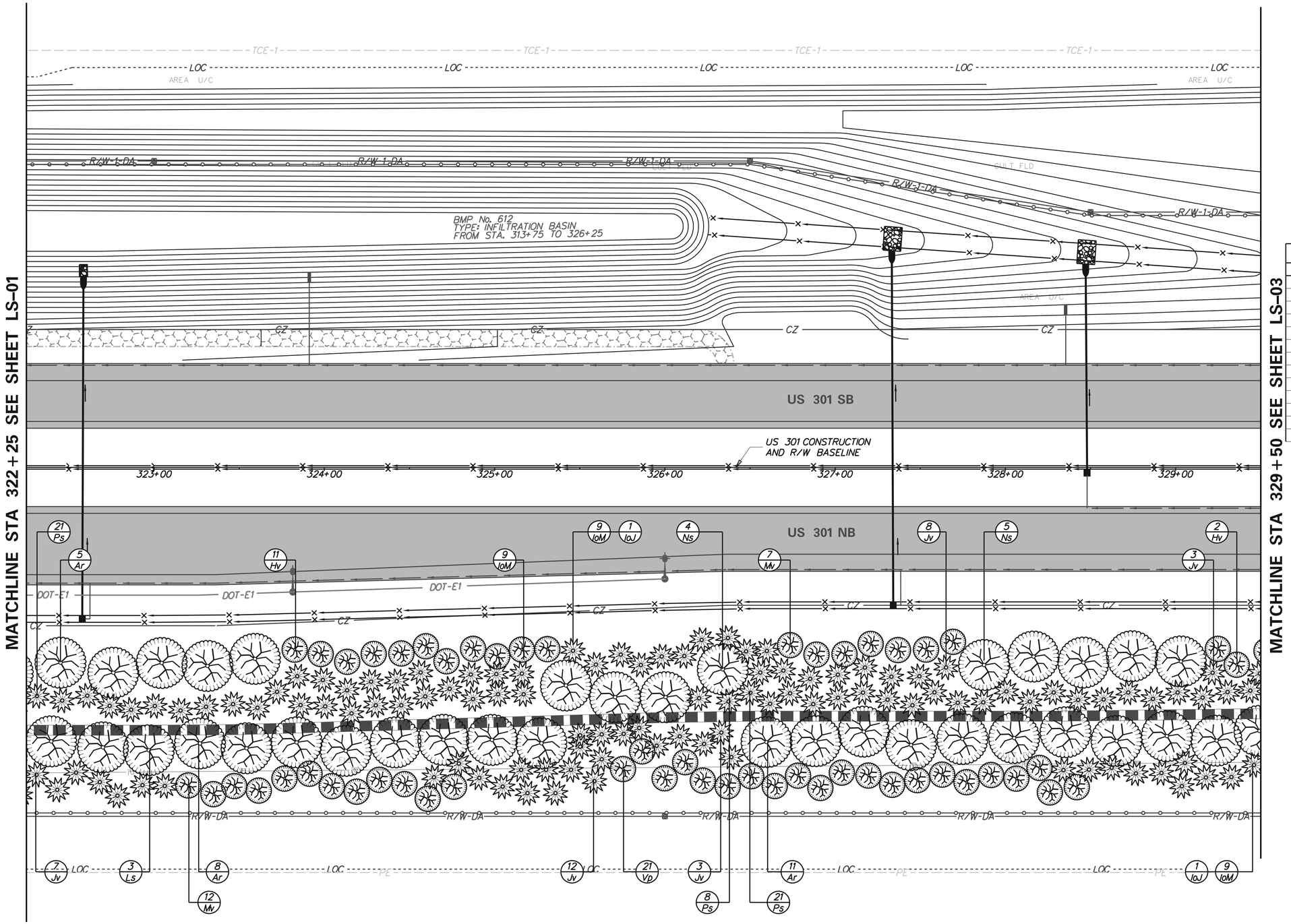
US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: DMS	
COUNTY	CHECKED BY: AJC	
NEW CASTLE		

LANDSCAPING PLAN

SHEET NO. 969

TOTAL SHTS. 1256



Berm planting for visual mitigation to the Southridge community.

LANDSCAPE PLANTING SCHEDULE

KEY	PLANTING DESCRIPTION	QUANTITY
	MAJOR DECIDUOUS TREES	
Ar	Acer rubrum 'Red Sunset'	24
Ls	Liquidambar styraciflua	3
Ns	Nyssa sylvatica	9
	EVERGREEN TREES	
IoM	Ilex opaca 'Miss Helen'	27
IoJ	Ilex opaca 'Jersey Knight'	2
Jv	Juniperus virginiana	33
Ps	Pinus strobus	50
	MINOR DECIDUOUS TREES	
Hv	Hamamelis virginiana	13
Mv	Magnolia virginiana	19
Vp	Viburnum prunifolium	21

LANDSCAPE LEGEND

- Major Deciduous Tree
- Evergreen Tree
- Minor Deciduous Tree
- Mass Planting of Groundcovers
- Mass Planting of Shrubs

LANDSCAPE NOTES

Refer to Landscape Planting Schedule and Notes Sheet for summary of quantities and landscape notes.

FOR INFORMATION ONLY/WORK BY OTHERS

LS-02

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

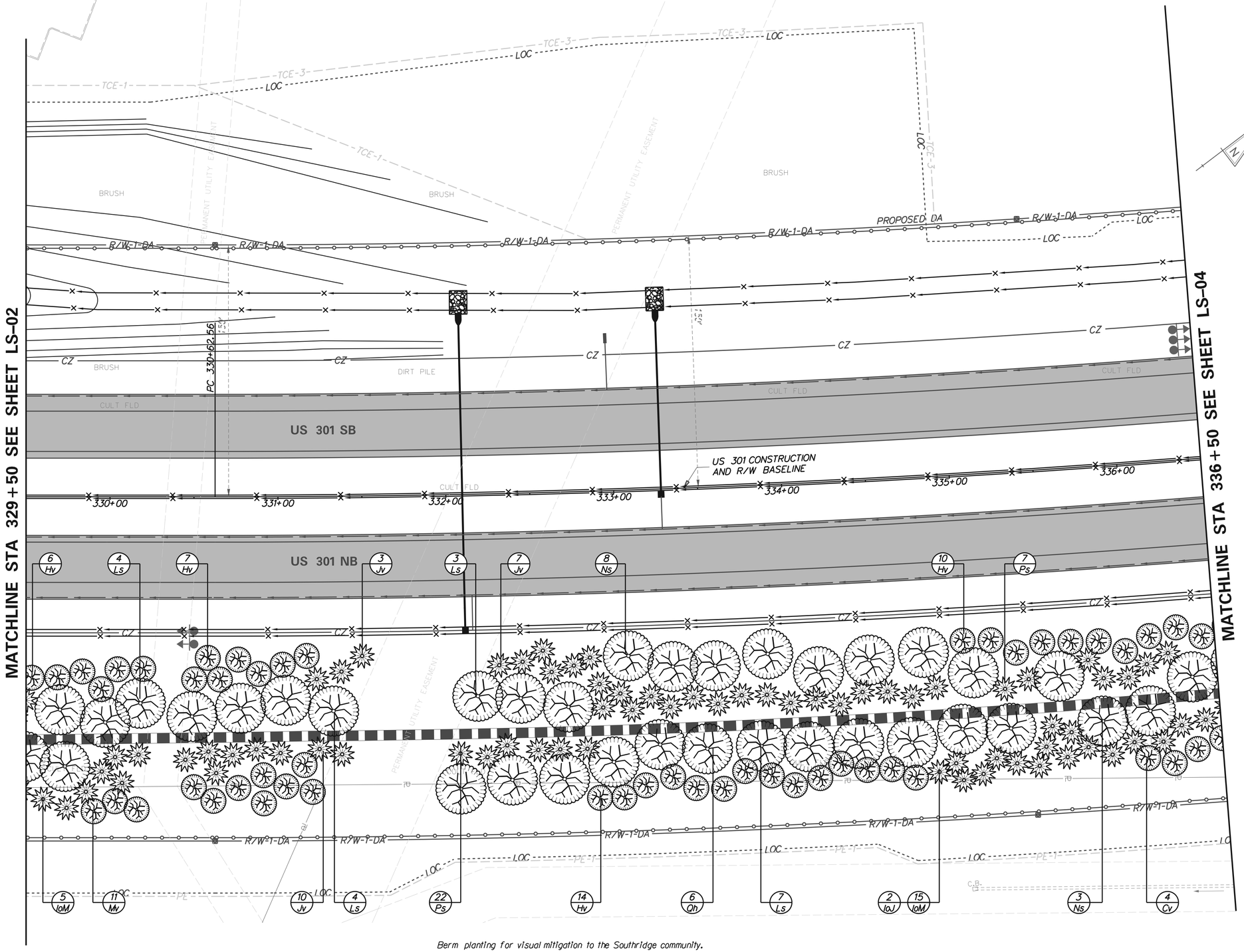
SCALE
0 30 60 90
FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: DMS	
COUNTY		
NEW CASTLE	CHECKED BY: AJC	

LANDSCAPING PLAN

SHEET NO. 970
TOTAL SHTS. 1256



Berm planting for visual mitigation to the Southridge community.

LANDSCAPE PLANTING SCHEDULE

KEY	PLANTING DESCRIPTION	QUANTITY
	MAJOR DECIDUOUS TREES	
Ls	Liquidambar styraciflua	18
Ns	Nyssa sylvatica	11
Qh	Quercus phellos	6
	EVERGREEN TREES	
IoM	Ilex opaca 'Miss Helen'	20
IoJ	Ilex opaca 'Jersey Knight'	2
Jv	Juniperus virginiana	20
Ps	Pinus strobus	29
	MINOR DECIDUOUS TREES	
Cv	Crataegus viridis 'Winter King'	4
Hv	Hamamelis virginiana	37
Mv	Magnolia virginiana	11

LANDSCAPE LEGEND

- Major Deciduous Tree
- Evergreen Tree
- Minor Deciduous Tree
- Mass Planting of Groundcovers
- Mass Planting of Shrubs

LANDSCAPE NOTES

Refer to Landscape Planting Schedule and Notes Sheet for summary of quantities and landscape notes.

FOR INFORMATION ONLY/WORK BY OTHERS

LS-03

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

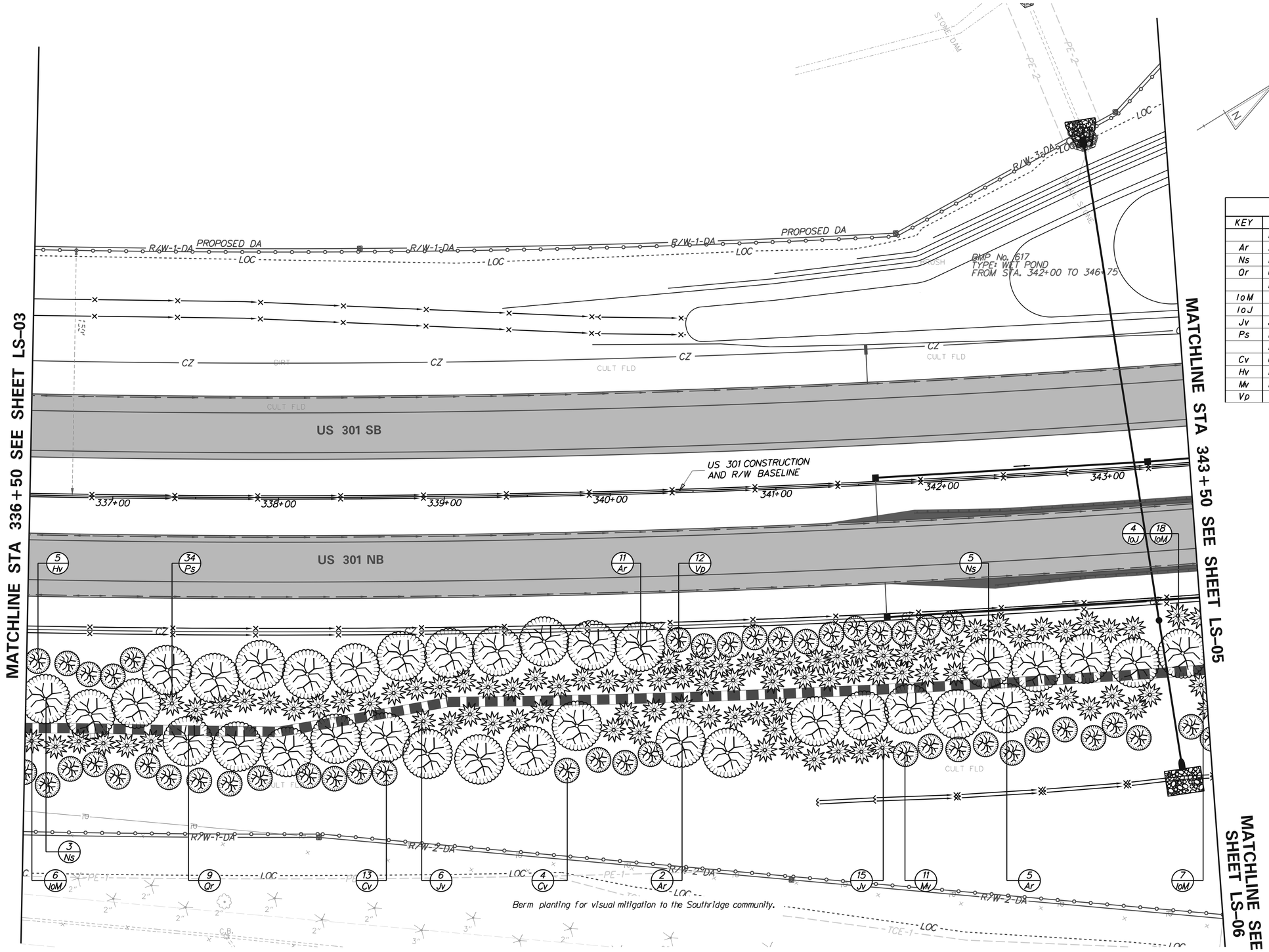
US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: DMS	
COUNTY		
NEW CASTLE	CHECKED BY: AJC	

LANDSCAPING PLAN

SHEET NO. 971

TOTAL SHTS. 1256



LANDSCAPE PLANTING SCHEDULE

KEY	PLANTING DESCRIPTION	QUANTITY
	MAJOR DECIDUOUS TREES	
Ar	Acer rubrum 'Red Sunset'	18
Ns	Nyssa sylvatica	8
Or	Quercus rubra	9
	EVERGREEN TREES	
IoM	Ilex opaca 'Miss Helen'	31
IoJ	Ilex opaca 'Jersey Knight'	4
Jv	Juniperus virginiana	21
Ps	Pinus strobus	34
	MINOR DECIDUOUS TREES	
Cv	Crataegus viridis 'Winter King'	17
Hv	Hamamelis virginiana	5
Mv	Magnolia virginiana	11
Vp	Viburnum prunifolium	12

LANDSCAPE LEGEND

- Major Deciduous Tree
- Evergreen Tree
- Minor Deciduous Tree
- Mass Planting of Groundcovers
- Mass Planting of Shrubs

LANDSCAPE NOTES

Refer to Landscape Planting Schedule and Notes Sheet for summary of quantities and landscape notes.

FOR INFORMATION ONLY/WORK BY OTHERS

LS-04

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

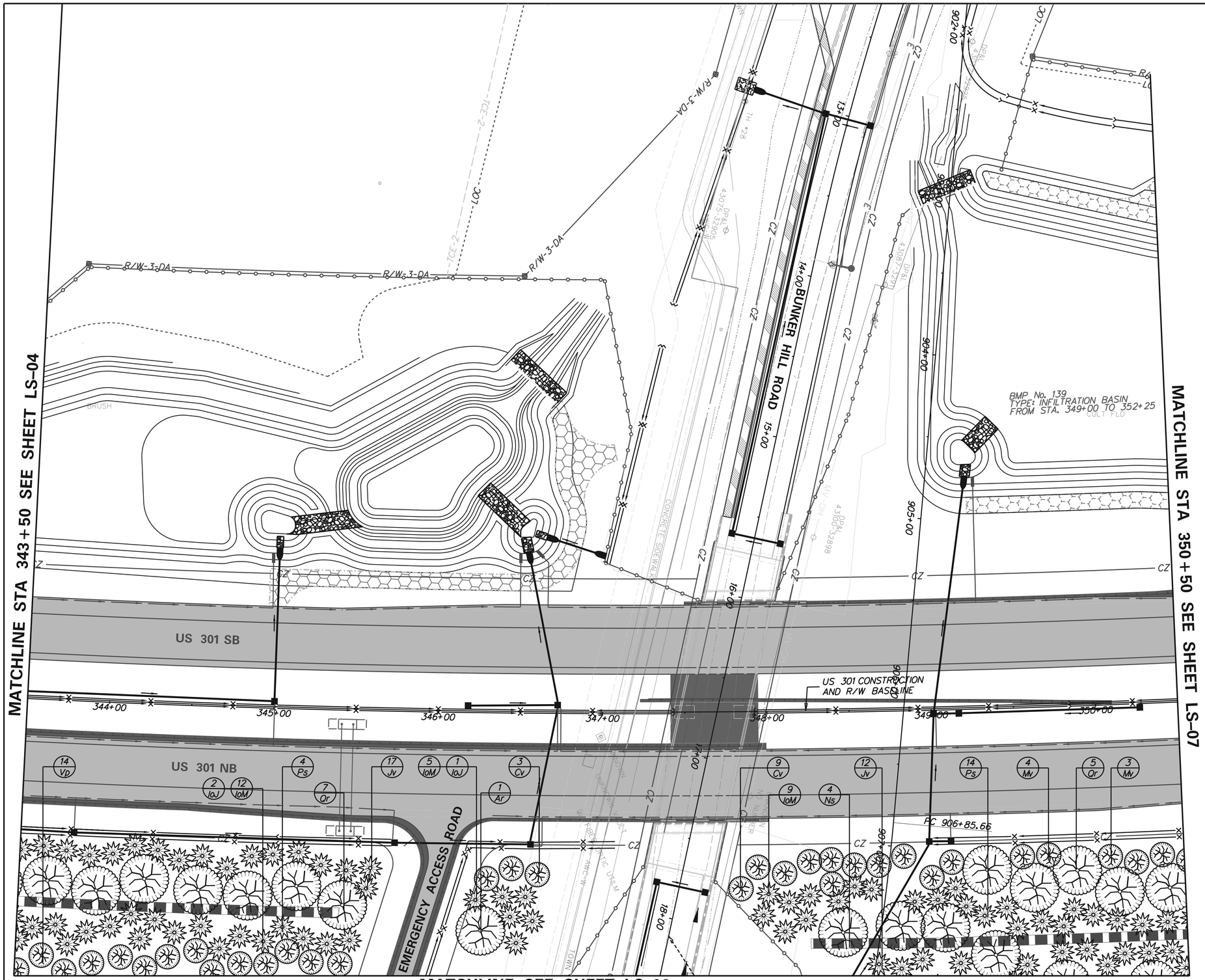
SCALE 0 30 60 90 FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: DMS	
COUNTY		
NEW CASTLE	CHECKED BY: AJC	

LANDSCAPING PLAN

SHEET NO.
972
TOTAL SHTS.
1256



LANDSCAPE PLANTING SCHEDULE

KEY	PLANTING DESCRIPTION	QUANTITY
	MAJOR DECIDUOUS TREES	
Ar	Acer rubrum 'Red Sunset'	1
Ns	Nyssa sylvatica	4
Or	Quercus rubra	12
	EVERGREEN TREES	
IoM	Ilex opaca 'Miss Helen'	26
IoJ	Ilex opaca 'Jersey Knight'	3
Jv	Juniperus virginiana	29
Ps	Pinus strobus	18
	MINOR DECIDUOUS TREES	
Cv	Crataegus viridis 'Winter King'	12
Mv	Magnolia virginiana	7
Vp	Viburnum prunifolium	14

LANDSCAPE LEGEND

- Major Deciduous Tree
- Evergreen Tree
- Minor Deciduous Tree
- Mass Planting of Groundcovers
- Mass Planting of Shrubs

LANDSCAPE NOTES

Refer to Landscape Planting Schedule and Notes Sheet for summary of quantities and landscape notes.

FOR INFORMATION ONLY/WORK BY OTHERS

LS-05

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

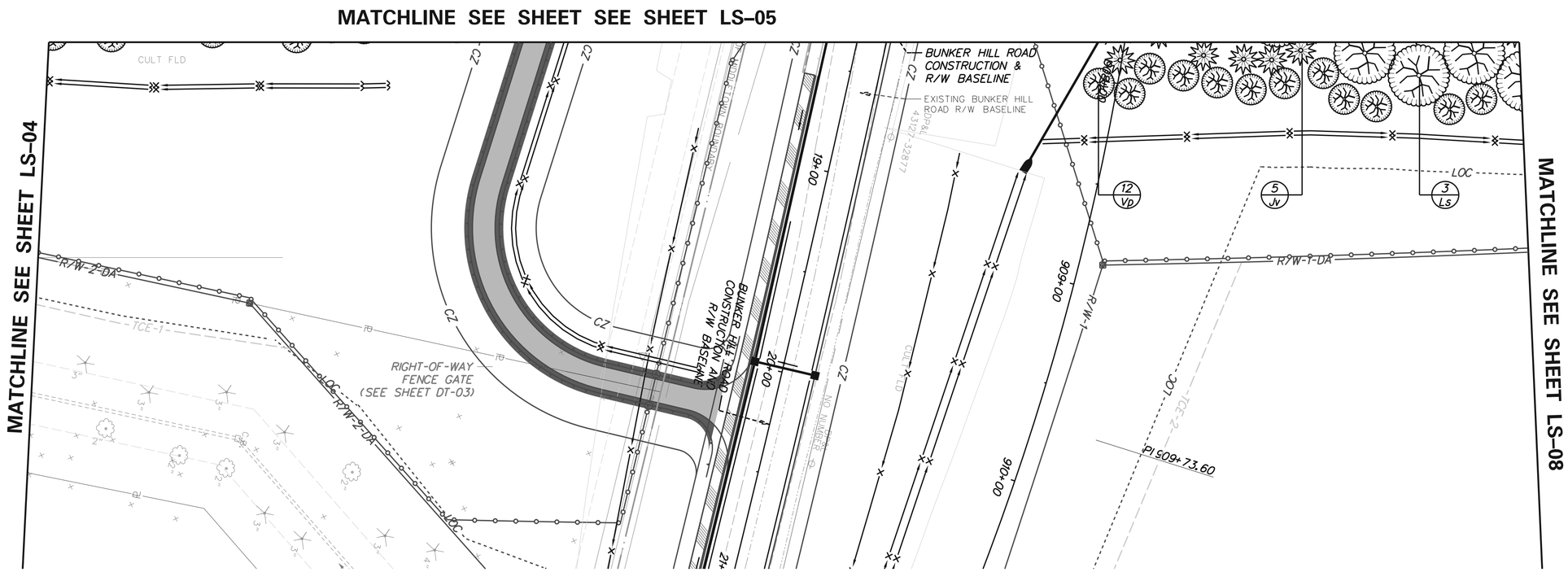
US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: DMS	
COUNTY		
NEW CASTLE	CHECKED BY: AJC	

LANDSCAPING PLAN

SHEET NO.
973
TOTAL SHTS.
1256

LANDSCAPE PLANTING SCHEDULE		
KEY	PLANTING DESCRIPTION	QUANTITY
	MAJOR DECIDUOUS TREES	
Ls	Liquidambar styraciflua	3
	EVERGREEN TREES	
Jv	Juniperus virginiana	5
	MINOR DECIDUOUS TREES	
Vp	Viburnum prunifolium	12



Berm planting for visual mitigation to the Maples historic property.

LANDSCAPE LEGEND

- Major Deciduous Tree
- Evergreen Tree
- Minor Deciduous Tree
- Mass Planting of Groundcovers
- Mass Planting of Shrubs

LANDSCAPE NOTES

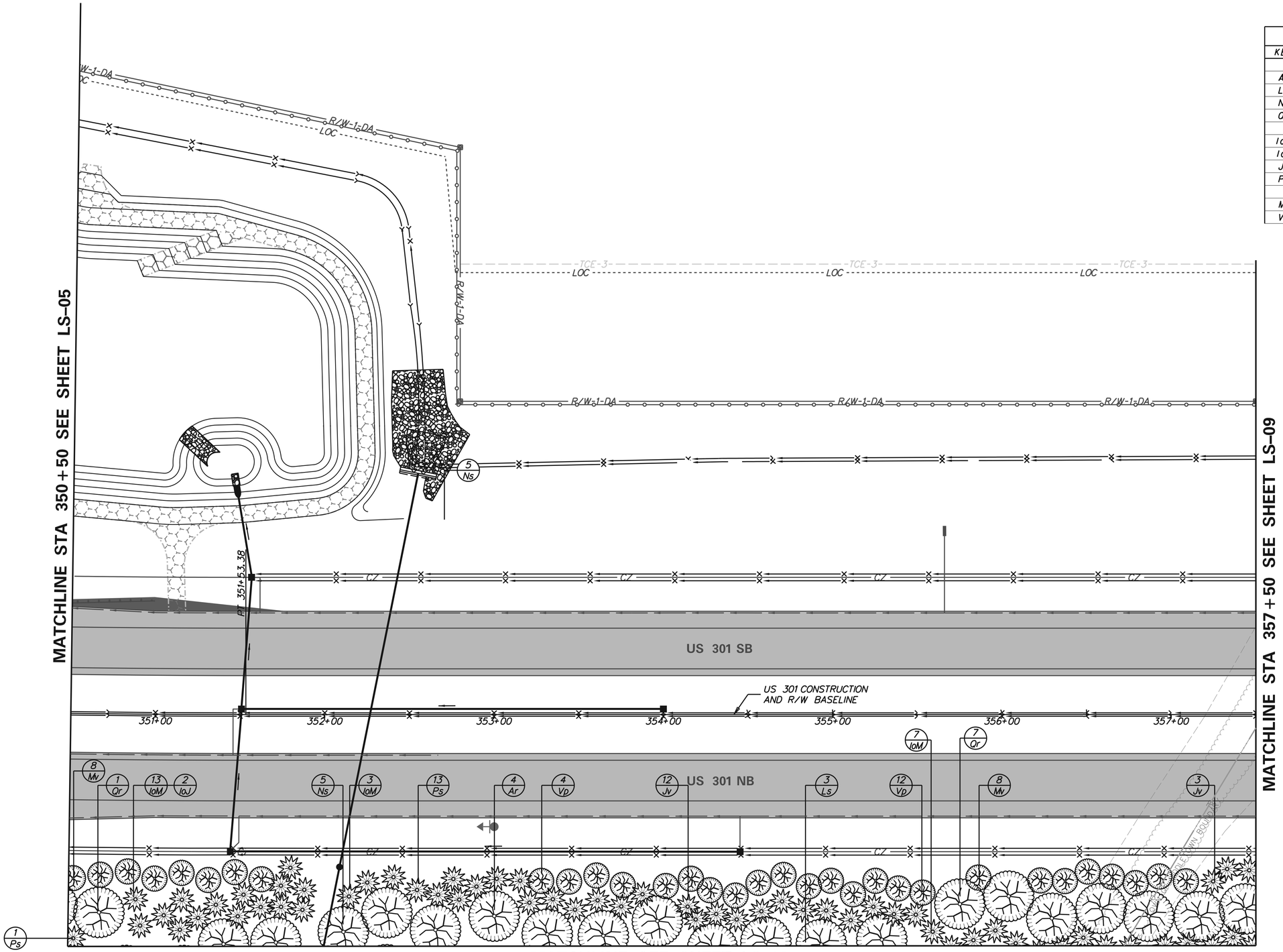
Refer to Landscape Planting Schedule and Notes Sheet for summary of quantities and landscape notes.

FOR INFORMATION ONLY/WORK BY OTHERS

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO.	LANDSCAPING PLAN
				COUNTY NEW CASTLE	DESIGNED BY: DMS	
					CHECKED BY: AJC	

LS-06	
SHEET NO.	974
TOTAL SHTS.	1256

LANDSCAPE PLANTING SCHEDULE		
KEY	PLANTING DESCRIPTION	QUANTITY
	MAJOR DECIDUOUS TREES	
Ar	Acer rubrum 'Red Sunset'	4
Ls	Liquidambar styraciflua	3
Ns	Nyssa sylvatica	5
Or	Quercus rubra	8
	EVERGREEN TREES	
IoM	Ilex opaca 'Miss Helen'	23
IoJ	Ilex opaca 'Jersey Knight'	2
Jv	Juniperus virginiana	15
Ps	Pinus strobus	14
	MINOR DECIDUOUS TREES	
Mv	Magnolia virginiana	16
Vp	Viburnum prunifolium	16



MATCHLINE SEE SHEET LS-08

Berm planting for visual mitigation to the Maples historic property.

LANDSCAPE LEGEND

- Major Deciduous Tree
- Evergreen Tree
- Minor Deciduous Tree
- Mass Planting of Groundcovers
- Mass Planting of Shrubs

LANDSCAPE NOTES

Refer to Landscape Planting Schedule and Notes Sheet for summary of quantities and landscape notes.

FOR INFORMATION ONLY/WORK BY OTHERS

LS-07

DELAWARE DEPARTMENT OF TRANSPORTATION

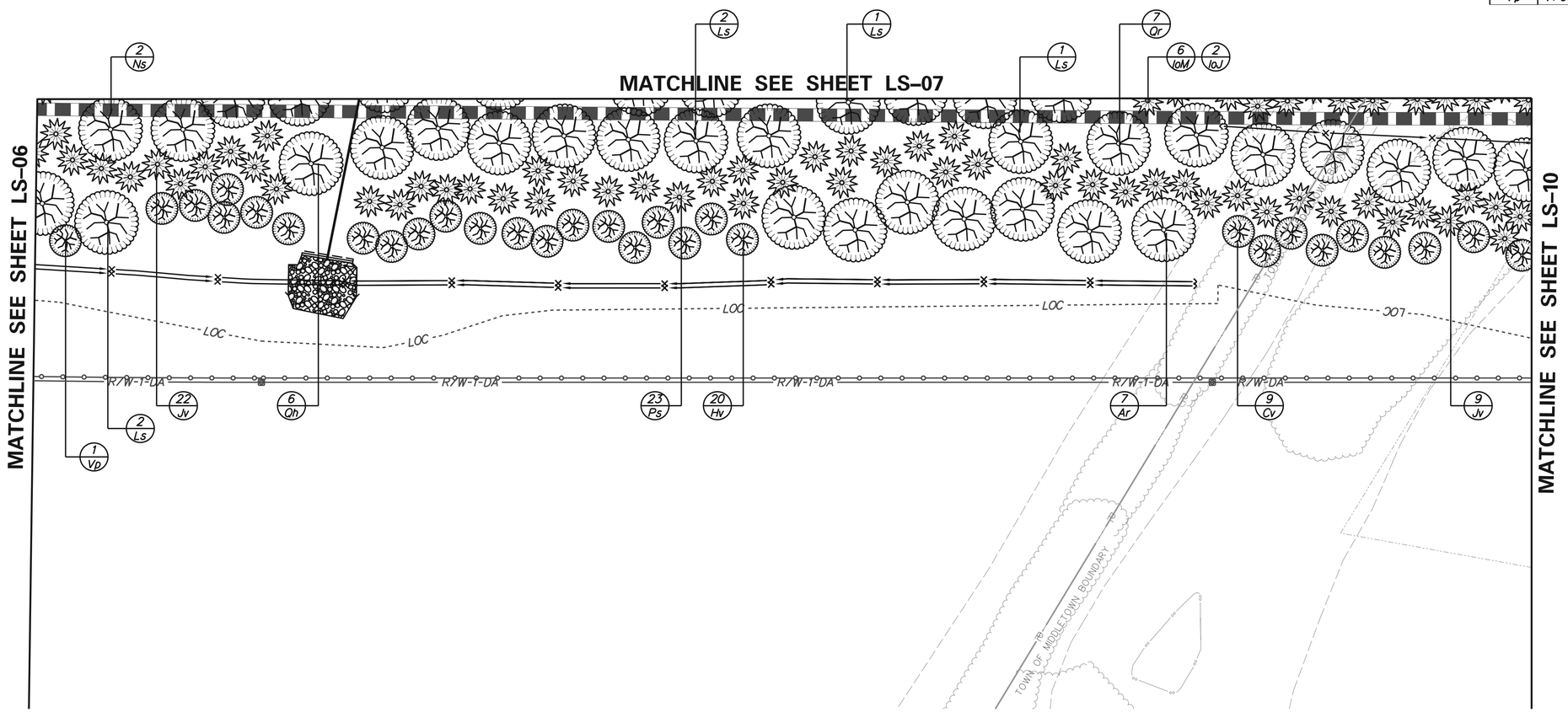
ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	LANDSCAPING PLAN	SHEET NO.
T200911303	DESIGNED BY: DMS		975
COUNTY			TOTAL SHTS.
NEW CASTLE	CHECKED BY: AJC		1256

LANDSCAPE PLANTING SCHEDULE		
KEY	PLANTING DESCRIPTION	QUANTITY
	MAJOR DECIDUOUS TREES	
Ar	Acer rubrum 'Red Sunset'	7
Ls	Liquidambar styraciflua	6
Ns	Nyssa sylvatica	2
Oh	Quercus phellos	6
Or	Quercus rubra	7
	EVERGREEN TREES	
IoM	Ilex opaca 'Miss Helen'	6
IoJ	Ilex opaca 'Jersey Knight'	2
Jv	Juniperus virginiana	31
Ps	Pinus strobus	23
	MINOR DECIDUOUS TREES	
Cv	Crataegus viridis 'Winter King'	9
Hv	Hamamelis virginiana	20
Vp	Viburnum prunifolium	1



Berm planting for visual mitigation to the Maples historic prperty and Middletown Village.

LANDSCAPE LEGEND

- Major Deciduous Tree
- Evergreen Tree
- Minor Deciduous Tree
- Mass Planting of Groundcovers
- Mass Planting of Shrubs

LANDSCAPE NOTES

Refer to Landscape Planting Schedule and Notes Sheet for summary of quantities and landscape notes.

FOR INFORMATION ONLY/WORK BY OTHERS

LS-08

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

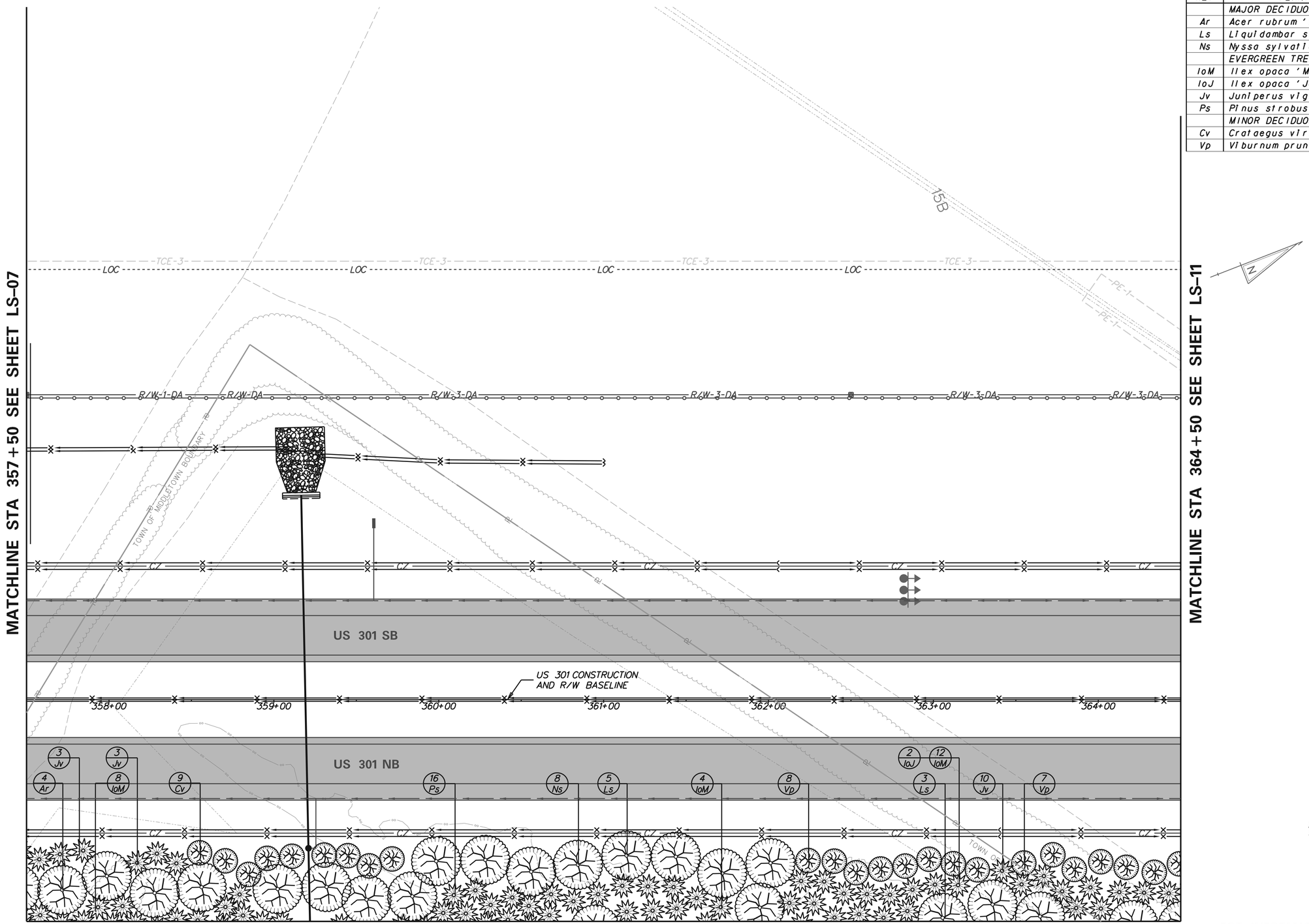
US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: DMS	
COUNTY		
NEW CASTLE	CHECKED BY: AJC	

LANDSCAPING PLAN

SHEET NO.
976
TOTAL SHTS.
1256

LANDSCAPE PLANTING SCHEDULE		
KEY	PLANTING DESCRIPTION	QUANTITY
	MAJOR DECIDUOUS TREES	
Ar	Acer rubrum 'Red Sunset'	4
Ls	Liquidambar styraciflua	8
Ns	Nyssa sylvatica	8
	EVERGREEN TREES	
IoM	Ilex opaca 'Miss Helen'	24
IoJ	Ilex opaca 'Jersey Knight'	2
Jv	Juniperus virginiana	16
Ps	Pinus strobus	16
	MINOR DECIDUOUS TREES	
Cv	Crataegus viridis 'Winter King'	9
Vp	Viburnum prunifolium	15



Berm planting for visual mitigation to Middletown Village.

MATCHLINE SEE SHEET LS-10

LANDSCAPE LEGEND

- Major Deciduous Tree
- Evergreen Tree
- Minor Deciduous Tree
- Mass Planting of Groundcovers
- Mass Planting of Shrubs

LANDSCAPE NOTES

Refer to Landscape Planting Schedule and Notes Sheet for summary of quantities and landscape notes.

FOR INFORMATION ONLY/WORK BY OTHERS

LS-09

DELAWARE DEPARTMENT OF TRANSPORTATION

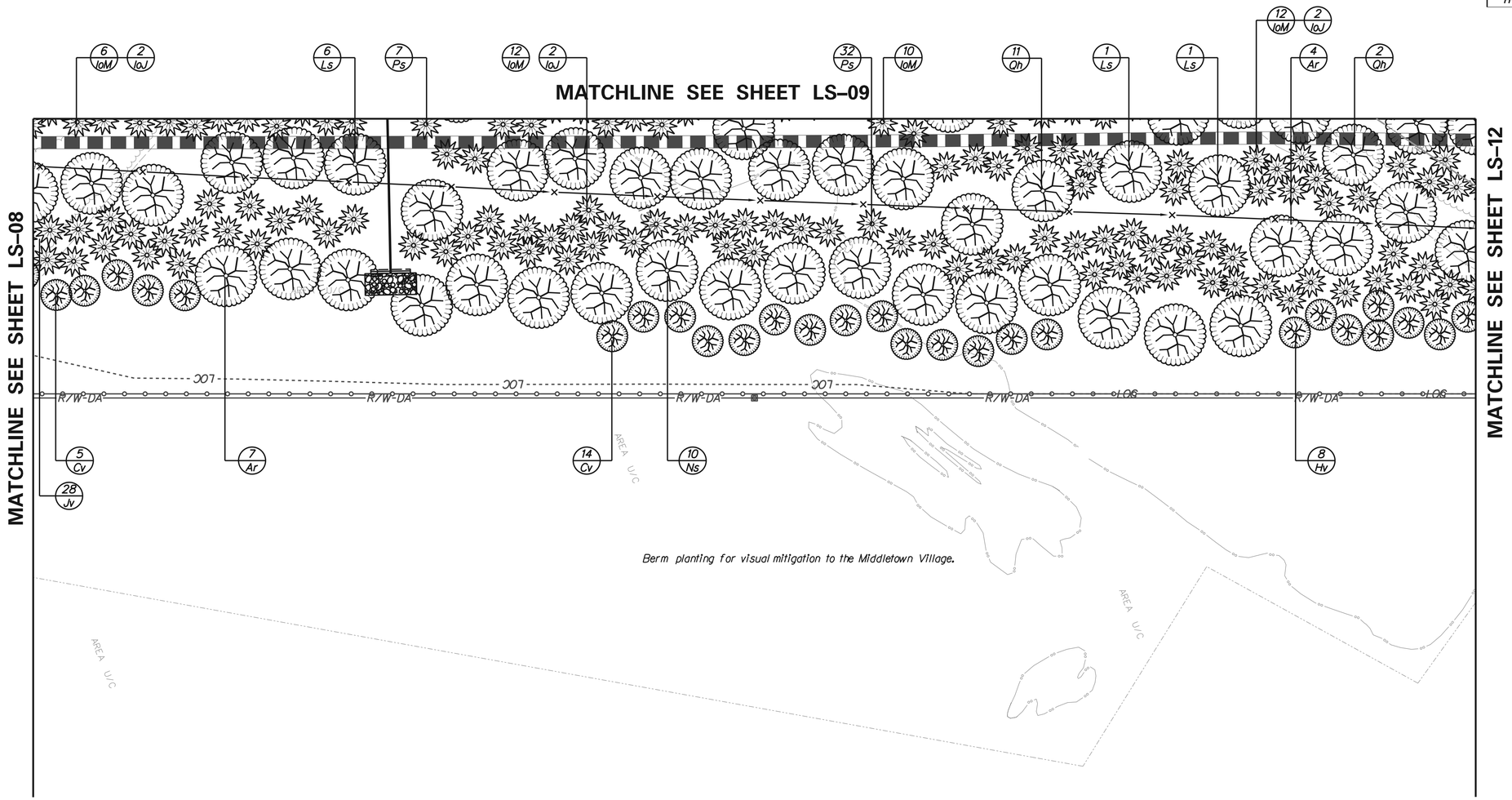
ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	LANDSCAPING PLAN	SHEET NO.
T200911303	DESIGNED BY: DMS		977
COUNTY			TOTAL SHTS.
NEW CASTLE	CHECKED BY: AJC		1256

LANDSCAPE PLANTING SCHEDULE		
KEY	PLANTING DESCRIPTION	QUANTITY
	MAJOR DECIDUOUS TREES	
Ar	Acer rubrum 'Red Sunset'	11
Ls	Liquidambar styraciflua	8
Ns	Nyssa sylvatica	10
Oh	Quercus phellos	13
	EVERGREEN TREES	
IoM	Ilex opaca 'Miss Helen'	40
IoJ	Ilex opaca 'Jersey Knight'	6
Jv	Juniperus virginiana	28
Ps	Pinus strobus	39
	MINOR DECIDUOUS TREES	
Cv	Crataegus viridis 'Winter King'	19
Hv	Hamamelis virginiana	8



LANDSCAPE LEGEND

- Major Deciduous Tree
- Evergreen Tree
- Minor Deciduous Tree
- Mass Planting of Groundcovers
- Mass Planting of Shrubs

LANDSCAPE NOTES

Refer to Landscape Planting Schedule and Notes Sheet for summary of quantities and landscape notes.

FOR INFORMATION ONLY/WORK BY OTHERS

LS-10

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT T200911303

COUNTY NEW CASTLE

BRIDGE NO.

DESIGNED BY: DMS

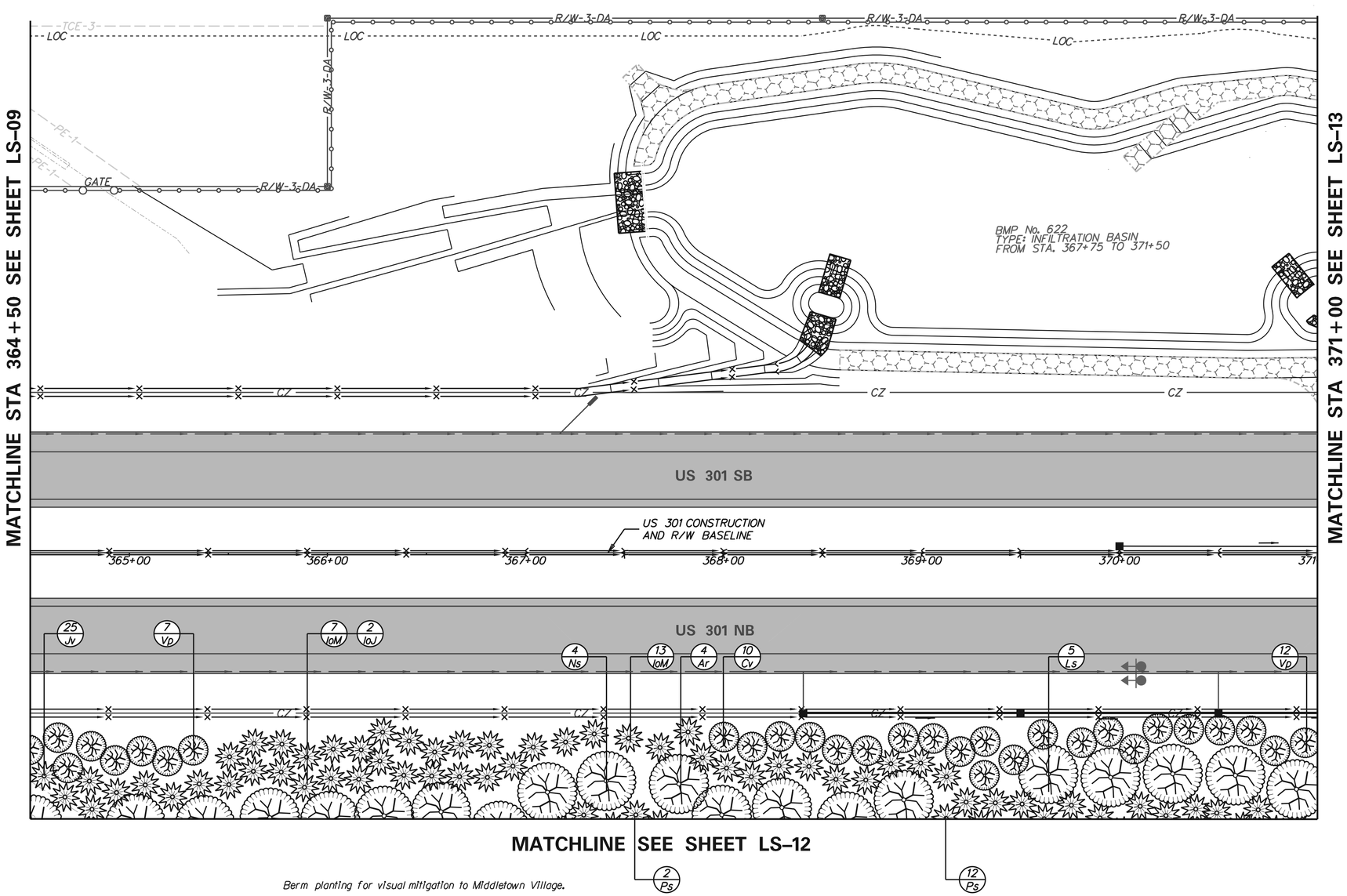
CHECKED BY: AJC

LANDSCAPING PLAN

SHEET NO. 978

TOTAL SHTS. 1256

LANDSCAPE PLANTING SCHEDULE		
KEY	PLANTING DESCRIPTION	QUANTITY
	MAJOR DECIDUOUS TREES	
Ar	Acer rubrum 'Red Sunset'	4
Ls	Liquidambar styraciflua	5
Ns	Nyssa sylvatica	4
	EVERGREEN TREES	
IoM	Ilex opaca 'Miss Helen'	20
IoJ	Ilex opaca 'Jersey Knight'	2
Jv	Juniperus virginiana	25
Ps	Pinus strobus	14
	MINOR DECIDUOUS TREES	
Cv	Crataegus viridis 'Winter King'	10
Vp	Viburnum prunifolium	19



Berm planting for visual mitigation to Middletown Village.

LANDSCAPE LEGEND

- Major Deciduous Tree
- Evergreen Tree
- Minor Deciduous Tree
- Mass Planting of Groundcovers
- Mass Planting of Shrubs

LANDSCAPE NOTES

Refer to Landscape Planting Schedule and Notes Sheet for summary of quantities and landscape notes.

FOR INFORMATION ONLY/WORK BY OTHERS

LS-11

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT T200911303

COUNTY NEW CASTLE

BRIDGE NO.

DESIGNED BY: DMS

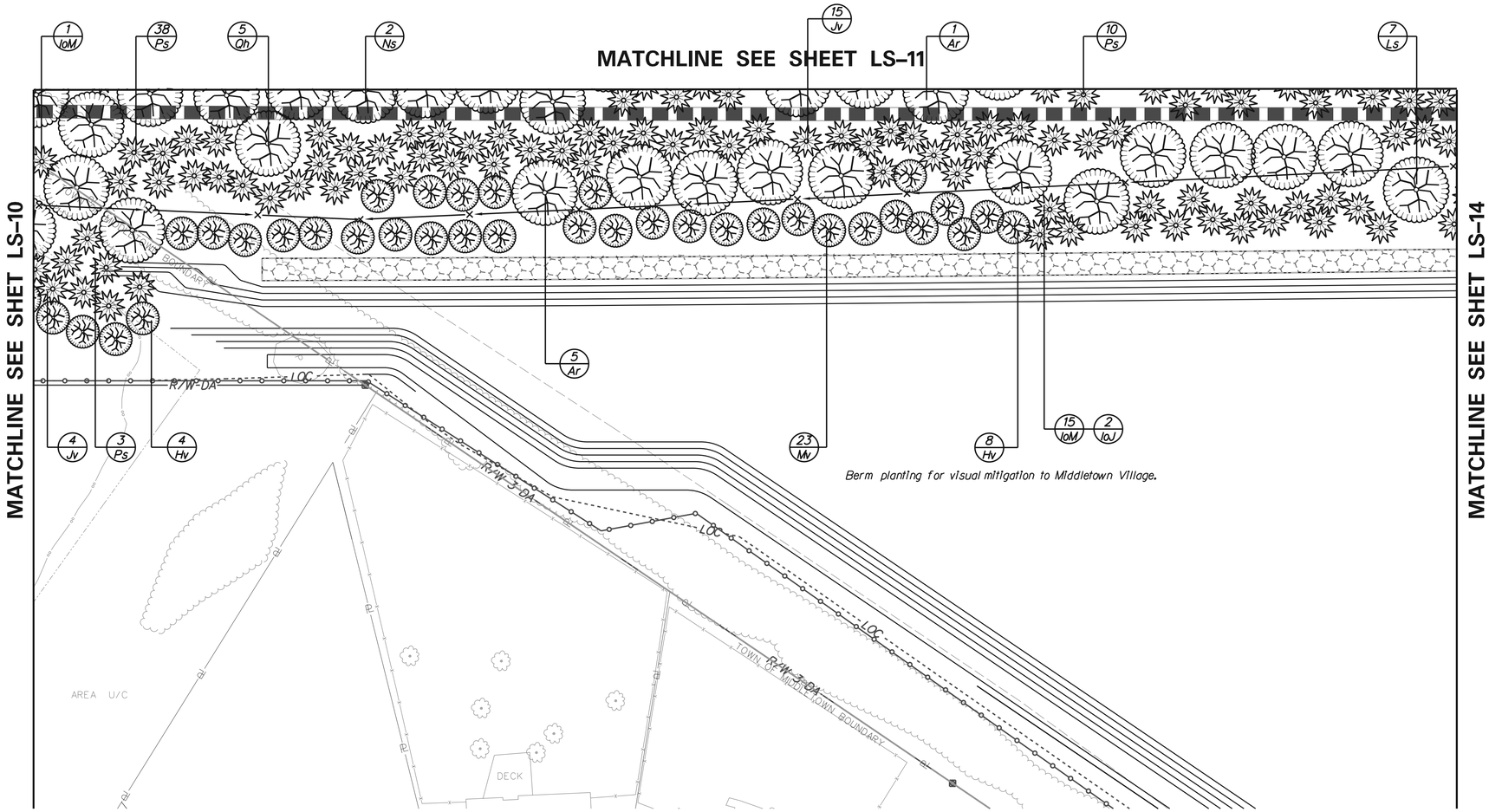
CHECKED BY: AJC

LANDSCAPING PLAN

SHEET NO. 979

TOTAL SHTS. 1256

LANDSCAPE PLANTING SCHEDULE		
KEY	PLANTING DESCRIPTION	QUANTITY
	MAJOR DECIDUOUS TREES	
Ar	Acer rubrum 'Red Sunset'	6
Ls	Liquidambar styraciflua	7
Ns	Nyssa sylvatica	2
Oh	Quercus phellos	5
	EVERGREEN TREES	
IoM	Ilex opaca 'Miss Helen'	16
IoJ	Ilex opaca 'Jersey Knight'	2
Jv	Juniperus virginiana	19
Ps	Pinus strobus	51
	MINOR DECIDUOUS TREES	
Hv	Hamamelis virginiana	12
Mv	Magnolia virginiana	23



LANDSCAPE LEGEND

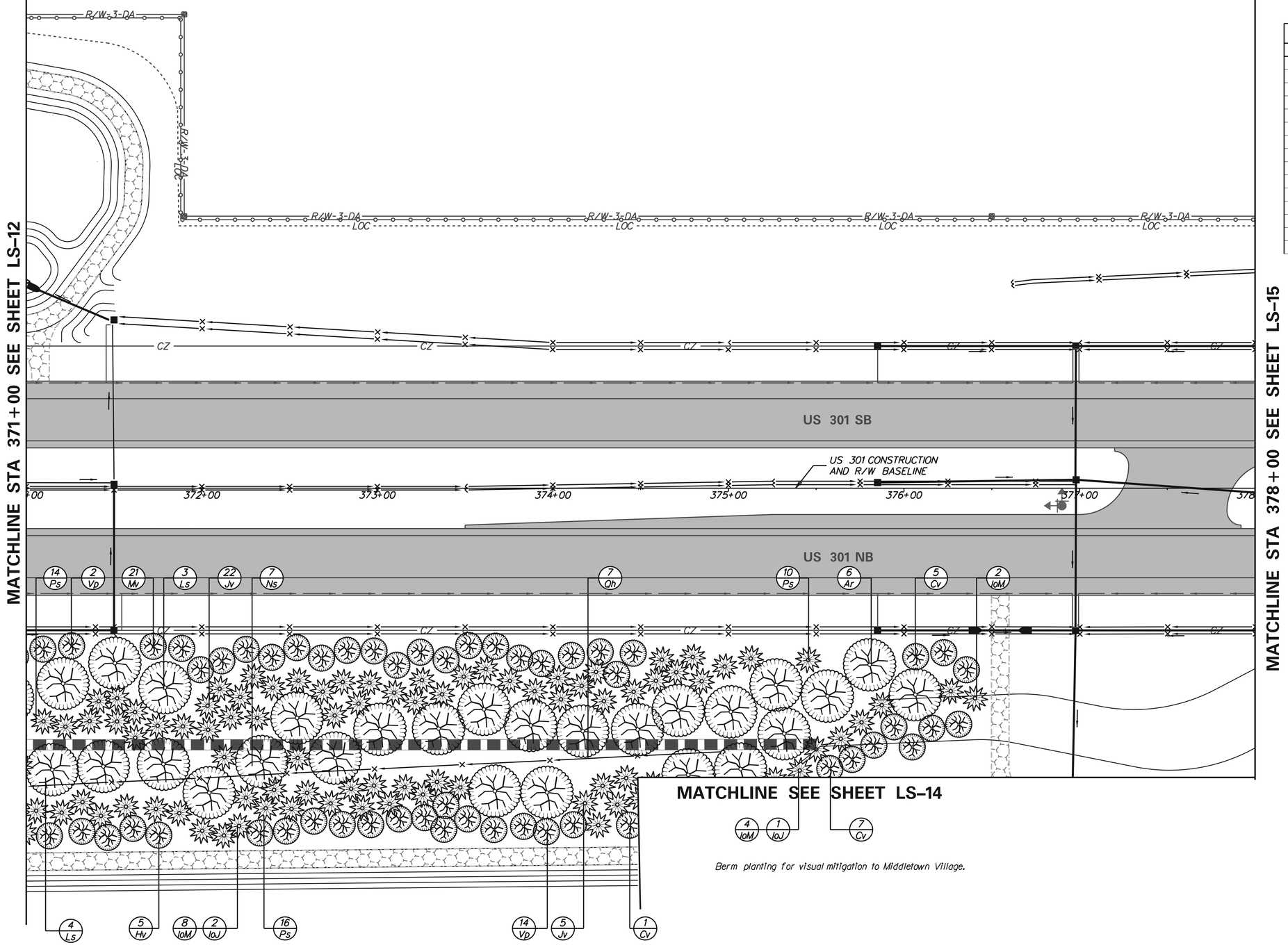
- Major Deciduous Tree
- Evergreen Tree
- Minor Deciduous Tree
- Mass Planting of Groundcovers
- Mass Planting of Shrubs

LANDSCAPE NOTES

Refer to Landscape Planting Schedule and Notes Sheet for summary of quantities and landscape notes.

FOR INFORMATION ONLY/WORK BY OTHERS

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303 / COUNTY NEW CASTLE	BRIDGE NO. / DESIGNED BY: DMS / CHECKED BY: AJC	LANDSCAPING PLAN	LS-12 / SHEET NO. 980 / TOTAL SHTS. 1256



Berm planting for visual mitigation to Middletown Village.

LANDSCAPE PLANTING SCHEDULE		
KEY	PLANTING DESCRIPTION	QUANTITY
	MAJOR DECIDUOUS TREES	
Ar	Acer rubrum 'Red Sunset'	6
Ls	Liquidambar styraciflua	7
Ns	Nyssa sylvatica	7
Oh	Quercus phellos	7
	EVERGREEN TREEES	
IoM	Ilex opaca 'Miss Helen'	14
IoJ	Ilex opaca 'Jersey Knight'	3
Jv	Juniperus virginiana	27
Ps	Pinus strobus	40
	MINOR DECIDUOUS TREES	
Cv	Crataegus viridis 'Winter King'	13
Hv	Hamamelis virginiana	5
Mv	Magnolia virginiana	21
Vp	Viburnum prunifolium	16

LANDSCAPE LEGEND

- Major Deciduous Tree
- Evergreen Tree
- Minor Deciduous Tree
- Mass Planting of Groundcovers
- Mass Planting of Shrubs

LANDSCAPE NOTES

Refer to Landscape Planting Schedule and Notes Sheet for summary of quanitties and landscape notes.

FOR INFORMATION ONLY/WORK BY OTHERS

LS-13

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

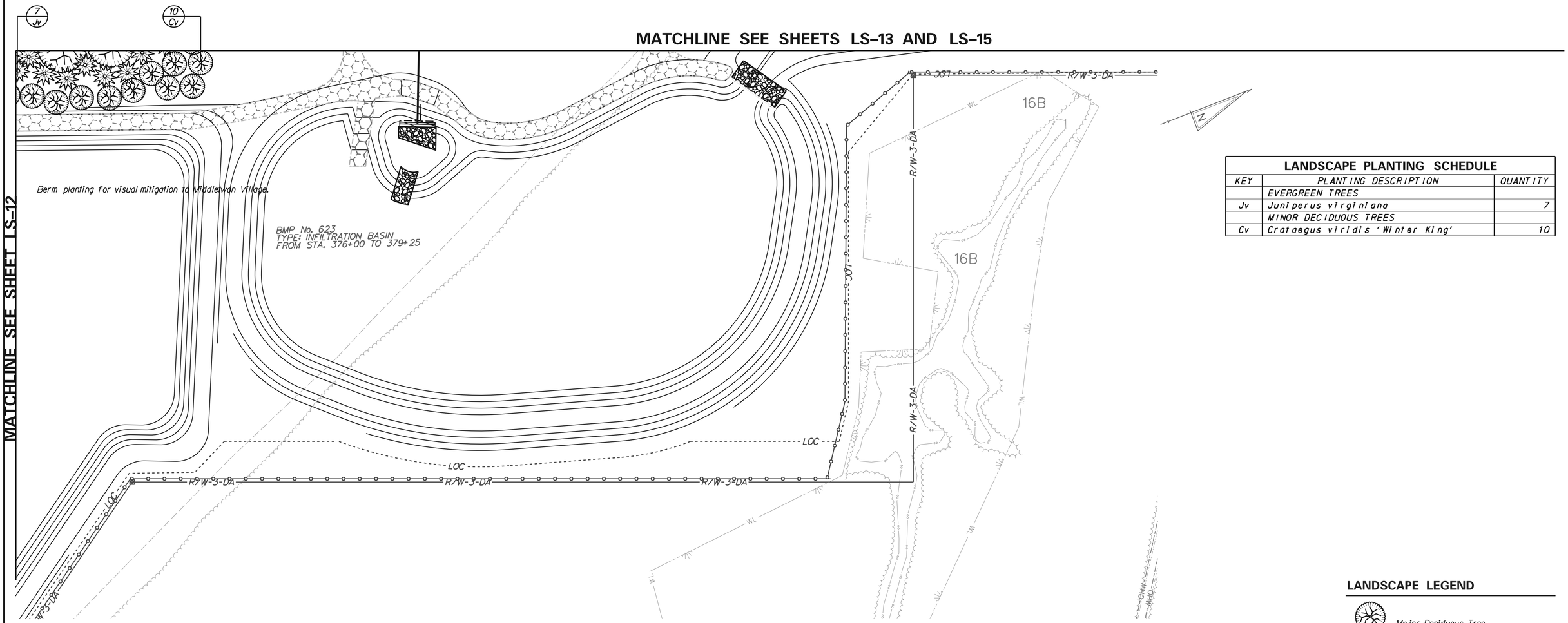
US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: DMS	
COUNTY		
NEW CASTLE	CHECKED BY: AJC	

LANDSCAPING PLAN

SHEET NO. 981

TOTAL SHTS. 1256



LANDSCAPE PLANTING SCHEDULE

KEY	PLANTING DESCRIPTION	QUANTITY
	EVERGREEN TREES	
Jv	Juniperus virginiana	7
	MINOR DECIDUOUS TREES	
Cv	Crataegus viridis 'Winter King'	10

LANDSCAPE LEGEND

- Major Deciduous Tree
- Evergreen Tree
- Minor Deciduous Tree
- Mass Planting of Groundcovers
- Mass Planting of Shrubs

LANDSCAPE NOTES

Refer to Landscape Planting Schedule and Notes Sheet for summary of quantities and landscape notes.

FOR INFORMATION ONLY/WORK BY OTHERS

LS-14

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 30 60 90
FEET

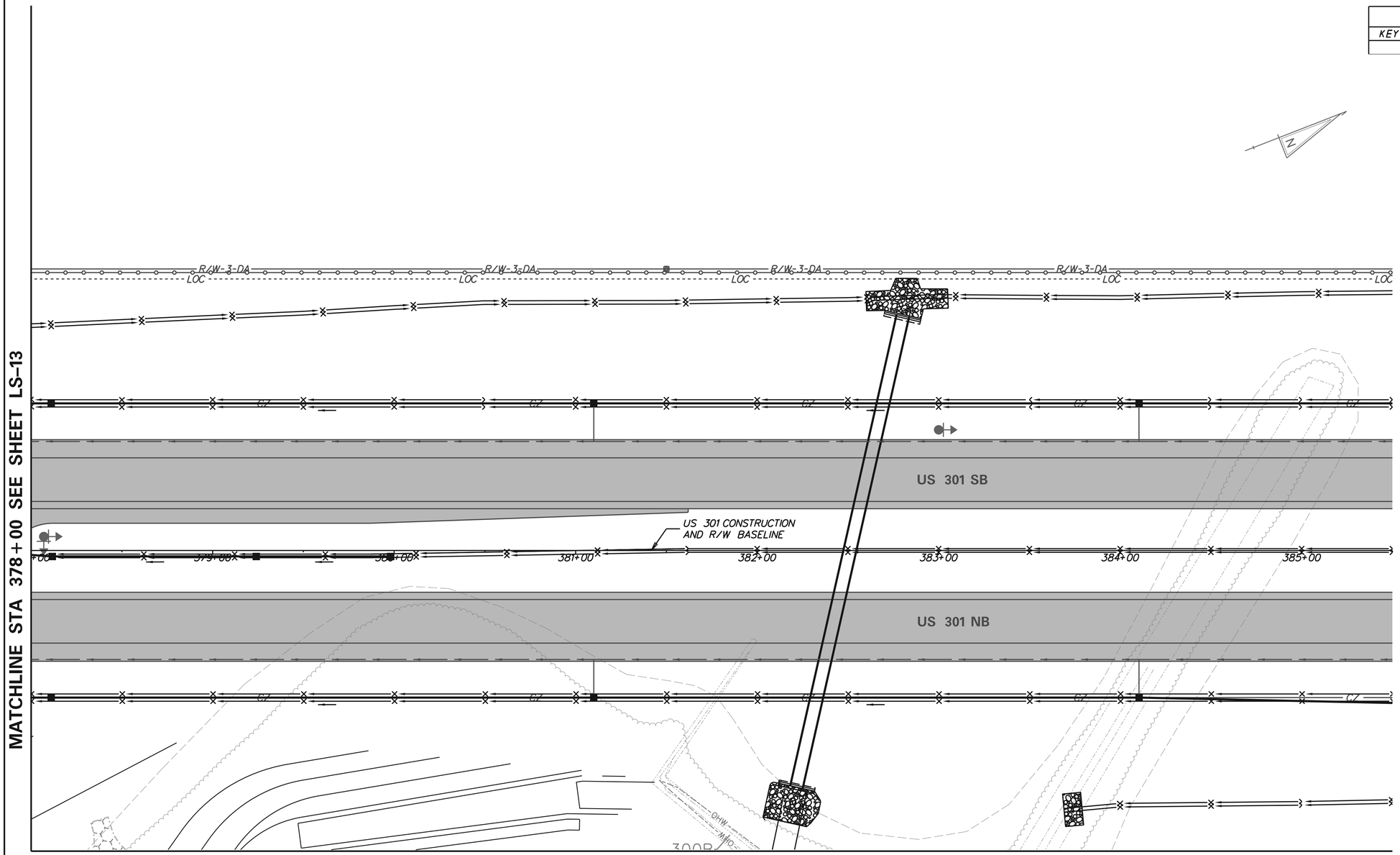
US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.
T200911303	DESIGNED BY: DMS
COUNTY	
NEW CASTLE	CHECKED BY: AJC

LANDSCAPING PLAN

SHEET NO. 982
TOTAL SHTS. 1256

LANDSCAPE PLANTING SCHEDULE		
KEY	PLANTING DESCRIPTION	QUANTITY
	There is no planting proposed on this sheet.	



LANDSCAPE LEGEND

- Major Deciduous Tree
- Evergreen Tree
- Minor Deciduous Tree
- Mass Planting of Groundcovers
- Mass Planting of Shrubs

LANDSCAPE NOTES

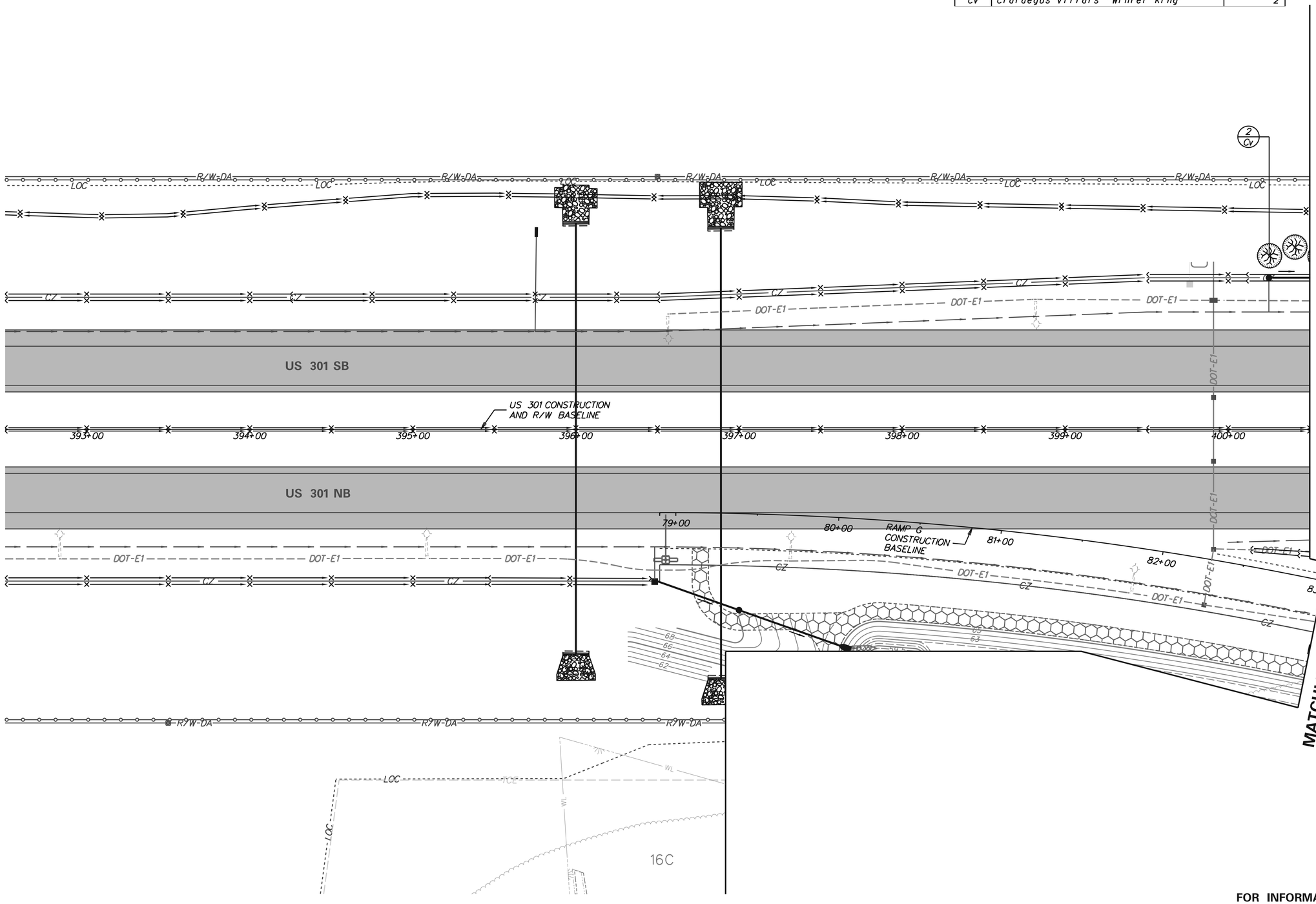
Refer to Landscape Planting Schedule and Notes Sheet for summary of quantities and landscape notes.

FOR INFORMATION ONLY/WORK BY OTHERS

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO.	LANDSCAPING PLAN
				COUNTY NEW CASTLE	DESIGNED BY: DMS	
					CHECKED BY: AJC	

LS-15	
SHEET NO.	983
TOTAL SHTS.	1256

LANDSCAPE PLANTING SCHEDULE		
KEY	PLANTING DESCRIPTION	QUANTITY
	MINOR DECIDUOUS TREES	
Cv	Crataegus viridis 'Winter King'	2



LANDSCAPE LEGEND

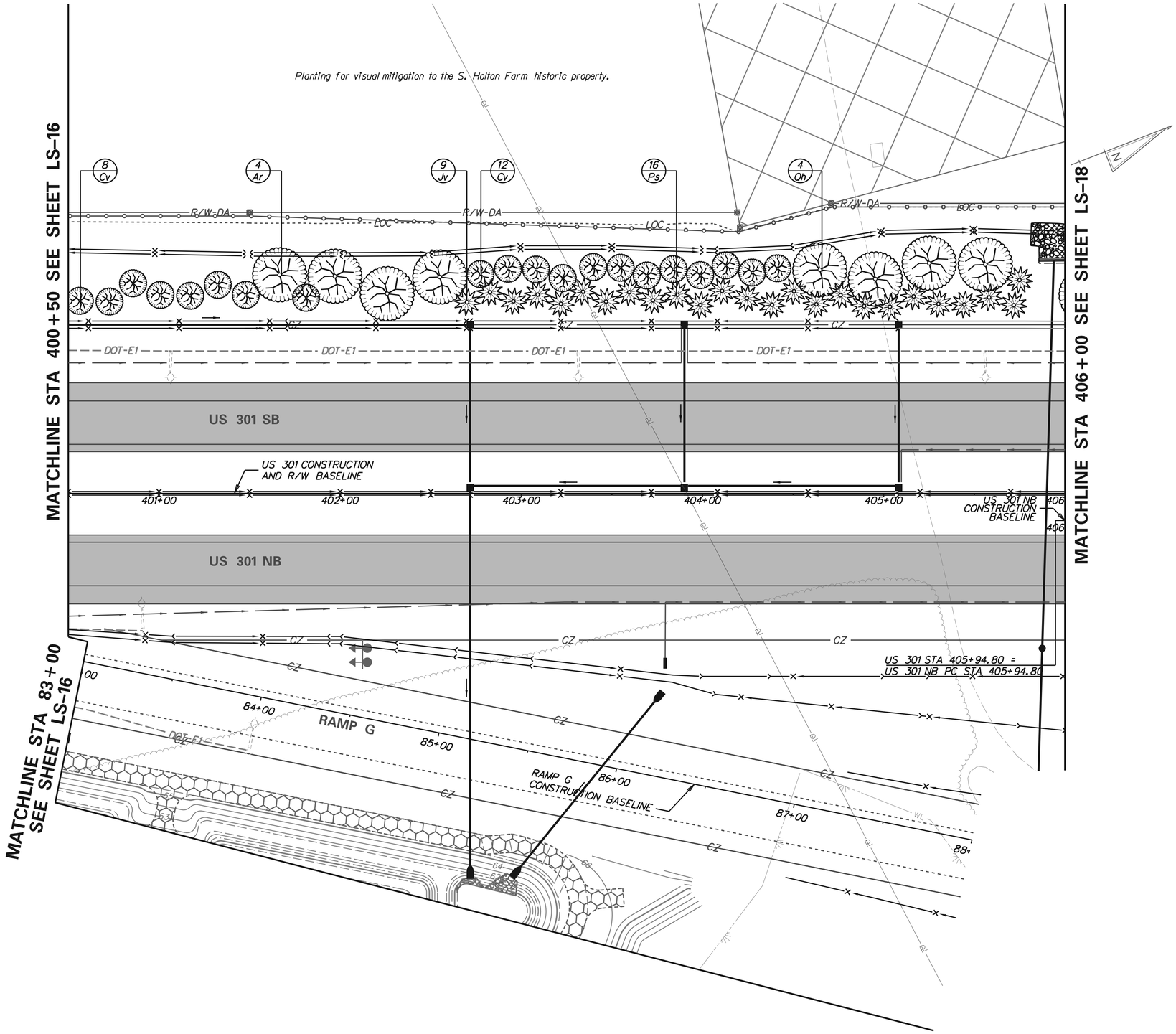
- Major Deciduous Tree
- Evergreen Tree
- Minor Deciduous Tree
- Shrubs
- Mass Planting of Shrubs, Ornamental Grasses or Perennials
- Revegetation Area

LANDSCAPE NOTES

Refer to Landscape Planting Schedule and Notes Sheet for summary of quantities and landscape notes.

FOR INFORMATION ONLY/WORK BY OTHERS

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303 / COUNTY NEW CASTLE	BRIDGE NO. / DESIGNED BY: DMS / CHECKED BY: AJC	LANDSCAPING PLAN	LS-16 / SHEET NO. 984 / TOTAL SHTS. 1256



LANDSCAPE PLANTING SCHEDULE

KEY	PLANTING DESCRIPTION	QUANTITY
	MAJOR DECIDUOUS TREES	
Ar	Acer rubrum 'Red Sunset'	4
Oh	Quercus phellos	4
	EVERGREEN TREES	
Jv	Juniperus virginiana	9
Ps	Pinus strobus	16
	MINOR DECIDUOUS TREES	
Cv	Crataegus viridis 'Winter King'	20

LANDSCAPE LEGEND

- Major Deciduous Tree
- Evergreen Tree
- Minor Deciduous Tree
- Mass Planting of Groundcovers
- Mass Planting of Shrubs

LANDSCAPE NOTES

Refer to Landscape Planting Schedule and Notes Sheet for summary of quantities and landscape notes.

FOR INFORMATION ONLY/WORK BY OTHERS

LS-17

DELAWARE DEPARTMENT OF TRANSPORTATION

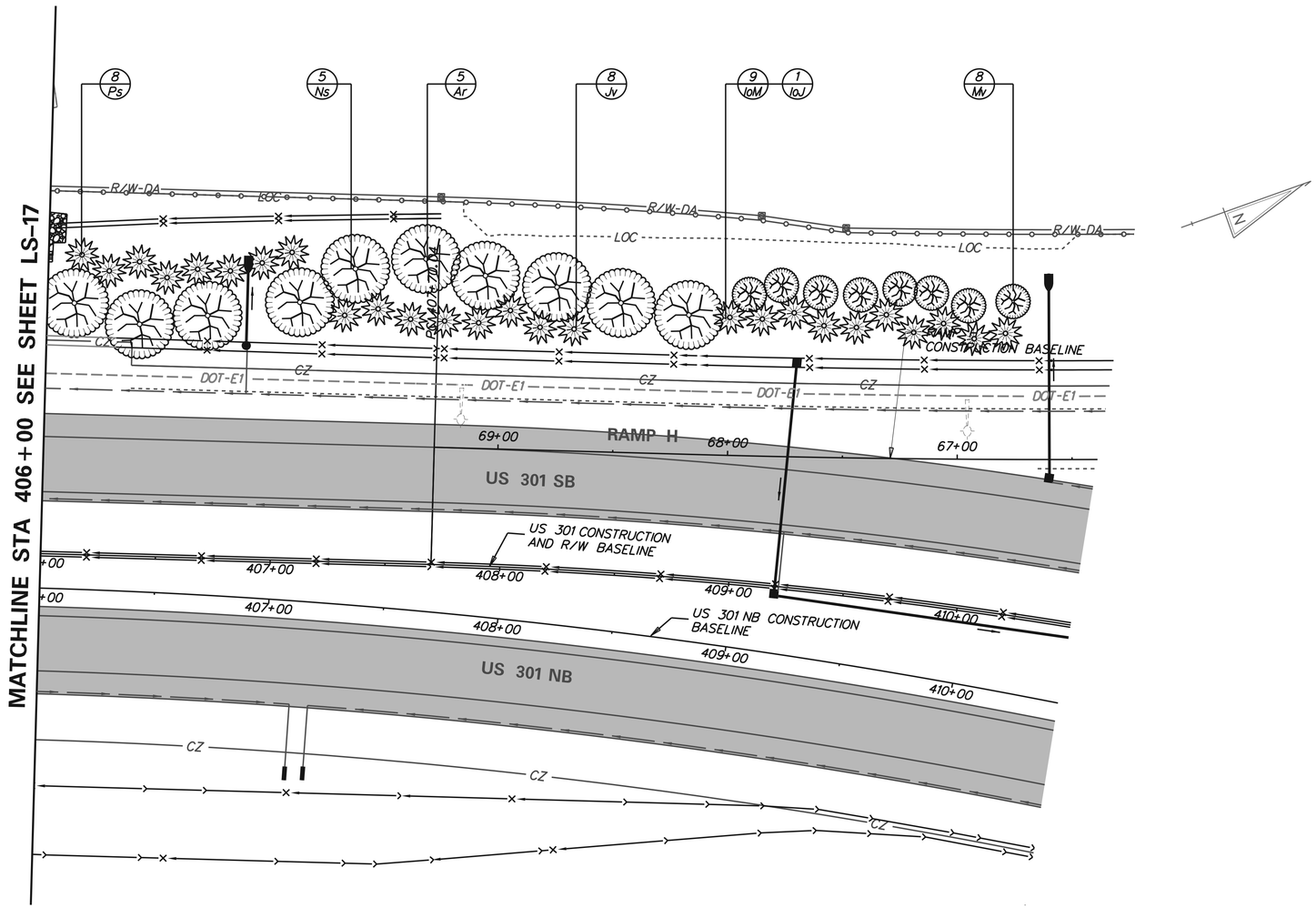
ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	LANDSCAPING PLAN	SHEET NO.
T200911303	DESIGNED BY: DMS		985
COUNTY			TOTAL SHTS.
NEW CASTLE	CHECKED BY: AJC		1256

Planting for visual mitigation to the S. Holton Farm historic property.



LANDSCAPE PLANTING SCHEDULE		
KEY	PLANTING DESCRIPTION	QUANTITY
	MAJOR DECIDUOUS TREES	
Ar	Acer rubrum 'Red Sunset'	5
Ns	Nyssa sylvatica	5
	EVERGREEN TREES	
IoM	Ilex opaca 'Miss Helen'	9
IoJ	Ilex opaca 'Jersey Knight'	1
Jv	Juniperus virginiana	8
Ps	Pinus strobus	8
	MINOR DECIDUOUS TREES	
Mv	Magnolia virginiana	8

LANDSCAPE LEGEND

- Major Deciduous Tree
- Evergreen Tree
- Minor Deciduous Tree
- Mass Planting of Groundcovers
- Mass Planting of Shrubs

LANDSCAPE NOTES

Refer to Landscape Planting Schedule and Notes Sheet for summary of quantities and landscape notes.

FOR INFORMATION ONLY/WORK BY OTHERS

LS-18

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT T200911303

COUNTY NEW CASTLE

BRIDGE NO.

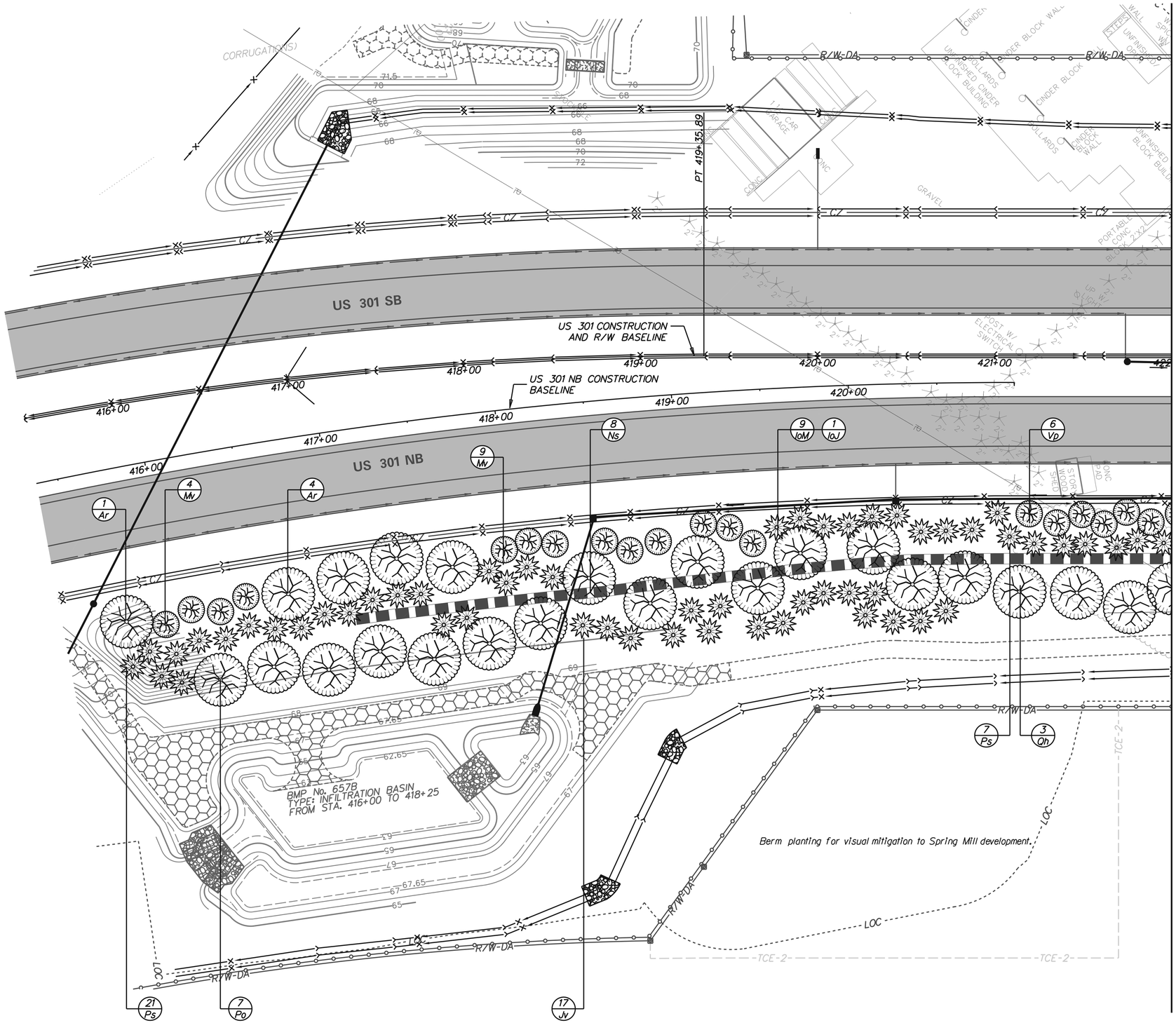
DESIGNED BY: DMS

CHECKED BY: AJC

LANDSCAPING PLAN

SHEET NO. 986

TOTAL SHTS. 1256



MATCHLINE STA 422+00 SEE SHEET LS-20

LANDSCAPE PLANTING SCHEDULE

KEY	PLANTING DESCRIPTION	QUANTITY
	MAJOR DECIDUOUS TREES	
Ar	Acer rubrum 'Red Sunset'	5
Ns	Nyssa sylvatica	8
Po	Platanus occidentalis	7
Oh	Quercus phellos	3
	EVERGREEN TREES	
IoM	Ilex opaca 'Miss Helen'	9
IoJ	Ilex opaca 'Jersey Knight'	1
Jv	Juniperus virginiana	17
Ps	Pinus strobus	28
	MINOR DECIDUOUS TREES	
Mv	Magnolia virginiana	13
Vp	Viburnum prunifolium	6

LANDSCAPE LEGEND

- Major Deciduous Tree
- Evergreen Tree
- Minor Deciduous Tree
- Mass Planting of Groundcovers
- Mass Planting of Shrubs

LANDSCAPE NOTES

Refer to Landscape Planting Schedule and Notes Sheet for summary of quantities and landscape notes.

FOR INFORMATION ONLY/WORK BY OTHERS

LS-19

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

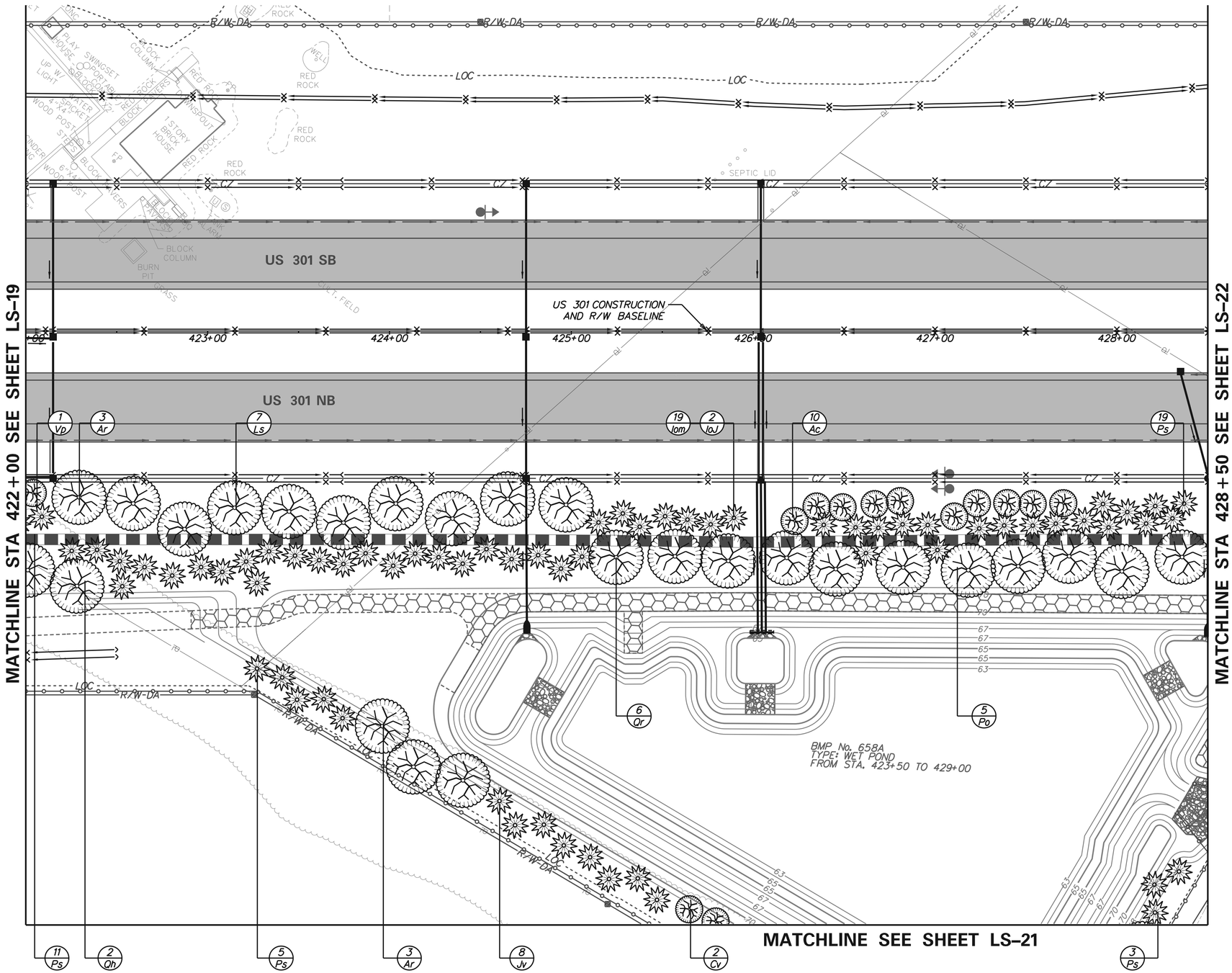
US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: DMS	
COUNTY		
NEW CASTLE	CHECKED BY: AJC	

LANDSCAPING PLAN

SHEET NO. 987

TOTAL SHTS. 1256



Berm planting for visual mitigation to Spring Mill development.

LANDSCAPE PLANTING SCHEDULE

KEY	PLANTING DESCRIPTION	QUANTITY
	MAJOR DECIDUOUS TREES	
Ar	Acer rubrum 'Red Sunset'	6
Ls	Liquidambar styraciflua	7
Po	Platanus occidentalis	5
Oh	Quercus phellos	2
Or	Quercus rubra	6
	EVERGREEN TREES	
IoM	Ilex opaca 'Miss Helen'	19
IoJ	Ilex opaca 'Jersey Knight'	2
Jv	Juniperus virginiana	8
Ps	Pinus strobus	38
	MINOR DECIDUOUS TREES	
Ac	Amelanchier canadensis	10
Cv	Crataegus viridis 'Winter King'	2
Vp	Viburnum prunifolium	1

LANDSCAPE LEGEND

- Major Deciduous Tree
- Evergreen Tree
- Minor Deciduous Tree
- Mass Planting of Groundcovers
- Mass Planting of Shrubs

LANDSCAPE NOTES

Refer to Landscape Planting Schedule and Notes Sheet for summary of quantities and landscape notes.

FOR INFORMATION ONLY/WORK BY OTHERS

LS-20

DELAWARE DEPARTMENT OF TRANSPORTATION

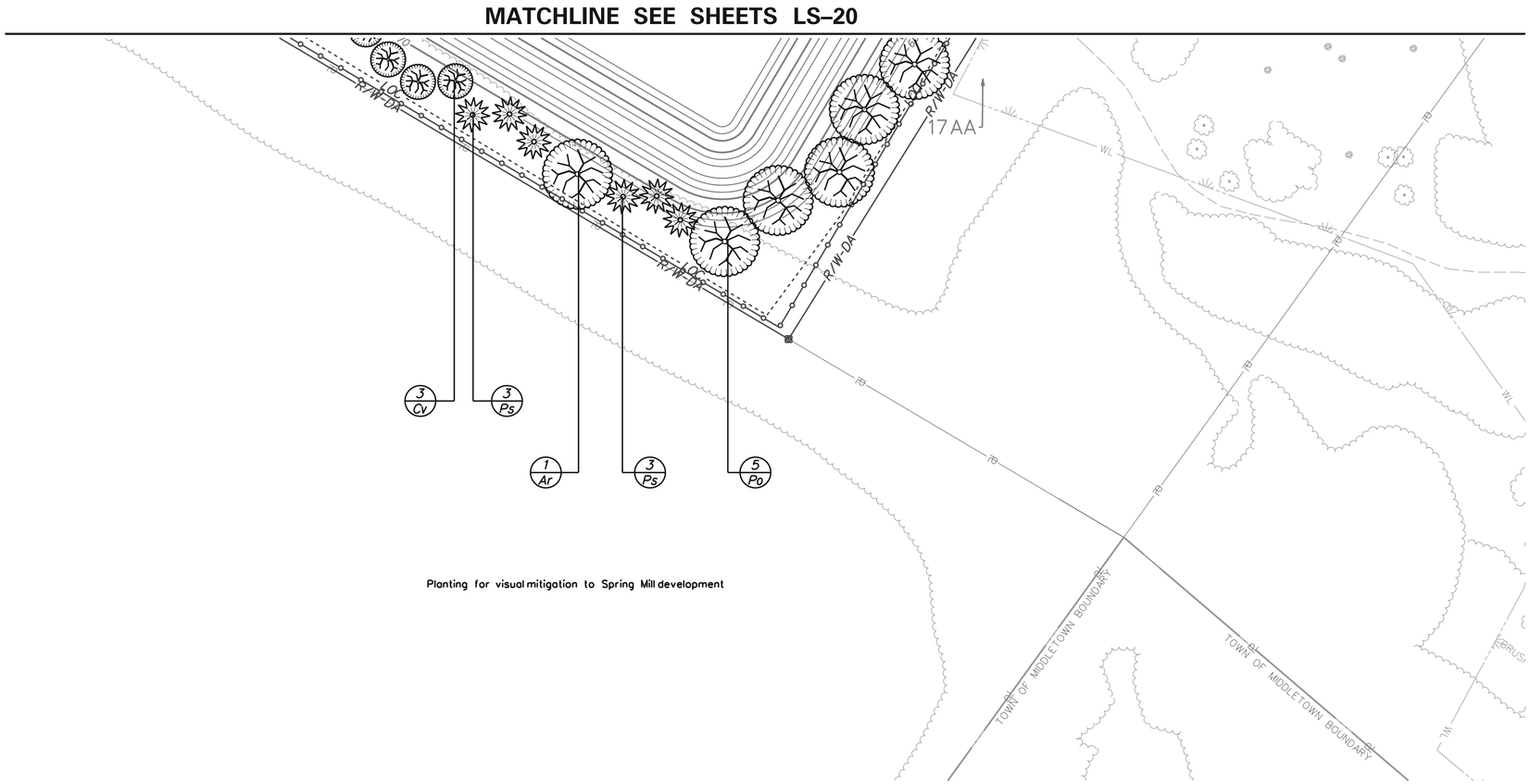
ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	LANDSCAPING PLAN	SHEET NO.
T200911303	DESIGNED BY: DMS		988
COUNTY			TOTAL SHTS.
NEW CASTLE	CHECKED BY: AJC		1256

LANDSCAPE PLANTING SCHEDULE		
KEY	PLANTING DESCRIPTION	QUANTITY
	MAJOR DECIDUOUS TREES	
Ar	Acer rubrum 'Red Sunset'	1
Po	Platanus occidentalis	5
	EVERGREEN TREES	
Ps	Pinus strobus	6
	MINOR DECIDUOUS TREES	
Cv	Crataegus viridis 'Winter King'	3



Planting for visual mitigation to Spring Mill development

LANDSCAPE LEGEND

- Major Deciduous Tree
- Evergreen Tree
- Minor Deciduous Tree
- Mass Planting of Groundcovers
- Mass Planting of Shrubs

LANDSCAPE NOTES

Refer to Landscape Planting Schedule and Notes Sheet for summary of quantities and landscape notes.

FOR INFORMATION ONLY/WORK BY OTHERS

LS-21

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: DMS	DMS
COUNTY	CHECKED BY: AJC	AJC
NEW CASTLE		

LANDSCAPING PLAN

SHEET NO. 989

TOTAL SHTS. 1256

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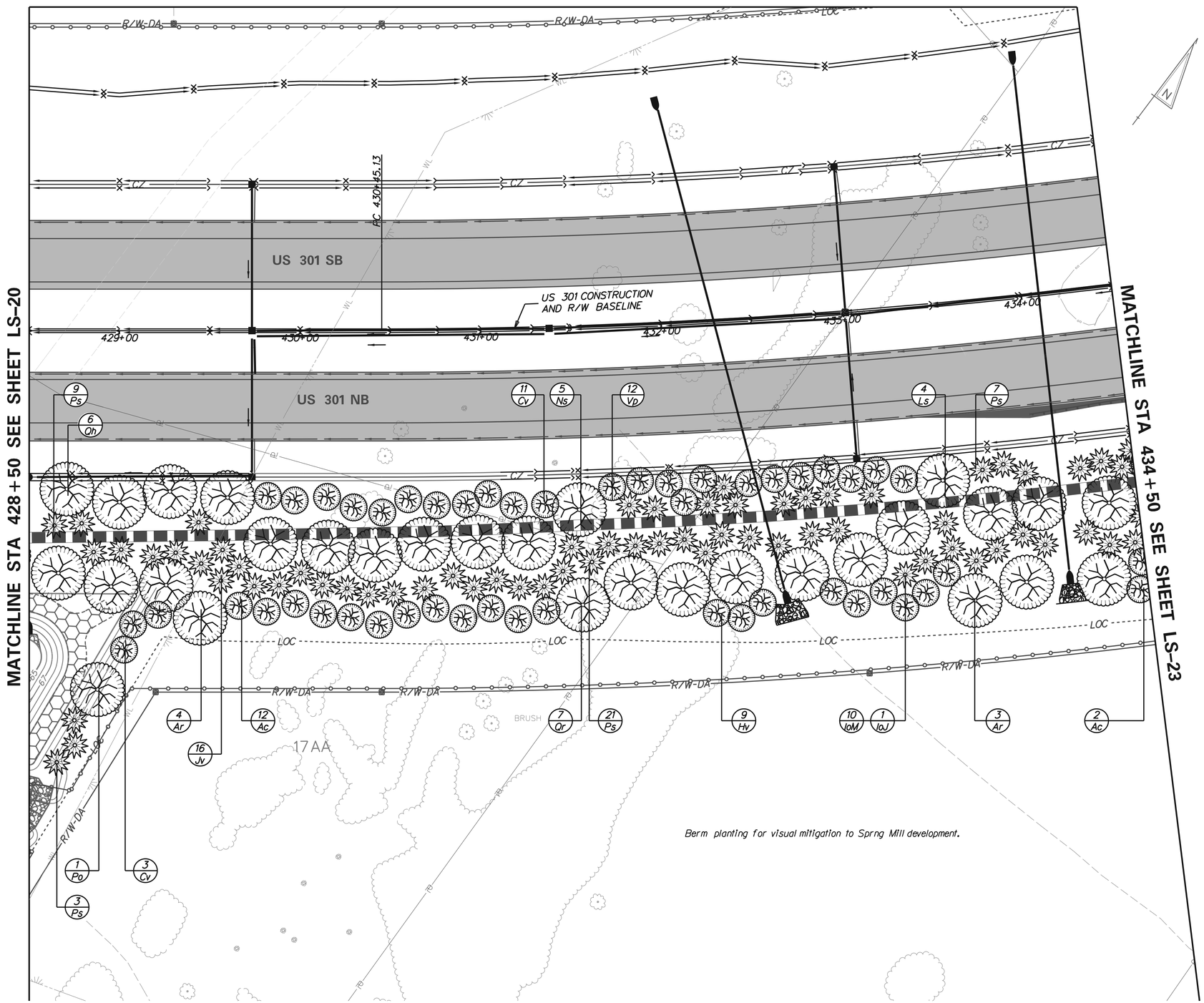


LANDSCAPE PLANTING SCHEDULE

KEY	PLANTING DESCRIPTION	QUANTITY
	MAJOR DECIDUOUS TREES	
Ar	Acer rubrum 'Red Sunset'	7
Ls	Liquidambar styraciflua	4
Ns	Nyssa sylvatica	5
Po	Platanus occidentalis	1
Oh	Quercus phellos	6
Or	Quercus rubra	7
	EVERGREEN TREES	
IoM	Ilex opaca 'Miss Helen'	10
IoJ	Ilex opaca 'Jersey Knight'	1
Jv	Juniperus virginiana	16
Ps	Pinus strobus	40
	MINOR DECIDUOUS TREES	
Ac	Amelanchier canadensis	14
Cv	Crataegus viridis 'Winter King'	14
Hv	Hamamelis virginiana	9
Vp	Viburnum prunifolium	12

LANDSCAPE LEGEND

- Major Deciduous Tree
- Evergreen Tree
- Minor Deciduous Tree
- Mass Planting of Groundcovers
- Mass Planting of Shrubs

LANDSCAPE NOTES

Refer to Landscape Planting Schedule and Notes Sheet for summary of quantities and landscape notes.

FOR INFORMATION ONLY/WORK BY OTHERS

LS-22

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

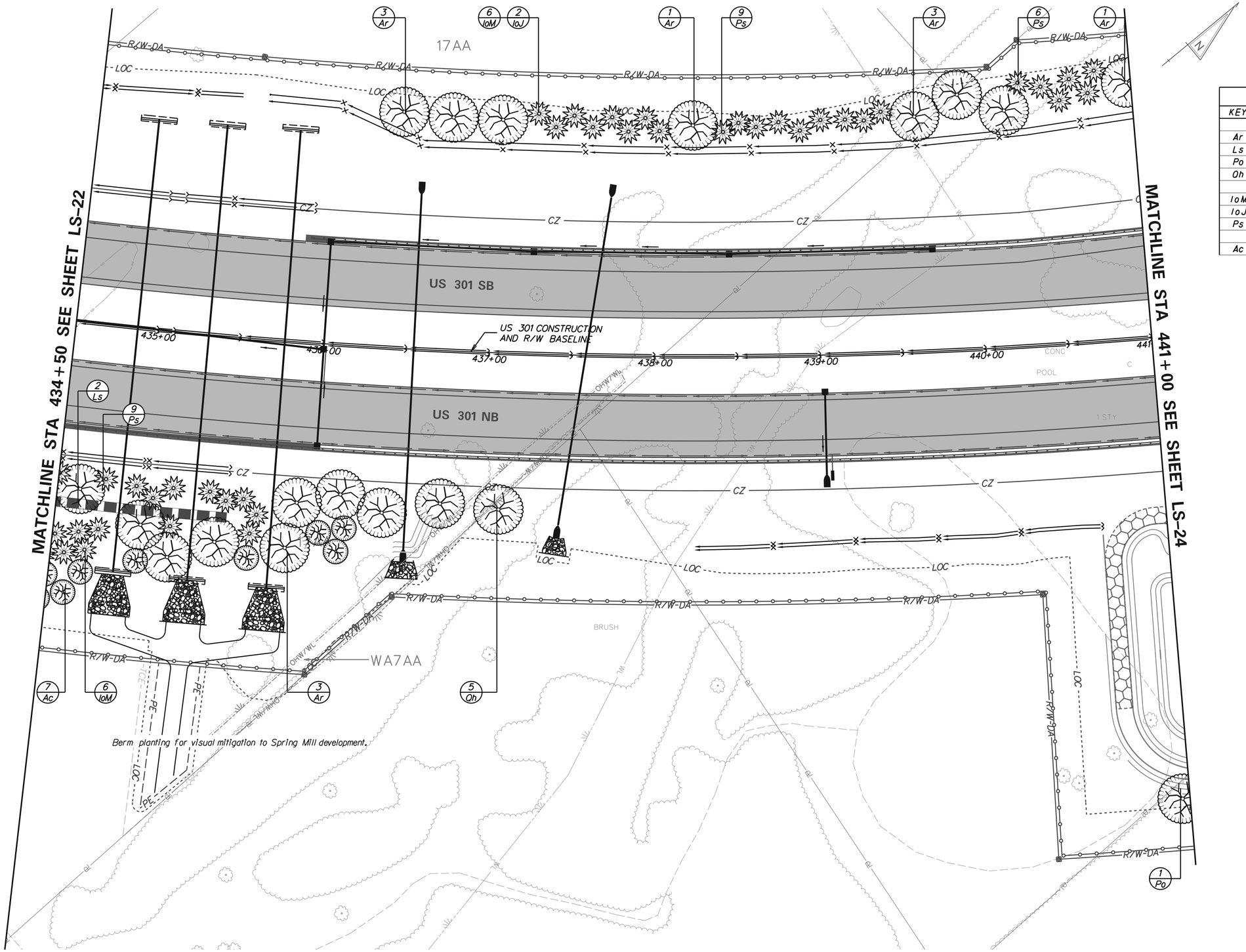
US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: DMS	
COUNTY		
NEW CASTLE	CHECKED BY: AJC	

LANDSCAPING PLAN

SHEET NO. 990

TOTAL SHTS. 1256



LANDSCAPE PLANTING SCHEDULE

KEY	PLANTING DESCRIPTION	QUANTITY
	MAJOR DECIDUOUS TREES	
Ar	Acer rubrum 'Red Sunset'	11
Ls	Liquidambar styraciflua	2
Po	Platanus occidentalis	1
Oh	Quercus phellos	5
	EVERGREEN TREES	
IoM	Ilex opaca 'Miss Helen'	12
IoJ	Ilex opaca 'Jersey Knight'	2
Ps	Pinus strobus	24
	MINOR DECIDUOUS TREES	
Ac	Amelanchier canadensis	7

LANDSCAPE LEGEND

- Major Deciduous Tree
- Evergreen Tree
- Minor Deciduous Tree
- Mass Planting of Groundcovers
- Mass Planting of Shrubs

LANDSCAPE NOTES

Refer to Landscape Planting Schedule and Notes Sheet for summary of quantities and landscape notes.

FOR INFORMATION ONLY/WORK BY OTHERS

LS-23

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

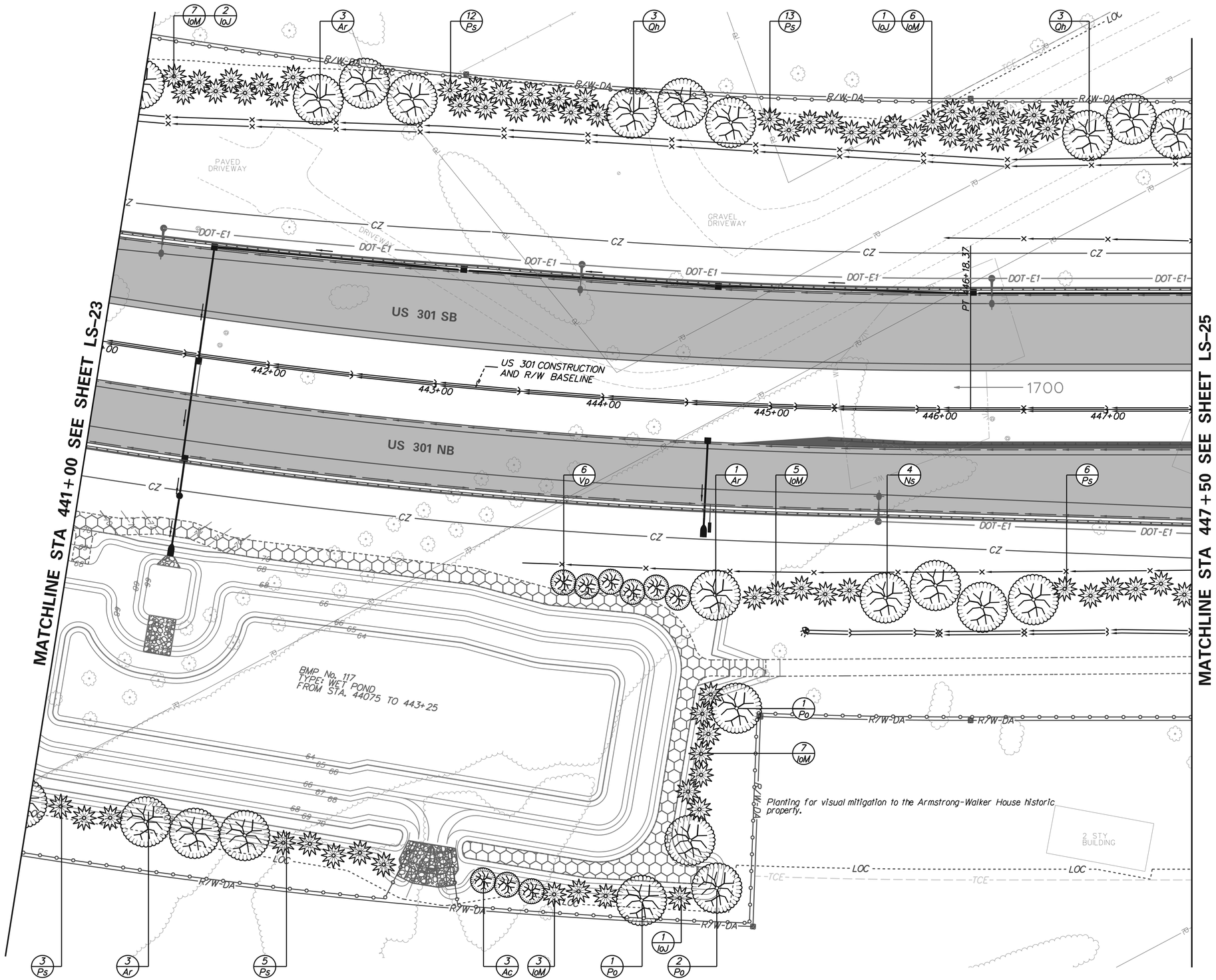
US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: DMS	
COUNTY		
NEW CASTLE	CHECKED BY: AJC	

LANDSCAPING PLAN

SHEET NO. 991

TOTAL SHTS. 1256



LANDSCAPE PLANTING SCHEDULE

KEY	PLANTING DESCRIPTION	QUANTITY
	MAJOR DECIDUOUS TREES	
Ar	Acer rubrum 'Red Sunset'	7
Ns	Nyssa sylvatica	4
Po	Platanus occidentalis	4
Qh	Quercus phellos	6
	EVERGREEN TREES	
IoM	Ilex opaca 'Miss Helen'	28
IoJ	Ilex opaca 'Jersey Knight'	4
Ps	Pinus strobus	39
	MINOR DECIDUOUS TREES	
Ac	Amelanchier canadensis	3
Vp	Viburnum prunifolium	6

LANDSCAPE LEGEND

- Major Deciduous Tree
- Evergreen Tree
- Minor Deciduous Tree
- Mass Planting of Groundcovers
- Mass Planting of Shrubs

LANDSCAPE NOTES

Refer to Landscape Planting Schedule and Notes Sheet for summary of quantities and landscape notes.

FOR INFORMATION ONLY/WORK BY OTHERS

LS-24

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

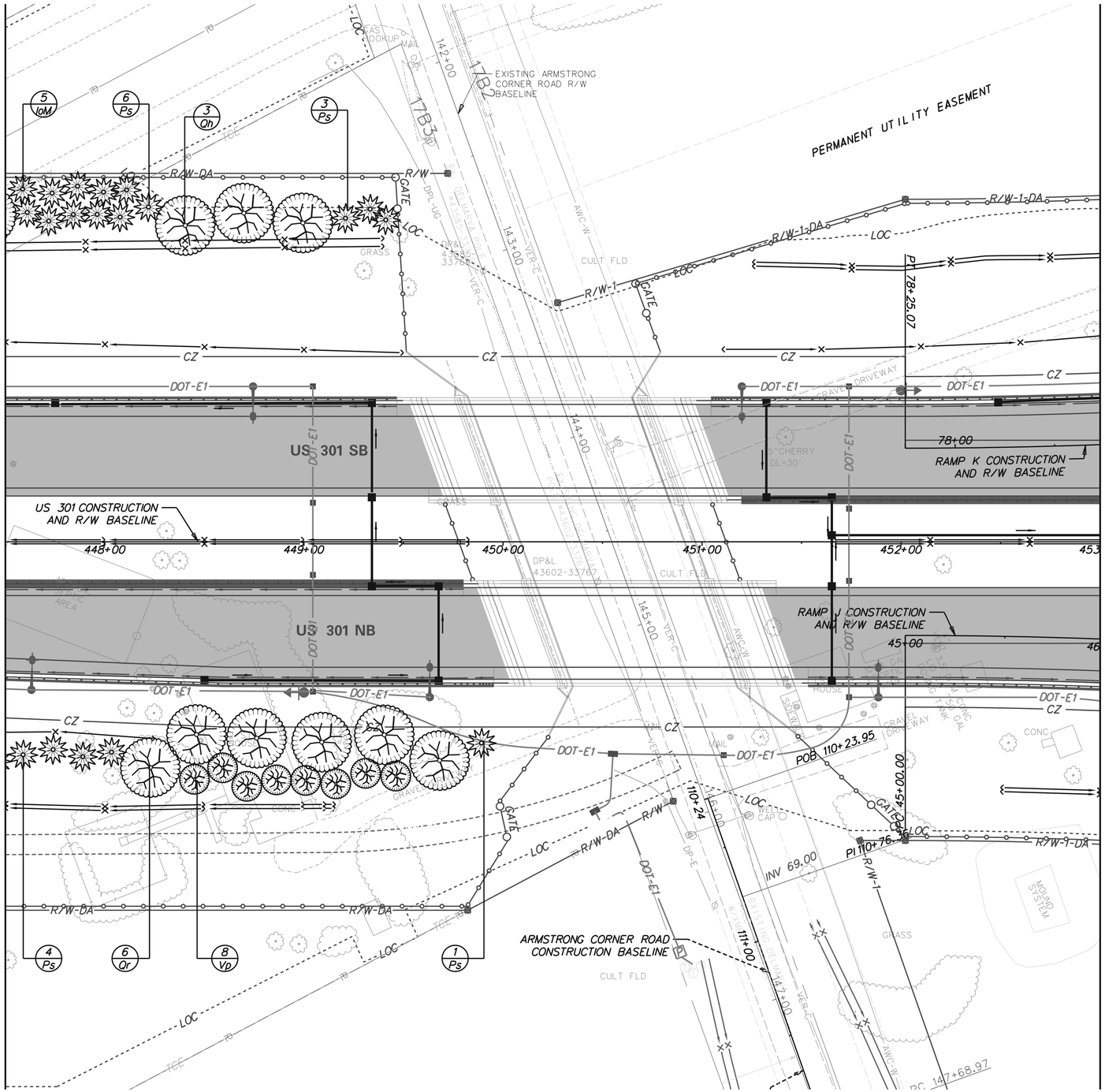
CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: DMS	
COUNTY		
NEW CASTLE	CHECKED BY: AJC	

LANDSCAPING PLAN

SHEET NO. 992

TOTAL SHTS. 1256

MATCHLINE STA 447+50 SEE SHEET LS-24



MATCHLINE STA 453+00 SEE SHEET LS-26

LANDSCAPE PLANTING SCHEDULE		
KEY	PLANTING DESCRIPTION	QUANTITY
	MAJOR DECIDUOUS TREES	
Oh	Quercus phellos	3
Or	Quercus rubra	6
	EVERGREEN TREES	
IoM	Ilex opaca 'Miss Helen'	5
Ps	Pinus strobus	14
	MINOR DECIDUOUS TREES	
Vp	Viburnum prunifolium	8

LANDSCAPE LEGEND

- Major Deciduous Tree
- Evergreen Tree
- Minor Deciduous Tree
- Mass Planting of Groundcovers
- Mass Planting of Shrubs

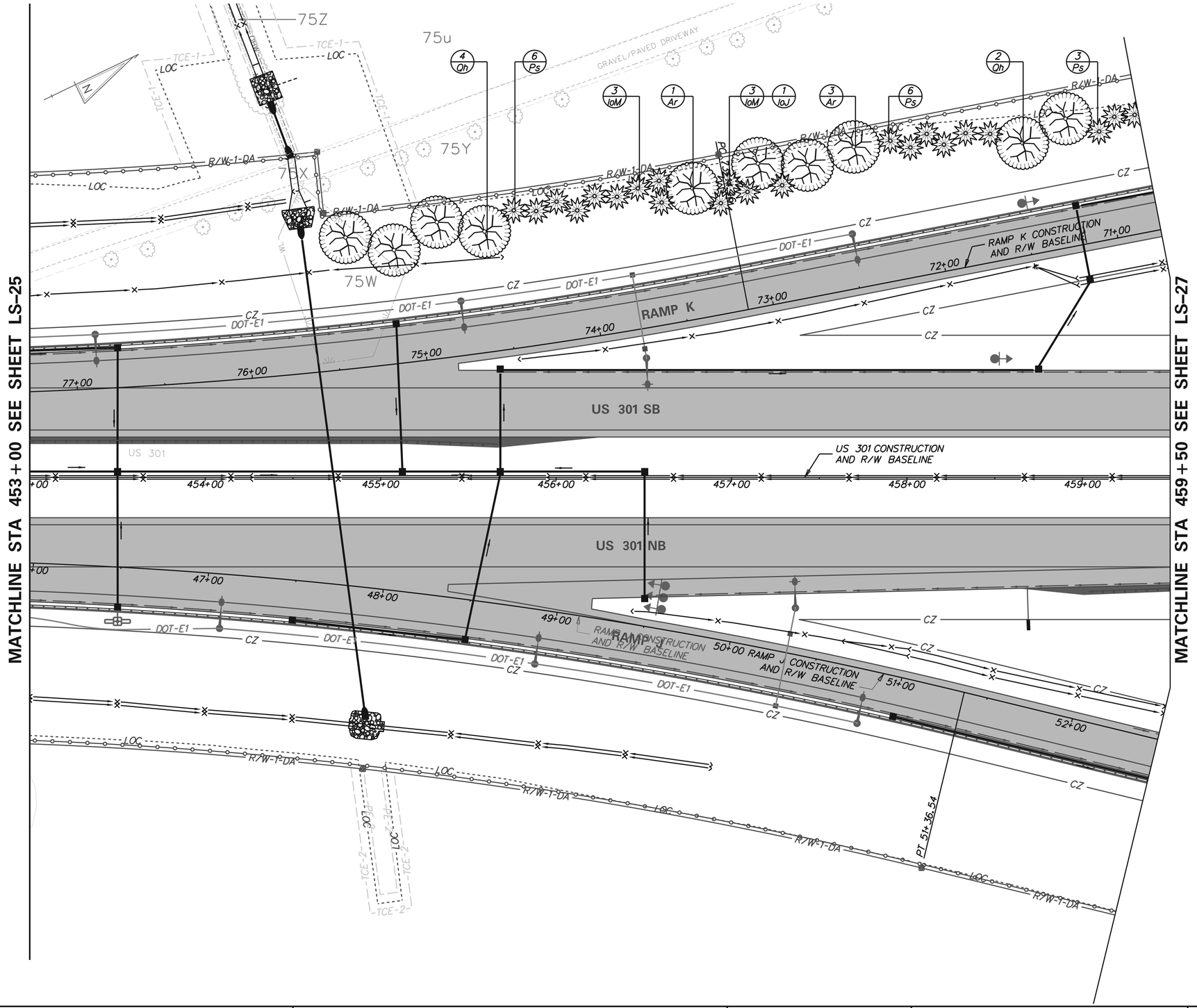
LANDSCAPE NOTES

Refer to Landscape Planting Schedule and Notes Sheet for summary of quantities and landscape notes.

Planting for visual mitigation to the Armstong-Walker House historic property.

FOR INFORMATION ONLY/WORK BY OTHERS

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303 / COUNTY NEW CASTLE	BRIDGE NO. / DESIGNED BY: DMS / CHECKED BY: AJC	LANDSCAPING PLAN	LS-25 / SHEET NO. 993 / TOTAL SHTS. 1256



LANDSCAPE PLANTING SCHEDULE

KEY	PLANTING DESCRIPTION	QUANTITY
	MAJOR DECIDUOUS TREES	
Ar	Acer rubrum 'Red Sunset'	4
Qh	Quercus phellos	6
	EVERGREEN TREES	
IoM	Ilex opaca 'Miss Helen'	6
IoM	Ilex opaca 'Jersey Knight'	1
Ps	Pinus strobus	15

LANDSCAPE LEGEND

- Major Deciduous Tree
- Evergreen Tree
- Minor Deciduous Tree
- Mass Planting of Groundcovers
- Mass Planting of Shrubs

LANDSCAPE NOTES

Refer to Landscape Planting Schedule and Notes Sheet for summary of quantities and landscape notes.

FOR INFORMATION ONLY/WORK BY OTHERS

LS-26

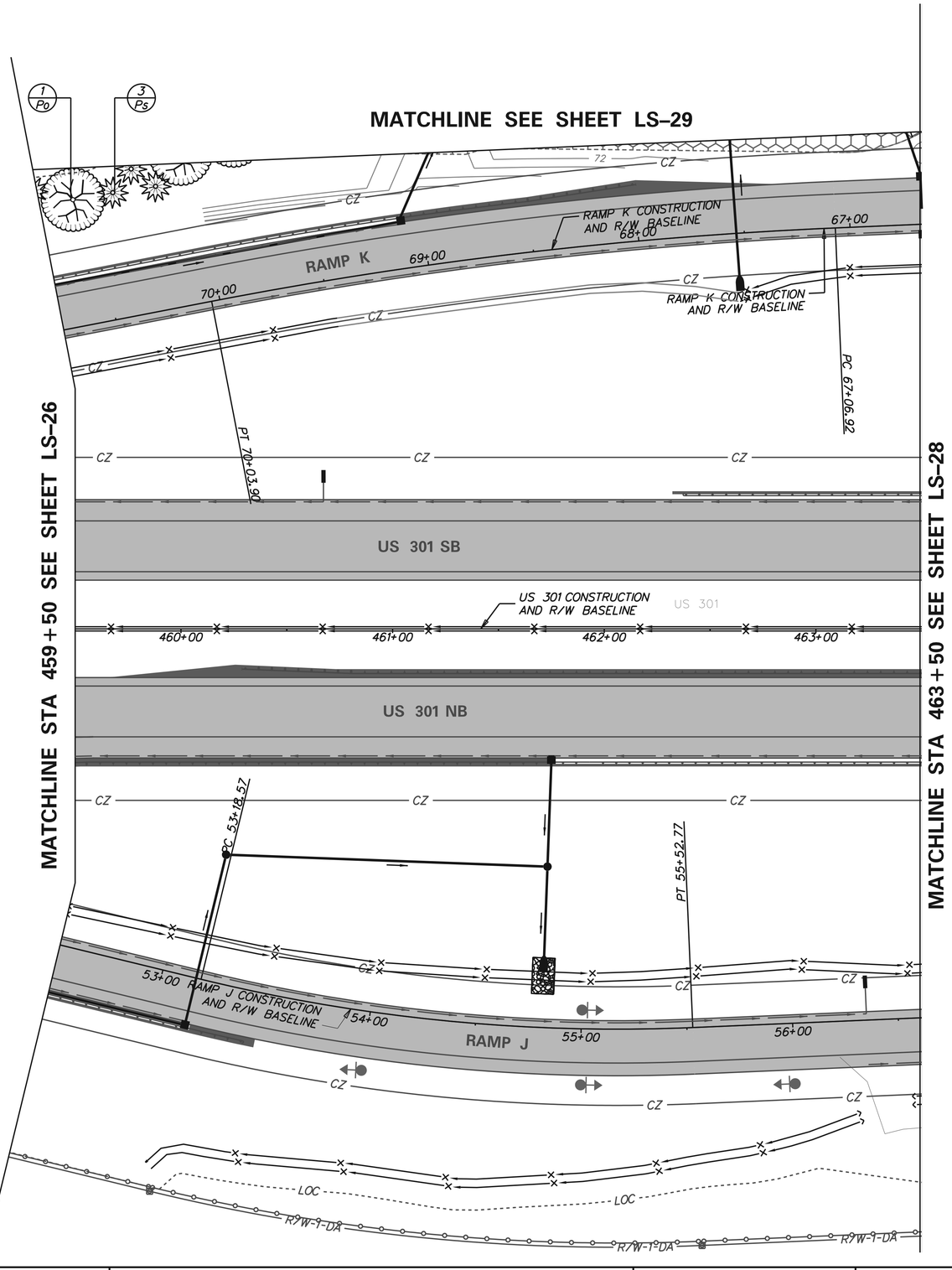
DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	LANDSCAPING PLAN	SHEET NO.
T200911303	DESIGNED BY: DMS		994
COUNTY			TOTAL SHTS.
NEW CASTLE	CHECKED BY: AJC		1256



LANDSCAPE PLANTING SCHEDULE		
KEY	PLANTING DESCRIPTION	QUANTITY
	MAJOR DECIDUOUS TREES	
Po	Platanus occidentalis	1
	EVERGREEN TREES	
Ps	Pinus strobus	3

LANDSCAPE LEGEND

- Major Deciduous Tree
- Evergreen Tree
- Minor Deciduous Tree
- Mass Planting of Groundcovers
- Mass Planting of Shrubs

LANDSCAPE NOTES

Refer to Landscape Planting Schedule and Notes Sheet for summary of quantities and landscape notes.

FOR INFORMATION ONLY/WORK BY OTHERS

LS-27

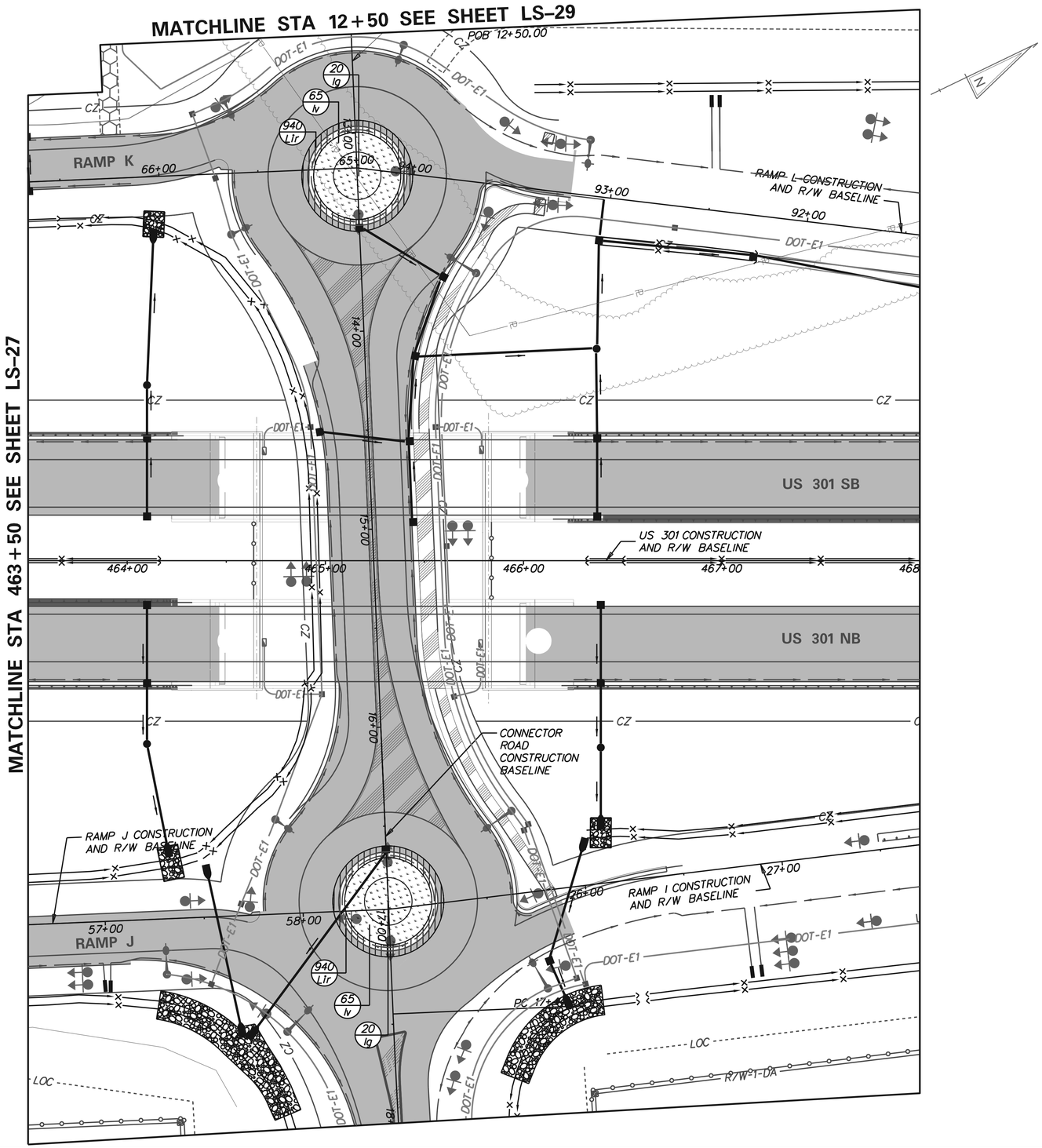
DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.		LANDSCAPING PLAN	SHEET NO.
T200911303	DESIGNED BY: DMS			995
COUNTY				TOTAL SHTS.
NEW CASTLE	CHECKED BY: AJC			1256



LANDSCAPE PLANTING SCHEDULE

KEY	PLANTING DESCRIPTION	QUANTITY
	SHRUBS	
Ig	Ilex glabra	40
Iv	Itea virginica 'Henry's Garnet'	130
	GROUNDCOVERS	
Lir	Liriope platyphylla	1880

LANDSCAPE LEGEND

- Major Deciduous Tree
- Evergreen Tree
- Minor Deciduous Tree
- Mass Planting of Groundcovers
- Mass Planting of Shrubs

LANDSCAPE NOTES

Refer to Landscape Planting Schedule and Notes Sheet for summary of quantities and landscape notes.

FOR INFORMATION ONLY/WORK BY OTHERS

LS-28

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

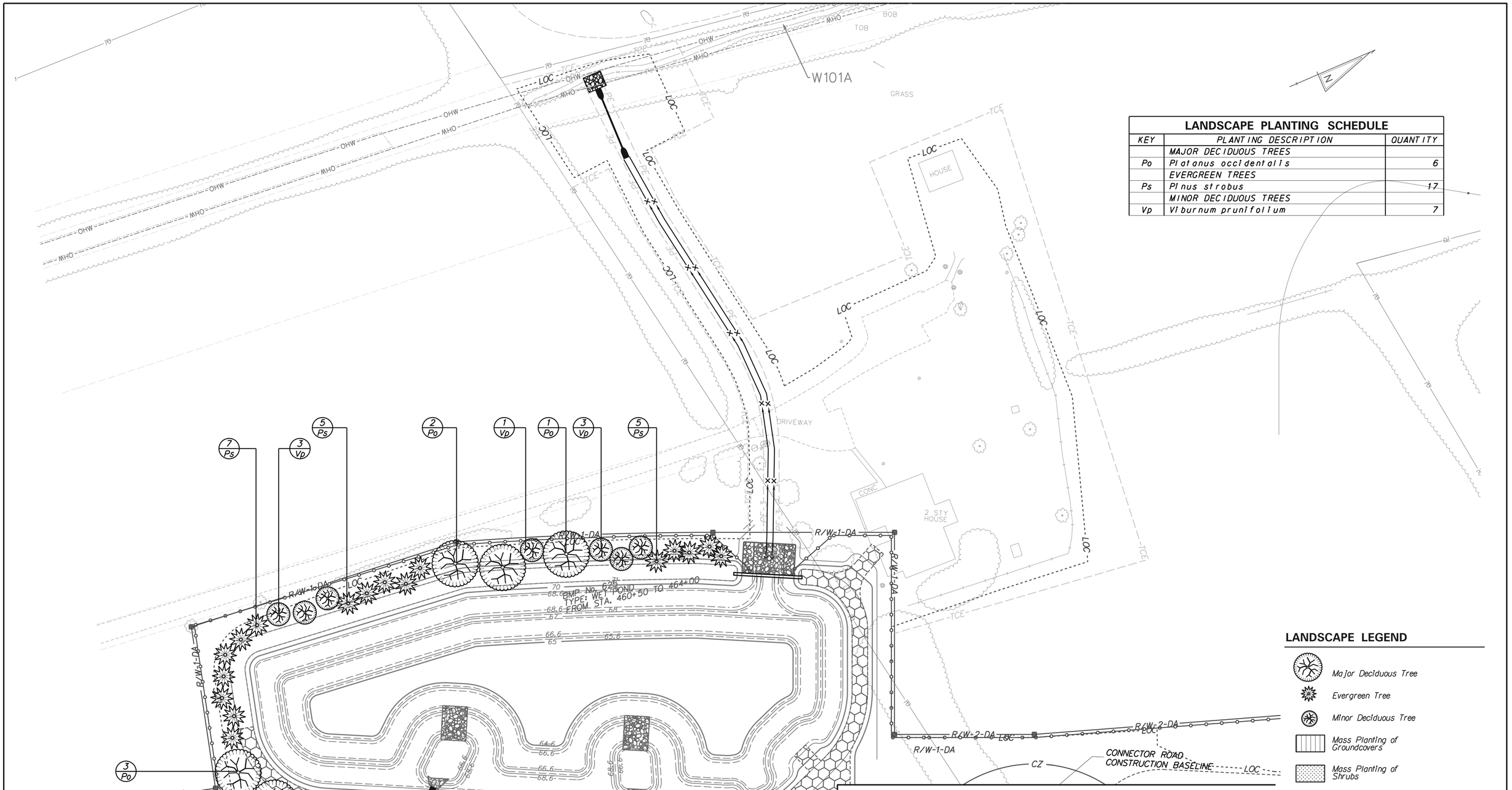
SCALE 0 30 60 90 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: DMS	
COUNTY	CHECKED BY: AJC	
NEW CASTLE		

LANDSCAPING PLAN

SHEET NO.	TOTAL SHTS.
996	1256



LANDSCAPE PLANTING SCHEDULE

KEY	PLANTING DESCRIPTION	QUANTITY
	MAJOR DECIDUOUS TREES	
Po	Platanus occidentalis	6
	EVERGREEN TREES	
Ps	Pinus strobus	17
	MINOR DECIDUOUS TREES	
Vp	Viburnum prunifolium	7

LANDSCAPE LEGEND

- Major Deciduous Tree
- Evergreen Tree
- Minor Deciduous Tree
- Mass Planting of Groundcovers
- Mass Planting of Shrubs

LANDSCAPE NOTES

Refer to Landscape Planting Schedule and Notes Sheet for summary of quantities and landscape notes.

FOR INFORMATION ONLY/WORK BY OTHERS

LS-29

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

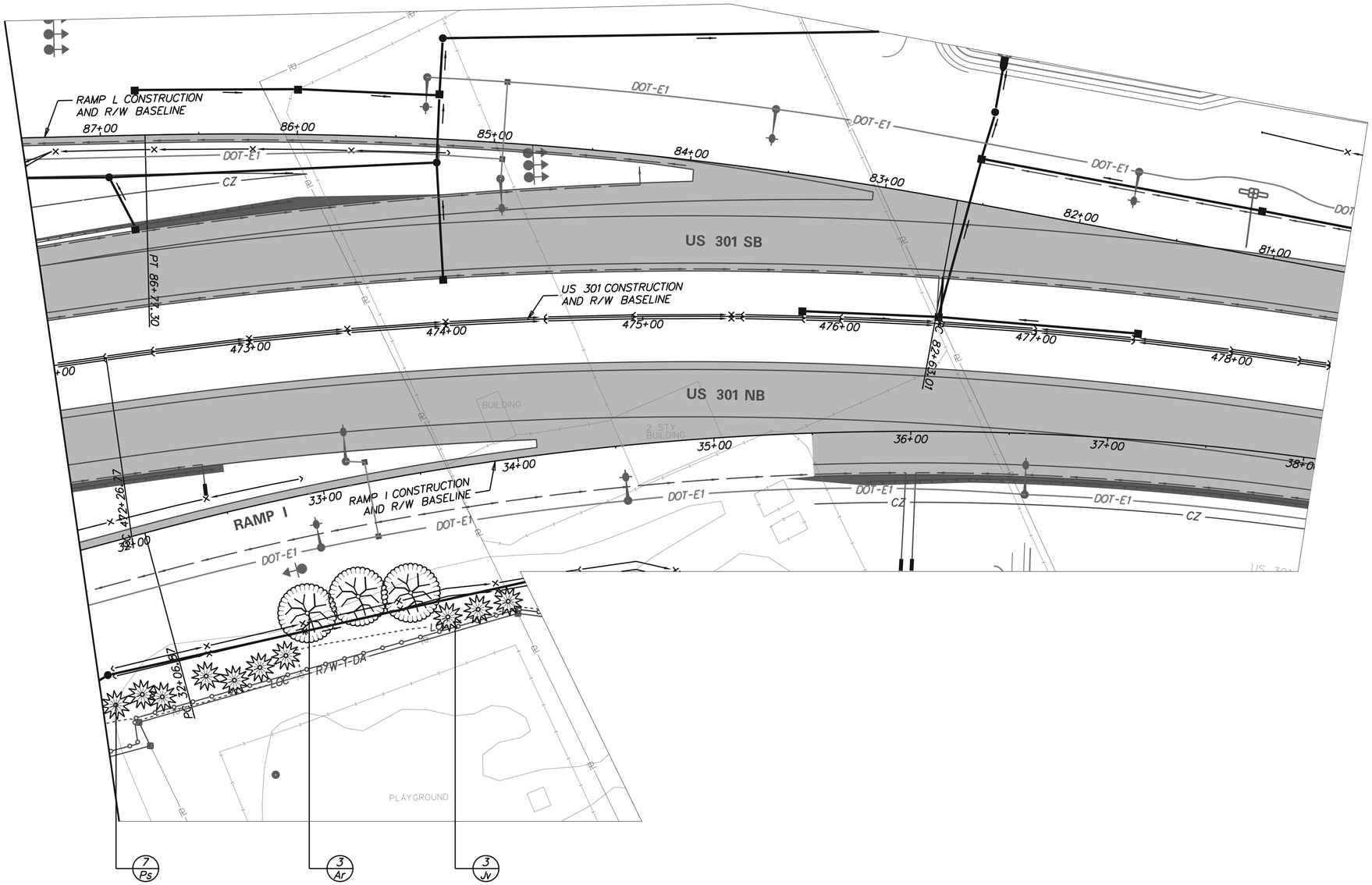
SCALE 0 30 60 90 FEET

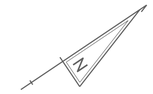
US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	
T200911303	DESIGNED BY: DMS	
COUNTY		
NEW CASTLE	CHECKED BY: AJC	

LANDSCAPING PLAN

SHEET NO.
997
TOTAL SHTS.
1256





LANDSCAPE PLANTING SCHEDULE

KEY	PLANTING DESCRIPTION	QUANTITY
	MAJOR DECIDUOUS TREES	
Ar	Acer rubrum 'Red Sunset'	3
	EVERGREEN TREES	
Jv	Juniperus virginiana	3
Ps	Pinus strobus	7

LANDSCAPE LEGEND

- Major Deciduous Tree
- Evergreen Tree
- Minor Deciduous Tree
- Mass Planting of Groundcovers
- Mass Planting of Shrubs

LANDSCAPE NOTES

Refer to Landscape Planting Schedule and Notes Sheet for summary of quantities and landscape notes.

FOR INFORMATION ONLY/WORK BY OTHERS

LS-30

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT T200911303

COUNTY NEW CASTLE

BRIDGE NO.

DESIGNED BY: DMS

CHECKED BY: AJC

LANDSCAPING PLAN

SHEET NO. 998

TOTAL SHTS. 1256

MASTER LANDSCAPE PLANTING SCHEDULE

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE AND ROOT CONDITION	COMMENTS
		MAJOR DECIDUOUS TREES			
144	Ar	Acer rubrum 'Red Sunset'	Red Sunset Maple	2" Caliper, B&B	Space approx. 40' OC
96	Ls	Liquidambar styraciflua	Sweet-gum	2" Caliper, B&B	Space approx. 40' OC
97	Ns	Nyssa sylvatica	Blackgum	2" Caliper, B&B	Space approx. 40' OC
30	Po	Platanus occidentalis	Sycamore	2" Caliper, B&B	Space approx. 40' OC
72	Qh	Quercus phellos	Willow Oak	2" Caliper, B&B	Space approx. 40' OC
69	Qr	Quercus rubra	Red Oak	2" Caliper, B&B	Space approx. 40' OC
		EVERGREEN TREES			
360	IoM	Ilex opaca 'Miss Helen'	American Holly	6' Height, B&B	Space approx. 15' OC
45	IoJ	Ilex opaca 'Jersey Knight'	American Holly (Male Pollinator)	6' Height, B&B	Space approx. 15' OC
379	Jv	Juniperus virginiana	Eastern Redcedar	6' Height, B&B	Space approx. 15' OC
620	Ps	Pinus strobus	Eastern White Pine	6' Height, B&B	Space approx. 15' OC
		MINOR DECIDUOUS TREES			
34	Ac	Amelanchier canadensis	Shadblow Serviceberry	5' Height, B&B	Space approx. 15' OC
144	Cv	Crataegus viridis 'Winter King'	Winter King Hawthorn	5' Height, B&B	Space approx. 15' OC
131	Hv	Hamamelis virginiana	Common Witchhazel	5' Height, B&B	Space approx. 15' OC
138	Mv	Magnolia virginiana	Sweetbay Magnolia	5' Height, B&B	Space approx. 15' OC
166	Vp	Viburnum prunifolium	Blackhaw Viburnum	5' Height, B&B	Space approx. 15' OC
		SHRUBS			
40	Ig	Ilex glabra	Inkberry Holly	24" Height, CG	Space 5' OC
130	It	Itea virginica 'Henry's Garnet'	Sweetspire	24" Height, CG	Space 4' OC
		GROUNDCOVERS			
1880	Lir	Liriope platyphylla	Lilyturf	1 Gallon CG	Space 1' OC

CG = Container Grown
OC = On Center

LANDSCAPE PLANTING NOTES

1. ALL LANDSCAPING SHALL BE DONE IN ACCORDANCE WITH DELDOT STANDARD SPECIFICATIONS AND CONSTRUCTION DETAILS;AND ANY SPECIAL PROVISIONS AND DETAILS PROVIDED ON THE PLANS AND IN THE IFB FOR THIS CONTRACT.
2. LANDSCAPING PLANS ARE FOR LANDSCAPING PURPOSES ONLY. AS-BUILT CONDITIONS MAY VARY. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND SHALL INFORM THE ENGINEER OF ANY DISCREPANCIES OR POTENTIAL PROBLEMS PRIOR TO COMMENCING WORK.
3. THE CONTRACTOR SHALL VERIFY PLANT MATERIAL QUANTITIES SHOWN ON THE PLANS WITH THE TOTALS IN THE PLANT SCHEDULES. WHERE DISCREPANCIES OCCUR BETWEEN THE PLANS AND THE PLANT SCHEDULE, THE PLANS SHALL GOVERN.
4. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING MISS UTILITY TO LOCATE ALL UTILITIES A MINIMUM OF 72 HOURS PRIOR TO PROCEEDING WITH ANY EXCAVATION FOR PLANT MATERIAL INSTALLATION.
5. PLANT MATERIAL SHALL MAINTAIN THE FOLLOWING MINIMUM SETBACKS:
   50' FROM OVERHEAD TRANSFORMER LINES
   20' FROM OVERHEAD UTILITY LINES
   6' FROM UNDERGROUND UTILITIES, DRAINAGE SWALES AND PIPES, FENCES, GUARDRAILS AND CURBS.
6. NO PLANTS SHALL BE PLANTED WITHIN THE ROADWAY CLEAR ZONE OR DIRECTLY IN FRONT OF ROADWAY SIGN SIGHT LINES.
7. ANY ADJUSTMENTS OR CHANGES TO PLANT LAYOUT SHALL BE APPROVED BY DELDOT PRIOR TO INSTALLATION.
8. CONTRACTOR SHALL BE REQUIRED TO KEEP ALL PLANT MATERIALS SUFFICIENTLY WATERED FROM JUNE 15 THROUGH OCTOBER 1. WATERING, ONCE INITIATED, SHALL CONTINUE WITHOUT INTERRUPTION UNTIL ALL PLANTS ON THE PROJECT HAVE BEEN WATERED. PAYMENT SHALL BE PER 1,000 GALLONS OF WATER APPLIED AND SHALL BE BASED ON THE FOLLOWING SCHEDULE: MAJOR AND EVERGREEN TREES-15 GALLONS PER TREE, MINOR AND REVEGETATION TREES-10 GALLONS PER TREE, SHRUBS-5 GALLONS PER SHRUB, PERENNIALS AND GROUNDCOVERS-10 GALLONS PER 100 SQUARE FEET OF PLANTING BED. WATER USED FOR THIS ITEM SHALL MEET THE REQUIREMENTS OF SECTION 803 OF THE STANDARD SPECIFICATIONS. TREE WATERING BAGS, IF UTILIZED, SHALL BE FILLED AS A PART OF THE WATERING OPERATION; PAYMENT SHALL BE AS DETAILED HEREIN. TREE WATERING BAGS SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED PRIOR TO FINAL INSPECTION.

FOR INFORMATION ONLY/WORK BY OTHERS

LS-31

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 30 60 90
FEET

US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT: T200911303
COUNTY: NEW CASTLE
BRIDGE NO.
DESIGNED BY: DMS
CHECKED BY: AJC

LANDSCAPE PLANTING SCHEDULES AND NOTES

SHEET NO. 999
TOTAL SHTS. 1256