

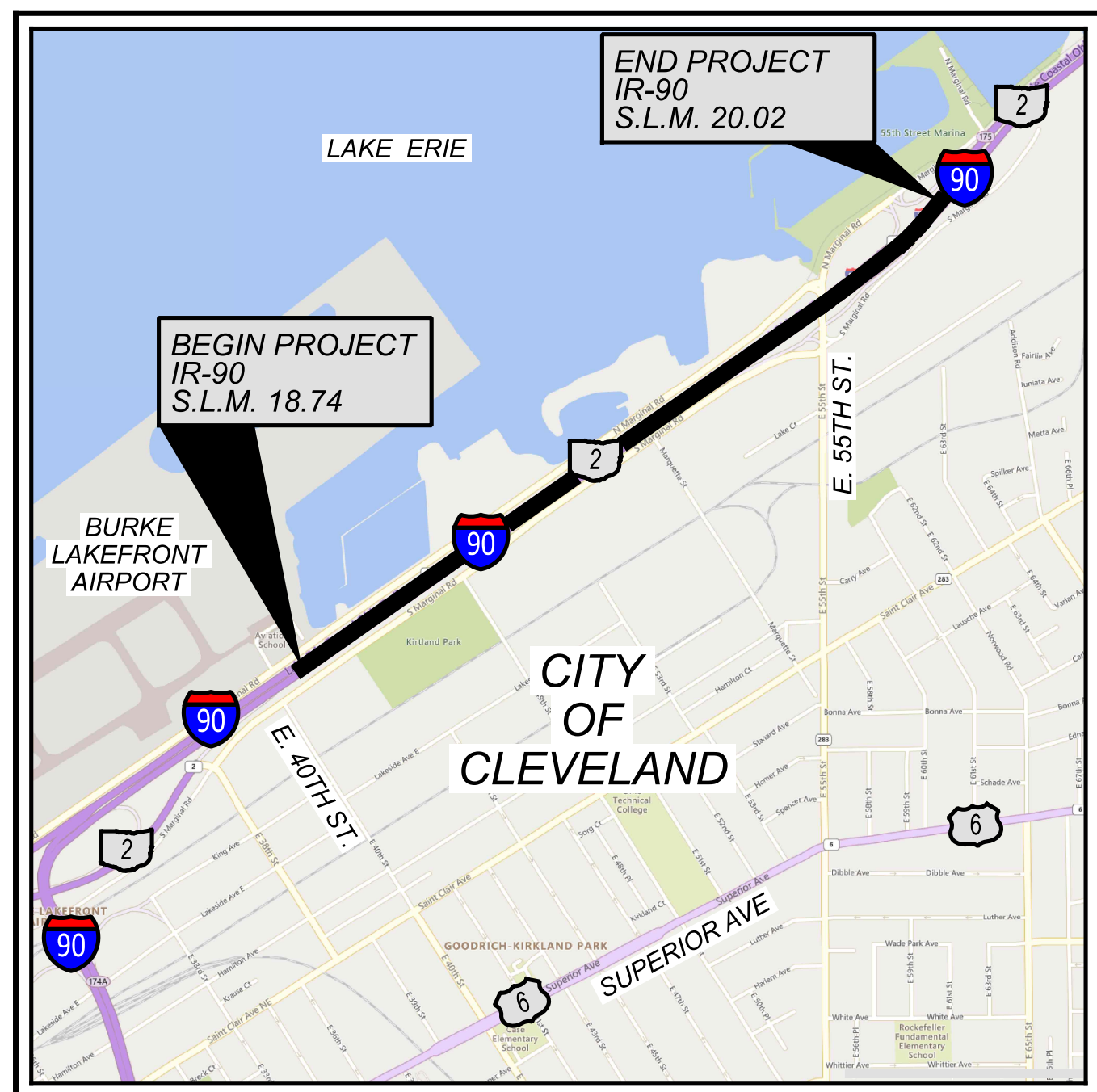
STATE OF OHIO DEPARTMENT OF TRANSPORTATION

CUY-090-18.72

CITY OF CLEVELAND
CUYAHOGA COUNTY

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LOCATION MAP

LATITUDE: 41°31'19" LONGITUDE: 81°40'03"



PORTION TO BE IMPROVED _____

DESIGN DESIGNATION

	SLM 18.74-19.53	SLM 19.53-19.63	SLM 19.63-20.02
CURRENT ADT (2020)	105,411	109,772	109,772
DESIGN YEAR ADT (2023)	113,000	123,000	122,000
DESIGN HOURLY VOLUME (2043)	11,500	12,500	12,000
DIRECTIONAL DISTRIBUTION	53%	54%	53%
TRUCKS (24 HOUR B&C)	4%	4%	4%
DESIGN SPEED	65 MPH	65 MPH	65 MPH
LEGAL SPEED (EASTBOUND)	60 MPH	60 MPH	60 MPH
LEGAL SPEED (WESTBOUND)	50 MPH	60 MPH	60 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	URBAN INTERSTATE		
FREEWAYS AND EXPRESSWAYS			
NHS PROJECT	YES		

DESIGN EXCEPTIONS

NONE

ADA DESIGN WAIVERS

NONE

UNDERGROUND UTILITIES
Contact Two Working Days
Before You Dig



OHIO811, 8-1-1, or 1-800-362-2764
(Non members must be called directly)

PLAN PREPARED BY:
O.D.O.T. DISTRICT 12
PLANNING AND ENGINEERING
5500 TRANSPORTATION BLVD.
GARFIELD HEIGHTS, OH 44125

STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-3.1	1/21/22	MT-95.30	7/19/19	TC-41.20	10/18/13	800-2023 SEE PROPOSAL	
BP-7.1	7/17/20	MT-95.50	7/21/17	TC-41.30	10/18/13	807	1/21/22
BP-9.1	1/18/19	MT-98.10	1/17/20	TC-41.40	10/18/13	808	1/18/19
		MT-98.11	1/17/20	TC-42.20	10/18/13	821	4/20/12
		MT-98.20	4/19/19	TC-52.10	10/18/13	832	7/15/22
		MT-98.22	1/17/20	TC-52.20	1/15/21	850	4/15/22
		MT-98.28	1/17/20	TC-65.10	1/17/14	872	1/21/22
		MT-98.29	1/17/20	TC-65.11	7/21/17	875	1/18/19
		MT-99.20	4/18/19	TC-71.10	7/16/21	905	4/17/20
		MT-101.70	1/17/20	TC-72.20	7/20/18	908	10/20/17
		MT-101.75	1/17/20	TC-73.20	1/17/20	921	4/20/12
		MT-101.90	7/17/20	TC-74.10	1/21/22		
		MT-104.10	10/16/15	TC-82.10	7/19/19		
		MT-105.10	1/17/20				

FEDERAL PROJECT NUMBER

E210 (490)

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

RESURFACING THE EAST SHORWAY (I.R.-90)
FROM EAST OF THE INNERBELT CURVE
TO EAST 55TH STREET IN THE CITY OF CLEVELAND.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: N/A
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: N/A
NOTICE OF INTENT EARTH DISTURBED AREA: N/A (NOI not required)*
* Routine Maintenance Project

2019 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS, CHANGES LISTED IN THE PROPOSAL, AND THE SUPPLEMENTAL SPECIFICATION 800 VERSION INDICATED ON THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

DISTRICT DEPUTY DIRECTOR
John P. Picuri, P.E.

APPROVED _____

DATE 9/11/22

DIRECTOR, DEPARTMENT OF TRANSPORTATION

Drake A. Brauer

ENGINEER'S SEAL

SIGNED: *Drake Brauer*
Drake A. Brauer, P.E.
DATE: 9-1-2022

TITLE SHEET

DESIGN AGENCY



DESIGNER

JAG

REVIEWER

DAB 10/24/22

PROJECT ID

75483

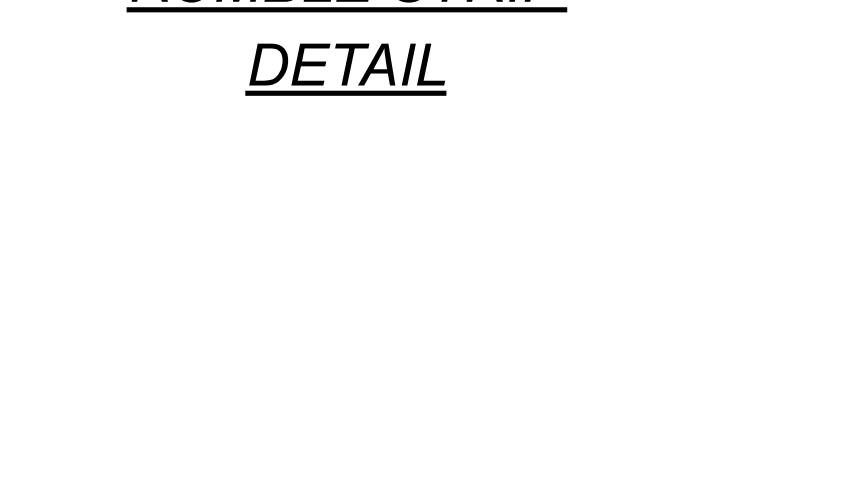
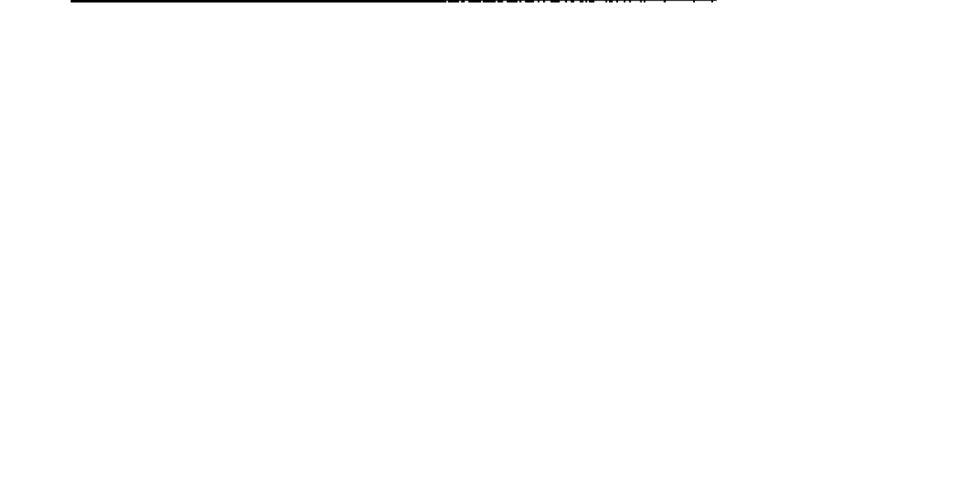
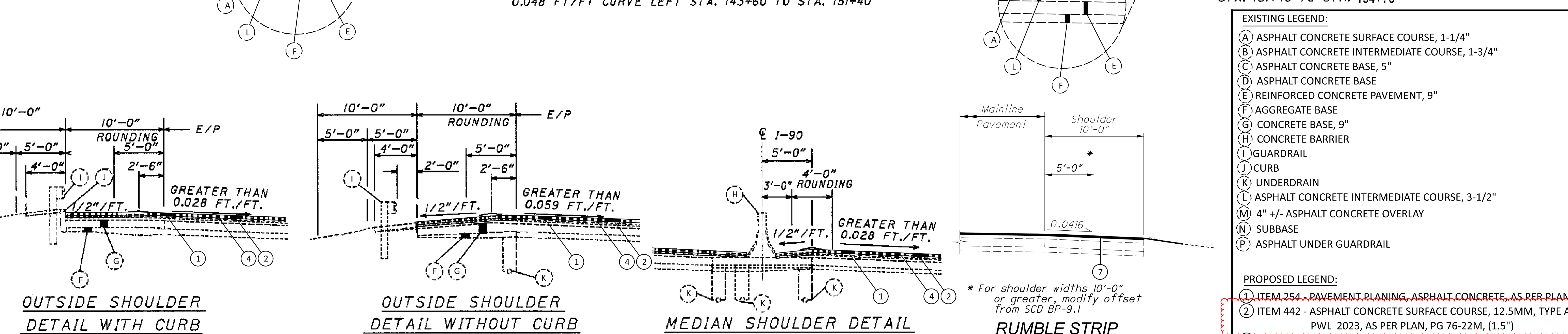
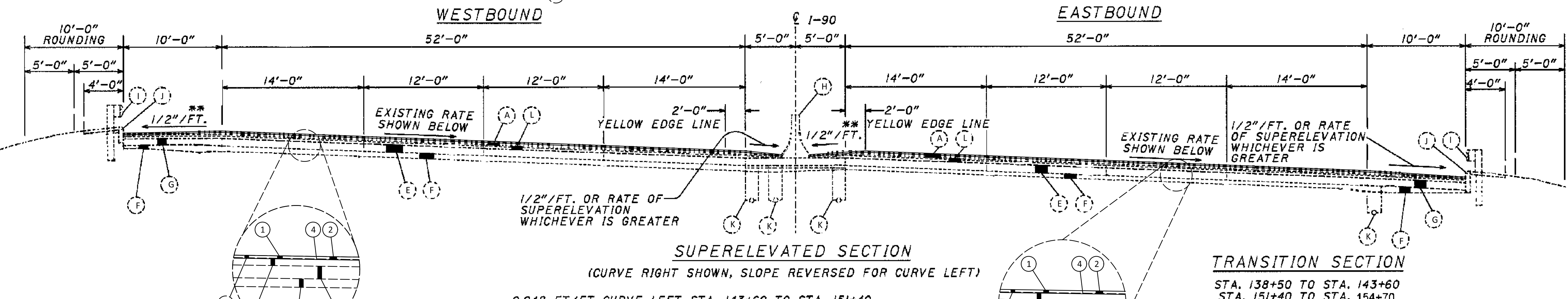
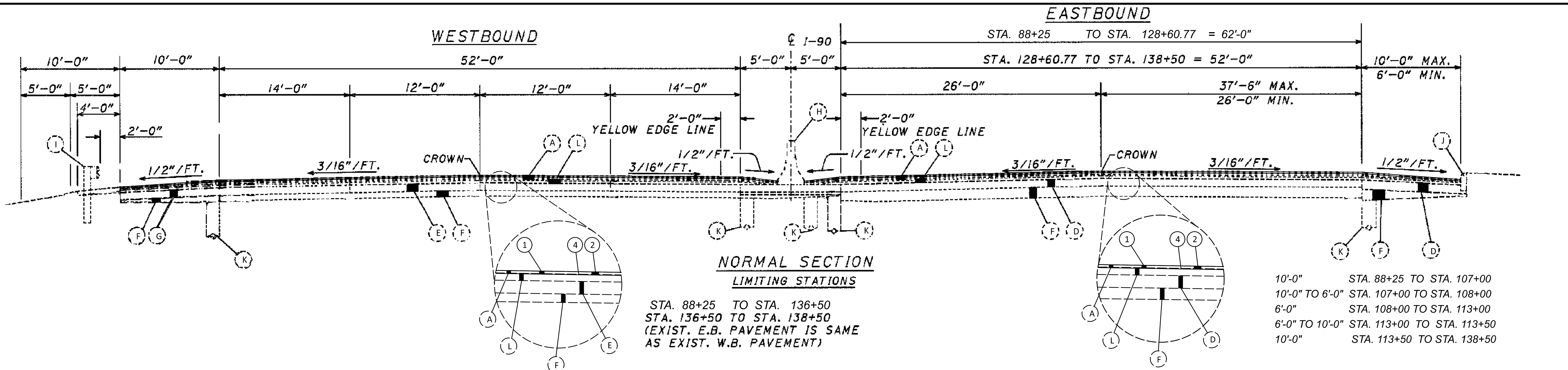
SHEET TOTAL

P.01 26

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ADDENDUM - R1
CUY-090-18.72

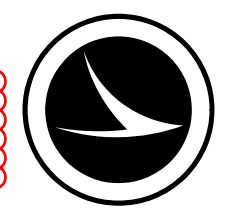
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- EXISTING LEGEND:**
- (A) ASPHALT CONCRETE SURFACE COURSE, 1-1/4"
 - (B) ASPHALT CONCRETE INTERMEDIATE COURSE, 1-3/4"
 - (C) ASPHALT CONCRETE BASE, 5"
 - (D) ASPHALT CONCRETE BASE
 - (E) REINFORCED CONCRETE PAVEMENT, 9"
 - (F) AGGREGATE BASE
 - (G) CONCRETE BASE, 9"
 - (H) CONCRETE BARRIER
 - (I) GUARDRAIL
 - (J) CURB
 - (K) UNDERDRAIN
 - (L) ASPHALT CONCRETE INTERMEDIATE COURSE, 3-1/2"
 - (M) 4" +/- ASPHALT CONCRETE OVERLAY
 - (N) SUBBASE
 - (P) ASPHALT UNDER GUARDRAIL
- PROPOSED LEGEND:**
- (1) ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN (1.5")
 - (2) ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A, (447), PWL 2023, AS PER PLAN, PG 76-22M, (1.5")
 - (3) ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5MM, TYPE A, (448), (1.5")
 - (4) ITEM 407 - NON-TRACKING TACK COAT
 - (5) ITEM 254 - PAVEMENT PLANING, PORTLAND CEMENT CONCRETE, AS PER PLAN (1.0")
 - (6) ITEM 407 - TACK COAT, 702.13
 - (7) ITEM 618 - RUMBLE STRIPS (ASPHALT CONCRETE), AS PER PLAN
 - (8) ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A, (446), PWL 2023, AS PER PLAN, PG 76-22M, (1.5")

TYPICAL SECTIONS

DESIGN AGENCY

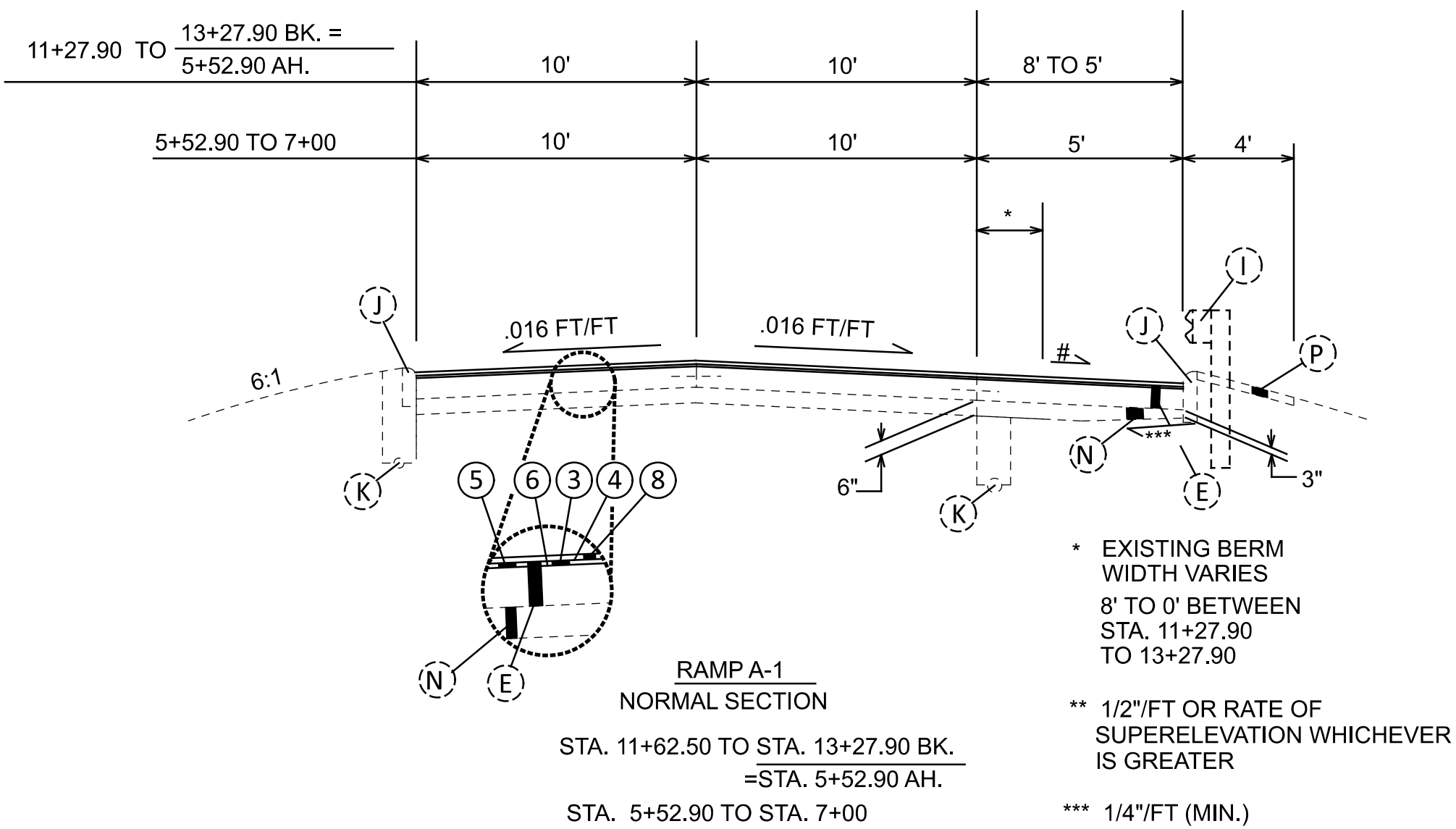


DESIGNER
JAG

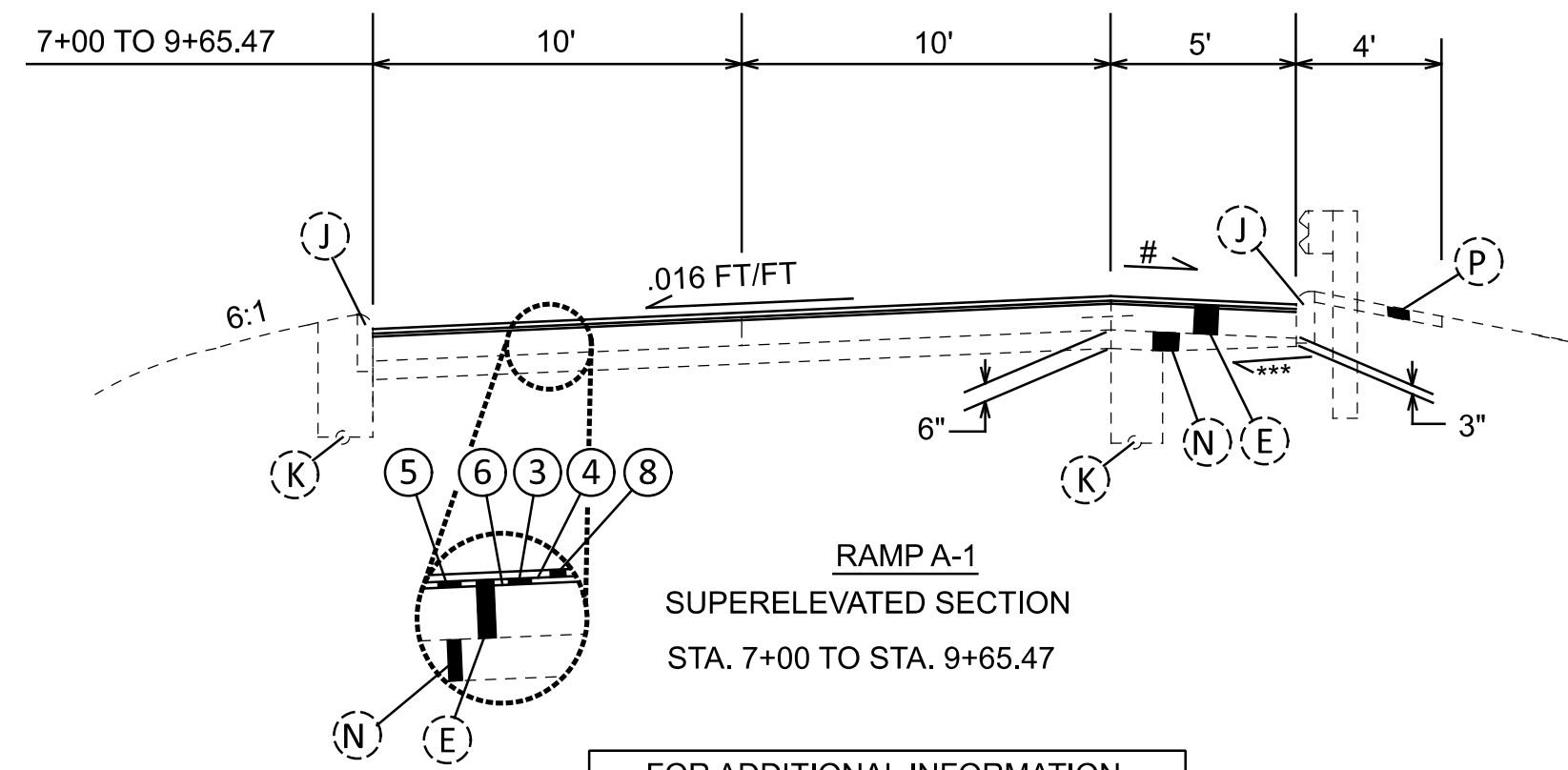
REVIEWER
DAB 10/24/22

PROJECT ID
75483

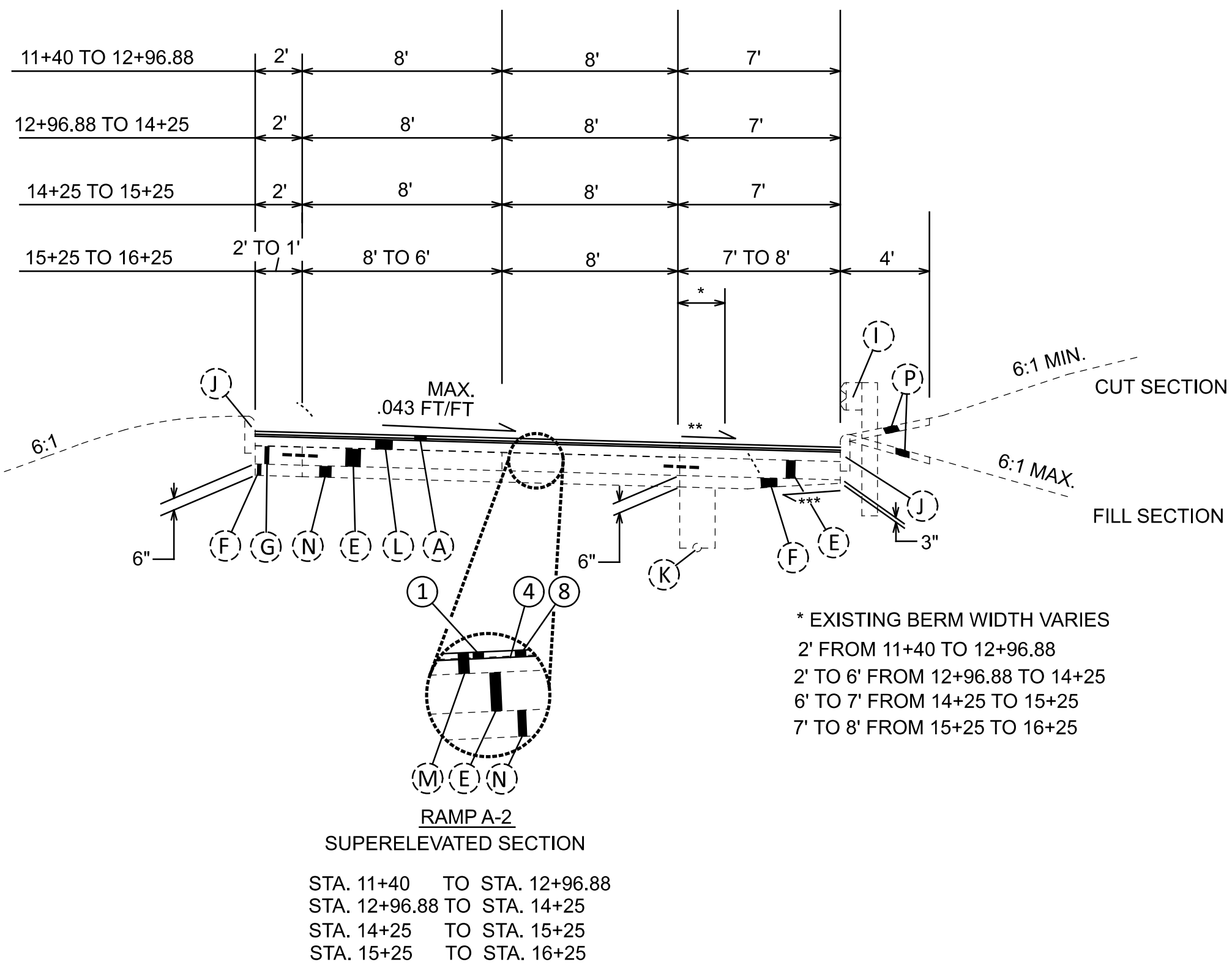
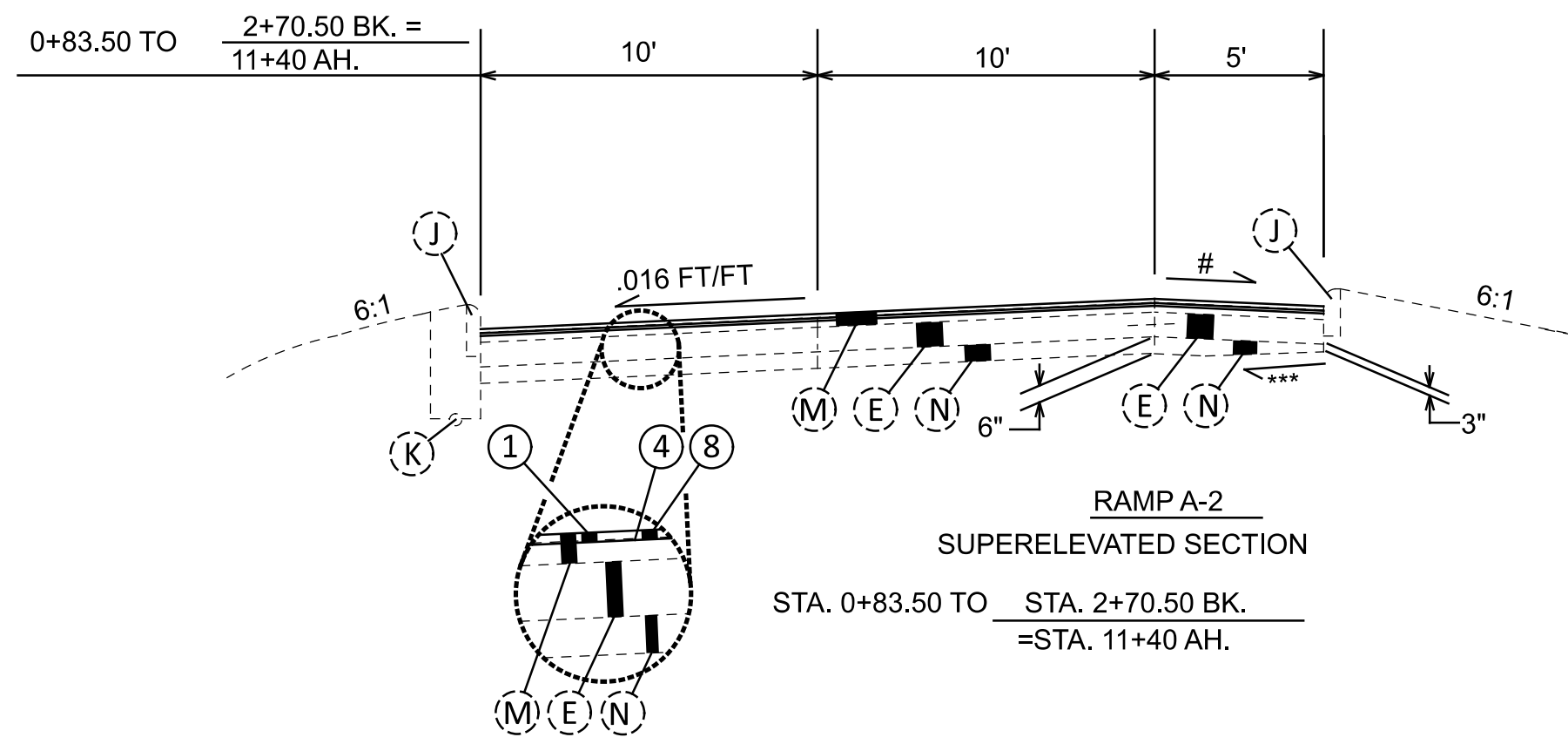
SHEET TOTAL
P.03 26



FOR ADDITIONAL INFORMATION,
 SEE
 "PAVEMENT DETAIL SHEET - RAMP A-1"



FOR ADDITIONAL INFORMATION,
 SEE
 "PAVEMENT DETAIL SHEET - RAMP A-1"



- EXISTING LEGEND:**
- (A) ASPHALT CONCRETE SURFACE COURSE, 1-1/4"
 - (B) ASPHALT CONCRETE INTERMEDIATE COURSE, 1-3/4"
 - (C) ASPHALT CONCRETE BASE, 5"
 - (D) ASPHALT CONCRETE BASE
 - (E) REINFORCED CONCRETE PAVEMENT, 9"
 - (F) AGGREGATE BASE
 - (G) CONCRETE BASE, 9"
 - (H) CONCRETE BARRIER
 - (I) GUARDRAIL
 - (J) CURB
 - (K) UNDERDRAIN
 - (L) ASPHALT CONCRETE INTERMEDIATE COURSE, 3-1/2"
 - (M) 4" +/- ASPHALT CONCRETE OVERLAY
 - (N) SUBBASE
 - (P) ASPHALT UNDER GUARDRAIL
- PROPOSED LEGEND:**
- (1) ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN (1.5")
 - (2) ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A, (447), PWL 2023, AS PER PLAN, PG 76-22M, (1.5")
 - (3) ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5MM, TYPE A, (448), (1.5")
 - (4) ITEM 407 - NON-TRACKING TACK COAT
 - (5) ITEM 254 - PAVEMENT PLANING, PORTLAND CEMENT CONCRETE, AS PER PLAN (1.0")
 - (6) ITEM 407 - TACK COAT, 702.13
 - (7) ITEM 618 - RUMBLE STRIPS, (ASPHALT CONCRETE), AS PER PLAN
 - (8) ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A, (446), PWL 2023, AS PER PLAN, PG 76-22M, (1.5")

General

Project Description

This project involves the improvement of IR-90 by removing 1.5" of asphalt and paving the roadway with 1.5" of Item 442, Asphalt Concrete Surface Course, 12.5mm, Type A, (447), PWL 2023, As Per Plan, PG76-22M.

The project will start from IR-90 (SLM 18.72) to (SLM 20.02) in the City of Cleveland. Incidental work includes pavement repairs, pavement markings, raised pavement markers and median concrete barrier repairs.

Existing Typical Sections

Existing typical sections have been taken from the records and are believed to represent the existing pavement, but the State of Ohio does not guarantee the accuracy of the same.

For further information in regards to the existing typical sections, the Contractor shall refer to the previous construction plans.

These plans may be reviewed at the following location:

Ohio Department of Transportation
District 12 Office
5500 Transportation Boulevard
Garfield Heights, Ohio 44125

Plan Sheet Stationing

The roadway was not surveyed prior to the preparation of these plans. Record drawings were used to prepare plan sheets and to calculate estimated pavement area quantities and pavement marking quantities.

Right of Way

All work shall be performed within the existing right of way or easements.

Work Limits

The work limits shown on these plans are for physical construction only. Provide the installation and operation of all work zone traffic control and work zone traffic control devices required by these plans whether inside or outside these work limits.

Contingency Quantities

The Contractor shall not order materials or perform work for items designated by plan note to be used **"As Directed by the Engineer"** unless authorized by the Engineer. The actual work locations and quantities used for such items shall be incorporated into the final change order governing completion of this project.

Equipment and Material Storage

In order to provide for the safety of the traveling public the Contractor's attention is directed to 614.03. In addition, the following provisions shall apply:

- Any removed items shall not be stored on the right of way for more than thirty (30) days.
- The storage of equipment, materials, and vehicles within the highway right of way will be permitted. The number of areas and exact locations shall be approved by the Engineer.
- All disturbed areas shall be returned to their original condition at no expense to the state.

Cooperation Between Contractors

The Contractor shall cooperate and coordinate his/her operations with the contractors on other projects that may be in force during the life of the contract. No waiver of any provisions of 105.08 of the Construction and Material Specifications is intended.

Staging Areas

There are no specific areas given in the plans for the Contractor to use as a staging area(s). If the Contractor wants to use an area(s) for staging, regardless if it falls within the project limits or not, the Contractor is to use the Right of Way E-Permitting System at <https://odhcp.bemcorp.net/Accounts/Account/Account> in order to apply for a permit per Section 107.02 of the CMS. For specific permitting questions, the Contractor can contact the District Permitting Office, (Melvin Safford) at 216-584-2137 or at District12Permits@dot.ohio.gov.

If a permit is granted, all conditions of the permit shall be met in addition to the requirements of 104.04 of the CMS, at no additional cost to the State. If the Project Engineer deems that all the conditions of the permit were not met, then 10% of the Contract bid amount for mobilization shall be withheld until all the conditions of the permit are satisfied.

Item 623 - Construction Layout Stakes, As Per Plan

After completion of all work, but prior to final acceptance of the project, an Ohio Professional Surveyor shall determine the minimum vertical clearances of all existing and new bridges within the project limits. At a minimum, measurements shall be taken along each fascia beam at the edge of shoulders, edge lines, lane lines, and crown of the roadway below. The ODOT District 12 Vertical Clearance Survey Form shall be used, where applicable, to document the measurements. Where the ODOT District 12 Vertical Clearance Survey Form is not applicable, the measurements shall be documented on a contractor-developed form that closely resembles the ODOT District 12 Vertical Clearance Survey Form and accurately depicts the bridge and the lane and shoulder configuration of the roadway that passes below the bridge. The completed form shall bear the stamp or seal of the Ohio Professional Surveyor who has taken the measurements and shall be submitted to the Project Engineer prior to final acceptance of the project.

The ODOT District 12 Vertical Clearance Survey Form can be downloaded from the following FTP site:

<ftp://ftp.dot.state.oh.us/pub/Contracts/Attach/CUY-75483>

Form will be located in ZIP file: **CUY-75483-CADDFiles.zip**

Directory location within ZIP file:

**\400Engineering
\Roadway\EngData\ODOT_District_12_Vertical_Clearance_Survey_Form**

Payment for all of the above work shall be at the unit price bid for Item 623 – Construction Layout Stakes, As Per Plan, which shall include all labor, equipment, materials and incidentals necessary to complete the above work.

Protection of Right-of-Way Landscaping

Prior to beginning work, the Contractor, the Project Engineer and a representative of the maintaining agency will review and record all landscaping items within the right-of-way (both within and outside the construction limits). A record of this review will be kept in the Project Engineer's files. Prior to final acceptance, a final review of landscaping items will be made.

Constrict all activities, equipment storage and staging to within the construction limits. Unless otherwise identified in the plans or proposal, the construction limits are identified as 30 feet from the edge of pavement.

Submit a written request to the Project Engineer to use any area outside these limits. The document submitted must clearly identify the area and explain the proposed use and restoration of the area. Use of these areas for disposal of waste material and construction debris, excavation of borrow material and placement of portable plants is prohibited. The request must be approved, in writing, before the Contractor has permission to use the area.

Any items damaged beyond the construction limits, as defined above, will be replaced in kind or as approved by the Project Engineer.

GENERAL NOTES

DESIGN AGENCY



DESIGNER

JAG

REVIEWER

DAB 10/24/22

PROJECT ID

75483

SHEET TOTAL

P.05 26

CUY-090-18.72

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Pavement

Profile and Alignment

Place the proposed pavement to follow the alignment of the existing pavement. Previous construction plans showing the original alignment are available for inspection at the ODOT District 12 office. Place the proposed asphalt concrete as shown on the typical sections. The intent of the plans is to maintain the existing profile.

Planing Requirements

The duration of time between planing the asphalt and placing the asphalt overlay shall be kept to a minimum. In no instance shall this time exceed 10 calendar days. The time limit shall begin on the first day of planing and shall continue based on calendar days, minus any weather days, until completion of the asphalt concrete surface course. This is to ensure that the potential degradation of the exposed pavement due to traffic is kept to a minimum. This requirement applies to both mainline and ramps alike.

In the event that the time between exposing the existing pavement and placing the asphalt surface course exceeds 10 calendar days, liquidated damages as per 108.07 of the CMS shall be assessed.

Asphalt Concrete Surface Course Sealing Requirements

In addition to the gutter sealing requirements specified in SCD BP-3.1 and C&MS 401.15, after completion of the surface course, the contractor shall use a certified 702.01 PG binder to seal the following locations:

- All castings including but not limited to monuments, manholes, water valves, catch basins, curb inlets.
- Butt joints and feather joints including bridge approaches.
- Forward joint for driveway asphalt and trailing joint when butting to existing asphalt drive.
- Perimeter of all pavement repairs or other asphalt inlays when pavement repairs /inlays are not overlaid with an asphalt concrete surface course.
- All cold longitudinal joints between paved shoulders and guardrail asphalt.

The material used shall be a certified 702.01 PG binder. The width of the sealer shall be 2-3 inches.

Any additional costs associated with the work identified in this note shall be included in the appropriate asphalt concrete surface course item of work.

Longitudinal Joints (Flexible Pavement)

Longitudinal joints between a pavement lane and adjoining shoulder or speed change lane, and between a speed change lane and the adjoining shoulder shall be made the same day. All longitudinal joints shall be hot with the exception of one cold joint per roadway. Locate the cold joint along the centerline or a lane line. Longitudinal joint locations shall be as approved by the Engineer. Each ramp shall have a maximum of one longitudinal cold joint located approximately halfway across the ramp.

Item 251 - Partial Depth Pavement Repair (442), As Per Plan A

This item shall be used for the repair of unsound, cold-patch, or pop-out areas of longitudinal joints as directed by the Engineer. This work shall be performed after the planing operation. The depth of the repair shall be 3" below the top of the planed asphalt surface. The width of the repair shall be 12" centered over the existing joint.

Use replacement materials conforming to the requirements of Item 442, 19mm.

The following estimated quantity has been carried to the General Summary:

Item 251 – Partial Depth Pavement Repair (442),
As Per Plan A **250 Sq Yd**

Item 251 - Partial Depth Pavement Repair (442), As Per Plan B

This item shall be used for the repair of unsound, cold-patch, or pop-out areas of transverse joints and cracks as directed by the Engineer. This work shall be performed after the planing operation. The depth of the repair shall be 3" below the top of the planed asphalt surface. The width of the repair shall be 12" centered over the existing joint.

Use replacement materials conforming to the requirements of Item 442, 19mm.

The following estimated quantity has been carried to the General Summary:

Item 251 – Partial Depth Pavement Repair (442),
As Per Plan B **250 Sq Yd**

Item 254 – Pavement Planing, Asphalt Concrete, As Per Plan

This item shall be used to remove the existing asphalt overlay full width at an average depth of 1.5" as specified in the plans. In addition, this item shall also be used to plane additional asphalt adjacent to the median barrier inlets to provide a depressed apron at a maximum slope of 0.08 toward the inlet. This additional planing shall also provide for the full 4" window opening on either side of the median barrier inlet.

Item 254 – Pavement Planing, Portland Cement Concrete, As Per Plan

This item shall be used for the planing of the existing Portland cement concrete on eastbound Ramp A-1 to a depth of 1.0", As Directed by the Engineer. This work shall also include tapering the planing depth from 1.5" on the asphalt surface at the Ramp A-1 gore to the 1" depth along the rest of the ramp as shown on the plan sheets. Also included in this pay item is the asphalt overlay on this ramp near the intersection of E. 55th Street.

Item 442 – Asphalt Concrete Surface Course, 12.5mm, Type A, (447), PWL 2023, As Per Plan, PG76-22M

The coarse virgin aggregate for this item shall be limited to a blend of air cooled blast furnace slag (ACBFS) or Trap Rock from Ontario and limestone. The Contractor shall use a minimum 60% of ACBFS or Trap Rock from Ontario with limestone comprising the remaining percentage. At least 50% of the fine virgin aggregate for this item shall be limited to ACBFS or Trap Rock from Ontario.

Table 442.02-2 applies except No. 4 sieve requirements are 52 to 60 Total Percent Passing. For the No. 4 sieve, do not exceed 63 in production.

When ACBFS is used for a fraction of the coarse aggregate, provide a total asphalt binder content greater than or equal to 6.2%. If ACBFS makes up 100% of the coarse aggregate, apply the binder content requirements of CMS 442.

Mat Density Acceptance - Follow the requirements of 447 *Mat Density Acceptance*, except as modified below.

Obtain 6-inch diameter cores for each Lot.

The PWL calculator, located on the ODOT website at the Office of Construction Administration, will be used to determine the Lot PWL and the Lot AASHTO pay factors.

The Department will determine the pay factor for each Lot cored by the following table.

Lower Specification Limit	Pay Factor Criteria	Pay Factor (PF)
92.6%	If AVE density is ≥ 93% AND PWL ≥ 70	PF =1 or AASHTO PF whichever is greater
	If 70 > PWL > 50	AASHTO PF
	If PWL ≤ 50	REMOVE AND REPLACE

GENERAL NOTES



**Item 442 – Asphalt Concrete Surface Course, 12.5mm, Type A, (446),
PWL 2023, As Per Plan, PG76-22M**

Joint coring as per 446.04 will not be required for all asphalt concrete placed with cold longitudinal joints using Void Reducing Asphalt Membrane (VRAM). Construct cold longitudinal joints over VRAM using the same techniques, equipment, and roller patterns used on the rest of the mat. Obtain 10 mat cores for each lot of material per 446.04. Pay factors for each lot of material will be determined per Table 446.04-2.

The coarse virgin aggregate and at least 50% of fine virgin aggregate for this item shall be limited to air cooled blast furnace slag (ACBFS) or Trap Rock from Ontario.

Table 442.02-2 applies except No. 4 sieve requirements are 52 to 60 Total Percent Passing. For the No. 4 sieve, do not exceed 63 in production.

Density Acceptance - Follow the requirements of 446 *Density Acceptance*, except as modified below.

Obtain 6-inch diameter cores for each Lot.

The PWL calculator, located on the ODOT website at the Office of Construction Administration, will be used to determine the Lot PWL and the Lot AASHTO pay factors.

The Department will determine the pay factor for each Lot cored by the following tables.


Lower Specification Limit	Surface with 3 joint cores Pay Factor Criteria	Pay Factor (PF)
92%	If AVE density is $\geq 92.4\%$ AND PWL ≥ 70	PF =1 or AASHTO PF whichever is greater
	If $70 > \text{PWL} > 50$	AASHTO PF
	If PWL ≤ 50	REMOVE AND REPLACE

Lower Specification Limit	Surface with NO joint cores Pay Factor Criteria	Pay Factor (PF)
92.6%	If AVE density is $\geq 93\%$ AND PWL ≥ 70	PF =1 or AASHTO PF whichever is greater
	If $70 > \text{PWL} > 50$	AASHTO PF
	If PWL ≤ 50	REMOVE AND REPLACE



SHEET NUM.											PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	
5-6	7	8	9	11	12	13	14	17	18	22	26	01/IMS/05							02/IMS/04
										854		854		202	30000	854	SF	ROADWAY	
											50	854	50	202	30701	50	FT	CONCRETE BARRIER REMOVED, AS PER PLAN	26
	350									97		447		202	32000	447	FT	CURB REMOVED	
										355		355		608	10000	355	SF	4" CONCRETE WALK	
										499		499		608	52001	499	SF	CURB RAMP, AS PER PLAN	6
											50		50	622	90000	50	FT	BARRIER, MISC.:CONCRETE BARRIER, TYPE B50	26
																		EROSION CONTROL	
LS												LS		659	98700	LS		SEEDING, MISC.:SEEDING AND MULCHING	6
												1,000		832	30000	1,000	EACH	EROSION CONTROL	
																		DRAINAGE	
	26											26		611	98631	26	EACH	CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN	7
	1											1		611	98634	1	EACH	CATCH BASIN RECONSTRUCTED TO GRADE	
	4											4		611	99151	4	EACH	INLET ADJUSTED TO GRADE, AS PER PLAN	7
	6											6		611	99655	6	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	7
	1											1		611	99660	1	EACH	MANHOLE RECONSTRUCTED TO GRADE	
	4,000											4,000		SPECIAL	61199820	4,000	LB	MISCELLANEOUS METAL	7
																		PAVEMENT	
		250										250		251	01021	250	SY	PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN A	8
		250										250		251	01021	250	SY	PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN B	8
										107,528		107,528		254	01001	107,528	SY	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN, (1.5")	8
										4,696		4,696		254	01011	4,696	SY	PAVEMENT PLANING, PORTLAND CEMENT CONCRETE, AS PER PLAN, (1.0")	8
										375		375		407	13900	375	GAL	TACK COAT, 702.13	
										10,099		10,099		407	20000	10,099	GAL	NON-TRACKING TACK COAT	
										3,986		3,986		442	00100	3,986	CY	ANTI-SEGREGATION EQUIPMENT	
										258		258		442	10011	258	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), PWL 2023, AS PER PLAN, PG76-22M, (1.5")	8A
										4,422		4,422		442	10311	4,422	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), PWL 2023, AS PER PLAN, PG76-22M, (1.5")	8
										154		154		442	20170	154	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5 MM, TYPE A (448), (1.5")	
										21.5		21.5		442	22300	21.5	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5 MM, TYPE A (449), (VARIABLE)	
	350											350		609	26000	350	FT	CURB, TYPE 6	
										50		50		617	10101	50	CY	COMPACTED AGGREGATE, AS PER PLAN	9
										5.03		5.03		618	40601	5.03	MILE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE), AS PER PLAN	9
										16.15		16.15		850	10010	16.15	MILE	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT)	
										1.04		1.04		850	10030	1.04	MILE	GROOVING FOR 12" RECESSED PAVEMENT MARKING, (ASPHALT)	
										1,196		1,196		872	10000	1,196	FT	VOID REDUCING ASPHALT MEMBRANE (VRAM)	
																		LIGHTING	
											2	2		625	00480	2	EACH	CONNECTION, UNFUSED PERMANENT	26
											1,210	1,210		625	23300	1,210	FT	NO. 2 AWG 2400 VOLT DISTRIBUTION CABLE	26
											595	595		625	25910	595	FT	CONDUIT CLEANED AND CABLES REMOVED	26
																		TRAFFIC CONTROL	
										720		720		621	00100	720	EACH	RPM	
										475		475		621	54000	475	EACH	RAISED PAVEMENT MARKER REMOVED	
										98		98		646	10400	98	FT	STOP LINE	
										650		650		646	10510	650	FT	CROSSWALK LINE, 12"	
										125		125		646	10620	125	FT	CHEVRON MARKING	
										140		140		646	10800	140	SF	ISLAND MARKING, YELLOW	
										3		3		646	20300	3	EACH	LANE ARROW	
										3		3		646	20320	3	EACH	WRONG WAY ARROW	
										3.27		3.27		807	12010	3.27	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6", WHITE	
										3.28		3.28		807	12010	3.28	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6", YELLOW	
										8.89		8.89		807	12110	8.89	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, LANE LINE, 6"	
										2,541		2,541		807	12310	2,541	FT	WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12"	
										1,348		1,348		807	12410	1,348	FT	WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 6"	
										2,927		2,927		807	12430	2,927	FT	WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 12"	

GENERAL SUMMARY

DESIGN AGENCY

 DESIGNER
JAG
 REVIEWER
 DAB 10/24/22
 PROJECT ID
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SHEET NUM.											PART		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	
5-6	7	8	9	11	12	13	14	17	18	22	26	01/IMS/05							02/IMS/04
			2									2		632	26501	2	EACH	TRAFFIC SIGNALS DETECTOR LOOP, AS PER PLAN	9
						500		8				500		614	11110	500	HOUR	MAINTENANCE OF TRAFFIC LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
				25								8		614	12484	8	EACH	WORK ZONE INCREASED PENALTIES SIGN	
												25		614	13001	25	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC, AS PER PLAN	11
					12							12		614	18601	12	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	12
					7.84							7.84		614	20110	7.84	MILE	WORK ZONE LANE LINE, CLASS I, 6", 642 PAINT	
					7.84							7.84		614	20560	7.84	MILE	WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT	
					5.48							5.48		614	22110	5.48	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	
					5.48							5.48		614	22360	5.48	MILE	WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT	
					1,820							1,820		614	23210	1,820	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 642 PAINT	
					1,820							1,820		614	23690	1,820	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 12", 642 PAINT	
					1,218							1,218		614	24202	1,218	FT	WORK ZONE DOTTED LINE, CLASS I, 6", 642 PAINT	
					2,390							2,390		614	24208	2,390	FT	WORK ZONE DOTTED LINE, CLASS I, 12", 642 PAINT	
					1,218							1,218		614	24612	1,218	FT	WORK ZONE DOTTED LINE, CLASS III, 6", 642 PAINT	
					2,390							2,390		614	24618	2,390	FT	WORK ZONE DOTTED LINE, CLASS III, 12", 642 PAINT	
					38							38		614	26200	38	FT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	
					38							38		614	26610	38	FT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	
					385							385		614	27050	385	FT	WORK ZONE CROSSWALK LINE, CLASS I, 12", 642 PAINT	
					385							385		614	27250	385	FT	WORK ZONE CROSSWALK LINE, CLASS III, 12", 642 PAINT	
											140		140	622	90000	140	FT	BARRIER, MISC.: PORTABLE TEMPORARY MOVABLE BARRIER SYSTEM	26
							300					300		630	97800	300	SF	SIGNING, MISC.: ADDITIONAL SIGNS, GROUND MOUNTED, AS DIRECTED BY THE ENGINEER	14
							12					12		808	18700	12	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY	
												LS		108	30000	LS		INCIDENTALS CPM PROGRESS SCHEDULE SHORT DURATION PROJECTS	
												LS		614	11000	LS		MAINTAINING TRAFFIC	
LS												LS		623	10001	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN	5
												LS		624	10000	LS		MOBILIZATION	

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER
JAG

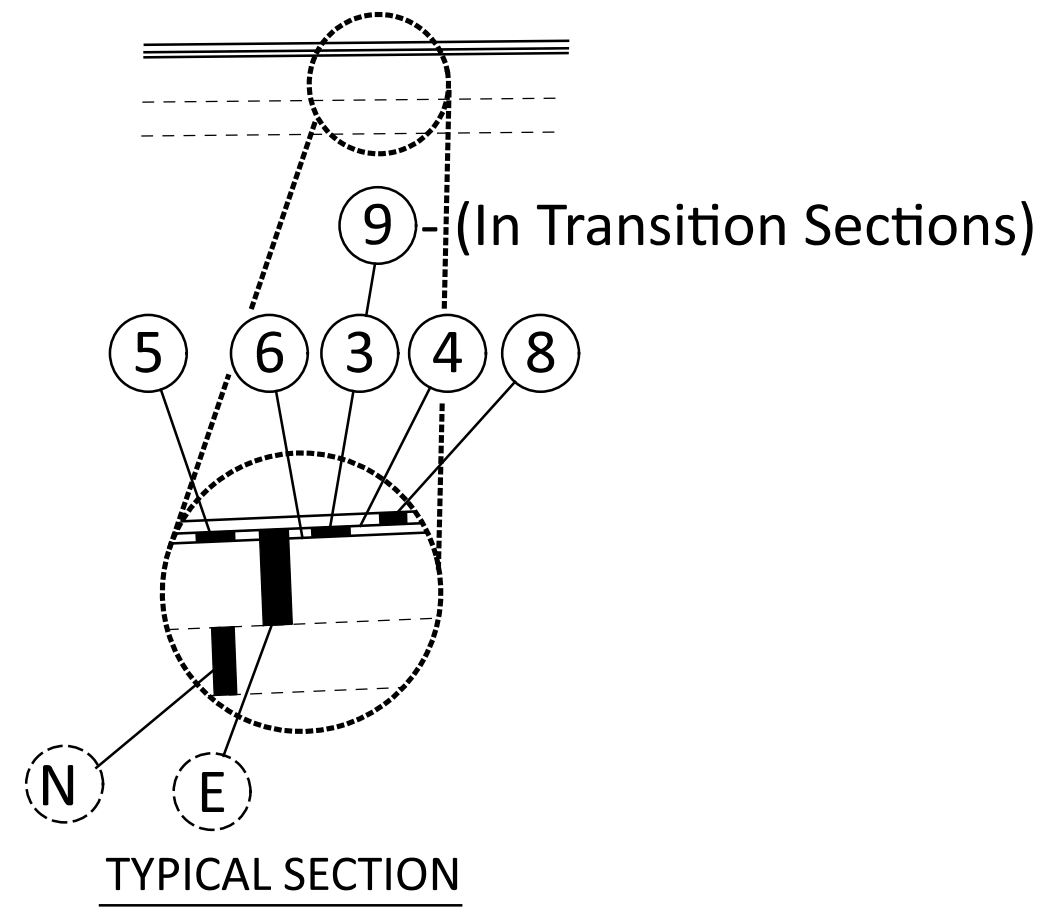
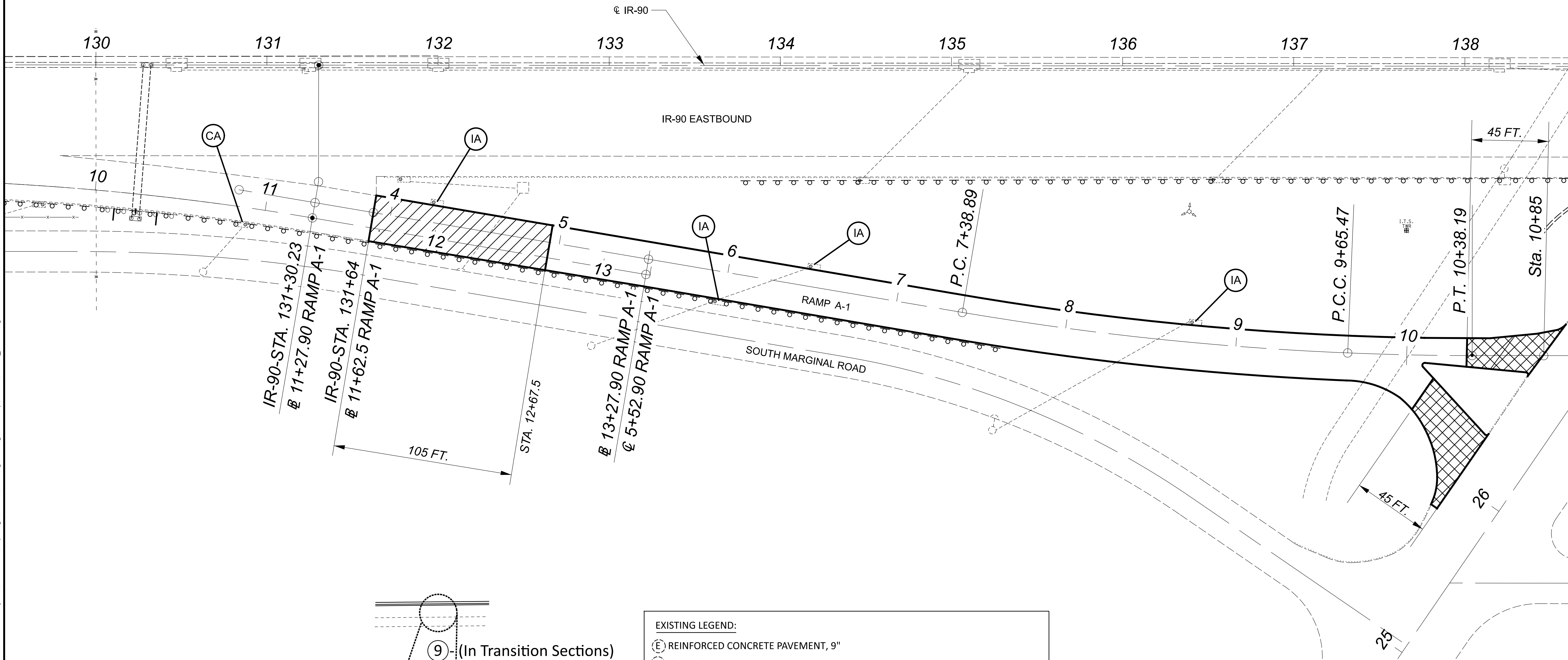
REVIEWER
DAB 10/24/22

PROJECT ID
75483

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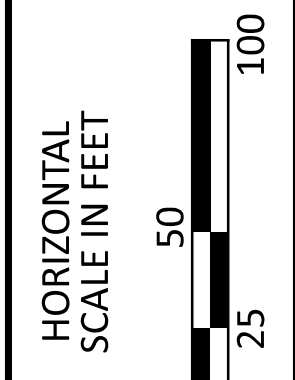
REF. NO.	SHEET NO.	PLAN SPLIT NO.	STATION TO STATION	LENGTH FT.	BEGIN WIDTH FT.	ENDING WIDTH FT.	AVERAGE WIDTH FT.	AREA SQ. YD.	254	254	407	407	442	442	442	442	442	872
									PAVEMENT PLANING, PORTLAND CEMENT CONCRETE, AS PER PLAN, (1.0") SY	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN, (1.5") SY	TACK COAT, 702.13 GAL	NON-TRACKING TACK COAT GAL	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), PWL 2023, AS PER PLAN, PG76-22M, (1.5") CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), PWL 2023, AS PER PLAN, PG76-22M, (1.5") CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5 MM, TYPE A (448), (1.5") CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5 MM, TYPE A (449), (VARIABLE) CY	ANTI-SEGREGATION EQUIPMENT CY	VOID REDUCING ASPHALT MEMBRANE (VRAM) FT
			IR-90 Eastbound															
		1	88+25.00 128+60.77	4036	75.75	75.75	75.75	33970	33970			3057	1416					1159
		1	128+60.77 131+30.23	270	75.75	97.55	86.65	2600	2600			234	109					94
		1	131+30.23 131+64.00	34	97.55	102.75	100.15	378	378			34	16					15
		1	131+64.00 144+05.00	1241	65.75	65.75	65.75	9066	9066			816	378					288
		1	144+05.00 154+70.00	1065	100.75	70.75	85.75	10147	10147			913	423					360
			IR-90 Westbound															
		1	88+25.00 141+00.00	5275	65.75	65.75	65.75	38537	38537			3468	1606					1222
		1	141+00.00 148+20.00	720	65.75	99.75	82.75	6620	6620			596	276					240
		1	148+20.00 154+70.00	650	65.75	65.75	65.75	4749	4749			427	198					151
			RAMP A-1 Eastbound															
		1	11+62.50 12+67.50	105	65.75	65.75	65.75	767	767		61	69		32		16	64	105
		1	12+67.50 13+27.90	61	65.75	65.75	65.75	446	446		36	40		19	19		38	61
		1	Sta. 13+27.90 BK = 5+52.90 AH															
		1	5+52.90 9+65.47	413	65.75	65.75	65.75	3017	3017		241	272		126	126		252	413
		1	9+65.47 10+40.00	75				CADD AREA	205		16	18		9	9		18	75
		1	10+40.00 10+85.00	45				CADD AREA	261		21	23		11		5.5	22	45
			RAMP A-2 Eastbound															
		1	0+34.00 0+84.00	50				CADD AREA	220			20		9			10	50
		1	0+84.00 2+70.50	187	25.00	25.00	25.00	519	519			47		22			22	187
		1	Sta. 2+70.50 BK = 11+40 AH															
		1	11+40.00 14+00.00	260	25.00	25.00	25.00	722	722			65		30			31	260
SUBTOTALS									4696	107528	375	10099	4422	258	154	21.5	3986	1196
TOTALS CARRIED TO GENERAL SUMMARY									4696	107528	375	10099	4422	258	154	21.5	3986	1196





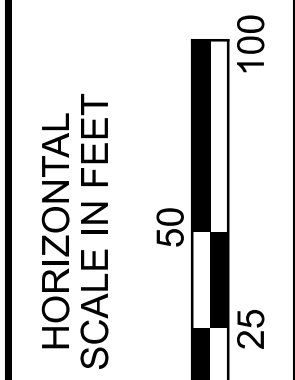
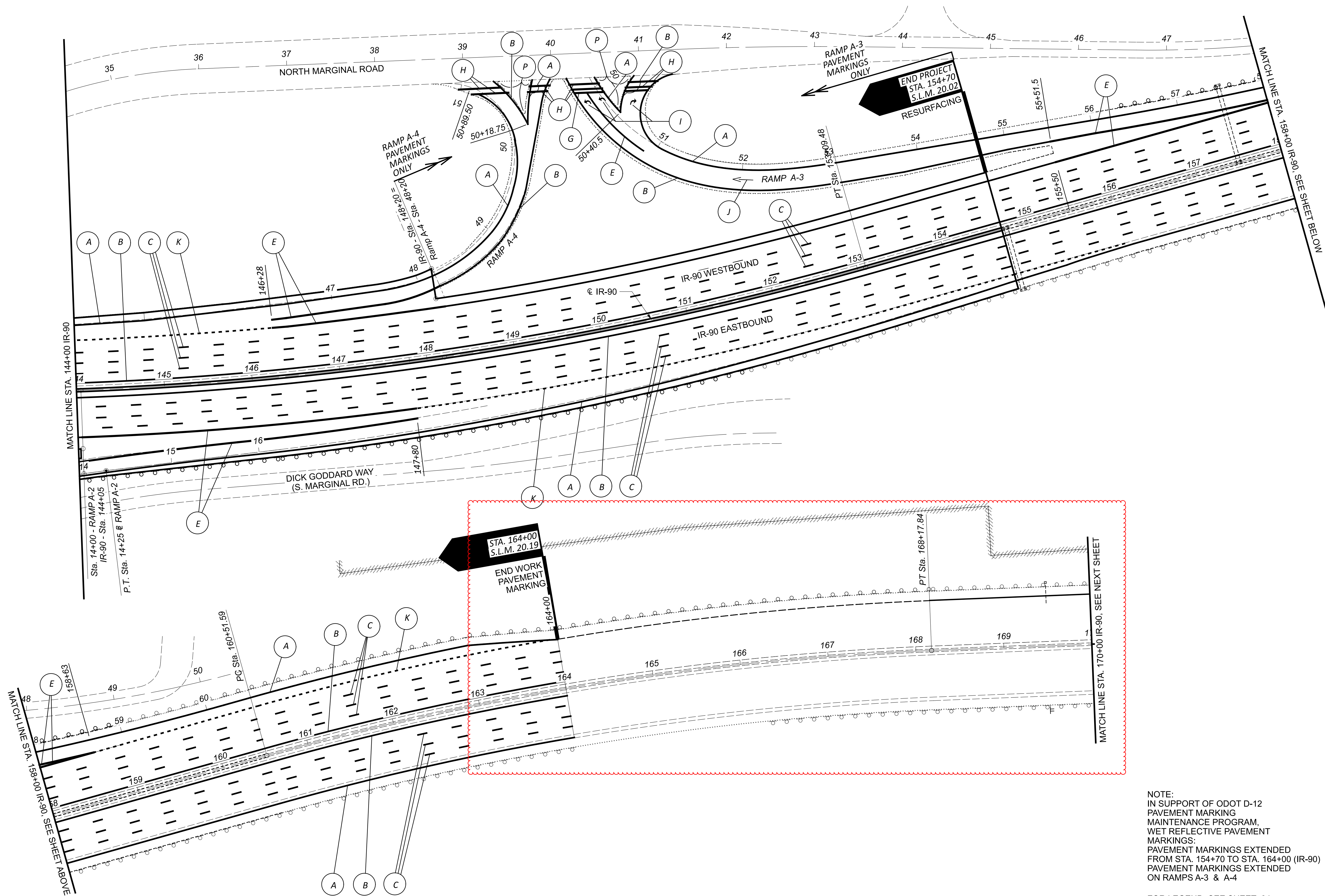
- EXISTING LEGEND:**
- (E) REINFORCED CONCRETE PAVEMENT, 9"
 - (N) SUBBASE
- PROPOSED LEGEND:**
- (8) ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A, (446), PWL 2023, AS PER PLAN, PG 76-22M, (1.5")
 - (3) ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5 MM, TYPE A, (448), (1.5")
 - (4) ITEM 407 - NON-TRACKING TACK COAT
 - (5) ITEM 254 - PAVEMENT PLANING, PORTLAND CEMENT CONCRETE, AS PER PLAN (1.0")
 - (6) ITEM 407 - TACK COAT, 702.13
 - (9) ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5 MM, TYPE A, (449), (VARIABLE DEPTH)

- LEGEND:**
- TAPER CONCRETE PLANING FROM 1.5" TO 1.0"
 - TAPER CONCRETE PLANING FROM 1.0" TO 1.5" BUTT JOINT AGAINST 55TH ST. PAVEMENT
 - (IA) - INLET ADJUSTED TO GRADE
 - (CA) - CATCH BASIN ADJUSTED TO GRADE



PAVEMENT DETAIL SHEET - RAMP A-1
 STA. 11+62.5 TO STA. 10+85

DESIGN AGENCY	
DESIGNER	JAG
REVIEWER	DAB 10/24/22
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TRAFFIC CONTROL - PLAN SHEET
STA. 144+00 TO STA. 158+00

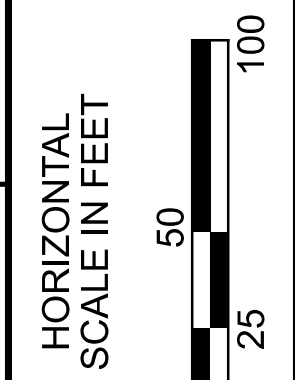
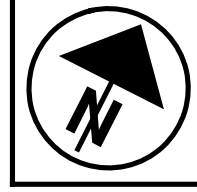
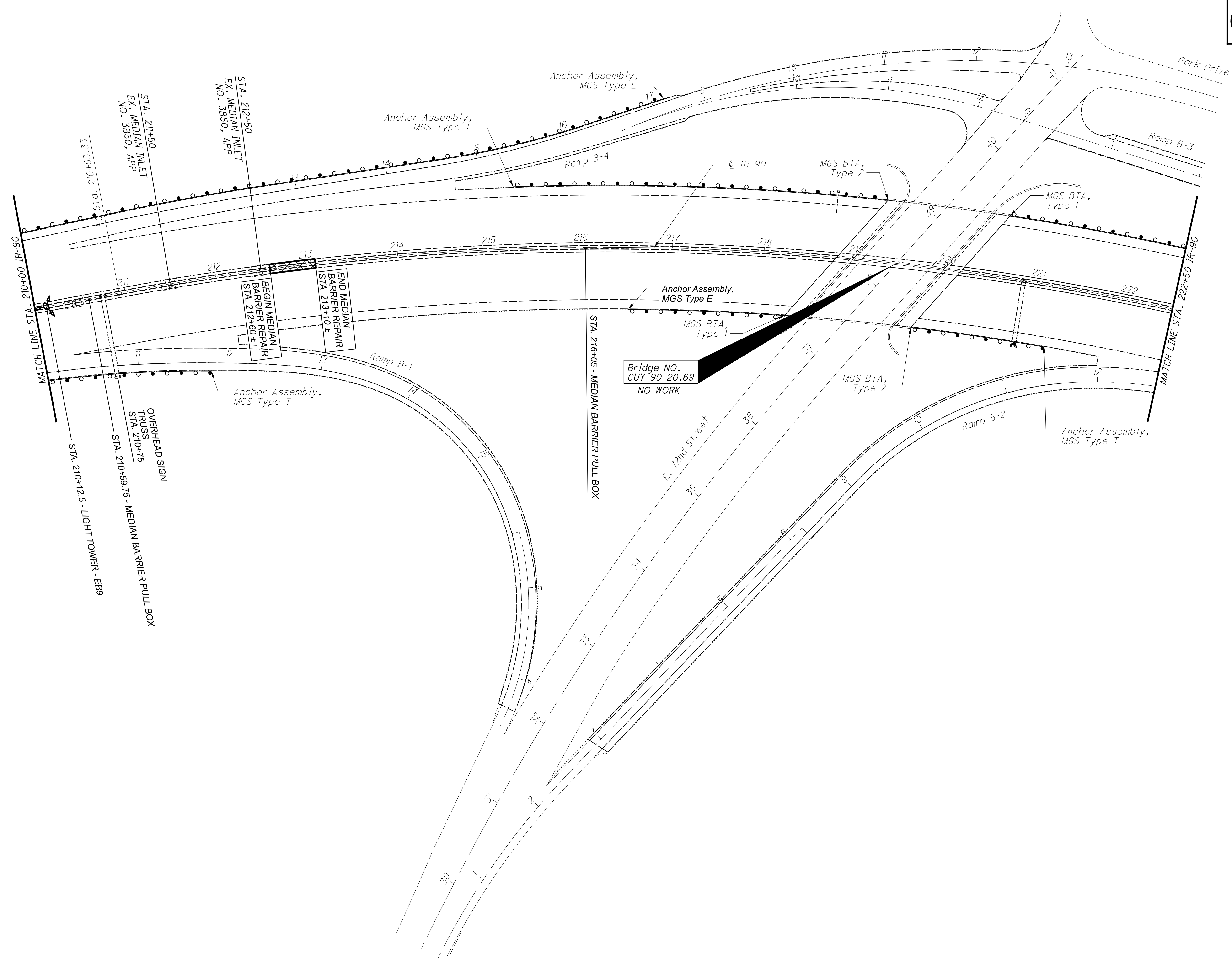
NOTE:
IN SUPPORT OF ODOT D-12
PAVEMENT MARKING
MAINTENANCE PROGRAM,
WET REFLECTIVE PAVEMENT
MARKINGS:
PAVEMENT MARKINGS EXTENDED
FROM STA. 154+70 TO STA. 164+00 (IR-90)
PAVEMENT MARKINGS EXTENDED
ON RAMP A-3 & A-4

FOR LEGEND, SEE SHEET 24

DESIGN AGENCY



DESIGNER	JAG
REVIEWER	DAB
DATE	10/24/22
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PLAN SHEET
 MEDIAN BARRIER REPAIR
 IR-90, STA. 210+00 TO STA. 222+50

DESIGN AGENCY



DESIGNER	JAG
REVIEWER	DAB
PROJECT ID	75483
SHEET	P.25C
TOTAL	26

CONCRETE BARRIER REPLACEMENT DETAILS

CALC BY	CUYAHOGA COUNTY CUY-90-18.63	OH 10	24
DATE		FHWA REGION 5	
CHKD BY		FEDERAL PROJECT	
DATE			

CONSTRUCTION LEGEND

- # - Optional Construction Joint
- * - Grout proposed reinforcing bars into holes drilled into existing concrete in accordance with Supplemental Specifications 852. Holes shall have a maximum diameter of 1" and shall be 0'-6" deep. (Optional)
- ** - Grout proposed reinforcing bars into holes drilled into existing concrete in accordance with Supplemental Specifications 852. Holes shall have a maximum diameter of 1 1/2" and shall be 0'-6" deep. (Optional)

NOTES:

Drawing not to scale.

Horizontal reinforcing bars shall not extend through the Expansion Joint. Clearances between Expansion Joints and vertical reinforcing bars shall be a minimum of 2 1/2" unless otherwise noted. Also all other bars shall maintain a 2" minimum clearance from the outside edge of Barrier. Verticals bars shall be placed with 4' or less spacing between bars.

Refer to Standard Drawing MC-9.3 and MC-9.4 for further details and additional notes.

Concrete Barrier shall be placed in alternate sections by the use of Bulkheads. Closing sections shall be placed after the removal of Bulkheads and after placement of Expansion Joint Filler. Exposed edges of the filler shall be flush with the surface of concrete and shall be free of mortar.

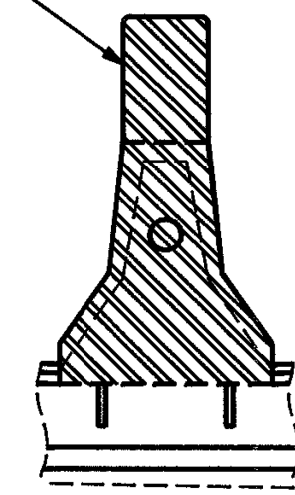
Station marking as per MC-9.3 and MC-9.4 shall be included under this item of work.

Concrete Barrier, Type B-50, As Per Plan "A" shall include the cost of the 9" concrete base in Item 622. Concrete Barrier, Type B-50, As Per Plan "B" shall pay for the concrete base separately under Item 305, 9" Concrete Base, As Per Plan "A".

All labor and materials described and detailed on the concrete barrier sheets shall be included in the overall cost of Item 622 Concrete Barrier, Type B-50, As Per Plan "A" or "B"

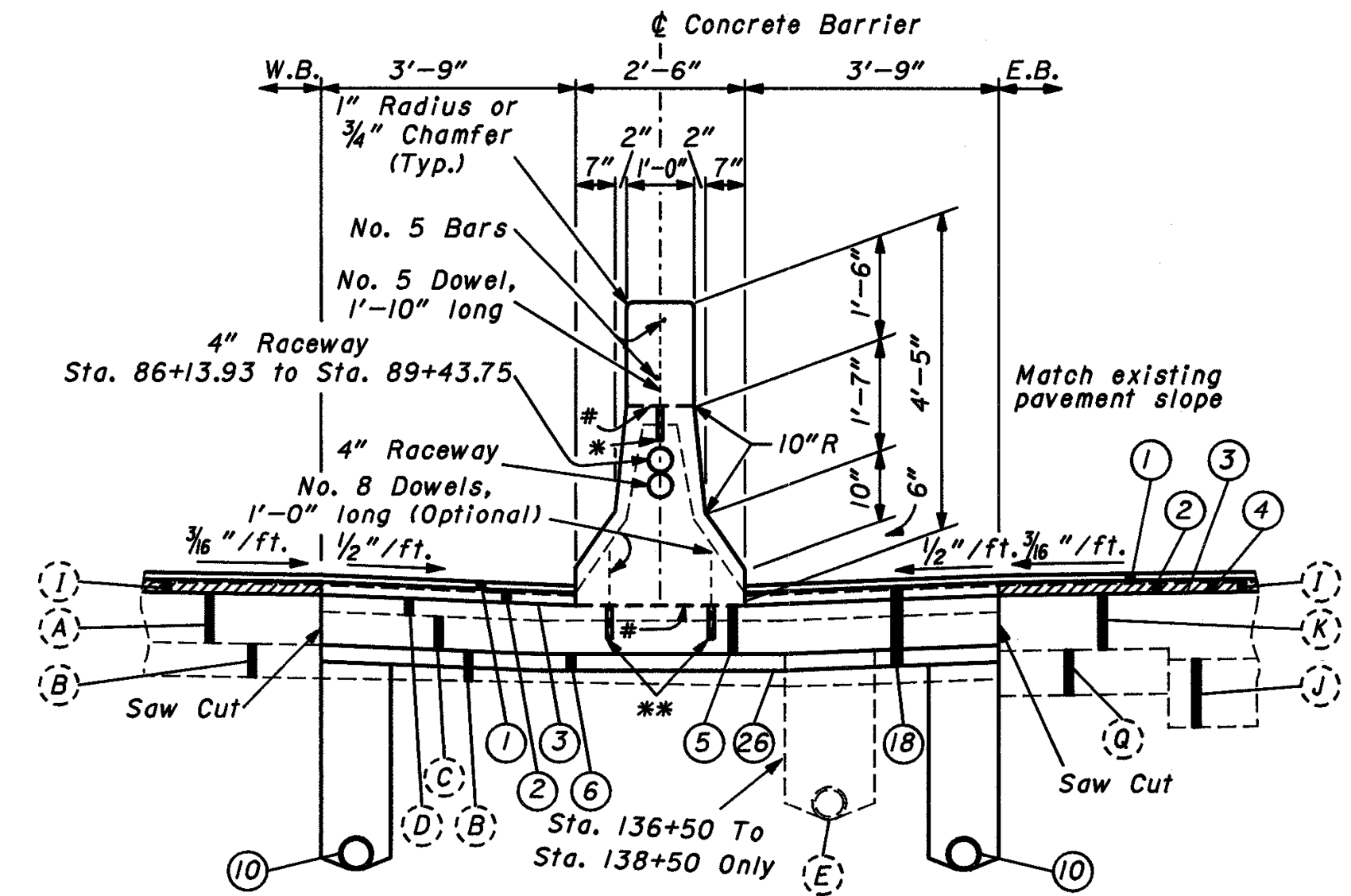
Refer to Shts. 41 for Barrier Quantities.
 Refer to Shts. 5 for Typical Legend.

Preformed Expansion Joint Filler in the Barrier Expansion Joints shall be 3/4" min., in accordance with 705.03. Typically 20' spacing between joints. 3/4" P.E.J.F. is required around each pier also.



SECTION THRU PROPOSED EXPANSION JOINT

ITEM 622 - CONCRETE BARRIER, TYPE B-50, AS PER PLAN "B"



TRANSITION SECTIONS:

- Sta. 138+50 To Sta. 143+60
- Sta. 151+40 To Sta. 162+22
- Sta. 164+67 To Sta. 170+49.90 BK.
=Sta. 200+83.36 AH.
- Sta. 208+65.10 To Sta. 215+25 E.B.
- Sta. 208+65.10 To Sta. 214+00 W.B.
- Sta. 228+20 To Sta. 240+75
- Sta. 247+75 To Sta. 252+68.80 (End Proposed Barrier)
- E. 55th St. Bridge (1976) Deduction:
Sta. 139+55.00 To Sta. 140+41.00
- M.L.K. Blvd. Bridge (2105) Deduction:
Sta. 237+82.67 To Sta. 238+78.72

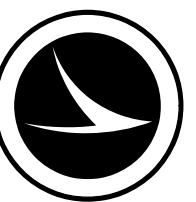
SECTION B-B PROPOSED MEDIAN BARRIER

- Normal Section:
- Sta. 86+13.93 To Sta. 89+43.75 (Two Raceways)
- Sta. 89+43.75 To Sta. 136+50 (One Raceway)
- Sta. 136+50 To Sta. 138+50 (One Raceway) E.B. Pavement buildup same as W.B.

THIS SHEET FOR REFERENCE PURPOSES
 FROM RECORD PLANS:
 1993 - CUY-CUY-090-18.63 - PID 5553

PLAN INSERT SHEET
 CONCRETE BARRIER REPLACEMENT DETAILS
 RECORD PLANS: 1993 - CUY-090-18.63 - PID 5553

DESIGN AGENCY



DESIGNER
JAG

REVIEWER
DAB 10-24-22

PROJECT ID
75483

SHEET TOTAL
P.25D 26

CONCRETE BARRIER REPLACEMENT DETAILS

General Notes – Median Barrier Repairs

Work Description

This project will include the repair of a damaged section of concrete median barrier containing electrical conduits providing electrical power for highway lighting. The below notes and quantities shall be used for the median barrier repair.

Item 202 – Concrete Barrier Removed, As Per Plan

Removal of the existing concrete barrier foundation, existing conduit and guardrail shall be included in this item of work. The Contractor may elect to sawcut the pavement at the barrier foundation edge prior to the concrete barrier and concrete barrier foundation removal as to prevent adjacent pavement from being damaged.

All costs for this item of work, including sawcutting, labor, materials, equipment and incidentals shall be included in the unit bid price for Item 202 – Concrete Barrier Removed, As Per Plan.

The following estimated quantity has been carried to the General Summary for use As Directed by the Engineer:

Item 202 – Concrete Barrier Removed, As Per Plan 50 FT

Item 622 – Barrier, Misc.: Concrete Barrier, Type B50

This item shall consist of furnishing and installing Type B50 Concrete Barrier according to the details shown on **P.25D** of this plan with the following modifications:

1. Install the no. 8 dowel bars between the concrete foundation and the concrete barrier. The size, length and placement of the dowel bars shall follow the doweling details shown for the 53" normal sections.
2. The cost of the min. 9" thick, 3.5' wide foundation shall be included in this pay item.
3. For vertical wall butt joints, install epoxy coated ¾" dowel bars 18" long along perimeter of wall at 12" spacing to tie into existing wall sections.
4. Conduit material shall meet the requirements of 725.04 or 725.051. The appropriate couplings shall also be included in this pay item.

All costs for this item of work, including sawcutting of existing shoulder asphalt, labor, materials, equipment and incidentals shall be included in the unit bid price for Item 622 – Barrier, Misc.: Concrete Barrier, Type B50.

The following estimated quantity has been carried to the General Summary for use As Directed by the Engineer:

Item 622 – Barrier, Misc.: Concrete Barrier, Type B50 50 FT

Median Lighting Cable Replacement

Existing median distribution cables shall be removed and replaced from light tower EB9 at Sta. 210+12.50 to the junction box at Sta. 216+05.00. The following items of work have been carried to the General Summary to complete this work.

Item 625 – Connection, Unfused Permanent 2 EACH
Item 625 – No. 2 AWG 2400 Volt Distribution Cable 1210 FT
Item 625 – Conduit Cleaned and Cables Removed 595 FT

Item 622 – Barrier Misc.: Portable Temporary Movable Barrier System

A. Description

This item consists of furnishing, installing and relocating a portable temporary movable barrier system, including the necessary barrier transfer devices, in accordance with this specification, the plans and as directed by the Engineer.

B. Materials and Construction Methods

All temporary barrier installations shall be completed in accordance with the applicable sections of the Ohio Manual of Uniform Traffic Control Devices (OMUTCD) including all revisions up to the date of advertisement of the contract.

The Portable Temporary Movable Barrier System shall be fully tested to and shall meet the recommended criteria as defined in the National Cooperative Highway Research Program (NCHRP) Report 350 for test level 3 when properly installed according to the manufacturer's recommendations, the plans and as directed by the Engineer.

For design impacts the Portable Temporary Movable Barrier System shall be capable of a lateral deflection of no more than 8 feet when impacted.

The Portable Temporary Movable Barrier System shall be constructed from a series of individual sections. Each barrier section shall be no longer than 50 feet (15 meters) and no shorter than 3 feet (1 meter). A portable impact attenuator shall be installed at the leading edge of the barrier installation and the first two (2) sections of barrier shall be anchored to the roadway in accordance with the manufacturer's recommendations. **Payment for the appropriate impact attenuators shall be included in this bid item.** The last two (2) sections of barrier shall also be anchored to the roadway in accordance with the manufacturer's recommendations. Barrier-to-barrier connections shall be accomplished in accordance with the manufacturer's recommendations.

Sections of the Portable Temporary Movable Barrier System shall be equipped with wheel and jack mechanisms that allow for manual movement of the barrier if directed by the Engineer.

The Portable Temporary Movable Barrier System shall have the capability to be configured as a gate to facilitate work zone or median access. The gate function shall be integrated into the barrier and shall be capable of being moved with the barrier. The gate functionality shall only be used if directed by the Engineer.

A barrier transfer device shall be provided as per the manufacturer's recommendations and shall be incidental to this item. The barrier transfer device shall be a self-contained unit or can be an attachment for any typical construction apparatus. The barrier transfer devices shall be capable of laterally adjusting the barrier at a rate no more than one (1) mile in thirty (30) minutes. The movable barrier system shall be moved at the beginning of the work day to close a lane as required by the Engineer and shall be moved at the end of the work day to open a lane as required by the Engineer.

Barrier reflectors and object markers, spaced at alternating 50 foot intervals per standard drawing MT-101.70, shall be installed on the Portable Temporary Movable Barrier System. Payment for the appropriate barrier reflectors and object markers shall be included in this bid item.

The Contractor shall submit his or her plan for phasing of the Portable Temporary Movable Barrier System to the Engineer two weeks prior to mobilizing the Portable Temporary Movable Barrier System for approval.

To reposition the movable barrier system to close or open a lane, the Contractor shall position three (3) TMA's in the left lane/shoulder. One TMA shall remain at the end of the left lane taper, one shall follow the barrier positioning vehicle and one TMA shall follow further behind the second TMA. Barrier movement shall occur in the direction of traffic flow. A LEO shall follow the second TMA. The Contractor shall submit to the Engineer the product specification information, design cut sheets and other information necessary for approval as determined by the Engineer.

C. Method of Measurement and Basis of Payment

The measurement of the item shall be made along the centerline in feet and payment shall be made at the unit price bid per foot of Item 622 – Barrier Misc.: Portable Temporary Movable Barrier System.

Payment for accepted quantities, complete in place, will be made at the contract price. Payment shall be full compensation for all materials, labor, incidentals and equipment for furnishing, erecting, relocating, maintaining and removing the Portable Temporary Movable Barrier System. The following estimated quantity has been carried to the general summary:

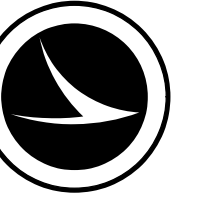
Item 622 – Barrier Misc.: Portable Temporary Movable Barrier System 140 FT

If the contractor so desires, they may propose to use a different style of portable barrier with the understanding that no payment will be made for moving the portable barrier before and after work shifts. Impact attenuators, barrier reflectors and object markers shall be included in the cost of whichever style of portable barrier the contractor proposes.

CUY-090-18.72

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CONCRETE BARRIER REPLACEMENT
GENERAL NOTES AND QUANTITIES

DESIGN AGENCY	
	
DESIGNER	JAG
REVIEWER	DAB
PROJECT ID	10-24-22
SHEET	75483
TOTAL	26
P.26	