THE STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION

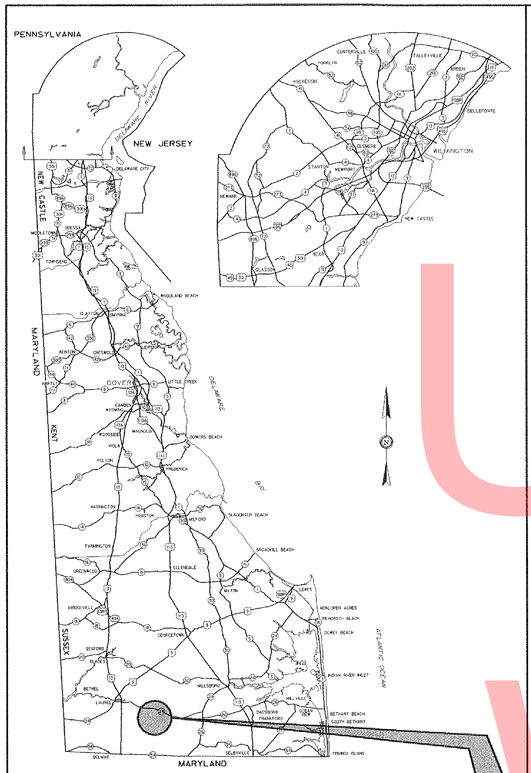
U.S. CUSTOMARY UNITS

CONSTRUCTION AND RIGHT-OF-WAY PLANS FOR:

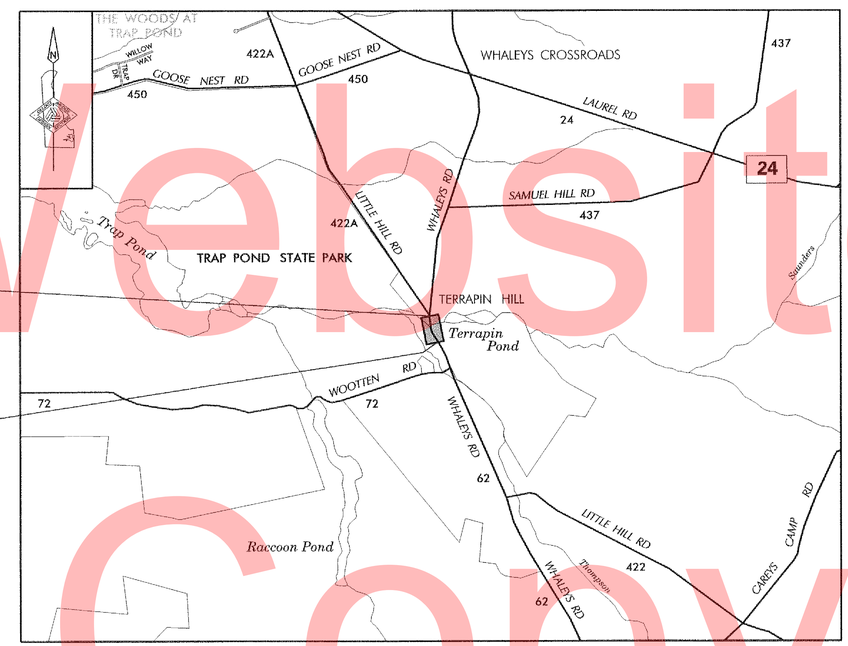
BR 3-341 ON S062
WHALEYS ROAD OVER
SANDERS BRANCH

CONTRACT NUMBER: T201407302
FEDERAL AID PROJECT NUMBER: EBROS-S062(04)

COUNTY: SUSSEX M.R. #: S062



GENERAL LOCATION OF CONTRACT



BEGIN
CONTRACT T201407302
STATION 1+50.00

END
CONTRACT T201407302
STATION 4+80.00

DESIGN DESIGNATION

FUNCTIONAL CLASS: RURAL MINOR COLLECTOR		D.H.V. PROJECTED: 32	YEAR: 2040
TYPE OF CONSTRUCTION: PIPE REPLACEMENT		DESIGN SPEED: 55 M.P.H	
A.A.D.T. CURRENT: 251	YEAR: 2010	TRUCKS: 14%	
A.A.D.T. PROJECTED: 375	YEAR: 2040	DIRECTION OF DISTRIBUTION: 65%	

INDEX OF SHEETS

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TOTAL SHEETS: 15

APPROVED DESIGN EXCEPTIONS

DESIGN PARAMETER	REQUIRED	PROVIDED	DATE

ADDENDA & REVISIONS

DESCRIPTION	NAME & DATE

ASSOCIATED CONTRACTS

CONTRACT NO.	CONTRACT NAME
276	WHITESVILLE TO PEPPER

RECOMMENDED

Wayne Massey — 12-4-13
SQUAD MANAGER, CONSTRUCTION — DATE

Bradford L Salmons — 12/4/2013
GROUP ENGINEER, CONSTRUCTION — DATE

ASSISTANT DIRECTOR, TRANSPORTATION SOLUTIONS (CONSTRUCTION) — DATE

RECOMMENDED
Vincent W. Davis
STORMWATER ENGINEER
DATE 6 DEC 2013
VINCENT W. DAVIS REGISTERED No. 12898 DELAWARE PROFESSIONAL ENGINEER
SEAL

RECOMMENDED
SQUAD MANAGER, BRIDGE DESIGN
DATE December 9th, 2013
EMILY MAURER LICENSED No. 16939 DELAWARE PROFESSIONAL ENGINEER
SEAL

RECOMMENDED
BRIDGE DESIGN ENGINEER
DATE 11 DECEMBER 2013
JASON N. HASTINGS REGISTERED No. 13545 DELAWARE PROFESSIONAL ENGINEER
SEAL

RECOMMENDED
ASSISTANT DIRECTOR, BRIDGE
DATE DECEMBER 13, 2013
BARRY A. BENTON REGISTERED No. 10774 DELAWARE PROFESSIONAL ENGINEER
SEAL

APPROVED
CHIEF ENGINEER
DATE December 18, 2013
ROBERT BRIAN McCLEARY REGISTERED No. 8567 DELAWARE PROFESSIONAL ENGINEER
SEAL

LAST UPDATED: NOVEMBER 22, 2013
Y:\SUSSEX\062\BRIDGE\T201407302\PLANS\TC.DGN

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EXISTING SYMBOLS

DRAINAGE

	DITCH OR STREAM CENTERLINE
	DIRECTIONAL STREAM FLOW ARROW
D.I.	DRAINAGE INLET
J.B.	DRAINAGE JUNCTION BOX
D	DRAINAGE MANHOLE
SIZE/TYPE LABEL	DRAINAGE PIPE AND FLOW ARROW
	DRAINAGE PIPE HEADWALL
	RIPRAP - AREA FEATURE
	RIPRAP - LINEAR FEATURE

MANMADE ROADSIDE FEATURES

	BOLLARD - STEEL POLE
	BOLLARD - WOOD POST
(TYPE LABEL)	CURB
(TYPE LABEL)	CURB AND GUTTER
	FENCE - CHAINLINK OR STRANDED
	FENCE - STOCKADE OR SPLIT RAIL
FP	FLAG POLE
	GUARDRAIL - STEEL BEAM
	GUARDRAIL - WIRE ROPE
LAMP	LAMP AND POST - RESIDENTIAL
MB	MAILBOX
PM	PARKING METER AND POST
	PAVEMENT - FLEXIBLE
	PAVEMENT - RIGID
	PILE - BRIDGE
	PILLAR OR MISCELLANEOUS POST
	TRAFFIC SIGN AND POST
	WALL - BRICK OR BLOCK
	WALL - STONE

NATURAL ROADSIDE FEATURES

	GRASS LAWN
	HEDGEROW OR THICKET
	MARSH BOUNDARY LINE
	TREE - CONIFEROUS
	TREE - DECIDUOUS
	TREE STUMP
	SHRUBBERY
WL	DELINEATED WETLAND BOUNDARY LINE
	WOODS LINE BOUNDARY

RIGHT-OF-WAY SYMBOLS

C.M.	PROPERTY MARKER - CONCRETE MON.
I.P.	PROPERTY MARKER - IRON PIPE
100+00	HISTORIC RIGHT-OF-WAY BASELINE
	EXISTING RIGHT-OF-WAY
PD	EXISTING PROPERTY LINE
EASEMENT TYPE	EXISTING EASEMENT
DA	EXISTING DENIAL OF ACCESS
R/W-DA	EXISTING R/W & DENIAL OF ACCESS

SURVEY CONTROL & MONUMENTATION

B.M.	SURVEY BENCHMARK LOCATION
T.P.	SURVEY TIE POINT LOCATION
	SURVEY TRAVERSE POINT
	POINT OF CURVATURE OR TANGENCY
	POINT OF INTERSECTING TANGENTS

UTILITY

	SOIL BORING LOCATION
	UTILITY TEST HOLE LOCATION
TV	CABLE TV DISTRIBUTION BOX
E	ELECTRIC MANHOLE
EM	ELECTRIC METER
E	ELECTRIC TRANSFORMER
	POLE MOUNTED LUMINAIRE
G	GAS MANHOLE
G.M.	GAS METER
G.V.	GAS VALVE
G.P.	GAS PUMP - SERVICE STATION
	RAILROAD TRACKS
S	SANITARY SEWER MANHOLE
S.V.	SANITARY SEWER VALVE
VENT	SANITARY SEWER VENT OR CLEANOUT
S.D.F.	SEPTIC DRAIN FIELD
B	TELEPHONE BOOTH
T	TELEPHONE MANHOLE
T	TELEPHONE TEST POINT
J.W.	TRAFFIC - CONDUIT JUNCTION WELL
	TRAFFIC - LIGHT POLE AND BASE
	TRAFFIC - PEDESTRIAN POLE & BASE
	TRAFFIC - SIGNAL CABINET & BASE
	TRAFFIC - SIGNAL POLE AND BASE
U	UTILITY BOX
	UTILITY POLE GUY WIRE ANCHOR
	UTILITY POLE
F.H.	WATER - FIRE HYDRANT
W.M.	WATER METER
W.V.	WATER VALVE
WELL	WELL HEAD
?	MANHOLE - UNDETERMINED OWNER

UTILITY COMPANY FACILITIES

DEC-E-OH	DELAWARE ELECTRIC COOPERATIVE
VER-FO-OH	VERIZON - FIBER OPTIC
VER-C	VERIZON

PROPOSED SYMBOLS

CONSTRUCTION

	CONCRETE SAFETY BARRIER - PERMANENT
BFS	BIOFILTRATION SWALE
	BOLLARD - STEEL POLE
	BOLLARD - WOOD POST
	BRICK PATTERNED SURFACE
	BUTT JOINT
100+00	CONSTRUCTION BASELINE
CSF	CONSTRUCTION SAFETY FENCE
	CURB, TYPE 1 & TYPE 3
	CURB, TYPE 2
	CURB & GUTTER, TYPE 1
	CURB & GUTTER, TYPE 2
	CURB & GUTTER, TYPE 3
	CURB & GUTTER, TYPE 4
CZ	CLEAR ZONE
	DRAINAGE INLET
	DITCH
	FENCE - METAL
	FENCE - WOOD
	FLARED END SECTION
	GUARDRAIL, TYPE 1
	GUARDRAIL, TYPE 2
	GUARDRAIL, TYPE 3
	GUARDRAIL END ANCHORAGE
	GUARDRAIL END TREATMENT, TYPE 1
	GUARDRAIL END TREATMENT, TYPE 2
	GUARDRAIL END TREATMENT, TYPE 3
HC	HORIZONTAL CLEARANCE
	IMPACT ATTENUATOR
	JUNCTION BOX - DRAINAGE
LOC	LIMIT OF CONSTRUCTION
	MANHOLE
	PAVEMENT PATCH
	PAVEMENT REMOVAL - TOPSOIL, SEED AND MULCH
	PIPE & DIRECTIONAL FLOW ARROW
	RIPRAP
	P.C.C. SIDEWALK @ 4"
	P.C.C. SIDEWALK @ 6"
	UNDERDRAIN
	UNDERDRAIN OUTLET

RIGHT-OF-WAY SYMBOLS

	PROPOSED RIGHT-OF-WAY MONUMENT
DA	PROPOSED DENIAL OF ACCESS
PE	PROPOSED PERMANENT EASEMENT
R/W	PROPOSED RIGHT-OF-WAY
R/W-DA	PROPOSED R/W & DENIAL OF ACCESS
TCE	TEMPORARY CONSTRUCTION EASEMENT
100+00	PROPOSED RIGHT-OF-WAY BASELINE

IDENTIFIERS

A/C	ADJUST BY CONTRACTOR
A/O	ADJUST BY OTHERS
B	CONCRETE SAFETY BARRIER
C	CURB OR CURB & GUTTER
D	DITCH RELOCATION
C.J.B.	CONVERT TO JUNCTION BOX
C.M.H.	CONVERT TO DRAINAGE MANHOLE
C/O	CURB OPENING
CR	CURB RAMP / TYPE
CR-N	CURB RAMP / TYPE - WITHOUT SIDEWALK SURFACE DETECTABLE WARNING SYSTEM
CSF	CONSTRUCTION SAFETY FENCE
DI	DRAINAGE INLET
DND	DO NOT DISTURB
ED	ENERGY DISSIPATOR
F	FENCE
FES	FLARED END SECTION
FF/C	FILL WITH FLOWABLE FILL
FS	FILTRATION STRUCTURE
GR	GUARDRAIL
JB	JUNCTION BOX
MH	MANHOLE
M	MONUMENT - RIGHT-OF-WAY
P	PIPE
RL/C	RELOCATE BY CONTRACTOR
RL/O	RELOCATE BY OTHERS
RM/C	REMOVE BY CONTRACTOR
RM/O	REMOVE BY OTHERS
UB	UTILITY BOX
UD	UNDERDRAIN / LENGTH
UOP	UNDERDRAIN OUTLET PIPE

LANDSCAPING

LS	LANDSCAPE PLANTINGS
	SHRUBBERY
	CONIFEROUS TREE
	DECIDUOUS TREE

TRAFFIC

ITMS-CON	ITMS CONDUIT
SIG-CON	SIGNAL CONDUIT
	CONDUIT JUNCTION WELL
	LUMINAIRE
	PAVEMENT MARKINGS
	PAVEMENT STRIPING
	TRAFFIC SIGN

PAVEMENT SECTION(S)

	N/A
	1-¼" WMA SUPERPAVE, TYPE C 2-¼" WMA SUPERPAVE, TYPE B 6" GRADED AGGREGATE BASE COURSE, TYPE B
	N/A

UTILITY COMPANY FACILITIES

DEC-E-OH	DELAWARE ELECTRIC COOPERATIVE
VER-FO-OH	VERIZON - FIBER OPTIC
VER-C	VERIZON

EROSION & SEDIMENT CONTROL

DWB	DEWATERING BASIN
	EROSION CONTROL BLANKET
ED	EARTH DIKE
	INLET SEDIMENT CONTROL
	PERIMETER DIKE/SWALE
PST	PORTABLE SEDIMENT TANK
RSF	REINFORCED SILT FENCE
SBD	SANDBAG DIKE
SB	SANDBAG DIVERSION
	STONE CHECK DAM
SCE	STABILIZED CONSTRUCTION ENTRANCE
SF	SILT FENCE
SP-1	SUMP PIT, TYPE 1
SP-2	SUMP PIT, TYPE 2
ST	SEDIMENT TRAP
ST	SEDIMENT TRAP WITH INLET AS OUTLET
ST	SEDIMENT TRAP PIPE OUTLET
SW	STILLING WELL
	TEMPORARY SWALE
TSD	TEMPORARY SLOPE DRAIN

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GENERAL NOTES

1. THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS", DATED AUGUST 2001 AND THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD CONSTRUCTION DETAILS", DATED 2001, INCLUDING ALL REVISIONS UP TO THE DATE OF ADVERTISEMENT.

2. SITE REVIEWER - AN EROSION CONTROL SITE REVIEWER SHALL BE A PERSON FROM THE CONTRACTOR'S STAFF ASSIGNED TO EROSION AND SEDIMENT CONTROL IMPLEMENTATION AND MAINTENANCE AND SHALL BE REQUIRED ON SPECIFIC PROJECTS. THE NAME AND DNREC CERTIFICATION NUMBER OF EACH SITE REVIEWER SO REQUIRED SHALL BE SUBMITTED TO THE DEPARTMENT PRIOR TO THE EXECUTION OF THE CONTRACT. THE NAME OF THE DELAWARE REGISTERED PROFESSIONAL ENGINEER PROVIDING DIRECTION AND SUPERVISION OF THE SITE REVIEWER, AS REQUIRED IN SECTION 12.3 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS, SHALL ALSO BE SUBMITTED TO THE DEPARTMENT PRIOR TO THE EXECUTION OF THE CONTRACT. THE SITE REVIEWER REQUIREMENTS IN EFFECT ON THIS PROJECT SHALL BE MARKED WITH AN "X" BELOW:

EROSION POTENTIAL FOR THIS PROJECT	SITE REVIEWER REQUIREMENT
( ) INSIGNIFICANT	NONE
( ) MINOR	CONTRACTOR CERTIFICATION COURSE TRAINING ONLY, AS DEFINED IN SECTION 13 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.
(X) MEDIUM	THE SUPERINTENDENT OR A SEPARATE INDIVIDUAL FROM THE CONTRACTOR'S STAFF SHALL BE A CERTIFIED CONSTRUCTION REVIEWER (CCR), AS DEFINED IN SECTION 12 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.
( ) MAJOR	SUPERINTENDENT AND AN INDIVIDUAL FROM CONTRACTOR'S STAFF SHALL BE CCR. ONE INDIVIDUAL FROM THE CONTRACTOR'S STAFF MUST BE A CCR PRIOR TO THE EXECUTION OF THE CONTRACT. THE SUPERINTENDENT MUST BECOME A CCR WITHIN ONE YEAR AFTER THE AWARD OF CONTRACT.

3. ELECTRONIC PROJECT FILES THAT WILL BE MADE AVAILABLE TO THE AWARDED CONTRACTOR, INCLUDE:

( )	NONE
( )	ASCII DATA FILES WITH COORDINATES AND ELEVATIONS FOR PROPOSED POINTS AS SELECTED BY THE ENGINEER.
(X)	RASTER FILES, IN .PDF FILE FORMAT, FOR ALL PLAN SHEETS.
( )	EXISTING DIGITAL TERRAIN MODEL, IN .DTM FILE FORMAT, COMPATIBLE WITH SOFTWARE CURRENTLY USED BY DELDOT.
( )	PROPOSED DIGITAL TERRAIN MODEL, IN .DTM FILE FORMAT, COMPATIBLE WITH SOFTWARE CURRENTLY USED BY DELDOT.
( )	DESIGN FILE, IN .DGN FILE FORMAT, CONTAINING ONLY THE PROPOSED 3D TRIANGLES OF THE PROPOSED DIGITAL TERRAIN MODEL (DTM).

NOTE: THE DOCUMENT ENTITLED "RELEASE FOR DELIVERY OF DOCUMENTS IN ELECTRONIC FORM TO A CONTRACTOR" MUST BE SIGNED BY ALL PARTIES PRIOR TO THE DELIVERY OF ANY ELECTRONIC PROJECT FILES.

4. PROJECT FILES THAT WILL BE MADE AVAILABLE TO THE CONTRACTOR, INCLUDE:

(X)	CROSS SECTIONS (WILL BE MADE AVAILABLE TO THE AWARDED CONTRACTOR)
(X)	RIGHT-OF-WAY PLANS

5. AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) CERTIFIED TRAFFIC CONTROL SUPERVISOR REQUIREMENT FOR THIS PROJECT.

(X)	THE CONTRACTOR SHALL NOT BE REQUIRED TO HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT.
( )	THE CONTRACTOR SHALL HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT. THE CONTRACTOR'S GENERAL SUPERINTENDENT FOR THIS PROJECT OR ANOTHER ATSSA CERTIFIED MEMBER OF THE CONTRACTOR'S PROJECT STAFF MAY BE THE ATSSA SUPERVISOR. PAYMENT FOR ATSSA SUPERVISOR IS INCIDENTAL TO ITEM 743000.
( )	THE CONTRACTOR SHALL HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT. THE ATSSA SUPERVISOR'S SOLE JOB SHALL BE SUPERVISION OF THE INSTALLATION, OPERATION AND MAINTENANCE OF TRAFFIC CONTROL DEVICES FOR THIS PROJECT. THE CONTRACTOR'S GENERAL SUPERINTENDENT FOR THIS PROJECT SHALL NOT BE THE ATSSA SUPERVISOR. PAYMENT FOR ATSSA SUPERVISOR SHALL BE PAID FOR UNDER ITEM 743031.

6. THE DISTURBED AREA FOR THIS PROJECT IS 0.6461 ACRES.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADHERING TO THE CONSTRUCTION SITE POLLUTION PREVENTION SPECIFICATIONS AS DETAILED IN SECTION 3.6 OF THE "DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK". ALL COSTS ASSOCIATED WITH ADHERING TO THE STANDARDS SHALL BE INCIDENTAL TO THE OVERALL CONTRACT COSTS.

8. THE EROSION AND SEDIMENT CONTROL PLANS HAVE BEEN APPROVED BY DELDOT'S STORMWATER ENGINEER UNDER DELDOT'S DELEGATED AUTHORITY. THE EROSION AND SEDIMENT CONTROL PLANS ARE VALID FOR A THREE YEAR PERIOD, BEGINNING ON THE DATE THE STORMWATER ENGINEER SIGNED THE CONSTRUCTION TITLE SHEET. IF THE FINAL ACCEPTANCE OF THE PROJECT IS ANTICIPATED TO EXTEND BEYOND THE THREE YEARS, THE CONTRACTOR SHALL INFORM THE ENGINEER THREE MONTHS PRIOR TO THE EXPIRATION OF THE EROSION AND SEDIMENT CONTROL PLAN APPROVAL. DELDOT WILL REVIEW THE CURRENT EROSION AND SEDIMENT CONTROL PLAN AND ISSUE AN EXTENSION WITH ANY APPROPRIATE MODIFICATIONS.

BACKFILL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STABILIZING THE PIPES IN ORDER TO PREVENT ANY MOVEMENT DURING THE PLACEMENT OF FLOWABLE FILL.
2. THE MAXIMUM DIFFERENCE IN SURFACE LEVELS OF THE FLOWABLE FILL ON OPPOSITE SIDES OF A PIPE SHALL NOT EXCEED 1'-0" DURING POUR.
3. THE CONTRACTOR SHALL DETERMINE THE NEED TO POUR FLOWABLE FILL IN LIFTS DUE TO BUOYANCY. THE CONTRACTOR SHALL SUBMIT BUOYANCY CALCULATIONS TO THE ENGINEER FOR APPROVAL. POURING OF FLOWABLE FILL SHALL TERMINATE 2" ABOVE THE TOP OF PIPES.
4. THE LIMITS OF THE FLOWABLE FILL SHALL BE AS SHOWN ON SHEET 8 ON THE BRIDGE SECTION. THE CONTRACTOR MAY USE FLOWABLE FILL IN LIEU OF BORROW, TYPE 'B' FOR THE SLOPES. PAYMENT WILL BE MADE AT THE UNIT PRICE FOR ITEM #209002 - BORROW, TYPE 'B' REGARDLESS.
5. THE LIMITS OF THE FLOWABLE FILL AS SHOWN IN THE TYPICAL BACKFILL ELEVATION SHALL BE AT THE #207000 LIMITS. ANY AREAS OUTSIDE OF THESE LIMITS, SHALL BE FILLED AND PAID WITH ITEM #209002 - BORROW, TYPE 'B' REGARDLESS OF IF THE CONTRACTOR OPTS TO USE FLOWABLE FILL IN LIEU OF BORROW, TYPE 'B'.

PROJECT NOTES

SECTION 100

1. ANY DAMAGE TO ITEMS NOTED TO BE RELOCATED OR RESET BY THE CONTRACTOR, AT THE DISCRETION OF THE ENGINEER, SHALL BE REPAIRED AND/OR REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.

SECTION 200

2. ITEMS TO BE REMOVED UNDER ITEM #211000-REMOVAL OF STRUCTURES AND OBSTRUCTIONS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
   - REMOVAL OF 3 EXISTING 6'-0" DIAMETER CORRUGATED METAL PIPES.
   - REMOVAL OF POSSIBLE EXISTING RIP-RAP UPSTREAM AND DOWNSTREAM OF THE BRIDGE. RIP-RAP MAY BE RE-USED IF IT MEETS THE REQUIREMENTS SET FORTH BY THE STANDARD SPECIFICATIONS OF THE PROPOSED RIP-RAP.
   - REMOVAL OF TWO EXISTING LOAD POSTING SIGNS.

3. THIS PROJECT IS COVERED UNDER AN NPDES GENERAL PERMIT FOR CONSTRUCTION. UNDER THE GENERAL PERMIT, COMPLIANCE WITH DELDOT'S APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLANS WILL CONSTITUTE COMPLIANCE WITH THE NPDES INDUSTRIAL PERMITTING REQUIREMENTS FOR THIS CONSTRUCTION PROJECT. A COPY OF THE NPDES GENERAL PERMIT AND NOI IS KEPT ON FILE IN EACH OF THE CONSTRUCTION OFFICES AND THE DEPARTMENT'S TEAM SUPPORT SECTION. A COPY OF THE GENERAL PERMIT OR THE NOI CAN BE OBTAINED UPON REQUEST FROM EITHER THE DEPARTMENT'S STORMWATER ENGINEER OR THE APPROPRIATE CONSTRUCTION ENGINEER.

SECTION 300

4. A. THE CONTRACTOR MAY ELECT TO USE ANY OF THE FOLLOWING MATERIALS TO MEET THE REQUIREMENTS OF ITEM #302007 -GRADED AGGREGATE BASE COURSE, TYPE 'B':
   a. CRUSHED STONE (PER STANDARD SPECIFICATION 821)
   b. CRUSHED CONCRETE (PER STANDARD SPECIFICATION 821)
   c. HOT-MIX MILLINGS (PER SPECIAL PROVISION 302514 MILLED HOT-MIX BASE COURSE)

   THE CONTRACTOR WILL NOT BE ALLOWED TO MIX DIFFERENT MATERIALS (OR SIMILAR MATERIALS FROM DIFFERENT SOURCES) TO MEET THE REQUIREMENTS OF ITEM #302007 - GRADED AGGREGATE BASE COURSE, TYPE 'B'. ALL OF THE ABOVE LISTED MATERIALS ARE PERMITTED FOR USE ON THE JOB, PROVIDED THEY ARE SEPARATED INTO APPROVED AREAS. EACH AREA OF BASE COURSE MUST BE CONSTRUCTED USING MATERIALS FROM A SINGULAR SOURCE, FULL DEPTH, IN ORDER THAT PROPER TESTING MAY BE ACCOMPLISHED. THE CONTRACTOR AND ENGINEER SHALL AGREE ON THE LIMITS OF EACH SOURCE OF MATERIAL PRIOR TO PLACEMENT.

   B. THE QUANTITY USED FOR BASE OF EACH OF THE ABOVE LISTED MATERIALS WILL BE THE CONTRACTOR'S CHOICE, WITH THE TOTAL BEING EQUAL TO THE ACTUAL QUANTITY USED UNDER ITEM #302007-GRADED AGGREGATE BASE COURSE, TYPE 'B'.

   C. THE CONTRACTOR MAY ALSO ELECT TO RECYCLE MILLINGS FOR USE IN HOT-MIX AS PERMITTED BY THE STANDARD SPECIFICATIONS. THE CHOICE OF THE QUANTITY OF MILLINGS USED FOR THIS PURPOSE, OR FOR BASE COURSE, LIES WITH THE CONTRACTOR. ALL EXCESS MILLING MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR.

   D. HOT-MIX MILLINGS MAY BE GENERATED FROM THE FOLLOWING SOURCES:
   a. MATERIAL MILLED ON THIS CONTRACT AT THE CONTRACTOR'S CHOICE UNDER ITEM #202000.
   b. MILLED MATERIAL FURNISHED ON THE JOB FROM THE CONTRACTOR'S YARD OR OTHER OUTSIDE SOURCE.
   ALL MILLED MATERIALS SHALL MEET THE MATERIAL REQUIREMENTS OF ITEM #302514 - MILLED HOT-MIX BASE COURSE.

   E. PAYMENT CLARIFICATION:
   a. SHOULD THE CONTRACTOR ELECT TO MILL PORTIONS OF HOT-MIX SHOWN ON THE PLANS TO BE REMOVED UNDER ITEM #202000 - EXCAVATION AND EMBANKMENT THE COST OF MILLING THIS HOT-MIX WILL BE PAID AS ITEM #202000 - EXCAVATION AND EMBANKMENT. THE MILLINGS GENERATED MAY BE RECYCLED INTO HOT-MIX, UTILIZED FOR BASE COURSE, OR DISPOSED OF TO AN APPROVED SITE. HAULING COSTS FOR DISPOSAL AND/OR RECYCLING ARE INCIDENTAL TO ITEM #202000 - EXCAVATION AND EMBANKMENT.
   b. SHOULD THE CONTRACTOR ELECT TO TEMPORARILY STOCKPILE MILLINGS ON THE JOB SITE FOR LATER USE, ALL COSTS FOR STOCKPILING AND SUBSEQUENT REHANDLING SHALL BE INCIDENTAL TO ITEM #202000 - EXCAVATION AND EMBANKMENT.
   c. MILLINGS USED FOR BASE COURSE SHALL BE PLACED IN ACCORDANCE WITH THE REQUIREMENTS OF SPECIAL PROVISION 302514 - MILLED HOT-MIX BASE COURSE. NO SEPARATE PAYMENT WILL BE MADE TO FURNISH MILLINGS FROM AN OUTSIDE SOURCE OR TRANSPORT MILLINGS WITHIN THE PROJECT LIMITS. MILLINGS USED FOR BASE COURSE WILL BE PAID FOR AT THE UNIT BID PRICE FOR ITEM #302007 - GRADED AGGREGATE BASE COURSE, TYPE 'B'.
   d. ALL COSTS TO UTILIZE MILLINGS IN RECYCLED HOT-MIX WILL BE INCIDENTAL TO THE UNIT PRICE BID FOR THE HOT-MIX ITEM USING THE RECYCLED MATERIAL.
   e. SPECIAL PROVISION 302514 - MILLED HOT-MIX BASE COURSE IS PROVIDED TO SPECIFY THE MEANS OF LAY DOWN AND COMPACTION AS WELL AS THE MATERIAL REQUIREMENTS FOR MILLINGS USED AS BASE COURSE. ALL COSTS TO BRING THE MILLINGS INTO COMPLIANCE WITH THE REQUIREMENTS OF ITEM #302514 - MILLED HOT-MIX BASE COURSE ARE INCIDENTAL TO ITEM #302007 - GRADED AGGREGATE BASE COURSE, TYPE 'B'. NO PAYMENT WILL BE MADE FOR ITEM #302514 - MILLED HOT-MIX BASE COURSE. THE QUANTITY OF MILLINGS USED FOR BASE COURSE WILL BE PAID FOR UNDER ITEM #302007 - GRADED AGGREGATE BASE COURSE.

SECTION 700

5. ALL PAVED AREAS TO BE RECONSTRUCTED OR WIDENED SHALL BE SAWCUT AT THE POINT WHERE THE NEW PAVEMENT IS TO TIE INTO THE EXISTING PAVEMENT. ALL HOT-MIX SAW CUTTING SHALL BE FULL DEPTH, UNLESS OTHERWISE NOTED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

6. STRIPING
   PROPOSED STRIPING SHALL MATCH EXISTING STRIPING PATTERN CONSISTING OF TWO SOLID YELLOW CENTERLINE STRIPES THROUGHOUT THE PROJECT LIMITS. PAYMENT FOR PERMANENT PAVEMENT STRIPING UNDER ITEM #748548-PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5".

7. SIGNING
   TO AVOID DAMAGE, SIGNS MAY BE REMOVED DURING CONSTRUCTION IF NEEDED, BUT MUST BE REPLACED TO MATCH EXISTING CONDITIONS BEFORE REOPENING THE ROADWAY, WITH THE EXCEPTION OF EXISTING LOAD POSTING SIGNS THAT ARE TO BE REMOVED. ALL WORK RELATED TO MOVING AND REINSTALLING THE SIGN SHALL BE INCLUDED IN ITEM #211000-REMOVAL OF STRUCTURES AND OBSTRUCTIONS. IF THE SIGN IS DAMAGED DURING CONSTRUCTION, THE SIGN MUST BE REPLACED AT THE CONTRACTORS EXPENSE. THE LOAD POSTING TO BE REMOVED SHALL BE RETURNED TO DELDOT. CONTRACTOR SHALL CONTACT BOB HUTSON AT 302-760-2563 TO COORDINATE.

8. MAINTENANCE OF TRAFFIC SHALL BE AS PER DETOUR. THE DETOUR SHALL REMAIN IN EFFECT UNTIL THE FINAL HOT MIX IS PLACED. ALL MOT ITEMS WITH THE EXCEPTION OF CHANGEABLE MESSAGE BOARDS AND FLAGGERS WILL BE INCLUDED IN ITEM #763643-MAINTENANCE OF TRAFFIC, ALL INCLUSIVE.

MISCELLANEOUS

9. DESIGN CRITERIA:
   2012 AASHTO LRFD BRIDGE DESIGN SPECIFICATION, 6TH EDITION, US CUSTOMARY UNITS.

10. LOADING:
    AASHTO HL-93 FOR LIVE LOAD
    25 PSF DEAD LOAD HAS BEEN INCLUDED FOR FUTURE OVERLAY.

11. HYDRAULIC DATA:
    -DRAINAGE AREA = 4.85 SQ. MILES
    -DESIGN FREQUENCY = 50-YEARS
    -DESIGN DISCHARGE = 388.0 CFS
    -DESIGN FLOOD ELEVATION = 35.38 FT
    -PROPOSED OPENING = (3) 6 FT CIRCULAR PIPES

12. SCOUR ANALYSIS:
    THE PROPOSED STRUCTURE HAS BEEN ANALYZED FOR THE EFFECTS OF SCOUR IN ACCORDANCE WITH HEC-14- 'HYDRAULIC DESIGN OF ENERGY DISSIPATORS FOR CULVERTS AND CHANNELS', HEC-18 - 'EVALUATING SCOUR AT BRIDGES' AND HEC-23 - 'BRIDGE SCOUR AND STREAM INSTABILITY COUNTERMEASURE'. SCOUR COUNTERMEASURES HAVE BEEN DESIGNED FOR THE WORST CASE SCENARIO OF THE OVERTOPPING FLOOD OR THE 500-YR FLOOD EVENT.
    -DESIGN EVENT = 50-YEAR STORM
    -DESIGN DISCHARGE = 695.0 CFS
    -DESIGN VELOCITY = 8.39 FT/S
    -TAILWATER DEPTH = 5.9 FT

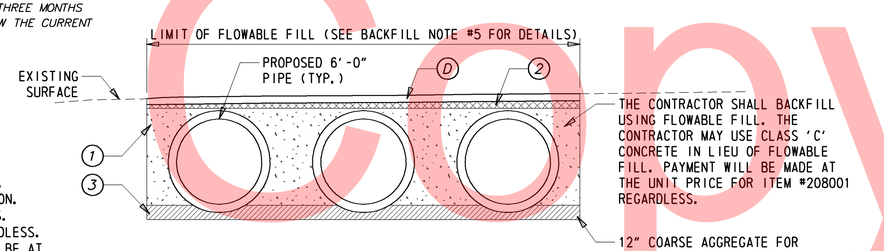
13. UTILITIES:
    SEE UTILITY STATEMENT FOR RELOCATION DETAILS. NOTE THAT OVERHEAD LINES SHALL NOT BE COMPLETELY REMOVED AND PROPER CLEARANCES SHALL BE MAINTAINED DURING CONSTRUCTION.

14. ENVIRONMENTAL COMPLIANCE:
    REFER TO THE ENVIRONMENTAL COMPLIANCE PLAN FOR RESTRICTIONS AND ADDITIONAL GUIDANCE THAT MAY BE ASSOCIATED TO THIS PROJECT. NOTE THAT BRIDGE 3-341 EXISTS IN A NATURAL AREA. REFER TO ENVIRONMENTAL COMPLIANCE SHEET FOR APPLICABLE RESTRICTIONS.

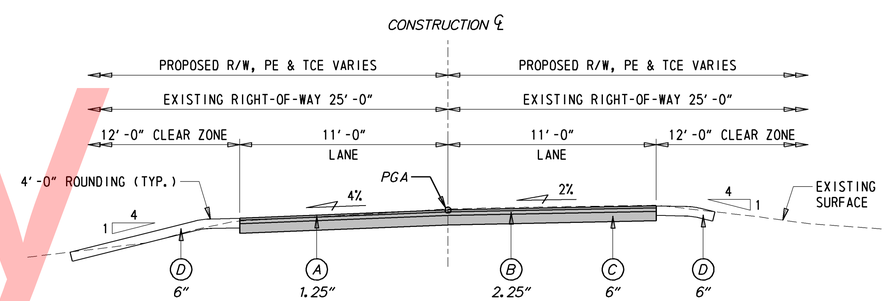
LEGEND

1. ITEM 208001 - FLOWABLE FILL
2. ITEM 209002 - BORROW, TYPE B
3. ITEM 608000 - COARSE AGGREGATE FOR FOUNDATION STABILIZATION

(A) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE)
(B) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
(C) ITEM 302007 - GRADED AGGREGATE BASE COURSE (GABC), TYPE B
(D) ITEM 732002 - TOPSOIL, 6" DEPTH
ITEM 734013 - PERMANENT GRASS SEEDING, DRY GROUND



TYPICAL BACKFILL SECTION
3/16" = 1'-0"



TYPICAL SECTION
1/4" = 1'-0"

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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	BR 3-341 ON S062 WHALEYS ROAD OVER SANDERS BRANCH	CONTRACT T201407302 / COUNTY SUSSEX	BRIDGE NO. 3-341 / DESIGNED BY: SMW / CHECKED BY: EM	NOTES AND TYPICAL SECTION	SHEET NO. 3 / TOTAL SHTS. 15

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HORIZONTAL / VERTICAL CONTROL DATA					
POINT	STATION	OFFSET	NORTHING	EASTING	ELEVATION
TP #5	N/A	N/A	188816.63	645958.67	38.97
TP #6	3+36.61	-14.09	189079.19	645840.47	36.59
TP #7	N/A	N/A	189430.09	645796.13	38.11
TP #8	2+70.27	18.49	189137.98	645795.45	37.45

CONSTRUCTION ALIGNMENT CONTROL				
POINT	STATION	OFFSET	NORTHING	EASTING
10000	0+00.00	0.00	189410.21	645815.53
10001	0+88.69	0.00	189321.87	645807.74
10100	3+30.20	37.93	189081.29	645786.51
10003	5+55.98	0.00	188873.53	645909.65
10004	6+00.00	0.00	188835.66	645932.10

DATUM REFERENCE:

HORIZONTAL - THIS PROJECT IS REFERENCED TO THE DELAWARE STATE PLANE COORDINATE SYSTEM (NAD 83/91).

VERTICAL - THIS PROJECT IS REFERENCED TO NAVD 88.

Element: Circular Curve #1			
PC (10001)	0+88.69	189321.87	645807.74
PI (10100)	3+30.20	189081.29	645786.51
CC (10002)		189255.95	646554.83
PT (10003)	5+55.98	188873.53	645909.65
Radius:		750.00	
Delta:		35°41'54" Left	
Degree of Curvature(Arc):		7°38'22"	
Length:		467.29	
Tangent:		241.51	
Chord:		459.77	
Middle Ordinate:		36.10	
External:		37.93	
Tangent Direction:		S 5°02'32" W	
Radial Direction:		N 84°57'28" W	
Chord Direction:		S 12°48'26" E	
Radial Direction:		S 59°20'37" W	
Tangent Direction:		S 30°39'23" E	

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

BR 3-341 ON S062 WHALEYS ROAD OVER SANDERS BRANCH

CONTRACT T201407302 | COUNTY SUSSEX | BRIDGE NO. 3-341 | DESIGNED BY: SMW | CHECKED BY: EM

HORIZONTAL AND VERTICAL CONTROL

SHEET NO. 4 | TOTAL SHTS. 15

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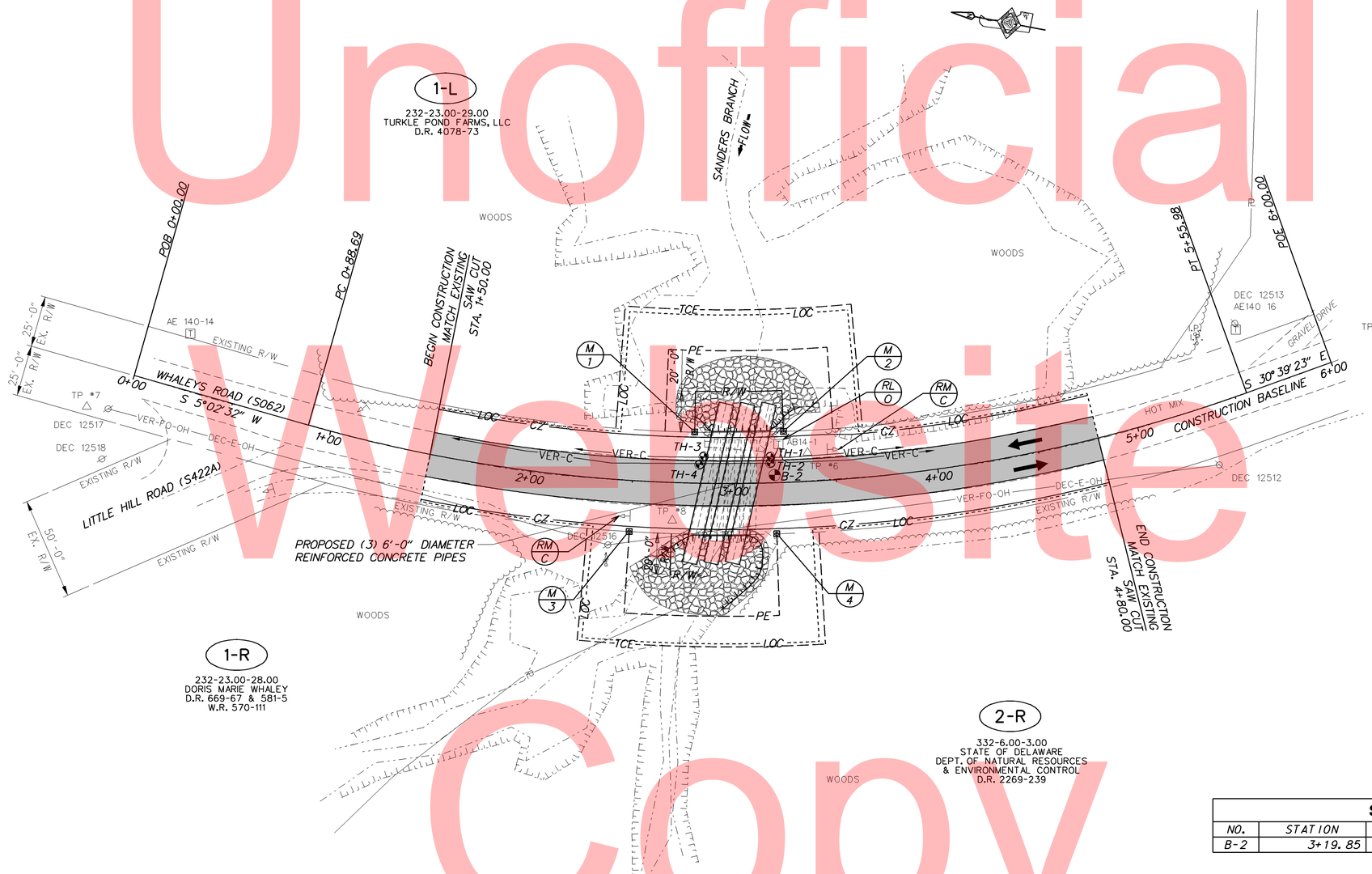

SOIL BORING SCHEDULE

NO.	STATION	ELEVATION	OFFSET	NORTHING	EASTING
B-2	3+19.85	37.64	-3.81	189092.95	645826.66

RIGHT-OF-WAY MONUMENT SCHEDULE

NO.	TYPE	STATION	OFFSET	NORTHING	EASTING
M-1	CAPPED REBAR	2+80.00	-25.00	189135.38	645839.93
M-2	CAPPED REBAR	3+25.00	-25.00	189092.73	645848.45
M-3	CAPPED REBAR	2+50.00	25.00	189157.72	645786.08
M-4	CAPPED REBAR	3+20.00	25.00	189086.51	645798.58

UTILITY TEST HOLE SCHEDULE

NO.	UTILITY	STATION	OFFSET	GRND EL.	COVER	O.D. & MATERIAL	OFFSET
TH-1	TELEPHONE	3+17.99	-12.83	37.06	2.46	1" CABLE	VERIZON
TH-2	TELEPHONE	3+17.97	-9.71	37.34	2.59	1" CABLE	VERIZON
TH-3	TELEPHONE	2+84.79	-13.13	37.32	2.66	1" CABLE	VERIZON
TH-4	TELEPHONE	2+82.75	-9.13	37.47	2.27	1" CABLE	VERIZON

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

BR 3-341 ON S062 WHALEYS ROAD OVER SANDERS BRANCH

CONTRACT: T201407302
COUNTY: SUSSEX
BRIDGE NO. 3-341
DESIGNED BY: SMW
CHECKED BY: EM

CONSTRUCTION PLAN

SHEET NO. 5
TOTAL SHTS. 15

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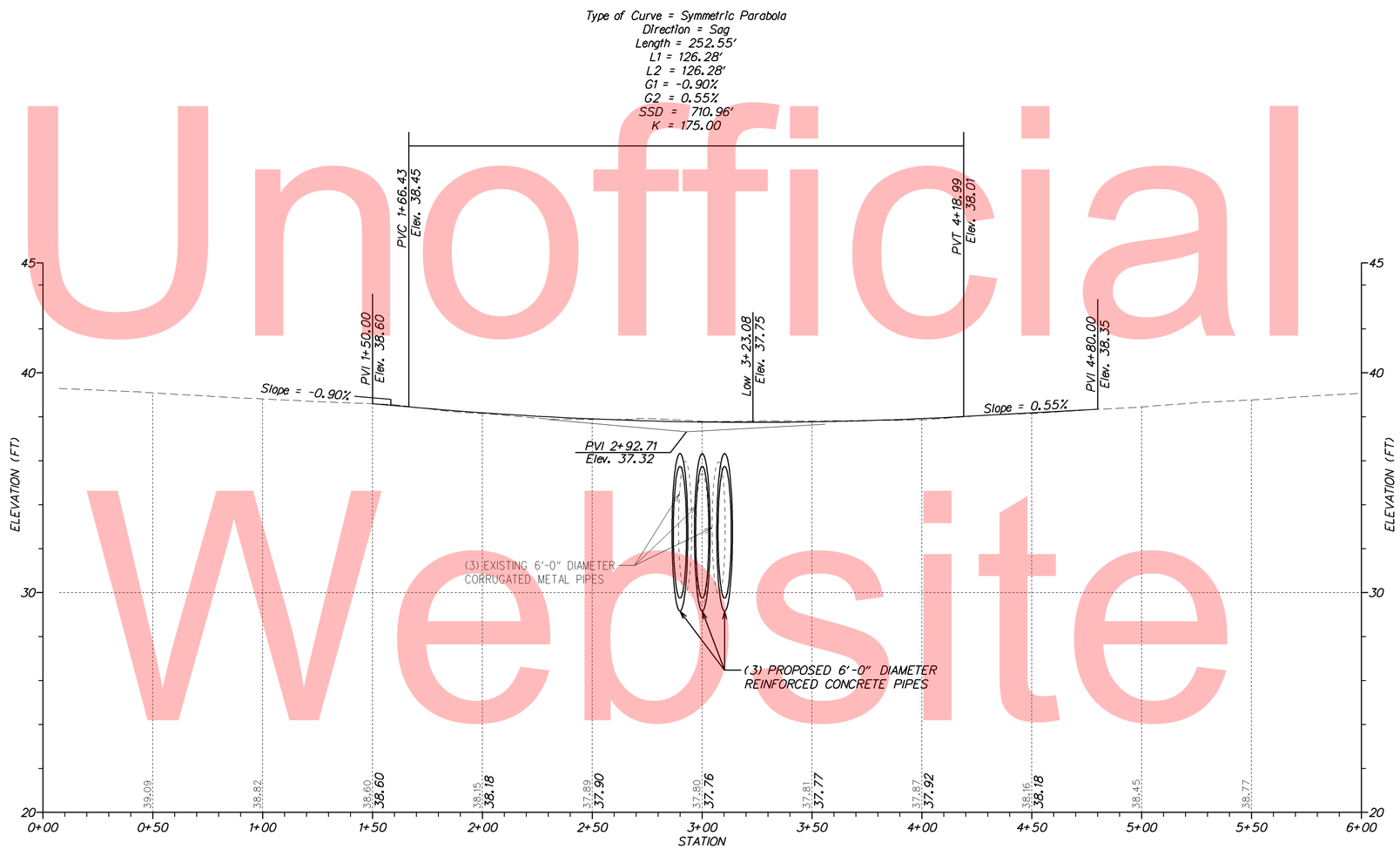

S062 – WHALEYS ROAD

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VERTICAL SCALE FEET 9 6 3 0

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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	BR 3-341 ON S062 WHALEYS ROAD OVER SANDERS BRANCH	CONTRACT T201407302	BRIDGE NO. 3-341	PROFILE	SHEET NO. 6
				COUNTY SUSSEX	DESIGNED BY: SMW		TOTAL SHTS. 15
					CHECKED BY: EM		

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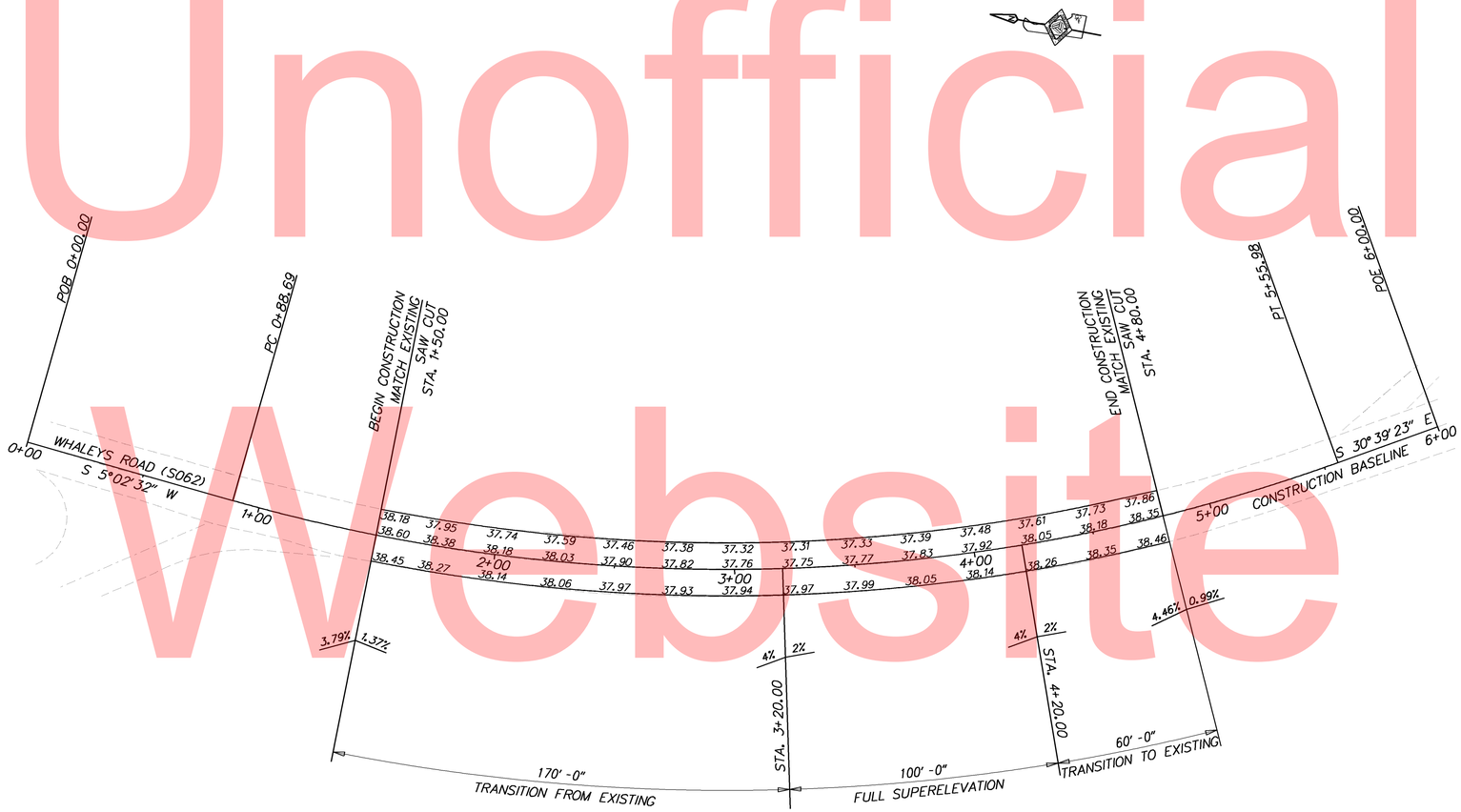

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	BR 3-341 ON S062 WHALEYS ROAD OVER SANDERS BRANCH	CONTRACT T201407302	BRIDGE NO. 3-341	GRADES AND GEOMETRICS	SHEET NO. 7
				COUNTY SUSSEX	DESIGNED BY: SMW		TOTAL SHTS. 15
					CHECKED BY: EM		

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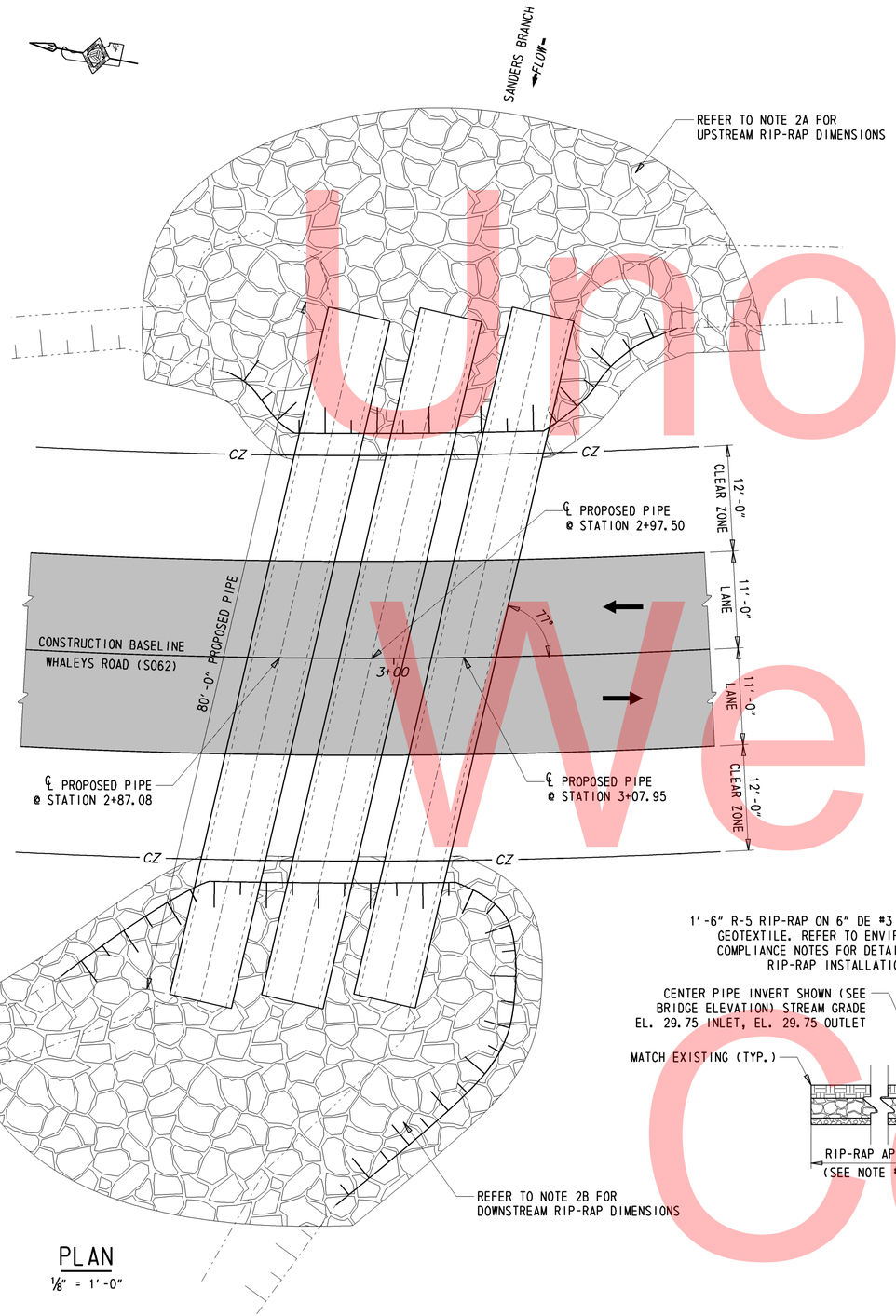
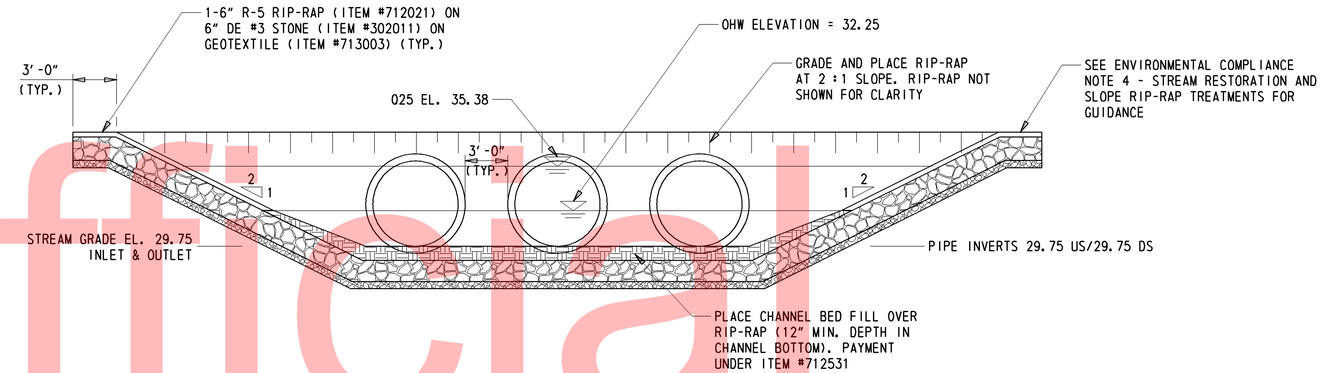


PLAN

1/8" = 1'-0"

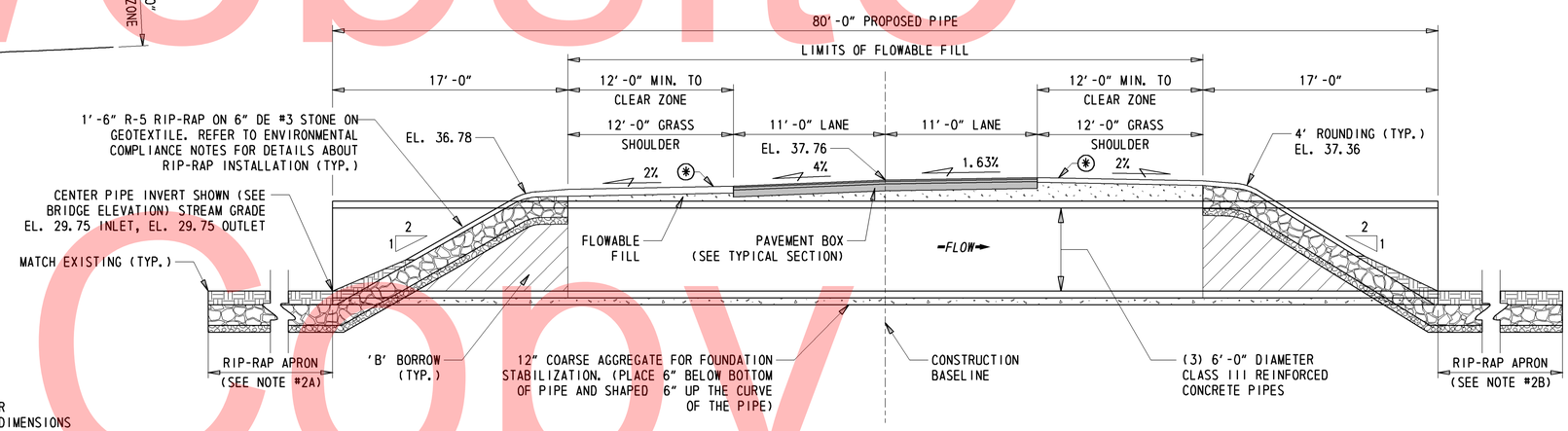


BRIDGE ELEVATION

3/16" = 1'-0"

NOTES:

1. PROPOSED BRIDGE:
   THE EXISTING (3) 6'-0" CORRUGATED METAL PIPES SHALL BE REPLACED WITH (3) 6'-0" DIAMETER REINFORCED CONCRETE PIPES (80'-0" LONG). THE INVERT OF THE OUTER PIPES SHALL BE PLACED AT THE SAME ELEVATION AS THE INVERT OF THE CENTER PIPE. PLACE PIPES WITH A 3'-0" GAP BETWEEN THE OUTER WALLS OF EACH RUN. PLACE 6" COARSE AGGREGATE BEDDING BENEATH PIPES AND 6" SHAPED UP THE CURVE OF EACH PIPE.
2. RIP-RAP PLACEMENT:
   A. UPSTREAM - RIP-RAP SHALL BE PLACED IN THE CHANNEL BOTTOM 20'-0" FROM THE PIPE INLET ALONG THE STREAM CENTERLINE AND SHALL BE PLACED TO CREATE A SMOOTH BEND THAT MATCHES THE EXISTING STREAM BANKS.
   B. DOWNSTREAM - RIP-RAP SHALL BE PLACED IN THE CHANNEL BOTTOM 24'-0" FROM THE PIPE OUTLET ALONG THE STREAM CENTERLINE AND SHALL BE PLACED TO CREATE A SMOOTH BEND THAT MATCHES THE EXISTING STREAM BANKS.
3. FILL BETWEEN PIPES:
   FLOWABLE FILL SHALL BE USED TO FILL BETWEEN PIPES. FOR GUIDANCE, REFER TO TYPICAL BACKFILL SECTION AND BACKFILL NOTES ON SHEET 3.



NOTE: BRIDGE SECTION SHOWS THE CENTERLINE OF THE CENTER PIPE.

BRIDGE SECTION

3/16" = 1'-0"

*-PLACE PERMANENT SEEDING, DRY GROUND (ITEM #734013) ON 6" OF TOPSOIL (ITEM 732002).

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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE: AS NOTED	BR 3-341 ON S062 WHALEYS ROAD OVER SANDERS BRANCH	CONTRACT T201407302	BRIDGE NO. 3-341	BRIDGE PLAN, SECTION AND ELEVATION	SHEET NO. 8
				COUNTY SUSSEX	DESIGNED BY: SMW		TOTAL SHTS. 14
					CHECKED BY: EM		

BRIDGE 3–341

BORING: B-2		**DATE DRILLED:** 4/25/13	
STATION: 3+19.85	**OFFSET:** -3.81	**ELEVATION:** 37.64	**NORTHING:** 189092.95	**EASTING:** 645826.66
COMMENTS: N/A			

SAMPLE INFORMATION

NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
1	0.0	2	MOIST MEDIUM DENSE BROWN COARSE TO FINE SAND W/SOME SILT, TRACE OF FINE GRAVEL.	A-2-4(0)	HOT-MIX 5". GRAVEL 3"
		9			
		13			
	2.0	11			
2	2.0	2	MOIST LOOSE GRAY COARSE TO FINE SAND W/SOME SILT, TRACE OF FINE GRAVEL.	A-2-4(0)	
		2			
		3			
	4.0	2			APPROX. DEPTH TO WATER: 4 FT.
3	4.0	1	MOIST VERY LOOSE GRAY FINE TO COARSE SAND W/SOME SILT AND FINE GRAVEL.	A-2-4(0)	
		1			
		2			
	6.0	2			
4	6.0	1	SATURATED VERY LOOSE GRAY FINE SAND W/SOME COARSE SAND AND SILT, TRACE OF FINE GRAVEL.	A-2-4(0)	
		1			
		1			
	8.0	2			
5	8.0	1	SATURATED LOOSE DARK BROWN FINE SAND W/TRACE OF COARSE SAND, SILT AND FINE GRAVEL.	A-3	APPROXIMATE FOUNDATION STABILIZATION DEPTH.
		1			
		8			
	10.0	2			
6	10.0	1	SATURATED LOOSE GRAY FINE SAND W/ SOME COARSE SAND, TRACE OF SILT AND FINE GRAVEL.	A-3	
		3			
		5			
	12.0	6			
7	12.0	1	SATURATED LOOSE GRAY FINE TO COARSE SAND, W/ TRACE OF FINE GRAVEL AND SILT.	A-3	
		4			
		5			
	14.0	7			
8	14.0	2	SATURATED LOOSE GRAY FINE TO COARSE SAND, W/TRACE OF FINE GRAVEL AND SILT.	A-3	
		4			
		5			
	16.0	5			
9	16.0	1	SATURATED LOOSE GRAY FINE SAND W/SOME COARSE SAND, TRACE OF SILT AND FINE GRAVEL.	A-3	
		2			
		3			
	18.0	3			
10	18.0	1	SATURATED LOOSE BROWN FINE SAND W/SOME COARSE SAND AND SILT, TRACE OF FINE GRAVEL.	A-2-4(0)	
		2			
		5			
	20.0	8			
11	23.0	5	SATURATED MEDIUM DENSE BROWN COARSE TO FINE SAND, W/ TRACE OF SILT AND FINE GRAVEL.	A-3	
		8			
		9			
	25.0	14			
12	28.0	1	SATURATED LOOSE BROWN FINE SAND W/SOME SILT AND COARSE SAND, TRACE OF FINE GRAVEL.	A-2-4(0)	
		2			
		3			
	30.0	8			
13	33.0	2	SATURATED LOOSE BROWN FINE TO COARSE SAND W/ TRACE OF SILT AND GRAVEL.	A-3	
		4			
		6			
	35.0	10			
14	38.0	5	SATURATED MEDIUM DENSE BROWN COARSE TO FINE SAND, W/ TRACE OF SILT AND FINE GRAVEL.	A-1-B	
		6			
		10			
	40.0	15			
15	43.0	7	SATURATED MEDIUM DENSE BROWN COARSE TO FINE SAND, W/ TRACE OF SILT AND FINE GRAVEL.	A-1-B	
		9			
		11			
	45.0	15			
16	48.0	4	SATURATED MEDIUM DENSE COARSE TO FINE SAND, W/ TRACE OF SILT AND FINE GRAVEL.	A-1-B	
		9			
		17			
	50.0	19			
			END BORING.		

NOTES:

1. *BORING LOG CREATED BY THE DELAWARE DEPARTMENT OF TRANSPORTATION. SUBSURFACE EXPLORATION COMPLETED BY HILLIS-CARNES ENGINEERING ASSOCIATES INC (HCEA).*
2. *REFER TO CONSTRUCTION PLAN (SHEET 5) FOR APPROXIMATE BORING LOCATION. BORING LABELED AS B-2.*
3. *SOIL SAMPLING: 2 IN. OUTSIDE DIA. SPLIT BARREL SAMPLER, DRIVEN WITH A 140 LB. HAMMER FALLING 30 IN.*
4. *ALL DEPTHS GIVEN ARE IN FEET.*

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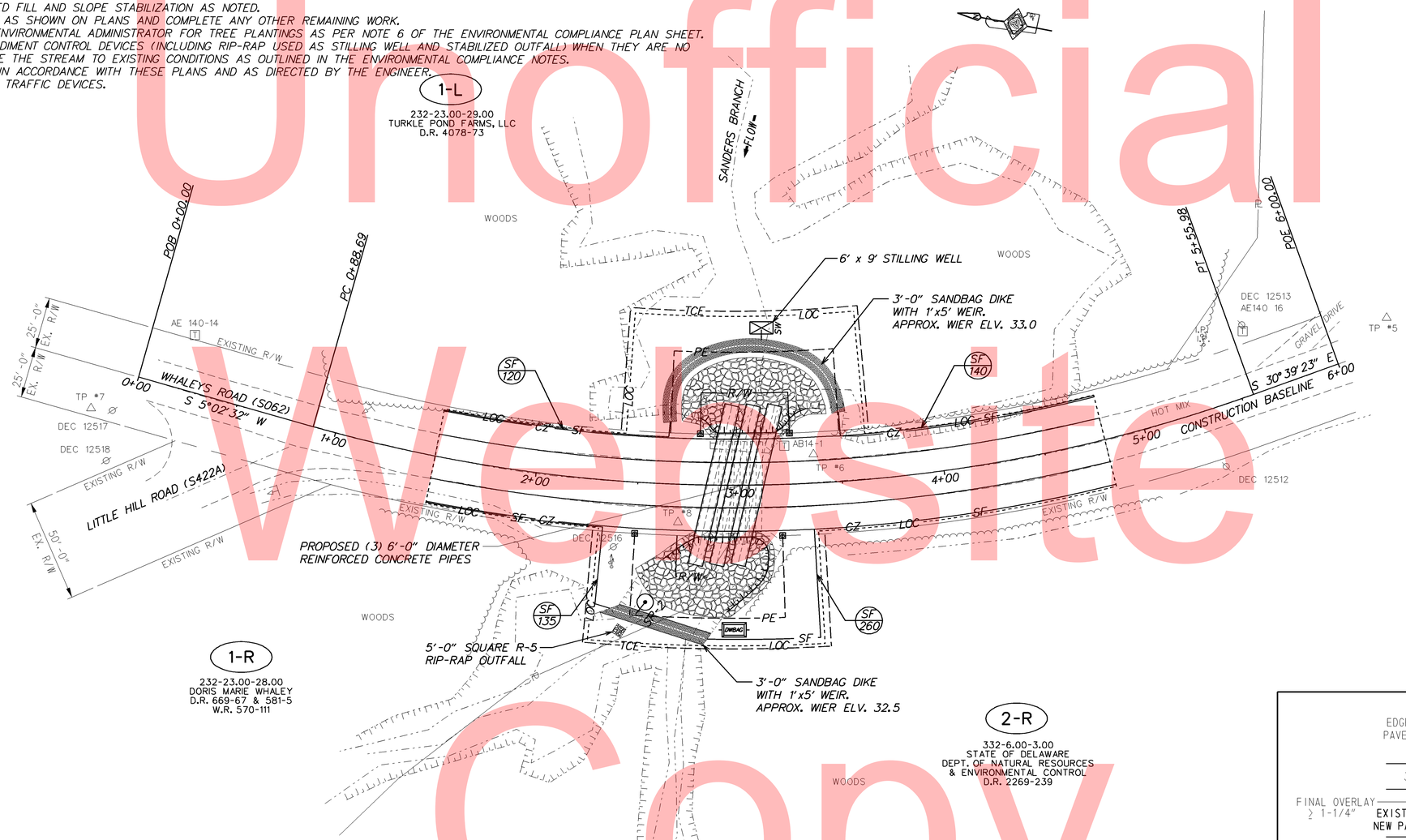
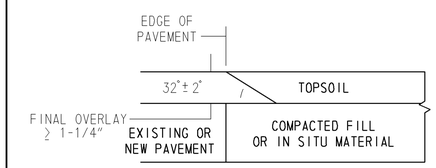
SEQUENCE OF CONSTRUCTION:

1. CLOSE WHALEYS ROAD (S062) IN ACCORDANCE WITH THE DETOUR PLAN.
2. DUE TO THE SURROUNDING NATURAL AREA, ACCESS WORK AREA IN COORDINATION WITH ENVIRONMENTAL STUDIES SECTION AS PER NOTE 8 OF THE ENVIRONMENTAL COMPLIANCE PLAN SHEET.
3. INSTALL SILT FENCE AS SHOWN ON THE PLAN, EXCEPT AT CONNECTION TO SANDBAG DIKES. TO AVOID DAMAGE IN WOODED WETLAND AREAS, A UNIQUE SILT FENCE INSTALLATION TECHNIQUE HAS BEEN RECOMMENDED BY THE ENVIRONMENTAL STUDIES SECTION. REFER TO NOTE 7 OF THE ENVIRONMENTAL COMPLIANCE PLAN SHEET FOR FURTHER INSTALLATION GUIDANCE. CONSTRUCT UPSTREAM AND DOWNSTREAM SANDBAG DIKES IN THE EXISTING CHANNEL. DUE TO LOW UPSTREAM ELEVATION CONDITIONS, UPSTREAM SANDBAG DIKE MAY BE PLACED OUTSIDE OF THE CHANNEL AS DEPICTED ON PLAN SHEET TO CONTROL SURROUNDING UPSTREAM FLOW. CONNECT SILT FENCE TO SANDBAG DIKES, ENCLOSING THE WORK AREA. INSTALL STABILIZED OUTFALL USING R-5 RIP-RAP. TO MAINTAIN STREAM FLOW, INSTALL PUMPS TO DIVERT FLOW AROUND THE WORK AREA. STREAM DIVERSION SHALL BE INSTALLED AS PER ITEM #265500-STREAM DIVERSION. INSTALL SUMP PIT AND DEWATERING BAG FOR USE IN DEWATERING THE WORK AREA. SEE SECTION 111 OF THE STANDARD SPECIFICATIONS FOR MORE INFORMATION ON DEWATERING OPERATIONS. STREAM DIVERSION SHALL BE SUFFICIENT TO PASS 12.5 C.F.S., INCLUDING ANY ALTERNATE PLANS PROPOSED BY THE CONTRACTOR.
4. REMOVE THREE EXISTING CORRUGATED METAL PIPES. INSTALL THREE PROPOSED REINFORCED CIRCULAR CONCRETE PIPES.
5. POUR FLOWABLE FILL BETWEEN PIPES AS SPECIFIED IN BACKFILL NOTES ON SHEET 3. PROVIDE REMAINING BACKFILL AROUND AND ABOVE PIPES WITH BORROW, TYPE B.
6. INSTALL RIP-RAP, CHANNEL BED FILL AND SLOPE STABILIZATION AS NOTED.
7. INSTALL PROPOSED PAVEMENT AS SHOWN ON PLANS AND COMPLETE ANY OTHER REMAINING WORK.
8. COORDINATE WITH ROADSIDE ENVIRONMENTAL ADMINISTRATOR FOR TREE PLANTINGS AS PER NOTE 6 OF THE ENVIRONMENTAL COMPLIANCE PLAN SHEET.
9. REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES (INCLUDING RIP-RAP USED AS STILLING WELL AND STABILIZED OUTFALL) WHEN THEY ARE NO LONGER NEEDED AND RESTORE THE STREAM TO EXISTING CONDITIONS AS OUTLINED IN THE ENVIRONMENTAL COMPLIANCE NOTES.
10. STABILIZE DISTURBED AREAS IN ACCORDANCE WITH THESE PLANS AND AS DIRECTED BY THE ENGINEER.
11. REMOVE ALL MAINTENANCE OF TRAFFIC DEVICES.





HOT-MIX PAVEMENTS AND OVERLAYS
NOT TO SCALE

SAFETY EDGE DETAIL
NOT TO SCALE

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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	BR 3-341 ON S062 WHALEYS ROAD OVER SANDERS BRANCH	CONTRACT T201407302 / COUNTY SUSSEX	BRIDGE NO. 3-341 / DESIGNED BY: SMW / CHECKED BY: EM	CONSTRUCTION SEQUENCE AND EROSION AND SEDIMENT CONTROL PLAN	SHEET NO. 10 / TOTAL SHTS. 15

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LEGEND

- CREATION AREA
- PERMANENT IMPACT AREA
- TEMPORARY IMPACT AREA
- OHW/WL — ORD. HIGH WATER / WETLAND
- WL — WETLAND BOUNDARY
- POHW — PROPOSED ORDINARY HIGH WATER
- XX / ?X — IMPACT AREA TYPE ID. (SEE BELOW) / IMPACT AREA ID. AND/OR NUMBER

O = OPEN WATER IMPACT C = CREATION AREA

T = TEMPORARY IMPACT W = WETLAND IMPACT

WETLANDS DELINEATED BY ENVIRONMENTAL RESOURCES, INC. ON 1-4-2013 IN ACCORDANCE WITH THE US ARMY CORPS OF ENGINEERS "CORPS OF ENGINEERS WETLAND DELINEATION MANUAL (1987)".

ORIGINAL SHEET PREPARED BY SCOTT WALLS ON 6-13-2013.
SHEET LAST UPDATED ON 11-18-2013.

OPEN WATER CREATION AREA SCHEDULE

ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
OC-1	PROP. PIPE	524.51	0.0120	48.57	COE/DNREC
TOTAL OPEN WATER CREATION AREAS		524.51	0.0120	48.57	COE/DNREC

TEMPORARY OPEN WATER IMPACT AREA SCHEDULE

ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
OT-1	STILLING WELL	54.00	0.0012	4.00	COE/DNREC
OT-2	UPSTREAM SANDBAGS	120.57	0.0028	8.93	COE/DNREC
OT-3	EX. PIPE TO PROP. PIPE	526.45	0.0121	48.75	COE/DNREC
OT-4	SUMP PIT-TYPE 2	28.27	0.0006	2.83	COE/DNREC
OT-5	DOWNSTREAM SANDBAGS	206.54	0.0047	19.12	COE/DNREC
OT-6	STABILIZED OUTFALL	25.00	0.0006	1.85	COE/DNREC
TOTAL TEMPORARY OPEN WATER IMPACTS		960.83	0.0220	85.48	COE/DNREC

PERMANENT OPEN WATER IMPACT AREA SCHEDULE

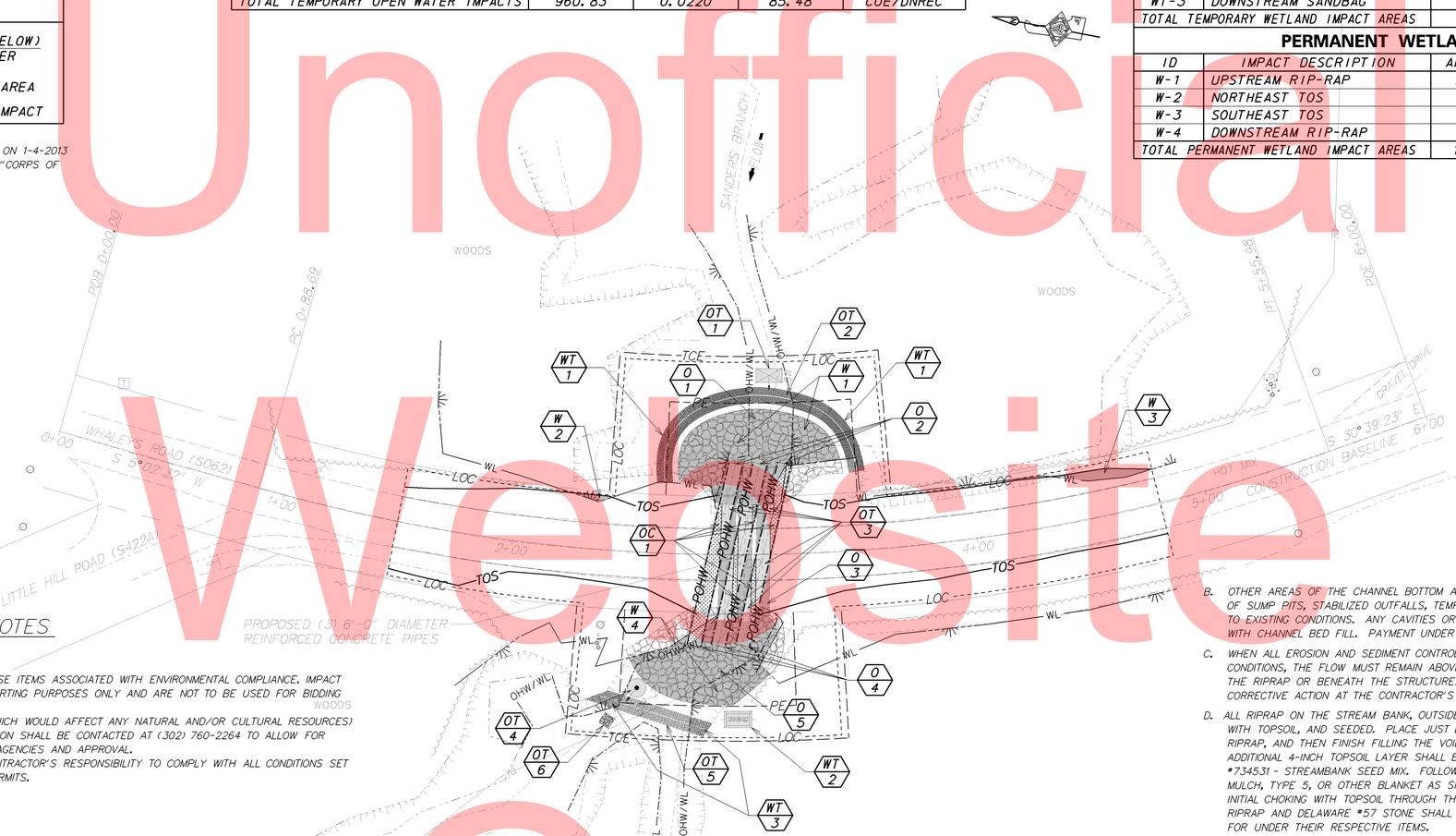
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
O-1	UPSTREAM RIP-RAP	562.24	0.0129	41.65	COE/DNREC
O-2	UPSTREAM PROP. PIPE	306.04	0.0070	28.34	COE/DNREC
O-3	EX. PIPE TO PROP. FILL	351.90	0.0081	32.58	COE/DNREC
O-4	DOWNSTREAM PROP. PIPE	173.79	0.0040	16.09	COE/DNREC
O-5	DOWNSTREAM RIP-RAP	900.27	0.0207	66.69	COE/DNREC
TOTAL PERMANENT OPEN WATER IMPACTS		2294.24	0.0527	185.35	COE/DNREC

TEMPORARY WETLAND IMPACT AREA SCHEDULE

ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
WT-1	UPSTREAM SANDBAG	656.32	0.0151	N/A	COE
WT-2	DEWATERING BAG	30.00	0.0007	N/A	COE
WT-3	DOWNSTREAM SANDBAG	117.84	0.0027	N/A	COE
TOTAL TEMPORARY WETLAND IMPACT AREAS		804.16	0.0185	N/A	COE

PERMANENT WETLAND IMPACT AREA SCHEDULE

ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
W-1	UPSTREAM RIP-RAP	1022.65	0.0235	N/A	COE
W-2	NORTHEAST TOS	24.88	0.0006	N/A	COE
W-3	SOUTHEAST TOS	121.55	0.0028	N/A	COE
W-4	DOWNSTREAM RIP-RAP	466.39	0.0107	N/A	COE
TOTAL PERMANENT WETLAND IMPACT AREAS		1635.47	0.0376	N/A	COE



ENVIRONMENTAL COMPLIANCE NOTES

1. GENERAL NOTES:

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

   B. IF A DEPARTURE FROM THE APPROVED PLANS (WHICH WOULD AFFECT ANY NATURAL AND/OR CULTURAL RESOURCES) IS NECESSARY, THE ENVIRONMENTAL STUDIES SECTION SHALL BE CONTACTED AT (302) 760-2264 TO ALLOW FOR COORDINATION WITH THE APPROPRIATE RESOURCE AGENCIES AND APPROVAL.

   C. USE OF THIS SHEET DOES NOT ALLEVIATE THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL CONDITIONS SET FORTH IN THE ENVIRONMENTAL STATEMENT AND PERMITS.

2. NATURAL RESOURCE ISSUES:

   A. PERMIT REQUIREMENTS/APPROVALS*:
      U.S. ARMY CORPS OF ENGINEERS (COE): NATIONWIDE PERMIT 3 (a) AND (c), (NO PCN)
      DNREC - WETLANDS & SUBAQUEOUS LANDS (WLSL): PROJECT CONSISTENT WITH DEL. CODE CH. 72, SECTION 7217 (b), AS AMENDED BY SB 186
      DNREC - WATER QUALITY (WQC) & COASTAL ZONE CONSISTENCY (CZM): ISSUED (PROJECT IS NOT LOCATED IN CRW)
      * THE PERMITS/APPROVALS LISTED ARE THOSE REQUIRED FOR THIS PROJECT. THE ENVIRONMENTAL STUDIES SECTION IS RESPONSIBLE FOR COORDINATING AND/OR OBTAINING THIS APPROVAL.
      ** THE CONTRACTOR MUST ENSURE THAT THESE PERMITS/APPROVALS ARE IN THEIR POSSESSION PRIOR TO BEGINNING CONSTRUCTION IN THE PERMITTED AREA(S) AND ENSURE IT IS DISPLAYED ON-SITE DURING THE ENTIRE CONSTRUCTION PERIOD.

   B. CONSTRUCTION RESTRICTIONS:
      FISHERIES - NONE
      ENDANGERED SPECIES - NONE
      MIGRATORY BIRDS - NONE

3. CULTURAL RESOURCE ISSUES:

   A. PROJECT IS CONSISTENT WITH FHWA, THE ADVISORY COUNCIL ON HISTORIC PRESERVATION, DELDOT, AND THE DE STATE HISTORIC PRESERVATION OFFICER PROGRAMMATIC AGREEMENT REGARDING THE IMPLEMENTATION OF THE FEDERAL AID HIGHWAY PROGRAM IN DE. MORE SPECIFICALLY, THE PROJECT FALLS UNDER STIPULATION II. B.4.a.III OF THAT AGREEMENT. AS SUCH, NO SPECIAL PROVISIONS ARE NECESSARY OTHER THAN KEEPING WITHIN THE CONFINED LOC AND/OR OTHER GEOGRAPHIC LIMITS AS DEFINED IN THE DESIGN PLANS OR SPECIAL PROVISIONS. CHANGES IN LOC LIMITS AND SCOPE WILL BE COORDINATED BACK WITH THE ENVIRONMENTAL STUDIES OFFICE TO DETERMINE THE CONSISTENCY THAT THE PROJECT IS STILL FOLLOWING THAT PROGRAMMATIC AGREEMENT.

4. STREAM RESTORATION AND RIPRAP TREATMENTS

   A. 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 SUFFICIENT SOURCES FOR CHANNEL BED FILL DO NOT EXIST ON-SITE, ANY NEW MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF ITEM *712531 - CHANNEL BED FILL. ALL RIPRAP IN THE CHANNEL BOTTOM (I.E. BELOW THE WATER LINE) SHALL BE RECESSED ONE FOOT BELOW STREAM BED ELEVATION 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 A MINIMUM OF 12" CHANNEL BED FILL. FINAL CHANNEL ELEVATIONS SHALL MATCH EXISTING ELEVATIONS AT THE UPSTREAM AND DOWNSTREAM PROJECT LIMITS. THROUGH THE STRUCTURE, ELEVATIONS SHALL BE AS NOTED ON THE PLANS. PAYMENT UNDER ITEM *712531 - CHANNEL BED FILL.

   B. 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 EXISTING CONDITIONS. ANY CAVITIES OR SCOUR HOLES RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE FILLED WITH CHANNEL BED FILL. PAYMENT UNDER ITEM *712531 - CHANNEL BED FILL.

   C. 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.

   D. ALL RIPRAP ON THE STREAM BANK, OUTSIDE THE CHANNEL BED, SHALL BE CHOKED WITH DELAWARE *57 STONE, FILLED WITH TOPSOIL, AND SEEDED. PLACE JUST ENOUGH CHOKE MATERIAL TO PREVENT THE LOSS OF TOPSOIL THROUGH THE RIPRAP, AND THEN FINISH FILLING THE VOIDS WITH TOPSOIL SO THAT THE RIPRAP PEAKS ARE BARELY VISIBLE. AN ADDITIONAL 4-INCH TOPSOIL LAYER SHALL BE PLACED ON TOP OF THE RIPRAP. SLOPE SEEDING SHALL BE WITH ITEM *734531 - STREAMBANK SEED MIX. FOLLOWING THE SEEDING OPERATION, ITEM *735535 - SOIL RETENTION BLANKET MULCH, TYPE 5, OR OTHER BLANKET AS SHOWN ON THE PLANS SHALL BE INSTALLED. ALL WORK, STARTING WITH THE INITIAL CHOKING WITH TOPSOIL THROUGH THE SEEDING SHALL BE COMPLETED PRIOR TO ANY RAIN EVENT. PAYMENT FOR RIPRAP AND DELAWARE *57 STONE SHALL BE PAID FOR UNDER THE RIPRAP ITEM. ALL OTHER ITEMS SHALL BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.

5. CLEARING IN WETLAND AREAS SHALL BE KEPT TO A MINIMUM ABSOLUTELY NECESSARY FOR CONSTRUCTION ACCESS. IN WETLAND AREAS THAT ARE CLEARED, THERE SHALL BE NO GRUBBING EXCEPT WHERE NECESSARY TO CONSTRUCT PROJECT COMPONENTS SUCH AS FOUNDATIONS AND RIPRAP PROTECTION. VEGETATION SHALL BE CUT FLUSH WITH THE GROUND (I.E. NO DISTURBANCE OF THE ROOT MAT. TEMPORARILY DISTURBED WETLAND AREAS SHALL BE RESTORED TO GRADE AND SEEDED WITH TEMPORARY GRASS SEEDING - DRY GROUND, PAYMENT UNDER ITEM 734017).

6. PLANTING GUIDANCE (INFORMATIONAL ONLY, WORK TO BE DONE BY OTHERS. THERE SHALL BE NO PAYMENT FOR PLANTING ON THIS CONTRACT.): UPON FINAL ACCEPTANCE OF THE CONTRACT, APPROPRIATE TREES AND/OR SHRUBS SHALL BE PLANTED, IN A NATURALIZED PATTERN (MINIMUM 8', MAXIMUM 12' CENTERS) IN TEMPORARILY DISTURBED WOODED WETLAND AREAS WITHIN THE LOC. FINAL PLANT COUNTS WILL BE BASED ON FIELD CONDITIONS AND DETERMINED BY THE ROADSIDE ENVIRONMENTAL ADMINISTRATOR ON HIS DESIGNEE. SPECIFIC PLANT SELECTION IS ALSO AT HIS DISCRETION BUT SHALL BE A NATIVE SPECIES APPROVED BY THE DELAWARE DEPARTMENT OF NATURAL RESOURCES.

7. SILT FENCE INSTALLATION ADJACENT TO WOODED WETLANDS: PROVIDED PROPER EROSION & SEDIMENT CONTROL CAN BE MAINTAINED, IT IS RECOMMENDED THAT SANDBAGS BE USED TO SECURE SILT FENCE IN LIEU OF TRENCHING. PAYMENT UNDER ITEM *351000. THE ENVIRONMENTAL STUDIES SECTION (CAROL SULLIVAN, (302) 760-2129) CAN PROVIDE FURTHER GUIDANCE REGARDING THIS METHOD OF INSTALLATION.

8. BRIDGE 3-341 EXISTS WITHIN THE JAMES BRANCH NATURAL AREA. THE CONTRACTORS ACCESS TO THE WORK IN THIS AREA WILL NEED TO BE COORDINATED WITH THE ENVIRONMENTAL STUDIES SECTION PRIOR TO CONSTRUCTION (CONTACT CAROL SULLIVAN, (302) 760-2129 OR CAROL.SULLIVAN@STATE.DE.US).

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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	BR 3-341 ON S062 WHALEYS ROAD OVER SANDERS BRANCH	CONTRACT T201407302	BRIDGE NO. 3-341	ENVIRONMENTAL COMPLIANCE PLAN	SHEET NO. 11
				COUNTY SUSSEX	DESIGNED BY: SMW		TOTAL SHTS. 15
					CHECKED BY: EM		

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CHANGEABLE MESSAGE BOARDS

CMS-1

PRIOR TO DETOUR
(10 DAYS PRIOR TO BEGINNING OF DETOUR)

WHALEYS ROAD TO CLOSE	STARTING XX/XX/XX

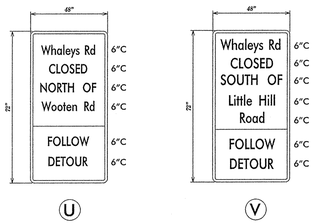
CMS-2

DURING DETOUR
(DISPLAY FOR 5 DAYS AFTER IMPLEMENTATION OF DETOUR)

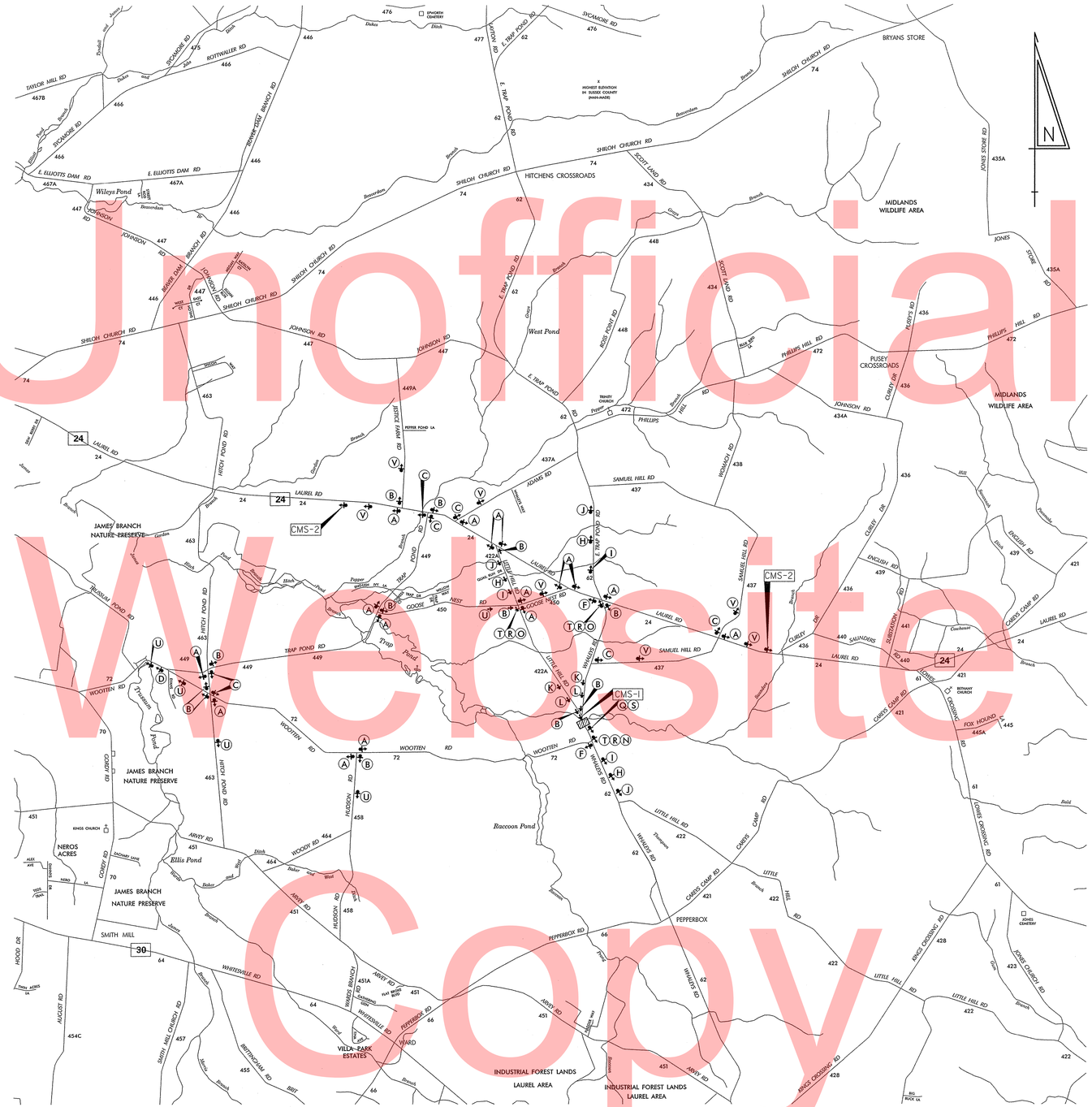
WHALEYS ROAD CLOSED	FOLLOW DETOUR

NOTE- UPON IMPLEMENTATION OF DETOUR, CMS-1 TO TO BE RELOCATED TO CMS-2 LOCATIONS.

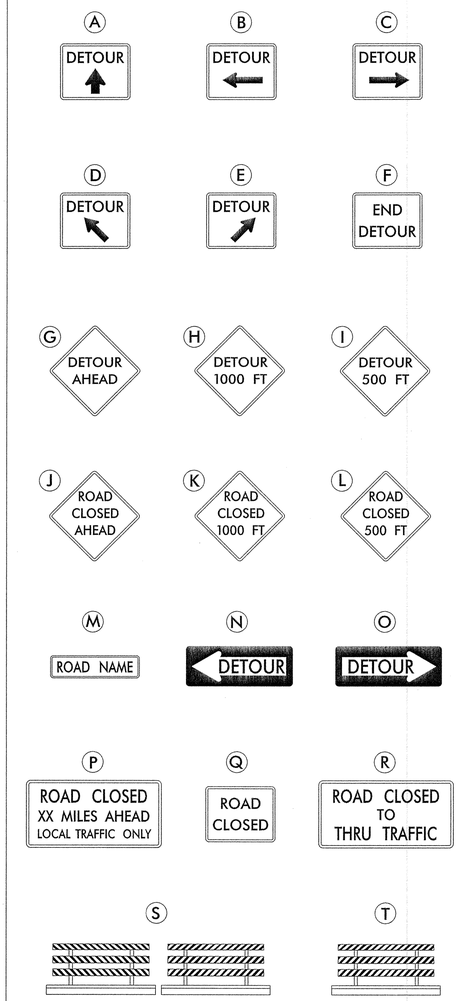
SPECIAL SIGNS



D/G RETROREFLECTIVE FLUORESCENT ORANGE BACKGROUND; BLACK LEGEND



LEGEND



GENERAL NOTES

1. ALL DETOUR SIGNING INCLUDING, TRAILBLAZERS, ARE TO BE SUPPLIED AND MAINTAINED BY THE GENERAL CONTRACTOR IN COMPLIANCE TO THE DE 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.

RECOMMENDED Michael F. Rivera DATE: 6-25-12	RECOMMENDED Todd Pryer DATE: 6-26-12	RECOMMENDED ____ DATE: ____	APPROVED CHIEF SAFETY OFFICER [signature] DATE: 7-6-12	APPROVED TRAFFIC ENGINEER [signature] DATE: 7/9/12

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUM / REVISIONS

NOT TO SCALE

BR 3-341 ON S062 WHALEYS ROAD OVER SANDERS BRANCH

CONTRACT	ROAD NO.	S062
T201407302	DESIGNED BY: MFR	
COUNTY	CHECKED BY: ASW	
SUSSEX		

DETOUR PLAN

SHEET NO. 12
TOTAL SHTS. 15

C:\DOCUMENTS AND SETTINGS\MICHAEL.RIVERA\MY DOCUMENTS\MICRO STATION DGN\WHALEYS RD BR 3-341.DGN

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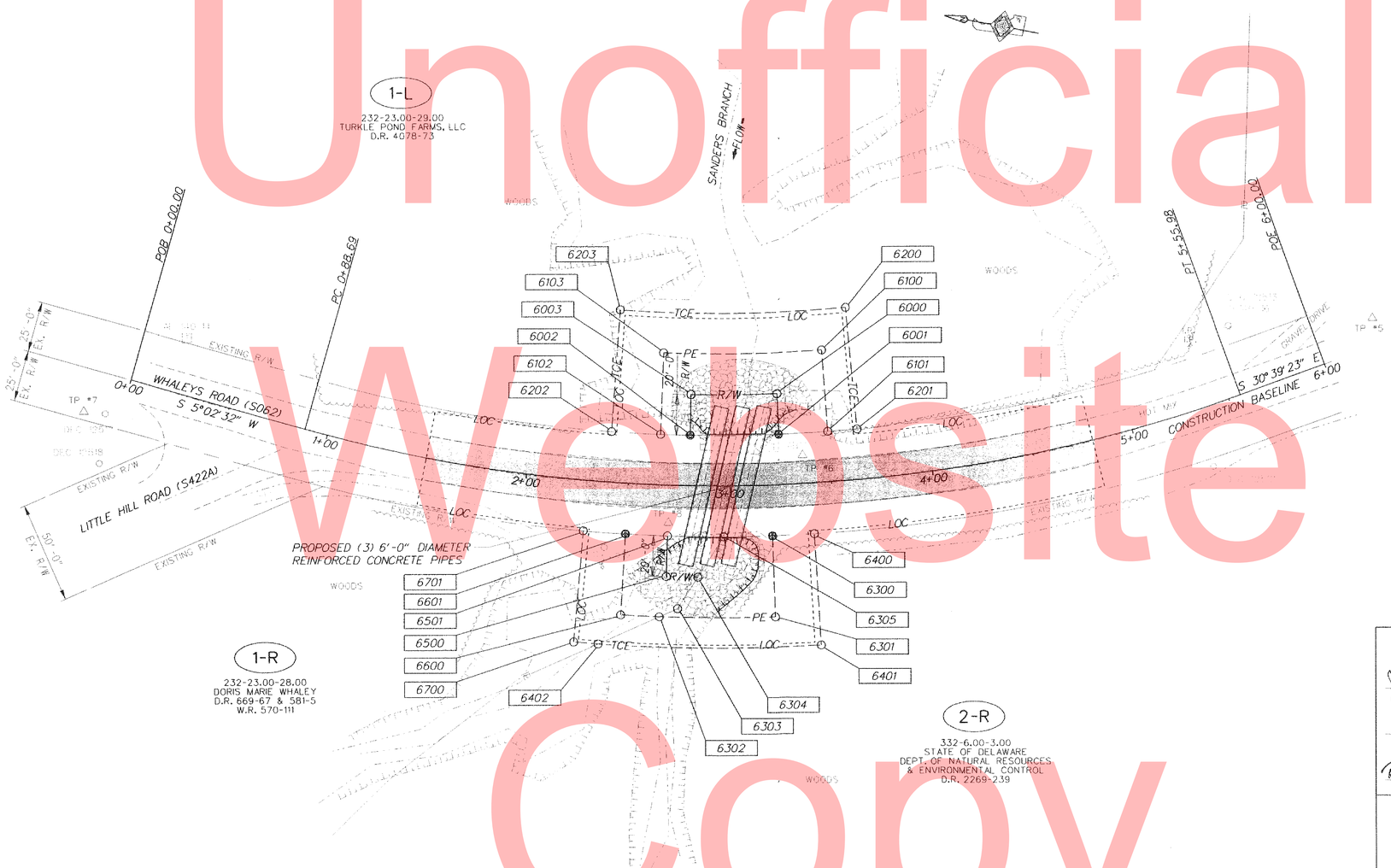

RECOMMENDED

Judie Crawford 11-7-13 / Shelby Claudle 11/7/13
TEAM SUPPORT SQUAD MANAGER — DATE

11.7.13
TEAM SUPPORT ENGINEER — DATE

Robert B. McCleary 11/7/13
ASSISTANT DIRECTOR, ENGINEERING SUPPORT — DATE

"AS-ACQUIRED" PLANS

I CERTIFY THAT ALL PROPOSED RIGHT-OF-WAY HAS BEEN ACQUIRED IN THE NAME OF THE STATE OF DELAWARE AND THAT THESE PLANS ACCURATELY DEPICT THE NATURE AND EXTENT OF THE REAL ESTATE SECTION ACQUISITION UNDER THIS PROJECT.

CHIEF, REAL ESTATE — DATE

RIGHT-OF-WAY SHEET 1 OF 3

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	BR 3-341 ON S062 WHALEYS ROAD OVER SANDERS BRANCH	CONTRACT T201407302 / COUNTY SUSSEX	BRIDGE NO. 3-341 / DESIGNED BY: SMW / CHECKED BY: EM	RIGHT-OF-WAY PLAN	SHEET NO. 13 / TOTAL SHTS. 15

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ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
232-23.00-29.00	(1-L) TURKLE POND FARMS, LLC	FEE	4078-73	145.89

ALIGNMENT NUMBER & DESCRIPTION: 10000 - S062 - WHALEYS ROAD

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
6000	10000	3+25.00	-45.00	189097.2278	645867.9334	S 76°59′20.37″ W	20.00				
6001	10000	3+25.00	-25.00	189092.7251	645848.4469			N 11°17′31.68″ W	43.49	43.50	725.00
6002	10000	2+80.00	-25.00	189135.3766	645839.9304	N 80°25′36.26″ E	20.00				
6003	10000	2+80.00	-45.00	189138.7027	645859.6518			S 11°17′31.68″ E	42.29	42.30	-705.00
6000	10000	3+25.00	-45.00	189097.2278	645867.9334						

FIGURE 6000 AREA = 858.0000 SQ. FT. (0.0197 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
232-23.00-29.00	(1-L) TURKLE POND FARMS, LLC	P/E	4078-73	145.89

ALIGNMENT NUMBER & DESCRIPTION: 10000 - S062 - WHALEYS ROAD

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
6100	10000	3+50.00	-65.00	189079.5733	645892.9304	S 75°04′44.88″ W	40.00				
6101	10000	3+50.00	-25.00	189069.2739	645854.2791			N 13°57′57.37″ W	24.17	24.17	725.00
6001	10000	3+25.00	-25.00	189092.7251	645848.4469	N 76°59′20.37″ E	20.00				
6000	10000	3+25.00	-45.00	189097.2278	645867.9334			N 11°17′31.68″ W	42.29	42.30	705.00
6003	10000	2+80.00	-45.00	189138.7027	645859.6518	S 80°25′36.26″ W	20.00				
6002	10000	2+80.00	-25.00	189135.3766	645839.9304			N 9°00′01.09″ W	14.50	14.50	725.00
6102	10000	2+65.00	-25.00	189149.6978	645837.6620	N 81°34′21.56″ E	40.00				
6103	10000	2+65.00	-65.00	189155.5600	645877.2301			S 11°40′26.78″ E	77.59	77.63	-685.00
6100	10000	3+50.00	-65.00	189079.5733	645892.9304						

FIGURE 6100 AREA = 2338.0000 SQ. FT. (0.0537 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
232-23.00-29.00	(1-L) TURKLE POND FARMS, LLC	TCE	4078-73	145.89

ALIGNMENT NUMBER & DESCRIPTION: 10000 - S062 - WHALEYS ROAD

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
6200	10000	3+65.00	-85.00	189071.9065	645915.8089	S 73°55′59.58″ W	60.00				
6201	10000	3+65.00	-25.00	189055.3010	645858.1525			N 15°29′37.77″ W	14.50	14.50	725.00
6101	10000	3+50.00	-25.00	189069.2739	645854.2791	N 75°04′44.88″ E	40.00				
6100	10000	3+50.00	-65.00	189079.5733	645892.9304			N 11°40′26.78″ W	77.59	77.63	685.00
6103	10000	2+65.00	-65.00	189155.5600	645877.2301	S 81°34′21.56″ W	40.00				
6102	10000	2+65.00	-25.00	189149.6978	645837.6620			N 7°28′20.70″ W	24.17	24.17	725.00
6202	10000	2+40.00	-25.00	189173.6581	645834.5193	N 83°28′57.05″ E	60.00				
6203	10000	2+40.00	-85.00	189180.4685	645894.1316			S 11°17′31.68″ E	110.71	110.83	-665.00
6200	10000	3+65.00	-85.00	189071.9065	645915.8089						

FIGURE 6200 AREA = 3754.0000 SQ. FT. (0.0862 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
232-23.00-28.00	(1-R) DORIS MARIE WHALEY	FEE	669-67 & 581-5	3.48

ALIGNMENT NUMBER & DESCRIPTION: 10000 - S062 - WHALEYS ROAD

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
6500	10000	2+70.00	45.00	189134.1988	645769.2121	N 81°11′26.46″ E	20.00				
6501	10000	2+70.00	25.00	189137.2617	645788.9761			S 9°50′02.93″ E	27.72	27.72	-775.00
6305	10000	2+96.83	25.00	189109.9462	645793.7111	N 67°55′20.44″ W	23.71				
6304	10000	2+84.67	45.00	189118.8563	645771.7437			N 9°22′10.81″ W	15.55	15.55	795.00
6500	10000	2+70.00	45.00	189134.1988	645769.2121						

FIGURE 6500 AREA = 432.5265 SQ. FT. (0.0099 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
232-23.00-28.00	(1-R) DORIS MARIE WHALEY	P/E	669-67 & 581-5	3.48

ALIGNMENT NUMBER & DESCRIPTION: 10000 - S062 - WHALEYS ROAD

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
6600	10000	2+50.00	65.00	189152.6547	645746.4064	N 82°43′06.85″ E	40.00				
6601	10000	2+50.00	25.00	189157.7244	645786.0838			S 8°02′43.34″ E	20.67	20.67	-775.00
6501	10000	2+70.00	25.00	189137.2617	645788.9761	S 81°11′26.46″ W	20.00				
6500	10000	2+70.00	45.00	189134.1988	645769.2121			S 9°22′10.81″ E	15.55	15.55	-795.00
6304	10000	2+84.67	45.00	189118.8563	645771.7437	N 67°56′22.32″ W	18.47				
6303	10000	2+75.62	60.72	189125.7915	645754.6304	N 34°43′24.40″ W	9.83				
6302	10000	2+67.45	65.00	189133.8749	645749.0283			N 7°56′52.69″ W	18.96	18.96	815.00
6600	10000	2+50.00	65.00	189152.6547	645746.4064						

FIGURE 6600 AREA = 1024.8790 SQ. FT. (0.0235 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
232-23.00-28.00	(1-R) DORIS MARIE WHALEY	TCE	669-67 & 581-5	3.48

ALIGNMENT NUMBER & DESCRIPTION: 10000 - S062 - WHALEYS ROAD

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
6700	10000	2+30.00	80.00	189172.7431	645729.0151	N 84°14′47.25″ E	55.00				
6701	10000	2+30.00	25.00	189178.2569	645783.7380			S 6°31′02.95″ E	20.67	20.67	-775.00
6601	10000	2+50.00	25.00	189157.7244	645786.0838	S 82°43′06.85″ W	40.00				
6600	10000	2+50.00	65.00	189152.6547	645746.4064			S 7°56′52.69″ E	18.96	18.96	-815.00
6302	10000	2+67.45	65.00	189133.8749	645749.0283	N 34°43′34.79″ W	32.89				
6402	10000	2+40.76	80.00	189160.9044	645730.2938			N 6°09′52.36″ W	11.91	11.91	830.00
6700	10000	2+30.00	80.00	189172.7431	645729.0151						

FIGURE 6700 AREA = 1239.9852 SQ. FT. (0.0285 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
332-6.00-3.00	(2-R) STATE OF DELAWARE	P/E	2269-239	4.300

ALIGNMENT NUMBER & DESCRIPTION: 10000 - S062 - WHALEYS ROAD

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
6300	10000	3+20.00	25.00	189086.5060	645798.5841	S 77°22′15.47″ W	40.00				
6301	10000	3+20.00	65.00	189077.7605	645759.5519			N 10°37′18.38″ W	57.09	57.10	815.00
6302	10000	2+67.45	65.00	189133.8749	645749.0283	S 34°43′24.40″ E	9.83				
6303	10000	2+75.62	60.72	189125.7915	645754.6304	S 67°56′22.32″ E	18.47				
6304	10000	2+84.67	45.00	189118.8563	645771.7437	S 67°55′20.44″ E	23.71				
6305	10000	2+96.83	25.00	189109.9462	645793.7111			S 11°44′38.42″ E	23.94	23.94	-775.00
6300	10000	3+20.00	25.00	189086.5060	645798.5841						

FIGURE 6300 AREA = 1510.5944 SQ. FT. (0.0347 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
332-6.00-3.00	(2-R) STATE OF DELAWARE	TCE	2269-239	4.300

ALIGNMENT NUMBER & DESCRIPTION: 10000 - S062 - WHALEYS ROAD

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
6400	10000	3+40.00	25.00	189066.4020	645803.3710	S 75°50′35.08″ W	55.00				
6401	10000	3+40.00	80.00	189052.9502	645750.0414			N 10°21′58.44″ W	109.75	109.83	830.00
6402	10000	2+40.76	80.00	189160.9044	645730.2938	S 34°43′34.79″ E	32.89				
6302	10000	2+67.45	65.00	189133.8749	645749.0283			S 10°37′18.38″ E	57.09	57.10	-815.00
6301	10000	3+20.00	65.00	189077.7605	645759.5519	N 77°22′15.47″ E	40.00				
6300	10000	3+20.00	25.00	189086.5060	645798.5841			S 13°23′34.73″ E	20.67	20.67	-775.00
6400	10000	3+40.00	25.00	189066.4020	645803.3710						

FIGURE 6400 AREA = 2265.5148 SQ. FT. (0.0520 ACRES)

LEGEND

FEE	AREA OF ACQUISITION
R/W	AREA OCCUPIED BY EXISTING R/W
P/E	PERMANENT EASEMENT
TCE	TEMPORARY CONSTRUCTION EASEMENT
*	"-L-" OFFSET IS LEFT OF BASELINE
**	"-L-" CURVE TURNS TO THE LEFT

RIGHT-OF-WAY SHEET 2 OF 3

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

BR 3-341 ON S062 WHALEYS ROAD OVER SANDERS BRANCH

CONTRACT	BRIDGE NO.	3-341
T201407302	DESIGNED BY: SMW	
COUNTY		
SUSSEX	CHECKED BY: EM	

RIGHT-OF-WAY DATA SHEET

SHEET NO.
14
TOTAL SHTS.
15

COUNTY ASSESSMENT PARCEL NUMBER	PLAN SHEET NUMBER	OWNERSHIP OF RECORD	TITLE SOURCE	PROPERTY AREA BEFORE ACQUISITION (ACRE) D=DEED C=CALCULATED A=ASSESMENT	ACQUISITION CODE FEE, R/W, P/E, TCE	AREA TO BE ACQUIRED				PROPERTY AREA REMAINING (SQ. FEET /ACRES)	DEED RECORD OF ACQUISTITION	REMARKS
						ACQUISITION (SQ. FEET /ACRES)	AREA OCCUPIED BY EXISTING RIGHT OF WAY (SQ. FEET /ACRES)	EASEMENT PERMANENT (SQ. FEET /ACRES)	EASEMENT TEMPORARY (SQ. FEET /ACRES)			
232-23.00-29.00	13	(1-L) TURKLE POND FARMS, LLC	4078-73	A - 145.89	FEE		858.00 / 0.02					
					P/E			2338.00 / 0.05				
					TCE				3754.00 / 0.09	6354535.8735 / 145.88		
232-23.00-28.00	13	(1-R) DORIS MARIE WHALEY	669-67 & 581-5	A - 3.48	FEE		432.5265 / 0.01					
					P/E			1024.879 / 0.02				
					TCE				1239.9852 / 0.03	150730.80 / 3.46		
332-6.00-3.00	13	(2-R) STATE OF DELAWARE	2269-239	A - 4.30	P/E			1510.5944 / 0.03				
					TCE				2265.5148 / 0.05	187308.00 / 4.30		

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ACQUISITION CODES

FEE - ACQUISITION
R/W - AREA OCCUPIED BY EXISTING R/W
P/E - PERMANENT EASEMENT
TCE - TEMPORARY EASEMENT

RIGHT-OF-WAY SHEET 3 OF 3

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

BR 3-341 ON S062
WHALEYS ROAD OVER
SANDERS BRANCH

CONTRACT: T201407302
COUNTY: SUSSEX
BRIDGE NO. 3-341
DESIGNED BY: SMW
CHECKED BY: EM

RIGHT-OF-WAY TABULATION SHEET

SHEET NO. 15
TOTAL SHTS. 15

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