

STATE OF DELAWARE



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

CONTRACT NO: T201487901 P3E NO: 14-44002

CONTRACT TITLE: GUARDRAIL SAFETY IMPROVEMENTS &
REPAIR, SOUTH, 2014

PLANS PREPARED BY: GRANT PARKER (DESIGN TECHNICIAN)

PLANS REVIEWED BY: Simon Wyatt DATE: 11/05/13
MAINT. SUPPORT MANAGER

<p>DATE RECOMMENDED: _____</p> <p>ASSISTANT MAINT. ENGINEER: _____</p>	
<p>DATE RECOMMENDED: <u>11-5-13</u></p> <p>MAINTENANCE ENGINEER: <u>[Signature]</u></p>	
<p>DATE APPROVED: <u>11/5/13</u></p> <p>SOUTH DISTRICT ENGINEER: <u>[Signature]</u></p>	

SOUTH DISTRICT

GUARDRAIL SAFETY IMPROVEMENTS & REPAIR, SOUTH, 2013

CONTRACT DESCRIPTION

THIS CONTRACT IS INTENDED TO REPLACE GUARDRAIL END TREATMENTS, BRIDGE ATTACHMENTS AND ALL OTHER GUARDRAIL COMPONENTS AS WELL AS PLACING NEW COMPONENTS ON UNPROTECTED BRIDGES AND STRUCTURES AS NOTED HEREIN THE CONTRACT PLANS. 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, 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. 2-7) WILL BE 25 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 (UNKNOWN LOCATION) 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.

DEPARTMENT OF TRANSPORTATION

CONTRACT T201487901

PAGE 3 OF 30

SOUTH DISTRICT

GUARDRAIL SAFETY IMPROVEMENTS & REPAIR, SOUTH, 2013

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. ACCESS TO ALL BUSINESSES AND RESIDENCES WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THIS CONTRACT. ANY TEMPORARY CLOSURE OF A DRIVEWAY FOR TIE-IN PURPOSES SHALL BE COORDINATED WITH THE ENGINEER AND/OR PROPERTY OWNER IN ADVANCE OF THE CLOSURE.
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.

DEPARTMENT OF TRANSPORTATION

CONTRACT T201487901

PAGE 4 OF 30

SOUTH DISTRICT

GUARDRAIL SAFETY IMPROVEMENTS & REPAIR, SOUTH, 2013

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 USE OF A GRADER ON EXISTING SHOULDERS OR EDGE DROP-OFFS AND THE GRADING OF TOPSOIL, MODIFIED, SHALL BE AS DIRECTED BY THE ENGINEER.
13. 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.
14. THE CONTRACTOR SHALL NOT REMOVE ANY EXISTING GUARDRAIL OR END SECTIONS WHILE LEAVING THE LOCATION SITE UNPROTECTED UNLESS USE OF PORTABLE BARRIER / CRASH CUSHIONS ARE USED IN ACCORDANCE WITH THE TRAFFIC CONTROL MANUAL SECTION 6F.85 & 6F.86, THIS WORK SHALL BE INCIDENTAL TO THE WORK IT PROTECTS.
15. 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.*
16. ALL CONCRETE ANCHOR BLOCKS LEFT FROM TWISTED END TREATMENTS OR END ANCHORAGES SHALL BE REMOVED AND PAID AS INCIDENTAL TO ITEM 211002, REMOVAL OF STRUCTURES AND OBSTRUCTIONS (GUARDRAIL). VOIDS SHALL BE FILLED WITH ITEM 302005 – GABC OR AS DIRECTED BY THE INSPECTOR.
17. PAYMENT SHALL BE MADE UNDER ITEM #302005 – GABC TYPE B FOR BACKFILL OF EXISTING GUARDRAIL POST HOLES, LOW GRADES, AND BACKFILL ANY CONCRETE ANCHOR HOLES WHERE TWISTED-END / END TREATMENT SECTIONS ARE REMOVED AND THE ANCHOR BLOCKS ARE DEEMED TO ALSO BE REMOVED.
18. 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 PAID INCIDENTAL TO ITEM #211002.

DEPARTMENT OF TRANSPORTATION

CONTRACT T201487901

PAGE 5 OF 30

SOUTH DISTRICT

GUARDRAIL SAFETY IMPROVEMENTS & REPAIR, SOUTH, 2013

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. DAMAGE CAUSED BY THE CONTRACTOR TO EXISTING HOT MIX MAINTENANCE STRIPS SHALL BE REPAIRED INCIDENTAL TO ITEM # 211002, REMOVAL OF STRUCTURES AND OBSTRUCTIONS (GUARDRAIL).
21. 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.
22. 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.
23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ANY TREES OR BRUSH WITHIN 4' OF THE BACK OF THE EXISTING OR PROPOSED GUARDRAIL AND SHALL BE INCIDENTAL TO THE GUARDRAIL ITEM BEING INSTALLED.
24. 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.
25. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND CURVED RADIUS SECTIONS FOR PROPER FIT PRIOR TO INSTALLING GUARDRAIL.
26. MAINTENANCE STRIPS SHALL EXTEND PAST GUARDRAIL TO ENSURE ACCEPTABLE APPROACH SLOPES PER DELDOT STANDARD DETAILS.
27. 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.
28. 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 DUE TO WEATHER OR ANY OTHER REASON.

DEPARTMENT OF TRANSPORTATION

CONTRACT T201487901

PAGE 6 OF 30

SOUTH DISTRICT

GUARDRAIL SAFETY IMPROVEMENTS & REPAIR, SOUTH, 2013

MAINTENANCE OF TRAFFIC

1. WORK SHALL BE PERFORMED IN A MANNER THAT WILL ENSURE THE LEAST PRACTICAL OBSTRUCTION TO THE TRAVELING PUBLIC, CONSISTENT WITH SAFETY STANDARDS AND SHALL COMPLY WITH THE REQUIREMENTS OF THE 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).
2. THE CONTRACTOR SHALL SUBMIT THE PROPOSED TRAFFIC PLANS FOR ALL KNOWN LOCATIONS TO THE SOUTH DISTRICT SAFETY OFFICER FOR APPROVAL PRIOR TO RECEIVING THE NOTICE TO PROCEED.
3. THE CONTRACTOR SHALL SUBMIT THE PROPOSED TRAFFIC PLANS FOR EACH WORK-ORDER ISSUED LOCATION TO THE SOUTH DISTRICT SAFETY OFFICER FOR APPROVAL PRIOR TO THE START OF WORK ON THAT LOCATION.
4. 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.
5. ALL TRAFFIC CONTROL DEVICES SHALL BE IN NEW OR REFURBISHED CONDITION AND SHALL BE IN COMPLIANCE WITH THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND MASH AS DEFINED IN SECTION "6A.01" OF THE MANUAL. THE DEVICES SHALL BE APPROVED BY THE ENGINEER PRIOR TO USE AND SHALL BE MAINTAINED IN GOOD CONDITION FOR THE DURATION OF THE CONTRACT.
6. THE HORIZONTAL CIRCUMFERENTIAL MARKINGS ON PLASTIC DRUMS SHALL BE MADE OF FLUORESCENT ORANGE AND WHITE PRISMATIC RETRO REFLECTIVE SHEETING.
7. THE CONTRACTOR, WITH THE ENGINEER, SHALL INVENTORY ALL SIGNS ON ALL ROADS SUBJECT TO IMPROVEMENTS. NECESSARY SIGNS SHALL BE MAINTAINED IN OPERATION DURING CONSTRUCTION AND ANY OTHER SIGNS SHALL BE PROPERLY STORED WITH THE CONTRACTOR, WHO SHALL BE RESPONSIBLE FOR LOSS OR DAMAGE. IMMEDIATELY PRIOR TO FINAL INSPECTION, THE CONTRACTOR AND ENGINEER SHALL AGAIN INVENTORY THE TRAFFIC SIGNS AND ACCOUNT FOR ANY LOST OR DAMAGED SIGNS.
8. 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.
9. 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 THE APPLICABLE TA OF THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES OR TO THE SATISFACTION OF THE ENGINEER AND SHALL BE ADA COMPLIANT. THE COST FOR ANY PROVISIONS SHALL BE INCIDENTAL TO THE WORK.
10. WHEN SIDE ROADS INTERSECT THE WORK ZONE, ADDITIONAL TRAFFIC CONTROL DEVICES SHALL BE ERECTED INCLUDING PERMANENT AND TEMPORARY WARNING SIGNS.
11. ALL ROADWAY EXCAVATION IN OR ADJACENT TO TRAVELWAYS SHALL BE PROPERLY BACKFILLED AT THE END OF EACH DAY PRIOR TO TRAFFIC RETURNING TO UNRESTRICTED TRAVEL PER SECTION 6G.20 OF THE TRAFFIC CONTROL MANUAL. THIS INCLUDES ALL UTILITIES AND/OR OBSTACLES WITHIN OR ADJACENT TO THE TRAVELWAYS AS OUTLINED IN THE TRAFFIC CONTROL MANUAL.

DEPARTMENT OF TRANSPORTATION

CONTRACT T201487901

PAGE 7 OF 30

SOUTH DISTRICT

GUARDRAIL SAFETY IMPROVEMENTS & REPAIR, SOUTH, 2013

OPEN END REPAIR NOTES

1. 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.
2. 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.
3. 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.
4. 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.
5. 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.
6. 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.
7. BACKFILL 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 BID ITEMS. 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*.
8. 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.
9. 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.

DEPARTMENT OF TRANSPORTATION

CONTRACT T201487901

PAGE 8 OF 30

SOUTH DISTRICT

GUARDRAIL SAFETY IMPROVEMENTS & REPAIR, SOUTH, 2013

OPEN END REPAIR NOTES cont.

10. EXECUTION OF EACH WORK-ORDER GROUP IS TO BEGIN WITHIN FIVE (5) DAYS OF ITS BEING ISSUED TO THE CONTRACTOR, UNLESS REQUIRED MATERIALS ARE NOT AVAILABLE, AND WORK SHALL BE COMPLETED WITHIN FIVE (5) WORKING DAYS. FOR EXAMPLE, WORK ASSOCIATED WITH A WORK-ORDER GROUP ISSUED ON A MONDAY SHALL BEGIN THE FOLLOWING MONDAY AND BE COMPLETED BY THE END OF THAT FRIDAY. 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 FIVE (5) WORKING DAYS. CONTRACTOR SHALL PRESENT SHIPPING TICKETS, WHICH UPON VERIFICATION, BY THE DISTRICT, WILL ESTABLISH THE DATE OF MATERIAL AVAILABILITY FOR *ITEMS 720585 AND 720586*, AND FOR ANY OTHER PREVIOUSLY UNAVAILABLE ITEMS.
11. IF WORK DOES NOT COMMENCE, OR NON-AVAILABILITY OF MATERIALS IS NOT PRESENTED, IN WRITING, WITHIN THE SPECIFIED FIVE (5) WORKING DAYS, TIME CHARGES EQUAL TO LIQUIDATED DAMAGES FOR THE WORK-ORDER GROUP SHALL COMMENCE. IF THERE IS A VERIFIED NON-AVAILABILITY OF MATERIALS, TIME CHARGES SHALL COMMENCE ON THE FIFTH (5TH) WORKING DAY FOLLOWING THE DELIVERY DATE.
12. FAILURE TO COMPLETE A WORK GROUP 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 WORK-ORDER GROUP IS TO BE COMPLETED WITHIN FIVE (5) WORKING DAYS. ADDITIONAL ITEMS AND/OR WORKING DAYS MAY BE ADDED TO ANY WORK-ORDER AS NEEDED, AT THE DISCRETION OF THE ENGINEER. IF WORK ON A SPECIFIC WORK-ORDER GROUP IS NOT COMPLETED WITHIN THE ALLOTTED TIME, LIQUIDATED DAMAGES WILL BE ASSESSED IN ACCORDANCE WITH SUBSECTION 108.09 BASED ON THE TOTAL VALUE OF THAT WORK-ORDER GROUP.
13. A SEMI-FINAL INSPECTION WILL BE PERFORMED ON EACH WORK-ORDER GROUP AFTER THE DEPARTMENT RECEIVES COPIES OF THE COMPLETED WORK-ORDERS FROM THE CONTRACTOR. ALL WORK MUST MEET THE DEPARTMENT'S SPECIFICATIONS, THE REQUIREMENTS AS OUTLINED IN THIS CONTRACT, AND THE MANUFACTURER'S SPECIFICATIONS PERTAINING TO GUARDRAIL END TREATMENTS (WHEN APPLICABLE) BEFORE THEY CAN BE CONSIDERED COMPLETE. IF ALL THE WORK-ORDERS ARE SATISFACTORILY COMPLETED, THE WORK WILL BE ACCEPTED BY THE DEPARTMENT, AT WHICH TIME THAT WORK-ORDER GROUP WILL BE CONSIDERED CLOSED.

DEPARTMENT OF TRANSPORTATION

CONTRACT T201487901

PAGE 9 OF 30

SOUTH DISTRICT

GUARDRAIL SAFETY IMPROVEMENTS & REPAIR, SOUTH, 2013

REPAIR TYPES

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

LEVEL I REPAIR

A LEVEL I REPAIR FOR THE 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:

PC 985 A	GUARDRAIL EXTRUDER	(REUSE)
PC 782 G	BEARING PLATE	(REUSE)
PC 3000 G	ASSEMBLY CABLE	(REUSE)
PC 9852 A	STRUT	(REUSE)
PC 704 A	CABLE ANCHOR	(REUSE)
PC 62 G	DEEP BEAM GUARDRAIL	(REPLACE)
PC 4147 B	WOOD POST	(REPLACE)

ALL BOLTS, WASHERS AND NUTS SHALL BE INCIDENTAL TO REPAIR.

LEVEL II REPAIR

A LEVEL II REPAIR FOR THE 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 ITEMS SPECIFIED IN LEVEL I REPAIR PLUS THE FOLLOWING:

PC 4075 B	WOOD BLOCK	(REPLACE)
-----------	------------	-----------

ALL BOLTS, WASHERS AND NUTS SHALL BE INCIDENTAL TO REPAIR.

DEPARTMENT OF TRANSPORTATION

CONTRACT T201487901

PAGE 10 OF 30

SOUTH DISTRICT

GUARDRAIL SAFETY IMPROVEMENTS & REPAIR, SOUTH, 2013

GUARDRAIL END TREATMENT ATTENUATOR TYPE II (SRT-350, 6 & 8 POST OR COMPARABLE BRAND)

LEVEL I REPAIR

A LEVEL I REPAIR FOR IMPACT ATTENUATOR TYPE II – SRT-350 (BOTH 6 AND 8 POST) 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.

- PC 923 G 12/BARRIER/98' (TERMINAL)
- PC 9852 A STRUT ASSEMBLY
- PC 3000 G 3/4 X 6'6" CABLE
- PC 700 A CABLE ANCHOR BRACKET
- PC 36 BACK UP PLATE
- PC 4147 B 3'9" POST 51/2" X 71/2"
- PC 775 G 5/8" X 6" X 8" BEARING PLATE
- PC 705 G 2"OD X 51/2" PIPE
- PC 34 G 12/12'6/5 SRT 1 (GUARDRAIL)

ALL BOLTS, WASHERS AND NUTS SHALL BE INCIDENTAL TO REPAIR.

LEVEL II REPAIR

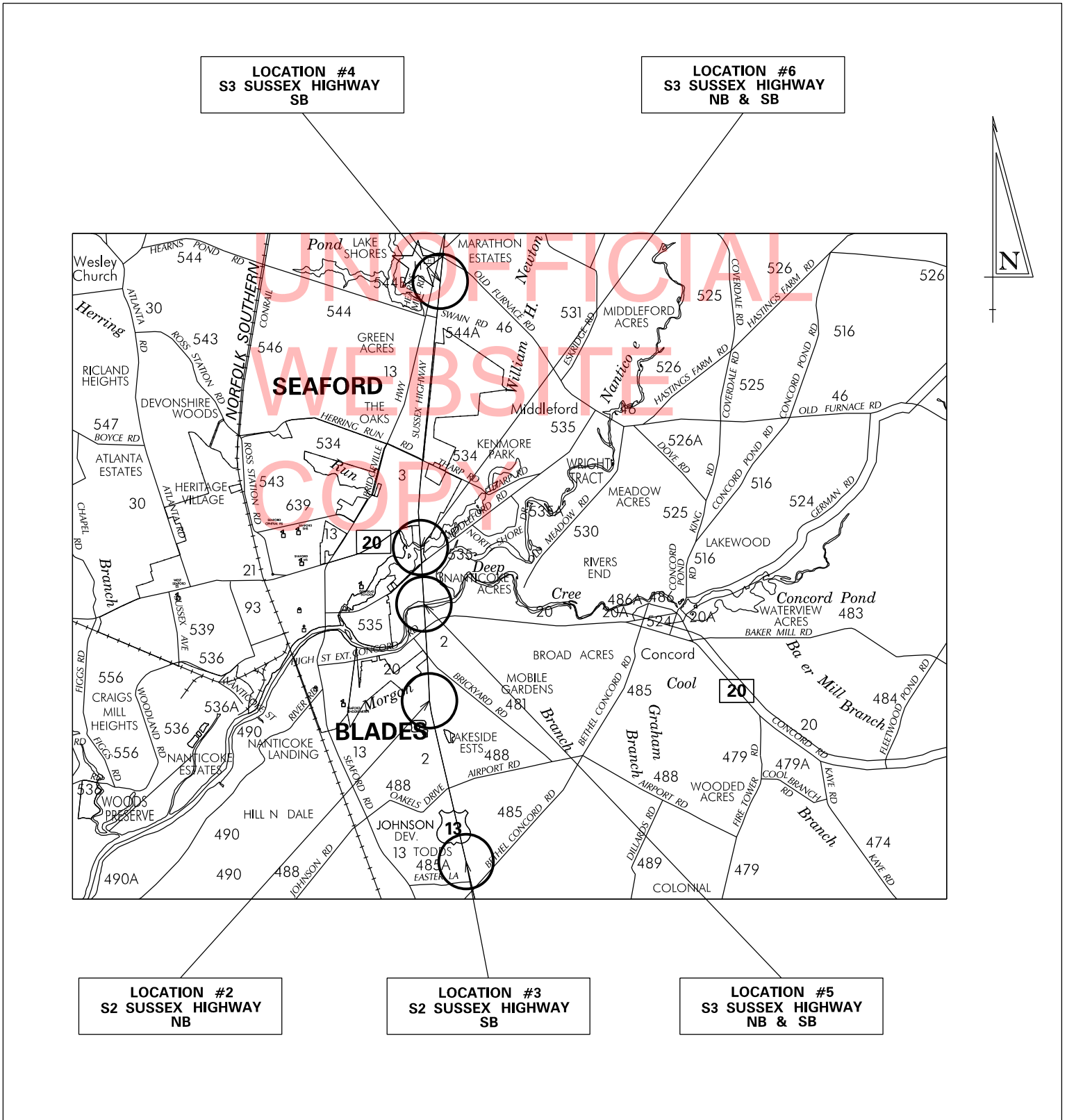
A LEVEL II REPAIR FOR IMPACT ATTENUATOR TYPE II – SRT-350 (BOTH 6 AND 8 POST) OR SIMILAR SHALL BE USED WHEN THE ATTENUATOR IS DAMAGED TO BUT NOT PAST THE THIRD POST, THE FOLLOWING ITEM SHALL BE REPLACED, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

- PC 4147 B 3'9" POST 51/2" X 71/2"
- PC 4063 B 6'0" POST 6" X 8"
- PC 4075 B 14" BLOCK 6" X 8"
- PC 3 G 12' X 12" BACK UP PLATE
- P 34 G 12/12'6/5 SRT 1 GUARDRAIL

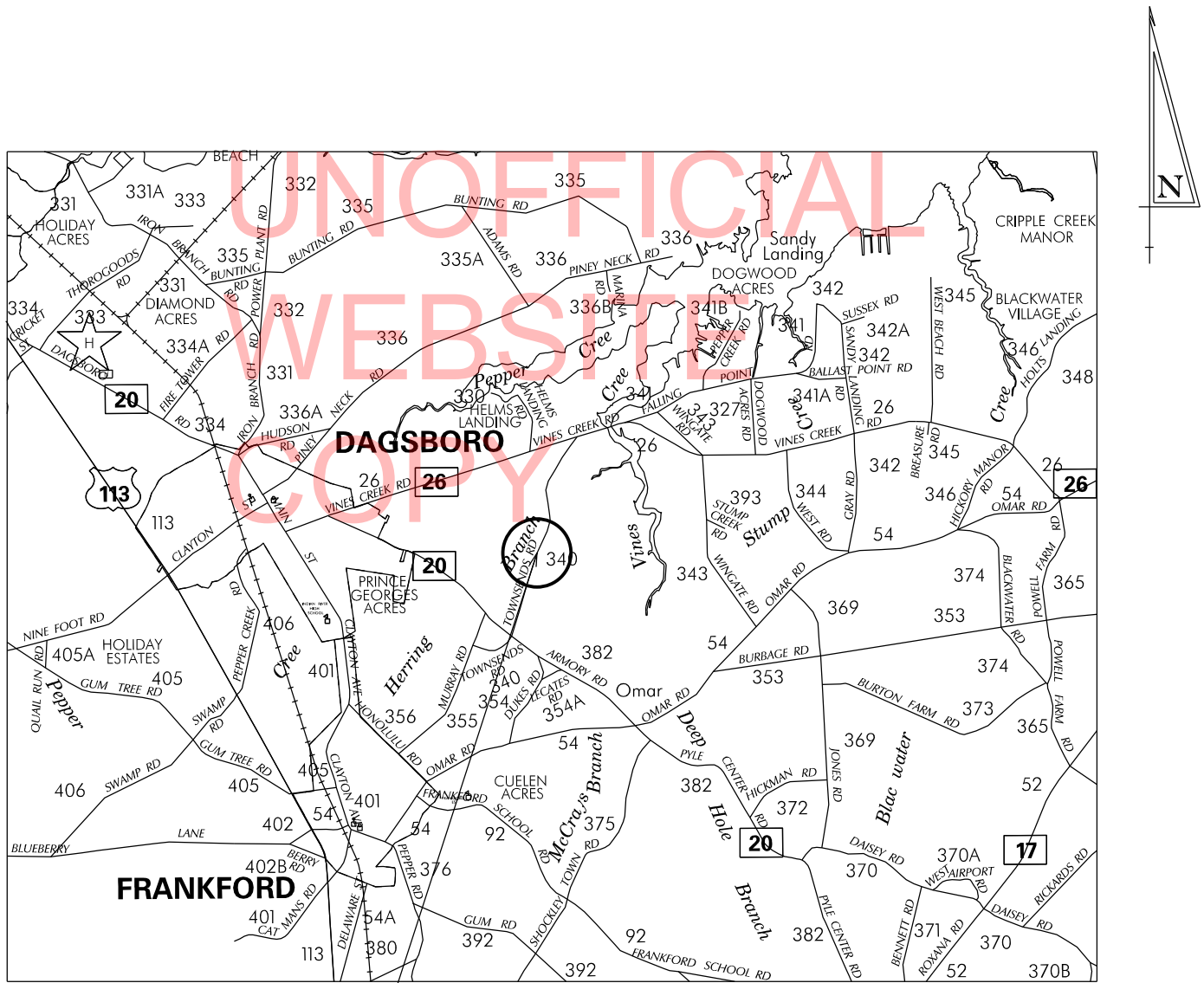
ALL BOLTS, WASHERS AND NUTS SHALL BE INCIDENTAL TO REPAIR.

NOTE: IF DAMAGE TO 5' TUBE SLEEVE (PC 7366) OCCURS THIS WILL BE CONSIDERED A LEVEL II REPAIR, SOIL PLATE (PC 7666) MAY ALSO NEED TO BE REPLACED.

LOCATION MAP



LOCATION MAP



LOCATION #7
S340 TOWNSENDS ROAD
NB & SB

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT T201487901

PAGE 13 OF 30

**SOUTH
MAINTENANCE**

GUARDRAIL SAFETY IMPROVEMENTS, SOUTH, 2014

LOCATION 1 (VARIOUS REPAIR LOCATIONS) FROM TO

LENGTH

GENERAL IMPROVEMENTS

REPAIR DAMAGED GUARDRAIL ON AN AS NEEDED BASIS

COMMENTS:

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

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT T201487901

PAGE 14 OF 30

SOUTH
MAINTENANCE

GUARDRAIL SAFETY IMPROVEMENTS, SOUTH, 2014

LOCATION 1 (VARIOUS REPAIR LOCATIONS) FROM TO

LENGTH

GENERAL IMPROVEMENTS

REPAIR DAMAGED GUARDRAIL ON AN AS NEEDED BASIS

COMMENTS:

MATERIAL ESTIMATE FOR LOCATION 1

763615

JOB ORDER MOBILIZATION, SOUTH DISTRICT

5.00 EACH

** DENOTES FIXED PRICE ITEM

UNOFFICIAL
WEBSITE
COPY

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT T201487901

PAGE 15 OF 30

SOUTH
MAINTENANCE

GUARDRAIL SAFETY IMPROVEMENTS, SOUTH, 2014

LOCATION 2 2(SUSSEX HIGHWAY) FROM S488 (AIRPORT RD) TO S481 (BRICKYARD RD)

LENGTH

AADT 23509

GENERAL IMPROVEMENTS

GUARDRAIL SAFETY IMPROVEMENTS

COMMENTS:

Please see attached sheets for comments

MATERIAL ESTIMATE FOR LOCATION 2

211002	REMOVAL OF STRUCTURES AND OBSTRUCTIONS (GUARDRAIL)	50.00 L.F.
401800	BITUMINOUS CONCRETE, SUPERPAVE, TYPE C, 115 GYRATIONS, PG 64-22 (CARBONATE STONE)	2.00 TON
720050	GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31	25.00 L.F.
726001	END ANCHORAGE 31	1.00 EACH
743003	ARROWPANELS, TYPE C	1.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	1.00 EA-DY
743024	TEMPORARY WARNING SIGNS AND PLAQUES	14.00 EA-DY

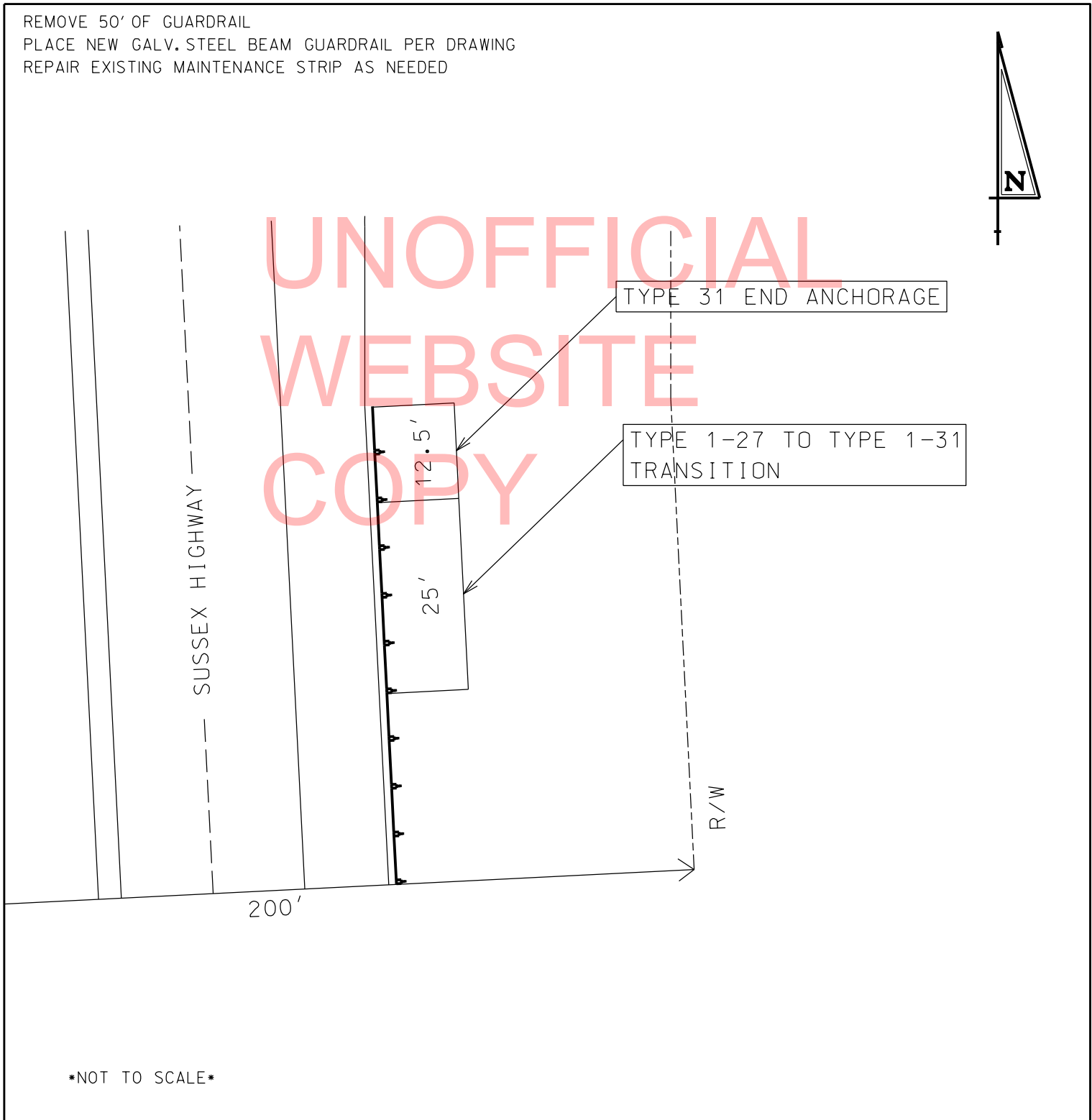
UNOFFICIAL
WEBSITE
COPY

LOCATION 2
S2 (SUSSEX HIGHWAY)
FROM S48I (BRICKYARD RD) TO S488 (AIRPORT RD)

REMOVE 50' OF GUARDRAIL
PLACE NEW GALV. STEEL BEAM GUARDRAIL PER DRAWING
REPAIR EXISTING MAINTENANCE STRIP AS NEEDED



UNOFFICIAL
WEBSITE
COPY



NOT TO SCALE

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT T201487901

PAGE 17 OF 30

SOUTH
MAINTENANCE

GUARDRAIL SAFETY IMPROVEMENTS, SOUTH, 2014

LOCATION 3 2(SUSSEX HIGHWAY) FROM S488 (OCKELS RD) TO S485A (EASTER LN)

LENGTH

AADT 23509

GENERAL IMPROVEMENTS

GUARDRAIL SAFETY IMPROVEMENTS

COMMENTS:

Please see attached sheets for comments

MATERIAL ESTIMATE FOR LOCATION 3

211002	REMOVAL OF STRUCTURES AND OBSTRUCTIONS (GUARDRAIL)	137.50 L.F.
401800	BITUMINOUS CONCRETE, SUPERPAVE, TYPE C, 115 GYRATIONS, PG 64-22 (CARBONATE STONE)	2.00 TON
720050	GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31	50.00 L.F.
720585	GUARDRAIL END TREATMENT ATTENUATOR, TYPE 1-31	1.00 EACH
726001	END ANCHORAGE 31	1.00 EACH
743003	ARROWPANELS, TYPE C	1.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	1.00 EA-DY
743024	TEMPORARY WARNING SIGNS AND PLAQUES	14.00 EA-DY

LOCATION 3
S3 (SUSSEX HIGHWAY)
FROM S488 (OCKELS RD) TO S485A (EASTER RD)

REMOVE 137.5' OF GUARDRAIL
PLACE NEW GALV. STEEL BEAM GUARDRAIL PER DRAWING
REPAIR EXISTING MAINTENANCE STRIP AS NEEDED

TYPE 1-27 TO TYPE 1-31
TRANSITION

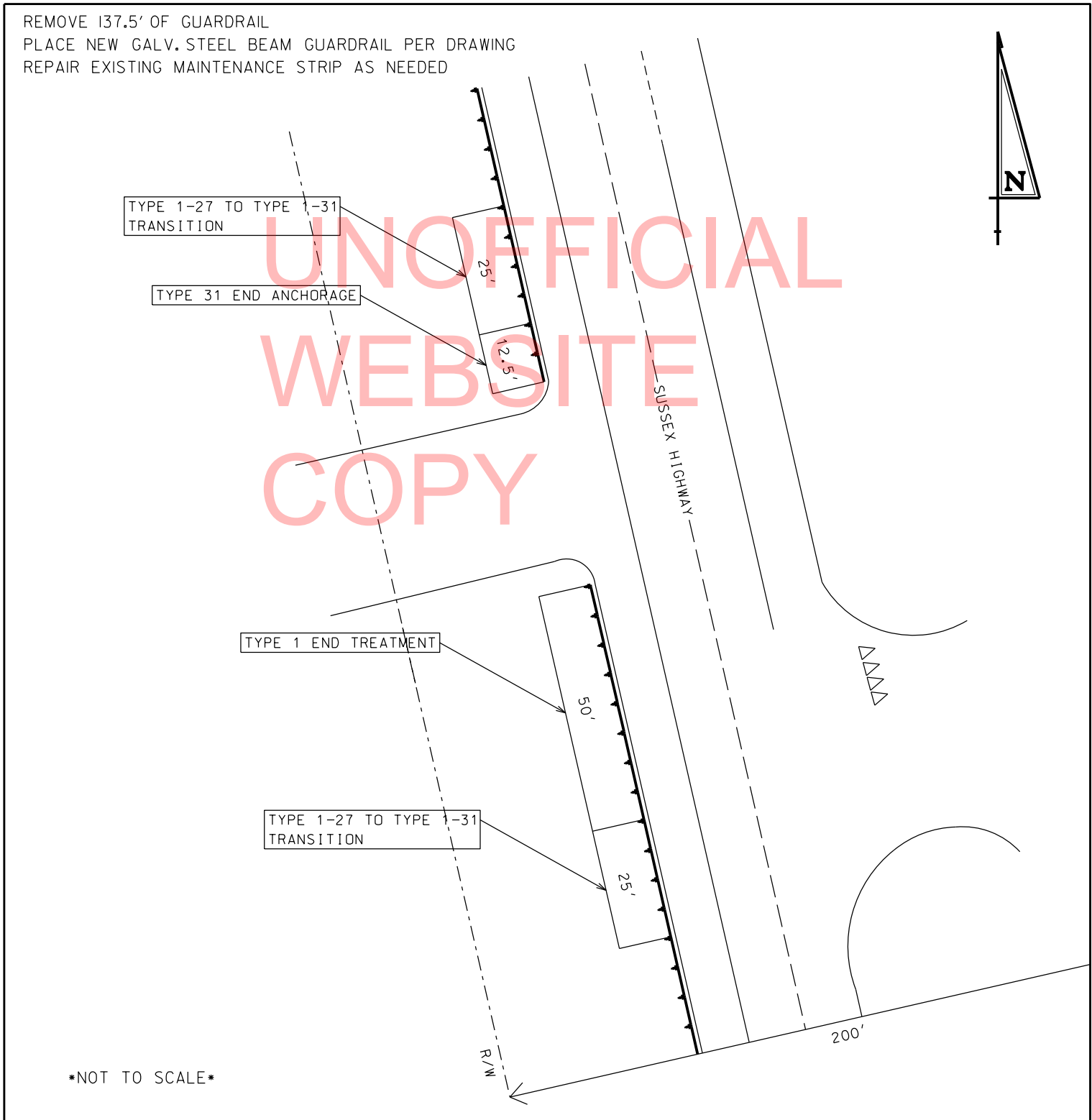
TYPE 31 END ANCHORAGE

TYPE 1 END TREATMENT

TYPE 1-27 TO TYPE 1-31
TRANSITION

NOT TO SCALE

UNOFFICIAL
WEBSITE
COPY



DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT T201487901

PAGE 19 OF 30

SOUTH
MAINTENANCE

GUARDRAIL SAFETY IMPROVEMENTS, SOUTH, 2014

LOCATION 4 3(SUSSEX HIGHWAY) FROM S13 (BRIDGEVILLE HWY) TO S544A (SWAIN RD)

LENGTH AADT 30554

GENERAL IMPROVEMENTS
GUARDRAIL SAFETY IMPROVEMENTS

COMMENTS:

Please see attached sheets for comments

MATERIAL ESTIMATE FOR LOCATION 4

211002	REMOVAL OF STRUCTURES AND OBSTRUCTIONS (GUARDRAIL)	137.50 L.F.
401800	BITUMINOUS CONCRETE, SUPERPAVE, TYPE C, 115 GYRATIONS, PG 64-22 (CARBONATE STONE)	2.00 TON
720050	GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31	50.00 L.F.
720585	GUARDRAIL END TREATMENT ATTENUATOR, TYPE 1-31	1.00 EACH
726001	END ANCHORAGE 31	1.00 EACH
743003	ARROWPANELS, TYPE C	1.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	1.00 EA-DY
743024	TEMPORARY WARNING SIGNS AND PLAQUES	14.00 EA-DY

LOCATION 4
S3 (SUSSEX HIGHWAY)
FROM S13 (BRIDGEVILLE HWY) TO S544A (SWAIN RD)

REMOVE 137.5' OF GUARDRAIL
PLACE NEW GALV. STEEL BEAM GUARDRAIL PER DRAWING
REPAIR EXISITING MAINTENANCE STRIP AS NEEDED

TYPE 1-27 TO TYPE 1-30
TRANSITION

TYPE 31 END ANCHORAGE

TYPE 1 END TREATMENT

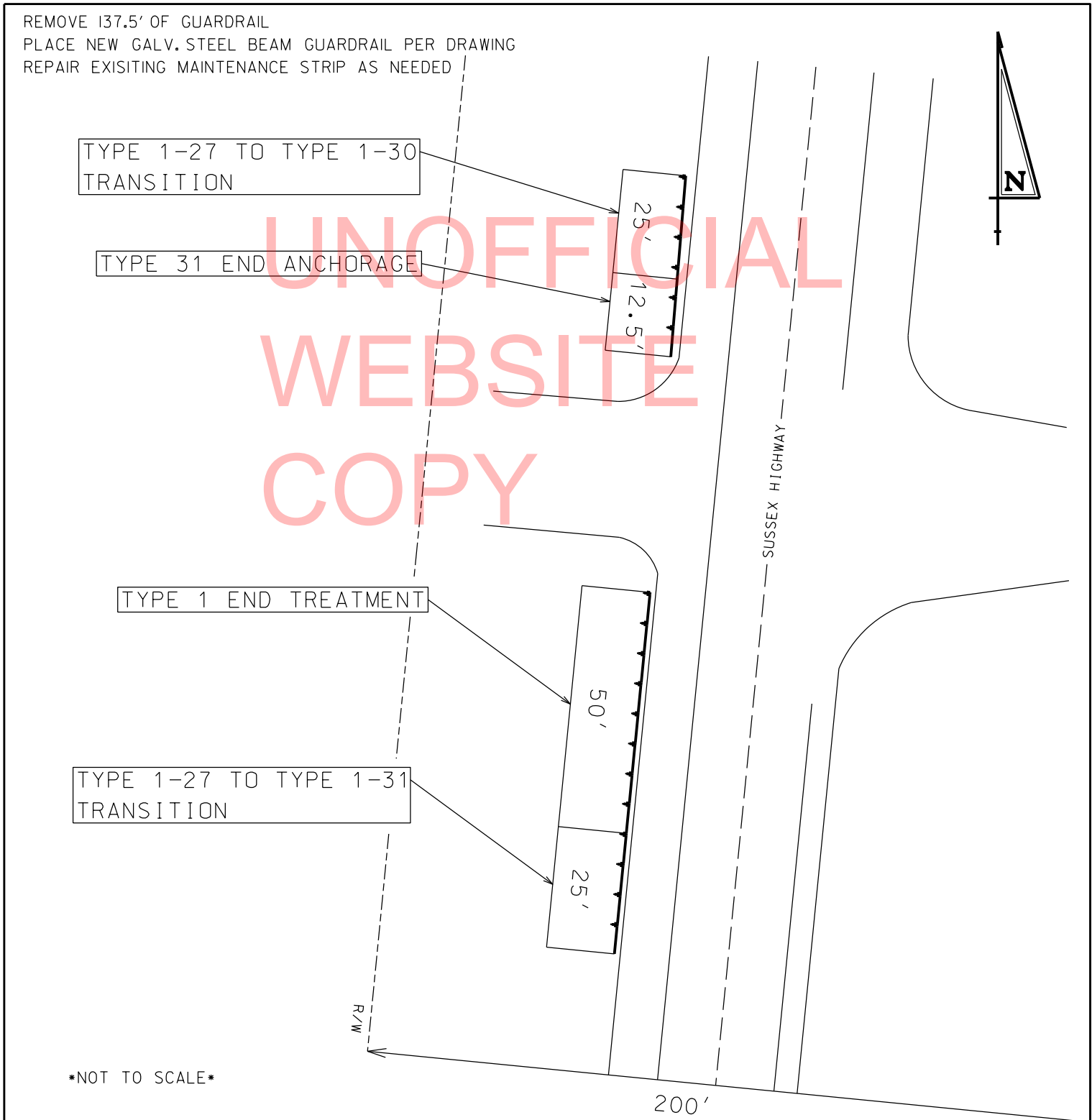
TYPE 1-27 TO TYPE 1-31
TRANSITION

R/W

NOT TO SCALE

200'

UNOFFICIAL
WEBSITE
COPY



DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT T201487901

PAGE 21 OF 30

SOUTH
MAINTENANCE

GUARDRAIL SAFETY IMPROVEMENTS, SOUTH, 2014

LOCATION 5 3(SUSSEX HIGHWAY) FROM S20 (CONCORD RD) TO S535 (MIDDLEFORD RD)

LENGTH AADT 25135

GENERAL IMPROVEMENTS

GUARDRAIL SAFETY IMPROVEMENTS

COMMENTS:

Please see attached sheets for comments

MATERIAL ESTIMATE FOR LOCATION 5

202000	EXCAVATION AND EMBANKMENT	86.00 C.Y.
211002	REMOVAL OF STRUCTURES AND OBSTRUCTIONS (GUARDRAIL)	2,825.00 L.F.
401800	BITUMINOUS CONCRETE, SUPERPAVE, TYPE C, 115 GYRATIONS, PG 64-22 (CARBONATE STONE)	151.00 TON
720050	GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31	2,825.00 L.F.
720585	GUARDRAIL END TREATMENT ATTENUATOR, TYPE 1-31	2.00 EACH
720586	GUARDRAIL END TREATMENT ATTENUATOR,TYPE 2-31	3.00 EACH
725001	GUARDRAIL TO BARRIER CONNECTION (EXIT TYPE 31)	4.00 EACH
725002	GUARDRAIL TO BARRIER CONNECTION, APPROACH TYPE 1-31	4.00 EACH
726001	END ANCHORAGE 31	5.00 EACH
743003	ARROWPANELS, TYPE C	5.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	5.00 EA-DY
743024	TEMPORARY WARNING SIGNS AND PLAQUES	100.00 EA-DY

LOCATION 5
S3 (SUSSEX HWY)
FROM S20 (CONCORD RD) TO S535 (MIDDLEFORD RD)

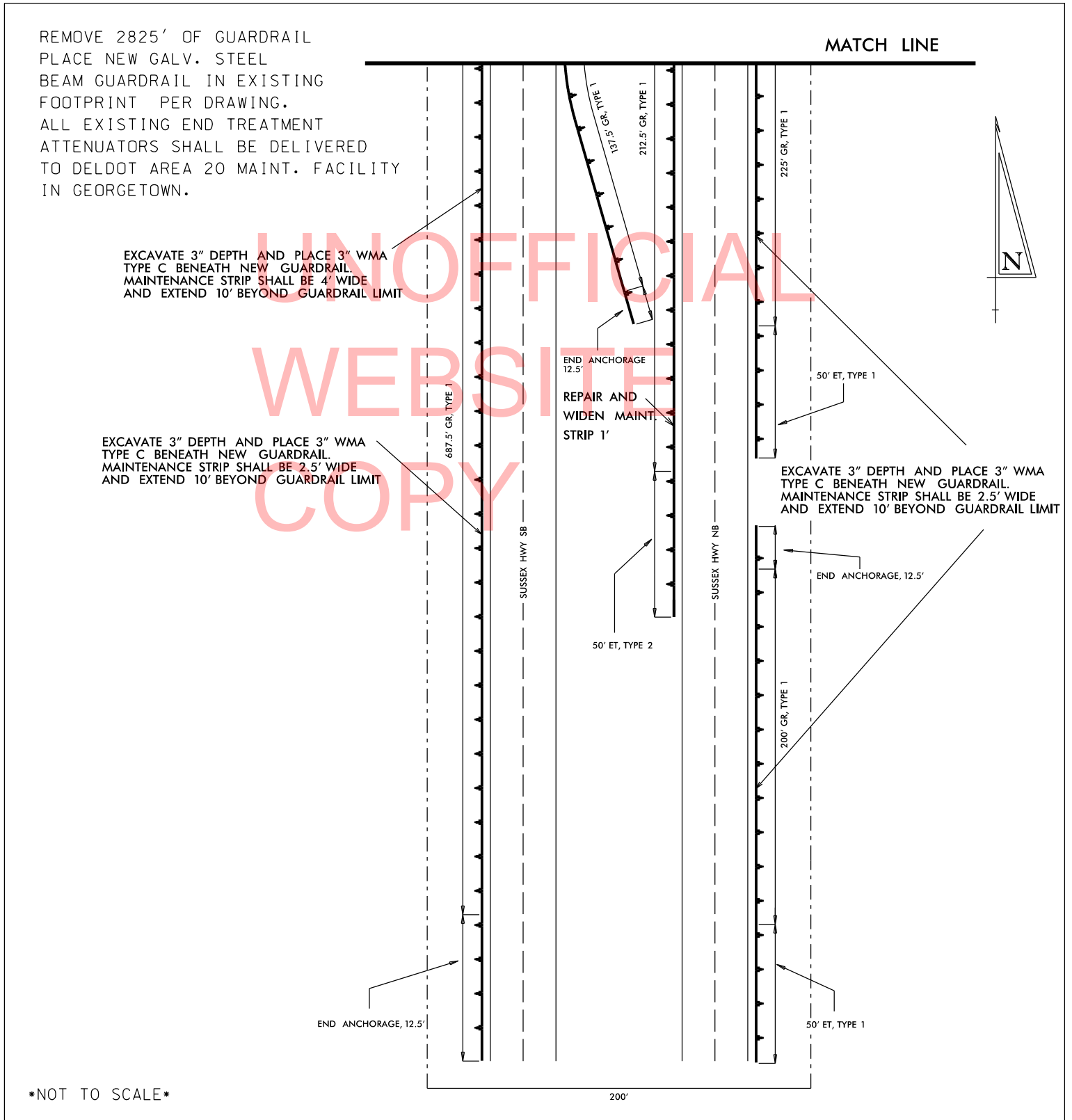
REMOVE 2825' OF GUARDRAIL
PLACE NEW GALV. STEEL
BEAM GUARDRAIL IN EXISTING
FOOTPRINT PER DRAWING.
ALL EXISTING END TREATMENT
ATTENUATORS SHALL BE DELIVERED
TO DELDOT AREA 20 MAINT. FACILITY
IN GEORGETOWN.

MATCH LINE

EXCAVATE 3" DEPTH AND PLACE 3" WMA
TYPE C BENEATH NEW GUARDRAIL.
MAINTENANCE STRIP SHALL BE 4' WIDE
AND EXTEND 10' BEYOND GUARDRAIL LIMIT

EXCAVATE 3" DEPTH AND PLACE 3" WMA
TYPE C BENEATH NEW GUARDRAIL.
MAINTENANCE STRIP SHALL BE 2.5' WIDE
AND EXTEND 10' BEYOND GUARDRAIL LIMIT

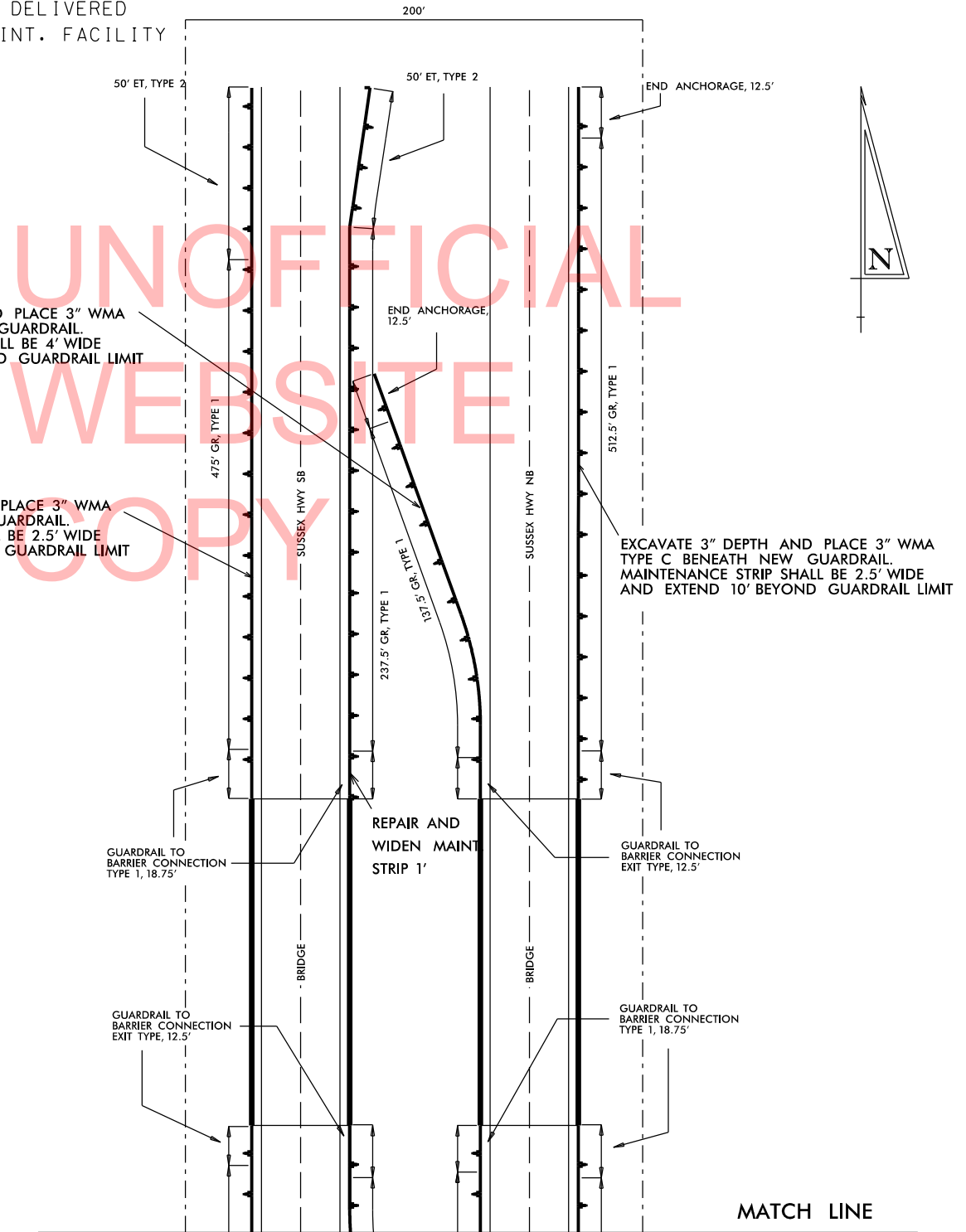
EXCAVATE 3" DEPTH AND PLACE 3" WMA
TYPE C BENEATH NEW GUARDRAIL.
MAINTENANCE STRIP SHALL BE 2.5' WIDE
AND EXTEND 10' BEYOND GUARDRAIL LIMIT



NOT TO SCALE

LOCATION 5
S3 (SUSSEX HWY)
FROM S20 (CONCORD RD) TO S535 (MIDDLEFORD RD)

ALL EXISTING END TREATMENT
ATTENUATORS SHALL BE DELIVERED
TO DELDOT AREA 20 MAINT. FACILITY
IN GEORGETOWN.



NOT TO SCALE

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT T201487901

PAGE 24 OF 30

SOUTH
MAINTENANCE

GUARDRAIL SAFETY IMPROVEMENTS, SOUTH, 2014

LOCATION 6 3(SUSSEX HIGHWAY) FROM S535 (MIDDLEFORD RD) TO S21 (STEIN HWY)

LENGTH AADT 24677

GENERAL IMPROVEMENTS

GUARDRAIL SAFETY IMPROVEMENTS

COMMENTS:

Please see attached sheets for comments

MATERIAL ESTIMATE FOR LOCATION 6

202000	EXCAVATION AND EMBANKMENT	53.00 C.Y.
211002	REMOVAL OF STRUCTURES AND OBSTRUCTIONS (GUARDRAIL)	1,662.50 L.F.
401800	BITUMINOUS CONCRETE, SUPERPAVE, TYPE C, 115 GYRATIONS, PG 64-22 (CARBONATE STONE)	85.00 TON
720050	GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31	1,385.50 L.F.
720585	GUARDRAIL END TREATMENT ATTENUATOR, TYPE 1-31	3.00 EACH
720586	GUARDRAIL END TREATMENT ATTENUATOR,TYPE 2-31	1.00 EACH
725001	GUARDRAIL TO BARRIER CONNECTION (EXIT TYPE 31)	4.00 EACH
725002	GUARDRAIL TO BARRIER CONNECTION, APPROACH TYPE 1-31	4.00 EACH
726001	END ANCHORAGE 31	4.00 EACH
743003	ARROWPANELS, TYPE C	5.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	5.00 EA-DY
743024	TEMPORARY WARNING SIGNS AND PLAQUES	100.00 EA-DY

LOCATION 6
S3 (SUSSEX HWY)
FROM S535 (MIDDLEFORD RD) TO S2I(STEIN HWY)

REMOVE 2825' OF GUARDRAIL
PLACE NEW GALV. STEEL
BEAM GUARDRAIL IN EXISTING
FOOTPRINT PER DRAWING.
ALL EXISTING END TREATMENT
ATTENUATORS SHALL BE DELIVERED
TO DELDOT AREA 20 MAINT. FACILITY
IN GEORGETOWN.

MATCH LINE

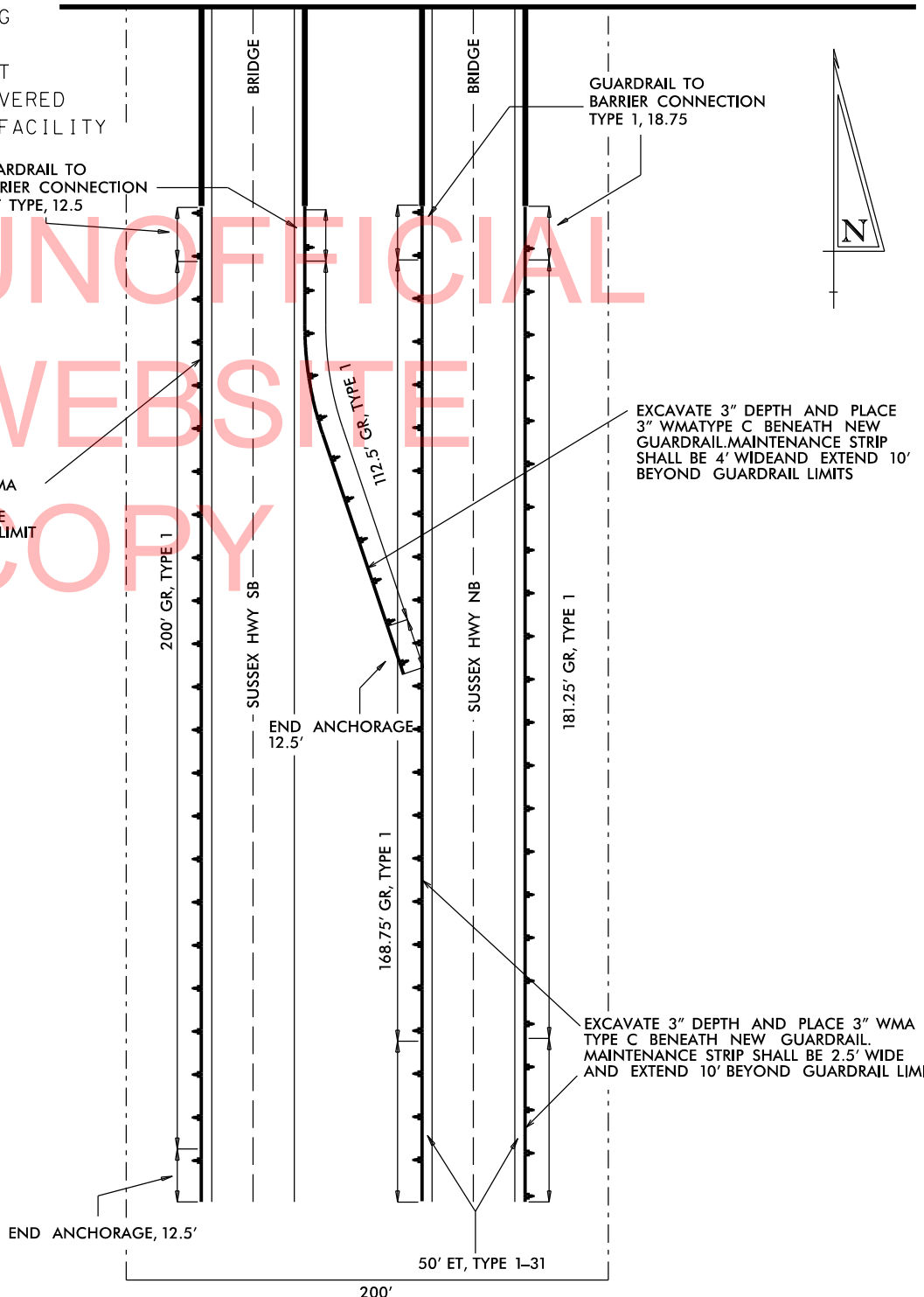
UNOFFICIAL
WEBSITE
COPY



EXCAVATE 3" DEPTH AND PLACE 3" WMA
TYPE C BENEATH NEW GUARDRAIL.
MAINTENANCE STRIP SHALL BE 2.5' WIDE
AND EXTEND 10' BEYOND GUARDRAIL LIMIT

EXCAVATE 3" DEPTH AND PLACE
3" WMA TYPE C BENEATH NEW
GUARDRAIL. MAINTENANCE STRIP
SHALL BE 4' WIDE AND EXTEND 10'
BEYOND GUARDRAIL LIMITS

EXCAVATE 3" DEPTH AND PLACE 3" WMA
TYPE C BENEATH NEW GUARDRAIL.
MAINTENANCE STRIP SHALL BE 2.5' WIDE
AND EXTEND 10' BEYOND GUARDRAIL LIMIT

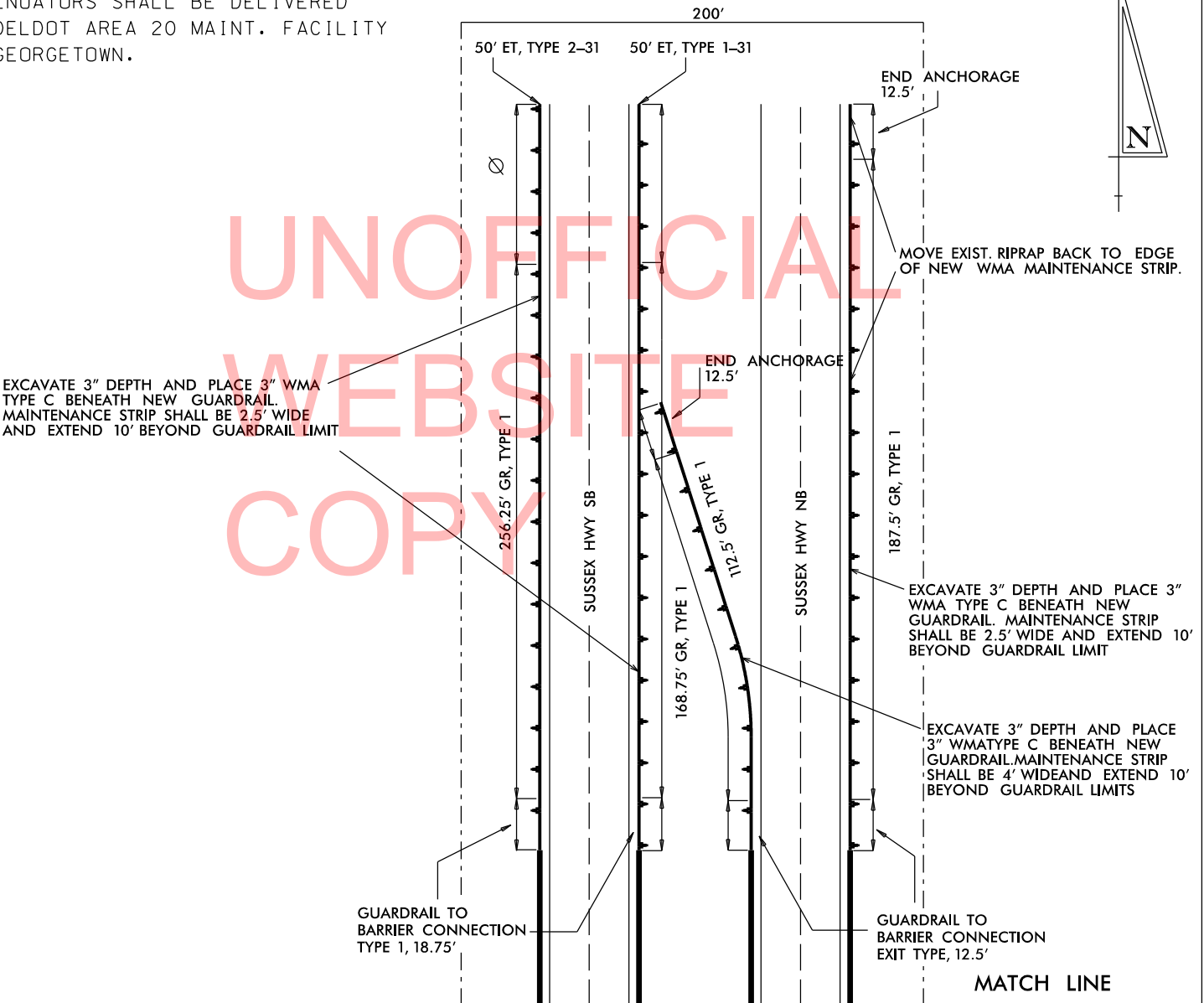


NOT TO SCALE

200'

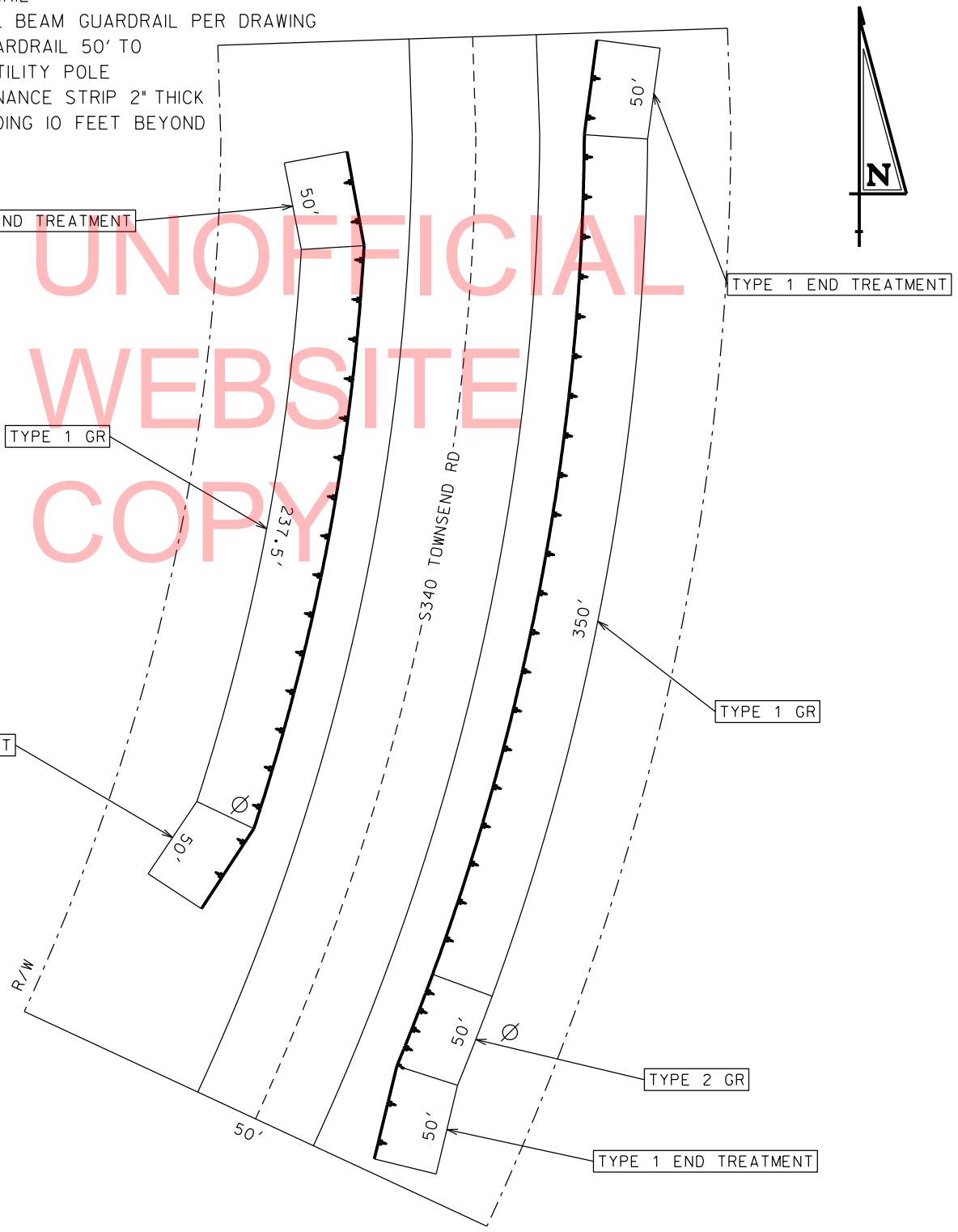
LOCATION 6
S3 (SUSSEX HWY)
FROM S535 (MIDDLEFORD RD) TO S21 (STEIN HWY)

ALL EXISTING END TREATMENT
ATTENUATORS SHALL BE DELIVERED
TO DELDOT AREA 20 MAINT. FACILITY
IN GEORGETOWN.



S340 (TOWNSEND RD)
FROM S382 (ARMORY RD) TO S26 (VINES CREEK RD)

REMOVE 782' OF GUARDRAIL
PLACE NEW GALV. STEEL BEAM GUARDRAIL PER DRAWING
EXTEND SOUTHWEST GUARDRAIL 50' TO
AVOID CONFLICT WITH UTILITY POLE
PLACE A 2' WMA MAINTINANCE STRIP 2" THICK
BENIETH GR AND EXTENDING 10 FEET BEYOND
EACH END



NOT TO SCALE

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT: T201487901

PAGE 29 OF 30

SOUTH
MAINTENANCE

GUARDRAIL SAFETY IMPROVEMENTS, SOUTH, 2014

CONTRACT QUANTITIES SUMMARY SHEET

202000	EXCAVATION AND EMBANKMENT	174.00 C.Y.
209006	BORROW, TYPE F	50.00 C.Y.
211002	REMOVAL OF STRUCTURES AND OBSTRUCTIONS (GUARDRAIL)	6,093.75 L.F.
302005	GRADED AGGREGATE BASE COURSE, TYPE B	92.00 TON
401800	BITUMINOUS CONCRETE, SUPERPAVE, TYPE C, 115 GYRATIONS, PG 64-22 (CARBONATE STONE)	284.00 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	5,123.00 L.F.
720051	GALVANIZED STEEL BEAM GUARDRAIL, TYPE 2-31	250.00 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	15.00 EACH
720586	GUARDRAIL END TREATMENT ATTENUATOR,TYPE 2-31	8.00 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
725001	GUARDRAIL TO BARRIER CONNECTION (EXIT TYPE 31)	8.00 EACH
725002	GUARDRAIL TO BARRIER CONNECTION, APPROACH TYPE 1-31	8.00 EACH
725503	GUARDRAIL TO BARRIER CONNECTION (APPROACH TYPE) REPAIR	1.00 L.S.
726001	END ANCHORAGE 31	12.00 EACH
743003	ARROWPANELS, TYPE C	13.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	31.00 EA-DY

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT: T201487901

PAGE 30 OF 30

SOUTH
MAINTENANCE

GUARDRAIL SAFETY IMPROVEMENTS, SOUTH, 2014

CONTRACT QUANTITIES SUMMARY SHEET

743024	TEMPORARY WARNING SIGNS AND PLAQUES	350.00 EA-DY
743052	** FLAGGER, SUSSEX COUNTY, STATE	134.00 HOUR
743064	** FLAGGER, SUSSEX COUNTY, STATE, OVERTIME	26.00 HOUR
763000	INITIAL EXPENSE	LUMP SUM
763615	JOB ORDER MOBILIZATION, SOUTH DISTRICT	5.00 EACH
763643	MAINTENANCE OF TRAFFIC, ALL INCLUSIVE	LUMP SUM

** DENOTES FIXED PRICE ITEM

UNOFFICIAL
WEBSITE
COPY