

[illegible]

PID	109070		
Sheet No.	1	OF	1

SFN	2100789		
Item #	202	Ext.	11203

TOTAL	=	1	LS
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TOTAL	=	245	SY
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[illegible]

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Description	WEARING COURSE REMOVED
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PID	109070	
Sheet No.	1	OF 1

2100789	
509	Ext. 10000

Job Name	DEL-36-01.85
Location of Member	US 36 OVER BLUES CREEK
Description	EPOXY COATED STEEL REINFORCEMENT

TOTAL	=	69449	LB
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Made By	PSK	Date	8/29/2023	PID	109070
Checked By	PJL	Date	8/29/2023	Sheet No.	1 OF 1
Updated By	TNL	Date	11/22/2023		
Checked By	Lori Sommer	Date	12/1/2023		

QUANTITY CALCULATIONS

Job Name DEL-36-01.85
Location of Member US 36 OVER BLUES CREEK

SFN 2100789
Item # 510 Ext. 10000

Description DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT

TOTAL	=	170	EACH
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	Description / Calculation	Pay Unit -	EACH	QUANTITY
1	Drill holes for #8 Dowels at Approach Seats			
	Bars spaced at 1'-6" per ODOT SCD AS-1-15			
A	Rear End Diaphragm			
	Appr. Seat Length =	44.00 ft		
	No. Dowels =	31 Ea.		
B	Forward End Diaphragm			
	Appr. Seat Length =	44.00 ft		
	No. Dowels =	31 Ea.		
	Total No. of #8 Dowels =	62 Ea.		62.00 EACH
2	Drill holes for #5 U-Bar Dowels in Diaphragm at Abutments			
	Bars spaced at 1'-6" per ODOT SCD SICD-1-21			
A	Rear End Diaphragm			
	Section Width =	7.50 ft		
	No. Dowels per Section =	6 Ea.		
	No. of Sections =	4 Ea.		
	Dowels at the outside =	3 Ea.		
	No. of Sides =	2		
	No. Dowels =	54 Ea. (2 holes per bar)		
B	Forward End Diaphragm			
	Section Width =	7.50 ft		
	No. Dowels per Section =	6 Ea.		
	No. of Sections =	4 Ea.		

	Dowels at the outside = 3 Ea.	
	No. of Sides = 2	
	No. Dowels = 54 Ea. (2 holes per bar)	
	Total No. of #8 Dowels = 108 Ea.	108.00 EACH
		170 EACH

Made By	PSK	Date	8/29/2023
Checked By	PJL	Date	8/29/2023
Updated By	TNL	Date	11/22/2023
Updated By	TNL	Date	2/7/2024
Checked By	NBR	Date	2/13/2024

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QUANTITY CALCULATIONS

Job Name DEL-36-01.85

Location of Member US 36 OVER BLUES CREEK

Description CLASS QC2 CONCRETE, BRIDGE DECK

SFN	2100789		
Item #	511	Ext.	34444

TOTAL	=	263	CY
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	Description / Calculation	Pay Unit -	CY	QUANTITY
	<i>Note: Calculate the deck face-to-face abut. dia.,</i>			
	<i>calculate the diaphragm conc. separately</i>			
1	Bridge Deck			
A	Average Length =	173.00		
	Average Width =	39.00 ft		
	Thickness =	0.75 ft		
	Volume =	187.42 cu yd		187.42 CY
B	Left Fascia Beam Additional Overhang			
	Average Overhang Width =	2.5714 ft		
	Min. Overhang Thickness =	1.6667 ft	(TST-2-21)	
	Average Section Area =	4.29 ft ²		
	Haunch Length =	173.00 ft		
	Volume =	27.46 cu yd		27.46 CY
C	Haunch			
	Haunch Width =	12.00 in		
	Haunch Length =	173.00 ft		
	Deck Thickness =	0.75 ft		
	Beam Depth =	3.01667 ft		

	i) Proposed Top of Deck Elevation					
	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	
0.0	946.91	946.94	946.48	946.02	945.56	
0.5	946.94	946.93	946.47	946.01	945.55	
1.0	946.97	946.92	946.46	946.00	945.54	
1.5	946.98	946.92	946.46	946.00	945.54	
2.0	946.97	946.93	946.47	946.00	945.54	
2.5	946.95	946.94	946.48	946.02	945.56	
3.0	946.92	946.96	946.49	946.00	945.57	
	ii) Existing Top of Beam Elevation (using Bott. Of Beam El. From Survey)					
	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	
0.0	945.94	945.97	945.50	945.04	944.58	
0.5	946.01	945.98	945.53	945.06	944.60	
1.0	945.85	945.90	945.22	944.97	944.53	
1.5	945.97	945.95	945.51	945.01	944.54	
2.0	945.91	945.88	945.41	944.96	944.52	
2.5	945.96	945.94	945.49	945.01	944.55	
3.0	945.92	945.93	945.48	945.01	944.54	
	iii) Haunch Depth (ft)					
	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	
0.0	0.22	0.23	0.23	0.23	0.23	
0.5	0.19	0.20	0.19	0.20	0.20	
1.0	0.37	0.27	0.49	0.28	0.26	
1.5	0.26	0.22	0.20	0.24	0.25	
2.0	0.31	0.30	0.30	0.30	0.27	
2.5	0.24	0.25	0.24	0.25	0.26	
3.0	0.26	0.28	0.26	0.24	0.28	
AVG =	0.26	0.25	0.27	0.25	0.25	
VOL (FT3) =	45.67	43.04	47.15	42.92	43.28	
	Volume = 8.22 cu yd					8.22 CY
D	Right Fascia Beam Haunch					
	Average Overhang Width =	2.4345 ft				
	Min. Overhang Thickness =	1.6667 ft (TST-2-21)				
	Average Section Area =	3.69 ft²				
	Haunch Length =	173.00 ft				
	Volume = 23.65 cu yd					23.65 CY

2	Rear End Diaphragm	
	Depth = 15.00 in	
	Width = 45.00 in	
	Add Triangular Fillet = 36.00 in ²	
	Length = 44.00 ft	
	Volume = 8.05 cu yd	8.05 CY
3	Forward End Diaphragm	
	Depth = 15.00 in	
	Width = 45.00 in	
	Add Triangular Fillet = 36.00 in ²	
	Length = 44.00 ft	
	Volume = 8.05 cu yd	8.05 CY
	Bridge Deck Concrete Volume	
	= 262.9 CY	
		263 CY

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Updated By	TNL		11/22/2023		
Checked By	Lori Sommer	Date	12/1/2023		

QUANTITY CALCULATIONS

Job Name DEL-36-01.85
Location of Member US 36 OVER BLUES CREEK

SFN 2100789
Item # 512 **Ext.** 10100

Description SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

TOTAL	=	118	SY
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	Description / Calculation	Pay Unit -	SY	QUANTITY
1	For Substructure see ODOT BDM Section 306.1.2 and Figure 306-3			
	This includes proposed and existing substructures			
A	Rear End Diaphragm			
	Area = 182.90 sq yd (Measured in CADD)			
	Beam Area = 0.35 ft^2			
	No. of Beams = 5.00			
	Sealing Area = 20.13 sq yd			20.13 SY
B	Forward End Diaphragm			
	Area = 183.12 sq yd (Measured in CADD)			
	Beam Area = 0.35 ft^2			
	No. of Beams = 5.00			
	Sealing Area = 20.15 sq yd			20.15 SY
2	For Overhangs, see ODOT BDM Section 309.2.1 and Figure 309-2			
	Left Overhang			
	Length = 173.00 ft			
	Sealing Width = 2.00 ft			
	Area = 38.44 sq yd			38.44 SY
	Right Overhang			
	Length = 173.00 ft			
	Sealing Width = 2.00 ft			
	Area = 38.44 sq yd			38.44 SY
	Left Bridge Superstructure Sealing Area			
	= 118 SY			
				118 SY

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Job Name	DEL-36-01.85
Location of Member	US 36 OVER BLUES CREEK

SFN	2100789	
Item #	513	Ext. 10200

TOTAL = 1450 LB

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Job Name	DEL-36-01.85
Location of Member	US 36 OVER BLUES CREEK

SFN	2100789	
Item #	513	Ext. 20000

TOTAL = 3045 EACH

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Made By	PSK	Date	8/29/2023	PID	109070
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Updated By	TNL	Date	11/22/2023		
Checked By	Lori Sommer	Date	12/1/2023		

QUANTITY CALCULATIONS

Job Name DEL-36-01.85
Location of Member US 36 OVER BLUES CREEK

SFN 2100789
Item # 513 Ext. 90000

Description STRUCTURAL STEEL, MISC.: MOMENT PLATE RETROFITS

TOTAL	=	2790	LB
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	Description / Calculation	Pay Unit -	LB	QUANTITY
	<i>For Moment Plate Retrofit</i>			
	<i>Increase by 115% for bolts and fill PL</i>			
	Moment PL Retrofit (Outside)			
	PL Length =	29.50 in		
	PL Width =	10.50 in		
	PL Thickness =	0.6250 in		
	No. PL per Location =	1		
	No. Locations =	20		
	Weight =	1,262.62 lb	115%	
	Moment PL Retrofit (Inside)			
	PL Length =	29.50 in		
	PL Width =	9.00 in	2@4.5"	
	PL Thickness =	0.625 in		
	No. PL per Location =	1		
	No. Locations =	20		
	Weight =	1,082.24 lb	115%	
	Moment PL Retrofit (Inside)			
	PL Length =	14.75 in		
	PL Width =	10.50 in	2@4.5"	
	PL Thickness =	0.438 in		
	No. PL per Location =	1		
	No. Locations =	20		
	Weight =	441.92 lb	115%	
	Total Steel Weight =	2,790	LB	2790 LB
				2790 LB

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SFN	2100789	
Item #	514	Ext. 00050

TOTAL = 8988 SF

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PID	109070		
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SFN	2100789	
Item #	514	Ext. 00060

TOTAL	=	8988	SF
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PID	109070		
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SFN	2100789		
Item #	514	Ext.	00066

TOTAL = 8988 SF

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TOTAL = 15 MNHR

[illegible]

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[illegible]

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[illegible]

PID	109070		
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Job Name	DEL-36-01.85
Location of Member	US 36 OVER BLUES CREEK

SFN	2100789		
Item #	517	Ext.	70100

TOTAL = 377.00 FT

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PID	109070		
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SFN	2100789	
Item #	518	Ext. 22300

TOTAL	=	346.00	FT
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PID	109070		
Sheet No.	1	OF	1

SFN	2100789	
Item #	526	Ext. 25000

TOTAL = 245 SY

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PID	109070		
Sheet No.	1	OF	1

SFN	2100789	
Item #	526	Ext. 90030

TOTAL	=	88	FT
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