

ITEM 423 - CRACK SEALING, TYPE II, AS PER PLAN

THE CONTRACTOR SHALL SEAL ALL VISIBLE JOINTS AND CRACKS OVER TWO (2) FEET IN LENGTH ACCORDING TO ITEM 423 PRIOR TO MICROSURFACING.

PAYMENT FOR THIS WORK IS INCIDENTAL TO THAT OF THE CONTRACT UNIT BID PRICE FOR ITEM 421 - MICROSURFACING, SURFACE COURSE AND ITEM 421 - MICROSURFACING, SURFACE COURSE, AS PER PLAN.

ITEM 421 - MICROSURFACING, SURFACE COURSE, AS PER PLAN

ALL REQUIREMENTS OF ITEM 421 APPLY. IN ADDITION, SUPPLY A BLEND OF A MINIMUM OF 50% IGNEOUS DIABASE TRAP ROCK AND A MAXIMUM OF 50% LIMESTONE AGGREGATE FROM APPROVED SOURCES FOR USE AS AGGREGATE IN ITEM 421. DO NOT USE OTHER AGGREGATES.

MICROSURFACING SHALL BE IN ACORDANCE WITH ITEM 421 WITH THE FOLLOWING CHANGE: TRUCK MOUNTED MACHINES ARE NOT PERMITTED ON THIS PROJECT.

OMIT ITEM 421 ON STRUCTURES WITH CONCRETE WEARING SURFACE.

THE CONTRACTOR IS RESPONSIBLE FOR COVERING ANY CASTINGS SO THE MICROSURFACING WILL NOT COVER THE CASTINGS (MONUMENT BOXES, MANHOLES, ETC.)

FENCE LENGTHS

THE LENGTHS OF FENCE SHOWN IN THE PLANS ARE HORIZONTAL DIMENSIONS. MEASUREMENTS OF THE FINAL QUANTITIES WILL BE IN ACCORDANCE WITH ITEM 607.

ITEM 670 - SLOPE EROSION PROTECTION, AS PER PLAN

DUE TO THE TIME OF YEAR FOR CONSTRUCTION OF THIS PROJECT, IT MAY BE NECESSARY TO ADJUST THE TIMING OF THE APPLICATION OF THE FINAL SEEDING & MULCHING. THIS ITEM, SLOPE EROSION PROTECTION, AS PER PLAN, IS NOT TO BE INSTALLED UNTIL AFTER THE FINAL SEEDING & MULCHING HAS BEEN APPLIED. TIMING OF INSTALLATION SHALL REQUIRE ENGINEER'S APPROVAL. ALL OTHER STANDARDS AND APPLICABLE CMS SPECIFICATIONS SHALL APPLY.

PN 107 - CRITICAL PATH METHOD PROGRESS SCHEDULE FOR MULTI-SEASON PROJECTS

THE PROGRESS SCHEDULE REQUIRED FOR THIS PROJECT IS THE CRITICAL PATH METHOD SCHEDULE (CPM SCHEDULE). THE CONTRACTOR SHALL DESIGNATE A SCHEDULE REPRESENTATIVE WHO SHALL BE RESPONSIBLE FOR COORDINATING WITH THE ENGINEER DURING THE PREPARATION AND MAINTENANCE OF THE SCHEDULE. THE REQUIREMENTS OF THIS NOTE (IN ITS ENTIRETY, DATED 10/19/18) REPLACE THE PROGRESS SCHEDULE REQUIREMENTS IN 108.03 OF THE CONSTRUCTION & MATERIAL SPECIFICATIONS. THE CONTRACTOR SHALL SUBMIT AN INTERIM SCHEDULE FOLLOWED BY A BASELINE, DEPENDING ON WHEN THE CONTRACTOR STARTS WORK AS DESCRIBED IN THE FULL NOTE AVAILABLE ON ODOT'S WEBSITE (https://www.dot.state.oh.us/Divisions/ConstructionMgt/Specification%20Files/PN107_10192018_for_2019.pdf).

(IN ADDITION TO THIS NOTE, PN121 - INCENTIVE/DISINCENTIVE CONTRACT, CLARIFIED ON SHEET 5, IS INCLUDED IN THE PROJECT PROPOSAL.)

PN 512 - 01/15/2016 - ITEM SPECIAL - PATCHING CONCRETE BRIDGE DECKS

A. Description. This item consists of furnishing the necessary labor, materials and equipment to repair concrete bridge decks, including the removal of all loose and unsound concrete, bituminous patches, surface preparation, bonding coat and the mixing, placing, finishing and curing of the mortar or concrete patches.

B. Materials. Furnish materials conforming to the following requirements:

Fine aggregate (natural sand).....	703.02
Coarse aggregate (No.8).....	703.02
Portland cement.....	701.05
Quick Setting Concrete Mortar, Type 1 or 2.....	705.21
Air-entraining admixture.....	705.10
Curing materials - Type A or B Patches.....	705.07
Curing materials - Type C Patches.....	Mfgr's recommendations

C. Removal of Unsound Concrete. The Engineer shall sound the entire deck and outline the areas to be removed. Sound the deck when it is sufficiently dry to permit detection of all areas of delamination. Saw the perimeter of all removal areas to a depth of 1 inch (25 mm) to produce a vertical or slightly undercut face. Use additional saw cuts to facilitate removal, if necessary. Remove all unsound concrete including all patches other than sound Portland cement concrete, and all loose and disintegrated concrete. Remove the unsound concrete by chipping or hand dressing. Use chipping hammers that are not heavier than the nominal 35 pound (16 kg) class. Operate the chipping hammers at an angle of less than 45 degrees measured from the surface of the deck. Remove the concrete in a manner that prevents cutting, elongating or damaging reinforcing steel. Where the bond between the concrete and a primary reinforcing bar has been destroyed, or where more than one half of the periphery of such a bar has been exposed, remove the adjacent concrete to a depth that will provide a minimum 3/4 inch (19 mm) clearance around the bar except where other reinforcing bars make this impracticable. Adequately support and tie back into place reinforcement which has become loose. After completion of the secondary removal operations, the Engineer will re-sound the deck to ensure that only sound concrete remains. Minimize construction joints. Only place construction joints on the perimeter of the removal areas.

D. Surface Preparation. Clean and then apply the bonding grout and/or the patching material. Thoroughly clean by sandblasting followed by an air blast, the surface to be patched and the exposed reinforcing steel. Use hand tools to remove scale from the reinforcing steel. Keep the prepared surface dry for Type A and Type B patches and Type C patches which do not use water as the activator. Leave the prepared surface in the condition as recommended by the manufacturer for Type C patches which require water as the activator. Follow the manufacturer's recommendations for any additional surface preparation for the patching material which is used.

E. Bonding Grout. The grout for bonding Type A patches consists of equal parts by volume of Portland cement and sand, mixed with sufficient water to form a stiff slurry. Apply this slurry with a stiff brush or broom to the existing surface in a thin, uniform coating. Scrub the coating of grout onto the dry surface immediately before placing the concrete. Ensure that no excess grout is permitted to collect in low spots. The grout is not be permitted to dry before placing the new concrete. Paint thinned grout over all joints between the new existing concrete immediately after the finishing has been completed. Bond Type B and Type C patches according to the manufacturers recommendations.

F. Patching. Place the mortar or concrete as Type A, B, or C.

1. Type A. The mixture consists of 1 part high-early-strength Portland cement, 1-1/2 parts fine aggregate and 1-1/2 parts coarse aggregate by volume. Add sufficient air-entraining agent to maintain an air content of 8 plus or minus 2 percent. Maintain the slump at the minimum practical for placing and at a maximum of 2 inches (50 mm). Mix the materials at the site. Ready-mixed concrete is not be permitted. Place the mix in the area to be patched while the bonding grout is still wet, slightly overfilled and struck off with a vibrating screed drawn slowly across the area. Hand finish with a wood float to produce a tight, uniform surface.

2. Type B. Patching material consists of Quick Setting Concrete Mortar, Type 1 or 2, 705.21. Mix and place the mortar as per manufacturer's recommendations. Add coarse aggregate in accordance with the manufacturer's instructions when the depth of the patch exceeds 1 inch (25 mm).

3. Type C. Patching material consists of a blend of 705.21 Type 2 material and selected aggregates with an activator. Mix and place these materials as per manufacturer's recommendations. Add coarse aggregate in accordance with the manufacturer's instructions when the depth of the patch exceeds 1 inch (25 mm).

G. Curing. Cure Type A patches in accordance with 511.14, Method (A), for not less than 24 hours if membrane waterproofing is to be applied immediately. If not, use Method (A) for 48 hours, after which apply membrane curing material at a rate not less than one gallon per 200 square foot (1 L per 5 m²). Remove membrane curing material prior to placing waterproofing. Cure Type B and Type C patches in accordance with the manufacturer's recommendations.

H. Method of Measurement. The Department will measure the actual area in square yards (square meters) of the exposed surface of all patches, irrespective of the depth of the patch, complete, in place and accepted.

I. Basis of Payment. The Department will pay for accepted quantities at the contract price bid for:

ITEM	UNIT	DESCRIPTION
Special	Sqare Yard (Square Meter)	Patching concrete bridge decks, Type _____.

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GENERAL NOTES

FRA-70-16.75
(FRA-270/315)

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SHEET NUM.											PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.		
7	8	9	13			31	01/NHS/ PV	02/SAF/ OT												
																	TRAFFIC CONTROL			
													518	518	621	00100	518	EACH	RPM	
													518	518	621	54000	518	EACH	RAISED PAVEMENT MARKER REMOVED	
													5.31	5.31	644	00104	5.31	MILE	EDGE LINE, 6"	
													6.71	6.71	644	00204	6.71	MILE	LANE LINE, 6"	
													2,462	2,462	644	00404	2,462	FT	CHANNELIZING LINE, 12"	
													319	319	644	00720	319	FT	CHEVRON MARKING	
													1,710	1,710	644	01510	1,710	FT	DOTTED LINE, 6"	
													12.89	12.89	644	30030	12.89	MILE	REMOVAL OF PAVEMENT MARKING	
																			MISCELLANEOUS STRUCTURE	
													3,394	3,394	509	10000	3,394	LB	EPOXY COATED REINFORCING STEEL	
													70	70	510	10001	70	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	31
													27	27	511	53012	27	CY	CLASS QC2 CONCRETE, MISC.: PARAPET INCLUDING SLEEPER SLAB WITH QC/QA	31
													43	43	512	10100	43	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
													30	30	SPECIAL	51912510	30	SY	PATCHING CONCRETE BRIDGE DECK, TYPE B	14
																			MAINTENANCE OF TRAFFIC	
													50	50	614	11110	50	hour	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
													580	580	614	11630	580	FT	INCREASED BARRIER DELINEATION	
													1	1	614	12380	1	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	
													10	10	614	12460	10	EACH	WORK ZONE MARKING SIGN	
													13	13	614	13350	13	EACH	OBJECT MARKER, ONE WAY	
													13.42	13.42	614	20560	13.42	MILE	WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT	
													10.62	10.62	614	22360	10.62	MILE	WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT	
													4,924	4,924	614	23680	4,924	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 8", 642 PAINT	
													3,420	3,420	614	24612	3,420	FT	WORK ZONE DOTTED LINE, CLASS III, 6", 642 PAINT	
													4	4	616	10000	4	MAL	WATER	
													580	580	622	41100	580	FT	PORTABLE BARRIER, UNANCHORED	
																			INCIDENTALS	
													LUMP		108	30000	LS		CPM PROGRESS SCHEDULE SHORT DURATION PROJECTS	6
													LUMP		614	11000	LS		MAINTAINING TRAFFIC	
													LUMP	LUMP	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
													LUMP		624	10000	LS		MOBILIZATION	

GENERAL SUMMARY

FRA-70-16.75
(FRA-270/315)

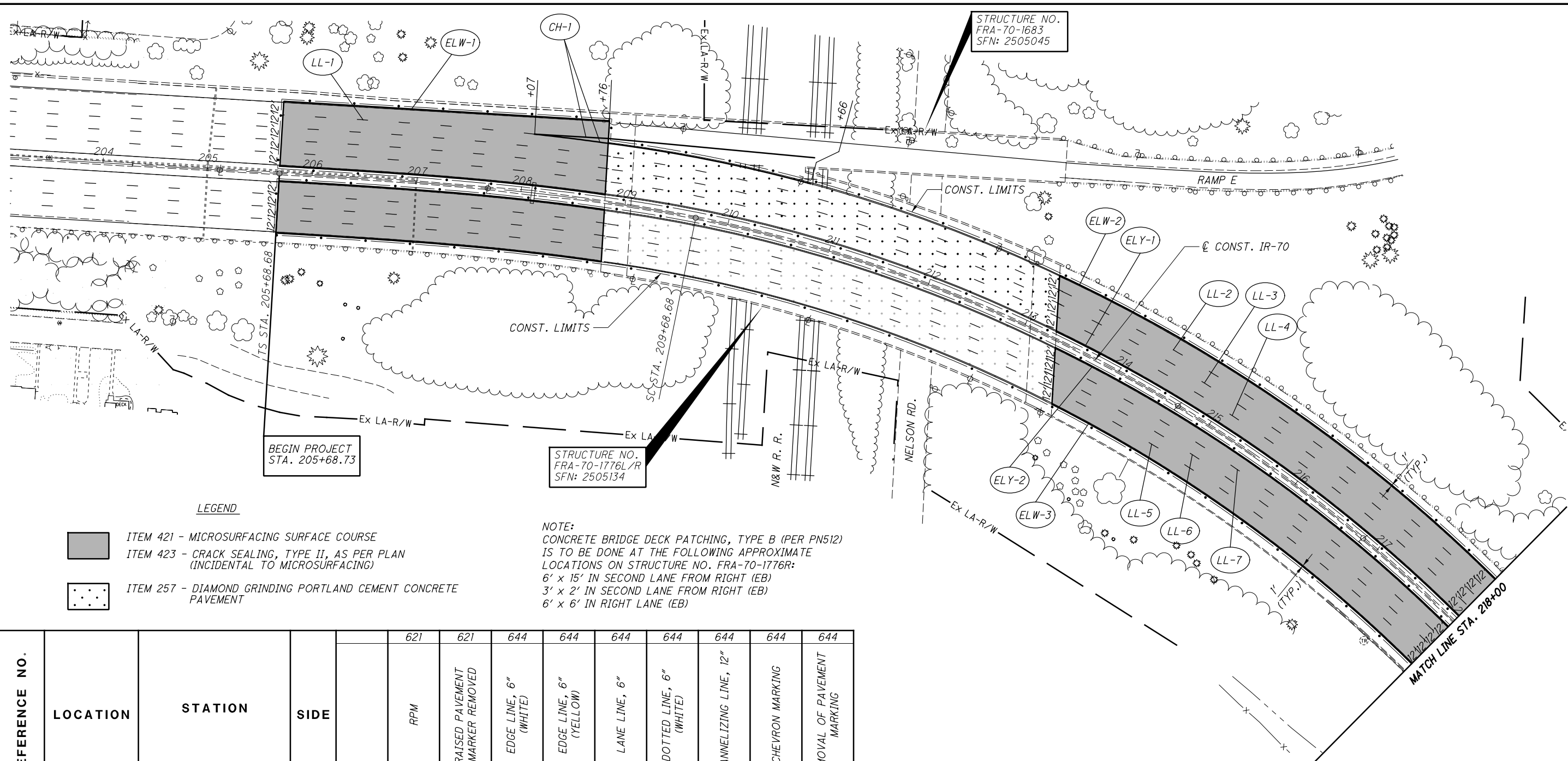
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MICROSURFACING AND DIAMOND GRINDING ESTIMATED QUANTITIES							
SHEET NO.	257	421	421			519	
	DIAMOND GRINDING PORTLAND CEMENT CONCRETE PAVEMENT SY	MICROSURFACING SURFACE COURSE	MICROSURFACING SURFACE COURSE, AS PER PLAN			SPECIAL - PATCHING CONCRETE BRIDGE DECK, TYPE B SY	
14	5,024	9,151				30	
15	3,722	12,344					
16	808	15,228					
17	1,370	9,960					
18	2,126	8,058					
19			4,333				
TOTALS CARRIED TO GENERAL SUMMARY							
	13,050	54,741	4,333			30	

PAVEMENT MARKING ESTIMATED QUANTITIES										
SHEET NO.	621	621	644	644	644	644	644	644	644	644
	RPM	RAISED PAVEMENT MARKER REMOVED	EDGE LINE, 6"	LANE LINE, 6"	DOTTED LINE, 6" (WHITE)	CHANNELIZING LINE, 12"	CHEVRON MARKING	REMOVAL OF PAVEMENT MARKING		
	EACH	EACH	MILE	MILE	FT	FT	FT	FT	FT	MILE
14	100	100	0.96	1.49		138				2.48
15	109	109	1.08	1.52		816	78			2.77
16	103	103	1.04	1.46		898	156			2.70
17	80	80	0.88	1.10						1.98
18	61	61	0.79	0.86	877	254				1.87
19	65	65	0.56	0.28	833	356	85			1.09
TOTALS CARRIED TO GENERAL SUMMARY										
	518	518	5.31	6.71	1,710	2,462	319			12.89

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REFERENCE NO.	LOCATION	STATION		SIDE	ITEMS								
		FROM	TO		RPM	RAISED PAVEMENT MARKER REMOVED	EDGE LINE, 6" (WHITE)	EDGE LINE, 6" (YELLOW)	LANE LINE, 6"	DOTTED LINE, 6" (WHITE)	CHANNELIZING LINE, 12"	CHEVRON MARKING	REMOVAL OF PAVEMENT MARKING
					EACH	EACH	MILE	MILE	MILE	FT	FT	FT	MILE
CH-1	IR-70	208+07	208+76	LT.							138		0.03
ELW-1	IR-70	205+68.73	208+76	LT.			0.06						0.06
ELW-2	IR-70	208+76	218+00	LT.			0.18						0.18
ELW-3	IR-70	205+68.73	218+00	RT.			0.24						0.24
ELY-1	IR-70	205+68.73	218+00	LT.				0.24					0.24
ELY-2	IR-70	205+68.73	218+00	RT.				0.24					0.24
LL-1	IR-70	205+68.73	208+07	LT.	4	4			0.05				0.05
LL-2	IR-70	205+68.73	218+00	LT.	16	16			0.24				0.24
LL-3	IR-70	205+68.73	218+00	LT.	16	16			0.24				0.24
LL-4	IR-70	205+68.73	218+00	LT.	16	16			0.24				0.24
LL-5	IR-70	205+68.73	218+00	RT.	16	16			0.24				0.24
LL-6	IR-70	205+68.73	218+00	RT.	16	16			0.24				0.24
LL-7	IR-70	205+68.73	218+00	RT.	16	16			0.24				0.24
SUB-TOTAL							0.48	0.48					
TOTALS CARRIED TO SUB-SUMMARY					100	100	0.96	1.49		138			2.48

STATION	SIDE	AREA	ITEMS		SPECIAL - PATCHING CONCRETE BRIDGE DECK, TYPE B
			DIAMOND GRINDING PORTLAND CEMENT CONCRETE PAVEMENT	MICROSURFACING SURFACE COURSE	
FROM	TO	SF	SY	SY	SY
205+68.73	208+80.59	LT.	20,005		
205+68.73	208+80.59	RT.	15,596		
208+80.59	213+32.57	LT.	22,569	2,508	
208+80.59	213+32.57	RT.	22,643	2,516	30
213+32.57	218+00.00	LT.	24,558		
213+32.57	218+00.00	RT.	22,186		
TOTALS CARRIED TO SUB-SUMMARY			5,024	9,151	30

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HORIZONTAL
SCALE IN FEET

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PLAN IR-70

STA. 203+50.00 TO STA. 218+00.00

FRA-70-16.75
(FRA-270/315)

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