BRIDGE NO: CUY-480-0612

SFN: 1814168
BRIDGE DESCRIPTION: W. 220th St. over IR 480



DATE: 08/18/20 **DATE:** 08/18/20



	ESTIMATED QUANTITIES			
ITEM	ITEM EXT.	DESCRIPTION		
ITEM 202	ITEM 202 75261 VANDAL PROTECTION FENCE REMOVED, AS PER PLAN			
		gth of fence removed on bridge deck = _ength of fence remove on wingwalls =		
		Total Quantity =	579 ft	
ITEM 512	10101	SEALING OF CONCRETE SURFACE	S (EPOXY-URETHANE), AS PER PLAN	
	Abutment sea	aling quantity over backwall patching =	135.00 ft^2	
		Pier sealing quantity =	57.00 ft^2	
		ngth of parapets on wingwalls to seal = Perimeter of parapet to seal = Area of parapet sealing on wingwalls =	5.50 ft	
	Sidewa	alk curb sealing quantity for patching = Perimeter of parapet to seal = Length of left parapet to seal = Length of right parapet to seal = Area of parapet on bridge to seal =	5.50 ft 255.42 ft 259.65 ft	
		Total Abutment Quantity = Total Pier Quantity = Total Superstructure Quantity = Total Quantity =	7 SY 384 SY	
ITEM 512	74001	REMOVAL OF EXISTING COATINGS	S FROM CONCRETE SURFACES, AS PER PLAN	
	Area of parag	rapet sealing on wingwalls to remove = oet sealing on bridge deck to remove = ea of parapet to subtract for patching =	2832.89 ft^2 300.00 ft^2	
		Total Quantity =	322 5 Y	
ITEM 516	12310	SIDEWALK COVER PLATE		
		Thickness of cover plate = Cover plate width = Length of cover plate = Weight of steel plate =	0.54 ft 8.10 ft	
		Total Quantity =	68 LB	
ITEM 516	46701	RESET BEARING, AS PER PLAN		

Number of abutment bearings to reset = 1 each

Total Quantity = 1 each

Designer: 57% Date: 8/18/20

Checker: EVY Date: 8 | 18 | 20

ITEM 516	47001	JACKING AND TEMPORARY SUPPO	ORT OF SUPERSTRUCTURE, AS PER PLAN
		Number of locations =	1 each
		Total Quantity =	LUMP
ITEM 519	11101	PATCHING CONCRETE STRUCTUR	E, AS PER PLAN
		Rear Abutment patching total =	
		Forward Abutment patching total =	24.00 ft^2
		Pier patching total =	38.00 ft^2
		Area of parapet patching =	
		Area of sidewalk curb patching =	167.00 ft^2
		Total Abutment Quantity =	
		Total Pier Quantity =	
		Total Superstructure Quantity = Total Quantity =	
ITEM 519	12300	PATCHING CONCRETE BRIDGE DE	CKS, TYPE B
		Patching total on bridge deck =	762 NO ft^2
		Patching total along top of backwall =	
		Total Quantity =	98 SV
		Total Quantity –	30 01
SPECIAL	53000600	STRUCTURE, MISC.: PERMANENT	TRAFFIC PROTECTION, AS PER PLAN
		Length of span 2 =	77 00 ft
		Length of span 3 =	
		Beam Spacing =	
		Number of bays =	7 each
		Total Quantity =	8937 SF
ITEM 607	39901	VANDAL PROTECTION FENCE, 6' S	TRAIGHT, COATED FABRIC, AS PER PLAN
		Length of fence on bridge deck =	511 67 ft
		Length of fence on wingwalls =	
		Total Quantity =	579 FT
I			

Designer: STK Date: \$1/8/20

Checker: ERV Date: \$18/20

CUY-480-0612 SFN: 1814168 **BRIDGE NO:** CUY-480-0616

SFN: 1814176

BRIDGE DESCRIPTION: Mastick Rd. over IR 480



DATE: 08/18/20 **DATE:** 08/18/20



ESTIMATED QUANTITIES

ITEM	ITEM EXT.	DESCRIPTION	

ITEM 201 23000 TREE REMOVED, 30"

Number of trees to remove = 1 each

Total Quantity = 1 each

ITEM 202 75261 VANDAL PROTECTION FENCE REMOVED, AS PER PLAN

Length of fence removed on bridge deck = 792.33 ft Length of fence remove on wingwalls = 100.50 ft

Total Quantity = 893 ft

ITEM 512 10101 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN

Abutment sealing quantity over backwall patching = 638.00 ft²

Length of parapets on wingwalls to seal = 106.29 ft

Perimeter of parapet to seal = 5.50 ft

Area of parapet sealing on wingwalls = 584.60 ft^2

Sidewalk curb sealing quantity for patching = 72.00 ft²

Perimeter of parapet to seal = 5.50 ft

Length of left parapet to seal = 393.72 ft Length of right parapet to seal = 393.75 ft

Area of parapet on bridge to seal = 4403.09 ft²

Total Abutment Quantity = 71 SY

Total Superstructure Quantity = 555 SY

Total Quantity = 626 SY

ITEM 512 71500 URETHANE TOP COAT SEALER

Number of pier columns to get fiber wrap = 4 each

Pier column diameter = 3.00 ft

Average height of pier columns = 16.37 ft

Quantity of urethane sealer = 617.13 ft²

Total Quantity = 69 SY

ITEM 512 74001 REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN

Area of parapet sealing on wingwalls to remove = 584.60 ft^2

Area of parapet sealing on bridge deck to remove = 4331.09 ft²

Area to subtract for concrete patching = 572.00 ft^2

Total Quantity = 483 SY

SPECIAL 51900100 COMPOSITE FIBER WRAP SYSTEM

Number of pier columns to get fiber wrap = 4 each

Pier column diameter = 3.00 ft

Amount to lap fiber wrap = 1.00 ft

Average height of pier columns = 16.37 ft

Additional total height for 2" overlaps = 1.50 ft

Total Quantity = 746 SF

Designer: STK_Date: 8/18/20

Checker: Egy_Date: 8118 120

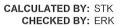
CUY-480-0616 SFN: 1814176

ITEM 519	11101 PATCHING CONCRETE STRUCTURE, AS PER PLAN
	Rear Abutment patching total = 51.30 ft ²
	Forward Abutment patching total = 373.70 ft ²
	Area of parapet patching = 572.00 ft ²
	Area of sidewalk curb patching = 48.00 ft ²
	Total Abutment Quantity = 425 SF
	Total Superstructure Quantity = 620 SF
	Total Quantity = 1045 SF
ITEM 519	12300 PATCHING CONCRETE BRIDGE DECKS, TYPE B
	Patching total on bridge deck = 78.00 ft ²
	Patching total along top of backwall = 130.00 ft^2
	Total Quantity = 24 SY
ITEM 607	39901 VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN
	Length of fence on bridge deck = 792.33 ft
	Length of fence on wingwalls = 100.50 ft
	Total Quantity = 893 FT
ITEM 044	ACCOUNT OF THE PATCHING WITH CALVANIC ANODE PROTECTION AS DED DI AN
ITEM 844	10001 CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN
	Amount of patching on pier columns = 84.00 ft ²
	Total Quantity = 84 SF

BRIDGE NO: CUY-480-1075

SFN: 1812912

BRIDGE DESCRIPTION: IR 480 over CSX Railroad



DATE: 08/18/20 **DATE:** 08/18/20



ESTIMATED QUANTITIES

ITEM	ITEM EXT.	DESCRIPTION		
				AN 40 DED DI AN
ITEM 202	11203 F	PORTIONS OF STRUCTURE REMOV	ED, OVER 20 FOOT SPA	AN, AS PER PLAN
		area of bridge deck to remove (EB) = rea of bridge deck to remove (WB) = Unit price to remove bridge deck =	1000.87 ft^2	
	Volun	th of abutment backwall to remove = Backwall width to remove = Backwall height to remove = ne of abutment backwall to remove = ne to remove substructure concrete =	1.25 ft 1.46 ft	F.A. 116.00 ft 1.25 ft 1.46 ft 22 CY
		of end crossframe steel to remove = iit price for structural steel removal =		
		Removal Cost =	\$57,000	
		Total Quantity =	LUMP	
ITEM 202	22900 A	APPROACH SLAB REMOVED		
	Fo	Rear approach slab removal area = sinward approach slab removal area = Total Quantity =	2061.06 ft ² 23 ³ 1931.98 ft ² 19	<u>lestbound</u> 98.46 ft^2 17.25 ft^2
	T III	ALE A DIVINO COLUDOS DE MOVED		
ITEM 202		Rear approach slab removal area = wward approach slab removal area = Total Quantity =	2061.06 ft^2 23 1931.98 ft^2 19	'estbound 98.46 ft^2 17.25 ft^2
ITEM 509	T 10000 E	EPOXY COATED REINFORCING STI	F I	
11 LW 303	10000 [1	Quantity for abutments = Quantity for superstructure = Total Quantity =	2959 LB 1091 LB	
	T		NE OF EVICTING SEILE	CORONIO CTETI. AC DED DI ANI
ITEM 509	20001 F	REINFORCING STEEL, REPLACEME	INT OF EXISTING REINF	UKUING STEEL, AS PER PLAN
	nber of existing #8 ver Length of	tical abutment bars to be salvaged = tical abutment bars to be salvaged = Nominal weight of no. 4 bar = Nominal weight of no. 5 bar = Nominal weight of no. 6 bar = Nominal weight of no. 8 bar = #6 abutment vertical bar to replace =	470 each 0.668 lb/ft 1.043 lb/ft 1.502 lb/ft 2.670 lb/ft 3.33 ft	

Length of #8 abutment vertical bar to replace = 2.00 ft

Dowel length for no. 8 bar = 1.00 ft
Estimated number of existing bars to replace = 25%

Dowel length for no. 6 bar = 0.75 ft

Designer: 57k Date: 8/18/20

Checker: ERV Date: 8/18/20

CUY-480-1075 SFN: 1812912 Number of existing #4 longitudinal deck bars to salvage = 418 each
Number of existing #5 longitudinal deck bars to salvage = 394 each
Number of existing #6 transverse deck bars to salvage = 1870 each
Length of existing longitudinal bar to salvage = 4.95 ft
Length of existing transverse bar to salvage = 2.83 ft
Dowel length for no. 4 bar = 0.50 ft
Dowel length for no. 5 bar = 0.67 ft
Dowel length for no. 6 bar = 0.75 ft

Estimated number of existing bars to replace = 25%

Abutment Quantity = 2071 LB Superstructure Quantity = 3474 LB Total Quantity = 5545 LB

ITEM 511 21520 CLASS QC2 CONCRETE, SUPERSTRUCTURE

Concrete deck thickness = 0.83 ft
Area of deck (R.A. eastbound) = 468.26 ft^2
Area of deck (R.A. westbound) = 587.42 ft^2
Area of deck (F.A. eastbound) = 414.66 ft^2
Area of deck (F.A. westbound) = 409.72 ft^2
Volume of deck concrete = 1566.72 ft^3

Average outside overhang deck width = 2.00 ft Additional overhang deck thickness = 0.08 ft

Length of bridge = 4.00 ft Number of sides = 2 each Beam haunch area = 0.20 ft^2 Number of beams = 23 each

Volume of additional deck overhang and haunch concrete = 19.73 ft³

Cross section area of outside parapet = 3.74 ft^2
Total length of new outside parapet = 20.49 ft
Cross section area of EB median parapet = 3.41 ft^2
Total length of new EB median parapet = 10.73 ft
Cross section area of WB median parapet = 3.65 ft^2
Total length of new WB median parapet = 10.82 ft

Total length of new WB median parapet = 10.82 ft Volume of parapet concrete on bridge deck = 152.71 ft³

Total length of outside parapets on wingwalls = 14.44 ft

Total length of EB median parapet = 12.75 ft
Total length of WB median parapet = 12.77 ft

Volume of parapet concrete on wingwalls = 144.09 ft^3

Total Abutment Quantity = 6 CY
Total Superstructure Quantity = 65 CY
Total Quantity = 71 CY

ITEM 511 44110 CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING

| R.A. | F.A. | St. | St

Total Quantity = 50 CY

Designer: STK_Date: 8/18/20

CUY-480-1075 SFN: 1812912 Checker: <u>EVIL</u> Date: <u>8 (19</u> /20

ITEM 512 10100 SEALING OF CONCRETE SURFA	ACES (EPOXY-URETHANE)
Abutment sealing quantity over backwall and breastwall patching	$g = 288.00 \text{ ft}^2$ 268.50 ft
Length of outside parapets on wingwalls to sea Perimeter of outside parapet to sea Length of EB median parapet to sea Perimeter of EB median parapet to sea Length of WB median parapet to sea Perimeter of WB median parapet to sea Area of parapet sealing on wingwalls	1 = 6.80 ft
Total length of outside parapets to sea Perimeter of outside parapet to sea Length of WB median parapet to sea Perimeter of WB median parapet to sea Length of EB median parapet to sea Perimeter of EB median parapet to sea Parapet area to seal from patching Area of parapet on bridge to sea	al = 6.80 ft al = 10.82 ft al = 5.07 ft al = 10.73 ft al = 5.07 ft g = 12.00 ft^2
Total Abutment Quantit Total Superstructure Quantit Total Quantit	y = 60 SY
ITEM 513 10201 STRUCTURAL STEEL MEMBERS	, LEVEL UF, AS PER PLAN
Number of Type 1 end crossframe location: Number of Type 2 end crossframe location: Total length of Type 1 end crossframe Total length of Type 2 end crossframe Unit weight of Type 1 end crossframe Unit weight of Type 2 end crossframe Weight of end crossframe angle: Add 25% for connection plate:	s = 5 each e = 56.40 ft e = 37.90 ft e = 14.40 lb/ft e = 8.16 lb/ft s = 28347.60 lb
Total Quantity	y = 36000 SY
ITEM 514 00050 SURFACE PREPARATION OF EX	STING STRUCTURAL STEEL
Girder depth at abutment end Flange width at abutment end (girder Flange width at all other girder end: Nominal measurement (girder 1 Nominal measurement (other girders Length of beam end to pain Number of beam ends at R.A Number of beam ends at F.A Quantity of existing beams to pain	1) = 1.33 ft s = 1.00 ft) = 14.29 ft) = 13.29 ft tt = 10.00 ft tt = 23 each tt = 19 each
Total Quantit	y = 5603 SF
ITEM 514 00056 FIELD PAINTING OF EXISTING S	TRUCTURAL STEEL, PRIME COAT
Total Quantity	y = 5603 SF
ITEM 514 00060 FIELD PAINTING STRUCTURAL	STEEL, INTERMEDIATE COAT
Quantity for painting beam end	
Number of Type 1 end crossframe locations Number of Type 2 end crossframe locations Perimeter of Type 1 end crossframe to pain Perimeter of Type 2 end crossframe to pain Total length of Type 1 end crossframe to pain Total length of Type 2 end crossframe to pain Area of end crossframe angles to pain Add 10% for connection plates Quantity for end crossframes to pain Total Quantit	s = 5 each tt = 1.67 ft tt = 1.33 ft tt = 56.40 ft tt = 37.90 ft tt = 3354.67 ft^2 s = 335.47 ft^2 tt = 3690 SF
I Total gaanat	

ITEM 514	00066 FIELD PAINTING STRUCTURAL STEEL, FINISH COAT
	Total Quantity = 9294 SF
ITEM 514	00504 GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL
	Amount to provide per BDM 302.4.1.5 for each beam = 1 min/ft Total length of beams to paint = 420.00 ft Total Quantity = 7 man hour
ITEM 514	10000 FINAL INSPECTION REPAIR
	Total length of beams = 420.00 ft Per CMS 514.21: inspect every: 150 ft
	Number of crossframe assemblies = 38 each Per CMS 514.21: inspect = 5%
	Total Quantity = 5 each
ITEM 516	11210 STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL
	Length of joint (westbound) = $\frac{R.A.}{226.25 \text{ ft}}$ $\frac{F.A.}{158.10 \text{ ft}}$ Length of joint (eastbound) = 180.80 ft 159.20 ft
	Total Quantity = 725 FT
ITEM 516	13600 1" PREFORMED EXPANSION JOINT FILLER
	Number of expansion joint locations in backwall = 4 each Expansion joint width in backwall = 1.25 ft Expansion joint height in backwall = 1.46 ft Total Quantity of PEJF at abutment expansion joints = 12.78 ft^2
Area d	Length of PEJF between median parapets = 6.04 ft 5.54 ft Height of PEJF between median parapets = 4.70 ft FPEJF between existing and proposed median parapet = 9.28 ft^2 Total Quantity of PEJF for median parapets = 72.99 ft^2
	Height of PEJF between backwall and wingwall = 1.46 ft Width of PEJF between backwall and wingwall = 1.50 ft Number of locations = 1 each Total Quantity of PEJF between backwall and wingwall = 6.57 ft^2
	tal length of PEJF between parapet and approach slab = 66.16 ft 80.84 ft Height of PEJF between parapet and approach slab = 1.25 ft Quantity of PEJF between parapet and approach slabs = 183.75 ft^2
	Total Quantity = 277 SF
ITEM 516	44000 ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (10"X12"X1.648" WITH A 12"X14"X1" LOAD PLATE)
	Abutment Quantity = 1 each
	Total Quantity = 1 each
ITEM 516	44100 ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (12"X6"X2.222" WITH A 14"X8"X1" LOAD PLATE)
	Abutment Quantity = 1 each
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Total Quantity = 1 each

Designer: 57k Date: 8/18/20

CUY-480-1075 SFN: 1812912

ITEM 516	44100	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (15"X12"X2.398" WITH A 17"X14"X1" LOAD PLATE)
		Abutment Quantity = 20 each
		Total Quantity = 20 each
ITEM 516	44100	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (15"X12"X2.398" WITH A 18"X14"X1" LOAD PLATE)
		Abutment Quantity = 1 each
		Total Quantity = 1 each
ITEM 516	44400	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (15"X12"X5.694" WITH A 17"X14"X1" LOAD PLATE)
		Abutment Quantity = 18 each
		Total Quantity = 18 each
ITEM 516	44400	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (15"X12"X5.694" WITH A 18"X17"X1" LOAD PLATE)
		Abutment Quantity = 1 each
		Total Quantity = 1 each
ITEM 516	47001	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN
		Number of jacking locations at R.A. = 23 each Number of jacking locations at F.A. = 19 each Price per jacking location = \$1,000/each Total cost = \$42,000
		Total Quantity = LUMP
ITEM 519	11101	PATCHING CONCRETE STRUCTURE, AS PER PLAN
		Rear Abutment patching total = 192.00 ft^2 Forward Abutment patching total = 179.00 ft^2
		Area of parapet patching = 8.00 ft^2
		Total Abutment Quantity = 371 SF Total Superstructure Quantity = 8 SF Total Quantity = 379 SF
ITEM 519	12300	PATCHING CONCRETE BRIDGE DECKS, TYPE B
		Patching total on bridge deck = 55.00 ft^2
		Total Quantity = 7 SY
ITEM 526	25000	REINFORCED CONCRETE APPROACH SLABS (T=15")
		Rear approach slab removal area = \frac{Eastbound}{2061.06 \text{ ft}^2} \frac{Westbound}{2398.46 \text{ ft}^2} \frac{1917.25 \text{ ft}^2}{1917.25 \text{ ft}^2}
		Total Quantity = 924 SY

Designer: 57K_Date: 8/18/20

CUY-480-1075 SFN: 1812912