

ATTACHMENT E
SUPPLEMENTARY SPECIAL PROVISIONS

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The following Supplementary Special Provisions (SSP) modifies the following documents:

1. The **2015 Edition** of the Standard Specifications for Public Works Construction (The "GREENBOOK").
 2. The **2015 Edition** of the City of San Diego Standard Specifications for Public Works Construction (The "WHITEBOOK"), including the following:
 - a) General Provisions (A) for all Contracts.
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SECTION 1 – TERMS, DEFINITIONS, ABBREVIATIONS, UNITS OF MEASURE, AND SYMBOLS

- 1-2 TERMS AND DEFINITIONS.** To the "WHITEBOOK", item 54, "Normal Working Hours", ADD the following:

The **Normal Working Hours** are **7:00 AM to 5:00 PM**.

SECTION 2 - SCOPE AND CONTROL OF WORK

- 2-3.2 Self Performance.** To the "GREENBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. You shall perform, with your own organization, Contract Work amounting to at least 30% of the base Bid.
2. The self-performance percentage requirement will be waived for Prime Contractors meeting the Class B License requirement of this Contract.

- 2-5.4.2 Asset Specific Red-lines.** To the "WHITEBOOK", ADD the following:

1. **Fiber Optic and WIFI Device Red-lines.** Fiber Optic and WIFI Device Red-lines shall clearly record by dimension from 2 known fixed points and by depth of underground facilities all deviations, modifications, and changes in the Work. Records, deviations, modifications, and changes on the day the Work is performed shall reflect the actual Work location and shall be marked in red at the scale of the Plan sheet on which they are recorded. Red-lines shall show the equipment locations and associated information for the following:
 - a) Locations and depths of underground utilities.
 - b) Revisions to the routing of piping and conduits.
 - c) Actual equipment locations.

- d) Pull Boxes.
- e) Electrical Meter, including meter address.
- f) Items abandoned in place.

2-7 SUBSURFACE DATA. To the "WHITEBOOK", ADD the following:

- 4. In preparation of the Contract Documents, the designer has relied upon the following reports of explorations and tests of subsurface conditions at the Work Site:
 - a. Report of Geotechnical Investigation dated July 28, 2017 by Leighton Consulting, Inc.
- 5. The reports listed above are available for review by contacting the Contract Specialist or visiting:

<https://filecloud.sandiego.gov/url/cvzvyxpk8chifude>

2-9.1 Permanent Survey Markers. To the "WHITEBOOK", item 3, DELETE in its entirety and SUBSTITUTE with the following:

- 3. You shall submit to the Engineer a minimum of 7 Days prior to the start of the Work a list of controlling survey monuments which may be disturbed. CMFS (or the private owner for Permit Work) shall perform the following:
 - a) Set survey points outside the affected Work area that reference and locate each controlling survey monument that may be disturbed.
 - b) File a Corner Record or Record of Survey with the County Surveyor after setting the survey points to be used for re-establishment of the disturbed controlling survey monuments.
 - c) File a Corner Record or Record of Survey with the County Surveyor after re-establishment of the disturbed controlling survey monuments.

ADD:

2-10 AUTHORITY OF THE BOARD AND THE ENGINEER. To the "GREENBOOK", Paragraph (2), DELETE in its entirety and SUBSTITUTE with the following:

The decision of the Engineer is final and binding on all questions relating to: quantities; acceptability of material, equipment, or work; execution, progress or sequence of work; requests for information (RFI), and interpretation of the Plans, Specifications, or other Contract Documents. This shall be precedent to any payment under the Contract. The Engineer shall be the single point of contact and shall be included in all communications.

2-15 TECHNICAL STUDIES AND DATA. To the "WHITEBOOK", ADD the following:

3. In preparation of the Contract Documents, the designer has relied upon the following reports and tests at the Work Site:
 - a) Final Drainage study
 - b) Storm Water Quality Management Plan
4. The reports listed above are available for review by contacting the Contract <https://filecloud.sandiego.gov/url/cvzvyxpk8chifude>

2-16 CONTRACTOR REGISTRATION AND ELECTRONIC REPORTING SYSTEM. To the "WHITEBOOK", item 1, DELETE in its entirety.

SECTION 3 – CHANGES IN WORK

3-5.1 Claims. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

ADD:

3-5.1 Claims.

1. A Claim is a written demand by you that seeks an adjustment in the Contract Price, Contract Time, or other relief associated with a dispute arising under or relating to the Contract, including a breach of any provision thereof. A voucher, invoice, or other routine request for payment is not a Claim.
2. A Claim shall conform to these specifications and may be considered after the City has previously denied a request by you for a Change Order seeking the demanded relief.
3. You shall submit a Claim to the Engineer if a dispute occurs that arises from or relates to the Contract. The Claim shall seek all relief to which you assert you are entitled as a result of the event(s) giving rise to the dispute. Your failure to process a Claim in accordance with these specifications shall constitute a waiver of all relief associated with the dispute. Claims are subject to 6-11, "Right to Audit".
4. You shall continue to perform the Services and Work and shall maintain the Schedule during any dispute proceedings. The Engineer will continue to make payments for undisputed Services and Work.

5. The City's Claims process specified herein shall not relieve you of your statutory obligations to present claims prior to any action under the California Government Code.

3-5.1.1 Initiation of Claim.

1. You shall promptly, but no later than 30 Days after the event(s) giving rise to the Claim, deliver the Claim to the Engineer.
2. You shall not process a Claim unless the Engineer has previously denied a request by you for a Change Order that sought the relief to be pursued in the claim.

3-5.1.1.1 Claim Certification Submittal.

1. If your Claim seeks an increase in the Contract Price, the Contract Time, or both, submit with the Claim an affidavit certifying the following:
 - a) The Claim is made in good faith and covers all costs and delays to which you are entitled as a result of the event(s) giving rise to the Claim.
 - b) The amount claimed accurately reflects the adjustments in the Contract Price, the Contract Time, or both to which you believe you are entitled.
 - c) All supporting costs and pricing data are current, accurate, and complete to the best of your knowledge. The cost breakdown per item of Work shall be supplied.
 - d) You shall ensure that the affidavit is executed by an official who has the authority to legally bind you.

3-5.1.2 Initial Determination.

1. The Engineer will respond in writing to your Claim within 30 Days of receipt of the Claim.

3-5.1.3 Settlement Meeting.

1. If you disagree with the Initial Determination, you shall request a Settlement Meeting within 30 Days. Upon receipt of this request, the Engineer will schedule the Settlement Meeting within 15 Working Days.

3-5.1.4 City's Final Determination.

1. If a settle agreement is not reached, the City shall make a written Final Determination within 10 Working Days after the Settlement Meeting.
2. If you disagree with the City's Final Determination, notify the Engineer in writing of your objection within 15 Working Days after receipt of the written determination and file a "Request for Mediation" in accordance with 3-5.2, "Dispute Resolution Process".

3. Failure to give notice of objection within the 15 Working Days period shall waive your right to pursue the Claim.

3-5.1.5 Mandatory Assistance.

1. If a third party dispute, litigation, or both arises out of or relates in any way to the Services provided under the Contract, upon the City's request, you shall agree to assist in resolving the dispute or litigation. Your assistance includes, but is not limited to the following:
 - a) Providing professional consultations.
 - b) Attending mediations, arbitrations, depositions, trials, or any event related to the dispute resolution and litigation.

3-5.1.5.1 Compensation for Mandatory Assistance.

1. The City will reimburse you for reasonable fees and expenses incurred by you for any required assistance rendered in accordance with 3-5.1.5, "Mandatory Assistance" as Extra Work.
2. The Engineer will determine whether these fees and expenses were necessary due to your conduct or failure to act.
3. If the Engineer determines that the basis of the dispute or litigation in which these fees and expenses were incurred were the result of your conduct or your failure to act in part or in whole, you shall reimburse the City for any payments made for these fees and expenses.
4. Reimbursement may be through any legal means necessary, including the City's withholding of your payment.

3-5.2.3 Selection of Mediator. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. A single mediator, knowledgeable in construction aspects and acceptable to both parties, shall be used to mediate the dispute.
2. To initiate mediation, the initiating party shall serve a Request for Mediation at the American Arbitration Association (AAA) on the opposing party.
3. If AAA is used, the initiating party shall concurrently file with AAA a "Request for Mediation" along with the appropriate fees, a copy of requested mediators marked in preference order, and a preference for available dates.
4. If AAA is selected to coordinate the mediation (Administrator), within 10 Working Days from the receipt of the initiating party's Request for Mediation, the opposing party shall file the following:
 - a) A copy of the list of the preferred mediators listed in preference order after striking any mediators to which they have any objection.

- b) A preference for available dates.
 - c) Appropriate fees.
5. If the parties cannot agree on a mediator, then each party shall select a mediator and those mediators shall select the neutral third party to mediate the matter.

3-5.3 Forum of Litigation. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

- 1. It is the express intention that all legal actions and proceedings related to the Contract or Agreement with the City or to any rights or any relationship between the parties arising therefrom shall be solely and exclusively initiated and maintained in courts of the State of California for the County of San Diego.

ADD:

3-5.4 Pre-judgment Interest.

- 1. The parties stipulate that if a judgment is entered against a party for breaching this Contract, the pre-judgment interest shall be two percent (2%) per annum.

SECTION 4 - CONTROL OF MATERIALS

4-1.3.4 Inspection Paid For By the Contractor. To the "WHITEBOOK", ADD the following:

- 1. The special inspections required are listed as follows:
 - a) Structural Concrete per C.B.C. Section 1705.3 and Table 1705.3.
 - b) Masonry per C.B.C. Section 1705.4 and Quality Assurance Requirements of TMS 602/ACI 530.1/ASCE 6.
 - c) Existing Site Soil Conditions, Fill Placement and Load-Bearing Requirements per C.B.C. Section 1705.6 and Table 1705.6.
 - d) Post-Installed Expansion Anchors In Concrete. HILTI KB-TZ per ICC ESR-1917
 - e) Any other Special Inspections as specified in the contract drawings or specifications.

4-1.3.5 Special Inspection. To the "WHITEBOOK", ADD the following:

- 5. The payment for special inspection Work specified under this section shall be paid in accordance with 4-1.3.4.1, "Payment".

- 4-1.3.6 Preapproved Materials.** To the "WHITEBOOK", ADD the following:
3. You shall submit in writing a list of all products to be incorporated in the Work that are on the AML.

- 4-1.6 Trade Names or Equals.** To the "WHITEBOOK", ADD the following:
11. You shall submit your list of proposed substitutions for an "equal" item(s) no later than 30 Working Days after the determination of the Apparent Low Bidder and on the City's Product Submittal Form available at:
<http://www.sandiego.gov/publicworks/edocref/index.shtml>

SECTION 5 - UTILITIES

- 5-1.1 General.** To the "WHITEBOOK", ADD the following:
9. **90 Calendar Days** prior to any paving work, you shall notify the utility owner to provide them adequate time to adjust their utility box frame and cover to finish grade.

- 5-2 PROTECTION.** To the "WHITEBOOK", item 2, ADD the following:
- g) Refer to **Appendix G** for more information on the protection of AMI devices.

- 5-6 COOPERATION.** To the "GREENBOOK", ADD the following:
2. Notify SDG&E at least 10 Working Days prior to excavating within 10 feet of SDG&E Underground High Voltage Transmission Power Lines (69 KV and higher).

SECTION 6 - PROSECUTION, PROGRESS AND ACCEPTANCE OF WORK

- 6-1.1 Construction Schedule.** To the "WHITEBOOK", items 5, 9, 20, and 22, DELETE in their entirety and SUBSTITUTE with the following:
5. Monthly progress payments are contingent upon the submittal of an updated Schedule and cash flow forecast as discussed in item 22 of 6-1.1, "Construction Schedule" to the Engineer. The Engineer may refuse to recommend the whole or part of any monthly payment if, in the Engineer's opinion, your failure or refusal to provide the required Schedule and cash flow forecast information precludes a proper evaluation of your ability to complete the Project within the Contract Time and amount.
 9. Inclusive to the Contract Time, include 15 Working Days to the Schedule for the generation of the Punchlist. You shall Work diligently to complete all Punchlist items within 30 Working Days after the Engineer provides the Punchlist.

20. The **90 Calendar Days** for the Plant Establishment Period is included in the stipulated Contract Time. Time shall begin with the acceptance of installation of the vegetation plan in accordance with Section 801-6, "MAINTENANCE AND PLANT ESTABLISHMENT".
22. With every pay request, submit the following:
 - a) An updated cash flow forecast showing periodic and cumulative construction billing amounts for the duration of the Contract Time. If there has been any Extra Work since the last update, include only the approved amounts.
 - b) A curve value percentage comparison between the Contract Price and the updated cash flow forecast for each Project ID included in the Contract Documents. Curve values shall be set on a scale from 0% to 100% in intervals of 5% of the Contract Time. Refer to the Sample City Invoice materials in **Appendix D – Sample City Invoice** and use the format shown. Your invoice amounts shall be supported by this curve value percentage. For previous periods, use the actual values and percentages and update the curve value percentages accordingly. See "Cash Flow Curve Fitting Example" at the location below:

<https://www.sandiego.gov/publicworks/edocref>

ADD:

6-3.2.1.1 Environmental Document.

1. The City of San Diego has prepared a **Notice of Exemption** for **Bay Terraces Senior Center, Project No. S-16060**, as referenced in the Contract Appendix. You shall comply with all requirements of the **Notice of Exemption** as set forth in **Appendix A**.
2. Compliance with the City's environmental document shall be included in the Contract Price.

6-8.1.1 Requirements Preparatory to Requesting a Walk-through. To the "WHITEBOOK", ADD the following:

2. You shall notify the Engineer to arrange a final inspection of permanent BMPs installed and shall obtain the completed, signed, and stamped DS-563 Form 30 Days prior to the issuance of the Notice of Completion.

6-8.3.1 Defective Work. To the "WHITEBOOK", item 6, DELETE in its entirety and SUBSTITUTE with the following:

6. For Building Projects which require a certificate of occupancy, not including sewer and water facilities, if you fail to correct the defective Work listed on the

City's Punchlist within 45 Days after the Contract Time, you shall reimburse the City for all costs to provide inspection services required to monitor Work beyond the 45 Days. The City shall bill you for the additional inspection at the City's established rates.

SECTION 7 - RESPONSIBILITIES OF THE CONTRACTOR

7-3 **INSURANCE.** To the "GREENBOOK", DELETE in its entirety and SUBSTITUTE with the following:

7-3 **INSURANCE.**

1. The insurance provisions herein shall not be construed to limit your indemnity obligations contained in the Contract.

7-3.1 **Policies and Procedures.**

1. You shall procure the insurance described below, at its sole cost and expense, to provide coverage against claims for loss including injuries to persons or damage to property, which may arise out of or in connection with the performance of the Work by you, your agents, representatives, officers, employees or Subcontractors.
2. Insurance coverage for property damage resulting from your operations is on a replacement cost valuation. The market value will not be accepted.
3. You shall maintain this insurance for the duration of this Contract and at all times thereafter when you are correcting, removing, or replacing Work in accordance with this Contract. Your liabilities under the Contract, e.g., your indemnity obligations, is not deemed limited to the insurance coverage required by this Contract.
4. The payment for insurance shall be included in the Contract Price as bid by you. Except as specifically agreed to by the City in writing, you are not entitled to any additional payment. Do not begin any Work under this Contract until you have provided and the City has approved all required insurance.
5. Policies of insurance shall provide that the City is entitled to 30 Days (10 Days for cancellation due to non-payment of premium) prior written notice of cancellation or non-renewal of the policy. Maintenance of specified insurance coverage is a material element of the Contract. Your failure to maintain or renew coverage or to provide evidence of renewal during the term of the Contract may be treated by the City as a material breach of the Contract.

7-3.2 Types of Insurance.

7-3.2.1 Commercial General Liability Insurance.

1. Commercial General Liability Insurance shall be written on the current version of the ISO Occurrence form CG 00 01 07 98 or an equivalent form providing coverage at least as broad.
2. The policy shall cover liability arising from premises and operations, XCU (explosions, underground, and collapse), independent contractors, products/completed operations, personal injury and advertising injury, bodily injury, property damage, and liability assumed under an insured's contract (including the tort liability of another assumed in a business contract).
3. There shall be no endorsement or modification limiting the scope of coverage for either "insured vs. insured" claims or contractual liability. You shall maintain the same or equivalent insurance for at least 10 years following completion of the Work.
4. All costs of defense shall be outside the policy limits. Policy coverage shall be in liability limits of not less than the following:

<u>General Annual Aggregate Limit</u>	<u>Limits of Liability</u>
Other than Products/Completed Operations	\$2,000,000
Products/Completed Operations Aggregate Limit	\$2,000,000
Personal Injury Limit	\$1,000,000
Each Occurrence	\$1,000,000

7-3.2.2 Commercial Automobile Liability Insurance.

1. You shall provide a policy or policies of Commercial Automobile Liability Insurance written on the current version of the ISO form CA 00 01 12 90 or later version or equivalent form providing coverage at least as broad in the amount of \$1,000,000 combined single limit per accident, covering bodily injury and property damage for owned, non-owned, and hired automobiles ("Any Auto").
2. All costs of defense shall be outside the limits of the policy.

7-3.2.5 Contractors Builders Risk Property Insurance.

1. You shall provide at your expense, and maintain until Final Acceptance of the Work, a Special Form Builders Risk Policy or Policies. This insurance shall be in an amount equal to the replacement cost of the completed Work (without deduction for depreciation) including the cost of excavations, grading, and filling. The policy or policies limits shall be 100% of this Contract value of the

Work plus 15% to cover administrative costs, design costs, and the costs of inspections and construction management.

2. Insured property shall include material or portions of the Work located away from the Site but intended for use at the Site and shall cover material or portions of the Work in transit. The policy or policies shall include as insured property scaffolding, falsework, and temporary buildings located at the Site. The policy or policies shall cover the cost of removing debris, including demolition.
3. The policy or policies shall provide that all proceeds thereunder shall be payable to the City as Trustee for the insured, and shall name the City, the Contractor, Subcontractors, and Suppliers of all tiers as named insured. The City, as Trustee, will collect, adjust, and receive all monies which may become due and payable under the policy or policies, may compromise any and all claims thereunder, and will apply the proceeds of such insurance to the repair, reconstruction, or replacement of the Work.
4. Any deductible applicable to the insurance shall be identified in the policy or policies documents and responsibility for paying the part of any loss not covered because of the application of such deductibles shall be apportioned among the parties except for the City as follows: if there is more than one claimant for a single occurrence, then each claimant shall pay a pro-rata share of the per occurrence deductible based upon the percentage of their paid claim to the total paid for insured. The City shall be entitled to 100% of its loss. You shall pay the City any portion of that loss not covered because of a deductible at the same time the proceeds of the insurance are paid to the City as trustee.
5. Any insured, other than the City, making claim to which a deductible applies shall be responsible for 100% of the loss not insured because of the deductible. Except as provided for under California law, the policy or policies shall provide that the City is entitled to 30 Days prior written notice (10 Days for cancellation due to non-payment of premium) of cancellation or non-renewal of the policy or policies.

7-3.3 Rating Requirements. Except for the State Compensation Insurance Fund, all insurance required by this Contract as described herein shall be carried only by responsible insurance companies with a rating of, or equivalent to, at least "A-, VI" by A.M. Best Company, that are authorized by the California Insurance Commissioner to do business in the State, and that have been approved by the City.

7-3.3.1 Non-Admitted Carriers. The City will accept insurance provided by non-admitted, "surplus lines" carriers only if the carrier is authorized to do business in the State and is included on the List of Approved Surplus Lines Insurers (LASLI list).

All policies of insurance carried by non-admitted carriers shall be subject to all of the requirements for policies of insurance provided by admitted carriers described herein.

7-3.4 Evidence of Insurance. Furnish to the City documents e.g., certificates of insurance and endorsements evidencing the insurance required herein, and furnish renewal documentation prior to expiration of this insurance. Each required document shall be signed by the insurer or a person authorized by the insurer to bind coverage on its behalf. We reserve the right to require complete, certified copies of all insurance policies required herein.

7-3.5 Policy Endorsements.

7-3.5.1 Commercial General Liability Insurance.

7-3.5.1.1 Additional Insured.

1. You shall provide at your expense policy endorsement written on the current version of the ISO Occurrence form CG 20 10 11 85 or an equivalent form providing coverage at least as broad.
2. To the fullest extent allowed by law e.g., California Insurance Code §11580.04, the policy shall be endorsed to include the City and its respective elected officials, officers, employees, agents, and representatives as additional insured.
3. The additional insured coverage for projects for which the Engineer's Estimate is \$1,000,000 or more shall include liability arising out of:
 - a) Ongoing operations performed by you or on your behalf,
 - b) your products,
 - c) your Work, e.g., your completed operations performed by you or on your behalf, or
 - d) premises owned, leased, controlled, or used by you.
4. The additional insured coverage for projects for which the Engineer's Estimate is less than \$1,000,000 shall include liability arising out of:
 - a) Ongoing operations performed by you or on your behalf,
 - b) your products, or
 - c) premises owned, leased, controlled, or used by you.

7-3.5.1.2 Primary and Non-Contributory Coverage. The policy shall be endorsed to provide that the coverage with respect to operations, including the completed operations, if appropriate, of the Named Insured is primary to any insurance or self-insurance of the City and its elected officials, officers, employees, agents and representatives. Further, it shall provide that any insurance maintained by the City and its elected officials, officers, employees, agents and representatives shall be in excess of your insurance and shall not contribute to it.

- 7-3.5.1.3 Project General Aggregate Limit.** The policy or policies shall be endorsed to provide a Designated Construction Project General Aggregate Limit that will apply only to the Work. Only claims payments which arise from the Work shall reduce the Designated Construction Project General Aggregate Limit. The Designated Construction Project General Aggregate Limit shall be in addition to the aggregate limit provided for the products-completed operations hazard.
- 7-3.5.2 Commercial Automobile Liability Insurance.**
- 7-3.5.2.1 Additional Insured.** Unless the policy or policies of Commercial Auto Liability Insurance are written on an ISO form CA 00 01 12 90 or a later version of this form or equivalent form providing coverage at least as broad, the policy shall be endorsed to include the City and its respective elected officials, officers, employees, agents, and representatives as additional insured, with respect to liability arising out of automobiles owned, leased, hired or borrowed by you or on your behalf. This endorsement is limited to the obligations permitted by California Insurance Code §11580.04.
- 7-3.5.5 Builders Risk Endorsements.**
- 7-3.5.5.1 Waiver of Subrogation.** The policy or policies shall be endorsed to provide that the insurer will waive all rights of subrogation against the City, and its respective elected officials, officers, employees, agents, and representatives for losses paid under the terms of the policy or policies and which arise from Work performed by the Named Insured for the City.
- 7-3.5.5.2 Builders Risk – Partial Utilization.** If the City desires to occupy or use a portion or portions of the Work prior to Acceptance in accordance with this Contract, the City will notify you and you shall immediately notify your Builder's Risk insurer and obtain an endorsement that the policy or policies shall not be cancelled or lapse on account of any such partial use or occupancy. You shall obtain the endorsement prior to the City's occupation and use.
- 7-3.6 Deductibles and Self-Insured Retentions.** You shall pay for all deductibles and self-insured retentions. You shall disclose deductibles and self-insured retentions to the City at the time the evidence of insurance is provided.
- 7-3.7 Reservation of Rights.** The City reserves the right, from time to time, to review your insurance coverage, limits, deductibles and self-insured retentions to determine if they are acceptable to the City. The City will reimburse you, without overhead, profit, or any other markup, for the cost of additional premium for any coverage requested by the Engineer but not required by this Contract.
- 7-3.8 Notice of Changes to Insurance.** You shall notify the City 30 Days prior to any material change to the policies of insurance provided under this Contract.
- 7-3.9 Excess Insurance.** Policies providing excess coverage shall follow the form of the primary policy or policies e.g., all endorsements.

7-4 **NOT USED.** To the "GREENBOOK", DELETE in its entirety and SUBSTITUTE with the following:

7-4 **WORKERS' COMPENSATION INSURANCE AND EMPLOYERS LIABILITY INSURANCE.**

1. In accordance with the provisions of §3700 of the California Labor Code, you shall provide at your expense Workers' Compensation Insurance and Employers Liability Insurance to protect you against all claims under applicable state workers compensation laws. The City, its elected officials, and employees will not be responsible for any claims in law or equity occasioned by your failure to comply with the requirements of this section.

2. Limits for this insurance shall be not less than the following:

<u>Workers' Compensation</u>	<u>Statutory Employers Liability</u>
Bodily Injury by Accident	\$1,000,000 each accident
Bodily Injury by Disease	\$1,000,000 each employee
Bodily Injury by Disease	\$1,000,000 policy limit

3. By signing and returning the Contract you certify that you are aware of the provisions of §3700 of the Labor Code which requires every employer to be insured against liability for worker's compensation or to undertake self-insurance in accordance with the provisions of that code and you shall comply with such provisions before commencing the Work as required by §1861 of the California Labor Code.

7-4.1 **Waiver of Subrogation.** The policy or policies shall be endorsed to provide that the insurer will waive all rights of subrogation against the City and its respective elected officials, officers, employees, agents, and representatives for losses paid under the terms of the policy or policies and which arise from Work performed by the Named Insured for the City.

7-5 **PERMITS, FEES, AND NOTICES.** To the "WHITEBOOK", ADD the following:

2. Contractor shall be responsible for obtaining all permits, including, but not limited to:
- a) Grading Permit
 - b) Traffic Control
 - c) Combined Building Permit
 - d) Public Improvement Permit
 - e) Deferred approvals and permits related to Fire Alarms, Fire Sprinkler and Hood Suppression system.
 - f) Health Permit for Commercial Kitchen from Department of Environmental Health(DEH).
 - g) Any other permits necessary to complete scope as outlined in the contract documents

ADD:

7-6 THE CONTRACTORS REPRESENTATIVE. To the "GREENBOOK", ADD the following:

1. Both the representative and alternative representative shall be employees of the Contractor and shall not be assigned to a Subcontractor unless otherwise approved by the City in writing.

7-8.6 Water Pollution Control. To the "WHITEBOOK", ADD the following:

6. Based on a preliminary assessment by the City, this Contract is subject to WPCP.

7-13.4 Contractor Standards and Pledge of Compliance. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. The Contract is subject to City's Municipal Code §22.3004 as amended 10/29/13 by ordinance O-20316.
2. You shall complete a Pledge of Compliance attesting under penalty of perjury that you complied with the requirements of this section.
3. You shall ensure that all Subcontractors complete a Pledge of Compliance attesting under penalty of perjury that they complied with the requirements of this section.
4. You shall require in each subcontract that the Subcontractor shall abide by the provisions of the City's Municipal Code §22.3004. A sample provision is as follows:

"Compliance with San Diego Municipal Code §22.3004: The Subcontractor acknowledges that it is familiar with the requirements of San Diego Municipal Code §22.3004 ("Contractor Standards"), and agrees to comply with requirements of that section. The Subcontractor further agrees to complete the Pledge of Compliance, incorporated herein by reference."

ADD:

7-13.8 Equal Pay Ordinance.

1. You shall comply with the Equal Pay Ordinance (EPO) codified in the San Diego Municipal Code (SDMC) in section 22.4801 through 22.4809, unless compliance is not required based on an exception listed in SDMC section 22.4804.
2. You shall require all of your Subcontractors to certify compliance with the EPO in their written subcontracts.
3. You shall post a notice informing your employees of their rights under the EPO in the workplace or job site.
4. By signing this Contract with the City of San Diego, you acknowledge the EPO requirements and pledge ongoing compliance with the requirements of SDMC Division 48, section 22.4801 et seq., throughout the duration of this Contract.

7-20 **ELECTRONIC COMMUNICATION.** To the "WHITEBOOK", ADD the following:

2. Virtual Project Manager shall be used on this Contract.

7-21.1 **General.** To the "WHITEBOOK", item 3, DELETE in its entirety and SUBSTITUTE with the following:

3. During the construction phase of projects, the minimum waste management reduction goal is 90% of the inert material (a material not subject to decomposition such as concrete, asphalt, brick, rock, block, dirt, metal, glass, and etc.) and 65% of the remaining project waste. You shall provide appropriate documentation, including a Waste Management Form attached as an appendix, and evidence of recycling and reuse of materials to meet the waste reduction goals specified.

SECTION 9 - MEASUREMENT AND PAYMENT

9-3.1 **Payment.** To the "GREENBOOK", ADD the following:

The payment for Bid Item "**Construction Cost**" shall include full compensation for all labor, materials, tools, equipment, apparatus and all incidentals required to complete the work as shown in the contract documents and are not included as part of Bid Items 1,2,3,4 and 5.

SECTION 203 – BITUMINOUS MATERIALS

203-3.4.4 **Rubber Polymer Modified Slurry (RPMS).** To the "WHITEBOOK", DELETE in its entirety.

203-3.4.4.1 **General.** To the "WHITEBOOK", DELETE in its entirety.

ADD:

203-3.4.4.1 **General.** To the "GREENBOOK", paragraph (2), ADD the following:

- e) Crumb rubber shall be a product of recycled material from the City if unavailable from the San Diego County region.

ADD:

203-5.6 **Rubber Polymer Modified Slurry (RPMS).**

203-5.6.1 **General.**

1. Rubber polymer modified slurry (RPMS) is a crumb rubber asphalt slurry-seal surface treatment. RPMS shall be a stable mixture of asphaltic emulsion, mineral

aggregate, set-control additives, specially produced and graded crumb rubber, polymer, mineral fillers, carbon black, and water. The materials for RPMS shall conform to 203-5.4, "Emulsion-Aggregate Slurry (EAS)" and these specifications. Mixing and spreading of RPMS shall be as described in 302-4.12, "Rubber Polymer Modified Slurry (RPMS)".

2. RPMS shall be used for this Contract.

203-5.6.2 Materials.

1. The ingredients of RPMS immediately prior to the mixing shall conform to the following:

- a) Asphaltic emulsion shall be a quick-set type and shall conform to the requirements of CQS-1h and to the following requirements in accordance with the specified test methods:

Quality Tests for Emulsion	Test	Requirements
AASHTO T59	Residue after Distillation	60% min.
ASTM D244		
Quality Tests for Residue	Test	Requirements
AASHTO T49	Penetration at 77° F (25° C)	40% - 90%
ASTM D2397		

- b) Quick setting Type CQS-1h Asphaltic Emulsion shall test positive for Particle Charge when tested in accordance with the applicable ASTM test designation. If the Particle Charge Test result is inconclusive, the asphaltic emulsion shall meet a pH requirement of 6.7 maximum.
- c) Water shall be potable and of such quality that the asphalt will not separate from the emulsion before the application of slurry seal.
- d) If necessary for workability, a set-control agent that will not adversely affect the RPMS material may be added.
- e) Polymer additive shall be SBR Latex or approved equal, which is added at a minimum of 2% by weight of the asphaltic emulsion.
- f) Crumb Rubber.
 - i. Crumb rubber shall be ambient granulated or ground from whole passenger tires, truck tires, or a combination only in

conformance with the requirements indicated in Tables 203-5.6.2 (A), 203-5.6.2 (B), and 203-5.6.2 (C).

- ii. Un-curing or de-vulcanized rubber shall not be acceptable. Rubber tire buffing from either recapping or manufacturing processes may not be used as a supplement to the crumb rubber mixture.
- iii. In order to remove steel and fabric, an initial separation stage which subjects the rubber to freezing temperatures may be used.
- iv. The crumb rubber shall not be elongated or hair-like in shape and individual particles shall not be greater than 1/20 of an inch in length.
- v. The crumb rubber shall be free of contaminants including fiber, metal, and mineral matter within the following tolerances: the fiber content shall be less than 0.30% by weight and the crumb rubber shall be free of metal particles. Metal imbedded in rubber particles shall not be allowed. The amount of mineral contaminants allowed shall not exceed 0.10% by weight.
- vi. The crumb rubber shall be dry with a moisture content of less than 0.75%.

TABLE 203-5.6.2 (A)

CRUMB RUBBER CHEMICAL PROPERTIES SPECIFICATION

Property	Specification Limits
Specific Gravity	1.15 ± .05
Percent of Carbon Black	35.0 Maximum
Percent of Rubber Hydrocarbon	55.0 Maximum
Percent Ash	6.0 Maximum
Percent of Acetone Extract	10.0 Maximum
Percent of Chloroform Extract	3.0 Maximum
Percent Natural Rubber	40 Minimum

TABLE 203-5.6.2 (B)**CRUMB RUBBER GRADATION REQUIREMENTS**

Sieve Size	Percent Passing
No. 30	100
No. 40	90 - 100
No. 50	75 - 85
No. 100	25 - 35
No. 200	0 - 10

TABLE 203-5.6.2 (C)**TESTING METHODS FOR CRUMB RUBBER ANALYSIS**

Property	Test Method
Specific Gravity	ASTM D1817
Carbon Black	ASTM D297
Ash	ASTM D297
Chloroform Extract	ASTM D297
Natural/Synthetic Rubber	ASTM D297
Sieve Analysis	ASTM C136

- vii. Carbon black solution shall be non-ionic in charge and liquid in form. The carbon black shall be compatible with the emulsion system, polymers, and additives being used and shall conform to the requirements indicated in 203-5.6.2 (D) and ASTM D1511.

TABLE 203-5.6.2 (D)

Specification	Tolerances
Total Solids	40 - 44
% Black by Weight	35 - 37
Type Black	Medium Furnace Color
Type Dispersing	Non-ionic

- viii. Additives may be used to accelerate or retard the break-set of the RPMS. The use of additives shall be in quantities specified in the mix design.

- ix. Mineral filler such as Portland cement, hydrated lime, limestone dust, fly ash, or other approved filler meeting the requirements of ASTM D242 shall be used if required by the mix design and may be used to facilitate set times as needed. Any cement used shall be considered as part of the dry aggregate weight for mix design purposes.
- x. The mineral aggregate used shall be the type and grade specified for the particular Type of RPMS. The aggregate shall be manufactured crushed stone such as granite, slang, limestone, chat, other high quality aggregate, or a combination thereof. Aggregate shall consist of rock dust except that 100% of any aggregate of combination of aggregates larger than the No. 50 sieve size used in the mix shall be obtained by crushing rock. The material shall be free from vegetable matter and other deleterious substances. The aggregate shall be free of caked lumps and oversized particles. The aggregate shall also conform to the following requirements in Table 203-5.6.2 (E).

TABLE 203-5.6.2 (E)

Test	California Test	Requirements
Sand Equivalent	217	45 min.
Durability Index	229	55 min.

- xi. Crumb rubber shall be a product of recycled material from the City if unavailable from the San Diego County region.

203-5.6.3 Composition and Grading.

- 1. The percentage composition by weight of the aggregate shall conform to the requirements indicated in the tables below when determined by California Test 202 and modified by California Test 105 when there is a difference in specific gravity of 0.20 or more between blends of different aggregates.

TABLE 203-5.6.3 (A)

TYPE I SLURRY SEAL GRADATION

Sieve Size	Percentage Passing	Stockpile Tolerance
No.4	100	± 5%
No.8	90 - 100	± 5%

Sieve Size	Percentage Passing	Stockpile Tolerance
No.16	65 - 90	± 5%
No.30	40 - 60	± 5%
No.50	25 - 42	± 4%
No.200	10 - 20	± 2%

TABLE 203-5.6.3 (B)

TYPE II SLURRY SEAL GRADATION

Sieve Size	Percentage Passing	Stockpile Tolerance
No.3/8	100	± 5%
No.4	90 - 100	± 5%
No.8	65 - 90	± 5%
No.16	45 - 70	± 5%
No.30	30 - 50	± 5%
No.50	18 - 36	± 4%
No.100	10 - 24	± 3%
No.200	5 - 15	± 2%

TABLE 203-5.6.3 (C)

TYPE III SLURRY SEAL GRADATION

Sieve Size	Percentage Passing	Stockpile Tolerance
No.3/8	100	± 5%
No.4	70 - 90	± 5%
No.8	45 - 70	± 5%
No.16	28 - 50	± 5%

Sieve Size	Percentage Passing	Stockpile Tolerance
No.30	19 - 34	± 5%
No.50	12 - 25	± 4%
No.100	7 - 18	± 3%
No.200	5 - 15	± 2%

2. The job mix (target) gradation shall be within the gradation band for the desired type. After the target gradation has been submitted, the percent passing each sieve shall not be more than the stockpile tolerance.
3. The aggregate shall be accepted at the Site or stockpile. The stockpile shall be accepted based on 5 gradation tests according to California Test 202, modified by California Test 105 when there is a difference in specific gravity of 0.2 or more between blends of different aggregates. If the average of the 5 tests is within the gradation tolerances, then the material will be accepted. If the test shows the material to be out, you may choose to remove the material or blend other aggregates with the stockpile material to bring it into compliance with these specifications. Materials used in blending shall meet the quality test before blending and shall be blended in a manner to produce a consistent gradation.
4. When the results of either the Aggregate Grading or the Sand Equivalent test do not conform to the requirements specified, the aggregate shall be removed. However, if requested in writing and approved by the Engineer, the aggregate may be used and you shall pay to the agency \$1.75 per ton for such aggregate left in place. No single aggregate grading or sand equivalent tests shall represent more than 300 tons or one day's production, whichever is smaller.

203-5.6.4 Mix Design.

1. Before Work begins, you shall submit laboratory reports of mix designs performed in accordance with the tests identified in Table 203-5.6.4 at your expense and shall utilize the specific materials to be used on the project. The design shall be prepared by a laboratory experienced in designing rubber asphalt slurry-seal surface treatments. After the mix design is approved, no substitution shall be made unless approved by the Engineer. The proposed rubber asphalt slurry-seal surface treatment mix design shall verify compatibility of the aggregate, emulsion, mineral filler, set-control additive, and rubber blend.

TABLE 203-5.6.4

Test	Description	Specification
ISSA T-106	Slurry Seal Consistency	Pass
ISSA TB-109	Excess Asphalt	50 grams/ft ² maximum
ISSA TB-100 (Type I)	The Wet Track Abrasion	50 grams/ ft ² maximum
ISSA TB-100 (Type II)	The Wet Track Abrasion	60 grams/ ft ² maximum
ISSA TB-100 (Type III)	The Wet Track Abrasion	60 grams/ ft ² maximum
ISSA TB-113	Mixing Time	Controllable to 150 seconds minimum
ISSA TB-114	The Wet Stripping	Pass

2. The Mixing Time test shall be done at the highest temperatures expected during construction. The original lab report shall be signed by the laboratory that performed the mix design and shall show the results of the tests on individual materials. The report shall clearly show the proportions of aggregate, mineral filler (minimum and maximum), water (minimum and maximum), additive (s) (usage), asphalt emulsion, and asphalt rubber blend based on the dry weight of the aggregate.
3. Component materials used in the mix design shall be representative of your proposed materials. The percentage of each individual material required shall be shown in the laboratory report. Adjustments may be required during the construction based on field conditions.
4. The component materials shall be within the following limits:
 - a) Residual Asphalt Type I, 10% - 16% based on dry weight of aggregate.
 - b) Residual Asphalt Type II, 7.5% - 13.5% based on dry weight of aggregate.
 - c) Residual Asphalt Type III, 6.5% - 12% based on dry weight of aggregate.
 - d) The crumb rubber will be added to the rubberized slurry mix at a rate of 5% by volume to the asphalt cement.
 - e) Polymer additive shall be added at 2% of finished emulsion.
 - f) Carbon Black shall be added at 1.3% to 2% of the finished emulsion.

- g) Mineral filler shall be 0.5% - 2.0% (if required by mix design) based on dry weight of aggregate.
- h) Additives, as needed.
- i) Water, as needed to achieve proper mix consistency (total mix liquids shall not exceed the loose aggregate voids).

SECTION 209 – PRESSURE PIPE

209 PRESSURE PIPE. To the “WHITEBOOK”, ADD the following:

- 2. PVC products, specifically type C900 and C905, as manufactured or distributed by J-M Manufacturing Company or JM Eagle shall not be used on the Contract for pressurized pipe.

209-1.1.2 Materials. To the “WHITEBOOK”, item 10, ADD the following:

- a) The interior of bells shall be lined **as specified**.

SECTION 217 – BEDDING AND BACKFILL MATERIALS

217-2.2 Stones, Boulders, and Broken Concrete. To the “GREENBOOK”, Table 217-2.2, DELETE in its entirety and SUBSTITUTE with the following:

TABLE 217-2.2

Zone	Zone Limits	Maximum Size (greatest dimension)	Backfill Requirements in Addition to 217-2.1
Street or Surface Zone	From ground surface to 12" (300 mm) below pavement subgrade or ground surface	2.5" (63 mm)	As required by the Plans or Special Provisions.
Street or Surface Zone Backfill of Tunnels beneath Concrete Flatwork		Sand	Sand equivalent of not less than 30.
Trench Zone	From 12" (300 mm) below pavement subgrade or ground surface to 12" (300 mm) above top of pipe or box	6" (150 mm)	
Deep Trench Zone (Trenches 3' (0.9 m) wide or wider)	From 60" (1.5 m) below finished surface to 12" (300 mm) above top of pipe or box	Rocks up to 12" (300 mm) excavated from trench may be placed as backfill	
Pipe Zone	From 12" (300 mm) above top of pipe or box to 6" (150 mm) below bottom of pipe or box exterior	2.5" (63 mm)	Sand equivalent of not less than 30 or a coefficient of permeability greater than 1-½ inches/hour (35 mm per hour).

Zone	Zone Limits	Maximum Size (greatest dimension)	Backfill Requirements in Addition to 217-2.1
Overexcavation	Backfill more than 6" (150 mm) below bottom of pipe or box exterior	6" (150 mm)	Sand equivalent of not less than 30 or a coefficient of permeability greater than 1-½ inches/hour (35 mm per hour). Trench backfill slurry (100-E-100) per 201-1 may also be used.

SECTION 302 – ROADWAY SURFACING

302-4.12.4 Measurement and Payment. To the "WHITEBOOK", item 2, DELETE in its entirety and SUBSTITUTE with the following:

2. The payment for RPMS shall be the total square footage used on the project calculated using the method described and shall be paid under Bid item "Construction Cost".

302-5.9 Measurement and Payment. To the "WHITEBOOK", item 2, DELETE in its entirety.

SECTION 304 – METAL FABRICATION AND CONSTRUCTION

304-5 PAYMENT. To the "WHITEBOOK", REVISE section "304-5" to "304-6".

SECTION 306 – OPEN TRENCH CONDUIT CONSTRUCTION

306-3.3.4.1 Non-Friable Asbestos Cement Pipe (ACP). To the "WHITEBOOK", item 2, subsection "i", DELETE in its entirety and SUBSTITUTE with the following:

- i) A minimum of 5 Working Days prior to the transportation of the ACP disposal bins or friable asbestos waste, you shall provide notice to and assist the
- j) Resident Engineer in completing the Inspection Work Request Form for the Asbestos, Lead, and Mold Program. The form is located below:

<https://forms.sandiego.gov/f/gS2064>

306-6.5.1 General. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. For PVC water pipes:
 - a) Bedding material shall:
 - i. Either be sand, crushed aggregate, or native free-draining granular material.

- ii. 100% of the bedding material shall pass the no. 4 sieve and shall have an expansion when saturated with water of not more than 0.5%.
- iii. Have a sand equivalent of SE 50. SE 30 or higher may be substituted for SE 50 as bedding material if all of the following requirements are met:
 - The top of the pipe and haunch areas are mechanically compacted by means of tamping, vibrating roller, or other mechanical tamper.
 - Equipment is of size and type approved by the Engineer.
 - 90% relative compaction or better is achieved.

b) When jetting, care shall be exercised to avoid floating of the pipe.

- 2. PVC sewer pipes shall be bedded in 3/8 inch (9.5 mm) or 1/2 inch (12.5 mm) crushed rock in accordance with 200-1.2, "Crushed Rock and Rock Dust". Crushed rock for PVC sewer pipes may contain recycled Portland Cement Concrete and shall conform to gradation requirements for 3/8 inch or 1/2 inch nominal size as shown in Table 200-1.2.1 (A).
- 3. Storm drains and all types of non-PVC sewer mains shall be bedded in 3/4 inch (19 mm) crushed rock in accordance with 200-1.2, "Crushed Rock and Rock Dust". Crushed rock for storm drains may contain recycled Portland Cement Concrete and shall conform to gradation requirements for 3/4 inch nominal size as shown in Table 200-1.2.1 (A). Bedding shall be placed to a depth of 4 inches (101.6 mm) below the outside diameter of the pipe or 1 inch (25.4 mm) below the bell of the pipe, whichever is greater.

306-7.8.2.1 General. To the "WHITEBOOK", item 2, ADD the following:

- a) Specified test pressure for Class 235 pipe shall be 150 psi and is tested at 225psi.
- b) Specified test pressure for Class 305 pipe shall be 200 psi and is tested at 300psi.

SECTION 700 – MATERIALS

700-9.1 Pedestrian Barricade. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

- 1. Pedestrian barricades shall be constructed in accordance with the City of San Diego Standard Drawing SDE-103, "Pedestrian Barricade".

2. Curb ramp barricades shall be constructed in accordance with the City of San Diego Standard Drawing SDG-140, "Curb Ramp Barricade".
3. Assembly shall be commercial quality galvanized material.

SECTION 800 - MATERIALS

800-1.2.4 Organic Soil Amendment. To the "GREENBOOK", ADD the following:

Type 4 organic soil amendment (compost) shall be derived from Green Material (yard waste and/or food waste) that is composted in accordance with California Code of Regulations, Title 14, Chapter 3 Article 7, 17868.3 (15 Day Process to Further Reduce Pathogens and kill weed and other seeds). Incorporated into the soil, compost improves soil texture; increases both nutrient and water holding capacity; and reduces the need for commercial fertilizer. Where applicable, Organic Soil Amendment can qualify as a component of LEED certification.

Type 4 organic soil amendment shall come from a compost facility that tests its compost on a quarterly basis and meets the requirements listed in Table 212-1.2.4 (B). You shall provide a copy of the most recent quarterly test results and a current representative sample of the compost to be used on the project to the City prior to approval and the compost being used.

The City of San Diego's Miramar Greenery produces Type 4 organic soil amendment (compost) and complies with the U.S. Composting Council's Seal of Testing Assurance Program. The Miramar Greenery is located within the City's Miramar Landfill at State Hwy. 52 and Convoy St. in San Diego.

<http://www.sandiego.gov/environmental-services/miramar/greenery/>

Table 800-1.2.4 (B)

Test Criteria	Acceptable Range	Unit of Measure	TMCC Test Method
pH	6.0 - 8.0		04.11-A 1:5 Slurry pH
Soluble salts	0 - 10	dS/m (mmhos/cm)	04.10-A 1:5 Slurry Method
Organic Matter	30 - 75%	% dry weight basis	05.07-A Loss-on-ignition Organic Matter Method (LOI)
Stability	≤ 8	mg CO ₂ /g OM/day	05.08-B carbon Dioxide Evolution Rate

Test Criteria	Acceptable Range	Unit of Measure	TMCC Test Method
Maturity	> 80% emergence	average % of control	05.05-A Germination and vigor
Pathogens			
Fecal coliform	Pass	Pass/Fail per U.S. EPA Class A standard, 40CFR 503.32(a)	07.01-B Fecal coliforms
Salmonella	Pass	Pass/Fail per U.S. EPA Class A standard, 40CFR 503.32(a)	07.02 Salmonella
Heavy Metal	Pass	Pass/Fail per U.S. EPA Class A standard, 40CFR 503.13(a) Tables 1 and 3.	04.06-Heavy Metals standards, and Hazardous Elements.
Particle Size	≥ 90%	% dry weight passing through 11mm	02.02-B Sample Sieving for Aggregate Size Classification

800-1.2.5 Mulch. To the “WHITEBOOK”, item 3, subsection “i”, ADD the following:

Type 9 Mulch shall be 2 or 4 inches maximum in size.

ADD:

800-4 BIORETENTION SOIL MEDIA (BSM).

800-4.1 General. Bioretention Soil Media (BSM) is a formulated soil mixture that is intended to filter storm water and support plant growth while minimizing the leaching of chemicals found in the BSM itself. BSM consists of 70% to 85% by volume washed sand and 15% to 30% by volume compost or alternative organic amendment. Alternative proportions may be justified under certain conditions. BSM shall be mixed thoroughly using a mechanical mixing system at the plant site prior to delivery. In order to reduce the potential for leaching of nutrients, the proportion of compost or alternative organic amendment shall be held to a minimum level that will support the proposed vegetation in the system.

800-4.1.1 Sand for Bioretention Soil Media. The sand shall conform to ASTM C33 “fine aggregate concrete sand” requirements. A sieve analysis shall be performed in accordance with ASTM C 136, ASTM D 422, or approved equivalent method to demonstrate compliance with the gradation limits shown in Table 800-4.1.1 (A). The sand shall be thoroughly washed to remove fines, dust, and deleterious materials prior to delivery. Fines passing the No. 200 sieve shall be non-plastic.

Table 800-4.1.1 (A) Sand Gradation Limits

Sieve Size (ASTM D422)	Percent Passing (by weight)	
	Minimum	Maximum
3/8 inch	100	100
#4	95	100
#8	80	100
#16	50	85
#30	25	60
#50	5	30
#100	0	10
#200	0	5

Note: Coefficient of Uniformity ($C_u = D_{60}/D_{10}$) equal to or greater than 4

800-4.1.2

Compost. Compost shall be certified by the U.S. Composting Council's Seal of Testing Assurance Program or an approved equivalent program. Compost shall comply with the following requirements:

1. Organic Material Content shall be 35% to 75% by dry weight.
2. Carbon to nitrogen (C:N) ratio shall be between 15:1 and 40:1, preferably above 20:1 to reduce the potential for nitrogen leaching/washout.
3. Physical contaminants (manmade inert materials) shall not exceed 1% by dry weight.
4. pH shall be between 6.0 and 7.5.
5. Soluble Salt Concentration shall be less than 10 dS/m (Method TMECC 4.10-A, USDA and U.S. Composting Council).
6. Maturity (seed emergence and seedling vigor) shall be greater than 80% relative to positive control (Method TMECC 5.05-A, USDA and U.S. Composting Council)
7. Stability (Carbon Dioxide evolution rate) shall be less than 2.5 mg CO₂-C per g compost organic matter (OM) per day or less than 5 mg CO₂-C per g compost carbon per day, whichever unit is reported. (Method TMECC 5.08-B, USDA and U.S. Composting Council). Alternatively a Solvita rating of 6 or higher is acceptable.
8. Moisture shall be 25%-55% wet weight basis.
9. Select Pathogens shall pass US EPA Class A standard, 40 CFR Section 503.32(a).
10. Trace Metals shall pass US EPA Class A standard, 40 CFR Section 503.13, Tables 1 and 3.

11. Shall be within gradation limits in Table 800-4.1.2 (ASTM D 422 sieve analysis or approved equivalent).

Table 800-4.1.2 Compost Gradation Limits

Sieve Size	Percent Passing (by weight)
16 mm (5/8")	99 to 100
6.3 mm (1/4")	40 to 95
2 mm	40 to 90

800-4.1.3 Alternative Mix Components and Proportions. Alternative mix components and proportions may be utilized, provided that the whole blended mix (800-4.2) conforms to agricultural, chemical, and hydraulic suitability criteria, as applicable. Alternative mix designs may include alternative proportions, alternative organic amendments and/or the use of natural soils. Alternative mixes are subject to approval by the Resident Engineer.

Additional mix components, such as granular activated carbon, zeolite, and biochar may be considered to improve performance for other parameters.

800-4.2 Whole BSM Testing Requirements and Criteria. You shall submit the following information to the Resident Engineer at least 30 Days prior to ordering materials:

1. Source/supplier of BSM,
2. Location of source/supplier,
3. A physical sample,
4. Available supplier testing information,
5. Whole BSM test results from a third party independent laboratory,
6. Description of proposed methods and schedule for mixing, delivery, and placement of BSM.

Test results shall be no older than 120 Days and shall accurately represent the materials and feed stocks that are currently available from the supplier.

Test results shall demonstrate conformance to agricultural suitability criteria (800-4.2.1), chemical suitability criteria (800-4.2.2), and hydraulic suitability criteria (800-4.2.3). No delivery, placement, or planting of BSM shall begin until test results confirm the suitability of the BSM. You shall submit a written request for approval which shall be accompanied by written analysis results from a written report of a testing agency. The testing agency shall be registered by the State for agricultural soil evaluation which indicates compliance stating that the tested material proposed source complies with these specifications.

800-4.2.1 BSM Agricultural Suitability. The BSM shall be suitable to sustain the growth of the plants specified and shall conform to the following requirements:

- a) pH shall be between 6.0-7.5.

- b) Salinity shall be less than 3.0 millimho/cm (as measured by electrical conductivity).
- c) Sodium adsorption ration (SAR) shall be less than 3.0.
- d) Chloride shall be less than 150 ppm.

The test results shall show the following information:

- a) Date of testing
- b) Project name
- c) The Contractor's name
- d) Source of materials and supplier's name
- e) pH
- f) E_c
- g) Total and plant available elements (mg/kg particle concentration): phosphorus, potassium, iron, manganese, zinc, copper, boron, calcium, magnesium, sodium, sulfur, molybdenum, nickel, aluminum, arsenic, barium, cadmium, chromium, cobalt, lead, lithium, mercury, selenium, silver, strontium, tin, and vanadium. Plant available concentration shall be assessed based on weak acid extraction(ammonium Bicarbonate/DTPA soil analysis or similar)
- h) Soil adsorption ratio
- i) Carbon/nitrogen ratio
- j) Cation exchange capacity
- k) Moisture content
- l) Organic content
- m) An assessment of agricultural suitability based on test results
- n) Recommendations for adding amendments, chemical corrections, or both.

BSM which requires amending to comply with these specifications shall be uniformly blended and tested in its blended state prior to testing and delivery

800-4.2.2 BSM Chemical Suitability. For systems with underdrains, the BSM shall exhibit limited potential for leaching of pollutants that are at levels of concern. Potential for pollutant leaching shall be assessed using either the Saturated Media Extract Method (aka, Saturation Extract) that is commonly performed by agricultural laboratories or the Synthetic Precipitation Leaching Procedure (SPLP) (EPA SW-846, Method 1312). The referenced tests express the criteria in terms of the pollutant concentration in water that is in contact with the media. In areas in which a pollutant or pollutants are associated with a water quality impairment or a TMDL, BSM in systems with

underdrains shall conform to the following Saturation Extract or SPLP criteria for applicable pollutant(s):

1. Nitrate < 3 mg/L
2. Phosphorus < 1 mg/L*
3. Zinc < 0.1 mg/L
4. Copper < 0.025 mg/L
5. Lead < 0.025 mg/L
6. Arsenic < 0.02 mg/L
7. Cadmium < 0.01 mg/L
8. Mercury < 0.01 mg/L
9. Selenium < 0.01 mg/L

Criteria shall be met as stated where a pollutant is associated with a water quality impairment or Total Maximum Daily Load (TMDL) in any downstream receiving water. Criteria may be waived or modified, at the discretion of the Resident Engineer, where a pollutant does not have a nexus to a water quality impairment or TMDL of downstream receiving water(s). Criteria may also be modified at the discretion of the Resident Engineer if the you demonstrate that suitable BSM materials cannot be feasibly sourced within a 50 mile radius of the project site and a good faith effort has been undertaken to investigate available materials.

The chemical suitability criteria listed in this section do not apply to systems without underdrains, unless groundwater is impaired or susceptible to nutrient contamination.

800-4.2.3 BSM Hydraulic Suitability.

1. The saturated hydraulic conductivity or infiltration rate of the whole BSM shall be measured by one of the following methods:
 - a. Measurement of hydraulic conductivity (USDA Handbook 60, method 34b) (commonly available as part of standard agronomic soil evaluation).
 - b. ASTM D2434 Permeability of Granular Soils (at approximately 85% relative compaction Standard Proctor, ASTM D698).
2. BSM shall conform to hydraulic criteria associated with the BMP design configuration that best applies to the facility where the BSM will be installed.
 - a) **Systems with unrestricted underdrain system (i.e., media control).** For systems with underdrains that are not restricted, the BSM shall have a minimum measured hydraulic conductivity of 8 inches per hour to ensure adequate flow rate through the BMP and longevity of the system. The BSM should have a maximum measured hydraulic conductivity of no more than 20 inches per hour. BSM with higher measured hydraulic conductivity may be accepted at the

discretion of the Resident Engineer. In all cases, an upturned elbow system on the underdrain, measuring 9 to 12 inches above the invert of the underdrain, should be used to control velocities in the underdrain pipe and reduce potential for solid migration through the system.

- b) **Systems with restricted underdrain system (i.e., outlet control).** For systems in which the flowrate of water through the media is controlled via an outlet control device (e.g., orifice or valve) affixed to the outlet of the underdrain system, the hydraulic conductivity of the media should be at least 15 inches per hour and not more than 40 inches per hour. The outlet control device should control the flowrate to between 5 and 12 inches per hour.
- c) **Systems without underdrains.** For systems without underdrains, the BSM shall have a hydraulic conductivity at least 4 times higher than the underlying soil infiltration rate, but shall not exceed 12 inches per hour.

800-4.3 Delivery, Storage and Handling. You shall not deliver or place soils in frozen, wet, or muddy conditions. You shall protect soils and mixes from absorbing excess water and from erosion at all times. You shall not store materials unprotected during large rainfall events (>0.25 inches). If water is introduced into the material while it is stockpiled, you shall allow the material to drain to the acceptance of the Resident Engineer before placement.

BSM shall be thoroughly mixed prior to delivery using mechanical mixing methods such as a drum mixer. BSM shall be lightly compacted and placed in loose lifts approximately 12 inches (300 mm) to ensure reasonable settlement without excessive compaction. Compaction within the BSM area shall not exceed 75 to 85% standard proctor within the designed depth of the BSM. Machinery shall not be used in the bioretention facility to place the BSM. A conveyor or spray system shall be used for media placement in large facilities. Low ground pressure equipment may be authorized for large facilities at the discretion of the Resident Engineer.

Placement methods and BSM quantities shall account for approximately 10% loss of volume due to settling. Planting methods and timing shall account for settling of media without exposing plant root systems.

The Engineer may request up to three double ring infiltrometer tests (ASTM D3385) or approved alternative tests to confirm that the placed material meets applicable hydraulic suitability criteria (800-4.2.3). In the event that the infiltration rate of placed material does not meet applicable criteria, the Resident Engineer may require replacement and/or decompaction of materials.

800-4.4 Quality Control and Acceptance. Close adherence to the material quality controls herein are necessary in order to support healthy vegetation, minimize pollutant leaching, and assure sufficient permeability to infiltrate/filter runoff during the life of the facility. Amendments may be included to adjust agronomic properties. Acceptance of the material will be based on test results certified to be representative. Test results shall be conducted no more than 120 Days prior to delivery of the blended BSM to the project site. For projects installing more than 100 cubic yards of BSM, batch-specific tests of the blended mix shall be provided to the Resident Engineer for every 100 cubic yards of BSM along with a site plan showing the placement locations of each BSM batch within the facility.

800-4.5 Integration with Other Specifications. This specification includes, is related to, and may depend or have dependency on other specifications, including but not limited to:

1. Plantings and Hydroseed
2. Mulch
3. Aggregate (choking stone, drainage stone, energy dissipation)
4. Geotextiles
5. Underdrains
6. Outlet control structures
7. Excavation

Execution of this specification requires review and understanding of related specifications. Where conflicts with other specifications exist or appear to exist, you shall consult with the Resident Engineer to determine which specifications prevail.

800-4.6 Aggregate Materials for BSM Drainage Layers.

800-4.6.1 Drainage of BSM. Drainage of BSM requires the use of specific aggregate materials for filter course (aka choking layer) materials and for an underlying drainage and storage layer.

800-4.6.1.1 Rock and Sand Products for Use in BSM Drainage. Size classifications detailed in Tables 800-4.6.1 (A) and 800-4.6.1 (B) shall apply with respect to BSM drainage materials. All sand and stone products used in BSM drainage layers shall be clean and thoroughly washed.

Table 800-4.6.1 (A) Crushed Rock and Stone Gradation Limits

Sieve Size	Percent Passing Sieves	
	AASHTO No. 57 ⁽¹⁾	ASTM No. 8 ⁽¹⁾
3 in	-	-

Sieve Size	Percent Passing Sieves	
	AASHTO No. 57 ⁽¹⁾	ASTM No. 8 ⁽¹⁾
2.5 in	-	-
2 in	-	-
1.5 in	100	-
1 in	95 – 100	-
0.75 in	-	-
0.5 in	25 – 60	100
0.375 in	-	85 – 100
No. 4	10 max.	10 – 30
No. 8	5 max.	0 – 10
No. 16		0 – 5
No. 50		-

Table 800-4.6.1 (B) Sand Gradation Limits

Sieve Size	Percent Passing Sieves
	Choker Sand - ASTM C33
0.375 in	100
No. 4	95 – 100
No. 8	80 – 100
No. 16	50 – 85
No. 30	25 – 60
No. 50	5 – 30
No. 100	0 – 10
No. 200	0 – 3

800-4.6.1.2 Graded Aggregate Choker Stone. Graded aggregate choker material is installed as a filter course to separate BSM from the drainage rock reservoir layer. This ensures that no migration of sand or other fines occurs. The filter course consists of two layers of choking material increasing in particle size. The top layer of the filter course shall be constructed of thoroughly washed ASTM C33 fine aggregate sand material conforming to gradation limits contained in Table 212-4.6.1(B). The bottom layer of the filter course

shall be constructed of thoroughly washed ASTM No. 8 aggregate material conforming to gradation limits contained in Table 212-4.6.1(A).

EQUAL OPPORTUNITY CONTRACTING PROGRAM (EOCP) SECTION A – GENERAL REQUIREMENTS

4.1 Nondiscrimination in Contracting Ordinance. To the “WHITEBOOK”, subsection 4.1.1, paragraph (2), sentence (1), DELETE in its entirety and SUBSTITUTE with the following:

You shall not discriminate on the basis of race, gender, gender expression, gender identity, religion, national origin, ethnicity, sexual orientation, age, or disability in the solicitation, selection, hiring, or treatment of subcontractors, vendors, or suppliers.

END OF SUPPLEMENTARY SPECIAL PROVISIONS (SSP)