NAVARRO BY-THE-SEA CENTER FOR RIPARIAN AND ESTUARINE RESEARCH

NAVARRO BY THE SEA
NAVARRO RIVER REDWOODS STATE PARK
MENDOCINO DISTRICT
NAVARRO BEACH ROAD
NAVARRO, CALIFORNIA 95463

NAVARRO INN STABILIZATION PROJECT

BID DOCUMENTS

PROJECT MANUAL
SPECIFICATIONS

MAY 16, 2011

Each Bid shall be enclosed in an envelope bearing the subscription:
"BID FOR: NAVARRO INN STABILIZATION PROJECT (NSCR)

NAVARRO INN STABILIZATION PROJECT
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May 16, 2011

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SECTION 01010

SUMMARY OF WORK

PART 1 - GENERAL

1.1 WORK COVERED BY CONTRACT DOCUMENTS

A. The architectural work required to be performed by the Contractor consists of constructing and completing the project in accordance with the drawings and these specifications and all applicable provisions of the contract documents.

B. The work includes furnishing all labor, tools, equipment, appliances, materials, transportation, and services and in performing all operations necessary for and properly incidental to the construction and proper completion of the project as shown and noted on the drawings and as specified in these specifications.

C. Description of Work:

1. General - Stabilization and seismic upgrade to the historic circa 1865 Navarro Inn using the Secretary of the Interior's Standards for the Treatment of Historic Properties in advance of a future rehabilitation project.

2. Base Bid

a. Remove existing southern and northern additions as shown on the drawings. Retain historic building elements including but not limited to the historic bar, cooler, and fixtures in downstairs bath and eastern upstairs bath. Historic elements to be retained are itemized in the drawing notes. Prior to demolition, photo document the inside and outside of Addition "B" at the south elevation. Hire a professional photographer for the documentation, and submit high resolution digital files to the Project Representative.

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b. Document construction details, then remove existing porch and salvage elements as shown on the drawings for re-use in the Alternate One porch reconstruction.

c. Dismantle the existing chimney, firebox and mantle elements. Catalog and salvage firebox, mantle, and wall coverings removed to access chimney for deconstruction and reconstruction in a future phase. Retain all elements of chimney assembly for reconstruction. Close opening at roof at chimney stack penetration and at west wall firebox opening. Document any evidence of previous fireplace or Chimney during deconstruction, for possible reconstruction. Store bricks on site as shown in the drawings, and store mantle and fireplace surround elements in the Inn.

d. Lift the building three feet above the existing finished floor elevation. Replace deteriorated first floor wood spanning elements. The assumed area of replacement is the south section of the building. Additional replacement

may be required. The contractor will conduct a detailed estimate of structural members to be replaced to be verified by the Project Representative.

e. Install new concrete grade beam and stem wall foundations, including a new retaining wall and slab at the rear of the building. Include foundation for porch (Alt. No. 1)at this time. Prior to excavation the Contractor shall hire a professional archeologist to be present on-site during the excavation process.

f. Catalog, remove and salvage for reinstallation, exterior wood siding at locations to receive seismic reinforcing on wall surfaces and / or for inspection or replacement of vertical redwood sub-sheathing, or where removed for construction access. Install new in-kind wood siding to replace material lost to deterioration or damaged in removal for seismic work. Refasten loose siding throughout. Replace deteriorated vertical sub-sheathing in-kind to match existing historic sub-sheathing. Install seismic reinforcing straps and shear walls as shown on the drawings.

g. Reframe south exterior wall to restore bearing. Sheath reframed wall with vertical redwood sub-sheathing to match existing historic sub-sheathing. Replacement boards span from first floor sill plate to second floor top plate. Clad in wood siding to match existing. Cover and flash new window opening in temporary exterior grade plywood cladding design similar to existing vented coverings.

h. Reframe northwest corner picture windows at porch to restore bearing. Frame openings based on historic window locations. Sheath reframed wall with vertical redwood sub-sheathing to match existing historic sub-sheathing. Replacement boards span from first floor sill plate to second floor top plate. Clad wood siding to match existing. Cover and flash new window opening in temporary exterior grade plywood cladding design similar to existing.

i. Remove scored redwood wall cladding at the original north facing wall of the main building at the demolished bar addition. Inspect vertical redwood sub-sheathing. If required replacement boards span from first floor sill plate to second floor top plate. Clad in wood siding to match existing. Cover and flash new window or existing door openings in temporary exterior grade plywood cladding design similar to existing.

j. Repair or replace fascia, and exterior trim. Replace existing door at southwestern corner of building with a temporary vandal resistant door and locking system to provide secure, primary access to building. Prep prime and paint all exterior wood elements.

k. Prior to demolition or construction, remove hazardous materials in the porch addition and the adjacent motel structure. Remove hazardous materials per “Hazardous Material” specification, and reference “Lead and Asbestos Survey Report” by RGA Environmental, November 23, 2009

l. Demolish existing motel structure to the west of the Inn.

m. All electrical work is design-build. Disconnect existing electrical service from Motel prior to demolition. Construct temporary pole and box for construction service. Install new weather head and box with meter as shown at the southwest corner of the Inn. Install new electrical outlets as specified.

3. Alternates – See Specification Section 01030 Alternates

D. Project Authorities:

1. The project described above will be implemented under the joint auspices of the Navarro-by-the-Sea Center for Riparian and Estuarine Research (NSCR) and of California Recreation and Parks Department. The term "Project Representative" shall mean the designated staff assigned to the project from the State of California or the NCSR.

1.2 DRAWINGS

A. The location, extent, and design of the required construction and improvements are indicated on the drawings accompanying these specifications, which drawings are hereby made a part of these specifications and this contract. A complete list of drawings and titles is given on the title sheet A0.0 of the drawings.

B. Interpretation of Contract Requirements

1. Correlation: The contract documents shall be interpreted as being complementary in requiring complete work ready for use and occupancy or, if not to be occupied, operation. Any requirement occurring in any one of the documents is as binding as though occurring in all.

2. Conflicts in the Contract Documents: In the event of conflict in the contract documents, priorities stated in subdivisions a, b, c, and d below shall govern:

a. Addenda shall govern over all other contract documents. Subsequent addenda shall govern over prior addenda only to the extent specified.

b. In case of conflict between plans and specifications, the plans shall govern.

c. Conflict within the Plans:

(1) Specific Notes shall govern over all other portions of the plans except for schedules.

(2) Larger scale drawings shall govern over smaller scale drawings.

(3) Detail drawings shall govern over standard plates bound within the specifications.

(4) Figured or numerical dimensions shall govern over dimensions obtained by scaling.

d. In the event where provisions of codes, safety orders, contract documents, referenced manufacturers specifications or industry standards are in conflict, the more restrictive and higher quality shall govern.

C. Any part of the work not specified in the specifications but indicated on the drawings, or any part of the work not indicated on the drawings but specified in the specifications, shall be constructed and completed by the Contractor as if fully specified in the specifications and indicated on the drawings.

D. Where "as shown," "as indicated," "as noted," "as detailed," "as scheduled," or words of like meaning are used in the Contract or Documents, it shall be understood that the reference to the foregoing drawings is being made, unless otherwise specified.

E. When reference to the work "plans" is made anywhere in the contract documents, it shall be understood that such reference refers to the drawings.

1.3 PROGRESS OF THE WORK

A. Contractor shall complete the work called for under the contract in all parts and requirements within the number of working days (Monday - Friday) set forth herein; working days will begin on the date set forth in the notice to proceed that defines the start of construction.

1.4 SUPPLEMENTARY CONDITIONS

A. The Contractor shall be responsible for verifying field measurements before ordering materials and prefabricated items. Any necessary adjustments between field measurements and drawings or specifications shall be made in accordance with the Project Representative.

B. The Contractor shall be responsible for protection of all existing facilities on or adjacent to the premises, including sensitive riparian or wetland areas adjacent to the project site, whether shown on drawings or not. In the event of damage, such items shall be immediately repaired or replaced by the Contractor, at his expense, to the satisfaction of the Project Representative.

C. The Contractor shall provide all items not specified or shown on the drawings for a complete and finished job.

D. Contractor shall coordinate use of and access to the construction area with the project site boundaries, including scheduling time and locations for deliveries and storage of materials. During all phases of work minimum disturbance of site functions is essential.

E. The Contractor will be required to assume sole responsibility for the job site conditions during the course of demolition and construction of the project including safety of all persons and property; that this requirement shall be made to apply continuously and not be limited to normal working hours, and Contractor further agrees to defend, indemnify, and hold the the NSCR, and the Architect harmless from any and all liability, real or alleged, in connection with the performance of work on this project. Inasmuch as addition to, remodeling and/or rehabilitation of an existing building requires certain assumptions to be made regarding existing conditions, and because some of these assumptions may not be verifiable without expending additional sums of money, or destroying otherwise adequate or serviceable portions of the building, the Contractor the State and / or the NCSR agree that the Contractor and the State and /or the NCSR will hold harmless, indemnify, and defend the Architect from any and all claims arising out of the professional services in this circumstance and under this agreement.

1.5 COORDINATION

A. Coordinate work of the various sections of the specifications to assure efficient and orderly sequence of installation of construction elements.

B. Verify that characteristics of elements of interrelated constructions and operating equipment are compatible; coordinate work of various sections having interdependent responsibilities for construction, installation, connection to and placing such items in service.

C. The organization of the specifications into divisions, sections and articles, and the arrangement of the Drawings shall not control the Contractor in dividing the Work among the Subcontractors or in establishing the extent of Work to be performed by any trade.

1.6 WEATHER PROTECTION

A. Provide continuous weather protection for all work in place and for all items delivered to site. Repair, replace or refinish any items damaged by weather to Project Representative's satisfaction.

1.7 REFERENCE STANDARDS

A. For products specified by association or trade standards comply with requirements of referenced standard, except when more rigid requirements are specified or are required by applicable codes.

B. The date of the standard is that in effect as of the date of the contract, except when a specific date is specified.

1.8 PROJECT MEETINGS

A. Schedule and administer project meetings throughout the progress of the work.

B. Attendance: Project Representative, Contractor, and Consultants, major subcontractors and suppliers as required.

C. Minutes – The Project Representative shall issue meeting minutes to all attendees within five (5) business days of meeting.

1.9 SCHEDULING

A. The movement of materials and times of work shall be as agreed to by the Project Representative, and in accordance with hours of construction allowed by local ordinance.

1.10 CONTRACTOR'S USE OF PREMISES

A. The Contractor's use of the premises for work, storage, and vehicular parking is limited to areas indicated and designated by the Contract.

B. If the areas on the premises are not sufficient, obtain and pay for the use of additional work, storage, and parking areas needed.

C. Limit use of the premises to designated areas to allow for continued use by the public, and to avoid impacting sensitive environments.

D. Comply with additional requirements specified in the General and Supplementary Conditions.

E. The premises shall be turned over to the Project Representative in their original condition and restored as required.

1.11 ADJACENT SITE CONDITION SURVEY

A. Prior to commencement of work, jointly survey the site, paving, plant life, and other items with the Project Representative, noting and recording existing damage such as cracks, sags, unhealthy plant life, and other damage.

B. This record shall serve as a basis for determination of subsequent damage to these items due to settlement, movement, or Contractor's operations.

C. Existing damage observed shall be marked and the official record of existing damage shall be signed by the parties making the survey.

D. Cracks, sags, and damage to the site, paving, plant life, and other items not noted in the original survey but subsequently observed shall be reported immediately to the Project Representative.

1.12 PROTECTION OF EXISTING UTILITIES

A. Contractor shall locate known existing utility installations before proceeding with excavation, trenching, or other operations which may cause damage; shall maintain them in service where appropriate, and shall repair any damage to them caused by the Work, at no increase in Contract Sum.

B. Additional utilities whose locations are unknown to the State or the NSCR may exist. Contractor shall be alert to their existence. If they are encountered, immediately notify the Project Representative.

C. In addition to notification, if a utility is damaged, Contractor shall take appropriate action as provided in the General Conditions.

D. Additional compensation or extension of time on account of utilities not shown or otherwise brought to the Contractor's attention including reasonable action taken to protect or repair damage shall be determined as provided in the General Conditions.

1.13 USE AND OCCUPANCY OF WORK PRIOR TO ACCEPTANCE BY THE STATE / NCSR

A. SECTION NOT USED. The current work is for stabilization only. As such, occupancy will not occur until the future rehabilitation phase is completed.

1.14 ARCHEOLOGICAL MATERIALS

A. It is the Contractor's responsibility to hire a professional Archeologist who is certified by the Society of Professional Archaeology (SOPA) to be present on site during excavation activity. Should archeological materials be uncovered during grading, trenching, or other onsite excavations, earthwork within 30 yards of these materials shall be stopped until the archeologist has had an opportunity to evaluate the significance of the find and suggest appropriate mitigation(s), if deemed necessary. Do not disturb area until Project Representative has evaluated undocumented items.

1.15 HAZARDOUS MATERIALS

A. Asbestos removal - The base bid includes removal and proper disposal of asbestos containing materials (ACMs) prior to demolition or construction. Remove ACMs from areas indicated on the drawings and per the requirements of the "Hazardous Materials" specification, Section 02100, and the "Lead and Asbestos Survey" by RGA Environmental, November 23 ,2009, commissioned by the NSCR. Before starting the abatement work submit a work plan outlining materials to be removed and disposal methods and locations. The work plan shall be based on Tables I and III of the "Lead and Asbestos Survey"

B. Lead – Adhere to the treatments recommended in the"Hazardous Materials" specification, Section 02100, and the "Lead and Asbestos Survey" by RGA Environmental, November 23, 2009, commissioned by the NSCR. Before starting the abatement work submit a work plan outlining materials to be removed and disposal methods and locations. The work plan shall be based on Tables I and III of the "Lead and Asbestos Survey"

PART 2 - PRODUCTS

Not used.

PART 3 – EXECUTION

Not used.

END OF SECTION

SECTION 01030

ALTERNATES

PART 1 - GENERAL

1.1 REQUIREMENTS AND DESCRIPTION OF THE WORK

A. This section defines alternate bids and their relationship to the Base Bid.

1.2 ALTERNATE BID

A. The Base Bid includes all work required to construct and complete the project in accordance with the Contract Documents, except for the work included in the Alternate Bids.

B. In addition to the "Base Bid," the Contractor (Bidder) shall quote alternate prices for each alternate unit of work.

C. Each accepted alternate unit of work shall be performed, constructed, and completed in accordance with the Contract Documents. Each Alternate Bid item shall include interface and coordination with adjacent and related work and incidentals and accessories as required to render the work complete and ready for use on this project.

D. The Alternate Bids increase the scope of work defined by the Base Bid and represent additions to the cost of the Base Bid. The Project Representative may reject all Alternate Bids, or the Project Representative may accept some of them without regard to the numerical order of their listing.

1.3 ADD ALTERNATES

A. Add alternates represent an additional sum to the cost of construction as defined in the Base Bid.

1. Alternate One - Reconstruct the front porch per 1930's era photographs, and as shown in the drawings and these specifications.

2. Alternate Two - Deconstruct existing temporary protective roof and existing roof materials to the skip sheathing. Install new plywood sheathing over existing skip sheathing. Install new insulation, building paper and new asphalt shingles as shown in the drawings and these specifications.

3. Alternate Three - Install six over six wood double hung windows at first floor locations as shown in the drawings and these specifications.

1.4 DEDUCT ALTERNATES

A. NOT USED

END OF SECTION

SECTION 01040

COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

A. This Section specifies administrative and supervisory requirements necessary for Project coordination including, but not necessarily limited to:

1. Coordination.

2. Administrative and supervisory personnel.

3. General installation provisions.

4. Cleaning and protection.

1.2 PROJECT COORDINATION

A. Coordination: Coordinate construction activities included under various Sections of these Specifications to assure efficient and orderly installation of each part of the work. Coordinate construction operations included under different Sections of the Specifications that are dependent upon each other for proper installation, connection, and operation.

1. Where installation of one part of the work is dependent on installation of other components, either before or after its own installation, schedule construction activities in the sequence required to obtain the best results.

2. Where availability of space is limited, coordinate installation of different components to assure maximum accessibility for required maintenance, service and repair.

3. Make adequate provisions to accommodate items scheduled for later installation.

4. Coordinate the work; do not delegate the responsibility for coordination to a Subcontractor.

5. Resolve differences or disputes concerning coordination, interference, or extent of work of the various Sections before presenting solution(s) to the Project Representative for timely resolution. The Contractor’s decisions, if consistent with the requirements of the Contract Documents, shall be final.

6. Coordinate the efforts of all individuals connected with this work; review all dimensions for accuracy and adequacy to receive products, equipment and assemblies as specified and as indicated on reviewed shop drawings and product data.

7. Drawings showing location of building components are diagrammatic. When indicated locations are not possible due to obstructions, notify the Project Representative for a determination of necessary relocation. Do not relocate items until Architect has approved the location.

8. Coordinate with Project Representative for simultaneous work under separate Contracts, if any.

9. Take special precautions in placement of utilities, fixtures, hangers, piping and the like in exposed structures; coordinate placement to prevent “false starts” with subsequent damage to structure.

10. Schedule subcontractors work to allow the timely execution of the Project. Identify uncertainties in the coordination and indicate contingency plans in the construction schedule.

B. Where necessary, prepare memoranda for distribution to each party involved outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings.

C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and ensure orderly progress of the work. Such administrative activities include, but are not limited to, the following:

1. Preparation of schedules.

2. Installation and removal of temporary facilities.

3. Delivery and processing of submittals.

4. Progress meetings.

5. Project Close-out activities.

1.3 COORDINATION OF WORK AND INSPECTIONS

A. Welding, reinforcing bar placement and splices, and other work for which inspection is required shall not be carried out without such inspection and likewise work for which sampling is required, whether the work is performed during regular work hours or off times.

B. Coordinate with the Project Representative to provide inspections and sampling at times required and notify Testing Labs if required.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

3.1 GENERAL INSTALLATION PROVISIONS

A. General: The provisions in this Article are in addition to and are intended to supplement specific installation requirements specified in other Sections.

B. Inspection of Conditions: Require the installer of each major component to inspect both the substrate and conditions under which work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.

C. Manufacturers' Instructions: Comply with manufacturers' installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.

D. Inspect materials or equipment immediately upon delivery and again prior to installation. Reject damaged and defective items.

E. Provide attachment and connection devices and methods necessary for securing work. Secure work true to line and level where allowable. Allow for expansion and building movement.

F. Visual Effects: Provide uniform joint widths in exposed work. Arrange joints in exposed work to obtain the best visual effect. Refer questionable choices to the Architect for final decision.

G. Recheck measurements and dimensions, before starting each installation.

H. Install each component during weather conditions and Project status that will ensure the best possible results. Isolate each part of the completed construction from incompatible material as necessary to prevent deterioration.

I. Coordinate temporary enclosures with required inspections and tests, to minimize the necessity of uncovering completed construction for that purpose.

J. Mounting Heights: Where mounting heights are not indicated or historic location cannot be ascertained, install individual components at standard mounting heights recognized within the industry for the particular application indicated. Refer questionable mounting height decisions to the Architect for final decision.

3.2 CLEANING AND PROTECTION

A. During handling and installation, clean and protect construction in progress and adjoining materials in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

B. Clean and maintain completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

C. Limiting Exposures: Supervise construction activities to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

END OF SECTION

SECTION 01045

CUTTING AND PATCHING

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

A. Perform all cutting and patching as required to perform and complete the work of this project.

B. Perform cutting and patching for all trades as required.

C. Contractor shall be responsible for coordination and interface of all cutting and patching work.

D. Patching shall achieve security, strength, and weather protection, as applicable and required.

E. Patching shall successfully duplicate undisturbed adjacent finishes, colors, textures, and profiles. Where there is dispute as to whether duplication is successful or has been achieved to a reasonable degree, the Project Representative's judgment shall be final.

PART 2 - PRODUCTS

NOT USED.

PART 3 - EXECUTION

3.1 REQUIREMENTS

A. Perform all cutting, associated structural reinforcing, and patching in a manner to prevent damage to other work and to provide proper surfaces for the installation of materials, equipment, and repairs.

B. Adjust and fit products to provide a clean and professional installation.

C. Cutting work shall be neatly and accurately performed with proper tools and equipment. Cuts shall be of minimum size required for the work.

D. Cutting work shall be accurately located and shall be closely coordinated with the individual trades requiring such cutting work.

E. Work to remain shall be properly protected to prevent damage.

F. When items such as woodwork, moldings, gutters, decorative metals, windows, or other decorative elements must be disturbed, these items shall be removed carefully by the Contractor and preserved for reuse. Before removal, the items and their original installations will be documented to the fullest extent necessary to re-install the items with the best possible results.

3.2 CLEAN UP

A. Dispose of waste, trash, and debris in a safe, acceptable manner, in accordance with applicable laws and ordinances and as prescribed by authorities having jurisdiction. Burying of trash and debris on the site will not be permitted.

B. All milled lumber, moldings, sandstone, bricks, landscape materials, metals, and other salvaged items are the property of the State and / or the NSCR. Any items not desired by the State become the property of the Contractor and are to be removed from the site at the Contractor's expense. Coordinate with the final disposition of materials with the Project Representative.

END OF SECTION

SECTION 01050

FIELD ENGINEERING

PART 1 - GENERAL

1.1 REQUIREMENTS AND DESCRIPTION OF THE WORK

A. This section specifies survey work and engineering responsibilities of the Contractor.

1.2 EXISTING SITE CONDITIONS

A. Verify location of all utility lines, conduits, surface or subsurface structures, etc., of any nature that may be affected by the Work.

B. Should any of the above items be disturbed, disconnected, or damaged during construction, bear all expenses of whatever nature arising from such disturbance or the replacement or repair thereof and replace or repair such items as required to maintain continuing service, including emergency repairs.

C. Should any unidentified item or suspicion of contaminated soil be encountered during excavation, do not proceed with excavation until the Project Representative has been notified and direction has been given by the Project Representative.

1. If any traces of archeological resources (human remains, artifacts, concentrations of shell/bone/rock/ash) are encountered, immediately stop all construction operations within a 30 yard radius until the Project Representative has been consulted and has received mitigation recommendations from the on – site Archeologist. (See Section 01010 Summary of Work, part 1.14 – Archeological Materials)

1.3 SURVEY AND LAYOUT

A. Obtain and pay for all engineering services required to accurately and completely lay out the Work by a registered civil engineer who is qualified to perform surveying or a licensed land surveyor.

B. The Contractor shall lay out the Work, setting grade elevations, location stakes, and other reference points and information necessary to complete the Work and shall be responsible for the accuracy thereof. Unless discrepancies between Drawings and actual conditions are brought to the attention of the Architect and Project Representative prior to the commencement of operations, the Contractor shall be held solely responsible for the proper installation of the Work. Adjustments in layout shall be made at the Contractor's expense.

C. Stakes, boundary lines, corner markers, bench marks or survey markers which have been or may be established in any part of the site, shall be preserved and respected and shall be restored at Contractor's expense if lost or destroyed as a result of the Contractor's operations.

D. Site data and building dimensions indicated on the Drawings are as exact as could be obtained, but their absolute accuracy cannot be guaranteed. Exact locations, distances,

elevations, and similar data shall be governed finally by field conditions and the Project Representative's instructions.

E. Contractor shall verify on site the location and depth (elevation) of all existing utilities and services before performing any excavation work.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION

SECTION 01250

CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications. The terms “Change Order”, “Contract Modification”, and “Amendment” are synonymous.

1.2 MINOR CHANGES IN THE WORK

A. Project Representative will issue Bulletins, defined as supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time.

1.3 PROPOSED CHANGE ORDER (PCO)

A. State-Initiated Requests: Project Representative will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.

1. PCOs issued by Project Representative are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
2. Within 15 days after receipt of a PCO, submit a change proposal indicating all cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.

    a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
    b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
    c. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity durations, start and finish times, and activity relationships. Use available total float before requesting an extension of the Contract Time.

B. Contractor - Change Order Request (COR): Contractor may propose changes by submitting a Change Order Request (COR).

1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.

4. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

1.4 ALLOWANCES

A. Allowance Adjustment: To adjust allowance amounts, base each Change Order proposal on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.

1. Include installation costs in purchase amount only where indicated as part of the allowance.
2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other margins claimed.
3. Submit substantiation of a change in scope of work, if any, claimed in Change Order proposals related to unit-cost allowances.
4. State reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.

B. Submit requests for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the Purchase Order amount or Contractor's handling, labor, installation, overhead, and profit. Submit request within 10 days of receipt of the Project Representative authorizing work to proceed on the allowance. The Project Representative has the option to reject requests submitted later than 10 days after such authorization.

1. Do not include Contractor's or subcontractor's indirect expense in the Change Order proposal cost amount unless it is clearly shown that the nature or extent of work has changed from what could have been foreseen from information in the Contract Documents.
2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

1.5 CONTRACT FIELD ORDER (CFO)

A. Contract Field Order: The Project Representative may issue a Contract Field Order (CFO). A CFO instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Contract Amendment.

1. A CFO contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

1.6 CHANGE ORDER (CONTRACT AMENDMENT)

A. Submit a letter of authority indicating the Contractor’s authorized representative for negotiation of cost and time adjustments, and the limits of their authority. On State's approval of a Contractor’s Change Proposal, State will issue a Contract Amendment for signatures of State and Contractor.

PART 2 - PART2 – PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01250

SECTION 01290

PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.

1.2 SCHEDULE OF VALUES

A. General: Submit Schedule of Values in accordance with GENERAL CONDITIONS.

B. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.

1. Correlate line items in the Schedule of Values with the Project Schedule.
2. Subschedules: Where the Work is separated into phases requiring separately phased payments, provide sub-schedules showing values correlated with each phase of payment.

C. Format and Content: Use the Project Manual table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line item for each Specification Section.

1. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide several line items for principal subcontract amounts, where appropriate.
2. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
3. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
4. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
5. Allowances: Provide a separate line item in the Schedule of Values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
6. Each item in the Schedule of Values and Applications for Payment shall be complete..

    a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at Contractor's option.

7. Provide separate line items for profit, fees, taxes, overhead, and General Conditions.

8. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Contract Field Orders result in a change in the Contract Sum.

1.3 APPLICATIONS FOR PAYMENT

A. Each Application for Payment shall be sequentially numbered and consistent with previous applications and payments as certified by the Project Representative.

1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.

B. Transmittal: Submit three (3) signed original copies of each Application for Payment to the Project Representative.

1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.

C. Administrative Items: Administrative actions, submittals , and update submittals that must precede or coincide with submittal of first Application for Payment include the following:

1. List of subcontractors.
2. Schedule of Values.
3. Contractor's Construction Schedule (preliminary if not final).
4. Submittals Schedule (preliminary if not final).
5. List of Contractor's staff assignments.
6. Copies of required permits.
7. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.

D. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.

1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
2. This application shall reflect Certificates of Partial Substantial Completion issued previously for State and / or NSCR occupancy of designated portions of the Work.

E. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:

1. Evidence of completion of Project closeout requirements.
2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
3. Updated final statement, accounting for final changes to the Contract Sum.
4. Project Record Documents (As-Builts).
5. Operation and Maintenance (O & M) Manuals.
6. Warranties.

7. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when the State and / or NSCR took possession of and assumed responsibility for corresponding elements of the Work.

END OF SECTION

SECTION 01300

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other miscellaneous submittals.

1.2 DEFINITIONS

A. Action Submittals: Written and graphic information that requires the Designer's responsive action.

B. Informational Submittals: Written information that does not require the Designer's approval. Submittals may be rejected for not complying with requirements.

1.3 SUBMITTAL PROCEDURES

A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity

.

2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.

    a. The Project Representative reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

B. Submittals Schedule: Submit six copies total. Copies of the submittal schedule must be transmitted to the Project Representative within 15 days of Notice To Proceed. Three copies to be distributed to the site for NSCR, and Contractor use.

C. Processing Time: Allow enough time for submittal review, including time for re-submittals, as follows. Time for review shall commence on the Designer's receipt of submittal.

1. Initial Review: Allow 10 working days for initial review of each submittal. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. The State will advise Contractor when a submittal being processed must be delayed for coordination.
2. If intermediate submittal is necessary, process it in same manner as initial submittal.
3. Allow 10 working days for processing each re-submittal.
4. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing.

D. Identification: Place a permanent label or title block on each submittal for identification.

1. Indicate name of firm or entity that prepared each submittal on label or title block.
2. Provide a space on label or beside title block to record Contractor's review and approval markings and action taken by the State.
3. Include the following information on label for processing and recording action taken:

a. Project name.
b. Date.
c. Name and address of Contractor.
d. Name and address of subcontractor.
e. Name and address of supplier.
f. Name of manufacturer.
g. Unique sequential identifier, including revision number.
h. Number and title of appropriate Specification Section.
i. Drawing number and detail references, as appropriate.
j. Other necessary identification.

E. Deviations: Highlight, encircle, or otherwise identify in a manner acceptable to the State any deviations from the Contract Documents on submittals.

F. Additional Copies: Unless additional copies are required for final submittal, and unless the Designer observes noncompliance with provisions of the Contract Documents, initial submittal may serve as final submittal.

1. Additional copies submitted for maintenance manuals will not be marked with action taken and will be returned.

G. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Number each submittal sequentially and date each submittal. The Project Representative will return submittals, without review, from sources other than Contractor.

1. Include Contractor's certification stating that information submitted complies with requirements of the Contract Documents.
2. Transmittal Form: Use form approved by the Project Representative.

H. Use for Construction: Use only final submittals with mark indicating action taken by the State in connection with construction.

PART 2 - PRODUCTS

2.1 ACTION SUBMITTALS

A. General: Prepare and submit Action Submittals required by individual Specification Sections.

1. Number of Copies: Submit six copies of each submittal, unless otherwise indicated. The Project Representative will return two copies. Mark up and retain one returned copy as a Project Record Document.

B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.

1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
2. Mark each copy of each submittal to show which products and options are applicable.
3. Include the following information, as applicable:

a. Manufacturer's written recommendations.
b. Manufacturer's product specifications.
c. Manufacturer's installation instructions.
d. Manufacturer's catalog cuts.
e. Compliance with recognized trade association standards.
f. Compliance with recognized testing agency standards.

C. Shop Drawings: Submit Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.

1. Preparation: Include the following information, as applicable:

a. Dimensions.
b. Identification of products.
c. Fabrication and installation drawings.
d. Roughing-in and setting diagrams.
e. Shopwork manufacturing instructions.
f. Templates and patterns.
g. Schedules.
h. Notation of coordination requirements.
i. Notation of dimensions established by field measurement.

2. Wiring Diagrams: field-installed wiring.
3. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 30 by 40 inches

D. Samples: Submit physical units of materials or products, including the following:
1. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.

a. Submit three full sets of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. The Project Representative will return submittal with options selected.

2. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from the same material to be used for the Work, cured and finished in manner specified, and physically identical with the product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, partial sections of manufactured or fabricated components; small cuts or containers of materials;

complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.

a. Submit three (3) sets of Samples. The Project Representative will retain two Sample sets; remainder will be returned.

3. Preparation: Mount, display, or package Samples in manner specified to facilitate review of qualities indicated. Submit Samples to match the State's sample where so indicated. Attach label on unexposed side.
4. Submit Samples for review of kind, color, pattern, and texture for a final check of these characteristics with other elements and for a comparison of these characteristics between final submittal and actual component as delivered and installed.
5. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.

E. Product Schedule or List: Submit a written summary indicating types of products required for the Work and their intended location.

F. Application for Payment: Comply with requirements in Division 1 Section 01290 "Payment Procedures."

G. Schedule of Values: Comply with requirements in Section 00700 General Conditions.

2.2 INFORMATIONAL SUBMITTALS

A. General: Prepare and submit Informational Submittals required by other Specification Sections.

1. Number of Copies: Submit six (6) copies of each submittal, unless otherwise indicated. The Project Representative will return two (2) copies.
2. Certificates and Certifications: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.

B. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements.

C. Welding Certificates: Submit written certification that welding procedures and personnel comply with requirements. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.

D. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements and, where required, is authorized for this specific Project.

E. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements. Include evidence of manufacturing experience where required.

F. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements.

G. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements.

H. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.

I. Field Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements.

J. Product Test Reports: Submit written reports indicating current product produced by manufacturer complies with requirements. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

K. Research/Evaluation Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project.

L. Maintenance Data: Submit written and graphic instructions and procedures for operation and normal maintenance of products and equipment.

M. Design Data: Submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

N. Manufacturer's Instructions: Submit written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer.

O. Manufacturer's Field Reports: Submit written information documenting factory-authorized service representative's tests and inspections.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

A. Review each submittal and check for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to the Project Representative.

B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 REVIEWER'S ACTION

A. General: The Reviewer will not review submittals that do not bear Contractor's approval stamp and will return them without action. The Reviewer is either the Architect or Engineer responsible for generating the original submittal requirement.

B. Action Submittals: The Reviewer will review each submittal, make marks to indicate corrections or modifications required, and return it through the Project Representative. The Reviewer will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken:

C. Informational Submittals: The Reviewer will review each submittal and will return it, or will reject and return it if it does not comply with requirements. The Project Representative will forward each submittal to appropriate party.

END OF SECTION

SECTION 01400

QUALITY CONTROL

PART 1 - GENERAL.

1.1 SECTION INCLUDES

A. Quality assurance and control of installation.

B. Reference standards.

C. Field samples.

D. Manufacturers' field services and reports.

1.2 RELATED SECTIONS

A. Section 01300 - Submittals: Submission of manufacturers' instructions and certificates.

B. Section 01600 Materials and Equipment

C. Testing and inspection as required by various sections.

1.3 QUALITY ASSURANCE/CONTROL OF INSTALLATION

A. Monitor quality control of suppliers, manufacturers, products, services, site conditions, and workmanship to produce work of specified quality.

B. Comply fully with manufacturers' instructions, including each step in sequence.

C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.

D. Comply with specified standards as a minimum quality for the work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

E. Perform work by persons qualified to produce workmanship of specified quality.

F. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion or disfigurement.

1.4 REFERENCE STANDARDS

A. Conform to reference standard by date of issue current on date for receiving bids.

B. Obtain copies of standards and maintain at site when required by Contract Documents.

C. Should specified reference standards conflict with Contract Documents, request clarification from Project Representative before proceeding.

D. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.5 FIELD SAMPLES

A. Install field samples at the site as required by individual specification sections for review.

B. Acceptable samples represent a quality level for the work.

C. Where field sample is specified in individual sections to be removed, clear area after field sample has been accepted by the Project Representative.

1.6 MANUFACTURERS' FIELD SERVICES AND REPORTS

A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, and quality of workmanship, as applicable, and to initiate instructions when necessary.

B. Submit qualifications of observer to the Project Representative 30 days in advance of required observations.

C. Individuals are to report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

D. Submit report in duplicate within 15 days of observation to Project Representative for review.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION

SECTION 01500

CONSTRUCTION FACILITIES

PART 1 - GENERAL

1.1 REQUIREMENTS AND DESCRIPTION OF THE WORK

A. This section specifies temporary utilities and miscellaneous temporary facilities required during construction.

1.2 TEMPORARY UTILITIES

A. General

1. Use of existing electrical power is permitted.

B. Temporary Electricity

1. Provide temporary electrical services throughout the Project on an as-needed basis. Provide meter, wiring and related service equipment. Distribute power to job site.

2. Electrical power is supplied to the existing motel structure. New panel and temporary power pole will be required. Modify service as needed to adequately power the Project.

3. Such service shall be maintained in a proper, safe, operating condition and with appropriate, labeled safety equipment.

C. Temporary Lighting

1. Provide temporary lighting (minimum lighting level of 2 watts/sq. ft.) to allow work to be properly executed, to provide project security day and night, and to adequately warn of safety hazards.

2. Source of power will be from existing electricity pulled from an adjacent building

3. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, and lamps as required.

D. Temporary Telephone Service: Provide, maintain and pay for all telephone service to field office at time of project mobilization, for use of personnel and employees or as agreed to by the Project Representative.

E. Temporary Water: Provide temporary water service as necessary to properly perform work. There is no potable water source currently at the site. All water used for construction purposes must be delivered.

F. Sanitary Facilities

1. Provide temporary toilet facilities as required for use of construction personnel or as agreed to by the Project Representative.

G. Temporary Fire Protection

1. Provide temporary fire protection, including fire extinguishers, in conformance with the requirements of the State Fire Marshal.

2. In general, the use of open flame devices is prohibited.

1.3 TEMPORARY CONSTRUCTION

A. The Contractor shall provide and maintain in good condition all temporary construction, including, rigging, scaffolding, hoisting equipment, rubbish chutes, barricades around openings, debris boxes, and the like, as well as all other temporary construction required to accomplish the Work and to fulfill all other requirements of the Contract Documents.

B. Temporary construction shall conform to all requirements in regard to operation, safety and fire hazard of federal, state, and local authorities having jurisdiction, and of Underwriters' Laboratories, Inc. The Contractor shall furnish and complete all items necessary for complete and lawful installations and for conformity with such requirements whether called for under the separate sections of these Specifications or not.

C. The Contractor, having obtained prior approval of the Project Representative, shall remove all temporary construction as soon as it is no longer needed, and, before completion and acceptance of all work under this Contract.

1.4 BARRIERS AND ENCLOSURES

A. Barriers

1. Provide plastic net barriers to prevent unauthorized entry to construction areas and to protect existing facilities, adjacent structures or ecosystems, and the public from damage from construction operations and demolition.

1.5 SECURITY AND SAFETY

A. Protection of Work and Property

1. Protect all existing buildings, paving, site improvements and utilities from damage as a result of or caused by construction operations. See SECTION 02071- Protection and Salvage of Historic Elements for specific requirements related to historic features and finishes of the building.

2. Secure all building materials and equipment against heavy winds and weather both during job hours and non-working hours.

3. Take special care to protect all surfaces from welding damage.

4. Maintain extreme caution and care not to damage existing weather resistant assemblies, including roof.

5. Protect installed Work and provide special protection where specified in individual Specification Sections.

6. Protect privately-owned vehicles, stored materials, site and structures, and adjacent environment from damage.

7. Contractor shall replace or restore, at his expense, to a condition satisfactory to the Project Representative and the NSCR, any of the State's property or adjacent property that is damaged due to the actions of any of the Contractor's employees, agents or Subcontractors.

B. Safety Program

1. It is essential that the General Contractor and each of his Subcontractors implement an effective and vigorous safety and health program to cover all portions of the Work. It shall be understood that the full responsibility for providing a safe place to work with respect to this Work rests with the General Contractor.

2. The Contractor shall be required to comply with the safety program and all federal, state, and local regulation codes, rules, laws, and ordinances.

3. The Contractor agrees to indemnify and hold the State, Architect, and NSCR harmless from any loss, including, but not limited to fines, legal fees, penalties, and corrective measures the State, Architect and NSRC may sustain by reason of the Contractor's failure to comply with said laws, rules, and regulations in connection with the performance of this Contract.

4. The wearing of hard hats shall be as required by the approved Safety regulations in effect. The Contractor shall supply hard hats for all employees and visitors.

5. Safety Requirements

a. Standards: Maintain the Project in accordance with all applicable safety and insurance standards.

b. Hazards Control:

(1) Store volatile wastes in covered containers, and remove from premises daily.

(2) Prevent accumulation of wastes which create hazardous conditions.

(3) Provide adequate ventilation during use of volatile or noxious substances.

c. Conduct cleaning and disposal operations to comply with all applicable laws, ordinances, etc.

(1) Do not burn or bury rubbish and waste materials on Project site.

(2) Do not dispose of volatile wastes such as mineral spirits, oil, or paint thinner in storm or sanitary drains, or on ground.

(3) Do not dispose of wastes into streams or waterways. riparian or wetland areas.

1.6 TEMPORARY CONTROLS

A. Construction Cleaning

1. Maintain project site areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

2. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.

3. Remove non-volatile waste materials, debris, and rubbish from site weekly and dispose off-site.

B. Noise, Dust and Pollutant Control

1. Contractor shall be aware of operations which cause noise, dust, solvent escape, smoke or other pollutants, and abate such nuisances should they occur, regardless of notification by authorized environmental agencies. Contractor shall be responsible for any damage to adjacent properties from dust, dirt or materials allowed, whether purposefully or negligently, upon those properties or public ways.

2. All products used in this project must meet or exceed current local and state air pollution control standards.

1.8 FIELD OFFICE

A. The Contractor shall establish and maintain, in a location by agreement with the Project Representative, a temporary Field Office minimum, for his use

1. The Field office shall have a fax machine and a copy machine to be installed and maintained and paid for by the Contractor, or as agreed to by the Project Representative, until completion of the Work. The fax and copy machines are to be used by the Project Representative as required.

2. The Field Office shall at all times contain a complete up-to-date set of Contract Documents, reviewed shop drawings, and other submittals, annotated to date and available for the Project Representative's review. See Section 01300-Submittals.

B. Location of the field offices will be by agreement with the NSCR and the Project Representative.

1.9 CLEAN-UP AND REMOVAL

A. At completion of the Work, remove all temporary facilities and controls except those designated to become a permanent part of the work. Clean-up and dispose of all debris, repair all damage, and bring the entire site to finish condition.

B. All roads, parking and adjacent areas shall be restored to their original, pre-construction condition.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION

SECTION 01600

MATERIALS AND EQUIPMENT

PART 1 - GENERAL

1.1 RELATED REQUIREMENTS

A. Section 01300; Submittal of manufacturer's certificates.

B. Section 01700; Project Closeout including operation and maintenance data; warranties and bonds.

1.2 PRODUCTS

A. Products include material, equipment and systems.

B. Comply with Specifications and referenced standards as minimum requirements.

C. Components required to be supplied in quantity within a Specification section shall be the same, and shall be interchangeable.

1.3 WORKMANSHIP

A. Comply with industry standards except when more restrictive tolerance or requirements indicate more rigid standards or precise workmanship.

B. Perform work by persons qualified to produce workmanship of specified quality.

C. Secure products in place with positive anchorage devices designed to withstand stresses, vibration and racking.

1.4 MANUFACTURER'S INSTRUCTIONS

A. When work is specified to comply with manufacturer's instructions, submit copies as specified in Section 01300, distribute copies to persons involved, and maintain one set in field office.

B. Perform work in accordance with details of instructions and specified requirements. Should a conflict exist between Specifications and instructions, consult with Architect.

1.5 TRANSPORTATION AND HANDLING

A. Coordinate deliveries to avoid conflict with work and conditions at the site. Deliver materials and equipment on time to assure uninterrupted progress of the work.

B. Transport products by methods that avoid damage to products, worksite, state property adjacent to worksite, or other state property en route to and from worksite. Deliver to site in undamaged condition in manufacturer's unopened containers or packaging

C. Provide equipment and personnel to handle products by methods to prevent soiling or damage.

D. Promptly inspect shipments to assure that products comply with requirements, quantities are correct, and products are undamaged.

1.6 STORAGE AND PROTECTION

A. Store products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive products in weather-tight enclosures; maintain within temperature and humidity ranges required by manufacturer's instructions.

B. For exterior storage of fabricated products, place on sloped supports above ground. Cover products subject to deterioration with impervious sheet covering, provide ventilation to avoid condensation.

C. Store loose granular materials on solid surfaces in a well-drained area; prevent mixing with foreign matter.

D. Arrange storage to provide access for inspection. Inspect to assure products are undamaged and are maintained under required conditions.

E. After installation, provide coverings to protect products from traffic and construction operations damage, remove when not needed.

F. Do not allow stored products to be damaged by floodwaters or storm surge.

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

Not used

END OF SECTION

SECTION 01630

SUBSTITUTIONS

PART 1 - GENERAL

1.1 SPECIFIED PRODUCTS

A. For products specified only by reference standard, select any product meeting that standard.

B. For products specified by naming one or more manufacturers, select products of any named manufacturer meeting specifications.

1.2 SUBSTITUTIONS

A. Formal requests for substitutions will be considered submitted with the attached "Material/Product Substitution Request" form.

B. Substitute products shall not be ordered without written acceptance by the Project Representative.

C. Requests for substitution constitute a representation that:

1. The product meets or exceeds, in all respects, the specified product.

2. A warranty, equal to, or better than, the specified product, will be provided.

3. Installation and any changes required for the work to be complete, in all aspects, will be provided.

4. Claims by the Contractor for additional costs as a result of the Substitution which may subsequently become apparent will be waived.

D. Data Requirements: The following information shall be submitted by the Contractor with each proposal:

1. A description of the difference between the existing contract requirements and the proposed change; the comparative advantages and disadvantages of each; justification where function of a work item is being reduced.

2. Separate detailed cost estimate comparing the existing contract requirement and the proposed change.

E. Requests shall be submitted to the Project Representative in a timely manner. The Project Representative shall have 10 working days to review.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION

MATERIAL/PRODUCT SUBSTITUTION REQUEST

To:

From:

A. We hereby submit for your consideration the following product instead of the specified item:

1. Section _____ Subarticle
2. Specified Item
3. Proposed Substitution (Mfg., Type, Model, etc.)

B. Complete all of the following:

1. Does this substitution offer the NSRC and State a cost credit (including costs for changes by other trades)? _____.
   How much? _____.

2. Does this substitution offer earlier delivery or less construction time? _____. How much and why? _____.

3. Does this substitution affect any dimensions, layout, or details of other trades as shown on the Drawings?

4. What are the specific differences between this substitution and the specified item?

C. Attach the following items as applicable:

Check if attached
1. Manufacturers technical data
2. Laboratory test or performance results
3. Drawings & wiring diagrams of the proposed product
4. Drawings & description of changes required by other trades
5. Samples
6. Manufacturers guarantee & maintenance instructions

D. The undersigned agrees to pay for all additional review, design, testing, changes in the contract documents, and construction as a result of the acceptance of this substitution, at no cost to Owner.

E. Submitted by (Firm)

Signature _____ Date

Accepted__ Rejected__ Revise and Resubmit__ See Attached

SECTION 01700

CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:

1. Inspection procedures.
2. Project Record Documents.
3. Operation and maintenance manuals.
4. Warranties.
5. Instruction of the State's personnel.
6. Final cleaning.

1.2 SUBSTANTIAL COMPLETION

A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.

1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
2. Make final changeover of permanent locks and deliver keys to the Project Representative. Advise the Project Representative of changeover in security provisions.
3. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.

B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, the Project Representative will either proceed with inspection or notify Contractor of unfulfilled requirements. The Project Representative will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by the Project Representative, that must be completed or corrected before certificate will be issued.

1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for Final Completion.

1.3 FINAL COMPLETION

A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:

1. Submit a final Application for Payment according to Division 1 Section 01290 "Payment Procedures."
2. Submit one copy of the Project Representative’s Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by the Project Representative. The copy of the list shall state that each item has been completed or otherwise resolved for acceptance.

3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
4. Prepare and submit Project Record Documents, operation and maintenance manuals, Final Completion construction photographs, damage or settlement surveys, property surveys, and similar final record information.
5. Deliver tools, spare parts, extra materials, and similar items to location designated by the State. Label with manufacturer's name and model number where applicable.
6. Submit pest-control final inspection report and warranty.
7. Instruct the Project Representative in operation, adjustment, and maintenance of products, equipment, and systems.
8. Complete final cleaning requirements, including touchup painting.
9. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, the Project Representative will either proceed with inspection or notify Contractor of unfulfilled requirements. The Project Representative will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.4 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Preparation: Submit one copy of punch list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.

1. Organize list of spaces in sequential order.
2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.

1.5 PROJECT RECORD DOCUMENTS (AS-BUILTS)

A. General: Do not use Project Record Documents for construction purposes. Protect Project Record Documents from deterioration and loss. Provide access to Project Record Documents for the Project Representative’s reference during normal working hours.

B. Provide Project Record Documents in accordance with the General Conditions.

1.6 OPERATION AND MAINTENANCE MANUALS

A. Assemble two (2) complete sets of operation and maintenance data indicating the operation and maintenance of each system, subsystem, building component, or piece of equipment not part of a system. Include operation and maintenance data required in individual Specification Sections and as follows:

1. Operation Data: Include emergency instructions and procedures, system and equipment descriptions, operating procedures, and sequence of operations.

2. Maintenance Data: Include manufacturer's information, list of spare parts, maintenance procedures, maintenance and service schedules for preventive and routine maintenance, and copies of warranties and bonds.

B. Organize operation and maintenance manuals into suitable sets of manageable size. Bind and index data in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, with pocket inside the covers to receive folded oversized sheets. Identify each binder on front and spine with the printed title "OPERATION AND MAINTENANCE MANUAL," Project name, and subject matter of contents.

1.7 WARRANTIES

A. Submittal Time: Submit written warranties on request of the Project representative for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.

B. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.

1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.

C. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 DEMONSTRATION AND TRAINING

A. Instruction: Instruct the State's Representative to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.

1. Provide instructors experienced in operation and maintenance procedures.
2. Provide instruction at mutually agreed-on times. For equipment that requires seasonal operation, provide similar instruction at the start of each season.
3. Schedule training with the Project Representative, with at least seven days' advance notice.
4. Coordinate instructors, including providing notification of dates, times, length of instruction, and course content.

B. Program Structure: Develop an instruction program that includes individual training modules for each system and equipment not part of a system, as required by individual Specification Sections. For each training module, develop a learning objective and teaching outline.

1. Include instruction for system design and operational philosophy, review of documentation, operations, adjustments, troubleshooting, maintenance, and repair.

3.2 FINAL CLEANING

A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:

a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
d. Remove tools, construction equipment, machinery, and surplus material from Project site.
e. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
f. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
g. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
h. Remove labels that are not permanent.
i. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
j. Leave Project clean and ready for the next phase of work.

C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the State's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION

SECTION 02060

BUILDING DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. Demolish the four room motel adjacent to the historic Navarro Inn. Demolition items include but are not limited to: framing, cladding, windows, doors, interior finishes, interior and exterior fixtures, roofing, concrete slab and other foundation elements, and utilities. Demolition work includes related site activities including: restoration of grade after foundation removal, capping utilities, and protection of the adjacent historic structure as shown on the Drawings and in accordance with this Specification.

B. Prior to demolition, remove hazardous materials per the locations and recommended treatments in the "Lead and Asbestos Survey Report" by RGA Environmental, November 23, 2009, and Section 02100 – Hazardous Materials.

C. Contractor shall complete and submit all necessary information to obtain required permits.

1.2 RELATED SECTIONS

A. Section 00804 - Disposal of Refuse

B. Section 01010 – Summary of Work

C. Section 02070 - Deconstruction

D. Section 02071 - Protection and Salvage of Historic Elements.

E. Section 02100 – Hazardous Materials

F. Section 02200 - Earthwork.

1.3 QUALITY ASSURANCE

A. Contractor shall use workers skilled in the trades appropriate for each task.

B. Contractor shall take precautions to guard against movement, settlement or collapse of any nearby slopes, structures and utilities not designated for demolition and be liable for the consequences of any such movement, settlement, collapse, or damage.

C. Contractor shall become familiar with the site conditions and subject building by performing a site reconnaissance.

1.4 SUBMITTALS

A. Before commencing work the Contractor shall submit to the Project Representative a fully coordinated work plan for the motel demolition, and associated refuse removal, including hazardous materials. The plan shall also include protection measures for the historic Navarro Inn structure.

1.5 JOB CONDITIONS

A. Use or possession of explosives on-site is not permitted.

B. Contractor is required to conduct demolition operations and debris removal to minimize interference with roads, buildings and adjacent vegetation. The Contractor shall not close or obstruct roads, or other occupied and used facilities without approval, and provide alternate routes around closed or obstructed traffic ways in accordance with applicable regulations.

C. Do not allow heavy equipment to pass over existing roads or other public and private property without protection sufficient to prevent damage. Any such property, which is damaged as the result of operations, shall be restored to original condition at no additional cost to the State.

D. Comply with the requirements of CCR Title 8, Construction Safety Orders, and California State Building Code.

E. Every precaution shall be taken to prevent spillage when hauling on or adjacent to any public road or highway. If spillage occurs, all such spillage shall be removed and the roads and highways shall be swept, washed or otherwise cleaned as required by the State.

F. All precautions shall be taken by the Contractor to prevent soil erosion. Any damage to facilities to remain, caused by Contractor's failure to control erosion, shall be repaired at the Contractor's expense.

G. All portions of the Work shall be kept free of standing water at all times. Maintain uniform grades, construct ditches as necessary to prevent erosion., Do not under any circumstances, conduct or pump water or allow water to be diverted or flow towards other areas of the site, which may, in the opinion of the Project Representative, be damaged.

1.6 PROTECTION

A. Contractor shall provide, erect and maintain all platforms, lights, barriers, weather protection, warning signs, and all other items as required for the proper protection of workers engaged in demolition operations, visitors, public and adjacent construction.

B. Contractor shall provide adequate fire protection in accordance with all governing agency requirements.

C. Provide and maintain temporary protection of all existing elements designated to remain including but not limited to utility lines, roads, and the adjacent historic Navarro Inn structure. Make all repairs necessitated by operations under this Section to the complete

satisfaction of the Project Representative of the damaged property at no additional cost to the State.

D. Make all necessary explorations to determine required protective measures before proceeding with demolition and removal work.

1.7 EXISTING UTILITIES

A. Prior to starting any work related to existing utilities, notify the Project Representative and utility owner 72 hours in advance and obtain utility owner's written approval before proceeding with this phase of the Work.

B. Contractor shall be responsible for protection of existing utility lines. If existing active utility lines are encountered, protect same from damage and notify the Project Representative. Do not interrupt service except as directed or accepted by the Project Representative and allow sufficient time for the utility company to arrange for continuation of required services. Damage to said lines as a result of demolition operations shall be repaired as directed by the Project Representative at no cost to the State.

C. Protect existing active utilities as required to prevent unauthorized disruption of services. Prior to commencing any operations in the general location where utilities are indicated, determine exact alignment and depth of utilities.

D. Remove existing utility piping, conduits, culverts and other related items that are to be abandoned and plug open ends with concrete.

E. Existing utility service to be removed, shut-off, cut, or capped shall be performed in compliance with the requirements of the utility owning the service and the Project Representative.

1.8 DUST CONTROL

A. Take necessary precautions to prevent dust and dirt from rising by wetting demolished building components, concrete, excavated soils and similar debris to limit dust and dirt rising and scattering in air. Contractor shall comply with applicable air pollution control regulations.

B. Control the use of water so that it does not create hazardous or objectionable conditions such as flooding, or silt/debris runoff into sensitive habitat areas.

C. Clean adjacent areas and improvements of dust, dirt, and debris caused by demolition operations. Return adjacent areas to condition existing prior to start of work.

PART 2 - PRODUCTS (Not Used.)

PART 3 - EXECUTION

3.1 PREPARATION

A. Verify conditions in the field prior to the start of work. If unanticipated utility elements or other site conditions conflict with the proper operation of systems or site elements that are to remain, investigate and measure both nature and extent of the conflict and notify the Project Representative prior to proceeding with demolition work.

B. Provide shoring, bracing, and other supports as required to comply with all laws and regulations. If the safety of the adjacent historic Navarro Inn structure or other elements appears to be endangered, cease operations and notify the Project Representative immediately. Take precautions to support endangered work until determination is made for continuing operations.

3.2 SITE DEMOLITION

A. Demolish and remove any concrete and structures within the project boundary as shown on the Drawings.

B. All abandoned utilities within the project area encountered shall be completely removed as indicated in the site plans. Ends of abandoned utilities shall be capped or plugged as approved and tagged with permanent identification.

C. Excavations resulting from the removal of such items shall be cleaned out to firm, undisturbed soil.

D. At completion of demolition, remove all debris from the project and finish off grades and other work in a neat and uniform manner.

E. All surfaces, paving, utilities, improvements, or other items of any kind outside the limits of Work, which are cut or disturbed by operations under this Section, shall be restored to their original condition, quality, finish, appearance, and wearing value with duplicating materials all to the acceptance of the Project Representative.

F. The Contractor shall assume complete responsibility for damage by erosion, to areas both inside and outside the limits of Work, caused or contributed to by operations under this Section.

G. If the Contractor is forced to suspend Work prior to completion as a result of inclement weather, it shall be responsible for leaving the project in a suitable condition with proper erosion control to drain properly until such time as work is again commenced.

3.3 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Remove from site accumulated debris, rubbish, and other materials resulting from demolition operations.

B. Prior to the start of demolition activities, determine in consultation with the Project Representative, which, if any materials from the demolition shall be salvaged and delivered to the State.

C. Burning of combustible materials from demolished structures will not be permitted.

D. Removal: Transport from site and legally dispose of materials removed from demolished structures following all local, State and Federal laws, acts and ordinances.

3.4 CLEANING UP

A. Upon completion of all work under this Section, remove all tools, materials, apparatus and rubbish of any sort. The premises shall be left clean.

END OF SECTION

SECTION 02070

DECONSTRUCTION

PART 1 – GENERAL

1.1 SECTION INCLUDES:

A. Definition: Deconstruction – Removal work that is distinct from demolition. It is the careful, controlled, and orderly removal of building components or materials, with the intention of salvage, reinstallation and repair.

B. Deconstruction, removal, and salvage of interior or exterior finishes, elements, and additions as indicated on the drawings, including but not limited to:

1. Fireplace, mantel elements and chimney stack brick
2. Wood sheathing
3. Wood exterior cladding
4. Wood framing
5. Metal Roofing (Alternate Two - If metal roofing is removed without significant damage, it shall be salvaged and delivered to the State. Coordinate with Project Representative.)

C. Related Sections

1. Section 01010 - Summary of Work
2. Section 01045 - Cutting and Patching
3. Section 02071- Protection and Salvage of Historic Elements
4. Section 02100- Hazardous Materials

1.2 QUALITY ASSURANCE

A. The Navarro Inn is an historic resource. Listing on the National Register of Historic Places is pending. It is the California Department of Parks and Recreation's and the Navarro-by-the-Sea Center for Riparian and Estuarine Research (NSCR's) intention to undertake necessary repair and stabilization in a manner which minimizes adverse effects to this historic building. Take all measures during performance of work to maintain and protect historic fabric of this building. Perform work with extreme care and assure that no features of structure are damaged. All work described in this section will adhere to the standards set forth by the *Secretary of the Interior's Standards for the Treatment of Historic Properties.*

B. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work in this section.

1.3 SUBMITTALS

A. General: Submit the following according to the Conditions of the Contract and Division 1 Specification Sections.

B. Prior to removal, submit an Artifact Log of all items to be removed. Include a detailed description of methods and equipment to be used for each operation and of the sequence of operations before work is started. Include coordination for shut-off, capping, and continuation of utility services as required. Include procedures for removal of all structural elements and for temporary supports proposed for use. Do not begin work until items and methods have been approved by the Project Representative. See Section 02071 – Protection and Salvage of Historic Elements for requirements.

C. Deconstruction Shop Drawings: Submit shop drawings showing the extent and location of deconstruction. Existing construction drawings may be used as base sheets for shop drawings.

D. Photographs: Prior to commencement of any work, the Contractor shall, at his expense, have photographs taken by a competent commercial photographer. See Section 02071 – Protection and Salvage of Historic Elements for requirements.

1.4 REGULATORY REQUIREMENTS

A. Perform deconstruction in accordance with applicable Federal, State and local building code and regulations, safety standards and requirements of authorities, having jurisdiction, including applicable requirements of the following:

1. Safety Requirements for Demolition: ANSI A 10.6.

2. Building Construction Operation: ANSI/NFPA 241.

3. State of California Construction Safety Orders.

4. Local regulations for protection of the public and control of noise, dust, dirt and other pollutants.

5. Cal/OHSA.

B. Lead Based Paint Precautions:

1. Existing items scheduled for possible deconstruction or removal may contain lead based paint. Items include:

a. Wood trim
b. Wood siding

c. Doors and windows
d. Exterior ornament –railings, posts, soffits and fascia
e. Interior flooring / exterior decking

2. Prior to performing the work refer to the recommendations in the "Lead and Asbestos Survey Report" by RGA Environmental, July 31, 2009. Perform all work and disposal of any components containing lead in accordance with applicable state, federal, and local regulations, with deleading work performed by licensed deleading contractor.

3. General Contractor shall assume responsibility for complying with all applicable regulations.

1.5 PROJECT CONDITIONS

A. Condition of Structure: The State and the NSCR assume no responsibility for actual condition of items to be demolished.

1. The drawings identify major requirements of this section. The drawings are intended to explain the scope of the section and are not to be interpreted as a comprehensive inventory of existing conditions. They are provided for information only and do not supplant on-site evaluation by the Contractor.

B. Explosives: Use of explosives will not be permitted.

C. Protection of Persons and Property:

1. Provide and maintain temporary construction fences, guards, barricades, signs and other forms of protection as necessary to protect streets, sidewalks, adjoining properties, personnel and general public form injury due to the work at all times.

2. Protect existing sidewalks, streets, utilities and other items which are to remain undisturbed.

3. Provide interior and exterior shoring, bracing or support to prevent movement, settlement, or collapse of elements to be demolished and adjacent facilities or work to remain.

4. Provide dustproof enclosures and or temporary protection to protect from damage existing finish work that is to remain in place.

5. Provide temporary weather protection during interval between deconstruction and removal of existing construction on exterior surfaces, and installation of new construction to insure that no water leakage or damage occurs to structure or interior areas of existing building.

6. Protect from damage existing structure and adjacent elements to remain by approved methods including saw-cutting of existing portions of construction adjacent to portions which are to remain. Remove both new and previous protection provided by others when the work is completed, or as directed by Project Representative.

D. Damages: Promptly repair damages caused to existing building elements, adjacent public or private facilities, utilities and premises by deconstruction at no additional cost to the State or NSCR.

1. Any damage done to historic elements of the building, must be repaired in a manner approved by the Project Representative prior to implementation.

E. Traffic: Conduct deconstruction operations and debris removal in a manner to ensure minimum interference with roads, streets, sidewalks and other adjacent occupied facilities.

1. Do not close, block or otherwise obstruct roads, streets, sidewalks or other occupied facilities without proper written permission from authorities having jurisdiction.

F. Utility Services: Maintain existing utilities indicated to remain, keep in service, and protect against damage during deconstruction operations.

G. Remove rubbish and debris from the job site daily unless otherwise directed. Do not allow accumulations inside or outside the building.

H. Environmental Controls: Use water sprinkling, temporary enclosures, and other suitable methods to limit dust and dirt rising and scattering in air to lowest practical level. Comply with governing regulation pertaining to environmental protection. Do not use water when it may create objectionable conditions or cause damage to existing structures and finishes to remain.

I. The use of power-driven impact tools will be permitted only with the consent of the Project Representative.

J. Open Flame: Cutting torches will not be permitted except by Project Representative's written permission. Maintain portable fire suppression devices of appropriate classes during all removals work.

1. Smoking is not permitted in the building or adjacent areas.

2. Fire watch is the responsibility of the Contractor.

PART 2 - PRODUCTS

Not included.

PART 3 - EXECUTION

3.1 GENERAL

A. Locate deconstruction equipment throughout structure and promptly remove materials so as not to impose excessive loads on supporting walls, floors, or framing.

B. Unanticipated elements which conflict with intended function or design, if encountered, shall be investigated, measured, photo documented and reported to the Project Representative in writing. Pending receipt of a directive, rearrange deconstruction schedule as necessary to continue overall job progress.

C. Title to Materials: Title to all materials to be removed and disposed of, as approved by the Project Representative, is vested in the Contractor upon the receipt of such approval. The State and / or the NSCR will not be responsible for the condition of, loss of, or damage to such property after such approval. Materials shall not be viewed by prospective purchasers or sold on the site.

1. Items indicated to be removed but of salvageable value to Contractor may be removed from structure as work progresses. Transport salvaged items from site as they are removed.

D. Historic artifacts uncovered during work of this Section remain property of the State and shall remain boxed and labeled in the building attic for future research. Notify Project Representative if such items are encountered and obtain acceptance regarding method of removal and salvage.

E. Existing finish work that is to remain in place and becomes exposed during deconstruction operations shall be protected from damage as specified in Section 02071 - "Protection and Salvage of Historic Elements".

3.2 PREPARATION

A. Inspection

1. Prior to commencement of deconstruction work, inspect areas in which work will be performed. Photograph existing conditions of adjacent elements which could be construed as damage resulting from selective removal work; file with the Project Representative prior to starting work.

2. Determine location of piping, utilities and equipment and confirm whether it shall be removed or shall remain.

B. Provide interior and exterior shoring, bracing, or support to prevent movement, settlement or collapse of structures to be demolished and adjacent facilities to remain.

1. Cease operations and notify the Project Representative immediately if safety of structure appears to be endangered. Take precautions to support structure until determination is made for continuing operations.

C. Cover and protect equipment and fixtures to remain from soiling or damage when deconstruction work is performed in rooms or areas from which such items have not been removed.

D. Locate, identify, stub off, and disconnect utility services that are not indicated to remain.

1. Provide bypass connections as necessary to maintain continuity of service to building.

3.3 DECONSTRUCTION OF ELEMENTS FOR SALVAGE AND REUSE

A. General: Perform deconstruction work in a systematic manner. Use such methods as required to complete work indicated on the drawings, these specifications, and governing regulations.

1. Specialty items will be removed under Project Representative's or Architect's supervision.

2. Exercise care in removing salvage Elements and materials attached to Historic Elements which are to remain.

a. Unbolt bolted connections.

b. Unscrew screwed connections.

c. Do not pry apart members whose finish will be damaged by chipping, crazing, or cracking, or whose structural integrity will be impaired.

d. Do not remove nails from woodwork from exposed side. Drive nails through or pull from back so head does not splinter finished face.

e. Remove items whole wherever possible. Where cuts are required, make cuts cleanly with proper tools and at logical break points. Verify unusual or ambiguous configurations with Project Representative and document with photos and written notes prior to removal.

B. Millwork: Remove full lengths of millwork. Reinstall in same locations.

C. Door Assemblies: Store door, frame and hardware of individual door assemblies as single component. Door assemblies will only be removed if necessary for stabilization of building.

D. Windows: Remove only as much material necessary to accommodate new work. Remove window components in whole sections. Remove windows only if necessary for stabilization of building.

3.4 DISPOSAL OF WASTE MATERIALS

A. Remove debris, rubbish and other materials resulting from deconstruction operations from building site. Transport and legally dispose of materials off site in accordance with the approved methods and dump locations.

1. If hazardous materials are encountered during deconstruction operations, comply with applicable regulations, laws, and ordinances concerning removal, handling and protection against exposure or environmental pollution.

2. Burning of removed materials is not permitted on project site.

3.5 CLEAN-UP AND REPAIR

A. Upon completion of deconstruction work, remove tools, equipment and demolished materials from site.

1. Remove both new and existing protection except for those specified to remain.

2. Temporary partitions and closures will not be required to remain, and shall be demolished and removed off the site.

3. Leave interior areas broom clean.

B. Repair deconstruction performed in excess of that required. Return structures and surfaces to remain to condition existing prior to commencement of deconstruction work. Repair adjacent construction or surfaces soiled or damaged by deconstruction work.

END OF SECTION

SECTION 02071

PROTECTION AND SALVAGE OF HISTORIC ELEMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Protect all historic elements that remain in place or on site from damage by construction activities.

B. Document, deconstruct, record, label, store, and protect all items designated to be removed, salvaged and reinstalled as indicated on drawings or as directed by the Project Representative.
All work described in this section will adhere to the standards set forth by the *Secretary of the Interior's Standards for the Treatment of Historic Properties*

C. Document, remove and salvage items scheduled to be removed, including but not limited to:

1. Fireplace, mantel elements and chimney stack brick
2. Exterior wood porch elements.
3. Exterior wood sheathing
4. Exterior wood siding
5. Exterior wood trim, soffits and fascia

1.2 RELATED SECTIONS:

A. Section 01045 - Cutting and Patching

B. Section 02070 - Deconstruction

1.3 DEFINITIONS

A. "Historic Elements" may include, but are not limited to, the following finishes, components, or areas:

1. Wood windows and doors
2. Interior wood trim and moldings and panels
3. Interior and exterior historic electrical fixtures

4. Fireplace, mantle elements, and masonry chimney

5. Interior wallpaper finishes

6. Exterior wood trim, soffits and fascia

7. Exterior sheathing

8. Exterior wood siding

B. "Historic Elements" may also be identified in the field by the Project Representative and brought to the attention of the Contractor. Contractor shall verify any questionable items with the Project Representative prior to commencement of protection, demolition, or construction procedures.

C. “Protection” as specified herein refers to; protection of historic elements remaining in place from impact and general construction damage, and protection of all stored historic elements from impact, general construction damage, weather, or flooding. Fire protection is not covered by this specification and remains the responsibility of the Contractor.

1.4 QUALITY ASSURANCE

A. Use adequate numbers of skilled workers who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of work in this section, in accordance with the *Secretary of the Interior's Standards*

B. The Contractor shall be responsible for protection of all existing materials and components to remain or to be salvaged. The minimum amount of protection required is indicated on the drawings. In the event of damage, such items shall be immediately repaired or replaced by the Contractor, at his expense, to the satisfaction of the Project Representative.

C. Historic Significance: The Navarro Inn is a historic resource, and listing on the National Register of Historic Places is pending. It is the California Department of Parks and Recreation’s intention to undertake necessary repair and stabilization of the Navarro Inn in a manner which minimizes adverse effect to this historic building or the surrounding environment. Take all measures during performance of work to maintain, protect, and preserve historic fabric of this building. Perform work with extreme care and assure that no features of structure are damaged.

1.5 SUBMITTALS

A. Description of Finishes Work:

1. Submit written document describing salvage procedures for each area shown on the drawings. Indicate profiles and dimensions of finishes to be removed.

B. Description of Protection Work:

1. Submit written description of protection procedures for Historic Elements to remain in place. Include: details of methods, materials and other pertinent information about protection operations required.

C. Description of Removal Work

1. Submit written description of demolition and removal operations. Include: details of methods, equipment, materials, typical shoring and bracing (if required), temporary enclosure, storage locations, provision for protection and security and other pertinent information about demolition, removal, and salvage operations required.

D. Shop Drawings

1. Removal/Salvage Numbering System: Before beginning removal and salvage operations, submit set of elevation drawings at 1/4 inch scale which assign separate numbers to each item to be disassembled, stored and reinstalled. Assign a different number to each element to be removed. Label items in field prior to removal to storage. Place labels where not visible after installation.

E. Artifact Log: Keep Artifact Log current. Submit copy of up-to-date Artifact Log weekly to Project Representative.

F. Documentation

1. Submit documentation, supported by digital photographs and written notes, of site conditions during removal /salvage operations, noting details of construction of removed elements, and any evidence of pre existing installations.

G. Photographic Requirements

1. Photographs shall be taken in high resolution, digital format with the files supplied on archival quality disc. The disc shall also contain a schedule of the dates of exposures, description of view and the name and address of the photographer. Submit three discs to the Project Representative.

1.6 SITE CONDITIONS

A. Coordinate the performance of work in this section with related or adjacent work. Protection of items should be complete prior to commencement of new construction and demolition.

B. At the end of working day or during inclement weather cover work exposed to weather with waterproof coverings, securely anchored.

C. Protection for Historic Elements should remain in place for the duration of the project unless determined otherwise by the Project Representative.

PART 2 - PRODUCTS

2.1 PROTECTION MATERIALS

A. General: Provide new materials; if acceptable to the Project Representative provide undamaged, previously used materials in serviceable condition. Provide materials suitable for the use intended.

B. Polyethylene sheets - 4 mil. to 10 mil.

C. Lumber: Species to be selected by Contractor, sizes to fit field conditions.

D. Plywood: 1/2-inch or 3/4-inch fire retardant.

E. Soft Fiberboard: Homasote Co., P. O. Box 7240, West Trenton, N.J. 08628, (609) 883-3300, or approved equal.

F. Polyurethane foam sheets: 4-inch thick.

G. Ethafoam

H. Duct tape.

I. "Preservation" Tape: 3M Scotch brand no. 4811, or approved equal.

J. Plastic film tape: 3M Scotch brand no. 472, or approved equal.

K. Kraft Paper, or approved equal.

L. Accessories: Provide necessary and related parts, devices and anchors required for complete installation.

PART 3 - EXECUTION

3.1 GENERAL

A. Historic Elements to Remain in place:

1. Protect all Historic Elements to remain in place, which may be damaged by construction activities. In the event of new damage, the Contractor shall document damage with photographs and written notes and inform the Project Representative immediately as to the nature and extent of damage and the proposed method of repair. Contractor is responsible for repairs and replacement of newly damaged items, to the satisfaction of the Project Representative at no additional cost to the State and / or the NSCR.

2. Do not attach protection materials directly to Historic Elements. Do not use duct tape or mechanical fasteners on historic materials unless so directed by Project Representative.

3. Protection to be secured adequately, so as to maintain a safe environment for workers and other individuals using the building throughout the duration of the project.

B. Salvage Elements to be removed:

1. Protect, carefully handle, transport, and store Historic Elements identified for removal. Contractor is responsible for handling and storing these items, in addition to being responsible for repairs and replacement of newly damaged items to Project Representative's satisfaction at no additional cost to the State and / or the NSCR.

2. Catalog removed Salvage Elements in the Artifact Log. Document type, size, quantity, location in storage and, if applicable, original location and condition.

3. Store Salvage Elements in neat, orderly fashion to allow for access and retrieval. Store like type elements together in groups. Store particularly fragile elements in manner that prevents damage while in storage.

3.2 PREPARATION

A. Remove all furnishings and debris to allow for full access as required to perform protection of Historic Elements.

B. Verify Off-Site Facility has adequate capacity and access for orderly storage and retrieval of Salvage elements.

C. Do not stockpile items at job site other than in preparation for transport to storage facility.

3.3 INSTALLATION OF PROTECTION

A. General

1. Alternative methods to specified protection may be acceptable if equal or greater protection is provided. Submit alternative methods to the Project Representative for review as specified. Do not proceed with alternative methods until specified approvals are secured.

2. Protection may be required to remain in place for the duration of the project. As such, materials should be installed to provide adequate protection throughout the full extent of construction activities. Repair or reinstall protection throughout the duration of construction as required.

3. Extent of protection is to cover all Historic Elements to remain which are in the vicinity of construction activities whether specifically called out on the drawings or not. All questionable protection requirements should be identified for the Project Representative's review.

4. All protection assemblies should be self-supporting and self bracing, secured at the base to the floor protection, unless otherwise noted.

B. Wood trim, wood sheathing / siding, molding, bases, window and door surrounds and other miscellaneous millwork: Verify extent of potential impact on these elements with Project Representative. If protection is required, carefully remove these elements for reinstallation.

C. Windows and Doors: Verify extent of potential impact on these elements with Project Representative.

3.4 DISCOVERY OF HIDDEN ARCHITECTURAL OR ARCHEOLOGICAL FEATURES

A. It is the Contractor's responsibility to hire a professional Archeologist who is certified by the Society of Professional Archaeology (SOPA) to be present on site during excavation activity. Should archeological materials be uncovered during grading, trenching, or other onsite excavations, earthwork within 30 yards of these materials shall be stopped until the archeologist has had an opportunity to evaluate the significance of the find and suggest appropriate mitigation(s), if deemed necessary. Do not disturb area until Project Representative has evaluated undocumented items.

B. Time lost thereby will be condition for which contract time may be extended. Costs incurred for salvaging or documenting artifacts, after discovery will be handled as a Construction Contingency.

C. The State reserves right to retain possession and ownership of objects, artifacts and historically or archeologically significant materials, other than normal building construction materials, discovered during execution of work. NSCR may act as steward to above findings, with permission of the State, to be stored on location.

3.6 CATALOGING OF HISTORIC SALVAGE ELEMENTS

A. General: Historic fabric removed from its original location shall be labeled to permit reinstallation to its original location and configuration. Contractor may propose alternative methods for cataloguing Salvage Elements. Submit alternative method for Project Representative's review as specified. All cataloging of historical elements will be supported by digital photographs and written notes of the historic elements in original locations prior to removal.

B. Numbering and cataloguing: Each item to be removed shall be given a unique catalogue number which is to be permanently marked on the element and listed on a Removed Historic Element Log. Numbers are to be created as follows:

N/P/FL1/2

Where:
N ‘elevation, (cardinal direction)
P ‘ component type abbreviation, (P for post)
FL1 ‘ floor number (first floor)
2 ‘ component number

C. Wood elements shall be numbered with a black, permanent marker or a yellow lumber crayon, unless otherwise noted, in area hidden from view when element is installed.

D. Removed Historic Elements – Artifact Log

1. As items are removed and labeled, they shall be recorded in an artifact log. The log shall list the item number, a brief description of the item and location in the building, and a reference to the storage location. If required to pinpoint the exact location of an object, the number shall also be placed on an interior elevation, plan, or sketch which shall be appended to the Historic Elements Log. This information will be cross referenced with the photo-documentary evidence collected before and during removal of historic elements.

3.7 STORAGE

A. General: Keep items clean, dry, and well ventilated in designated storage facility. Protect items from abrasion or damage as required. Keep area clean.

B. Organization: organize elements to be readily accessible and retrievable for re-use or reference and store complex components requiring re-assembly together.

3.8 REINSTALLATION

A. Return Salvage elements to their original locations, unless otherwise indicated. When items cannot be returned to their original location because of architectural modifications, they may be re-used in other locations determined by Project Representative. Where salvage Elements are not to be re-used, they will remain the State's property, if so directed by the Project Representative.

3.9 CLEAN-UP

A. All residue and debris from protection work is to be removed from existing construction leaving the premises clean and neat.

END OF SECTION

SECTION 02080

ASBESTOS ABATEMENT AND DISPOSAL

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. The General Conditions and Division I General Requirements shall be included in and made part of this Section.

B. Examine all other Sections of the Specifications for requirements therein affecting the work of this Section of the Specifications.

1.02 COMPLIANCE AND INTENT

A. The Contractor is responsible for repair, to the satisfaction of the Project Representative, of surfaces not scheduled for renovation and/or demolition that become damaged as a result of the work. All unscheduled repair work shall be at no increase to contract price.

B. This project deals with abatement of asbestos-containing materials (ACMs). It is necessary for the Contractor to coordinate all abatement work with the specifications. During all work, provide monitoring and worker protective equipment in accord with the California Occupational Safety and Health Administration (Cal-OSHA) and as required by this specification. Where there is conflict, the most stringent requirement shall apply.

C. The work covered by this specification includes the handling, removal, and proper disposal of asbestos-containing materials. All hazardous materials shall be removed and disposed of according to all federal, state and local regulations. The Contractor shall determine if additional hazardous materials will be impacted by the scope of the abatement work. The cleanup of any incidental asbestos found in areas undergoing abatement of asbestos that become separated from the buildings during the dismantling process are part of the work.

D. The abatement workers shall have received Cal-OSHA accredited training and be certified for asbestos abatement work.

E. Furnish all labor, materials, facilities, equipment, services, employee training, medical monitoring, permits and agreements necessary to perform the work required for asbestos abatement in accordance with this specification.

F. Site electricity and water are not available. Contractor must furnish temporarily electrical power and sufficient water for all required work.

G. Comply with all federal, state, and local regulations pertaining to asbestos removal, storage, transportation and disposal; employee heath and safety; Contractor certifications; and all licenses, permits, and training.

H. Work on the premises shall be confined to areas designated in the Contract Documents. Materials and equipment shall be stored within areas designated by the Project Representative. Should additional space be required, the Contractor shall request permission for additional space and shall adequately safeguard occupants from associated health and safety hazards.

I. Perform all work specified herein with competent persons trained, knowledgeable and qualified in state-of-the-art techniques relating to asbestos abatement, handling, and the subsequent cleaning of contaminated areas.

J. During removal activities, the Contractor shall protect against contamination of soil, water, plant life, and adjacent building areas, and shall ensure that there is no airborne release of dusts. The Project Representative may collect air samples in the buildings and in adjacent areas to evaluate

the Contractor's performance. Evidence of settled dust or airborne levels of contaminants above background will require the implementation of additional controls at no increase to contract price.

K. It is the Contractor's responsibility to determine the quantities of ACMs that will require removal prior to commencement of the project. The Contractor shall conduct a site visit to determine exact locations of materials that will require abatement. This section provides appropriate protocols for handling and disposal of ACMs. All ACMs shall be removed according to the procedures outlined in this specification. If additional suspect ACMs are discovered during the course of the abatement work, immediately notify the Project Representative.

L. The work of this section shall be performed by an entity that holds a current, valid asbestos handling license issued by the California State Contractor's Licensing Board (SCLB) and a current valid Certificate of Registration for Asbestos-Related Work issued by the California Department of Industrial Relations-Division of Occupational Safety and Health (Cal-OSHA), unless other specified. Display copies of CSLB license and Cal-OSHA Registration in a visible place at the job-site.

M. ACMs removed during the abatement activities shall be disposed of in an approved manner complying with all applicable federal, state, and local regulations. Appropriate waste manifests or letters of salvage shall be furnished to the Project Representative thereby limiting the State's liability for improperly salvaged items. Materials are conveyed to the Contractor "as is," without any warranty, expressed or implied, including but not limited to, any warranty to marketability or fitness for a particular purpose, or any purpose. The Project Representative's Environmental Consultant shall approve the non-ACM hazardous waste disposal site(s) prior to disposal for materials that may be disposed of in that manner.

N. All interior asbestos abatement work shall be conducted using a negative pressure enclosure and three stage decontamination units unless otherwise specified.

1.03 DEFINITIONS

A. The following definitions pertain to work of this section.

1. Abatement: Process of controlling fiber release from ACMs including encapsulation, enclosure, controlled renovation procedures, removal, clean-up and disposal.

2. ACM: Asbestos-containing material

3. Aggressive Sampling: Air sampling either during or following the agitation of the air.

4. AHERA: Asbestos Hazard Emergency Response Act (40 CFR Part 763).

5. Airlock: A system for permitting ingress and egress with minimum air movement between a contaminated area and uncontaminated areas. Typically consists of two curtained or gasketed doorways separated by a distance of at least six feet such that one passes through one doorway into the airlock, allowing the doorway to close off the opening. This airlock must be maintained in uncontaminated condition at all times.

6. Ambient Air Quality: The quality of air (in terms of airborne fiber content) that is present in a given space.

7. Area Monitoring: Sampling of airborne asbestos fiber concentrations within the work area and outside the work area. Sampling shall represent airborne concentrations that may reach the breathing zone.

8. Asbestos Fibers: Refers to asbestos fibers having an aspect ratio of 3:1, and those fibers longer than five (5) microns.

9. Asbestos Permissible Exposure Limit (PEL): A level of airborne fibers specified by OSHA as an occupational exposure standard for asbestos. This level represents the 8-hour time-weighted average of 0.1 fibers per cubic centimeter of air as measured by Phase Contrast Microscopy (PCM) analytical method.

10. Asbestos-Containing Material (ACM): Those manufactured products and construction materials including structural and mechanical building materials, as well as packings and gaskets that contain more than one percent (1.0%) asbestos by weight.

11. Asbestos: Asbestos includes asbestiform varieties of serpentinite (chrysotile), riebeckite (crocidolite), cummingtonite-gunerite (amosite), anthophylite, tremolite, and actinolite. For the purposes of determining worker respiratory protection, both the asbestiform and non-asbestiform of the above minerals, and any chemically treated or altered materials shall be considered as asbestos.

12. Authorized Visitor: Designated employees or consultants for the Project Representative and representatives of any federal, state or local regulatory or other agency having jurisdiction over the project.

13. Baseline: Refers to the background levels of asbestos monitored before abatement.

14. Breathing Zone: A hemisphere forward of the shoulders and head with a radius of approximately six to nine inches.

15. Breach: A rift or gap in the critical or secondary barriers that allow egress of air from the containment to outside, or vice versa.

16. Bridging Encapsulant: An encapsulant that forms a discrete layer on the surface of an in-situ asbestos matrix.

17. Cal-OSHA: State of California, Occupational Safety & Health Administration.

18. Chain-of-Custody: A legal concept involving documentation of the physical possession of a sample(s) from the moment it is collected, transported, analyzed, and ultimately stored in an archive.

19. Change Rooms: Refers to the two chambers in the decontamination area used to change into and out of protective clothing.

20. Certified Industrial Hygienist (CIH): A person certified by the American Board of Industrial Hygiene.

21. Clean Room: An uncontaminated area or room that is part of the worker decontamination enclosure system, with provisions for storage of workers' street clothes and protective equipment.

22. Clearance Level: Clearance level for samples analyzed by PCM will be less than 0.01 fibers per cubic centimeter of air and for TEM will be less than 70 structures per square millimeter (<70 s/mm^2). Samples may be collected by aggressive or non-aggressive sampling methods and the minimum air volume shall be 1,200 liters.

23. Competent Person: One who is capable of identifying existing and predictable hazards and who has the authority to take prompt corrective measures to eliminate them.

24. Critical Barrier: A unit of temporary construction that provides the only separation between asbestos work area and an adjacent potential occupied space. This includes the decontamination unit, perimeter walls, ceilings, penetrations and any temporary critical barriers between the work area and the uncontaminated environment.

25. CSLB: Contractors State Licensing Board

26. Decontamination Area: Area which is constructed to provide the means for workers to store clothing, equipment and other articles, and to properly remove contamination upon concluding work activities that result in exposure to these hazardous materials.

27. DOP: Dioctylphthalate, the challenge aerosol used to perform on-site leak testing of HEPA filtration equipment.

28. DOT: Federal Department of Transportation.

29. DOSH: Division of Occupational Safety & Health (see also Cal-OSHA)

30. Decontamination Unit: Refers to system of airlocks used to decontaminate personnel, waste bags, equipment, etc. when exiting the work area. A decontamination unit shall be set up for each containment area.

31. Demolition: The wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.

32. Disposal Bag: Minimum six (6) mil thick leak-tight plastic bags used for transporting asbestos waste from a work area to disposal or shipping container. Each disposal bag must have required labels according to Title 8 CCR 1529 (Cal-OSHA asbestos rule), 5194 (HAZCOM). RACM waste must be additionally labeled according to 49 CFR 171-179 (USDOT), and 40 CFR 61 Subpart M (NESHAP). Hazardous waste disposal bags must be labeled with generator's name, address, site location, generator number, and the following information:

CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD
AVOID BREATHING AIRBORNE ASBESTOS
RQ WASTE ASBESTOS, 9 NA 2212 PG III

(Class 9 placard)
HAZARDOUS WASTE
STATE AND FEDERAL LAW
PROHIBITS IMPROPER DISPOSAL
IF FOUND, CONTACT THE NEAREST
POLICE OR PUBLIC SAFETY
AUTHORITY OR THE CALIFORNIA
DEPARTMENT OF TOXIC SUBSTANCES CONTROL

33. Encapsulant: A liquid material that can be applied to ACMs that controls the possible release of asbestos fibers from the material either by creating a membrane over the surface (bridging) or by penetrating into the material and binding its components together (penetrating encapsulant).

34. Encapsulation: A specified procedure necessary to coat ACMs or asbestos contaminated surfaces with an encapsulant to control the possible release of asbestos fibers into the ambient air.

35. Enclosure: The construction of an airtight, impermeable, permanent barrier surrounding the ACM to prevent the release of asbestos fibers into the air.

36. Environmental Consultant: CIH, Certified Asbestos Consultant (CAC), and/or Certified Site Surveillance Technician (CSST) retained by the Project Representative.

37. Equipment Decontamination Enclosure System: A decontamination enclosure system for materials and equipment, typically in a designated area of the work area, and including a washroom, a holding area, and an uncontaminated area.

38. Equipment Room: A contaminated area or room that is part of the worker decontamination enclosure system, with provisions for storage of contaminated clothing and equipment. The equipment room shall be kept clean from asbestos-containing debris at all times.

39. Excursion Limit: A California Code of Regulations (Title 8 CCR 1529) requirement that ensures no employee exposed to airborne concentrations of asbestos in excess of 1.0 fibers per cubic centimeter of air as averaged over a sampling period of thirty (30) minutes.

40. Filter: A media component used in respirators to remove solid or liquid particles from the inspired air.

41. Fixed Object: A unit of equipment or furniture in the work area that cannot be removed from the work area.

42. Friable Asbestos-Containing Material: Material that contains more than 1.0% asbestos by weight, and that can be crumbled, pulverized or reduced to powder by hand pressure when dry.

43. Foreman: An individual who typically fulfills the duties of "competent person" as defined by Title 8 CCR 1529. This individual must supply documentation of a passing grade in a Cal-OSHA accredited course in Asbestos Contractor/Supervisor training. The foreman must be on-site during all abatement work.

44. Glove Bag: A polyethylene bag with two inward projecting long sleeve gloves, designed to enclose an object from which an ACM is to be removed. Bags shall be seamless at the bottom, have a minimum thickness of 6 mil, and shall be labeled appropriately.

45. Glove Bag Technique: A method for removing ACM from heating, ventilation and air conditioning (HVAC) ducts, piping runs, valves, joints, elbows, and other non-planar surfaces. The glove bag is constructed and installed in such a manner that it surrounds the object or material to be removed and contains all asbestos fibers released during the process. Secondary containment shall be provided for all glove bag work unless otherwise noted.

46. Gross or Full Abatement: Designated rooms, spaces, or areas of the project that have been totally sealed, contained in polyethylene, equipped with decontamination enclosure systems, and placed under negative pressure.

47. HEPA: High Efficiency Particulate Air filter capable of filtering out airborne particulate 0.3 microns or greater in diameter at 99.97 percent efficiency.

48. Manifest: The document authorized by both Federal and State authorities for tracking the movement of ACMs.

49. Movable Object: A unit of equipment or furniture in the work area that can be removed from the work area (e.g., smoke detectors, lights, etc.)

50. Negative Pressure Respirator: A respirator in which the air pressure inside the respiratory inlet covering is positive during exhalation in relation to the air pressure of the outside atmosphere, and negative during inhalation in relation to the air pressure of the outside atmosphere.

51. Negative Pressure: Air pressure lower than surrounding areas, generally caused by exhausting air from a sealed space (work area).

52. NESHAP: National Emission Standard for Hazardous Air Pollutants – EPA Regulation 40 CFR Subpart M, Part 61.

53. NIOSH: National Institute for Occupational Safety and Health: Sets test standards, analytical methods, and certifies performance of various respirator designs (research institute within Federal OSHA).

54. NIST: National Institute of Standards and Technology: Administers the NVLAP Program.

55. NVLAP: National Voluntary Laboratory Accreditation Program – evaluates and certifies laboratories doing PLM and TEM analyses.

56. Passive Sampling: Refers to air sampling with no air agitation.

57. Permissible Exposure Limits (PEL): A level of airborne fibers specified by OSHA as an occupational exposure standard for asbestos. This level represents the 8-hour time-weighted average of 0.1 fibers per cubic centimeter of air and 30 minute excursion limit of 1.0 fibers per cubic centimeter of air as measured by Phase Contrast Microscopy (PCM) analytical method.

58. Phase Contrast Microscopy (PCM): Technique using a light microscope equipped to provide enhanced contrast between the fibers and the background. Filters are cleared with a chemical solution and viewed through the microscope at a magnification of approximately 400X. This method does not distinguish between fiber types and only counts those fibers longer than 5 microns and wider than approximately 0.25 microns. Because of these limitations, fiber counts by PCM typically provide only an index of the total concentration of airborne asbestos in the environment monitored.

59. Polarized Light Microscopy (PLM): An optical microscope technique used to identify asbestos content and distinguish between different types of asbestos fibers by their shape and unique optical properties.

60. Powered Air Purifying Respirator (PAPR): A full facepiece respirator that has the breathing air powered to the wearer after it has been purified through a filter.

61. Protection Factor: The ratio of the ambient concentration of an airborne substance to the concentration of the substance inside the respirator at the breathing zone of the wearer. The protection factor is a measure of the degree of protection provided by a respirator to the wearer.

62. Remodel: Replacement or improvement of an existing building or potion thereof where exposure to airborne asbestos may result. Remodel includes, but is not limited to, installation of materials, demolition, cutting, patching, and removal of building materials.

63. Respirator: A device designed to protect the wearer from the inhalation of harmful atmospheres.

64. Shower Room: A room between the clean room and the equipment room in the work decontamination enclosure system. This room contains hot and cold or warm running water and soap suitably arranged for complete showering during decontamination. The shower room comprises an airlock between contaminated and clean areas.

65. Surfactant: A chemical wetting agent added to water to improve penetration, this reducing the quantity of water required for a given operation or area.

66. Transmission Electron Microscopy (TEM): Asbestos structure analysis for a specified volume of air. TEM is a technique that focuses an electron beam onto a thin sample. As the beam transmits through certain areas of the sample, an image resulting from varying densities of the sample is projected onto a fluorescent screen. TEM is the state-of-the-art analytical method for identifying asbestos fibers collected in air samples in non-industrial settings. TEM microscopes equipped with selected area electron diffraction (SAED) capabilities also can provide information on the crystal structure of an individual particle.

67. Visible Emissions: Any emission containing particulate material that is visually detectable without the aid of instruments. This does not include condensed uncombined water vapor.

68. Visual Inspection: A visual inspection by Environmental Consultant, of the work area under adequate lighting to ensure that the work area is free of visible material, debris, and dust.

69. Washroom: A room between the work area and the holding area in the equipment decontamination enclosure system equipped with water for decontamination of equipment and sealed waste containers. The washroom or shower room comprises one airlock.

70. Water Filtration: Refers to water filtration to as small a particulate size as technically feasible, but not more than 5 microns.

71. Wet Cleaning: The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, HEPA vacuuming, or other cleaning utensils dampened with amended water and afterward thoroughly decontaminated or disposed of as asbestos contaminated waste.

72. Work Area: The area where asbestos removal is performed and that is defined or isolated to prevent the spread of asbestos fibers, dust or debris, and entry by unauthorized personnel. Work area is a regulated area as defined by Title 8 CCR 1529.

1.04 SCOPE OF WORK

A. Provide the removal of ACMs as specified in this section of the specifications. See other sections of the Specifications and other documents included in the contract documents for information and requirements that affect the work of this Section.

B. Table 1 provides estimated quantities of ACMs requiring removal. A 10% variance of quantity of actual ACM shown in the Table and estimated ACM is not considered a changed condition. The Contractor is responsible for field verifying quantities of ACMs and difficulty in abating the same.

C. The following materials shall be disposed of as regulated asbestos-containing material (RACM): floor tile and flooring mastic if removed with mechanical methods.

D. The following materials can be disposed of as Category I Non-friable ACMs if they are not rendered friable during removal: roofing mastics, floor tile and mastic (if removed with manual methods that do not render material friable), roofing patch. If a removal solvent is used to abate the flooring mastic, the Contractor shall perform waste characterization and dispose of the material as required.

E. The following materials can be disposed of as Category II Non-friable ACMs if they are not rendered friable during removal: transite flues, ceramic wall tile adhesive.

Table I – Asbestos Containing Materials

Material Description	Material Location	Asbestos Type	Estimated Quantity
Navarro Inn – Building Renovation			
9” Brown vinyl floor tile with black mastic	1st Floor – bar and two (2) restrooms	Floor tile: 8% CH Mastic: 5% CH	700 sf
9” Red vinyl floor tile with black mastic	1st Floor – behind bar	Floor tile: 10% CH Mastic: ND	100 sf

Material Description	Material Location	Asbestos Type	Estimated Quantity
White vinyl sheet flooring and white vinyl floor tile with tan mastic	1st Floor – Transition area between rooms 100 and 101	Vinyl sheet flooring: ND Floor tile: 5% CH Mastic: ND	20 sf
12” White vinyl floor tile with black mastic	1st Floor Bar - Raised Footrest for bar stools	Floor tile: 5% CH Mastic: 5% CH	20 sf
Black patch	1st Floor - Bar roof	8% CH	1 sf
Transite flues (2)	East elevation-exterior and interior	Assumed	20 lf
Motel – Building Demolition			
9” Tan vinyl floor tile with black mastic	All restrooms	Floor tile: 3% CH Mastic: ND	300 sf
4” White ceramic wall tile (shower wainscot) grout and glue - dark tan	All restroom showers wainscots and sink backsplashes	Tile: ND Grout: ND Adhesive: 5% CH	800 sf
Transite flue (1)	East elevation	Assumed	10 lf
Grey roof patch (no access)	Roof penetrations	Assumed	10 sf

CH = Chrysotile, ND = None Detected, sf = square feet, lf = linear feet

1.05 REFERENCES

A. The publications listed below form a part of this specification by reference. The publications are referred to in the text by basic designation only. If there is a conflict between any of the listed regulations or standards, then the most stringent or restrictive shall apply.

B. American National Standards Institute (ANSI) and American Society for Testing and Materials (ASTM)

1. ANSI Z9.2, 1979 (R 1991), Fundamentals Governing the Design and Operation of Local Exhaust Systems
2. ANSI Z87.1, 2003, Occupational and Educational Eye and Face Protection
3. ANSI Z88.2 1992, Respiratory Protection
4. ANSI Z89.1, 1986, Requirements for Protective Headgear for Industrial Workers
5. ANSI Z41, 1999, Personal Protection – Protective Footwear
6. ANSI Z88.6, 1984, Respiratory Protection – Respiratory Use Physical Qualifications for Personnel
7. ASTM C 732, 1982 (R 1987) Aging Effects of Artificial Weathering on Latex

Sealants

8. ASTM D 522, 1993 (Rev. A) Mandrel Bend Test of Attached Organic Coatings
9. ASTM D 1331, Solutions of Surface-Active Agents
10. ASTM D 2794, 1993 Resistance of Coatings to the Effects of Rapid Deformation (Impact)
11. ASTM E 84, 1991 (Rev. A) Surface Burning Characteristics of Building Materials
12. ASTM E 96, 1994 Water Vapor Transmission of Materials
13. ASTM E 119, 1988 Fire Tests of Building Construction and Materials
14. ASTM E 736, 1992 Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members
15. ASTM E849, 1986 Safety and Health Requirement Relating to Occupational Exposure to Asbestos
16. ASTM E 1368, 1990 Visual Inspection of Asbestos Abatement Projects
17. ASTM E1494, 1992 Specifications for Encapsulants for Friable Asbestos-Containing Building Materials

C. California Assembly Bills (CAB)

1. CAB 040, Yearly Registration of Contractors

D. California Code of Regulations (CCR)

1. Title 8 CCR 5208, General Industry - Asbestos
2. CCR CARS, Carcinogen and Asbestos Registration Sections 340-344.53, 341.6 Amended, and 341.9 Amended Through 341.14
3. CCR ESO, Electrical Safety Orders, Chapter 4, Subchapter 5
4. CCR 1523, Illumination
5. CCR 1529, Asbestos in the Construction Industry
6. CCR 1531, Construction Respiratory Protective Equipment
7. CCR 3203, Injury and Illness Prevention Program
8. CCR 3204, Access to Employee Exposure and Medical Records
9. CCR 3220, Emergency Action Plan
10. CCR 3221, Fire Prevention Plan
11. CCR 5144, Respiratory Protection Equipment Standard
12. CCR 5194, Hazard Communication Standard
13. CCR 6003, Accident Prevention Signs
14. Title 22, Division 4, Minimum Standards for Management of Hazardous and Extremely Hazardous Waste

E. California Health Services (CHS) Titles 22 and 23, California Administrative Code Disposal Requirements

CHS 25123, Section 25123

CHS 25124, Section 25124

CHS 25143, Section 25143

CHS 25163, Section 25163

CHS 66508, Section 66508

CHS 66510, Section 66510

CHS DIV 4, Division 4, Commencing with Section 66000, "Disposal"

F. California Health and Safety Code (CHSC)

1. CHSC 20
   Division 20, Commencing with Section 24200

G. California Labor Code (CLC)

1. CLC DIVISION 5, Part 1, commencing with 6300

H. California Propositions (CP)

1. CP 65, Proposition 65

I. California State Board of Equalization (CSBE)

1. CSBE ETU, Excise Tax Unit

J. California State License Board (CSLB)

1. CSLB CBPC, California Business and Professional Code Sections 7058.5 and 7058.7, "Certification"

K. Code of Federal Regulations (CFR)

1. 29 CFR 1910.134, Respiratory Protection
2. 29 CFR 1910.141, Sanitation
3. 29 CFR 1910.145, Accident Prevention Signs and Tags
4. 29 CFR 1926.21, Safety Training and Education
5. 29 CFR 1926.55, Gases, Vapors, Fumes, Dusts, and Mists
6. 29 CFR 1926.65, Hazardous Waste Operations and Emergency Response
7. 29 CFR 1926.59, Hazard Communication
8. 29CFR 1910.1000, Air Contaminants
9. 29 CFR 1926.1101, Asbestos
10. 40 CFR 61-SUBPART A, General Provisions
11. 40 CFR 61-SUBPART M, National Emission Standard for Asbestos
12. 40 CFR 260, Hazardous Waste Management Systems: General
13. 40 CFR 745, Lead; Requirements for Lead-Based Paint Activities
14. 40 CFR 763, Asbestos Containing Material in Schools

L. State and Local Regulations

1. Regulation 11, Rule 2, Bay Area Air Quality Management District

M. Underwriters Laboratories, Inc. (UL)

1. UL 586-96, 1996 Test Performance of High-Efficiency Particulate Air Filter Units

N. Asbestos and Lead Survey Report

Navarro Inn, Mendocino, California
November 23, 2009
RGA Environmental, Inc.

1.06 SUBMITTALS PRIOR TO START OF WORK

A. The reviews by the Project Representative are intended to be only for general conformance with the requirements. The Project Representative assumes no responsibility for permits, licenses, notices, materials and methods, equipment or temporary construction required to execute the work described in this Section of the Specification or in other Sections of the Specification or in other documents included in the contract documents.

B. Before commencing work involving the abatement of asbestos, submit the following for review by the Project Representative:

1. Provide a detailed asbestos abatement work plan that follows Attachment A – Asbestos Abatement Work Plan Outline.

2. Provide an asbestos site safety plan prior to project initiation. The site safety plan shall deal with, at a minimum: site safety and health hazards; fiber release incidents; control of water leakage or discharge within and/or from the work area; medical emergency; asbestos handling procedures; Contractor's internal administrative and inspection procedures; earthquakes and/or fire emergency procedures; protocol for responding to complaints or questions from interested parties; 24-hour emergency telephone numbers for company officers with authority to respond to emergencies.

3. Competent Person (as defined by Title 8 CCR 1529): Demonstrate education and specialized training with successful completion of examination of a Cal-OSHA accredited asbestos training course.

4. Workers: Demonstrate education and specialized training with successful completion of a Cal-OSHA accredited asbestos training course.

5. Submit current certificates (less than 11 months) signed by each employee and trainer that the employee has received proper training in the handling of materials that contain asbestos. Include documentation showing that the worker understands the following; health implications and risks involved (including the illnesses possible from exposure to airborne asbestos fibers), the use and limits of the respiratory equipment to be used, and the results of monitoring of airborne quantities of asbestos concerning health and respiratory equipment.

6. Proof of Respirator Fit Testing: Provide proof of respirator fit testing. Fit testing records must be less than eleven (11) months old and document testing on the type of respiratory protective equipment used for this project. Fit testing records must be signed by the Competent Person.

7. Foreman Training: Submit evidence that the foreman to be used on the job fulfills the qualifications detailed in this specification and has experience in similar jobs.

8. Medical Examinations: Submit evidence signed by a physician that each employee used on the job has received an appropriate medical examination as detailed in Title 8 CCR 1529. The submitted document must be less than eleven (11) months old.

9. Rental Equipment: When rental equipment is to be used in the abatement areas or to transport hazardous waste, the Contractor shall provide written notification regarding intended use of the rental equipment to the rental agency before use, with copies to the Environmental Consultant and the Project Representative.

10. Submit written evidence that the landfill(s) for disposal are approved for asbestos and any other hazardous materials disposal by the USEPA and state or local regulatory agency(s). Submit uniform hazardous waste manifests prepared, signed and dated by an agent of the landfill. The manifest must certify the amount of hazardous materials

delivered to the landfill. The manifest must be provided to the Project Representative within ten working days after delivery.

11. Satisfactory proof that written notification has been provided to the Mendocino County Air Quality Management District, in accordance with Title 40 CFR Part 61 Subparts A&M, National Emission Standards for Hazardous Air Pollutants, U.S. EPA.

12. Satisfactory proof that written notification has been provided to the Department of Occupational Safety and Health (DOSH) in accordance with Title 8 CCR, Chapter 3.2, Subchapter 2, Article 2.5.

13. Licenses: Submit copies of state and local licenses, evidence of Cal-OSHA registration and permits necessary to carry out the work of this contract.

14. Notification of Other Contractors: If other contractors are working at the job site, before beginning any work the Contractor must inform all other contractors in writing regarding the location, nature, and requirements of the work areas.

15. Material Safety Data Sheets/Specification Sheets: The Contractor shall submit Material Safety Data and Specification Sheets for all chemicals, encapsulants, etc. to be used for this project.

1.07 SUBMITTALS AT THE COMPLETION OF THE PROJECT

Upon completion of on-site work, Contractor shall provide a detailed project summary that will include each of the items listed below. The project Summary shall be submitted and approved by the Project Representative prior to acceptance of final pay request and shall include the following:

1. Copies of the Security and Safety Logs showing names of persons entering the workspace. The logs shall include date and time of entry and exit, supervisor's record of any accident (detailed description of accident).

2. Emergency evacuations and any other safety or health incident.

3. Waste manifests including Land Disposal Restrictions Notice and Certification.

4. Personal air sample results.

5. Pressure differential strip chart readings for each differential recording device on the site.

6. Project Summary:

   a. Abatement contractor’s name and address, certification number (CSLB), registration number (DOSH) and Tax ID number.

   b. Hazardous waste hauler certifications (DHS, DOT).

   c. Name, address and registration number of hazardous waste hauler.

   d. Laboratory performing analyses (NVLAP).

   e. Contract number and name of project.

   f. Specific inventory (including locations and approximate quantities) of the hazardous materials which were removed or handled.

   g. Number of employees working on the project.

   h. Dates of commencement and completion of on-site work.

   i. Work method employed (i.e., glove bag, mini-containment, full containment with negative air and decontamination enclosure system, etc.)

   j. Name, location, telephone number and EPA registration of waste disposal site(s) used.

1.08 CONTRACTOR MONITORING

A. The Project Representative reserves the right to perform air sampling and wipe sampling in selected areas during the course of the project. The Project Representative reserves the right to stop work within in an area if in the course of performing monitoring, the Project Representative observes instances of substantial non-conformance with the this Section or other Sections of the Specification presenting health hazards to workers, the general public or the surrounding areas. Work shall not resume until the corrective measures have been enforced. Instances of substantial non-conformance shall include, but not be limited to, the following:

1. Activities or misconduct imperiling worker's safety and health.
2. Airborne fiber concentrations as measured by PCM outside of the containment area exceeding background or 0.01f/cc whichever is greater. Airborne concentrations as measured by TEM outside of the containment area exceeding background or 70 S/mm^2, whichever is greater.
3. Loss of negative pressurization.
4. Breaches in containment resulting in potential release of asbestos to non-work areas.

B. The Project Representative may perform air sampling inside and outside the hazardous materials work area during all phases of the work. The Contractor shall cooperate fully with the Consultant and ensure the cooperation of his workers during collection of air samples and work area inspections.

C. When visual inspections or air monitoring are specified, the Contractor shall notify the Project Representative in writing 24 hours in advance of the day and time when the Contractor will be ready for such inspections or monitoring. Such requests shall be initiated by the Contractor's Competent Person or Foreman indicating that the work area has been previously inspected and is ready for inspection/testing.

D. Air monitoring generated by the Project Representative shall not be used by the Contractor to represent compliance with regulatory agency requirements for monitoring of workers exposure to airborne asbestos, nor shall any other activity on the part of the Project Representative be construed to meet the Contractor's compliance with applicable health and safety regulations.

PART 2 - **PRODUCTS**

2.01 SIGNS AND LABELS:

A Provide labeling in accordance with State and Federal EPA requirements. Provide the required signs, labels, warnings, placards or posted instructions for containers used to transport hazardous material to the landfill.

B Location of Caution Signs and Labels: Provide bilingual caution signs at all approaches to work areas in languages used by the Contractor’s employees. Locate signs at such a distance that personnel may read the sign and take the necessary protective steps required before entering the area. Provide labels and affix to all asbestos-containing materials, scrap, waste, debris, and other products contaminated with hazardous materials.

C Warning Sign Format: Vertical format conforming to Title 8 CCR 1529:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA

D Warning Sign Format: Vertical format conforming to Title 8 CCR 1529: Warning Label Format: Provide labels that comply with Title 8 CCR 1529 of sufficient size to be clearly legible, displaying the following legend:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

2.02 ENCAPSULANTS

A. Encapsulants shall be U.L. Listed, in full-scale E-119 fire test.

B. Average depth of penetration shall meet manufacturer's recommendations.

C. Dry mil thickness of bridging encapsulating systems shall be as indicated in the specific treatment instructions included in this specification, and as recommended by the manufacturer.

D. Performance Requirements: Classification - penetrating encapsulant; spray applied and brushable. Product shall be tested and listed by EPA and possess the following characteristics:

1. Flame resistance/flame spread ~25 (ASTM E162) V6.
2. Fire classification - UL Class A approved in the specific or similar assembly to its intended application.
3. Product shall be tested and rated non-toxic and non-irritating under the Federal Hazardous Substances Control Act and contain no methylene chloride.
4. Material shall be tinted sufficiently to provide a readable contrast to background color to which it is applied.

2.03 PLASTIC SHEETING:

A Use fire-retardant polyethylene (poly) film.

B Thickness – 6-mil, Minimum, NO EXCEPTIONS.

C Flame Resistance/Flame Spread Rate <25.

D Conforms to NFPA #701 and Tested in accordance with ASTM E-84.

2.04 TAPE, ADHESIVE, SEALANTS:

A. Tape, 2” or wider, shall be capable of sealing joints of adjacent sheet of polyethylene and shall attach polyethylene sheet to finished or unfinished surfaces or similar materials. Tape shall be capable of adhering under dry and wet conditions, including use of amended water. Taping to critical or sensitive surfaces shall be completed using preservation sealing tape.

B. Spray adhesive for sealing polyethylene to polyethylene shall contain no methylene chloride or methyl chloroform (1,1,1-trichloroethane) compounds.

C. Fire resistant sealants shall be compatible with concrete, metals, wood, etc. Sealant shall prevent fire, smoke, water and toxic fumes from penetrating. Sealant shall have a flame spread, smoke and fuel contribution of zero, and shall be ASTM and UL rated for 3 hours for standard method of fire test for fire stop systems.

2.05 STRIP CHART RECORDER(S):

A. Where interior work areas are required, each shall have a minimum differential pressure of 0.025 inches water gage at all times. Fluctuations below 0.025 inches of water column are unacceptable and may require temporary cessation of work until conditions are corrected.

B. The strip chart recorder will be checked a minimum of four times per day by a person familiar with the operation. Each check shall be documented on the circular chart with a time and date notation and the initials of the person performing the check. A copy of the circular chart shall be submitted daily to the Project Representative.

C. Differential air pressure systems shall be in accordance with Appendix J of EPA's "Guidance for Controlling Asbestos-Containing Materials in Buildings, EPA 560/5-85-024. The Differential pressure system shall be continuously monitored by the Contractor using a recording instrument connected to an appropriate strip chart recorder. The recording instrument shall be connected to an audible alarm that will activate at a pressure differential of -0.025 inches water gauge air pressure.

2.06 VACUUM EQUIPMENT:

A All vacuum equipment used in the work area shall use HEPA filtration systems and be of the wet-dry type.

2.07 LOCAL EXHAUST SYSTEM:

A. Where containments are required, sufficient High Efficiency Particulate Absolute (HEPA) ventilation units shall be used to maintain the negative pressure in each interior work area at 0.025 inches of water column and a minimum of four (4) air changes per hour.

B. The ventilation system shall remain in operation 24 hours a day until the work area has passed the specified clearance criteria. HEPA filtered air which is exhausted to maintain negative pressure shall be exhausted from the buildings at locations approved by the Project Representative. Exhausted air shall not be near or adjacent to other building intake vents or louvers or at entrances to buildings. Other HEPA units shall operate within the enclosure to circulate air and control fiber counts.

2.08 RESERVE EQUIPMENT:

A. Contractor shall have the following equipment on site: two reserve, functioning HEPA Filter Vacuum Cleaning Units, two reserve HEPA area filtration units for every four containments. Contractor shall also have sufficient polyethylene (poly), respirators, protective equipment, tape, tools, decontamination enclosure systems for each work area.

B. Provide authorized visitors, Project Representative, Consultants or other contractors requiring access to the work area with suitable protective clothing, headgear, eye protection, as described in this specification, whenever the visitor must enter the work area. The Contractor shall have available and maintain at all times a minimum of three (3) suits and other suitable protective equipment for this purpose. All protective equipment shall be new and for the exclusive use of visitors.

C. The Contractor shall document that each visitor has been trained and fit-tested prior to entering an abatement area.

2.09 SCAFFOLDING:

A. Scaffolding, as required to do the specified work, shall meet all applicable safety regulations and DOSH standards. A non-skid surface shall be furnished on all scaffold surfaces subject to foot traffic.

2.10 TRANSPORTATION EQUIPMENT:

A. Transportation equipment, as required, shall be lockable and suitable for loading, temporary storage, transit and unloading of contaminated waste without exposure to persons or property. Any vehicle used to transport asbestos waste shall be properly registered with all applicable controlling agencies.

2.11 WATER SUPPLY:

A. There are no active water service connections in either building. Contractor shall be responsible for providing all necessary water for abatement and decontamination purposes.

B. Employ heavy-duty abrasion-resistant hoses with a pressure rating greater than the maximum pressure of the supply equipment in each work area.

2.12 WATER HEATER:

A. The hot water supply must be adequate to allow for 15 minutes of continuous usage while maintaining a water temperature of 85 F °. At minimum provide UL rated 40-gallon electric water heater to supply hot water for the decontamination unit shower. Start from a 30-amp circuit breaker located within the decontamination unit subpanel. Provide relief valve compatible with water heater operation; pipe relief valve down to drip pan on floor with type L copper. Drip pans shall consist of a 24 inch X 24 inch X 6 inch deep pan, made of 19 gauge galvanized steel with handles. Drip pan shall be securely fastened to the water heater with bailing wire or similar material. Wiring of the water heater shall comply with NEMA, NEC and UL standards.

2.13 OTHER TOOLS AND EQUIPMENT:

A. The Contractor shall provide other suitable tools for the stripping, removal and disposal activities.

B. Prohibited Equipment: The following equipment is prohibited from use on this project unless accepted in writing by the Project Representative:

5. High or low pressure water blasting equipment for hosing of work areas.

6. Bead blasting or other uncontained abrasive blasting methods.

7. Vacuum-powered removal or collection equipment located outside the asbestos work area, such as a “Vacu-Loader”.

8. Gasoline, propane, diesel or other fuel powered equipment inside the buildings, unless previously approved in writing by the Project Representative.

9. Equipment that creates excessive noise or vibration that would affect the safety of the buildings or generate complaints from neighboring building occupants. No equipment shall exceed an A-weighted sound level of 85 dB as measured at 3 ft. from the radiating source without written permission of the Project Representative.

10. Metal wire-brushes.

11. Flammable solvents with a flash point below 140 degrees F or materials containing ethylene glycol ether, methylene chloride, ethyl chloroform (1,1,1-trichloroethane), or other hazardous substances.

12. Non-fire retardant polyethylene sheeting.

13. Polyurethane spray foam for application in fire-rated assemblies, including but not limited to penetrations into stairwells, mechanical rooms, electrical closets, rated floor-to-floor assemblies, etc.

PART 3 - **EXECUTION**

3.01 INITIAL AREA ISOLATION

A. The Project Representative reserves the right to inspect and approve all containment setups before any abatement is undertaken.

B. If a containment area is breached (failure of polyethylene seals, visible dust emission, fiber counts above background level, etc.), the Contractor shall take immediate action to control the breach and clean the area to the satisfaction of the Project Representative.

C. If sample results indicate that conditions have exceeded the baseline, as determined by the Project Representative, all work shall cease. Work shall not recommence until the condition(s) causing the increase have been corrected.

D. Shut down and verify disconnection of all electrical power, gas, sewage, water, phone lines, fire life safety lines and sprinkler systems to the work area so that there is no possibility of reactivation and electrical shock.

E. Provide all connections for temporary utilities in the work area needed throughout abatement. Temporary electrical power shall be according to OSHA and the National Electrical Code for Wet Environments.

F. Contractor shall conform to the Project Representative's lockout requirements, and secure the work area at all times. Area entrances and exits shall be secured by the Contractor throughout the abatement phase. Unauthorized visitors are strictly prohibited. Only the Contractor, and Project representatives are permitted at the job site. Contractor shall ensure that all doors, gates, windows, and potential entrances to the work areas and the designated waste location areas are secured and locked at the end of each workday.

G. Contractor shall store all materials, equipment, and supplies for the project inside the buildings or in areas designated by the Project Representative.

H. As required, establish designated limits for the abatement work area with continuous barriers. Use barrier tape (3-inch) with a pre-printed asbestos warning throughout exterior asbestos abatement activities when containments are not constructed. Provide signs around the perimeter of all the interior works areas according to EPA and Cal-OSHA.

I. Contractor shall store all materials, equipment, and supplies for the project inside the buildings or in areas designated by the Project Representative.

J. Contractor shall provide temporary sanitary services of adequate capacity to handle the maximum estimated crew size plus an additional twenty percent. Contractor shall maintain the temporary facilities throughout the duration of the project.

K. The Contractor shall be responsible for identifying all HVAC components (if applicable) that lead into or out of the work areas. All components shall be disconnected and sealed airtight for the duration of the abatement work. All openings shall be sealed with two (2) layers of 6 mil polyethylene secured with duct tape, as applicable.

L. Pre-clean the work area and fixed objects in the work area using HEPA filtered vacuums and/or wet cleaning methods. Protect fixed objects with protective barriers (as appropriate) and cover with 6 mil poly sealed with tape.

3.02 CONTAINMENT SET-UP PROCEDURES

A. All work shall be conducted within an asbestos regulated area as required by Cal-OSHA. Contractor shall seal operable windows and air intakes within 50 feet of the work area with two layers of 6-mil polyethylene sealed with tape.

B. Contractor shall construct critical barrier negative pressure containments for the removal of floor tile and associated mastic and ceramic wall tile mastic. The work area(s) shall be placed under negative pressure as outlined in this specification throughout the abatement work period.

C. To permit the inspector to view the majority of the work area, the Contractor shall provide easily accessible viewing ports from the clean space into each abatement area. Viewing ports must be a minimum of 2' x 2', clear-see-through plastic with no scratches, tape or glue marks.

D. Pressure differential recorders with strip charts are required to monitor the pressure differential in the work area. The recorders must be calibrated prior to arriving on site and shall be recalibrated monthly throughout the project. Recalibration shall be performed by qualified technicians following the procedures outlined by the manufacturers. Provide documentation of calibration before beginning work and monthly there after.

E. A two-chambered decontamination unit shall be required during the abatement work conducted in critcal barrier containments. The unit shall be located immediately outside the contained area. A pre-fabricated unit is acceptable. Chambers shall be arranged as follows: (1) a clean/change room shall be the first chamber entered from outside the work area, (2) a dirty/change room shall be the last chamber before entering the work area.

F. A two-chamber decontamination unit may be allowed during the abatement work conducted in critical barrier containments. The unit shall be located immediately outside the contained area and shall contain a wash down area. A pre-fabricated unit is acceptable.

G. Contractor shall construct an equipment decontamination enclosure system consisting of a washroom, holding area and clean room separated by airlocks.

H. A decontamination area must be established contiguous to all abatement work conducted in barrier containments. The unit shall be located immediately outside the regulated area and shall contain a wash down area.

I. Approved fire extinguishers (Class ABC, multi-purpose, dry chemical type, rated: 4A; 60BC) shall be readily available to workers (maximum travel distance of 50 feet) inside and adjacent to work area(s). Personnel and emergency exits shall be clearly indicated on the inside of the containment area. The emergency exit plan shall be approved by the Environmental Consultant prior to the set up of any work areas.

3.03 PERSONNEL PROTECTION

A. Informed Workers:

1. All workers shall be informed of the hazards of ACMs and any other hazardous materials exposure. Workers shall also be instructed in the use and fitting of respirators, protective clothing, decontamination procedures, and all other aspects associated with the abatement work.

B. Personal Hygiene Practices:

1. The Contractor shall enforce and follow good personal hygiene practices during the abatement of ACMs. These practices will include but not be limited to the following: no eating, drinking, smoking or applying cosmetics in the work area. The Contractor shall provide a clean space, separated from the work area, for these activities.

2. Workers shall remove street clothes in the clean room and put on a respirator and clean protective clothing before entering the work area. Upon exiting the work area, remove gross contamination from clothing before leaving the work area; proceed to the change room and remove clothing except respirators; proceed to the shower; clean the outside of the respirator with soap and water while showering; remove respirator and thoroughly wash. Following showering, proceed directly to the clean room and dress in street clothes. Do not wear disposable clothing outside the decontamination enclosure system.

3. If data gathered by the Project Representative in areas adjacent to the work areas shows exposure to airborne asbestos or other hazardous materials exceeding Cal-OSHA criteria, that area will become regulated and workers must wear protective clothing and approved respirators and must have a shower facility provided to them.

C. Respirators:

1. Establish a respiratory protection program as outlined by ANSI and required by Cal-OSHA. Select respirators from those approved by the National Institute for Occupational Safety and Health (NIOSH). Respirators selected must be approved by the Competent Person. Submit program for review a minimum of five (5) working days prior to the commencement of abatement activities.

2. Provide workers with approved and personally-issued respirators with replaceable filters. Provide sufficient quantity of filters approved by NIOSH for use in asbestos environments so that workers can change filters as required by the manufacturer.

3. At a minimum, provide each employee with the following respiratory protection for each work phase:

a. Pre-cleaning, containment set-up, and containment removal work: NIOSH-approved, half-face respirators with HEPA cartridges.

b. Asbestos abatement of floor tile vinyl and associated mastics, ceramic tile adhesive, exterior roofing materials, asbestos cement flues: half-face respirators with HEPA cartridges and organic vapor cartridges (as necessary).

4. At all times, respiratory protection selected shall, at a minimum, meet the requirements of the Table 1 below.

Table 1 – Respiratory Protection

Airborne Concentration of Asbestos	Required Respirator
Not in excess of 1.0 f/cc (10 X PEL)	Half-mask air purifying respirator other than a disposable respirator, equipped with high efficiency filters
Not in excess of 5.0 f/cc (50 X PEL)	Full facepiece air purifying respirator equipped with high efficiency filters
Not in excess of 10 f/cc (100 X PEL)	Any powered air purifying respirator equipped with high efficiency filters or any supplied air respirator operated in continuous flow mode
Not in excess of 100 f/cc (1,000 X PEL)	Full facepiece supplied air respirator operated in pressure demand mode
Greater than 100 f/cc or unknown concentration	Full facepiece supplied air respirator operated in pressure demand mode, equipped with an auxiliary positive pressure self-contained breathing apparatus

5. Provide Type C continuous flow or pressure-demand, supplied-air respirators if the average airborne concentration of asbestos exceeds 100 times the permissible exposure limit; i.e., 8-hour time-weighted average (TWA) and ceiling limit. Use the respirators presented in Title 8 CCR 1529 that afford adequate protection at such upper concentrations of airborne asbestos. When Type C Respirators are required provide the following:

a. The air supply system shall provide Grade D breathing air that conforms to OSHA and ANSI Commodity Specification for Air.

b. Compressed Air System for Type C Respirators shall be high pressure, with a compressor capable of satisfying the respirator manufacturer's recommendations. The compressed air system shall have compressor failure alarm, high temperature alarm, and a carbon monoxide alarm. It also shall have suitable in-line air purifying absorbent beds and filters to assure Grade D breathing air.

c. Use of Belt: Type C respirators shall be worn with belt to minimize possibility of dislodging face mask when hose is snagged in the work area.

D. Protective Clothing:

1. Provide personnel exposed to asbestos fibers with fire retardant disposable protective whole body clothing, head coverings, gloves, and foot coverings. Provide appropriate gloves to protect workers hands from exposure to hazardous materials. Make sleeves secure at the wrists and make foot coverings secure at the ankles with tape. Ensure that all personnel entering and leaving the work area follow this procedure. Suits shall be of adequate size to accommodate the largest employee. Foot covers may be part of the coveralls. Non-disposable footwear shall be left in the work area until it is decontaminated or disposed of at the completion of the job.

2. Protective clothing will be worn inside the work area after the area passes pre-abatement inspection and shall remain in use until the area passes final clearance inspection.

E. Eye Protection: Provide safety glasses or goggles to personnel removing or handling asbestos-containing materials and waste.

F. Emergency Precautions and Procedures:

1. Establish emergency and fire exits from the work area. Display necessary signage at exits and paths to exits with representative visual aids. A diagram of all emergency and fire exits shall be posted in a conspicuous area proximate to the entrance to each work area.

2. The Contractor’s supervisor/competent person shall be trained and certified in first aid and CPR, and be prepared to administer first aid to injured personnel after decontamination. Seriously injured personnel shall be treated immediately or evacuated without delay for decontamination. When an injury occurs, the Contractor shall implement fiber reduction techniques until the injured person has been removed from the work area.

3. In the event of a loss of negative pressure to the work area, work shall stop immediately and entrances to the work area sealed tight. The Contractor shall also institute fiber reduction controls until negative pressure is re-established to acceptable levels.

3.04 ASBESTOS REMOVAL (GROSS REMOVAL TECHNIQUE)

A. The Contractor shall abate all asbestos containing materials identified in this specification. Removal and attachment of components to products or surfaces that contain asbestos is a regulated task and must be performed by trained workers.

B. The Contractor shall continuously apply wetting agent throughout the removal process. The wetting agent shall be applied with a low-pressure fine spray to minimize fiber releases. The materials shall be thoroughly saturated so that there is no detectable fiber release. All ACM shall be immediately packaged in leak-tight containers following removal.

C. Minimize removal activities of ACMs that generate airborne particulate. To the extent feasible, score or cut-out ACMs in sections, wetting along the scoring line continually, and misting the air with an airless sprayer to knock down suspended particulate. After completion of removal work, surfaces from which asbestos has been removed shall be wire brushed and/or wet cleaned to remove all visible material and residue.

D. Wet clean the exterior surfaces of waste containers in the equipment decontamination enclosure system prior to removal from the work area. Ensure that workers do enter from uncontaminated

areas into contaminated areas in the equipment decontamination enclosure system. The Contractor shall transport asbestos-containing waste bags to the waste debris box at designated hours approved by the Project Representative. RACM shall be packaged in a minimum of two (2) 6-mil polyethylene bags. Bags shall be properly labeled for RACM disposal including site-specific generator labels. Non-friable waste shall be packaged in a leaktight container and properly labeled while stored on-site.

E. Asbestos-containing debris and contaminated water shall be cleaned from the work area at the end of each work shift. The Contractor shall clean the work area using wet methods and HEPA vacuum equipment.

3.05 REGULATED AREA MONITORING

A. Prior to each work shift and continuously throughout the project, each containment and decontamination enclosure system shall be inspected and repaired as needed.

B. Ambient asbestos fiber levels outside each work area shall not exceed 0.01 f/cc (PCM) or 70 s/mm^2 (TEM) or background whichever is greater. If the asbestos fiber concentrations outside work areas exceed those levels shown above, then abatement must stop and operations be reviewed and modified until the fiber count can be reduced to within the acceptable limits.

3.06 AIR MONITORING

A. The purpose of any air monitoring that may be conducted by the Project Representative will be to detect possible release of fibers or dusts (asbestos or lead) emanating from the work areas.

B. All PCM air sample analysis shall comply with NIOSH Method 7400. All TEM analysis shall be consistent with modified-AHERA protocols.

C. The Project Representative reserves the right to perform and / or observe final clearance inspection and sampling.

D. The method of analysis for pre-abatement and clearance air samples shall be via Phase Contrast Microscopy (PCM). The method of analysis for in-progress asbestos air samples shall be PCM and TEM at the option of the Project Representative.

E. The Contractor shall be responsible for all personal air sampling. During the performance of any work in the contaminated work area, sufficient personnel breathing zone samples shall be taken to constitute representative sampling. These samples shall be taken each shift and for each distinct crew operation, and shall be used to verify adequacy of fiber control and respiratory protection. Personal breathing zone air sampling shall be in accordance with the Cal-OSHA asbestos standard.

3.07 CLEARANCE INSPECTIONS

A. The Project Representative reserves the right to conduct visual inspections. Contractor shall notify the Project Representative's representative when the decontamination process in each containment area is complete. Evidence of debris will require additional clean up by the Contractor. Contractor shall be responsible for re-cleaning all areas found to be deficient. Contractor shall provide a minimium of twenty-four (24) hours notice prior to post abatement inspections. Note: The Project Represetnative shall determine if visual inspections will be performed to verify abatement work.

B. If the Project Representative determines that the work area is sufficiently clean, the Contractor may proceed. If the Project Representative determines that certain areas require additional cleaning, the Contractor shall re-clean the work area and request a second inspection of the recleaned area. All costs incurred by the Project Representative for inspections required after the second inspection will be charged to the Contractor.

C. Once the initial visual is passed, the Contractor shall remove all but the containment critical barriers.

D. Following the visual inspection, the Contractor shall provide a coating of non-diluted encapsulant in the work area. The Contractor shall allow the encapsulant to dry for the period specified by the manufacturer.

E. Asbestos Clearance Testing: Following encapsulation and drying time, the Contractor shall conduct air clearance sampling. Clearance air sampling shall not take place until all encapsulant is dry. The Project Representative reserves the right to approve the initiation of clearance sampling.

3.08 ASBESTOS CLEARANCE CRITERIA:

A. The clearance level per containment shall be less than 0.01 fibers per cubic centimeter via phase contrast microscopy (PCM) or less than 70 structures per square millimeter via transmission electron microscopy (TEM). Aggressive air sampling shall be used for clearance purposes. Multiple samples shall be collected in large containment areas.

B. If air samples do not pass the required clearance criteria, the area shall be recleaned and new samples shall be collected by the Project Representative. The Contractor shall be responsible for all costs associated with re-sampling and re-analyses. This amount will be deducted by the Project Representative from the Contractor's final payment.

C. The Project Representative shall notify the Contractor in writing of acceptable asbestos fiber concentrations. The Contractor shall then remove all the remaining barriers in the work area.

3.09 ASBESTOS DISPOSAL

A. It is the responsibility of the Contractor to determine current waste handling, labeling, transportation and disposal regulations for the work site and for each waste disposal landfill. The Contractor must comply fully with these Specifications, local, state, and federal regulations and provide documentation of the same.

B. Ensure that polyethylene bags are sealed air-tight. All bags shall be wet cleaned prior to removing them from the equipment decontamination enclosure system.

C. Ensure all disposal containers are properly labeled according to 8 CCR 1529, 5194 (HAZCOM), 49 CFR 171-179 (USDOT), 40 CFR 61 Subpart M (NESHAP), and any local regulations and state regulations as required by this specification.

D. Filter all wastewater to the technically feasible limit, but not more than five (5) microns before disposal. Comply with all current local, state and federal codes relating to waste water release.

E. Asbestos-containing waste that is properly labeled and double-bagged, may be temporarily stored in areas approved by the Project representative. Areas must be made secure before storing the waste. Waste is not to remain in temporary storage area for longer than four (4) days before final load-out of materials.

F. All asbestos waste shall be double-wrapped prior to transport from the site.

G. All vehicles used to transport hazardous waste must be registered with the Department of Toxic Substances Control and display the proper registration and expiration stickers.

H. Trucks must have an enclosed cargo area with a storage compartment that is fully lined with a minimum of one (1) layer of 6-mil polyethylene on the walls and two (2) layers on the floor.

I. Contractor shall not throw bags into the truck in a way that may cause the bags to burst open.

J. Contractor shall provide at minimum one (1) day advance notification to the Project Representative when signatures are required on manifest(s). The Contractor shall ensure that the Hazardous Waste Manifest is correctly filled out. The Contractor shall give the appropriate copies to the Project Representative and shall also instruct the Project Representative in writing that they must send the appropriate copy to the Department of Toxic Substances Control.

K. If a debris box is used, the Contractor shall make all necessary arrangement with the Project Representative including obtaining all appropriate permits.

L. Contractor is responsible for all coordination with the waste disposal site and with the waste hauling company.

M. Debris box for hazardous waste shall be fully lined with a double layer of polyethylene sheeting and must be locked at all times when unattended.

N. Debris box shall be constructed with minimum 20-gauge steel with no windows or openings other than the door. The door of the container shall have a secure cover on the locking device with access to the lock only at the key-hole. Once the debris box is filled and the manifest is signed, Contractor must transport the debris box off the job site.

O. Disposal shall be in a landfill that meets EPA requirements. Do not throw bags into landfills in a way that may cause the bags to burst open.

END OF SECTION

ATTACHMENT A
ASBESTOS ABATEMENT WORK PLAN OUTLINE

In accordance with the contract documents, the Contractor is required to prepare a written, site-specific Asbestos Abatement Work Plan, and submit to the Project Representative for approval prior to start of work. This plan is required for the contractor to meet Cal-OSHA requirements as well as the contract documents, and shall describe work procedures and control methods that will protect the State's facilities and the environment.

I. Location of Work:
The work to be completed under this work plan will be completed at:

NAVARRO INN AND MOTEL / NAVARRO BY THE SEA
NAVARRO RIVER REDWOODS STATE PARK
MENDOCINO DISTRICT
NAVARRO BEACH ROAD
NAVARRO, CALIFORNIA 95463

(Location within building)

II. Description of Work:
Describe the anticipated work scope

III. Schedule:

Phase/Task	Anticipated Date(s)
Mobilization	_____
Set-up of work area(s), containments	_____
Abatement	_____
Final Cleaning	_____
Visual Inspection	_____
Final Clearance (visual and air sampling)	_____
Teardown	_____
Demobilization	_____

IV. Equipment and Materials
List all equipment and materials to be used, such as the following:

HEPA Vacuums	Negative air filtration units
Scrapers	Manometers
Power saws	Shower facilities
Pry bars	Airless sprayers/compressors
Cutting shears	Cleaning detergents
Other hand tools	Solvents (must be approved by Project Representative)
Encapsulants/sealants	Roller/brushes
Gloves	Disposable coveralls
Respiratory protection	Eye & foot protection

V. Crew
List all workers and supervisors with emergency contact names and cell numbers.

Clearly identify the supervisor and competent person who have authority for all safety and health.

VI. Control Measures and Work Practices

Describe in a narrative format specific work procedures, exposure/ contamination controls, and engineering controls. This description should include, but not be limited to, the following:

OSHA Class I, II, III and IV work	Wet methods
Negative pressure enclosure	Glovebag removal
Respiratory protection	HEPA vacuums
Mini-containments	Solvent removal of mastic
List other procedures	

VII. Respiratory Protection and Protective Clothing/Personal Protective Equipment

List all respiratory protection including types and manufacturers which are anticipated for this project. Identify the phases of the project for which respirators will be required or likely to be required. List all personal protective equipment anticipated to be used on the project.

VIII. Decontamination/Hygiene Facilities

Identify the types and locations of decontamination or hygiene facilities to be used on this project. Specify use of disposable towels, soap, hot and cold water, and other supplies. Specify the required use of the facilities, including use of the facilities prior to eating, drinking, smoking and before leaving the project site. Describe handling or treatment of asbestos-contaminated solid waste and wastewater.

IX. Air Monitoring Data

Identify general worker air monitoring protocols to be followed on this project, including worker category classifications, frequency of monitoring, anticipated laboratory to be used for analysis, pump calibration techniques, etc. Identify the competent person responsible for conducting personal air monitoring.

X. Containment Diagram

Include a diagram (hand written is acceptable) of the containment(s) showing the containment perimeter in relation to the surrounding areas, locations of negative air machines and exhaust locations, direction of airflow, and decontamination areas.

XI. Waste

Describe how all waste on this project will be packaged, labeled, stored, transported, manifested and disposed

XII. Preparation of Asbestos Abatement Work Plan

Date Prepared and Prepared By (signature, name and title)

SECTION 02081

LEAD-RELATED CONSTRUCTION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. The General Conditions and Division I General Requirements shall be included in and made part of this Section.

B. Examine all other Sections of the Specifications for requirements therein affecting the work of this Section of the Specifications.

1.02 COMPLIANCE AND INTENT

A. The Contractor is responsible for repair, to the satisfaction of the Project Representative, of surfaces not scheduled for demolition that become damaged as a result of the work. All unscheduled repair work shall be at no increase to contract price.

B. This project deals with construction activities that will impact lead-containing products and coatings. It is necessary for the Contractor to coordinate all lead-related construction work with the specifications. During all work, provide monitoring and worker protective equipment in accord with the California Occupational Safety and Health Administration (Cal-OSHA) and as required by this specification. Where there is conflict, the most stringent requirement shall apply.

C. The work covered by this specification includes the handling, removal, and proper disposal of lead-containing materials. All lead-containing materials requiring removal shall be disposed of according to all federal, state and local regulations. The Contractor shall determine if additional hazardous materials will be impacted by the scope of the abatement work. The cleanup of any incidental lead found in areas undergoing lead-related construction work that become separated from the buildings during the dismantling process are part of the work.

D. The workers shall have received lead training in accordance with Cal-OSHA Title 8 CCR 1532.1. Workers that perform removal of damaged paint on the interior or exterior of the buildings shall be additionally trained in accordance with the California Department of Health Services Lead-Related Construction training requirements.

E. Furnish all labor, materials, facilities, equipment, services, employee training, medical monitoring, permits and agreements necessary to perform the work required for lead-related construction in accordance with this specification.

F. Comply with all federal, state, and local regulations pertaining to lead-related construction, storage, transportation and disposal; employee heath and safety; Contractor certifications; and all licenses, permits, and training.

G. Work on the premises shall be confined to areas designated in the Contract Documents. Materials and equipment shall be stored within areas designated by the Project Representative. Should additional space be required, the Contractor shall request permission for additional space and shall adequately safeguard occupants from associated health and safety hazards.

H. Perform all work specified herein with competent persons trained, knowledgeable and qualified in state-of-the-art techniques relating to lead-related construction, handling, and the subsequent cleaning of contaminated areas.

I. During lead-related construction activities, the Contractor shall protect against contamination of soil, water, plant life, and adjacent building areas, and shall ensure that there is no airborne release of dusts. The Project Representative may collect air and/or wipe samples in the buildings and in adjacent areas to evaluate the Contractor’s performance. Evidence of settled dust or airborne levels

of contaminants above background will require the implementation of additional controls at no increase to contract price.

J. It is the Contractor's responsibility to determine the quantities of lead-related construction prior to commencement of the project. The Contractor shall conduct a site visit to determine exact locations of materials that will be impacted. This section provides appropriate protocols for handling and disposal of lead-containing materials. All lead-containing materials shall be handled according to the procedures outlined in this specification. If additional suspect lead-containing materials are discovered during the course of the work, immediately notify the Project Representative.

K. The work of this section shall be performed by an entity that holds a current, valid contractors license issued by the California State Contractor's Licensing Board (SCLB). Display a copy of CSLB license in a visible place at the job-site.

L. Lead-containing materials removed during the work shall be disposed of in an approved manner complying with all applicable federal, state, and local regulations. Appropriate waste manifests or letters of salvage shall be furnished to the Project Representative thereby limiting the State's liability for improperly salvaged items. Materials are conveyed to the Contractor "as is," without any warranty, expressed or implied, including but not limited to, any warranty to marketability or fitness for a particular purpose, or any purpose. The Project Representative shall approve the waste disposal site(s) prior to disposal.

M. Perform appropriate Total Threshold Limit Concentration (TTLC), Soluble Threshold Limit Concentration (STLC) and Toxicity Characteristic Leaching Procedure (TCLP) testing for lead containing materials including (paint and painted building debris) as required by this specification, by the regulations, and the selected landfill(s). All testing shall be done in the presence of the Project Representative. Chain-of-custody forms shall be provided to the Project Representative within one (1) day following sample delivery to the laboratory.

1.03 DEFINITIONS

A. The following definitions pertain to work of this section.

1. Action Level: Employee exposure without regard to the use of respirators, to an airborne concentration of 30 micrograms per cubic meter or air (30 $\mu g/m^3$) calculated as an 8-hour time-weighted average (TWA).

2. Airlock: A system for permitting ingress and egress with minimum air movement between a contaminated area and uncontaminated areas. Typically consists of two curtained or gasketed doorways separated by a distance of at least six feet such that one passes through one doorway into the airlock, allowing the doorway to close off the opening. This airlock must be maintained in uncontaminated condition at all times.

3. Area Monitoring: Sampling of airborne lead concentrations within the work area and outside the work area. Sampling shall represent airborne concentrations that may reach the breathing zone.

4. Authorized Visitor: Designated employees or consultants for the Project Representative and representatives of any federal, state or local regulatory or other agency having jurisdiction over the project.

5. Baseline: Refers to the background levels of lead monitored before work activities.

6. Breathing Zone: A hemisphere forward of the shoulders and head with a radius of approximately six to nine inches.

7. Breach: A rift or gap in the critical or secondary barriers that allow egress of air from the containment to outside, or vice versa.

8. Cal-OSHA: State of California, Occupational Safety & Health Administration.

9. Chain-of-Custody: A legal concept involving documentation of the physical possession of a sample(s) from the moment it is collected, transported, analyzed, and ultimately stored in an archive.

10. Change Rooms: Refers to the two chambers in the decontamination area used to change into and out of protective clothing.

11. Certified Industrial Hygienist (CIH): A person certified by the American Board of Industrial Hygiene.

12. Clean Room: An uncontaminated area or room that is part of the worker decontamination enclosure system, with provisions for storage of workers' street clothes and protective equipment.

13. Competent Person: One who is capable of identifying existing and predictable hazards and who has the authority to take prompt corrective measures to eliminate them.

14. Critical Barrier: A unit of temporary construction that provides the only separation between the work area and an adjacent potential occupied space. This includes the decontamination unit, perimeter walls, ceilings, penetrations and any temporary critical barriers between the work area and the uncontaminated environment.

15. CSLB: Contractors State Licensing Board

16. Decontamination Area: Area which is constructed to provide the means for workers to store clothing, equipment and other articles, and to properly remove contamination upon concluding work activities that result in exposure to these hazardous materials.

17. DHS: State of California Department of Health Services.

18. DOP: Dioctylphthalate, the challenge aerosol used to perform on-site leak testing of HEPA filtration equipment.

19. DOT: Federal Department of Transportation.

20. DOSH: Division of Occupational Safety & Health (see also Cal-OSHA)

21. Decontamination Unit: Refers to system of airlocks used to decontaminate personnel, waste bags, equipment, etc. when exiting the work area. A decontamination unit shall be set up for each containment area.

22. Demolition: The wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.

23. Equipment Decontamination Enclosure System: A decontamination enclosure system for materials and equipment, typically in a designated area of the work area, and including a washroom, a holding area, and an uncontaminated area.

24. Equipment Room: A contaminated area or room that is part of the worker decontamination enclosure system, with provisions for storage of contaminated clothing and equipment. The equipment room shall be kept clean from lead-containing debris at all times.

25. Filter: A media component used in respirators to remove solid or liquid particles from the inspired air.

26. Fixed Object: A unit of equipment or furniture in the work area that cannot be removed from the work area.

27. HEPA: High Efficiency Particulate Air filter capable of filtering out airborne particulate 0.3 microns or greater in diameter at 99.97 percent efficiency.

28. Lead: Toxic metallic element of atomic number 82, or any other materials, substances or compounds that may contain lead. Note for metal painted surfaces lead is often

found in combination with chromates. For the purposes of this specification, lead also refers to lead-chromate paints.

29. Lead Hazardous Waste: Paint, sludge, debris or cleaning materials are to be treated as a hazardous waste if laboratory results indicate a lead (Pb) concentration of 5 milligrams per liter (mg/l) or greater using the EPA approved Toxicity Characteristic Leaching Procedure (TCLP) test. The waste will also be classified as hazardous waste if the Total Threshold Limit Concentration (TTLC) of measured lead is greater than 350 mg/kg or if the Soluble Threshold Limit Concentration (STLC) of measured lead is greater than or equal to 5 mg/l.

30. Manifest: The document authorized by both Federal and State authorities for tracking the movement of hazardous wastes.

31. Movable Object: A unit of equipment or furniture in the work area that can be removed from the work area (e.g., smoke detectors, lights, etc.)

32. Negative Pressure Respirator: A respirator in which the air pressure inside the respiratory inlet covering is positive during exhalation in relation to the air pressure of the outside atmosphere, and negative during inhalation in relation to the air pressure of the outside atmosphere.

33. Negative Pressure: Air pressure lower than surrounding areas, generally caused by exhausting air from a sealed space (work area).

34. NIOSH: National Institute for Occupational Safety and Health: Sets test standards, analytical methods, and certifies performance of various respirator designs (research institute within Federal OSHA).

35. NIST: National Institute of Standards and Technology: Administers the NVLAP Program.

36. Permissible Exposure Limits (PEL): An eight-hour time weighted average concentration of 50 $\mu g/m^3$.

37. Personal Monitoring: Sampling for lead concentrations within the breathing zone of an employee.

38. Powered Air Purifying Respirator (PAPR): A full facepiece respirator that has the breathing air powered to the wearer after it has been purified through a filter.

39. Protection Factor: The ratio of the ambient concentration of an airborne substance to the concentration of the substance inside the respirator at the breathing zone of the wearer. The protection factor is a measure of the degree of protection provided by a respirator to the wearer.

40. Remodel: Replacement or improvement of an existing building or portion thereof where exposure to lead may result. Remodel includes, but is not limited to, installation of materials, demolition, cutting, patching, and removal of building materials.

41. Respirator: A device designed to protect the wearer from the inhalation of harmful atmospheres.

42. Shower Room: A room between the clean room and the equipment room in the work decontamination enclosure system. This room contains hot and cold or warm running water and soap suitably arranged for complete showering during decontamination. The shower room comprises an airlock between contaminated and clean areas.

43. Soluble Threshold Limit Concentration (STLC): A material is considered as hazardous waste if laboratory test results indicate Soluble Threshold Limit Concentration of measured lead are greater than or equal to 5 milligrams per liter (mg/l).

44. Supervisor: An individual who typically fulfills the duties of “supervisor” as defined by Title 8 CCR 1532.1. This individual must supply documentation lead training in

accordance with Cal-OSHA requirements or DHS requirements, as applicable. The supervisor must be on-site during all lead-related construction work.

45. Toxicity Characteristic Leaching Procedure (TCLP): Test developed by U.S. Environmental Protection Agency (USEPA) to simulate landfill conditions and the potential for a waste to leach hazardous materials (40 CFR 261 - Appendix 2).

46. Total Threshold Limit Concentration (TTLC): A material is considered as hazardous waste if laboratory test results indicate Total Threshold Limit Concentration of measured lead are greater than or equal to 350 milligrams per kilogram (mg/kg).

47. Visible Emissions: Any emission containing particulate material that is visually detectable without the aid of instruments. This does not include condensed uncombined water vapor.

48. Visual Inspection: A visual inspection by Environmental Consultant, of the work area under adequate lighting to ensure that the work area is free of visible debris and dust.

49. Washroom: A room between the work area and the holding area in the equipment decontamination enclosure system equipped with water for decontamination of equipment and sealed waste containers. The washroom or shower room comprises one airlock.

50. Water Filtration: Refers to water filtration to as small a particulate size as technically feasible, but not more than 5 microns.

51. Wet Cleaning: The process of eliminating lead contamination from building surfaces and objects by using cloths, mops, HEPA vacuuming, or other cleaning utensils dampened with amended water and afterward thoroughly decontaminated or disposed of as lead contaminated waste.

52. Work Area: The area where lead-related construction work is performed and that is defined or isolated to prevent the spread of lead dust or debris, and entry by unauthorized personnel. Work area is a regulated area as defined by Title 8 CCR 1532.1.

53. Zinc Protoporphyrin (ZPP) Test: Biological test for lead-exposure that measures the amount of zinc protoporphyrin in blood.

1.04 SCOPE OF WORK

A. It is assumed that all interior and exterior painted surfaces unless otherwise noted, contain detectable concentrations of lead. The lead-related construction work includes, but is not limited to, any work activity which may result in an exposure to lead.

B. Contractor shall remove all damaged (loose and peeling) paint from the buildings' substrate prior to renovation (Navarro Inn – two-story) and demolition (Motel one-story) of building finishes/materials. Area of damaged paint removal shall be stabilized with a suitable primer/paint to reduce the potential for additional peeling prior. Estimated damaged paint on the interiors and exteriors of the Navarro Inn is 5,000 – 6,000 square feet. Estimated damaged varnish on the exterior doors of the Motel structure is approximately 100 square feet.

C. Contractror shall remove all lead-containing and assumed resilient sheet flooring (e.g. linoleum) within the Navarro Inn located including: 1) 2nd floor hallway - 300 square feet of brown vinyl sheet flooring and 2) Room 100 and adjacent restroom - 500 square feet of red linoleum.

D. Contractor shall remove all lead-containing 4" white ceramic tiles (e.g. sink back-splashes and shower wainscot) throughout the Motel structure (note adhesives also contain asbestos). Ceramic tile estimated at 800 square feet.

E. The Contractor is responsible for proper handling, personnel monitoring, personnel protection, and disposal of lead painted construction debris. It is the Contractor's responsibility to determine the required testing protocols for lead-containing materials prior to disposal.

F. Contractor shall conduct personal monitoring and provide workers with appropriate personal protective equipment if necessary. All work shall be conducted in a manner that does not release lead dust to the surrounding areas.

G. The Contractor is responsible for conformance with all applicable regulations, including, but not limited to, CAL/OSHA Worker Protection, CAL/EPA Environmental Protection requirements, the Department of Health Services (DHS).

1.05 REFERENCES

A. The publications listed below form a part of this specification by reference. The publications are referred to in the text by basic designation only. If there is a conflict between any of the listed regulations or standards, then the most stringent or restrictive shall apply.

B. American National Standards Institute (ANSI) and American Society for Testing and Materials (ASTM)

1. ANSI Z9.2, 1979 (R 1991), Fundamentals Governing the Design and Operation of Local Exhaust Systems
2. ANSI Z87.1, 2003, Occupational and Educational Eye and Face Protection
3. ANSI Z88.2 1992, Respiratory Protection
4. ANSI Z89.1, 1986, Requirements for Protective Headgear for Industrial Workers
5. ANSI Z41, 1999, Personal Protection – Protective Footwear
6. ANSI Z88.6, 1984, Respiratory Protection – Respiratory Use Physical Qualifications for Personnel
7. ASTM C 732, 1982 (R 1987) Aging Effects of Artificial Weathering on Latex Sealants
8. ASTM D 522, 1993 (Rev. A) Mandrel Bend Test of Attached Organic Coatings
9. ASTM D 1331, Solutions of Surface-Active Agents
10. ASTM D 2794, 1993 Resistance of Coatings to the Effects of Rapid Deformation (Impact)
11. ASTM E 84, 1991 (Rev. A) Surface Burning Characteristics of Building Materials
12. ASTM E 96, 1994 Water Vapor Transmission of Materials
13. ASTM E 119, 1988 Fire Tests of Building Construction and Materials
14. ASTM E 736, 1992 Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members

C. California Assembly Bills (CAB)

1. CAB 040, Yearly Registration of Contractors

D. California Code of Regulations (CCR)

1. CCR ESO, Electrical Safety Orders, Chapter 4, Subchapter 5
2. CCR 1523, Illumination
3. CCR 1532.1, Lead in the Construction Industry
4. CCR 1531, Construction Respiratory Protective Equipment
5. CCR 3203, Injury and Illness Prevention Program

6. CCR 3204, Access to Employee Exposure and Medical Records
7. CCR 3220, Emergency Action Plan
8. CCR 3221, Fire Prevention Plan
9. CCR 5144, Respiratory Protection Equipment Standard
10. CCR 5194, Hazard Communication Standard
11. CCR 6003, Accident Prevention Signs
12. Title 22, Division 4, Minimum Standards for Management of Hazardous and Extremely Hazardous Waste

E. California Health Services (CHS) Titles 22 and 23, California Administrative Code Disposal Requirements
1. CHS 25123, Section 25123
2. CHS 25124, Section 25124
3. CHS 25143, Section 25143
4. CHS 25163, Section 25163
5. CHS 66508, Section 66508
6. CHS 66510, Section 66510
7. CHS DIV 4, Division 4, Commencing with Section 66000, "Disposal"

F. California Health and Safety Code (CHSC)
1. CHSC 20
Division 20, Commencing with Section 24200

G. California Labor Code (CLC)
1. CLC DIVISION 5, Part 1, commencing with 6300

H. California Propositions (CP)
1. CP 65, Proposition 65

I. California State Board of Equalization (CSBE)
1. CSBE ETU, Excise Tax Unit

J. California State License Board (CSLB)
1. CSLB CBPC, California Business and Professional Code Sections 7058.5 and 7058.7, "Certification"

K. Code of Federal Regulations (CFR)
1. 29 CFR 1910.134, Respiratory Protection
2. 29 CFR 1910.141, Sanitation
3. 29 CFR 1910.145, Accident Prevention Signs and Tags
4. 29 CFR 1926.21, Safety Training and Education
5. 29 CFR 1926.55, Gases, Vapors, Fumes, Dusts, and Mists
6. 29 CFR 1926.65, Hazardous Waste Operations and Emergency Response
7. 29 CFR 1926.59, Hazard Communication
8. 29CFR 1910.1000, Air Contaminants

9. 29 CFR 1926.62, Lead
10. 40 CFR 260, Hazardous Waste Management Systems: General
11. 40 CFR 745, Lead; Requirements for Lead-Based Paint Activities

L. U.S. Department of Housing and Urban Development (HUD)
1. Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing

M. Underwriters Laboratories, Inc. (UL)
1. UL 586-96, 1996 Test Performance of High-Efficiency Particulate Air Filter Units

N. Asbestos and Lead Survey Report
Navarro Inn, Mendocino, California
November 23, 2009
RGA Environmental, Inc.

1.06 SUBMITTALS PRIOR TO START OF WORK

A. The reviews by the Project Representative are intended to be only for general conformance with the requirements. The Project Representative assumes no responsibility for permits, licenses, notices, materials and methods, equipment or temporary construction required to execute the work described in this Section of the Specification or in other Sections of the Specification or in other documents included in the contract documents.

B. Before commencing lead-related construction work, submit the following for review by the Project Representative:

1. Provide a detailed lead-related construction work plan that follows Attachment A – Lead Work Plan Outline.
2. Provide a lead site safety plan prior to project initiation. The site safety plan shall deal with, at a minimum: site safety and health hazards; contaminant release incidents; control of water leakage or discharge within and/or from the work area; medical emergency; Contractor's internal administrative and inspection procedures; earthquakes and/or fire emergency procedures; protocol for responding to complaints or questions from interested parties; 24-hour emergency telephone numbers for company officers with authority to respond to emergencies.
3. Provide a Lead Compliance Plan as required by Title 8 CCR 1532.1.
4. Supervisor (as defined by Title 8 CCR 1532.1): Demonstrate education and specialized training with successful completion of DHS examination.
5. Workers: Demonstrate education and specialized lead training in accordance with Cal-OSHA Title 8 CCR 1532.1 and Title 17 CCR, Division 1 Chapter 8 requirements.
6. Submit current certificates (less than 11 months) signed by each employee and trainer that the employee has received proper training in the handling of materials that contain lead. Include documentation showing that the worker understands the following; health implications and risks involved in the use and limits of the respiratory equipment to be used, and the results of monitoring of airborne quantities of lead concerning health and respiratory equipment
7. Proof of Respirator Fit Testing: Provide proof of respirator fit testing. Fit testing records must be less than eleven (11) months old and document testing on the type of respiratory protective equipment used for this project. Fit testing records must be signed by the Competent Person.

8. Foreman Training: Submit evidence that the foreman to be used on the job fulfills the qualifications detailed in this specification and has experience in similar jobs.

9. Medical Examinations: Submit evidence signed by a physician that each employee used on the job has received an appropriate medical examination as detailed in Title 8 CCR 1532.1. The submitted document must be less than eleven (11) months old.

10. Rental Equipment: When rental equipment is to be used in the work areas or to transport lead waste, the Contractor shall provide written notification regarding intended use of the rental equipment to the rental agency before use, with copies to the Project Representative.

11. Certificates of Compliance: Submit manufacturer's certification that vacuums, ventilation equipment, and other equipment required to contain lead dust conform to ANSI Z9.2.

12. Submit written evidence that the landfill(s) for disposal are approved for lead and any other hazardous materials used by the USEPA and state or local regulatory agency(s). Submit uniform hazardous waste manifests prepared, signed and dated by an agent of the landfill. The manifest must certify the amount of hazardous materials delivered to the landfill. The manifest must be provided to the Project Representative within ten working days after delivery.

13. Satisfactory proof that written notification has been provided to Cal-OSHA.

14. Licenses: Submit copies of state and local licenses and permits necessary to carry out the work of this contract.

15. Notification of Other Contractors: If other contractors are working at the job site, before beginning any work the Contractor must inform all other contractors in writing regarding the location, nature, and requirements of the work areas.

16. Material Safety Data Sheets/Specification Sheets: The Contractor shall submit Material Safety Data and Specification Sheets for all chemicals, encapsulants, etc. to be used for this project.

1.07 SUBMITTALS AT THE COMPLETION OF THE PROJECT

A. Upon completion of on-site work, Contractor shall provide a detailed project summary that will include each of the items listed below. The project Summary shall be submitted and approved by the Project Representative prior to acceptance of final pay request and shall include the following:

1. Copies of the Security and Safety Logs showing names of persons entering the workspace. The logs shall include date and time of entry and exit, supervisor's record of any accident (detailed description of accident).

2. Emergency evacuations and any other safety or health incident.

3. Waste manifests including Land Disposal Restrictions Notice and Certification.

4. Personal air sample results.

5. Pressure differential strip chart readings for each differential recording device on the site.

6. Project Summary:

a. Contractor’s name and address, certification number (CSLB) and Tax ID number.

b. Hazardous waste hauler certifications (DHS, DOT).

c. Name, address and registration number of hazardous waste hauler.

d. Laboratory performing analyses and results of waste characterization testing.

e. Contract number and name of project.

f. Specific inventory (including locations and approximate quantities) of the lead-containing materials removed or handled.

g. Number of employees working on the project.

h. Dates of commencement and completion of on-site work.

i. Work method employed (i.e., poly drop sheets and barrier tape, mini-containment, full containment with negative air and decontamination enclosure system, etc.)

j. Name, location, telephone number and EPA registration of waste disposal site(s) used.

1.08 CONTRACTOR MONITORING

A. The Project Representative reserves the right to perform air sampling and wipe sampling in selected areas during the course of the project. Project Representative reserves the right to stop work within in an area if in the course of performing monitoring, the Project Representative observes instances of substantial non-conformance with this Section or other Sections of the Specification presenting health hazards to workers, the general public or the surrounding areas. Work shall not resume until the corrective measures have been enforced. Instances of substantial non-conformance shall include, but not be limited to, the following:

1. Activities or misconduct imperiling worker's safety and health.

2. Airborne lead concentrations outside of the work area exceeding background or 1.5 $\mu g/m^3$, whichever is greater.

3. Loss of negative pressurization.

4. Breaches in containment resulting in potential release of lead to non-work areas.

B. The Environmental Consultant may perform air and/or wipe sampling inside and outside the work area during all phases of the work. The Contractor shall cooperate fully with the Consultant and ensure the cooperation of his workers during collection of air/wipe samples and work area inspections.

C. When visual inspections or air monitoring are specified, the Contractor shall notify the Project Representative in writing 24 hours in advance of the day and time when the Contractor will be ready for such inspections or monitoring. Such requests shall be initiated by the Contractor's Supervisor or Foreman indicating that the work area has been previously inspected and is ready for inspection/testing.

D. Air monitoring generated by the Project Representative shall not be used by the Contractor to represent compliance with regulatory agency requirements for monitoring of workers exposure to airborne lead, nor shall any other activity on the part of the Project Representative be construed to meet the Contractor's compliance with applicable health and safety regulations.

PART 2 - **PRODUCTS**

2.01 SIGNS AND LABELS:

A. Provide labeling in accordance with State and Federal EPA requirements. Provide the required signs, labels, warnings, placards or posted instructions for containers used to transport hazardous material to the landfill.

B. Location of Caution Signs and Labels: Provide bilingual caution signs at all approaches to work areas in languages used by the Contractor’s employees. Locate signs at such a distance that personnel may read the sign and take the necessary protective steps required before entering the area.

C. Warning Sign Format: Vertical format conforming to Title 8 CCR 1532.1:

WARNING
LEAD WORK AREA
POISON
NO SMOKING OR EATING

D. Where the treatment process is reasonably expected to impact any lead-containing materials:

1. Post a sign 14” by 14” which includes the phrase, “Caution Lead Hazard. Keep Out” in bold lettering at least 2” high.

2. Postings shall be in English and Spanish, and in any language used by any of the Contractor’s employees as the primary language of communication.

2.02 ENCAPSULANTS

A. Encapsulants shall be U.L. Listed, in full-scale E-119 fire test.

B. Average depth of penetration shall meet manufacturer's recommendations.

C. Dry mil thickness of bridging encapsulating systems (if used) shall be as indicated in the specific treatment instructions included in this specification, and as recommended by the manufacturer.

D. Performance Requirements: Classification - penetrating encapsulant; spray applied and brushable. Product shall be tested and listed by EPA and possess the following characteristics:

1. Flame resistance/flame spread ~25 (ASTM E162) V6.

2. Fire classification - UL Class A approved in the specific or similar assembly to its intended application.

3. Product shall be tested and rated non-toxic and non-irritating under the Federal Hazardous Substances Control Act and contain no methylene chloride.

4. Material shall be tinted sufficiently to provide a readable contrast to background color to which it is applied.

2.03 PLASTIC SHEETING:

A. Use fire-retardant (FR) polyethylene (poly) film.

1. Thickness - 6-mil, minimum, NO EXCEPTIONS.

2. Flame Resistance/Flame Spread Rate <25.

3. Conforms to NFPA #701 and Tested in accordance with ASTM E-84.

2.04 TAPE, ADHESIVE, SEALANTS:

A. Tape, 2” or wider, shall be capable of sealing joints of adjacent sheet of polyethylene and shall attach polyethylene sheet to finished or unfinished surfaces or similar materials. Tape shall be capable of adhering under dry and wet conditions, including use of amended water. Taping to critical or sensitive surfaces shall be completed using preservation sealing tape.

B. Spray adhesive for sealing polyethylene to polyethylene shall contain no methylene chloride or methyl chloroform (1,1,1-trichloroethane) compounds.

C. Fire resistant sealants shall be compatible with concrete, metals, wood, etc. Sealant shall prevent fire, smoke, water and toxic fumes from penetrating. Sealant shall have a flame spread, smoke and fuel contribution of zero, and shall be ASTM and UL rated for 3 hours for standard method of fire test for fire stop systems.

2.05 VACUUM EQUIPMENT:

A. All vacuum equipment used in the work area shall use HEPA filtration systems and be of the wet-dry type.

2.06 RESERVE EQUIPMENT:

A. Contractor shall have the following equipment on site: one reserve, functioning HEPA Filter Vacuum Cleaning Unit. Contractor shall also have sufficient polyethylene (poly), respirators, protective equipment, tape, tools, and decontamination enclosure systems for each work area.

B. Provide authorized visitors, Project Representative, Consultants or other contractors requiring access to the work area with suitable protective clothing, headgear, eye protection, as described in this specification, whenever the visitor must enter the work area. The Contractor shall have available and maintain at all times a minimum of three (3) suits and other suitable protective equipment for this purpose. All protective equipment shall be new and for the exclusive use of visitors.

C. The Contractor shall document that each visitor has been trained and fit-tested prior to entering a work area.

2.07 SCAFFOLDING:

A. Scaffolding, as required to do the specified work, shall meet all applicable safety regulations and DOSH standards. A non-skid surface shall be furnished on all scaffold surfaces subject to foot traffic.

2.08 TRANSPORTATION EQUIPMENT:

A. Transportation equipment, as required, shall be lockable and suitable for loading, temporary storage, transit and unloading of contaminated waste without exposure to persons or property. Any vehicle used to transport lead waste shall be properly registered with all applicable controlling agencies.

2.09 CONNECTIONS TO WATER SUPPLY:

A There are no active water service connections in either building. Contractor shall be responsible for providing all necessary water for abatement and decontamination purposes.

B Employ heavy-duty abrasion-resistant hoses with a pressure rating greater than the maximum pressure of the supply equipment in each work area.

2.10 OTHER TOOLS AND EQUIPMENT:

A. The Contractor shall provide other suitable tools for the lead-related construction and disposal activities.

B. Prohibited Equipment: The following equipment is prohibited from use on this project unless accepted in writing by the Project Representative:

1. High or low pressure water blasting equipment for hosing of work areas.

2. Uncontained abrasive blasting methods.

3. Gasoline, propane, diesel or other fuel powered equipment inside the building, unless previously approved in writing by the Project Representative.

4. Equipment that creates excessive noise or vibration that would affect the safety of the building or generate complaints from neighboring building occupants. No equipment shall exceed an A-weighted sound level of 85 dB as measured at 3 ft. from the radiating source without written permission of the Project Representative.

5. Flammable solvents with a flash point below 140 degrees F or materials containing ethylene glycol ether, methylene chloride, ethyl chloroform (1,1,1-trichloroethane), or other hazardous substances.

6. Non-fire retardant polyethylene sheeting.

7. Polyurethane spray foam for application in fire-rated assemblies, including but not limited to penetrations into stairwells, mechanical rooms, electrical closets, rated floor-to-floor assemblies, etc.

PART 3 - **EXECUTION**

3.01 INITIAL AREA ISOLATION

A. The Project Representative reserves the right to inspect and approve all work area setups before any lead-related construction work is undertaken.

B. If a work area is breached (failure of polyethylene seals, visible dust emission, airborne lead level above background, etc.), the Contractor shall take immediate action to control the breach and clean the area to the satisfaction of the Project Representative.

C. If sample results indicate that conditions have exceeded the baseline, as determined by the Project Representative, all work shall cease. Work shall not recommence until the condition(s) causing the increase have been corrected.

D. Provide all connections for temporary utilities in the work area needed throughout the lead-related work. Temporary electrical power shall be according to OSHA and the National Electrical Code for Wet Environments.

E. Contractor shall conform to the Project Representative's lockout requirements, and secure the work area at all times. Area entrances and exits shall be secured by the Contractor throughout the abatement phase. Unauthorized visitors are strictly prohibited. Only the Contractor, or Project Representatives are permitted at the job site. Contractor shall ensure that all doors, gates, windows, and potential entrances to the work areas and the designated waste location areas are secured and locked at the end of each workday.

F. Contractor shall store all materials, equipment, and supplies for the project inside the buildings or in areas designated by the Project Representative.

G. As required, establish designated limits for the lead-related construction work area with continuous barriers. Use barrier tape (3-inch) with a pre-printed lead warning throughout exterior work areas. Provide signs around the perimeter of all the interior/exterior work areas according to EPA, Cal-OSHA.

H. Contractor shall store all materials, equipment, and supplies for the project inside the buildings or in areas designated by the Project Representative.

I. Contractor shall provide temporary sanitary services of adequate capacity to handle the maximum estimated crew size plus an additional twenty percent. Contractor shall maintain the temporary facilities throughout the duration of the project.

J. The Contractor shall be responsible for identifying all HVAC components (if applicable) that lead into or out of the work areas. All components shall be disconnected and sealed airtight for the duration of the work. All openings shall be sealed with two (2) layers of 6 mil polyethylene secured with duct tape, as applicable.

K. Pre-clean the work area and fixed objects in the work area using HEPA filtered vacuums and/or wet cleaning methods. Protect fixed objects with protective barriers (as appropriate) and cover with 6 mil poly sealed with tape.

3.02 CONTAINMENT SET-UP PROCEDURES

A. Containments shall be constructed in accordance with the procedures specified in California Department Health Services Title 17, CCR 8, Division 1, Chapter 8 which references Chapters 11 and 12 of “Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing", U.S. Department of Housing and Urban Development, Development, June 1995.

B. Containment is not required for exterior lead-related construction work. However, all work shall be conducted within a lead regulated area demarcated with barrier tape and appropriate signage.

C. All interior lead-related construction work shall be conducted inside isolated enclosures consistent with the requirements as stated in 3.02A including removal of lead containing sheet flooring and ceramic tile.

D. All exterior lead-related construction work shall be conducted with 6-mil poly drop sheets sufficient in size to prevent dissemination of paint beyond the drop sheet or a minimum of 10 feet in all directions. A lead regulated area shall be constructed with barrier tape and appropriate lead signage in accordance with Title 8 CCR 1532.1 to limit access to the work areas. Exterior lead-related construction work (uncontained) shall be suspended for the work day if wind speeds exceed 15 miles per hour.

E. A decontamination area shall be constructed for all lead-related construction work. The area shall be located immediately outside the work area and shall contain a washdown station.

F. All water from the decontamination units shall be filtered to the technically feasible limit but not more than five (5) microns before disposal. In addition, the Contractor shall comply with all current local, state and federal codes relating to waste water release.

G. Approved fire extinguishers (Class ABC, multi-purpose, dry chemical type, rated: 4A; 60BC) shall be readily available to workers (maximum travel distance of 50 feet) inside and adjacent to work area(s). Personnel and emergency exits shall be clearly indicated on the inside of the containment area. The emergency exit plan shall be approved by the Environmental Consultant prior to the set up of any work areas.

3.03 PERSONNEL PROTECTION

A. Informed Workers:

1. All workers shall be informed of the hazards of lead and any other hazardous materials exposure. Workers shall also be instructed in the use and fitting of respirators, protective clothing, decontamination procedures, and all other aspects associated with the work.

B. Personal Hygiene Practices:

1. The Contractor shall enforce and follow good personal hygiene practices during the lead-related construction work. These practices will include but not be limited to the following: no eating, drinking, smoking or applying cosmetics in the work area. The Contractor shall provide a clean space, separated from the work area, for these activities.

2. Workers shall remove street clothes in the clean room and put on a respirator and clean protective clothing before entering the work area. Upon exiting the work area, remove gross contamination from clothing before leaving the work area; proceed to the change room and remove clothing except respirators; proceed to the decontamination area; clean the outside of the respirator with soap and water; remove respirator and thoroughly wash. Following decontamination, proceed to designated clean area or room and dress in street clothes. Do not wear disposable clothing outside regulated work areas.

3. If data gathered by the Project Representative in areas adjacent to the work areas shows exposure to airborne lead or lead dust exceeding background levels, that area will become regulated and workers must wear protective clothing and approved respirators.

C. Respirators:

1. Establish a respiratory protection program as outlined by ANSI and required by Cal-OSHA. Select respirators from those approved by the National Institute for Occupational Safety and Health (NIOSH). Respirators selected must be approved by the Competent Person. Submit program for review a minimum of five (5) working days prior to the commencement of abatement activities.

2. Provide workers with approved and personally-issued respirators with replaceable filters. Provide sufficient quantity of filters approved by NIOSH for use in lead environments so that workers can change filters as required by the manufacturer.

3. At a minimum, provide each employee with the following respiratory protection for each work phase:

   a. Pre-cleaning, containment set-up, and containment removal work: NIOSH-approved, half-face respirators with HEPA cartridges.

   b. Interior and exterior lead-related construction work such as manual demolition of painted building components, demolition of lead containing building materials (ceramic tile and resilient sheet flooring, manual paint removal methods: NIOSH-approved, half-face respirators with HEPA cartridges and organic vapor cartridges (as necessary).

4. At all times, respiratory protection selected shall, at a minimum, meet the requirements of the Table 1 below.

Table 1 – Respiratory Protection

Airborne Concentration of Lead	Required Respirator
Not in excess of 500 µg/m^3	Half-mask air purifying respirator equipped with high efficiency filters
Not in excess of 1,250 µg/m^3	Loose fitting hood or helmet powered air purifying respirator equipped with high efficiency filters Hood or helmet supplied air respirator operated in a continuous-flow mode
Not in excess of 2,500 µg/m^3	Full face piece air purifying respirator equipped with high efficiency filters Tight fitting powered air purifying respirator equipped with high efficiency filters Full face piece supplied air respirator operated in demand mode Half-mask or full face piece SCBA operated in demand mode
Not in excess of 50,000 µg/m^3	Half-mask supplied air respirator operated in pressure demand or other positive-pressure mode
Not in excess of 100,000 µg/m^3	Full face piece supplied air respirator operated in pressure demand or other positive-pressure mode
Greater than 100,000 µg/m3 or unknown concentration	Full face piece SCBA operated in pressure demand or other positive-pressure mode

5. Use the respirators presented in Title 8 CCR 1532.1 that afford adequate protection at such upper concentrations of airborne lead. When Type C Respirators are required provide the following:

   a. The air supply system shall provide Grade D breathing air that conforms to OSHA and ANSI Commodity Specification for Air.

b. Compressed Air System for Type C Respirators shall be high pressure, with a compressor capable of satisfying the respirator manufacturer's recommendations. The compressed air system shall have compressor failure alarm, high temperature alarm, and a carbon monoxide alarm. It also shall have suitable in-line air purifying absorbent beds and filters to assure Grade D breathing air.

c. Use of Belt: Type C respirators shall be worn with belt to minimize possibility of dislodging face mask when hose is snagged in the work area.

D. Protective Clothing:

1. Provide personnel exposed to lead dust with fire retardant disposable protective whole body clothing, head coverings, gloves, and foot coverings. Provide appropriate gloves to protect workers hands from exposure to hazardous materials. Make sleeves secure at the wrists and make foot coverings secure at the ankles with tape. Ensure that all personnel entering and leaving the work area follow this procedure. Suits shall be of adequate size to accommodate the largest employee. Foot covers may be part of the coveralls. Non-disposable footwear shall be left in the work area until it is decontaminated or disposed of at the completion of the job.

2. Protective clothing will be worn inside the work area after the area passes pre-work inspection and shall remain in use until the area passes final clearance inspection.

E. Eye Protection: Provide safety glasses or goggles to personnel removing or handling lead-containing materials and waste.

F. Shower Requirements: Use of a decontamination shower is not required unless any of the lead related construction work should exceed the Department of Occupational Safety and Health's Permissible Exposure Limit (PEL) for lead.

G. Emergency Precautions and Procedures:

1. Establish emergency and fire exits from the work area. Display necessary signage at exits and paths to exits with representative visual aids. A diagram of all emergency and fire exits shall be posted in a conspicuous area proximate to the entrance to each work area.

2. The Contractor's supervisor/competent person shall be trained and certified in first aid and CPR, and be prepared to administer first aid to injured personnel after decontamination. Seriously injured personnel shall be treated immediately or evacuated without delay for decontamination. When an injury occurs, the Contractor shall implement fiber reduction techniques until the injured person has been removed from the work area.

3. In the event of a loss of negative pressure to the work area, work shall stop immediately and entrances to the work area sealed tight. The Contractor shall also institute dust reduction controls until negative pressure is re-established to acceptable levels.

3.04 LEAD REMOVAL

A. All painted surfaces are assumed to contain detectable concentrations of lead. Contractor shall remove all damaged (loose and peeling) paint from interior and exterior painted surfaces on both structures. Apply a sealer/primer suitable for the substrate following damaged paint removal to stabilize remaining paint. Coordinate sealer/primer selection with the Project Representative.

B. Lead containing sheet flooring has been identified in the Navarro Inn. Contractor shall remove lead containing sheet flooring for proper disposal.

C. Lead containing ceramic wall tile has been identified in the Motel structure. Contractor shall remove ceramic tile for proper disposal. Note: Lead containing ceramic tile is adhered to surfaces with an asbestos containing adhesive.

D. Until an exposure assessment has been performed, Contractor shall treat all employees as if they were exposed to lead above the Permissible Exposure Level (PEL) and shall provide the following:

1. Appropriate respiratory protection to each employee.
2. Appropriate personal protective clothing and equipment.
3. Change areas and hand-washing facilities.
4. Biological monitoring for each employee consisting of sampling and analysis for lead and zinc protoporphyrin levels.

E. The Contractor shall continuously apply water during lead-related construction work. The water shall be applied with a low-pressure fine spray to minimize airborne dust levels. All lead debris shall be immediately bagged following removal.

F. Collect personal samples representative of a full shift including at least one sample for each job classification in each work area. Samples must be representative of the monitored employee's regular, daily exposure to lead.

G. Employees must have proper training which includes the content of the lead standard; the specific nature of the operations which could result in exposure to lead above the action level; the purpose, proper selection, fitting, use and limitations of respirators; the purpose of the medical surveillance program; purpose of engineering controls; content of compliance plans; and the employee's right of access to records.

H. The Contractor shall transport lead waste bags to the waste debris box at designated hours approved by the Project Representative.

I. The Contractor is responsible for proper statistical waste stream categorization, manifesting and disposal of lead-containing waste as required by USEPA and applicable state and local regulations. The Project Representative, at its option may collect duplicate waste stream samples to verify the statistical methods used by the Contractor. In the event of conflict, the Project Representative's results will prevail. The Contractor at no additional expense to the Project Representative will appropriately dispose of the waste.

J. Contractor shall collect all waste stream samples in the presence of the Environmental Consultant and shall supply the Environmental Consultant with a copy of the chain-of-custody within one (1) day of receipt by the laboratory.

K. Lead-containing debris and contaminated water shall be cleaned from the work area at the end of each work shift. Contractor shall clean the work area using wet methods and HEPA vacuuming equipment.

3.05 REGULATED AREA MONITORING

A. Prior to each work shift and continuously throughout the project, each containment and decontamination enclosure system shall be inspected and repaired as needed.

B. Ambient airborne lead levels outside the work area shall not exceed 1.5 $\mu g/ m^3$. If the airborne lead concentration outside the work area exceeds 1.5 $\mu g/m^3$, then the work must stop. Contractor must stop and operations reviewed and modified to reduce the airborne lead concentration to within the acceptable limits.

3.06 AIR MONITORING

A. The purpose of any air monitoring that may be conducted by the Project Representative will be to detect possible release of dusts emanating from the work areas.

B. All lead air sampling shall comply with NIOSH 7082 method or NIOSH 7300 method.

C. The Project Representative reserves the right to perform and / or observe final clearance inspection and sampling.

D. The Contractor shall be responsible for all personal air sampling. During the performance of any work in the contaminated work area, sufficient personnel breathing zone samples shall be taken to constitute representative sampling. These samples shall be taken each shift and for each distinct crew operation, and shall be used to verify adequacy of dust control and respiratory protection. Personal breathing zone air sampling shall be in accordance with the Cal-OSHA lead in construction standard.

3.07 CLEARANCE INSPECTIONS

A. The Project Representative will determine if visual inspections of work areas will be performed. Contractor shall notify the Project Representative when the decontamination process in each containment area is complete. Evidence of debris will require additional clean up by the Contractor. Contractor shall be responsible for re-cleaning all areas found to be deficient.

B. If the Project Representative determines that the work area is sufficiently clean, the Contractor may proceed. If the Project Representative determines that certain areas require additional cleaning, the Contractor shall re-clean the work area and request a second inspection of the recleaned area. All costs incurred by the Project Representative for inspections required after the second inspection will be charged to the Contractor.

C. Once the initial visual is passed, the Contractor shall remove all work area barriers.

D. Lead Clearance Testing: The Project Representative may conduct clearance wipe sampling.

3.08 LEAD CLEARANCE CRITERIA:

A. Following lead-related construction work the Project Representative may conduct dust wipe sampling. The dust wipe clearance criteria is 40 $\mu g/ft^2$ for floors, 250 $\mu g/ft^2$ for window sills and 800 $\mu g/ft^2$ for window troughs, rough floors and exterior surfaces.

B. If the dust wipe samples do not pass the required clearance criteria, the area shall be recleaned and new samples shall be collected by the Project Representative. The Contractor shall be responsible for all costs associated with re-sampling and re-analyses. This amount will be deducted by the Project Representative from the Contractor's final payment.

C. If post tested is performed the Project Representative shall notify the Contractor in writing of acceptable of clearance sampling. The Contractor shall then remove all the remaining barriers in the work area.

3.09 LEAD DISPOSAL

A. It is the responsibility of the Contractor to determine current waste handling, labeling, transportation and disposal regulations for the work site and for each waste disposal landfill. The Contractor must comply fully with these Specifications, local, state, and federal regulations and provide documentation of the same.

B. Ensure that polyethylene bags are sealed air-tight. All bags shall be wet cleaned prior to removing them from the work area.

C. Ensure all disposal containers are properly labeled according to 8 CCR 1532.1, 5194 (HAZCOM), 49 CFR 171-179 (USDOT), Title 22 CCR and any local regulations and state regulations as required by this specification.

D. Perform appropriate Total Threshold Limit Concentration (TTLC), Soluble Threshold Limit Concentration (STLC) and Toxicity Characteristic Leaching Procedure (TCLP) testing for paint waste disposal as required by this specification, by the regulations, and the selected landfill(s). All testing shall be done in the presence of the Project Representative's Environmental Consultant.

Chain-of-custody forms shall be provided to the Project Representative and the Environmental Consultant within one (1) day following sample delivery to the laboratory.

E. Filter all wastewater to the technically feasible limit, but not more than five (5) microns before disposal. Test as required to confirm lead concentration and other water quality parameters prior to discharge or off-site transportation. Comply with all current local, state and federal codes relating to waste water release.

F. Lead waste that is properly labeled and bagged, may be temporarily stored in areas approved by the Project Representative. Areas must be made secure before storing the waste. Waste is not to remain in temporary storage area for longer than seven (7) days before final load-out of materials.

G. All lead waste shall be double-wrapped prior to transport from the site.

H. All vehicles used to transport hazardous waste must be registered with the Department of Toxic Substances Control and maintain proof of current registration with vehicle at all times.

I. Trucks must have an enclosed cargo area with a storage compartment that is fully lined with a minimum of one (1) layer of 6-mil polyethylene on the walls and two (2) layers on the floor.

J. Contractor shall not throw bags into the truck in a way that may cause the bags to burst open.

K. Contractor shall provide at minimum one (1) day advance notification to the Project Representative when signatures are required on manifest(s). The Contractor shall ensure that the Hazardous Waste Manifest is correctly filled out. The Contractor shall give the appropriate copies to the Project Representative and shall also instruct the Project Representative in writing that they must send the appropriate copy to the Department of Toxic Substances Control.

L. If a debris box is used, the Contractor shall make all necessary arrangement with the Project Representative including obtaining all appropriate permits.

M. Contractor is responsible for all coordination with the waste disposal site and with the waste hauling company.

N. Debris box shall be constructed with minimum 20-gauge steel with no windows or openings other than the door. The door of the container shall have a secure cover on the locking device with access to the lock only at the key-hole. Once the debris box is filled and the manifest is signed, Contractor must transport the debris box off the job site.

O. Disposal shall be in a landfill that meets EPA and DTSC requirements.

END OF SECTION

ATTACHMENT A
LEAD WORK PLAN OUTLINE

In accordance with the contract documents, Cal-OSHA Lead in Construction Standard (Title 8 CCR 1532.1) and DHS (17 CCR Division 1, Chapter 8), the Contractor is required to prepare a written, site-specific Lead Compliance Plan, and submit to the Project Representative for approval prior to start of work. This plan is required for the contractor to meet Cal-OSHA and DHS requirements as well as the contract documents, and shall describe work procedures and control methods that will protect the State's facilities and the environment.

I. Location of Work:
The work to be completed under this work plan will be completed at:

NAVARRO INN AND MOTEL / NAVARRO BY THE SEA
NAVARRO RIVER REDWOODS STATE PARK
MENDOCINO DISTRICT
NAVARRO BEACH ROAD
NAVARRO, CALIFORNIA 95463

(Location within building)
Previous lead inspections or surveys have found that lead-based paints/coatings, or other lead-containing materials are present at the following locations:

(List all materials and locations to assure the Project Representative and the Contractor are aware of all lead-containing materials locations)

II. Description of Work:
Describe the anticipated work scope, including:

A. Paint removal (list paints or coatings, and locations)
B. Paint stabilization or encapsulation (list paints or coatings, and locations)
C. Removal and/or replacement of lead-coated components (list components and locations)
D. Dust/residue removal or decontamination (list materials and locations)
E. Demolition of lead-coated components
F. Any other activities that will or may result in worker exposures to lead

III. Schedule:

Phase/Task	Anticipated Date(s)
Mobilization	_____
Set-up of work area(s), containments	_____
Lead-related construction	_____
Final Cleaning	_____
Visual Inspection	_____
Final Clearance (visual and sampling)	_____
Teardown	_____
Demobilization	_____

The competent person, _____, will conduct worksite visual inspections on a daily basis, or more often as necessary.

IV. Equipment and Materials
List all equipment and materials to be used, such as the following:

HEPA Vacuums	Negative air filtration units
Scrapers	Manometers
Power saws	Shower facilities

Pry bars	Airless sprayers/compressors
Cutting shears	Cleaning detergents
Other hand tools	Solvents (must be approved by Project Representative)
Encapsulants/sealants	Roller/brushes
Gloves	Disposable coveralls
Respiratory protection	Eye & foot protection

V. Crew

List all workers and supervisors with emergency contact names and cell numbers.

Clearly identify the supervisor and competent person who has authority for all safety and health.

VI. Control Measures and Work Practices

Describe in a narrative format specific work procedures, exposure/contamination controls, and engineering controls. This description should include, but not be limited to, the following:

Location, size, layout & detail of work	Wet methods
Enclosure	Local exhaust for tools
Respiratory protection	HEPA vacuums
Vacuum assisted blasting	General room ventilation
Containment (i.e., poly barriers)	Interface of trades involved
Methods to assure safety of bldg occupants	Pollution control
Removal method to reduce lead dust generation	

VII. Technology To Be Used In Meeting the OSHA PEL

List all or any specialized equipment to be used to meet the PEL.

VIII. Respiratory Protection and Protective Clothing/Personal Protective Equipment

List all respiratory protection including types and manufacturers which are anticipated for this project. Identify the phases of the project for which respirators will be required or likely to be required. List all personal protective equipment anticipated to be used on the project.

IX. Decontamination/Hygiene Facilities

Identify the types and locations of decontamination or hygiene facilities to be used on this project. Specify use of disposable towels, soap, hot and cold water, and other supplies. Specify the required use of the facilities, including use of the facilities prior to eating, drinking, smoking and before leaving the project site. Describe handling or treatment of lead-contaminated solid waste and wastewater.

X. Air Monitoring Data

Identify general worker air monitoring protocols to be followed on this project, including worker category classifications, frequency of monitoring, anticipated laboratory to be used for analysis, pump calibration techniques, etc. Identify the competent person responsible for conducting personal air monitoring.

XI. Medical Surveillance Program

Describe the Contractor's medical surveillance program currently in place. Identify the physician or medical provider firm currently handling the medical surveillance needs and include name and phone number.

XII. Worker Training

Provide the Contractor's Lead Worker Training Certificates per the specifications.

XIII. Waste

Describe how all waste on this project will be packaged, waste characterized, labeled, stored, transported, manifested and disposed.

XIV. Notification

Describe all arrangements made on multi-employer work sites to inform affected employers about the lead project. Attach copies of any notifications.

XV. Preparation of Lead Work Plan

Date Prepared and Prepared By (signature, name and title)

SECTION 02300

EARTHWORK

PART 1 – GENERAL

1.1 SUMMARY

A. This section includes the following:

1. Excavating and back-filling for buildings and structures

2. Excavating and back-filling within building lines

3. Also see Appendix to this section

1.2 RELATED SECTIONS:

A. Section 02070 - Deconstruction

B. Section 02071 - Protection, Salvage, and Removal of Historic Elements

C. Section 02421 – Protection and Avoidance of Sensitive Environmental Resources

1.3 DEFINITIONS

A. Back-fill: Soil materials used to fill an excavation

B. Bedding Course: Layer placed over the excavated sub-grade in a trench before laying pipe.

C. Borrow: Satisfactory soil imported from off-site for use as fill or back-fill.

D. Drainage Course: Layer supporting slab-on-grade used to minimize capillary flow of pore-water.

E. Excavation: Removal of material encountered above sub-grade elevations.

1. All excavation work is to be conducted in favorable weather conditions and par all procedures and methods of local codes and ordinances.

F. Fill: Soil materials used to raise existing grades.

G. Structures: Buildings, footings, foundations, retaining walls, slabs, mechanical and electrical appurtenances, or other man made stationary features constructed above or below the ground surface.

H. Sub-grade: Surface or elevation remaining after completing excavation or top surface of a fill or back-fill immediately below topsoil grade.

I. Utilities: Utilities include on-site underground pipes, conduits, ducts, and cables, as well as underground services within the buildings.

1.4 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary work and who are completely familiar with the specified requirements and the methods needed for proper performance of work in this section.

B. The Contractor shall be responsible for protection of all existing materials and components to remain or to be salvaged. The minimum amount of protection required is indicated on the drawings. In the event of damage, such items shall be immediately repaired or replaced by the Contractor, at his expense, to the satisfaction of the Project Representative.

C. Historic Significance: The Navarro Inn is eligible for listing on the National Register of Historic Places. It is the California Department of Parks and Recreation's intention to undertake necessary stabilization treatments in a manner, which minimizes adverse effect to this historic building. Take all measures during performance of work to maintain and protect historic fabric of this building. Perform work with extreme care and assure that no features of structure are damaged.

1.5 SUBMITTALS

A. Description of Bracing and Shoring Work: Submit written document describing bracing and shoring methods for all foundation work.

B. Description of Protection Work:

1. Submit written description of protection procedures for Historic Elements to remain in place. Include: details of methods, materials and other pertinent information about protection operations required.

C. Description of Removal Work

1. Submit written description of demolition and removal operations. Include: details of methods, equipment, materials, typical shoring and bracing (if required), temporary enclosure, storage locations, provision for protection and security and other pertinent information about demolition, removal, and salvage operations required.

D. Shop Drawings

1. Bracing and shoring methods

2. Back-fill profiles for foundations and retaining wall.

1.6 SITE CONDITIONS

A. Coordinate the performance of work in this section with related or adjacent work. Protection of items should be complete prior to commencement of new construction and demolition.

B. At the end of working day or during inclement weather cover work exposed to weather with waterproof coverings, securely anchored.

C. Protection for Historic Elements should remain in place for the duration of the project unless determined otherwise by the State Representative.

D. Dewatering:

1. Prevent surface water and ground water from entering excavations, from ponding on prepared sub-grades and from flooding project site or surrounding area. Note that foundation excavation is not recommended during months of high water in the Navarro River.

2. Install a dewatering system or sump pump to keep sub-grades dry and convey water away from excavations. Maintain until dewatering is no longer required. Location of discharge line for sump pumps to be determined. Recommended discharge into riparian area east of the Navarro Inn structure, this is dependent on any environmental restrictions.

E. See Section 02421, Protection/Avoidance of Sensitive Environmental Resources, and the *Final Grading Plan* and *Erosion Control Plan* prepared by I.L. Welty & Associates for information on wetlands avoidance and erosion control.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.

B. Satisfactory Back-fill Soils:

1. Native excavated material

2. Borrow soil free of rock or gravel larger than 3” in any dimension, debris, waste, vegetation or other deleterious matter. Borrowed soil should match native soil in content of sand, clay, and organic matter to assure similar percolation characteristics.

C. Bedding Material: Not Used

D. Drainage material: See Appendix to this section

PART 3 - EXECUTION

3.1 PREPARATION

A. Historic Elements to Remain in place:

1. Protect all Historic Elements to remain in place, which may be damaged by construction activities. In the event of new damage, inform the Project Representative immediately as to the nature and extent of damage and the proposed method of repair. Contractor is responsible for repairs and replacement of newly damaged items to the satisfaction of the Architect at no additional cost to the State and / or the NSCR.

2. Protect structures, utilities, walkways, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operation.

3. Provide erosion-contral measures to prevent erosion or displacement of soils and discharge of soil bearing water runoff.

3.2 EXPLOSIVES

A. Explosives are not permitted.

3.3 EXCAVATION GENERAL

A. Unclassified Excavation: Excavation to sub-grade elevations regardless of the character of surface and subsurface conditions, including rock, soil materials, and obstructions.

1. If excavated materials intended for fill and back-fill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.

B. Classified Excavation: Excavation to sub-grade elevations classified as earth and rock.

1. Earth excavation includes excavating pavements or obstructions visible on the surface: underground structures, utilities, and other items indicated to be removed: together with soil, boulders, and other materials not classified as rock or unauthorized excavations.

a. Intermittent drilling; gram hammering: or ripping of material not classified as rock excavation is earth excavation.

2. Rock excavation includes removal and disposal of rock.

a. Do not excavate rock until it has been classified and cross sectioned by the project Soils Engineer.

3.4 EXCAVATION FOR STRUCTURES

A. Excavate to indicated elevations and dimension within a tolerance of plus or minus one inch. Extend excavations a sufficient distance from structures for placing and removing concrete form-work, for installing services and other construction and for inspections.

1. Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.

3.5 EXCAVATION FOR UTILITY TRENCHES (Not Used)

3.6 APPROVAL OF SUBGRADE All foundation work, including excavations, will be approved by the project Soils Engineer.

A. Notify the Project Representative when excavations have reached required sub-grade. The Project Representative will request an inspection from the project Soils Engineer.

B. If the project Soils engineer determines that unsatisfactory soil is present, continue excavation and replace with compacted back-fill or fill material as directed.

1. Additional excavation and replacement material will be paid for according to the Contract provisions for changes in the work.

C. Reconstruct subgrades damaged by rain, accumulated water, or construction activities, as directed by the project Soils Engineer.

3.7 UNAUTHORIZED EXCAVATION

A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom without altering top elevation. Lean concrete fill may be used when approved by the project Soils Engineer

3.8 STORAGE OF SOIL MATERIALS

A. Stockpile borrow materials and satisfactory excavated soil materials a designated area determined by project documentation, specifically the project Mitigated Negative Declaration. Stockpiling of excavations in this environment will be determined by an ecologist. Stockpile soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.

1. Stockpile soil materials away from edge of excavations. Do not store within drip line trees.

3.9 BACKFILL

A. Place and compact back-fill in excavation promptly, but not before completing the following:

1. Surveying locations of underground utilities for record documents.

2. Inspecting and testing underground utilities.

3. Removing concrete form-work.

4. Removing trash and debris.

5. Removing temporary shoring and bracing, and sheeting.

6. Installing permanent or temporary horizontal bracing on horizontally supported walls.

B. See Appendix to this section

3.10 UTILITY TRENCH BACKFILL (Not Used)

3.11 FILL

A. Preparation: remove vegetation, topsoil, debris, unsatisfactory soil materials, obstruction and deleterious materials from ground surface before placing fills.

B. Place and compact fill material in layers to required elevations as follows:

1. Under walks and pavements, use satisfactory fill material.

2. Under slabs use engineered fill.

3. Under footings and foundations use engineered fill.

4. Fill around completed foundation to restore the original grade / finished floor relationship is not in contract.

3.12 MOISTURE CONTROL

A. Uniformly moisten or aerate sub-grade and each subsequent fill or back-fill layer before compaction to within 2 percent of optimum moisture content.

B. Place and compact fill material in layers to required elevations as follows:

1. Do not place back-fill or fill material on surfaces that are muddy.

2. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is excessively wet.

3.13 COMPACTION OF BACKFILLS AND FILLS

A. Place back-fill and fill materials in layers not mare than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.

B. Place back-fill and fill materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.

3.14 GRADING

A. General: Uniformly grade areas to a smooth surface, free from irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevation indicated.

1. Provide smooth transition between adjacent existing grades and new grades.

2. Cut out soft spots, fill low spots, and trim high spots to comply with the required surface tolerances.

B. Slope grades to direct water away form buildings and to prevent ponding.

C. Grading inside Building Lines: Finish sub-grade to a tolerance of ½ inch when tested with a 10 foot straight edge.

3.15 PROTECTION

A. Protecting Graded Areas: Protect newly graded areas from traffic, and erosion. Keep free of trash and debris.

B. Restore grades to original contours. Fill around foundation will occur in later phase. Where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.

C. Where Settling occurs before Project correction period elapses, remove finished surfacing, back-fill with additional soil material, compact, and reconstruct surfacing.

1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to the greatest extent possible.

D. Protect all historic fabric per Section 02071 and this specification.

3.16 DISPOSAL OF SURPLUS AND WASTE MATERIALS / CLEAN-UP

A. Disposal: Remove surplus satisfactory soil and waste material, including unsatisfactory soil, trash, and debris, and legally dispose of material at off site location approved by local ordinance, the Project Representative, and Specification Section 00804 Disposal of Refuse.

B. All residue and debris from Earthwork is to be removed from existing construction leaving the premises clean and neat with the ground plane restored to pre-existing grades.

3.17 DISCOVERY OF HIDDEN ARCHITECTURAL OR ARCHEOLOGICAL FEATURES

A. In event that undocumented features, materials, or artifacts are discovered during execution of work, immediately notify the Project Representative. Do not disturb area until the Project Representative has evaluated undocumented items. Per Specification Section 00810 Constraints and Mitigations, and the Final Mitigated Negative Declaration, the Project Representative reserves the right to discretionary monitoring by the State Historian or Archaeologist assigned to the project. See Specification Section 02071 Protection & Salvage of Historic Elements and Section 00810 Constraints and Mitigations for discussion of this topic. An archaeologist hired by the Contractor shall be present on site during excavation under and adjacent to the building, as well as work that will occur prior to lifting it.

C. The Project Representative reserves right to document, or have documented by qualified professional, location, surrounding conditions, and other circumstances that may be pertinent. Time lost thereby will be condition for which contract time may be extended. Costs incurred for salvaging or documenting artifacts, after discovery, will be administered as a change order through the Contractor. The State reserves right to retain possession and ownership of objects, artifacts and historically or archeologically significant materials, other than normal building construction materials, discovered during execution of work.

4.0 Appendix to Earthwork – Section 02300. Letter and detail by Jensen-Van Lieden Associates, Inc. See next Page.

Jensen – Van Lienden Associates, Inc.
GEOTECHNICAL ENGINEERING CONSULTANTS

Curtis N. Jensen
Geoffrey Van Lienden
Srinivas K. Mohan

October 14, 2009
Job No. U146AA

Navarro-by-the-Sea Center
PO Box 1710
Mendocino, California 95460
Attention: James Martin

RECEIVED
OCT 16 2009

Re: Plans for the Navarro Inn Stabilization
Navarro River Redwoods State Park
Mendocino, CA

Gentlemen:

At your request, we reviewed geotechnical engineering related details shown on structural engineering plans for the referenced project. The plans were prepared by Fulcrum Structural Engineering and are dated August 10, 2009.

Based upon our review, we conclude that the plans generally comply with the intent of recommendations for the details contained in our report for the project dated December 17, 2008 and subsequent recommendations informally transmitted to the structural engineer.

A concrete slab will be constructed between the new retaining wall and the building new foundation wall. In our opinion, this slab can be cast upon a gravel fill. We recommend that the gravel be made up of crushed rock. It should be compacted with hand-operated compacting equipment during placement.

We understand that fill will be imported to the site to raise grades within the building area. It is our view that this fill can be miscellaneous soil and/or soil and rock mixtures, provided that it is not comprised of organic material or is largely "fat" (plastic) clay. The fill should also be compacted during placement.

The subsurface drain installed behind the new retaining wall should comply with details shown on Figure 1.

JENSEN-VAN LIENDEN ASSOCIATES, INC.

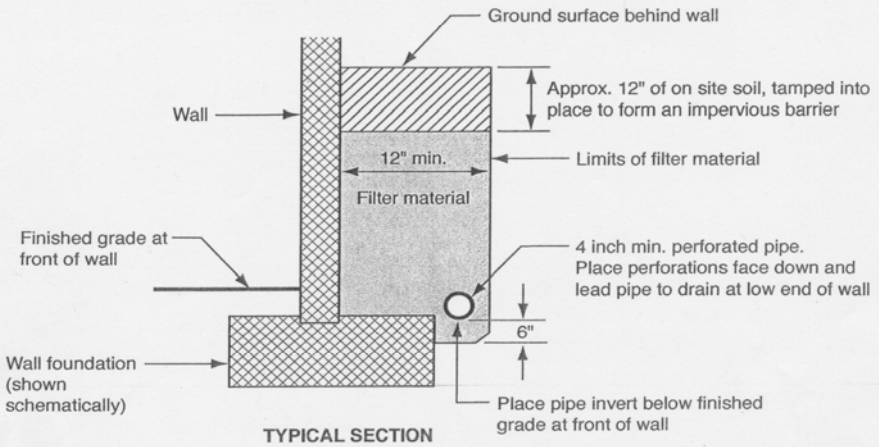
Curtis N. Jensen
G. E. # 438

REGISTERED PROFESSIONAL ENGINEER
CURTIS N. JENSEN
No. GE438
Exp. 12-31-09
GEOTECHNICAL
STATE OF CALIFORNIA

cc: Carey and Company, Inc.
Fulcrum Structural Engineering

1840C Alcatraz Avenue • Berkeley, California 94703 • Phone: (510) 658-9111 • FAX: (510) 658-8918

RECOMMENDED MATERIALS AND DIMENSIONS
SUBDRAINAGE BEHIND RETAINING WALLS



TYPICAL SECTION
(Not to Scale)

Subdrain pipe shall be manufactured in accordance with the following requirements:

a. Acrylonitrile-butadiene-styrene (ABS) plastic pipe shall conform to the specifications for ABS plastic pipe given in ASTM Designation D2282 and ASTM Designation D2751. ABS pipe shall have a minimum pipe stiffness of 45 psi at 5% deflection when measured in accordance with ASTM Method D2412.
b. Polyvinyl chloride (PVC) pipe shall conform to AASHTO Designation M278. PVC pipe shall have a minimum pipe stiffness of 50 psi at 5% deflection when measured in accordance with ASTM Method D2412 except that pipe conforming to F758 shall be suitable. Schedule 40 PVC pipe shall be suitable.

Filter material for use in backfilling trenches around and over subdrain pipes shall consist of clean coarse sand and gravel or crushed stone conforming to the following requirements:

Sieve Size	% Passing Sieve
2"	100
3/4"	70 to 100
3/8"	40 to 100
#4	25 to 50
#8	15 to 45
#30	5 to 25
#50	0 to 20
#200	0 to 3

Class 2 "Permeable Material" conforming to the State of California Department of Transportation Standard Specifications, latest edition, Section 68-1.025 shall be suitable.

Clean, coarse gravel ("drain rock") shall be suitable, provided the subsurface drain is wrapped in an acceptable geotextile ("filter fabric").

Job No. U146AA	Jensen - Van Lienden Associates Inc.	Figure No. 1

END OF SECTION

SECTION 02421

PROTECTION AND AVOIDANCE OF SENSITIVE ENVIRONMENTAL RESOURCES

PART 1 - GENERAL

1.1 SUMMARY

A. The Navarro Inn Stabilization project is located in an area with known sensitive environmental resources that must be protected during construction. In addition to the important historical resources associated with the building itself and possible archaeological resources uncovered during excavation, as controlled under Section 02071, the surrounding area is known to support wetlands regulated under State and federal law, and the Inn and adjacent cottages are known to provide non-maternity roosting habitat for a special-status bat species, Townsend's big-eared bat (*Corynorhinus townsendii*). Construction restrictions and controls related to the protection and avoidance of jurisdictional wetlands and Townsend's big eared bat are defined in this section of the construction documents.

1.2 RELATED SECTIONS:

A. Section 02071 – Protection and Salvage of Historic Elements

1.3 DEFINITIONS

A. "Wetlands" consist of areas supporting hydrophytic vegetation, soils, and surface hydrology, mapped by State Parks and confirmed by the U.S. Army Corps of Engineers. These include features regulated under Section 404 of the Clean Water Act, as well as areas regulated under the California Coastal Act of 1976 and the federal Coastal Zone Management Act within the jurisdiction of the California Coastal Commission. No wetlands are known to occur within the immediate footprint of the Navarro Inn, motel building to be demolished and the paved area in front of these structures. The limits of known jurisdictional wetlands regulated by the U.S. Army Corps of Engineers and the California Coastal Commission have been mapped on the Grading Plan for the Navarro Inn Stabilization Project.

B. "Special-Status Bats" include those recognized by the California Department of Fish and Game as a California Special Concern species. Townsend's big-eared bat (*Corynorhinus townsendii*) is a special-status bat species, and small numbers of this species are known to roost in the Navarro Inn and two cottage buildings to the east. Details on the status and occurrence of Townsend's big-eared bat are summarized in the report by Wildlife Research Associates "*Results of Bat Roost Habitat Assessment, Building Surveys and Mitigation Recommendations for Buildings at the Navarro-by-the-Sea Specific Plan Study Area*", dated November 9, 2009.

1.4 SITE CONDITIONS

A. Protections for wetlands in the vicinity of the Inn and the possible roosting habitat associated with the cottages to the east of the Inn shall remain in place for the duration of the project,

unless subsequent authorizations are obtained by jurisdictional agencies that would allow further activities within these sensitive resource areas. No fill or disturbance to wetland areas is allowed without prior authorization from the U.S Army Corps of Engineers, Regional Water Quality Control Board, California Coastal Commission, and possibly the California Department of Fish and Game.

PART 2 – EXECUTION OF WETLAND AVOIDANCE MEASURES

2.1 GENERAL

A. The report by California State Parks, Mendocino District, entitled "*Delineation of Potential "Jurisdictional Wetlands under Section 404 of the Clean Water Act & California Coastal Act, "Navarro River Redwoods State Park*" (undated) provides a draft of the extent of jurisdictional waters. This mapping was verified by representatives of the U.S. Army Corps of Engineers during a field visit to the site conducted on June 12, 2009, and the maps were revised accordingly by Bill Maslach, California State Parks, Mendocino District, on August 28, 2009, and subsequently reviewed and confirmed by David Wickens, U.S. Army Corps of Engineers as part of a Preliminary Jurisdictional Delineation. The limits of jurisdictional wetlands confirmed by the U.S. Army Corps of Engineers was then transferred to the *Final Grading Plan* for the Navarro Inn Stabilization Project, prepared by I.L Welty & Associates. The contractor must be completely familiar with the restrictions associated with avoiding all areas of jurisdictional wetlands and not modifying these features during the construction work.

2.2 WETLAND AVOIDANCE

A. All construction-related activities must avoid direct and indirect modifications to areas mapped as "Wetlands" in the *Final Grading Plan* for the Navarro Inn Stabilization Project, prepared by I.L. Welty & Associates. No disturbance shall be permitted by the contractor within areas mapped as "Wetlands" in the *Final Grading Plan*, including but not limited to installation of construction of fencing, equipment operation, placement of fills or other grading, stockpiling of debris and excavated materials, storage of equipment or other materials, and any other construction-related activities.

B. Temporary orange construction-fencing shall be installed at the edge of wetland areas to be protected as delineated on the *Final Grading Plan* for the Navarro Inn Stabilization Project. The final location of the fencing shall be installed under the supervision of a qualified wetland specialist or Project representative prior to initiation of any on-site construction activities.

C. All erosion control measures defined in the *Erosion Control Plan* for the Navarro Inn Stabilization Project prepared by I.L. Welty & Associates shall be followed by the contractor. This includes construction avoidance of adjacent wetlands and existing vegetation, restrictions on grading during the rainy season, installation of silt fencing and fiber rolls around the perimeter of the construction zone prior to on-set of rains, installation of a stabilized construction entrance onto the site, controls on storage of any stockpiled soils, proper construction waste storage and disposal, spill cleanup, and wind erosion control, among others.

PART 3 – SPECIAL-STATUS BAT AVOIDANCE AND PROTECTION MEASURES

3.1 GENERAL

A. The report by Wildlife Research Associates entitled "*Results of Bat Roost Habitat Assessment, Building Surveys and Mitigation Recommendations for Buildings at the Navarro-by-the-Sea Specific Plan Study Area*", dated November 9, 2009, provides a detailed assessment of the occurrence of Townsend's big-eared bat at the Inn and two cottages to the east. Recommendations are made in the report to prevent inadvertent loss of any bats during demolition of the motel building and portions of the Inn, and during subsequent construction. The contractor must be completely familiar with the contents of this report, and follow the recommendations called for in Mitigations 1-1 and 2-1. The contractor is not responsible for implementing the recommendations called for in Mitigations 1-2 and 2-2, as specified below in 3.1.B. However, the two cottages east of the Inn must be avoided during construction to prevent any disturbance to possible roosting bats that could be using them.

B. The contractor is not required to implement recommendations called for in Mitigation 1-2 and 2-2 of the report by Wildlife Research Associates entitled "*Results of Bat Roost Habitat Assessment, Building Surveys and Mitigation Recommendations for Buildings at the Navarro-by-the-Sea Specific Plan Study Area*", dated November 9, 2009. The habitat enhancement called for in Mitigation 1-2 and 2-2 have already been implemented, as described in the report by Wildlife Research Associates entitled "*Cottage Cleanup and Bat Entry Modifications Per Mitigation Recommendations at Navarro-by-the-Sea Specific Plan Study Area*" dated November 9, 2009. The motel building has been previously sealed as called for in Mitigation 2-1 to prevent possible bat occupation prior to initiation of construction and the preconstruction survey to confirm absence specified in 3.1.B below.

3.2 BAT MORTALITY AVOIDANCE

A. Direct mortality of bats must be avoided during demolition and construction. For the Inn, this will be accomplished by carefully opening specific portions of the Inn prior to the start of stabilization, foundation, demolition and other structural retrofitting activities and leaving sufficient openings throughout construction to cause the building to be unsuitable for day roosting by pats, particularly Townsend's be-eared bat, by increasing the amount of light and airflow into the structure. This method is in lieu of a conventional "blockage and humane eviction method (also called "passive exclusion") for removing bats prior to demolition or construction activities. This method requires the following actions:

1. Opening of the soffits, windows and other areas of the Inn shall occur only when bats are seasonally active (approximately March 1 through October 15). This will minimize chances for direct mortality caused by inactive bats not being metabolically capable of flight away from the structure prior to construction activities, or indirect mortality resulting from causing bats to rouse and fly during winter months, which could result in loss of stored body fat essential for winter survival.

2. Prior to removing plywood window, door coverings and soffits on the Inn, a qualified bat biologist shall conduct a building survey to determine if bats are present in the

structure and if so, to oversee removal of window/door coverings and building soffit boards. The bat biologist will provide training of all construction crews working on demolition and stabilization. The training shall provide information on the bat species of concern, goals of the project, and procedure for daily inspection and what to do if individuals are encountered in the structures during construction.

3. After the preconstruction survey and training outlined in 2 above, open all windows on the Inn, particularly upper floor, during construction. If replacing windows, they must remain open after installation.

4. After the preconstruction survey and training outlined in 2 above, remove soffit boards on front and back (north and south elevation) of the Inn at start of construction and do not replace until conclusion of work.

5. Prior to start of work each day, conduct a survey of the entire Inn by a construction foreman trained by the qualified bat biologist, including the attic space, for bats that may have returned to the building overnight.

6. In the unlikely event any bats are found inside the Inn, the qualified bat biologist or bat rescue center specialists must be notified immediately, who will attempt to hand-capture the bat and place it into one of the cottages to the east. Construction activities in the building shall not proceed until the bat has been successfully relocated outside the building.

7. If any bats are found on more than one occasion after steps 1-4 above have been followed, additional portions of the structure may need to be temporarily opened to increase the airflow and light into the structure. This recommendation would be made by the qualified bat biologist after evaluating the conditions and occurrence.

B. For the motel building, there is a remote possibility that demolition of the building could result in direct mortality of roosting bats, including Townsend's big-eared bat. To prevent direct mortality of bats resulting from demolition activities of the motel building, a qualified bat biologist shall conduct surveys to verify absence of bats 20-30 days prior to demolition. If bats are present, humane eviction shall be conducted either under supervision of a qualified bat biologist, or by a qualified bat exclusion specialist. The appropriate method for eviction from the motel building would be blockage and eviction. The specific locations for blockage and installation of one-way exists would be determined by the bat biologist at the time of the pre-demolition survey.

C. If required, human eviction shall occur only from about March 1 (or after heavy rains and when night temperatures are above 40F) until April 15, or from August 15 (assuming no heavy rains or unseasonably cold temperatures have occurred in April (which could delay birth), until about October 15 (or before heavy rains and before night temperatures get below 40F).

END OF SECTION

SECTION 06100

ROUGH CARPENTRY

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Section 01045 – Cutting and Patching

B. Section 06200 – Finish Carpentry

C. Section 06250 – General Wood Restoration

D. Structural Drawings Sheet S0.1 Rough Carpentry, items 1 through 16

1.2 SUMMARY

A. Supply and install all rough carpentry work as shown on the drawings and as specified herein.

1.3 REFERENCES AND STANDARDS

A. "Standard Grading and Dressing Rules #16, of the West Coast Lumber Inspection Bureau" (WCLIB).

B. "Grading Rules for Western Lumber" of the Western Wood Products Association (WWPA).

C. "Product Standard PS 1 for Construction and Industrial Plywood".

D. American Wood Preservers Association (AVYTA) Standard C.2, "Lumber, Timbers, Bridge Ties and Mine Ties - Preservative Treatment by Pressure Processes".

E. American Wood Preservers Bureau (AWPB) Quality Control Standards.

1.4 QUALITY ASSURANCE

A. Comply with all applicable and most stringent Federal, State and Local codes, safety regulations and standards.

PART 2 PRODUCTS

2.1 GRADE MARKS

A. All framing lumber shall be identified by the grade stamp of the West Coast Lumber Inspection Bureau or in-kind unstamped locally milled redwood.

B. All plywood shall be identified as to the species, grade, and glue type, and shall bear the identification grade mark of the American Plywood Association.

2.2 FRAMING

A. As much existing building framing shall be salvaged as possible. Replacement framing Douglas Fir Coast Region, conforming to WCLIB standard grading (unless otherwise noted on drawings):

1. Provide dressed lumber with dimensions and surface dressing of framing lumber to match existing.

2. See Structural Drawing S0.1, Rough framing, items 1 and 2.

B. Sheathing – replace in-kind 1" No. 1 Redwood

C. Alternate One - Porch framing shall be Per Structural Drawings S0.1 Rough Framing.

2.3 PLYWOOD

A. Plywood shall conform to U. S. Product Standard PS 1-83, American Plywood Association ADA Rated Sheathing, Exposure 1, thicknesses as indicated on drawings. See Structural Drawing Sheet S0.1 Rough Carpentry, item 7.

2.4 CONNECTIONS

A. General – All connections shall adhere to Structural Drawing S0.1 Rough Carpentry, items 8 through 15.

B. Light gage and heavy gage metal connectors shall be Simpson Company Strong Tie Connectors, unless otherwise noted on drawings. Substitutions may be made with prior approval by State Representative.

C. Foundation bolting: Per Structural Drawing S0.1

D. Nails shall be hot-dip galvanized for interior applications Nails shall be stainless steel for exterior applications.

E. Bolts and lag screws shall conform to the requirements of square or hexagonal heads, exterior, stainless steel, interior hot dipped galvanized, with matching nuts and washers under head and nut when in contact with wood or per structural drawings and specifications.

F. Understory cripple walls and shear panels shall be nailed with stainless steel nails.

PART 3 EXECUTION

3.1 GENERAL

A. Discard units of material with defects which might impair quality of work, and units which are too small to use in fabricating work with minimum joints or optimum joint arrangements.

B. Set carpentry work accurately to required levels and lines, with members plumb and true and accurately cut and fitted.

C. Securely attach carpentry work to substrate by anchoring and fastening as shown and as required by recognized standards. Make tight connections between members. Install fasteners without splitting of wood; predrill as required.

D. Bolt holes in wood shall be drilled 1/16" oversize. Washers shall be stainless steel washers except as noted. All nuts shall be tightened when placed and re-tightened just prior to closing in of floor.

3.2 PLYWOOD

A. General –See Structural Drawing S0.1 Rough Carpentry, item 7.

B. Nails shall be hot dipped galvanized for interior use and stainless steel for exterior applications unless otherwise specified. Alternative fasteners may be used with prior approval of State Representative.

C. Hand nail all plywood sheathing. Minimum edge distance of nail from edge of plywood and framing shall be 3/8".

D. Overdriving of nails so that the heads cut the outer veneer is not allowed.

E. Under-driving of nails shall be corrected by hand nailing.

F. Nails driven so as to miss the bearing shall be removed and correctly-driven substitute nails provided.

G . If any joists receiving the points of the nails are damaged, they shall be removed and replaced.

3.3 QUALITY CONTROL

A. Inspection and Testing will be arranged by the contractor performed by the appropriate agency with notice to the State Representative.

3.4 CLEAN-UP

A. Upon completion of work, remove tools, equipment, and other unnecessary materials from site. Return adjacent area to clean condition which existed prior to the start of work.

B. Remove and legally dispose off-site all debris, rubbish, and other materials resulting from work.

END OF SECTION

SECTION 06200

FINISH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

A. Exterior: new and / or salvaged wood trim, cladding.

B. Front porch wood elements (Alternate One)

1.2 RELATED SECTIONS:

A. Section 06100 - Rough Carpentry

B. Section 06250 - General Wood Restoration

1.3 REFERENCES

A. ANSI - American National Standards Institute, A156.18 - BHMA 1301 Standards for Materials and Finishes.

B. ASTM - American Society for Testing and Materials:

1. A307 - Specification for Carbon Steel Externally Threaded Standard Fasteners.

2. A536 - Specification for Carbon and Alloy Steel Nuts.

C. AWI - Architectural Woodwork Institute: Architectural Woodwork Quality Standards.

D. CRA - California Redwood Association: RSPAA - Redwood Siding Patterns and Application

E. FS - Federal Specifications

1. FF-S-325 - Shield Expansion; Nail Expansion; and Nails, Drive Screw (Devices Anchoring Masonry)

F. RIS - Redwood Inspection Service.

1. Standard Specifications for Grades of California Redwood Lumber

G. WIC - Woodwork Institute of California: Manual of Millwork.

1.4 SUBMITTALS: As specified in Section 01300.

A. Shop drawings for prefabricated millwork. Include species, erection data, profiles, dimensions, construction, and fastenings.

B. Samples:

1. One linear foot of each kind of trim, siding or flooring.

1.5 QUALITY ASSURANCE

A. Fabricator Qualifications: Fabricator shall be equipped for and experienced in doing work equal to standards specified and be able to provide evidence of such experience to the State Representative's satisfaction.

1.6 DELIVERY, STORAGE, AND HANDLING:

A. Protect materials from weather. Store materials a minimum of 6 inches above ground on framework or blocking and protect with waterproof covering allowing for adequate air circulation and ventilation. Do not store materials in damp portions of building or outside in the damp.

B. Protect treated materials from high humidity and moisture during storage and erection. Do not allow equilibrium moisture content of treated members or fabricated assemblies to exceed specified allowable range (8% - 15%) during storage or installation. If outdoor storage 6 inches above ground allows treated members or assemblies to exceed allowable equilibrium moisture content, do not store outdoors.

C. Do not deliver finish carpentry materials, until painting, wet work, grinding and similar operations which could damage, soil or deteriorate woodwork have been completed in installation areas. If, due to unforeseen circumstances, finish carpentry materials must be stored in other than installation areas, store only in areas meeting requirements specified for installation areas. Allow prepared finish materials to achieve moisture equilibrium with the relative humidity of the installation area prior to installation Plan work accordingly to allow materials enough time to acclimate.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General

1. Material Grades

a. Finish Carpentry Intended for Transparent Finish: WIC Custom Grade

2. Lumber shall be kiln dried to equilibrium moisture content suitable for fabrication in shop and suitable for use intended; minimum 8 percent, maximum 15 percent.

B. Lumber: See requirements in Section 06100 Rough Carpentry, and Section 06250 General Wood restoration

2.2 FABRICATION

A. Preparation

1. Verify measurements at project site.

2. Verify details and dimensions of fittings and piping integral with finish carpentry for proper fit and accurate alignment.

B. General Fabrication Requirements

1. Factory-fabricate and assemble work in complete units insofar as dimensions permit shipment and installation.

2. Kerf backs of solid members more than five inches wide or more than one-inch nominal thickness.

3. Nail replacement components for removed historic materials in same manner as original materials. Where exposed, nails should be same material composition and manufacture as historic materials, set nail heads for putty only if historic materials were treated that way.

4. Perform corrective measures necessitated by nonconformance with WIC standards. The State Representative's opinion shall govern discrepancies.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine surfaces scheduled to receive finish carpentry for conditions that will adversely affect installation.

B. Do not install work until unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Verify measurements at job site.

B. Verify details and dimensions of fittings and piping integral with finish carpentry for proper fit and accurate alignment.

3.3 INSTALLATION

A. Install finish carpentry in accordance with reviewed shop drawings.

B. Install millwork in accordance with WIC Section 26.

C. Set work square, level, plumb with edges scribed, accurately and secure in place with fastenings, clips, braces, brackets, anchors, shims and blocks.

D. Nail replacement components for removed historic materials in same manner as original materials. Where exposed, nails should be same material composition and manufacture as historic materials, set nail heads for putty only if historic materials were treated that way.

E. Miter Match historic woodwork joints copings, and molded work at returns and interior angles. Miter molded work at exterior corners, where applicable and to match the historic condition.

3.4 ADJUSTING, AND PROTECTION

A. Remove damaged or otherwise disfigured portions and replace with new prior to final acceptance.

B. Protect installation from damage until State Representative's final acceptance.

3.5 CLEAN-UP

A. Upon completion of work, remove tools, equipment, and other unnecessary materials from site. Return adjacent area to clean condition which existed prior to the start of work.

B. Remove and legally dispose off-site all debris, rubbish, and other materials resulting from work.

END OF SECTION

SECTION 06250

GENERAL WOOD RESTORATION

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Repair existing exterior and interior wood elements, including but not limited clapboard siding, redwood sheathing, trim, soffits, fascia and interior flooring.

1.2 RELATED SECTIONS:

A. 06200 - Finish Carpentry

B. 09900 - Painting

1.3 REFERENCES

A. Redwood Inspection Service, Standard Specifications for Grades of California Redwood Lumber, 1997 edition.

B. Woodwork Institute of California (W.I.C.), Manual of Millwork: Standards of the Industry, March 1, 1992.

1.4 SUBMITTALS

A Product Data: Wood epoxy consolidant, epoxy fill, and adhesive.

B. Shop Drawings: Full size profiles of all components to be replicated.

C. Samples: 6" lengths of all components to be replicated.

D. Field Samples

1. Dutchman patch.

2. Epoxy consolidation.

3. Adhesive repair with in-kind material.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Protect wood from exposure to weather at all times.

1. Stack wood sufficiently above the ground to avoid exposure to wet or damp surfaces.

2. Cover wood with waterproof sheeting to protect against inclement weather.

B. Store wood in a manner that allows air circulation within and around stacks.

C. Deliver materials to the site in the original and unopened containers, bearing packing labels describing the material type, name, and any catalogue numbers. Delivered materials must be identical to approved samples.

1.6 QUALITY ASSURANCE

A. The Contractor for work of this section must have a minimum of 10 years experience in the satisfactory completion of projects involving wood restoration including consolidation, fill, and replication of new elements.

PART 2 - PRODUCTS

2.1 CONSOLIDATION MATERIALS

A. Liquid Epoxy Consolidant for consolidation of decayed wood trim:

1. Use a low strength, low viscosity, moisture insensitive epoxy with a low modulus of elasticity specifically designed and marketed for wood restoration.

2. Subject to compliance with requirements, provide one of the following, or approved equal:

a. Liquid Wood, Abatron Inc., 5501 - 95th Avenue, Kenosha, WI 53144 Tel: (414) 653-2000

b. Flexible Epoxy Consolidant 100, ConServ Epoxies, Housecraft Associates, 7 Goodale Rd., Newton, NJ 07860 Tel: (201) 579-1112

c. West System 105 Epoxy Resin with 205 Hardener, Gougeon Brothers Inc., P.O. Box 908, Bay City, MI 48707 Tel: (517) 684-7286

d. Smith & Co. 5100 Channel Ave., Richmond, CA 94804 Tel: (800) 234-0330

B. Epoxy Fill for patching and resurfacing voids in wooden members:

1. Use a moisture insensitive, putty consistency epoxy compound with a low modulus of elasticity and inert filler that is specifically designed and marketed for wood restoration, and which may be cut and worked with wood-working tools after curing.

2. Subject to compliance with requirements, provide one of the following, or approved equal.

a. WoodEpox, Abatron Inc., 5501 - 95th Avenue, Kenosha, WI 53144 Tel: (414) 653-2000

b. Flexible Epoxy Patch 200, ConServ Epoxies, Housecraft Associates, 7 Goodale Rd.., Newton, NJ 07860 Tel: (201) 579-1112

c. West System 105 Epoxy Resin with 407, Gougeon Brothers Inc., P.O. Box 908, Bay City, MI 48707 Tel:(517) 684-7286

2.2 REPLACEMENT LUMBER

A. General Requirements:

1. Wood to bear the grade and trademark of the association under whose rules it is produced and a mark of mill identification, where applicable.

2. Lumber and finished woodwork throughout to be of sound stock thoroughly seasoned, kiln-dried to a moisture content not exceeding 15% for finish.

3. Work shall be free from defects or blemishes that will show on surfaces exposed after the finish coat is applied. Any material which is in any way defective or fails to meet specifications for quality and grade, or is otherwise not in proper condition, will be rejected.

4. Intent is to match existing in material species, size, pattern and dimension, and grain direction.

B. Species: California Redwood, Douglas Fir

C. Grade: Architectural Grade, Heart Clear, Kiln Dried, Vertical Grain, Surfaced.

D. Adhesives: Aliphatic resin, non-staining, heat and water resistant glue.

E. Fasteners: Of size and type to suit application. Finish nails for exposed locations to be hot dipped galvanized steel on the interior only. Exterior fasteners to be stainless steel, bronze, or forge-manufactured cut nails to match historic when appropriate to installation.

2.3 OTHER MATERIALS

A. All other materials required for work of this Section shall be selected by the Contractor subject to the approval of the State Representative.

2.4 FINISHES

A. Refer to Section 09900 – Painting and the drawings.

2.5 FABRICATION

A. Design and construction features: Comply with details shown for profile and construction of architectural woodwork. Where not otherwise shown, match existing and comply with applicable quality standards. Submit shop drawings of alternate details for review and approval by the architect and State Representative.

B. Match original wood species and grade. Fabricate architectural woodwork to match original profiles.

C. Fabricate architectural woodwork with pre-cut openings, where possible, to receive hardware and similar items. Locate openings accurately and use templates or roughing-in diagrams for proper size and shape.

D. Before proceeding with fabrication of woodwork required to be fitted to other construction, obtain measurements and verify dimensions.

PART 3 - EXECUTION

3.1 VERIFICATION OF CONDITIONS

A. Prepare all existing painted surfaces, using methods described in Section 09900 - Painting, for the following:

1. Salvaged and in-place woodwork with decorative profiles (woodwork having non-rectangular cross-sections).

B. Prior to beginning work, examine all surfaces to be repaired by epoxy consolidation or resurfacing. Correct any defects in the substrate that will affect the proper execution, stability, or longevity of the epoxy repair work. Assure that substrates and patching materials are thoroughly dry. Epoxy repairs with defects that mar the appearance of finished work or which is otherwise defective will be rejected.

3.2 INSTALLATION OF SALVAGE AND REPLICATED WOODWORK

A. Dress and finished woodwork to ensure it is free from machine milling marks, abrasions, raised grain or other defects on surfaces exposed to view. For construction and workmanship of millwork items, conform to or exceed the requirements of "Premium Grade" as established by Quality Standards of the Woodwork Institute of California, current edition. Where conflicts occur between these standards and this specification, the more stringent requirements govern in each case. Finish millwork surfaces to match historic finish.

B. Make joints tight and form joints to conceal shrinkage. Construct all exterior millwork so that water cannot pass through joints.

C. Match historic woodwork joints copings, and molded work at returns and interior angles. Miter molded work at exterior corners, where applicable and to match the historic condition.

D. Where woodwork has to be cut to fit adjoining work, repair damaged finish at cuts. Joints greater than 1/4" wide are not permitted between woodwork and adjoining existing masonry.

E. Standing and running trim: Install with minimum number of joints possible using full-length pieces (from maximum length of salvage lumber available) to the greatest extent possible. Stagger joints in adjacent and related members. Use all salvaged trim. If inadequate lengths of salvage trim are available to complete required work, install new trim to match. Use splayed heading joints where new or existing running trim abut.

F. Install the work plumb, level, true, and straight in relation to existing pitches of adjacent walls and floors with no distortions. Shim as required using concealed shims. Install to a tolerance of 1/16" in 8'-0" for plumb and level except where existing assembly is not plumb and level; and with 1/16" maximum offset in flush adjoining surfaces. Where existing assembly is not plumb and level, install work as close as possible to plumb and level, where applicable.

G. Before proceeding with the work, notify State Representative where woodwork cannot be set plumb and/or level due to existing field conditions.

H. Anchor woodwork to anchors or wood blocking built into substrates. Secure stripping and blocking with counter-sunk, concealed fasteners and blind nailing as required for a complete installation. Use galvanized finishing nails for exposed nailing at interior wood work only. Use stainless fixtures on the exterior. Sink exposed nails 1/16" and fill flush with woodwork if this is the historic condition.

I. Do all cutting and fitting required and install all hardware required for the work. Make all templates, etc., required for the fitting and adjustment of other mechanics' work to the woodwork. Do all cutting, patching, and fitting for the installation of work by other trades.

J. Contractor is responsible for materials and workmanship and is required to replace any work that may shrink, crack, or warp. Required for painting and finishing. Protect all finished hardware against damage until final acceptance of the work.

3.3 EPOXY APPLICATION

A. Protection and Preparation

1. Protect all surrounding areas prior to start of work.

2. Wear protective clothing, goggles, gloves and barrier creams as recommended by the manufacturer and as may be required by governmental regulations.

3. Do not begin epoxy consolidation and repair prior to approval of all submittals required by this section.

4. Do not begin epoxy consolidation and repair prior to placement of all protective barriers.

B. Epoxy Consolidation for decayed wood trim:

1. Mixing: Use extreme care and follow manufacturer's written mixing and storage instructions for each product. If written instructions are not available or do not apply to the project conditions, consult the manufacturer's technical representative for specific written recommendations before proceeding with the work. Do not use products that have passed the manufacturer's shelf life.

2. Prepare surface to be consolidated by removing all visible dirt and debris. To prevent leakage, temporarily plug large holes or cracks with modeling clay or wax. Surfaces must be dry before consolidation begins to achieve optimum results.

3. Drill 1/8" diameter holes across the end grain at an oblique angle, staggered at approximately 2" intervals, in areas of wood deterioration.

4. Pour epoxy resin into each area to be consolidated until the void has been filled. Top off voids as required as epoxy is absorbed into the wood. To avoid trapping air within the wood, work from one end of the piece to the other.

5. Cure time will vary according to ambient conditions. Follow manufacturer's instructions for curing. Protect consolidated areas from damage until fully cured. Protect consolidated areas from moisture until work is painted.

C. Epoxy Fill for patching and resurfacing deteriorated areas.

1. Use extreme care and follow manufacturer's written mixing and storage instructions for each product. If written instructions are not available or do not apply to the project conditions, consult the manufacturer's technical representative for specific written recommendations before proceeding with the work.

2. Prepare surface by removing all dirt and debris. Surfaces must be clean and dry prior to repair.

3. Fill voids, cracks, gouges and depressions with layers of epoxy at the locations indicated on the drawings or the specifications. Slightly overfill holes to allow for sanding or planing of surface. Where surface build-up is required to achieve positive drainage, apply additional layers of epoxy as

necessary. Back bevel gouges, depressions, and cracks to mechanically lock epoxy fill in place.

4. After appropriate cure time, hand sand or plane surface until smooth to achieve original profile.

5. Allow adequate curing time for consolidant before applying resurfacing compound.

6. Protect resurfaced areas from damage until fully cured. Protect filled and resurfaced areas from moisture until work is painted.

7. Prime and paint as specified in Section 09900.

3.4 ADJUSTMENT, CLEANING, FINISHING, AND PROTECTION

A. Where possible, repair damaged and defective existing woodwork to eliminate functional and visual defects. Where not possible to properly repair existing woodwork, replace it with new wood to match original. Adjust joinery for uniform appearance. and to match existing historic fabric.

B. Cover completed woodwork with protective paper to protect all vulnerable finishes from damage. Remove cover immediately before time of final acceptance.

END OF SECTION

SECTION 07210

BUILDING INSULATION

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Section 06100 Rough Carpentry

1.2 SUMMARY

A. This Section includes the following: Concealed building insulation at attic level (Alternate Two) and beneath the first floor (Base Bid).

1.3 SUBMITTALS

A. Product Data: For each type of product indicated per Section 01300 Submittals.

1.4 QUALITY ASSURANCE

A. Source Limitations: Obtain each type of building insulation through one source.

B. Fire-Test-Response Characteristics: Provide insulation and related materials with the fire-test-response characteristics indicated, as determined by testing identical products per test method indicated below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify materials with appropriate markings of applicable testing and inspecting agency.

1. Surface-Burning Characteristics: ASTM E 84.
2. Fire-Resistance Ratings: ASTM E 119
3. Combustion Characteristics: ASTM E 136

1.5 DELIVERY, STORAGE, AND HANDLING

A. Protect insulation materials from physical damage and from deterioration by moisture, soiling, and other sources. Store inside and in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation.

A. Protect insulation as follows:

1. Do not expose to sunlight, except to extent necessary for period of installation and concealment.
2. Protect against ignition at all times. Do not deliver plastic insulating materials to Project site before installation time.
3. Complete installation and concealment of plastic materials as rapidly as possible in each area of construction.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Glass-Fiber Insulation with vapor barrier

a. Certain Teed Corporation.
b. Johns Manville Corporation.
c. Knauf Fiber Glass.
d. Owens Corning.

2.2 INSULATING MATERIALS

A. General: Provide insulating materials that comply with requirements and with referenced standards.

1. Preformed Units: Sizes to fit applications indicated; selected from manufacturer's standard thicknesses, widths, and lengths.

2. Fastenings: For wood, wood stainless steel staples

B. Faced Mineral-Fiber Blanket Insulation: ASTM C 665, Type I (blankets with vapor barrier consisting of fibers manufactured from glass; with maximum flame-spread and smoke-developed indices of 25 and 50, respectively; passing ASTM E 136 for combustion characteristics.

1. R-Value: 13, Attic (Alternate Two)
2. R-value: 19 Under floor

2.3 AUXILIARY INSULATING MATERIALS

A. Adhesive for Bonding Insulation: Product with demonstrated capability to bond insulation securely to substrates indicated without damaging insulation and substrates.

2.4 INSULATION FASTENERS

A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:

1. Adhesively Attached, Spindle-Type Anchors:

a. AGM Industries, Inc.: Series T TACTOO Insul-Hangers.
b. Eckel Industries of Canada Limited; Stic-Klip Tupe N Fasteners
c. Gemco; Spindle Type.

2. Insulation-Retaining Washers:

a. AGM Industries, Inc.; RC150.
b. AGM Industries, Inc.; SC150.
c. Gemco; R-150
d. Gemco; S-150.

3. Anchor Adhesives:

a. AGM Industries, Inc.; TACTOO Adhesive.
b. Eckel Industries of Canada Limited; Stic-Klip Type S Adhesive
c. Gemco; Tuff Bond Hanger Adhesive.

B. Insulation-Retaining Washers: Self-locking washers formed from 0.016-inch- (0.41-mm-) Thick galvanized steel sheet, with beveled edge for increased stiffness, sized as required to hold insulation securely in place, but not less that 1-1/2 inches (38mm) square or in diameter.

1. Protect ends with capped self-locking washers incorporating a spring steel insert to ensure permanent retention of cap in the following locations:

a. Crawlspaces.
b. Ceiling plenums.
c. Attic spaces
d. Where indicated.

C. Anchor Adhesive: Product with demonstrated capability to bond insulation anchors securely to substrates indicated without damaging insulation, fasteners, and substrates.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Installer present, for compliance with requirements for Sections in which substrates and related work are specified and other conditions affecting performance.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Comply with manufacturer’s written instructions or vapor retarders, including removing projections capable of puncturing vapor retarders or of interfering with insulation attachment.

3.3 INSTALLATION, GENERAL

A. Comply with manufacturer's written instructions applicable to products and application indicated.

B. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed At any time to ice and snow.

C. Extend insulation in thickness required to achieve R-Value indicated on the drawings, to envelop entire area to be insulated. Cut and fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.

D. Water-Piping Coordination: If water piping is located on inside of insulated exterior walls, coordinate location of piping to ensure that it is placed on warm side of insulation and insulation encapsulates piping.

E. Apply single layer of insulation required to achieve R-Value indicated on the drawings, unless multiple layers are otherwise shown or required to make up total thickness.

3.4 INSTALLATION OF GENERAL BUILDING INSULATION

A. Apply insulation units to substrates by method indicated, complying with manufacturer's written instructions. If no specific method is indicated, bond units to substrate with adhesive or use mechanical anchorage to provide permanent placement and support of units.

B. Seal joints between closed-cell (non-breathing) insulation units by applying adhesive, mastic, or sealant to edges of each unit to form a tight seal as units are shove into place. Fill voids in completed installation with adhesive, mastic, or sealant as recommended by insulation manufacturer.

C. Install mineral-fiber blankets in cavities formed by framing members according to the following requirements:

1. Use blanket widths and lengths that fill the cavities formed by framing members. If more than one length is required to fill cavity, provide lengths that will produce a snug fit between ends.
2. Place blankets in cavities formed by framing members to produce a friction fit between edges of insulation and adjoining framing members.
3. For metal-framed wall cavities where cavity heights exceed 96 inches (2438mm), support un-faced blankets mechanically and support faced blankets by taping stapling flanges to flanges of metal studs.

D. Install board insulation in curtain-wall construction where indicated on Drawings according to curtain-wall manufacturer's written instructions.

1. Retain insulation in place by metal clips and straps or integral pockets within window frames spaced at intervals recommended in writing by insulation manufacturer to hold insulation securely in place without touching spandrel glass. Maintain cavity width of dimension indicated between insulation and glass.

3.5 PROTECTION

A. Protect installed insulation from damage due to harmful weather exposures, physical abuse, and other causes. Provide temporary coverings or enclosures where insulation is subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

END OF SECTION

ASPHALT SHINGLES

SECTION 07311

PART 1 – GENERAL

1. SECTION INCLUDES

A. Granular surfaced asphalt shingle roofing.

B. Underlayment,

C. Associated metal flashings and accessories.

2. RELATED SECTIONS

A. Section 06100 - Rough Carpentry

B. Section 07620 – Sheet Metal Flashing / Wood Gutters
.

3 REFERENCES

A. ASTM D226 - Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing.

B. ASTM D3018 - Class A Asphalt Shingles Surfaced with Mineral Granules.

C. ASTM D3462 - Asphalt Shingles Made From Glass Felt and Surfaced With Mineral Granules.

D. ASTM D4586 - Asphalt Roof Cement, Asbestos Free.

E. NRCA - Steep Roofing Manual.

F. UL 790 - Tests for Fire Resistance of Roof Covering Materials.

4. SUBMITTALS FOR REVIEW

A. Section 01300 - Submittals: Procedures for submittals.

B. Shop Drawings: Indicate specially configured metal flashings, jointing methods and locations, fastening methods and locations, and installation details.

C. Product Data: Provide data indicating material characteristics (including profiles, textures and colors), performance criteria, and limitations.

D. Samples: Submit two samples of each shingle color indicating color range and finish texture/pattern; for color selection.

5. SUBMITTALS FOR INFORMATION

A. Section 01300 - Submittals: Procedures for submittals.

B. Manufacturer's Instructions: Indicate installation criteria and procedures.

C. Manufacturer's Certificate: Certify that Products meet or exceed specified requirements.

6. QUALITY ASSURANCE

A. Perform Work in accordance with NRCA Steep Roofing Manual.

B. Maintain one copy of document on site.

7. MOCK-UP

A. Section 01400 - Quality Control: Requirements for mock-up.

B. Provide 4 foot by 4 foot mockup, including eave protection, underlayment, shingle installation, and associated flashings.

C. Locate where directed.

8. EXTRA MATERIALS

A. Section 01700 - Contract Closeout.01730 - Operation and Maintenance Data.

B. Provide 100 sq ft of extra shingles of the color selected as attic stock.

PART 2 - PRODUCTS

1. MATERIALS

A. Diamond pattern cut, UL Class “A” Heavy Weight: Mineral-surfaced, self-sealing, asphalt fiberglass strip shingles complying with ASTM D 3018, Type 1, ASTM D 3462 Fiberglass Shingle Standard, and ASTM D 3161 Class F Wind Standard. Provide shingles bearing UL Class “A” external fire exposure label, and UL 997 Wind Resistant label for 110 mph. Product to have a 50 year limited warranty. Pabco Roofing Products, Cascade, Signature Cut Shingles or equal.

B. Felt Underlayment: No. 30; unperforated organic felt complying with ASTM D 226, Type I; 36 inches wide.

C. Asphalt Plastic Cement: Nonasbestos fibrated asphalt cement complying with ASTM JD 4586, designed for trowel application.

D. Nails: Stainless steel, 11- or 12-gage, sharp-pointed, conventional roofing nails with barbed shanks, minimum 3/8-inch-diameter head, and of sufficient length to penetrate 3/4 inch into solid decking or to penetrate through plywood sheathing. Material of nails in contact with flashing shall match materials selected for flashing to prevent galvanic action. DO NOT use staples to fasten shingles.

E. Color to be selected match existing shingles currently covered and protected by metal temporary roofing.

2. FLASHING MATERIALS

A. Sheet Flashings: Copper Flashing: ASTM B370, temper H00 (cold rolled), unless temper 060 is required for forming; 16 oz./sq. ft. (0.55 mm thick), unless otherwise noted.

B. Flashing Nails: Standard round wire copper roofing type, of sufficient length to penetrate through roof sheathing.

3. FLASHING FABRICATION

A. Form flashings to standard profiles or profiles indicated on Drawings, and to protect roofing materials from physical damage and shed water.

B. Form sections square and accurate to profile, in maximum possible lengths, free from distortion or defects detrimental to appearance or performance.

C. Hem exposed edges of flashings minimum 1/4 inch (6 mm) on underside.

PART 3 - EXECUTION

1. EXAMINATION

A. Verify that roof penetrations and plumbing stacks are plumb and in place and flashed to deck surface.

B. Verify roof openings are correctly framed.

C. Verify deck surfaces are dry, free of ridges, warps, or voids.

2. PREPARATION

A. Fill knot holes and surface cracks with latex filler at areas of bonded eave protection.

B. Broom clean deck surfaces under eave protection and underlayment.

3. INSTALLATION

A. Comply with manufacturer's installation instructions and recommendations, but not less than recommended by "The NRCA Steep Roofing Manual."

B. Perimeter Underlayment: Apply along eaves and rakes and ridge. Lap end joints 4 inches and side joints 2 inches.

C. Install asphalt shingles beginning at lower end with a starter strip of roll roofing. Apply starter strip to gable end perimeters with 3/8" overhang to give ledger line for trimming shingles at gable ends. Fasten shingles in pattern, with weather exposure, and using number of fasteners per shingle as recommended by manufacturer. Provide ½ spacing offset at succeeding courses and open valley construction.

D. Install ridge vent: Cor-A Vent or equal. Cut and fit asphalt shingles at ridges and edges to provide maximum weather protection. Provide same weather exposure at ridges as specified for roof. Lap shingles at ridges to shed water away from direction of prevailing wind. Fasteners at ridges shall be of sufficient length to penetrate sheathing as specified.

E. Flashing: Install metal flashing as indicated and in accordance with details and recommendations of the "Asphalt Roofing" section of "The NRCA Steep Roofing Manual."

F Replace any damaged materials installed under this Section with new materials meeting specified requirements.

4. PROTECTION OF FINISHED WORK

A. Do not permit traffic over finished roof surface.

END OF SECTION

SECTION 07310

WOOD SIDING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Exterior wood cladding to match existing historic cladding.

B. Related trim, flashings, accessories, and fastenings.

1.2 RELATED SECTIONS

A. Section 01045 - Cutting and Patching

B. Section 06100 - Rough Carpentry

C. Section 06200 - Finish Carpentry

D. Section 06250 – General Wood Restoration

C. Section 07900 - Joint Sealers

D. Section 09900 - Painting

1.3 REFERENCES

A. ALSC - American Lumber Standards Committee: Softwood Lumber Standards.

B. "Standard Patterns of Worked Redwood Lumber" by the California Redwood Association (1936).

C. AWPA - American Wood Preservers' Association.

D. WCLIB - West Coast Lumber Inspection Bureau: Standard Grading Rules for West Coast Lumber.

E. WWPA - Western Wood Products Association.

1.4 SUBMITTALS

A. Submit under provisions of Section 01300.

B. Product Data: Provide data indicating materials, component profiles, fastening methods, jointing details, sizes, surface texture, finishes, and accessories.

C. Samples: Submit three samples, 12inches in length, illustrating surface texture and application of paint. Include grade stamp on sample.

1.5 QUALITY ASSURANCE

A. Grade materials in accordance with the following:

1. Lumber Grading: Certified by WCLIB.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, protect and handle products to site under provisions of Section 01600.

B. Store in ventilated areas with constant minimum temperature of 60 degrees F (16 degrees C) and maximum relative humidity of 55%

.

1.7 WARRANTY

A. Provide five year warranty under provisions of Section 01700.

B. Warranty: Include coverage of finished siding products from degradation of color or deterioration of finish.

PART 2 PRODUCTS

2.1 SIDING MATERIALS

A. Lumber: Match species, and grade to existing historic siding. Historic sources identify the section as “Bungalow Siding”

B. Accessories: Stainless steel; types, size, and strength to securely and rigidly retain work.

C. Accessory Components: Fascias, Starter strips, Trim etc; of same material and finish as

siding.

D. Prime Paint: See section 09900 – Painting.

2.2 FABRICATION - BOARD SIDING

A. Board Size: match height and thickness with historic dimensions.

B. Board Profile: Historic sources identify the section as “Bungalow Siding”. Match historic profile

C. Surface Texture: Smooth

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that substrate surfaces are ready to receive work.

3.2 PREPARATION - SITE TREATMENT OF WOOD MATERIALS

A. Apply preservative treatment to site sawn ends in accordance with manufacturer's instructions. Allow preservative to cure prior to erecting materials.

B. Verify materials do not exceed the specified percent moisture content before applying wood preservative treatment..

C. Prime paint cut edges and surfaces in contact with cementitious materials.

3.3 INSTALLATION - BUILDING PAPER

A. Not Uses

3.4 INSTALLATION – SIDING

A. Use the same quantity of nails per fixture point as used in the historic nailing system.

B. Nail at 16”o.c. aligned pattern or to match visible historic nailing pattern. Fasten siding in place, level and plumb.

C. Butt horizontal joints tight, and butter sealant at butt. Lap external corners, and cover with corner trim boards matching the thickness and width of the historic condition.

D. Back prime all siding and trim pieces.

E. Position cut ends over bearing surfaces. Sand and prime cut edges smooth and clean.

F. Install corner strips, closures, and trim.

G. Install metal flashings as shown on the drawings

H. Touch-up pre-finished paint surfaces that are disfigured. Unsightly touch-up will require removal and replacement of affected siding.

3.5 INSTALLATION TOLERANCES

A. Maximum Variation From Plumb and/or Level: ¼ inch / 10 feet.

B. Maximum Offset From Joint Alignment: 1/16 inch .

3.6 PREPARATION FOR SITE FINISHING

A. Sand work smooth and set exposed nails and screws if set historically.

B. Finishing: Specified in Section 09900.

END OF SECTION

SECTION 07620

SHEET METAL FLASHING / WOOD GUTTERS

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. Roof flashing at gable ends, eaves, and walls

B. Window and door head trim flashing.

C. Porch deck flashing (Alternate One)

D. Wood Gutters at Porch Roof (Alternate One)

1.2 RELATED SECTIONS

A. Section 07311 – Asphalt Shingles

B. Section 06250 – General Wood Restoration

1.3 REFERENCES

A. Comply with the latest applicable standards and recommendations of the following:

1. Architectural Sheet Metal, Fourth Edition (1987), published by Sheet Metal and Air Conditioning Contractors National Association, Inc.

1.4 QUALITY ASSURANCE

A. The work of this section shall be performed by a contractor with a minimum of five (5) years documented experience in sheet metal roofing. Submit qualifications of all personnel scheduled for work on this project. All work to be performed by persons whose qualifications have been submitted.

1.5 SUBMITTALS

A. Qualification data for firms and persons specified in the "Quality Assurance" article to demonstrate their capabilities and experience. Include a list of completed projects with project name, addresses, names of Architects and Owners, and other information specified.

1. Within five (5) business days after bid opening submit qualifications and experience of all lead personnel scheduled for work on this Project. List project manager or foreman's name and experience relative to this Project.

B. Product Data: Manufacturer’s technical product data, installation instructions and general recommendations for each specified sheet material and accessories.

C. Shop Drawings: Show methods of forming, jointing, nailing, and securing metal to form units, including joint details and waterproof connections.

D. Samples:

1. Two 12-inch-square samples of specified sheet materials to be exposed as finished surfaces.

2. Anchoring devices and fasteners: 2 pieces of each kind.

3. All seam types required in metal (including all junctions of two different seam types): 2-12 inch long pieces.

4. New 12 inch long Redwood Gutter section showing treated interior lining and painted exterior with rain leader attachment.

E. Installation procedures: Submit proposed methods and operations for installation prior to start of work. Include detailed description of method, sequence, and any other pertinent information about installation as required for this work.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver all materials to job site in manufacturer's unopened containers, clearly labeled as to manufacturer and product.

B. Store and handle all products to prevent damage or deterioration before incorporation into the Work.

PART 2 – PRODUCTS

2.1 FLASHING, RAINLEADER , AND GUTTER MATERIALS

A. Sheet Flashings: Copper Flashing: ASTM B370, temper H00 (cold rolled), unless temper 060 is required for forming; 16 oz./sq. ft. (0.55 mm thick), unless otherwise noted.

B. Flashing Nails: Standard round wire copper roofing type, of sufficient length to penetrate through roof sheathing.

C. Flashing Nails: galvanized ferrous roofing type, of sufficient length to penetrate through roof sheathing.

D. Screws or Bolts: Stainless steel or bronze for gutter fixture, round heads, sizes to fit field conditions.

E. Rain-leaders: Copper, 20 oz. 2 1/12” diameter round. Replacement Gutters: No. 1 Redwood. Section to match existing historic profile.

H. Wood Gutter Lining: Fully adhered TPO (Thermoplastic Polyolefin) Membrane, 60 MIL. ASTM D5338. Use GenFlex, GAF EverGuard, or equal.

2.2 FLASHING FABRICATION

A. Flashings are to be formed to existing profiles determined by field investigation, and must protect roof sheathing and trim materials from physical damage and must shed water.

B. Form sections square and accurate to profile, in maximum possible lengths, free from distortion or defects detrimental to appearance or performance.

E. Flashing: Hem exposed edges of flashing minimum 1/4 inch on underside.

D. Rain-leaders: Rolled tube with soldered interlocking seams. Solder all joints.

2.3 GUTTER FABRICATION

A. Remove sound piece of existing gutter for use as a pattern

B. Shop fabricate shaper and core-box knives to historic gutter profile.

C. Shape gutters in shop and seal as specified above.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine the areas and conditions under which work of this section will be performed. Correct conditions detrimental to timely and proper completion of work. Do not proceed until unsatisfactory conditions are corrected.

3.2 FLASHING AND GUTTER INSTALLATION

A. Install flashing in accordance with SMACNA Architectural Sheet Metal Manual requirements.

B. Secure flashings and gutters in place using concealed fasteners.

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3.3 CLEANING AND PROTECTION

A. Clean exposed metal surfaces, removing substances that might cause corrosion of metal or deterioration of finishes.

B. Protection: Advise Contractor of required procedures for surveillance and protection of flashings and sheet metal work during construction to ensure that work will be without damage or deterioration other than natural weathering at time of Substantial Completion.

3.4 CLEAN-UP

A. After completion of sheet metal operation, remove all equipment, tools, and debris and leave project site neat and clean.

B. Remove and legally dispose off-site all debris, rubbish, and materials resulting from sheet metal roofing operations.

END OF SECTION

SECTION 07910

JOINT SEALANTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Preparation of substrate surfaces to receive sealants.

B. Furnish and install joint sealants and backing for the following locations:

1. Perimeter joints of exterior openings where indicated.

2. Exterior intersections of dissimilar materials.

3. Other locations as shown on drawings.

1.2 RELATED SECTIONS

A. 08610 - Wood Windows

B. 09900 – Painting

1.3 REFERENCES

A. ASTM C834 - Latex Sealing Compounds

B. ASTM C92- - Elastomeric Joint Sealants

C. ASTM D1056 - Flexible Cellular Materials - Sponge or Expanded Rubber.

D. ASTM D2000 - Rubber Products in Automotive Applications.

E. ASTM - E814 - Standard Method of Fire Testing Through-Penetration Fire Stops.

F. FS TT-S-00277 - Sealing Compound, Elastomeric Type, Multi Component.

G. UL 1479 - Fire Test of Through-Penetration Fire Stop.

1.4 SYSTEM PERFORMANCE REQUIREMENTS

A. Provide specified joint sealants that have been produced and installed to establish and to maintain watertight and airtight continuous seals without causing staining or deterioration of joint substrates.

1.5 SUBMITTALS

A. General: Submit the following in accordance with Specification Section 01300 - submittals.

B. Qualification data for firms and persons specified in the "Quality Assurance" article to demonstrate their capabilities and experience. Include a list of completed projects with project name, addresses, names of Architects and Owners, and other information specified.

C. Product data from manufacturers for each joint sealant product required, including sealant chemical characteristics, performance criteria, substrate preparation, limitations, and color availability.

1. Certification by joint sealant manufacturer that sealants plus the primers and cleaners required for sealant installation comply with local regulations controlling use of volatile organic compounds.

D. Samples for initial selection purposes in form of manufacturer's standard bead samples, consisting of strips of actual products showing full range of colors available, for each product exposed to view.

E. Certificates from manufacturers of joint sealants attesting that their products comply with specification requirements and are suitable for the use indicated.

F. Manufacturer's Installation Instructions: Indicate special procedures, surface preparation, and perimeter conditions requiring special attention.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: Engage an experienced Installer who has completed joint sealant applications similar in material, design, and extent to that indicated for Project that have resulted in construction with a record of successful in-service performance.

B. Perform work in accordance with SWRI requirements for materials and installation, and with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.

C. Single Source Responsibility for Joint Sealant Materials: Obtain joint sealant materials from a single manufacturer for each different product required.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Project site in original unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration period for use, pot life, curing time, and mixing instructions for multi component materials.

B. Store and handle materials in compliance with manufacturer's recommendations to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

1.8 PROJECT CONDITIONS

A. Environmental Conditions: Do not proceed with installation of joint sealants under the following conditions:

1. When ambient and substrate temperature conditions are outside the limits permitted by joint sealant manufacturer.

2. When joint substrates are wet.

B. Joint Width Conditions: Do not proceed with installation of joint sealants where joint widths are less than allowed by joint sealant manufacturer for application indicated.

C. Joint Substrate Conditions: Do not proceed with installation of joint sealants until contaminants capable of interfering with their adhesion are removed from joint substrates.

PART 2 PRODUCTS

2.1 MATERIALS, GENERAL

A. Compatibility: Provide joint sealants, joint fillers, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.

B. Colors: Provide color of exposed joint sealants to comply with the following:

1. Match colors indicated by reference to manufacturer's standard designations.

2.2 SEALANT MATERIALS

A. Sealant: Sikaflex 1a, premium-grade, high performance, moisture cured, 1 component, polyurethane base, non sag, elastomeric sealant. Paintable. FS TT-S-0023OC, type 2, Class A. Distributed by Sika, San Diego, CA (619) 741-9291:
B. or approved equal – see requirements for submittals and substitutions.

2.3 JOINT SEALANT BACKING

A. General: Provide sealant backings of material and type that are non-staining; are compatible with joint substrates, sealants, primers and other joint fillers; and are

approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

B. Plastic Foam Joint Fillers: Preformed, compressible, resilient, non-staining, non-waxing, non-extruding strips of flexible plastic foam of material indicated below and of size, shape, and density to control sealant depth and otherwise contribute to producing optimum sealant performance:

1. Closed-cell polyethylene foam, nonabsorbent to liquid water and gas, non-outgassing in unruptured state.

C. Bond-Breaker Tape: Polyethylene tape or other plastic tape as recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

2.4 MISCELLANEOUS MATERIALS

A. Primer: Material recommended by joint sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint sealant-substrate tests and field tests.

B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming in any way joint substrates and adjacent nonporous surfaces, and formulated to promote optimum adhesion of sealants with joint substrates.

C. Masking Tape: Non-staining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 EXECUTION

3.1 INSPECTION

A. Verify joint dimensions, physical, and environmental conditions are acceptable to receive work of this section.

B. Beginning of installation means acceptance of substrate.

3.2 PREPARATION

A. Clean out joints immediately before installing sealants.

B. Remove any loose materials and other foreign matter which might impair adhesion of sealant.

C. Verify proper surface and ambient temperatures.

D. Verify that joint backing and release tapes are compatible with sealant.

E. Protect elements surrounding the work of this section from damage or disfiguration. Use masking tape where required to prevent contact of sealant with adjoining surfaces.

F. Prime joint surfaces where recommended by joint sealant manufacturers. Apply primer to comply with joint sealant manufacturer's recommendations.

3.3 INSTALLATION

A. Install sealant in accordance with manufacturer's instructions.

B. Measure joint dimensions and size materials to achieve required width/depth ratios.

C. Install joint backing to achieve neck dimensions no greater than 1/3 the joint width.

D. Apply sealant within recommended temperature ranges. Consult manufacturer when sealant cannot be applied within recommended temperature ranges.

E. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.

F. Tool joints concave.

G. Remove masking tape immediately after tooling joints without disturbing joint seal.

3.4 CLEANING AND REPAIRING

A. Clean completed work.

B. Clean adjacent soiled surfaces.

C. Repair or replace defaced or disfigured finishes caused by work of this section.

3.5 PROTECTION OF FINISHED WORK

A. Protect finished installation

B. Protect sealants until cured.

END OF SECTION

SECTION 08200

WOOD DOORS

PART 1 GENERAL

1.01 RELATED SECTIONS

A. Section 01450 – Cutting and Patching

B. Section 06100 – Rough Carpentry

C. Section 06200 - Finish Carpentry

D. Section 07910 – Joint Sealants

E. Section 09900 – Painting

1.02 REFERENCES

A. "Architectural Woodwork Quality Standards" (Fifth Edition) by The Architectural Woodwork Institute.

B. WDMA IS 1A – Window and Door Manufacturers Association (WDMA)

1.03 SUBMITTALS

A. Shop Drawings: Show details, elevation, size, thickness, swing, hardware and construction for each door type, location and installation requirements for hardware. 81/2 x 11 format.

B. Product Data: Catalog sheets, specifications, and installation instructions for door specified.

1.04 QUALITY ASSURANCE

A. Certifications: Affidavit by door manufacturer certifying that the door meets the specified requirements and standards.

B. Mark each door with National Woodwork Manufacturers Association (NWMA) Wood Flush Door Certification hallmark certifying compliance with applicable requirements of ANSI/NWMA.

C. Obtain door and frames from a single manufacturer to ensure uniformity in quality of appearance and construction.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Factory Finished Doors: Deliver door in factory applied plastic bags or heavy paper protective cartons.

B. Deliver, store and protect and handle products under provisions of WDMA, AWI and manufacturer's care and handling instructions. The following are general guidelines:

1. Store doors flat and off the floor on a level surface in a dry, well-ventilated building. Do not sore on edge. Protect/cover doors from dirt, water and abuse.
2. Protect doors from exposure to light after delivery – some wood species are light sensitive.
3. Do not subject doors to extremes in either heat or humidity. HVAC systems must be operational and balanced, providing a temperature range of 50 to 90 degrees Fahrenheit and 25% to 55% relative humidity.
4. When handling doors, always lift and carry. Do not drag across other doors or surfaces. Handle with clean hands or gloves.

1.06 PROJECT CONDITIONS

A. Environmental Requirements: Do not store doors within the building or install doors until after completion of cast-in-place concrete, and until after the building has dried out.

B. Note: The door shown on the drawings and specified herein is to be considered a temporary, but secure door, providing controlled access to the building after stabilization is completed. The door is a non-traditional pattern, and the assembly contains modern materials which will be removed in the future Rehabilitation Phase.

PART 2 PRODUCTS

2.01 MATERIALS and ACCESSORIES

A. Lumber: Comply with applicable AWI species requirements for door type and grade.

1. Exposed Surfaces: As indicated on the Drawings or specified. Furnish matching exposed surface material on both faces and both edges of each door unless otherwise indicated. .

B. Wood Veneers: Comply with applicable AWI species requirements for door exterior door type and grade.

C. Glue: Type I waterproof adhesives for bonding faces and crossbands to core, for exterior door fabrication.

D. Water-Repellent Preservative Treatment Materials for Exterior Doors: Comply with National Wood Window And Door Association's Standard NWWDA I.S.4.

E. Flashing for Exterior Doors: 20 oz. copper.

G. Threshold: Pemko, Aluminum to match jamb.

I. Weather Stripping: install weather stripping to interior head and jambs. Install brush at bottom of door compatible with the threshold.

H. Hardware:

1. Hinges: Stainless steel heavy duty with rounded corners, stainless screws, fixed hinge pin. Mount three hinges on door. Manufacturer: Stanley, National or equal.

2. Lock: Dead bolt type with exterior key and interior thumb turn. All stainless steel parts including strike and screws. Supply 12 inch long, 16 gauge, stainless steel astragal to cover bolt throw location. Manufacturers: Schlage, Yale, Stanley or equal.

3. Note: This specification calls for deadbolt locking and latching only. A mortised or drilled latching, and mechanism with protruding knobs is deleted for security reasons.

2.02 FABRICATION

A. Exterior Flush Wood Door: Size determined in the field. Thickness 1 3/4 inches. 2 or 3 ply face panel construction each side over a solid glued wood block (stave) core edge bonded to stiles and rails, complying with AWI SLC-5 or SLC – 7. Apply water repellent preservative treatment to exposed wood parts after fabrication. Install flashing over top of door.

1. Exposed Surfaces for paint finish: Medium density overlay face over standard thickness close grain hardwood face veneers. Close grain hardwood for exposed edges and all other solid wood components.

B. Frame: Solid wood, Vertical Grain Douglas Fir, three piece type (door jambs, and head with solid wood stops.

2.03 FACTORY PRIMING

A. Factory Priming for Doors to Receive Paint Finish: Shop apply prime coat on all exposed surfaces and edges of wood doors scheduled or indicated to receive paint finish as follows:

1. Exterior doors: Two coats oil base exterior primer. Finish coats will be field applied.

2.04 FACTORY FINISHING, PREFITTING, AND PREPARATION FOR HARDWARE

A. Factory Finishing: Prefinish wood doors at the factory or finishing shop as follows:

1. Comply with AWI factory finishing recommendations including final sanding requirements.

2. Finishing System: Comply with the requirements of the following AWI Finish System:

B. Factory Prefitting and premachining for hardware: Prefit doors scheduled or indicated to receive factory finishing. Premachine these doors for hardware including hinges and lock. Contractor to coordinate premachining for lock and hinges with the door manufacturer.

1. Comply with AWI clearance requirements for prefitting. Machine doors for hardware requiring cutting of doors.

PART 3 EXECUTION

3.01 PREPARATION

A. Condition doors to average prevailing humidity in installation area prior to hanging.

B. Prepare doors to receive deadbolt type locking hardware. Coordinate door and frame manufacture with the required hardware for proper location of hardware. Machine doors for hardware.

C. Exterior Doors: Brush coat surfaces of cutouts and surfaces which have been trimmed or altered after fabrication with a compatible preservative.

D. Touch-up cut surfaces of factory primed doors with primer compatible with primer specified for factory priming.

3.02 INSTALLATION

A. Install the Work of this Section in accordance with manufacturer's printed installation instructions, except as shown or specified otherwise.

B. Fit doors to prepared frames for proper fit. Allow 3/32 to 1/8 inch clearance at head and both jambs. Trim doors when necessary by planning. Slightly chamfer edge of lock stiles. Bevel lock stile as follows: 1/8 inch in 2 inches.

C. Prefit Doors: Do not alter prefit factory finished doors.

D. Factory Finished Doors: Field touch-up and restore finishes damaged during installation.

END OF SECTION

SECTION 08610

WOOD WINDOWS (Alternate 3)

PART 1 - GENERAL

1.1 SUMMARY

A. Provide new wood double hung window and frame, complete, as shown and specified.

1. The new windows and frames shall match the appearance of the existing double-hung windows on the building.

B. Related Sections:

1. Section 01045 – Cutting and Patching

2. Section 06100 – Rough Carpentry

3. Section 06200 – Finish Carpentry

4. Section 07910 – Joint Sealants

5. Section 09900 - Painting.

1.2 REFERENCES

A. Standards: Comply with the following standards for fabrication and installation.

1. National Wood Window and Door Association (NWWDA) I.S.2. “Industry Standard for Wood Window Units.”

2. NWWDA IS.4. “INDUSTRY Standard for Water-Repellent Preservative Treatment for Millwork.”

3. ASTM E1105. “Standard Method for Field Measurement of Water Penetration through Installed Exterior Windows and Doors.”

1.3 SUBMITTALS

A. Product Data: Submit product data on each manufactured products specified and proposed to be furnished. Include window hardware, operating mechanism, weather-sptripping, sealant, wood preservative treatment and primer.

B. Shop Drawings: Submit shop drawings for fabrication and installation of new wood window. Include dimensioned elevations and sections as well as full size details of all typical members and joinery. Show hardware and relationship to adjoining work.

C. Samples:

1. Submit samples of corner and operating sash complete with glass, 10"x10" size.

2. Submit complete sets of operating hardware and weatherstrip.

1.4 QUALITY ASSURANCE

A. The Quality Standards, latest edition of the Architectural Woodwork Institute, Section 1000, apply to the work of this Section. Provide Premium Grade work as defined in the above referenced standard for all wood window work. Where conflicts occur between these standards and this specification, the more stringent requirement governs in each case.

B. NWWDA Standard I.S.2-87: Provides new windows meeting the requirements for Grade 40 windows.

C. Manufacturer's Qualifications: Engaged in the manufacturing, sales, and services of wood windows for minimum five (5) years.

D. Installer's Qualifications: Regularly engaged in the installation of wood windows in residential projects for minimum five (5) years.

E. Field Mock-up and Installation:

1. After approval of all submittals and prior to fabrication of the windows for the Project, fabricate and install one complete window unit on the building.

2. The unit shall be constructed, installed and finished as if it is the final product. The State Representative will review the construction and installation for compliance with the Contract Documents. Contractor shall correct all deficiencies and adjust the product and installation as required by the State Representative at no additional cost.

3. The accepted installation shall be left in place and shall serve as the standard for the work.

1.5 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Wood window Components: Keep all materials and fabricated items dry and protected from damage, soiling, and deterioration.

1.6 SITE CONDITIONS

A. Field Measurement: Make all field measurements as required prior to fabrication and installation.

B. Coordination: Coordinate work with other trades to ensure proper sequencing and fitting of construction.

1.7 WARRANTY

A. Warrant for a period of ten years from the date of Project Completion that the wood window, frame, glazing, and the accessory components shall be free of defects in material and workmanship and that it will not leak water, wear, rot or deteriorate excessively, or otherwise fail to perform as required.

B. In accordance with the Contract Documents, locate and repair the defective workmanship, replace the defective material, and remove and replace with work which has been superimposed on the window to be repaired or replaced. Also repair or replace all portions of the building damaged by the defect or repair of it.

PART 2-PRODUCTS

2.1 MATERIALS

A. Wood, Double hung replacement windows to match the size and configuration of existing original windows.

1. Double Hung Window, with integral hardware and weather stripping. Primer coat by manufacturer Single glazed (ASTM C 1036), Authentic divided lights – six over six. All fasteners shall be stainless steel or bronze.

B. Manufacturers:

1. Marvin: Wood Ultimate Insert Double Hung Window

2. Andersen 200 Series Narrowline Double HungWood Windows

3. Jeld-Wen Builders series Double Hung

C. Sealant: Sikaflex 1a, premium-grade, high performance, moisture cured, 1 component, polyurethane base, non sag, elastomeric sealant. FS TT-S-0023OC, type 2, Class A. Distributed by Sika, San Diego, CA (619) 741-9291:
or approved equal – see requirements for submittals and substitutions.

PART 3 EXECUTION

3.1 PREPARATION

A. Verify dimensions of supporting structure at the project site by accurate field measurements so that all work will be accurately designed, fabricated and fitted to the structure.

B. Coordinate window work with the work of other sections and provide items to be placed during the installation of other work at the proper time to avoid delays in the work. Place such items, including inserts and anchors, accurately in relation to the final location of window components.

C. Remove all necessary portions of the existing wall.

D. Examine the substrates of adjoining construction and the conditions under which the work is to be installed. Do not proceed with the work until unsatisfactory conditions detrimental to the proper and timely completion of the work have been corrected.

E. Protect all work and materials, both new and existing, from damage. Any damage or repair to the exterior made necessary by removal of existing wall shall be reported to the State Representative at once.

3.2 INSTALLATION

A. Erect all component parts of the windows in accordance with the manufacturer's instructions and recommendations, unless otherwise indicated or specified.

B. The sash shall not be altered in the field.

C. Do not erect members which are warped, bowed, deformed or otherwise damaged or defaced to such extent as to impair strength or appearance, including exterior finish. Remove and replace window units damaged during the process of erection, including exterior finish, as directed by State Representative.

D. Set units level, plumb, and true to line, with uniform joints. Support head, jamb and sill on shims of material approved by the State Representative, and secure in place by fastening to supporting structure. Use only the types of equipment, ropes, wedges, spacers, shims and other items during erection which will not stain or mar the finish units.

E. All assembled window unit materials shall be properly back sealed, buttered where it is required, and property fastened before erection. The State Representative reserves the right to determine whether the materials are satisfactorily sealed during installation.

F. Provide all materials fully processed, profit, predrilled, etc., and the unit when assembled, shall fit the openings so as not to require any cutting, ripping, or fitting on the job site.

G. All fasteners of windows in adjacent building elements shall be designed and installed to withstand the specified performance standards.

H. Paint sash and frame as specified in Section 09900 - Painting.

3.3 CLEANING

A. Wash clean window assembly prior to Substantial Completion.

END OF SECTION

SECTION 09560

WOOD FLOORING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Install new wood tongue and groove porch flooring. (Alternate One – Porch Reconstruction)

B. Related Sections:

1. Section 02071 - Protection and Salvage of Historic Elements
2. Section 06100 – Rough Carpentry
3. Section 06200 – Finish Carpentry
4. Section 07910 – Joint Sealants
5. Section 09900 - Painting

1.2 QUALITY ASSURANCE

A. Qualifications of wood flooring installation: Contractor must include a minimum of five (5) years experience in wood floor work, involving cleaning, sanding, and new flooring installation.

B. The contractor shall have satisfactorily completed a minimum of two (2) similar flooring restoration projects within the previous five (5) years.

C. Personnel scheduled for work on this project shall have a minimum of two (2) years experience in flooring restoration involving cleaning, sanding, and new flooring installation. Submit qualifications of all personnel scheduled for work on this project. Work shall be performed by persons whose qualifications have been submitted.

1.3 SUBMITTALS

A. Submit under provisions of Section 01300.

B. Samples:

1. Submit three 12 inch long samples of new flooring to match existing porch flooring.

2. Submit three 12 inch samples of original flooring for comparison with new stock from the deconstructed porch.

3. Survey the porch for flooring stock cross section, wood species, nailing type, nailing pattern, and joint pattern. Submit findings in a short narrative with sketches in 8 1/2 x 11 format.

C. Product Data: Submit technical data and application instructions for joint sealants, fasteners, primer and paint.

1.4 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver and handle products under provisions of Section 01600.

B. All new flooring materials shall be thoroughly dry before delivery. Deliver all other materials to the job site in the manufacturer's original containers with labels intact.

1.5 SITE CONDITIONS

A. Provide equipment and cover to maintain a minimum of 40 degrees F and to protect work completed or in progress.

B. Maintain materials and surrounding air at minimum 50 degrees F prior to, during, and 48 hours after completion of work.

C. Do not install wood flooring material until wet construction work is complete and ambient air at installation point has moisture content stabilized.

D. Protection: Adequately protect existing construction to remain and surrounding property from damage.

E. Disposal: Dispose of all waste materials in a safe and legal manner.

F. Regulations: conform to all applicable federal, state, and local regulations.

PART 2 - PRODUCTS

2.1 FLOORING

A. New Flooring at Porch:

1. All flooring shall match the original flooring removed from the porch during deconstruction. Existing flooring material is tongue and groove Douglas Fir

2.2 ACCESSORIES

A. Nails: Stainless Steel. Type and size recommended sufficient to fix nail tongue and groove flooring to its substrate.

B. Joint Sealer: Sikaflex polyurethane

2.3 FINISHING

A. Floor Paint: Alkyd Enamel. Two coats of primer, and two coats of paint formulated for porch floors. Color to be selected by Architect.

B. Follow paint manufacturer's instructions for the drying time between primer and finish coats. Allow paint to fully cure before allowing traffic on porch floor.

PART 3 - EXECUTION

3.1 PREPARATION

A. Ensure that the moisture content of the wood meets the paint manufacturer's requirements prior to priming and painting.

B. Verify that the substrate is smooth and flat.

3.2 INSTALLATION

A. Lay porch flooring to match existing pattern.

C. Joints shall occur over bearing points

D. Nail flooring to match existing nailing methods.

E. Apply joint sealant to the grooved side of each board prior to attaching the adjacent tongued edge.

3.3 CLEANING

A. Allow complete and painted porch floor surface to fully cure before cleaning

3.4 FINISHING AND REFINISHING

A. Hand-sand existing flooring the minimum degree required to accommodate patched areas.

B. Prepare new wood as recommended by finish manufacturer.
C. Mask off adjacent surfaces.

D. Apply stain to patches on same day that sanding is completed. Stain to match clean surrounding wood.

E. Apply first coat of finish. Allow to dry and buff with steel wool to remove irregularities. Vacuum clean and wipe with damp cloth.

F. Apply second coat and allow to dry. Lightly buff with steel wool and vacuum clean.

G. Apply last coat of finish.

H. Clean and polish floor surfaces in accordance with manufacturer's instructions.

3.5 PROTECTION OF FINISHED WORK

A. Protect finished work under provisions of Section 01500.

B. Do not permit traffic near unprotected finish surfaces.

3.6 CLEAN-UP

A. Upon completion of work, remove tools, equipment, and other unnecessary materials from site. Return adjacent area to clean condition which existed prior to the start of work.

B. Remove and legally dispose off-site all debris, rubbish, and other materials resulting from work.

END OF SECTION

SECTION 09900

PAINTING

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. This Section includes surface preparation, painting, and finishing of new and existing wood, exterior surfaces, including the following:

1. Exterior woodwork: Wood siding, fascia, and soffit, porch posts railings and deck window sash: Oil base, or acrylic semi gloss enamel.

1.2 RELATED SECTIONS:

A. Section 06200 - Finish Carpentry

B. Section 06250 - General Wood Restoration

C. Section 07910 - Joint Sealants

D. Section 08610 - Wood Windows

E. Section 086200 - Wood Doors

1.3 REFERENCES

A. ASTM D16 - Definitions of Terms.

B. ASTM D2016 - Test Method for Moisture Content of Wood.

C. NPCA (National Paint and Coatings Association) - Guide to U.S. Government Paint Specifications.

D. PDCA (Painting and Decorating Contractors of America) - Painting - Architectural Specifications Manual.

1.4 SUBMITTALS

A. General: Submit the following according to Section 01300 – Submittals.

B. Product data for each paint system specified, including primers and sealers.

1. Provide the manufacturer's technical information including label analysis and instructions for handling, storage, and application of each material proposed for use.

2. Certification by the manufacturer that products supplied comply with local regulations controlling use of volatile organic compounds (VOCs).

C. Qualification data for firms and persons specified in the "Quality Assurance" article to demonstrate their capabilities and experience. Include a list of completed projects with project name, addresses, names of Architects and Owners.

D. Samples for Verification Purposes: Submit four 8-1/2 x 11 inch samples of each color to be applied, with texture to simulate actual conditions, on representative samples of the actual substrate.

1.5 QUALITY ASSURANCE

A. Applicator Qualifications: Work must be performed by a firm having not less than five (5) years successful experience in painting work comparable to work of this Section, and employing personnel skilled in the painting processes and operations indicated.

1. Only skilled journeymen painters who are familiar and experienced with the materials and methods specified and are familiar with the design requirements shall be employed for work of this Section.

2. One skilled journeyman painter shall be present at all times during execution of the work and shall personally direct the work.

B. Single-Source Responsibility: Provide primers and undercoat paint produced by the same manufacturer as the finish coats

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to the job site in the manufacturer's original, unopened packages and containers bearing manufacturer's name and label, and the following information:

1. Product name or title of material.

2. Product description (generic classification or binder type).

3. Manufacturer's stock number and date of manufacture.

4. Contents by volume, for pigment and vehicle constituents.

5. Thinning instructions.

6. Application instructions.

7. Color name and number.

B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F (7 deg C). Maintain containers used in storage in a clean condition, free of foreign materials and residue.

C. Safety: Use all means necessary to protect all persons, whether engaged in the work of this Section or not, from any harm caused by work of this Section.

1.7 JOB CONDITIONS

A. Do not use torches, heat guns, or any other heat-generating equipment to remove paint or coatings.

B. Apply solvent-thinned paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 45 deg F (7 deg C) and 95 deg F (35 deg C).

C. Do not apply paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or any other conditions detrimental to formation of a durable paint film.

D. Lead: Remaining existing paint may contain lead. Take all necessary precautions to ensure the safety of all persons engaged in removing lead-based paint and dispose of all residues generated from lead-based paint stripping in legal manner

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1.8 EXTRA MATERIALS

A. Provide 1 gallon of each color to State Representative.

B. Label each container with date, color and type, in addition to the manufacturer's label.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Paint and finish products: Highest quality standard brand, produced by a nationally known manufacturer. Provide primers and other undercoat paint produced by same manufacturer as finish coats. Paint products shall be fresh and well ground; shall not settle readily, cake, or thicken in the container; shall be broken up readily with paddle to a smooth consistency; and shall have easy application properties. Other materials such as boiled linseed oil, turpentine, mineral spirits, miscellaneous thinners, varnish, and shellac, and wax shall be the highest quality of an approved manufacturer.

B. Filling compounds: Use only high quality, nonshrink materials which have been approved.

C. Colors: To be selected by the Architect based on scrapings from historic painted surfaces.

2.2 PAINT MANUFACTURERS

A. Manufacturer: Unless otherwise designated, listed materials are the product of the following manufacturer and require no further approval.

1. Dunn Edwards / Benjamin Moore - Pigmented paint

2. Behelen - paste wood fillers

3. Jasco - Strippers

B. Equivalent products of the following manufacturers may be used subject to compliance with requirements and approval by the State Representative.

1. Benjamin Moore- Pigmented paint

2. Clarks – paste wood fillers

3. Strippers - Approved equal - see requirements for submittals and substitutions

2.3 PAINT SYSTEMS

A. Exterior Coating Systems: Dunn Edwards / Benjamin Moore / As stated below, or approved equal

1. Wood Windows, Doors, Trim, Fascias, Soffits and Railings:

a. Primer- E-Z prime (W708)

b. Top Coats: Two coats Permasheen, W901, acrylic semi-gloss enamel. Color to match historic colors determined by scraping.

2. Wood Siding:

a. Primer- E-Z prime (W708)

b. Top Coats- Two coats Permashell, W940, acrylic egg-shell acrylic paint. Color to match historic colors determined by scraping.

3. Porch Deck Surfaces (Alternate 1):

a. Alkyd enamel formulated for porch deck use

C. Materials not specified by brand names:

1. Cementitious Filler: Non-shrink formulation; white Portland cement with fine silicate aggregate, zinc-oxide pigment, and reinforcing chemical binder.

2. General Purpose Filler: Standard spackling compound or gypsum wallboard joint compound or latex patching compound for patching plaster, gypsum wallboard surfaces to receive opaque finishes.

3. Turpentine, thinners, driers, and putty: As recommended by each manufacturer

for his respective product.

4. Alcohol - Denatured.

6. Equipment: Provide scaffolding, staging, drop cloths, covers, brushes, rollers and spraying and other equipment required for proper execution of the work.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions under which painting will be performed for compliance with paint application requirements. Surfaces receiving paint must be thoroughly dry before paint is applied.

B. Applicator shall notify Contractor in writing of conditions detrimental to proper and timely completion of work.

1. Do not begin to apply paint until unsatisfactory conditions have been corrected.

2. Start of painting and finishing work will be construed as the Applicator's acceptance of surfaces and conditions.

C. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content is below the recommended maximum.

3.2 CLEANING & PROTECTION

A. Before applying paint or other surface treatments, clean the substrates of substances that could impair the bond of the various coatings.

B. Protect wet, newly painted surfaces from dust and other debris.

3.3 SURFACE PREPARATION - EXTERIOR WOOD

A. General:

1. Clean surfaces of dirt, oil, and other foreign substances with scrapers, mineral spirits, and sandpaper, as required.

2. Sand smooth all finished surfaces exposed to view. Remove sanding dust.

3. IMPORTANT! Do not use abrasive rotary or pneumatic paint removal methods. Do not use high pressure water streams.

B. Wood Surfaces:

1. Scrape and wire brush all loose paint, taking care not to damage existing wood surfaces.

2. Do not proceed with further work until all missing, rotted or otherwise deteriorated wood is repaired following the requirements of Section 06250 - "General Wood Restoration".

3. Set all raised nails.

4. Prime all bare wood at exposed surfaces prior to application of finish coat; lightly sand; remove sanding dust.

5. After priming fill any remaining surface imperfections; spot prime over fill areas; lightly sand with fine sandpaper.

7. Seal all new wood immediately upon delivery, if required. Scrape and clean small, dry, seasoned knots, and apply a thin coat of white shellac or other recommended knot sealer where resin has exuded from wood.

3.4 PAINT APPLICATION

A. General: Apply paint according to manufacturer's directions. Use applicators and techniques best suited for substrate and type of material being applied.

B. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.

1. The number of coats and the film thickness required are the same regardless of the application method. Do not apply succeeding coats until the previous coat has cured as recommended by the manufacturer. Sand between applications where sanding is required to produce a smooth even surface according to the manufacturer's directions.

2. Apply additional coats if undercoats, stains, or other conditions show through final coat of paint until paint film is of uniform finish, color, and appearance. Give special attention to ensure that all exposed surfaces, including edges, corners, and crevices, receive a dry film thickness equivalent to that of flat surfaces.

3. Sand lightly between each succeeding coat.

C. Application Procedures: Use brushes or rollers according to manufacturer’s directions. Do not use spray equipment.

D. Minimum Coating Thickness: Apply materials no thinner than the manufacturer's recommended spreading rate. Provide the total dry film thickness of the entire system as recommended by the manufacturer.

3.5 CLEANING

A. Cleanup: At the end of each work day, remove empty cans, rags, rubbish, and other discarded paint materials from the site.

B. Upon completion of work, remove tools, equipment, and other unnecessary materials from site. Return adjacent area to the condition which existed prior to the start of work.

C. Remove and legally dispose off-site all debris, rubbish, and other materials resulting from this work.

3.6 PROTECTION

A. Protect work of other trades and surrounding area against damage by painting. Correct damage by cleaning, repairing or replacing, and repainting, as acceptable to State Representative.

1. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

END OF SECTION

SECTION 16010

ELECTRICAL DESIGN / BUILD PROVISIONS

PART 1 GENERAL

1.1 WORK INCLUDED

A. Disconnect power from Motel structure prior to demolition

B. Provide power to temporary utility pole during construction activities.

C. Reconnect power to the southwest corner of the Inn structure as shown on the drawings using marine grade components. Provide weather head, panel and meter.

D. Supply one interior and one exterior weatherproof grounded duplex outlet at locations shown on the drawings.

E. Electrical work is design-build. The contractor is responsible for all coordination with the electrical utility company.

F. New service should be 200 amps with 220 volt capacity for future hydronic baseboard heating

1.2 INSPECTION OF THE SITE AND EXISTING CONDITIONS

A. It is strongly advised that the Contractor walk through the jobsite scheduled to take place during the pre-bid conference prior to submitting his proposal for the work to account for all labor and material cost required to perform the contract work.

B. If the Contractor finds that existing project site conditions substantially differ from what is shown on the contract drawings, Contractor shall notify the Project Representative in writing at least five (5) working days before bid date and request clarification. Response and any Addendum thereof shall be at the discretion of the Project Representative.

C. After award of Contract, verify the location of existing underground utilities. Protect all existing underground utilities during construction.

1.3 CONTRACTOR QUALIFICATIONS & RESPONSIBILITIES

A. New and retrofit aspects of the work requires an electrical subcontractor with a C10 license and minimum of 5 years documented experience performing similar type of work. Experience shall include at least one historic building.

B. Contractors claiming experience that satisfies requirement will be required to provide 2 local references, failure to provide proof of experience when requested shall make the bidder non-responsive and will be grounds for bid rejection.

C. Only electricians who possess the California General electrician's license will be allowed to performing work electrical work in this project. In addition to the above, workers shall have a minimum of five years of journeyman level experience performing electrical work. The Contractor shall require the workers hired to perform electrical work on this Contract to submit documentation proving that these training and experience requirements are met. As part of the Bid the contractor shall submit an affidavit to the Project representative identifying the workers and stating that each of the electrical workers meet these minimum requirements. The Contractor shall make such documentation available to the Project Representative upon written request.

D. Contractor is required to perform the work in accordance with all applicable codes and regulation whether it is stated in the contract document or not.

E. The Contractor is required to provide a complete and functional system in accordance with intent of these Contract Documents.

F. The Contractor will coordinate the details equipment and construction for all Specifications Divisions, which affect the work.

G. The Contractor shall install all incidental items not actually shown or specified, but which are required by good practice to provide complete functional systems.

1.4 QUALITY ASSURANCE

A. Codes: All electrical equipment and materials, including installation and testing, shall conform to the current editions of all applicable codes including but not limited to: the California Building Code, and the California State Electrical Code Title 24

B. Variances: In instance where two or more codes are at variance, the most restrictive requirements shall apply.

C. All work will be coordinated with other disciplines.

D. Standards: Equipment shall conform to applicable standards of American National Standards Institute (ANSI), Electronics Industries Association (EIA), Institute of Electrical and Electronics Engineers (IEEE), Insulated Power Cable Engineer's Association (IPCEA), and National Electrical Manufacturers Association (NEMA), ISA – Instrument Society of America, and local utility service requirements. The revisions of these standards in effect on the date of issuance of the Contract Documents shall apply.

E. Underwriters Laboratories (UL) listing is required for all equipment and materials where such listing is offered by the Underwriters Laboratories. Unique electrical products are products for which there is no listing available from an approved testing laboratory and for which there is no nationally recognized standards of safety. Safety labeling and listing by other organizations, such as ETL Testing Laboratories, may be substituted for UL labeling and listing if acceptable to the authority having code enforcement jurisdiction. Provide service entrance labels for all equipment required by the NEC to have such labels.

1.5 INTENT OF DRAWINGS

A. The electrical elements shown on the Architectural drawings are diagrammatic and show only general locations of equipment, and devices, unless specifically dimensioned. The Contractor shall be responsible for the proper placement of equipment due to actual field conditions, subject to the approval of the Project Representative.

B. As-Built Drawings

1. Maintain a complete and accurate record set of full size “working drawings” during construction.

2. Record all work that is installed differently than shown on the Drawings.

3. Upon completion of the work, contractor shall submit a set of “As-Built Drawings” reflecting all change made during construction.

1.6 SUBMITTALS

A. In addition to the requirements of the General Conditions, submittals shall be made in accordance with the following provisions:

Section 01300-Submittals

B. Materials List: Submit manufacturer’s catalog cuts as product data for each item for which shop drawings are not required. The catalog cuts shall include the manufacturer’s name, be identified by reference to the applicable Specification paragraph or Drawing number, and provide sufficient information to show that the materials meet the requirements of the Drawings and Specifications. Where more than one item or catalog number appears on a catalog cut, clearly identify the specific item(s) or catalog number(s) proposed.

C. Shop Drawings: Submit product review shop drawings for equipment for which shop drawings are specified in the equipment Specification Section. Include any data specifically required by the equipment Specifications.

D. As-Built Shop Drawings: Revise manufacturer's shop drawings to show any construction changes. Prior to final acceptance, deliver one complete set to the Project Representative for his favorable review.

E. Manuals and or Equipment Information:

1. Furnish Two (2) copies of manufacturers manuals or product information for all installed equipment and components.

PART 2 MATERIALS AND EQUIPMENT, COMMON REQUIREMENTS

2.1 GENERAL

A. Unless otherwise indicated, provide all first-quality, new materials and equipment, free from any defects, in first-class condition, and to fit the space provided. Provide materials and equipment listed by UL wherever standards have been established by that agency.

B. Where two or more units of the same class of material or equipment are required, provide products of a single manufacturer. Component parts of materials or equipment need not be products of the same manufacturer.

2.2 STANDARD PRODUCTS

A. Unless otherwise indicated, provide materials and equipment which are standard products of manufacturers regularly engaged in the production of such materials and equipment. Provide the manufacturer's latest standard design modified as required to conform to these specifications.

2.3 EQUIPMENT FINISH

A. Equipment finish shall be for exterior, marine grade use

2.4 EQUIPMENT HARDWARE

A. Hardware used for installation of outdoor equipment shall be stainless steel. Unless noted otherwise, hardware used for installation of indoor equipment shall be galvanized steel or stainless steel. Zinc or cadmium plated hardware is not acceptable. Hardware shall include, but not limited to, door handles, hinges, latches, bolts, clamps, nuts and other items.

2.5 SEISMIC REQUIREMENTS

A. All panel boards, switchboard, and other equipment, including supports and attachments, shall be designed for seismic loading.

2.6 OUTDOOR EQUIPMENT

A. Provide equipment and devices to be installed outdoors or in unheated enclosures capable of continuous operation within an ambient temperature range of 20 degrees F to 105 degree F. All materials, connections, and finishes shall be for use in the marine environment

PART 3 EXECUTION COMMON REQUIREMENTS

3.1 GENERAL

A. Install materials and equipment in workmanlike manner-utilizing craftsmen skilled in the particular trade. Provide work that has a neat and finished appearance. Carry out work in accordance with NECA Standard of Installation unless otherwise specified.

B. Coordinate electrical work with other Divisions, and be aware of the work of other trades to avoid conflicts, errors, delays and unnecessary interference during construction.

C. Prior installation, check the locations of electrical outlets and other electrical system components shown on Drawings for conflicts with openings, structural members and components of other systems and equipment having fixed locations. Submit suggested resolution of such conflicts for approval.

3.2 MATERIALS AND EQUIPMENT INSTALLATION

A. Follow manufacturer's installation instructions explicitly, unless otherwise indicated. Keep copy of manufacturer's installation instructions on the job site available for review at all times.

3.3 CUTTING AND PATCHING

A. Lay out work carefully in advance. Do not cut or notch any structural member or building surface without specific approval of the Project Representative. Carefully carry out any cutting, channeling, chasing or drilling of floors, walls, partitions, ceilings, paving or other surfaces required for the installation, support or anchorage of conduit, raceways or other electrical materials and equipment. Following such work, restore surfaces neatly to original condition. Use skilled craftsmen of the trades involved.

3.4 CLEANING AND TOUCHUP

A. Keep the premises free at all times from accumulation of waste material, litter and rubbish. Upon completion of work, remove all materials, scraps and debris from premises and from interior and exterior of all devices and equipment.

B. The interior of all electrical equipment shall be vacuumed and wiped free of dust just before final acceptance.

C. Touch up scratches, scrapes or chips in interior and exterior surfaces of devices and equipment with finishes matching the type, color, consistency and type of surface of the original finish. If extensive damage is done to equipment paint surfaces, refinish the entire equipment in a manner that provides a finish equal to or better than the factory finish, that meets the requirements of the Specifications and that is acceptable to the Project Representative.

3.5 STANDARDS, CODES, PERMITS AND REGULATIONS

A. Perform all work; furnish and install all materials and equipment in full accordance with the latest applicable rules, regulations, requirements and specifications of the following:

1. Local Laws, Codes, Ordinances and Regulating Agencies
2. State and Federal Laws
3. National Electrical Code (NEC)
4. State Fire Marshal
5. Underwriters' Laboratories (UL)
6. National Electrical Safety Code (NESC)
7. American National Standards Institute (ANSI)
8. National Electrical Manufacturer's Association (NEMA)
9. National Electrical Contractor's Association (NECA); Standard Installation
10. Institute of Electrical and Electronics Engineers (IEEE)

END OF SECTION