

STATE OF DELAWARE



DEPARTMENT OF TRANSPORTATION
MAINTENANCE SUPPORT – SOUTH DISTRICT
PLANS AND SPECIFICATIONS FOR:

CONTRACT NO: T201687901 P6 NO: 15-00773

CONTRACT TITLE: GUARDRAIL SAFETY IMPROVEMENTS &
REPAIR, SOUTH, 2016

PLANS PREPARED BY: TIM PHILLIPS (DESIGN TECHNICIAN)

PLANS REVIEWED BY: *P. C. Adams* DATE: 1/4/16
MAINT. SUPPORT MANAGER

DATE RECOMMENDED: <u>01.06.16</u>	
ASSISTANT MAINT. ENGINEER: <u><i>Jason McCluskey</i></u>	
DATE RECOMMENDED: <u>1-6-16</u>	
MAINTENANCE ENGINEER: <u><i>[Signature]</i></u>	
DATE APPROVED: <u>1/6/16</u>	
SOUTH DISTRICT ENGINEER: <u><i>Jeffrey S. Reed</i></u>	

SOUTH DISTRICT

GUARDRAIL SAFETY IMPROVEMENTS & REPAIR, SOUTH, 2016

CONTRACT DESCRIPTION

THIS CONTRACT IS INTENDED TO REPLACE EXISTING GUARDRAIL INCLUDING END TREATMENTS, BRIDGE ATTACHMENTS AND ALL OTHER GUARDRAIL COMPONENTS WITH 31" MGS (MIDWEST GUARDRAIL SYSTEM) GUARDRAIL AS WELL AS THE REPAIR OF LOCATIONS ON AN AS NEEDED BASIS. ALL NEW RAIL AND COMPONENTS INSTALLED SHALL BE COMPLIANT WITH MASH TESTING, DELAWARE DOT STANDARD SPECIFICATIONS, STANDARD DETAILS AND THESE PLANS.

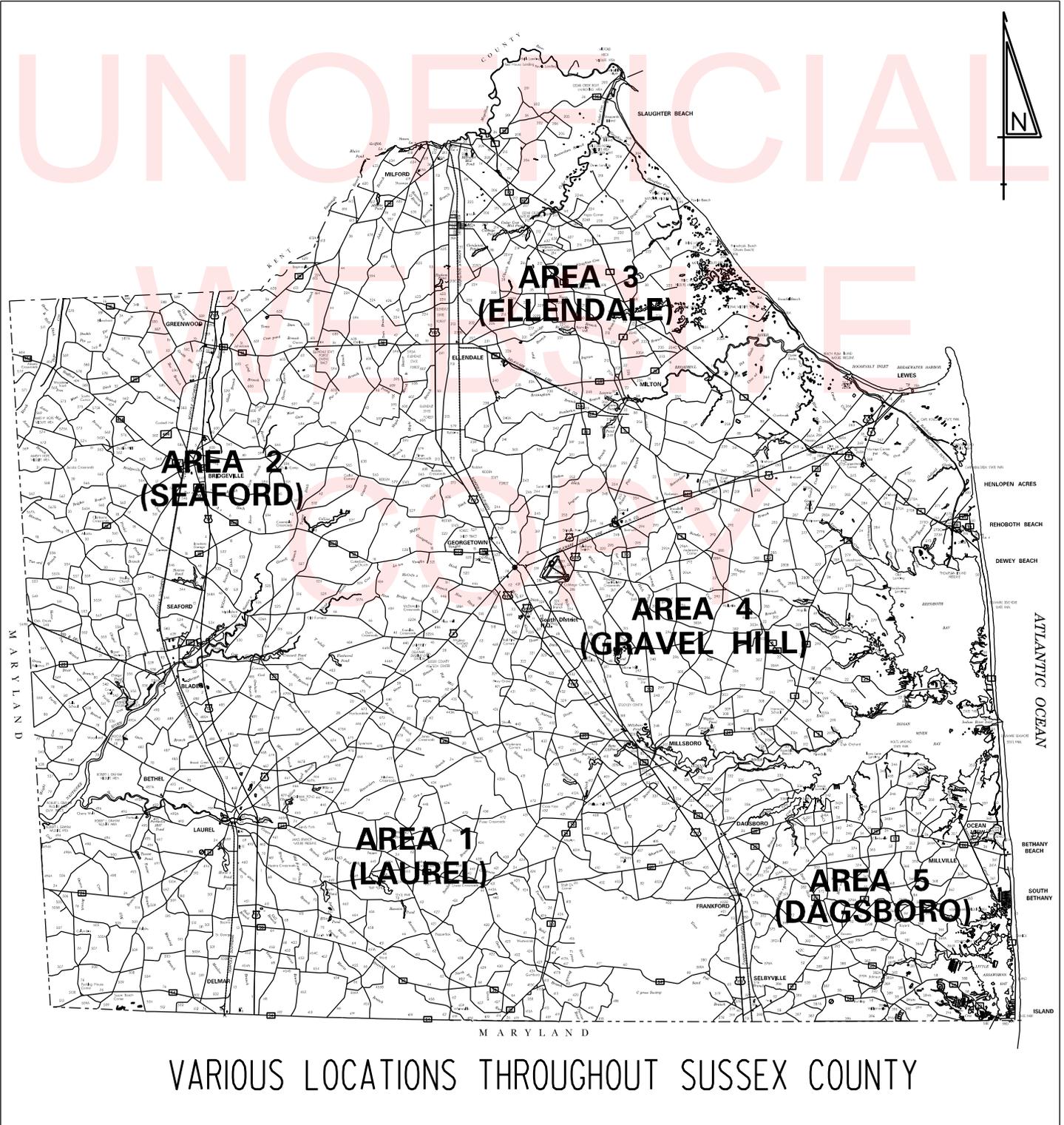
THE WORK SHALL INCLUDE, BUT NOT BE LIMITED TO MAINTENANCE OF TRAFFIC, AS REQUIRED PER LOCATION, REMOVAL OF EXISTING NON-COMPLIANT GUARDRAIL COMPONENTS, REPAIR / REPLACEMENT OF DAMAGED GUARDRAIL COMPONENTS, PLACEMENT OF GABC AND/ OR WARM MIX MAINTENANCE STRIPS, GRADING, TOPSOIL, SEED, MULCH AND BORROW AND ALL OTHER WORK ASSOCIATED WITH THE COMPLETION OF THE CONTRACT OBJECTIVES. SPECIFIC LOCATION SHEETS AND DETAILS CAN BE FOUND WITHIN THIS PACKAGE.

MOT PLANS MUST BE SUBMITTED TO THE DEPARTMENT FOR APPROVAL PRIOR TO THE START OF ANY WORK. THE CONTRACTOR SHALL SUBMIT THE PROPOSED TRAFFIC CONTROL PLANS TO THE SOUTH DISTRICT SAFETY OFFICER 2 WEEKS PRIOR TO THE SCHEDULED WORK PER LOCATION.

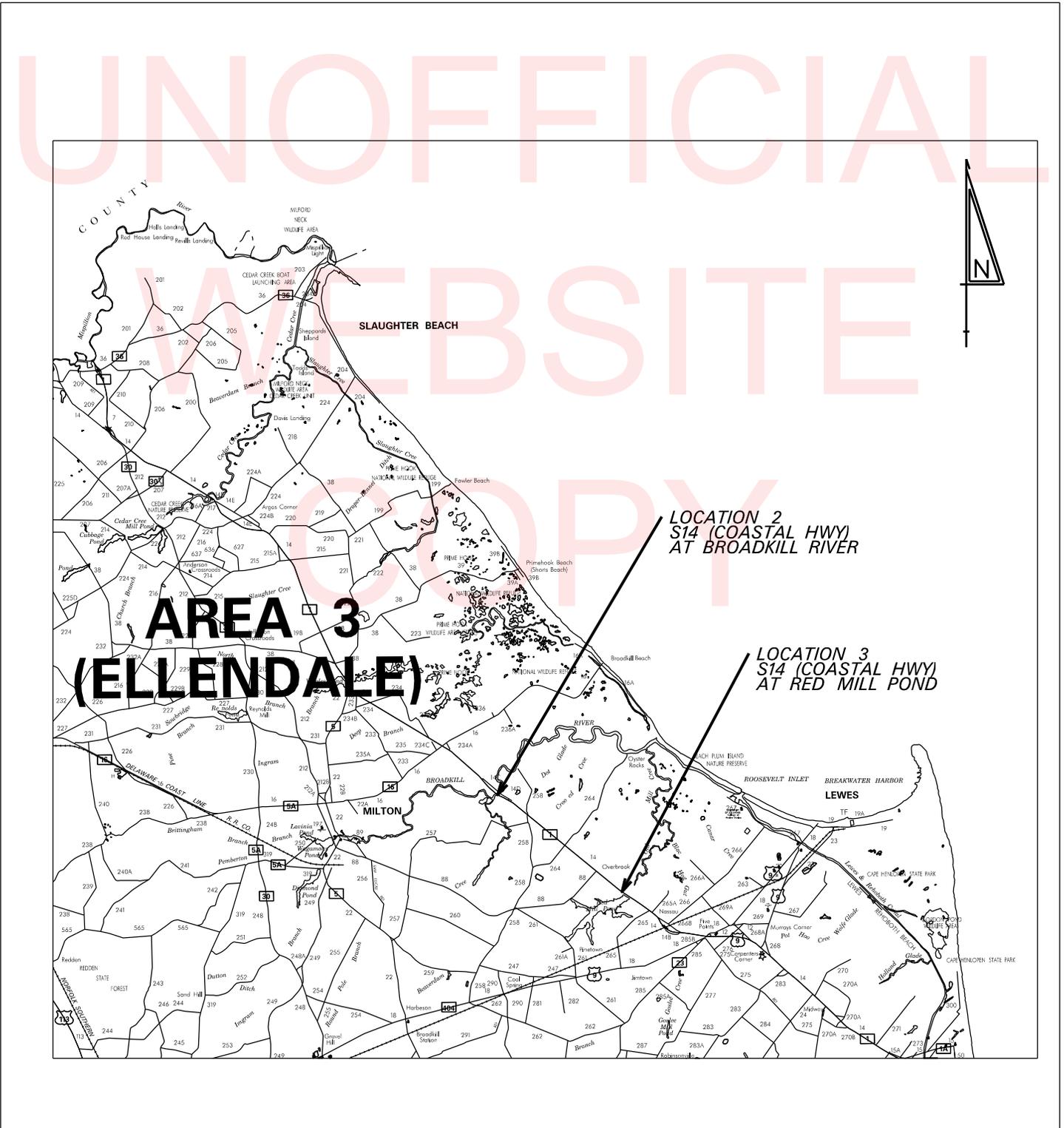
THE CONTRACT TIME FOR THE KNOWN LOCATIONS (LOC. 2 AND 3) WILL BE 40 CALENDAR DAYS FROM THE DATE SPECIFIED IN THE NOTICE TO PROCEED. LIQUIDATED DAMAGES WILL BE ASSESSED AFTER THIS TIME EXPIRES IF THESE KNOWN LOCATIONS ARE NOT SUBSTANTIALLY COMPLETE.

THIS CONTRACT ALSO INCLUDES AN OPEN END (LOCATION 1, UNKNOWN LOCATIONS) PORTION THAT WILL BE 365 CALENDAR DAYS IN LENGTH FROM THE DATE SPECIFIED IN THE NOTICE TO PROCEED. THIS PORTION WILL INCLUDE THE REPAIR OF DAMAGED GUARDRAIL ON AN AS NEEDED BASIS AND WILL BE ISSUED VIA JOB ORDER.

OPEN END REPAIR LOCATION MAP - SUSSEX COUNTY



LOCATION MAP - LOCATIONS 2 & 3
S14 (COASTAL HWY)



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GENERAL CONTRACT PLAN NOTES

1. CONSTRUCTION OF THIS CONTRACT SHALL CONFORM TO DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS DATED AUGUST 2001 AS AMENDED BY THE SUPPLEMENTAL SPECIFICATIONS, THE SPECIAL PROVISIONS, THE MOST RECENT STANDARD CONSTRUCTION DETAILS, DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THESE PLANS.
2. THE PURPOSE OF THIS CONTRACT IS TO MAKE GENERAL IMPROVEMENTS TO ROADS AND/OR STREETS WITHIN THE DISTRICT HEREIN SPECIFIED. DEPENDING ON FUND AVAILABILITY, THE DEPARTMENT RESERVES THE RIGHT TO ADD OR DELETE LOCATIONS AND/OR QUANTITIES FOR THIS CONTRACT. SUCH LOCATION OR QUANTITY ADDITIONS OR DELETIONS SHALL NOT BE CAUSE FOR AN INCREASE OR DECREASE IN ANY CONTRACT UNIT BID PRICES. NO ITEM PRICES ARE TO BE RENEGOTIATED DUE TO EITHER AN INCREASE OR DECREASE IN QUANTITY USAGE RESULTING FROM SAID ADDITIONS OR DELETIONS. IN THE CASE WHERE CONTRACT UNIT PRICES ARE NOT AVAILABLE THE PRICES ARE TO BE NEGOTIATED.
3. THE CONTRACTOR SHALL PROVIDE ALL RESIDENTS AND BUSINESSES WHO LIVE ADJACENT TO THE WORK ZONE A MINIMUM 48 HR. PRIOR WRITTEN NOTICE FOR THE START OF CONSTRUCTION WORK. THIS NOTIFICATION SHALL INCLUDE THE SCOPE OF WORK, WORKING HOURS, ANTICIPATED START AND COMPLETION DATES, CONTRACTOR NAME & ADDRESS, AND DELDOT CONTACT NUMBERS. FAILURE TO GIVE PROPER NOTICE WILL RESULT IN A SUSPENSION OF WORK REQUIRING NOTICE, UNTIL PROPER NOTICE IS PROVIDED.
4. THE CONTRACTOR SHALL SUBMIT THE REQUIRED COPIES OF A DETAILED PROGRESS SCHEDULE (PSC) AS OUTLINED IN STANDARD SPECIFICATION 108.04 PRIOR TO OR AT THE PRECONSTRUCTION MEETING. DETAILS SHALL INCLUDE A DESCRIPTION OF EACH WORK ACTIVITY, THE PLANNED DAYS OF WORK, MULTIPLE CREWS OR SHIFTS, AND SCHEDULED WORKING HOURS. DURING THE CONTRACT, THE CONTRACTOR SHALL SUBMIT TWO-WEEK (OR AS REQUIRED) "LOOK AHEAD" SCHEDULES TO THE AREA ENGINEER/ MANAGER NO LATER THAN NOON OF EACH THURSDAY. FAILURE TO COMPLY WILL RESULT IN A SUSPENSION OF ALL CONTRACT WORK WITH TIME CHARGES CONTINUING TO BE ASSESSED.
5. LOCATION LISTINGS INDICATE GENERAL LIMITS OF CONSTRUCTION, MAJOR TYPES OF IMPROVEMENTS, AND ESTIMATED QUANTITIES. DURING THE BIDDING PERIOD, ANY QUESTIONS PERTAINING TO LOCATIONS SHALL BE DIRECTED TO THE CONTRACT ADMINISTRATOR. AFTER THE AWARD, SUCH QUESTIONS SHALL BE REFERRED TO THE APPROPRIATE DISTRICT ENGINEER OR HIS REPRESENTATIVE.
6. ANY AND ALL CONSTRUCTION ENGINEERING SHALL BE INCIDENTAL TO THE CONTRACT.
7. NO ENVIRONMENTAL PERMITS ARE REQUIRED FOR THIS WORK PROVIDED DITCHES OCCUR IN UPLANDS AND ARE CONVEYING ONLY ROADSIDE STORM WATER (I.E. NON CORPS-JURISDICTIONAL). IF THERE IS ANY QUESTION AS TO WHETHER OR NOT THE DITCHES ARE LOCATED IN JURISDICTIONAL WATERS, CONTACT THE DELDOT ENVIRONMENTAL SECTION AT 302-760-2264
8. ALL PORTLAND CEMENT CONCRETE MUST BE RECEIVED FROM AN APPROVED PRODUCTION PLANT UNLESS OTHERWISE APPROVED BY THE ENGINEER. ONLY CALIBRATED VOLUMETRIC CONCRETE TRUCKS WILL BE PERMITTED TO PROVIDE ON-SITE MIXTURES. THIS PERTAINS TO BOTH WORK OCCURRING DURING NORMAL WORKING HOURS AND NIGHTTIME RESTRICTED WORK.

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GENERAL CONTRACT PLAN NOTES cont.

9. THE CONTRACTOR SHALL GIVE TWO (2) WEEKS NOTICE TO THE PROPERTY OWNER WHEN ANY FIXTURE, SHRUB OR OTHER OBJECT MUST BE REMOVED FROM THE RIGHT OF WAY OR EASEMENT AREA. IF THE OWNER HAS NOT ATTEMPTED TO SALVAGE THIS PROPERTY, THE CONTRACTOR SHALL REMOVE IT WITHOUT OBLIGATION. COMPENSATION SHALL BE INCIDENTAL TO THE CONTRACT.
10. THE MINIMUM AND MAXIMUM SINGLE LIFT THICKNESSES OF MATERIALS SHALL BE AS FOLLOWS:
 - TYPE C WARM-MIX: 1.25" - 2.00"
 - TYPE B WARM-MIX: 2.25" - 4.00"
 - BCBC: 3.00" - 6.00"
 - GABC: 2.00" - 8.00"
11. THE COST OF FINE GRADING, COMPACTING, AND PREPARING EXISTING SHOULDERS FOR PAVING SHALL BE INCIDENTAL TO SECTIONS 401.
12. THE CONTRACTOR IS REMINDED THAT SECTION 105.07 OF THE STANDARD SPECIFICATIONS REQUIRES THE GENERAL CONTRACTOR TO HAVE A COMPETENT SUPERINTENDENT OR FOREMAN ON THE PROJECT AT ALL TIMES.
13. THE CONTRACTOR SHALL NOT REMOVE ANY EXISTING GUARDRAIL OR END SECTIONS WHILE LEAVING THE LOCATION SITE UNPROTECTED. THE USE OF PORTABLE BARRIER / CRASH CUSHIONS MAY BE USED IN ACCORDANCE WITH THE TRAFFIC CONTROL MANUAL SECTION 6F.85 & 6F.86 TO PROTECT SUCH LOCATIONS. THIS WORK SHALL BE INCIDENTAL TO THE WORK IT PROTECTS.
14. UNDERGROUND UTILITIES MAY BE PRESENT AT ALL LOCATIONS. THEREFORE, ALL STANDARD PRACTICES AND PROCEDURES FOUND IN THE LATEST VERSION OF THE DELDOT UTILITY MANUAL SHALL BE FOLLOWED. THE CONTRACTOR IS REQUIRED TO CONTACT MISS UTILITY TO HAVE UTILITIES MARKED OUT PRIOR TO BEGINNING WORK AT ANY LOCATION. IN THE EVENT THAT A UTILITY IS INADVERTENTLY DISTURBED, THE CONTRACTOR IS REQUIRED TO CONTACT THE PROPER UTILITY COMPANY IMMEDIATELY SO THEY CAN VERIFY THE EXTENT OF THE DAMAGE AND MAKE REPAIRS.
15. ALL CONCRETE ANCHOR BLOCKS LEFT FROM TWISTED END TREATMENTS OR END ANCHORAGES SHALL BE REMOVED AND IS INCIDENTAL TO ITEM 211002, REMOVAL OF STRUCTURES AND OBSTRUCTIONS (GUARDRAIL). VOIDS SHALL BE FILLED WITH ITEM 302005 – GABC OR AS DIRECTED BY THE INSPECTOR.
16. PAYMENT SHALL BE MADE UNDER ITEM #302005 – GABC TYPE B FOR BACKFILL OF EXISTING GUARDRAIL POST HOLES, LOW GRADES, AND BACKFILL OF ANY CONCRETE ANCHOR HOLES WHERE TWISTED-END / END TREATMENT SECTIONS ARE REMOVED.
17. THE ENGINEER /REPRESENTATIVE SHALL DETERMINE FOR THE CONTRACTOR WHAT, IF ANY, GUARDRAIL ELEMENTS SHALL BE RETAINED BY THE DEPARTMENT AND DELIVERED TO THE NEAREST STATE MAINTENANCE YARD. ANY GUARDRAIL ELEMENTS NOT TO BE RETAINED, AS DETERMINED BY THE ENGINEER, BECOME THE PROPERTY OF THE CONTRACTOR. PAYMENT FOR THE REMOVAL, LEGAL DISPOSAL AND/OR DELIVERY OF REUSABLE ELEMENTS, INCLUDING, BUT NOT LIMITED TO RAILS, POSTS, END ATTACHMENTS, AND ANCHORS ARE TO BE INCIDENTAL TO ITEM #211002.
18. DAMAGE CAUSED BY THE CONTRACTOR TO EXISTING HOT MIX MAINTENANCE STRIPS SHALL BE REPAIRED. SUCH REPAIRS ARE INCIDENTAL TO ITEM # 211002, REMOVAL OF STRUCTURES AND OBSTRUCTIONS (GUARDRAIL).

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GENERAL CONTRACT PLAN NOTES cont.

19. THE CONTRACTOR SHALL NOT EXCAVATE ADJACENT TO TRAVEL LANES AN AREA FOR MORE ROADWAY THEN CAN BE CONSTRUCTED TO THE TOP OF THE EXISTING COURSE IN THE SAME DAY. THE CONTRACTOR SHALL FOLLOW THE REQUIREMENTS OF THE TRAFFIC CONTROL MANUAL TO FORM A 4:1 WEDGE/FILLET FOR AREA OF GRADE DIFFERENTIAL FROM EXISTING COURSE TO PAVEMENT EDGE. THE WEDGE FILLET MATERIAL SHALL BE GRADED AGGREGATE BASE COURSE, TYPE B AND SHALL BE PAID FOR UNDER ITEM 302005.
20. ITEM #401800 (SUPERPAVE, TYPE C WARM MIX, 115 GYRATIONS) AND ITEM #302005 (GABC, TYPE B) SHALL BE USED TO EXTEND HOT MIX MAINTENANCE STRIPS AS NEEDED AT END TREATMENTS. THE NEW MAINTENANCE STRIPS SHALL BE MADE UP OF 2" TYPE C HOT MIX OVER 4" GABC AT A WIDTH OF 2' TO 4' BY THE LENGTH OF THE GUARDRAIL / END TREATMENT. THE ACTUAL SIZE AND DEPTH OF MAINTENANCE STRIPS WILL VARY BY LOCATION.
21. POST VOIDS AND / OR WARM MIX THAT IS DAMAGED DURING THE RELOCATION OF GUARDRAIL ELEMENTS SHALL BE REPAIRED WITH LIKE MATERIAL AS APPROVED BY THE ENGINEER AND SHALL BE INCIDENTAL TO THE RELOCATING GUARDRAIL ITEM.
22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ANY TREES OR BRUSH WITHIN 4' OF THE BACK OF THE EXISTING OR PROPOSED GUARDRAIL. SUCH REMOVAL SHALL BE INCIDENTAL TO THE GUARDRAIL ITEM BEING INSTALLED.
23. ALL HOLES LEFT IN BRIDGE PARAPET WALLS, WHICH WERE CAUSED BY THE REMOVAL OF EXISTING NON-COMPLIANT BRIDGE ATTACHMENTS SHALL BE FILLED WITH NON-SHRINK GROUT. THIS WORK SHALL BE INCIDENTAL TO ITEM 211002.
24. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND CURVED RADIUS SECTIONS FOR PROPER FIT PRIOR TO INSTALLING GUARDRAIL.
25. MAINTENANCE STRIPS SHALL EXTEND PAST GUARDRAIL TO ENSURE ACCEPTABLE APPROACH SLOPES PER DELDOT STANDARD DETAILS.
26. NON-AVAILABILITY OF MATERIALS SHALL BE VERIFIED BY AT LEAST THREE (3) DIFFERENT SOURCES. VERIFICATION SHALL BE FORMAL AND SUPPLIED BY THE CONTRACTOR IN WRITING. IF THERE IS A VERIFIED NON-AVAILABILITY OF MATERIALS, TIME CHARGES SHALL COMMENCE ON THE FIRST WORKING DAY FOLLOWING THE DELIVERY DATE OF SAID MATERIALS.
27. DEPENDANT ON WEATHER, THE WARM MIX MAINTENANCE STRIP MAY NEED TO BE INSTALLED AFTER THE GUARDRAIL IS INSTALLED. THE CONTRACTOR SHALL EXCAVATE AND INSTALL GABC TO A DEPTH OF 2" BELOW FINISH GRADE AND THEN PLACE WARM MIX. IF WARM MIX IS AVAILABLE AT THAT TIME IT MAY BE PLACED AT THAT TIME, HOWEVER, THE CONTRACTOR SHALL BE PREPARED TO INSTALL WARM MIX ON A RETURN TRIP IF MATERIAL IS NOT AVAILABLE AT THAT TIME AT NO ADDITIONAL COST TO THE DEPARTMENT.
28. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE REQUIRED CLEARANCES AND INSURANCES FOR EACH RAILWAY COMPANY INVOLVED IF THE RAILROAD PROPERTY AND/OR FACILITIES ARE LOCATED WITHIN OR NEAR THE PROPOSED LIMITS OF WORK AND/OR IF THE PROPOSED WORK ENCROACHES UPON THE RAILROAD'S RIGHT OF WAY; IN ACCORDANCE WITH DELDOT MAINTENANCE OF RAILROAD TRAFFIC ITEM NO. 763502. THE CONTRACTOR MUST CONTACT DELDOT'S RAILROAD SECTION MANAGER AT 302-760-2183 PRIOR TO ANY WORK STARTED TO COORDINATE THE EXECUTION OF THE APPROPRIATE AGREEMENTS AND AUTHORIZATIONS REQUIRED FROM ANY RAILWAY COMPANY INVOLVED, INCLUDING COORDINATION OF RAILROAD FLAGGING, IF NECESSARY.

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MAINTENANCE OF TRAFFIC NOTES

29. ALL WORK SHALL BE PERFORMED IN A MANNER THAT WILL REASONABLY PROVIDE THE LEAST PRACTICAL OBSTRUCTION TO ALL ROAD USERS, INCLUDING VEHICULAR, PEDESTRIAN AND BICYCLE TRAFFIC AND SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) PART 6, HEREIN REFERRED TO AS THE TRAFFIC CONTROL MANUAL (INCLUDING REVISIONS IN EFFECT AT THE TIME OF ADVERTISEMENT FOR BIDS).
30. THE CONTRACTOR SHALL SUBMIT THE PROPOSED TRAFFIC PLANS FOR ALL KNOWN LOCATIONS TO THE SOUTH DISTRICT SAFETY OFFICER AT LEAST 2 WEEKS PRIOR TO THE SCHEDULED WORK FOR APPROVAL.
31. THE CONTRACTOR SHALL SUBMIT THE PROPOSED TRAFFIC PLANS FOR EACH WORK-ORDER ISSUED LOCATION TO THE SOUTH DISTRICT SAFETY OFFICER AT LEAST 2 WEEKS PRIOR TO THE START OF WORK ON THAT LOCATION FOR APPROVAL.
32. THE CONTRACTOR SHALL SUBMIT TO THE SOUTH DISTRICT SAFETY OFFICER A TRAFFIC CONTROL PLAN, INCLUDING THE NECESSARY NCHRP 350 AND MASH CERTIFICATIONS FOR ALL DEVICES THAT WILL BE UTILIZED FOR EACH LOCATION BEFORE THE START OF THE PRE-CONSTRUCTION MEETING. WRITTEN APPROVAL MUST BE RECEIVED BEFORE THE START OF WORK AT EACH AND EVERY LOCATION. AT TIME OF SUBMITTAL, TIME RESTRICTIONS WILL BE DETERMINED FOR EACH LOCATION.
33. WORK ZONE SETUPS TA-3A AND TA-33 SHALL BE UTILIZED FOR WORK ALONG SR-1. LANE CLOSURE HOURS ON SR1 SHALL CONFORM TO 1) 8AM TO 4PM MONDAY THROUGH FRIDAY BETWEEN OCT 1 AND MAY 14 AND 2) 9 PM TO 5 AM MONDAY TO FRIDAY BETWEEN MAY 15 AND SEPT 30.
34. THE SET UP OF TRAFFIC CONES SHALL BE INCIDENTAL TO THE ITEMS THAT THEY PROTECT. ALL FLAGGERS, WARNING SIGNS AND TRUCK MOUNTED ATTENUATORS SHALL BE PAID SEPARATELY.
35. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE TRAFFIC MANAGEMENT CENTER (1-302-659-4600) IS NOTIFIED EACH AND EVERY DAY WHEN WORK IS BEING PERFORMED IN STATE RIGHT OF WAY. THE CONTRACTOR MUST IDENTIFY THE TYPE OF WORK, ANY LANES OR SHOULDERS CLOSED, LENGTH OF TIME FOR WORK, WHEN LANE RESTRICTION IS IN PLACE AND WHEN LANE RESTRICTION IS PICKED UP, CONTACT PERSON/NUMBER, AND STATE INSPECTOR.
36. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE LOCAL 911 CENTER, LOCAL SCHOOLS, AND THE DELDOT PUBLIC INFORMATION CENTER OF ALL ROADS AND LANES TO BE CLOSED A MINIMUM OF SEVEN CALENDAR DAYS BEFORE THE CLOSURE. IF TEMPORARILY BLOCKING ACCESS TO A FIRE HYDRANT, NOTIFICATION MUST BE GIVEN TO SUSSEX COUNTY, THE LOCAL FIRE FIGHTING AUTHORITIES, AND THE 911 CENTER
37. ACCESS TO ALL BUSINESSES AND RESIDENCES WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE CONTRACT. ANY TEMPORARY CLOSURE OF AN ENTRANCE FOR TIE IN PURPOSES SHALL BE COORDINATED WITH THE ENGINEER AND / OR PROPERTY OWNER IN ADVANCE OF THE CLOSURE.
38. IF A LOCATION CANNOT BE COMPLETED BY THE END OF THE WORK DAY, THE OPENED SECTION OF GUARDRAIL SHALL BE POSITIVELY PROTECTED BY A PASSING CRASH TESTED DEVICE.
39. AN AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) CERTIFIED TRAFFIC CONTROL SUPERVISOR SHALL BE REQUIRED FOR ALL KNOWN LOCATION IN THE CONTRACT PLANS. A COPY OF THE CERTIFICATION CARD FOR THE ATSSA TRAFFIC CONTROL SUPERVISOR SHALL BE SUBMITTED AT THE PRECONSTRUCTION MEETING. THE PAPER CERTIFICATE IS NOT ACCEPTABLE.

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MAINTENANCE OF TRAFFIC NOTES cont.

40. THE CONTRACTOR SHALL MAINTAIN ACCESS TO AND ALONG PEDESTRIAN FACILITIES AT ALL TIMES DURING CONSTRUCTION. EARTH, STONE AND GRAVEL SURFACES ARE NOT ACCEPTABLE FOR PROVIDING PEDESTRIAN ACCESS. WHERE PEDESTRIAN ROUTES ARE CLOSED OR BLOCKED, ALTERNATE PEDESTRIAN ACCESS SHALL BE PROVIDED USING TA-28 OR TA-29 OF THE TRAFFIC CONTROL MANUAL OR TO THE SATISFACTION OF THE ENGINEER AND SHALL BE ADA COMPLIANT. THE COST FOR ANY PROVISIONS ON OPEN END CONTRACTS SHALL BE NEGOTIATED PRIOR TO THE COMMENCEMENT OF WORK, WHILE THESE COSTS ON KNOWN LOCATION CONTRACTS SHALL BE INCIDENTAL TO ITEM 763643 – MAINTENANCE OF TRAFFIC, ALL INCLUSIVE.

PEDESTRIAN MAINTENANCE OF TRAFFIC: THIS WORK SHALL CONSIST OF PROVIDING AND MAINTAINING AN ACCESSIBLE PEDESTRIAN ROUTE THROUGHOUT THE PROJECT'S LIMITS IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT OF 1960 (ADA) TITLE II, PARAGRAPH 35.130.

THE CONTRACTOR SHALL BE REQUIRED TO REVIEW EACH CURB RAMP LOCATION AND SUBMIT THE APPROPRIATE MAINTENANCE OF TRAFFIC DETAIL AND DEVICES TO THE ENGINEER FOR EACH LOCATION AT LEAST 2 WEEKS BEFORE CONSTRUCTION FOR REVIEW, COMMENT, AND APPROVAL. THE FOLLOWING CONSIDERATIONS SHALL BE TAKEN INTO ACCOUNT WHEN ADDRESSING ACCESSIBLE PEDESTRIAN MAINTENANCE OF TRAFFIC:

- ALL PEDESTRIANS, INCLUDING PERSONS WITH DISABILITIES, SHALL BE PROVIDED WITH A REASONABLY SAFE, CONVENIENT, AND ACCESSIBLE PATH THAT REPLICATES AS MUCH AS PRACTICAL THE EXISTING PEDESTRIAN FACILITIES.
- MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AT ALL TIMES.
- PROVIDE PEDESTRIAN ACCESS THROUGH OR AROUND THE WORK ZONE. IF A DETOUR IS CHOSEN THE CONTRACTOR MUST SUBMIT THE DETOUR ROUTE TO THE ENGINEER FOR REVIEW AND APPROVAL. THE DETOUR ROUTE MUST MEET OR EXCEED THE CURRENT CONDITIONS.
- WORK SHOULD BE PHASED SO THAT ALL AREAS OF AN INTERSECTION / SIDEWALK PATH ARE NOT UNDER CONSTRUCTION AT THE TIME UNLESS A CLEAR PATH IS PROVIDED AND IDENTIFIED.
- TRAFFIC CONTROL DEVICES AND OTHER CONSTRUCTION MATERIALS AND FEATURES SHALL NOT PROTRUDE INTO THE USABLE WIDTH OF THE SIDEWALK, TEMPORARY PATHWAY OR OTHER PEDESTRIAN FACILITY.
- SIGNS AND OTHER DEVICES MOUNTED LOWER THAN 7 FT ABOVE THE TEMPORARY PEDESTRIAN PATHWAY SHALL NOT PROJECT MORE THAN 4" INTO ACCESSIBLE PEDESTRIAN ROUTE.

A SMOOTH, CONTINUOUS HARD SURFACE SHALL BE PROVIDED THROUGHOUT THE ENTIRE LENGTH AND WIDTH OF THE PEDESTRIAN ROUTE THROUGHOUT CONSTRUCTION. THERE SHALL BE NO CURBS OR VERTICAL ELEVATION CHANGES GREATER THAN ¼" IN GRADE OR TERRAIN THAT COULD CAUSE TRIPPING OR BE A BARRIER TO WHEELCHAIR USE.

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OPEN END REPAIR NOTES

41. NO UTILITY RELOCATION INVOLVEMENT IS ANTICIPATED. SHOULD ANY CONFLICTS BE ENCOUNTERED DURING CONSTRUCTION REQUIRING ADJUSTMENT AND/OR RELOCATION OF THE AGENCIES' EXISTING FACILITIES, THE NECESSARY RELOCATION WORK SHALL BE ACCOMPLISHED BY THE RESPECTIVE AGENCIES' FORCES, AS DIRECTED BY THE DISTRICT ENGINEER. ANY ADJUSTMENTS AND/OR RELOCATIONS OF MUNICIPALLY OWNED FACILITIES SHALL BE DONE BY THE STATE'S CONTRACTOR IN ACCORDANCE WITH THE RESPECTIVE AGENCIES' STANDARD SPECIFICATIONS AS DIRECTED BY THE DISTRICT ENGINEER.
42. IT IS ANTICIPATED THAT ALL WORK WILL OCCUR WITHIN DELDOT'S EXISTING RIGHT OF WAY OR EASEMENT AREAS. SHOULD THE NEED OCCUR TO TRESPASS ONTO PRIVATE PROPERTY; IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SECURE SUCH TRESPASS NEEDS.
43. IT IS ANTICIPATED THAT ALL WORK WILL OCCUR WITHIN DELDOT'S RIGHT OF WAY. SHOULD THE NEED OCCUR TO TRESPASS ONTO RAILROAD PROPERTY, INCLUDING THE HIGHWAY-RAIL CROSSING; IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE RAILROAD CHIEF ENGINEER AND OBTAIN WRITTEN AUTHORIZATION BEFORE ENTERING. SUFFICIENT TIME SHALL BE PROVIDED FOR THE REVIEW AND APPROVAL OF THE PLAN. THE MAINTENANCE OF TRAFFIC PLAN SHALL INCLUDE PROPOSED TIME RESTRICTIONS ON THE CLOSURE OF TRAVEL LANES SUBJECT TO THE APPROVAL OF THE SAFETY SECTION.
44. THE PROJECT MANAGER SHALL BE RESPONSIBLE FOR COORDINATING WITH THE TRAFFIC SECTION RELATING TO ANY IMPACTS TO TRAFFIC SECTION FACILITIES (INCLUDING BUT NOT LIMITED TO TRAFFIC LOOPS, JUNCTION WELLS ETC.) AT LEAST 4 WEEKS IN ADVANCE OF THE START OF THE ACTIVITY.
45. THE PROJECT MANAGER IS RESPONSIBLE FOR ENSURING ANY REQUIRED DOCUMENTS AND ANALYSIS AS PART OF THE ADOPTED WORK ZONE SAFETY AND MOBILITY PROCEDURES AND GUIDELINES HAS BEEN COMPLETED PRIOR TO ANY WORK STARTING ON THIS CONTRACT.
46. FOR THE PURPOSE OF THE REPAIR PORTION OF THE CONTRACT, THE REPLACEMENT GUARDRAIL TYPE AND LOCATION SHALL BE IDENTICAL TO THE DAMAGED GUARDRAIL, EXCEPT IN THE INSTANCES WHEN AN UPGRADE TO THE CURRENT STANDARD OF GUARDRAIL IS DEEMED NECESSARY, OR WHEN OTHERWISE DIRECTED BY THE ENGINEER.
47. BACKFILLING OF HOLES CREATED BY POST REMOVAL, IN COMPACTED LIFTS; PROVIDING AND INSTALLING RAIL BACKUP PLATES, BOLTS, NUTS, AND WASHERS; PROVIDING AND SETTING UP TRAFFIC CONES AND/OR PATTERNS ARE INCIDENTAL TO THE CONTRACT. THE COST FOR EXCAVATING AND DISPOSING OF UP TO ONE (1) CUBIC YARD OF MATERIAL AND/OR GRADING (UP TO A 6" DEPTH) TO MEET THE MANUFACTURER'S SLOPE REQUIREMENTS IS INCIDENTAL TO THE UNIT PRICE BID FOR ITEMS 720585, OR 720586.
48. WORK TO BE PERFORMED UNDER THIS CONTRACT SHALL BE GENERATED THROUGH JOB ORDERS ISSUED TO THE CONTRACTOR BY THE DEPARTMENT'S SOUTH DISTRICT. UP TO SIX (6) WORK ORDERS WILL BE ISSUED AT ONE TIME, AS A GROUP TO COMPOSE A JOB ORDER, TO ALLOW FOR THE MOST EFFICIENT ALLOCATION OF THE CONTRACTORS WORK FORCE.
49. A SINGLE MOBILIZATION WILL BE PAID PER JOB ORDER. FOR EXAMPLE, IF A JOB ORDER IS ISSUED THAT INCLUDES 3 DIFFERENT WORK ORDERS / LOCATIONS, ONE MOBILIZATION WILL BE PAID, NOT THREE.

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OPEN END REPAIR NOTES cont.

50. EXECUTION OF EACH JOB ORDER IS TO BEGIN WITHIN SEVEN (7) CALENDAR DAYS OF ITS BEING ISSUED TO THE CONTRACTOR; UNLESS REQUIRED MATERIALS ARE NOT AVAILABLE. WORK SHALL BE COMPLETED WITHIN THE TIME ISSUED IN EACH JOB ORDER. FOR EXAMPLE, WORK ASSOCIATED WITH A JOB ORDER ISSUED ON A MONDAY SHALL BEGIN THE FOLLOWING MONDAY AND BE COMPLETED WITHIN THE TIME FRAME ALLOTTED IN THE JOB ORDER. NON-AVAILABILITY OF MATERIAL SHALL BE VERIFIED BY AT LEAST THREE (3) DIFFERENT SOURCES, WITH THE VERIFICATION FORMALLY PRESENTED IN WRITING BY THE CONTRACTOR TO THE DEPARTMENT WITHIN SEVEN (7) CALENDAR DAYS OF THE JOB ORDER ISSUE DATE. THE CONTRACTOR SHALL PRESENT SHIPPING TICKETS, WHICH UPON VERIFICATION BY THE DISTRICT, WILL ESTABLISH THE DATE OF MATERIAL AVAILABILITY FOR ANY PREVIOUSLY UNAVAILABLE ITEMS.
51. IF WORK DOES NOT COMMENCE, OR NON-AVAILABILITY OF MATERIALS IS NOT PRESENTED IN WRITING WITHIN THE SPECIFIED SEVEN (7) CALENDAR DAYS, TIME CHARGES EQUAL TO LIQUIDATED DAMAGES SHALL COMMENCE. IF THERE IS A VERIFIED NON-AVAILABILITY OF MATERIALS, TIME CHARGES SHALL COMMENCE ON OR BEFORE THE SEVENTH (7TH) CALENDAR DAY FOLLOWING THE DELIVERY DATE.
52. FAILURE TO START A JOB ORDER IN THE SPECIFIED TIME SHALL CONSTITUTE "FAILURE TO PURSUE THE WORK" AND SUBJECTS THE CONTRACTOR TO LIQUIDATED DAMAGES AS OUTLINED IN SUBSECTION 108.08 OF THE STANDARD SPECIFICATIONS. EACH JOB ORDER IS TO BE COMPLETED IN THE TIME FRAME ALLOTTED IN THE JOB ORDER. IF WORK ON A SPECIFIC JOB ORDER IS NOT COMPLETED WITHIN THE ALLOTTED TIME, LIQUIDATED DAMAGES WILL BE ASSESSED IN ACCORDANCE WITH SUBSECTION 108.09.
53. A SEMI-FINAL INSPECTION WILL BE PERFORMED ON EACH JOB ORDER AFTER THE DEPARTMENT RECEIVES COPIES OF THE COMPLETED WORK ORDERS FROM THE CONTRACTOR. ALL WORK MUST MEET THE DEPARTMENT'S SPECIFICATIONS, STANDARD DETAILS, CONTRACT REQUIREMENTS, AND THE MANUFACTURER'S SPECIFICATIONS & SHOP DRAWINGS BEFORE THEY CAN BE CONSIDERED COMPLETE. WHEN ALL THE WORK ORDERS ARE SATISFACTORILY COMPLETED, THE WORK WILL BE ACCEPTED BY THE DEPARTMENT, AT WHICH TIME THAT JOB ORDER WILL BE CONSIDERED CLOSED.

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SOUTH DISTRICT

GUARDRAIL SAFETY IMPROVEMENTS & REPAIR, SOUTH, 2016

REPAIR TYPES

GUARDRAIL END TREATMENT ATTENUATOR, TYPE I REPAIR
(ET-2000, SKT OR COMPARABLE BRAND)

LEVEL I REPAIR

A LEVEL I REPAIR FOR THE SKT, ET-2000 IMPACT ATTENUATOR OR SIMILAR SHALL BE USED WHEN THE ATTENUATOR IS DAMAGED UP TO, BUT NOT INCLUDING POST THREE.

THE FOLLOWING ITEMS SHALL BE REUSED OR REPLACED AT THE DISCRETION OF THE ENGINEER:

A LEVEL I REPAIR SHALL CONSIST OF THE FOLLOWING:

- GUARDRAIL EXTRUDER (REUSE)
- BEARING PLATE (REUSE)
- ASSEMBLY CABLE (REUSE)
- STRUT (REUSE)
- CABLE ANCHOR (REUSE)
- INITIAL 12.5' GUARDRAIL (REPLACE)
- POSTS 1 AND 2 (REPLACE)
- ALL BOLTS, WASHERS AND NUTS SHALL BE INCIDENTAL TO REPAIR.

LEVEL II REPAIR

A LEVEL II REPAIR FOR THE SKT, ET-2000 IMPACT ATTENUATOR OR SIMILAR SHALL BE USED WHEN THE ATTENUATOR IS DAMAGED UP TO BUT NOT INCLUDING POST FIVE THE FOLLOWING ITEMS SHALL BE REPLACED UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

- ALL COMPONENTS UP TO POST 5 (REPLACE)
- ALL BOLTS, WASHERS AND NUTS SHALL BE INCIDENTAL TO REPAIR.

INDIVIDUAL COMPONENTS

IF REPAIR IS ONLY FOR INDIVIDUAL COMPONENTS, SUCH AS POSTS, BLOCKS, IMPACT HEAD, CABLES, ETC., THEN REPLACEMENT OF THOSE COMPONENTS WILL BE NEGOTIATED AT THE ENGINEER'S REQUEST.

DEPARTMENT OF TRANSPORTATION

CONTRACT T201687901

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SOUTH DISTRICT

GUARDRAIL SAFETY IMPROVEMENTS & REPAIR, SOUTH, 2016

GUARDRAIL END TREATMENT ATTENUATOR TYPE II REPAIR
(SRT-350, FLEAT OR COMPARABLE BRAND)

LEVEL I REPAIR

A LEVEL I REPAIR FOR IMPACT ATTENUATOR TYPE II – SRT-350, FLEAT OR SIMILAR SHALL BE USED WHEN THE ATTENUATOR IS DAMAGED TO BUT NOT PAST THE SECOND POST, THE FOLLOWING ITEM SHALL BE REPLACED, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

- ALL COMPONENTS UP TO POST 3 (REPLACE)
- ALL BOLTS, WASHERS AND NUTS SHALL BE INCIDENTAL TO REPAIR.

LEVEL II REPAIR

A LEVEL II REPAIR FOR IMPACT ATTENUATOR TYPE II – SRT-350, FLEAT OR SIMILAR SHALL BE USED WHEN THE ATTENUATOR IS DAMAGED TO BUT NOT PAST THE THIRD POST, THE FOLLOWING ITEM SHALL BE REPLACED, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

- ALL COMPONENTS UP TO POST 5 (REPLACE)
- ALL BOLTS, WASHERS AND NUTS SHALL BE INCIDENTAL TO REPAIR.

INDIVIDUAL COMPONENTS

IF REPAIR IS ONLY FOR INDIVIDUAL COMPONENTS, SUCH AS POSTS, BLOCKS, IMPACT HEAD, CABLES, ETC., THEN REPLACEMENT OF THOSE COMPONENTS WILL BE NEGOTIATED AT THE ENGINEER'S REQUEST.

DELAWARE DEPARTMENT OF TRANSPORTATION

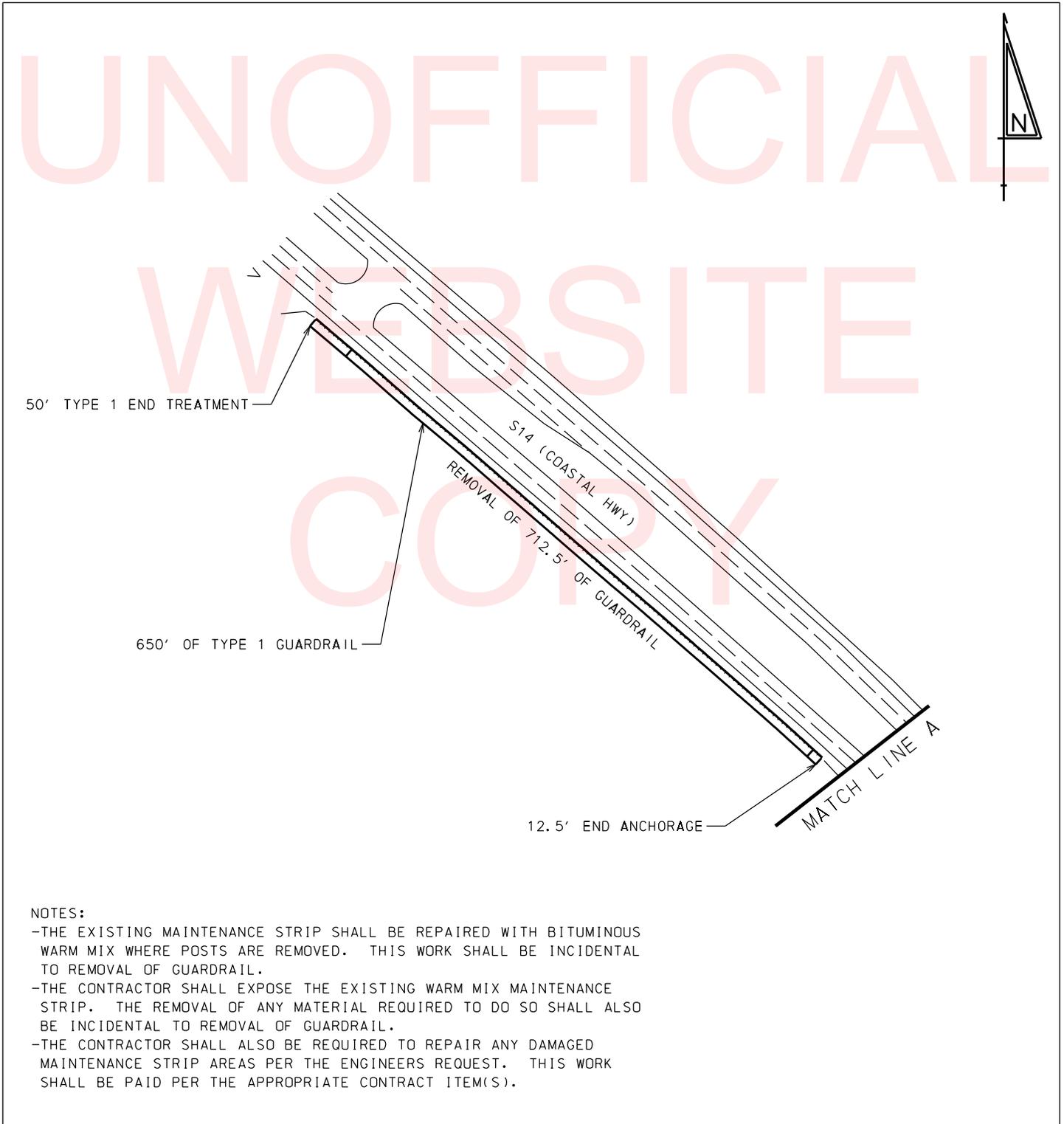
CONTRACT T201687901

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SOUTH DISTRICT

GUARDRAIL , SOUTH, 2016

LOCATION 2 - S14 (COASTAL HWY)
BETWEEN S258 (STEAMBOAT LANDING RD) AND S16 (BROADKILL RD)



NOTES:

- THE EXISTING MAINTENANCE STRIP SHALL BE REPAIRED WITH BITUMINOUS WARM MIX WHERE POSTS ARE REMOVED. THIS WORK SHALL BE INCIDENTAL TO REMOVAL OF GUARDRAIL.
- THE CONTRACTOR SHALL EXPOSE THE EXISTING WARM MIX MAINTENANCE STRIP. THE REMOVAL OF ANY MATERIAL REQUIRED TO DO SO SHALL ALSO BE INCIDENTAL TO REMOVAL OF GUARDRAIL.
- THE CONTRACTOR SHALL ALSO BE REQUIRED TO REPAIR ANY DAMAGED MAINTENANCE STRIP AREAS PER THE ENGINEERS REQUEST. THIS WORK SHALL BE PAID PER THE APPROPRIATE CONTRACT ITEM(S).

DELAWARE DEPARTMENT OF TRANSPORTATION

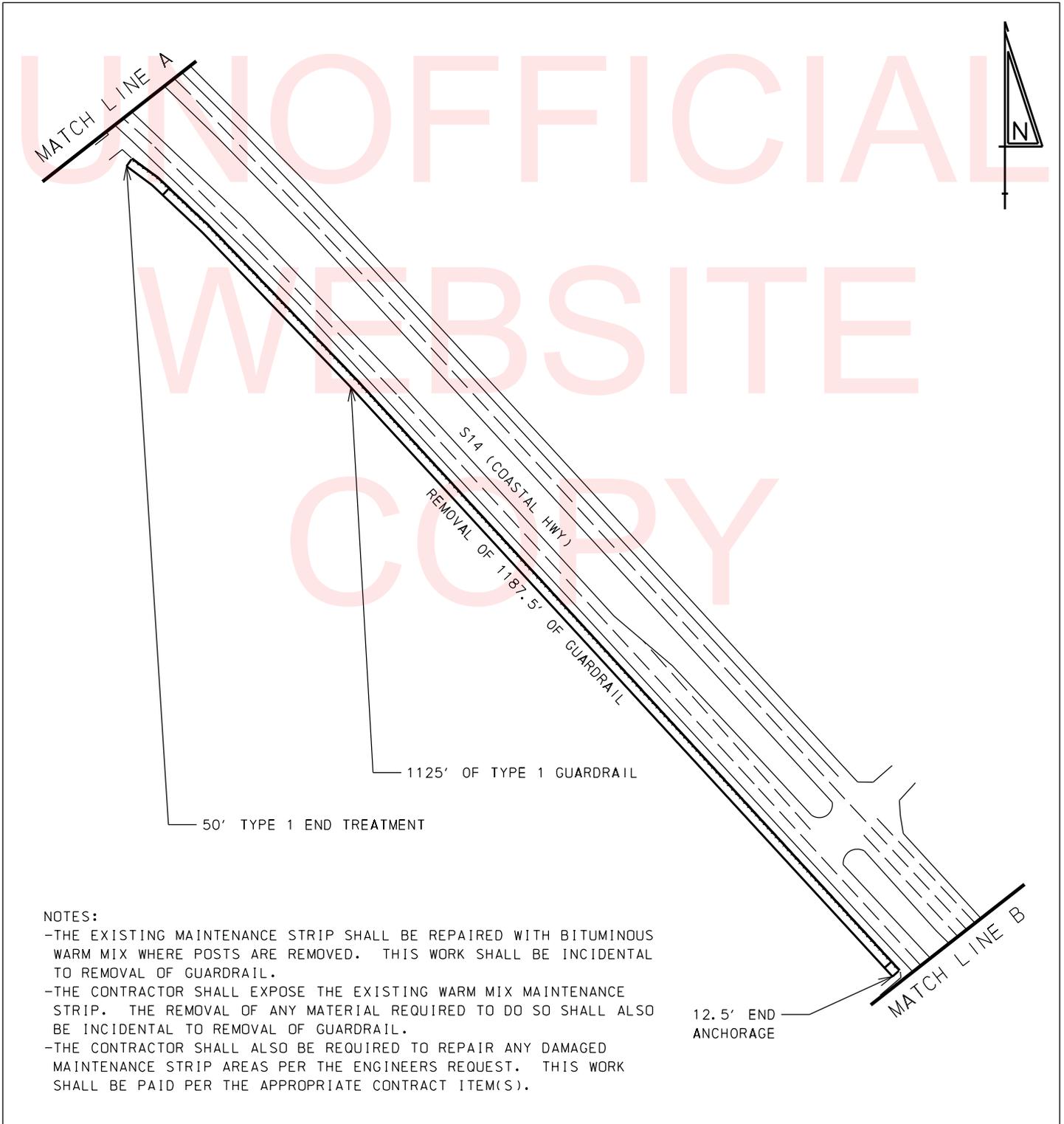
CONTRACT T201687901

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SOUTH DISTRICT

GUARDRAIL , SOUTH, 2016

LOCATION 2 - S14 (COASTAL HWY)
BETWEEN S258 (STEAMBOAT LANDING RD) AND S16 (BROADKILL RD)



NOTES:

- THE EXISTING MAINTENANCE STRIP SHALL BE REPAIRED WITH BITUMINOUS WARM MIX WHERE POSTS ARE REMOVED. THIS WORK SHALL BE INCIDENTAL TO REMOVAL OF GUARDRAIL.
- THE CONTRACTOR SHALL EXPOSE THE EXISTING WARM MIX MAINTENANCE STRIP. THE REMOVAL OF ANY MATERIAL REQUIRED TO DO SO SHALL ALSO BE INCIDENTAL TO REMOVAL OF GUARDRAIL.
- THE CONTRACTOR SHALL ALSO BE REQUIRED TO REPAIR ANY DAMAGED MAINTENANCE STRIP AREAS PER THE ENGINEERS REQUEST. THIS WORK SHALL BE PAID PER THE APPROPRIATE CONTRACT ITEM(S).

DELAWARE DEPARTMENT OF TRANSPORTATION

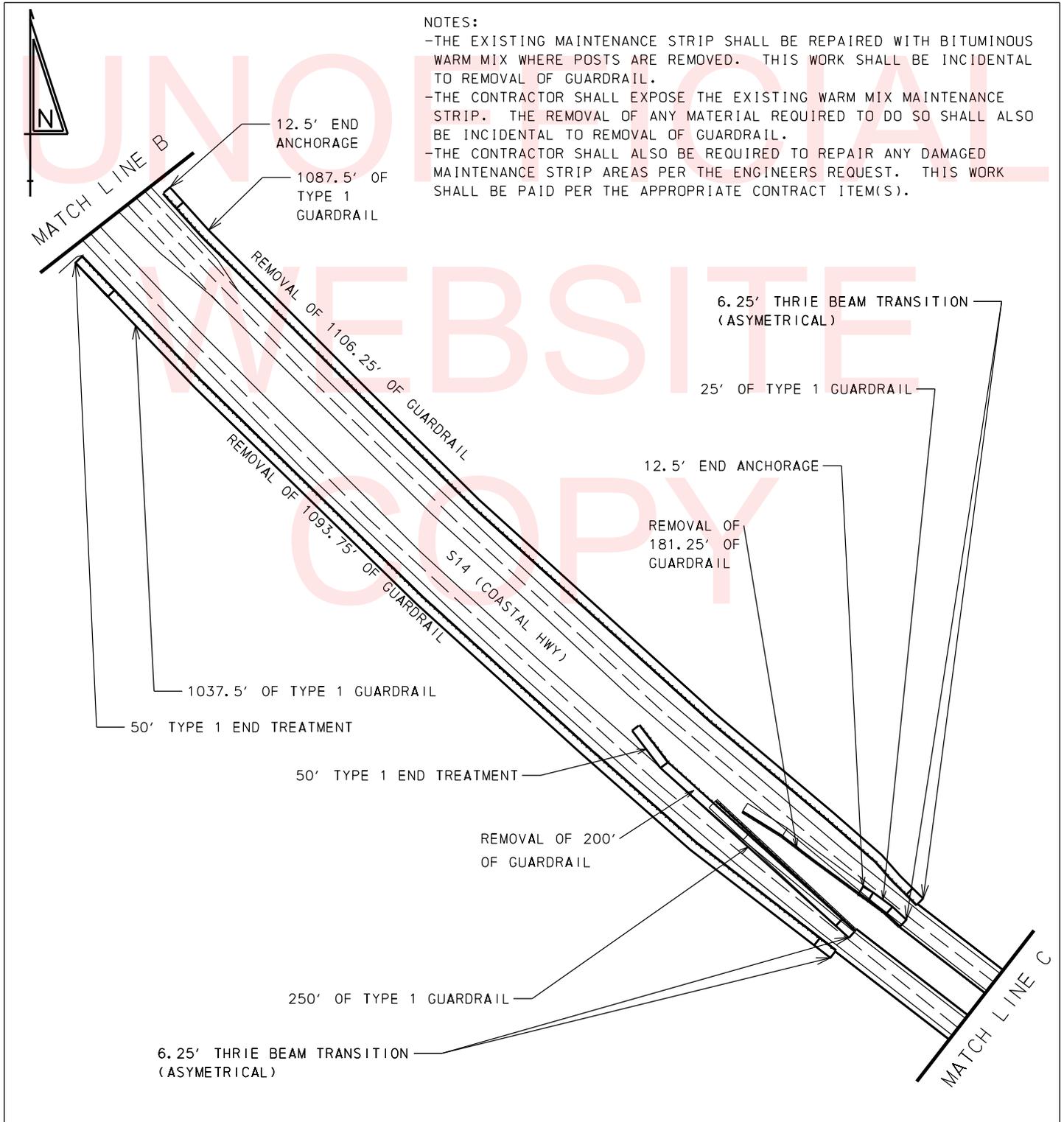
CONTRACT T201687901

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SOUTH DISTRICT

GUARDRAIL , SOUTH, 2016

LOCATION 2 - S14 (COASTAL HWY)
BETWEEN S258 (STEAMBOAT LANDING RD) AND S16 (BROADKILL RD)



DELAWARE DEPARTMENT OF TRANSPORTATION

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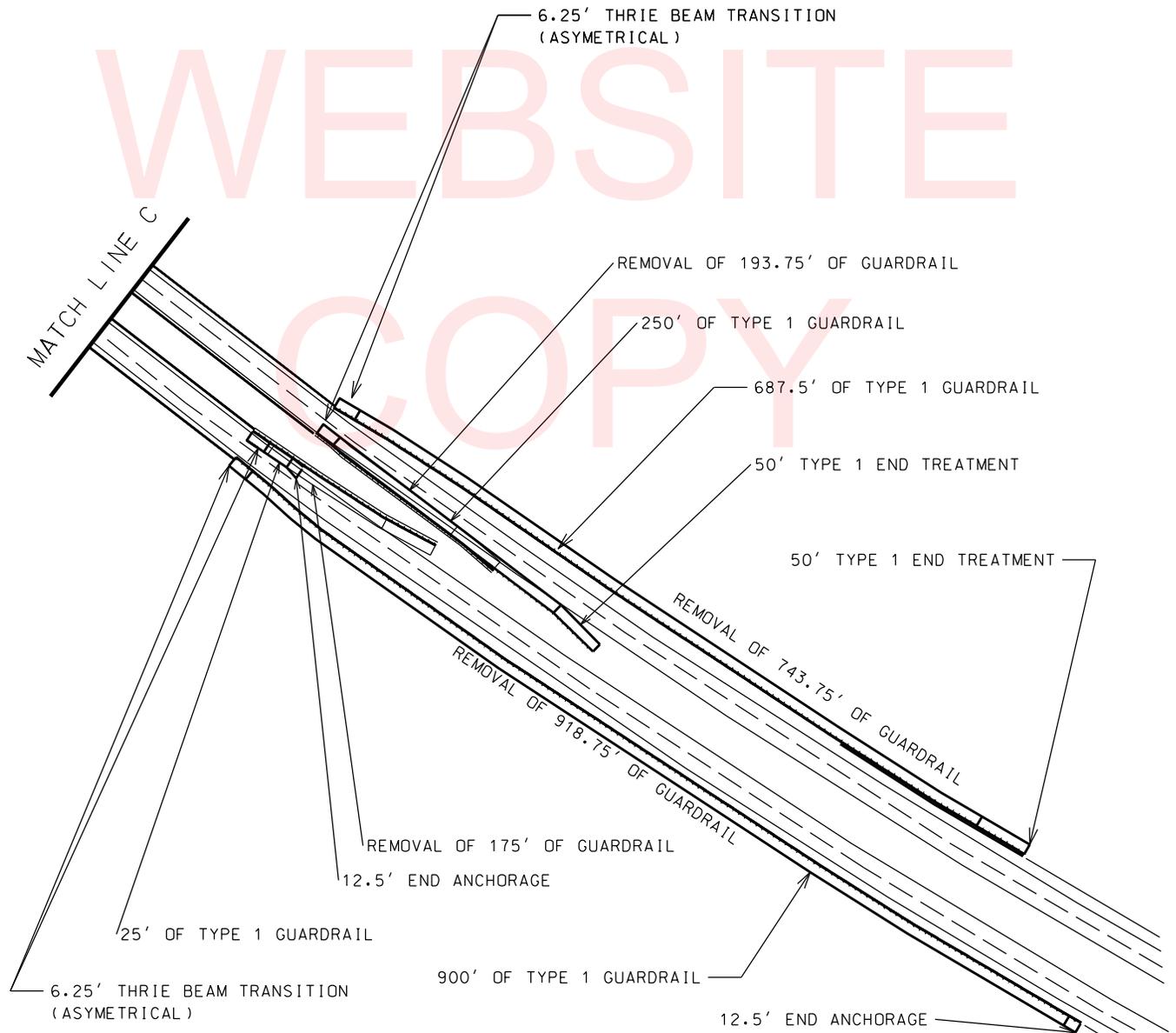
SOUTH DISTRICT

GUARDRAIL , SOUTH, 2016

LOCATION 2 - S14 (COASTAL HWY)
BETWEEN S258 (STEAMBOAT LANDING RD) AND S16 (BROADKILL RD)

NOTES:

- THE EXISTING MAINTENANCE STRIP SHALL BE REPAIRED WITH BITUMINOUS WARM MIX WHERE POSTS ARE REMOVED. THIS WORK SHALL BE INCIDENTAL TO REMOVAL OF GUARDRAIL.
- THE CONTRACTOR SHALL EXPOSE THE EXISTING WARM MIX MAINTENANCE STRIP. THE REMOVAL OF ANY MATERIAL REQUIRED TO DO SO SHALL ALSO BE INCIDENTAL TO REMOVAL OF GUARDRAIL.
- THE CONTRACTOR SHALL ALSO BE REQUIRED TO REPAIR ANY DAMAGED MAINTENANCE STRIP AREAS PER THE ENGINEERS REQUEST. THIS WORK SHALL BE PAID PER THE APPROPRIATE CONTRACT ITEM(S).



DELAWARE DEPARTMENT OF TRANSPORTATION

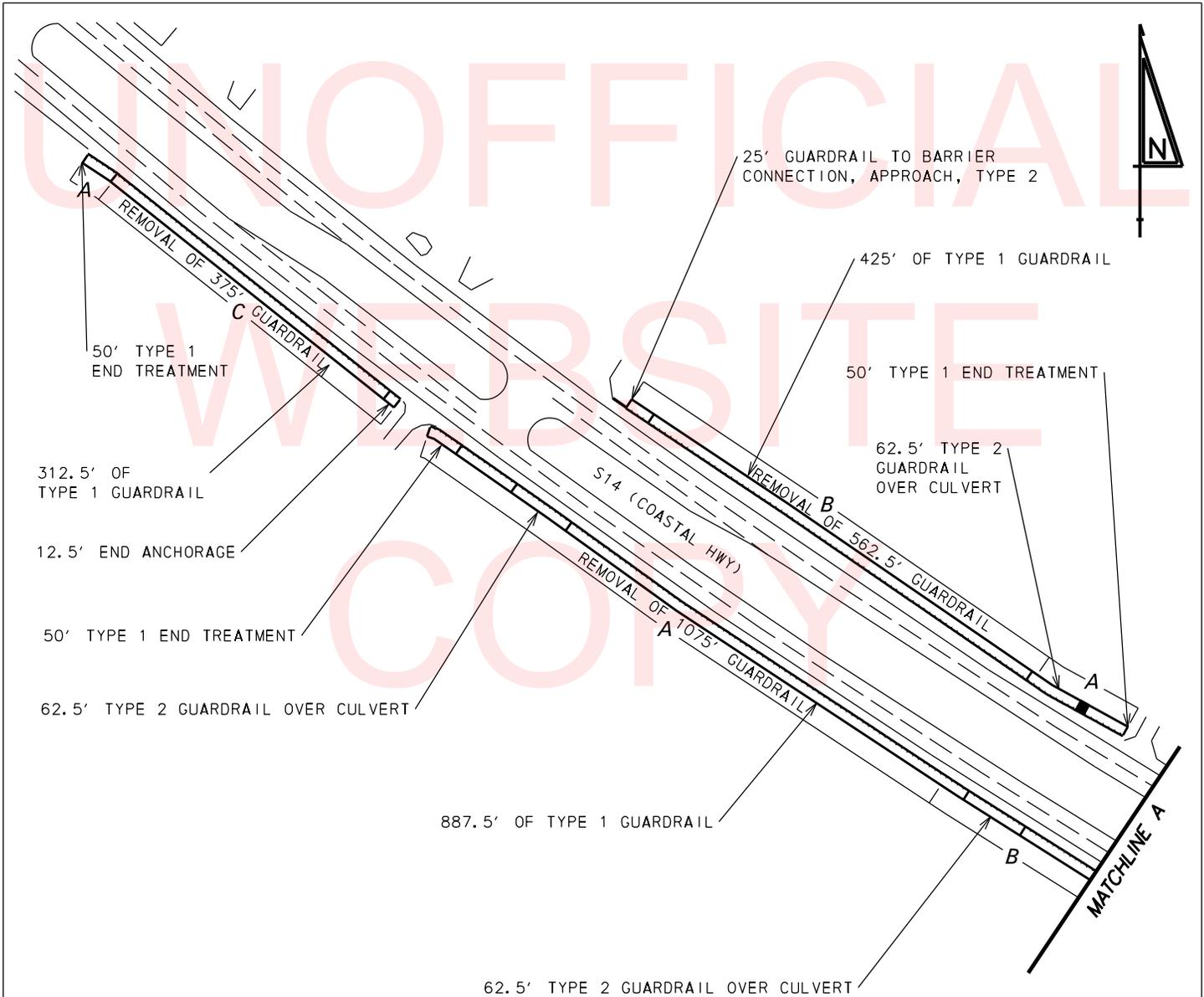
CONTRACT T201687901

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SOUTH DISTRICT

GUARDRAIL , SOUTH, 2016

LOCATION 3 - S14 (COASTAL HWY)
BETWEEN S265A (OLD MILL RD) AND S88 (CAVE NECK RD)



NOTES:

- THE EXISTING MAINTENANCE STRIP SHALL BE REPAIRED WITH BITUMINOUS WARM MIX WHERE POSTS ARE REMOVED. THIS WORK SHALL BE INCIDENTAL TO REMOVAL OF GUARDRAIL.
- THE CONTRACTOR SHALL REWORK THE MAINTENANCE STRIPS ON THIS LOCATION SIMILAR TO TYPES 'A', 'B', AND 'C' ON PAGE 20 OF THIS CONTRACT. THIS WORK SHALL BE PAID USING THE CONTRACT UNIT PRICING.
- THE CONTRACTOR SHALL ALSO BE REQUIRED TO REPAIR ANY DAMAGED MAINTENANCE STRIP AREAS PER THE ENGINEERS REQUEST. THIS WORK SHALL BE PAID PER THE APPROPRIATE CONTRACT ITEM(S).

DELAWARE DEPARTMENT OF TRANSPORTATION

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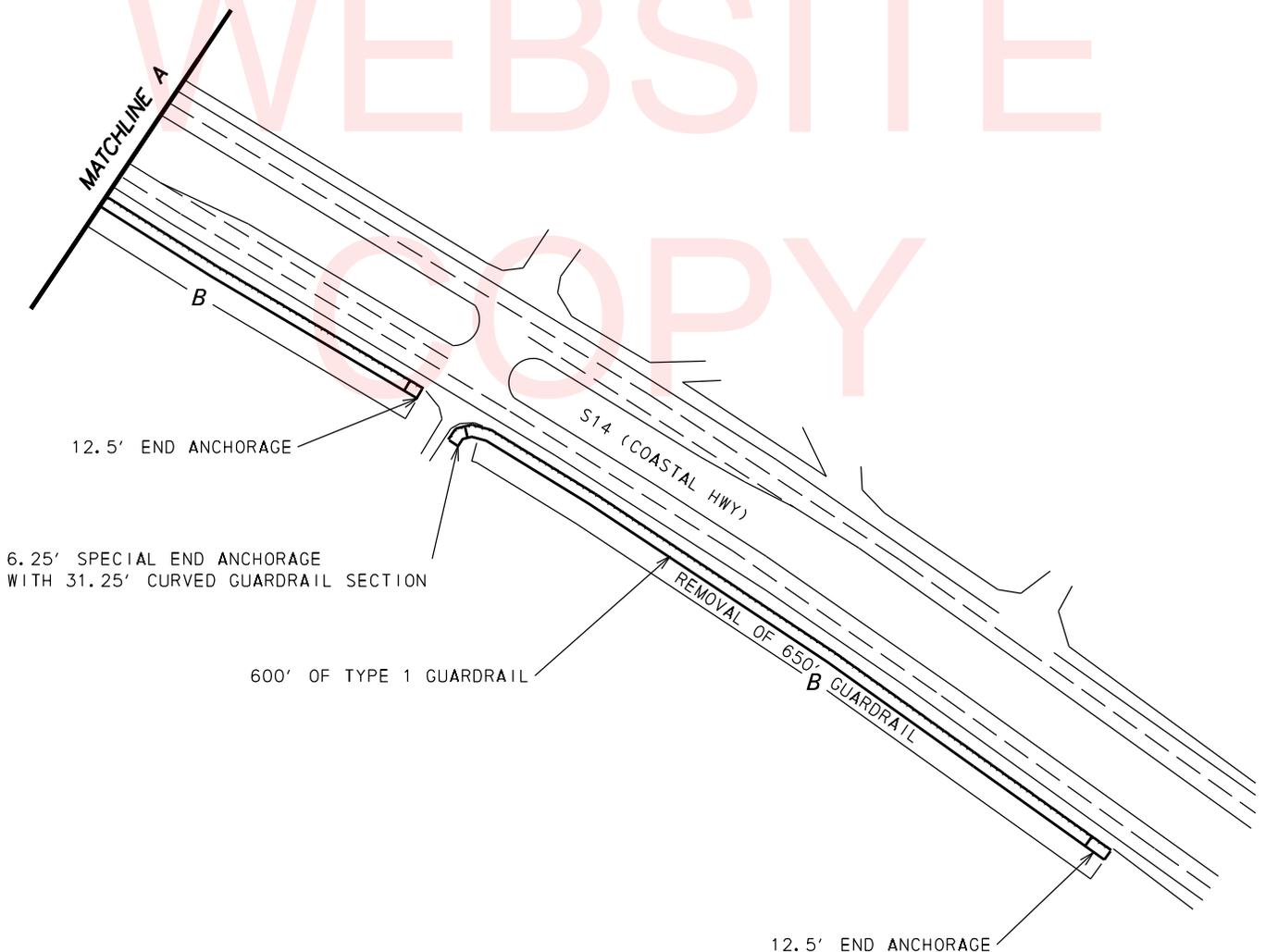
SOUTH DISTRICT

GUARDRAIL , SOUTH, 2016

LOCATION 3 - S14 (COASTAL HWY)
BETWEEN S265A (OLD MILL RD) AND S88 (CAVE NECK RD)

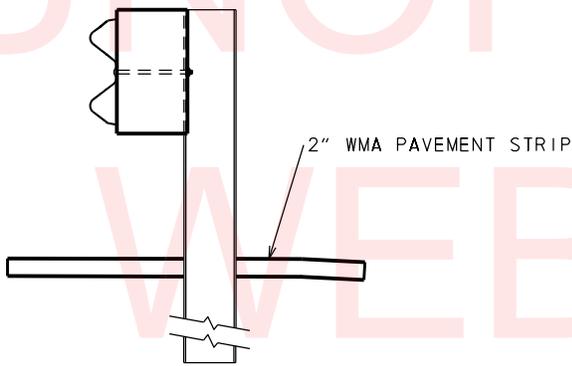
NOTES:

- THE EXISTING MAINTENANCE STRIP SHALL BE REPAIRED WITH BITUMINOUS WARM MIX WHERE POSTS ARE REMOVED. THIS WORK SHALL BE INCIDENTAL TO REMOVAL OF GUARDRAIL.
- THE CONTRACTOR SHALL REWORK THE MAINTENANCE STRIPS ON THIS LOCATION SIMILAR TO TYPES 'A', 'B', AND 'C' ON PAGE 20 OF THIS CONTRACT. THIS WORK SHALL BE PAID USING THE CONTRACT UNIT PRICING.
- THE CONTRACTOR SHALL ALSO BE REQUIRED TO REPAIR ANY DAMAGED MAINTENANCE STRIP AREAS PER THE ENGINEERS REQUEST. THIS WORK SHALL BE PAID PER THE APPROPRIATE CONTRACT ITEM(S).



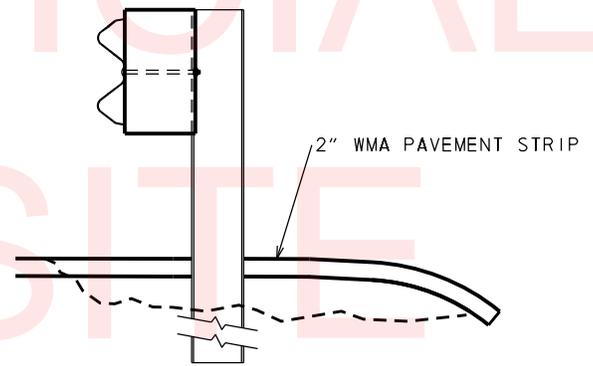
MAINTENANCE STRIP DETAILS

GUARDRAIL SECTION
MAINTENANCE STRIP TYPE A



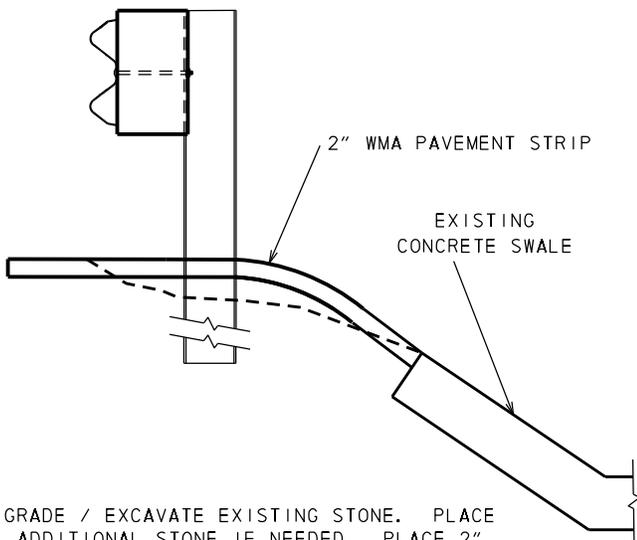
EXCAVATE 2" EXISTING MATERIAL OR AS NEEDED AND PLACE 2" TYPE C WARM MIX PAVEMENT AT A 4' WIDTH.

GUARDRAIL SECTION
MAINTENANCE STRIP TYPE B



PLACE APPROX 4" TO 6" OF STONE AS NEEDED TO FILL VOID AREAS AND PLACE 2" TYPE C WARM MIX PAVEMENT AT A 4' WIDTH.

GUARDRAIL SECTION
MAINTENANCE STRIP TYPE C



GRADE / EXCAVATE EXISTING STONE. PLACE ADDITIONAL STONE IF NEEDED. PLACE 2" TYPE C WARM MIX PAVEMENT AT A 4' WIDTH. TIE IN WARM MIX TO CONCRETE SWALE.

NOTE THAT THESE DETAILS DO NOT REPLACE ANY DETAILS OR GRADING REQUIREMENTS IN THE STANDARD CONSTRUCTION DETAILS. THESE DETAILS REPRESENT THE APPROXIMATE EXISTING CONDITIONS AND METHOD OF REPAIR. THE EXISTING MAINTENANCE STRIPS VARY IN CONDITION. THE INTENT IS TO PROVIDE A SOLIDLY CONSTRUCTED 2" WARM MIX STRIP TO PREVENT EROSION AND MEET THE STANDARD GRADING REQUIREMENTS.

DELAWARE DEPARTMENT OF TRANSPORTATION

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SOUTH
MAINTENANCE

GUARDRAIL SAFETY IMPROVEMENTS & REPAIR, SOUTH, 2016

LOCATION 1 (VARIOUS LOCATIONS THROUGHOUT SUSSEX COUNTY) FROM TO

LENGTH

GENERAL IMPROVEMENTS

REPAIR LOCATIONS - OPEN END

COMMENTS:

UNOFFICIAL

MATERIAL ESTIMATE FOR LOCATION 1

209006	BORROW, TYPE F	50.00 C.Y.
211002	REMOVAL OF STRUCTURES AND OBSTRUCTIONS (GUARDRAIL)	500.00 L.F.
302005	GRADED AGGREGATE BASE COURSE, TYPE B	50.00 TON
401800	BITUMINOUS CONCRETE, SUPERPAVE, TYPE C, 115 GYRATIONS, PG 64-22 (CARBONATE STONE)	20.00 TON
720005	STEEL RAIL ELEMENT, STRAIGHT	200.00 L.F.
720007	GALVANIZED STEEL POSTS	50.00 EACH
720010	TREATED WOOD BLOCK	50.00 EACH
720041	REFLECTORIZED WASHERS	50.00 EACH
720043	GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-27	200.00 L.F.
720050	GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31	200.00 L.F.
720051	GALVANIZED STEEL BEAM GUARDRAIL, TYPE 2-31	200.00 L.F.
720052	GALVANIZED STEEL BEAM GUARDRAIL, TYPE 3-31	200.00 L.F.
720055	CURVED GUARDRAIL SECTION	50.00 L.F.
720585	GUARDRAIL END TREATMENT ATTENUATOR, TYPE 1-31	4.00 EACH
720586	GUARDRAIL END TREATMENT ATTENUATOR,TYPE 2-31	4.00 EACH
720591	END ANCHORAGE REPAIR	1.00 L.S.
720595	GUARDRAIL END TREATMENT ATTENUATOR,TYPE 1, LEVEL I REPAIR	3.00 EACH
720596	GUARDRAIL END TREATMENT ATTENUATOR,TYPE 1, LEVEL II REPAIR	3.00 EACH
720597	GUARDRAIL END TREATMENT ATTENUATOR,TYPE 2, LEVEL I REPAIR	3.00 EACH
720598	GUARDRAIL END TREATMENT ATTENUATOR,TYPE 2, LEVEL II REPAIR	3.00 EACH
720603	REMOVE AND RESET GALVANIZED STEEL POST AND OFFSET BLOCK	100.00 EACH
725503	GUARDRAIL TO BARRIER CONNECTION (APPROACH TYPE) REPAIR	1.00 L.S.
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	16.00 EA-DY
743024	TEMPORARY WARNING SIGNS AND PLAQUES	100.00 EA-DY
743052	FLAGGER, SUSSEX COUNTY, STATE	100.00 HOUR
743064	FLAGGER, SUSSEX COUNTY, STATE, OVERTIME	20.00 HOUR

WEBSITE

COPY

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT T201687901

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SOUTH
MAINTENANCE

GUARDRAIL SAFETY IMPROVEMENTS & REPAIR, SOUTH, 2016

LOCATION 1 (VARIOUS LOCATIONS THROUGHOUT SUSSEX COUNTY) FROM TO

LENGTH

GENERAL IMPROVEMENTS

REPAIR LOCATIONS - OPEN END

COMMENTS:

UNOFFICIAL

763615	JOB ORDER MOBILIZATION, SUSSEX COUNTY	MATERIAL ESTIMATE FOR LOCATION 1	5.00 EACH
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WEBSITE

COPY

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT T201687901

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SOUTH
MAINTENANCE

GUARDRAIL SAFETY IMPROVEMENTS & REPAIR, SOUTH, 2016

LOCATION 2 14(COASTAL HIGHWAY) FROM S258 (STEAMBOAT LANDING RD) TO S16
(BROADKILL RD)

LENGTH

GENERAL IMPROVEMENTS

GUARDRAIL SAFETY IMPROVEMENTS

COMMENTS:

UNOFFICIAL

MATERIAL ESTIMATE FOR LOCATION 2

202000	EXCAVATION AND EMBANKMENT	50.00 C.Y.
211002	REMOVAL OF STRUCTURES AND OBSTRUCTIONS (GUARDRAIL)	6,512.50 L.F.
302005	GRADED AGGREGATE BASE COURSE, TYPE B	60.00 TON
401800	BITUMINOUS CONCRETE, SUPERPAVE, TYPE C, 115 GYRATIONS, PG 64-22 (CARBONATE STONE)	48.00 TON
720023	GALVANIZED TRANSITION SECTION, THRIE BEAM	8.00 EACH
720050	GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31	6,037.50 L.F.
720585	GUARDRAIL END TREATMENT ATTENUATOR, TYPE 1-31	6.00 EACH
726001	END ANCHORAGE 31	6.00 EACH
743003	ARROWPANELS, TYPE C	15.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	15.00 EA-DY
743024	TEMPORARY WARNING SIGNS AND PLAQUES	120.00 EA-DY

WEBSITE
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DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT T201687901

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SOUTH
MAINTENANCE

GUARDRAIL SAFETY IMPROVEMENTS & REPAIR, SOUTH, 2016

LOCATION 3 14(COASTAL HIGHWAY) FROM S265A (OLD MILL RD) TO S88 (CAVE NECK RD)

LENGTH km MILE

GENERAL IMPROVEMENTS

GUARDRAIL SAFETY IMPROVEMENTS

COMMENTS:

MATERIAL ESTIMATE FOR LOCATION 3

202000	EXCAVATION AND EMBANKMENT	35.00 C.Y.
211002	REMOVAL OF STRUCTURES AND OBSTRUCTIONS (GUARDRAIL)	2,662.50 L.F.
302005	GRADED AGGREGATE BASE COURSE, TYPE B	240.00 TON
401800	BITUMINOUS CONCRETE, SUPERPAVE, TYPE C, 115 GYRATIONS, PG 64-22 (CARBONATE STONE)	145.00 TON
720050	GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31	2,225.00 L.F.
720054	GUARDRAIL OVER CULVERTS, TYPE 2-31	3.00 EACH
720055	CURVED GUARDRAIL SECTION	31.25 L.F.
720585	GUARDRAIL END TREATMENT ATTENUATOR, TYPE 1-31	3.00 EACH
725003	GUARDRAIL TO BARRIER CONNECTION, APPROACH TYPE 2-31	1.00 EACH
726001	END ANCHORAGE 31	3.00 EACH
726004	ENTRANCE SPECIAL END ANCHORAGE	1.00 EACH
743003	ARROWPANELS, TYPE C	10.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	10.00 EA-DY
743024	TEMPORARY WARNING SIGNS AND PLAQUES	80.00 EA-DY

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT: T201687901

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SOUTH GUARDRAIL SAFETY IMPROVEMENTS & REPAIR, SOUTH, 2016
MAINTENANCE

CONTRACT QUANTITIES SUMMARY SHEET

202000	EXCAVATION AND EMBANKMENT	85.00 C.Y.
209006	BORROW, TYPE F	50.00 C.Y.
211002	REMOVAL OF STRUCTURES AND OBSTRUCTIONS (GUARDRAIL)	9,675.00 L.F.
302005	GRADED AGGREGATE BASE COURSE, TYPE B	350.00 TON
401800	BITUMINOUS CONCRETE, SUPERPAVE, TYPE C, 115 GYRATIONS, PG 64-22 (CARBONATE STONE)	213.00 TON
720005	STEEL RAIL ELEMENT, STRAIGHT	200.00 L.F.
720007	GALVANIZED STEEL POSTS	50.00 EACH
720010	TREATED WOOD BLOCK	50.00 EACH
720023	GALVANIZED TRANSITION SECTION, THRIE BEAM	8.00 EACH
720041	REFLECTORIZED WASHERS	50.00 EACH
720043	GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-27	200.00 L.F.
720050	GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31	8,462.50 L.F.
720051	GALVANIZED STEEL BEAM GUARDRAIL, TYPE 2-31	200.00 L.F.
720052	GALVANIZED STEEL BEAM GUARDRAIL, TYPE 3-31	200.00 L.F.
720054	GUARDRAIL OVER CULVERTS, TYPE 2-31	3.00 EACH
720055	CURVED GUARDRAIL SECTION	81.25 L.F.
720585	GUARDRAIL END TREATMENT ATTENUATOR, TYPE 1-31	13.00 EACH
720586	GUARDRAIL END TREATMENT ATTENUATOR,TYPE 2-31	4.00 EACH
720591	END ANCHORAGE REPAIR	1.00 L.S.
720595	GUARDRAIL END TREATMENT ATTENUATOR,TYPE 1, LEVEL I REPAIR	3.00 EACH
720596	GUARDRAIL END TREATMENT ATTENUATOR,TYPE 1, LEVEL II REPAIR	3.00 EACH
720597	GUARDRAIL END TREATMENT ATTENUATOR,TYPE 2, LEVEL I REPAIR	3.00 EACH
720598	GUARDRAIL END TREATMENT ATTENUATOR,TYPE 2, LEVEL II REPAIR	3.00 EACH
720603	REMOVE AND RESET GALVANIZED STEEL POST AND OFFSET BLOCK	100.00 EACH
725003	GUARDRAIL TO BARRIER CONNECTION, APPROACH TYPE 2-31	1.00 EACH
725503	GUARDRAIL TO BARRIER CONNECTION (APPROACH TYPE) REPAIR	1.00 L.S.
726001	END ANCHORAGE 31	9.00 EACH
726004	ENTRANCE SPECIAL END ANCHORAGE	1.00 EACH

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT: T201687901

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SOUTH
MAINTENANCE

GUARDRAIL SAFETY IMPROVEMENTS & REPAIR, SOUTH, 2016

CONTRACT QUANTITIES SUMMARY SHEET

743003	ARROWPANELS, TYPE C	25.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	41.00 EA-DY
743024	TEMPORARY WARNING SIGNS AND PLAQUES	300.00 EA-DY
743052	FLAGGER, SUSSEX COUNTY, STATE	100.00 HOUR
743064	FLAGGER, SUSSEX COUNTY, STATE, OVERTIME	20.00 HOUR
763000	INITIAL EXPENSE	LUMP SUM
763615	JOB ORDER MOBILIZATION, SUSSEX COUNTY	5.00 EACH

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