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**Kenaitze Indian Tribe**  
150 North Willow St.  
Kenai, Alaska 99611

July 19, 2021

**ADDENDUM #1**  
**This addendum consists of: 2 pages**

To: All Kenaitze Indian Tribe Tribal Courthouse Plan Holders

Subject: Kenaitze Indian Tribe Tribal Courthouse  
Job Number: 21014.01

The following corrections, changes, additions, deletions, revisions, and/or clarifications are hereby made a part of the Contract Documents. In case of conflicts between this Addendum and previously issued documents, this addendum shall take precedence.

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**ARCHITECTURAL:**

Drawings

- Item A1: **Sheet A402**  
**Change** notes D1/A402 and A1/A402- 'Toilet paper dispenser, OFCI' to 'Toilet paper dispenser, **OFOI**'
- Item A2: **Sheet A701**  
**Change** A1 and C1 casework notes to read 'Re-purposed kitchen cabinets, see demolition notes'

Specifications

- Item A3: **Section 011000**  
**ADD:**  
1.5 B-1 – Special Systems rough-in installed and devices terminated by others except as noted in electrical drawings.  
1.5 B-3 – Court Rooms - Display Cases are owner provided and installed.
- Item A4: **Section 012600**  
Contract Modifications and Procedures – Part 1 General –  
1.5 Change Order Procedures  
**ADD:**  
1.5 B – Contractor's self-performed work for Overhead and Profit shall not exceed a 15% markup. Subcontractor's markup up for self-performed to includes any sub-tier

contractors or subcontractors, shall not exceed 15% for Overhead and Profit. General Contractor's mark up on subcontractor's work shall not exceed 10% for Overhead and Profit. No markup is permitted on Change Orders for Bonding and Insurances.

1.5 C – Under no circumstances shall the contractor stop work or delay the project due to disagreements on change order cost or pricing.

1.5 D – Owner reserves the right to initiate Change Order Scope of Work on a Time and Material basis.

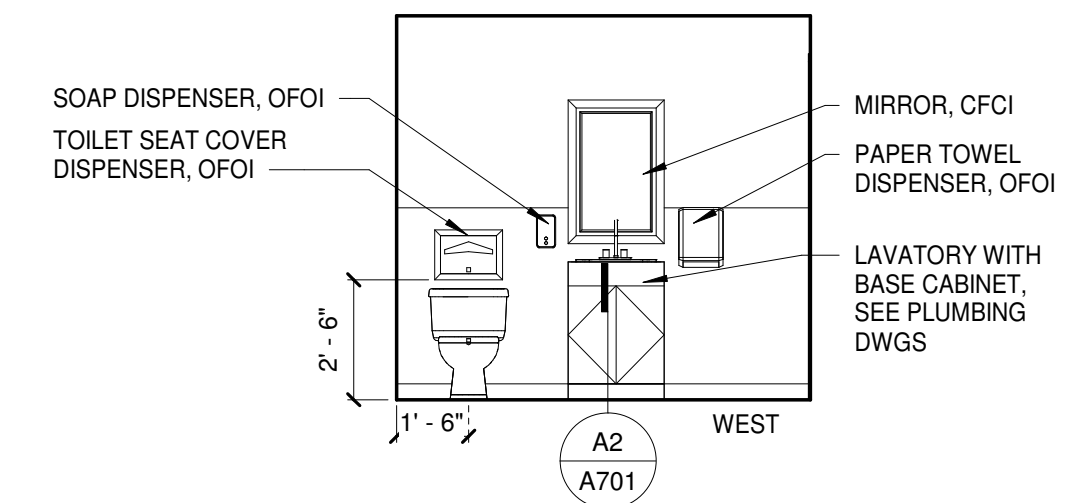
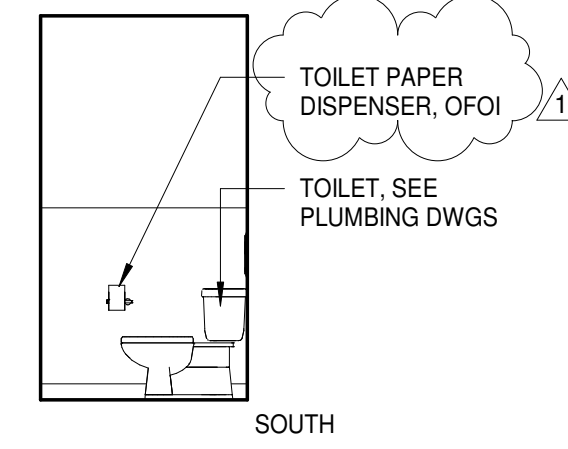
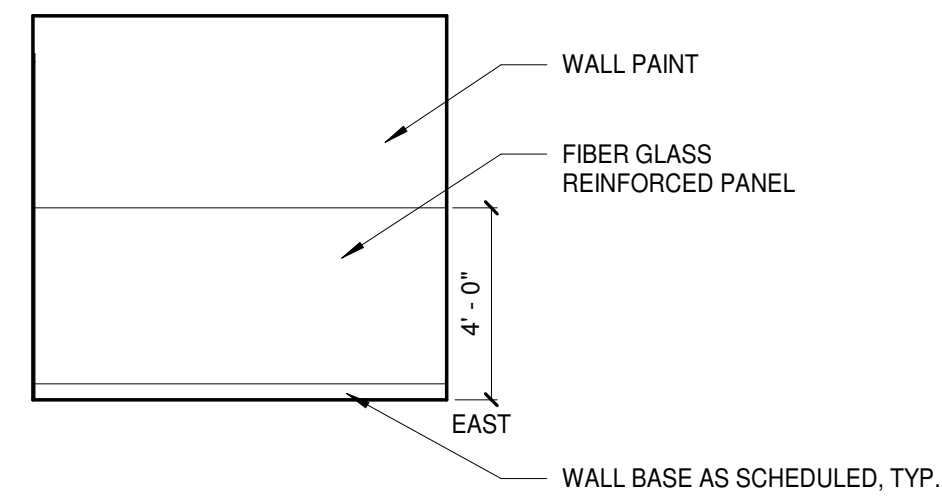
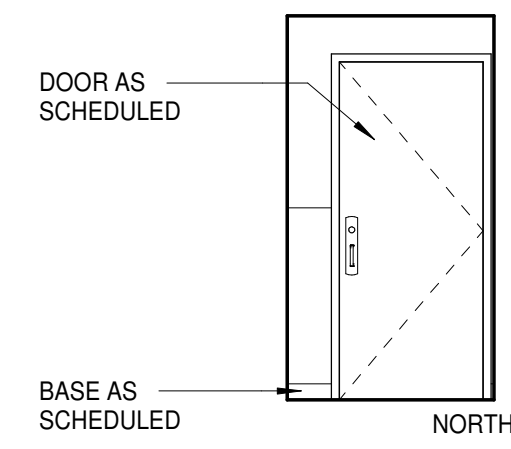
Item A5: **Section 013200**  
**Change:** 1.4 G. to read 'Daily Construction Reports: **Submit at daily intervals.**'

Item A6: **Section 087100**  
**Change** the following in the 3.9 hardware schedule"

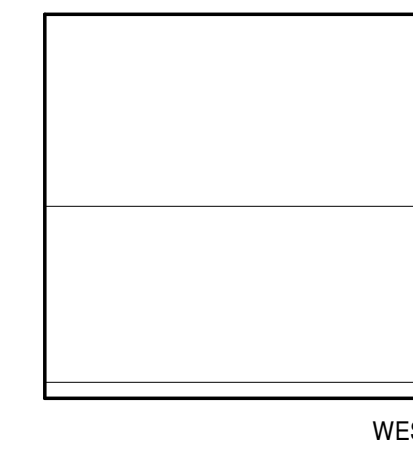
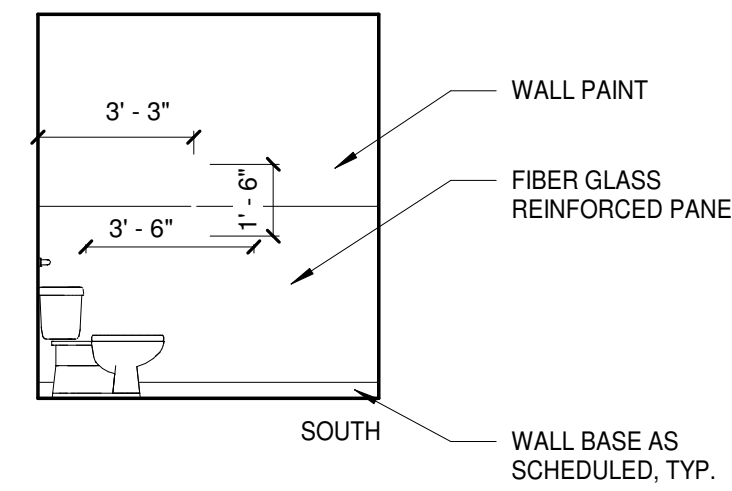
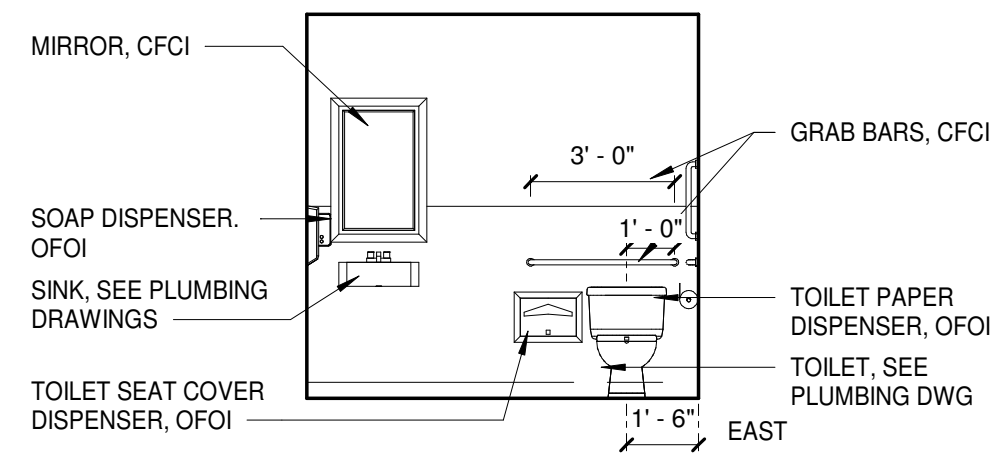
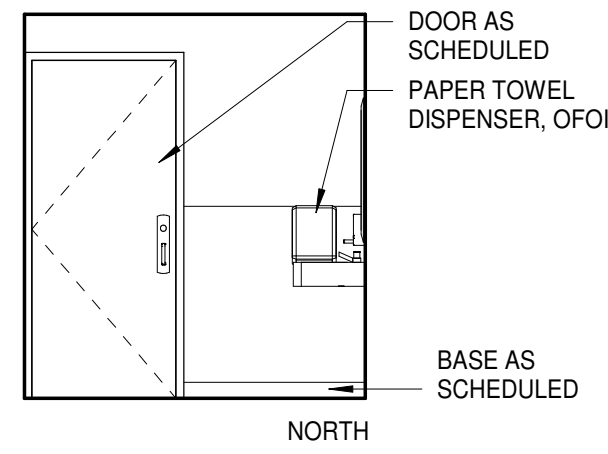
Hardware Group 1  
Electrified Hinge **O.F.O.I.**  
Electrified Mortise Lock **O.F.O.I.**  
Small Format Inter core **O.F.O.I.**  
Card Reader **O.F.O.I.**

Hardware Group 3  
Electrified Hinge **O.F.O.I.**  
Electrified Mortise Lock **O.F.O.I.**  
Small Format Inter core **O.F.O.I.**  
Card Reader **O.F.O.I.**

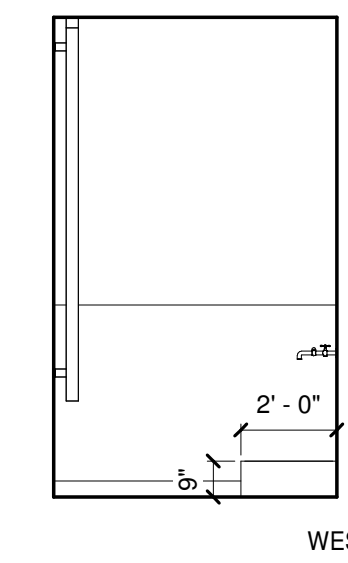
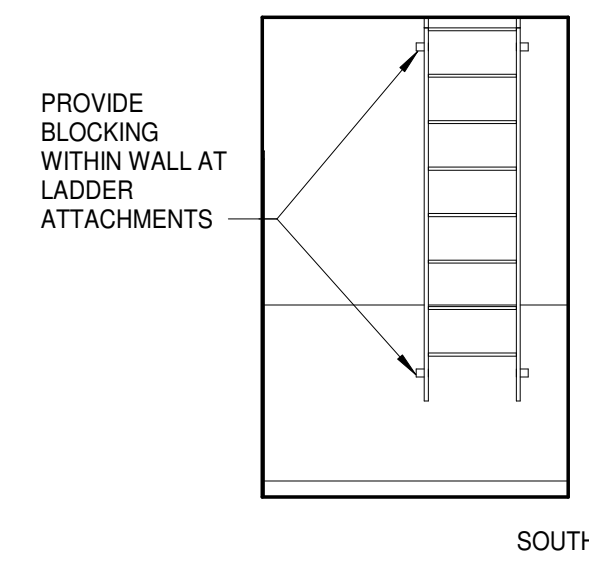
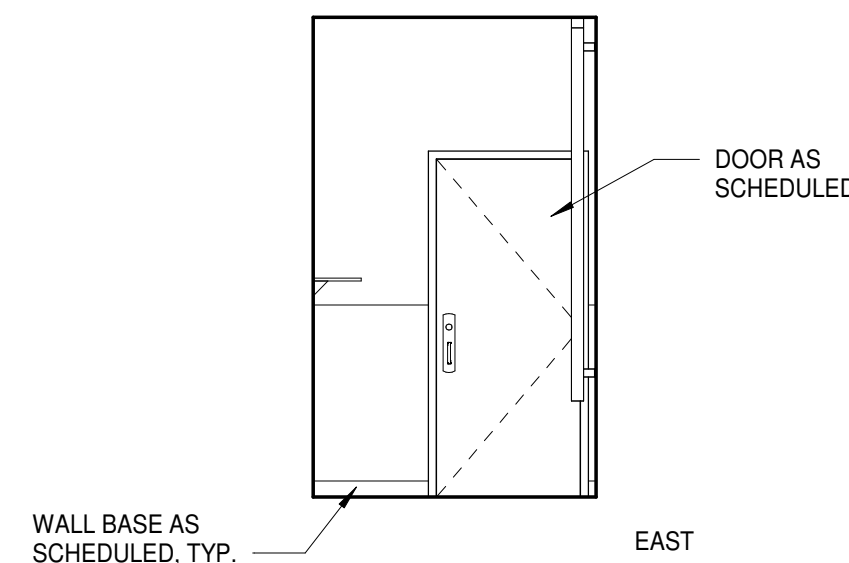
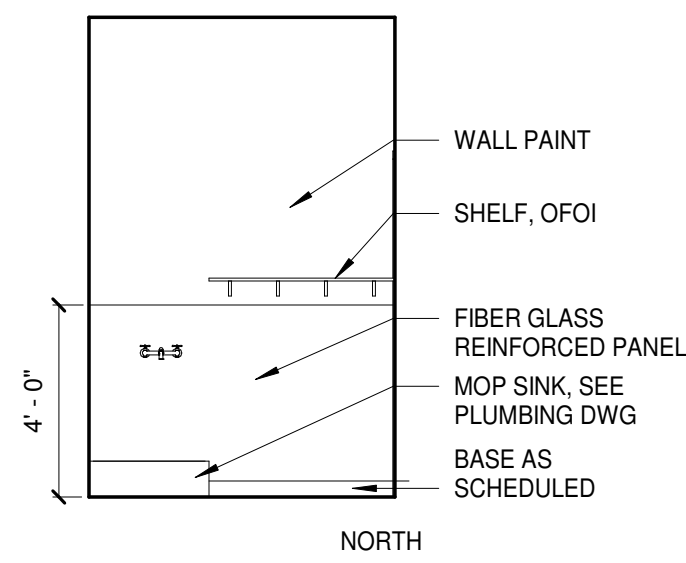
Hardware Group 4  
Electrified Hinge **O.F.O.I.**  
Electrified Mortise Lock **O.F.O.I.**  
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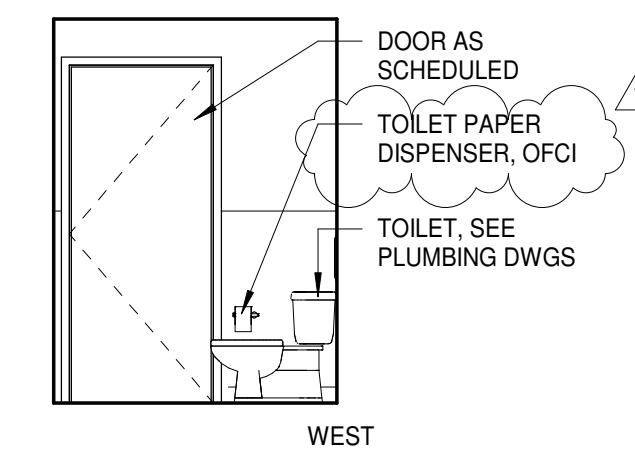
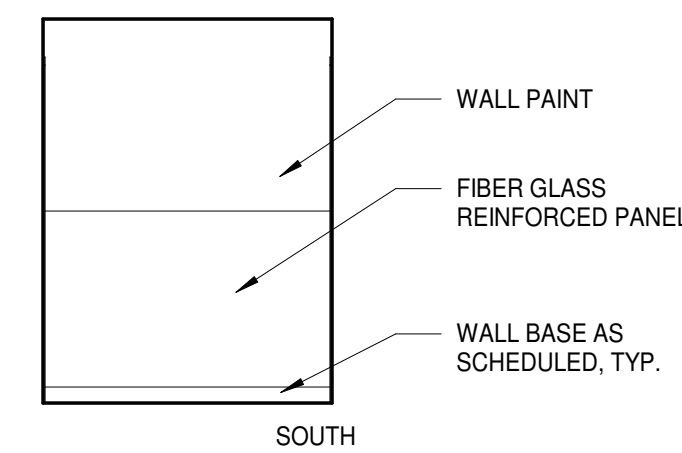
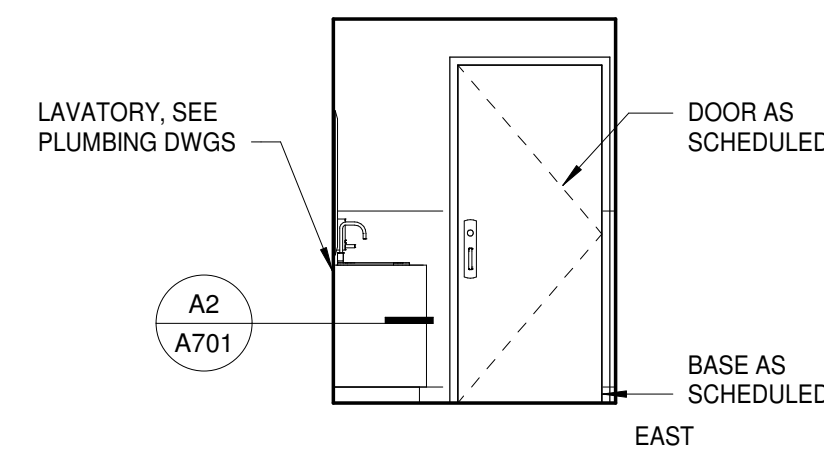
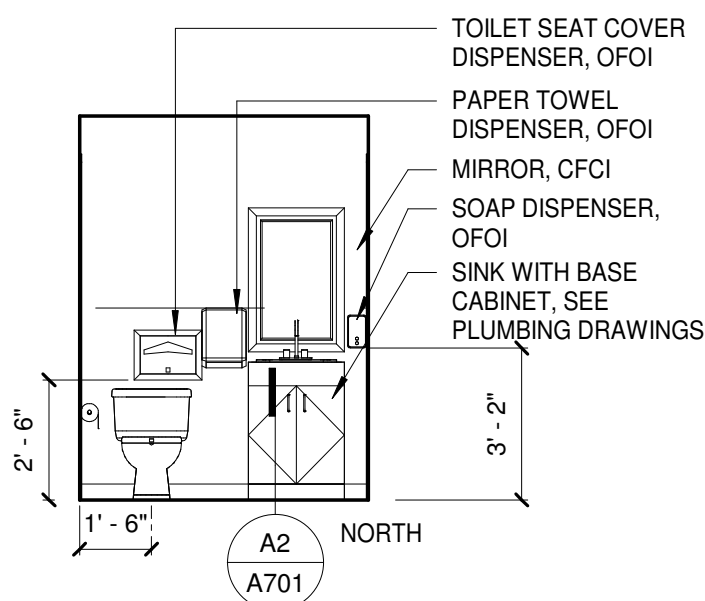
D1 UA RESTROOM 102  
A402 1/4" = 1'-0"



C1 ADA PUBLIC RESTROOM 108B  
A402 1/4" = 1'-0"

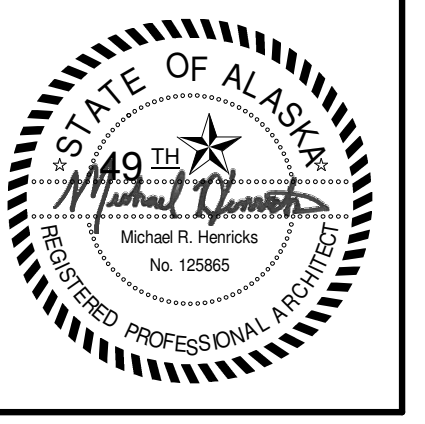


B1 JANITOR 109B  
A402 1/4" = 1'-0"



A1 PUBLIC RESTROOM 109A  
A402 1/4" = 1'-0"

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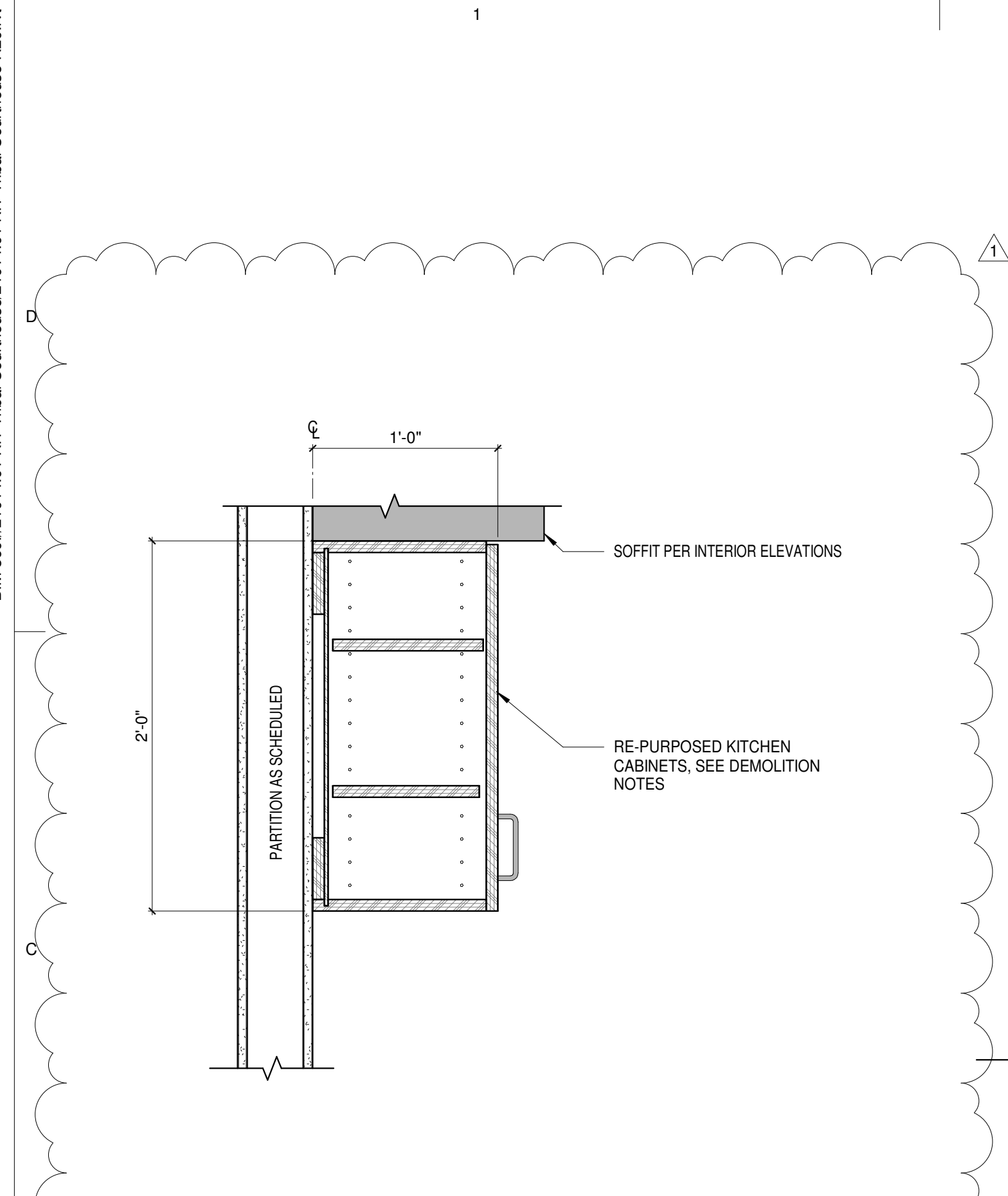
KENAI INDIAN TRIBE  
**TRIBAL COURTHOUSE**  
508 UPLAND AVE. KENAI, ALASKA

No.	Description	Date
1	Addendum 1	7/19/21

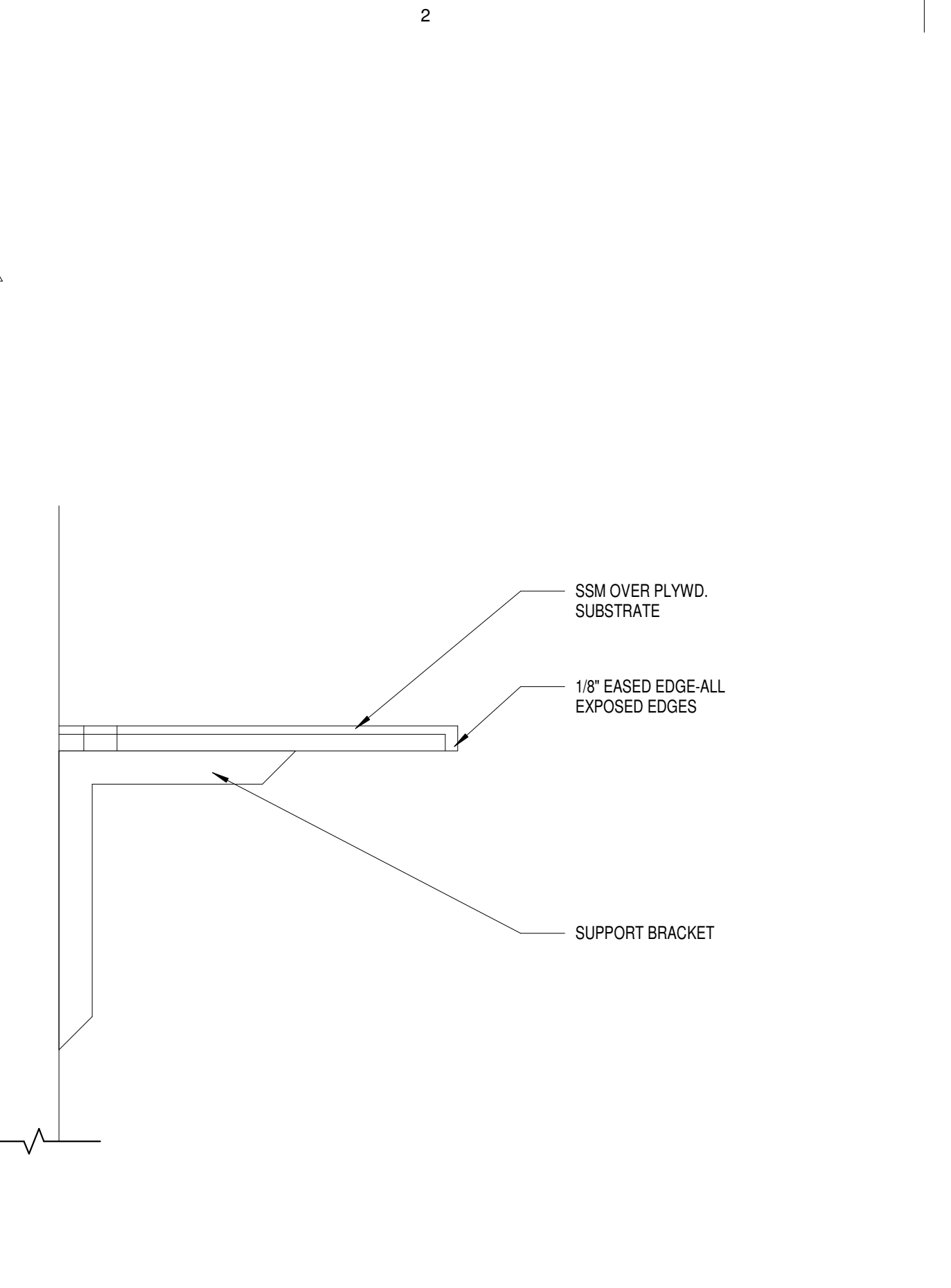
Drawn by Author	Date 07-15-21
Checked Checker	Job No. 21014.01

Sheet Contents  
INTERIOR ELEVATIONS

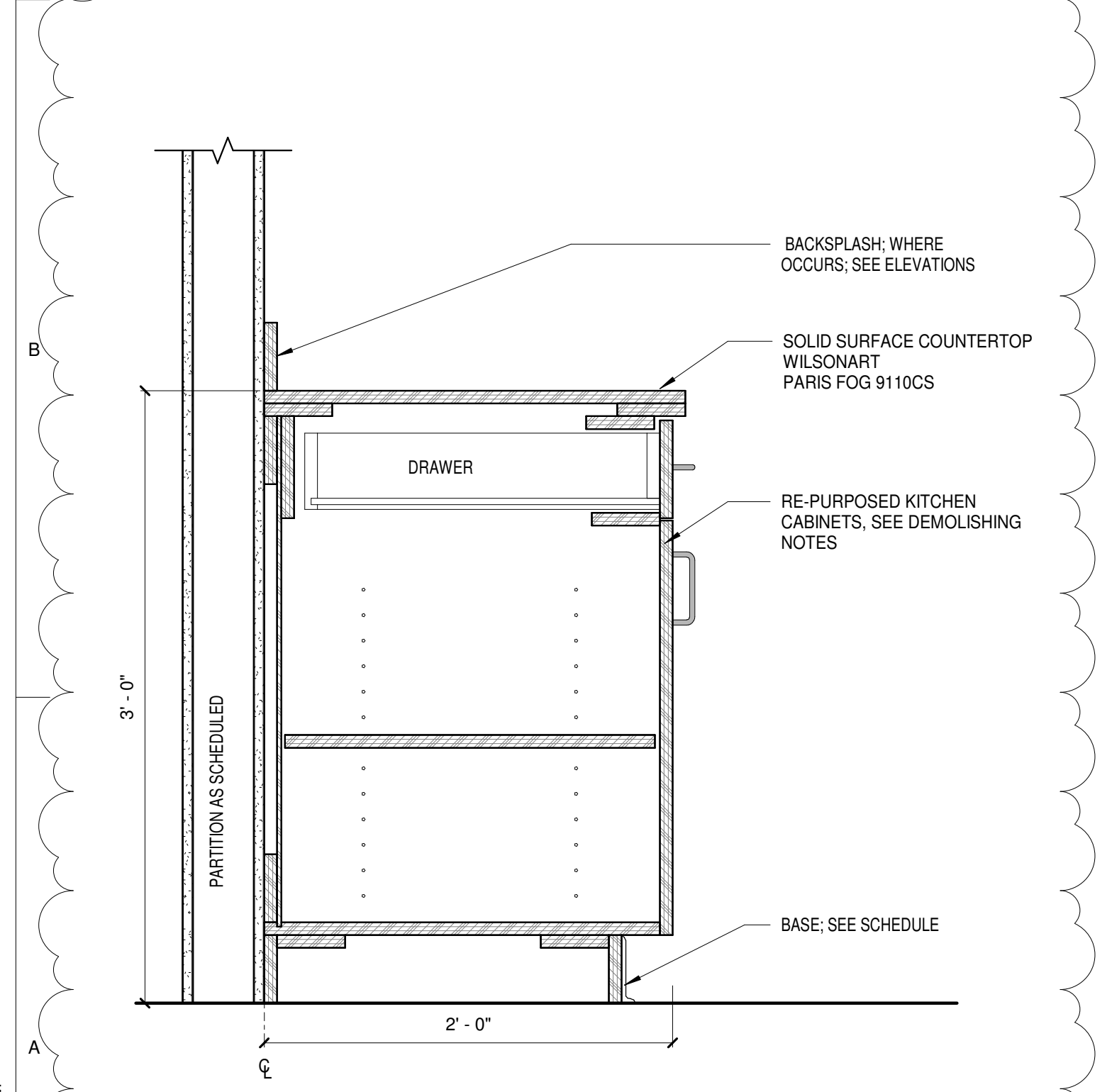
Sheet No.  
**A402**



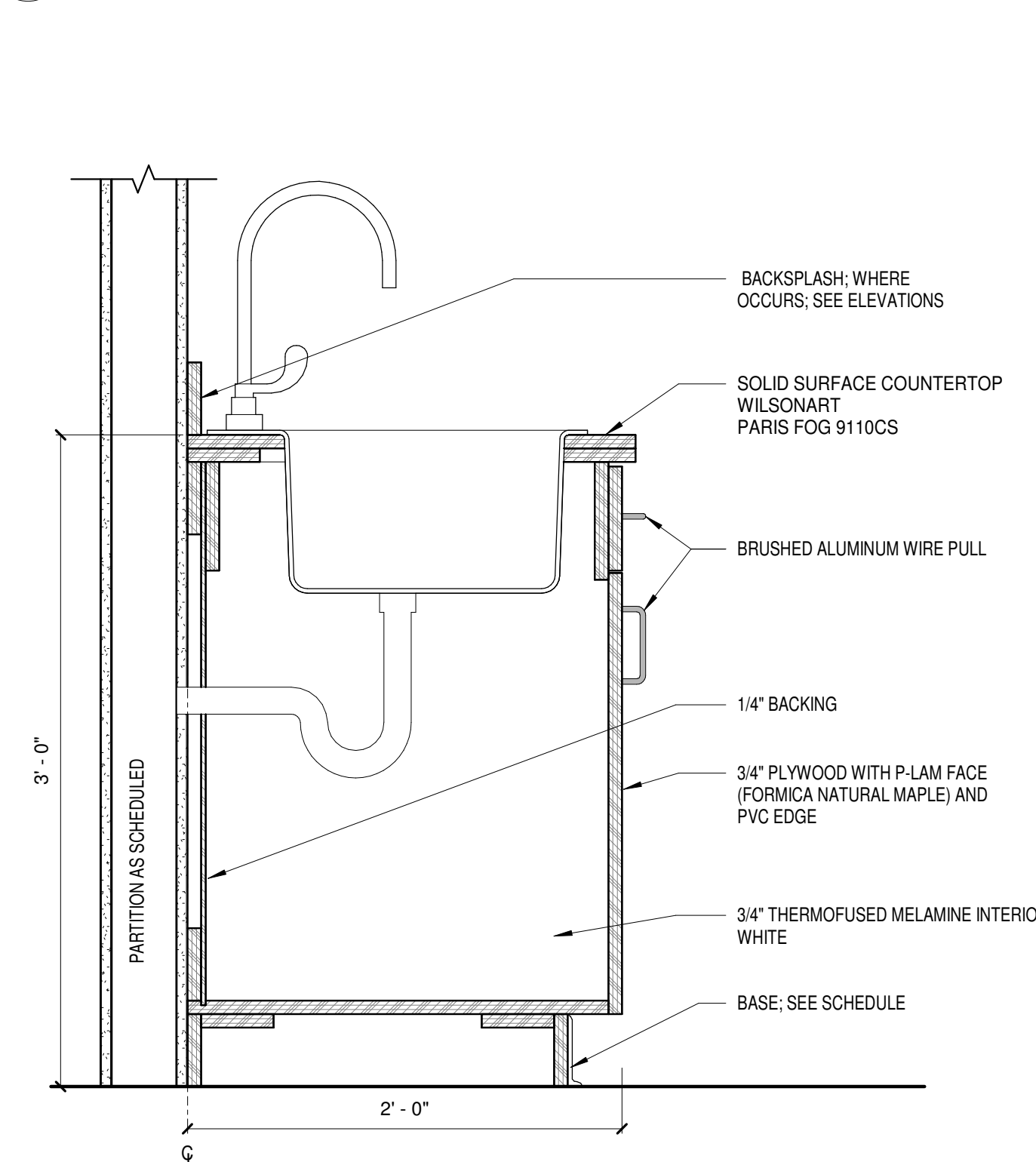
C1 CASEWORK DETAILS @ UPPERS  
A701 1 1/2" = 1'-0"



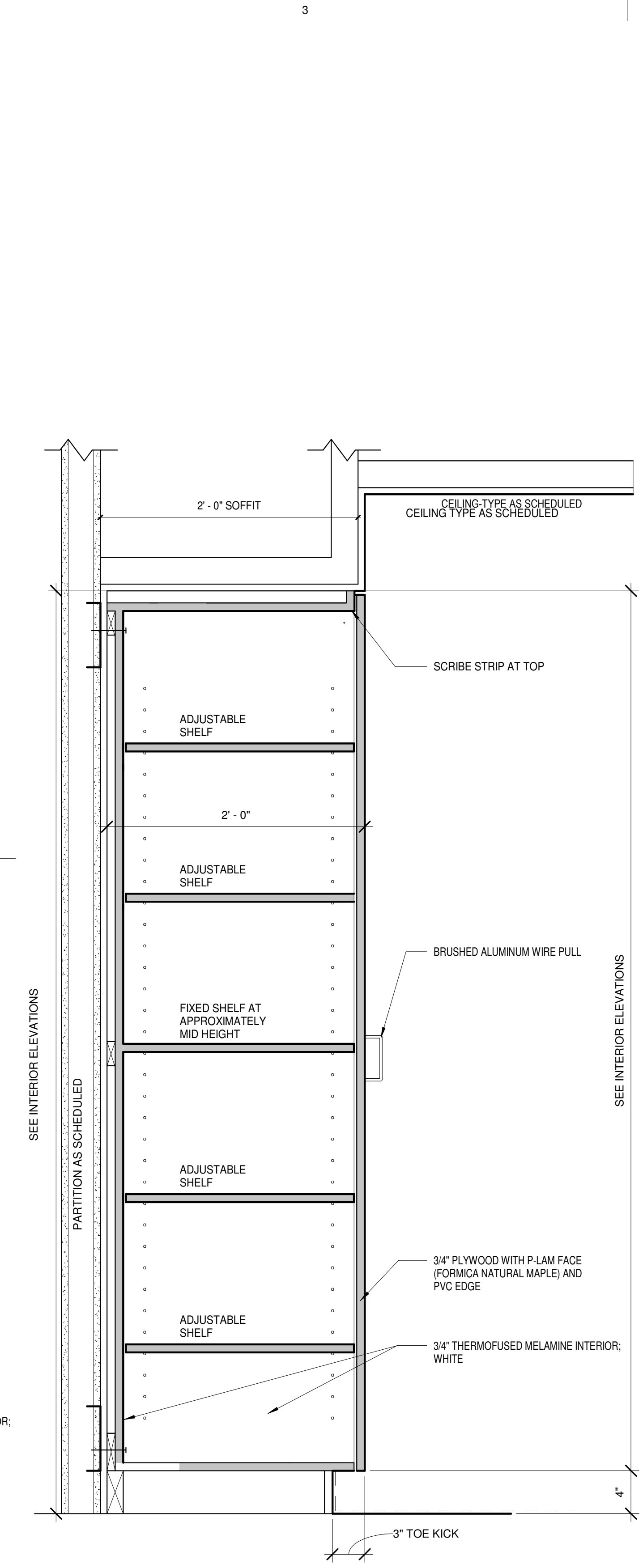
C2 WALL MOUNTED SHELF  
A701 1 1/2" = 1'-0"



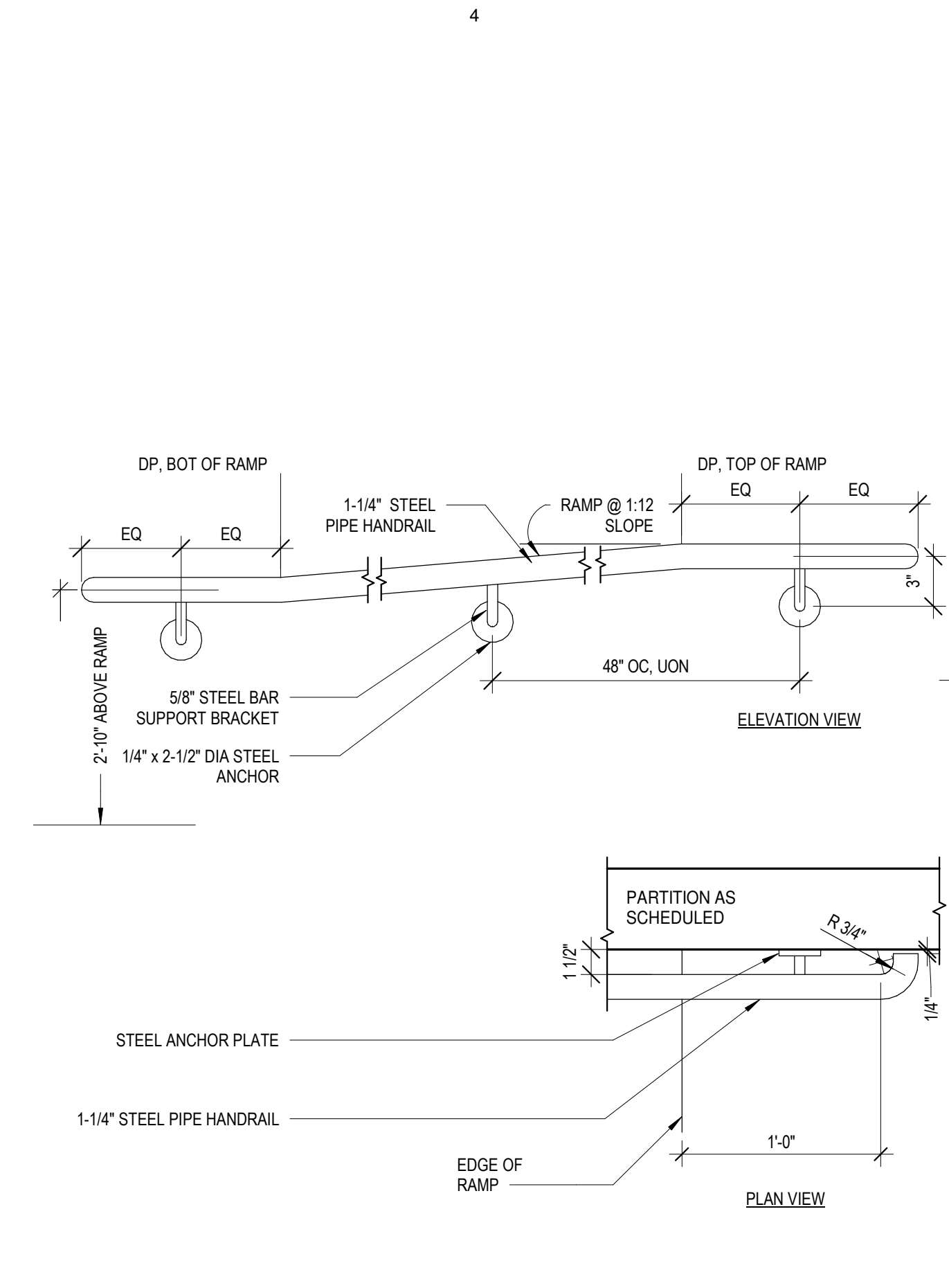
A1 CABINET W/ DOOR & DRAWER  
A701 1 1/2" = 1'-0"



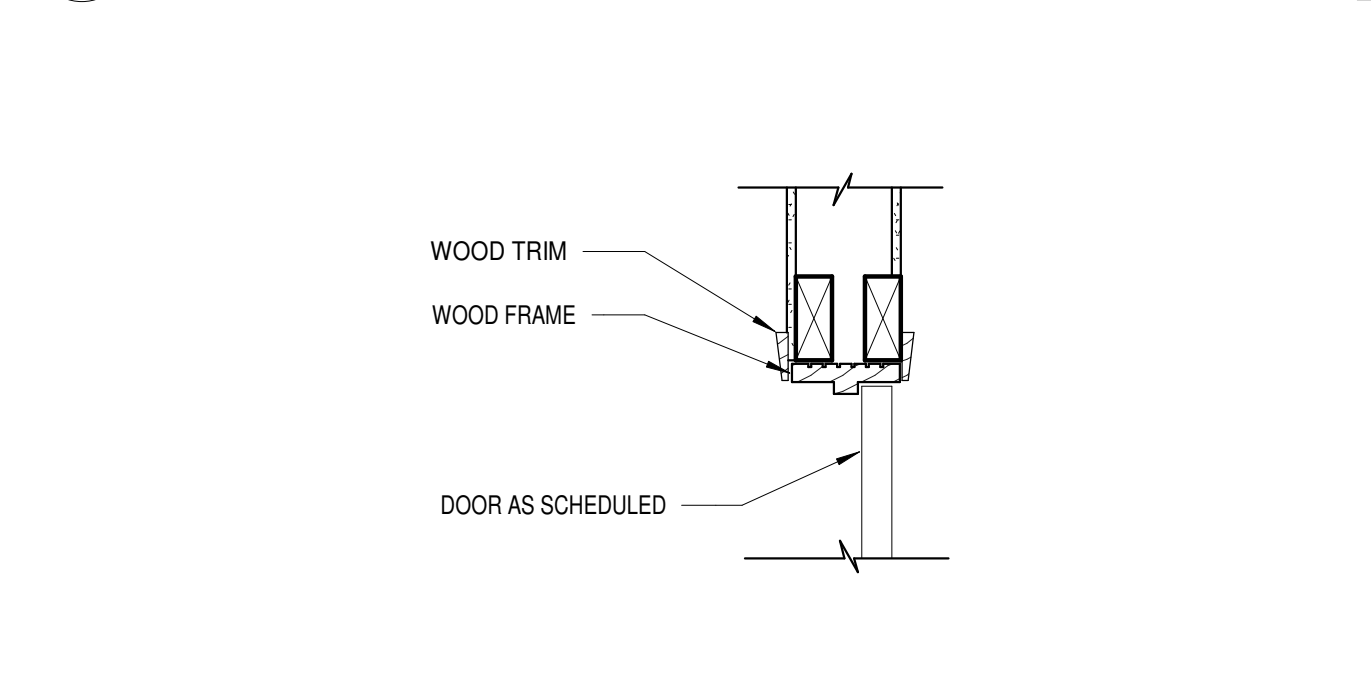
A2 CASEWORK DETAILS @ SINK  
A701 1 1/2" = 1'-0"



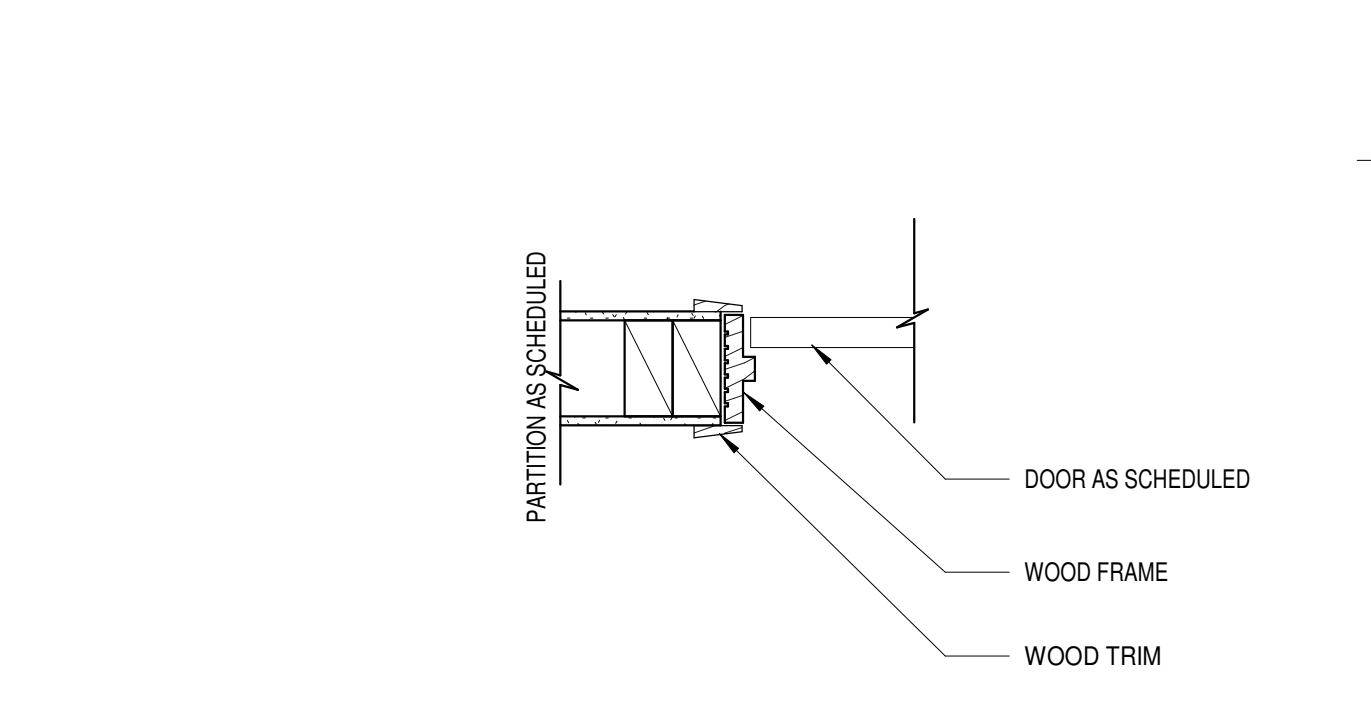
A3 FULL HEIGHT CABINETS  
A701 1 1/2" = 1'-0"



C4 INT. RAIL DETAIL  
A701 1 1/2" = 1'-0"



B4 INT. DOOR HEAD  
A701 1 1/2" = 1'-0"



A4 INT. DOOR JAMB  
A701 1 1/2" = 1'-0"



KENAI INDIAN TRIBE  
**TRIBAL COURTHOUSE**  
508 UPLAND AVE. KENAI, ALASKA

Revisions

No.	Description	Date
1	Addendum 1	7/19/21

Drawn by Author	Date 07-15-21
Checked Checker	Job No. 21014.01

Sheet Contents  
INTERIOR DETAILS

Sheet No.  
**A701**

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Phased construction.
4. Work by Owner.
5. Work under separate contracts.
6. Future work.
7. Purchase contracts.
8. Owner-furnished products.
9. Contractor-furnished, Owner-installed products.
10. Access to site.
11. Coordination with occupants.
12. Work restrictions.
13. Specification and Drawing conventions.
14. Miscellaneous provisions.

B. Related Requirements:

1. Section 015000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.3 PROJECT INFORMATION

A. Project Identification: KIT Tribal Courthouse

1. Project Location: 508 Upland Ave. Kenai, AK

B. Owner: Kenaitze Indian Tribe 150 North Willow Street Kenai AK. 99611

1. Owner's Representative: Don Ohler

C. Architect: Architects Alaska 900 West 5<sup>th</sup> Ave. Ste. 403 Anchorage, AK 99501

D. Architect's Consultants: Architect has retained the following design professionals who have prepared designated portions of the Contract Documents:

1. Civil Engineer: Nelson Engineers 155 Bidarka Street, Kenai, AK 99611
2. Structural: DCI Engineers 341 W. Tudor, Suite 105, Anchorage, AK
3. Mechanical and Electrical Engineers: HZA Engineering 113 W. Northern Lights Blvd, Suite 240, Anchorage, AK 99503

- E. Contractor: TBD
- F. Web-Based Project Software: Project software administered by Contractor will be used for purposes of managing communication and documents during the construction stage.
  - 1. See Section 013100 "Project Management and Coordination." for requirements for **establishing, administering and** using web-based Project software.

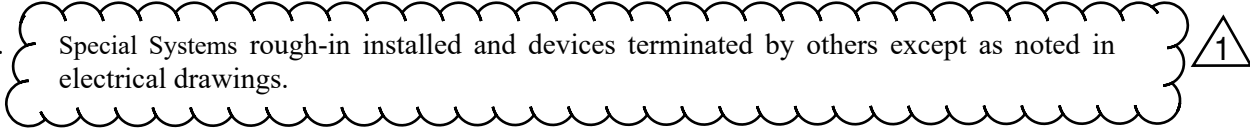
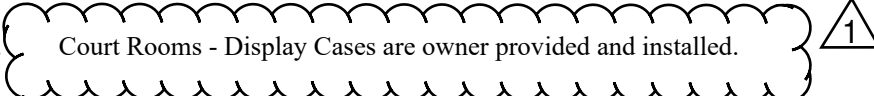
1.4 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of Project is defined by the Contract Documents and consists of the following:
  - 1. Renovation/expansion of existing Kenaitze Indian Tribe courthouse building. The building will be 5,872 s.f. after the expansion. This is type V-B Construction with typical 2x6 wood framed walls and R-21 batt insulation.
- B. Type of Contract:
  - 1. Project will be constructed under a single prime contract.

1.5 WORK BY OWNER

- A. General: Cooperate fully with Owner so work may be carried out smoothly, without interfering with or delaying work under this Contract or work by Owner. Coordinate the Work of this Contract with work performed by Owner.
- B. Subsequent Work: Owner will perform the following additional work at site after Substantial Completion. Completion of that work will depend on successful completion of preparatory Work under this Contract.
  - 1. Special Systems to be completed by owner.
  - 2. Furniture to be provided and installed by owner.

1.6 OWNER-FURNISHED PRODUCTS

- A. Owner will furnish products indicated. The Work includes receiving, unloading, handling, storing, protecting, and installing Owner-furnished products.
- B. Owner-Furnished Products:
  - 1. Special Systems rough-in installed and devices terminated by others except as noted in electrical drawings. 
  - 2. Furniture
  - 3. Court Rooms - Display Cases are owner provided and installed. 

1.7 ACCESS TO SITE

- A. General: Contractor shall have full use of Project site for construction operations during construction period. Contractor's use of Project site is limited only by Owner's right to perform work or to retain other contractors on portions of Project.
- B. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.
- C. Condition of Existing Grounds: Maintain portions of existing grounds, landscaping, and hardscaping affected by construction operations throughout construction period. Repair damage caused by construction operations.

1.8 COORDINATION WITH OCCUPANTS

- A. Owner Limited Occupancy of Completed Areas of Construction: Owner reserves the right to occupy and to place and install equipment in completed portions of the Work, prior to Substantial Completion of the Work, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and limited occupancy shall not constitute acceptance of the total Work.
  - 1. Architect will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied prior to Owner acceptance of the completed Work.
  - 2. Obtain a Certificate of Occupancy from authorities having jurisdiction before limited Owner occupancy.
  - 3. Before limited Owner occupancy, mechanical and electrical systems shall be fully operational, and required tests and inspections shall be successfully completed. On occupancy, Owner will operate and maintain mechanical and electrical systems serving occupied portions of Work.
  - 4. On occupancy, Owner will assume responsibility for maintenance and custodial service for occupied portions of Work.

1.9 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.
  - 1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
- B. On-Site Work Hours: Limit work in the existing building to normal business working hours of 7:00 a.m. to 7:00 p.m., Monday through Friday, unless otherwise indicated.
  - 1. Weekend Hours: Allowed
  - 2. Early Morning Hours: Contractor's Discretion
  - 3. Hours for Utility Shutdowns: Contractor's Discretion
  - 4. Hours for noisy activities (i.e. core drilling): Nothing after 7pm
- C. Restricted Substances: Use of controlled substances on Project site is not permitted. Only smoking is allowed.
- D. Employee Identification: Owner will provide identification tags for Contractor personnel working on Project site. Require personnel to use identification tags at all times.

- E. Employee Screening: Comply with Owner's requirements for drug and background screening of Contractor personnel working on Project site.
  - 1. Maintain list of approved screened personnel with Owner's representative.

#### 1.10 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
  - 1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
  - 2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
  - 1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
  - 2. Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard and scheduled on Drawings.
  - 3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

\*\*\*END OF SECTION 011000\*\*\*



PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.

1.3 MINOR CHANGES IN THE WORK

- A. Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on form included in Project Manual.

1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Architect 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. Work Change Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
2. Within time specified in Proposal Request after receipt of Proposal Request, submit a quotation estimating 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 costs of labor and supervision directly attributable to the change.
- d. 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.
- e. Quotation Form: Use forms acceptable to Architect.

- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.

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 costs of labor and supervision directly attributable to the change.
5. 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.
6. Comply with requirements in Section 012500 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
7. Proposal Request Form: Use form acceptable to Architect.

#### 1.5 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Work Change Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on form included in Project Manual. 1

B. Contractor's self-performed work for Overhead and Profit shall not exceed a 15% markup. Subcontractor's markup up for self-performed to includes any sub-tier contractors or subcontractors, shall not exceed 15% for Overhead and Profit. General Contractor's mark up on subcontractor's work shall not exceed 10% for Overhead and Profit. No markup is permitted on Change Orders for Bonding and Insurances.

C. Under no circumstances shall the contractor stop work or delay the project due to disagreements on change order cost or pricing.

D. Owner reserves the right to initiate Change Order Scope of Work on a Time and Material basis.

#### 1.6 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect may issue a Construction Change Directive on form included in Project Manual. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

1. Construction Change Directive 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.

- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

#### 1.7 WORK CHANGE DIRECTIVE

- A. Work Change Directive: Architect may issue a Work Change Directive on EJCDC Document C-940 form included in Project Manual. Work Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

1. Work Change Directive 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.

- B. Documentation: Maintain detailed records on a time and material basis of work required by the Work Change Directive.

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

\*\*\*END OF SECTION 012600\*\*\*

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY


- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
  - 1. Startup construction schedule.
  - 2. Contractor's Construction Schedule.
  - 3. Construction schedule updating reports.
  - 4. Daily construction reports.
  - 5. Material location reports.
  - 6. Site condition reports.
  - 7. Unusual event reports.

### 1.3 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction Project. Activities included in a construction schedule consume time and resources.
  - 1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
  - 2. Predecessor Activity: An activity that precedes another activity in the network.
  - 3. Successor Activity: An activity that follows another activity in the network.
- B. Cost Loading: The allocation of the schedule of values for completing an activity as scheduled. The sum of costs for all activities must equal the total Contract Sum.
- C. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.
- D. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- E. Event: The starting or ending point of an activity.
- F. Float: The measure of leeway in starting and completing an activity.
  - 1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
  - 2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.

3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.
- G. Resource Loading: The allocation of manpower and equipment necessary for completing an activity as scheduled.

#### 1.4 INFORMATIONAL SUBMITTALS

- A. Format for Submittals: Submit required submittals in the following format:
1. Working electronic copy of schedule file, where indicated.
  2. PDF file.
  3. **Two** paper copies, of sufficient size to display entire period or schedule, as required.
- B. Startup construction schedule.
1. Submittal of cost-loaded, startup construction schedule will not constitute approval of schedule of values for cost-loaded activities.
- C. Startup Network Diagram: Of size required to display entire network for entire construction period. Show logic ties for activities.
- D. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
1. Submit a working digital copy of schedule, using software indicated, and labeled to comply with requirements for submittals.
- E. CPM Reports: Concurrent with CPM schedule, submit each of the following reports. Format for each activity in reports shall contain activity number, activity description, cost and resource loading, original duration, remaining duration, early start date, early finish date, late start date, late finish date, and total float in calendar days.
1. Activity Report: List of activities sorted by activity number and then early start date, or actual start date if known.
  2. Logic Report: List of preceding and succeeding activities for each activity, sorted in ascending order by activity number and then by early start date, or actual start date if known.
  3. Total Float Report: List of activities sorted in ascending order of total float.
  4. Earnings Report: Compilation of Contractor's total earnings from the Notice to Proceed until most recent Application for Payment.
- F. Construction Schedule Updating Reports: Submit with Applications for Payment.
- G. Daily Construction Reports: Submit at daily intervals. 
- H. Material Location Reports: Submit at monthly intervals.
- I. Site Condition Reports: Submit at time of discovery of differing conditions.
- J. Unusual Event Reports: Submit at time of unusual event.
- K. Qualification Data: For scheduling consultant.

## 1.5 QUALITY ASSURANCE

- A. Scheduling Consultant Qualifications: An experienced specialist in CPM scheduling and reporting, with capability of producing CPM reports and diagrams within 24 hours of Architect's request.
- B. Prescheduling Conference: Conduct conference at Project site to comply with requirements in Section 013100 "Project Management and Coordination." Review methods and procedures related to the preliminary construction schedule and Contractor's Construction Schedule, including, but not limited to, the following:
  - 1. Review software limitations and content and format for reports.
  - 2. Verify availability of qualified personnel needed to develop and update schedule.
  - 3. Discuss constraints, including work stages, area separations, interim milestones and partial Owner occupancy.
  - 4. Review delivery dates for Owner-furnished products.
  - 5. Review schedule for work of Owner's separate contracts.
  - 6. Review submittal requirements and procedures.
  - 7. Review time required for review of submittals and resubmittals.
  - 8. Review requirements for tests and inspections by independent testing and inspecting agencies.
  - 9. Review time required for Project closeout and Owner startup procedures, including commissioning activities.
  - 10. Review and finalize list of construction activities to be included in schedule.
  - 11. Review procedures for updating schedule.

## 1.6 COORDINATION

- A. Coordinate Contractor's Construction Schedule with the schedule of values, **list of subcontracts**, submittal schedule, progress reports, payment requests, and other required schedules and reports.
  - 1. Secure time commitments for performing critical elements of the Work from entities involved.
  - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

## 1.7 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Computer Scheduling Software: Prepare schedules using current version of a program that has been developed specifically to manage construction schedules.
  - 1. Use Microsoft Project, for current Windows operating system.
- B. Scheduling Consultant: Engage a consultant to provide planning, evaluation, and reporting using CPM scheduling.
  - 1. In-House Option: Owner may waive requirement to retain a consultant if Contractor employs skilled personnel with experience in CPM scheduling and reporting techniques. Submit qualifications.
  - 2. Meetings: Scheduling consultant shall attend all meetings related to Project progress, alleged delays, and time impact.
- C. Time Frame: Extend schedule from date established for commencement of the Work to date of [final completion.

1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- D. Activities: Treat each floor or separate area as a separate numbered activity for each main element of the Work. Comply with the following:
1. Activity Duration: Define activities so no activity is longer than 20 days, unless specifically allowed by Architect.
  2. Procurement Activities: Include procurement process activities for the following long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
  3. Submittal Review Time: Include review and resubmittal times indicated in Section 013300 "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with submittal schedule.
  4. Startup and Testing Time: Include no fewer than 15 days for startup and testing.
  5. Commissioning Time: Include no fewer than 15 days for commissioning.
  6. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
  7. Punch List and Final Completion: Include not more than 30 days for completion of punch list items and final completion.
- E. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
1. Phasing: Arrange list of activities on schedule by phase.
  2. Work under More Than One Contract: Include a separate activity for each contract.
  3. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
  4. Products Ordered in Advance: Include a separate activity for each product. Include delivery date indicated in Section 011000 "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
  5. Owner-Furnished Products: Include a separate activity for each product. Include delivery date indicated in Section 011000 "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
  6. Work Restrictions: Show the effect of the following items on the schedule:
    - a. Coordination with existing construction.
    - b. Limitations of continued occupancies.
    - c. Uninterruptible services.
    - d. Partial occupancy before Substantial Completion.
    - e. Use-of-premises restrictions.
    - f. Provisions for future construction.
    - g. Seasonal variations.
    - h. Environmental control.
  7. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
    - a. Subcontract awards.
    - b. Submittals.
    - c. Purchases.
    - d. Mockups.
    - e. Fabrication.
    - f. Sample testing.

- g. Deliveries.
  - h. Installation.
  - i. Tests and inspections.
  - j. Adjusting.
  - k. Curing.
  - l. Building flush-out.
  - m. Startup and placement into final use and operation.
  - n. Commissioning.
8. Construction Areas: Identify each major area of construction for each major portion of the Work. Indicate where each construction activity within a major area must be sequenced or integrated with other construction activities to provide for the following:
- a. Structural completion.
  - b. Temporary enclosure and space conditioning.
  - c. Permanent space enclosure.
  - d. Completion of mechanical installation.
  - e. Completion of electrical installation.
  - f. Substantial Completion.
- F. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and final completion.
- G. "Cost Correlation" Paragraph below establishes progress measured in dollar volume of the Work.
- H. Cost Correlation: Superimpose a cost correlation timeline, indicating planned and actual costs. On the line, show planned and actual dollar volume of the Work performed as of planned and actual dates used for preparation of payment requests.
- 1. See Section 012900 "Payment Procedures" for cost reporting and payment procedures.
- I. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:
- 1. Unresolved issues.
  - 2. Unanswered Requests for Information.
  - 3. Rejected or unreturned submittals.
  - 4. Notations on returned submittals.
  - 5. Pending modifications affecting the Work and the Contract Time.
- J. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.
- 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
  - 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
  - 3. As the Work progresses, indicate final completion percentage for each activity.
- K. Recovery Schedule: When periodic update indicates the Work is 14 or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, equipment required to achieve compliance, and date by which recovery will be accomplished.



- L. Distribution: Distribute copies of approved schedule to Architect, Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
  - 1. Post copies in Project meeting rooms and temporary field offices.
  - 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

#### 1.8 STARTUP CONSTRUCTION SCHEDULE

- A. Gantt-Chart Schedule: Submit startup, horizontal, Gantt-chart-type construction schedule within seven days of date established for commencement of the Work.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line. Outline significant construction activities for first 90 days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.

#### 1.9 GANTT-CHART SCHEDULE REQUIREMENTS

- A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal, Gantt-chart-type, Contractor's Construction Schedule within 30 days of date established for commencement of the Work.
  - 1. Base schedule on the startup construction schedule and additional information received since the start of Project.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.
  - 1. For construction activities that require three months or longer to complete, indicate an estimated completion percentage in 10 percent increments within time bar.

#### 1.10 CPM SCHEDULE REQUIREMENTS

- A. General: Prepare network diagrams using AON (activity-on-node) format.
- B. Startup Network Diagram: Submit diagram within 14 days of date established for commencement of the Work. Outline significant construction activities for the first 90 days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.
- C. CPM Schedule: Prepare Contractor's Construction Schedule using a cost- and resource-loaded, time-scaled CPM network analysis diagram for the Work.
  - 1. Develop network diagram in sufficient time to submit CPM schedule so it can be accepted for use no later than 60 days after date established for commencement of the Work.
    - a. Failure to include any work item required for performance of this Contract shall not excuse Contractor from completing all work within applicable completion dates.

2. Conduct educational workshops to train and inform key Project personnel, including subcontractors' personnel, in proper methods of providing data and using CPM schedule information.
  3. Establish procedures for monitoring and updating CPM schedule and for reporting progress. Coordinate procedures with progress meeting and payment request dates.
  4. Use "one workday" as the unit of time for individual activities. Indicate nonworking days and holidays incorporated into the schedule to coordinate with the Contract Time.
- D. CPM Schedule Preparation: Prepare a list of all activities required to complete the Work. Using the startup network diagram, prepare a skeleton network to identify probable critical paths.
1. Activities: Indicate the estimated time duration, sequence requirements, and relationship of each activity in relation to other activities. Include estimated time frames for the following activities:
    - a. Preparation and processing of submittals.
    - b. Mobilization and demobilization.
    - c. Purchase of materials.
    - d. Delivery.
    - e. Fabrication.
    - f. Utility interruptions.
    - g. Installation.
    - h. Work by Owner that may affect or be affected by Contractor's activities.
    - i. Testing and inspection.
    - j. Commissioning.
    - k. Punch list and final completion.
    - l. Activities occurring following final completion.
  2. Critical Path Activities: Identify critical path activities, including those for interim completion dates. Scheduled start and completion dates shall be consistent with Contract milestone dates.
  3. Processing: Process data to produce output data on a computer-drawn, time-scaled network. Revise data, reorganize activity sequences, and reproduce as often as necessary to produce the CPM schedule within the limitations of the Contract Time.
  4. Format: Mark the critical path. Locate the critical path near center of network; locate paths with most float near the edges.
    - a. Subnetworks on separate sheets are permissible for activities clearly off the critical path.
  5. Cost- and Resource-Loading of CPM Schedule: Assign cost to construction activities on the CPM schedule. Do not assign costs to submittal activities. Obtain Architect's approval prior to assigning costs to fabrication and delivery activities. Assign costs under main subcontracts for testing and commissioning activities, operation and maintenance manuals, punch list activities, Project record documents, **sustainable design documentation**, and demonstration and training (if applicable), in the amount of 5 percent of the Contract Sum.
    - a. Each activity cost shall reflect an appropriate value subject to approval by Architect.
    - b. Total cost assigned to activities shall equal the total Contract Sum.
- E. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using a network fragment to demonstrate the effect of the proposed change on the overall Project schedule.
- F. Initial Issue of Schedule: Prepare initial network diagram from a sorted activity list indicating straight "early start-total float." Identify critical activities. Prepare tabulated reports showing the following:
1. Contractor or subcontractor and the Work or activity.

2. Description of activity.
3. Main events of activity.
4. Immediate preceding and succeeding activities.
5. Early and late start dates.
6. Early and late finish dates.
7. Activity duration in workdays.
8. Total float or slack time.
9. Average size of workforce.
10. Dollar value of activity (coordinated with the schedule of values).

G. Schedule Updating: Concurrent with making revisions to schedule, prepare tabulated reports showing the following:

1. Identification of activities that have changed.
2. Changes in early and late start dates.
3. Changes in early and late finish dates.
4. Changes in activity durations in workdays.
5. Changes in the critical path.
6. Changes in total float or slack time.
7. Changes in the Contract Time.

H. Value Summaries: Prepare two cumulative value lists, sorted by finish dates.

1. In first list, tabulate activity number, early finish date, dollar value, and cumulative dollar value.
2. In second list, tabulate activity number, late finish date, dollar value, and cumulative dollar value.
3. In subsequent issues of both lists, substitute actual finish dates for activities completed as of list date.
4. Prepare list for ease of comparison with payment requests; coordinate timing with progress meetings.
  - a. In both value summary lists, tabulate "actual percent complete" and "cumulative value completed" with total at bottom.
  - b. Submit value summary printouts one week before each regularly scheduled progress meeting.

## 1.11 REPORTS

A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:

1. List of subcontractors at Project site.
2. List of separate contractors at Project site.
3. Approximate count of personnel at Project site.
4. Equipment at Project site.
5. Material deliveries.
6. High and low temperatures and general weather conditions, including presence of rain or snow.
7. Testing and inspection.
8. Accidents.
9. Meetings and significant decisions.
10. Unusual events.
11. Stoppages, delays, shortages, and losses.
12. Meter readings and similar recordings.
13. Emergency procedures.
14. Orders and requests of authorities having jurisdiction.

15. Change Orders received and implemented.
  16. Change Directives received and implemented.
  17. Services connected and disconnected.
  18. Equipment or system tests and startups.
  19. Partial completions and occupancies.
  20. Substantial Completions authorized.
- B. Material Location Reports: At weekly intervals, prepare and submit a comprehensive list of materials delivered to and stored at Project site. List shall be cumulative, showing materials previously reported plus items recently delivered. Include with list a statement of progress on and delivery dates for materials or items of equipment fabricated or stored away from Project site. Indicate the following categories for stored materials:
1. Material stored prior to previous report and remaining in storage.
  2. Material stored prior to previous report and since removed from storage and installed.
  3. Material stored following previous report and remaining in storage.
- C. Site Condition Reports: Immediately on discovery of a difference between site conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.
- D. Unusual Event Reports: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, responses by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.
1. Submit unusual event reports directly to Owner within one day of an occurrence. Distribute copies of report to parties affected by the occurrence.

\*\*\*END OF SECTION 013200\*\*\*

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## SECTION 087100 - DOOR HARDWARE

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Mechanical door hardware for the following:
    - A. Swinging doors.

#### 1.3 COORDINATION

- A. Installation Templates: Distribute for doors, frames, and other work specified to be factory prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.
- B. Existing Openings: Where hardware components are scheduled for application to existing construction or where modifications to existing door hardware are required, field verify existing conditions and coordinate installation of door hardware to suit opening conditions and to provide proper door operation.

#### 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
  - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Door Hardware Schedule: Prepared by or under the supervision of Installer's Architectural Hardware Consultant. Coordinate door hardware schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
  - 1. Format: Use same scheduling sequence and format and use same door numbers as in door hardware schedule in the Contract Documents.
  - 2. Content: Include the following information:
    - A. Identification number, location, hand, fire rating, size, and material of each door and frame.
    - B. Locations of each door hardware set, cross-referenced to Drawings on floor plans and to door and frame schedule.
    - C. Complete designations, including name and manufacturer, type, style, function, size, quantity, function, and finish of each door hardware product.
- C. Keying Schedule: Prepared by or under the supervision of Installer's Architectural Hardware Consultant, detailing Owner's final keying instructions for locks. Include schematic keying diagram and index each key set to unique door designations that are coordinated with the Contract Documents.

#### 1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer and Architectural Hardware Consultant.
- B. Product Certificates: For each type of electrified door hardware.

1. Certify that door hardware for use on each type and size of labeled fire-rated doors complies with listed fire-rated door assemblies.
- C. Sample Warranty: For special warranty.
- 1.6 CLOSEOUT SUBMITTALS
- A. Maintenance Data: For each type of door hardware to include in maintenance manuals.
  - B. Schedules: Final door hardware and keying schedule.
- 1.7 QUALITY ASSURANCE
- A. Installer Qualifications: Supplier of products and an employer of workers trained and approved by product manufacturers and of an Architectural Hardware Consultant who is available during the course of the Work to consult Contractor, Architect, and Owner about door hardware and keying.
    1. Scheduling Responsibility: Preparation of door hardware and keying schedule.
- 1.8 DELIVERY, STORAGE, AND HANDLING
- A. Inventory door hardware on receipt and provide secure lock-up for door hardware delivered to Project site.
  - B. Tag each item or package separately with identification coordinated with the final door hardware schedule, and include installation instructions, templates, and necessary fasteners with each item or package.
  - C. Deliver keys and permanent cores to Owner.
- 1.9 WARRANTY
- A. Special Warranty: Manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.
    1. Failures include, but are not limited to, the following:
      - A. Structural failures including excessive deflection, cracking, or breakage.
      - B. Faulty operation of doors and door hardware.
      - C. Deterioration of metals, metal finishes, and other materials beyond normal weathering and use.
    2. Warranty Period: Three years from date of Substantial Completion unless otherwise indicated below:
      - A. Exit Devices: Two years from date of Substantial Completion.
      - B. Manual Closers: 10 years from date of Substantial Completion.
  - B. **Warranty dispute must occur in the jurisdiction where the products are installed.**

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Source Limitations: Obtain each type of door hardware from single manufacturer.

## 2.2 PERFORMANCE REQUIREMENTS

- A. Means of Egress Doors: Latches do not require more than 15 lbf to release the latch. Locks do not require use of a key, tool, or special knowledge for operation.
- B. Accessibility Requirements: For door hardware on doors in an accessible route, comply with the DOJ's "2010 ADA Standards for Accessible Design" and ICC A117.1.
  - 1. Provide operating devices that do not require tight grasping, pinching, or twisting of the wrist and that operate with a force of not more than 5 lbf.
  - 2. Comply with the following maximum opening-force requirements:
    - A. Interior, Non-Fire-Rated Hinged Doors: 5 lbf applied perpendicular to door.
    - B. Sliding or Folding Doors: 5 lbf applied parallel to door at latch.
    - C. Fire Doors: Minimum opening force allowable by authorities having jurisdiction.
  - 3. Bevel raised thresholds with a slope of not more than 1:2. Provide thresholds not more than 1/2 inch high.
  - 4. Adjust door closer sweep periods so that, from an open position of 90 degrees, the door will take at least 5 seconds to move to a position of 12 degrees from the latch.
  - 5. Adjust spring hinges so that, from an open position of 70 degrees, the door will take at least 1.5 seconds to move to the closed position.

## 2.3 SCHEDULED DOOR HARDWARE

- A. Provide products for each door that comply with requirements indicated in Part 2 and door hardware schedule.
  - 1. Door hardware is scheduled in Part 3.

## 2.4 HINGES

- A. Hinges: BHMA A156.1. Provide template-produced hinges for hinges installed on hollow-metal doors and hollow-metal frames.
  - 1. Manufacturers: Subject to compliance with requirements, provide products by the following:
    - A. Allegion
    - B. Hager Companies
    - C. McKinney
    - D. Stanley Commercial Hardware

## 2.5 LOCKS AND LATCHES

- A. Lock Functions: As indicated in door hardware schedule.
- B. Lock Throw: Comply with testing requirements for length of bolts required for labeled fire doors, and as follows:
  - 1. Bored Locks: Minimum 1/2-inch (13-mm) latchbolt throw.
  - 2. Mortise Locks: Minimum 3/4-inch (19-mm) latchbolt throw.
  - 3. Deadbolts: Minimum 1-inch (25-mm) bolt throw.
- C. Lock Backset: 2-3/4 inches (70 mm) unless otherwise indicated.
  - 1. Lock Trim:
    - A. Description: Match existing.
    - B. Levers: Match Existing
    - C. Escutcheons (Roses): Match Existing.
    - D. Dummy Trim: Match lever lock trim and escutcheons.



- D. Strikes: Provide manufacturer's standard strike for each lock bolt or latchbolt complying with requirements indicated for applicable lock or latch and with strike box and curved lip extended to protect frame; finished to match lock or latch.
- E. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
- F. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
- G. Aluminum-Frame Strike Box: Manufacturer's special strike box fabricated for aluminum framing.
- H. Rabbet Front and Strike: Provide on locksets for rabbeted meeting stiles.
- I. Mortise Locks: BHMA A156.13; Security Grade 2; stamped steel case with steel or brass parts; Series 1000.
  - 1. Manufacturers: Subject to compliance with requirements, provide products by the following:
    - A. Allegion
    - B. Best
    - C. Dorma
    - D. Hager Companies
    - E. Sargent
    - F. Stanley
    - G. Yale

## 2.6 ELECTRIC STRIKES

- A. Electric Strikes: BHMA A156.31; [Grade 1] [Grade 2]; with faceplate to suit lock and frame.
  - 1. Allegion
  - 2. Assa Abloy
  - 3. Hager
  - 4. Stanley Commercial Hardware

## 2.7 ELECTROMAGNETIC LOCKS

- A. Electromagnetic Locks: BHMA A156.23; electrically powered; with electromagnet attached to frame and armature plate attached to door; full-exterior or full-interior type, as required by application indicated.
  - 1. Allegion
  - 2. Assa Abloy
  - 3. Dorma
  - 4. Hager

### 2.8.1 MANUAL FLUSH BOLTS

- A. Manual Flush Bolts: BHMA A156.16; minimum 3/4-inch (19-mm) throw; designed for mortising into door edge.
  - 1. Allegion
  - 2. Trimco

## 2.8 EXIT DEVICES AND AUXILIARY ITEMS

- A. Exit Devices and Auxiliary Items: BHMA A156.3.
  - 1. Manufacturers: Subject to compliance with requirements, provide products by the following:
    - A. Allegion
    - B. Dorma
    - C. Hager
    - D. Sargent

- E. Stanley
- F. Yale

## 2.9 LOCK CYLINDERS

- A. Lock Cylinders: Tumbler type, constructed from brass or bronze, stainless steel, or nickel silver.
  - 1. Allegion
  - 2. ASSA, Inc.
  - 3. Best Access Systems
  - 4. Hager
  - 5. Sargent
  - 6. Stanley
  - 7. Yale
- B. Standard Lock Cylinders: BHMA A156.5; Grade 2 permanent cores; face finished to match lockset.
- C. Core Type: Interchangeable
- D. High-Security Lock Cylinders: BHMA A156.30; Grade 2 permanent cores that are removable; face finished to match lockset.
- E. Type: E, electrical.
- F. Construction Master Keys: Provide cylinders with feature that permits voiding of construction keys without cylinder removal. Provide 10 construction master keys.
- G. Construction Cores: Provide construction cores that are replaceable by permanent cores. Provide 10 construction master keys.

## 2.10 KEYING

- A. Keying System: Factory registered, complying with guidelines in BHMA A156.28, appendix. Provide one extra key blank for each lock.
  - 1. Existing System:
    - A. Master key or grand master key locks to Owner's existing system.
- B. Keys: Brass.
  - 1. Stamping: Permanently inscribe each key with a visual key control number and include the following notation:
    - A. Notation: "DO NOT DUPLICATE."

## 2.11 OPERATING TRIM

- A. Operating Trim: BHMA A156.6; stainless steel unless otherwise indicated.

## 2.12 SURFACE CLOSERS

- A. Surface Closers: BHMA A156.4; rack-and-pinion hydraulic type with adjustable sweep and latch speeds controlled by key-operated valves and forged-steel main arm. Comply with manufacturer's written instructions for size of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Provide factory-sized closers, adjustable to meet field conditions and requirements for opening force.
  - 1. Manufacturers: Subject to compliance with requirements, provide products by the following:
    - A. Allegion
    - B. Dorma

- C. Hager Companies
- D. Norton Door Controls
- E. Sargent
- F. Stanley
- G. Yale

2.13 MECHANICAL STOPS AND HOLDERS

- A. Wall- and Floor-Mounted Stops: BHMA A156.16.
  - 1. Manufacturers: Subject to compliance with requirements, provide products by the following:
    - A. Allegion
    - B. American Specialties
    - C. Architectural Builders Hardware
    - D. Baldwin
    - E. Hager
    - F. Rockwood
    - G. Trimco

2.14 DOOR GASKETING

- A. Door Gasketing: BHMA A156.22; with resilient or flexible seal strips that are easily replaceable and readily available from stocks maintained by manufacturer.
  - 1. Hager
  - 2. National guard
  - 3. Pemko
- B. Maximum Air Leakage: When tested according to ASTM E 283 with tested pressure differential of 0.3-inch wg, as follows:
  - 1. Smoke-Rated Gasketing: 0.3 cfm/sq. ft. of door opening.
  - 2. Gasketing on Single Doors: 0.3 cfm/sq. ft. of door opening.
  - 3. Gasketing on Double Doors: 0.50 cfm per foot of door opening.

2.15 THRESHOLDS

- A. Thresholds: BHMA A156.21; fabricated to full width of opening indicated.
  - 1. Hager
  - 2. National Guard
  - 3. Pemko
  - 4. Rockwood

2.16 METAL PROTECTIVE TRIM UNITS

- A. Metal Protective Trim Units: BHMA A156.6:
  - 1. Manufacturers: Subject to compliance with requirements, provide products by the following:
    - A. Allegion
    - B. Hager
    - C. Inpro
    - D. Rockwood
    - E. Trimco

2.17 FABRICATION

- A. Manufacturer's Nameplate: Do not provide products that have manufacturer's name or trade name displayed in a visible location except in conjunction with required fire-rating labels and as otherwise approved by Architect.

1. Manufacturer's identification is permitted on rim of lock cylinders only.
- B. Base Metals: Produce door hardware units of base metal indicated, fabricated by forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness. Furnish metals of a quality equal to or greater than that of specified door hardware units and BHMA A156.18.
- C. Fasteners: Provide door hardware manufactured to comply with published templates prepared for machine, wood, and sheet metal screws. Provide screws that comply with commercially recognized industry standards for application intended, except aluminum fasteners are not permitted. Provide Phillips flat-head screws with finished heads to match surface of door hardware unless otherwise indicated.
  1. Concealed Fasteners: For door hardware units that are exposed when door is closed, except for units already specified with concealed fasteners. Do not use through bolts for installation where bolt head or nut on opposite face is exposed unless it is the only means of securely attaching the door hardware. Where through bolts are used on hollow door and frame construction, provide sleeves for each through bolt.
  2. Fire-Rated Applications:
    - A. Wood or Machine Screws: For the following:
      - 1) Strike plates to frames.
      - 2) Closers to doors and frames.
    - B. Steel Through Bolts: For the following unless door blocking is provided:
      - 1) Surface hinges to doors.
      - 2) Closers to doors and frames.
      - 3) Surface-mounted exit devices.
  3. Spacers or Sex Bolts: For through bolting of hollow-metal doors.
  4. Gasketing Fasteners: Provide noncorrosive fasteners for exterior applications and elsewhere as indicated.

## 2.18 FINISHES

- A. Provide finishes complying with BHMA A156.18 as indicated in door hardware schedule.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance of the Work.
- B. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Steel Doors and Frames: For surface-applied door hardware, drill and tap doors and frames according to ANSI/SDI A250.6.
- B. Wood Doors: Comply with door and hardware manufacturers' written instructions.

### 3.3 INSTALLATION

- A. Mounting Heights: Mount door hardware units at heights to comply with the following unless otherwise indicated or required to comply with governing regulations.
  - 1. Standard Steel Doors and Frames: ANSI/SDI A250.8.
  - 2. Custom Steel Doors and Frames: HMMA 831.
  - 3. Wood Doors: DHI's "Recommended Locations for Architectural Hardware for Wood Flush Doors."
- B. Install each door hardware item to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work. Do not install surface-mounted items until finishes have been completed on substrates involved.
  - 1. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.
  - 2. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.
- C. Hinges: Install types and in quantities indicated in door hardware schedule, but not fewer than the number recommended by manufacturer for application indicated or one hinge for every 30 inches of door height, whichever is more stringent, unless other equivalent means of support for door, such as spring hinges or pivots, are provided.
- D. Lock Cylinders: Install construction cores to secure building and areas during construction period.
  - 1. Replace construction cores with permanent cores as directed by Owner.
  - 2. Furnish permanent cores to Owner for installation.
- E. Thresholds: Set thresholds for exterior doors and other doors indicated in full bed of sealant complying with requirements specified in Section 079200 "Joint Sealants."
- F. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they will impede traffic.
- G. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.
  - 1. Do not notch perimeter gasketing to install other surface-applied hardware.

### 3.4 FIELD QUALITY CONTROL

- A. Independent Architectural Hardware Consultant: [Owner will engage] [Engage] a qualified independent Architectural Hardware Consultant to perform inspections and to prepare inspection reports.
  - 1. Independent Architectural Hardware Consultant will inspect door hardware and state in each report whether installed work complies with or deviates from requirements, including whether door hardware is properly installed and adjusted.

### 3.5 ADJUSTING

- A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended.

Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

1. Door Closers: Adjust sweep period to comply with accessibility requirements and requirements of authorities having jurisdiction.
2. Spring Hinges: Adjust to achieve positive latching when door is allowed to close freely from an open position of 70 degrees and so that closing time complies with accessibility requirements of authorities having jurisdiction.
3. Electric Strikes: Adjust horizontal and vertical alignment of keeper to properly engage lock bolt.

- B. Occupancy Adjustment: Approximately six months after date of Substantial Completion, Installer's Architectural Hardware Consultant shall examine and readjust each item of door hardware, including adjusting operating forces, as necessary to ensure function of doors, door hardware, and electrified door hardware.

### 3.6 CLEANING AND PROTECTION

- A. Clean adjacent surfaces soiled by door hardware installation.
- B. Clean operating items as necessary to restore proper function and finish.
- C. Provide final protection and maintain conditions that ensure that door hardware is without damage or deterioration at time of Substantial Completion.

### 3.7 MAINTENANCE SERVICE

- A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

### 3.8 DEMONSTRATION

- A. Train Owner's maintenance personnel to adjust, operate, and maintain door hardware.

#### 3.9 DOOR HARDWARE SCHEDULE

##### Hardware Group 01

2	EA	Hinge	T4A3386 NRP 4 1/2" x 4 1/2" US32D	McKinney
1	EA	Hinge	T4A3386 QC12 4 1/2" x 4 1/2" US32D	O.F.O.I.
1	EA	Electrified Mortise Lock		O.F.O.I.
1	EA	Small Format Inter Core		O.F.O.I.
2	EA	Surface Closer	TB 1431 P10 EN	Sargent
1	EA	Threshold	273x3AFG 72 FHSL14	Pemko
1	EA	Gasketing	S88D	Pemko
1	EA	Sweep	18061CNB 36	Pemko
1	EA	Astragal	357SPTB	Pemko
1	EA	Card Reader		O.F.O.I.

##### Hardware Group 02

3	EA	Hinge	T4A3386 NRP 4 1/2" x 4 1/2" US32D	McKinney
1	EA	Mortise Lock	72 8204 LNP US32D	Sargent
1	EA	Small Format Inter Core	117P 7300B	Sargent
1	EA	Surface Closer	TB 1431 CPS EN	Sargent
1	EA	Threshold	273x3AFG 36 FHSL14	Pemko
1	EA	Gasketing	S88D 17'	Pemko
1	EA	Sweep	18061CNB 36	Pemko
1	EA	Latch Protector	325 US26D	Rockwood



Hardware Group 03

2	EA	Hinges	T4A3786 NRP 4 ½" x 4 ½" x 26D	McKinney
1	EA	Electrified Hinge	T4A3786 QC12 4 ½" x 4 ½" x 26D	O.F.O.I.
1	EA	Elec. Mortise Lock		O.F.O.I.
1	EA	SFIC	117P-7300B	O.F.O.I.
1	EA	Closer	TB1431 P10	Sargent
1	EA	Wall Stop	404 x 26D	Rockwood
1	EA	Door Bottom	411APKL 36"	Pemko
1	EA	Card Reader By Others		O.F.O.I.

Hardware Group 04

2	EA	Hinges	T4A3786 NRP 4 ½" x 4 ½" x 26D	McKinney
1	EA	Electrified Hinge	T4A3786 QC12 4 ½" x 4 ½" x 26D	O.F.O.I.
1	EA	Elec. Mortise Lock		O.F.O.I.
1	EA	SFIC	117P-7300B	O.F.O.I.
1	EA	Closer	TB1431 P10	Sargent
1	EA	Door Bottom	411APKL 36"	Pemko
1	EA	Card Reader By Others		O.F.O.I.

Hardware Group 05

3	EA	Hinge	BB1199 4-1/2" x 4-1/2" US32D NRP	Hager
1	EA	Cylindrical Lock	3553 WTN US26D	Hager
1	EA	Wall Stop	404 US26D	Rockwood
1	EA	Gasketing	5050B 17'	NG
1	EA	Door Bottom	411APKL 36"	Pemko

Hardware Group 06

3	EA	Hinges	FBB179 4 ½" x 4 ½" x 26D	Stanley
1	EA	Mortise Latchset	8215 LNP 32D 1-5/8" lip strike	Sargent
1	SET	Gasketing	S773D 17'	Pemko
1	EA	Door Bottom	411APKL 36"	Pemko

Hardware Group 07

3	EA	Hinges	FBB179 4 ½" x 4 ½" x 26D	Stanley
1	EA	Mortise Latchset	8215 LNP 32D 1-5/8" lip strike	Sargent
1	EA	Wall Stop	404 x 26D	Rockwood
1	SET	Gasketing	S773D 17'	Pemko
1	EA	Door Bottom	411APKL 36"	Pemko

Hardware Group 08

3	EA	Hinges	FBB179 4 ½" x 4 ½" x 26D	Stanley
1	EA	Mortise Privacy Set	8265 LNP 32D 1-5/8" lip strike	Sargent
1	EA	Wall Stop	404 x 26D	Rockwood
1	SETS	Gasketing	S773D 17'	Pemko
1	EA	Door Bottom	411APKL 36"	Pemko

Hardware Group 09

3	EA	Hinges	FBB179 4 ½" x 4 ½" x 26D	Stanley
1	EA	Mortise Privacy Set	8265 LNP 32D 1-5/8" lip strike	Sargent
1	SETS	Gasketing	S773D 17'	Pemko
1	EA	Door Bottom	411APKL 36"	Pemko

Hardware Group 10

3	EA	Hinges	FBB179 4 1/2" x 4 1/2" x 26D	Stanley
1	EA	Mortise Lockset	72 8204 LNP 32D 1-5/8" lip strike	Sargent
1	EA	SFIC	117P-7300B	Sargent
1	Set	Gasketing	S773D 17'	Pemko
1	EA	Door Bottom	411APKL 36"	Pemko

Hardware Group 11

3	EA	Hinges	FBB179 4 1/2" x 4 1/2" x 26D	Stanley
1	EA	Mortise Lockset	72 8204 LNP 32D 1-5/8" lip strike	Sargent
1	EA	SFIC	117P-7300B	Sargent
1	EA	Wall Stop	404 x 26D	Rockwood
1	Set	Gasketing	S773D	Pemko
1	EA	Door Bottom	411APKL	Pemko

Hardware Group 12

3	EA	Hinges	FBB179 4 1/2" x 4 1/2" x 26D	Stanley
1	EA	Mortise Latchsets	8215 LNP 32D 1-5/8" lip strike	Sargent
1	EA	Wall Stops	404 x 26D	Rockwood
1	Set	Gasketing	S773D 17'	Pemko
1	EA	Door Bottoms	411APKL 36"	Pemko

Hardware Group 13

2	EA	Hinges	FBB179 4 1/2" x 4 1/2" x 26D	Stanley
1	EA	Mortise Lockset	72 8204 LNP 32D 1-5/8" lip strike	Sargent
1	EA	SFIC	117P-7300B	Sargent
1	Set	Gasketing	S773D	Pemko
1	EA	Door Bottom	411APKL 36"	Pemko

\*\*END OF SECTION 087100\*\*



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