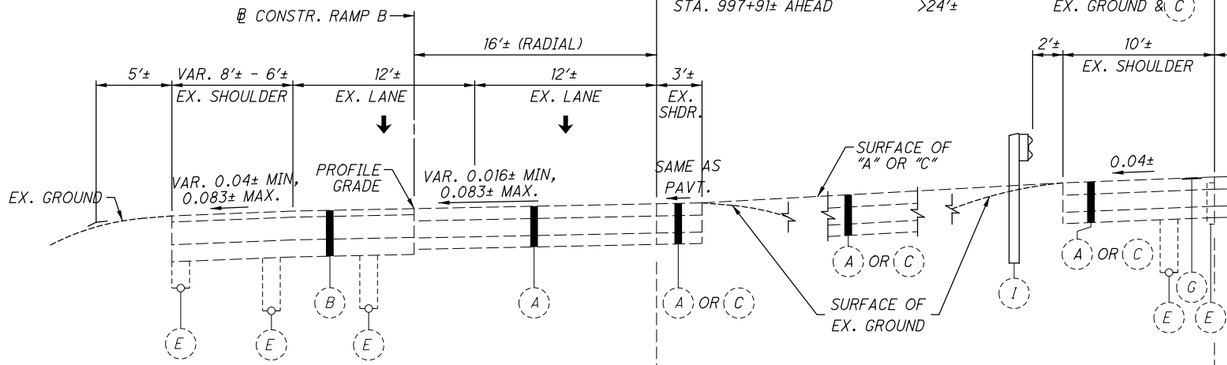
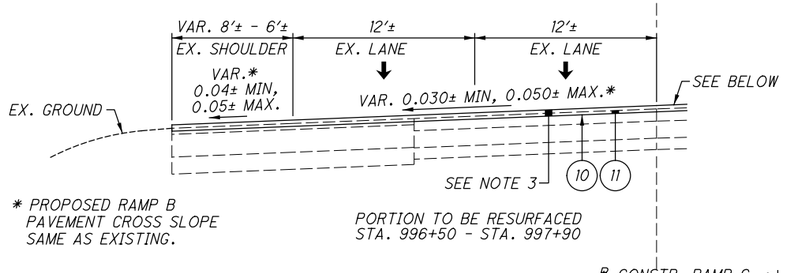
STATIONS RAMP C	WIDTH	BUILDUP
STA. 987+94± - 992+44±	VAR. 0′ - 9′±	ALL (A)
STA. 992+44± - 997+91±	VAR. 9′± - 24′±	ALL (C)
STA. 997+91± AHEAD	>24′±	EX. GROUND & (C)



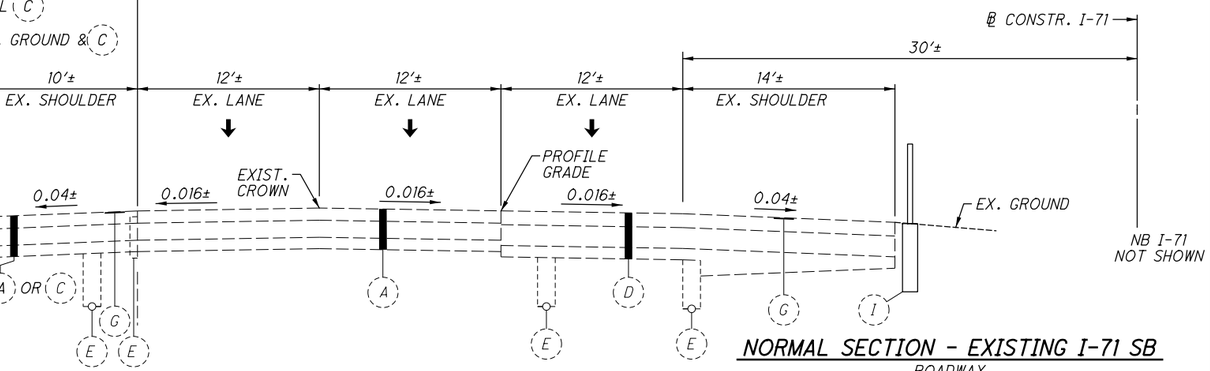
SUPERELEVATED SECTION - EXISTING RAMP B

ROADWAY



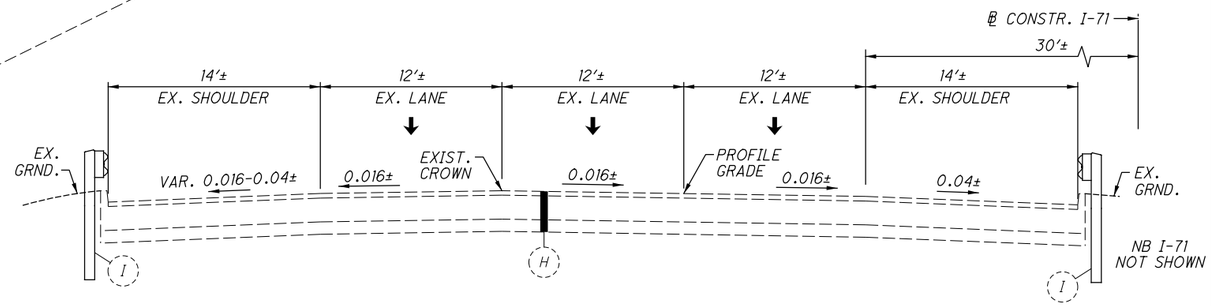
* PROPOSED RAMP B PAVEMENT CROSS SLOPE SAME AS EXISTING.

PORTION TO BE RESURFACED STA. 996+50 - STA. 997+90



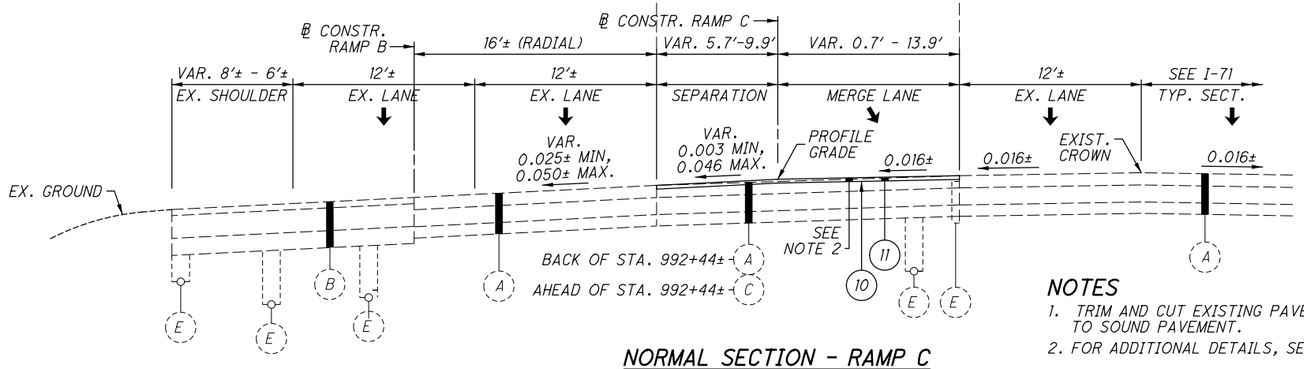
NORMAL SECTION - EXISTING I-71 SB

ROADWAY
EXCLUDING BRIDGES & APPR. SLABS



NORMAL SECTION - EXISTING I-71 SB

APPROACH SLABS



NORMAL SECTION - RAMP C

STA. 991+30 - STA. 997+90

NOTES

1. TRIM AND CUT EXISTING PAVEMENT EDGE, TO SOUND PAVEMENT.
2. FOR ADDITIONAL DETAILS, SEE PAVEMENT DETAIL SHEET 65.

LEGEND

(A) EXISTING 6.5″ ASPHALT, 9″ CONCRETE, 6″ SUBBASE (±)
(B) EXISTING 3.25″ ASPHALT, 12″ BITUMINOUS AGGREGATE, 9″ AGGREGATE (±)
(C) EXISTING 6.5″ MIN. ASPHALT, 9″ MAX. AGGREGATE, 6″ SUBBASE (±)
(D) EXISTING 7.25″ ASPHALT, 11″ CONCRETE, 6″ MIN. SUBBASE (±)
(E) EXISTING UNDERDRAIN
(F) EXISTING CURB OR CURB & GUTTER
(G) EXISTING RUMBLE STRIPS
(H) EXISTING APPROACH SLAB WITH ASPHALT SURFACE COURSE
(I) EXISTING GUARDRAIL OR CABLE BARRIER
(J) EXISTING PAVEMENT WITH UNSPECIFIED BUILDUP
(L) LONGITUDINAL JOINT

(1) ITEM 442 - 1.5″ ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448)
(2) ITEM 442 - 1.75″ ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448)
(3) ITEM 302 - 10″ ASPHALT CONCRETE BASE, PG64-22
(4) ITEM 302 - 12″ ASPHALT CONCRETE BASE, PG64-22
(5) ITEM 304 - 6″ AGGREGATE BASE
(6) ITEM 304 - 9″ AGGREGATE BASE
(7) ITEM 622 - CONCRETE BARRIER END SECTION, TYPE B, AS PER PLAN
(8) ITEM 254 - 1.5″ PAVEMENT PLANING, ASPHALT CONCRETE
(9) ITEM 452 - 8″ NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P
(10) ITEM 407 - TACK COAT
(11) ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, VARIABLE DEPTH
(12) ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE B
(13) ITEM 606 - GUARDRAIL, TYPE MGS
(14) APPROACH SLAB PARAPET - SEE BRIDGE DRAWINGS
(15) ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2
(16) ITEM 617 - COMPACTED AGGREGATE
(17) ITEM 206 - CEMENT STABILIZED SUBGRADE, 12 INCHES DEEP
(18) ITEM 659 - SEEDING AND MULCHING
(19) ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15″)
(20) ITEM 605 - 4″ UNCLASSIFIED PIPE UNDERDRAINS
(21) ITEM 605 - 6″ BASE PIPE UNDERDRAINS, 18-INCH DEPTH
(22) ITEM 609 - CURB, TYPE 4-C
(23) ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 4, AS PER PLAN
(24) ITEM 608 - 4″ CONCRETE WALK
(25) ITEM 609 - CURB, TYPE 8, AS PER PLAN
(26) ITEM 601, PAVED GUTTER, TYPE 5
(27) ITEM 204, PROOF ROLLING
(28) ITEM 670, SLOPE EROSION PROTECTION

CALCULATED CAL
CHECKED SCC

TYPICAL SECTIONS

HAM/WAR-71
19.83/0.00

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146

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E, MASH 2016

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, MGS TYPE E, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 606 - IMPACT ATTENUATOR, TYPE 2 (35 MPH) HAZARD WIDTH (24 INCHES) (BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE TYPE 2 IMPACT ATTENUATORS AS LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE (REFER TO THE POSTED SHOP DRAWINGS FOR THE MOST CURRENT APPROVED PRODUCT MODELS).
WHEN BI-DIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS. THE FACE OF THE IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING PER CMS 730.19.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, IMPACT ATTENUATOR, TYPE 2 (35 MPH), HAZARD WIDTH (24 INCHES),
(BIDIRECTIONAL), EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL
IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS/BACKSTOPS, TRANSITIONS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

DRAINAGE NOTES

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN CONDITION DUE TO THE CONTRACTOR'S WORK OR OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

ITEM 611 15", SLOTTED DRAIN, TYPE 2

THIS ITEM SHALL CONSIST OF 15 INCH DIAMETER SLOTTED DRAIN ALUMINUM COATED STEEL CONDUIT 707.01 WITH 6 INCH TRAPEZOIDAL GALVANIZED SOLID BAR GRATE AS APPROVED BY THE ENGINEER. ALL COSTS FOR LABOR AND MATERIALS, INCLUDING TYPE 2 BEDDING, AND BACKFILLING AS DETAILED ON STANDARD CONSTRUCTION DRAWING DM-1.3 SHALL BE INCLUDED IN THE PRICE BID PER FOOT FOR ITEM 611 - 15" SLOTTED DRAIN, TYPE 2.

EXISTING SUBSURFACE DRAINAGE

PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS OR AGGREGATE DRAINS ENCOUNTERED DURING CONSTRUCTION.

PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDERDRAINS THAT OUTLET TO A SLOPE.

UNDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDERDRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDERDRAINS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

601, TIED CONCRETE BLOCK MAT, TYPE 2 - 4 SQ. YD.
611, 6" CONDUIT, TYPE F - 10 FT.
611, PRECAST REINFORCED CONCRETE OUTLET - 1 EACH
605, 4" UNCLASSIFIED PIPE UNDERDRAINS - 25 FT.

POST CONSTRUCTION STORM WATER TREATMENT

THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT.

VEGETATED BIOFILTER

THIS PLAN UTILIZES VEGETATED BIOFILTER(S) FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE EITHER ITEM 660 SODDING OR ITEM 659 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AS SHOWN IN THE PLANS TO ANY DISTURBED AREA ON THE SHOULDER AND FORESLOPE DRAINING TO A VEGETATED BIOFILTER. THE DITCH FOR EACH VEGETATED BIOFILTER SHALL BE TRAPEZOIDAL, AS SHOWN IN THE PLANS.
PROVIDE ITEM 670 AS SPECIFIED IN THE PLANS.

VEGETATED FILTER STRIP

THIS PLAN UTILIZES VEGETATED FILTER STRIP(S) FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE EITHER ITEM 660 SODDING OR ITEM 659 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AND ITEM 670, SLOPE EROSION PROTECTION TO ALL DISTURBED AREAS DESIGNATED AS VEGETATED FILTER STRIPS, THE EDGE OF SHOULDER, AND THE FORESLOPE AS SPECIFIED IN THE PLANS.

ITEM 619 FIELD OFFICE, TYPE B AS PER PLAN, 22 MNTH

THIS PAY ITEM IS TO FOLLOW THE REQUIRMENTS OF ITEM 619 EXCEPT THAT THE CONTRACTOR SHALL ONLY BE RESPONSIBLE FOR MAINTAINING THE FIELD OFFICE AND SITE WHICH INLCUDES MOWING AND PROVIDING APPLICABLE ITEMS INDICATED IN TABLE 619.02-1. THE CONTRACTOR'S MAINTENANCE RESPONSIBLITY INCLUDES BUT IS NOT LIMITED TO: ROOM TEMPERATURE, ELECTRIC SERVICE, POTABLE HOT AND COLD WATER, TOILET ACCOMMODATIONS, AND UTILITY SERVICES. THE WARREN COUNTY TRANSPORTATION IMPROVEMENT DISTRICT (WCTID) WILL PROVIDE AND SUBSEQUENTLY REMOVE THE FIELD OFFICE FOR THE PROJECT. THE FIELD OFFICE WILL BE THE ADJACENT BP GAS STATION WHICH HAS BEEN ACQUIRED BY THE WCTID.

ELECTRONIC TICKETING

PURPOSE:

PROVIDE ELECTRONIC MATERIAL TICKETS IN AN ELECTRONIC FORMAT DIRECTLY RECORDED FROM THE MATERIAL LOADING SOURCE.

PROVIDE ELECTRONIC MATERIAL TICKETS FOR THE FOLLOWING MATERIALS:

AGGREGATE
ASPHALT CONCRETE
PORTLAND CONCRETE

THIS NOTE IN NO WAY SUPERSEDES ANY OTHER COMMERCIAL REGULATIONS OR ANY OTHER LEGAL REQUIREMENTS REGULATING THE TRANSPORTATION OF COMMERCIAL MATERIALS.

REQUIREMENTS:
AT THE PRE-CONSTRUCTION MEETING, SUBMIT AN ELECTRONIC TICKETING PLAN TO THE ENGINEER DESCRIBING THE PROPOSED ELECTRONIC TICKET DELIVERY METHOD. THE ELECTRONIC MATERIAL TICKET SHALL CONTAIN INFORMATION AS REQUIRED PER THE APPLICABLE MATERIAL SPECIFICATION FOR WEIGHT MEASUREMENT AND OTHER MATERIAL CHARACTERISTICS; PROVIDE AN EXAMPLE(S) OR A MOCK-UP OF THE PROPOSED ELECTRONIC TICKET TO SHOW THE DETAILS ON WHAT IS TO BE TRANSMITTED TO THE DEPARTMENT. NAMING OF THE ELECTRONIC MATERIAL TICKET FILES SHALL BE DISTINCT SUCH THAT THE TICKET S REPRESENTED MATERIAL IS EASILY DETERMINED; INCLUDE THE PROPOSED NAMING CONVENTION. DELIVERY MAY BE THROUGH A PRODUCER WEBSITE UPLOAD ACCESSIBLE TO THE ENGINEER, ODOT PROJECT SPECIFIC SHAREPOINT DOCUMENTATION SITE UPLOAD, OR ANOTHER SECURE ELECTRONIC TRANSMITTAL MEANS. EMAILING OF A TICKET TO AN ODOT CONTACT IS ACCEPTABLE BUT IS NOT PREFERRED. THE ELECTRONIC TICKETING PLAN SHALL IDENTIFY A CONTINGENCY METHOD FOR MANUALLY CAPTURING AND DELIVERING TICKET INFORMATION IF ELECTRONIC TRANSMISSION IS TEMPORARILY UNAVAILABLE. AN ELECTRONIC TICKETING PLAN WHICH INCLUDES SOLELY THE USE OF DIGITAL PHOTOS OF PAPER TICKETS IS NOT ACCEPTABLE.

THE DEPARTMENT RECOGNIZES THAT VARIOUS DIGITAL TICKETING SYSTEMS MAY BE COMMERCIALLY AVAILABLE AND USED TO ACCOMMODATE INDIVIDUAL CONTRACTORS AND MATERIAL SUPPLIER CAPABILITIES. THE CONTRACTOR MAY PROVIDE A DIGITAL TICKETING SYSTEM GIVING SECURE ACCESS TO ORGANIZED DIGITAL DATA. IF UTILIZED, THE DIGITAL TICKETING SYSTEM MAY ALSO BE ACCESSIBLE BY REAL-TIME MONITORING WITH A MOBILE COMMUNICATION DEVICE SUCH AS A TABLET, SMARTPHONE, ETC. THROUGH MOBILE DEVICE APPLICATIONS (MOBILE APP) IF ACCEPTABLE TO THE DEPARTMENT. IF A DIGITAL TICKETING SYSTEM REQUIRES A MOBILE APP, THE MOBILE APP SHALL BE AT NO COST TO THE DEPARTMENT. THE DIGITAL DATA MUST BE ABLE TO BE EXPORTED IN A FORMAT USABLE BY THE ENGINEER UPON REQUEST (I.E. MICROSOFT WORD, MICROSOFT EXCEL, PDF FORMATS).

DELIVER EACH ELECTRONIC MATERIAL TICKET TO THE ENGINEER PRIOR TO THE PLACEMENT OF MATERIAL, BUT NOT PRIOR TO THE LOADING OF MATERIAL AT THE SOURCE.

PROVIDE THE ENGINEER A DAILY MATERIAL SUMMARY REPORT BY THE END OF THE DAY S HAULING ACTIVITIES, OR AT A TIME AS APPROVED BY THE ENGINEER. THE DAILY MATERIAL SUMMARY REPORT INCLUDES SUMMARY INFORMATION LISTED FOR EACH MATERIAL AS OUTLINED IN THE RESPECTIVE MATERIAL SPECIFICATION.

CALCULATED CAL
CHECKED DLW

GENERAL NOTES

HAM/WAR-71
19.83/0.00

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, SOIL ANALYSIS TEST 2 EACH
659, TOPSOIL 1,232 CU. YD.
659, SEEDING AND MULCHING 11,533 SQ. YD.
659, REPAIR SEEDING AND MULCHING 576 SQ. YD
659, COMMERCIAL FERTILIZER 1.5 TON
659, LIME 2.38 ACRES
659, WATER 62 M. GAL.
659, MOWING 25 M. SQ. FT.

UNLESS OTHERWISE SHOWN IN THE PLANS, SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT OF WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT OF WAY COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS. SEE REINFORCED SOIL SLOPE AND NOISE BARRIER PLAN FOR ADDITIONAL DETAILS WHERE APPLICABLE.

PAVEMENT NOTES

CONTRACTION AND/OR EXPANSION JOINTS

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN CONTRACTION AND EXPANSION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. IN ALL CASES, THE PROVISION OF EXPANSION JOINTS AT ALL MAJOR STRUCTURES INCLUDING THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS IS IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2 AND THE SPECIFICATIONS.

MEDIAN AND/OR CURBING ON APPROACH SLABS

WITHIN THE LIMITS OF THE APPROACH SLAB, TRANSITION THE SHAPE OF THE MEDIAN AND/OR CURBING ON APPROACH SLABS FROM THE STANDARD SECTION ON THE APPROACHES TO THE SECTION USED ON THE BRIDGE.

ITEM SPECIAL: CONSULTANT FOR CONCRETE QUALITY CONTROL AND TESTING

ALL CONCRETE SHALL BE TESTED. ALL TESTING, INSPECTION AND QUALITY CONTROL FOR CONCRETE, NOT INCLUDED UNDER QC/QA PAY ITEMS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE A CONCRETE TESTING CONSULTANT WITH PREVIOUS EXPERIENCE AND FAMILIARITY IN ODOT PROCEDURES, CONCRETE TESTING REQUIREMENTS AND CONCRETE TESTING DOCUMENTATION. AT LEAST 30 DAYS PRIOR TO CONCRETE PLACEMENT, SUBMIT TO THE ENGINEER FOR APPROVAL, THE PROPOSED CONCRETE TESTING CONSULTANT ALONG WITH THE RESUMES OF THE PROPOSED TESTING PERSONNEL.

TESTING CONCRETE FOR STRUCTURES AND PORTLAND CEMENT CONCRETE PAVEMENT SHALL BE PERFORMED AS OUTLINED IN CMS SPECIFICATIONS 455 RESPECTIVELY.

THROUGH THE CONTRACTOR, THE CONSULTANT SHALL BE RESPONSIBLE FOR ENSURING THAT ALL CONCRETE PLACED IS IN ACCORDANCE WITH THE SPECIFICATIONS. SUCH WORK SHALL BE IN ACCORDANCE WITH THE APPLICABLE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND THE ODOT CONSTRUCTION INSPECTION MANUAL OF PROCEDURES FOR CONCRETE. THE CONCRETE CONSULTANT SHALL PROVIDE THE NECESSARY TRAINED TECHNICIAN(S), ALL EQUIPMENT, AND SHALL FURNISH THE PROJECT ENGINEER WITH TWO (2) COPIES OF ALL TEST RESULTS WITHIN 24 HOURS AFTER COMPLETION OF CONCRETE PLACEMENT.

THE TECHNICIAN SHALL BE ACI LEVEL I CERTIFIED AND WILL BE REQUIRED TO DEMONSTRATE HIS/HER COMPETENCE AND EXPERIENCE LEVELS TO THE ENGINEER PRIOR TO BEGINNING WORK. THE ENGINEER WILL ORDER THE CONTRACTOR TO REPLACE ANY TECHNICIAN THAT IS NOT VERSED IN THE REQUIRED TESTING PROCEDURE.

THE TECHNICIAN SHALL VERBALLY NOTIFY THE ODOT PROJECT ENGINEER OF ANY FAILING TEST AND SHALL SUBMIT FOLLOW-UP WRITTEN NOTIFICATION TO THE PROJECT ENGINEER OF REMEDIAL ACTION(S) TAKEN. TESTS SHALL BE TAKEN AS SPECIFIED WITHIN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, CONCRETE MANUAL OR APPROPRIATE SUPPLEMENTAL SPECIFICATION AS LISTED IN THE PROPOSAL GOVERNING THE PROJECT. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO MAKE IMMEDIATE CORRECTIONS OR ADJUSTMENTS TO THE CONCRETE MIX VIA DIRECT COMMUNICATION WITH THE CONCRETE SUPPLIER'S PLANT PERSONNEL TO MAINTAIN UNINTERRUPTED COMPLIANCE WITH THE SPECIFICATIONS UPON NOTIFICATION OF CONCRETE MIX NON-COMPLIANCE BY THE CONSULTANT TECHNICIAN. THE PROJECT ENGINEER MAY REQUIRE MORE FREQUENT TESTING AS CONDITIONS WARRANT.

UPON COMPLETION OF DAILY CONCRETE PLACEMENT(S), THE CONCRETE CONSULTANT SHALL PROVIDE THE PROJECT ENGINEER WITH DAILY TEST REPORTS, TE-45'S, INSPECTORS DAILY REPORT AND SUPPORTING DOCUMENTATION FOR EACH ITEM OF CONCRETE WORK PERFORMED SEPARATED BY MIX DESIGN. SUBSEQUENTLY, UPON COMPLETION OF AN ENTIRE CONCRETE SPECIFICATION ITEM, THE CONCRETE CONSULTANT SHALL ALSO PROVIDE THE PROJECT ENGINEER WITH TWO (2) COPIES OF AN ADDITIONAL INSPECTION REPORT BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, WHICH CONTAINS THE TESTING-RESULTS SUMMARY FOR EACH ITEM BY CONTRACT REFERENCE NUMBER AND THE CONSULTANT'S CONCLUSIONS RELATIVE TO SPECIFICATION COMPLIANCE FOR ALL CONCRETE-TESTING WORK.

THE ODOT PROJECT ENGINEER RESERVES THE RIGHT TO MAKE UNANNOUNCED QUALITY-CONTROL TESTS TO VERIFY PROCEDURES USED AND RESULTS BEING OBTAINED BY THE CONTRACTOR.

THE CONCRETE TECHNICIAN SHALL WORK UNDER THE DIRECTION OF A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, WHO WILL MONITOR THE CONCRETE TEST RESULTS. THE FINAL INSPECTION REPORTS FOR EACH COMPLETED ITEM SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, CERTIFYING THAT ALL CONCRETE TESTS PROVIDED BY THE CONTRACTOR MET APPLICABLE CONTRACT REQUIREMENTS. A FINAL REPORT ISSUED BY THE CONSULTING FIRM SHALL CONTAIN A CERTIFIED STATEMENT OF COMPLIANCE WITH ODOT SPECIFICATIONS AND ANY OTHER CONCLUSIONS REGARDING THE CONCRETE MATERIALS INCORPORATED INTO THE PROJECT. SUCH STATEMENT SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO. AND, THE CONCRETE CONSULTANT SHALL BE REQUIRED TO ATTEND MONTHLY PROGRESS MEETINGS AS REQUIRED BY THE PROJECT ENGINEER.

ADDITIONALLY, THE CONTRACTOR SHALL BE REQUIRED TO KEEP A POSTED LIST OF BEAM AND CYLINDER IDENTIFICATION NUMBERS FOR THE PURPOSE OF IDENTIFYING THE CORRESPONDING PLACEMENT LOCATION AND CONCRETE SPECIFICATION ITEM.

PAYMENT SHALL BE BID AS LUMP SUM FOR ITEM SPECIAL MISC.: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION. THE ITEM WILL BE PAID FOR AS FOLLOWS:

UPON APPROVAL OF CONSULTANT 20%
PROGRESSIVE EQUIVALENT PAYMENTS 50%
UPON SUBMISSION OF FINAL REPORT . . . . 30%.

THE TECHNICIAN SHALL HAVE THE FULL EFFECT AND AUTHORITY OF AN ODOT PROJECT INSPECTOR IN DETERMINING ACCEPTABILITY OF MATERIAL AND CONCRETE PLACEMENT PRACTICES.

ITEM 609, COMBINATION CURB AND GUTTER, TYPE 4, AS PER PLAN

ALL REQUIREMENTS OF ITEM 609, COMBINATION CURB AND GUTTER, TYPE 4 SHALL APPLY, EXCEPT THAT THE SLOPE OF THE GUTTER PAN SHALL MATCH THE SLOPE OF THE ADJACENT PAVEMENT.

ITEM 609, CURB, TYPE 8, AS PER PLAN

IN ADDITION TO THOSE ITEMS INCLUDED IN CMS 609 AND STD. DRAWING BP-5.1, THIS ITEM INCLUDES SAW CUTTING AND REMOVING EXISTING PARKING LOT PAVEMENT ABUTTING THE CURB, AND RESTORATION OF THE EXISTING PAVEMENT IN ACCORDANCE WITH CMS 253 UNLESS OTHERWISE NOTED IN THE PLANS. SEPARATE PAYMENT WILL NOT BE MADE FOR PAVEMENT REMOVAL OR REPAIR. EXPANSION JOINT MATERIAL AND JOINT SEALER BETWEEN THE CURB AND PARKING LOT PAVEMENT ARE REQUIRED AND ARE INCIDENTAL. MAINTAIN MINIMUM OF 9" CURB HEIGHT ABOVE SIDEWALK AND PARKING LOT PAVEMENT.

ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC

THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED TO MAINTAIN TRAFFIC AS DIRECTED BY THE ENGINEER.

ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC, 5 CU. YD.

ITEM 622, CONCRETE BARRIER END SECTION, TYPE B, AS PER PLAN

ALL REQUIREMENTS OF ITEM 622, CONCRETE BARRIER END SECTION, TYPE B SHALL APPLY, EXCEPT THAT THE WIDTH TRANSITION SHALL BE MODIFIED AS SHOWN IN THE PLANS.

ITEM 203 EMBANKMENT

UNLESS OTHERWISE SPECIFIED IN THE PLANS, PROVIDE NATURAL SOILS AS OUTLINED IN CMS 703.16.A. WITH THE EXCEPTION OF A-4b SOILS, TO COMPRISE THE TOP 12 INCHES OF THE ROADWAY EMBANKMENT. IN ADDITION TO THE REQUIREMENTS OF 703.16.A, THE SOIL SHALL HAVE A PLASTICITY INDEX OF LESS THAN 20% WITH A SULFATE CONTENT LESS THAN 3,000 PPM. SHALE AND LIMESTONE IS PROHIBITED IN THE UPPER 12 INCHES OF THE EMBANKMENT.

ITEM SPECIAL - SETTLMENT PLATFORMS

DESCRIPTION: THIS ITEM CONSISTS OF FURNISHING, CONSTRUCTING, AND MAINTAINING SETTLEMENT PLATFORMS AND OBTAINING SETTLEMENT READINGS AS REQUIRED BY THE PLANS OR AS DIRECTED BY THE ENGINEER. AT THE OPTION AND EXPENSE OF THE CONTRACTOR, ADDITIONAL SETTLEMENT PLATFORMS MAY BE INSTALLED AT LOCATIONS APPROVED BY THE ENGINEER. SETTLEMENT READINGS SHALL BE TAKEN WEEKLY DURING CONSTRUCTION AND DURING ANY SPECIFIED WAITING PERIOD. THE READINGS SHALL BE PLOTTED ON A GRAPH PRESENTING DEFORMATION (ON THE NEGATIVE Y-AXIS) AND FILL HEIGHT (ON THE POSITIVE Y-AXIS) VERSUS TIME (ON THE X-AXIS). IN ORDER TO CREATE THE GRAPH, USE THE SETTLEMENT PLATFORM SPREADSHEET LOCATED AT HTTP://WWW.DOT.STATE.OH.US/DIVISIONS/PRODMGT/GEOTECHNICAL/GEOTECHNICAL_DOCUMENTS/BLANK_SETTLEMENT_READING_PLOTS-ENGLISH.XLS IN THE OGE WEBSITE PUBLICATIONS AND DOCUMENTS SECTION. PREPARE A SEPARATE GRAPH IN THE SPREADSHEET FOR EACH SETTLEMENT PLATFORM. PROVIDE THE SETTLEMENT PLATFORM DESIGNATION NUMBER, STATION AND OFFSET ON EACH TAB IN THE SPREADSHEET. A COPY OF EACH CUMULATIVE PLOT SHALL BE SENT TO THE ENGINEER AND THE DISTRICT GEOTECHNICAL ENGINEER AFTER EACH SETTLEMENT READING IS RECORDED.

THE DEPARTMENT WILL CONSIDER VIBRATING WIRE SETTLEMENT MONITORING PLATFORMS IN LIEU OF THE CONVENTIONAL SETTLEMENT PLATFORMS. THE CONTRACTOR SHOULD PROVIDE DETAILS OF THE PROPOSED VIBRATING WIRE SETTLEMENT PLATFORMS AS WELL AS DESIGN DRAWINGS OF THE PROPOSED PLATFORM AND CABLING LAYOUT TO THE ENGINEER AT LEAST 30 DAYS PRIOR TO CONSTRUCTION. THE DEPARTMENT WILL REQUIRE 10 WORKING DAYS FOR REVIEW AND APPROVAL. THE DESIGN DRAWINGS SHOULD ILLUSTRATE THE PROPOSED SETTLEMENT VIBRATING WIRE SETTLEMENT PLATFORM LOCATIONS WITH ALL EXISTING AND PROPOSED SITE FEATURES TO VERIFY THE PROPOSED CABLING WILL NOT CONFLICT WITH EXISTING FACILITIES, PROPOSED FACILITIES OR UTILITIES. NO ADDITIONAL PAYMENT WILL BE PROVIDED IF THE CONTRACTOR ELECTS TO UTILIZE VIBRATING WIRE SETTLEMENT PLATFORMS.

MATERIALS: SOUND LUMBER SUCH AS (3/4-INCH) EXTERIOR GRADE PLYWOOD SHALL BE USED FOR THE BASE. THE PIPE SHALL BE (2-1/2-INCH) STANDARD BLACK PIPE WITH THREADED FITTINGS AS SHOWN ON THE PLANS. A STEEL PLATE (36" X 36" X 1/8") MAY BE SUBSTITUTED FOR THE LUMBER FOR THE PLATFORMS, AT THE CONTRACTOR'S OPTION.

THE CONTRACTOR MAY UTILIZE VIBRATING WIRE SETTLEMENT MONITOR DEVICES IN LIEU OF THE SETTLEMENT PLATFORMS AT NO ADDITIONAL COST TO THE PROJECT. THE CONTRACTOR MUST SUBMIT THE PROPOSED VIBRATING WIRE SETTLEMENT MONITORING EQUIPMENT AND METHODS TO THE DISTRICT GEOTECHNICAL ENGINEER FOR APPROVAL PRIOR TO ORDER MATERIALS OR FIELD INSTALLATION.

CALCULATED CAL
CHECKED SCC

GENERAL NOTES

HAM/WAR-71
19.83/0.00

SHEET NUM.											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
28	29	71	130								01MPOOT	02ENHOT							
																		ROADWAY	
LS											LS			201	11000	LS		CLEARING AND GRUBBING	
2											2			202	20010	2	EACH	HEADWALL REMOVED	
22											22			202	23000	22	SY	PAVEMENT REMOVED	
360												360		202	30000	360	SF	WALK REMOVED	
55											55			202	30700	55	FT	CONCRETE BARRIER REMOVED	
287											287			202	32000	287	FT	CURB REMOVED	
465											465			202	32500	465	FT	CURB AND GUTTER REMOVED	
93											93			202	34900	93	FT	PIPE REMOVED	
601											601			202	38000	601	FT	GUARDRAIL REMOVED	
2											2			202	58200	2	EACH	INLET REMOVED	
			835								835			202	75000	835	FT	FENCE REMOVED	
61											61			202	98200	61	FT	REMOVAL MISC.: PAVED GUTTER	28
2,317		79									2,396			203	10000	2,396	CY	EXCAVATION	
23,095											23,095			203	20000	23,095	CY	EMBANKMENT	
		118									118			203	35120	118	CY	GRANULAR MATERIAL, TYPE C	11
2											2			SPECIAL	20365000	2	EACH	SETTLEMENT PLATFORM	
																			11
2											2			204	45000	2	HOUR	PROOF ROLLING	
		768									768			204	50000	768	SY	GEOTEXTILE FABRIC	
149											149			206	10500	149	TON	CEMENT	
5,754											5,754			206	11000	5,754	SY	CURING COAT	
5,754											5,754			206	15010	5,754	SY	CEMENT STABILIZED SUBGRADE, 12 INCHES DEEP	
LS											LS			206	30000	LS		MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS	
	1,038										1,038			606	15050	1,038	FT	GUARDRAIL, TYPE MGS	
	2										2			606	26150	2	EACH	ANCHOR ASSEMBLY, MGS TYPE E MASH 2016	
	1										1			606	26550	1	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
	2										2			606	35002	2	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
	1										1			606	35102	1	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
	1										1			606	60028	1	EACH	IMPACT ATTENUATOR, TYPE 2 (BIDIRECTIONAL)	
			718								718			607	23000	718	FT	FENCE, TYPE CLT	
	2,495											2,495		608	10000	2,495	SF	4" CONCRETE WALK	
	428											428		608	52000	428	SF	CURB RAMP	
	148										148			622	10060	148	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE B	
	1										1			622	24841	1	EACH	CONCRETE BARRIER END SECTION, TYPE B, AS PER PLAN	67
											4			623	38500	4	EACH	MONUMENT ASSEMBLY	132
		1,745									1,745			863	00100	1,745	SY	GEOGRID, TYPE P1	
		462									462			863	00600	462	SY	GEOGRID, TYPE S1	
		1,295									1,295			863	00800	1,295	CY	REINFORCED EMBANKMENT	
LS											LS			878	25000	LS		INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS	

CALCULATED CAL
CHECKED SCC

GENERAL SUMMARY

HAM/WAR-71
19.83/0.00

SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
30	31	32		71								01MPOOT	02ENHOT						
																		EROSION CONTROL	
		1.8										1.8		601	21050	1.8	SY	TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT	
9												13		601	21060	13	SY	TIED CONCRETE BLOCK MAT WITH TYPE 2 UNDERLAYMENT	9
9												9		601	32200	9	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
20												20		601	32300	20	CY	ROCK CHANNEL PROTECTION, TYPE D WITH FILTER	
287												287		601	37500	287	FT	PAVED GUTTER, TYPE 1-2	
139												139		601	38400	139	FT	PAVED GUTTER, TYPE 2	
148												148		601	39500	148	FT	PAVED GUTTER, TYPE 5	
												62		616	10000	62	MGAL	WATER	10
67												1,299		659	00300	1,299	CY	TOPSOIL	10
				435								435		659	00530	435	SY	SEEDING AND MULCHING, CLASS 3B	
												11,098		659	10000	11,098	SY	SEEDING AND MULCHING	10
												576		659	14000	576	SY	REPAIR SEEDING AND MULCHING	10
												1.5		659	20000	1.5	TON	COMMERCIAL FERTILIZER	10
												2.38		659	31000	2.38	ACRE	LIME	
												25		659	40000	25	MSF	MOWING	
600				435								1,035		670	00500	1,035	SY	SLOPE EROSION PROTECTION	
271												271		670	00700	271	SY	DITCH EROSION PROTECTION	
270												270		670	00710	270	SY	DITCH EROSION PROTECTION MAT, TYPE A	
												LS		832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
												LS		832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
												LS		832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
												74,280		832	30000	74,280	EACH	EROSION CONTROL	
																		DRAINAGE	
	2											2		602	20000	2	CY	CONCRETE MASONRY	
		3,415										3,415		605	14000	3,415	FT	6" BASE PIPE UNDERDRAINS	
		377										377		611	00510	377	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	9
		21										21		611	01500	21	FT	6" CONDUIT, TYPE F	9
		1										1		611	99710	1	EACH	PRECAST REINFORCED CONCRETE OUTLET	9
	46											46		611	04600	46	FT	12" CONDUIT, TYPE C	
	12											12		611	05200	12	FT	12" CONDUIT, TYPE F	
	185											185		611	05900	185	FT	15" CONDUIT, TYPE B	
	47											47		611	06100	47	FT	15" CONDUIT, TYPE C	
	65											65		611	06700	65	FT	15" CONDUIT, TYPE F, 707.05 TYPE C OR 707.21	
	249											249		611	07400	249	FT	18" CONDUIT, TYPE B	
	81											81		611	13400	81	FT	30" CONDUIT, TYPE B	
	663											663		611	16400	663	FT	36" CONDUIT, TYPE B	
	24											24		611	16600	24	FT	36" CONDUIT, TYPE C	
	173											173		611	22600	173	FT	54" CONDUIT, TYPE C	
	24											24		611	23800	24	FT	60" CONDUIT, TYPE B	
	8											8		611	53104	8	FT	43" X 68" CONDUIT, TYPE C, 706.04	
	26											26		611	97010	26	FT	SLOTTED DRAIN, TYPE 2 (15")	
	2											2		611	98150	2	EACH	CATCH BASIN, NO. 3	
	2											2		611	98180	2	EACH	CATCH BASIN, NO. 3A	
	2											2		611	98370	2	EACH	CATCH BASIN, NO. 6	
	2											2		611	98450	2	EACH	CATCH BASIN, NO. 2-2A	
	6											6		611	99574	6	EACH	MANHOLE, NO. 3	
	4											4		611	99155	4	EACH	INLET RECONSTRUCTED TO GRADE, AS PER PLAN	13
	2											2		611	99654	2	EACH	MANHOLE ADJUSTED TO GRADE	

CALCULATED CAL
CHECKED SCC

GENERAL SUMMARY

HAM/WAR-71
19.83/0.00

SHEET NUM.													PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
29	33	81	82	95	97								01MPOOT	02ENHOT						
																			PAVEMENT	
	92												92		254	01000	92	SY	PAVEMENT PLANING, ASPHALT CONCRETE 1.5"	
	3,035												3,035		254	01000	3,035	SY	PAVEMENT PLANING, ASPHALT CONCRETE VARIABLE DEPTH	
	853												853		302	46000	853	CY	ASPHALT CONCRETE BASE, PG64-22	
	1,138												1,138		304	20000	1,138	CY	AGGREGATE BASE	
	438												438		407	10000	438	GAL	TACK COAT	
	289												289		442	20000	289	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448)	
	151												151		442	20200	151	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448)	
	2,329												2,329		452	12010	2,329	SY	8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	
1,583													1,583		609	12000	1,583	FT	COMBINATION CURB AND GUTTER, TYPE 2	
495													495		609	23001	495	FT	COMBINATION CURB AND GUTTER, TYPE 4, AS PER PLAN	10
4													4		609	24510	4	FT	CURB, TYPE 4-C	
265													265		609	30001	265	FT	CURB, TYPE 8, AS PER PLAN	10
		1,021											1,021		618	40100	1,021	FT	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	
	5												5		617	10100	5	CY	COMPACTED AGGREGATE	
													LS		SPECIAL	69098400	LS		CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION	10
																			LIGHTING	
					8								8		625	00450	8	EACH	CONNECTION, FUSED PULL APART	
					2								2		625	00460	2	EACH	CONNECTION, UNFUSED PULL APART	
					6								6		625	00480	6	EACH	CONNECTION, UNFUSED PERMANENT	
					3								3		625	10490	3	EACH	LIGHT POLE, CONVENTIONAL	
					3								3		625	14000	3	EACH	LIGHT POLE FOUNDATION, 24" X 6' DEEP	
					2								2		625	18200	2	EACH	BRACKET ARM, 15'	
					735								735		625	23400	735	FT	NO. 10 AWG POLE AND BRACKET CABLE	
					1,652								1,652		625	24000	1,652	FT	1-1/2" DUCT CABLE WITH TWO NO. 4 AWG 600 VOLT CABLES	
					62								62		625	25500	62	FT	CONDUIT, 3", 725.04	
					62								62		625	25900	62	FT	CONDUIT, JACKED OR DRILLED, 3"	
					8								8		625	26252	8	EACH	LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), 150W	
					1,530								1,530		625	29002	1,530	FT	TRENCH, 24" DEEP	
					3								3		625	30706	3	EACH	PULL BOX, 725.08, 24"	
					3								3		625	32000	3	EACH	GROUND ROD	
					1								1		625	34001	1	EACH	POWER SERVICE, AS PER PLAN	96
					1,592								1,592		625	36010	1,592	FT	UNDERGROUND WARNING/MARKING TAPE	
					2								2		625	39520	2	EACH	PULL BOX CLEANED	
					LS								LS		SPECIAL	62540000	LS		MAINTAIN EXISTING LIGHTING	95
					3								3		625	75506	3	EACH	LUMINAIRE REMOVED	
					1								1		625	75801	1	EACH	DISCONNECT CIRCUIT, AS PER PLAN	96
					1								1		632	89300	1	EACH	WOOD POLE	
																			TRAFFIC SURVEILLANCE	
				235									235		625	25752	235	FT	CONDUIT, 4", MULTICELL, 725.20 , EPC-80, AS PER PLAN	92
				1									1		625	25930	1	EACH	CONDUIT, MISC.:CONDUIT REMOVED	92
				44									44		625	29000	44	FT	TRENCH	
				1									1		625	30700	1	EACH	PULL BOX, 725.08, 18"	
				2									2		625	30710	2	EACH	PULL BOX, 725.08, 32"	
				1									1		625	31510	1	EACH	PULL BOX REMOVED	
				1									1		625	32000	1	EACH	GROUND ROD	
				44									44		625	36010	44	FT	UNDERGROUND WARNING/MARKING TAPE	92
				1									1		625	39520	1	EACH	PULL BOX CLEANED	
				1									1		633	67100	1	EACH	CABINET FOUNDATION	
				1									1		633	67200	1	EACH	CONTROLLER WORK PAD	
				1									1		804	30000	1	EACH	FAN-OUT KIT, 6 FIBER	
				2									2		804	32000	2	EACH	DROP CABLE, 6 FIBER	
				4									4		804	35000	4	EACH	FUSION SPLICE	
													1		809	60040	1	EACH	CCTV IP-CAMERA SYSTEM, QUAD MULTI-VIEW FIXED WITH PTZ	
													1		809	65000	1	EACH	ITS CABINET - GROUND MOUNTED	

CALCULATED CAL
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GENERAL SUMMARY

HAM/WAR-71
19.83/0.00

REF NO.	SHEET NO.	STATION TO STATION					606 GUARDRAIL, TYPE MGS	606 ANCHOR ASSEMBLY, MGS TYPE E	606 ANCHOR ASSEMBLY, MGS TYPE T	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	606 IMPACT ATTENUATOR, TYPE 2 (BIDIRECTIONAL)	608 4" CONCRETE WALK	608 CURB RAMP	609 COMBINATION CURB AND GUTTER, TYPE 2		609 COMBINATION CURB AND GUTTER, TYPE 4, AS PER PLAN	609 CURB, TYPE 4-C	609 CURB, TYPE 8, AS PER PLAN	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE B		622 CONCRETE BARRIER END SECTION, TYPE B AS PER PLAN			
				TO			FT	EACH	EACH	EACH	EACH	EACH	SF	SF	FT		FT	FT	FT	FT		EA			
C-1	37	1005+10.04	LT		1005+13.56	LT												4							
C-2	37	1008+56.23	LT		1013+50.31	LT											495								
C-3	39	1014+10.00	RT/LT		50+37.87	RT/LT									156										
C-4	39	1014+15.83	LT		54+24.24	LT									323										
C-5	39	51+75.00	LT		54+00.00	LT													229						
C-6	44	54+39.99	LT		54+54.43	LT									42										
C-10	41	54+01.00	LT		54+01.00	LT													36						
C-7	45	15+00.00	RT		21+19.00	RT									620										
C-8	45	16+36.00	LT		17+11.00	LT									75										
C-9	45	17+55.00	LT		21+19.00	LT									367										
G-1	35	1000+27.50	LT		1005+15.56	LT	475		1		1														
G-2	37	1008+30.90	LT		1013+79.63		475	1		1															
G-3	37	1008+60.46	RT		1010+23.42		87.5	1		1															
W-1	39	1014+06.00	RT										99												
W-2	39	1014+06.00	RT											101											
W-3	39	1014+06.00	LT											152											
W-4	39	1014+15.75	LT		54+23.12	LT							2396												
W-5	44	54+36.51	LT											175											
AU1	45	17+60.42	RT									1													
B-1	45	17+79.42	RT		18+09.42	RT															1				
B-2	45	18+09.42	RT		18+83.42	RT														148					
TOTALS CARRIED TO GENERAL SUMMARY							1038	2	1	2	1	1	2495	428	1583		495	4	265	148		1			

CALCULATED CAL
CHECKED SCC

ROADWAY SUBSUMMARY

HAM/WAR-71
19.83/0.00

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REF NO.	SHEET NO.	STATION TO STATION						601 TIED CONCRETE BLOCK MAT, TYPE 2 SY	601 ROCK CHANNEL PROTECTION, TYPE C WITH FILTER CY	601 ROCK CHANNEL PROTECTION, TYPE D WITH FILTER CY	601 PAVED GUTTER, TYPE 1-2 FT	601 PAVED GUTTER, TYPE 2 FT	601 PAVED GUTTER, TYPE 5 FT			659 TOPSOIL CY						670 SLOPE EROSION PROTECTION SY	670 DITCH EROSION PROTECTION SY	670 DITCH EROSION PROTECTION MAT, TYPE A SY				
				TO																							
E1	36	1000+00.00	LT		1003+25.00	LT																	271				
E2	38	1004+04.00	LT		1005+33.30	LT																		108			
E3	38	1005+06.00	LT		1005+06.00	LT			1.6																		
E4	38	1007+51.00	LT		1007+61.74	LT			6.7																		
E5	38	1007+62.00	LT		1008+05.00	LT				19.8																	
E6	38	1008+88.50	LT		1010+13.00	LT						139															
E7	38, 40	1010+13.00	LT		1013+00.00	LT					287																
E8	40	1012+50.00	RT		1013+98.00	RT							148														
E9	40	1013+53.00	LT		1013+53.00	LT		9.2																			
E10	38	1010+03.00	RT		1010+03.00	RT			1.1																		
E11	38, 40	1010+06.00	RT		1012+00.00	RT																		162			
E12	36	1003+50.00	LT		1004+50.00	LT										67							600				
TOTALS CARRIED TO GENERAL SUMMARY								10	9	20	287	139	148			67							600	271	270		

CALCULATED JNR
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DRAINAGE SUBSUMMARY

HAM/WAR-71
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REF NO.	SHEET NO.	STATION TO STATION						602	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611
								CONCRETE MASONRY	12" CONDUIT, TYPE C	12" CONDUIT, TYPE F	15" CONDUIT, TYPE B	15" CONDUIT, TYPE C	15" CONDUIT, TYPE F, 707.05 TYPE C OR 707.21		18" CONDUIT, TYPE B		30" CONDUIT, TYPE B	36" CONDUIT, TYPE B	36" CONDUIT, TYPE C	54" CONDUIT, TYPE C	60" CONDUIT, TYPE B	43" X 68" CONDUIT, TYPE C, 706.04	SLOTTED DRAIN, TYPE 2 (15")	CATCH BASIN, NO. 3	CATCH BASIN, NO. 3A	CATCH BASIN, NO. 6	CATCH BASIN, NO. 2-2A	MANHOLE, NO. 3	INLET RECONSTRUCTED TO GRADE, AS PER PLAN		MANHOLE ADJUSTED TO GRADE
								CY	FT	FT	FT	FT	FT		FT		FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH		EACH
				TO																											
D3	43	54+19.00	LT		52+86.00	LT									133																1
D4	40	52+86.00	LT		51+70.00	LT									116														1		
D5	40	51+70.61	LT																												1
D6	40	51+38.75	LT		1013+90.00	RT											81														
D9	40	1014+97.92	LT		1014+70.47	LT						32												1							
D10	40	1014+70.47	LT		1014+21.25	LT					49														1						
D11	40	1014+21.25	LT		1013+90.00	LT					31													1							
D12	40	1013+90.00	RT		1013+90.00	LT												31											1		
D13	40	1013+90.00	LT		1012+00.00	LT												190											1		
D14	40	1013+90.00	LT		1013+90.00	LT						15																1			
D15	40	1013+90.00	RT		1013+90.00	RT					7																1				
D16	40	1012+00.00	LT		1012+00.00	LT					7														1						
D17	40	1012+00.00	LT		1009+30.00	LT												271													
D18	40	1012+00.00	RT		1012+00.00	LT					45																	1			
D19	38	1010+03.00	RT		1010+03.00	RT		0.21		12																					
D20	38	1009+30.00	LT		1007+61.74	LT		0.76										171											1		
D21	38	1005+80.00	LT	21	1004+04.15	LT														173									1		
D22	38	1006+17.50	LT	22	1005+80.00	LT			46																						
D23	38	1005+87.00	LT	23	1005+80.00	LT																8									
D24	36	1004+04.15	LT	24	1003+96.00	LT															24								1		
D25	36	1004+04.23	LT	25	1004+04.15	LT		0.76											24												
D26	38	1005+61.60	RT	26	1005+35.60	RT																	26								
D27	38	1005+35.60	RT	27	1005+07.30	LT					46																1				
D28	38	1005+07.30	LT	28	1005+06.10	LT		0.27					65																		
D29	44	17+07	LT		17+07	LT																							1		
D30	44	19+04	LT		19+04	LT																							1		
D31	44	17+75	RT		17+75	RT																							1		
D32	44	18+75	RT		18+75	RT																							1		
TOTALS CARRIED TO GENERAL SUMMARY								2	46	12	185	47	65		249		81	663	24	173	24	8	26	2	2	2	2	6	4		2

CALCULATED JNR
CHECKED SCC

DRAINAGE SUBSUMMARY

HAM/WAR-71
19.83/0.00

STATION RANGE	TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DxW/9	CADD GENERATED AREA	442 ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448)	442 ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448)	302 ASPHALT CONCRETE BASE, PG64-22	304 AGGREGATE BASE	254 PAVEMENT PLANING, ASPHALT CONCRETE, 1.5"	254 PAVEMENT PLANING, ASPHALT CONCRETE, VARIABLE DEPTH	452 8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1	407 NON-TRACKING TACK COAT	617 COMPACTED AGGREGATE
			FT	FT	SY	SY	CY	CY	CY	CY	SY	SY	SY	GAL	CY
TO															
MILL AND OVERLAY															
RAMP C															
991+30.00		1005+60.25		1430.25	11.00	1748.08	1759	75.00	25.00				1759.00		184.00	
FIELDS ERTEL ROAD															
17+79.29		18+86.42		107.13	9.00	107.13	81	2				81.33			4.10	
RAMP B															
2+57.83		6+32.17		374.34	30.00	1247.80	1276	104.00					1276.00		144.00	5.00
FULL DEPTH ASPHALT															
RAMP C															
997+90.00		1005+26.21		736.21	24.00	1963.23	1937	80.69	94.25	659	510.58					
1005+26.21		1005+51.21		25.00			11				22.27			11.44		
1008+19.85		1008+44.85		25.00							18.98					
AS-2-15 FLEXIBLE PAVEMENT															
RAMP C															
1008+44.85		1008+69.85		BOTH			941	4.36	5.09	26.38	28.34				17.35	
FULL DEPTH CONCRETE															
RAMP C															
1008+69.85		1014+69.51		599.66			2318				448.11			2317.78		
MASON-MONTGOMERY ROAD															
50+37.51		51+25.54		LT	88.03	12.00	117.37	550				10.21			1.00	
51+25.54		54+56.18		LT	330.64	12.00	440.85	528	22.02	25.72	167.28	109.53			87.19	
SUBTOTALS							288.07	150.05	852.16	1137.80	91.54	3035.00	2329.22	437.64	5.00
TOTALS CARRIED TO GENERAL SUMMARY							289	151	853	1138	92	3035	2329	438	5

CALCULATED CAL
CHECKED SCC

PAVEMENT SUBSUMMARY

HAM/WAR-71
19.83/0.00

RAMP C	RAMP C
P.I. Sta. 1004+25.04	P.I. Sta. 1010+56.24
Δ = 3° 12′ 04″ (LT)	Δ = 4° 00′ 41″ (RT)
Dc = 1° 59′ 59″	Dc = 1° 59′ 59″
R = 2,865.00′	R = 2,865.00′
T = 80.05′	T = 100.33′
L = 160.07′	L = 200.58′
E = 1.12′	E = 1.76′
C = 160.05′	C = 200.54′
C.B. = N 44° 01′ 11″ E	C.B. = N 44° 25′ 29″ E
emax = 0.053	emax = 0.045

HORIZONTAL SCALE IN FEET: 0, 10, 20, 40

CALCULATED CAL | CHECKED SCC

PLAN - RAMP C
STA. 1004+50 - STA. 1010+50

HAM/WAR-71
19.83/0.00

39
146

L:\DCS\Projects\TRN\6054697_WCTIDFEINT\ODOT\104844\Design\Roadway\Sheets\104844_GP004.dgn Sheet 5/5/2021 12:14:32 PM dave.wormald

LEGEND

PAVEMENT RESURFACING

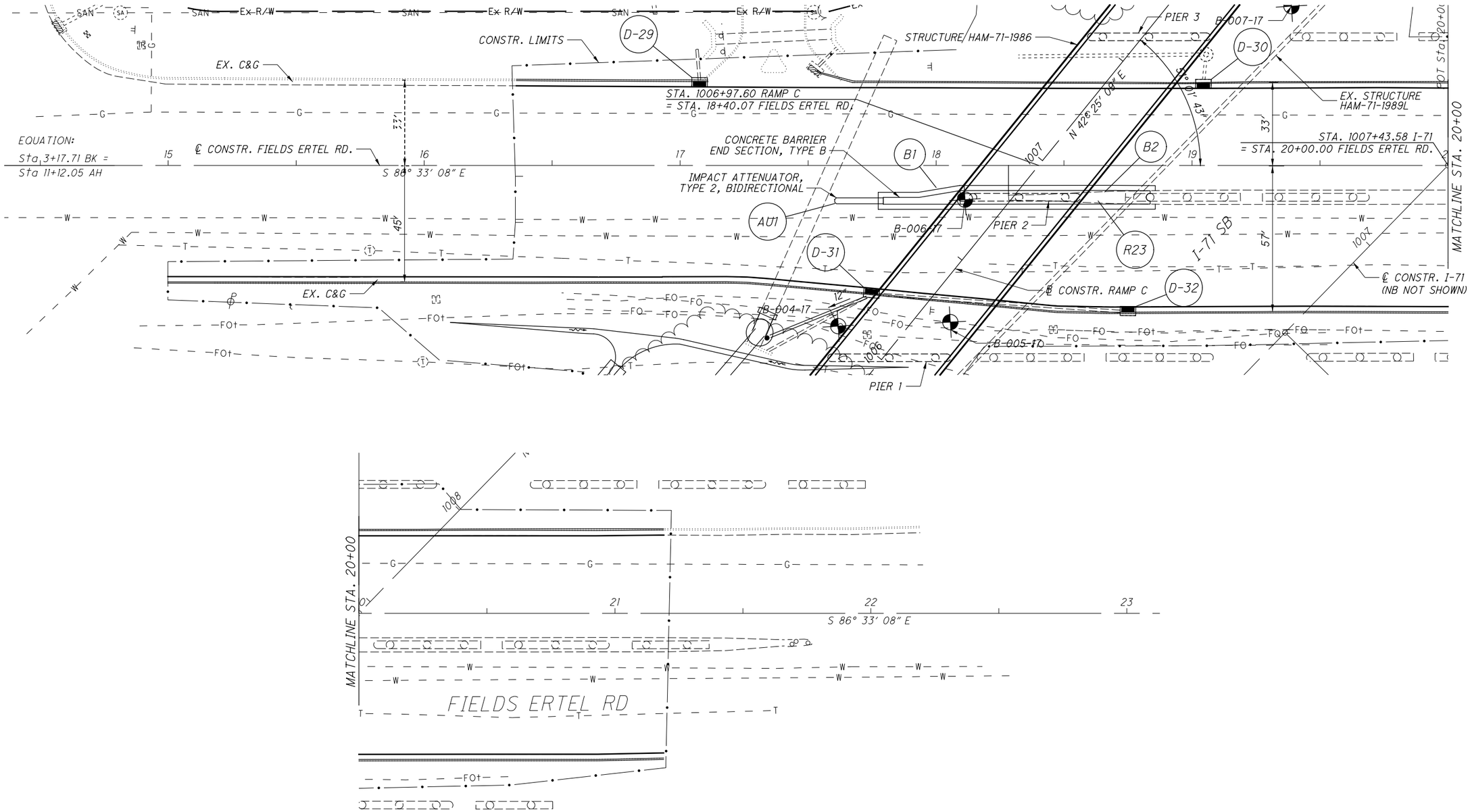
LIMITS OF REINFORCED SLOPE

CONTRACTOR SHALL COORDINATE GUARDRAIL POST INSTALLATION TO AVOID DAMAGING GEOGRIDC FOR REINFORCED SOIL SLOPE

CROSS REFERENCES

FOR ADDITIONAL DETAILS, SEE BRIDGE SITE PLAN
FOR PLAN FIELDS ERTEL RD, SEE SHEET 45
FOR ESTIMATED QUANTITIES SEE SHEET 22
FOR ℄ & ℄ REFERENCES SEE SHEET 2
FOR PROJECT CONTROL SEE SHEET 10

FOR ADDITIONAL DETAILS, SEE RETAINING WALL PLANS
FOR REINFORCED SOIL SLOPE DETAILS, SEE SHEET 70
SEE BRIDGE PLANS FOR APPROACH SLAB PARAPET DETAILS
FOR FENCING PLAN, SEE SHEET 130



I-71
P.I. Sta. 999+93.14
Δ = 3° 31′ 04″ (RT)
Dc = 0° 16′ 00″
R = 21,485.88′
T = 659.79′
L = 1,319.17′
E = 10.13′
C = 1,318.96′
C.B. = N 45° 56′ 25″ E

CROSS REFERENCES

SEE BRIDGE SITE PLAN FOR DETAILS
FOR PAVEMENT DETAILS, SEE SHEET 67
FOR ESTIMATED QUANTITIES SEE SHEET 22
FOR ℄ & ℄ REFERENCES SEE SHEET 2
FOR PROJECT CONTROL SEE SHEET 10

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED CAL
CHECKED SCC

PLAN - FIELDS-ERTEL ROAD
STA. 15+00 - STA. 23+00

HAM/WAR-71
19.83/0.00

45
146

ITEM203 - ROADWAY, MISC.: TEMPORARY SURCHARGE

DESCRIPTION: THIS ITEM CONSISTS OF DESIGNING, CONSTRUCTING, AND REMOVING A TEMPORARY SURCHARGE AT THE LOCATIONS AND LIMITS SHOWN IN THE PLANS OR DESCRIBED BELOW.

AS DIRECTED IN THE DRILLED SHAFT INSTALLATION CONSTRAINTS, A TEMPORARY SURCHARGE IS NECESSARY AT THE ABUTMENTS FOR THIS BRIDGE TO MITIGATE EMBANKMENT SETTLEMENT. CONSTRUCT THE TEMPORARY SURCHARGE SO IT EXTENDS VERTICALLY FROM THE ELEVATION OF THE BOTTOM OF THE PROPOSED ABUTMENT FOOTING TO THE PROPOSED ROADWAY SUBGRADE ELEVATION. CONSTRUCT THE TEMPORARY SURCHARGE USING ITEM 203 EMBANKMENT WITH A DRY DENSITY OF AT LEAST 105 PCF AFTER COMPACTION. SUPPORT THE SIDES OF THE TEMPORARY SURCHARGE SO THAT THE TOP OF THE SURCHARGE MATERIAL IS NO MORE THAN 2 FEET (MEASURED HORIZONTALLY) FROM THE BACK FACE OF THE PROPOSED ABUEMENT BACKWALL. CONSTRUCT THE TEMPORARY SURCHARGE SO THAT IT EXTENDS AT LEAST 100 FEET BEHIND EACH ABUTMENT.

PREPARE AND PROVIDE SHOP DRAWINGS AND DESIGN CALCULATIONS FOR THE TEMPORARY SURCHARGE, INCLUDING THE METHOD USED TO SUPPORT THE SIDES OF THE TEMPORARY SURCHARGE AND ALL DETAILS OF THE SUPPORT SYSTEM. ENSURE THE TEMPORARY SURCHARGE DESIGN ACCOMMODATES THE LOCATION AND COMPOSITION OF THE PROPOSED ABUTMENT WALLS FOR THE BRIDGE STRUCTURE. HAVE TWO OHIO REGISTERED ENGINEERS SIGN, SEAL, AND DATE THE DRAWINGS AND CALCULATIONS ACCORDING TO C&MS 501.05. SUBMIT THE DRAWINGS AND CALCULATIONS TO THE ENGINEER AT LEAST 30 DAYS BEFORE CONSTRUCTION OF THE TEMPORARY SURCHARGE BEGINS.

REMOVE THE TEMPORARY SURCHARGE AFTER THE CONDITIONS SPECIFIED IN THE DRILLED SHAFT INSTALLATION CONSTRAINTS ARE SATISFIED AND THE ENGINEER AUTHORIZES REMOVAL.

BASIS OF PAYMENT: THE DEPARTMENT WILL PAY FOR ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO DESIGN, CONSTRUCT AND REMOVE THE TEMPORARY SURCHARGE AT THE REAR AND FORWARD ABUTMENTS FOR THE BRIDGE AT THE CONTRACT LUMP SUM BID PRICE FOR ITEM SPECIAL 203E ROADWAY, MISC.: TEMPORARY SURCHARGE

CLASS QC3 CONCRETE WITH QC/QA, SUPERSTRUCTURE, AS PER PLAN
CLASS QC3 CONCRETE WITH QC/QA, BRIDGE DECK AS, PER PLAN
CLASS QC3 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET) AS PER PLAN

THESE ITEMS MODIFY THE STANDARD 511 CONCRETE FOR STRUCTURES SPECIFICATION TO INCLUDE MACRO-SYNTHETIC, AND CORROSION INHIBITORS INTO THE RESPECTIVE CONCRETE ITEMS. THIS ITEM SHALL CONFORM TO CMS 511 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

PROVIDE MATERIALS CONFORMING TO 511.02 EXCEPT AS MODIFIED BELOW:

PORTLAND CEMENT CONCRETE 499.03, CLASS QC 3 MEETING A DESIGN STRENGTH OF 4,500 PSI, WITH MACRO-SYNTHETIC FIBERS WITH MODIFICATION PER 511.02
FIBERS FOR CONCRETE ASTM C 1116, TYPE III
CORROSION INHIBITOR 515.15

THE CLASS QC3 CONCRETE SHALL MEET THE FOLLOWING CRITERIA:

WATER/CEMENT RATIO = 0.40 MAXIMUM; MINIMUM 4 LBS/CY MACROSYNTHETIC FIBERS (1.5 IN. MIN. TO 2.5 IN. MAX.) MEETING ASTM C1116 TYPE III SHALL BE ADDED TO THE MIX.

MIX SHALL INCLUDE A MIGRATING CORROSION INHIBITOR AS MANUFACTURED BY AN APPROVED SUPPLIER LISTED ON ODOT'S QUALIFIED APPROVED SUPPLIERS, ITEM 515.15. THE DOSAGE RATE LISTED ON THE ODOT QUALIFIED APPROVED SUPPLIERS LIST WILL APPLY.

THE MACRO-SYNTHETIC FIBERS SHALL BE INCORPORATED INTO THE MIX IN SUCH A WAY THAT NO 'BALLING' OCCURS. UPON INSPECTION OF THE MIX AT THE TIME OF PLACEMENT, IF ANY 'BALLING' OCCURS, THE ENGINEER SHALL REJECT THE REMAINDER OF THE LOAD AT ANY TIME DURING THE POUR. IT IS IMPORTANT TO FOLLOW INDUSTRY STANDARDS AND ASTM SPECIFICATIONS ON THE PREMIXING OF THE CEMENT, AGGREGATE, AND MACRO-SYNTHETIC FIBERS PRIOR TO THE ADDITION OF WATER AND ADMIXTURES. PROVIDE MACRO-SYNTHETIC -FIBERS THAT ARE MONOFILAMENT FIBERS MADE FROM VIRGIN POLYPROPYLENE, POLYETHYLENE, OR CO-POLYMERS THAT ARE INERT TO ALKALI ATTACK. ENSURE THE MACRO-SYNTHETIC FIBERS HAVE A MINIMUM TENSILE STRENGTH OF 70 KSI, A MINIMUM MODULUS OF ELASTICITY OF 800 KSI, A MINIMUM FILAMENT DIAMETER OF 0.012 INCHES, AND ASPECT RATIO BETWEEN 60 AND 100, AND ARE BETWEEN 1.0 AND 2.5 INCHES IN LENGTH. STORE THE MACRO-SYNTHETIC FIBERS ACCORDING TO THE MANUFACTURE'S RECOMMENDATION AND KEEP THE MATERIAL FREE FROM DUST, DIRT AND MOISTURE. PLACING THE BAG THAT THE FIBERS COME IN INTO THE CONCRETE MIX IS NOT PERMITTED.

USE A MINIMUM DOSAGE RATE OF MACRO-SYNTHETIC FIBERS OF 4.0 LBS/CY OF CONCRETE. DETERMINE THE FINAL PROPOSED DOSAGE RATE THROUGH MIX TESTING. ENSURE THE FIBER REINFORCED CONCRETE MEETS OR EXCEEDS A MINIMUM EQUIVALENT FLEXURAL STRENGTH RATIO OF 25% ACCORDING TO ASTM C 1609. ENSURE THE FINAL PROPOSED MIX IS WORKABLE AND ABLE TO BE PRODUCED SUCH THAT BALLING OR CLUMPING OF THE FIBERS IS NOT A PROBLEM AS DETERMINED BY THE ENGINEER. UTILIZE A LABORATORY REGULARLY INSPECTED BY THE CEMENT AND CONCRETE REFERENCE LABORATORY (CCRL) OF THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, OR OTHER APPROVED REFERENCE LABORATORY, TO PERFORM THE TESTING. BEFORE USE, SUBMIT DOCUMENTATION TO THE PROJECT ENGINEER CERTIFYING BOTH THE MACRO-SYNTHETIC FIBERS AND THE MIX MEET OR EXCEED THE REQUIRED PROPERTIES. SAMPLING WILL BE ALLOWED FOR TESTING PURPOSES. A DEMONSTRATION OF THE MIX PRODUCTION OR TRIAL MIX, MAY BE REQUIRED BY THE ENGINEER PRIOR TO PLACING ANY OF THE MIX ON THE PROJECT.

THE BATCH WEIGHTS SHALL BE CORRECTED TO COMPENSATE FOR THE MOISTURE CONTAINED IN THE AGGREGATE AT THE TIME OF USE. A CHEMICAL ADMIXTURE (705.12, TYPE A OR D) SHALL BE USED. THE TRANSIT MIXER CHARGE SHALL BE LIMITED TO 3/4 OF ITS RATED CAPACITY OR 6 CUBIC YARDS, WHICHEVER IS SMALLER. THE FIRST THREE TRANSIT MIXER LOADS ARE REQUIRED TO BE AT THE MINIMUM YARDAGE LISTED ABOVE TO SHOW PROOF OF THE SUCCESSFUL BATCHING OPERATION. AFTER CONSISTENCY IN THE DELIVERED MATERIAL HAS BEEN ESTABLISHED, THE CONCRETE SUPPLIER MAY INCREASE THE BATCH DELIVERED QUANTITIES AS LONG AS THE QUALITY REMAINS ACCEPTABLE TO THE ENGINEER. THE ENGINEER CAN REDUCE THE BATCH LOAD SIZE AT ANY TIME AS NEEDED TO CORRECT/IMPROVE CONCRETE QUALITY.

CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT THE CORROSION INHIBITOR AND ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CORROSION INHIBITOR IS SUGGESTED TO BE A MCI PRODUCT BY CORTEC OR AN APPROVED EQUAL FROM THE QUALIFIED PRODUCTS LIST. THE CONCRETE SUPPLIER'S CHOICE OF ONE OF THESE CORROSION INHIBITORS DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS. PLEASE BE ADVISED THAT SOME PRODUCTS ON THE LIST EFFECT THE DELIVERED MIX PROPERTIES GREATLY WHILE OTHER PRODUCTS DO NOT.

APPROACH SLABS, SUPERSTRUTURE (DIAPHRAGMS), AND BRIDGE PARAPET CONCRETE (INCLUDING APPROACH SLAB PARAPETS) ARE TO USE THE SAME MIX DESIGN AS THE BRIDGE DECK. THE CONTRACTOR SHOULD BE ADVISED THAT CONCRETE RETARDING AGENTS MAY NEED TO BE ADDED TO OFFSET THE EFFECTS OF THE MIGRATING CORROSION INHIBITOR SELECTED.

THE CONTRACTOR SHALL PROVIDE TRADITIONAL BRIDGE DECK FORMS CONFORMING TO CMS 508. PERMANENT STAY-IN-PLACE (SIP) FORMS ARE NOT ALLOWED. THE PLACING OF THE DECK AND THE APPROACH SLABS IN THE SAME CONCRETE POUR IS NOT PERMITTED.

CLASS QC3 CONCRETE WITH QC/QA, SUBSTRUCTURE PIER ABOVE FOOTINGS, AS PER PLAN
CLASS QC3 CONCRETE WITH QA/QA, SUBSTRUCTURE ABUTMENTS
INLCLUDING FOOTINGS

THESE ITEMS MODIFY THE STANDARD 511 CONCRETE FOR STRUCTURES SPECIFICATION TO INCLUDE MACRO-SYNTHETIC, AND CORROSION INHIBITORS INTO THE SUBSTRUCTURE CONCRETE. THIS ITEM SHALL CONFORM TO CMS 511 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

PROVIDE MATERIALS CONFORMING TO 511.02 EXCEPT AS MODIFIED BELOW:

PORTLAND CEMENT CONCRETE 499.03, CLASS QC 3 MEETING A DESIGN STRENGTH OF 4,000 PSI, WITH MACRO-SYNTHETIC FIBERS WITH MODIFICATION PER 511.02
FIBERS FOR CONCRETE ASTM C 1116, TYPE III
CORROSION INHIBITOR 515.15

THE CLASS QC3 CONCRETE FOR THE SUBSTRUCTURE SHALL MEET THE FOLLOWING CRITERIA:
WATER/CEMENT RATIO = 0.40 MAXIMUM; MINIMUM 4 LBS/CY MACRO-SYNTHETIC FIBERS (1.0 IN. MIN. TO 2.5 IN. MAX.) MEETING ASTM C1116 TYPE III SHALL BE ADDED TO THE MIX.

MIX SHALL INCLUDE A MIGRATING CORROSION INHIBITOR AS MANUFACTURED BY AN APPROVED SUPPLIER LISTED ON ODOT'S QUALIFIED APPROVED SUPPLIERS, ITEM 515.15. THE DOSAGE RATE LISTED ON THE ODOT QUALIFIED APPROVED SUPPLIERS LIST WILL APPLY.

THE MACRO-SYNTHETIC FIBERS SHALL BE INCORPORATED INTO THE MIX IN SUCH A WAY THAT NO 'BALLING' OCCURS. UPON INSPECTION OF THE MIX AT THE TIME OF PLACEMENT, IF ANY 'BALLING' OCCURS, THE ENGINEER SHALL REJECT THE REMAINDER OF THE LOAD AT ANY TIME DURING THE POUR. IT IS IMPORTANT TO FOLLOW INDUSTRY STANDARDS AND ASTM SPECIFICATIONS ON THE PREMIXING OF THE CEMENT, AGGREGATE, AND MACRO-SYNTHETIC FIBERS PRIOR TO THE ADDITION OF WATER AND ADMIXTURES. PROVIDE MACRO-SYNTHETIC -FIBERS THAT ARE MONOFILAMENT FIBERS MADE FROM VIRGIN POLYPROPYLENE, POLYETHYLENE, OR CO-POLYMERS THAT ARE INERT TO ALKALI ATTACK. ENSURE THE MACRO-SYNTHETIC FIBERS HAVE A MINIMUM TENSILE STRENGTH OF 70 KSI, A MINIMUM MODULUS OF ELASTICITY OF 800 KSI, A MINIMUM FILAMENT DIAMETER OF 0.012 INCHES, AND ASPECT RATIO BETWEEN 60 AND 100, AND ARE BETWEEN 1.0 AND 2.5 INCHES IN LENGTH. STORE THE MACRO-SYNTHETIC FIBERS ACCORDING TO THE MANUFACTURE'S RECOMMENDATION AND KEEP THE MATERIAL FREE FROM DUST, DIRT AND MOISTURE. PLACING THE BAG THAT THE FIBERS COME IN INTO THE CONCRETE MIX IS NOT PERMITTED.

USE A MINIMUM DOSAGE RATE OF MACRO-SYNTHETIC FIBERS OF 4.0 LBS/CY OF CONCRETE. DETERMINE THE FINAL PROPOSED DOSAGE RATE THROUGH MIX TESTING. ENSURE THE FIBER REINFORCED CONCRETE MEETS OR EXCEEDS A MINIMUM EQUIVALENT FLEXURAL STRENGTH RATIO OF 25% ACCORDING TO ASTM C 1609. ENSURE THE FINAL PROPOSED MIX IS WORKABLE AND ABLE TO BE PRODUCED SUCH THAT BALLING OR CLUMPING OF THE FIBERS IS NOT A PROBLEM AS DETERMINED BY THE ENGINEER. UTILIZE A LABORATORY REGULARLY INSPECTED BY THE CEMENT AND CONCRETE REFERENCE LABORATORY (CCRL) OF THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, OR OTHER APPROVED REFERENCE LABORATORY, TO PERFORM THE TESTING. BEFORE USE, SUBMIT DOCUMENTATION TO THE PROJECT ENGINEER CERTIFYING BOTH THE MACRO-SYNTHETIC FIBERS AND THE MIX MEET OR EXCEED THE REQUIRED PROPERTIES. SAMPLING WILL BE ALLOWED FOR TESTING PURPOSES. A DEMONSTRATION OF THE MIX PRODUCTION OR TRIAL MIX, MAY BE REQUIRED BY THE ENGINEER PRIOR TO PLACING ANY OF THE MIX ON THE PROJECT.

THE BATCH WEIGHTS SHALL BE CORRECTED TO COMPENSATE FOR THE MOISTURE CONTAINED IN THE AGGREGATE AT THE TIME OF USE. A CHEMICAL ADMIXTURE (705.12, TYPE A OR D) SHALL BE USED. THE ENGINEER CAN REDUCE THE BATCH LOAD SIZE AT ANY TIME AS NEEDED TO CORRECT/IMPROVE CONCRETE QUALITY. THE TRANSIT MIXER CHARGE SHALL BE LIMITED TO 3/4 OF ITS RATED CAPACITY OR 6 CUBIC YARDS, WHICHEVER IS SMALLER. THE FIRST THREE TRANSIT MIXER LOADS ARE REQUIRED TO BE AT THE MINIMUM YARDAGE LISTED ABOVE TO SHOW PROOF OF THE SUCCESSFUL BATCHING OPERATION. AFTER CONSISTENCY IN THE DELIVERED MATERIAL HAS BEEN ESTABLISHED, THE CONCRETE SUPPLIER MAY INCREASE THE BATCH DELIVERED QUANTITIES AS LONG AS THE QUALITY REMAINS ACCEPTABLE TO THE ENGINEER. THE ENGINEER CAN REDUCE THE BATCH LOAD SIZE AT ANY TIME AS NEEDED TO CORRECT/IMPROVE CONCRETE QUALITY.

CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT THE CORROSION INHIBITOR AND ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CORROSION INHIBITOR IS SUGGESTED TO BE A MCI PRODUCT BY CORTEC OR AN APPROVED EQUAL FROM THE QUALIFIED PRODUCTS LIST. THE CONCRETE SUPPLIER'S CHOICE OF ONE OF THESE CORROSION INHIBITORS DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS. PLEASE BE ADVISED THAT SOME PRODUCTS ON THE LIST EFFECT THE DELIVERED MIX PROPERTIES GREATLY WHILE OTHER PRODUCTS DO NOT.

THE CONTRACTOR SHOULD BE ADVISED THAT CONCRETE RETARDING AGENTS MAY NEED TO BE ADDED TO OFFSET THE EFFECTS OF THE MIGRATING CORROSION INHIBITOR SELECTED.

DESIGN AGENCY
AECOM
AECOM
250 East Fifth Street, Suite 1800
Cincinnati, Ohio 45202, USA
www.aecom.com

DESIGNED	DRAWN	REVIEWED	DATE
ERM	ERM	TMB	12/19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
ESH	---	3107754	

GENERAL NOTES - 2 OF 2
BRIDGE NO. HAM-71-19.83
I-71 SB RAMP C OVER FIELDS ERTEL ROAD

HAM/WAR-71
-19.83/0.00
PID No. 104844

ITEM ODOT	EXT.	PARTICIPATION 01/MPO/OT	TOTAL	UNIT	DESCRIPTION	QUANTITIES HAM-71-19.83 ABUTMENTS REAR	ABUTMENTS FWD.	PIERS	SUPER.	GENERAL	REF. SHEET
202	11301	24	24	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN					24	2/31 5/31
203	98500	LS	LS	LS	TEMPORARY SURCHARGE					LS	2/31 5/31
503	11101	LS	LS	LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN					LS	
509	10000	140,406	140,406	LB	EPOXY COATED REINFORCING STEEL	6238	7121	23943	101294	1810	
509	30020	6,362	6,362	FT	NO. 4 GFRP DEFORMED BARS				6267	95	
511	33500	4	4	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE	2	2				
511	53014	43	43	CY	CLASS QC3 CONCRETE WITH QC/QA, SUPERSTRUCTURE, AS PER PLAN				43		3/31
511	53014	308	308	CY	CLASS QC3 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN				308		3/31
511	53014	90	90	CY	CLASS QC3 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN				81	9	3/31
511	53014	110	110	CY	CLASS QC3 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS, AS PER PLAN			110			3/31
511	53014	136	136	CY	CLASS QC3 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING, AS PER PLAN	59	77				3/31
512	10100	1,021	1,021	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	50	62	342	567		
513	10240	323,996	323,996	LB	STRUCTURAL STEEL MEMBERS, LEVEL 2				323996		
513	20000	3,875	3,875	EACH	WELDED STUD SHEAR CONNECTORS				3875		
514	00060	15,535	15,535	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT				15535		
514	00066	15,535	15,535	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT				15535		
516	13600	14	14	SF	1" PREFORMED EXPANSION JOINT FILLER	5	9				
516	13900	130	130	SF	2" PREFORMED EXPANSION JOINT FILLER	75	55				
516	14020	105	105	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	53	52				
516	44200	10	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (12" x 12" x 2.5" WITH 13" x 13" x 1.50" PLATE)	5	5				
516	44200	15	15	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (17" x 15" x 2.5" WITH 18" x 16" x 1.50" PLATE)			15			
518	21200	97	97	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	47	50				
518	40000	164	164	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	75	89				
518	40010	14	14	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	8	6				
524	94605	150	150	FT	DRILLED SHAFTS, 30" DIAMETER INTO BEDROCK, AS PER PLAN	60	90				2/31
524	94703	696	696	FT	DRILLED SHAFTS, 36" DIAMETER, ABOVE BEDROCK, AS PER PLAN	264	432				2/31
524	94705	45	45	FT	DRILLED SHAFTS, 36" DIAMETER, INTO BEDROCK, AS PER PLAN			45			2/31
524	94803	486	486	FT	DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK, AS PER PLAN			486			2/31
526	25001	216	216	SY	REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN					216	26/31 27/31
526	90010	94	94	FT	TYPE A INSTALLATION					94	
601	20000	471	471	SY	CRUSHED AGGREGATE SLOPE PROTECTION	230	241				
625	25600	319	319	LF	CONDUIT, 4", 725.04				319		

CALC BY: ERM 5/30/2019
CHECK BY: ESH 11/18/2019

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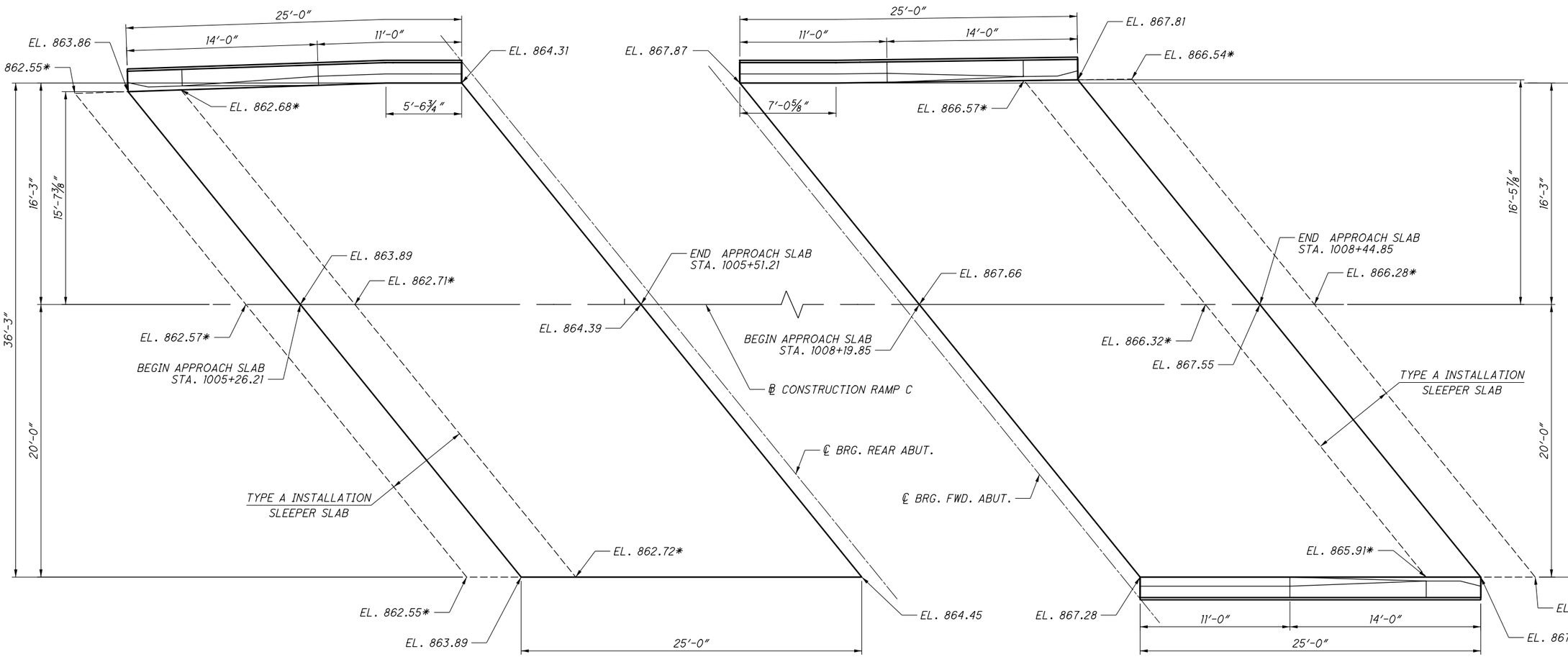
DESIGNED	DRAWN	REVIEWED	DATE
ERM	ERM	TMB	12/19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
ESH	---	3107754	

ESTIMATED QUANTITIES
BRIDGE NO. HAM-71-19.83
I-71 SB RAMP C OVER FIELDS ERTEL ROAD

HAM/WAR-71
-19.83/0.00
PID No. 104844



REAR APPROACH SLAB PLAN

FORWARD APPROACH SLAB PLAN

LEGEND

* TOP OF SLEEPER SLAB SURFACE ELEVATION

NOTES:

1. APPROACH SLAB TYPE A INSTALLATION PER STD. DWG. AS-2-15.
2. ALL ELEVATIONS SHOWN ARE FINISHED GRADE, UNLESS OTHERWISE NOTED.
3. FOR GENERAL NOTES, SEE SHEETS 2/31 AND 3/31.
4. FOR REINFORCING STEEL LIST, SEE SHEET 31/31.
5. PARAPETS ARE PAID SEPARATELY. FOR ADDITIONAL PARAPET BARRIER DETAILS, SEE SHEET 27/31.
6. FOR ADDITIONAL APPROACH SLAB DETAILS NOT SHOWN, INCLUDING REINFORCING STEEL AND SLEEPER SLAB INSTALLATION, SEE STD. DWGS. AS-1-15 AND AS-2-15.

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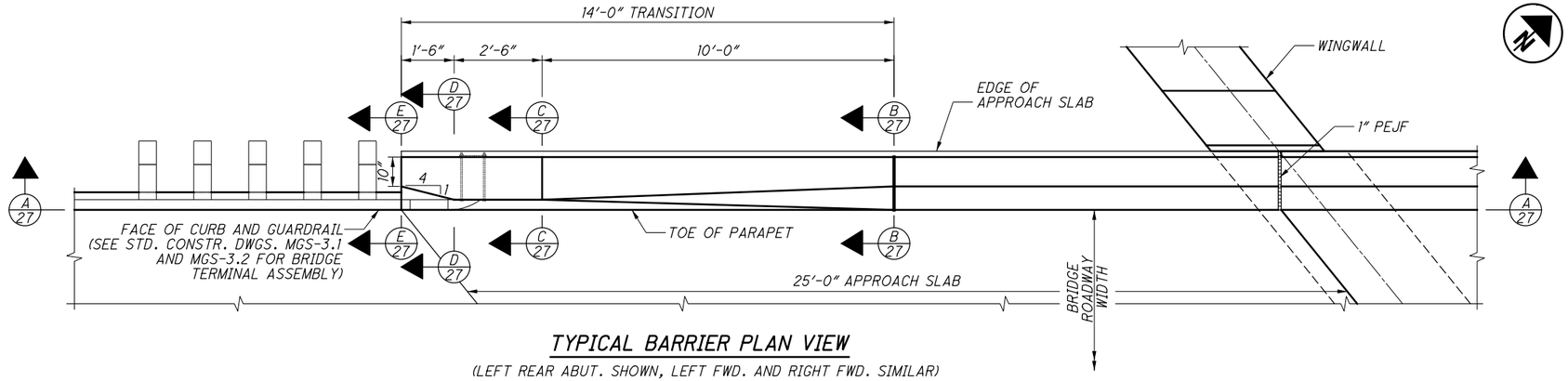
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LMP	---	3107754	

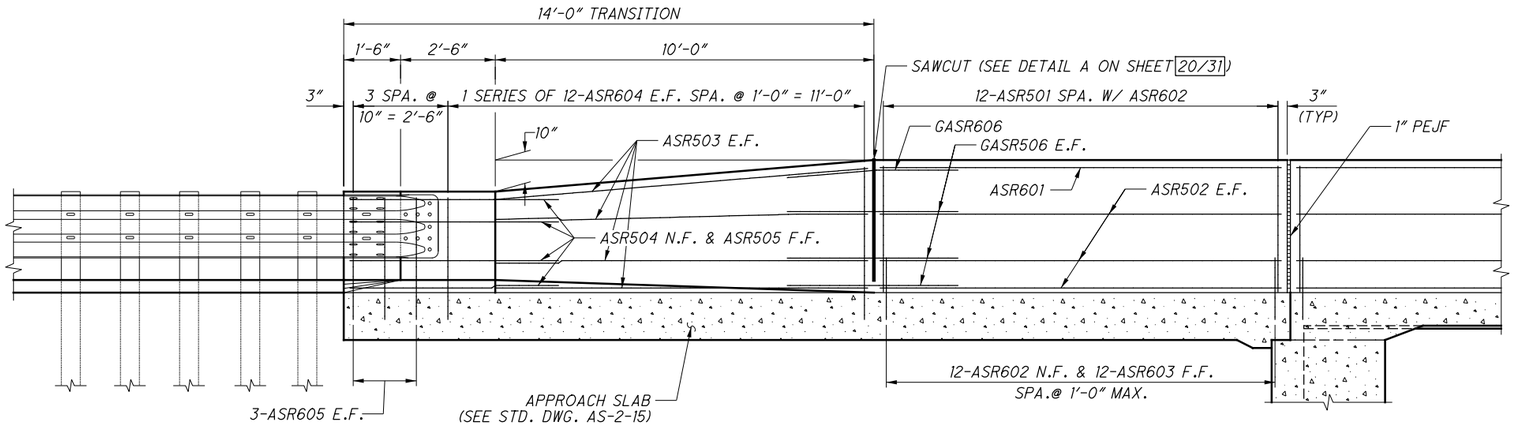
MODIFIED APPROACH SLAB PLAN
BRIDGE NO. HAM-71-19.83
I-71 SB RAMP C OVER FIELDS ERTEL ROAD

HAM/WAR-71
-19.83/0.00
PID No. 104844

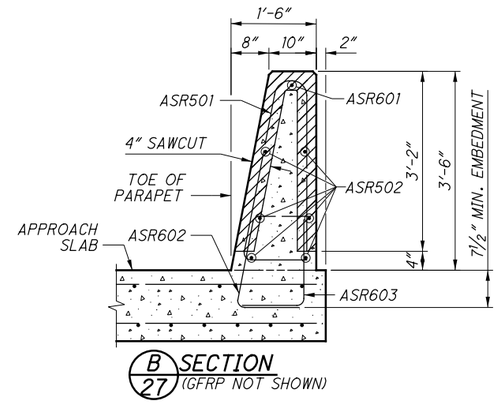


TYPICAL BARRIER PLAN VIEW

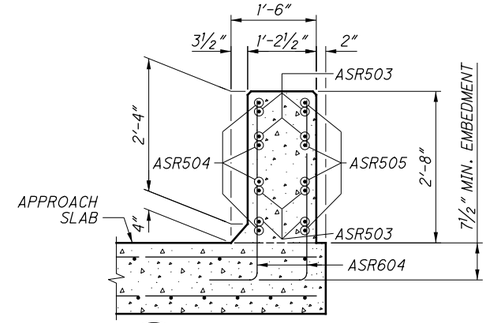
(LEFT REAR ABUT. SHOWN, LEFT FWD. AND RIGHT FWD. SIMILAR)



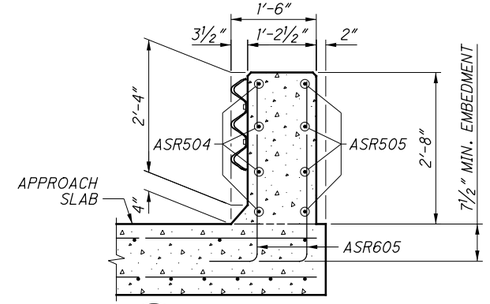
A 27 SECTION



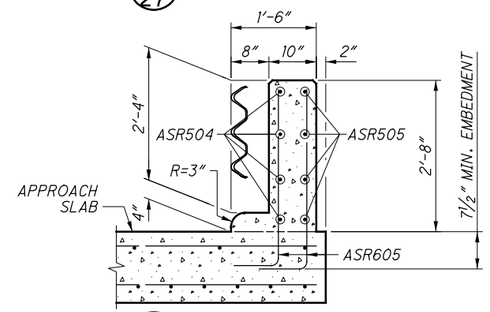
B 27 SECTION (GFRP NOT SHOWN)



C 27 SECTION



D 27 SECTION



E 27 SECTION

NOTES:

1. FOR REINFORCING STEEL LIST, SEE SHEET 31/31.
2. THE PREFIX 'G' HAS BEEN USED TO DENOTE THE BAR IS GLASS FIBER REINFORCED POLYMER (GFRP) STIFFENING REINFORCEMENT. IT IS TO BE PAID BY LINEAR FOOT, NOT WITH THE EPOXY COATED REINFORCING STEEL, AS IT IS TOO LIGHT TO BE PAID BY THE POUND.
3. REINFORCING STEEL FOR APPROACH SLAB IS INCIDENTAL TO REINFORCED CONCRETE APPROACH SLAB AS PER PLAN. REINFORCING STEEL FOR PARAPETS IS PAID SEPARATELY.

L:\DCS\Projects\TRN\6054697_WCTIDFEINT\ODOT\104844\Design\Structures\WAR071L0000P\Sheets\104844_SM005.dgn Sheet 5/4/2021 10:36:29 AM dave.wormald

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DESIGNED ERM | DRAWN ERM | CHECKED LMP | REVIEWED TMB | DATE 12/19 | REVISED --- | STRUCTURE FILE NUMBER 3107754

APPROACH SLAB PARAPET DETAILS
BRIDGE NO. HAM-71-19.83
I-71 SB RAMP C OVER FIELDS ERTEL ROAD

HAM/WAR-71 -19.83/0.00 PID No. 104844

27 / 31

125 / 146

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
SUPERSTRUCTURE											
S401	360	30'-0"	7214	STR							
S402	40	14'-10"	396	STR							
S403	8	3'-8"	20	STR							
S501	378	30'-0"	11828	STR							
S502	42	18'-7"	814	STR							
S503	946	39'-3"	38727	STR							
S504	4 SR OF 52	3'-0" TO 38'-9"	4529	STR							0'-8 ½"
S505	1048	9'-5"	10293	2	7'-2"	0'-7"	1'-11"				
S506	16	5'-0"	83	STR							
S507	72	6'-5"	482	2	2'-5"	1'-10"	2'-5"				
S508	64	12'-0"	801	3	2'-8"	3'-0"					
S509	8	8'-6"	71	3	2'-8"	1'-3"					
S510	12	7'-7"	95	42	3'-0"	2'-2"	2'-3"				
S511	4	6'-11"	29	2	2'-3"	2'-8"	2'-3"				
S601	117	38'-8"	6795	STR							
S801	72	5'-6"	1057	18	3'-4"	1'-0"	1'-0"				
S802	16	22'-6"	961	STR							
S803	8	33'-3"	710	STR							
S804	8	32'-9"	700	2	2'-0"	29'-2"	2'-0"				
S805	12	8'-10"	283	1	2'-0"	7'-0"					
S806	4	29'-2"	312	STR							
S807	6	7'-0"	112	STR							
S808	32	5'-3"	449	18	3'-3"	0'-10"	0'-10"				
S809	8	33'-0"	705	19	30'-11"	1'-11"	0'-11"				
S810	4	8'-2"	87	43	1'-8"	1'-4"	4'-3"	2'-0"			
S811	2	6'-4"	34	19	4'-3"	1'-8"	1'-4"				
SUB-TOTAL			87587								

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
PARAPET											
GR401	198	30'-0"		STR							
GR402	22	14'-10"		STR							
R401	208	10'-0"	1389	STR							
R402	16	14'-4"	153	STR							
R403	16	12'-9"	136	STR							
R601	586	6'-6"	5721	45	2'-3¼"	0'-9½"					
R602	586	7'-2"	6308	23	0'-6"	3'-3"	3'-3"			0'-3"	
SUB-TOTAL			13707								

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
APPROACH SLAB PARAPETS											
ASR501	36	7'-4"	275	23	0'-11"	3'-3"	3'-0"			0'-3"	
ASR502	18	10'-7"	199	STR							
ASR503	24	9'-10"	246	STR							
ASR504	12	5'-8"	71	25	1'-10"	2'-5"	1'-4"	0'-1 ½"	0'-5"		
ASR505	12	5'-8"	71	STR							
GASR506	18	4'-6"		STR							
ASR601	3	10'-7"	48	STR							
ASR602	36	3'-5"	185	28	1'-9"	1'-0"					
ASR603	36	2'-7"	140	1	1'-0"	1'-9"					
ASR604	6 SR OF 12	3'-11" TO 4'-9"	469	1	1'-0"	3'-1" TO 3'-11"					0'-1"
ASR605	18	3'-11"	106	1	1'-0"	3'-1"					
GASR606	3	4'-6"		STR							
SUB-TOTAL			1810								

NOTES:

THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, S601:

- S: LOCATION OF THE BAR IN THE STRUCTURE (SUPERSTRUCTURE)
- 6: BAR SIZE DIMENSION NO. 6
- 01: SEQUENCE NUMBER

THE PREFIX 'G' HAS BEEN USED TO DENOTE THE BAR IS GLASS FIBER REINFORCED POLYMER (GFRP) STIFFENING REINFORCEMENT. IT IS TO BE PAID BY LINEAR FOOT, NOT WITH THE EPOXY COATED REINFORCING STEEL, AS IT IS TOO LIGHT TO BE PAID BY THE POUND.

BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE NOTED. "STD." WRITTEN IN PLACE OF DIMENSION INDICATES A STANDARD BAR BEND AT THE END OF A BAR. STRAIGHT BARS ARE INDICATED BY "STR".

ALL REINFORCING IS TO BE EPOXY COATED.

FOR REINFORCING BAR BENDING DIAGRAMS, SEE SHEET 28/31 .

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DESIGNED ESH | DRAWN ESH | REVIEWED TMB | DATE 12/19
CHECKED ERM | REVISED --- | STRUCTURE FILE NUMBER 3107754

REINFORCING STEEL LIST - 4 OF 4
BRIDGE NO. HAM-71-19.83
I-71 SB RAMP C OVER FIELDS ERTEL ROAD

HAM/WAR-71
-19.83/0.00
PID No. 104844

31 / 31

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146