

Drainage

Review of drainage facilities

Before any work is started on the project and again before final acceptance by the state, representatives of the state and the contractor, along with local representatives, shall make an inspection of all existing sewers which are to remain in service and which may be affected by the work. The condition of the existing conduits and their appurtenance shall be determined from field observations. Records of the inspection shall be kept in writing by the state.

All new conduits, inlets, catch basins, and manholes constructed as a part of the project shall be free of all foreign matter and in a clean condition before the project will be accepted by the state.

All existing sewers inspected initially by the above mentioned parties shall be maintained and left in a condition reasonably comparable to that determined by the original inspection. Any change in the condition resulting from the contractor's operations shall be corrected by the contractor to the satisfaction of the engineer.

Payment for all operations described above shall be included in the contract price for the pertinent 611 items.

Roadway

Item 209 – Linear Grading, As Per Plan

This item of work shall consist of grading along the outside edge of the paved shoulder to eliminate high spots and provide positive sheet flow off the pavement and shoulder into roadside ditches or drainage structures. This item is not intended to be used to excavate a uniform depth to place Item 617 – Compacted Aggregate, As Per Plan.

Any debris collected shall be removed and disposed of as specified in Section 105.16 & 105.17 of the Construction and Material Specifications.

Payment for the above work shall be made at the unit bid price for Item 209, Station, Linear Grading, As Per Plan and shall include all labor, tools, equipment and materials necessary to perform this item of work.

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

209, Linear Grading, As Per Plan..... **200 Stations**

Pavement

Profile and Alignment

Place the proposed pavement to follow the alignment and profile of the existing pavement. Previous construction plans showing the original alignment and profile, are available for inspection at the ODOT District 12 Office. Place the proposed pavement as shown on the typical sections.

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 7 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 7 calendar days, liquidated damages as per 108.07 of the C&MS 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 401.08(D), 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, 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 prior to the milling operation. The depth of the repair from the top of the existing surface shall be 3.5”. The width of the repair shall be 24” centered over the existing joint.

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

The following estimated quantity is carried to the General Summary to complete this item of work:

251, Partial Depth Pavement Repair, As Per Plan A **450 Sq Yds**

Item 251 – Partial Depth Pavement Repair, As Per Plan B

This item shall be used for the repair of unsound, cold patch, or pop-out areas of transverse joints as directed by the Engineer. This work shall be performed prior to the milling operation. The depth of the repair from the top of the existing surface shall be 3.5”. The width of the repair shall be 24” centered over the existing joint.

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

The following estimated quantity is carried to the General Summary to complete this item of work:

251, Partial Depth Pavement Repair, As Per Plan B..... **1,820 Sq Yds**

Item 253 – Pavement Repair

This work item is for use as directed by the Engineer for the purpose of pavement repair. All labor and material necessary to perform this work and section 250 of the CMS shall be included for payment under Item 253.

Depth of pavement repair removal shall typically be 4” measured before the pavement has been planed. The intent is to take the repair into the concrete if necessary to achieve the 4” removal limits between Sta. 2080+75 and 2081+25 (ATR site 591).

Use replacement materials conforming to the requirements of Item 301.

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

Item 253 – Pavement Repair..... **50 CY**

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. Areas which have transverse wedges (butt joints) are to be removed in two passes as required for maintaining traffic. No additional payment shall be made for the second pass.

Exercise caution when planing adjacent to existing asphalt concrete curb so as not to damage it.

Item 442 – Asphalt Concrete Surface Course, 12.5mm, Type A, (447), 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 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 percent. If ACBFS makes up 100% of the coarse aggregate, apply the binder content requirements of C&MS 442.

Follow all requirements of the specifications with the addition of the following: Provide location reference coordinates for each core taken for mat and joint density acceptance. Utilize a Global Navigation Satellite System (GNSS) receiver with an accuracy of ± 2 inches (50 mm) in the X and Y directions. Use a GNSS with the ability to obtain positional corrections using the ODOT Real Time Network (RTN) or a Base-Rover real-time kinematic (RTK) system. Tie data to the most current version of the National Spatial Reference System (NSRS) through Ohio County Coordinate System (OCCS) Coordinates. Use the RTN only when coverage is available throughout the project limits.



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

Joint coring in accordance with 446.04 is not required for cold longitudinal joints placed over 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 in accordance with 446.04. Pay factors for each lot of material will be determined according to 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.

Item 617 – Compacted Aggregate, As Per Plan

This item shall be used to place compacted aggregate at a variable depth only where needed to fill in low spots along the shoulder and eliminate drop-offs. Material shall be limited to reclaimed asphalt concrete pavement.

The actual depth of compacted aggregate placed will vary depending upon existing conditions. For estimating purposes, an average depth of one inch (1”) has been used. Water, if needed, shall be applied as per 617.05 and included under Item 617 – Compacted Aggregate, As Per Plan.

The following estimated quantity is carried to the General Summary for use as directed by the Engineer:

617, Compacted Aggregate, As Per Plan..... **300 Cu Yds**

Item 618 – Rumble Strips, (Asphalt Concrete), As Per Plan

For all freeways, the lateral position of edge line rumble strips shown in SCD BP-9.1 is revised as follows:

1. Median and Outside Shoulder Offset for shoulders less than 6’: Dimension A and B are equal to 6”.
2. Median and Outside Shoulder Offset for shoulders 6’ to 12’: Dimension A and B are equal to half the shoulder width minus 12”.
3. Median and Outside Shoulder Offset for shoulders greater than 12’: Dimension A and B are equal to 5’.

618, Rumble Strips, (Asphalt Concrete), As Per Plan **22 Mile**

Environmental

Environmental Commitment – Drinking Water Protection

The project is located in a drinking water source protection area. In order to minimize the potential for a release in this sensitive area, project related refueling and maintenance activities performed within the project shall be conducted in an environmentally responsible manner. Spills of fuels, oils, chemicals or other materials which could pose a threat to the drinking water source area shall be cleaned up immediately by the contractor. If the spill is a reportable amount, the contractor should contact solon public service department (440-248-1155) if in solon or the geauga county sheriff’s office dispatch center (440-286-1234) if in bainbridge township for cleanup of the spill.

Environmental Commitment – Scenic River

The Contractor shall not discharge toxic or hazardous materials such as sealants, paint, solvents, cleaning agents, earthen materials, waste-water, fuels or debris of any kind to a scenic river, its tributaries, or drainage ways. If refueling of immobile equipment is necessary within the floodplain or near any tributary drainage ways, ditches, or stream, the contractor shall provide secondary containment with enough capacity to completely contain and collect all potential liquid wastes in the event of a spill.

Any and all construction debris, earthen debris, excess asphalt or concrete, wood debris from clearing, excess fill material, and trash should be disposed of at an approved upland site or land fill above FEMA 100-year flood elevations. Disposal of any such materials within 1000 feet of the Aurora Branch of the Chagrin River is prohibited.

In accordance with ORC 3750.06, reportable spills must be reported to the local fire department (911), the local emergency coordinator SOLON PUBLIC SERVICE DEPARTMENT (440-248-1155) IF IN SOLON OR THE GEAUGA COUNTY SHERIFF’S OFFICE DISPATCH CENTER (440-286-1234) IF IN BAINBRIDGE TOWNSHIP , and the Ohio Spill Line (1-800-282-9378).

The Contractor shall keep all idle equipment, fuels, lubricants, and any storage for/of potentially toxic or hazardous materials out of the FEMA designated special flood hazard area and not within 1000 feet of the Aurora Branch of the Chagrin River.

The Contractor shall notify the Project Engineer 40 days prior to work within 1000 feet of the Aurora Branch of the Chagrin River. The Project Engineer shall notify the District Environmental Coordinator 35 days prior to work within 1000 feet of the scenic river. The District Environmental Staff (Megan Romanchok, Thomas Sorge) shall coordinate with ODNR Scenic Rivers a minimum of 30 days prior to any work within 1000 feet of Aurora Branch of the Chagrin River.

Traffic Control

Entrance and Exit Markings

The entrance and exit pavement markings shall be located and installed as per Standard Construction Drawing TC-72.20. Plan details showing gore locations are approximate. The Contractor shall be responsible to perform as many measurements as needed to determine the correct locations of the markings.

The final pavement markings shall be placed no earlier than 7 days, but no later than 21 days after the placement of the surface course.

Permanent Pavement Markings on Bridges

Proposed pavement markings on bridges shall be placed on top of existing markings.

Raised Pavement Markers

Install raised pavement markers for lane lines at a spacing of eighty feet (80’) center-to-center.

Detection Maintenance

If vehicle detection becomes unexpectedly disabled, requires modification, or is scheduled to be temporarily removed during the construction project, the Contractor shall immediately notify the Project Engineer and District Traffic Engineer.

If the loss of vehicle detection is known prior to the start of construction, it shall be discussed at the preconstruction meeting. At such time, the District Traffic Engineer shall advise the Project Engineer and Contractor on the appropriate action to rectify any loss of vehicle detection. This may include placing the traffic signal on minimum or maximum recall, modifying the minimum green times, and removing the malfunctioning detection from service. Where nonintrusive detection (i.e. video, radar) already exists, the Contractor shall insure that detection is operating and maintained by reconfiguring the detection units accordingly during all construction phases. This is to avoid the signal from maxing out the effected signal phase and creating unnecessary delays.

Locations where non-intrusive detection is proposed and the existing vehicle detection is to be abandoned, the non-intrusive vehicle detection shall be installed, configured and made fully functional prior to the existing detection being disabled. The Contractor shall continue to maintain and modify the detection until final acceptance of the traffic signal. This is to ensure vehicle detection remains fully functional throughout construction.

Protection Of Traffic Monitoring Equipment

Prior to beginning any pavement activities or any excavation activities between 2080+75 and 2081+25 (ATR site 591) the contractor, the project engineer, and a representative from the owner will coordinate a time for the owner/maintaining agency to disconnect the equipment. Following the disconnection by the owner, the contractor will be allowed to perform their pavement activities, including pavement removal. The removed loops and sensors become the property of the contractor.

During the meeting, the owner/maintaining agency will identify equipment locations. Do not disturb pull boxes, controllers, cabinets, poles and conduits. Any damage will be the responsibility of the contractor and repairs must be accepted by the owner.

DESIGN AGENCY



DESIGNER

MAE

REVIEWER

KHD 04/07/26

PROJECT ID

107385

SHEET

P.9

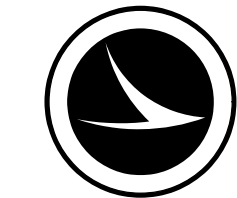
TOTAL

30

SHEET NUMBER							PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
7-9	9A	10-14	16	17	18		01/NHS						
200							200	209	60201	200	STA	ROADWAY	8
	35						35	203	10000	35	CY	LINEAR GRADING, AS PER PLAN	
	35						35	304	20000	35	CY	EXCAVATION	
												AGGREGATE BASE	
							1,000	832	30000	1,000	EACH	EROSION CONTROL	
												PAVEMENT	
							LS	SPECIAL	40010000	LS		PAVER MOUNTED THERMAL PROFILING	
							LS	SPECIAL	69098400	LS		INTELLIGENT COMPACTION	
	2,000						2,000	255	15001	2,000	SY	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, TYPE 1, CLASS QC MS, AS PER PLAN, A	
	100						100	255	15001	100	SY	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, TYPE 1, CLASS QC MS, AS PER PLAN, B	
450							450	251	01001	450	SY	PARTIAL DEPTH PAVEMENT REPAIR (441), AS PER PLAN A	
1,820							1,820	251	01001	1,820	SY	PARTIAL DEPTH PAVEMENT REPAIR (441), AS PER PLAN B	
50							50	253	02001	50	CY	PAVEMENT REPAIR, AS PER PLAN	8
			135,483	117,348			252,831	254	01001	252,831	SY	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN, 1.5"	
			11,519	9,979			21,498	407	20000	21,498	GAL	NON-TRACKING TACK COAT	8
			3,628	3,164.0			6,792	442	00100	6,792	CY	ANTI-SEGREGATION EQUIPMENT	8
				556			556	442	10001	556	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN A, PG76-22M, 1-1/2"	8
			5,645	4,334			9,979	442	10301	9,979	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN A, PG76-22M, 1-1/2"	
300							300	617	10101	300	CY	COMPACTED AGGREGATE, AS PER PLAN	
22							22	618	40601	22	MILE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE), AS PER PLAN	9
					32.72		32.72	850	10010	32.72	MILE	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT)	9
													9
					4,065		4,065	850	10110	4,065	FT	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT)	9
					3,775		3,775	850	10130	3,775	FT	GROOVING FOR 12" RECESSED PAVEMENT MARKING, (ASPHALT)	
					8,680		8,680	850	20110	8,680	FT	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (CONCRETE)	
				3,414			3,414	872	10000	3,414	FT	VOID REDUCING ASPHALT MEMBRANE (VRAM)	
												TRAFFIC CONTROL	
					224		224	620	00500	224	EACH	DELINEATOR, POST GROUND MOUNTED	
					224		224	620	31200	224	EACH	REMOVAL OF DELINEATOR	
					649		649	621	00100	649	EACH	RPM	
					483		483	621	54000	483	EACH	RAISED PAVEMENT MARKER REMOVED	
		300					300	630	97800	300	SF	SIGNING, MISC.: ADDITIONAL SIGNS, GROUND MOUNTED, AS DIRECTED BY THE ENGINEER	
					96		96	646	10400	96	FT	STOP LINE	
					15		15	646	20300	15	EACH	LANE ARROW	13
					2		2	646	20320	2	EACH	WRONG WAY ARROW	
					11.72		11.72	807	12010	11.72	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6", WHITE	
					11.72		11.72	807	12010	11.72	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6", YELLOW	
					10.93		10.93	807	12110	10.93	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, LANE LINE, 6"	
					3,775		3,775	807	12310	3,775	FT	WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12"	
					4,065		4,065	807	12410	4,065	FT	WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 6"	
												MAINTENANCE OF TRAFFIC	
		100					100	614	11110	100	hour	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
		6					6	614	12484	6	EACH	WORK ZONE INCREASED PENALTIES SIGN	
		100					100	614	13001	100	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC, AS PER PLAN	
		6					6	614	18601	6	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	
		11.02					11.02	614	20110	11.02	MILE	WORK ZONE LANE LINE, CLASS I, 6", 642 PAINT	13
													12
		11.02					11.02	614	20560	11.02	MILE	WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT	12
		23.62					23.62	614	22110	23.62	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	12
		23.62					23.62	614	22360	23.62	MILE	WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT	
		4,671					4,671	614	23210	4,671	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 642 PAINT	
		4,671					4,671	614	23690	4,671	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 12", 642 PAINT	
		4,065					4,065	614	24202	4,065	FT	WORK ZONE DOTTED LINE, CLASS I, 6", 642 PAINT	
		4,065					4,065	614	24612	4,065	FT	WORK ZONE DOTTED LINE, CLASS III, 6", 642 PAINT	
		96					96	614	26200	96	FT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	
		96					96	614	26610	96	FT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	
		15					15	614	30200	15	EACH	WORK ZONE ARROW, CLASS I, 642 PAINT	

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER

MAE

REVIEWER

KHD 04/07/26

PROJECT ID

107385

SHEET

P.15

TOTAL

30

