

FRA-071-28.265 (SFN 2511372)
STRUCTURE ESTIMATED QUANTITIES
FRA-071/270-28.27/25.99A - PID No. 105435
IR-71 under RAMP K (IR-270 WB to IR-71 SB)
Columbus, Franklin County



Submitted to:
Ohio Department of Transportation, District 6
September 2024

CALC:	SLL	DATE:	6/17/2024
CHECKED:	EA	DATE:	6/20/2024

ESTIMATED QUANTITIES					STRUCTURE FILE NUMBER: 2511372				
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPERSTRUCTURE	GENERAL	SEE SHEET
202	11203	LS	LS	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LS	
202	22900	134	SY	APPROACH SLAB REMOVED				134	
202	23500	1,041	SY	WEARING COURSE REMOVED				1,041	
203	35110	78	CY	GRANULAR MATERIAL, TYPE B	78				
SPECIAL	20365000	2	EACH	SETTLEMENT PLATFORM	2				
503	11101	LS	LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	LS				
503	21100	186	CY	UNCLASSIFIED EXCAVATION				186	
505	11100	LS	LS	PILE DRIVING EQUIPMENT MOBILIZATION				LS	
507	00500	4,290	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	4,290				
507	00550	4,510	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	4,510				
507	00700	1,050	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN		1,050			
507	00750	1,125	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED		1,125			
509	10000	95,964	LB	EPOXY COATED REINFORCING STEEL	12,012	13,712	70,240		
509	30020	7,486	FT	NO.4 DEFORMED GFRP REINFORCEMENT			7,486		
511	33500	2	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE	2				
511	34446	253	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK			253		
511	34450	74	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)			74		
511	41012	31	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS		31			
511	44112	80	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	80				
511	46512	149	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	107	42			
512	10100	1,038	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	122	102	493	321	
512	33000	34	SY	TYPE 2 WATERPROOFING	34				
513	10300	231,000	LB	STRUCTURAL STEEL MEMBERS, LEVEL 5			231,000		
513	20000	2,835	EACH	WELDED STUD SHEAR CONNECTORS			2,835		
514	00060	11,000	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			11,000		
514	00066	11,000	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			11,000		
516	10010	76	FT	ARMORLESS PREFORMED JOINT SEAL				76	
516	13600	165	SF	1" PREFORMED EXPANSION JOINT FILLER				165	
516	13900	156	SF	2" PREFORMED EXPANSION JOINT FILLER				156	
516	14020	76	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	76				
516	44201	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN	8				
				(14"x16"x3.607" WITH 15"x20"x1.5" LOAD PLATE)					
516	44201	4	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN		4			
				(14.75"x18"x3.128" WITH 15.75"x26"x1.5" LOAD PLATE)					
518	20000	59	SY	PREFABRICATED GEOCOMPOSITE DRAIN	59				
518	21200	12	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	12				
518	40000	147	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	147				

523	20001	3	EACH	DYNAMIC LOAD TESTING, AS PER PLAN	2	1			
523	20501	3	EACH	RESTRIKE, AS PER PLAN	2	1			
526	30010	249	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17")				249	
526	90030	71	FT	TYPE C INSTALLATION				71	
601	21000	51	SY	CONCRETE SLOPE PROTECTION				51	
840	20000	4,301	SF	MECHANICALLY STABILIZED EARTH WALL				4,301	
840	21000	1,505	CY	WALL EXCAVATION				1,505	
840	22000	890	SY	FOUNDATION PREPARATION				890	
840	23000	3,312	CY	SELECT GRANULAR BACKFILL				3,312	
840	23001	481	CY	SELECT GRANULAR BACKFILL, AS PER PLAN	481				
840	23050	336	CY	NATURAL SOIL				336	
840	25010	753	FT	6" DRAINAGE PIPE, PERFORATED				753	
840	25020	23	FT	6" DRAINAGE PIPE, NON-PERFORATED				23	
840	26000	286	FT	CONCRETE COPING				286	
840	26050	4,301	SF	AESTHETIC SURFACE TREATMENT				4,301	
840	27000	5	DAY	ON-SITE ASSISTANCE				5	
840	28000	LS	LS	SGB INSPECTION AND COMPACTION TESTING				LS	
863	00100	2,421	SY	GEOGRID, TYPE P1				2,421	
867	00100	LS	LS	TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL				LS	



Made by: SLL	Date: 6/10/24	Project No: P402200080
Checked by: EA	Date: 6/20/24	Sheet No: 3 of 57
Back Ck by:	Date:	
Project: FRA-00071-28.265		
Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

202 Ext.: 11203 Unit: LS
Item Description: PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
Member Location :

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

LUMP

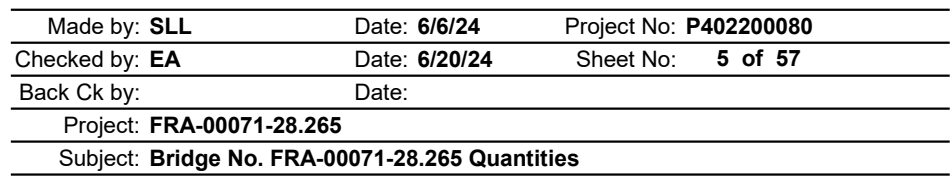


Made by: SLL	Date: 6/6/24	Project No: P402200080
Checked by: EA	Date: 6/20/24	Sheet No: 4 of 57
Back Ck by:	Date:	
Project: FRA-00071-28.265		
Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

202 Ext.: 22900 Unit: SY
Item Description: APPROACH SLAB REMOVED
Member Location :

Existing Rear Approach Slab Removed			
From Original Plans	600.00 SF	(25' Long x 24' Wide)	
Average	600.00 SF		
Existing Forward Approach Slab Removed			
From Original Plans	600.00 SF	(25' Long x 24' Wide)	
Average	600.00 SF		
Total	1,200.00 SF		
	133.33 SY		
Total			133.33
TOTAL			134 SY



Existing Wearing Course Removed							
Via Calculation	Begin STA.	End. STA.	Length	Width	Area		
Forward Approach			25.00	24.00	600.00		
Deck	1,774.14	1,501.99	272.15	30.00	8,164.50		
Rear Approach			25.00	24.00	600.00		
			Total		9,364.50		
				Total (SY)		1041	
TOTAL						1041	SY

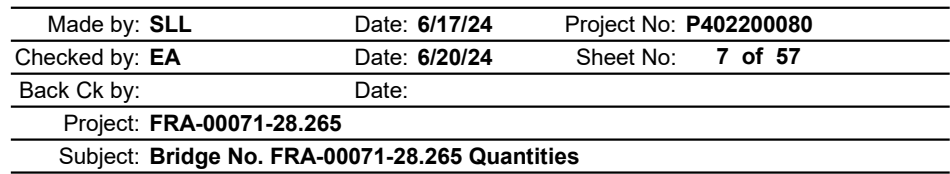


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Back Ck by:	Date:	
Project: FRA-00071-28.265		
Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

203 Ext.: 35110 Unit: CY
Item Description: GRANULAR MATERIAL, TYPE B
Member Location :

Location	Area	Width	Vol (CF)	Vol (CY)	Sheet	
RA Back	28.00	37.33	1,045.24	38.71	20	
FA Back	28.00	37.33	1,045.24	38.71	20	
Total				77.43		77.43
TOTAL						78 CY



Settlement Platforms		
2 Per Bridge	Total	2.00
		2.00



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Project: FRA-00071-28.265		
Subject: Bridge No. FRA-00071-28.265 Quantities		

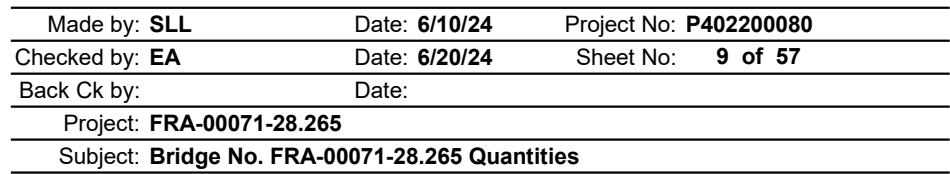
Bridge No. FRA-00071-28.265 Quantities

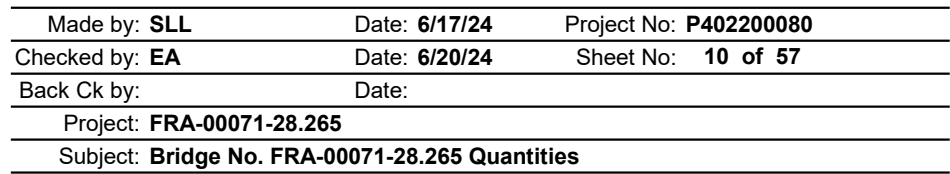
503 Ext.: 11101 Unit: LS
Item Description: COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN
Member Location :

COFFERDAMS AND EXCAVATION BRACING

LUMP

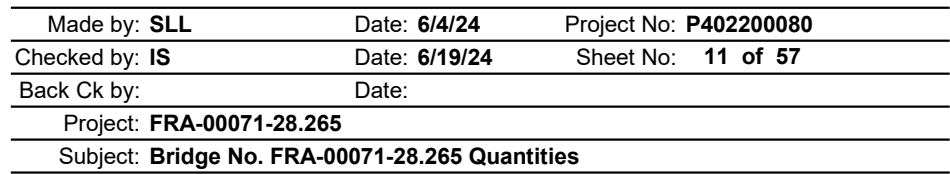
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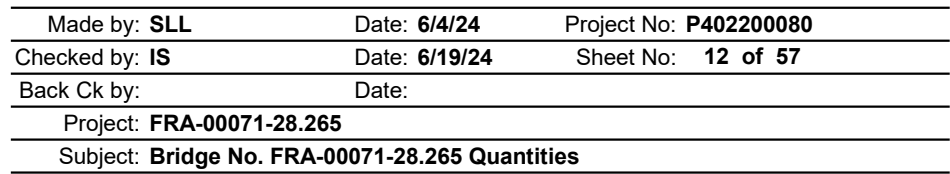
505 Ext.: 11100 Unit: LS
 Item Description: PILE DRIVING EQUIPMENT MOBILIZATION
 Member Location :

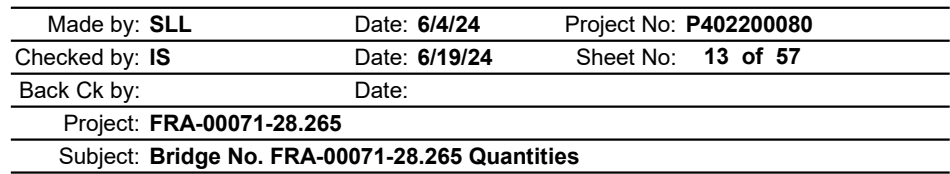
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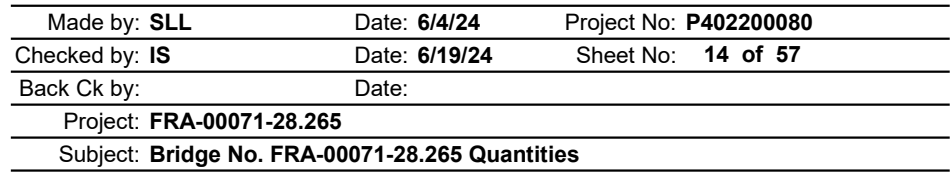


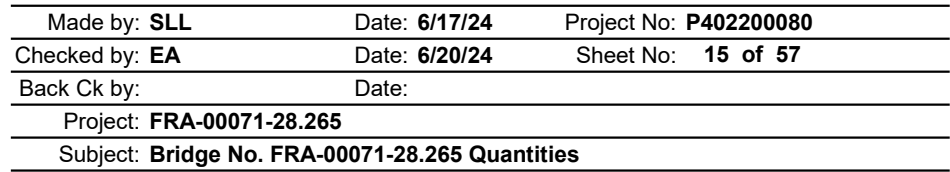
Member Location : _____

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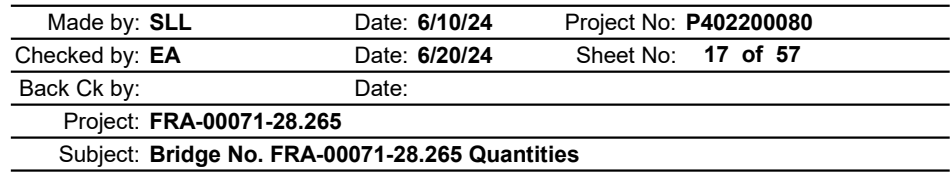


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Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

509 Ext.: 30020 Unit: FT
Item Description: NO. 4 DEFORMED GFRP REINFORCEMENT
Member Location :

Railing			7486.00	FT	7,486.00
Total			0.00		0.00 CY
TOTAL			7486	FT	



511 Ext.: 33500 Unit: EACH

Item Description: SEMI-INTEGRAL DIAPHRAGM GUIDE

Member Location :

Diaphragm Guide		
Item	Count	Sheet
RA	1.00	19
FA	1.00	19
Total		2.00
TOTAL		2 EACH

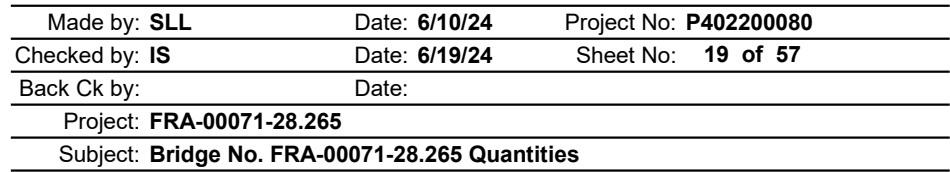


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Project: FRA-00071-28.265		
Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

511 Ext.: 34446 Unit: CY
Item Description: CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK
Member Location :

Deck Concrete							
via Bluebeam							
	Area	Length	Vol CF	Vol CY			
Transverse Section Area	30.92	183.81	5,683.31	210.49			
	Height	Width	Length	Vol CF	Vol CY		
Plan View Area Strips							
1	1.02	3.42	183.81	641.09	23.74		
2	0.75	10.17	183.81	1,401.53	51.91		
3	0.38	1.33	183.81	91.90	3.40		
4	0.75	10.17	183.81	1,401.53	51.91		
5	0.38	1.33	183.81	91.90	3.40		
6	0.75	10.17	183.81	1,401.53	51.91		
7	0.38	1.33	183.81	91.90	3.40		
8	1.04	3.42	183.81	654.17	24.23		
			Total	213.91		213.9	CY
Diaphragm	Length	Area	Vol (CF)	Vol (CY)			
RA	3.00	173.11	519.33	19.23			
FA	3.00	171.87	515.61	19.10			
			Total	38.33		38.3	CY



Parapet Concrete					
	Area	Length	Vol CF	Vol CY	
Transverse Section Area	4.08	487.29	1,989.77	73.70	74
Total				0.00	
TOTAL					74 CY



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Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

511 Ext.: 41012 Unit: CY

Item Description: CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS

Member Location :

Pier Cap & Column Concrete							
Column Concrete:							
	Top Elev	Bot Elev	Height	Diameter	Vol (CF)	Vol (CY)	
Column 1	929.05	910.50	18.55	3.00	131.12	4.86	4.86
Column 2	929.79	910.50	19.29	3.00	136.32	5.05	5.05
Column 3	930.52	910.50	20.02	3.00	141.51	5.24	5.24
Cap Concrete:							
Piece	Height	Length	Width	Vol (CF)	Vol (CY)		
1	2.50	5.00	3.33	41.67	1.54		
2	1.00	3.50	3.33	5.83	0.22		
3	1.00	1.50	3.33	5.00	0.19		
4	3.50	4.60	3.33	53.72	1.99		
5	3.50	0.50	3.33	5.83	0.22		
6	3.50	3.00	3.33	35.00	1.30		
7	3.50	7.00	3.33	81.67	3.02		
8	3.50	0.50	3.33	5.83	0.22		
9	3.50	3.00	3.33	35.00	1.30		
10	3.50	6.25	3.33	72.92	2.70		
11	2.00	5.00	3.33	33.33	1.23		
12	1.00	1.50	3.33	5.00	0.19		
13	1.00	3.50	3.33	5.83	0.22		
Total				14.32			
Cap Conc via Bluebeam							
	Area (SF)	Width (FT)	Vol (CF)	Vol (CY)			
	126.00	3.33	420.00	15.56			15.56
TOTAL							31 CY

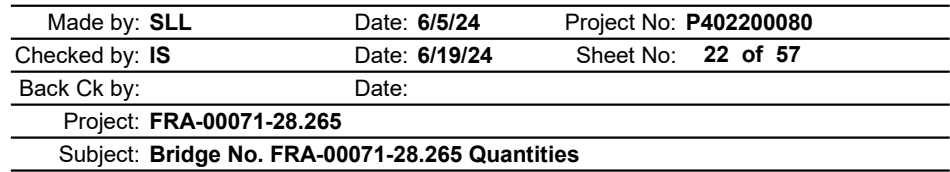


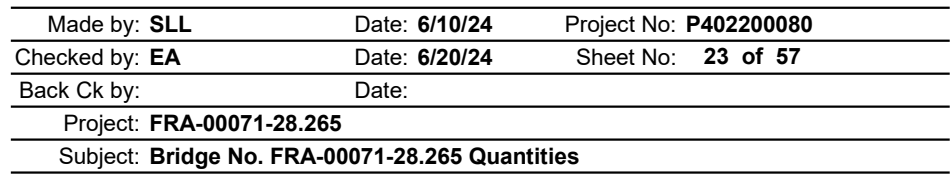
Made by: SLL	Date: 6/11/24	Project No: P402200084
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Project: FRA-00071-28.265		
Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

511 Ext.: 44112 Unit: CY
 Item Description: CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING
 Member Location : _____

REAR ABUTMENT							
Piece	Length	Height	Area	Depth	Vol (CF)	Vol (CY)	
1	14.50	10.03	87.22	2.50	218.04	8.08	
2	4.50	10.03	45.13	3.25	146.69	5.43	
3	37.86	3.57	135.18	3.00	405.53	15.02	
4	4.14	8.58	35.48	3.25	115.32	4.27	
5	12.00	8.58	63.48	2.50	158.70	5.88	
Total						38.68	
Via Bluebeam							
Piece	Length	Height	Area	Depth	Vol (CF)	Vol (CY)	
1.00			87.20	2.50	218.00	8.07	
2.00			43.62	3.25	141.77	5.25	
3.00			135.57	3.00	406.71	15.06	
4.00			36.79	3.25	119.57	4.43	
5.00			63.47	2.50	158.68	5.88	
Total						38.69	38.7
FORWARD ABUTMENT							
Piece	Length	Height	Area	Depth	Vol (CF)	Vol (CY)	
1	13.50	8.53	60.34	2.50	150.86	5.59	
2	4.55	8.53	38.83	3.25	126.20	4.67	
3	37.86	3.64	137.83	3.00	413.48	15.31	
4	4.58	10.12	46.38	3.25	150.75	5.58	
5	14.50	10.12	99.40	2.50	248.49	9.20	
Total						40.36	40.36
Via Bluebeam							
Piece	Length	Height	Area	Depth	Vol (CF)	Vol (CY)	
1.00			71.03	2.50	177.58	6.58	
2.00			40.13	3.25	130.42	4.83	
3.00			137.92	3.00	413.76	15.32	
4.00			44.85	3.25	145.76	5.40	
5.00			87.85	2.50	219.63	8.13	
Total						40.26	
						TOTAL	80 CY

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Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

512 Ext.: 33000 Unit: SY
Item Description: TYPE 2 WATERPROOFING
Member Location :

Location	Count	Width	Length	Area (SF)	Area (SY)	Sheet	
RA	2.00	3.00	4.98	29.88	3.32	15,16	
FA	2.00	3.00	5.05	30.30	3.37	17,18	
RA Diaph	1.00	3.00	40.52	121.56	13.51	35	
FA Diaph	1.00	3.00	40.53	121.59	13.51	35	
Total					33.70	SY	33.70
						TOTAL	34 SY



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Project: FRA-00071-28.265		
Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

513 Ext.: 10300 Unit: LB
Item Description: STRUCTURAL STEEL MEMBERS, LEVEL 5
Member Location :

Member	Weight	
G1	48,184.20	
G2	48,091.50	
G3	48,176.90	
G4	48,175.20	
Bearing Stiffeners	682.30	
Intermediate Stiffeners	511.70	
Field Splices	7,604.50	
Crossframes	22,339.80	
Bolts	6,712.90	
Total	230,479.00	
		Rounded Total 231,000.00
Notes		
Crossframes include 4 Ls, 4 plates, 2 stiffeners per sheet 28/47		
Bolts are calculated as 3% of structural steel weight		
Bearing stiffeners included only above the pier per sheet 26/47		
Girder dimensions from sheet 26/47		
TOTAL		231000 LB



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Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

513 Ext.: 20000 Unit: EACH
Item Description: WELDED STUD SHEAR CONNECTORS
Member Location :

Girder 1	Location	Number	Girder 2	Location	Number	
	Y1	13.00		Y1	17.00	
	Y2	58.00		Y2	70.00	
	Y3	0.00		Y3		
	Y4	28.00		Y4	25.00	
	Y5	16.00		Y5	21.00	
	Y6	25.00		Y6	25.00	
	Y7	0.00		Y7		
	Y8	56.00		Y8	77.00	
	Y9	19.00		Y9	12.00	
Girder 3	Location	Number	Girder 4	Location	Number	
	Y1	17.00		Y1	17.00	
	Y2	70.00		Y2	63.00	
	Y3			Y3		
	Y4	25.00		Y4	25.00	
	Y5	21.00		Y5	28.00	
	Y6	25.00		Y6	21.00	
	Y7			Y7		
	Y8	77.00		Y8	67.00	
	Y9	12.00		Y9	15.00	
			x3 total	2,835.00		
				Total		2,835.00
				TOTAL	2835	EACH



Made by: SLL	Date: 9/9/24	Project No: P402200080
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Project: FRA-00071-28.265		
Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

514 Ext.: 00060 Unit: SF
Item Description: FIELD PAINTING OF STRUCTURAL STEEL, INTERMEDIATE COAT
Member Location :

Location	Count	Length	Width	Area	(SF)	
G1-4 Web	2.00	711.23	3.58	5,097.14		
G1-4 TF	2.00	711.23	0.10	148.17		
G1-4 TF	2.00	711.23	0.17	237.08		
G1-4 TF	1.00	711.23	1.29	918.67		
G1-4 BF	1.00	711.23	1.50	1,066.84		
G1-4 BF	1.00	711.23	1.46	1,037.21		
G1-4 BF	2.00	711.23	0.15	207.44		
G1-4 BF	2.00	711.23	0.17	237.08		
INT STIFF	24.00	3.58	1.17	100.33		
INT STIFF	12.00	3.58	0.04	1.79		
BRG STIFF	16.00	3.58	0.58	33.44		
BRG STIFF	8.00	3.58	0.08	2.39		
SQ GUS	108.00	1.33	1.33	192.00		
RECT GUS	108.00	1.33	0.83	120.00		
L TOP	27.00	9.17	2.00	495.00		
L BOT	27.00	9.17	2.00	495.00		
L LEFT	27.00	3.50	1.33	126.00		
L RIGHT	27.00	3.50	1.33	126.00		
CENTER	54.00	1.42	3.00	229.50		
				Total		10,871.09
say 11,000 SF				TOTAL		11000 SF



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Project: FRA-00071-28.265		
Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

514 Ext.: 00066 Unit: SF
Item Description: FIELD PAINTING STRUCTURAL STEEL, FINISH COAT
Member Location :

Location	Count	Length	Width	Area	(SF)	
G1-4 Web	2.00	712.06	3.58	5,103.11		
G1-4 TF	2.00	712.06	0.10	148.35		
G1-4 TF	2.00	712.06	0.17	237.35		
G1-4 TF	1.00	712.06	1.29	919.75		
G1-4 BF	1.00	712.06	1.50	1,068.09		
G1-4 BF	1.00	712.06	1.46	1,038.42		
G1-4 BF	2.00	712.06	0.15	207.68		
G1-4 BF	2.00	712.06	0.17	237.35		
INT STIFF	24.00	3.58	0.58	50.17		
INT STIFF	12.00	3.58	0.04	1.79		
BRG STIFF	16.00	3.58	0.58	33.44		
BRG STIFF	8.00	3.58	0.08	2.39		
SQ GUS	96.00	1.33	1.33	170.67		
RECT GUS	96.00	1.33	0.83	106.67		
L TOP	96.00	10.17	0.50	488.00		
L BOT	96.00	10.17	0.33	325.33		
L LEFT	96.00	3.50	0.33	112.00		
L RIGHT	96.00	3.50	0.50	168.00		
CENTER	48.00	1.42	3.00	204.00		
				Total	10622.58	
say 11,000				TOTAL	11000	SF



Made by: SLL	Date: 6/17/24	Project No: P402200080
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Project: FRA-00071-28.265		
Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

516 Ext.: 10010 Unit: FT
Item Description: ARMORLESS PREFORMED JOINT SEAL
Member Location :

Width of Slab Along Skew		
FA	37.51	
RA	37.51	
Total	75.02	
		75 FT
TOTAL		76 FT



Made by: SLL	Date: 6/11/24	Project No: P402200080
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Project: FRA-00071-28.265		
Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

516 Ext.: 13600 Unit: SF
Item Description: 1" PREFORMED EXPANSION JOINT FILLER
Member Location :

Location	Height	Width	Area	Sheet	
RA Front	0.50	73.00	36.50	16	
RA Back	0.50	73.00	36.50	16	
FA Front	0.50	75.00	37.50	18	
FA Back	0.50	75.00	37.50	18	
Railing			16.32	33	
		Total	164.32		164
TOTAL					165 SF



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Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

516 Ext.: 13900 Unit: SF
Item Description: 2" PREFORMED EXPANSION JOINT FILLER
Member Location :

Location	Count	Height	Width	Area	Sheet	
RA Left	1.00	5.83	2.52	14.70	15	
RA Right	1.00	5.82	2.52	14.67	15	
FA Left	1.00	5.76	2.58	14.88	17	
FA Right	1.00	5.79	2.58	14.96	17	
RA Dia M	1.00	8.00	3.00	24.00	35,36	
FA Dia Mid	1.00	8.00	3.00	24.00	35,36	
Railing	4.00	4.00	3.00	48	34.00	
Total				155.21		155
TOTAL						156 SF



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Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

516 Ext.: 14020 Unit: FT
Item Description: SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL
Member Location :

See Sheet 35,36		
3' Width	Length	
RA	37.51	
FA	37.51	
Total	75.02	75
TOTAL		76 FT

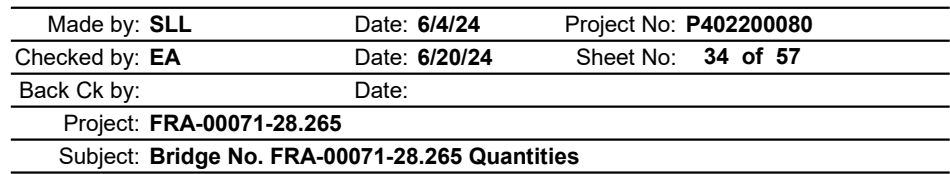


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Project: FRA-00071-28.265		
Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

516 Ext.: 44201 Unit: EA
Item Description: ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN
Member Location :

Location	Quantity		
Rear Abut	4.00		
Fore Abut	4.00		
(From P.561)			
Total	8.00		
		Abutments	8.00
		TOTAL	8 EA



Member Location : _____



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Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

518 Ext.: 20000 Unit: SY
Item Description: PREFABRICATED GEOCOMPOSITE DRAIN
Member Location :

Location	Height	Width	Area (SF)	Area (SY)	
RA Left	7.33	19.00	139.33	15.48	
RA Right	7.33	16.14	118.33	13.15	
FA Left	7.33	18.05	132.38	14.71	
FA Right	7.33	19.08	139.94	15.55	
		Total		58.89	
TOTAL				59	SY



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Project: FRA-00071-28.265		
Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

518 Ext.: 21200 Unit: CY
Item Description: POROUS BACKFILL WITH GEOTEXTILE FABRIC
Member Location :

Location	Length	Width	Depth	Vol (CF)	Vol (CY)	Sheet	
RA	16.14	1.00	1.00	16.14	0.60	15	
RA	38.00	3.00	1.00	114.00	4.22	15	
RA	19.00	1.00	1.00	19.00	0.70	15	
FA	18.05	1.00	1.00	18.05	0.67	17	
FA	38.00	3.00	1.00	114.00	4.22	17	
FA	19.08	1.00	1.00	19.08	0.71	17	
Total					11.12		11.12
TOTAL							12 CY



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Project: FRA-00071-28.265		
Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

518 Ext.: 40000 Unit: FT
Item Description: 6" PERFORATED CORRUGATED PLASTIC PIPE
Member Location :

Location	Length	Sheet	
RA	57.00	15.00	
RA	15.50	15.00	
FA	17.50	17.00	
FA	57.00	17.00	
Total	147.00		147.00
TOTAL			147 FT

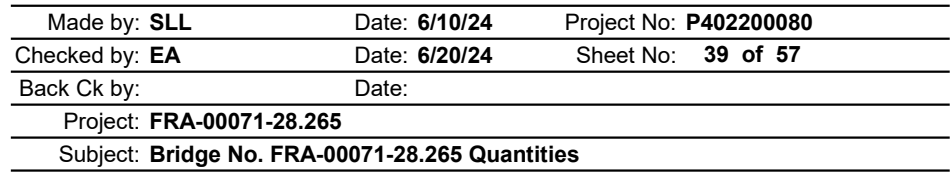


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Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

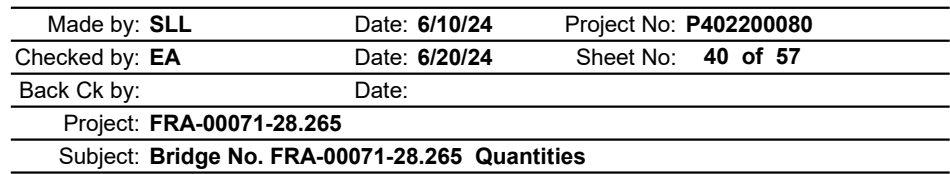
518 Ext.: 40000 Unit: FT
Item Description: 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS
Member Location :

Location	Length	
RA	0.00	
FA	0.00	
Total:		0.00
TOTAL		0 FT



Location	Count
RA	1.00
FA	1.00
Pier	1.00
Total	3.00

*1 per substructure unit	Abut	2.00
	Pier	1.00
	TOTAL	3 EACH



Location	Count
RA	1.00
FA	1.00
Pier	1.00
Total	3.00

*1 per substructure unit	Abut	2.00
	Pier	1.00
	TOTAL	3 EACH



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Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

526 Ext.: 30010 Unit: SY
Item Description: REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17")
Member Location :

	Length (FT)	Width (FT)	Area (SF)	Area (SY)	
REAR APPROACH SLAB	30.00	37.33	1,120.00	124.44	
FORWARD APPROACH SLAB	30.00	37.33	1,120.00	124.44	
Total				248.89	248.89
TOTAL					249 SY



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Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

526 Ext.: 90030 Unit: FT
Item Description: TYPE C INSTALLATION
Member Location :

	Length (FT)	Sheet	
REAR SLEEPER SLAB	35.17	39	
FORWARD SLEEPER SLAB	35.17	39	
Total	70.33	Total	70.33
TOTAL			71 FT

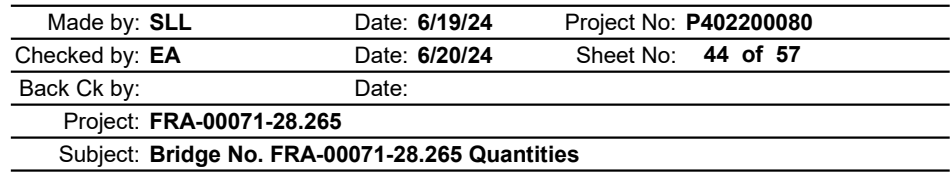


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Project: FRA-00071-28.265		
Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

601 Ext.: 21000 Unit: SY
Item Description: CONCRETE SLOPE PROTECTION
Member Location :

Location	Length	Width	Area (SF)	Area (SY)	Sheet	
RA	92.00	2.69	247.25	27.47	41,43	
FA	93.00	2.27	211.19	23.47	42,43	
		Total		50.94		50.94
TOTAL						51 SY



	Length	Height	Area	
Rear MSE	136.00	18.60	2,296.05	
Forward MSE	140.00	16.10	2,004.70	
Total			4,300.75	4301
TOTAL				4301 FT



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Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

840 Ext.: 21000 Unit: CY
Item Description: WALL EXCAVATION
Member Location :

Rear Abutment						
Length	Width	Area	Depth	Vol (CF)	Vol (CY)	
44.00	23.30	1,025.20	5.00	5,126.00	189.85185	
92.00	35.00	3,220.00	5.00	16,100.00	596.2963	
Forward Abutment						
Length	Width	Area	Depth	Vol (CF)	Vol (CY)	
47.00	23.40	1,099.80	4.50	4,949.10	183.3	
93.00	34.50	3,208.50	4.50	14,438.25	534.75	
Total					1504.20	1504.20
TOTAL						1505 FT



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Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

840 Ext.: 22000 Unit: SY
Item Description: FOUNDATION PREPARATION
Member Location :

Rear Abutment			Sheet 44
Length	Width	Area	
44.00	21.30	937.20	
92.00	33.00	3,036.00	
Forward Abutment			
Length	Width	Area	
47.00	21.40	1,005.80	
93.00	32.50	3,022.50	
Total		8,001.50 SF	
		889.06 SY	889.06



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Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

840 Ext.: 23000 Unit: CY
Item Description: SELECT GRANULAR BACKFILL
Member Location : _____

RA							
	Length	Height	Area	Depth	Vol (CF)	Vol (CY)	
Bot Trap	136.00	18.60	2,289.80	19.40	44,410.67	1644.84	
Top Trap L	18.71	10.03	114.93	12.25	1,407.86	52.14	
Top Trap R	16.43	8.58	89.46	13.25	1,185.40	43.90	
Under RA	73.00	2.00	134.00	12.75	1,708.50	63.28	
FA							
Bot Trap	140.00	16.10	1,977.85	19.40	38,370.29	1421.12	
Top Trap L	18.36	8.53	99.07	11.25	1,114.56	41.28	
Top Trap R	18.78	10.12	116.70	10.38	1,211.31	44.86	
Under FA	75.00	2.00	135.50	10.81	1,465.43	54.28	
Total						3311.4	3311.4
TOTAL							3312 CY



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Bridge No.FRA-00071-28.265 Quantities

840 Ext.: 23001 Unit: CY
Item Description: SELECT GRANULAR BACKFILL, AS PER PLAN
Member Location :

Forward Abutment						
Layer	Length	Width	Depth	Vol (CF)	Vol (CY)	
1	8.00	38.00	1.00	304.00	11.26	
2	11.00	38.50	1.00	423.50	15.69	
3	29.00	38.75	1.00	1,123.75	41.62	
4	28.50	39.00	1.00	1,111.50	41.17	
5	28.50	39.25	1.00	1,118.63	41.43	
6	28.50	39.50	1.00	1,125.75	41.69	
7	28.50	32.08	1.00	914.38	33.87	
8	24.00	15.00	1.00	360.00	13.33	
Total					240.06	240.06
Rear Abutment						
Layer	Length	Width	Depth	Vol (CF)	Vol (CY)	
1	8.00	38.00	1.00	304.00	11.26	
2	11.00	38.50	1.00	423.50	15.69	
3	29.00	38.75	1.00	1,123.75	41.62	
4	28.50	39.00	1.00	1,111.50	41.17	
5	28.50	39.25	1.00	1,118.63	41.43	
6	28.50	39.50	1.00	1,125.75	41.69	
7	28.50	32.08	1.00	914.38	33.87	
8	24.00	15.00	1.00	360.00	13.33	
Total					240.06	240.06
TOTAL						481 CY



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Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

840 Ext.: 23050 Unit: CY
Item Description: NATURAL SOIL
Member Location :

Rear Abutment	Width	Depth	Length	Vol (CY)	
Right	60.00	2.00	19.80	88.00	
Left	64.00	2.00	19.80	93.87	
Forward Abutment					
Right	55.00	2.00	18.00	73.33	
Left	60.00	2.00	18.00	80.00	
Total				335.20	335.20
TOTAL					336 CY



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Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

840 Ext.: 25010 Unit: FT
Item Description: 6" DRAINAGE PIPE, PERFORATED
Member Location :

6" Drainage Pipe, Perforated		
Location	Length (FT)	Comments
RA	88.00	
RA	7.50	
RA	118.50	
RA	70.00	
RA	7.00	
RA	47.00	
RA	20.30	Abutment drop down tie in
RA	20.30	Abutment drop down tie in
FA	69.00	
FA	7.00	
FA	48.00	
FA	119.00	
FA	7.00	
FA	91.00	
FA	16.80	Abutment drop down tie in
FA	16.30	Abutment drop down tie in
Total	752.70	
		752.70
TOTAL		753 FT



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Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

840 Ext.: 25010 Unit: FT
Item Description: 6" DRAINAGE PIPE, NON-PERFORATED
Member Location :

6" Drainage Pipe, Non-Perforated		
Location	Length (FT)	Comments
RA	3.00	Left
RA	3.00	Right
FA	8.50	Left
FA	8.50	Right
Total	23.00	
		23.00
TOTAL		23 FT



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Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

840 Ext.: 26000 Unit: FT
Item Description: CONCRETE COPING
Member Location :

Concrete Coping		
	Length	FT
RA	141.00	
FA	145.00	
Total	286.00	286.00
TOTAL		286 FT



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Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

840 Ext.: 26050 Unit: SF
Item Description: AESTHETIC SURFACE TREATMENT
Member Location :

Aesthetic Surface Treatment			
	Length	Height	Area
Rear MSE	136.00	18.60	2,296.05
Forward MSE	140.00	16.10	2,004.70
Total			4,300.75
TOTAL			4301 SF



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Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

840 Ext.: 27000 Unit: DAY
Item Description: ON-SITE ASSISTANCE
Member Location :

Total Days 5	5
TOTAL	5 DAY



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Bridge No. FRA-00071-28.265 Quantities

840 Ext.: 28000 Unit: LS
Item Description: SGB INSPECTION AND COMPACTION TESTING
Member Location :

SGB Inspection and Compaction Testing: Lump Sum	LS
TOTAL	LS



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Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

863 Ext.: 00100 Unit: SY
Item Description: GEOGRID, TYPE P1
Member Location :

TYPE P1 GEOGRID REINFORCEMENT					
REAR ABUTMENT					
Layer	Length	Width	Area (SF)	Area (SY)	
1	27.75		0.00	0.00	Agg layer
2	36.50	23.00	839.50	93.28	Top
3	36.50	40.08	1,463.04	162.56	
4	36.50	47.06	1,717.78	190.86	
5	36.50	47.06	1,717.78	190.86	
6	36.50	47.06	1,717.78	190.86	
7	37.00	47.06	1,741.31	193.48	
8	19.50	47.06	917.72	101.97	
9	16.50	47.06	776.53	86.28	Bottom
TOTAL				1,210.16	1,210.16
FORWARD ABUTMENT					
Layer	Length	Width	Area (SF)	Area (SY)	
1	27.75		0.00	0.00	Agg layer
2	36.50	23.00	839.50	93.28	Top
3	36.50	40.08	1,463.04	162.56	
4	36.50	47.06	1,717.78	190.86	
5	36.50	47.06	1,717.78	190.86	
6	36.50	47.06	1,717.78	190.86	
7	37.00	47.06	1,741.31	193.48	
8	19.50	47.06	917.72	101.97	
9	16.50	47.06	776.53	86.28	Bottom
TOTAL				1,210.16	1,210.16
TOTAL					2421 SY



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Subject: Bridge No. FRA-00071-28.265 Quantities		

Bridge No. FRA-00071-28.265 Quantities

867 Ext.: 00100 Unit: LS
Item Description: TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL
Member Location :

Temporary Wire Faced Mechanically Stabilized Earth Wall: Lump Sum	LS
TOTAL	LS