2020 SUPPLEMENTAL SPECIFICATIONS

FOR THE

2018 IDAHO STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION

Table of Contents

ON PAGES 14-17, SUBSECTION 101.03.2 – ABBREVIATIONS AND ACRONYMNS

In proper alphabetical position, add the following:

AAO	Asphalt Analyzer Offset
BA	Biological Assessment
BGEA	Bald and Golden Eagle Act
BO	Biological Opinion
COD	Contractor-Obligated Defects
MARV	Minimum Average Roll Values
MBTA	Migratory Bird Treaty Act
NCOD	Noncontractor-Obligated Defects
NESHAP	National Emission Standards for Hazardous Air Pollutants
NIOSH	National Institute of Occupational Safety and Health
NMFS	National Marine Fisheries Service
PTFE	Polytetrafluoroethylene
RCRA	Resource Conservation and Recovery Act
SHA	State Highway Archaeologist
SHPO	State Historic Preservation Office
TCS	Traffic Control Supervisor
THPO	Tribal Historic Preservation Office
USACE	United States Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service

ON PAGE 18, SUBSECTION 101.04 – DEFINITIONS

In proper alphabetical position, add the following:

Blaster In Charge. The person designated by the blast contractor, who is licensed in the state of Idaho, and responsible for inspecting the blast setup, clearing the blast area before detonation, and clearing the area after the blast for reentry.

Complete. A pay item is considered complete when all work associated with the pay item is acceptable, including all associated ITD forms or other documentation, material certifications or acceptance testing, and record drawings accepted by the Department. Unless otherwise specified, completed item measurements will be of the final, in place dimensions of the completed item.

Department Headquarters. The Department headquarters are located at 3311 W State Street, Boise, ID 83703.

Disadvantaged Business Enterprise (DBE) Authorized Representative. The person delegated by the owner of the DBE firm to represent the firm in the absence of the owner.

ON PAGE 23, SUBSECTION 101.04 – DEFINITIONS

In the Roadway Prism definition: delete both instances of:

1.5H:1.0V

And replace with:

2.0H:1.0V

ON PAGE 24, SUBSECTION 101.04 – DEFINITIONS

In proper alphabetical position, add the following:

Street Monument. A survey monument set within the limits of the paved roadway, (1) on or in reference to a roadway centerline alignment so as to control the geometry of a roadway, or (2) at a PLSS section corner or at a PLSS quarter corner or, in urban areas, at a PLSS sixteenth corner.

ON PAGE 27, SUBSECTION 102.04 – PREPARATION OF A PROPOSAL

In the second paragraph, replace "Expedite" with "Project Bids".

Add the following to the last paragraph:

as specified in 67-2310, Idaho Code.

ON PAGE 29, SUBSECTION 102.10 – IRREGULAR PROPOSALS

Delete the item 11 and renumber the remaining paragraphs as 11 and 12 to be in sequence.

ON PAGE 29, SUBSECTION 102.12 – PROTESTING A PROPOSAL

Delete 102.12 and replace with:

To protest a determination made by the Department regarding the regularity or irregularity of a bid, submit a written protest to the Chief Engineer within 5 calendar days (40-902, Idaho Code) of the official results being posted to the Department's website (https://apps.itd.idaho.gov/Apps/contractors/br.htm). The protest must set forth in specific terms the reasons why the Department's determination is thought to be erroneous.

Protest by Apparent Low. If the protest is made by the apparent low bidder, the protest will be addressed by the Chief Engineer.

Third-Party Protest. If the protest is made by other than the apparent low bidder, the Chief Engineer will assign a hearing officer for a contested case hearing followed by a final decision by the Chief Engineer.

ON PAGE 38, SUBSECTION 105.04 – COORDINATION OF CONTRACT DOCUMENTS

Delete subsection 105.04, in its entirety, and replace with:

The specifications, plans, special provisions, and supplementary documents are all essential parts of the contract. In case of discrepancy between contract documents, the discrepancy is resolved by following this order of precedence (i.e., 1 presiding over 2, 3, 4, 5, 6, and 7; 2 presiding over 3, 4, 5, 6, and 7; etc.):

1. Bid schedule.
2. DBE Documentation.
3. Addenda.
4. Special provisions.
5. Quality assurance special provision.
6. Plan details.
7. Plan sheets.
8. Standard Supplementals.
9. Standard Specifications.
10. Standard drawings.
11. Quality Assurance manual.
12. Electronic files.

Calculated dimensions govern over scaled dimensions.

Immediately notify the Engineer of an apparent error or omission encountered in the contract documents. Do not take advantage of errors or omissions in the contract documents. The Engineer will determine if an error or omission exists, interpret and correct the error or omission to fulfill the intent of the contract documents, and determine if a contract revision is required as a result of the error or omission as specified in 104.02.

If any discrepancies are found between the plans and the electronic files, the information in the plans presides over the electronic files.

ON PAGE 42, SUBSECTION 105.14.D – MAINTENANCE DURING CONSTRUCTION

Delete 105.14.D and replace with:

D. Maintenance of Traffic.

Maintain the road for use by traffic and minimize traffic delays during roadway construction, unless otherwise directed.

Before starting the work, provide a temporary traffic control plan for approval. Include the following information:

1. Construction phasing and work areas.
2. Phasing and sequencing for implementing the temporary traffic control plan and transitioning between phases.
3. Proposed detours.
4. Emergency vehicle and school bus route accommodations.
5. Pedestrian and bicycle accommodations.
6. Plan for preserving access to cross streets and approaches.
7. Temporary traffic control devices.

Submit changes to the approved temporary traffic control plan for approval. Allow at least 2 business days for review and approval.

Provide and maintain access to cross streets and approaches at no additional cost to the Department.

ON PAGE 61, SUBSECTION 106.06 – STORAGE AND HANDLING OF MATERIAL

Add the following after the first sentence:

When applicable store and handle all materials in accordance with the manufacturer's recommendations. Improperly stored or handled materials are subject to rejection.

ON PAGE 67, SUBSECTION 107.10 – RESPONSIBILITY FOR INJURY DAMAGE

In the fourth full paragraph, delete the entire paragraph starting with "Submit a certificate..." and replace it with the following:

Submit a certificate or other proof of insurance to itdplanroom@itd.idaho.gov and do not start work before obtaining approval of the insurance coverage by the Department's Contracting Services branch.

ON PAGE 68, SUBSECTION 107.10 – RESPONSIBILITY OF INJURY DAMAGE

Delete: "The above limits may be met by policies having limits such as $1,000,000 per occurrence, $2,000,000 aggregate plus an umbrella policy of $2,000,000."

Replace with: "The above limits may be met by policies having limits such as $1,000,000 per occurrence, $2,000,000 aggregate plus an excess liability or umbrella policy of $2,000,000. If an umbrella policy is used, it must follow the underlying coverage form."

ON PAGE 69, SUBSECTION 107.11.C – RELIEF OF RESPONSIBILITY FOR DAMAGE BY PUBLIC TRAFFIC

Delete #4.

ON PAGES 71, SUBSECTION 107.17 – ENVIRONMENTAL AND CULTURAL RESOURCE PROTECTION

Delete in its entirety and replace with:

107.17 Environmental and Cultural Resource Protection.

A. Noncompliance.

Comply with federal, state, and local environmental and cultural resource laws, regulations, and ordinances. Comply with the project permits. Notify the Engineer immediately of:

1. Work that is out of compliance with regulations or permits. Immediately cease non-compliant activities and take corrective action to bring the work into compliance.
2. Discharges of pollutants, discharges exceeding water quality standards, discharges which may endanger health or the environment, or an upset (exceptional incident because of factors beyond the reasonable control of the permittee as defined in 40 CFR 122.41). Perform actions to correct the discharge as soon as possible.

3. A notice of inspection or noncompliance from a state or federal resource agency. Cooperate with inspectors.

If a regulatory agency identifies a failure to comply with the permits and modifications thereto, or other federal, state, or local requirements, the Contractor is responsible for:

1. Penalties, including monetary fines and damages, proposed or assessed to the Department for the Contractor's failure to comply with environmental regulations or permits.
2. Costs to mitigate or remediate violations or environmental damage or for the Department to resolve enforcement actions, including payments made or costs incurred in settlement for alleged violations of applicable laws, regulations, or requirements.

The Department may withhold money due to the Contractor subject to the following:

The Department will withhold money due to the Contractor, in an amount estimated by the Department, to include up to the full amount of penalties and mitigation costs proposed, assessed, or levied as a result of the Contractor's violation of the permits, or federal or state law, regulations, or requirements. Funds will be withheld by the Department until final disposition of these costs has been made. The Contractor will remain liable for the full amount until the potential liability is finally resolved with the entity seeking the penalties.

Instead of the withhold, the Contractor may provide a suitable bond in favor of the Department to cover the highest estimated liability for any disputed penalties proposed as a result of the Contractor's violation of the permits, law, regulations, or requirements.

The Department will give the Contractor 30 calendar days' notice of the Department's intention to withhold funds from payments which may become due to the Contractor before acceptance of the contract. Funds withheld after acceptance of the contract will be made without prior notice to the Contractor.

No withholds of additional amounts out of payments will be made if the amount to be withheld does not exceed the amount being withheld from partial payments as specified in 109.05.

If the Department has withheld funds and it is subsequently determined that it is not subject to the entire amount of the costs and liabilities assessed or proposed in connection with the matter for which the withhold was made, the Department will return the excess amount withheld to the Contractor in the progress payment following the determination. If the matter is resolved for less than the amount withheld, the Department will pay interest at a rate of 6 percent per year on the excess withhold.

If the work results in non-compliance of a permit or regulatory requirement, the work may be suspended and the permitting agency notified, if required.

The Contractor will not receive additional compensation, or time extensions, for any disruption of work or loss of time caused by any actions brought against the Contractor for failure to comply with good engineering, hydrologic, and pollution control practices.

B. Contractor Support Areas.

Contractor support activities (e.g., material sources, waste, stockpile or staging areas, access or haul roads) will not:

1. Encroach on regulated wetlands as defined by the U.S. Army Corps of Engineers.
2. Affect listed threatened or endangered species or critical habitat.
3. Adversely affect historic properties.

Support areas must receive environmental clearances. Commercial materials sources available and open to the public at the time of the project's bid opening are not considered a project-related action, and do not require Department environmental approvals. If the support area is on public lands, additional coordination will be needed with the land management agency. Allow a minimum of 30 business days to obtain clearance for Contractor Support Areas, provided no cultural sites are located. If sites are found, clearance may be delayed or disallowed. The Contractor will be responsible for the expenses involved in obtaining any clearance not provided by the Department. Any delay created by the clearance and resource agency concurrence will not relieve the Contractor from any contract obligations.

C. Permits.

If a permit(s) has been obtained by the Department, the permit(s) and the permit application(s) is referenced in the contract bid package. Perform work in conformance with the description of work, work area, methods, sequencing, work windows, conditions, and mitigations contained within the permit application and permit.

D. Contract Revisions – Contractor Requested.

In compliance with 104.02 and 104.03, if the Contractor requests to add, delete, or modify work activities, work areas, methods, sequencing, or work windows may require a new or modified permit or approval (e.g., Section 404 Clean Water Act, Endangered Species Act, National Historic Preservation Act Section 106, NEPA). Exception: A project without federal funds, a federal permit, or federal approval does not require approval under National Historic Preservation Act Section 106. Projects on federal lands require coordination with the appropriate federal lands management agency (e.g., BLM, Forest Service).

1. The Contractor to submit a detailed description of new or modified work, and the required environmental documentation prepared by a qualified professional hired by the Contractor.
2. The Department will transmit documents to the approving jurisdictions.
3. Cost and contract time delays are the Contractor's responsibility.
4. Obtain the Engineer's written approval before beginning any work not included in the original contract.

E. Endangered Species Act (ESA).

If the work affects listed species or designated critical habitat (i.e., under the Endangered Species Act), a biological assessment (BA) or programmatic biological assessment (PBA) is referenced in the contract bid package. Projects with an adverse effect will also include a biological opinion (BO) prepared by the USFWS or NMFS.

Unless otherwise approved by the Engineer, perform work in conformance with the description of work, work area, methods, sequencing, work windows, conditions and mitigations contained within the BA or PBA and BO. Notify the Department of any issues identified as specified in 102.03. Refer conflict or ambiguity with the contract documents to the Engineer.

F. Birds.

1. Migratory Bird Treaty Act (MBTA).

   The Migratory Bird Treaty Act protects migratory and non-game birds, their occupied nests, and their eggs.

   Work that may impact migratory birds includes removal of vegetation or bridge structures and rock (cliff) excavation or blasting. See the contractor's note for the approximate nesting and breeding window for species that may be anticipated.

   Notify the Engineer of a discovery of nesting birds. An active nest is defined as one with eggs or a bird living in it. If active migratory bird nests are discovered on a project site, immediately stop work within 50 feet of the nest(s) or bird(s) and notify the Engineer.

   If a nest has been abandoned or there are no eggs present, it can be removed and destroyed as needed. An active nest must be protected from harm. If an active nest becomes established (i.e., there are eggs or young in the nest), cease any work with potential to disturb the nesting bird until the young have fledged and the nest is unoccupied.

   Work with the Engineer as needed to develop a plan to avoid impacts to birds, nestlings, or eggs. When directed, use exclusion devices, nesting prevention measures or remove and dispose of partially constructed and unoccupied nests of migratory or non-game birds on a regular basis to prevent their occupation. Nest removal activities must not result in depositing into or allowing materials to enter waters of Idaho. Unless otherwise provided, directed work will be paid as extra work as specified in 104. Adjustments may be made for delays the Engineer determines are not due to the Contractor's failure to perform the provision of the contract.

2. Bald and Golden Eagle Act (BGEA).

   If an active or inactive eagle nest is visible from the project site, immediately stop work and notify the Engineer of the discovery. Work with the Engineer as needed to develop a plan to avoid impacts to eagles. Unless otherwise provided, directed work will be paid as extra work as specified in 104. Adjustments may be made for delays the Engineer determines are not due to the Contractor's failure to perform the provision of the contract.

G. Bats.

Bats are a protected non-game species in Idaho (IDAPA 13.01.06). Work that may impact bats includes removal of vegetation or bridge structures and rock (cliff) excavation or blasting.

Notify the Engineer of a discovery of bats. If active bat roosts are discovered on a project site, immediately stop work within 50 feet of the roost(s) or bat(s) and notify the Engineer.

Work with the Engineer as needed to develop a plan to avoid impacts to bats. Unless otherwise provided, directed work will be paid as extra work as specified in 104. Adjustments may be made for delays the Engineer determines are not due to the Contractor's failure to perform the provision of the contract.

H. Hazardous Material.

Conditions (e.g., the presence of barrels, buried or above ground storage tanks, contamination indications, odors, excessively hot earth, stained and discolored soils, smoke, unidentifiable powders, sludges, pellets, debris) can be possible hazardous material indicators.

If an abnormal condition is encountered or exposed that indicates the presence of a hazardous material, immediately suspend work in the area, treat the conditions with extreme caution, and notify the Engineer. Do not attempt to excavate, open, or remove without approval. Notify the Engineer immediately after the discovery of either:

1. A petroleum-based spill that meets the reportable release definition as defined in IDAPA 58.01.02.851. This includes spills greater than 25 gallons or any spill that results in a sheen on a waterbody surface.
2. A hazardous waste spill that meets the disclosure definition as defined in IDAPA 58.01.05 and 58.01.02.850.

Notify StateComm at 1-800-632-8000.

In the event of a petroleum or hazardous waste spill, implement measures, if safe to do so, to minimize contaminant spread using spill kits or other appropriate methods. Capture and dispose of the spilled materials under the Engineer's direction in accordance with DEQ and EPA requirements. Document the spill and response action, and submit a copy to the Engineer.

If load-bearing structures (e.g., bridges, culverts) will be modified or altered NESHAP compliance is required as required in 203.03.

Work occurring on existing structures that have been previously painted may contain RCRA metals (e.g., lead) and a test may be needed to verify the absence or presence. If presence of RCRA metals has not been previously determined and disclosed in the contract, the Contractor is responsible for testing previously painted structure components.

Work related to the encounter of unidentified hazardous materials will be considered differing site conditions or extra work and managed as specified in 104.

I. Inadvertent Discovery of Cultural Resources Including Human Remains.

Items that could potentially be cultural resources or human remains are to be treated as if they are cultural resources and/or human remains until a clear determination is made by the Department's State Highway Archaeologist (SHA).

The Contractor will notify the Engineer that potential resources have been identified during the work. The Engineer will then immediately notify the SHA of any cultural resources and/or human remains or items that could potentially be cultural resources and/or human remains.

In the event cultural resources or human remains are discovered within the project site, the Contractor as directed by the Engineer will implement the appropriate protocol outlined below:

1. Cultural Resources.
    a. In the event that cultural resources are discovered within the project site, at locations associated with the project, or planned for use on the project; all work within 50 feet in all directions will cease and the area will be cleared of all

unnecessary personnel. The Contractor as directed by the Engineer will secure the area.

b. The Contractor will immediately notify the Engineer. The Engineer will notify the SHA.

c. The SHA will notify the State Historic Preservation Office (SHPO), the appropriate Tribal Historic Preservation Office (THPO), and/or Native American Tribes.

2. Human Remains.

a. In the event that human remains (with or without associated cultural resources) are discovered within the project site, at locations associated with the work, or at locations planned for use; work within 150 feet of the human remains will cease and the area will be cleared of all personnel other than one or two Contractor employees or Department staff who will stay with the human remains until the SHA is notified. The Contractor or the Department staff will secure the area and immediately notify the Engineer, who will then contact the Department's SHA, and if necessary, the SHA will contact the appropriate law enforcement personnel.

b. The SHA will notify the SHPO and Native American Tribes, if any.

c. Photography of human remains is not allowed. This applies to cameras, cell phones, or any other devices having photo capabilities.

d. The human remains will be completely covered with a tarp or plain piece of cloth (e.g., rug, towel, blanket). New ground disturbance should not occur within 100 feet.

e. The human remains will not be touched, moved, or in any way caused to change position from that noted upon discovery.

f. All information related to the discovery will be held in strictest confidence.

g. All information related to the discovery known to the Contractor or staff will be provided to the SHA, and/or law enforcement.

3. Confidentiality.

In either case (i.e., discovery of cultural resources or human remains), the Contractor or the Department staff will keep all information strictly confidential. If information is shared with the Contractor or its subcontractor, that person will be fully informed about the confidentiality requirements and will agree to keep the information confidential. The SHA will consult with appropriate parties to determine an appropriate course of action.

4. Proceeding with Construction.

After an inadvertent discovery, some areas may be specified for close monitoring or 'no work zones'. Any such areas will be identified by the SHA, and locations made available to the Contractor and the Engineer. Additional cultural resources investigations may be required.

Payment and contract time extension due to the inadvertent discovery and required cultural resource clearance not previously identified in the contract is specified in 104.02 and 108.07.

J. Stormwater Pollution Prevention.

Each project will require one of the following:

1. A stormwater pollution prevention plan (SWPPP) ITD-2950 form as required by a construction general permit (CGP). A SWPPP is required when ground disturbance equals or exceeds 1 or more acres and discharges to waters of the U.S.
2. A pollution prevention plan (PPP) ITD-2788 form when required by the Department.

Both plans are documents that address best management practices (BMPs) (e.g., erosion and sediment control, good housekeeping practices, inspection procedures, spill prevention, response, clean-up). Meet applicable requirements of 212.

The plan sheets (project clearance summary) identifies if a PPP or a CGP is anticipated based on estimates of ground disturbance and/or discharges to waters of the U.S.

PPP	CGP SWPPP
If the addition of construction support activities causes the project ground disturbance area to meet the requirements for a CGP, follow CGP requirements.	—
The Contractor will prepare the entire PPP using the ITD-2788 form as a template provided by the Engineer.	Revise the draft SWPPP developed by the Department, consisting of plans sheets and a template narrative (using the ITD-2950 form), included with the bid package.
Conduct inspections by a person who is knowledgeable in erosion and sediment control and pollution prevention practices. This includes professional accreditation (e.g., the Department's Water Pollution Control Manager (WPCM) training, Certified Professional in Erosion Control (CPESC), Certified Erosion, Sediment, and Stormwater Inspector (CESSWI)), or other applicable site management or project management experience, which can be documented and provided to the Engineer.	Conduct inspections by a certified WPCM. Training requirements are posted on the Department's Environmental website under Stormwater Inspector Requirements.
Document the inspections using the ITD-2786 form available online. Conduct inspections every 7 calendar days unless otherwise approved by the Engineer.	Document the inspections using the ITD-2802 form available online.

Submit the plan and plan revisions for approval before the preconstruction conference. The Engineer may also require submittal of an electronic, editable version of the plan. Allow 15 calendar days for review, unless otherwise specified. Revise to address comments and resubmit. Adjustments in cost or time are not allowed for SWPPP approval. Once approved, all operators will sign the plan. The plan must be approved before ground disturbance.

Construction activities, construction support activities, or pollutant-generating activities are not allowed beyond the project site.

K. CGP Requirements.

For projects that require coverage under the national pollutant discharge elimination system (NPDES) General Permit for Discharges from Construction Activities (CGP), comply with the permit and the following Department requirements:

1. Designate a qualified WPCM to manage project site pollution prevention and CGP requirements. Ensure the WPCM meets the training qualification requirements posted on the Department's website. Submit the WPCM's contact information and training qualifications before the preconstruction meeting. Once approved, insert the qualification information into the SWPPP.
2. Revise the draft SWPPP template provided by the Department to include the Contractor designated construction support activities, work areas, work methods, and phasing. Submit the revised SWPPP for review and approval before the preconstruction meeting.
3. Coordinate electronic NOI filing with the Engineer. Verify SWPPP certification requirements are met.
4. Do not begin construction activities until the EPA has acknowledged receipt of all required NOIs on the EPA's website and the 14 calendar day waiting period is over.
5. Post the NPDES ID (permit tracking number associated with the project NOI) in addition to the other requirements of the CGP.
6. Inspect the project site and associated support areas per the CGP requirements. Use the current version of the ITD-2802 form. Sign the inspection report and insert it into the SWPPP within 24 hours of completion of any inspection. Submit a copy to the Engineer upon request. Joint inspections with the Department's inspector may be allowed at the Engineer's discretion.
7. Field Controls. Ensure installation, operation, and maintenance of effective erosion and sediment control measures and pollution prevention measures in accordance with the CGP requirements. Ensure completion and documentation of corrective actions.
8. Recordkeeping. In accordance with the CGP, amend the SWPPP to conform to the Contractor's current sequencing and operation throughout the work. Submit proposed modifications for approval. Obtain necessary signatures and certifications from operators for required SWPPP modifications and corrective actions. Maintain SWPPP records. Retain completed copies of required documentation and recordkeeping in the SWPPP and at the project site or at an Engineer-approved offsite location.

L. Notice of Termination (NOT).

When conditions for terminating the CGP coverage have been met, request the Engineer's written approval to file a NOT using the ITD-2961 form. Do not submit a NOT without the Engineer's written approval. Provide the most current version of the SWPPP, at the time of work completion, to the Engineer.

M. Turbidity Monitoring.

Turbidity monitoring may be required for projects with USACE, USFWS or NMFS permits and may include a project-specific Water Quality Certification from Department of Environmental Quality.

Specific monitoring requirements are included within each agencies' permit conditions and are included in the contract.

N. Turbidity Monitoring for Contracts with CGP Coverage (if plume is visible).

1. Turbidity Monitoring. Turbidity monitoring is required for projects with CGP coverage that directly discharge pollutants from an unstabilized portion of the project site causing a visible plume into the waters of the U.S.
    a. If a visible plume is observed, collect and record turbidity readings from within the plume and compare the results to background measurements (upstream of plume, 50 NTU over background) unless otherwise directed in project specific requirements.
    b. If turbidity is less than 50 NTU (instantaneously) over the background turbidity, continue monitoring as long as the plume is visible. If over 50 NTU, then immediately cease earth-disturbing work.
    c. Take immediate action to address the cause of the exceedance in accordance with the CGP.
    d. Increase actions to address the cause of the exceedance and monitor frequency until state water standards are met.
    e. Work may continue once turbidity readings return to within 50 NTUs (instantaneously) of background levels and 25 NTU for more than 10 consecutive calendar days over the background turbidity.
    f. Provide a verbal report to the Engineer within 24 hours of any exceedance of the Idaho State Water Quality Standards, followed by a written report within 5 calendar days using the ITD-2790 form.
2. Turbidity Logbook and Diary.
    a. Maintain a legible, organized logbook and construction diary at the project site and make it available for inspection with the SWPPP.
    b. Logbook entries must include the following information:
        (1) Date.
        (2) Time.
        (3) Sample location.
        (4) Turbidity result (NTUs).
        (5) Cloud cover (i.e., cloudy, partly cloudy, or clear), wind direction and speed, precipitation (inches) in last 24 hours, and ambient air temperature (°F) at the time of sample collection.
        (6) Visual observations of any discharge in accordance with the CGP.
        (7) If applicable, corrective actions taken and their observed effectiveness.
        (8) Printed name and signature of the sample collector.
    c. Include photographic documentation of any visible variation in water quality.

d. Include a map or sketch, including GPS coordinates, of each sample location.

e. Submit routine monitoring data to the Engineer or to regulatory agencies upon request.

f. Include documentation in the SWPPP that any personnel collecting samples and testing water quality are qualified to perform this task.

O. Basis of Payment.

PPP or SWPPP development, revisions, modifications, and inspections are incidental and included in the contract pay items, unless otherwise specified.

ON PAGE 77, SUBSECTION 107.19.5 – SURVEY MONUMENT PRESERVATION

Under subsection 5, delete the second full sentence beginning with "Obtain and complete the …"

ON PAGE 78, SUBSECTION 107.19.7 – SURVEY MONUMENT PRESERVATION

Under subsection 7, Preliminary Procedure, delete subsections 107.19.7.b through 107.19.7.e and replace with the following:

b. Control points or benchmarks set by agencies of the United States government, the state of Idaho, counties, cities, or private surveyors.

c. Right of way monuments that may be disturbed by the work.

d. A list of known survey monuments will be provided in the contract.

ON PAGE 78, SUBSECTION 107.19.9.a – SURVEY MONUMENT PRESERVATION

Under subsection 9.a, add the following at the beginning of the subsection:

For each survey monument shown in the plans, follow recommended actions.

ON PAGE 78, SUBSECTION 107.19.9.b – SURVEY MONUMENT PRESERVATION

Under subsection 9.b, delete the second and third full sentences beginning with "A survey monument set or adjustment…" and replace with the following:

Any survey monument set or adjusted will be in accordance to 54-1227, Idaho Code and for Public Land Survey System (PLSS) corner monuments will be surmounted with a cap of such material and size that it can be permanently and legibly marked in accordance with the current Manual of Surveying Instructions published by the United States Department of the Interior, Bureau of Land Management.

ON PAGE 78, SUBSECTION 107.19.9.c – SURVEY MONUMENT PRESERVATION

Under subsection 9.c, delete the second sentence beginning with "In the case of NGS survey monuments…" and replace with the following:

In the case of NGS survey monuments, the Idaho's NGS Geodetic Coordinator on staff at Idaho State University (ISU), if available, or the NGS Northwest Regional Geodetic Advisor in Seattle, Washington will be consulted before the removal and reestablishment of any NGS or United States Coast and Geodetic Survey monument.

ON PAGE 79, SUBSECTION 107.19.9.d – SURVEY MONUMENT PRESERVATION

Under subsection 107.19.9.d. delete the subsection and replace with the following:

d. Survey monuments lying within the paved portions that will or may be disturbed during the work will be treated as follows:

(1) Installations for street monuments within the paved portions of the roadway and more than 1 foot inside the edge of the asphalt shoulder (edge of oil) that will or may be disturbed will conform to the specifications for a street monument as specified in 618.

(2) If an existing survey monument meets the minimum requirements of 54-1227, Idaho Code, it can be retained or adjusted vertically in place as determined by the PLS.

(3) If an existing survey monument does not meet the minimum requirements of 54-1227, Idaho Code, a new survey monument which meets or exceeds the minimum requirements of 54-1227, Idaho Code or the standards of the original monumenting agency, whichever is a superior monument, will be installed by or under the direct supervision of the PLS.

(4) If an existing survey monument must be removed for the work, a new survey monument which meets or exceeds the minimum requirements of 54-1227, Idaho Code or the standards of the original monumenting agency, whichever is a superior monument, will be installed by or under the direct supervision of the PLS.

(5) Each state highway system right of way monuments disturbed will conform to the specifications for a right of way marker as specified in 618.

ON PAGE 79, SUBSECTION 107.19.9.g – SURVEY MONUMENT PRESERVATION

Under subsection 107.19.9.g., delete the subsection and replace with the following:

Any survey monument not intended to be replaced by the work but that was willfully or carelessly disturbed or destroyed by the Contractor, or as a result of the contracted work, will be re-established and re-monumented as specified in this section.

ON PAGE 79, SUBSECTION 107.19.10 – SURVEY MONUMENT PRESERVATION

Under subsection 107.19.10, delete the subsection and replace with the following:

10. Documentation.

Following the completion of the work, the PLS will verify the monument positions, stamp the survey monuments, and verify the vaults (casings) have been installed, if required.

a. If public land corner monuments were adjusted or replaced, or if any accessories to the public land corner monuments have been established, the PLS will file the appropriate documentation in the county or counties where the project site is located in accordance with 55-16, Idaho Code.

b. If private land corner monuments, centerline monuments, or right of way monuments were adjusted or replaced, a record of survey will be filed in

accordance with 55-19, Idaho Code. Before filing the record of survey, submit drawing to the District Land Surveyor for review, complete the corrections noted and resubmit as indicated, and file the record of survey when approved.

c. The PLS will submit a copy of the documents recorded at the county offices.

d. If NGS survey monuments were disturbed and/or reset, the PLS will submit copies of the monument reset information as provided to and approved by the NGS.

e. The PLS will submit a written report, which documents the actions taken by him/her or the Contractor to preserve or restore each survey monument within the project site.

(1) Before construction, include the Geodetic or State Plane coordinate positions (including coordinate system, datum, and project combination factor used) of each survey monument within the project site.

(2) After the work has been completed, include the Geodetic or State Plane coordinate positions of each survey monument.

(3) Include the actions taken by the Contractor and the PLS to preserve, adjust, or replace each and every survey monument.

(4) The PLS will seal and sign this document.

ON PAGE 80, SUBSECTION 107.19.11 – SURVEY MONUMENT PRESERVATION

Under subsection 107.19.11 MCPD submittal, delete the subsection and replace with the following:

11. MCPD Submittal.

The PLS will obtain and complete the MCPD master template form, in its entirety, with global positions (e.g., WGS-84 latitude, longitude, and orthometric height) and with State Plane Coordinates of all survey monuments located, referenced, and tied during and checked after the work. The PLS will submit the completed MCPD template directly to the MCPD Data Steward at ISU (mcpd@isu.edu) and submit a copy to the Engineer. The MCPD template is available at http://giscenter.isu.edu/research/Techpg/GC/zip/MCPD_MASTER_TEMPLATE.zip. In the submittal of the MCPD to ISU, include a letter of transmittal signed and sealed by the PLS.

ON PAGE 80, SUBSECTION 107.19 – SURVEY MONUMENT PRESERVATION

Under subsection 107.19, delete the last paragraph of the subsection, replace with the following:

Survey monument preservation work to locate, reference, reestablish, replace, install, adjust, or reconstruct survey monuments and vaults, and to obtain and complete the MCPD template for submittal will be paid by force account as specified in 109.03.C.5.f.

Payment for this work will be withheld until copies of field notes and diaries documenting the work, the written Survey Monument Preservation report, and copies of the documents filed with the County Recorder(s) are submitted to the Engineer.

ON PAGE 83, SUBSECTION 108.03.A – PROJECT SCHEDULE

Add the following to number 6 under part A:

Unless otherwise allowed by the Engineer.

Delete the second sentence in number 7 under part A and replace with:

Leads and lags may be used when applicable.

ON PAGE 84, SUBSECTION 108.03.A – PROJECT SCHEDULE/GENERAL

Delete: "Ensure each CPM schedule submittal includes 1 electronic CPM schedule copy and 2 paper copies including:" and replace with "Submit each CPM schedule in a format acceptable to the Engineer and in a format compatible with the most current version of Microsoft Project, including:"

ON PAGE 92, SUBSECTION 109.01 – MEASUREMENT OF QUANTITIES

Delete the first paragraph and add the following:

The Engineer will measure the contract pay item quantities, except for items that require the Contractor to provide survey measurement as specified in 675, using the units of measure specified in the contract and the methods of measurement and calculation as specified in this subsection. The U.S. customary system of weights and measures units is defined in 15 CFR.

Unless otherwise agreed upon by the Engineer, progress payments will not be issued for items requiring survey measurement until the Engineer has received a statement of quantities, along with supporting documentation and calculations, signed and sealed by a licensed Idaho professional engineer or professional land surveyor.

ON PAGE 104-105, SUBSECTION 109.04 – INCREASES OR DECREASES DUE TO TAXES

Delete all of 109.04 and replace with the following:

109.04 Increases or Decreases Due to Taxes. The total contract amount includes applicable federal, state, and local taxes and duties.

The Department will not adjust the contract amount for increases or decreases due to taxes, unless the amount of an increase or decrease is greater than $100 from the contract amount.

Notify the Engineer promptly of a statute, court decision, written ruling, or regulation that will result in an increase or decrease in the contract amount. Price escalation will be calculated in as specified in 109.02.B. using the Department's form (e.g., ITD-2624, ITD-2625).

A. Increases Due to Taxes.

The Department will increase the contract amount if the following conditions exist:

1. A statute, court decision, written ruling, regulation, or price escalation on materials (e.g., fuel, asphalt) based on nationally published cost indexes increases federal, state, or local excise tax or duty on the transactions or property covered by the contract and takes effect after the contract date or causes an increase in sales tax burden through price escalation.
2. The statute, court decision, written ruling, or regulation was unanticipated by the Department and the Contractor before the contract date.

3. The Contractor pays or bears the burden of the federal, state, local excise tax or duty, or rate increase. The Department will increase the contract amount by the amount of the tax, duty, or rate increase paid by the Contractor. If requested by the Engineer, verify in writing the new federal, state, local excise tax or duty, or rate increase was not included in the contract amount.

B. Decreases Due to Taxes.

The Department will decrease the contract amount if the following conditions exist:

1. A statute, court decision, written ruling, regulation decreases federal, state, or local excise tax or duty on the transactions or property covered by the contract and takes effect after the contract date.
2. The statute, court decision, written ruling, regulation, or price de-escalation on materials (e.g., fuel, asphalt) based on nationally published cost indexes was unanticipated by the Department and the Contractor before the contract date or causes a decrease in sales tax burden through price de-escalation.
3. The Contractor pays or bears a lesser burden for federal, state, local excise tax or duty, or rate decrease. The Department will decrease the contract amount by the amount of the relief, refund, or drawback. Pay this amount to the Department as directed.

The Department will also decrease the contract amount if the Contractor, through fault or negligence or failure to follow the Engineer's instructions, is required to pay or bear the burden of a federal, state, or local excise tax or duty, or does not obtain a refund or drawback.

ON PAGE 106, SUBSECTION 109.05 – PARTIAL PAYMENTS

Add the following after the last paragraph:

As work progresses, payment will not be made on any pay item or portion thereof as specified in 109.05, until all acceptance documentation (e.g., material certifications, test results) and quantity calculations have been received and verified by the Department. Acceptance documentation and quantity measurement will be in accordance with the contract requirements.

ON PAGE 107, SUBSECTION 109.08 – ACCEPTANCE AND FINAL PAYMENT

Add the following before the first paragraph:

The Contractor will have 20 business days after the last charged contract day and notification by the Engineer to submit outstanding documentation on completed work or the Contractor will receive a pay reduction for failure to submit documentation for the applicable pay item(s) as documented on a change order**.**

Second to last paragraph, change 105.15 to 105.16.

ON PAGE 108, SUBSECTION 110.01 – CIVIL RIGHTS/GENERAL REQUIREMENTS

Delete section 110.01 replace with:

For federal-aid contracts, the Contractor will comply with 110 per Special Equal Employment Opportunity Responsibilities under 23 CFR 140 and 23 CFR 230, Subpart A and D (also refer to United States Department of Transportation (USDOT) form FHWA-1273 attached to each contract).

The Contractor will take affirmative action to assure equal employment opportunity as required by Executive Order 11246 and Executive Order 11375. The Contractor must ensure compliance with the Uniformed Services Employment and Reemployment Rights Act (USERRA) and the Vietnam Era Veterans' Readjustment Assistance Act (VEVRAA) where appropriate.

ON PAGE 108, SUBSECTION 110.02 – CIVIL RIGHTS/EQUAL EMPLOYMENT OPPORTUNITY

Delete section 110.02 replace with:

The Contractor will establish and administer wages, working conditions, employee benefits, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, in a non-discriminatory manner. When advertising to hire employees, the Contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer". All advertisements will be published in newspapers or other publications having a large circulation among women and minority groups in the project area where the work force would normally be sourced.

ON PAGE 108, SUBSECTION 110.03 – DISADVANTAGED BUSINESS ENTERPRISE (DBE)

Delete the last sentence of the 2nd full paragraph with link and replace with the following:

For additional DBE program information, see the Department's DBE program requirements located at: https://apps.itd.idaho.gov/apps/ocr/ocrdbeprogram.aspx.

ON PAGE 109, SUBSECTION 110.03.A.1 – DISADVANTAGED BUSINESS ENTERPRISE FOR RACE/GENDER – NEUTRAL CONTRACTS

Delete the third sentence of the third full paragraph and replace with the following:

The Contractor must complete and submit the ITD-2396 form, with all supporting documentation to the Department's Office of Civil Rights by 5:00 pm MT on the day of bid opening or the Contractor's bid will be deemed irregular as specified in 102.10. The ITD-2396 form, with all supporting documentation must be emailed to DBESubmittal@itd.idaho.gov or delivered to the Department's headquarters.

ON PAGE 113, SUBSECTION 110.03.B.1 – DISADVANTAGED BUSINESS ENTERPRISE FOR RACE/GENDER – CONSCIOUS CONTRACTS

Delete the third sentence of the first full paragraph and replace with the following:

The Contractor must complete and submit the ITD-2396 form, with all supporting documentation to the Department's Office of Civil Rights by 5:00 pm MT on the day of bid opening or the Contractor's bid will be deemed irregular as specified in 102.10. The ITD-2396 form, with all supporting documentation must be emailed to DBESubmittal@itd.idaho.gov or delivered to the Department's headquarters.

ON PAGE 114, SUBSECTION 110.03.B.4, DISADVANTAGED BUSINESS ENTERPRISE FOR RACE/GENDER – CONSCIOUS CONTRACTS

Delete this subsection in its entirety and replace with:

4. The Department requires all bidders to furnish DBE commitments on the ITD-2396 form and all supporting documentation for a construction contract by 5:00 pm MT on the day of bid opening. The ITD-2396 form, with all supporting documentation must be emailed to

DBESubmittal@itd.idaho.gov or delivered to the Department's headquarters. The forms must contain:

a. The identity of the DBE firm(s) the Contractor is committing to use in meeting the contract's DBE goals. Any DBE commitment statements of confirmation must be made to the Contractor regardless of subcontracting relationships.

b. Description of the work and associated dollar amounts each DBE firm offered to perform.

c. The DBE submittal package includes the ITD-2396 form, and the DBE quote or the ITD-2399 form which must include the:

    1. Commitment statement (a written statement that the DBE is committed to performing the work quoted, if selected).
    2. Date.
    3. Prime Contractor (can be shown as "To Prime Contractor" or "To All Prime Contractors"; cannot be shown as "To All Bidders").
    4. Project identifier (project name and/or key number).
    5. DBE work items.
    6. DBE firm total (must match the ITD-2396 form).
    7. DBE signature, which can be in one of the following forms:
        a. Handwritten signature or initials.
        b. An electronic signature that is not typed using software (e.g., Adobe® Reader, Adobe Professional, Adobe E-Signature, DocuSign®).
        c. Other acceptable forms of confirming the commitment include:
            i. Email with the DBE email return address, project name, and key number in the subject line and place the committed dollar amount in body of the email with typed first and last name and title of sender.
            ii. DBE firm letterhead with the project name, key number, and the committed dollar amount in body of the letter with a typed or signed first and last name and title.

d. The name of the Contractor's designated Equal Employment Opportunity Officer responsible for administering the Contractor's DBE program.

e. The Contractor must use the above-mentioned forms, unless the committed DBE firm(s) is unable or unwilling to perform because of default, decertification, or other relevant factors.

f. Any change to the original DBE Commitment must be accompanied by written acknowledgement from the DBE subcontractor.

ON PAGE 115, 110.03 B.7, DISADVANTAGED BUSINESS ENTERPRISE FOR RACE/GENDER – CONSCIOUS CONTRACTS

Delete the last 2 sentences of the last paragraph and replace with the following:

> Afterward, the Contractor must revise the DBE participation percentages by change order, identifying the replacement DBE, their quote, and statement of confirmation. The Engineer must approve the revised plan with concurrence from the Department's Office of Civil Rights. Failure of the Contractor to meet 110.03.B will be a violation of the contract.

ON PAGE 119, SUBSECTION 110.05 – TRIBAL/TRIBAL EMPLOYMENT RIGHTS ORDINANCES (TERO)

Delete the last sentence.

ON PAGE 123, SUBSECTION 203.03.D – MISCELLANEOUS REMOVALS/CONSTRUCTION REQUIREMENTS

Delete the last sentence. Replace Part D with the following:

D. Remove Sign Assembly. This includes signs, sign posts, and sign post foundations. If the sign is to be reinstalled, protect signs during transportation and storage to prevent damage.

ON PAGE 123, SUBSECTION 203.03.E.1.a – CONSTRUCTION REQUIREMENTS

Delete the following at the end of a:

> See the Department's design manual Figure 334.04-02 for more information.

ON PAGE 125, SUBSECTION 203.04 – METHOD OF MEASUREMENT

Add the following after the second sentence:

> Removal of miscellaneous items will be by the lump sum and will include all items specified in the special provisions.

ON PAGE 125, SUBSECTION 203.05 – MISCELLANEOUS REMOVALS/BASIS OF PAYMENT

Delete the first two pay items and replace with:

Removal of Miscellaneous Items……..Each, ft, SF, SY, LS

Removal of _____.....Each, ft, SF, SY, LS

ON PAGE 127, SUBSECTION 205.01 – DESCRIPTION

After paragraph E add:

F. Guardrail Terminal Grading. Construct guardrail terminal grading.

ON PAGE 127, SUBSECTION 205.02 – EXCAVATION AND EMBANKMENT/MATERIALS

B. Granular Borrow. Delete "greater than" from the second sentence and replace with a "minimum of" to be consistent with other references to the sand equivalent test and to be more mathematically consistent with the intent.

D. Shoulder Materials. Provide ¾-inch aggregate for untreated base that meets 703.04.

ON PAGE 128, SUBSECTION 205.02 – MATERIALS

After paragraph G add:

H. Guardrail Terminal Materials. Provide ¾ inch aggregate for untreated base, Type A or B, that meets 703.04.

ON PAGE 129, SUBSECTION 205.03.E – EXCAVATION AND EMBANKMENT/CONSTRUCTION REQUIREMENTS

Delete the last sentence of the first paragraph under part E and add the following:

Excavate down 2 feet minimum from the top of the roadbed or to the lines and grades as directed.

ON PAGE 131, SUBSECTION 205.03.G – EXCAVATION AND EMBANKMENT/CLASSES OF COMPACTION AND DENSITY REQUIREMENTS

In Table 205.03-1 – Class A Compaction, delete "205.03.E.2" and replace with "205.03.F.2".

ON PAGE 132, SUBSECTION 205.03.H – BLASTING

After the 1st paragraph add:

Blasting Contractor/Blaster In Charge. The blasting contractor and the blaster in charge must both submit documentation of the following minimum experience and qualifications:

- Must have at least 5 years of successful experience in construction blasting adjacent to utilities, residential or commercial structures, transportation facilities, and critical habitats. Quarry work will not be accepted as experience.
- Must have been responsible for 3 projects with at least 10,000 linear feet of documented successful presplit slopes.
- The blasting contractor and the blaster in charge must be in good standing with all licensing boards where they hold or have held licenses, regardless of state, and all federal regulatory agencies governing the use of explosives.

Submit the blasting contactor and blaster in charge qualifications and references at least 45 calendar days before the planned start of blasting. The blasting contractor and the blaster in charge qualifications must include a list of blasting projects, dates, reference names, and current phone numbers, or email addresses. Detail tasks performed specifically in regard to pre- and post-blast surveys, vibration/air blast monitoring, blast design, and work in proximity to utilities, structures, transportation facilities and critical habitats, and any recommended blast plan modifications made during the projects.

The listed projects must demonstrate a working knowledge of controlled blasting techniques, controlling fly rock to within the right of way, scaling, vibration and noise monitoring, and control methods. The information must include all affiliations with contractors, explosive suppliers and a complete list of blasting licenses held, regardless of whether they are current, lapsed, or revoked.

Upon receipt of an acceptable experience qualifications submittal, the Engineer will have 7 calendar days to approve or reject the proposed blasting contractor and/or blaster in charge. Do not start work, mobilize equipment, or order materials until the blasting contactor and blaster in charge have been approved by the Engineer.

Substitution or replacement of the blasting contractor or blaster in charge will only be allowed with the Engineer's prior approval. The Engineer may suspend the work if either the blasting contractor or blaster in charge are substituted without approval. The Contractor will be fully liable for all additional costs and delays resulting from such work suspensions, and no adjustment in contract time or delay costs will be allowed.

ON PAGES 133 AND 134, SUBSECTION 205.03.H.1.b – BLASTING

Change all references to "detailed blasting plan" to "test blast plan".

Replace the 1st paragraph with the following:

At least 24 hours before loading any holes, provide a test blast plan for each pre-split shot and a blast plan for each subsequent production and pre-split shot for the Engineer's approval.

The blast plans must be completed on the ITD-1006 Blast Plan form, which must be completely filled out with the required submittals attached. Blast plans must be approved by the Engineer before loading any holes. Each ITD-1006 Blast Plan form will have a corresponding ITD-1008 Blast Report form with the same corresponding number.

In paragraph 3, delete "For production blasting,".

In paragraph 3, sentence 2, delete:

the Contractor can justify to the Engineer

and add:

approved by the Engineer where

In paragraph 3, delete sentence 3 and 4 in their entirety and replace with:

Excavate shot rock to expose entire back slopes for the test blast evaluation. Test blast approval will be based in part on the exposed back slope results.

ON PAGE 134, SUBSECTION 205.03.H.1.c. – BLAST PLAN (FORMERLY FINAL BLASTING PLAN) AND SUPPLEMENTAL REVISIONS, AND SUBSECTION 205.03.H.2.a.(1) – GENERAL

Change all references to "Final Blasting Plan" and "final blasting plan" to "blast plan".

Change all references to "production blasting" to "blasting", "production drilling" to "drilling", and "production blastholes" to "blastholes".

ON PAGE 134, SUBSECTION 205.03.H.1.c – BLASTING

Add as a third paragraph:

> If a blast plan produces repeated successful blast results, as determined by the Engineer, the Engineer may preapprove the use of this successful blast plan and waive the 24-hour advance submittal time requirement before loading any holes. The Engineer can unapproved any previously approved blast plan if results become unsatisfactory. When blasts produce unsatisfactory results, the Engineer may reject the blast plan and require the Contractor to submit a revised test blast plan and perform additional test blasts for approval by the Engineer before continuing.

ON PAGE 135, SUBSECTION 205.03.H.2.a.(2) – FLY ROCK

Add at the end of the paragraph:

> Fly rock must be contained within the right of way.

ON PAGE 135, SUBSECTION 205.03.H.2.a.(3) – SCALING AND STABILIZATION

Add as a third paragraph:

> This scaling and stabilization requirement also applies to excavated soil slopes, and ripped or shot rock slopes associated with pioneer and access roads, whether included or not included in the plans.

ON PAGE 135, SUBSECTION 205.03.H.2.a.(4) – BLAST REPORT (FORMERLY BLASTING LOGS)

In this and all following 205 subsections, delete all references to “blasting logs” and replace with “blast report”.

Delete the 1st sentence in the first paragraph and replace with:

> No less than 24 hours after either a production or presplit blast, provide the Engineer a blast report. The blast report must be completed on the ITD-1008 Blast Report form which must be completely filled out and have all of the required submittals attached. Each ITD-1006 Blast Plan form will have a corresponding ITD-1008 Blast Report form, both having the same blast number. The ITD-1008 Blast Report form is the record of the blast. The purpose of the ITD-1008 Blast Report form is to document changes made from the corresponding blast plan, aid in evaluating the blast, and track pay items. Highlight the parameters on the ITD-1008 Blast Report form that deviated from the corresponding ITD-1006 Blast Plan form for quick evaluation by the Engineer.

Add at the end of the subsection:

> Drillers must record a drill log for each drill hole. Drill logs must be recorded and signed by the driller who drilled the hole at the time the hole was drilled. Use the drill logs to adjust the blast design to prevent significant geological features from producing unsatisfactory blasting results. Record drill hole dimensions and all significant geologic features. Significant geologic features include, but are not limited, to groundwater, voids larger than 6 inches, zones of soft or weather rock, mud pockets, changes in drill effort, loss of drill water, drill rod drops, or any other feature that would affect the blast loading or performance.

ON PAGE 136, SUBSECTION 205.03.H.2.a – BLASTING

Add:

(11) Blasthole Survey. Establish survey control necessary for the drillers to meet the required horizontal and vertical control tolerances. Establish a survey control method for transferring the blasting plan grid pattern recorded on the ITD-1006 Blast Plan form into the field. Paint or stake the drill hole identification number from the blast plan form next to each drill hole for ready identification in the field, including the collar elevation.

ON PAGE 137, SUBSECTION 205.03.H.2.c.(1).(c) – BLASTING

Add as a second paragraph at the end of (c):

Presplit hole lengths greater than 30 feet will be considered once proven to meet specifications after a test blast evaluation, and as approved by the Engineer.

At the end of the subsection, add:

(i) Initially design presplit holes with a 30-inch maximum spacing. Adjust the spacing only after achieving acceptable presplit results.

ON PAGE 137, SUBSECTION 205.03 – CONSTRUCTION REQUIREMENTS

After paragraph H. Blasting add:

I. **Guardrail Terminal Grading.** Place aggregate in sufficient quantities to match the plans. Ensure grading is sloped at 10:1 or flatter and ensure foundation tubes and terminal struts will not protrude more than 4 inches. Compact the guardrail terminal area to meet Class D requirements or as directed. Broom adjacent pavement to remove aggregate.

ON PAGE 138, SUBSECTION 205.04 – METHOD OF MEASUREMENT

Delete number 5 and replace with:

5. Controlled blasting will be measured by the linear foot of accepted drilled holes as recorded on the ITD-1008 Blast Report form.

Add the following to the end:

10. Shoulder aggregate will be measured by the cubic yard or by the ton.
11. Excavation and soft spot repair will be measured by the cubic yard of excavated material in its original position.
12. Guardrail terminal grading will be measured by each.

ON PAGE 138, SUBSECTION 205.05 – BASIS OF PAYMENT

After Soft Spot Repair add:

Guardrail Terminal Grading..... Each

ON PAGE 138, SUBSECTION 205.05 – BASIS OF PAYMENT

Add at the end of the subsection:

Surveys associated with blasting including surveys for drill holes are incidental. Reducing oversize material from rock excavations are incidental.

Payment for controlled blasting will be based on accepted quantities documented on the ITD-1008 Blast Report form.

ON PAGES 143-145, SECTION 210 – STRUCTURE EXCAVATION AND COMPACTING BACKFILL

Delete section 210, in its entirety, and replace with:

210.01 Description. Excavate and dispose of materials required for the construction of structures, unless otherwise specified as structural excavation. Include necessary drainage, pumping, bailing, sheeting, shoring, and the construction and removal of cribs and cofferdams. Remove old structures or parts as required. Place and compact backfill material as compacting backfill. Include sloping and cleaning up the sites.

The contract pay item structure excavation schedule no. 1 includes excavation for bridges, boxes, and stiffleg culverts. The contract pay item structure excavation schedule no. 2 includes excavation for other structures.

210.02 Materials. The Engineer will test material for backfill in accordance with AASHTO T 310 Method B, excluding materials too granular to test.

210.03 Construction Requirements.

A. General. Remove and dispose of unsuitable foundation material below the designed elevation as directed. Use suitable surplus excavated material in the construction of embankments. Replace material removed below the designed elevation with approved material.

Sheet and brace trenches if necessary. Do not remove sheeting or bracing until backfill has progressed enough to prevent damage to pipelines or structures.

Remove sheeting and bracing used in supporting structure excavation.

Where rock, hardpan, or other unyielding material is encountered and a yielding material is required, remove the unyielding material below the grade specified and backfill as directed.

Do not begin structure construction or backfill placement until the foundation has been approved. Do not use frozen material as backfill, and do not place backfill on snow-covered or frozen surfaces.

Place backfill consisting of suitable material in layers of 8 inches or less and compact to Class A compaction as specified in 205.03.G.

For backfill material placed within 3 feet of a concrete structure or retaining wall, uniformly distribute the backfill material in layers of no more than 8 inches and compact with lightweight compacting equipment having an impact force of 1,000 to 3,000 pounds. Compact the backfill to the density requirements for Class A compaction as specified in 205.03.G, before successive layers are placed. For backfill material determined by the Engineer as too granular to test, apply at least 5 overlapping compacting equipment passes per 8-inch lift or less.

Compact backfill in areas not within a roadway prism, or special backfill around pipe underdrains not requiring a higher degree of compaction for some other purpose, to approximately the same density as the adjacent undisturbed soil or gravel. Perform compaction by any effective means.

B. Conduit and Structural Plate Arch. Place and compact pipe bedding in maximum 6 inch loose lifts, and ensure that bedding completely fills the area under the pipe haunches. Carefully hand tamp under the lower ¼ of the overall pipe diameter, then compact for the balance of the pipe height and for the specified amount of bedding to be placed over the pipe.

Backfill pipe culvert and other conduit trenches with approved material.

C. Structures. For structures or retaining walls founded on rock**,** excavate rock to the elevation shown in the plans. Remove any weathered, highly broken rock at the excavation bottom. Level excavated rock surfaces to the plan elevation with Class 15 or higher class concrete before constructing the structure or wall foundations.

Use appropriate equipment and take precautions to ensure that structure and retaining wall foundation soils are not disturbed during excavation that may affect their bearing capacity. Remove disturbed, soft or unsuitable materials from the excavation and backfill with granular borrow or other approved material to the plan elevation. Replace material disturbed by the Contractor's operations at no additional cost to the Department.

Compact the bottom of soil excavations with a minimum of 5 overlapping passes with an approved compactor.

Take precaution when pumping water from foundation enclosure interiors to prevent the possibility of concrete materials being carried away. Do not pump during the placing of concrete or for at least 24 hours after, unless it is done from a suitable sump or well point separated from the concrete work.

When placing backfill material under water, place backfill in layers not thicker than 2 feet. Compaction is not required for this placement type.

Do not place backfill against newly constructed masonry or concrete structures before meeting the requirements in Table 502.03-5.

210.04 Method of Measurement. The Engineer will measure acceptably completed work by the cubic yard based on planned quantity.

The Engineer will measure structure excavation as the volume of material within prism-limiting planes as follows:

1. Structures:
    a. The bottom of the foundation.
    b. The vertical planes 2 feet outside of and parallel to the outside lines of the structure, in the case of bents with individual column footings, the entire bent are considered as 1 structure.
    c. With upper limits as follows:
        (1) In embankment sections, the existing ground surface as cross-sectioned.
        (2) In roadway cut sections or channel changes, the planes of the roadway cut or channel change as excavated.

The Engineer will measure compacting backfill by the cubic yard of backfill material placed and as follows:

1. Structures:
    a. Below the original ground surface. A volume equal to the volume of structure excavation less the volume of the permanent structure, including the opening, contained within the limits of measurement for structure excavation.
    b. Above the original ground surface. The volume contained between the outside walls of the structure and vertical planes 4 feet outside the original ground surface or the horizontal plane 1 foot above the top of the structure or of the subgrade, whichever is less.
    c. Volumes of backfill placed through water around abutments, wing walls, and piers will not be included in the measurement of quantities for compacting backfill.

210.05 Basis of Payment. The Department will pay for acceptable quantities at the contract unit prices as follows:

Pay Item	Pay Unit
Structure Excavation Schedule No. 1	CY
Structure Excavation Schedule No. 2	CY
Compacting Backfill	CY

When the contract does not include a contract pay item for structure excavation or compacting backfill, this work is incidental and included in other contract pay items.

The Department will pay for required structure backfill or bedding material whose source is other than structure excavation at the contract unit price for the material being used or as extra work if no unit price was established.

If the Contractor is directed to remove material below the elevation specified, the Department will pay for the excavation work at the contract unit price or as extra work.

The Department will pay for Class 15 concrete used to backfill rock excavation below the bottom of the design footing grade based on the actual quantity used, but not to exceed a prism 1 foot outside the footing neat lines with an average depth of 1 foot below the bottom of footing.

Payment will not be made by the Department to excavate, backfill, and compact material removed for safety purposes or foundation soils that become disturbed due to the Contractor's operations.

The Department will pay using plan quantities as specified in 109.01.

ON PAGE 150, SUBSECTION 212.05 – BASIS OF PAYMENT

Delete number 10 and replace with:

10. Removal of BMPs as determined necessary.

ON PAGE 155, SUBSECTION 251.03 – CONSTRUCTION REQUIREMENTS

Add to the end of #2:

> During the nesting season, monitor vegetation or structures for nesting birds. Preemptive measures to avoid migratory bird species include clearing outside the nesting season, regular monitoring of bird activity, removal and disposal of unoccupied nests to prevent occupation, and exclusion devices (e.g., bird repellant spray, netting) that does not result in death or injury to adult birds.

ON PAGE 161, SUBSECTION 303.03.A – AGGREGATE BASIS/CONSTRUCTION REQUIREMENTS

Delete "Mix the base by 1 or a combination of the following 4 methods:" and delete 1-4.

ON PAGE 163, SUBSECTION 304.03 – CONSTRUCTION REQUIREMENTS

Change 205.03.D to 205.03.E.

ON PAGE 166, SUBSECTION 308.04 – CRABS/METHOD OF MEASUREMENT

Delete #2 and replace with: "At the Engineer's request, randomly selected, empty transporting vehicles may be weighed on a local certified scale able to produce a scale ticket for the Engineer's documentation and verification."

ON PAGE 172, SUBSECTION 403.02 – CHIP SEAL WARRANTY

Change both references of Table 703.06-2 and Table 703.02-2 to Table 703.06-1.

ON PAGE 173, SUBSECTION 403.03.C – CONSTRUCTION REQUIREMENTS/BROOMING

Delete the first sentence of #1 and replace with: "Broom loose chips from the roadway and other areas listed in 403.03.C.2 at the end of each day's operations."

Delete 2 a. and replace with" "In curb/gutter and on sidewalk sections."

Delete #5 and renumber #6 to #5.

ON PAGE 179, SUBSECTION 404.05 – BASIS OF PAYMENT

Replace CY with SY.

ON PAGE 221, SUBSECTION 409.03.H.4.a.(1) – JOINTS/FABRICATION

Delete (1) and replace with:

(1) Fabrication. Fabricate dowel bar assemblies, or baskets, in single units for appropriate lanes before being placed on grade. Submit material detail sheets with basket size and complete anchoring details for approval.

ON PAGE 222, SUBSECTION 409.03.H.b.(3) – PORTLAND CEMENT CONCRETE PAVEMENT/CONSTRUCTION REQUIREMENTS/JOINTS/LOAD TRANSFER DEVICES/DOWEL BAR ASSEMBLIES

Replace "TFE" with "PTFE".

ON PAGE 237, SUBSECTION 415.03.A – MICROSURFACING/CONSTRUCTION REQUIREMENTS/MIX DESIGN

Add the following:

Provide an optimized emulsion content for the microsurfacing mix design, using no less than 3 emulsion contents spread over a range not to exceed 2.0 percent residual.

ON PAGE 238, SUBSECTION 415.03.F – MICROSURFACING/CONSTRUCTION REQUIREMENTS/AUXILIARY EQUIPMENT

Add the following:

Screen the aggregate when loading units going from the stockpile area to the lay down operation.

ON PAGE 238, SUBSECTION 415.03.G – MICROSURFACING/CONSTRUCTION REQUIREMENTS/CALIBRATION

Add the following:

In the Engineer's or their representative's presence, demonstrate that the calibration data has been entered into the computerized control unit used to print the pay ticket.

ON PAGE 240, SUBSECTION 415.03.R.5 – MICROSURFACING/CONSTRUCTION REQUIREMENTS/PRODUCTION MICROSURFACING

Replace 5 with:

5. Limit the emulsion content to within 1.0 percent of the job-mix design, not to exceed specifications.

ON PAGE 240, SUBSECTION 415.03.S.1 – MICROSURFACING/CONSTRUCTION REQUIREMENTS/REPORTING

Replace 1 with:

1. Maintain quality control documentation and make available to the Engineer upon request or at completion of daily work. This includes machine counts for aggregate, emulsion, and water.

ON PAGE 241, SUBSECTION 415.04 – MICROSURFACING/METHOD OF MEASUREMENT

Replace this section with:

The printouts from the calibrated computerized monitoring will be used to measure the pay items. Microsurfacing aggregate will be measured by the ton (dry weight basis). Polymer-modified emulsified asphalt will be measured by the ton, as delivered to the project site. Submit printouts daily. Make daily machine counts available for verification of Contractor supplied printouts.

ON PAGE 255, SUBSECTION 431.03 – CONSTRUCTION REQUIREMENTS

Add the following after the 6th paragraph:

Mill a consistent straight line to the Engineer's satisfaction.

ON PAGE 263, SUBSECTION 502.02 – MATERIALS

Delete the following note under "Sampling Freshly Mixed Concrete":

> When concrete is delivered by means of a concrete pump, obtain samples at the final point of placement (discharge pipe).

Delete "Standard Method of Test for Slump Flow of Self-Consolidating Concrete Cylinders" and replace with "Standard Practice for Static Segregation of Hardened Self-Consolidating Concrete Cylinders".

ON PAGE 263, SUBSECTION 502.03.A – CONSTRUCTION REQUIREMENTS

Under Subsection A. Proportioning add the following to the end of the first paragraph:

> Submit the mix design on the ITD-916 form along with all required documentation.

ON PAGE 274, SUBSECTION 502.03.E.5 – CONCRETE/CONSTRUCTION REQUIREMENTS

Add note [c] to the 4th row (Bridge decks, top slabs of concrete box culverts or stifflegs) of Table 502.03-5.

Add the following note to the "Minimum Days" column

> [f] 1 day is 24 hours.

ON PAGE 276, SUBSECTION 502.03.F.4 – MATERIALS

Delete the second paragraph and replace with:

> Concrete used in massive placements must not exceed a temperature of 158 °F at any time from placement through the full 7-day curing period. The difference between the surface temperature and the center of mass temperature for a placement must not exceed 35 °F at any time from placement throughout the full 7-day curing period.

ON PAGE 283, SUBSECTION 503.02 – MATERIALS

Add the following after the second paragraph:

> Order additional mechanical splices to account for field sampling.

ON PAGE 285, SUBSECTION 503.03.E – CONSTRUCTION REQUIREMENTS/SPLICES

Delete the fifth paragraph and replace with:

> Make one tension test specimen splice to represent each lot of bars spliced at the project site and submit for testing 15 calendar days before installation. A lot consists of every 50 epoxy-coated or every 50 non-epoxy-coated bars spliced at the project site of one size. Tension test each specimen to destruction or to the specified ultimate strength, whichever is less.

ON PAGE 303, SUBSECTION 505.03.A – GENERAL

In the second sentence of the second paragraph delete:

required production pile length

And replace with:

revised estimated production pile length

Add the following to the end of A. General:

Piles must achieve the required pile driving criteria through 2 consecutive, 1-foot or 1-inch penetration intervals.

ON PAGE 304, SUBSECTION 505.03.E – CONSTRUCTION REQUIREMENTS/STEAM, AIR, DIESEL, HYDRAULIC HAMMERS

Add the following to the end of E. Steam, Air, Diesel, Hydraulic Hammers:

Provide hydraulic hammers with at least 3 hydraulic control settings that ensure predictable energy or equivalent ram stroke. The maximum stroke for concrete piles is 2 feet. The hydraulic hammer stroke must be able to be set at 0.5-foot increments up to the maximum stroke. Supply hammer instrumentation with an electronic read out and control unit that allows the Engineer to monitor, and the operator to read and adjust the hydraulic hammer energy or equivalent ram stroke. When pressure measuring equipment is required to determine hydraulic hammer energy, calibrate the pressure measuring equipment before use in accordance with the hammer manufacturer's written requirements. Provide an acceptable written record of the calibration before beginning pile driving. If the Contractor is unfamiliar with hydraulic hammer operation, a manufacturer's representative must be onsite for the first driven piles to ensure that the equipment is operated properly.

ON PAGE 306, SUBSECTION 505.04 – METHOD OF MEASUREMENT

Replace 1. with the following:

1. Provide and drive piles and test piles will be by the foot of pile below the cutoff elevation not including the pile shoe or tip.

ON PAGE 306, SUBSECTION 505.05 – BASIS OF PAYMENT

In the second sentence of the second paragraph delete:

required pile lengths

And replace with:

revised estimated pile lengths

Add the following after the last paragraph:

The cost to drive pile shoes or tips is incidental.

ON PAGE 313, SECTION 507 – BRIDGE BEARINGS

507.01 Description. Provide and place bearings including plain unreinforced elastomeric pads, reinforced elastomeric pads with steel laminates, or polytetrafluoroethylene (PTFE) pads with stainless steel mating surface that meet AASHTO Specifications for Highway Bridges at girder supports as specified in the plans.

Provide bearings with the dimensions, material properties, elastomer grade, and type of laminates specified. Show the design load specified and testing requirements.

If filled PTFE sheet is used, only glass-fiber filler will be approved.

507.02 Materials. Provide bearings as specified in:

Elastomeric Bearings 720.02

Polytetrafluoroethylene (PTFE) Bearings 720.03

Provide manufacturer certificates of compliance for materials used in the bearings.

507.03 Construction Requirements.

1. Fabrication. Fabricate bearings as specified in 720.02.
2. Testing. Test materials for elastomeric bearings and finished bearings as specified in 720.02.
3. Installation. Install bearings as specified in 720.02.

507.04 Method of Measurement. The Engineer will measure acceptably completed work by the each.

507.05 Basis of Payment. The Department will pay for acceptable quantities as follows:

Pay Item	Pay Unit
Elastomeric Bearings – Plain	Each
Elastomeric Bearings – Laminated	Each
PTFE Bearings	Each

ON PAGE 320, SUBSECTION 510.02.E – PACKAGING

Add the following title to the latex-modified concrete properties table:

Table 510.02-2 – Latex-Modified Concrete Properties

ON PAGE 321, SUBSECTION 510.02.E – PACKAGING

Add the following title to the silica fume concrete properties table:

Table 510.02-3 – Silica Fume Concrete Properties

Delete the minimum cement content of 560 lb/yd^3 and replace with 520 lb/yd^3.

ON PAGE 324, SUBSECTION 510.03.E – CONSTRUCTION REQUIREMENTS/PLACING AND FINISHING

Add the following to the end of the section:

Apply a continuous fog spray of water to screeded and finished concrete. Provide fogging equipment for spreading a fine mist over concrete surfaces without ponding water. Continue fogging behind the final floating operation until placement of the cure system, and as directed by the Engineer. Do not fog concrete surfaces to aid surface finishing.

ON PAGE 335, SUBSECTION 512.04 – METHOD OF MEASUREMENT

Delete the sentence and replace with:

The Engineer will measure acceptably completed work by the square foot of wall surface are from the bottom to the top of the gabion baskets.

ON PAGE 335, SUBSECTION 512.05 – BASIS OF PAYMENT

Delete the section and replace with:

512.05 Basis of Payment. The Department will pay for accepted quantities at the contract unit price as follows:

Pay Item	Pay Unit
Gabion Structure	SF

Structural excavation, gabion basket backfill, geotextile, backfill behind gabion baskets, and compacting backfill are incidental.

ON PAGE 337, SUBSECTION 521.03.A – DYNAMIC PILE TESTING AND CAPWAP ANALYSIS/CONSTRUCTION REQUIREMENTS/TESTING/GENERAL

In the last sentence, delete “additional” and change “An” to “A”.

ON PAGE 337, SUBSECTION 521.03.B – DYNAMIC PILE TESTING AND CAPWAP ANALYSIS/CONSTRUCTION REQUIREMENTS/TESTING/TESTING AND REPORTING

Delete the first sentence and the first 3 bullets.

Delete the first sentence of the second paragraph and replace with:

The consultant engineer will operate the pile driving analyzer and monitor pile driving in real time on-site or remotely, from the beginning to the end, or as directed.

Add to the end of the second numbered list:

4. Graphs showing RMX, BLC, CSI, STK, and FMX by depth of penetration.
5. The hammer stroke and blow count when the CAPWAP analysis is performed will also be included.

Delete the last paragraph on the page and replace with:

The Contractor will submit a final CAPWAP analysis report to the Engineer that is sealed and signed by an Idaho licensed professional engineer within 2 working days after the test(s) completion for each project site visit. The report will contain the required information and the CAPWAP analysis. The report

must include the project key number, and information on the test pile, soil conditions, pile driving hammer, field test results (including the pile hammer stroke height at the hammer blow used for the CAPWAP analysis and the interval pile hammer blow count), and CAPWAP analysis with any comments that the consultant may have on the results.

ON PAGE 341, SUBSECTION 551.01.A – DESCRIPTION/GENERAL

Add the following after the first paragraph:

Survey the bridge deck and approach slabs before overlay surface preparation and after overlay placement as specified in 675.03.S.3.e.

ON PAGE 345, SUBSECTION 551.03.B.1.a – CONSTRUCTION REQUIREMENTS

Replace the second sentence of the third paragraph with the following:

The pull-off tests must have a minimum tensile bond strength of 250 psi or a failure area at a depth of 1/8 inch or more into the base concrete in at least 50 percent of the test area.

ON PAGE 346, SUBSECTION 551.03.B.2.a – POLYESTER POLYMER CONCRETE (PPC) OVERLAY/CONSTRUCTION REQUIREMENTS/TRIAL OVERLAY

Delete the first paragraph and replace with:

Trial Overlay. Meet the requirements for a trial overlay given in 551.03.B.1 except the minimum plan dimensions of the concrete pad and trial overlay are 12 feet in width and 75 feet in length. The trial overlay must meet the following additional requirements:

ON PAGE 348, SUBSECTION 551.03.F – CONSTRUCTION REQUIREMENTS – PLACEMENT OF PPC

Add the following after the last paragraph:

Ensure a minimum ¾ inch overlay depth. If the overlay thickness at any location on the bridge or approach slab is expected to be more than 1 inch thick, string lines must be used for grade control of the finishing machine.

ON PAGE 352, SECTION 553 – EPOXY OVERLAY

Delete the entire section and replace with the following:

SECTION 553 – EPOXY OVERLAY

553.01 Description. Prepare and apply an epoxy and aggregate overlay on the concrete bridge deck surface area between the curb faces and from the beginning to the end of the bridge and on the approach slabs as specified. Submit the following:

A. Submit the name and phone number of the epoxy material manufacturer's technical representative at the preconstruction meeting.

B. At least 10 calendar days before the epoxy overlay placement, submit:

1. The epoxy materials manufacturer's written mixing instructions, safety data sheets, independent test results, and a certificate of compliance stating the epoxy materials meet the requirements listed in Table 553.02-1.

2. Independent test results and a certificate of compliance stating the aggregates meet the requirements listed below in Tables 553.02-2 and 553.02-4 or in Tables 553.02-3 and 553.02-4 and that it is compatible with the epoxy material.

553.02 Materials. Provide an epoxy resin base and hardener that is a modified Type III, 2-component system that meets the requirements of ASTM C881, Grade 1, Classes B and C. Store the epoxy in accordance with the manufacturer's specifications. Ensure epoxy properties meet Table 553.02-1:

Table 553.02-1 – Epoxy Requirements

Property	Requirement	Test Method
Gel Time	≥ 15 to ≤ 45	ASTM C881, Paragraph 11.2 modified
Tensile Strength (neat)	≥ 2,000 psi to ≤ 5,000 psi at 7 days	ASTM D638
Tensile Elongation (neat)	≥ 40% to ≤ 80% at 7 calendar days	ASTM D638
Viscosity	> 7 to < 25 poises	ASTM D2393, Brookfield RVT Spindle No. 3 at 20 rpm
Minimum Compressive Strength at 3 hours	1,000 psi at 75 °F	ASTM C579 modified (with plastic inserts), mixed with aggregate
Minimum Compressive Strength at 24 hours	5,000 psi at 75 °F	ASTM C579 modified (with plastic inserts), mixed with aggregate
Minimum Adhesion Strength at 24 hours	250 psi at 75 °F	ACI 503R, Appendix A, VTM 92
Permeability to chloride ion at 28 days	100 coulombs maximum	AASHTO T 277

Pack materials in puncture, rupture, and leak proof containers. Label each container as part A or part B and clearly mark the name and address of the manufacturer, name of the product, mixing proportions and instructions, lot and batch numbers, date of manufacture, and quantity.

Provide aggregate topping that is clean, dry, and free from deleterious matter. Ensure the aggregate is compatible with the epoxy material. Furnish aggregates in appropriate packaging that is clearly labeled (i.e., showing the name of the manufacturer and location of processing) and protects the aggregate from contaminates, rain, and other moisture. Provide aggregate as shown in the plans and that meets the properties in Tables 553.02-2 or 553.02-3. If aggregate is not specified in the plans, either aggregate is acceptable. Provide an aggregate with gradation that meets the requirements in Table 553.02-4.

TABLE 553.02-2 – Calcined Bauxite Aggregate Requirements

Property	Requirement	Test Method
Resistance to Degradation – LA Abrasion Test	20% maximum	AASHTO T 96 or ASTM C131 "D" Grading
Resistance to Degradation – Micro-Deval Abrasion Test	5% maximum	AASHTO T 327 or ASTM D6928
Moisture Content	0.2% maximum	AASHTO T 255
Aluminum Oxide	87% minimum	ASTM C25
Mohs Scale Hardness	8 minimum	------

TABLE 553.02-3 – Standard Aggregate Requirements

Properties	Requirement	Test Method
Resistance to Degradation – LA Abrasion Test	20% maximum	AASHTO T 96 or ASTM C131, "D" Grading
Resistance to Degradation – Micro-Deval Abrasion Test	10% maximum	AASHTO T 327 or ASTM D6928
Moisture Content	0.2% maximum	AASHTO T 255
Mohs Scale Hardness	7 minimum	------

Table 553.02-4 – Aggregate Gradation AASHTO T 27

Sieve Size	Total Percent Passing
No. 4	100
No. 6	95 – 100
No. 16	0 – 5

553.03 Construction Requirements.

Ensure the epoxy overlay manufacturer's representative is on the project site at all times and who, upon consultation with the Engineer, may suspend work items that do not meet specification requirements. Work may resume only after taking appropriate remedial action to satisfy the manufacturer's representative and the Engineer. Plan and perform the work to allocate the specified minimum curing periods, or other longer curing periods prescribed by the manufacturer, before opening to public or construction traffic.

A. Equipment. For mechanical applications, provide equipment with a minimum of an epoxy distribution system, aggregate spreader, application squeegee, moisture and oil-free compressed air, and a source of lighting if work will be performed at night. Ensure the epoxy distribution system accurately blends the epoxy materials in accordance with the manufacturer's written specifications and distributes epoxy at the specified application rates to cover 100 percent of the work area. Propel aggregate spreader to uniformly and accurately apply the aggregate.

For manual applications, provide equipment with calibrated containers for measuring epoxy volumes, a paddle-type mixer, squeegees, shovels, and brooms that are suitable for mixing the epoxy and applying the epoxy and aggregate at the specified application rates.

B. Preparation of Concrete Surfaces. Repair minor potholes and delamination in the deck surface by removing the damaged concrete and patching with an Engineer-approved cementitious patching material before installation of the overlay. Epoxy overlay material is an acceptable alternate patching material. Strike off patches so they are level with the existing deck and finish with wooden floats. Portland cement concrete patches require a minimum cure period of 28 calendar days before application of the overlay.

Before placing the overlay, obliterate all pavement markings and thoroughly clean the entire concrete deck by steel shot blasting to ensure proper bonding between the epoxy and the concrete substrate. Achieve a final surface texture meeting numbers 5 through 7 as defined in ICRI Guideline No. 03732 and as shown by surface profile samples available from ICRI, or ASTM E965 pavement macrotexture depth of 0.04 to 0.08 inches. Shot blasting is meant to expose the coarse aggregate and ensure the surface is cleaned of asphalt material, oil, dirt, rubber, curing compounds, paint carbonation, laitance, weak surface mortar, and other potentially detrimental materials, which may interfere with the bonding, or curing of the overlay. Remove and repair loosely bonded patches and remove pavement markings. Use moisture and oil-free compressed air or high volume leaf blowers to remove dust that adheres to the prepared surface.

In order to determine the adequacy of the surface preparation, perform at least 1 bond test per lane of each bridge. For each test, apply palm-sized patties of binder aggregate, ¼ to 3/8 inch thick at 3 locations. After the samples have cured, remove the patties with a hammer, and chisel to examine the fracture and delamination plane. Verify concrete with fractured aggregate has attached to the entire underside of the patty. If only lattice or small particles of concrete are attached, further deck preparation is required.

C. Overlay Application. Handle and mix the epoxy resin and hardening agent in a safe manner to achieve the desired results in accordance with the specifications and the manufacturer's written instructions. Only apply epoxy overlay materials when weather or surface conditions allow the material to be properly handled, placed, and cured within the specified requirements for project sequencing, traffic control, or when rain is not imminent within the manufacturer's recommended cure times. Completely dry the prepared surface when applying epoxy. The Engineer may allow moisture and oil-free heat sources or torches to dry the surface. Ensure the temperature of the deck surface, epoxy, and aggregate components are at least 55 °F and rising at the time of application. Do not apply epoxy if the gel time is less than 5 minutes or if pavement temperatures exceed 115 °F. In situations where road closures are not under strict time constraints, obtain the Engineer's approval to apply epoxy at lower temperatures.

Apply the epoxy overlay and aggregate using a double pass method. The double pass method applies the epoxy and aggregate in 2 separate layers at the corresponding application rates specified in Table 553.03-1.

TABLE 553.03-1 – Double Pass Method – Epoxy and Aggregate Application Rates

Double Pass Method	Estimated Epoxy Rate gal/yd^2	Aggregate lbs/yd^2 [(a)]
1st Course	0.22	10
2nd Course	0.45	14.5

[(a)] Application of aggregate must be of sufficient quantity to completely cover the epoxy.

Mix the epoxy at a volume ratio of 1 part A to 1 part B and mechanically stir with a paddle-type mixer for 3 minutes or according to the epoxy manufacturer's written instructions. After the epoxy has been properly mixed, immediately and uniformly apply to the pavement service with a $^{3}/_{16}$ to ¼ inch V-notched squeegee. Apply the aggregate to cover the epoxy material while the epoxy material while the epoxy is still fluid. Remove and replace first course applications that do not receive enough aggregate before gelling.

Ensure each course of epoxy overlay cures before removing the excess unbonded aggregate to prevent tearing or damaging of the surface. Use moisture and oil-free compressed air, high-volume leaf blowers, or vacuum broom to remove excess aggregate. After loose aggregate is removed, remove remaining dust using moisture and oil-free compressed air, high-volume leaf blowers, or vacuum broom. Obtain the Engineer's approval before opening the first course to traffic. Begin application of the second course only after removing dust. The Department prohibits traffic on the overlay until it has cured sufficiently to prevent damage from wheel loads as specified in Table 553.03-2.

Table 553.03-2 – Typical Curing Times

Average Temperature of Deck, Epoxy, and Aggregate Components in °F						
Course	**60-64**	**65-69**	**70-74**	**75-79**	**80-84**	**Above 85 [(a)]**
1	4 hr	3 hr	2.5 hr	2 hr	1.5 hr	1 hr
2	6.5 hr	5 hr	4 hr	3 hr	3 hr	less than 3 hr

[(a)] Refer to manufacturer's written instructions.

Apply the second course at the rates specified in Table 553.03-1. Apply epoxy to ensure the wet epoxy does not coat the wear (top) surface of the aggregate. Once the epoxy is cured, remove loose aggregate from the surface with moisture and oil-free compressed air, high volume leaf blowers, or vacuum broom. After removing loose aggregate, if there are any areas where epoxy has coated the top surface stone, remove the excess epoxy using a light shot or sandblast.

Protect the bridge deck expansion joints with a bond breaker (e.g., duct tape) that can adequately seal the joints from the epoxy. The Contractor may also use duct tape to delineate application areas. The Department recommends taped areas or bond breakers be removed before epoxy starts to harden. The Contractor may also remove epoxy by scoring the overlay before gelling or by saw cutting after cure. Feather the overlay out at the end of the bridge or approach slab and at expansion joints (edge of armor angle) in accordance with the manufacturer's written instructions.

If the Contractor's operations or actions damage or mar the overlay, remove the damaged areas and reapply the overlay to the Engineer's satisfaction. In the event that part of the epoxy mixture does not cure, completely remove the overlay from the affected area and discard. Completely remove residual epoxy remaining on the pavement by mechanical means (e.g., steel shot, abrasive blasting, scarifying) before reapplying the overlay.

Maintain and provide records for each batch provided, including:

1. Number of batches mixed and volume per batch.
2. Location of batches as placed on deck, referenced by stations.
3. Batch time.
4. Gel time (50 milliliter sample).

5. Temperature of the air, deck surface, and epoxy components.
6. Loose aggregate removal time.
7. Time open to traffic.

553.04 Method of Measurement. The Engineer will measure acceptably completed work by the square foot of deck surface.

553.05 Basis of Payment. The Department will pay for accepted quantities at the contract unit price as follows:

Pay Item	Pay Unit
Epoxy Overlay	SF

Surface preparation, including obliteration of pavement markings, is incidental. Patch and repair of concrete will be paid under 582.

ON PAGE 358, SUBSECTION 565.01 – DESCRIPTION

Delete products 2, 3, and 4.

ON PAGE 358, SUBSECTION 565.01 – DESCRIPTION

Delete products 2, 3, and 4 as they are 2-part products with binder and aggregate separate.

ON PAGE 358, SUBSECTION 565.02.A – MATERIALS/BINDER MATERIAL

Delete existing sentence and replace with:

Provide premixed, premeasured polymer asphalt expansion joint binder material and aggregate. Ensure joint binder material meets the requirements in Table 565.02-1. Ensure aggregate is crushed, double washed, and dried granite, basalt, or orthoquartzite and is premised with binder material.

ON PAGE 359, SUBSECTION 565.02.B – MATERIALS/AGGREGATE

Delete in its entirety.

ON PAGE 359, SUBSECTION 565.03.C – CONSTRUCTION REQUIREMENTS/BINDER

Delete the last sentence.

ON PAGE 360, SUBSECTION 565.03.G – CONSTRUCTION REQUIREMENTS/AGGREGATE PREPARATION

Delete in its entirety.

ON PAGE 360, SUBSECTION 565.03.H – CONSTRUCTION REQUIREMENTS/AGGREGATE PROPORTION AND LAYER THICKNESS

Delete in its entirety.

ON PAGE 361, SUBSECTION 566.02 – MATERIALS

Delete the entire subsection and replace with the following:

566.02 Materials. Provide neoprene seals and adhesive as specified on the plans or an approved equal and as specified in 704.04.

ON PAGE 363, SECTION 568 – ELASTOMERIC CONCRETE HEADER

Delete the entire section and replace with the following:

SECTION 568 – ELASTOMERIC CONCRETE HEADER

568.01 Description. Provide and install elastomeric concrete headers in prepared blockout areas as specified. Include the collection and disposal of waste debris.

568.02 Materials. Provide elastomeric concrete that consists of a field-mixed, 2-part polyurethane material and pre-graded aggregate mix; the Department does not allow epoxy-based materials.

Provide a manufacturer's certification that attests the proposed materials are pre-tested and meets this specification.

A. Elastomeric Concrete. Provide ambient cure material, 100 percent solids, 2-component polyurethane with pre-graded aggregate mix exhibiting the physical properties listed in Tables 568.02-1 and 568.02-2. When properly mixed and poured, the elastomeric concrete cures rapidly, flows and fills voids, spalls, or irregularities to form a monolithic unit.

Table 568.02-1 – Elastomeric Cured Binder

Physical Properties	Test Method	Minimum Requirement
Tensile Strength	ASTM D638	1,000 psi
Ultimate Elongation	ASTM D638	150%
Tear Resistance	ASTM D624	80 lb/in

Table 568.02-2 – Elastomeric Cured Binder and Aggregate

Physical Properties	Test Method	Minimum Requirement
Compressive Strength	ASTM D695	2,000 psi
Resilience @ 5% deflection	ASTM D695	90%
Wet Bond Strength to Concrete	Note 1	250 psi
Impact Resistance @ -20 °F	Note 2	No cracks
Durometer Hardness	ASTM D2240	50

Note 1: Saw briquette in half so that cut surface area equals approximately 1 square inch. Ensure mortar briquette conforms to ASTM C190. Place briquette in mold and cast elastomeric concrete against sandblasted surface. Submerge specimen in room temperature water for 7 calendar days. Test specimen to failure using a Riehle Briquette Tester. Failure can occur anywhere within the test specimen.

Note 2: Cast 2.5-inch diameter and 0.375-inch thick disc test specimens then condition for 4 hours at test temperature. Drop a 1 pound steel ball onto the center of the specimen through a plastic tube from a height of 7 feet.

B. Bonding Agent. Provide manufacturer's 2-component, 100 percent solids bonding agent. Apply bonding agent to the sides and base of the preformed concrete blockout before elastomeric concrete placement. Store, mix, and apply in accordance with the manufacturer's safety data sheet and written instructions.

Identify liquid components by the following information:

Part A – Resin Color: Clear

Part B – Activator Color: Tan

Submit certified test results meeting the requirements in Tables 568.02-1 and 568.02-2 for the proposed products for approval before use.

568.03 Construction Requirements. Meet with the Engineer and discuss the method of installation before performing the work pertaining to the elastomeric concrete headers.

Ensure a qualified manufacturer's representative is onsite during the initial installation to meet with the Contractor and the Engineer, to train the Contractor in mixing and placement procedures, and to ensure the installation procedures are in accordance with the manufacturer's warranty requirements.

Ensure the concrete blockout has cured for 7 calendar days and has reached a minimum compression strength of 3,000 psi before placing elastomeric concrete. Sandblast and vacuum the blockout surfaces and immediate surrounding concrete area to remove dirt, dust, sand, oil, grease, paint, corrosion deposits, laitance, and bond-inhibiting materials immediately before placing the elastomeric concrete.

Prime the substrate surface as specified by the manufacturer and ensure joint gap is as specified on the plans before placing the elastomeric concrete. Mix and place the elastomeric concrete in accordance with the manufacturer's instructions and as specified. Provide the Engineer with 1 set of the manufacturer's instructions at least 1 week before the placement begins. Install the elastomeric concrete when the temperature is at least 45 °F and rising.

568.04 Method of Measurement. The Engineer will measure acceptably completed work by the cubic yard.

568.05 Basis of Payment. The Department will pay for accepted quantities at the contract unit price as follows:

Pay Item	Pay Unit
Elastomeric Concrete Header	CY

Removal of existing expansion joint material within designated blockout areas and expansion joint seal installation are covered in other contract pay items.

ON PAGE 367, SECTION 576 – GLASS FIBER REINFORCED POLYMER (GFRP) REINFORCEMENT

Delete the entire section and replace with:

576.01 Description. Provide and place glass fiber reinforced polymer (GFRP) as specified.

576.02 Materials. Provide GFRP reinforcement meeting ASTM D7957/D7957M. Provide GFRP reinforcement that is deformed and/or sand coated.

A. Submittals. Provide 2 copies of written certifications that the GFRP reinforcement meets this specification. The written certification must list the identifying lot information and test values and test procedures used to determine the physical properties of the GFRP reinforcement. Provide certifications bearing the notarized signature of a manufacturer's representative having quality control responsibility. Identify each bundle of GFRP reinforcement with a durable tag displaying the corresponding lot numbers.

B. Repair Material. Comply with the bar manufacturer's requirements for the material used to repair the cut ends of GFRP reinforcement. Perform all repairs of cut ends at the GFRP reinforcement manufacturer's plant unless otherwise approved.

576.03 Construction Requirements.

A. Material Handling. When handling GRFP reinforcement, use equipment that avoids damaging or abrading the GFRP reinforcement. Do not drop or drag the GFRP reinforcement.

B. Storage. Store GFRP reinforcement above the ground surface on platforms, skids, or other supports as close as possible to the point of placement. Cover the bars with opaque plastic or other types of cover to protect the bars from the external environment. Prevent exposure of GFRP reinforcing bars to temperatures above 120 °F during storage.

C. GFRP Placement. Secure GFRP reinforcement firmly in place before and during concrete placement by means of bar supports adequate in strength and number to prevent displacement and to keep the reinforcing at the proper distance from the forms and as specified in 503.03.D. Steel tie wires, bar chairs, supports, or clips must be fully coated with either epoxy or plastic. Provide adequate vertical restraint of GFRP reinforcement to prevent upward movement in the fresh concrete due to buoyancy.

When placed in the work, reinforcement must be free from dirt, paint, grease, oil, or other foreign materials deleterious to bonding with the surrounding concrete. Before placing concrete, remove foreign materials by cleaning the bars using methods and materials recommended by the bar manufacturer and Engineer approved.

D. Field Cutting. Field cutting GFRP reinforcement is not permitted, except with the Engineer's prior approval. Shear cutting and flame cutting are not permitted methods of field cutting. Coat field cut ends as described in this specification. Repair all surface damage due to field cutting GFRP reinforcement as described below or replace the bar with an undamaged bar.

E. Bending. If bent GFRP reinforcement is required, the bends must be pre-fabricated. Field bending or straightening of GFRP reinforcement is not permitted.

F. Repair of Bar Damage. Repair all visible damage to the accepted GFRP reinforcement. Repair damaged areas using materials and procedures specified by the GFRP manufacturer.

G. Concrete Placement. If the reinforcement is not adequately supported or tied to resist settlement, floating upward, or movement in any direction during concrete placement, halt concrete placement until corrective measures are taken.

576.04 Method of Measurement. The Engineer will measure GFRP reinforcement by the foot.

576.05 Basis of Payment. The Department will pay for accepted quantities at the contract unit price as follows:

Pay Item	Pay Unit
Glass Fiber Reinforced Polymer (GFRP) Reinforcement	ft

Ties, bar chairs, supports, or clips used for fastening GFRP reinforcement in place are incidental.

ON PAGE 370, SUBSECTION 577.03.B – PILE SLEEVES/CONSTRUCTION REQUIREMENTS/SHELL OR H-PILES

Delete "Shell or" from letter B.

Add letter C:

C. Shell Piles. Fill the lower 5 feet of the sleeves with coarse aggregate before placing and compacting the MSE backfill, and after the pile is lowered into the sleeve but before pile driving begins. Ensure the inside sleeve is not closer than 2 inches from the steel pile.

ON PAGE 371, SUBSECTION 578.01.B – SUBMITTALS

Delete the second paragraph.

At the end of the subsection add:

Submit the electronic as-built shop drawings in PDF format before contract closeout.

ON PAGE 372, SUBSECTION 578.03 – CONSTRUCTION REQUIREMENTS

Add the following sentence to the end of the second paragraph:

Ensure that dimensional tolerances meet ASTM C1577, Section 12.

Delete the eighth paragraph and replace with the following:

Apply a waterproof membrane as specified in 511 to the top slab of all buried culverts. Use waterproof membrane Type D when ballast and asphalt pavement are placed across the culvert. Use waterproof membrane Type E when only asphalt pavement is placed across the culvert.

ON PAGE 378, SUBSECTION 582.03 – CONSTRUCTION REQUIREMENTS

Delete the heading for part A and replace with the following:

A. Preparation of Concrete Surfaces.

ON PAGE 394, SUBSECTION 601.02 – MATERIALS

In the first sentence of the first paragraph, replace "AASHTO PP 63" with "AASHTO R 82".

ON PAGE 394, SUBSECTION 601.03.A – GENERAL

Add the following to the end of 601.03.A:

Minimum and maximum pipe cover heights will be measured from top of pipe to finished grade.

Designs for larger pipe sizes, different pipe cover heights or conditions not included in these Standard Specifications or the Special Provisions, must be performed by an Idaho licensed professional engineer.

ON PAGE 394, SUBSECTION 601.03.B – GENERAL

Add the following to 601.03.B after the first paragraph:

Recess the pipe bedding to receive pipe bells.

Pipes that show cracks or other damage will be rejected.

Minimum concrete pipe cover is 1 foot.

ON PAGE 394, SUBSECTION 601.03.D – PLASTIC PIPE

Add the following to the end of 601.03.D:

Table 601.03.D-1 – Minimum Plastic Pipe Cover Heights

Road Surface Type	Minimum Plastic Pipe Cover Height [a] (ft)
Flexible Pavement or Unpaved	2.0
Rigid Pavement	1.5

[a] Minimum cover for plastic pipe larger than 48 inch diameter is half the pipe diameter.

ON PAGE 396, SECTION 602 – CULVERTS

Delete section 602, in its entirety, and replace with:

602.01 Description. Provide and install culverts.

602.02 Materials. Provide materials as specified in 601.

Provide pipe joints that are either silt-tight or leak-resistant as specified in 601.02.

Provide size No. 1, 2a, or 2b coarse aggregate for concrete as specified in 703.02 and ¾ inch minus aggregate for untreated base as specified in 703.04.
Controlled density fill as specified in 522.

602.03 Construction Requirements. Install pipes as specified in 601.03.

In continuous water flow situations (e.g., creek crossings), place controlled density fill in the bedding zone for 3 feet of culvert length at the upstream end.

602.04 Method of Measurement. The Engineer will measure acceptably completed work by the foot along pipe centerline. The Engineer will allow an additional 1 foot for each connecting band used in making an authorized extension of existing corrugated metal pipe. The Engineer will include culvert sections attached to aprons in culvert measurements.

Pipe aprons required only because PVC or PE pipe is used will not be measured or paid for separately when other pipe material is acceptable.

602.05 Basis of Payment. The Department will pay for accepted quantities as follows:

Pay Item	Pay Unit
_____ Pipe Culverts	ft

_____ Pipe Arch ..... ft

Structure excavation, compacting backfill, trench zone backfill, and pipe bedding zone material are incidental and included in the culvert contract unit price.

ON PAGE 397, SECTION 603 – PIPE SIPHONS

Delete section 603, in its entirety, and replace with:

603.01 Description. Provide and install pipe siphons.

603.02 Materials. Provide materials as specified in 601.

Provide pipe joints that are leak-resistant with a maximum working pressure of 10 psi as specified in 601.02.

Provide size No. 1, 2a, or 2b coarse aggregate for concrete as specified in 703.02 and ¾ inch minus aggregate for untreated base as specified in 703.04.

603.03 Construction Requirements. Install metal pipe siphons as specified in 601.03.

Completely fill the siphon with water and repair leaks that develop before backfilling, using approved methods. If there are leaks around joints in rubber-gasketed concrete pipe, encase the joint using an approved reinforced concrete collar. Only 2 collar and joint repairs are allowed for each 150 feet of pipe. Empty the siphon of water before making repairs and then refill, retest, and obtain approval before backfilling.

603.04 Method of Measurement. The Engineer will measure acceptably completed work by the foot along pipe centerline. The Engineer may calculate the length from the dimensions of the approved siphon layout.

603.05 Basis of Payment. The Department will pay for acceptable quantities as follows:

Pay Item	Pay Unit
_____ Pipe Siphon	ft

Structure excavation, compacting backfill, trench zone backfill, and pipe bedding zone material are incidental and included in the pipe siphon contract unit price.

ON PAGE 398, SECTION 604 – IRRIGATION PIPELINES

Delete section 604, in its entirety, and replace with:

604.01 Description. Provide and install irrigation pipelines.

604.02 Materials. Provide materials as specified in 601.

Provide pipe joints that are leak-resistant with a maximum working pressure of 10 psi as specified in 601.02.

Provide Size No. 1, 2a, or 2b coarse aggregate for concrete as specified in 703.02 and ¾ inch minus aggregate for untreated base as specified in 703.04.

604.03 Construction Requirements. Install pipe as specified in 601.03.

Test for leaks by closing off a section with suitable water bulkheads, filling the line with water, and applying pressure to the line equal to the maximum static head the finished line will be subjected to at the point of testing. Locate and repair leaks as approved.

604.04 Method of Measurement. The Engineer will measure acceptably completed work by the foot along pipe centerline. The Engineer will allow an additional 1 foot for each connecting band used in making an authorized extension of existing corrugated metal pipe.

604.05 Basis of Payment. The Department will pay for accepted quantities as follows:

Pay Item	Pay Unit
_____ Irrigation Pipe	ft

Structure excavation, compacting backfill, trench zone backfill, and pipe bedding zone material are incidental and included in the irrigation pipe contract unit price.

ON PAGES 399-401, SECTION 605 – SEWERS, MANHOLE AND VALVE COVERS

Delete section 605, in its entirety, and replace with:

605.01 Description. Construct sewers with manholes, inlets, connections, and other appurtenances to carry stormwater or sewage. Adjust and repair manhole and valve covers.

605.02 Materials. Provide materials as specified in:

Concrete 509

Portland Cement 701

Gaskets for Concrete Pipe 706.11

Rubber Gaskets for Corrugated Metal Pipe 706.12

Metals 708

Reinforcing Steel 708.02

Manhole Covers and Rings, Grates, Catch Basins, Inlets, etc. 708.22

Concrete Curing Compounds and Admixtures 709

Provide pipe joints that are silt-tight or leak-resistant as specified in 601.02.

Provide other materials as specified in 601.

Corrugated PE pipe may only be used for storm sewers as specified in 706.16 and with the following additions:

1. Use Type S pipe.
2. Do not subject a pipeline with couplings to pressure flow.

Use only precast concrete manufacturers that hold current certificaton under the NPCA Plant Certification Program, the PCAA Plan Certification Program, the ACPA QCast Plant Cerifications Program, or the PCI Plant Certification Program.

Provide size No. 1, 2a, or 2b coarse aggregate for concrete as specified in 703.02 and ¾ inch minus aggregate for untreated base as specified in 703.04.

605.03 Construction Requirements. The Contractor may tunnel or jack to cross under cross walks, house drives, or service pipes. Excavate and compact backfill as specified in 210.

Lay concrete pipe for sanitary sewer lines beginning at the lower (downstream) end with the receiving end upstream and with ends fully joined using suitable means to prevent air circulation within the pipeline. Provide and install rubber-gasketed joints as specified in 601.03.

Install pipes as specified in 601.03.

Test the line for leaks before accepting the sewer line as specified in 601.03.

Install spiral rib corrugated steel pipe and ABS pipe in accordance with the manufacturer's written instructions.

Test the line for leaks before accepting the sewer line as follows:

1. Close off a section with suitable watertight bulkheads.
    a. Fill the line with water.
    b. Apply 4 feet of head pressure to the line measured from the top of the pipe at the upstream end, and supplying water to the section under test so the water loss may be measured.

The Engineer will not accept the sewer line if the water loss exceeds 200 gallons per inch of pipe diameter per mile per day. Locate and correct any leaks if the loss exceeds the volume allowed.

The Contractor may test by the low pressure air method as an acceptable alternate to hydraulic testing as follows:

1. Test installation on runs or sections. The Department will allow preliminary testing before backfilling. Test when the pipe is in a wet condition.
2. Use an approved apparatus and method recommended by the pipe manufacturer.
3. Prepare the installation being tested, between its plugged ends, by pressurizing it to an internal pressure of 4 psi. Air pressure is defined as the pressure in excess of back pressure on the installation that would occur if the pipe were submerged in water. Hold an air pressure of 4 psi for at least 2 minutes or as long as needed for the pressure to stabilize.
4. The tested section, when tested on the air pressure drop method, will be if the time required for the pressure to drop from 3.5 to 2.5 psi coincides with ASTM C924.

The Contractor may test connections to inlet and outlet structures by blocking off a pipe section of the outlet, filling the structure with water, and observing the water surface drop. To be acceptable, water loss must not exceed 0.002 gallons per inch of inside perimeter of connection per foot of structure height or length per hour with no outside back pressure.

Construct manholes, catch basins, inlets, sediment and oil trap manholes, and sediment control catch basins as specified in 708.22.

A. Adjusting Manhole and Valve Covers.

Adjust the existing manhole and valve covers to conform to the new finished pavement grade. Exercise care in operations in order to not damage the structures, equipment, or utilities (e.g., water, gas, power). Any damage occurring to the utilities due to the Contractor's operation will be repaired at no additional cost to the Department. Make any masonry adjustment by using bricks, concrete blocks, or placed concrete.

Coordinate with the utility owner 5 business days before lowering the manhole or valve covers. Locate and lower the manhole or valve covers before excavation and adjust to match the finished pavement grade. Where excavation is necessary to adjust to the design elevation, place backfill in 3-inch lifts and tamp by hand.

Place concrete collars around manholes and valve covers as specified. The concrete collar will be 1 foot wide, measured from the metal cover edge to the cut pavement edge. A 10-foot straightedge will be used to determine the completed installation surface smoothness. Place concrete collars ¼ inch below the finished grade. Adjust any high points by grinding.

B. Manholes, Valves, Catch Basins, and Inlets.

Construct manholes, valve frames and covers, catch basins, and inlets.

Adjust existing manhole and valve frames and covers to the finished pavement grade. Coordinate with the utility owner 5 business days before making adjustments. Replace damaged manhole or valve frames and covers.

Install concrete collars around manhole and valve frames. Use Idaho IR 87 to test surface smoothness.

605.04 Method of Measurement. The Engineer will measure the acceptably completed work as follows:

1. By the foot along pipe centerline, excluding the distance across catch basins, manholes, inlets, and other structures where the pipe, or a portion of pipe, is not actually incorporated in the finished product.
2. Manholes, valve frames and covers, catch basins, and inlets by the each.
3. Manhole and valve frame and cover adjustment and replacement by the each.

The Engineer will not measure structure excavation and backfill.

605.05 Basis of Payment. The Department will pay for acceptable quantities as follows:

Pay Item	Pay Unit
_____ Storm Sewer Pipe	ft
_____ Sanitary Sewer Pipe	ft
Manholes, Type _____	Each
Catch Basis, Type _____	Each
Inlets, Type_____	Each
Sediment and Oil Trap Manhole	Each
Sediment Control Catch Basin	Each
Adjust Manhole Covers	Each

Adjust Valve Covers ..... Each

Replace Damaged Manhole Frame ..... Each

Replace Damaged Valve Risers ..... Each

Structure excavation, compacting backfill, and trench zone backfill and pipe bedding zone material are incidental, and included in the sewer, manhole and valve cover contract unit price.

ON PAGE 411, SUBSECTION 612.02 – MATERIALS

Add:

Excavation and Embankment..... 205

ON PAGE 411, SUBSECTION 612.03.A – GUARDRAIL/CONSTRUCTION REQUIREMENTS/GUARDRAIL

Add the following after paragraph 4:

Install guardrail terminals in accordance with the manufacturer's written installation instructions. Provide and install self-adhesive object marker sheeting to the end of guardrail terminals or provide an object marker for each guardrail terminal.

ON PAGE 411, SUBSECTION 612.04 – METHOD OF MEASUREMENT

Delete the 612.04 section and replace with:

612.04 Method of Measurement. The Engineer will measure acceptably completed work as follows:

1. W-beam guardrail, precast concrete barrier, and cast-in-place concrete barrier will be by the foot, including the length of anchors, terminals, and transitions.
2. Guardrail anchors, guardrail terminals, guardrail transitions, concrete barrier terminals, and concrete barrier transitions will be per each.

ON PAGE 412, SUBSECTION 612.05 – BASIS OF PAYMENT

Delete the 612.05 section and replace with:

612.05 Basis of Payment. The Department will pay for acceptable quantities at the contract unit prices as follows:

Pay Item	Pay Unit
W-beam Guardrail	ft
Guardrail Anchor	Each
Guardrail Terminal, _____	Each
Guardrail Transition, _____	Each
Precast Concrete Barrier	ft
Concrete Barrier Terminal, _____	Each
Concrete Barrier Transition, _____	Each

Cast-in-place Concrete Barrier ..... ft

The additional payment for anchors, terminals, and transitions cover the additional materials and work necessary for these items. The chamfered barrier for guardrail transition is incidental to the guardrail transition pay items.

Guardrail terminal grading is measured and paid in as specified in 205.

Miscellaneous guardrail or barrier components are incidental and the cost included in the guardrail or barrier contract unit prices.

ON PAGE 418, SUBSECTION 616.03.D.2 – FOUNDATIONS

Delete the third paragraph and replace with:

Tighten all bolts that are not anchor rods as specified in 504.03.L.2.

ON PAGE 418, SUBSECTION 616.04 – SIGNS AND SIGN SUPPORTS/METHOD OF MEASUREMENT

Add the following after item 6:

7. Reinstalled signs will be per each sign reinstallation. Sign posts and foundations will be paid by their respective pay items.

ON PAGE 421, SUBSECTION 618.03 – MARKER POSTS, WITNESS POSTS, AND STREET MONUMENTS

Delete the last sentence of the first paragraph starting with “Mark right of way…” and replace with the following:

Mark right of way and centerline monuments with station and offset.

ON PAGE 422, SUBSECTION 618.05 – MARKER POSTS, WITNESS POSTS, AND STREET MONUMENTS

At the end of the subsection add the following:

Payment for marker posts and street monuments required under 107.19 are not included in the quantities of work under this section.

ON PAGE 425, SUBSECTION 619.03.D – ILLUMINATION/CONSTRUCTION REQUIREMENTS/POLES

In the last paragraph, delete “Formula No. 14” and replace with “Formula No. 2”.

ON PAGE 429, SUBSECTION 621.01 – SEEDING/DESCRIPTION

To the end of the first paragraph, add “specified”.

ON PAGE 431, SUBSECTION 621.03.D – SEEDING/CONSTRUCTION REQUIREMENTS/SEEDING

Delete the first sentence in the third paragraph.

ON PAGE 434, SUBSECTION 621.03.G – CONSTRUCTION REQUIREMENTS/WATERING

Replace “May 30 and September 15” with “May 1 and October 14”.

ON PAGE 440, SECTION 626 – TEMPORARY TRAFFIC CONTROL
Delete the entire section and replace with the following

SECTION 626 – TEMPORARY TRAFFIC CONTROL

626.01 Description. Provide, install, maintain, remove, and relocate temporary traffic control devices.

626.02 Materials. Provide material as specified in:

Guardrail and Concrete Barrier 612
Crash Cushions..... 613
Signs and Sign Supports..... 616
Pavement Markings 630
Retroreflective Sheeting..... 712.02

Ensure temporary traffic control devices are in acceptable or marginal conditions as defined in American Traffic Safety Services Association's (ATSSA) Quality Guidelines for Temporary Traffic Control Devices and Features.

A. Temporary Traffic Control Signs. Provide temporary traffic control signs meeting 616.

B. Channelizing Devices. Provide weighted base tubular markers, surface-mounted tubular markers, vertical panels, drums, barricades, or other channelizing devices.

Provide weighted base or surface-mounted tubular markers that are at least 36 inches high and have at least 3 inches width when facing traffic.

Attach surface-mounted tubular markers with an adhesive in accordance with the manufacturer's written installation instructions. Do not nail or bolt tubular markers to the pavement.

Provide barricades that have the following minimum lengths:

1. Type 1: 2 feet.
2. Type 2: 2 feet.
3. Type 3: 7 feet.

C. Temporary Pavement Markings. Provide temporary pavement marking tape, temporary waterborne pavement marking paint, or temporary raised pavement markers.

When used, ensure temporary pavement marking tape is retroreflective, white or yellow, adheres to concrete or asphalt pavements with precoated and pressure-sensitive adhesive, 4 inches wide, and is capable of conforming to the pavement surface. When used for broken-line pavement markings, use 2-foot long line segments.

Provide 2-sided temporary flexible raised pavement markers when used on undivided highways. Install in accordance with the manufacturer's written installation instructions.

Provide reflectorized rigid raised pavement markers for temporary applications. Provide 2-sided markers when used on undivided highways. Install in accordance with the manufacturer's written installation instructions. Ensure that markers are removable without the use of heat, grinding, or blasting.

D. Floodlights. Provide floodlights capable of illuminating flagger stations, work areas, and equipment crossings with at least 5 foot-candles or greater. Ensure floodlights are equipped with a meter that records hours of operation.

E. Arrow Boards. Provide arrow boards with a meter that records hours of operation.

F. Portable Changeable Message Signs (PCMS). Provide portable changeable message signs with message sign, control system, power source, and mounting and transporting equipment components. Ensure that PCMS are equipped with a meter that records hours of operation.

G. Temporary Traffic Control Signal. Provide portable temporary traffic control signals in accordance with NEMA TS-5 Type TR1.

H. Temporary Concrete Barrier. Provide temporary concrete barrier meeting 612.

I. Temporary Crash Cushion. Provide temporary crash cushions meeting 613. Provide test-level 2 or 3 temporary crash cushions when the highway posted speed is less than 45 mph. Provide test-level 3 temporary crash cushions when the highway posted speed is greater than or equal to 45 mph.

J. Truck Mounted Attenuator. Provide a truck mounted attenuator attached to a shadow vehicle. Provide test level 2 or 3 truck-mounted attenuators when the highway posted speed is less than 45 mph. Provide test-level 3 truck mounted attenuators when the highway posted speed is greater than or equal to 45 mph.

K. Miscellaneous Temporary Traffic Control Items. Provide miscellaneous temporary traffic control items.

L. Flagger Equipment. Ensure flaggers wear high-visibility safety apparel and are provided a STOP/SLOW paddle.

M. Pilot Car. Provide a vehicle with a PILOT CAR FOLLOW ME sign mounted on the rear of the pilot vehicle. Show the company name of the pilot car contractor on both sides of the vehicle.

626.03 Construction Requirements. Identify a project traffic control supervisor (TCS) certified by ATSSA or Evergreen Safety Council to direct the installation, modification, and maintenance of temporary traffic control devices. Provide contact information for the TCS. Provide a schedule and contact information for personnel working under the direction of the TCS that can be contacted will respond 24 hours per day during the duration of the temporary traffic control operations to provide temporary traffic control maintenance.

Under the direction of the TCS, install temporary traffic control devices before changing traffic patterns. Do not use devices for purposes other than those for which they are intended. Cover or remove temporary traffic control devices when not applicable.

Keep temporary traffic control zones as short as practical. Restore normal traffic operations to the extent practical during non-working hours and during planned or unplanned work stoppages. Ensure individual traffic delays do not exceed 15 minutes and traffic delays do not exceed a total of 30 minutes through the length of the project site, unless otherwise approved in writing. Implement remedial action to eliminate the excess traffic delays.

Ensure temporary traffic control devices are in acceptable or marginal condition as defined in the ATSSA Quality Guidelines for Temporary Traffic Control Devices and Features. Repair or replace devices that are unacceptable as defined in the ATSSA guidelines. Ensure temporary traffic control devices remain in place and serviceable during the time their use is required.

Ensure signs remaining in place for more than 3 calendar days are installed on breakaway sign posts, as specified in 616, at the following heights:

- 5 feet from the bottom of the sign to the elevation of the near edge of the pavement in rural areas
- 7 feet from the bottom of the sign to the top of the curb where parking or pedestrian movements are likely to occur
- Secondary signs mounted below another sign may be 1 foot less than the heights describe above.

Provide additional temporary traffic control signs if traffic queues extend upstream of the first temporary traffic control device. Remove or cover the signs when no longer needed.

Monitor and maintain the temporary traffic control plan and devices during the duration of the temporary traffic control operations. Temporary traffic control maintenance includes repairing, replacing, and cleaning temporary traffic control devices, restoring displaced devices, removing and resetting devices (excluding temporary concrete barrier) for different phases, and inspecting the temporary traffic control. Initial setup and final removal of temporary traffic control is incidental and included in the contract price for the temporary traffic control devices. Coordinate temporary traffic control maintenance operations before performing the work.

Provide weighted bases when necessary to ensure channelizing devices remain in place.

Install temporary markings as soon as practical. For temporary pavement markings, omit the test strip when waterborne paint is used. Use temporary flexible raised pavement markers or temporary rigid raised pavement markers to supplement or as a substitution for other pavement markings. Use 2 raised pavement markers placed side by side to mark double-width lines. The Engineer may require additional markers placed at a reduced spacing. Ensure pavement markings are visible in the day and night. Repair damaged markings.

Remove surface-mounted tubular markers, temporary paving market tape, temporary raised pavement markers, and rigid raised pavement markers without damaging pavement surface.

Obtain approval before removing temporary traffic control.

Illuminate flagger stations, work areas, and equipment crossings when nighttime work is being performed. Provide floodlights 30 minutes before sunset and up to 30 minutes after sunrise when workers or operational equipment are present. Ensure floodlighting does not produce a glare condition for approaching road users, flaggers, or workers.

Provide an extra floodlight onsite for backup. When a flagger station is moved, use the backup floodlight to illuminate the new station.

Secure the PCMS and temporary traffic control signal control systems with a lock and change the default control system password to prevent tampering.

At least once per week, ensure temporary traffic control devices function well during non-daylight hours.

When necessary for construction phasing, remove, store, and reset temporary concrete barrier. Store the removed barrier outside the highway clear zone. Replace damaged sections of temporary concrete barrier.

Provide temporary traffic control until the temporary concrete barrier is reset. Coordinate removing and resetting temporary concrete barrier before performing the work.

When necessary for construction phasing, remove, store, and reset temporary crash cushion in accordance with the manufacturer's installation instructions. Store removed crash cushions outside the highway clear zone. Replace damaged crash cushions. Provide temporary traffic control until the temporary crash cushion is reset.

Coordinate truck mounted attenuator use before deployment.

Perform flagger control with certified flaggers. Certified flaggers have completed a flagger training course from a Department-approved source and carry a current certificate of training. Certifications issued by other state Departments of Transportation that have a reciprocity agreement with the Department are acceptable. Coordinate flagging operations before performing the work.

Coordinate pilot car operations before performing the work.

626.04 Method of Measurement. The Engineer will measure acceptably completed work as follows:

1. Temporary traffic control signs will be by the square foot of sign.
2. Weighted based tubular markers, surface-mounted tubular markers, vertical panels, drums, and barricades will be per each.
3. Temporary pavement marking tape and temporary pavement marking waterborne paint will be by the foot and will include removal when applicable.
4. Temporary flexible raised pavement markers and temporary rigid raised pavement markers will be per each.
5. Floodlights will be by the hour or day.
6. Arrow boards will be by the hour or day.
7. Portable changeable message signs will be by the hour or day.
8. Temporary traffic control signal will be by the hour or day.
9. Temporary concrete barrier and removing and resetting temporary concrete barrier will be by the foot.
10. Temporary crash cushions, removing and resetting temporary crash cushions, and truck-mounted attenuators, including those used in mobile operations, will be per each.
11. Miscellaneous temporary traffic control items will be measured and paid by force account as specified in 109.03.C.5.
12. Temporary traffic control maintenance will be by the hour.
13. Flagger control will be by the hour and is limited to the actual number of hours flagging stations are staffed.
14. Pilot car operation will be by the hour.

Maintain a daily record of hours for temporary traffic control maintenance, flagger control, and/or pilot car usage. Provide the records weekly for approval of hours recorded. Provide a weekly report of each non-daylight hour temporary traffic control inspection to include temporary traffic control activities, the time the

temporary traffic control was reviewed, any actions taken, and any other pertinent information. If allowed by the Engineer, no additional payment will be made for temporary traffic control plan changes, flagging and pilot car operations for the Contractor's sole convenience.

626.05 Basis of Payment. The Department will pay for accepted quantities at the contract unit prices as follows:

Pay Item	Pay Unit
Temporary Traffic Control Signs	SF
Weighted Base Tubular Markers	Each
Surface-Mounted Tubular Markers	Each
Vertical Panels	Each
Drums	Each
Barricade, Type ___	Each
Temporary Pavement Marking Tape	ft
Temporary Flexible Raised Pavement Markers	Each
Temporary Rigid Raised Pavement Markers	Each
Temporary Pavement Marking – Waterborne	ft
Floodlights	Hour or Day
Arrow Board, Type ___	Hour or Day
Portable Changeable Message Sign (PCMS)	Hour or Day
Temporary Traffic Control Signal	Hour or Day
Temporary Concrete Barrier	ft
Remove and Reset Temporary Concrete Barrier	ft
Temporary Crash Cushion	Each
Remove and Reset Temporary Crash Cushion	Each
Truck Mounted Attenuator	Each
Miscellaneous Temporary Traffic Control Items	CA
Temporary Traffic Control Maintenance	Hour
Flagger Control	Hour
Pilot Car	Hour

Initial setup and final removal of temporary traffic control is incidental and included in the contract price for the temporary traffic control devices. Lights and flags on signs and sign posts are incidental and included in the contract price for temporary traffic control signs.

ON PAGE 453, SUBSECTION 630.02 – MATERIALS

Replace this section with: Provide materials as specified in:

Paint 707

Glass Beads Used in Pavement Markings 720.08

Provide paint and beads in original packaging showing the lot numbers. Preapproved lots do not need to be tested. For paint lots that have not been preapproved, sample paint materials in accordance with Idaho IR 7 and submit the samples for testing to the Central Materials Laboratory. For bead lots that have not been preapproved, provide a sample 50 pound bag of glass beads for testing by the Central Materials Laboratory. Receive lab approval before using the paint or glass beads. Allow 2 weeks for laboratory testing.

Provide paint and beads in original packaging showing the lot numbers. Sample paint materials in accordance with Idaho IR 7 and submit the samples for testing to the Central Materials Laboratory. Provide a sample 50 pound bag of glass beads for testing by the Central Materials Laboratory. Receive lab approval before using the paint or glass beads. Allow 2 weeks for laboratory testing.

ON PAGE 453, SUBSECTION 630.03.A – WATERBORNE PAINT

Delete the third and fourth sentences in 1 and replace with:

Place 2 paint applications for permanent pavement markings and 1 paint application for temporary traffic control pavement markings unless otherwise specified in the plans or as Engineer directed. When applying pavement markings on undivided highways to a centerline rumble strips or a seal coat, place the second application of centerline paint in the opposite direction of the first application to ensure full visibility of the pavement markings in each direction.

ON PAGE 455, SUBSECTION 631.02 – MATERIALS

Delete not specified and add the following:

Provide materials as specified in:

Fog Coat 408

Emulsified Asphalts 702.03

Provide CSS-1 or CSS-1H diluted emulsified asphalt for the fog coat.

ON PAGE 455, SUBSECTION 631.03 – CONSTRUCTION REQUIREMENTS

Delete the third paragraph and add the following:

Remove debris and apply fog coat as specified in 408. When applicable, remove and dispose of debris before opening adjacent lanes to traffic.

When rumble strips are installed under pavement markings, place 1 application of temporary pavement markings, construct and fog coat rumble strips, then place 2 applications of pavement markings as specified in 630.

ON PAGE 455, SUBSECTION 631.05 – BASIS OF PAYMENT

After the last sentence add:

Rumble strips that deviate 2 inches or greater longitudinally from the initial marking will be paid at 50 percent of the unit price for the length of the deviation. Deviations of 4 inches or greater longitudinally from the marking will be paid at 0 percent of the unit price for the length of the deviation. The length of the deviation will be measured to the nearest foot.

The first application of pavement markings will be paid for as temporary pavement markings as specified in 626. The permanent pavement markings will be paid as specified in 630.

ON PAGE 457, SUBSECTION 632.03.B – CONSTRUCTION REQUIREMENTS/CLASS B REMOVAL

In the first paragraph change ASTM D458 to ASTM D4580.

ON PAGE 463, SUBSECTION 641.02 – BIAXIAL GEOGRID/MATERIALS

Delete the third paragraph and replace with:

Provide the test dates on the certification. As a means of identification, provide tags on the product rolls with the manufacturer's name, full product name, style or product code number, and lot and/or roll number, which will permit field determination of the product delivered to the project site is covered by the certification.

Delete the footnote in Table 641.02-1 and replace with:

[a] Minimum Average Roll Values (MARV) in the weakest direction. The geogrid type is shown on the plans. When the geogrid type is not shown, use Type II.

ON PAGE 464, SUBSECTION 641.03 – BIAXIAL GEOGRID/CONSTRUCTION REQUIREMENTS

In the third sentence of the second paragraph delete the following:

first the

And replace with:

the first

In the last paragraph, delete "by construction activity".

ON PAGE 465, SUBSECTION 645.01 – FIELD LABORATORIES/DESCRIPTION

Add the following to the first paragraph:

If the Engineer, or consultant working under the Engineer's direction, is responsible for damage to the field laboratory or its equipment beyond what is expected during normal use, the Engineer will reimburse the Contractor for the damage at a reasonable replacement or maintenance cost. The Contractor must demonstrate to the Engineer that the damage was beyond normal wear and tear before the Engineer will reimburse the Contractor for damage.

ON PAGE 490, SUBSECTION 675.03.H.7.a – CONFIDENCE POINT DELIVERABLES

Delete "(current version of Bentley Inroads.dtm files)".

ON PAGE 491, SUBSECTION 675.03.I.4.a – CONSTRUCTION REQUIREMENTS/GRADE VERIFICATION POINTS/CONSTRUCTION TOLERANCES

Delete the subsection and replace with the following:

a. Areas with Specified Tolerance Values.

In constructing the work, meet the given tolerances below or as approved.

Material / Location	Tolerance
Subgrade / Section 200	± 0.10 ft
Aggregate / Section 300	± 0.08 ft

ON PAGE 494, SUBSECTION 675.03.S.3 – STRUCTURE AND PROCESS SPECIFICATION REQUIREMENTS

Add the following to the end of the last paragraph:

For PPC deck overlays, survey the bridge deck and approach slabs along profile grade line, along edges of deck, along curb flow lines, and along lane lines. Collect survey information including stations, offsets, and elevations at $^{1}/_{10}$ point intervals along each span of the bridge and ends of approach slabs. Collect survey information for the following steps: before grinding, after grinding (before overlay surface preparation begins), and after overlay placement.

Provide survey information to verify cross-slope and profile grade to the Engineer for acceptance. Do not begin next step until survey for the previous step has been accepted.

ON PAGE 496, SECTION 676 – RECORD OF EXISTING PAVEMENT MARKINGS

Replace section 676 in its entirety with the following:

SECTION 676 – RECORD AND REESTABLISH PAVEMENT MARKINGS

676.01 Description. Record existing pavement markings in order to sufficiently reestablish them in the same location, type, and form after they are covered or removed by the work.

676.02 Materials. Provide materials as specified in:

Temporary Traffic Control..... 626

Pavement Markings..... 630

676.03 Construction Requirements. Before removing pavement markings, do the following:

1. Propose a method for recording existing pavement markings that is accuracy to within 2 inches of the original location.
2. Record existing pavement markings.
3. Submit documentation of existing pavement markings through a diagram and/or video.
4. Receive approval to remove pavement markings.

To reestablish pavement markings, place reference markings on each lane line at no greater than 100 foot intervals on tangent sections and no greater than 50 foot intervals on curves and tapers. Reestablish pavement markings, including broken and dotted line patterns, as shown on the pavement markings standard drawing. Accurately reestablish no-passing zones. Mark the approximate center of word, arrow, symbol, or other markings.

Place pavement markings as specified in 630.03.

676.04 Method of Measurement. The Engineer will measure acceptably completed work by the lump sum.

676.05 Basis of Payment. Payment for accepted work will be made as follows:

Pay Item	Pay Unit
Record and Reestablish Pavement Markings	LS

Reference marking materials and other items needed to accomplish the work are incidental.

ON PAGE 501, SUBSECTION 702.02 – EMULSIFIED ASPHALTS

Delete AASHTO M 140 and replace with AASHTO M 316.

ON PAGE 501, SUBSECTION 702.03 – EMULSIFIED ASPHALTS

Delete #5 and renumber the list.

ON PAGE 503, SUBSECTION 702.04.1 – ANTI-STRIPPING ADDITIVE

Delete the second and third sentences and replace with:

> Determine an amount of anti-stripping additive per ton of asphalt to achieve passing test results and maintain that amount throughout production. If the asphalt mixture requires anti-strip additive, the asphalt binder samples will be tested in accordance with Idaho IT 99.

ON PAGE 505, SUBSECTION 703.02.A – CONCRETE AGGREGATE/GENERAL

Delete the second paragraph and replace:

> Do not use limestone for fine or coarse aggregate in concrete wearing surfaces.

ON PAGE 508, SUBSECTION 703.03 – MICROSURFACING AGGREGATE

In the table, change the method for the Sand Equivalent Test to read “AASHTO T 176 Modified Alternate Method No. 2 Pre-Wet”.

ON PAGE 509, SUBSECTION 703.03 – MICROSURFACING AGGREGATE

Add to Table Header with Stockpile Tolerances to read:

Stockpile Tolerance from the Mix Design Gradation

And add the following:

The gradation of the aggregate stockpile must not vary by more than the stockpile tolerance from the mix design gradation while also remaining within the specification gradation band. The percentage of aggregate passing any 2 successive sieves must not change from one end of the specified range to the other end.

ON PAGE 517, SUBSECTION 704.04 – NEOPRENE COMPRESSION SEAL

Delete the 1st paragraph and replace with the following:

704.04 Neoprene Compression Seal. Meet AASHTO M 220 for concrete pavement and AASHTO M 297 for bridges.

Provide a seal adhesive in accordance with the seal manufacturer's written instructions and appropriate for use with the seal shown on the plans. Where an adhesive lubricant is required, meet ASTM D2835 for concrete pavement and ASTM D4070 for bridges. Where an epoxy adhesive is required, meet ASTM C881, Types I, II, IV, V, Grade 3, Classes B and C.

ON PAGE 523, SUBSECTION 706.19 – POLYPROPYLENE PIPE

Replace this subsection in its entirety with: "Meet ASTM F2764 for corrugated double and triple wall pipe. Limit double wall pipe to 30 inches maximum diameter and triple wall pipe from 30 inches to 60 inches maximum diameters."

ON PAGE 525, SUBSECTION 707.02 – PAINT FORMULA

Delete "Formula No. 14 Highway Traffic Line Paint, Latex" and replace with "Formula No. 14 Highway Pavement Marking Paint, Waterborne".

Insert:

Table 707.02-1 – Waterborne Paint Criteria

Parameter	White	Yellow
Density of Paint lb/gal	Within ± 0.20 lb/gal of qualification sample	
Consistency:		
at 122°F (Kreb Units)	80 minimum	80 minimum
at 77°F (Kreb Units)	85-95	85-95
at 50°F (Kreb Units)	100 maximum	100 maximum
Total Nonvolatile Solids (%)	78 minimum	78 minimum
Pigment Solids (%)	65 maximum	65 maximum
Nonvolatile Vehicle, (%) by weight of the vehicle	40 minimum	40 minimum
Vehicle Composition	100% Acrylic Emulsion	
Pigment Composition (lb/gal) (Rutile TiO_2)	1.0 minimum	0.30 maximum
Scrub Resistance (Cycles)	800 minimum	800 minimum
pH (Standard Units)	9.8 minimum	9.8 minimum

VOC (grams/Liter)	150 maximum	150 maximum
Dry Through (Minutes) (Early Washout)	130 maximum	130 maximum
Static Heat Stability (Kreb Units)	±7 maximum	±7 maximum
Freeze-Thaw (Kreb Units)	±5 maximum	±5 maximum
Color (as approved)	37875	33538
Bleeding Ratio	0.98 minimum	0.98 minimum
Contrast Ratio	0.95 minimum	0.90 minimum
Directional Reflectance (%)	90 minimum	60 minimum
Yellowness Index	0.040 maximum	Not Tested
Settling (Inches)	1/4 maximum	1/4 maximum
Cake Depth (Inches)	3.5 maximum	3.5 maximum
Skinning	Pass	Pass
Flexibility	Pass	Pass
Cracking	Pass	Pass
No-tracking Time (Sec.) (Vehicle Field Test)	75 maximum	75 maximum

ON PAGE 534, SUBSECTION 708.18 – HARDWARE FOR SIGNS

Delete the second specification for Class No. Fe/Zn 25 and replace with:

Grade 5, Fe/Zn 3

ON PAGE 534, SUBSECTION 708.19 – ILLUMINATION POLES AND BASES

Delete the word “Standard” from paragraph 2.

ON PAGE 544, SUBSECTION 711.05 – SEED/RANDOM SAMPLING

Delete the second sentence and replace with:

The Engineer will weigh seed according to size, approximately 616 gram samples for lupine species and 125 gram samples of mostly native seed (550 gram samples of grain or similar size seed) from unblended and individually packaged seed containers of each species.

ON PAGE 549, SUBSECTION 711.21 – COMPOST SOCKS

Replace 711.18 with 654.

ON PAGE 550, SUBSECTION 712.02 – RETROREFLECTIVE SHEETING

Change numbers 1 and 2 as follows:

1. Sheet Aluminum and Plywood Signs. Provide Type IV direct applied retroreflective sheeting for signs with white backgrounds. Provide Type XI direct applied retroreflective sheeting for all other background colors. Provide Type XI direct applied retroreflective sheeting for white sign legends.
2. Extruded Aluminum Sign Panels. Provide Type XI direct applied retroreflective sheeting for the background and legend.

ON PAGE 556, SUBSECTION 713.08 – SIGNAL POLES

Replace “Pedestal” with “Pedestrian” under 3.

ON PAGE 556, SUBSECTION 713.09 – ILLUMINATION POLES

Delete the word “Standard” from 2b.

ON PAGE 560, SUBSECTION 714.05 – BLENDED SECONDARY CEMENTITIOUS MATERIALS

Add the following subsection to 714 SECONDARY CEMENTITIOUS MATERIALS:

714.05 Blended Secondary Cementitious Materials. Provide blended secondary cementitious materials conforming to ASTM C1697. Each cementitious material must be sampled before blending.

ON PAGE 564, SUBSECTION 718.03 – SAMPLES

Delete the second sentence of the third paragraph and replace with:

The Department defines a lot as geotextile rolls within the same consignment or shipment that a manufacturer produced with the same lot number, and product name or designation.

ON PAGE 568, SUBSECTION 720.03 – POLYTETRAFLUOROETHYLENE BRIDGE BEARING PADS

Delete all references to “TFE”.

ON PAGE 571, SUBSECTION 720.08 – GLASS BEADS USED IN PAVEMENT MARKINGS

Add a new subsection:

720.08 Glass Beads Used in Pavement Markings. Glass beads used in pavement markings will be tested in accordance with Federal Specification TT-B-1325D. Provide glass beads meeting AASHTO M 247, Type 1 and as follows:

1. Glass Beads for Thermoplastic Pavement Markings. Provide beads with moisture resistance and adherence coatings.
2. Glass Beads for Waterborne Pavement Markings. Provide beads with moisture resistance and adherence coatings. Modify Type 1 gradation as follows:

Microns	U.S. Sieve No.	Percent By Weight, Passing
1,000	18	100
850	20	90 – 100
425	40	15 – 35
300	50	0 – 5
180	80	0 – 2