



**COMPASS**  
INFRASTRUCTURE GROUP

JOB:	10059	PID:	113440
CALCULATED BY:	BEH	DATE:	9/8/2025
CHECKED BY:	CDH	DATE:	11/5/2025
PROJECT:	HAS-22-17.490L		
DESCRIPTION:	STRUCTURES ESTIMATED QUANTITIES		
	US 22 OVER S.R. 9		

<u>ITEM-EXTENSION</u>	<u>DESCRIPTION</u>
202E11202	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN

**FORWARD ABUTMENT**

**RAILING ON NORTH WINGWALL TO BE REMOVED**

VOLUME OF 14' TRANSITION	1.70	CY
AREA OF RAILING	3.12	SF
LENGTH	3.76	FT
VOLUME OF RAILING	0.43	CY
CURB		
CURB WIDTH	0.50	FT
CURB HEIGHT	1.75	FT
CURB LENGTH	8.02	FT
CURB VOLUME	0.26	CY
NORTH WINGWALL TOTAL	2.39	CY

**RAILING ON SOUTH WINGWALL TO BE REMOVED**

VOLUME OF 14' TRANSITION	1.70	CY
AREA OF RAILING	3.12	SF
LENGTH	4.36	FT
VOLUME OF RAILING	0.50	CY
CURB		
CURB WIDTH	0.50	FT
CURB HEIGHT	1.75	FT
CURB LENGTH	9.79	FT
CURB VOLUME	0.32	CY
SOUTH WINGWALL TOTAL	2.52	CY

TOTAL VOLUME 4.92 CY

COST/CY REMOVAL	\$500.00	/CY	(use higher for hand chipping)
COST OF CONCRETE REMOVAL	\$2,458.04		

TOTAL COST \$2,500.00

TOTAL (RA)	0
TOTAL (FA)	0
TOTAL (PIER)	0
TOTAL (SUPER)	0
TOTAL (GENERAL)	LS
<b>TOTAL</b>	<b>LS</b>

202E98100	REMOVAL MISC.: OEPA NOTIFICATION OF DEMOLITION
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	US 22 OVER S.R. 9		

PER INSTRUCTION FROM ODOT      1      EACH

TOTAL (RA)	0	
TOTAL (FA)	0	
TOTAL (PIER)	0	
TOTAL (SUPER)	0	
TOTAL (GENERAL)	1	
<b>TOTAL</b>	<b>1</b>	<b>EACH</b>

509E1000      EPOXY COATED STEEL REINFORCEMENT

FORWARD ABUTMENT

FA RAILING TOTAL      505      LB      (From SL001)

TOTAL (RA)	0	LB
TOTAL (FA)	505	LB
TOTAL (PIER)	0	LB
TOTAL (SUPER)	0	LB
TOTAL (GENERAL)	0	LB
<b>TOTAL</b>	<b>505</b>	<b>LB</b>

511E34448      CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET)

FORWARD ABUTMENT WINGWALLS

AREA OF PARAPET	3.12	SF
NORTH LENGTH OF PARAPET	17.68	FT
SOUTH LENGTH OF PARAPET	18.44	FT
PARAPET VOLUME	112.67	CF
FA RAILING TOTAL	5.00	CY

TOTAL (RA)	0	CY
TOTAL (FA)	5	CY
TOTAL (PIER)	0	CY
TOTAL (SUPER)	0	CY
TOTAL (GENERAL)	0	CY
<b>TOTAL</b>	<b>5</b>	<b>CY</b>

512E10100      SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

PARAPET AND DECK EDGES

LENGTH	137.28	FT
SEALING LIMITS	9.79	FT



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PROJECT:	HAS-22-17.490L		
DESCRIPTION:	STRUCTURES ESTIMATED QUANTITIES		
	US 22 OVER S.R. 9		

AREA	2689.08	SF
SUPERSTRUCTURE TOTAL	299.00	SY

PARAPET ON REAR WINGWALLS

LENGTH	35.30	FT
SEALING LIMITS	7.24	FT
AREA	255.48	SF

PARAPET ON FORWARD WINGWALLS

LENGTH	36.11	FT
SEALING LIMITS	7.24	FT
AREA	261.36	SF

REAR ABUTMENT STEM, SEAT & BACKWALL

LENGTH	63.00	FT
SEALING LIMITS	10.00	FT
AREA	630.00	SF

FORWARD ABUTMENT STEM, SEAT & BACKWALL

LENGTH	63.00	FT
SEALING LIMITS	10.00	FT
AREA	630.00	SF

WINGWALLS

REAR

NORTH EXPOSED LENGTH	10.00	FT
NORTH EXPOSED WIDTH	4.00	FT
AREA	20.00	SF
SOUTH EXPOSED LENGTH	10.00	FT
SOUTH EXPOSED WIDTH	4.00	FT
AREA	20.00	SF

FORWARD

NORTH EXPOSED LENGTH	10.00	FT
NORTH EXPOSED WIDTH	4.00	FT
AREA	20.00	SF
SOUTH EXPOSED LENGTH	10.00	FT
SOUTH EXPOSED WIDTH	4.00	FT
AREA	20.00	SF

ABUTMENT TOTAL	207.00	SY
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PIERS

PIER 1

CAP SIDES & ENDS	443.06	SF
CAP STEPS	80.72	SF



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PROJECT:	HAS-22-17.490L		
DESCRIPTION:	STRUCTURES ESTIMATED QUANTITIES		
	US 22 OVER S.R. 9		

CAP BOTTOM	145.73	SF
EXPOSED COLUMNS	784.91	SF
AREA	1454.41	SF
PIER 2		
CAP SIDES & ENDS	445.91	SF
CAP STEPS	83.39	SF
CAP BOTTOM	145.73	SF
EXPOSED COLUMNS	634.70	SF
AREA	1309.72	SF
PIER TOTAL	308.00	SY
TOTAL (RA)	103	SY
TOTAL (FA)	104	SY
TOTAL (PIER)	308	SY
TOTAL (SUPER)	299	SY
TOTAL (GENERAL)	0	SY
<b>TOTAL</b>	<b>814</b>	<b>SY</b>

512E74000

REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES

PARAPET AND DECK EDGES			
SUPERSTRUCTURE TOTAL	299.00	SY	(FROM SEALING LIMITS)
PARAPET ON REAR WINGWALLS			
AREA	255.48	SF	(FROM SEALING LIMITS)
REAR ABUTMENT STEM, SEAT & BACKWALL AREA	630.00	SF	(FROM SEALING LIMITS)
FORWARD ABUTMENT STEM, SEAT & BACKWALL AREA	630.00	SF	(FROM SEALING LIMITS)
WINGWALLS			
REAR			
NORTH WW AREA	20.00	SF	(FROM SEALING LIMITS)
SOUTH WW AREA	20.00	SF	(FROM SEALING LIMITS)
FORWARD			
NORTH WW AREA	20.00	SF	(FROM SEALING LIMITS)
SOUTH WW AREA	20.00	SF	(FROM SEALING LIMITS)
ABUTMENT TOTAL	178.00	SY	
PIERS			
PIER 1 AREA	1454.41	SF	
PIER 2 AREA	1309.72	SF	
PIER TOTAL	308.00	SY	



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PROJECT:	HAS-22-17.490L		
DESCRIPTION:	STRUCTURES ESTIMATED QUANTITIES		
	US 22 OVER S.R. 9		

TOTAL (RA)	103	SY
TOTAL (FA)	75	SY
TOTAL (PIER)	308	SY
TOTAL (SUPER)	299	SY
TOTAL (GENERAL)	0	SY
<b>TOTAL</b>	<b>785</b>	<b>SY</b>

512E74500                      REMOVAL OF EXISTING PAVEMENT MARKING

LENGTH ON DECK

LEFT	137.28	FT
MIDDLE LEFT	35.75	FT
MIDDLE RIGHT	44.00	FT
RIGHT	137.28	FT
SUPERSTRUCTURE TOTAL	355.00	FT

LENGTH ON APPROACH SLABS

LEFT	52.50	FT
MIDDLE LEFT	19.25	FT
MIDDLE RIGHT	12.00	FT
RIGHT	52.50	FT
GENERAL TOTAL	137.00	FT

TOTAL (RA)	0	FT
TOTAL (FA)	0	FT
TOTAL (PIER)	0	FT
TOTAL (SUPER)	355	FT
TOTAL (GENERAL)	137	FT
<b>TOTAL</b>	<b>492</b>	<b>FT</b>

516E01300                      ELASTOMERIC STRIP SEAL WITHOUT STEEL EXTRUSIONS

SUPERSTRUCTURE

REAR ABUTMENT	62.96	FT
FORWARD ABUTMENT	62.96	FT
SUPERSTRUCTURE TOTAL	126.00	FT

TOTAL (RA)	0	FT
TOTAL (FA)	0	FT
TOTAL (PIER)	0.00	FT
TOTAL (SUPER)	126.00	FT
TOTAL (GENERAL)	0.00	FT
<b>TOTAL</b>	<b>126.00</b>	<b>FT</b>



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DESCRIPTION:	STRUCTURES ESTIMATED QUANTITIES		
	US 22 OVER S.R. 9		

516E13900

2" PREFORMED EXPANSION JOINT FILLER

HEIGHT OF PEJF	4.25	FT
WIDTH OF PEJF	1.50	FT
# OF PEJF	2.00	EACH
GENERAL TOTAL	13.00	SF
TOTAL (RA)	0	SF
TOTAL (FA)	0	SF
TOTAL (PIER)	0.00	SF
TOTAL (SUPER)	0.00	SF
TOTAL (GENERAL)	13.00	SF
<b>TOTAL</b>	<b>13</b>	<b>SF</b>

519E11101

PATCHING CONCRETE STRUCTURE, AS PER PLAN

REAR ABUTMENT AREA	3.00	SF
FORWARD ABUTMENT AREA	69.00	SF
ABUTMENT TOTAL	72.00	SF
PIER 1	0.00	SF
PIER 2	0.00	SF
PIER TOTAL	0.00	SF
TOTAL (RA)	3.00	SF
TOTAL (FA)	69.00	SF
TOTAL (PIER)	0.00	SF
TOTAL (SUPER)	0.00	SF
TOTAL (GENERAL)	0.00	SF
<b>TOTAL</b>	<b>72</b>	<b>SF</b>

519E12304

PATCHING CONCRETE BRIDGE DECK - TYPE C

TOTAL DETERIATION AREA	877.00	SF
25%	219.25	SF
SUPERSTRUCTURE TOTAL	25.00	SY
TOTAL (RA)	0.00	SY
TOTAL (FA)	0.00	SY
TOTAL (PIER)	0.00	SY
TOTAL (SUPER)	25.00	SY
TOTAL (GENERAL)	0.00	SY
<b>TOTAL</b>	<b>25</b>	<b>SY</b>



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	US 22 OVER S.R. 9		

601E20001

CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN

GENERAL TOTAL	100.00	SY	(FROM PLAN NOTE)
TOTAL (RA)	0.00	SY	
TOTAL (FA)	0.00	SY	
TOTAL (PIER)	0.00	SY	
TOTAL (SUPER)	0.00	SY	
TOTAL (GENERAL)	100.00	SY	
<b>TOTAL</b>	<b>100</b>	<b>SY</b>	

858E10000

THIN POLYMER EPOXY OVERLAY

SUPERSTRUCTURE			
DECK AREA	6955.52	SF	
3" UP PARAPET	68.64	SF	
SUPERSTRUCTURE TOTAL	781.00	SY	
GENERAL			
REAR APPROACH SLAB AREA	1266.67	SF	
3" UP PARAPET AND CURB	12.50	SF	
FORWARD APPROACH SLAB AREA	1266.67	SF	
3" UP PARAPET AND BARRIER	12.50	SF	
GENERAL TOTAL	285.00	SY	
TOTAL (RA)	0.00	SY	
TOTAL (FA)	0.00	SY	
TOTAL (PIER)	0.00	SY	
TOTAL (SUPER)	781.00	SY	
TOTAL (GENERAL)	285.00	SY	
<b>TOTAL</b>	<b>1066</b>	<b>SY</b>	



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PROJECT:	HAS-22-17.490 R		
DESCRIPTION:	OVER S.R. 9 (CADIZ-JEWETT RD.)		
	QUANTITY CALCULATIONS		

<u>ITEM-EXTENSION</u>	<u>DESCRIPTION</u>
<u>202E11202</u>	<u>PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN</u>

FORWARD ABUTMENT		
RAILING ON NORTH WINGWALL TO BE REMOVED		
VOLUME OF 14' TRANSITION	1.70	CY
AREA OF RAILING	3.12	SF
LENGTH	3.76	FT
VOLUME OF RAILING	0.43	CY
CURB		
CURB WIDTH	0.50	FT
CURB HEIGHT	1.75	FT
CURB LENGTH	8.02	FT
CURB VOLUME	0.26	CY
NORTH WINGWALL TOTAL	2.39	CY
RAILING ON SOUTH WINGWALL TO BE REMOVED		
VOLUME OF 14' TRANSITION	1.70	CY
AREA OF RAILING	3.12	SF
LENGTH	4.36	FT
VOLUME OF RAILING	0.50	CY
CURB		
CURB WIDTH	0.50	FT
CURB HEIGHT	1.75	FT
CURB LENGTH	8.79	FT
CURB VOLUME	0.28	CY
SOUTH WINGWALL TOTAL	2.49	CY
TOTAL VOLUME	4.88	CY
COST/CY REMOVAL	\$1,000.00	/CY
COST OF CONCRETE REMOVAL	\$4,883.68	
TOTAL COST	\$5,000.00	
ABUTMENT TOTAL	LS	
<b>TOTAL</b>	<b>LS</b>	

<u>202E98100</u>	<u>REMOVAL MISC.: OEPA NOTIFICATION OF DEMOLITION</u>
FROM ODOT DIRECTION	1 EACH



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DESCRIPTION:	OVER S.R. 9 (CADIZ-JEWETT RD.)		
	QUANTITY CALCULATIONS		

GENERAL TOTAL 1 EACH

TOTAL 1 EACH

503E21100 UNCLASSIFIED EXCAVATION

PIER 1 12.57 CF  
PIER TOTAL 1.00 CY  
**TOTAL 1.00 CY**

509E10000 EPOXY COATED STEEL REINFORCEMENT

SUPERSTRUCTURE  
SUPERSTRUCTURE TOTAL 506.00 LB  
**TOTAL 506.00 LB**

511E34448 CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET)

FORWARD APPROACH SLAB  
AREA OF PARAPET 3.12 SF  
NORTH LENGTH OF PARAPET 17.76 FT  
SOUTH LENGTH OF PARAPET 18.36 FT  
PARAPET VOLUME 112.70 CF  
GENERAL TOTAL 5.00 CY  
**TOTAL 5.00 CY**

512E10100 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

PARAPET AND DECK EDGES  
LENGTH 133.47 FT  
SEALING LIMITS 9.79 FT  
AREA 2614.37 SF  
SUPERSTRUCTURE TOTAL 291.00 SY  
  
PARAPET ON REAR WINGWALLS  
LENGTH 35.30 FT  
SEALING LIMITS 7.24 FT



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PROJECT:	HAS-22-17.490 R		
DESCRIPTION:	OVER S.R. 9 (CADIZ-JEWETT RD.)		
	QUANTITY CALCULATIONS		

AREA	255.48	SF
PARAPET ON FORWARD WINGWALLS		
LENGTH	36.13	FT
SEALING LIMITS	7.24	FT
AREA	261.43	SF
REAR ABUTMENT STEM, SEAT & BACKWALL		
LENGTH	63.00	FT
SEALING LIMITS	10.00	FT
AREA	630.00	SF
FORWARD ABUTMENT STEM, SEAT & BACKWALL		
LENGTH	63.00	FT
SEALING LIMITS	10.00	FT
AREA	630.00	SF
WINGWALLS		
REAR		
NORTH EXPOSED LENGTH	10.00	FT
NORTH EXPOSED WIDTH	4.00	FT
AREA	20.00	SF
SOUTH EXPOSED LENGTH	10.00	FT
SOUTH EXPOSED WIDTH	4.00	FT
AREA	20.00	SF
FORWARD		
NORTH EXPOSED LENGTH	10.00	FT
NORTH EXPOSED WIDTH	4.00	FT
AREA	20.00	SF
SOUTH EXPOSED LENGTH	10.00	FT
SOUTH EXPOSED WIDTH	4.00	FT
AREA	20.00	SF
ABUTMENT TOTAL	207.00	SY
PIERS		
PIER 1		
CAP SIDES & ENDS	443.06	SF
CAP STEPS	63.84	SF
CAP BOTTOM	145.73	SF
EXPOSED COLUMNS	753.98	SF
AREA	1406.61	SF
PIER 2		
CAP SIDES & ENDS	443.31	SF
CAP STEPS	64.94	SF



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PROJECT:	HAS-22-17.490 R		
DESCRIPTION:	OVER S.R. 9 (CADIZ-JEWETT RD.)		
	QUANTITY CALCULATIONS		

CAP BOTTOM	145.73	SF
EXPOSED COLUMNS	612.61	SF
AREA	1266.58	SF
PIER TOTAL	298.00	SY
<b>TOTAL</b>	<b>796.00</b>	<b>SY</b>

512E74000

REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES

PARAPET AND DECK EDGES

LENGTH	133.47	FT
SEALING LIMITS	9.79	FT
AREA	2614.37	SF
SUPERSTRUCTURE TOTAL	291.00	SY

PARAPET ON REAR WINGWALLS

LENGTH	35.30	FT
SEALING LIMITS	7.24	FT
AREA	255.48	SF

REAR ABUTMENT STEM, SEAT & BACKWALL AREA	630.00	SF
FORWARD ABUTMENT STEM, SEAT & BACKWALL AREA	630.00	SF

WINGWALLS

REAR

NORTH WW AREA	20.00	SF
SOUTH WW AREA	20.00	SF

FORWARD

NORTH WW AREA	20.00	SF
SOUTH WW AREA	20.00	SF

ABUTMENT TOTAL	178.00	SY
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PIERS

PIER 1 AREA	1406.61	SF
PIER 2 AREA	1266.58	SF
PIER TOTAL	298.00	SY

<b>TOTAL</b>	<b>767.00</b>	<b>SY</b>
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512E74500

REMOVAL OF EXISTING PAVEMENT MARKING

LENGTH ON DECK

LEFT	132.00	FT
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PROJECT:	HAS-22-17.490 R		
DESCRIPTION:	OVER S.R. 9 (CADIZ-JEWETT RD.)		
	QUANTITY CALCULATIONS		

MIDDLE LEFT	35.75	FT
MIDDLE RIGHT	44.00	FT
RIGHT	132.00	FT
<b>SUPERSTRUCTURE TOTAL</b>	<b>344.00</b>	<b>FT</b>

LENGTH ON APPROACH SLABS & BACKWALLS

LEFT	52.50	FT
MIDDLE LEFT	19.25	FT
MIDDLE RIGHT	12.00	FT
RIGHT	52.50	FT
<b>GENERAL TOTAL</b>	<b>137.00</b>	<b>FT</b>

**TOTAL 481.00 FT**

514E20001      FIELD PAINTING OF DAMAGED STRUCTURAL STEEL, AS PER PLAN (THREE COAT)

ESTIMATED AREA	512.50	SF
<b>SUPERSTRUCTURE TOTAL</b>	<b>512.50</b>	<b>SF</b>

**TOTAL 513.00 SF**

516E01300      ELASTOMERIC STRIP SEAL WITHOUT STEEL EXTRUSIONS

SUPERSTRUCTURE		
REAR ABUTMENT	62.96	FT
FORWARD ABUTMENT	62.96	FT
<b>SUPERSTRUCTURE TOTAL</b>	<b>126.00</b>	<b>FT</b>

**TOTAL 126.00 FT**

516E13900      2" PREFORMED EXPANSION JOINT FILLER

HEIGHT OF PEJF	4.25	FT
WIDTH OF PEJF	1.50	FT
# OF PEJF	2.00	EACH
<b>GENERAL TOTAL</b>	<b>13.00</b>	<b>SF</b>

**TOTAL 13.00 SF**

519E00100      SPECIAL - COMPOSITE FIBER WRAP SYSTEM

PIER 1	75.40	SF
<b>PIER TOTAL</b>	<b>76.00</b>	<b>SF</b>



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DESCRIPTION:	OVER S.R. 9 (CADIZ-JEWETT RD.)		
	QUANTITY CALCULATIONS		

**TOTAL 76.00 SF**

519E11101      PATCHING CONCRETE STRUCTURE, AS PER PLAN

REAR ABUTMENT AREA	18.13	SF
FORWARD ABUTMENT AREA	7.50	SF
RAILING PATCHING	10.00	SF
ABUTMENT TOTAL	36.00	SF

PIER 1	23.00	SF
PIER 2	0.00	SF
PIER TOTAL	23.00	SF

**TOTAL 59.00 SF**

519E12304      PATCHING CONCRETE BRIDGE DECK - TYPE C

TOTAL DETERIORATION AREA	921.00	SF
25%	230.25	SF
SUPERSTRUCTURE TOTAL	26.00	SY

**TOTAL 26.00 SY**

601E20001      CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN

GENERAL TOTAL	100.00	SY
<b>TOTAL</b>	<b>100.00</b>	<b>SY</b>

858E10000      THIN POLYMER EPOXY OVERLAY

SUPERSTRUCTURE		
DECK AREA	6955.52	SF
3" UP PARAPET	68.64	SF
SUPERSTRUCTURE TOTAL	781.00	SY

GENERAL		
REAR APPROACH SLAB AREA	1266.67	SF
3" UP PARAPET AND CURB	12.50	SF
FORWARD APPROACH SLAB AREA	1266.67	SF
3" UP PARAPET AND BARRIER	12.50	SF
GENERAL TOTAL	285.00	SY

**TOTAL 1066.00 SY**



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CALCULATED BY:	BEH	DATE:	9/8/2025
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PROJECT:	HAS-22-17.530 L		
DESCRIPTION:	OVER COLUMBUS & OHIO RIVER RR SPUR		
	QUANTITY CALCULATIONS		

ITEM-EXTENSION

DESCRIPTION

202E11203

PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

LENGTH OF DECK REMOVED	56.93	FT
WIDTH OF DECK REMOVED	5.38	FT
AREA OF DECK REMOVED	611.97	SF
COST/SF OF REMOVAL	\$50.00	/SF
COST OF DECK REMOVAL	\$30,598.31	

RAILING LENGTH	112.42	FT
RAILING AREA	3.12	SF
RAILING VOLUME	350.74	CF

REAR SOUTH/FORWARD NORTH WINGWALL

AREA MEASURED FROM CAD	133.00	SF
THICKNESS	1.50	FT
EXISTING PEDESTAL AREA MEASURED FROM CAD	9.29	SF
THICKNESS	6.00	FT
VOLUME	255.26	CF

REAR SOUTH/FORWARD NORTH WINGWALL

AREA MEASURED FROM CAD	132.78	SF
THICKNESS	1.50	FT
EXISTING PEDESTAL AREA MEASURED FROM CAD	9.17	SF
THICKNESS	6.00	FT
VOLUME	254.19	CF

WINGWALL VOLUME	1018.90	CF
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BACKWALL LENGTH	53.74	FT
HEIGHT	1.25	FT
THICKNESS	1.00	FT
HEIGHT	5.92	FT
THICKNESS	1.50	FT
BACKWALL VOLUME	1088.33	CF

VOLUME OF CONCRETE REMOVED	92.00	CY
COST/CY REMOVAL	\$200.00	/CY
COST OF CONCRETE REMOVAL	\$18,400.00	

TOTAL COST \$49,000.00



**COMPASS**  
INFRASTRUCTURE GROUP

JOB:	10059	PID:	113440
CALCULATED BY:	BEH	DATE:	9/8/2025
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PROJECT:	HAS-22-17.530 L		
DESCRIPTION:	OVER COLUMBUS & OHIO RIVER RR SPUR		
	QUANTITY CALCULATIONS		

TOTAL (ABUT)  
 TOTAL (PIER)  
 TOTAL (SUPER)  
 TOTAL (GENERAL)      LS  
**TOTAL                    LS**

202E22900

APPROACH SLAB REMOVED

EXISTING LENGTH      54.80      FT  
 EXISTING WIDTH      23.57      FT  
 AREA OF EXISTING APPROACH SLAB REAR      1291.84      SF

TOTAL (ABUT)  
 TOTAL (PIER)  
 TOTAL (SUPER)  
 TOTAL (GENERAL)      288      SY  
**TOTAL                    288      SY**

202E98100

REMOVAL MISC.: OEPA NOTIFICATION OF DEMOLITION

FROM ODOT DIRECTION      1      EACH

TOTAL (ABUT)  
 TOTAL (PIER)  
 TOTAL (SUPER)  
 TOTAL (GENERAL)      1      EACH  
**TOTAL                    1      EACH**

503E21100

UNCLASSIFIED EXCAVATION

REAR ABUTMENT BACKWALL  
 EXCAVATION AREA      488.00      SF  
 APPROXIMATE AVERAGE HEIGHT      13.30      FT  
 REAR ABUTMENT TOTAL      6490.40      CF

FORWARD ABUTMENT BACKWALL  
 EXCAVATION AREA      488.00      SF  
 APPROXIMATE AVERAGE HEIGHT      13.40      FT  
 REAR ABUTMENT TOTAL      6539.20      CF

WINGWALLS  
 LENGTH OF EXCAVATION      8.50      FT  
 APPROXIMATE AVERAGE HEIGHT      5.50      FT  
 WIDTH      3.50      FT



**COMPASS**  
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# OF WINGWALLS	4.00	EACH
WW TOTAL	654.50	CF
ABUTMENT TOTAL	507.00	CY
TOTAL (ABUT)	<b>507.00</b>	CY
TOTAL (PIER)		
TOTAL (SUPER)		
TOTAL (GENERAL)		
<b>TOTAL</b>	<b>507.00</b>	<b>CY</b>

509E10000

EPOXY COATED STEEL REINFORCEMENT

ABUTMENTS		
REAR ABUTMENT	4361.00	LB
FORWARD ABUTMENT	4361.00	LB
ABUTMENT TOTAL	8722.00	LB
SUPERSTRUCTURE		
SUPERSTRUCTURE	9455.00	LB
DIAPHRAGM	7475.00	LB
SUPERSTRUCTURE TOTAL	16930.00	LB
RAILING		
RAILING	2377.00	LB
RAILING TOTAL	2377.00	LB
SUPERSTRUCTURE TOTAL	19307.00	LB
TOTAL REINFORCING WEIGHT CALCULATED	28029.00	LB
TOTAL (ABUT)	8722.00	
TOTAL (PIER)		
TOTAL (SUPER)	19307.00	
TOTAL (GENERAL)		
<b>TOTAL</b>	<b>28029.00</b>	<b>LB</b>

511E33500

SEMI-INTEGRAL DIAPHRAGM GUIDE

TOTAL (ABUT)	2	<b>EACH</b>
TOTAL (PIER)		
TOTAL (SUPER)		
TOTAL (GENERAL)		



**COMPASS**  
INFRASTRUCTURE GROUP

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QUANTITY CALCULATIONS			

**TOTAL      2.00      EACH**

511E34444

CLASS QC2 CONCRETE, BRIDGE DECK

PROPOSED OUT/OUT BRIDGE WIDTH	53.67	FT
LENGTH	12.61	FT
DECK AREA	676.98	SF
DECK THICKNESS	9.00	IN
DECK VOLUME	507.74	CF
HAUNCH WIDTH	16.00	IN
HAUNCH THICKNESS	4.00	IN
BEAM LENGTH	11.86	FT
NUMBER OF BEAMS	6.00	EACH
HAUNCH VOLUME	31.64	CF
OVERHANG DEPTH	13.00	IN
OVERHANG WIDTH	1.83	FT
HAUNCH AND OVERHANG VOLUME	9.81	CF
TOTAL DECK VOLUME	41.00	CY
REAR ABUTMENT DIAPHRAGM		
DIAPHRAGM LENGTH	56.93	FT
DIAPHRAGM HEIGHT	5.23	FT
DIAPHRAGM THICKNESS	3.00	FT
AREA OF BEAM END	0.63	SF
LENGTH OF BEAM END TO DEDUCT	2.39	FT
NUMBER OF BEAM ENDS	6.00	EACH
DIAPHRAGM VOLUME	884.00	CF
FORWARD ABUTMENT DIAPHRAGM		
DIAPHRAGM LENGTH	56.93	FT
DIAPHRAGM HEIGHT	5.81	FT
DIAPHRAGM THICKNESS	3.00	FT
AREA OF BEAM END	0.63	SF
LENGTH OF BEAM END TO DEDUCT	2.39	FT
NUMBER OF BEAM ENDS	6.00	EACH
DIAPHRAGM VOLUME	983.33	CF
DIAPHRAGM TOTAL VOLUME	70.00	CY

TOTAL (ABUT)



**COMPASS**  
INFRASTRUCTURE GROUP

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	QUANTITY CALCULATIONS		

TOTAL (PIER)			
TOTAL (SUPER)	111.00		
TOTAL (GENERAL)			
<b>TOTAL</b>	<b>111.00</b>	<b>CY</b>	

511E34448      CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET)

REAR APPROACH SLAB AND DECK			
AREA OF PARAPET	3.12	SF	
LENGTH OF PARAPET	39.45	FT	
PARAPET VOLUME	123.08	CF	
PARAPET VOLUME	4.56	CY	
FORWARD APPROACH SLAB			
AREA OF PARAPET	3.12	SF	
LENGTH OF PARAPET	23.53	FT	
PARAPET VOLUME	73.42	CF	
PARAPET VOLUME	2.72	CY	
APPROACH SLAB TRANSITION			
PARAPET VOLUME	1.70	CY	
TOTAL (ABUT)			
TOTAL (PIER)			
TOTAL (SUPER)	18.00		
TOTAL (GENERAL)			
<b>TOTAL</b>	<b>18.00</b>	<b>CY</b>	

511E43510      CLASS QC1 CONCRETE, ABUTMENT INCLUDING FOOTING

WINGWALLS

RA LT.			
TOP OF FOOTING TO TOP OF WINGWALL			
HEIGHT	9.61	FT	
WIDTH	7.97	FT	
THICKNESS	1.50	FT	
AREA	76.58	SF	
VOLUME	114.87	CF	

TRAPEZIUM (TRAPIZOIDAL AREA OF WINGWALL)

WIDTH	8.00	FT	
A HEIGHT	6.70	FT	
B HEIGHT	3.00	FT	
THICKNESS	1.50	FT	



**COMPASS**  
INFRASTRUCTURE GROUP

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QUANTITY CALCULATIONS			

AREA 38.80 SF  
VOLUME 58.20 CF

VOLUME OF WINGWALL 6.41 CY

FA LT.

TOP OF FOOTING TO TOP OF WINGWALL

HEIGHT 9.77 FT  
WIDTH 7.97 FT  
THICKNESS 1.50 FT  
AREA 77.85 SF  
VOLUME 116.78 CF

TRAPEZIUM (TRAPIZOIDAL AREA OF WINGWALL)

WIDTH 8.00 FT  
A HEIGHT 6.89 FT  
B HEIGHT 3.00 FT  
THICKNESS 1.50 FT  
AREA 39.56 SF  
VOLUME 59.34 CF

VOLUME OF WINGWALL 6.52 CY

RA RT.

TOP OF FOOTING TO TOP OF WINGWALL

HEIGHT 10.62 FT  
WIDTH 7.97 FT  
THICKNESS 1.50 FT  
AREA 84.63 SF  
VOLUME 126.94 CF

TRAPEZIUM (TRAPIZOIDAL AREA OF WINGWALL)

WIDTH 8.00 FT  
A HEIGHT 6.81 FT  
B HEIGHT 3.00 FT  
THICKNESS 1.50 FT  
AREA 39.24 SF  
VOLUME 58.86 CF

VOLUME OF WINGWALL 6.88 CY

FA RT.

TOP OF FOOTING TO TOP OF WINGWALL

HEIGHT 10.78 FT



**COMPASS**  
INFRASTRUCTURE GROUP

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DESCRIPTION:	OVER COLUMBUS & OHIO RIVER RR SPUR		
	QUANTITY CALCULATIONS		

WIDTH	7.97	FT
THICKNESS	1.50	FT
AREA	85.90	SF
VOLUME	128.85	CF

TRAPEZIUM (TRAPIZOIDAL AREA OF WINGWALL)

WIDTH	8.00	FT
A HEIGHT	6.96	FT
B HEIGHT	3.00	FT
THICKNESS	1.50	FT
AREA	39.84	SF
VOLUME	59.76	CF

VOLUME OF WINGWALL	6.99	CY
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TOTAL VOLUME OF WINGWALLS	26.80	CY
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ABUTMENTS

REAR ABUTMENT

AVERAGE HEIGHT	3.68	FT
LENGTH	57.28	FT
AREA	210.89	SF
THICKNESS	3.00	FT
VOLUME OF ABUTMENT	632.67	CF

FORWARD ABUTMENT

AVERAGE HEIGHT	3.46	FT
LENGTH	57.28	FT
AREA	198.38	SF
THICKNESS	3.00	FT
VOLUME OF ABUTMENT	595.15	CF

TOTAL VOLUME OF ABUTMENTS	45.47	CY
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FOOTING

AREA	291.30	SF
DEPTH	3.00	FT
VOLUME	1747.78	CF
VOLUME	64.73	cy

TOTAL (ABUT)	138.00
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TOTAL (PIER)

TOTAL (SUPER)



**COMPASS**  
INFRASTRUCTURE GROUP

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	QUANTITY CALCULATIONS		

TOTAL (GENERAL)  
**TOTAL 138.00 CY**

512E10050 SEALING OF CONCRETE SURFACES (NON-EPOXY)

SUPERSTRUCTURE

REAR DIAPHRAGM SEALING HEIGHT 5.09 FT  
DIAPHRAGM LENGTH 57.28 FT  
SEALING AREA TOTAL 291.28 SF

FORWARD DIAPHRAGM SEALING HEIGHT 5.10 FT  
DIAPHRAGM LENGTH 57.28 FT  
SEALING AREA TOTAL 292.42 SF

DIAPHRAGM SEALING TOTAL 64.86 SY

ABUTMENTS

LENGTH OF REAR ABUTMENT 60.38 FT  
ABUTMENT SEALING HEIGHT 0.16 FT  
SEALING AREA TOTAL 9.46 SF

LENGTH OF FORWARD ABUTMENT 60.38 FT  
ABUTMENT SEALING HEIGHT 0.00 FT  
SEALING AREA TOTAL 0.00 SF

ABUTMENT SEALING AREA TOTAL 1.05 SY

WINGWALLS

EXPOSED AREA OF WINGWALL FACE 66.24 SF  
WINGWALL THICKNESS 1.50 FT  
LENGTH ALONG TOP OF WINGWALL 15.97 FT  
# OF WINGWALLS 4.00 EACH  
WINGWALL TOTAL 360.77 SF  
WINGWALL TOTAL 40.09 SY

TOTAL (ABUT) 41.00  
TOTAL (PIER)  
TOTAL (SUPER) 65.00  
TOTAL (GENERAL)  
**TOTAL 106 SY**

512E10100 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)



**COMPASS**  
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	QUANTITY CALCULATIONS		

SUPERSTRUCTURE		
PARAPET ON DECK SEALING LIMITS	9.51	FT
DECK LENGTH	209.00	FT
DECK TOTAL	1987.11	SF
PARAPET ON APPROACH SLAB SEALING LIMIT	7.10	FT
LENGTH	103.50	FT
APPROACH TOTAL	734.52	SF
SUPERSTRUCTURE TOTAL	2721.63	SF
TOTAL (ABUT)		
TOTAL (PIER)		
TOTAL (SUPER)	303.00	
TOTAL (GENERAL)		
<b>TOTAL</b>	<b>303.00</b>	<b>SY</b>

512E10300

SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN

SUPERSTRUCTURE		
LENGTH ALONG DECK	57.00	FT
WIDTH	1.00	FT
#	2	
SUPERSTRUCTURE TOTAL	12.67	SY
TOTAL (ABUT)		
TOTAL (PIER)		
TOTAL (SUPER)	<b>13.00</b>	
TOTAL (GENERAL)		
<b>TOTAL</b>	<b>13.00</b>	<b>SY</b>

512E33000

TYPE 2 WATERPROOFING

LENGTH OF LOWER PART OF WW	8.00	FT
HEIGHT	3.00	FT
NUMBER OF WW	4.00	EACH
ABUTMENT TOTAL	11.00	SY
TOTAL (ABUT)	<b>11.00</b>	
TOTAL (PIER)		
TOTAL (SUPER)		
TOTAL (GENERAL)		
<b>TOTAL</b>	<b>11.00</b>	<b>SY</b>



**COMPASS**  
INFRASTRUCTURE GROUP

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	QUANTITY CALCULATIONS		

512E74000      REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES

EXISTING BRIDGE RAILING		
DECK LIMITS OF TO REMAIN	79.40	FT
PERIMETER	9.51	FT
TOTAL REMOVAL OF EXISTING COATINGS AREA	1509.82	SF
TOTAL (ABUT)		
TOTAL (PIER)		
TOTAL (SUPER)	168.00	
TOTAL (GENERAL)		
<b>TOTAL</b>	<b>168.00</b>	<b>SY</b>

513E10221      STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN

WEB SPLICE PLATE	65.1	LB
WEB FILL PLATE	10.2	LB
INNER FLANGE SPLICE PLATE	82.1	LB
OUTER FLANGE SPLICE PLATE	166.7	LB
TOTAL (ABUT)		
TOTAL (PIER)		
TOTAL (SUPER)	9600	
TOTAL (GENERAL)		
<b>TOTAL</b>	<b>9600</b>	<b>LB</b>

513E10280      STRUCTURAL STEEL MEMBERS, LEVEL 4

2"X16" PLATE AREA	0.22	SF
5/8"X54" WEB AREA	0.23	SF
LENGTH	7.75	FT
TOTAL VOLUME	63.13	FT^3
DENSITY	490.00	LB/FT^3
SUPERSTRUCTURE TOTAL	31000.00	LB
TOTAL (ABUT)		
TOTAL (PIER)		
TOTAL (SUPER)	31000	
TOTAL (GENERAL)		
<b>TOTAL</b>	<b>31000.00</b>	<b>LB</b>

513E20000      WELDED STUD SHEAR CONNECTORS



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QUANTITY CALCULATIONS			

STUDS PER ROW	3.00	EACH
NUMBER OF ROWS	22.00	EACH
NUMBER OF BEAMS	6.00	EACH
TOTAL NUMBER OF STUDS	396.00	EACH

TOTAL (ABUT)		
TOTAL (PIER)		
TOTAL (SUPER)	396	
TOTAL (GENERAL)		
<b>TOTAL</b>	<b>396.00</b>	<b>EACH</b>

513E95030      STRUCTURAL STEEL, MISC.: FIELD DRILLING HOLES

HOLES/BEAM	136.00	EACH
# OF BEAMS	6.00	EACH

TOTAL (ABUT)		
TOTAL (PIER)		
TOTAL (SUPER)	816	
TOTAL (GENERAL)		
<b>TOTAL</b>	<b>816.00</b>	<b>EACH</b>

514E00050      SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL

LENGTH FROM SPLICE TO 1' PAST FLANGE SPLICE PLATE	2.53	FT
PERIMETER	13.67	FT
NUMBER OF SPLICES	12.00	EACH

TOTAL (ABUT)		
TOTAL (PIER)		
TOTAL (SUPER)	416	
TOTAL (GENERAL)		
<b>TOTAL</b>	<b>416.00</b>	<b>SF</b>

514E00056      FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT

TOTAL (ABUT)		
TOTAL (PIER)		
TOTAL (SUPER)	416	
TOTAL (GENERAL)		
<b>TOTAL</b>	<b>416.00</b>	<b>SF</b>

514E00060      FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT



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AREA AT SPLICE			
PAINTING LIMIT	13.67	FT	
LENGTH	8.00	FT	
NUMBER OF SPLICES	12.00	EACH	
TOTAL SURFACE AREA AT SPLICES	1312.00	SF	

INCIDENTALS			
3%	39.36	SF	
SUPERSTRUCTURE TOTAL	1352.00	SF	

TOTAL (ABUT)			
TOTAL (PIER)			
TOTAL (SUPER)	1352		
TOTAL (GENERAL)			
<b>TOTAL</b>	<b>1352.00</b>	<b>SF</b>	

514E00066      FIELD PAINTING STRUCTURAL STEEL, FINISH COAT

TOTAL (ABUT)			
TOTAL (PIER)			
TOTAL (SUPER)	1352		
TOTAL (GENERAL)			
<b>TOTAL</b>	<b>1352.00</b>	<b>SF</b>	

514E00504      GRINDING FINIS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL

LENGTH OF BEAM TO BE COATED	38.38	LF	
	1.00	MIN/LF	
	0.64	MNHR	

TOTAL (ABUT)			
TOTAL (PIER)			
TOTAL (SUPER)	1		
TOTAL (GENERAL)			
<b>TOTAL</b>	<b>1.00</b>	<b>MNHR</b>	

514E10000      FINAL INSPECTION REPAIR

TOTAL (ABUT)			
TOTAL (PIER)			
TOTAL (SUPER)	1		
TOTAL (GENERAL)			
<b>TOTAL</b>	<b>1.00</b>	<b>EACH</b>	



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	QUANTITY CALCULATIONS		

516E10000

PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL

LENGTH ALONG TYPE C SLEEPER SLAB	57.00	FT
GENERAL TOTAL	57.00	FT
TOTAL (ABUT)		
TOTAL (PIER)		
TOTAL (SUPER)		
TOTAL (GENERAL)	57	
<b>TOTAL</b>	<b>57.00</b>	<b>FT</b>

516E13600

1" PREFORMED EXPANSION JOINT FILLER

SUPERSTRUCTURE		
HEIGHT OF PEJF	3.00	FT
WIDTH OF PEJF	1.50	FT
# OF PEJF	4.00	EACH
HEIGHT OF PEJF	4.25	FT
WIDTH OF PEJF	1.50	FT
# OF PEJF	2.00	EACH
SUPERSTRUCTURE TOTAL	31.00	SF
CONCRETE SLOPE PROTECTION		
HEIGHT OF PEJF	0.50	FT
LENGTH ALONG ABUTMENT	60.00	FT
# OF PEJF	2.00	EACH
SLOPE PROTECTION TOTAL	120.00	SF
TOTAL (ABUT)		
TOTAL (PIER)		
TOTAL (SUPER)	31.00	
TOTAL (GENERAL)	120.00	
<b>TOTAL</b>	<b>151.00</b>	<b>SF</b>

516E13900

2" PREFORMED EXPANSION JOINT FILLER

AREA REAR ABUTMENT	95.50	SF
AREA FORWARD ABUTMENT	95.50	SF
ABUTMENT TOTAL	191.00	SF
TOTAL (ABUT)	191.00	
TOTAL (PIER)		
TOTAL (SUPER)		
TOTAL (GENERAL)		



**COMPASS**  
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**TOTAL 191.00 SF**

516E14020

SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL

REAR ABUTMENT

ABUTMENT NEOPRENE SHEETING

HORIZONTAL LIMITS ALONG LENGTH OF ABUTMENT	57.28	FT
VERTICAL LIMIT ALONG WINGWALL	6.38	FT
ABUTMENT/WINGWALL OVERLAP	1.50	FT

DIAPHRAGM NEOPRENE SHEETING

VERTICAL LIMITS AT DIAPHRAGM GUIDE	4.01	FT
TOTAL SHEETING LENGTH	70.67	FT

FORWARD ABUTMENT

ABUTMENT NEOPRENE SHEETING

HORIZONTAL LIMITS ALONG LENGTH OF ABUTMENT	57.28	FT
VERTICAL LIMIT ALONG WINGWALL	6.38	FT
ABUTMENT/WINGWALL OVERLAP	1.50	FT

DIAPHRAGM NEOPRENE SHEETING

VERTICAL LIMITS AT DIAPHRAGM GUIDE	4.01	FT
TOTAL SHEETING LENGTH	70.67	FT

ABUTMENT TOTAL 142.00 FT

TOTAL (ABUT)	142.00	
TOTAL (PIER)		
TOTAL (SUPER)		
TOTAL (GENERAL)		
<b>TOTAL</b>	<b>142.00</b>	<b>FT</b>

516E44201

ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (16"X16"X3.273" WITH 17"X17"X1.5" LOAD PLATE)

NUMBER OF BEARINGS REAR ABUTMENT	6.00	EACH
NUMBER OF BEARINGS FORWARD ABUTMENT	6.00	EACH

TOTAL (ABUT)		
TOTAL (PIER)		
TOTAL (SUPER)	12.00	
TOTAL (GENERAL)		



**COMPASS**  
INFRASTRUCTURE GROUP

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**TOTAL 12.00 EACH**

516E47001

JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN

NUMBER OF JACKING POINTS	12.00	EACH
STEEL WEIGHT PER POINT	793.17	LB
STEEL COST	10.00	\$/LB
TOTAL STEEL COST	\$111,044.44	
DIVIDE COST TO 3 BRIDGES EQUALLY	\$37,014.81	PER BRIDGE
LABOR COST (300\$/HR, 8HR/POINT)	\$28,800.00	
COST OF JACKS	\$10,000.00	
COST OF POST-TENSIONING	\$10,000.00	
COST OF COORDINATION	\$5,000.00	
TOTAL COST	\$90,800.00	
TOTAL (ABUT)		
TOTAL (PIER)		
TOTAL (SUPER)		
TOTAL (GENERAL)	LS	
<b>TOTAL</b>	<b>LS</b>	

518E21200

POROUS BACKFILL WITH GEOTEXTILE FABRIC

REAR ABUTMENT		
LENGTH OF POROUS BACKFILL	57.28	FT
WIDTH OF POROUS BACKFILL	2.00	FT
APPROXIMATE AVERAGE HEIGHT OF POROUS BACKFILL	8.76	FT
VOLUME OF POROUS BACKFILL	1003.19	CF
FORWARD ABUTMENT		
LENGTH OF POROUS BACKFILL	57.28	FT
WIDTH OF POROUS BACKFILL	2.00	FT
APPROXIMATE AVERAGE HEIGHT OF POROUS BACKFILL	8.67	FT
VOLUME OF POROUS BACKFILL	993.54	CF
RA LT. WINGWALL		
LENGTH OF POROUS BACKFILL	7.97	FT
APPROXIMATE AVERAGE HEIGHT OF POROUS BACKFILL	7.86	FT
LENGTH OF POROUS BACKFILL (TRAPEZIUM)	8.00	FT
APPROXIMATE AVERAGE HEIGHT OF BACKFILL (TRAPEZIUM)	4.55	FT
WIDTH OF POROUS BACKFILL	2.00	FT



**COMPASS**  
INFRASTRUCTURE GROUP

JOB:	10059	PID:	113440
CALCULATED BY:	BEH	DATE:	9/8/2025
CHECKED BY:	CCJ	DATE:	9/8/2025
PROJECT:	HAS-22-17.530 L		
DESCRIPTION:	OVER COLUMBUS & OHIO RIVER RR SPUR		
QUANTITY CALCULATIONS			

VOLUME OF POROUS BACKFILL 198.15 CF

FA LT. WINGWALL

LENGTH OF POROUS BACKFILL 7.97 FT

APPROXIMATE AVERAGE HEIGHT OF POROUS BACKFILL 8.02 FT

LENGTH OF POROUS BACKFILL (TRAPEZIUM) 8.00 FT

APPROXIMATE AVERAGE HEIGHT OF BACKFILL (TRAPEZIUM) 4.63 FT

WIDTH OF POROUS BACKFILL 2.00 FT

VOLUME OF POROUS BACKFILL 201.98 CF

RA RT. WINGWALL

LENGTH OF POROUS BACKFILL 7.97 FT

APPROXIMATE AVERAGE HEIGHT OF POROUS BACKFILL 8.87 FT

LENGTH OF POROUS BACKFILL (TRAPEZIUM) 8.00 FT

APPROXIMATE AVERAGE HEIGHT OF BACKFILL (TRAPEZIUM) 5.06 FT

WIDTH OF POROUS BACKFILL 2.00 FT

VOLUME OF POROUS BACKFILL 222.33 CF

FA RT. WINGWALL

LENGTH OF POROUS BACKFILL 7.97 FT

APPROXIMATE AVERAGE HEIGHT OF POROUS BACKFILL 9.03 FT

LENGTH OF POROUS BACKFILL (TRAPEZIUM) 8.00 FT

APPROXIMATE AVERAGE HEIGHT OF BACKFILL (TRAPEZIUM) 5.14 FT

WIDTH OF POROUS BACKFILL 2.00 FT

VOLUME OF POROUS BACKFILL 226.16 CF

TOTAL (ABUT) 106.00

TOTAL (PIER)

TOTAL (SUPER)

TOTAL (GENERAL)

**TOTAL 106.00 CY**

518E40000 6" PERFORATED CORRUGATED PLASTIC PIPE

REAR ABUTMENT 64.87 FT

FORWARD ABUTMENT 65.04 FT

TOTAL (ABUT) 130.00

TOTAL (PIER)

TOTAL (SUPER)

TOTAL (GENERAL)

**TOTAL 130.00 FT**

518E40010 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS



**COMPASS**  
INFRASTRUCTURE GROUP

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LENGTH AT REAR ABUTMENT	10.00	FT
LENGTH AT FORWARD ABUTMENT	12.00	FT
TOTAL (ABUT)	22.00	
TOTAL (PIER)		
TOTAL (SUPER)		
TOTAL (GENERAL)		
<b>TOTAL</b>	<b>22.00</b>	<b>FT</b>

524E94702      DRILLED SHAFTS, 36" DIAMETER, ABOVE BEDROCK

TOTAL LENGTH	92.70	FT
TOTAL (ABUT)	93.00	
TOTAL (PIER)		
TOTAL (SUPER)		
TOTAL (GENERAL)		
<b>TOTAL</b>	<b>93.00</b>	<b>FT</b>

524E94704      DRILLED SHAFTS, 36" DIAMETER, INTO BEDROCK

ROCK SOCKET LENGTH REAR ABUTMENT	19.50	FT
NUMBER OF DRILLED SHAFTS	5.00	EACH
REAR ABUTMENT TOTAL	97.50	FT
ROCK SOCKET LENGTH FORWARD ABUTMENT	13.20	FT
NUMBER OF DRILLED SHAFTS	5.00	EACH
FORWARD ABUTMENT TOTAL	66.00	FT
TOTAL LENGTH	163.50	FT
TOTAL (ABUT)	164.00	
TOTAL (PIER)		
TOTAL (SUPER)		
TOTAL (GENERAL)		
<b>TOTAL</b>	<b>164.00</b>	<b>FT</b>

526E25000      REINFORCED CONCRETE APPROACH SLABS (T=15")

APPROACH SLAB LENGTH	25.00	FT
APPROACH SLAB WIDTH	53.67	FT
APPROACH SLAB AREA	1341.67	SF



**COMPASS**  
INFRASTRUCTURE GROUP

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	QUANTITY CALCULATIONS		

GENERAL TOTAL 298.15 SY

TOTAL (ABUT)  
 TOTAL (PIER)  
 TOTAL (SUPER)  
 TOTAL (GENERAL) 299.00  
**TOTAL 299.00 SY**

526E90010      TYPE A INSTALLATION

LENGTH ALONG APPROACH SLAB 57.00 FT

TOTAL (ABUT)  
 TOTAL (PIER)  
 TOTAL (SUPER)  
 TOTAL (GENERAL) 57.00  
**TOTAL 57.00 FT**

526E90031      TYPE C INSTALLATION, AS PER PLAN

LENGTH ALONG APPROACH SLAB 57.00 FT

TOTAL (ABUT)  
 TOTAL (PIER)  
 TOTAL (SUPER)  
 TOTAL (GENERAL) 57.00  
**TOTAL 57.00 FT**

601E21000      CONCRETE SLOPE PROTECTION

WIDTH BETWEEN PROPOSED AND EXISTING ABUTMENT 1.64 FT  
 LENGTH 60.00 FT  
 AREA 98.53 SF

TOTAL (ABUT)  
 TOTAL (PIER)  
 TOTAL (SUPER)  
 TOTAL (GENERAL) 11.00  
**TOTAL 11.00 SY**

613E41200      LOW STRENGTH MORTAR BACKFILL

REAR ABUTMENT  
 WIDTH BETWEEN PROPOSED AND EXISTING ABUTMENT 1.64 FT



**COMPASS**  
INFRASTRUCTURE GROUP

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DESCRIPTION:	OVER COLUMBUS & OHIO RIVER RR SPUR		
QUANTITY CALCULATIONS			

AVERAGE HEIGHT OF BACKFILL	2.90	FT
WIDTH B/W PROPOSED AND EXISTING ABUTMENT FOOTING	1.14	FT
HEIGHT OF BACKFILL FOOTING	3.00	FT
LENGTH OF BACKFILL	60.00	FT
BACKFILL VOLUME	490.81	CF

FORWARD ABUTMENT		
WIDTH BETWEEN PROPOSED AND EXISTING ABUTMENT	1.64	FT
AVERAGE HEIGHT OF BACKFILL	3.82	FT
WIDTH B/W PROPOSED AND EXISTING ABUTMENT FOOTING	1.14	FT
HEIGHT OF BACKFILL FOOTING	3.00	FT
LENGTH OF BACKFILL	60.00	FT
BACKFILL VOLUME	580.97	CF

TOTAL (ABUT)	40.00	
TOTAL (PIER)		
TOTAL (SUPER)		
TOTAL (GENERAL)		
<b>TOTAL</b>	<b>40.00</b>	<b>CY</b>

858E10000      THIN POLYMER EPOXY OVERLAY

DECK LIMITS	104.50	FT
TOE/TOE RAILING	50.67	FT
3" UP PARAPET	0.50	FT
SUPERSTRUCTURE TOTAL	5346.92	SF

TOTAL (ABUT)		
TOTAL (PIER)		
TOTAL (SUPER)	595.00	
TOTAL (GENERAL)		
<b>TOTAL</b>	<b>595.00</b>	<b>SY</b>

894E10000      THERMAL INTEGRITY PROFILING (TIP) TEST

TOTAL (ABUT)	2.00	
TOTAL (PIER)		
TOTAL (SUPER)		
TOTAL (GENERAL)		
<b>TOTAL</b>	<b>2.00</b>	<b>EACH</b>



**COMPASS**  
INFRASTRUCTURE GROUP

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DESCRIPTION:	OVER COLUMBUS & OHIO RIVER RR SPUR		
	QUANTITY CALCULATIONS		

ITEM-EXTENSION

DESCRIPTION

202E11203

PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

LENGTH OF DECK REMOVED	56.93	FT
WIDTH OF DECK REMOVED	5.38	FT
AREA OF DECK REMOVED	611.97	SF
COST/SF OF REMOVAL	\$50.00	/SF
COST OF DECK REMOVAL	\$30,598.31	

RAILING LENGTH	103.08	FT
RAILING AREA	3.12	SF
RAILING VOLUME	321.62	CF

REAR WINGWALLS

SOUTH AREA MEASURED FROM CAD	122.81	SF
THICKNESS	1.50	FT
FOOTING AREA REMOVED	33.79	SF
FOOTING WIDTH	3.50	FT
NORTH AREA MEASURED FROM CAD	162.14	SF
THICKNESS	1.50	FT
FOOTING AREA REMOVED	27.56	SF
FOOTING WIDTH	3.50	FT
VOLUME	642.14	CF

FORWARD WINGWALLS

NORTH AREA MEASURED FROM CAD	122.78	SF
THICKNESS	1.50	FT
EXISTING PEDESTAL AREA MEASURED FROM CAD	9.29	SF
THICKNESS	6.00	FT
SOUTH AREA MEASURED FROM CAD	122.56	SF
THICKNESS	1.50	FT
EXISTING PEDESTAL AREA MEASURED FROM CAD	9.17	SF
THICKNESS	6.00	FT
VOLUME	478.79	CF

WINGWALL VOLUME	1120.94	CF
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REAR BACKWALL LENGTH	53.74	FT
HEIGHT	1.25	FT
THICKNESS	1.00	FT
HEIGHT	7.42	FT
THICKNESS	1.50	FT
BACKWALL VOLUME	665.35	CF



**COMPASS**  
INFRASTRUCTURE GROUP

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	QUANTITY CALCULATIONS		

FORWARD BACKWALL LENGTH	53.74	FT
HEIGHT	1.25	FT
THICKNESS	1.00	FT
HEIGHT	5.92	FT
THICKNESS	1.50	FT
BACKWALL VOLUME	544.16	CF
VOLUME OF CONCRETE REMOVED	99.00	CY
COST/CY REMOVAL	\$200.00	/CY
COST OF CONCRETE REMOVAL	\$19,800.00	
TOTAL COST	\$51,000.00	

**TOTAL LS**

202E22900

APPROACH SLAB REMOVED

EXISTING LENGTH	54.80	FT
EXISTING WIDTH	23.57	FT
AREA OF EXISTING APPROACH SLAB REAR	1291.84	SF

**TOTAL 288.00 SY**

202E98100

REMOVAL MISC.: OEPA NOTIFICATION OF DEMOLITION

FROM ODOT DIRECTION

**TOTAL 1 EACH**

503E21100

UNCLASSIFIED EXCAVATION

REAR ABUTMENT BACKWALL		
EXCAVATION AREA	488.00	SF
APPROXIMATE AVERAGE HEIGHT	12.90	FT
REAR ABUTMENT TOTAL	6295.20	CF
FORWARD ABUTMENT BACKWALL		
EXCAVATION AREA	488.00	FT
APPROXIMATE AVERAGE HEIGHT	13.10	FT
REAR ABUTMENT TOTAL	6392.80	CF
WINGWALLS		
LENGTH OF EXCAVATION	8.50	FT



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	QUANTITY CALCULATIONS		

APPROXIMATE AVERAGE HEIGHT	5.50	FT
WIDTH	3.50	FT
WW TOTAL	654.50	CF
ABUTMENT TOTAL	495.00	CY
<b>TOTAL</b>	<b>495.00</b>	<b>CY</b>

509E10000      EPOXY COATED STEEL REINFORCEMENT

ABUTMENTS		
REAR ABUTMENT	5302.00	LB
FORWARD ABUTMENT	5279.00	LB
ABUTMENT TOTAL	10581.00	LB
SUPERSTRUCTURE		
SUPERSTURCTURE	9938.00	LB
REAR DIAPHRAGM	4755.00	LB
FORWARD DIAPHRAGM	4755.00	LB
SUPERSTRUCTURE TOTAL	19448.00	LB
RAILING		
RAILING	3470.00	LB
RAILING TOTAL	3470.00	LB
SUPERSTRUCTURE TOTAL	22918.00	LB
TOTAL REINFORCING WEIGHT CALCULATED	33499.00	LB
<b>TOTAL</b>	<b>33499</b>	<b>LB</b>

511E33500      SEMI-INTEGRAL DIAPHRAGM GUIDE

<b>TOTAL</b>	<b>2.00</b>	<b>EACH</b>
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511E34444      CLASS QC2 CONCRETE, BRIDGE DECK

PROPOSED OUT/OUT BRIDGE WIDTH	53.67	FT
LENGTH	12.61	FT
DECK AREA	676.98	SF
DECK THICKNESS	9.00	IN
DECK VOLUME	507.74	CF
HAUNCH WIDTH	16.00	IN



**COMPASS**  
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	QUANTITY CALCULATIONS		

HAUNCH THICKNESS	4.00	IN
BEAM LENGTH	11.86	FT
NUMBER OF BEAMS	6.00	EACH
HAUNCH VOLUME	31.64	CF
OVERHANG DEPTH	13.00	IN
OVERHANG WIDTH	1.83	FT
HAUNCH AND OVERHANG VOLUME	9.81	CF
TOTAL DECK VOLUME	41.00	CY
REAR ABUTMENT DIAPHRAGM		
DIAPHRAGM LENGTH	56.93	FT
DIAPHRAGM HEIGHT	5.70	FT
DIAPHRAGM THICKNESS	3.00	FT
AREA OF BEAM END	0.63	SF
LENGTH OF BEAM END TO DEDUCT	2.39	FT
NUMBER OF BEAM ENDS	6.00	EACH
DIAPHRAGM VOLUME	964.26	CF
FORWARD ABUTMENT DIAPHRAGM		
DIAPHRAGM LENGTH	56.93	FT
DIAPHRAGM HEIGHT	5.61	FT
DIAPHRAGM THICKNESS	3.00	FT
AREA OF BEAM END	0.63	SF
LENGTH OF BEAM END TO DEDUCT	2.39	FT
NUMBER OF BEAM ENDS	6.00	EACH
DIAPHRAGM VOLUME	948.32	CF
DIAPHRAGM TOTAL VOLUME	71.00	CY
<b>TOTAL</b>	<b>112.00</b>	<b>CY</b>

511E34448

CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET)

REAR APPROACH SLAB AND DECK		
AREA OF PARAPET	3.12	SF
LENGTH OF PARAPET	39.45	FT
PARAPET VOLUME	123.08	CF
PARAPET VOLUME	4.56	CY
FORWARD APPROACH SLAB AND DECK		
AREA OF PARAPET	3.12	SF
LENGTH OF PARAPET	23.53	FT



**COMPASS**  
INFRASTRUCTURE GROUP

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	QUANTITY CALCULATIONS		

PARAPET VOLUME	73.42	CF
PARAPET VOLUME	2.72	CY
APPROACH SLAB TRANSITION		
PARAPET VOLUME	1.70	CY
<b>TOTAL</b>	<b>18.00</b>	<b>CY</b>

511E43510

CLASS QC1 CONCRETE, ABUTMENT INCLUDING FOOTING

WINGWALLS

RA LT.

TOP OF FOOTING TO TOP OF WINGWALL

HEIGHT	9.58	FT
WIDTH	7.97	FT
THICKNESS	1.50	FT
AREA	76.34	SF
VOLUME	114.51	CF

TRAPEZIUM (TRAPIZOIDAL AREA OF WINGWALL)

WIDTH	8.00	FT
A HEIGHT	6.80	FT
B HEIGHT	3.00	FT
THICKNESS	1.50	FT
AREA	39.20	SF
VOLUME	58.80	CF

VOLUME OF WINGWALL 6.42 CY

FA LT.

TOP OF FOOTING TO TOP OF WINGWALL

HEIGHT	9.78	FT
WIDTH	7.97	FT
THICKNESS	1.50	FT
AREA	77.93	SF
VOLUME	116.90	CF

TRAPEZIUM (TRAPIZOIDAL AREA OF WINGWALL)

WIDTH	8.00	FT
A HEIGHT	6.84	FT
B HEIGHT	3.00	FT
THICKNESS	1.50	FT
AREA	39.36	SF
VOLUME	59.04	CF



**COMPASS**  
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	QUANTITY CALCULATIONS		

VOLUME OF WINGWALL      6.52      CY

RA RT.

TOP OF FOOTING TO TOP OF WINGWALL

HEIGHT	10.10	FT
WIDTH	7.97	FT
THICKNESS	1.50	FT
AREA	80.48	SF
VOLUME	120.73	CF

TRAPEZIUM (TRAPIZOIDAL AREA OF WINGWALL)

WIDTH	8.00	FT
A HEIGHT	6.87	FT
B HEIGHT	3.00	FT
THICKNESS	1.50	FT
AREA	39.48	SF
VOLUME	59.22	CF

VOLUME OF WINGWALL      6.66      CY

FA RT.

TOP OF FOOTING TO TOP OF WINGWALL

HEIGHT	10.30	FT
WIDTH	7.97	FT
THICKNESS	1.50	FT
AREA	82.08	SF
VOLUME	123.12	CF

TRAPEZIUM (TRAPIZOIDAL AREA OF WINGWALL)

WIDTH	8.00	FT
A HEIGHT	6.87	FT
B HEIGHT	3.00	FT
THICKNESS	1.50	FT
AREA	39.48	SF
VOLUME	59.22	CF

VOLUME OF WINGWALL      6.75      CY

TOTAL VOLUME OF WINGWALLS      26.35      CY

ABUTMENTS

REAR ABUTMENT



**COMPASS**  
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QUANTITY CALCULATIONS			

AVERAGE HEIGHT	3.17	FT
LENGTH	57.28	FT
AREA	181.49	SF
THICKNESS	3.00	FT
VOLUME OF ABUTMENT	544.46	CF

FORWARD ABUTMENT		
AVERAGE HEIGHT	3.32	FT
LENGTH	57.28	FT
AREA	190.27	SF
THICKNESS	3.00	FT
VOLUME OF ABUTMENT	570.81	CF

TOTAL VOLUME OF ABUTMENTS	41.31	CY
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FOOTING		
AREA	291.30	SF
DEPTH	3.00	FT
VOLUME	1747.78	CF
VOLUME	64.73	CY

<b>TOTAL</b>	<b>133.00</b>	<b>CY</b>
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512E10050

SEALING OF CONCRETE SURFACES (NON-EPOXY)

SUPERSTRUCTURE

REAR DIAPHRAGM SEALING HEIGHT	5.56	FT
DIAPHRAGM LENGTH	57.28	FT
SEALING AREA TOTAL	318.20	SF

FORWARD DIAPHRAGM SEALING HEIGHT	5.46	FT
DIAPHRAGM LENGTH	57.28	FT
SEALING AREA TOTAL	312.85	SF

DIAPHRAGM SEALING TOTAL	70.12	SY
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ABUTMENTS

LENGTH OF REAR ABUTMENT	60.38	FT
ABUTMENT SEALING HEIGHT	0.00	FT
SEALING AREA TOTAL	0.00	SF

LENGTH OF FORWARD ABUTMENT	60.38	FT
ABUTMENT SEALING HEIGHT	0.00	FT



**COMPASS**  
INFRASTRUCTURE GROUP

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	QUANTITY CALCULATIONS		

SEALING AREA TOTAL 0.00 SF

ABUTMENT SEALING AREA TOTAL 0.00 SY

WINGWALLS

EXPOSED AREA OF WINGWALL FACE 66.24 SF  
 WINGWALL THICKNESS 1.50 FT  
 LENGTH ALONG TOP OF WINGWALL 15.97 FT  
 # OF WINGWALLS 4.00 EACH  
 WINGWALL TOTAL 360.77 SF  
 WINGWALL TOTAL 40.09 SY

**TOTAL 111.00 SY**

512E10100 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

SUPERSTRUCTURE

PARAPET ON DECK SEALING LIMITS 9.51 FT  
 DECK LENGTH 209.00 FT  
 DECK TOTAL 1987.11 SF

PARAPET ON APPROACH SLAB SEALING LIMIT 7.10 FT  
 LENGTH 103.50 FT  
 APPROACH TOTAL 734.52 SF

SUPERSTRUCTURE TOTAL 2721.63 SF

**TOTAL 303.00 SY**

512E10300 SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN

SUPERSTRUCTURE

LENGTH ALONG DECK 57.00 FT  
 WIDTH 1.00 FT  
 # 2  
 SUPERSTRUCTURE TOTAL 12.67 SY

**TOTAL 13.00 SY**

512E33000 TYPE 2 WATERPROOFING

LENGTH OF LOWER PART OF WW 8.00 FT  
 HEIGHT 3.00 FT



**COMPASS**  
INFRASTRUCTURE GROUP

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	QUANTITY CALCULATIONS		

NUMBER OF WW	4.00	EACH
ABUTMENT TOTAL	11.00	SY

**TOTAL 11.00 SY**

512E74000      REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES

EXISTING BRIDGE RAILING		
DECK LIMITS OF TO REMAIN	79.40	FT
PERIMETER	9.51	FT
TOTAL REMOVAL OF EXISTING COATINGS AREA	1509.82	SF

**TOTAL 168.00 SY**

513E10221      STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN

WEB SPLICE PLATE	65.1	LB
WEB FILL PLATE	10.2	LB
INNER FLANGE SPLICE PLATE	82.1	LB
OUTER FLANGE SPLICE PLATE	166.7	LB

**TOTAL 9600 LB**

513E10280      STRUCTURAL STEEL MEMBERS, LEVEL 4

2"X16" PLATE AREA	0.22	SF
5/8"X54" WEB AREA	0.23	SF
LENGTH	7.75	FT
TOTAL VOLUME	63.13	FT^3
DENSITY	490.00	LB/FT^3
SUPERSTRUCTURE TOTAL	31000.00	LB

**TOTAL 31000.00 LB**

513E20000      WELDED STUD SHEAR CONNECTORS

STUDS PER ROW	3.00	EACH
NUMBER OF ROWS	22.00	EACH
NUMBER OF BEAMS	6.00	EACH
TOTAL NUMBER OF STUDS	396.00	EACH

**TOTAL 396.00 EACH**

513E95030      STRUCTURAL STEEL, MISC.: FIELD DRILLING HOLES



**COMPASS**  
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	QUANTITY CALCULATIONS		

HOLES/BEAM	136.00	EACH
# OF BEAMS	6.00	EACH
<b>TOTAL</b>	<b>816.00</b>	<b>EACH</b>

514E00050      SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL

LENGTH FROM SPLICE TO 1' PAST FLANGE SPLICE PLATE	2.53	FT
PERIMETER	13.67	FT
NUMBER OF SPLICES	12.00	EACH
<b>TOTAL</b>	<b>416.00</b>	<b>SF</b>

514E00056      FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT

**TOTAL      416.00      SF**

514E00060      FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT

AREA AT SPLICE		
PAINTING LIMIT	13.67	FT
LENGTH	8.00	FT
NUMBER OF SPLICES	12.00	EACH
TOTAL SURFACE AREA AT SPLICES	1312.00	SF

INCIDENTALS		
3%	39.36	SF
SUPERSTRUCTURE TOTAL	1352.00	SF

**TOTAL      1352.00      SF**

514E00066      FIELD PAINTING STRUCTURAL STEEL, FINISH COAT

**TOTAL      1352.00      SF**

514E00504      GRINDING FINES, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL

LENGTH OF BEAM TO BE COATED	38.38	LF
	1.00	MIN/LF
	0.64	MNHR

**TOTAL      1.00      MNHR**



**COMPASS**  
INFRASTRUCTURE GROUP

JOB:	10059	PID:	113440
CALCULATED BY:	BEH	DATE:	9/12/2025
CHECKED BY:	CCJ	DATE:	11/3/2025
PROJECT:	HAS-22-17.530 R		
DESCRIPTION:	OVER COLUMBUS & OHIO RIVER RR SPUR		
	QUANTITY CALCULATIONS		

514E10000

FINAL INSPECTION REPAIR

**TOTAL 1.00 EACH**

516E10000

PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL

LENGTH ALONG TYPE C SLEEPER SLAB 57.00 FT

GENERAL TOTAL 57.00 FT

**TOTAL 57.00 FT**

516E13600

1" PREFORMED EXPANSION JOINT FILLER

SUPERSTRUCTURE

HEIGHT OF PEJF 3.00 FT

WIDTH OF PEJF 1.50 FT

# OF PEJF 4.00 EACH

HEIGHT OF PEJF 4.25 FT

WIDTH OF PEJF 1.50 FT

# OF PEJF 2.00 EACH

SUPERSTRUCTURE TOTAL 31.00 SF

CONCRETE SLOPE PROTECTION

HEIGHT OF PEJF 0.50 FT

LENGTH ALONG ABUTMENT 60.00 FT

# OF PEJF 2.00 EACH

SLOPE PROTECTION TOTAL 120.00 SF

**TOTAL 151.00 SF**

516E13900

2" PREFORMED EXPANSION JOINT FILLER

AREA REAR ABUTMENT 95.50 SF

AREA FORWARD ABUTMENT 95.50 SF

ABUTMENT TOTAL 191.00 SF

**TOTAL 191.00 SF**

516E14020

SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL

REAR ABUTMENT

ABUTMENT NEOPRENE SHEETING

HORIZONTAL LIMITS ALONG LENGTH OF ABUTMENT 57.28 FT



**COMPASS**  
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DESCRIPTION:	OVER COLUMBUS & OHIO RIVER RR SPUR		
	QUANTITY CALCULATIONS		

VERTICAL LIMIT ALONG WINGWALL	7.10	FT
ABUTMENT/WINGWALL OVERLAP	1.50	FT

DIAPHRAGM NEOPRENE SHEETING		
VERTICAL LIMITS AT DIAPHRAGM GUIDE	4.00	FT
TOTAL SHEETING LENGTH	71.38	FT

FORWARD ABUTMENT

ABUTMENT NEOPRENE SHEETING		
HORIZONTAL LIMITS ALONG LENGTH OF ABUTMENT	57.28	FT
VERTICAL LIMIT ALONG WINGWALL	7.10	FT
ABUTMENT/WINGWALL OVERLAP	1.50	FT

DIAPHRAGM NEOPRENE SHEETING		
VERTICAL LIMITS AT DIAPHRAGM GUIDE	4.00	FT
TOTAL SHEETING LENGTH	71.38	FT

ABUTMENT TOTAL	143.00	FT
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<b>TOTAL</b>	<b>143.00</b>	<b>FT</b>
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516E44201      ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (16"X16"X3.273" WITH 17"X17"X1.5" LOAD PLATE)

NUMBER OF BEARINGS REAR ABUTMENT	6.00	EACH
NUMBER OF BEARINGS FORWARD ABUTMENT	6.00	EACH

<b>TOTAL</b>	<b>12.00</b>	<b>EACH</b>
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516E47001      JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN

NUMBER OF JACKING POINTS	12.00	EACH
STEEL WEIGHT PER POINT	793.17	LB
STEEL COST	10.00	\$/LB
TOTAL STEEL COST	\$111,044.44	
DIVIDE COST TO 3 BRIDGES EQUALLY	\$37,014.81	PER BRIDGE
LABOR COST (300\$/HR, 8HR/POINT)	\$28,800.00	
COST OF JACKS	\$10,000.00	
COST OF POST-TENSIONING	\$10,000.00	
COST OF COORDINATION	\$5,000.00	



**COMPASS**  
INFRASTRUCTURE GROUP

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PROJECT:	HAS-22-17.530 R		
DESCRIPTION:	OVER COLUMBUS & OHIO RIVER RR SPUR		
	QUANTITY CALCULATIONS		

TOTAL COST \$90,800.00

**TOTAL LS**

518E21200      POROUS BACKFILL WITH GEOTEXTILE FABRIC

REAR ABUTMENT

LENGTH OF POROUS BACKFILL	57.28	FT
WIDTH OF POROUS BACKFILL	2.00	FT
APPROXIMATE AVERAGE HEIGHT OF POROUS BACKFILL	8.22	FT
VOLUME OF POROUS BACKFILL	941.70	CF

FORWARD ABUTMENT

LENGTH OF POROUS BACKFILL	57.28	FT
WIDTH OF POROUS BACKFILL	2.00	FT
APPROXIMATE AVERAGE HEIGHT OF POROUS BACKFILL	8.26	FT
VOLUME OF POROUS BACKFILL	946.49	CF

RA LT. WINGWALL

LENGTH OF POROUS BACKFILL	7.97	FT
APPROXIMATE AVERAGE HEIGHT OF POROUS BACKFILL	7.83	FT
LENGTH OF POROUS BACKFILL (TRAPEZIUM)	8.00	FT
APPROXIMATE AVERAGE HEIGHT OF BACKFILL (TRAPEZIUM)	4.54	FT
WIDTH OF POROUS BACKFILL	2.00	FT
VOLUME OF POROUS BACKFILL	197.43	CF

FA LT. WINGWALL

LENGTH OF POROUS BACKFILL	7.97	FT
APPROXIMATE AVERAGE HEIGHT OF POROUS BACKFILL	8.03	FT
LENGTH OF POROUS BACKFILL (TRAPEZIUM)	8.00	FT
APPROXIMATE AVERAGE HEIGHT OF BACKFILL (TRAPEZIUM)	4.64	FT
WIDTH OF POROUS BACKFILL	2.00	FT
VOLUME OF POROUS BACKFILL	202.22	CF

RA RT. WINGWALL

LENGTH OF POROUS BACKFILL	7.97	FT
APPROXIMATE AVERAGE HEIGHT OF POROUS BACKFILL	8.35	FT
LENGTH OF POROUS BACKFILL (TRAPEZIUM)	8.00	FT
APPROXIMATE AVERAGE HEIGHT OF BACKFILL (TRAPEZIUM)	4.80	FT
WIDTH OF POROUS BACKFILL	2.00	FT
VOLUME OF POROUS BACKFILL	209.88	CF

FA RT. WINGWALL

LENGTH OF POROUS BACKFILL	7.97	FT
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**COMPASS**  
INFRASTRUCTURE GROUP

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DESCRIPTION:	OVER COLUMBUS & OHIO RIVER RR SPUR		
	QUANTITY CALCULATIONS		

APPROXIMATE AVERAGE HEIGHT OF POROUS BACKFILL	8.55	FT
LENGTH OF POROUS BACKFILL (TRAPEZIUM)	8.00	FT
APPROXIMATE AVERAGE HEIGHT OF BACKFILL (TRAPEZIUM)	4.90	FT
WIDTH OF POROUS BACKFILL	2.00	FT
VOLUME OF POROUS BACKFILL	214.67	CF
<b>TOTAL</b>	<b>101.00</b>	<b>CY</b>

518E40000      6" PERFORATED CORRUGATED PLASTIC PIPE

REAR ABUTMENT	68.11	FT
FORWARD ABUTMENT	71.71	FT
<b>TOTAL</b>	<b>140.00</b>	<b>FT</b>

518E40010      6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS

LENGTH AT REAR ABUTMENT	17.25	FT
LENGTH AT FORWARD ABUTMENT	11.50	FT
<b>TOTAL</b>	<b>29.00</b>	<b>FT</b>

524E94702      DRILLED SHAFTS, 36" DIAMETER, ABOVE BEDROCK

TOTAL LENGTH	43.50	FT
<b>TOTAL</b>	<b>44.00</b>	<b>FT</b>

524E94704      DRILLED SHAFTS, 36" DIAMETER, INTO BEDROCK

ROCK SOCKET LENGTH REAR ABUTMENT	12.00	FT
NUMBER OF DRILLED SHAFTS	5.00	EACH
REAR ABUTMENT TOTAL	60.00	FT
ROCK SOCKET LENGTH FORWARD ABUTMENT	23.00	FT
NUMBER OF DRILLED SHAFTS	5.00	EACH
FORWARD ABUTMENT TOTAL	115.00	FT
TOTAL LENGTH	175.00	FT
<b>TOTAL</b>	<b>175.00</b>	<b>FT</b>

526E25000      REINFORCED CONCRETE APPROACH SLABS (T=15")



**COMPASS**  
INFRASTRUCTURE GROUP

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PROJECT:	HAS-22-17.530 R		
DESCRIPTION:	OVER COLUMBUS & OHIO RIVER RR SPUR		
	QUANTITY CALCULATIONS		

APPROACH SLAB LENGTH	25.00	FT
APPROACH SLAB WIDTH	53.67	FT
APPROACH SLAB AREA	1341.67	SF
GENERAL TOTAL	298.15	SY
<b>TOTAL</b>	<b>299.00</b>	<b>SY</b>

526E90010      TYPE A INSTALLATION

LENGTH ALONG APPROACH SLAB	57.00	FT
<b>TOTAL</b>	<b>57.00</b>	<b>FT</b>

526E90031      TYPE C INSTALLATION, AS PER PLAN

LENGTH ALONG APPROACH SLAB	57.00	FT
<b>TOTAL</b>	<b>57.00</b>	<b>FT</b>

601E21000      CONCRETE SLOPE PROTECTION

WIDTH BETWEEN PROPOSED AND EXISTING ABUTMENT	1.64	FT
LENGTH	60.00	FT
AREA	98.53	SF
<b>TOTAL</b>	<b>11.00</b>	<b>SY</b>

613E41200      LOW STRENGTH MORTAR BACKFILL

REAR ABUTMENT		
WIDTH BETWEEN PROPOSED AND EXISTING ABUTMENT	1.64	FT
AVERAGE HEIGHT OF BACKFILL	2.67	FT
WIDTH B/W PROPOSED AND EXISTING ABUTMENT FOOTING	1.14	FT
HEIGHT OF BACKFILL FOOTING	0.75	FT
LENGTH OF BACKFILL	60.00	FT
BACKFILL VOLUME	314.26	CF
FORWARD ABUTMENT		
WIDTH BETWEEN PROPOSED AND EXISTING ABUTMENT	1.64	FT
AVERAGE HEIGHT OF BACKFILL	2.82	FT
WIDTH B/W PROPOSED AND EXISTING ABUTMENT FOOTING	1.14	FT
HEIGHT OF BACKFILL FOOTING	2.55	FT
LENGTH OF BACKFILL	60.00	FT



**COMPASS**  
INFRASTRUCTURE GROUP

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PROJECT:	<u>HAS-22-17.530 R</u>		
DESCRIPTION:	<u>OVER COLUMBUS &amp; OHIO RIVER RR SPUR</u>		
	<u>QUANTITY CALCULATIONS</u>		

BACKFILL VOLUME    452.33    CF

**TOTAL    29.00    CY**

858E10000            THIN POLYMER EPOXY OVERLAY

DECK LIMITS	104.50	FT
TOE/TOE RAILING	50.67	FT
3" UP PARAPET	0.50	FT
SUPERSTRUCTURE TOTAL	5346.92	SF

**TOTAL    595.00    SY**

894E10000            THERMAL INTEGRITY PROFILING (TIP) TEST

**TOTAL    2.00    EACH**



**COMPASS**  
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PROJECT:	HAS-250-19.12		
DESCRIPTION:	OVER COLUMBUS & OHIO RIVER RR SPUR		
	QUANTITY CALCULATIONS		

ITEM-EXTENSION

DESCRIPTION

202E11203

PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

LENGTH OF DECK REMOVED	55.69	FT
WIDTH OF DECK REMOVED	5.75	FT
AREA OF DECK REMOVED	640.41	SF
COST/SF OF REMOVAL	\$50.00	/SF
COST OF DECK REMOVAL	\$32,020.31	
RAILING LENGTH	83.00	FT
RAILING AREA	2.88	SF
RAILING VOLUME	238.87	CF
REAR SOUTH/FORWARD NORTH WINGWALL		
TOP AREA MEASURED FROM CAD	15.00	SF
THICKNESS	1.67	FT
AREA MEASURED FROM CAD	83.96	SF
THICKNESS	1.50	FT
EXISTING FOOTING AREA MEASURED FROM CAD	12.56	SF
THICKNESS	3.50	FT
VOLUME	194.91	CF
REAR SOUTH/FORWARD NORTH WINGWALL		
TOP AREA MEASURED FROM CAD	15.00	SF
THICKNESS	1.67	FT
AREA MEASURED FROM CAD	83.96	SF
THICKNESS	1.50	FT
EXISTING FOOTING AREA MEASURED FROM CAD	12.56	SF
THICKNESS	3.50	FT
VOLUME	194.91	CF
WINGWALL VOLUME	779.63	CF
BACKWALL LENGTH	55.34	FT
TOP HEIGHT	1.25	FT
THICKNESS	1.25	FT
HEIGHT	5.07	FT
THICKNESS	1.75	FT
BEAM SEAT HEIGHT	0.50	FT
BEAM SEAT THICKNESS	2.00	FT
BACKWALL VOLUME	1264.74	CF



**COMPASS**  
INFRASTRUCTURE GROUP

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DESCRIPTION:	OVER COLUMBUS & OHIO RIVER RR SPUR		
	QUANTITY CALCULATIONS		

VOLUME OF CONCRETE REMOVED	84.56	CY
COST/CY REMOVAL	\$200.00	/CY
COST OF CONCRETE REMOVAL	\$16,912.94	
TOTAL COST	\$49,000.00	

**TOTAL LS**

202E22900

APPROACH SLAB REMOVED

EXISTING LENGTH	52.14	FT
EXISTING WIDTH	14.82	FT
AREA OF EXISTING APPROACH SLAB REAR	772.53	SF

**TOTAL 172.00 SY**

202E98100

REMOVAL MISC.: OEPA NOTIFICATION OF DEMOLITION

PER INSTRUCTION FROM ODOT	1	EACH
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**TOTAL 1 EACH**

503E21100

UNCLASSIFIED EXCAVATION

ABUTMENT WIDTH	4.00	FT
ABUTMENT LENGTH	66.04	FT
EXCAVATION AREA	408.25	SF
REAR ABUTMENT AVERAGE HEIGHT	9.66	FT
FORARD ABUTMENT AVERAGE HEIGHT	8.64	FT
TOTAL VOLUME	7470.89	CF

ABUTMENT TOTAL	277.00	CY
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**TOTAL 277.00 CY**

509E10000

EPOXY COATED STEEL REINFORCEMENT

ABUTMENTS			
REAR	4361	LB	FROM TABLE
FORWARD	4361	LB	FROM TABLE
ABUTMENT TOTAL	8722	LB	



**COMPASS**  
INFRASTRUCTURE GROUP

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PROJECT:	HAS-250-19.12		
DESCRIPTION:	OVER COLUMBUS & OHIO RIVER RR SPUR		
	QUANTITY CALCULATIONS		

SUPERSTRUCTURE			
DECK	9455	LB	FROM TABLE
DIAPHRAGMS	7475	LB	FROM TABLE
SUPERSTRUCTURE TOTAL	16930	LB	

RAILING			
RAILING	2377	LB	FROM TABLE
RAILING TOTAL	2377	LB	

SUPERSTRUCTURE TOTAL 19307.00

TOTAL (ABUT)	8722.00
TOTAL (PIER)	
TOTAL (SUPER)	19307.00
TOTAL (GENERAL)	

**TOTAL 28029 LB**

511E33500 SEMI-INTEGRAL DIAPHRAGM GUIDE

**TOTAL 2.00 EACH**

511E34444 CLASS QC2 CONCRETE, BRIDGE DECK

PROPOSED OUT/OUT BRIDGE WIDTH	55.00	FT
LENGTH	12.14	FT
DECK AREA	667.45	SF
DECK THICKNESS	8.50	IN
DECK VOLUME	472.78	CF

HAUNCH WIDTH	16.63	IN
HAUNCH THICKNESS	4.00	IN
BEAM LENGTH	11.39	FT
NUMBER OF BEAMS	7.00	EACH
HAUNCH VOLUME	36.80	CF

OVERHANG DEPTH	12.00	IN
OVERHANG WIDTH	3.50	FT
HAUNCH AND OVERHANG VOLUME	19.87	CF

TOTAL DECK VOLUME 39.22 CY

REAR ABUTMENT DIAPHRAGM



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DESCRIPTION:	OVER COLUMBUS & OHIO RIVER RR SPUR		
	QUANTITY CALCULATIONS		

DIAPHRAGM LENGTH	55.68	FT
DIAPHRAGM HEIGHT	3.30	FT
DIAPHRAGM THICKNESS	3.00	FT
AREA OF BEAM END	0.57	SF
LENGTH OF BEAM END TO DEDUCT	2.28	FT
NUMBER OF BEAM ENDS	7.00	EACH
DIAPHRAGM VOLUME	541.47	CF
FORWARD ABUTMENT DIAPHRAGM		
DIAPHRAGM LENGTH	55.68	FT
DIAPHRAGM HEIGHT	3.24	FT
DIAPHRAGM THICKNESS	3.00	FT
AREA OF BEAM END	0.57	SF
LENGTH OF BEAM END TO DEDUCT	2.28	FT
NUMBER OF BEAM ENDS	7.00	EACH
DIAPHRAGM VOLUME	532.76	CF
DIAPHRAGM TOTAL VOLUME	39.79	CY
<b>TOTAL</b>	<b>80.00</b>	<b>CY</b>

511E34448

CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET)

REAR APPROACH SLAB AND DECK		
AREA OF PARAPET	2.88	SF
LENGTH OF PARAPET	45.79	FT
PARAPET VOLUME	131.79	CF
PARAPET VOLUME	4.88	CY
APPROACH SLAB TRANSITION		
PARAPET VOLUME	3.40	CY
FORWARD APPROACH SLAB		
AREA OF PARAPET	2.88	SF
LENGTH OF PARAPET	45.79	FT
PARAPET VOLUME	131.79	CF
PARAPET VOLUME	4.88	CY
APPROACH SLAB TRANSITION		
PARAPET VOLUME	3.40	CY
<b>TOTAL</b>	<b>17.00</b>	<b>CY</b>

511E43510

CLASS QC1 CONCRETE, ABUTMENT INCLUDING FOOTING

WINGWALLS



**COMPASS**  
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DESCRIPTION:	OVER COLUMBUS & OHIO RIVER RR SPUR		
	QUANTITY CALCULATIONS		

RA LT.

TOP OF FOOTING TO TOP OF WINGWALL

HEIGHT	8.95	FT
WIDTH	4.77	FT
THICKNESS	2.50	FT
AREA	42.73	SF
VOLUME	106.84	CF

TRAPEZIUM (TRAPIZOIDAL AREA OF WINGWALL)

HEIGHT	0.00	FT
A WIDTH	6.70	FT
B WIDTH	3.00	FT
THICKNESS	1.50	FT
AREA	0.00	SF
VOLUME	0.00	CF

VOLUME OF WINGWALL 3.96 CY

FA LT.

TOP OF FOOTING TO TOP OF WINGWALL

HEIGHT	8.90	FT
WIDTH	5.25	FT
THICKNESS	2.50	FT
AREA	46.71	SF
VOLUME	116.77	CF

TRAPEZIUM (TRAPIZOIDAL AREA OF WINGWALL)

HEIGHT	0.00	FT
A WIDTH	6.89	FT
B WIDTH	3.00	FT
THICKNESS	1.50	FT
AREA	0.00	SF
VOLUME	0.00	CF

VOLUME OF WINGWALL 4.32 CY

RA RT.

TOP OF FOOTING TO TOP OF WINGWALL

HEIGHT	8.04	FT
WIDTH	5.25	FT
THICKNESS	2.50	FT
AREA	42.20	SF
VOLUME	105.49	CF



**COMPASS**  
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DESCRIPTION:	OVER COLUMBUS & OHIO RIVER RR SPUR		
	QUANTITY CALCULATIONS		

TRAPEZIUM (TRAPIZOIDAL AREA OF WINGWALL)

HEIGHT	0.00	FT
A WIDTH	6.81	FT
B WIDTH	3.00	FT
THICKNESS	1.50	FT
AREA	0.00	SF
VOLUME	0.00	CF

VOLUME OF WINGWALL 3.91 CY

FA RT.

TOP OF FOOTING TO TOP OF WINGWALL

HEIGHT	7.98	FT
WIDTH	4.77	FT
THICKNESS	2.50	FT
AREA	38.10	SF
VOLUME	95.26	CF

TRAPEZIUM (TRAPIZOIDAL AREA OF WINGWALL)

HEIGHT	0.00	FT
A WIDTH	4.96	FT
B WIDTH	3.00	FT
THICKNESS	1.50	FT
AREA	0.00	SF
VOLUME	0.00	CF

VOLUME OF WINGWALL 3.53 CY

TOTAL VOLUME OF WINGWALLS 15.72 CY

ABUTMENTS

REAR ABUTMENT

AVERAGE HEIGHT	3.60	FT
LENGTH	55.68	FT
AREA	200.69	SF
THICKNESS	3.00	FT
VOLUME OF ABUTMENT	602.07	CF

FORWARD ABUTMENT

AVERAGE HEIGHT	3.60	FT
LENGTH	55.68	FT
AREA	200.53	SF



**COMPASS**  
INFRASTRUCTURE GROUP

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PROJECT:	HAS-250-19.12		
DESCRIPTION:	OVER COLUMBUS & OHIO RIVER RR SPUR		
	QUANTITY CALCULATIONS		

THICKNESS	3.00	FT
VOLUME OF ABUTMENT	601.59	CF
TOTAL VOLUME OF ABUTMENTS	44.58	CY
FOOTING		
REAR AREA	264.16	SF
FWD. AREA	264.16	SF
TOTAL AREA	528.33	SF
DEPTH	3.00	FT
VOLUME	1584.98	CF
VOLUME	58.70	cy
<b>TOTAL</b>	<b>119.00</b>	<b>CY</b>

512E10050

SEALING OF CONCRETE SURFACES (NON-EPOXY)

SUPERSTRUCTURE

REAR DIAPHRAGM SEALING HEIGHT	3.30	FT
DIAPHRAGM LENGTH	55.68	FT
SEALING AREA TOTAL	183.51	SF
FORWARD DIAPHRAGM SEALING HEIGHT	3.24	FT
DIAPHRAGM LENGTH	55.68	FT
SEALING AREA TOTAL	180.61	SF
DIAPHRAGM SEALING TOTAL	40.00	SY

ABUTMENTS

LENGTH OF REAR ABUTMENT	60.38	FT
ABUTMENT SEALING HEIGHT	0.00	FT
SEALING AREA TOTAL	0.00	SF
LENGTH OF FORWARD ABUTMENT	60.38	FT
ABUTMENT SEALING HEIGHT	0.00	FT
SEALING AREA TOTAL	0.00	SF
ABUTMENT SEALING AREA TOTAL	0.00	SY

WINGWALLS

EXPOSED AREA OF WINGWALL FACE	6.67	SF
WINGWALL THICKNESS	2.50	FT



**COMPASS**  
INFRASTRUCTURE GROUP

JOB:	10059	PID:	113440
CALCULATED BY:	ECC	DATE:	9/16/2025
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PROJECT:	HAS-250-19.12		
DESCRIPTION:	OVER COLUMBUS & OHIO RIVER RR SPUR		
	QUANTITY CALCULATIONS		

LENGTH ALONG TOP OF WINGWALL	5.01	FT
# OF WINGWALLS	4.00	EACH
WINGWALL TOTAL	76.78	SF
WINGWALL TOTAL	9.00	SY
<b>TOTAL</b>	<b>49.00</b>	<b>SY</b>

512E10100      SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

SUPERSTRUCTURE		
BARRIER PERIMETER SEALED	10.42	FT
DECK LENGTH	106.42	FT
DECK TOTAL	2217.39	SF
PARAPET ON APPROACH SLAB SEALING LIMIT	6.54	FT
LENGTH	14.00	FT
APPROACH TOTAL	366.24	SF
SUPERSTRUCTURE TOTAL	2583.63	SF
<b>TOTAL</b>	<b>288.00</b>	<b>SY</b>

512E10300      SEALING OF CONCRETE BRIDGE DECKS WITH HMWM RESIN

TOTAL LENGTH OF DECK	106.42	FT
LEFT LIMIT WIDTH	24.50	FT
RIGHT LIMIT WIDTH	24.50	FT
TOTAL LIMIT WIDTH	49.00	FT
TOTAL AREA	5214.74	SF
<b>TOTAL</b>	<b>580.00</b>	<b>SY</b>

512E33000      TYPE 2 WATERPROOFING

HEIGHT	3.00	FT
TOTAL LENGTH OF WINGWALLS	20.05	FT
AREA	60.14	SF
<b>TOTAL</b>	<b>7.00</b>	<b>SY</b>

512E74000      REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES

EXISTING BRIDGE RAILING		
DECK LIMITS OF TO REMAIN	59.88	FT



**COMPASS**  
INFRASTRUCTURE GROUP

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DESCRIPTION:	OVER COLUMBUS & OHIO RIVER RR SPUR		
	QUANTITY CALCULATIONS		

PERIMETER	10.42	FT
SURFACE AREA	1247.56	SF
TOTAL REMOVAL OF EXISTING COATINGS	1247.56	SF
<b>TOTAL</b>	<b>139.00</b>	<b>SY</b>

513E10221      STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN

COVER PLATE	1952.3	LB
WEB SPLICE PLATE	74.1	LB
INNER FLANGE SPLICE PLATE	48.8	LB
OUTER FLANGE SPLICE PLATE	123.8	LB
<b>TOTAL</b>	<b>21900</b>	<b>LB</b>

513E10220      STRUCTURAL STEEL MEMBERS, LEVEL 1

BEAM WEIGHT	282.000	LB/FT
LEGNTH	7.280	FT
SUPERSTRUCTURE TOTAL	28742.00	LB
<b>TOTAL</b>	<b>29000.00</b>	<b>LB</b>

513E20000      WELDED STUD SHEAR CONNECTORS

STUDS PER ROW	3.00	EACH
NUMBER OF ROWS	32.00	EACH
NUMBER OF BEAMS	7.00	EACH
TOTAL NUMBER OF STUDS	672.00	EACH
<b>TOTAL</b>	<b>672.00</b>	<b>EACH</b>

513E95030      STRUCTURAL STEEL, MISC.: FIELD DRILLING HOLES

HOLES/BEAM	116.00	EACH
# OF BEAMS	7.00	EACH
<b>TOTAL</b>	<b>812.00</b>	<b>EACH</b>

514E00050      SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL

LENGTH FROM SPLICE TO 1' PAST FLANGE SPLICE PLATE	2.26	FT
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PERIMETER	11.57	FT
NUMBER OF SPLICES	14.00	EACH
COVER PLATE LENGTH	45.00	FT
COVER PLATE WIDTH	1.33	FT
NUMBER OF COVER PLATES	7.00	EACH

**TOTAL 787.00 SF**

514E00056      FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT

COVER PLATE LENGTH	45.00	FT
COVER PLATE WIDTH	1.33	FT
COVER PLATE THICKNESS	0.063	FT
FLANGE THICKNESS	0.131	FT
NUMBER OF COVER PLATES	7.00	EACH

**TOTAL 910.00 SF**

514E00060      FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT

AREA AT SPLICE		
APPROXIMATE PERIMETER	11.57	FT
LENGTH	7.00	FT
NUMBER OF SPLICES	14.00	EACH
TOTAL SURFACE AREA AT SPLICES	1133.76	SF

AREA AT COVER PLATE		
SIDE AREA	8.70	SF
END AREA	1.00	SF
BOTTOM AREA	60.00	SF
TOTAL	555.80	SF

INCIDENTALS		
3%	50.69	SF
SUPERSTRUCTURE TOTAL	1741.00	SF

**TOTAL 1741.00 SF**

514E00066      FIELD PAINTING STRUCTURAL STEEL, FINISH COAT

**TOTAL 1741.00 SF**

514E00504      GRINDING FINNS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL



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	QUANTITY CALCULATIONS		

LENGTH OF BEAM TO BE COATED	34.13	LF
	1.00	MIN/LF
	0.57	MNHR
<b>TOTAL</b>	<b>1.00</b>	<b>MNHR</b>

<u>514E10000</u>	<u>FINAL INSPECTION REPAIR</u>		
	<b>TOTAL</b>	<b>1.00</b>	<b>EACH</b>

<u>516E13600</u>	<u>1" PREFORMED EXPANSION JOINT FILLER</u>		
	SUPERSTRUCTURE		
	HEIGHT OF PEJF	2.67	FT
	WIDTH OF PEJF	1.50	FT
	# OF PEJF	4.00	EACH
	SUPERSTRUCTURE TOTAL	16.00	SF
	CONCRETE SLOPE PROTECTION		
	HEIGHT OF PEJF	0.50	FT
	LENGTH ALONG ABUTMENT	56.00	FT
	# OF PEJF	2.00	EACH
	SLOPE PROTECTION TOTAL	112.00	SF
	<b>TOTAL</b>	<b>128.00</b>	<b>SF</b>

<u>516E13900</u>	<u>2" PREFORMED EXPANSION JOINT FILLER</u>		
	AREA REAR ABUTMENT	46.00	SF
	AREA FORWARD ABUTMENT	46.00	SF
	<b>TOTAL</b>	<b>92.00</b>	<b>SF</b>

<u>516E14020</u>	<u>SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL</u>		
	REAR ABUTMENT		
	ABUTMENT NEOPRENE SHEETING		
	HORIZONTAL LIMITS ALONG LENGTH OF ABUTMENT	55.68	FT
	ABUTMENT/WINGWALL OVERLAP	1.50	FT
	VERTICAL SHEETING	5.38	FT
	DIAPHRAGM NEOPRENE SHEETING		
	VERTICAL LIMITS AT DIAPHRAGM GUIDE	4.20	FT



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TOTAL SEALING LENGTH      68.26      FT

FORWARD ABUTMENT

ABUTMENT NEOPRENE SHEETING

HORIZONTAL LIMITS ALONG LENGTH OF ABUTMENT      55.68      FT

ABUTMENT/WINGWALL OVERLAP      1.50      FT

VERTICAL SHEETING      4.98      FT

DIAPHRAGM NEOPRENE SHEETING

VERTICAL LIMITS AT DIAPHRAGM GUIDE      4.20      FT

TOTAL SEALING LENGTH      67.86      FT

**TOTAL      137.00      FT**

516E44101      ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (14"X14"X2.6684" WITH 15"X15"X1.5" LOAD PLATE)

NUMBER OF BEARINGS REAR ABUTMENT      7.00      EACH

NUMBER OF BEARINGS FORWARD ABUTMENT      7.00      EACH

**TOTAL      14.00      EACH**

516E47001      JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN

NUMBER OF JACKING POINTS      14.00      EACH

STEEL WEIGHT PER POINT      785.60      LB

STEEL COST      10.00      \$/LB

TOTAL STEEL COST      \$109,983.36

DIVIDE COST TO 3 BRIDGES EQUALLY      \$36,661.12      PER BRIDGE

LABOR COST (300\$/HR, 8HR/POINT)      \$33,600.00

COST OF JACKS      \$10,000.00

COST OF POST-TENSIONING      \$10,000.00

COST OF COORDINATION      \$5,000.00

TOTAL COST      \$95,300.00

**TOTAL      LS**

518E21200      POROUS BACKFILL WITH GEOTEXTILE FABRIC

REAR ABUTMENT



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	QUANTITY CALCULATIONS		

LENGTH OF POROUS BACKFILL	57.28	FT
WIDTH OF POROUS BACKFILL	2.00	FT
APPROXIMATE AVERAGE HEIGHT OF POROUS BACKFILL	9.72	FT
VOLUME OF POROUS BACKFILL	1113.87	CF
FORWARD ABUTMENT		
LENGTH OF POROUS BACKFILL	55.68	FT
WIDTH OF POROUS BACKFILL	2.00	FT
APPROXIMATE AVERAGE HEIGHT OF POROUS BACKFILL	9.66	FT
VOLUME OF POROUS BACKFILL	1076.30	CF
RA LT. WINGWALL		
LENGTH OF POROUS BACKFILL	4.77	FT
APPROXIMATE AVERAGE HEIGHT OF POROUS BACKFILL	10.95	FT
LENGTH OF POROUS BACKFILL (TRAPEZIUM)	0.00	FT
APPROX. AVG. HEIGHT OF POROUS BACKFILL (TRAPEZIUM)	0.00	FT
WIDTH OF POROUS BACKFILL	2.00	FT
VOLUME OF POROUS BACKFILL	104.57	CF
FA LT. WINGWALL		
LENGTH OF POROUS BACKFILL	5.61	FT
APPROXIMATE AVERAGE HEIGHT OF POROUS BACKFILL	10.90	FT
LENGTH OF POROUS BACKFILL (TRAPEZIUM)	0.00	FT
APPROX. AVG. HEIGHT OF POROUS BACKFILL (TRAPEZIUM)	0.00	FT
WIDTH OF POROUS BACKFILL	2.00	FT
VOLUME OF POROUS BACKFILL	122.39	CF
RA RT. WINGWALL		
LENGTH OF POROUS BACKFILL	5.61	FT
APPROXIMATE AVERAGE HEIGHT OF POROUS BACKFILL	10.04	FT
LENGTH OF POROUS BACKFILL (TRAPEZIUM)	0.00	FT
APPROX. AVG. HEIGHT OF POROUS BACKFILL (TRAPEZIUM)	0.00	FT
WIDTH OF POROUS BACKFILL	2.00	FT
VOLUME OF POROUS BACKFILL	112.73	CF
FA RT. WINGWALL		
LENGTH OF POROUS BACKFILL	4.75	FT
APPROXIMATE AVERAGE HEIGHT OF POROUS BACKFILL	9.98	FT
LENGTH OF POROUS BACKFILL (TRAPEZIUM)	0.00	FT
APPROX. AVG. HEIGHT OF POROUS BACKFILL (TRAPEZIUM)	0.00	FT
WIDTH OF POROUS BACKFILL	2.00	FT
VOLUME OF POROUS BACKFILL	94.74	CF
<b>TOTAL</b>	<b>98.00</b>	<b>CY</b>



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518E40000

6" PERFORATED CORRUGATED PLASTIC PIPE

REAR ABUTMENT	65.54	FT
FORWARD ABUTMENT	65.54	FT
<b>TOTAL</b>	<b>132.00</b>	<b>FT</b>

518E40010

6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS

LENGTH AT REAR ABUTMENT	17.00	FT
LENGTH AT FORWARD ABUTMENT	20.00	FT
<b>TOTAL</b>	<b>37.00</b>	<b>FT</b>

524E94702

DRILLED SHAFTS, 36" DIAMETER, ABOVE BEDROCK

TOTAL LENGTH	0.80	FT
<b>TOTAL</b>	<b>1.00</b>	<b>FT</b>

524E94704

DRILLED SHAFTS, 36" DIAMETER, INTO BEDROCK

ROCK SOCKET LENGTH REAR ABUTMENT	18.90	FT
NUMBER OF DRILLED SHAFTS	4.00	EACH
REAR ABUTMENT TOTAL	75.60	FT
ROCK SOCKET LENGTH FORWARD ABUTMENT	13.20	FT
NUMBER OF DRILLED SHAFTS	4.00	EACH
FORWARD ABUTMENT TOTAL	52.80	FT
TOTAL LENGTH	128.40	FT
<b>TOTAL</b>	<b>129.00</b>	<b>FT</b>

526E25000

REINFORCED CONCRETE APPROACH SLABS (T=15")

APPROACH SLAB LENGTH	25.00	FT
APPROACH SLAB WIDTH	52.00	FT
APPROACH SLAB AREA	1300.00	SF
X TOTAL	288.89	SY
<b>TOTAL</b>	<b>289.00</b>	<b>SY</b>



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526E90010

TYPE A INSTALLATION

LENGTH ALONG REAR APPROACH SLAB	53.00	FT
LENGTH ALONG FWD. APPROACH SLAB	53.00	FT
<b>TOTAL</b>	<b>106.00</b>	<b>FT</b>

601E21000

CONCRETE SLOPE PROTECTION

WIDTH BETWEEN PROPOSED AND EXISTING ABUTMENT	1.50	FT
LENGTH	56.00	FT
AREA	84.00	SF
<b>TOTAL</b>	<b>19.00</b>	<b>SY</b>

613E41200

LOW STRENGTH MORTAR BACKFILL

REAR ABUTMENT		
WIDTH BETWEEN PROPOSED AND EXISTING ABUTMENT	1.50	FT
AVERAGE HEIGHT OF BACKFILL	3.10	FT
WIDTH BTW PROPOSED AND EXISTING ABUT. FOOTING	1.00	FT
HEIGHT OF BACKFILL FOOTING	0.03	FT
LENGTH OF BACKFILL	56.00	FT
BACKFILL VOLUME	261.66	CF
FORWARD ABUTMENT		
WIDTH BETWEEN PROPOSED AND EXISTING ABUTMENT	1.50	FT
AVERAGE HEIGHT OF BACKFILL	3.11	FT
WIDTH BTW PROPOSED AND EXISTING ABUT. FOOTING	1.00	FT
HEIGHT OF BACKFILL FOOTING	0.02	FT
LENGTH OF BACKFILL	56.00	FT
BACKFILL VOLUME	261.94	CF
<b>TOTAL</b>	<b>20.00</b>	<b>CY</b>

894E10000

THERMAL INTEGRITY PROFILING (TIP) TEST

<b>TOTAL</b>	<b>2.00</b>	<b>EACH</b>
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