

## REVISIONS TO MATERIALS SAMPLING GUIDE July 1, 2018 Edition

|  |  |   |  |
|--|--|---|--|
| Section 2, Asphaltic Materials   |  |   |  |
| Page 2-1 – Asphalt, Emulsified Anionic and Cationic  |  |   |  |
|  |  | Field Personnel                                       |  |
|  |  |   | <p>Removed – <u>Field-Diluted Emulsions</u><br/>Unless diluted under the supervision of the engineer, a sample consisting of one one-quart plastic container from each tank car or truckload following dilution at project.</p> <p><u>Supplier-Diluted and Undiluted Emulsions</u><br/>When requested by the central laboratory, a sample consisting of one one-quart plastic container from a tank car or truckload following receipt at project.</p> <p>Sample to be submitted no later than five days to the central laboratory.</p> <p>No further samples are required unless the appearance of the material or any physical characteristics of it indicates contamination or non-compliance with the specifications</p> |
|  |  |   | <p>Added – One sample for each item/type of emulsion on project for all suppliers.<br/>Inspector chooses any time within the project to get one sample. Sample will be shipped immediately as it must be tested within 14 days of born on date.<br/>Samples diluted with water after terminal delivery will be identified and the percentage of dilution disclosed.</p>  |
| Section 3, Asphaltic Concrete  |  |   |  |
| Page 3-1, Material – Asphaltic Concrete Type SPH, SPR; Air Void, Binder %, FAA, CAA, Gradation |  |   |  |
|  |  | Location of Additional Information                    |  |
|  |  | Added – Note 28                                       |  |
| Page 3-1, Material – Asphaltic Concrete Type SPH, SPR; Tensile Strength Ratio (TSR) T-283      |  |   |  |
|  |  | Location of Additional Information                    |  |
|  |  | Added – Note 28                                       |  |
| Page 3-1, Material – Asphaltic Concrete Type SPS   |  |   |  |
|  |  | Location of Additional Information                    |  |
|  |  | Added – Note 28                                       |  |
| Page 3-1, Material – Asphaltic Concrete Types LC, RLC, SLX, SRM                                |  |   |  |
|  |  | Material - Asphaltic Concrete Types LC, RLC, SLX, SRM |  |
|  |  | Removed – OGFCCRM, OGFC, GGCRM                        |  |
|  |  | Location of Additional Information                    |  |
|  |  | Added – Note 28                                       |  |
| Section 4, Asphaltic Concrete Materials  |  |   |  |
| Page 4-1, Mineral Aggregate (Gravel, Sand, Sand-Gravel)  |  |   |  |

|  |  |                                    |
|--|--|------------------------------------|
|  |  | Location of Additional Information |
|  |  | Added – Note 28                    |
| Page 4-1, Crushed Rock (Limestone)   |  |                                    |
|  |  | Location of Additional Information |
|  |  | Added – Section 27, Note 28        |
| Page 4-1, Crushed Rock (Limestone Screenings, Man-Sand)                        |  |                                    |
|  |  | Location of Additional Information |
|  |  | Added – Section 27, Note 28        |
| Page 4-2, Quartzite and Granite  |  |                                    |
|  |  | Location of Additional Information |
|  |  | Added – Section 27, Note 28        |
| Page 4-2, Quartzite, Chat and Granite (Screenings, Man-Sand)                   |  |                                    |
|  |  | Location of Additional Information |
|  |  | Added – Section 27, Note 28        |
| Page 4-2, Crushed Mineral Aggregate or Chat for Micro-surfacing                |  |                                    |
|  |  | Location of Additional Information |
|  |  | Added – Note 28                    |
| Section 5, Cold Mix Bituminous Surfacing and Base                              |  |                                    |
| Page 5-1, Subgrade Sand  |  |                                    |
|  |  | Location of Additional Information |
|  |  | Added – Section 27, Note 28        |
| Page 5-2, Combined Materials (Sand and Filler)                                 |  |                                    |
|  |  | Location of Additional Information |
|  |  | Added – Section 27, Note 28        |
| Page 5-2, Bituminous Aggregates (Includes Mixed in Place Bituminous Surfacing) |  |                                    |
|  |  | Location of Additional Information |
|  |  | Added – Note 28                    |
| Page 5-3, Mineral Aggregates   |  |                                    |
|  |  | Location of Additional Information |
|  |  | Added – Note 28                    |
| Section: 6 – Gravel and Crushed Rock for Surfacing                             |  |                                    |
| Page 6-1, Gravel for Surfacing   |  |                                    |
|  |  | Location of Additional Information |
|  |  | Added – Note 28                    |
| Page 6-2, Crushed Rock for Surfacing   |  |                                    |
|  |  | Location of Additional Information |

|   |   |  |                 |
|---|---|--|-----------------|
|   |   |  | Added – Note 28 |
| <b>Section 7 – Mineral Aggregate for Armor Coat</b>                                   |   |  |                 |
|   | Page 7-1, Mineral Aggregate for Armor Coat (Gravel)           |  |                 |
|   |   | Location of Additional Information   |                 |
|   |   | Added – Note 28  |                 |
|   | Page 7-2, Chip Seal (Limestone, Dolomite, Granite, Quartzite) |  |                 |
|   |   | Location of Additional Information   |                 |
|   |   | Added – Note 28  |                 |
| <b>Section 8 – Crushed Rock and Crushed Rock Screenings for Base Course</b>           |   |  |                 |
|   | Page 8-1, Crushed Rock for Base Course                        |  |                 |
|   |   | Location of Additional Information   |                 |
|   |   | Added – Section 27, Note 28  |                 |
| <b>Section 12 – Foundation Course (Crushed Concrete, Aggregate-D, and Bituminous)</b> |   |  |                 |
|   | Page 12-2, All Aggregates and Soil Binder                     |  |                 |
|   |   | Materials - All Aggregates and Soil Binder   |                 |
|   |   | Removed – All Aggregates and Soil Binder   |                 |
|   |   | Type of Test   |                 |
|   |   | Removed – Experimental Base Course Mixtures  |                 |
|   |   | Field Personnel  |                 |
|   |   | Removed - Project personnel will submit the 60-pound sample of aggregates and the 20-pound sample of soil binder needed to perform the testing shown under the central laboratory column.<br><br>The sample shall be taken at the project. |                 |
|   |   | Central Lab  |                 |
|   |   | Removed – One 60-pound sample of each aggregate and one 20-pound sample of soil binder for EBCM mix design and moisture-density information.<br><br>This sample is to be submitted prior to production.                                    |                 |
|   | Page 12-3, Soil Binder  |  |                 |
|   |   | Material   |                 |
|   |   | Removed – Soil Binder  |                 |
|   |   | Type of Test   |                 |
|   |   | Removed – Plasticity Index & Gradation   |                 |
|   |   | Field Personnel  |                 |

|   |  |                                    |  |
|---|--|------------------------------------|--|
|   |  |                                    | Removed – Project personnel will supply the 10-pound sample needed to perform the testing shown under the central laboratory column. |
|   |  |                                    | The sample shall be taken at the mixing locations.   |
|   |  | Central Lab                        |  |
|   |  |                                    | Removed – One 10-pound sample for testing each 1,000 cubic yards of binder used or fraction thereof.                                 |
| Section 13 – Granular Base, Granular Fill, Granular Backfill, Sand Blanket and MSE Walls          |  |                                    |  |
| Page 13-1, All – Mineral Aggregates and Soil Binder   |  |                                    |  |
|   |  | Location of Additional Information |  |
|   |  |                                    | Added – Section 27, Note 28  |
| Page 13-1, Mineral Aggregates (Commercial Production)   |  |                                    |  |
|   |  | Location of Additional Information |  |
|   |  |                                    | Added – Note 28  |
| Page 13 -2, Coarse Sand   |  |                                    |  |
|   |  | Location of Additional Information |  |
|   |  |                                    | Added – Note 28  |
| Page 13-2, Fine Sand  |  |                                    |  |
|   |  | Location of Additional Information |  |
|   |  |                                    | Added – Note 28  |
| Page 13-4, Granular Base, Granular Fill, Granular Backfill and Sand Blanket                       |  |                                    |  |
|   |  | Location of Additional Information |  |
|   |  |                                    | Added – Note 28  |
| Page 13-6, Stabilized Portion of Granular Base, Granular Fill, Granular Backfill and Sand Blanket |  |                                    |  |
|   |  | Location of Additional Information |  |
|   |  |                                    | Added – Note 28  |
| Page 13-7, Granular Backfill for Structures   |  |                                    |  |
|   |  | Location of Additional Information |  |
|   |  |                                    | Added – Note 28  |
| Page 13-8, Granular Subdrains   |  |                                    |  |
|   |  | Location of Additional Information |  |
|   |  |                                    | Added – Note 28  |
| Page 13-8, Granular Backfill for Pipe Underdrain  |  |                                    |  |
|   |  | Location of Additional Information |  |
|   |  |                                    | Added – Note 28  |
| Page 13-9, Select and Random Granular Backfill for MSE Walls                                      |  |                                    |  |
|   |  | Location of Additional Information |  |
|   |  |                                    | Added – Section 27, Note 28  |

|   |  |
|---|--|
| <b>Section 14 – Portland Cement/Interground-Blended Cement/Silica Fume</b>  |  |
| <b>Page 14-1. Interground/Blended Cement</b>  |  |
|   | Field Personnel                                    |
|   | Removed – 1-gallon                                 |
|   | Added – 15-pound                                   |
|   | Central Lab  |
|   | Removed – 1-gallon                                 |
|   | Added – 15-pound                                   |
| <b>Section 15 – Portland Cement Concrete For Pavement, Base Course, Base Course Widening, Pavement Patching, etc.</b>                 |  |
| <b>Page 15-1, Class E and F Aggregates</b>  |  |
|   | Location of Additional Information                 |
|   | Added – Note 28                                    |
| <b>Page 15-1, Class A, B, and C Aggregates</b>  |  |
|   | Location of Additional Information                 |
|   | Added – Note 28                                    |
| <b>Page 15-1, Class R Aggregate</b>   |  |
|   | Location of Additional Information                 |
|   | Added – Note 28                                    |
| <b>Page 15-2, All Aggregates</b>  |  |
|   | Location of Additional Information                 |
|   | Added – Note 28                                    |
| <b>Page 15-5, Load Transfer Device Assemblies for Reinforced Concrete Pavement Joints, Semi-Rigid, Closed-Cell Polypropylene Foam</b> |  |
|   | Item or Group                                      |
|   | Added – Semi-Rigid, Closed-Cell Polypropylene Foam |
|   | Approved Products List                             |
|   | Added – Yes  |
| <b>Section 16 - Portland Cement Concrete For Structures, Culverts, and Miscellaneous Construction</b>                                 |  |
| <b>Page 16-1, Class E and F Aggregates</b>  |  |
|   | Location of Additional Information                 |
|   | Added – Note 28                                    |
| <b>Page 16-1, Class A, B, and C Aggregates</b>  |  |
|   | Location of Additional Information                 |
|   | Added – Note 28                                    |
| <b>Page 16-1, Class R Aggregate</b>   |  |
|   | Location of Additional Information                 |

|   |  |                 |
|---|--|-----------------|
|   |  | Added – Note 28 |
|   | Page 16-2, All Aggregates  |                 |
|   | Location of Additional Information   |                 |
|   |  | Added – Note 28 |
| Section 18 – Fence Materials  |  |                 |
|   | Page 18-1, Fence (Barbed Wire, Chain Link Fabric, Right of Way, Woven Wire)                                |                 |
|   | Manufacturer Certified Tests Required  |                 |
|   |  | Removed – No    |
|   |  | Added – Yes     |
|   | Page 18-1, Handrail and Barrier Rail   |                 |
|   | Manufacturer Certified Tests Required  |                 |
|   |  | Removed – No    |
|   |  | Added – Yes     |
|   | Page 18-1, Fence Fasteners and Ties  |                 |
|   | Manufacturer Certified Tests Required  |                 |
|   |  | Removed – No    |
|   |  | Added – Yes     |
|   | Page 18-1, Fittings and Hardware   |                 |
|   | Manufacturer Certified Tests Required  |                 |
|   |  | Removed – No    |
|   |  | Added – Yes     |
|   | Page 18-1, Staples   |                 |
|   | Manufacturer Certified Tests Required  |                 |
|   |  | Removed – No    |
|   |  | Added – Yes     |
|   | Page 18-1, Steel 'T' Line Posts  |                 |
|   | Manufacturer Certified Tests Required  |                 |
|   |  | Removed – No    |
|   |  | Added – Yes     |
|   | Page 18-1, Tension Wire  |                 |
|   | Manufacturer Certified Tests Required  |                 |
|   |  | Removed – No    |
|   |  | Added – Yes     |
| Section 19 – Culvert Pipe, Drain Tile, Sewer Pipe, Slope Drains and Related Materials |  |                 |
|   | Page 19-1, Culvert, Metal Pipe (Zinc Coated Galvanized Steel, Aluminum Coated Steel, Polymer Coated Steel) |                 |
|   | Item or Group  |                 |

|  |  |   |
|--|--|---|
|  |  | Added – Metal Pipe  |
|  |  | Approved Products List  |
|  |  | Removed – See Post Applied Coatings and Flexible Pipe Joints (page 19-2) for applicable coating and joint information |
|  |  | Location of Additional Information  |
|  |  | Added – See Post Applied Coatings and Flexible Pipe Joints (page 19-2) for applicable coating and joint information   |
|  | Page 19-1, Culvert, Metal Pipe (Zinc Coated Galvanized Steel, Aluminum Coated Steel, Polymer Coated Steel), Pipe |   |
|  |  | Item or Group   |
|  |  | Removed – Culverts  |
|  |  | Added – Pipe  |
|  |  | Item or Group   |
|  |  | Removed – Culverts (Plastic)  |
|  |  | Sample Required   |
|  |  | Removed – Yes – One 10' section from each lot   |
|  |  | Approved Products List  |
|  |  | Removed – No  |
|  |  | Manufacturer Certified Tests Required   |
|  |  | Removed – Yes   |
|  |  | Manufacturer Certification of Compliance Required   |
|  |  | Removed – Yes   |
|  |  | Item or Group   |
|  |  | Removed – Underdrains   |
|  |  | Sample Required   |
|  |  | Removed – Yes – One 24-inch sample of each size to include markings   |
|  |  | Approved Products List  |
|  |  | Removed – No  |
|  |  | Manufacturer Certified Tests Required   |
|  |  | Removed – No  |
|  |  | Manufacturer Certification of Compliance Required   |
|  |  | Removed – Yes   |
|  |  | Location of Additional Information  |
|  |  | Removed – Section 27, Note 11   |
|  | Page 19-1, Culvert, Reinforced Concrete  |   |
|  |  | Item or Group   |
|  |  | Added – Pipe  |
|  |  | Location of Additional Information  |
|  |  | Added – Section 27, Note 28   |
|  |  | Item or Group   |

|  |   |  |
|--|---|--|
|  |   | Flared End Sections  |
|  |   | Location of Additional Information   |
|  |   | Added – Section 27, Note 28  |
|  | Page 19-1, Culvert, Plastic (All Shapes) (15 inches and larger) |  |
|  |   | Item or Group  |
|  |   | Added – Plastic (All Shapes) (15 inches and larger)  |
|  |   | Sample Required  |
|  |   | Added – Yes – One 10-foot section from each lot.   |
|  |   | Approved Products List   |
|  |   | Added – No   |
|  |   | Manufacturer Certified Tests Required  |
|  |   | Added – Yes  |
|  |   | Manufacturer Certification of Compliance Required  |
|  |   | Added – Yes  |
|  |   | Location of Additional Information   |
|  |   | Added – See Flexible Pipe Joints (page 19-2) for applicable joint information                                      |
|  | Page 19-1, Culvert, Drain Tile                                  |  |
|  |   | Item or Group  |
|  |   | Concrete   |
|  |   | Location of Additional Information   |
|  |   | Added – Note 28  |
|  |   | Item or Group  |
|  |   | Added – Plastic/Underdrains (14 inches or smaller)   |
|  |   | Sample Required  |
|  |   | Added – Yes – One 24-inch sample of each type (perforated, non-perforated, HDPE, PVC) and size to include markings |
|  |   | Approved Products List   |
|  |   | Added – No   |
|  |   | Manufacturer Certified Tests Required  |
|  |   | Added – No   |
|  |   | Manufacturer Certification of Compliance Required  |
|  |   | Added – Yes  |
|  |   | Location of Additional Information   |
|  |   | Added – Section 27, Note 11  |
|  | Page 19-2, Sewer Pipe   |  |
|  |   | Item or Group  |
|  |   | Removed – Plastic  |
|  |   | Sample Required  |
|  |   | Removed – Yes – One 10-foot section from each lot.   |

|                               |  |  |
|-------------------------------|--|--|
|                               | Approved Products List   |  |
|                               |  | Removed – No   |
|                               | Manufacturer Certified Tests Required                            |  |
|                               |  | Removed – Yes  |
|                               | Manufacturer Certification of Compliance Required                |  |
|                               |  | Removed – Yes  |
|                               | Item or Group  |  |
|                               |  | Added – Plastic (15 inches or larger)  |
|                               | Sample Required  |  |
|                               |  | Added – Yes – One 10-foot section from each lot.   |
|                               | Approved Products List   |  |
|                               |  | Added – No   |
|                               | Manufacturer Certified Tests Required                            |  |
|                               |  | Added – Yes  |
|                               | Manufacturer Certification of Compliance Required                |  |
|                               |  | Added – Yes  |
| Section 20 – Bridge Materials |  |  |
|                               | Page 20-4, Prestressed Steel Wire Strand                         |  |
|                               | Location of Additional Information                               |  |
|                               |  | Added – Section 27, Note 28  |
|                               | Page 20-4, Prestressed Fine and Coarse Aggregate                 |  |
|                               | Location of Additional Information                               |  |
|                               |  | Added – Section 27, Note 28  |
| Section 23 – Traffic Control  |  |  |
|                               | Page 23-2, Permanent Pavement Marking, Type Paint                |  |
|                               | Sample Required  |  |
|                               |  | Added - Yes – a minimum of one 1-quart sample for each color when the pay quantity exceeds 5,000 linear feet |
|                               | Manufacturer Certification of Compliance Required                |  |
|                               |  | Added – Yes, for each color when the pay quantity is less than 5,000 linear feet                             |
|                               | Location of Additional Information                               |  |
|                               |  | Added – Section 27, Note 28  |
|                               | Page 23-2, Glass Beads for Permanent Pavement Marking Type Paint |  |
|                               | Sample Required  |  |
|                               |  | Added - Yes – a minimum of one 1-quart sample for each color when the pay quantity exceeds 5,000 linear feet |
|                               | Manufacturer Certification of Compliance Required                |  |
|                               |  | Added – Yes, for each color when the pay quantity is less than 5,000 linear feet                             |

|   |   |  |
|---|---|--|
|   |   | Location of Additional Information   |
|   |   | Added – Section 27, Note 28  |
| Section 24 – Roadside Development and Erosion Control             |   |  |
|   | Page 24-1, Rock Riprap, Rock Riprap   |  |
|   |   | Location of Additional Information   |
|   |   | Added – Note 28  |
|   | Page 24-1, Gabions, Gabion Stone Fill   |  |
|   |   | Location of Additional Information   |
|   |   | Added – Note 28  |
|   | Page 24-1, Revel Mattress, Revel Mattress Stone Fill  |  |
|   |   | Location of Additional Information   |
|   |   | Added – Note 28  |
| Section 25 – Miscellaneous Materials                              |   |  |
|   | Page 25-4, Culvert Sandfill   |  |
|   |   | Location of Additional Information   |
|   |   | Added – Note 28  |
| Section 27 – Notes  |   |  |
|   | Page 27-4, Note 9, Reinforcing Steel, Bars, and Fabric  |  |
|   |   | Added – for review and authorization   |
|   | Page 27-5, Note 14, Steel Bearing Piling, Steel Sheet Piling and Steel Shells for Cast-in-Place Piling              |  |
|   |   | Added – and authorization  |
|   | Page 27-6, Note 18, Gray Iron Castings (Cast Iron Grates, Frames, Pull Box Frames and Covers, Junction Boxes, etc.) |  |
|   |   | Added – and associated certificates  |
|   | Page 27-6, Note 28, Nebraska Qualified Materials Vendor List  |  |
|   |   | Added – NDOT will pre-qualify material vendors to supply specific materials based on specification as outlined in the Standard Specification for Highway Construction and contract. In addition to these qualifications, additional material acceptance documentation is required for the materials provided by these vendors. |
|   |   | The NQMVL is maintained by the Materials & Research Division. The NQMVL is subject to change at the discretion of the Nebraska Department of Transportation.   |
| Section 28 – Quality Assurance Program for Construction Materials |   |  |
|   | Page 28-A-4, Test Methods for Qualification of Sampling and Testing Personnel                                       |  |
|   |   | Concrete Plant Technician  |

|  |  |   |  |
|--|--|---|--|
|  |  |   | Added – footnote designation for Note 3  |
|  |  |   | Removed – NDOT Employees – Lifetime  |
|  |  |   | Added – and Consultant   |
|  |  | Concrete Field Inspector/General Handling of Concrete |  |
|  |  |   | Added – footnote designation for Note 3  |
|  |  | Profilograph Operator                                 |  |
|  |  |   | Added – footnote designation for Note 3  |
|  |  | Shotcrete Technician (5 year)                         |  |
|  |  |   | Removed – Shotcrete Technician – 5 year  |
|  | Page 28-A-6, Table A1 – Test Methods for Qualification of Sampling and Testing Personnel |   |  |
|  |  | Concrete Plant Technician                             |  |
|  |  |   | Removed – A ready mix plant inspector must   |
|  |  |   | Added – Individuals who oversee proportioning of concrete, running moistures on aggregates, performing gradations etc., are required to  |
|  |  |   | Removed – This certification is required for NDOT employees (one-time training) and all contractor personnel performing project material acceptance testing and/or sampling at a concrete plant.   |
|  |  |   | Removed – NDOT Employees – Lifetime  |
|  |  |   | Added – and Consultant   |
|  | Page 28-A-9, Table A1 – Test Methods for Qualification of Sampling and Testing Personnel |   |  |
|  |  | Shotcrete Technician                                  |  |
|  |  |   | Removed -- A Shotcrete Technician is an individual who has the knowledge and ability to properly perform the installation of Shotcrete material. The certified individual will share credentials, project experience, and complete a test panel. |
|  |  |   | Training Coordinated By: NDOT Materials & Research or Designee<br>Certification Duration: 5 years<br>Certification Records Retained: SiteManager<br>Authority: NDOT Materials & Research or Designee<br>Prerequisite: NA                         |
|  | Page 28-F-2, Appendix F, Annual FHWA IA Program Report                                   |   |  |
|  | Assessment of Technician Certification Status  |   |  |
|  |  | ACI Concrete Strength Testing Technician              |  |
|  |  |   | Added – ACI Concrete Strength Testing Technician   |
|  |  | Profilograph Operator                                 |  |
|  |  |   | Added – Profilograph Operator  |