

KNOX COUNTY, OHIO

ASPHALT CONCRETE PAVEMENT SPECIFICATIONS

1.0 GENERAL

- A. In addition to all other specifications governing materials, workmanship and construction methods, the following specifications shall become part of this contract.
- B. These modifications are made to increase durability, compaction properties, enhance aesthetics and assure safety to the general public.
- C. Technicians in charge of Quality Control shall be knowledgeable of the specification requirements and a copy of the project specifications shall be available at all times in the plant lab and control house.

1.1 REFERENCE

All reference to the specification numbers, unless otherwise noted on the plans or modified herein shall be considered to be specification numbers or the respective section thereof of the current Ohio Department of Transportation Construction and Materials Specifications.

1.2 APPROVALS

At or before the preconstruction conference, the contractor shall submit the following for approval:

- A. A list of key project personnel (Project Engineer/Manager, Project Superintendent, etc.) with office and mobile phone numbers to be used by the Engineer.
- B. A list of the paving equipment that will be used on this project (self-propelled paver, roller, distributor, etc.)
- C. Proposed materials and suppliers.
- D. Aggregate producer's ODOT prequalification information.
- E. A list of subcontractors and key personnel representing each.
- F. Proposed Job Mix Formulas (submitted in ODOT format).
- G. Current Asphalt Plant Calibration and Plant Quality Control Plan.
- H. Computer printouts in accordance with 402.07, as requested by the Engineer

- I. The Engineer or a representative appointed by the Engineer will respond to the items submitted within two (2) weeks. If an item is not approved, the contractor will have two (2) weeks from the time of notification to resubmit; allowing two (2) weeks after resubmitting for approval. No mix will be produced until approval is granted.

1.3 **AGGREGATES**

- A. The coarse fraction of asphalt concrete shall be limestone or "crushed" gravel for all courses. If crushed gravel is used for intermediate and base courses, the material will meet the requirements of ODOT 703.05 for Micro-Deval.
- B. Manufactured sand shall not be allowed in mixes containing reclaimed asphalt (RAP).
- C. Manufactured sand shall be limited to 10% maximum of the total mix for virgin mixes.
- D. Aggregate stockpiles will be identified and stocked in a manner to minimize segregation and commingling of materials.
- E. The loader bucket shall be at a height of 1' to 2' above the bottom of the stockpile or at a height that will not allow contamination or debris in the loaded aggregate.
- F. Aggregate shall be placed in the cold feed bins to the extent that it will not overflow into the adjacent bin/s.

1.4 **ASPHALT BINDER**

- A. The mix producer will furnish performance grade PG64-22, ODOT Item 702.01, for all courses.
- B. The Engineer may require a PG70-22(SBS) or 76-22 (SBS) virgin surface course for areas where heavy traffic or previous rutting have occurred. In those instances, the modified grade will be noted on the plans. The design would be a 50 blow Marshall Mix at the minimum cement content noted in these specifications, but the aforementioned modified binder would be substituted for the PG64-22.

1.5 **ITEM 301 BITUMINOUS AGGREGATE BASE**

- A. A maximum of 30% reclaimed asphalt may be used.
- B. The mix shall be a blend of limestone or "crushed" gravel coarse aggregates and natural sand.
- C. No manufactured sand will be allowed in mixes containing reclaimed asphalt.
- D. 10% manufactured sand may be used in virgin mixes only.
- E. The percent passing the No. 4 sieve shall be 44-52%.
- F. The minimum asphalt cement content shall be 5.5% by total weight of the mix.
- G. The fines to asphalt ratio shall not exceed 1.0.

*Except as modified herein the mix shall meet all other requirements of 441.02-1.

*The contractor shall design and produce the mix within the specification limits in Item E. No tolerance outside of the specification will be allowed. If production falls outside the specification limits the contractor will investigate and make the appropriate adjustments. If the contractor fails to bring the mix in tolerance within two tests production will cease until the problem is corrected.

1.6 **441 TYPE 1 MODIFIED SURFACE**

- A. A maximum of 10% reclaimed asphalt shall be allowed for this item.
- B. The mix shall be a blend of limestone or "crushed gravel" and natural sand.
- C. The use of aggregates where the bulk of the material is retained on the No. 8 sieve shall not be allowed for use in the mixes. This would include No. 9, No.10 or any size with a similar gradation.
- D. 10% maximum manufactured sand may be used.
- E. The percentage passing the No. 4 sieve shall be 58-65%.
- F. The minimum asphalt cement content shall be 6.6% by total weight of the mix.
- G. Acceptance voids shall be 2.0-3.5%. Voids higher than 3.5% when tested in the field will require an increase in cement until the target of 3.5% or less is met consistently.
- H. The asphalt absorption and effective asphalt cement content shall be submitted with the proposed Marshall Mix Design.
- I. The fines to asphalt ratio shall not exceed 1.0.
- J. Marshall specimens to determine air voids shall be compacted at 275 +/-5 degrees

Fahrenheit for design and production. Two sets will be done the first three days of production. If the voids are within the specified range and do not vary by more than 0.5%, only one set of specimens every three days of production or as directed by the Engineer's Quality assurance Representative will be required. Marshall shall be done at the Manufacture's recommendation on polymer modified cement grades.

*Except as modified herein the mix shall meet all other requirements of 441.02-1.

*The contractor shall design and produce the mix within the specification limits in Item D. No tolerance outside of the specification will be allowed. If production falls outside the specification limits the contractor will investigate and make the appropriate adjustments. If the contractor fails to bring the mix in tolerance within two tests production will cease until the problem is corrected.

1.7 441 TYPE 1 MODIFIED INTERMEDIATE COURSE

- A. A maximum of 20% reclaimed asphalt is allowed for this item.
- B. The mix shall be a blend of limestone or “crushed” gravel coarse aggregate and natural sand.
- C. The use of aggregates where the bulk of the material is retained on the No. 8 sieve shall not be allowed for use in the mixes. This would include No. 9, No.10 or any size with a similar gradation.
- D. No manufactured sand will be allowed in mixes containing reclaimed asphalt.
- E. 10% manufactured sand may be used in virgin mixes.
- F. The percentage passing the No. 4 sieve shall be 60-68%.
- G. The minimum asphalt cement content shall be 6.4% by total weight of the mix.
- H. Acceptance voids shall be 2.0- 3.5%. Voids higher than 3.5% when tested in the field will require an increase in cement until the target of 3.5% or less is met consistently.
- I. The asphalt absorption and effective asphalt cement shall be submitted with the proposed Marshall Mix Design.
- J. The fines to asphalt ratio shall not exceed 1.0.
- K. Marshall specimens to determine air voids shall be compacted at 275 +/-5 degrees Fahrenheit for design and production. Two sets will be done the first three days of production. If the voids are within the specified range and do not vary by more than 0.5%, only one set of specimens every three days of production will be required. Results shall be provided to the Engineer as requested. Marshall shall be done at the Manufacture’s recommendation on polymer modified cement grades.

*Except as modified herein the mix shall meet all other requirements of 441.02-1.

*The contractor shall design and produce the mix within the specification limits in Item E. No tolerance outside of the specification will be allowed. If production falls outside the specification limits the contractor will investigate and make the appropriate adjustments. If the contractor fails to bring the mix in tolerance within two tests production will cease until the problem is corrected.

1.8 441 TYPE 2 MODIFIED INTERMEDIATE COURSE

- A. A maximum of 30% reclaimed asphalt is allowed for this item.
- B. The mix shall be a blend of limestone or crushed gravel and natural sand

- C. The use of aggregates where the bulk of the material is retained on the No. 8 sieve shall not be allowed for use in the mixes. This would include No. 9, No.10 or any size with a similar gradation.
- D. No manufactured sand will be allowed in mixes containing reclaimed asphalt
- E. 10% manufactured sand may be used in virgin mixes only.
- F. The percentage passing the No. 4 sieve shall be 45-53%.
- G. The minimum asphalt cement content shall be 5.5% by total weight of the mix.
- H. Acceptance voids shall be 2.0-3.5%. Voids higher than 3.5% when tested in the field will require an increase in cement until the target of 3.5% or less is met consistently.
- I. The asphalt absorption and effective asphalt cement shall be submitted with the proposed Marshall Mix Design.
- J. The fines to asphalt ratio shall not exceed 1.0.
- K. Marshall specimens to determine air voids shall be compacted at 275 +/-5 degrees Fahrenheit for design and production. Two sets will be done the first three days of production. If the voids are within the specified range and do not vary by more than 0.5%, only one set of specimens every three days of production will be required. Results shall be provided to the Engineer as requested. Marshall shall be done at the Manufacture's recommendation on polymer modified cement grades.

*Except as modified herein the mix shall meet all other requirements of 441.02-1.

*The contractor shall design and produce the mix within the specification limits in Item D. No tolerance outside of the specification will be allowed. If production falls outside the specification limits the contractor will investigate and make the appropriate adjustments. If the contractor fails to bring the mix in tolerance within two tests production will cease until the problem is corrected.

1.9 RECLAIMED ASPHALT

Reclaimed asphalt proposed for use shall be identified as to source and stockpile location. Processed yard rap will not be allowed unless proper, recent testing has been completed on the identified source and stockpile. Laboratory test data shall be submitted to the Engineer as requested. The cost of the inspection and testing will be borne by the contractor and/or mix supplier.

- A. A minimum of three (3) tests for asphalt cement content and gradation must be done, with the average used in the Job Mix Formula for gradation and cement content. Test data must be current and include one absolute viscosity.

- B. Reclaimed asphalt oxidized to the extent that an absolute viscosity cannot be obtained will not be allowed for use.
- C. Stockpiles will be free of debris and shall not be incorporated into the mix until the stockpile/s has been approved by the Engineer and/or his representative.
- D. The reclaimed asphalt shall be crushed and/or screened prior to mixing to minimize oversized. The screen shall be a minimum of 1 ½" for 301 Item, 1" for Type 2 Item and ½" for Type 1 Intermediate.
- E. Failure to incorporate reclaimed into the mix in a manner satisfactory to the Engineer and/or his representative may result in the material being disallowed for use in future production as well as load rejection until corrections are made.

2.0 **WORKMANSHIP**

In addition to all other specifications governing workmanship and construction method as detailed in 401.15 the following specifications will become part of this contract.

- A. "Folding" of the hopper wings must be minimized and done only when necessary. Material that forms in the corners of the hopper shall be manually thoroughly scraped through an established protocol by the contractor to ensure the safety of the person(s) tasked with the scraping of the hopper. Scraping of this material shall be done often enough to ensure that the temperature of the material in the hopper corners does not cool to the extent that the material does not move freely through the hopper to the augers. The paver hopper should have enough material that the scrapings will mix well through the augers. Material should be at least at a quantity to the flow gates that they are full.
- B. The slat conveyor shall not be visible when the sides of the hopper are cleaned, or become visible during the paving process. Ensure adequate material in the paver hopper at all times during mix placement.
- C. Obvious end load segregation due to failure to implement proper workmanship shall result in a 90% pay factor applied to the days production based on the unit bid price.
- D. Place asphalt concrete only if the surface is dry and weather conditions permit proper handling, finishing and compaction. In addition to Table 401.06-1 for minimum temperatures, surface and air temperatures must be 50 degrees F (10 C) and rising for all surface mixes regardless of the thickness.

- E. The presence of extraneous material, primarily dust balls from the plant in the mix shall be cause to immediately cease production until corrective action can be taken.
- F. Finished surfaces shall be smooth to a tolerance of 1/4" in 10 Feet.

3.0 **PLANT PRODUCTION**

- A. Computer data: The plant computer shall be operational at all times. Should a printer problem or other technical difficulties arise, the problem shall be corrected immediately. The plant operator will inform the Engineer and/or the Engineers contracted laboratory of any computer malfunctions and what corrective action has to be taken. Should the problem not be corrected in a timely manner, production will cease.
- B. Throughout production, the computer printouts shall be reviewed and at the end of each day's production the computer printouts, as requested shall be provided to the Engineers contracted laboratory to be reviewed by the Engineers Quality Assurance Representative.
- C. The switching of mixes while in production from mixes with coarse aggregate (larger than 1/2") to surface course shall not be allowed.
- D. The presence of extraneous material, primarily dust balls from the plant in the mix shall be cause to immediately cease production until corrective action is taken.
- E. Mix quantities in the silo shall be kept to a level to minimize segregation. Silo configuration, batcher capacity and timing will determine this quantity.
- F. Trucks shall be loaded in three (3) drops to minimize segregation. The rear, front and then the middle shall be loaded as recommended by the asphalt institute.
- G. Mix temperatures shall not vary by more than 20 degrees Fahrenheit from one truck to another.
- H. The following shall be production temperature ranges and are dependent on air temperatures, wind velocities and distance to the placement.

| <u>MIX TYPE</u> | <u>MINIMUM TEMPERATURE</u> | <u>MAXIMUM TEMPERATURE</u> |
|---------------------|----------------------------|----------------------------|
| Type 1 Surface | 290 degrees Fahrenheit | 325 degrees Fahrenheit |
| Type 1 Intermediate | 310 degrees Fahrenheit | 325 degrees Fahrenheit |
| Type 2/301 | 280 degrees Fahrenheit | 325 degrees Fahrenheit |

* Mixes containing modifiers will be in accordance with manufacturer's recommendations.
Mixes produced with modified cements shall be a minimum of 300 degrees F at the paver.

*Temperatures exceeding 325 F will not be rejected, but notification will be given to the plant to bring the temperature within range. Mix exceeding 350 will be rejected. If the mix is not brought within range within two trucks production will cease until the cause is identified and corrected.

- I. Truck beds shall be clean and sprayed with a uniform coating of release agent, Excess release agent and puddling in the beds will not be acceptable. The release agent shall be operational at all times; with any water dilutions within the manufacturer's recommendations.
- J. **DIESEL FUEL IN TRUCK BEDS IS NOT ALLOWED.** The plant operator shall monitor truck bed preparation. Trucks that do not comply should be put on notice.
- K. Changes in bin percentages to bring the mix into conformity with the JMF shall be documented on the TE-199 under mix proportions.
- L. Aggregate and reclaimed moisture contents entered into the computer shall be from current laboratory testing and adjusted only as moisture conditions change. Adjustments to the computer moisture entries will not be allowed without test verification.
- M. When producing mixes that include reclaimed asphalt, production rates (TPH) will be set at a rate that will produce a sufficient blending of the reclaimed and virgin aggregates.
- N. The asphalt cement specific gravity from the transport tickets shall be entered in the computer and adjusted only as transport tickets dictate.

4.0 **LABORATORY TESTING**

The producer will test his mix in accordance with the requirements of 441.09 with the following revisions.

- A. Marshall specimens to determine air voids shall be compacted at 275 +/-5 degrees Fahrenheit. Two sets will be done the first three days of production. If the voids

are within the specified range and do not vary by more than 0.5%, only one set per day thereafter or as directed by the Engineer. Marshall designs shall be done at the Manufacturer's recommendation on polymer modified cement grades.

- B. Extractions shall be done the first three days of production. The first sample of each of those three days.
- C. Corrected asphalt content over results shall be recorded on the TE-199 and the Ignition oven offset the same time as the nuclear gauge.
- D. The Engineers Quality Assurance Representative may make changes to the testing if there is a concern about one of the mix properties.
- E. Maximum Theoretical Gravity (MSG) "Dry Backs" which indicate 1 gram or less will eliminate the necessity for future dry backs. The Quality Assurance Representative may require periodic checks for this value if increased or decreased moisture is suspect or problems are being investigated.
- F. Random sample locations will be determined by the Engineers Quality Assurance Representative at the start of production for the quantity of mix to be produced each day. A 10,000 grams of the split sample will be taken and marked with all information for comparison checks by the Engineer. Testing not in agreement shall be investigated.
- G. Test results shall be recorded on ODOT TE-199's and production will be reported in lots of 3000 tons. All charts and paperwork shall be kept up to date. Test results shall be faxed or emailed each production day to the Engineer as requested.

5.0 **QUALITY ASSURANCE REPRESENTATIVE**

The Engineer may employ an independent testing laboratory to perform periodic mix testing, compaction testing, plant inspection and any other testing or inspection required to ensure materials, methods and processes are suitable and meet project specifications. The Engineer will coordinate with the contractor or material supplier a minimum of 24-hours in advance.

6.0 PROCEDURES FOR OPERATIONS

- A. All work associated with this contract shall be performed between 6:30 A.M and 8:00 P.M. Monday through Friday.
- B. Notice of Saturday work shall require a minimum of 24 hours' notice (on a week by week basis) and must be approved by the Engineer.
- C. If conditions are acceptable, daily work hours maybe be extended with approval from the Engineer.
- D. No work will be permitted on Sunday without written permission from the Engineer.
- E. The contractor shall notify the Engineer 48 hours prior to the start of operations.
- F. Weather requirements are as outlined in Item 2.0 (D.)
- G. If the contractor suspends operations on this contract for more than 3 working days (excluding holidays and weekends) the contractor shall notify the Engineer 48 hours prior to resuming operations. The contractor may make rescheduling arrangements with the Engineer prior to suspending work, but the contractor will be responsible for notifying the Engineer of any changes to any established arrangements.
- H. These requirements are to be followed by the general contractor and any sub- contractor on this project.
- I. Damage to areas outside of the designated work limits as a result of the contractor, subcontractor or duly appointed agents operations shall be repaired at the contractor's expense.
- J. Excavated areas will be secured prior to the end of each working day and will have adequate protection until such time the area/s no longer pose a risk to the public.
- K. Stockpiling of materials overnight on the job site will not be permitted.
- L. Streets and/or roadways with base conditions that are disturbed due to heavy loads shall have decreased tonnages on trucks as not to cause additional damage.

7.0 COODINATION WITH THE OHIO UTILITIES PROTECTION SERVICE

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8.0 ROADWAY PROPERTIES

- A. Pavement width shown on the plans is sometimes approximate.
- B. The pavement shall be resurfaced to its full width or to a width determined by the Engineer in the field.
- C. The Engineer and the contractor shall inspect the road prior to beginning the resurfacing operation, to determine the width to be paved, if plan notes do not indicate a pavement width, the contractor shall match the width of the existing pavement.
- D. Roads with aggregate berms that are not to be planed out shall have off set stakes set by the contractor to ensure that the existing edge of pavement is maintained. This work shall be included in the unit bid price for construction layout stakes.
- E. If the contractor's operation is unable to produce an accurate and consistent edge; the contractor may be directed by the Engineer to use a string line when placing asphalt courses.

9.0 PRE-LEVELING

- A. When specified in the plans, the contractor shall place an intermediate course of asphalt concrete on the roadway to correct any depressions, settlements, longitudinal or crown deficiencies in the existing pavement.
- B. The asphalt shall be placed in variable widths and depths as directed by the Engineer's representative in the field, or as depicted within the project plans.
- C. The contractor may also be required to place pre-leveling to maintain or modify the rate of super elevation or to a slope as directed by the Engineer.
- D. This work shall be included in the unit price bid for Item 441 asphalt, intermediate course.

10.0 FEATHERING

- A. At points where the proposed work begins or ends at intersections, the final asphalt course shall be feathered to meet the existing roadway surface.
- B. On roads to be resurfaced and on adjacent side roads the ratio of this feathering shall be 1" per 12 feet and shall be contained within the limits of work described in the plans or as directed by the Engineer.

11.0 **JOINTS**

- A. Open longitudinal joints shall not be permitted; however, when a cold joint is unavoidable, its vertical face shall be uniformly coated with ODOT Item 407 Tack Coat similar to that specified for intermediate and surface asphalt courses. All costs related to performing this work shall be included in the unit price bid for all courses.

12.0 **SEALING FEATHERS AND BUTT JOINTS**

- A. A well bonded and sealed joint is required
- B. Where the asphalt surface required to be feathered to meet an adjoining surface, including private driveways, the completed feathered surface and adjacent existing surface shall be coated with a thin coat of rubberized crack sealant approximately 8" in width.
- C. Traffic shall not be permitted on the sealed joint until the asphalt cement has cooled sufficiently to prevent tracking.
- D. The bituminous material used and the cost of sealing joints as described above shall be included in the unit price bid for item 441Type 1 surface course.

13.0 **DRIVEWAYS**

- A. Butt joints 18" wide shall be cut for asphalt driveways to ensure a smooth transition from the roadway surface. Butt joints shall be feathered to a maximum of 4' from the edge of pavement or as directed by the Engineer. All concrete driveways will be reviewed by the Contractor and Engineer.
- B. Sufficient quantities of 441 Type 1 surface course (driveways) has been included in the general summary for this work.
- C. Aggregate driveways shall be wedged with crushed aggregate immediately following the asphalt paving operation to maintain adequate access.
- D. During the berming operation, the aggregate driveways shall be feathered with Item 411 to a maximum of 3' from the edge of pavement or as directed by the Engineer.
- E. A sufficient quantity of 411 stabilized crushed aggregate has been included in the general summary for this work.

14.0 MAILBOX APPROACHES

- A. Mailbox approaches shall be constructed of their respective materials based upon existing conditions and or as directed by the Engineer.
- B. Sufficient quantities of required material have been included in the general summary for this work.
- C. The approaches shall be constructed in such a manner as to maintain proper cross slope and elevation with the adjacent pavement and berm.

15.0 BERMS

Where Item 411, stabilized aggregate is specified to be used for berm reconditioning and paved berm back-up, the work shall follow as closely as possible behind the paving operations and the length of the unconditioned shoulder shall be held to a minimum.

- A. All shoulder reconditioning shall be completed no later than five (5) calendar days after the placement of the surface course unless otherwise approved by the Engineer.
- B. All berm compaction shall be completed with a pneumatic tired roller.
- C. Proper cross slope (1/2" per foot) and proper elevations of the stabilized aggregate berm shall be achieved upon completion of compaction.
- D. At no time will the compacted berm be permitted to be higher than the adjacent pavement.
- E. The contractor will not have any liability to maintain berm after it has been accepted by the Engineer.
- F. After this acceptance the county will assume responsibility for maintenance of the berm

16.0 ROLLERS

- A. Rollers shall be only of the steel wheel type and pneumatic tire types meeting the minimum requirements of section 401.13 of the specifications.
- B. The use of a pneumatic tire roller is required for all leveling courses.
- C. When the tonnage production per hour and the area of coverage requires the use of three (3) rollers, the rollers will be in a sequence that assures adequate compaction and good aesthetics. Any change in rollers required must be approved by the Engineer prior to the day's production. The tonnage requirements and square yards covered shall govern, regardless of field density requirements under ODOT Supplemental 1055.

- D. Rollers shall be operational at all times. Should a roller break down, the placement will be slowed to a lesser tonnage for the number of rollers remaining until repairs are made.
- E. Vibration shall not be used on courses less than 1 ½" or where there are underlying unstable conditions, utilities or residences which may be disturbed. In most instances the vibratory roller will not be allowed in the vibratory mode.

17.0 **PAVEMENT REPAIR**

- A. The area to be repaired will be designated by the Engineer prior to the start of work.
- B. The existing pavement shall be saw cut at these limits (unless a milling head is used) and removed. The contractor shall take care to prevent disturbing or undermining the abutting pavement.
- C. After the existing pavement has been removed, the contractor and the Engineer shall inspect the sub grade. If the sub grade is found to be unsuitable, it shall be removed to a depth determined by the Engineer and backfilled with Item 301 and compacted. All removal shall in accordance with Item 202 and disposed of accordingly.
- D. Payment for this item shall include all labor, materials, equipment and incidentals required to remove and dispose of unsuitable sub grade.
- E. Prior to placing any bituminous base, all vertical faces shall be cleaned and coated with bituminous material in accordance with section 401.14.
- F. The asphalt shall be placed in a minimum of two (2) equal lifts (unless otherwise approved by the Engineer) with each lift compacted thoroughly.
- G. The final lift shall be finished flush with the existing pavement surface. This area shall be maintained flush by the contractor until the pavement is resurfaced.
- H. Where resurfacing is not specified in the repair area, the finish course shall be 441 Type 1 for a compacted thickness of 1 ½".
- I. The edges of all pavement repairs shall be sealed with a rubberized crack sealant if the plans do not include an asphalt overlay as part of the plans.
- J. Payment for this item will be at the unit bid for item 253 pavement repairs as per plan.

18.0 PAVEMENT PLANING, ASPHALT CONCRETE

- A. This work shall conform to Item 254 – Pavement Planing, Asphaltic Concrete with the following exceptions:
1. The areas calling for pavement planing are approximate.
 2. The contractor and Engineer shall inspect all locations for planing to determine the depth and area of the wearing course to be removed as well as the equipment requirements based on the environmental surroundings.
 3. All planed areas shall be paved within two (2) working days except as directed or permitted by the Engineer.
- B. All vertical edges shall be ramped with cold mix or hot mix asphalt placed on burlap, or as directed by the Engineer to provide a smooth and safe transition from the planed surface to the existing pavement. This shall be at a minimum slope of 12.1 or in some cases to provide driveway access.
- C. Butt joints shall be constructed as shown on ODOT Standard Drawing BP- 3.1 or as directed by the Engineer.
- D. At some locations, the contractor will be planing an entire roadway section or lane width. This planing will be at a range depth of 0" to 3" or greater. Proper cross slope is to be established during planing.
- E. Planed material shall become the property of the contractor to be disposed of at their expense.
- F. Payment for this item shall include all labor, equipment, material, removed and transfer of material and any incidentals required to perform the stated work.
- G. Payment will be at the unit bid price for Item 254.

19.0 ITEM 407 - TACK COAT

This work shall conform to ODOT Item 407-Tack Coat with the following exceptions:

- A. The contractor shall not apply tack coat more than 1,000 feet ahead of the paving operation or more area than can be covered with asphalt by the end of the workday. If surface course is placed over an intermediate course within 24 hours and the surface temperature exceeds 70 degrees Fahrenheit the application of tack may be waived by the Engineer when the area has not been open to traffic and the surface is clean and free of debris.
- B. Should the intermediate or leveling course be open to traffic for more than 24 hours and the surface has become dirty or contaminated, the contractor will be required to clean and tack the intermediate or leveling course.
- C. This work shall be performed at no additional cost to the Engineer or other agency covered under these specifications.
- D. Payment for this item shall include labor, materials, equipment, incidentals and required cleaning and/or cover aggregate if necessary.
- E. Payment will be at the unit bid price for Item 407 Tack Coat.

20.0 PUBLIC SAFETY AND TRAFFIC MAINTNENANCE

- A. The contractor shall provide and maintain lights, signs and barricades for the protection of the work and the safety and convenience of the traveling public.
- B. The contractor shall be responsible to provide traffic control devices for operations as described in the current edition of the Ohio Manual of Uniform Traffic Control Devices (OMUTCD).
- C. The contractor, subcontractor or duly appointed agent shall notify Engineer prior to any permanent traffic striping.