ENVIRONMENTAL COMPLIANCE NOTES

- GENERAL NOTES:
- 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
- IF A DEPARTURE FROM THE APPROVED PLANS (WHICH WOULD AFFECT ANY NATURAL AND/OR CULTURAL RESOURCES) IS NECESSARY, CONTACT THE ENVIRONMENTAL STUDIES SECTION AT (302-760-2264 OR DOT ENVIRONMENTALSTUDIES@DELAWARE.GOV) TO ALLOW FOR COORDINATION WITH THE APPROPRIATE RESOURCE AGENCIES AND APPROVAL.
- USE OF THIS SHEET DOES NOT ALLEVIATE THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL CONDITIONS SET FORTH IN THE ENVIRONMENTAL STATEMENT AND PERMITS.
- NATURAL RESOURCE ISSUES:
- PERMIT REQUIREMENTS/APPROVALS *: U.S. ARMY CORPS OF ENGINEERS (COE): NATIONWIDE PERMIT NWP 23 WITH PRECONSTRUCTION NOTIFICATION (PCN) DNREC - WETLANDS & SUBAQUEOUS LANDS (WLSL): WETLANDS & SUBAQEOUS LANDS PERMIT DNREC - WATER QUALITY (WQC) & COASTAL ZONE CONSISTENCY (CZM): ISSUED NWP 23
- THE PERMITS/APPROVALS LISTED ARE THOSE REQUIRED FOR THIS PROJECT. THE ENVIRONMENTAL STUDIES SECTION IS RESPONSIBLE FOR COORDINATING AND/OR OBTAINING THESE APPROVALS.
- THE CONTRACTOR MUST ENSURE THAT THESE PERMITS/APPROVALS ARE IN THEIR POSSESSION PRIOR TO BEGINNING CONSTRUCTION IN THE PERMITTED AREA(S) AND ENSURE THEY ARE DISPLAYED ON-SITE DURING THE ENTIRE CONSTRUCTION PERIOD.
- CONSTRUCTION RESTRICTIONS: FISHERIES - NO IN-WATER WORK FROM MARCH 1 TO JUNE 30 ENDANGERED SPECIES - NONE MIGRATORY BIRDS - NONE
- CULTURAL RESOURCE ISSUES:
 - A. NONE
- STREAM RESTORATION AND RIPRAP TREATMENT:
 - FOLLOW THE SPECIAL PROVISION FOR ITEM 707500 CHANNEL BED FILL IN REGARDS TO THE SALVAGING OF ON-SITE NATURAL STREAM BOTTOM MATERIAL OR THE FURNISHING OF OFFSITE MATERIAL. IF SUFFICIENT SOURCES FOR CHANNEL BED FILL DO NOT EXIST ON-SITE, ANY NEW MATERIAL MUST CONFORM TO THE REQUIREMENTS OF ITEM 707500 - CHANNEL BED FILL. RECESS ALL RIPRAP IN THE CHANNEL BOTTOM (I.E. BELOW THE WATER LINE) ONE FOOT BELOW STREAM BED ELEVATION AND CHOKE WITH BORROW TYPE 'B' SO THAT ALL OF THE VOIDS IN THE RIPRAP ARE FILLED WITH SPECIFIED MATERIAL. PAYMENT UNDER ITEM 209002 - BORROW, TYPE B. COVER THE RIPRAP WITH A MINIMUM OF 12" CHANNEL BED FILL. MATCH THE FINAL CHANNEL ELEVATIONS WITH EXISTING ELEVATIONS AT THE UPSTREAM AND DOWNSTREAM PROJECT LIMITS. THROUGH THE STRUCTURE, ELEVATIONS WILL BE AS NOTED ON THE PLANS. PAYMENT UNDER ITEM 707500 - CHANNEL BED FILL.
 - RESTORE 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) TO EXISTING CONDITIONS. FILL ANY CAVITIES OR SCOUR HOLES RESULTING FROM CONSTRUCTION ACTIVITIES WITH CHANNEL BED FILL. PAYMENT UNDER ITEM 707500 - CHANNEL BED FILL.
 - 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. CHOKE ALL RIPRAP ON THE STREAM BANK, OUTSIDE THE CHANNEL BED, WITH DELAWARE #57 STONE. 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. PLACE AN ADDITIONAL 6-INCH TOPSOIL LAYER ON TOP OF THE RIPRAP. SLOPE SEEDING WILL BE DONE WITH ITEM 908019 - STREAMBANK SEED MIX. SEEDING. FOLLOWING THE SEEDING OPERATION, INSTALL ITEM 908020 - EROSION CONTROL BLANKET (ECB) MULCH, OR OTHER BLANKET AS SHOWN ON THE PLANS ECB AT TOE OF SLOPE CAN BE EITHER TRENCHED IN OR STAPLED AT 6" ON CENTER. COMPLETE ALL WORK, STARTING WITH THE INITIAL CHOKING WITH TOPSOIL THROUGH THE SEEDING AND MULCHING PRIOR TO ANY RAIN EVENT. DELAWARE #57 STONE IS INCIDENTAL TO THE RIPRAP ITEM. ALL OTHER ITEMS WILL BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.
 - THE TOPSOIL/SEED/MULCH CAN BE PLACED BEFORE OR AFTER THE REMOVAL OF THE STREAM DIVERSION. IF THE PLACEMENT OCCURS AFTER STREAM DIVERSION REMOVAL, USE A TURBIDITY CURTAIN TO MINIMIZE IN-STREAM SEDIMENTATION. PAYMENT WILL BE INCIDENTAL TO ITEM 909005 - STREAM DIVERSION.
- PROTECTION OF RESOURCES:
 - KEEP CLEARING IN WETLAND AREAS TO A MINIMUM ABSOLUTELY NECESSARY FOR CONSTRUCTION ACCESS. SUPPORT ALL EQUIPMENT TRAVERSING WETLANDS AND SUBAQUEOUS LAND ON MATS. PAYMENT FOR MATS WILL BE MADE UNDER ITEM 621500 - TEMPORARY TIMBER MAT. IN WETLAND AREAS THAT ARE CLEARED, NO GRUBBING EXCEPT WHERE NECESSARY TO CONSTRUCT PROJECT COMPONENTS SUCH AS FOUNDATIONS AND RIPRAP PROTECTION IS PERMITTED. CUT VEGETATION FLUSH WITH THE GROUND (I.E. NO DISTURBANCE OF THE ROOT MAT). RESTORE TEMPORARILY DISTURBED WETLAND AREAS TO GRADE AND SEED WITH ITEM 908017 - TEMPORARY GRASS SEEDING (ANNUAL RYEGRASS).
 - USE SILT FENCE OR CONSTRUCTION SAFETY FENCE ALONG THE LIMITS OF CONSTRUCTION IN ALL AREAS WHERE WATER WETLANDS ARE BEING IMPACTED (AS SHOWN ON ENVIRONMENTAL COMPLIANCE SHEETS), AND ALSO IN ANY AREA WHERE WATER/WETLANDS EXIST WITHIN 20 FEET OF THE LIMIT OF CONSTRUCTION (AS SHOWN ON CONSTRUCTION PLAN SHEETS). ANY CONTRACTOR ACCESS BEYOND THE LIMIT OF CONSTRUCTION IS STRICTLY PROHIBITED.
 - USE SANDBAGS OR COMPOST FILTER LOG (CFL) TO SECURE SILT FENCE AT AREAS ADJACENT TO WOODED UPLANDS/ ALL WETLANDS IN LIEU OF TRENCHING UNLESS PROPER EROSION AND SEDIMENT CONTROL CANNOT BE MAINTAINED. REMOVE SANDBAGS AND CFLS (AND CONTENTS) IN THEIR ENTIRETY WHEN NO LONGER NEEDED. SANDBAGS/CFLS USED TO SECURE THE SILT FENCE IS INCIDENTAL TO ITEM 905001 - SILT FENCE. THE ENVIRONMENTAL STUDIES SECTION (302-760-2259 OR DOT ENVIRONMENTALSTUDIES@DELAWARE.GOV) CAN PROVIDE FURTHER GUIDANCE REGARDING THIS METHOD OF INSTALLATION.
 - D. CLEARLY MARK ALL TREES TO BE REMOVED WITH PAINT PRIOR TO THE EROSION AND SEDIMENT CONTROL MEETING.

		PERMANENT W	ETLAND IMPAC	T AREA SCHE	DULE		
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION	LOSS VS. IMPACT	LOSS AREA (AC)
2-W-01	FILL TYPE F / 36" RCP	1139.66	0.0262	N/A	USACE	LOSS	0.0262
2-W-02	FILL TYPE F	2808.44	0.0645	N/A	USACE	IMPACT	0.0000
2-W-03	FILL TYPE F	815.07	0.0187	N/A	USACE	LOSS	0.0187
4 - W - O 1	FILL TYPLE F / RIP RAP	1491.44	0.0342	N/A	USACE	LOSS	0.0342
4-W-02	FILL TYPLE F / RIP RAP	193.47	0.0044	N/A	USACE	LOSS	0.0044
4-W-03	FILL TYPLE F / RIP RAP	67.62	0.0016	N/A	USACE	LOSS	0.0015
4-W-04	FILL TYPLE F / RIP RAP	950.84	0.0218	N/A	USACE	LOSS	0.0218
5-W-01	FILL TYPLE F	1154.15	0.0265	N/A	USACE	LOSS	0.0265
5-W-02	FILL TYPLE F	332.46	0.0076	N/A	USACE	LOSS	0.0076
5-W-03	FILL TYPLE F	912.03	0.0209	N/A	USACE	LOSS	0.0209
5-W-04	FILL TYPLE F / RIP RAP	129.02	0.0030	N/A	USACE	LOSS	0.0030
9-W-01	FILL TYPLE F	797.71	0.0183	N/A	USACE	LOSS	0.0183
9-W-02	FILL TYPLE F	19.08	0.0004	N/A	USACE	LOSS	0.0004
9-W-03	FILL TYPLE F	387.05	0.0089	N/A	DNREC	N/A	0.0000
9-W-04	FILL TYPLE F	1456.21	0.0334	N/A	DNREC	N/A	0.0000
TOTAL PER	RMANENT WETLAND IMPACT AREAS	10810.99	0.2482	N/A	USACE	N/A	0.1837
TOTAL PER	RMANENT WETLAND IMPACT AREAS	1843.26	0.0423	N/A	DNREC	N/A	N/A

TEMPORARY WETLAND IMPACT AREA SCHEDULE						
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION	
2-WT-01	WORK AREA / E&S CONTROLS	289.67	0.0066	N/A	USACE	
2-WT-02	WORK AREA / E&S CONTROLS	148.75	0.0034	N/A	USACE	
2-WT-03	WORK AREA / E&S CONTROLS	769.00	0.0177	N/A	USACE	
4-WT-01	WORK AREA / E&S CONTROLS	2532.08	0.0581	N/A	USACE	
4-WT-02	WORK AREA / E&S CONTROLS	274.57	0.0063	N/A	USACE	
4-WT-03	WORK AREA / E&S CONTROLS	430.58	0.0099	N/A	USACE	
4-WT-04	WORK AREA / E&S CONTROLS	2443.49	0.0561	N/A	USACE	
5-WT-01	WORK AREA / E&S CONTROLS	346.45	0.0079	N/A	USACE	
5-WT-02	WORK AREA / E&S CONTROLS	339.79	0.0078	N/A	USACE	
5-WT-03	WORK AREA / E&S CONTROLS	1442.06	0.0331	N/A	USACE	
TOTAL TEM	PORARY WETLAND IMPACT AREAS	9016.44	0.02070	N/A	USACE	

	PERMANENT OPEN WATER IMPACT AREA SCHEDULE						
I D	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION	LOSS VS. IMPACT	LOSS AREA (AC)
2-0-01	FILL TYPE F / 36" RCP	422.11	0.0097	4.12	USACE	LOSS	0.0097
4-0-01	FILL TYPE F / RIP RAP	346.86	0.0080	3.33	USACE	LOSS	0.0079
9-0-01	FILL TYPE F / RIP RAP	34.22	0.0008	0.92	USACE	LOSS	0.0011
9-0-02	FILL TYPE F / RIP RAP	30.43	0.0007	0.31	DNREC	N/A	0.0000
TOTAL PER	RMANENT OPEN WATER IMPACT AREAS	803.19	0.0184	8.37	USACE	N/A	0.0184
TOTAL PER	RMANENT OPEN WATER IMPACT AREAS	30.43	0.0007	0.31	DNREC	N/A	N/A

	TEMPORARY OPEN WATER IMPACT AREA SCHEDULE						
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION		
2-OT-01	WORK AREA / E&S CONTROLS	289.67	0.0066	N/A	USACE		
4 - OT - 01	29" X 45" RCP PIPE	191.00	0.0043	16.50	USACE		
4-0T-02	WORK AREA / E&S CONTROLS	186.52	0.0043	3.45	USACE		
4 - 0T - 03	WORK AREA / E&S CONTROLS	181.33	0.0042	3.39	USACE		
TOTAL TEM	TOTAL TEMPORARY OPEN WATER IMPACT AREAS 848.52 0.0195 N/A USAC						

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ADDENDA / REVISIONS

HSIP SC, SR24 AT CAMP ARROW HEAD ROAD AND **SR24 AT ANGOLA ROAD**

CONTRACT	BRIDGE NO.	N/A
T201200902	DECICNED BY:	W. MALIMAN
COUNTY	DESIGNED BY:	W. NAUMAN
SUSSEX	CHECKED BY:	C. ESHAM

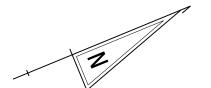
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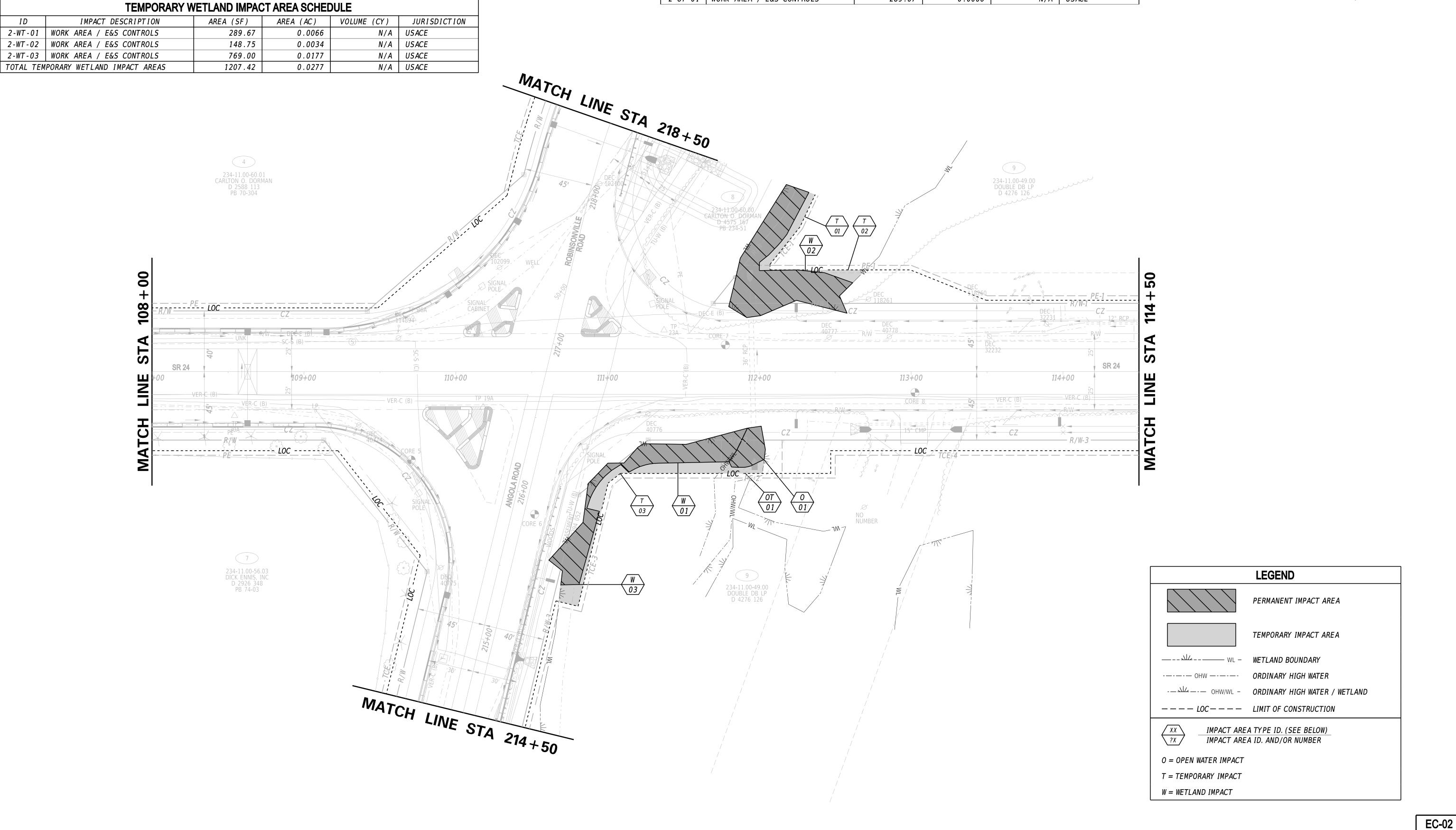
SHEET NO.

PERMANENT WETLAND IMPACT AREA SCHEDULE LOSS VS. IMPACT LOSS AREA (AC) IMPACT DESCRIPTION AREA (SF) JURISDICTION AREA (AC) VOLUME (CY) N/A USACE 2-W-01 | FILL TYPE F / 36" RCP 1139.66 0.0262 LOSS 0.0262 2-W-02 FILL TYPE F N/A USACE **IMPACT** 2808.44 0.0645 0.0000 2-W-03 | FILL TYPE F N/A USACE LOSS 815.07 0.0187 0.0187 4763.17 0.1094 N/A USACE TOTAL PERMANENT WETLAND IMPACT AREAS N/A0.0449

	PE	ERMANENT OPE	EN WATER IMPA	ACT AREA SCH	EDULE		
ΙD	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION	LOSS VS. IMPACT	LOSS AREA (AC)
2-0-01	FILL TYPE F / 36" RCP	422.11	0.0097	4.12	USACE	LOSS	0.0097

ID IMPACT DESCRIPTION AREA (SF) AREA (AC) VOLUME (CY) JURISDICTION
2-OT-01 WORK AREA / E&S CONTROLS 289.67 0.0066 N	A USACE





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ADDENDA / REVISIONS

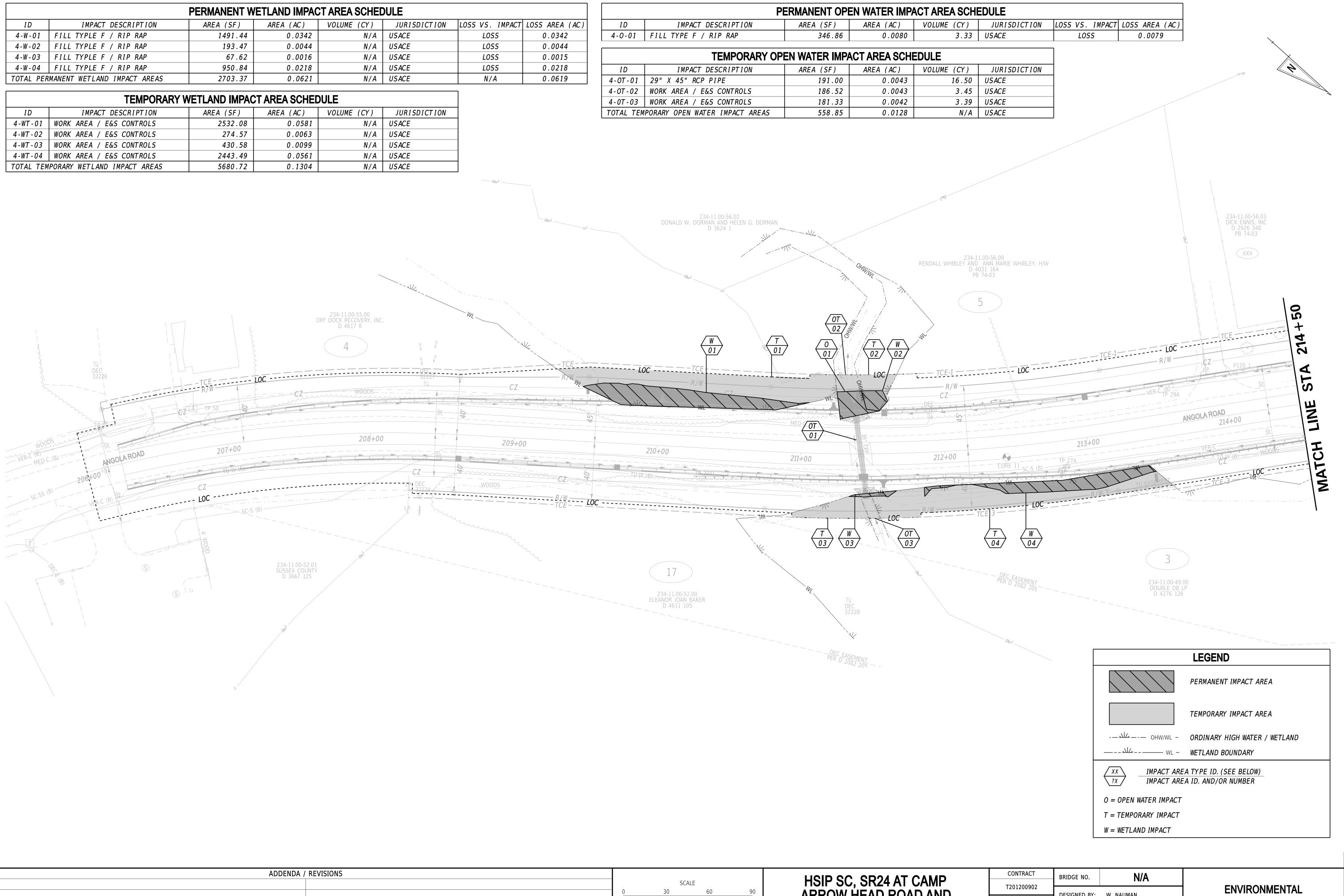
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HSIP SC, SR24 AT CAMP ARROW HEAD ROAD AND SR24 AT ANGOLA ROAD

CONTRACT	BRIDGE NO.	N/A
T201200902		14// \
COUNTY	DESIGNED BY:	W. NAUMAN
	OUEOVED DV	C FOULAN
SUSSEX	CHECKED BY:	C. ESHAM

ENVIRONMENTAL COMPLIANCE PLAN

SECTION
PD
SHEET NO.



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HSIP SC, SR24 AT CAMP ARROW HEAD ROAD AND SR24 AT ANGOLA ROAD

DESIGNED BY: W. NAUMAN COUNTY CHECKED BY: C. ESHAM SUSSEX

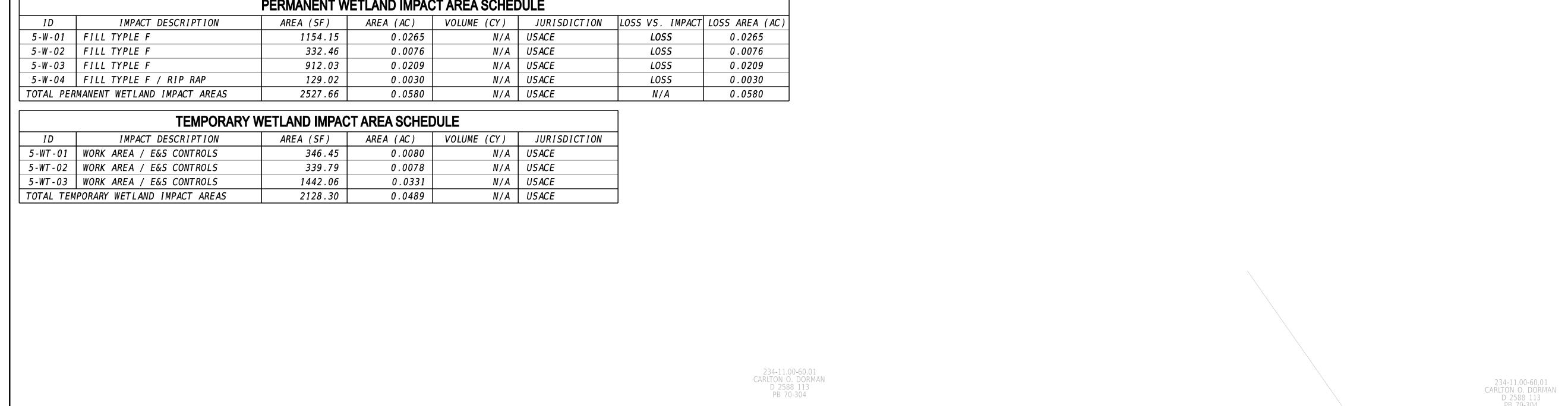
COMPLIANCE PLAN

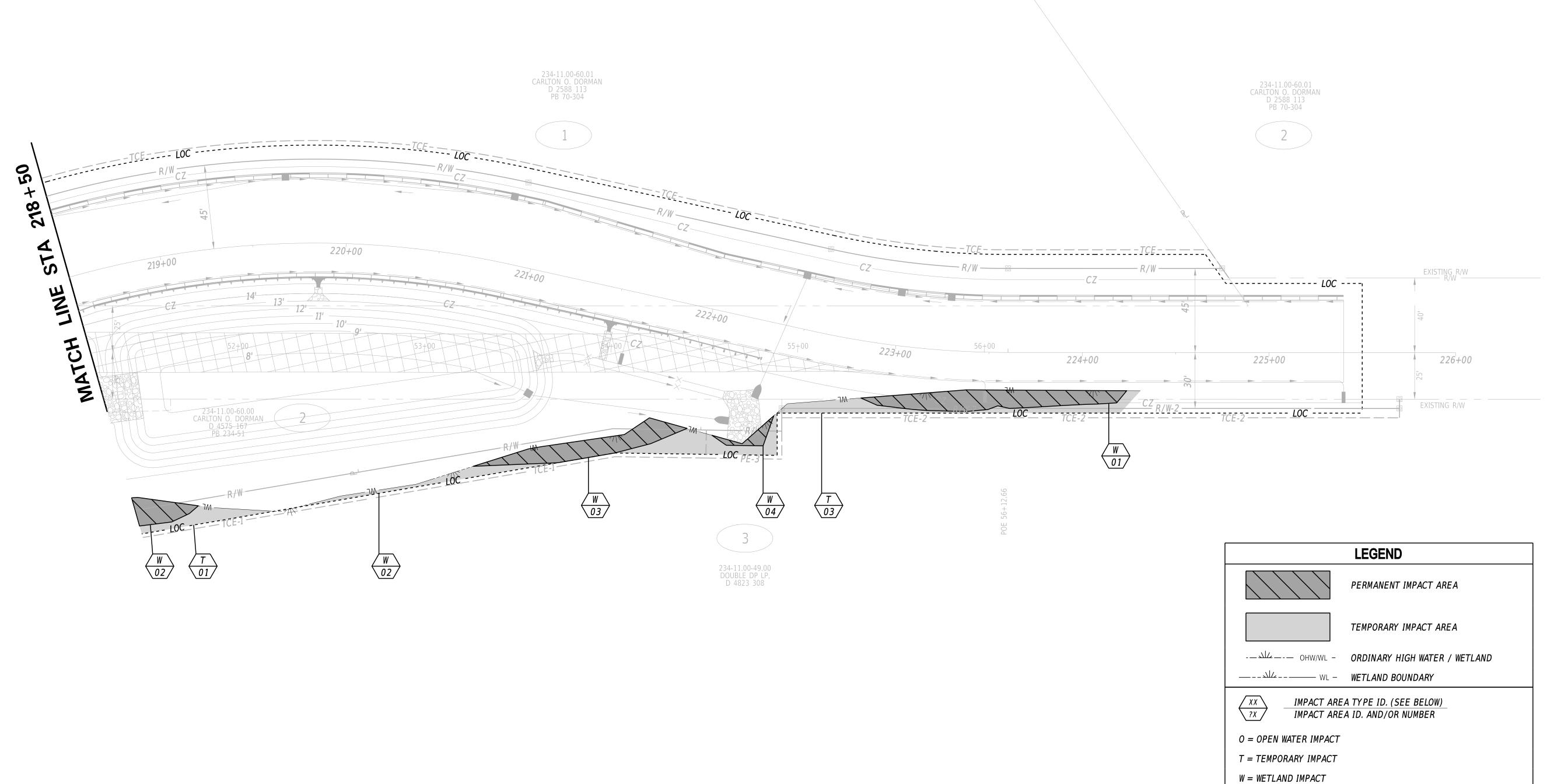
SECTION SHEET NO.

EC-04

	PERMANENT WETLAND IMPACT AREA SCHEDULE						
I D	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION	LOSS VS. IMPACT	LOSS AREA (AC)
5-W-01	FILL TYPLE F	1154.15	0.0265	N/A	USACE	LOSS	0.0265
5-W-02	FILL TYPLE F	332.46	0.0076	N/A	USACE	LOSS	0.0076
5-W-03	FILL TYPLE F	912.03	0.0209	N/A	USACE	LOSS	0.0209
5-W-04	FILL TYPLE F / RIP RAP	129.02	0.0030	N/A	USACE	LOSS	0.0030
TOTAL PER	RMANENT WETLAND IMPACT AREAS	2527.66	0.0580	N/A	USACE	N/A	0.0580

ADDENDA / REVISIONS





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HSIP SC, SR24 AT CAMP ARROW HEAD ROAD AND SR24 AT ANGOLA ROAD

CONTRACT	BRIDGE NO. N/A		
T201200902		14// \	1
1201200902	DESIGNED BY:	W NATIMAN	
COUNTY	DESIGNED BY:	W. NAUMAN	
KENT	CHECKED BY:	C. ESHAM	

ENVIRONMENTAL COMPLIANCE PLAN

EC-05 SECTION SHEET NO.