



State of Utah

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Governor

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Lt. Governor

Department of Administrative Services

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Executive Director

Division of Facilities Construction and Management

DAVID G. BUXTON
Director

ADDENDUM NO. 1

Date: December 31, 2009

To: Pre-Qualified General Contractors

From: Wayne Smith – Project Manager

Reference: Fillmore Armory Upgrade
Utah National Guard – Fillmore, Utah
DFCM Project No. 09242470

Subject: **Addendum No. 1**

Pages	Addendum Cover Sheet	1 page
	<u>Architect's Addendum</u>	<u>41 pages</u>
	Total	42 pages

Note: This Addendum shall be included as part of the Contract Documents. Items in this Addendum apply to all drawings and specification sections whether referenced or not involving the portion of the work added, deleted, modified, or otherwise addressed in the Addendum. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to Disqualification.

While we contend that SB220 should only be potentially applicable to a contract issued after the effective date of said bill, this is to clarify that for purposes of this contract, regardless of the execution or effective dates of this contract, the status of Utah Law and remedies available to the State of Utah and DFCM, as it relates to any matter referred to or affected by said SB220, shall be the Utah law in effect at the time of the issuance of this Addendum.

1.1 **SCHEDULE CHANGES:** No Project Schedule changes.

1.2 **GENERAL ITEMS:** See attached Architect's Addendum.



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ADDENDUM # 1

PROJECT: Utah National Guard
Fillmore Armory Upgrades
Project No. - 09242470
36 W Center Street
Fillmore, UT 84631

BID DATE: January 5, 2010

BID TIME: 3:00 p.m.

Please note and include the following items to the contract documents. The General Contractor shall be responsible to incorporate these changes into the Contract Documents and shall also be responsible to notify all sub-contractors of this addendum.

PROJECT MANUAL:

1. SECTION 012100 – ALLOWANCES:
 - 1.1. As a reminder there is an allowance on this project, see section for amount, and should be part of the Base Bid. The successful bidder should include this amount as a separate line item on the schedule of values on the Certificate For Payment, AIA Document G703.
2. SECTION 075113 – BUILT-UP ASPHALT ROOFING:
 - 2.1. See the attached revised section.
 - 2.2. Scope of penetrations is as follows: There will be one ventilation air penetration for the furnaces, Five flue penetrations for the furnaces and 10 refrigerant line penetrations for the furnaces air conditioner. The RTU will only have 2 roof penetrations. They are one for supply air and one for return air. The RTU openings are under the roof curb.
3. SECTION 077100 – ROOF SPECIALTIES:
 - 3.1. This section is included in the specifications and should be added to the Table of Contents.
4. SECTION 084113 – ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS:
 - 4.1. Paragraph 2.9 Aluminum Finishes: This should be changed from clear anodic finish to medium bronze. This color should match as close as possible to the color of transom windows W1 & W7.
5. SECTION 085113 – ALUMINUM WINDOWS:
 - 5.1. Paragraph 2.2.A: Window Type should be changed from Projected to Fixed.
6. SECTION 092400 – PORTLAND CEMENT STUCCO:
 - 6.1. See the attached section.
7. SECTION 096466 – WOOD ATHLETIC FLOORING:
 - 7.1. This section is included in the specifications but the number and title is wrong in the Table of Contents.
8. SECTION 096566 – RESILIENT ATHLETIC FLOORING:
 - 8.1. This section should be deleted as this material is existing and will not be replaced.
9. SECTION 102113 – TOILET COMPARTMENTS:
 - 9.1. Paragraph 2.1.A: Add Columbia Partitions.
10. SECTION 221513 – GENERAL-SERVICE COMPRESSED-AIR PIPING:

- 10.1. This section is included in the specifications and should be added to the Table of Contents.
- 11. SECTION 223100 – DOMESTIC WATER SOFTNERS:
 - 11.1. This section was listed in the Table of Contents but has no section and should not be included in the specifications.
- 12. SECTION 235533 – FUEL-FIRED UNIT HEATERS:
 - 12.1. This section is added to the specification- see attached.
- 13. DIVISION 27 – COMMUNICATION SERVICES:
 - 13.1. This Division should be Communication Services not the Electronic Safety & Security as per the Table of Contents.
 - 13.2. Section 283100 Fire Detection and Alarm: should be deleted from the Table of Contents in this location as this is a duplication.
 - 13.3. Section 271343 Communication Circuits: This is included in the specification and should be part of this Division.
 - 13.3.1. Attached as part of the addendum is the National Guard Telecommunication General Information and Conditions.

CONSTRUCTION DOCUMENTS:

- 14. SHEET G-008 ACCESSIBILITY DETAILS:
 - 14.1. Detail D6 revised- see attached detail.
- 15. SHEET S-101 GENERAL NOTES: (See attached sheet)
 - 15.1. The table in A.12 on Sheet S-101 has been revised with updated Importance factors and Seismic Occupancy factor.
 - 15.2. B.1 on Sheet S-101 has been revised to show an allowable soil bearing pressure of 1,000 psf and the reference to a project geotechnical report has been removed.
 - 15.3. Section C on Sheet S-101 has been revised to show Strong-Bolt anchors, Epoxy grouted anchors, and Titen-HD anchors at anchor bolts for interior walls.
 - 15.4. Section G has been deleted from Sheet S-101.
 - 15.5. Section H renamed to be Section G on Sheet S-101.
 - 15.6. Section I renamed to be Section H on Sheet S-101. Roof and Floor sheathing callout in same section revised to reference "Existing Sheathing to Remain".
 - 15.7. Section J renamed to be Section I on Sheet S-101.
 - 15.8. Section K renamed to be Section J on Sheet S-101.
 - 15.9. Section L renamed to be Section K on Sheet S-101.
 - 15.10. Section M has been deleted from Sheet S-101.
 - 15.11. Section N renamed to be Section L on Sheet S-101. Item B (CMU) in the same section has been deleted. Titen HD Anchors have been added to the Special Cases item in the same section.
 - 15.12. The structural items requiring special inspection per the DFCM Special Inspection and Testing Form (from http://dfcm.utah.gov/downloads/bldg_official/Special_Inspection_Form.pdf) are the following:
 - 15.12.1. Structural Steel to be Fabricated by an Approved Fabricator per DFCM Approved Fabricator List.
 - 15.12.2. High Strength Bolting (1704.3) – Periodic
 - 15.12.3. Single Pass Fillet Welds < or = 5/16" – Periodic.
 - 15.12.4. Reinforcing Steel Placement (in new footings) – Periodic
 - 15.12.5. Use of Required Concrete Design Mix – Periodic.
 - 15.12.6. Concrete Sampling for Strength Test, Slum, Air Content, and Temperature of Concrete – Continuous.
 - 15.12.7. Structural Fill Soil Densities – Periodic.
 - 15.12.8. Post-Installed Mechanical Anchors (Strong-Bolt or Titen HD) – Periodic
 - 15.12.9. Epoxy Grouted Anchor Bolts – Periodic.
 - 15.12.10. Seismic Supports for Duct Work and Sealing of Joints for Duct Work – Periodic
 - 15.12.11. Seismic Supports for Electrical Raceways, Cable Trays and Lights – Periodic

- 15.12.12. Seismic Supports for Plumbing Lines including Gas, Water, and Steam and Condensation - Periodic
16. SHEET S-201 FOUNDATION PLAN:
- 16.1. The Spot Footings on Sheet S-201 have been revised from F3.0 to F3.5 and F4.0 to F4.5. The new footings are the following:
- 16.2. F3.5 - 3'-6" x 3'-6" x 12" thick with five (5) #4 reinforcing bars each way.
- 16.3. F4.5 - 3'-6" x 3'-6" x 12" thick with six (6) #4 reinforcing bars each way.
- 16.4. A note was added to Sheet S-201 for the base below the spot footings (noted in item 13 above) to be compacted to at least 95% of the maximum dry density as determined by the AASHTO T-180 (ASTM D-1557) compaction criteria.
17. SHEET S-302 ROOF FRAMING PLAN:
- 17.1. The new roof joists shown on Sheet S-302 are only required if Alternate #5 is selected (Alternate with new RTU) and should not be included in the base bid.
18. SHEET S-401 STRUCTURAL DETAILS:
19. Detail 6 on Sheet S-401 (See attached detail) has been revised to be nearly identical as detail 2 on Sheet S-401 (detail 6 references the opening as a new opening whereas detail 2 references an existing opening that is to be enlarged). The reference to brick veneer has been removed from both details 2 and 6 on Sheet S-401.
- 19.1. The anchor bolts in detail 11 on Sheet S-401 have been revised to be eight (8) 1" diameter threaded rod anchors placed in 1-1/8" diameter by 9" deep holes with Simpson Set-XP epoxy.
20. SHEET A-101 SITE PLAN: (see attached sheet)
- 20.1. Additional Ramp information has been shown see plan and details.
- 20.2. Flagpole detail B6/A101 added.
- 20.3. Accessible parking dimensioned.
21. SHEET A-106 MAIN LEVEL FLOOR PLAN:
- 21.1. Additional Ramp/Stair information has been shown see attached plan.
- 21.2. Ramps have been extended to qualify as sloped walk-ways.
22. SHEET A-107 UPPER & BASEMENT FLOOR PLAN:
- 22.1. In Storage Room 203: Add the following wall types: North wall 'A1', West wall 'A2, South wall 'A3'.
23. SHEET A-201 EXTERIOR ELEVATIONS:
- 23.1. Elevation D5: The windows/doors shown at the Entry, above the stairs, are existing and should be removed and replaced with windows/doors shown in the enlarged elevation A4/A403. These new entry windows and doors are described in more detail on sht. A-601.
- 23.2. Elevation A5: Guardrail and Handrail from the Upper level to grade needs to be removed and replaced as per the details on A503.
24. SHEET A-501 ARCHITECTURAL DETAILS:
- 24.1. Detail A3 revised- see attached detail.
- 24.2. Detail A5 revised- see attached detail.
25. SHEET A-503 ARCHITECTURAL DETAILS:
- 25.1. Detail A6 added- see attached detail.
- 25.2. Detail C5 added- see attached detail.
- 25.3. Detail C6 added- see attached detail.
26. SHEET A-601 DOOR & WINDOW SCHEDULE:
- 26.1. Frame Type F5- The material should be changed from Hollow-Metal to Aluminum as per specification 084113.
- 26.2. Window Type W1- The doors as part of this storefront system should be screwed shut. The doors associated with Window Type W7 are operable.
- 26.3. Door Schedule:
- 26.3.1. Doors calling out for door type D16 should be changed to D14.
- 26.3.2. Doors 201A – 206A, all doors for the Upper Level should be door type D3.
- 26.3.3. Door Types D1, D2, D12, D13 are not used.
- 26.3.4. Door Type D2- the se notes and dimensions should be part of Door Type D6.
- 26.3.5. Door Type D13 should be replaced with Door Type D3.
- 26.3.6. Doors 203A & 204B- The frame type should be changed from N to F1.
27. SHEET M-002 MECHANICAL SCHEDULES: See attached revised sheet
- 27.1. Modifies the Mini-Split System Air Conditioner. AC-1 to a smaller unit.
28. SHEET P-202 1st FLOOR OVERALL PLUMBING PLAN:

- 28.1. Add General Note #3: Install gas piping as close as possible to existing gyp. board ceilings.
29. MECHANICAL: Subject to the Contract Documents the following manufacturers are acceptable for bidding:
- | | |
|-----------------------|---|
| 29.1. Air-Rite | Manual Volume Dampers, Roof Hoods |
| 29.2. Thermaflex | Flexible Duct |
| 29.3. Bradley | Thermostatic Mixing Valves |
| 29.4. Fujitsu | Mini-Split AC Units |
| 29.5. Hart and Cooley | Flexible Duct |
| 29.6. Powers | Thermostatic Mixing Valves, Pressure Balancing Valves |
| 29.7. Turbo-X | Radial Blade Ceiling Diffusers |
| 29.8. Tempco Services | Testing, Adjusting and Balancing |
30. SHEET E-101 MAIN LEVEL FLOOR PLAN- ELECTRICAL DEMOLITION:
- 30.1. Electrical Contractor shall provide new lighting fixtures on the Upper level as follows. Install 13 new Type F1 fixtures two in Aux Room, five in the Classroom, three in the corridor and three in FDC room. Also provide four Type F5 fixtures in the Storage Room. Install new switches in each room and corridor.
- 30.2. Electrical Contractor shall provide 3 new type F5 fixtures in the lower level Mechanical Equipment room and circuit to Circuit A1. Install new switch and the top of the stair.
- 30.3. Lighting fixtures in front Office are to be F1 not F6 Shown.
31. SHEET E-201 FLOOR PLANS- POWER & SYSTEMS:
- 31.1. Electrical contractor shall provide Additional Voice/Data outlets as follows:
- 31.1.1. Two in FDC room on the upper level.
 - 31.1.2. Two in Office #105
 - 31.1.3. Two in Supply Office
 - 31.1.4. One in Weight Room
 - 31.1.5. One in Mechanical Room
 - 31.1.6. Two in Office off the Garage
 - 31.1.7. One in the Garage
- 31.2. Provide a ¾" conduit from each Voice/Data outlet with cables per specifications to the IT room on the upper level.
32. SHEET E-401 ELECTRICAL RISERS:
- 32.1. The new electrical service Main, CT Cabinet, Meter and Generator Transfer switch is to be located on the North East corner of the building just east of the doorway to the Drill hall. The service conductors are to be run underground to the new MDP. Field verify the transformer location with Rocky Mtn Power and provide conduits to the transformer per their requirements.
- 32.2. The Service entrance feeders are to be two parallel runs of (4) #350 MCM CU. with #3 Gnd. in 3" Conduit, Feeders to Panels A and B to be #3/0 CU with #6 Gnd. In 2" Conduit, Feeders to Panels K and M to be #1 CU with # 6 Gnd. in 1-1/2" conduit.
33. ELECTRICAL:
- 33.1. PRODUCT APPROVALS- LIST OF APPROVAL ITEMS:

The following items, trade names, products and manufactures are approved for bidding. Approval does not relieve the bidder from satisfying the intent of the requirements of the drawings, specifications, and addenda in every respect. Failure to conform to the design quality and standards specified, established and required may result in later disapproval. If equipment must be disapproved after bidding, supplier shall supply specified equipment at no extra cost to the owner.

Items are listed generally and specific model number, etc. shall be as submitted. Items submitted but not approved either did not satisfy the requirements, or showed insufficient data, or arrived after the deadline established for the submittal process.

Fire Alarm System:

Notifier

Lighting Fixtures

F1	Lithonia Columbia	HE Williams
F2	Lithonia Prescolite	HE Williams
F3	Lithonia Columbia	LSI
F4	Lithonia Columbia	HE Williams
F5	Lithonia Columbia	HE Williams
X1	Lithonia Dual-Lite	Exitronics
E1	Sidelite Dual-Lite	
E2	Sidelite Dual-Lite	

Lighting Controls
PCI

Occupancy Sensors:
Novitas

End of Addendum #1

SECTION 075113 - BUILT-UP ASPHALT ROOFING

PART 1 - GENERAL

1.1 SUMMARY

- A. The Work generally involves providing a mineral surfaced cap membrane hot-mopped to four plies of type VI felt mopped to gypsum board over rigid insulation on metal decking complete with related flashings, scuppers, cant strips, insulation, and performing such incidental or other work as may be necessitated by these operations and called for by the Drawings. Repairs necessitated by installation of mechanical curbs, and modifications to the existing roof will be performed in the same manner as indicated below and will maintain the original roof warranty now in place. Exact built-up roofing system for this roof is unknown. Roof repair work should maintain the existing roofing material and integrity.
- B. RELATED WORK SPECIFIED ELSEWHERE: The following items may be covered in other sections of the specifications.
1. Section 06100: Rough Carpentry
 2. Section 06114: Wood Blocking and Curbing
 3. Section 07220: Insulation Board
 4. Section 07600: Sheet Metal
 5. Section 07724: Roof Hatches
 6. Section 07810: Skylights
 7. Section 15430: Plumbing Specialties
- C. REFERENCES
1. ANSI/ASTM D41 - Asphalt Primer Used in Roofing, Damproofing, and Waterproofing.
 2. ANSI/ASTM D312 - Asphalt Used in Roofing.
 3. ANSI/ASTM D2178 - Asphalt Impregnated Glass Mat Used in Roofing and Waterproofing.
 4. Factory Mutual (FM) Engineering Corporation - Roof Assembly Classifications.
 5. FS HH-I-530 - Insulation Board, Thermal (Urethane).
 6. National Roofing Contractors Association (NRCA) - Roofing and Waterproofing Manual.
 7. Underwriters Laboratories (UL) - Fire Hazard Classifications.
 8. Sheet Metal and Air-Conditioning Contractors National Association, inc. (SMACNA).

1.2 SYSTEM DESCRIPTION

- A. System I-0-4-M-/P6 Description:
1. 1" Energyguard polyisocyanurate insulation, mechanically attached to metal deck.
 2. Tapered Energyguard polyisocyanurate insulation - hot mopped in place.

3. 3/8" USG Securock - hot mopped in place.
4. Four plys Type VI felt – hot mopped in place.
5. Mineral surfaced cap sheet – hot mopped in place.
6. Flashings – Flexply 6 & Ruberoid Mop 170 - hot mopped in place.

1.3 SUBMITTALS

- A. Manufacturer's product data sheets and installation instructions on all materials proposed for use.
- B. Specimen copy of the manufacturer's standard roofing warranty.
- C. U. L. and F. M. compliance data.
- D. Shop Drawings indicating setting plan for tapered insulation.
- E. Submit two 8x10-inch samples of membrane illustrating the color and thickness to be used.
- F. Submit a copy of the manufacturer's installation instructions.

1.4 CONTRACTOR'S QUALIFICATIONS

- A. Applicator qualifications: Approved by the manufacturer prior to the bidding period and throughout the installation and able to present a copy of his certification upon request by the Architect or Owner.
- B. (Applicator must have installed at least five roofs of similar materials and methods specified for this project that have been warranted for the same number of years as required under this specification by the manufacturer of the product that will be used in the Work).

1.5 REGULATORY REQUIREMENTS

- A. Conform to applicable codes for roof assembly fire hazard requirements.
- B. Underwriters Laboratories, Inc. (UL):
 1. Class A Fire Hazard Classification.
- C. Factory Mutual Engineering & Research Corporation (FM):
 1. Roof assembly classification of Class A Construction, wind uplift requirements of (I-90) in accordance with FM Construction Bulletin 1-28.

1.6 PRE-INSTALLATION CONFERENCE

- A. Convene prior to commencing work of this section at a time and location to be determined by the Owner.

1. All parties responsible for work of this section are required to attend including the Architect, Owner, Contractor, and Manufacturer's Representative.
- B. Review installation procedures and coordination required with related Work.

1.7 DELIVERY, HANDLING AND STORAGE

- A. Deliver all materials and store in their unopened original packaging, bearing the manufacturer's name, related standards and any other specification or reference accepted as standard.
 1. When stored outdoors, insulation is to be stacked on pallets or dunnage at least four (4) inches above ground level and covered with "non-sweating" tarpaulins.
- B. Protect and permanently store all materials in a dry, well vented and weatherproof location. Only materials to be used the same day shall be removed from this location. During winter, store materials in a heated location with a 50 degrees F. minimum temperature, removed only as needed for immediate use. Keep materials away from open flame or welding sparks.
- C. Carefully store on end materials delivered in rolls with selvage edges up, a minimum of 6-inches above grade. Store metal flashings and counterflashings in such a way as to prevent wrinkling, twisting, scratching and other damage.
- D. Avoid stockpiling of materials on roofs without first obtaining acceptance from an Architect/Engineer.

1.8 QUALITY ASSURANCE

- A. Submit certification by the manufacturer of the system materials used that these Specifications and the Drawing Details are acceptable to them for the deck and surfacing to which they are to be applied.
 1. If details for any manufacturer's systems proposed in the Contract Documents are not acceptable to the manufacturer, submit corresponding details proposed for the particular application, together with the manufacturer's reasons for not accepting the conditions depicted in the Specifications or Drawings. No alternate details will be considered without evidence of valid objections on the part of the manufacturer to the Contract requirements.
 2. No deviation is to be made from this Specification without prior written approval by the manufacturer; submit such approval to the Architect.
- B. Inspection: Prior to, during installation and at completion of the installation, an inspection shall be made by a representative of the manufacturer in order to ascertain that the roofing system has been installed according to their published specifications, standards and details.
 1. Warranty will be issued upon approval of the installation (See 1.12 of this section).

1.9 JOB CONDITIONS

- A. Surfaces on which the roofing membrane system is to be applied shall be clean, smooth, dry, free of fins, sharp edges, loose and foreign materials, oil and grease.

1.10 WARRANTY

- A. Upon completion of the work, furnish to the Owner the manufacturer's written and signed warranty, certifying the performance of his products and the consistency of the properties of such products affecting their performance for a period of 20 years, without monetary limitations, from date of acceptance. All requirements of the DFCM shall be incorporated in to the warranty.
- B. The Contractor is to cover damages to the building resulting from failure to prevent penetration of water during construction.
- C. The Contractor is to guarantee all work against defects in materials and workmanship for a period of 5 years following final acceptance of the Work.

1.11 SITE PROTECTION

- A. During roofing work, exposed surfaces of finished walls shall be protected with tarps in order to prevent damage. Contractor shall assume full responsibility for any damage.

PART 2 - PRODUCTS

2.1 GENERAL

- A. GAF Building Materials Corporation:

2.2 WOOD BLOCKING

- A. All nailers and blocking material to be free of wane, shake, decay or checks, and pressure treated with water-borne preservatives for above ground use, AWPB LP-2.
- B. Blocking shall be not less than Construction Grade, Southern Pine.

2.3 INSULATION

- A. Insulation shall be a rigid polyisocyanurate board with facing material acceptable to the membrane manufacturer for the system specified.
 - 1. USG Securock 3/8" thickness
 - 2. Tapered Insulaiton, various thickness
 - 3. 1" Polyisocyanurate (Base Layer)

2.4 ASPHALT

- A. Asphalt shall be certified in full compliance with the requirements of 190-Type III asphalt listed in Table 1, ASTM D-312-71. Each container, or bulk, shipping ticket shall indicate the equiviscous temperature (EVT), the finished blowing temperature (FBT), and the flash point.

2.5 MISCELLANEOUS

- A. All materials incorporated in to the finished roof system shall be furnished by, or accepted by GAF Material Corporation and shall qualify to be included in the project warranty.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install roofing membrane on clean and dry surfaces, in accordance with the manufacturer's requirements and recommendations.
- B. Perform roofing work on a continuous basis as surface and weather conditions allow.
- C. Protect adjoining surfaces against any damage that could result from roofing installation.
- D. Install only as much roofing as can be completed in one day. If weather conditions do not permit such completion, exposed areas shall be temporarily weatherproofed to prevent any water or snow infiltration from damaging other materials already installed, in particular, the thermal insulation.

3.2 EQUIPMENT

- A. Maintain all equipment and tools in good working order.
- B. Equip kettles and tankers with accurate, fully readable thermometers. Do not heat asphalt to or above its FP. Avoid heating at or above FBT, should conditions make this impracticable, and exception is granted by the Architect, heating above the FBT must not be done for more than four (4) hours. Application temperatures must not be more or less than 25 degrees F of the EVT.

3.3 ASPHALT PRIMER APPLICATION

- A. Prime all dissimilar surfaces to which asphalt or membrane will come in contact. Apply at the rate of 150 - 200 sq. ft. / gallon. Coat all metal flashings and fascia with primer which will come in contact with membrane.

3.4 INSTALLATION OF INSULATION

- A. Install insulation in accordance with the manufacturer's requirements. The insulation shall provide a smooth surface to accept the roof membrane.

- B. Apply only as much insulation to the roof as can be covered the same day with roofing membrane. At the conclusion of each day's work, seal exposed edges of the insulation. Cut and remove seal upon continuation of the work.
- C. Place tapered insulation in accordance with manufacturer's recommendations and according to approved shop drawings. (if applicable).
- D. Install 3/8" Securock cover board over tapered insulation, stagger joints of insulation board.
- E. Mechanically fasten base insulation to deck with an approved fastener and plate in the approved fastening pattern.

3.5 ASPHALT APPLICATION

- A. For insulation and membrane application apply asphalt at a minimum temperature of approximately 425 degrees F - Type III. The maximum heating temperature shall be 450 degrees F -Type III. Apply asphalt at a rate of 20-30 lbs./sq. at a distance not to exceed three (3) feet ahead of the roll to provide a sufficient adhesion with the asphalt of the membrane.
- B. For low temperature application, it may be necessary to heat asphalt at higher temperatures so that application temperature is adequate. However, the heating temperature of the asphalt shall not exceed 450 degrees F or the indicated flash point. Care must be taken so the asphalt in the kettle is continuously used to prevent distillation.

3.6 PLY 6 INSTALLATION (REPEAT FOR EACH APPLICATION)

- A. Roll the membrane into a full width mopping of asphalt. The membrane must be firmly and uniformly set, without voids, into the asphalt which is applied at a nominal uniform rate of 23 lbs. per square. Each strip shall have three (3) inch side laps and six (6) inch end laps.
 - 1. Begin at low point of roof.
 - 2. Place membrane so edge lap will be centered on drain.
- B. The temperature of the asphalt at application should be such that, when the membrane is set its temperature is approximately 20 F above EVT.
- C. Application shall provide a smooth surface, free of air pockets, wrinkles, fishmouths or tears.
- D. Run membrane tight up against any vertical surfaces such as curbs, parapets, and vents.
- E. Stagger laps between the plys a minimum of 12".

3.7 CAP SHEET SURFACING INSTALLATION

- A. Once the Ply 6 has been installed and shows no sign of defects proceed with the surfacing sheet.
- B. Install an additional ply in all angles, curbs, or walls.
- C. Install mineral surfaced cap sheet in a mopping of hot asphalt, approximately 23lbs per square.

- D. Follow GAF's requirements for application. Cover all bleed out or asphalt spills with granules that match the Capsheet.

3.8 BASE/WALL FLASHING INSTALLATION

- A. Prior to application, the vertical surface receiving the base ply flashing shall receive a coat of primer at the rate of 150-200 sq. ft./gallon. This primer coating must be dry before application of the base sheet flashing.
- B. Install an additional ply in all angles, curbs, or walls prior to the surfacing mineral capsheet.
- C. Stagger base flashing plies and top ply seams a minimum of twelve (12) inches.
- D. SBS flashing top ply shall have side laps of three (3) inches and end laps of six (6) inches. Apply with hot asphalt.
- E. Application shall provide a smooth surface, free of air pockets, wrinkles, fishmouths or tears.
- F. Run membrane tight up against any vertical surfaces such as curbs, parapets, and vents.
- G. During installation, avoid asphalt seepage greater than 1/4 inch at seams.
 - 1. Cover asphalt seepage with a sprinkling of loose granules, color to match membrane.

3.9 CLEANING

- A. Clean-up and remove daily from the site all wrappings, empty containers, paper, loose particles and other debris resulting from these operations.
- B. Remove asphalt markings from finished surfaces.
- C. Repair or replace defaced or defigured finishes caused by work of this section.

3.10 PROTECTION

- A. Provide traffic ways, erect barriers, fences, guards, rails, enclosures, chutes and the like to protect personnel, roofs and structures, vehicles and utilities.
- B. Plywood for traffic ways required for material movement over existing roofs shall be not less than 5/8-inch thick.

3.11 FIELD CONTROL

- A. Field inspection will be performed as outlined under 1.10 of this section.

3.12 ROOF DRAINS

- A. Provide a smooth transition from drain bowl to deck surface.
 - 1. Taper insulation back from drain a minimum of 18-inches to provide for positive drainage.
 - 2. Prime all metal surfaces.
 - 3. Using a trowel, set a 6-inch wide layer of mastic around the drain bowl edge as water cut-off.
- B. Install base ply membranes with lap centered on bowl and as specified under 3.09 of this section ensuring a tight seal at drain.
 - 1. Mop into place a reinforcing sheet of base ply material three feet square centered on drain.
 - 2. Cut back membranes flush with the inside edge of the drain bowl and temporarily secure with clamping ring.
- C. Install top ply as specified under 3.11 of this section.
 - 1. Cut back membrane flush with the inside edge of the drain bowl.
 - 2. Position membrane so as to avoid the occurrence of any seams at drains.
- D. Install clamping ring and drain covers supplied with drain.
- E. Test all drains for proper flow and watertightness. Correct defects.

3.13 VENT (STACK)

- A. Inspect base ply installation and ensure tight seal around pipe.
- B. Construct and install () sheet metal vent sleeve as per details over base ply.
 - 1. Provide a minimum 5-inch base flange.
 - 2. Prime all metal surfaces.
- C. Mop into place a reinforcing sheet of base ply material three feet square over the vent.
 - 1. Seal all seams and edges with a heated trowel.
- D. Install top ply as specified under 3.11 of this section.
 - 1. Cut membrane to fit tight against stack sleeve and seal by running a heated trowel around vent base.
- E. Install metal vent cap.

3.14 CURBS

- A. Inspect and verify that all curbs are properly secured to deck, are level, a minimum 6-inches above finished roof, primed and ready to receive flashings.
 - 1. Follow Base Flashing installation procedures.
- B. Provide metal counter flashing.

3.15 ROOF EDGE

- A. Install ply sheets as specified under of this section. Carry membrane over roof edge a minimum of 3-inches and temporarily fasten using galvanized roofing nails.
- B. Install a metal edge as detailed.
 - 1. Prime all dissimilar surfaces prior to membrane or flashing installation.
 - 2. Flange on edge to be 4-inch minimum.
 - 3. Nail flange to decking or wood blocking at 4-inch center - staggered.
- C. Cover edge with a reinforcing strip of base membrane Membrane is to carry beyond the metal flange onto base ply a minimum of 4-inches.
 - 1. Hold the reinforcing strip back from outside edge of metal by 3/4-inch.
- D. Install capsheet according to this section with the edge tight against the metal and sealed with a hot trowel.

END OF SECTION 075113

UTNG – FILLMORE ARMORY REMODEL

SECTION 092400 PORTLAND CEMENT STUCCO

PART I – GENERAL

1.1 SCOPE:

- A. This specification describes the minimum requirements for the application the Western 1-Kote Exterior System consisting of weather barriers, lath, Western 1-Kote and Acrylic Finish.

1.2 REFERENCE SECTION / SCOPES OF WORK:

- A. Section 06110 – Wood Framing
- B. Section 07250 - Vapor Retarders
- C. Section 07600 – Flashing and Sheet Metal
- D. Section 07900 – Joint Sealants
- E. Section 09250 – Sheathing Boards

1.3 REFERENCES:

- A. Western 1-Kote ICC Evaluation Report ESR-1607
- B. 1997 Uniform Building Code Sections
- C. Northwest Walls and Ceilings Bureau: Portland Cement Plaster Resource Guide - Latest Revision
- D. Federal Specification FS UUB 790-A Building Paper
- E. American Society for Testing and Materials (ASTM)
- F. International Building Code: Current Adopted Edition
 - 1. C 847 – Metal Lath
 - 2. C 897 – Specification for Aggregate for Job-Mixed Portland Cement-Based Plasters.
 - 3. C 926 – Specification for Application of Portland Cement-Based Plaster.
 - 4. C 1063 – Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster.
 - 5. C 834 / C 920 Sealants
 - 6. E 119 – Test Method for Fire Tests of Building Construction Materials.

1.4 SYSTEM DESCRIPTION:

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- A. Weather barriers, woven, welded and expanded metal lath reinforcement, Western 1-Kote Concentrate or sanded basecoat. Integral color to be selected by the Architect.

1.5 QUALITY ASSURANCE:

- A. Obtain cement plaster, stucco finish, lath and trim that comply with the requirements of the Western 1-Kote Exterior Stucco System
- B. Manufacturer: Sacramento Stucco or approved blenders of Western 1-Kote.
- C. Contractor shall provide trained personnel qualified to install lath, plaster and finishes per the scope of work described in this specification.

1.6 DELIVERY, STORAGE AND HANDLING:

- A. Deliver, store, handle, and protect products for use on the project.
- B. Deliver product to job site:
 - 1. Without exposure to weather.
 - 2. In manufacturer's unopened container, packages or bundles; clearly identified.
- C. Store in dry, ventilated space off of the ground.
- D. Protect materials from soiling, rusting and damage.

1.7 SITE CONDITIONS:

- A. Contractor shall have reasonable and safe access to the jobsite for delivery, staging, storing, mixing and application of materials required for the described scope of work.

1.8 ENVIRONMENTAL CONDITIONS:

- A. Cold Weather Requirements: Provide heat and protection, temporary or permanent, as required to protect each coat of plaster from freezing – during or at least 24 hours after application or longer – to insure curing of the base and finish coats without freezing. Distribute heat uniformly to prevent concentration of heat on plaster near heat sources; provide deflection or protective screens.
- B. Warm Weather Requirements: Protect plaster against uneven and excessive evaporation and from strong flows of dry air, both natural and artificial. Apply and moist cure plaster to prevent dry out during the first forty-eight (48) hours or longer as required by climatic conditions. Provide suitable coverings, moist curing, barriers to deflect sunlight and wind, or combinations of these as required.
- C. Application Requirements: Apply plaster when substrate or ambient air temperature is 40 degrees F and rising (unless sand and mixing water are heated to 70 degrees F and temporary protection is provided to keep minimum 40 degrees F or above in plastered areas for 24 hours minimum after set has occurred in accordance with PCA Portland Cement Plaster Stucco Manual. Do not use frozen materials in mixes and do not apply materials to frozen bases.

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- D. Protection: Protect finished surface installed prior to plastering by covering with suitable drop cloths. When application of cement plaster is to interior spaces, screen openings with plastic film when building is subject to hot, dry winds, or when temperature differentials between interior and exterior spaces of more than 20 degrees F are present. Protect windows and doors with visqueen as necessary during application.

1.9 SEQUENCING:

- A. The General Contractor shall coordinate communications between the trades and scheduling of the work prior to project commencement and while the work is in progress.
- B. Consult other trades in advance and make provisions for their work to avoid cutting and patching.
- C. Applicator of the Cement Plaster System shall schedule all inspections required by local authorities or product manufacturers, at each required stage, before continuing with the next stage of the system.
- D. All wall penetrations shall be installed with proper flashing details by the appropriate trades before lathing shall begin. Flashing materials shall be compatible with sealant, building paper and flashings installed for the lath.
- E. Attachment of drywall or other products to the interior sides of walls receiving Western 1-Kote shall be complete before the installation of the exterior cement plaster.
- F. Adequately moist cure Western 1-Kote.
- G. Apply required leveling coats and primers. Refer to specification 09220 BPS.
- H. Apply acrylic finish coat. Refer to specification 09220-PAF. Note: Finish texture shall be sand finish (16/20). Colors to be determined by Architect from paint color selections. Acrylic finish coat manufacturer to match paint colors selected by Architect.

PART II – PRODUCTS

2.1 MANUFACTURERS:

- A. Sacramento Stucco Company, West Sacramento, CA.
- B. Western Stucco Company, Glendale, AZ.
- C. Rio Grande Stucco Company, El Paso, TX
- D. Ash Grove Packaging, Precision Packaging, Materials Packaging
- E. Fortifiber
- F. Clark Western, Cemco or equal

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- G. Davis, K-lath, Structalath or equal
- H. Stockton Wire Products or equal
- I. Acrylic Finish Coat product by one of the following manufacturers:
 - 1. Dryvit Systems Inc.
One Energy Way
West Warwick, Rhode Island 02893
 - 2. Sto Corp.
3800 Camp Creek Parkway, Building 1400
Suite 120
Atlanta, Georgia 30331
- J. Contol joints by Fry Reglet Corp. to be selected by the Architect. See drawings and details.

2.2 WEATHER BARRIER, LATH AND TRIM MATERIALS:

- A. All products used for the system shall be approved for exterior application.
- B. All weather barriers, flashings, metal reinforcing, trims, woven and welded wire, fasteners and other lath accessories for vertical and horizontal applications, shall be sized, spaced and installed per the listed reference standards and the latest adopted building codes.
- C. Wire Fabric Lath: Wire fabric lath must comply with the ICC-ES Acceptance Criteria for Metal Plaster Bases (Lath) (AD 191). Minimum No 20 gage [0.035 inch (0.89 mm), 1-inch galvanized steel, woven-wire fabric must be used. Lath must be furred when applied over all substrates except unbacked polystyrene board. Furring must comply with the following requirements:
 - 1. When maximum total coating thickness is ½-inch (12.7 mm) or less, the body of the lath must be furred a minimum of 1/8 inch (3.2mm) from the substrate after installation.
 - 2. When total coating thickness is greater than ½ inch (12.7 mm), No 17 gage [0.058 inch (1.47 mm)] by 1 ½-inch (38 mm) woven-wire fabric lath must be used. The body of the lath must be furred a minimum of ¼ inch (6.4 mm) from the substrate after installation.
- D. Strip Mesh: Expanded metal lath, minimum 2.5 pounds per square foot; 2 inch wide by 24 inches long.
- E. Sheathing Paper: Breather type asphalt saturated paper, water vapor permeable. Barrier to meet the following standards: FS UU-B-790a, Type 1, Style 2, Grade D 60 minute 2 ply UBC 1707a / 4706d. Sealant meeting ASTM C 834 or ASTM C920. Building paper, flashing and sealant shall be Fortifiber High Performance Window Flashing System.

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F. Trim:

1. Casing Bead: Galvanized roll-formed sheet steel minimum 26 gage thick, depth governed by plaster thickness. Maximum lengths.
2. Corner Bead: Galvanized roll-formed sheet steel minimum 26 gage thick. Maximum lengths; 2-5/8 inch expanded metal flanges (3-1/4 inch reinforced flanges).
3. Control Joint: Galvanized formed sheet steel minimum 26 gage thick, V or J profile, protected with plastic tape for removal after plastering, depth governed by plaster thickness; maximum lengths.
4. Plastic Nose corner aid where specifically called out meeting ASTM D 1784

- G. Provide bullnose at exterior corners, typical. Coordinate radius with Owner's Project Manager and Architect.

2.3 PLASTER MATERIALS:

- A. Western 1-Kote Concentrate
- B. Aggregate: Natural sand in accordance with ASTM C 897.
- C. Water - Clean, fresh, potable and free of mineral or organic matter, which can affect plaster.

PART III – EXECUTION

3.1 EXAMINATION:

- A. Verify that surfaces and site conditions are ready to receive work.

3.2 PREPARATION:

- A. Protect surfaces near the work of this Section from damage or disfiguration. Protect fixtures, frames, inserts and other adjacent work from rusting, soiling or clogging due to plastering.

3.3 LATHING – WALLS

- A. Install weep screeds where required.
- B. Install Fortifiber weather resistive barrier. Weather barrier shall be 2 -layers of 60 minute D grade paper.
- C. Install Casing Beads where required.

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- D. Install Fortifiber High Performance Window Flashing System with Moistop neXT in place of Moistop PF for sill and jamb flashing.
- E. Install metal head flashing with end dams over all wall penetrations per NWCB Resource Guide detail FWB9
- F. Apply metal lath or woven wire per manufacturers' instructions. Fasten per ASTM C 1063, UBC Sections 25B, and 25-C
- G. Control joints should be utilized at all areas where movement may be anticipated such as: Wall penetrations, structural plate lines, or between dissimilar materials, columns and cantilevered areas. Also, see drawings for locations and details.
- H. Stucco panel shall be designed to be no longer than twenty (20) feet without the use of a control joint and entire panel should not exceed a three to one ratio.
- I. As a general rule, stucco panels should be as square as possible and not in excess of one hundred and eighty square feet (144 sq. ft.).
- J. Install 3/8" horizontal and vertical control joints where specified on drawings. Install over continuous lath. Vertical joints shall be continuous. Abut horizontal joints to vertical joints. Intersections and end-to-end terminations shall be embedded in sealant. Install level, plumb and true to line; secure rigidly in place.
- K. Fasten all trims to wood or steel framing or wire tie Attachment to sheathing is not permissible.
- L. Install casing beads where indicated on drawings or where plaster terminations are exposed. Butt and align ends. Install level, plumb and true to line; secure rigidly in place.

3.4 APPLICATION – PLASTER APPLICATION:

- A. Mix and apply Western 1-Kote in accordance with ICC Report #1607 instructions.
- B. Apply 3/8" to 1/2" base coat without cold joints.
 - 1. The brown coat shall be hard floated to promote densification of the coat.
 - 2. Cut brown coat through full depth with trowel at intersection of plastered walls and plastered soffit.
 - 3. Note: Finish acrylic coat texture and color to be determined by the Architect from the manufacturer's full range of colors and textures. Coordinate the brown coat texture with the finish acrylic coat.

3.5 CURING:

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- A. Moist cure Western 1-Kote early and late in the day for the first forty-eight (48) hours after application. Hot, windy or dry conditions may dictate curing for an extended period.
- B. Portland cement is a high pH surface. Follow instructions of finish coat manufacturer for proper application over Western 1-Kote.

SECTION 235533 - FUEL-FIRED UNIT HEATERS

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. This Section includes natural gas-fired unit heaters.

1.3 SUBMITTALS

- A. Product Data: For each type of fuel-fired unit heater indicated. Include rated capacities, operating characteristics, and accessories.
- B. Manufacturer Seismic Qualification Certification: Submit certification that fuel-fired unit heaters, accessories, and components will withstand seismic forces defined in Division 23 Section "Vibration and Seismic Controls for HVAC Piping and Equipment." Include the following:
 - 1. Basis for Certification: Indicate whether withstand certification is based on actual test of assembled components or on calculation.
 - a. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified and the unit will be fully operational after the seismic event."
 - 2. Dimensioned Outline Drawings of Equipment Unit: Identify center of gravity and locate and describe mounting and anchorage provisions.
 - 3. Detailed description of equipment anchorage devices on which the certification is based and their installation requirements.
- C. Field quality-control test reports.
- D. Operation and Maintenance Data: For fuel-fired unit heaters to include in emergency, operation, and maintenance manuals.
- E. Warranty: Special warranty specified in this Section.

1.4 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

1.5 WARRANTY

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- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace heat exchanger of fuel-fired unit heater that fails in materials or workmanship within specified warranty period.
 - 1. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 GAS-FIRED UNIT HEATERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Lennox Industries, Inc.
 - 2. Modine Manufacturing Company.
 - 3. Reznor/Thomas & Betts Corporation.
 - 4. Sterling HVAC Products; Div. of Mestek Technology Inc.
 - 5. Trane
- B. Description: Factory assembled, piped, and wired, and complying with ANSI Z83.8/CSA 2.6.
- C. Fuel Type: Design burner for natural gas having characteristics same as those of gas available at Project site.
- D. Housing: Steel, with integral draft hood and inserts for suspension mounting rods.
 - 1. External Casings and Cabinets: Baked enamel or Powder coating over corrosion-resistant-treated surface.
 - 2. Suspension Attachments: Reinforce suspension attachments at connection to fuel-fired unit heaters.
 - a. Seismic Fabrication Requirements: Fabricate suspension attachments of fuel-fired unit heaters, accessories mountings, and components with reinforcement strong enough to withstand seismic forces defined in Division 23 Section "Vibration and Seismic Controls for HVAC Piping and Equipment" when fuel-fired unit heater is anchored to building structure.
- E. Controls: Regulated redundant gas valve containing pilot solenoid valve, electric gas valve, pilot filter, pressure regulator, pilot shutoff, and manual shutoff all in one body.
 - 1. Gas Control Valve: Single stage.
 - 2. Ignition: Electronically controlled electric spark with flame sensor.
 - 3. Fan Thermal Switch: Operates fan on heat-exchanger temperature.
 - 4. Vent Flow Verification: Flame rollout switch.
 - 5. Control transformer.
 - 6. High Limit: Thermal switch or fuse to stop burner.
 - 7. Thermostat: Single-stage, wall-mounting type with 50 to 90 deg F operating range and fan on switch.
- F. Discharge Louvers: Independently adjustable horizontal blades.
- G. Accessories:
 - 1. Summer fan switch.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install and connect gas-fired unit heaters and associated fuel and vent features and systems according to NFPA 54, applicable local codes and regulations, and manufacturer's written installation instructions.
- B. Suspended Units: Suspend from substrate using threaded rods, spring hangers, and building attachments. Secure rods to unit hanger attachments. Adjust hangers so unit is level and plumb.
 - 1. Restrain the unit to resist code-required horizontal acceleration.
- C. Substrate-Mounted Units: Provide supports connected to substrate. Secure units to supports.
 - 1. Spring hangers and seismic restraints are specified in Division 22 Section "Hangers and Supports for HVAC Piping and Equipment and "Vibration and Seismic Controls for HVAC Piping and Equipment."
 - 2. Anchor the unit to resist code-required horizontal acceleration.

3.2 CONNECTIONS

- A. Piping installation requirements are specified in other Division 23 Sections. Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Install piping adjacent to fuel-fired unit heater to allow service and maintenance.
- C. Gas Piping: Comply with Division 23 Section "Facility Natural-Gas Piping." Connect gas piping to gas train inlet; provide union with enough clearance for burner removal and service.
- D. Vent Connections: Comply with Division 23 Section "Breechings, Chimneys, and Stacks."
- E. Electrical Connections: Comply with applicable requirements in Division 26 Sections.
 - 1. Install electrical devices furnished with heaters but not specified to be factory mounted.

3.3 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installations, including connections. Report results in writing.
- B. Tests and Inspections:
 - 1. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
 - 2. Verify bearing lubrication.
 - 3. Verify proper motor rotation.
 - 4. Test Reports: Prepare a written report to record the following:
 - a. Test procedures used.
 - b. Test results that comply with requirements.

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- c. Test results that do not comply with requirements and corrective action taken to achieve compliance with requirements.
- C. Remove and replace malfunctioning units and retest as specified above.

3.4 ADJUSTING

- A. Adjust initial temperature set points.
- B. Adjust burner and other unit components for optimum heating performance and efficiency.

3.5 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain fuel-fired unit heaters. Refer to Division 01 Section "Demonstration and Training."

END OF SECTION 235533

UTAH NATIONAL GUARD STATEMENT OF WORK
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GENERAL INFORMATION AND CONDITIONS

Purpose and Intent:

The Utah Army National Guard (UTARNG) desires to have Telecommunication parts installed in accordance with Industry Standard TIA/568B. All projects must be coordinated and approved through the UTARNG State Telecommunications Manager (Mike Hansen, 801-432-4118) to ensure that industry standards are adhered to.

Key Dates:

Proposal Review: The Contractor should allow the Owner two weeks for review of proposals and award. A start date will be provided in the Notice of Award.

Site Visits:

Site visits for telecommunication projects will be arranged by contacting Mike Hansen by telephone at 801-432-4118(office), or by e-mail at john.m.hansen1@us.army.mil

Questions:

Questions regarding this Statement of Work should be presented in writing to:

Utah Army National Guard
UT-G6-C, ATTN: Mike Hansen
P.O. Box 1776
Draper, UT 84020
FAX (801) 523-4844

E-mail questions to john.m.hansen1@us.army.mil

A written answer to any such questions will be provided to all respondents to this request for proposals.

CONTRACT INFORMATION

Required Contractor Training

This is a list of all approved SYSTIMAX contractors and installers in the State of Utah

Americom Technology Contact: Mark Monsen
5123 South Commerce Drive
Murray, UT 84107
Tel: 801-892-0529
FAX: 801-892-0585

Cache Valley Electric Contact: Tim Hadden
2345 South John Henry Dr
Salt Lake City, UT 84119
Tel: 801-908-2680
FAX: 801-908-7041

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Federal Communication Contact: Justin Thomas

1990 South Milestone Drive
Suite D
Salt Lake City, UT 84104-4853
Tel: 801-972-2262
FAX: 801-972-9095

Wasatch Electric Contact: Ryan Wallwork

1574 South West Temple
Salt Lake City, UT 84155
Tel: 801-487-4511
FAX: 801-487-5032

The Contractor shall be fully conversant and capable in the cabling of low voltage applications such as, but not limited to data, voice and imaging network systems. The Contractor shall at a minimum possess the following qualifications:

Personnel trained and certified in the design of the Systimax Cabling Solution.

Personnel trained and certified to install the Systimax Cabling Solution.

The Designer and Installer shall show proof of current certification of the Systimax Cabling Solution via an updated card given after attending the 5- day course or a re-certification class given every two years.

Provide references of the type of installation provided in this specification.

Personnel trained and certified in fiber optic cabling, splicing, termination and testing techniques. Personnel must have experience using a light meter and OTDR.

Personnel trained in the installation of pathways and support for housing horizontal and backbone cabling.

System Warranty

A twenty (20) year warranty available for the category _ structured cabling system shall be provided for an end-to-end channel model installation which covers applications assurance, cable, connecting hardware and the labor cost for the repair or replacement thereof. CommScope will receive a warranty registration form no later than 60 days after the installation. This will include all testing results.

Proposal Organization: The Contractor should break down his proposal deliverables and costs into parts and labor.

Cost Basis: The Contractor should show a unit price breakdown for the personnel, materials and tasks to be provided, as well as lump sum prices per project.

Selection Criteria: The UTNG will use the following criteria, equally weighted, to select the successful Contractor for this work.

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Technical Abilities and Approach: The qualifications and experience of key personnel, as well as the proposed methodologies and resources will be considered.

Past Performance: The experiences of the Contractor most closely related to this project will be considered, particularly successful completion of projects using Industry Standard TIA/568B.

Responsiveness: The ability of the Contractor to dedicate sufficient resources to the project and to be readily available will be considered.

Cost: The overall costs proposed by the Contractor and the completeness of detail of these costs will be considered.

Award of Contract: Award of any Contract is contingent upon availability of state/federal funds to perform this work. The UTNG anticipates award of all work to a single Contractor, but reserves the right to split the award or make a partial award.

BACKGROUND

Agency Need Description: The UTNG requires that the following parts (brand specific) be used in conjunction with TIA/568B guidelines:

This is a list of all Telecommunication Standards for all Utah Army National Guard facilities, except for AGCW MDF.

MDF / IDF (Main or Intermittent Distribution Frame)
Standard Equipment:

1. CS-SYSTEMX 110UB1-366FT 366 PR BLOCK 110 CAT6 FIELD TERM KIT W/4PR CONN
BLAOCKS 108651143 VISIPATCH
2. CS-SYSTEMX 110U2R VISIPATCH DISTRIBUTION RING SNAPS ONTO BACK PANEL
108523937 (FOR EVERY 1 OF PART ONE YOU NEED 6 OF THIS PART)
3. CS-SYSTEMX 110UTC VISIPATCH TROUGH COVER USED TO HIDE PATCH CORDS
108593203 GRAY
4. CS-SYSTEMX 110UHD-S8 VISIPATCH, HORIZONTAL DUCT SNAPS INTO BOTTOM OF
VISIPATCH SYSTEM 108637737
5. CS-SYSTEMX MGS400BH-262 1-PORT MOD JACK 110 8W8P UTP T568A/B CAT6 GIGASPEED
700206725 ELEC. WHITE
6. CS-SYSTEMX M12L-262 2-PORT FLUSH MT UNLOADED SGL GANG M-SERIES 108168469
WHITE
7. CS-SYSTEMX CPC5512-03F003 CBL ASSY 110 24-4PR STRANDED CAT6 T568B 3FT
VISIPATCH CPC5512-03F003 GRAY
8. CS-SYSTEMX CPC5512-03F003 CBL ASSY 110 24-4PR STRANDED CAT6 T568B 5FT
VISIPATCH CPC5512-03F005 GRAY
9. CS-SYSTEMX CPC5512-03F003 CBL ASSY 110 24-4PR STRANDED CAT6 T568B 7FT
VISIPATCH CPC5512-03F007 GRAY
10. CS-SYSTEMX CPC5312-03F007 CBL ASSY 110-MOD 24-4PR STR CAT6 T568B 7FT
VISIPATCH CPC5312-03F007 GRAY
11. CS-SYSTEMX CPC5312-03F005 CBL ASSY 110-MOD 24-4PR STR CAT6 T568B 5FT
VISIPATCH CPC5312-03F005 GRAY
12. CS-SYSTEMX CPC5312-03F003 CBL ASSY 110-MOD 24-4PR STR CAT6 T568B 3FT
VISIPATCH CPC5312-03F003 GRAY
13. CS-SYSTEMX CPC5312-03F025 CBL ASSY 110 24-4PR STRANDED VISIP-RJ-45 CAT6 T568B
25FT GRAY CPC5312-03F025

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14. CS-SYSTIMX 600G2-1U-MOD-SD MODULAR COMBINATION SHELF SLIDE ACCEPT 4 MODULES 760028324
15. CS-SYSTIMX MODG2-6SC-MM 6 MODULE ADAPTER BEIGE 72 MAX FIB MODG2-6SC-MM 760032177
16. CS-SYSTIMX P6201B-Z 125 SC CONNECTOR MM CER EZ&EPOXY OC 900UM ONLY, NON-TUNABLE 760007070
17. COMMSCOPE 75N4 (CAT 6 BLUE)
18. COMMSCOPE 75N4 (CAT 6 YELLOW)
19. MARCONI R66P25QC LIGHTING PROTECTION PANEL
20. MARCONI R66P50QC LIGHTING PROTECTION PANEL
21. MARCONI R66P100QC LIGHTING PROTECTION PANEL
22. GAS PROTECTION FUSES 104410147

MDF (Main Distribution Frame) for AGCW

Standard Equipment:

1. AVAYA 107894966 100 PAIR LIGHTING PROTECTION 110 TERMINATION STYLE
2. SECOR CCH03U 72 STRAND RACK MOUNT LIU.

The MDF at AGCW is in building 6170. To gain access to this area you will have to contact Mike Hansen at (801-432-4118). **All work to be bid on or done at AGCW will contact Mike prior to starting.**

Manholes

1. Copper Splice Cases 3M KB6 (is the series). You will need to talk to Mike or Toby to determine what ends need to be placed on the ends of the splice case.
2. Fiber Splice Case Coyote 80805514 (Splice tray will depend on amount of fiber)

There are several Manholes at AGCW. When pulling Backbone Cable you will leave a 20 ft maintenance loop in every manhole between the IDF and the MDF. All splices will be sealed water tight. If a case is open, it will be resealed to maintain a water tight seal. All splices in the fiber cable will be fusion spliced. Splices in the copper cable will be done in a splice case and made water tight. To find a path from the IDF to the MDF you will need to speak with Mike or Toby.

All telecommunication work to be done on any Utah Army National Guard Facility will be coordinated and approved through Mike Hansen (801-432-4118). Layout of the Systimax Solution will be coordinated through Mike Hansen. There will be one blue and one yellow CAT 6 wire pulled to each location. They will correlate with the same number on the VisiPatch System (ex. Jack 101 will have one blue and one yellow wire that will be in the same location on the VisiPatch System). Fiber will be terminated in an LIU can. Termination of fiber will be done on the SC style connector unless specified otherwise. This will depend on location. You will need to speak with Mike in order to know what facility has what termination.

PROJECT DELIVERABLES

The Contractor will provide progress reports throughout the term of the Contract to the UTARNG Telecommunications Manager.

All wire must be tested by the contractor with a cable analyzer for its appropriate rating in accordance with TIA/568B standards. The Contractor will turn-in written results of the cable analyzer testing to the UTNG Telecommunications Manager.

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UT-G6-C (12/31/2009)

PROPOSAL PREPARATION INSTRUCTIONS

The proposal must include the following components: a technical proposal, a cost proposal, a delivery schedule, and a presentation of the Contractor's personnel qualifications and experience. Proposals that do not include the specified elements may be rejected. The Contractor is encouraged to submit copies of relevant projects performed (TIA/568B) within the last two years within his proposal.

Technical Proposal: The technical proposal should describe the tasks to be performed, the methods to be used and the proposed parts to be installed.

Cost Proposal:

The cost proposal should be provided as lump sums by project, and each project should be broken down by task. The cost proposal should include projected labor categories, hours and billing rates. The cost proposal should identify any proposed subcontractors and their labor categories, hours and billing rates.

Delivery Schedule:

The Contractor should provide a proposed schedule of activities, both on-site and in office, identifying work to be performed for each location.

Personnel, Qualifications and Experience:

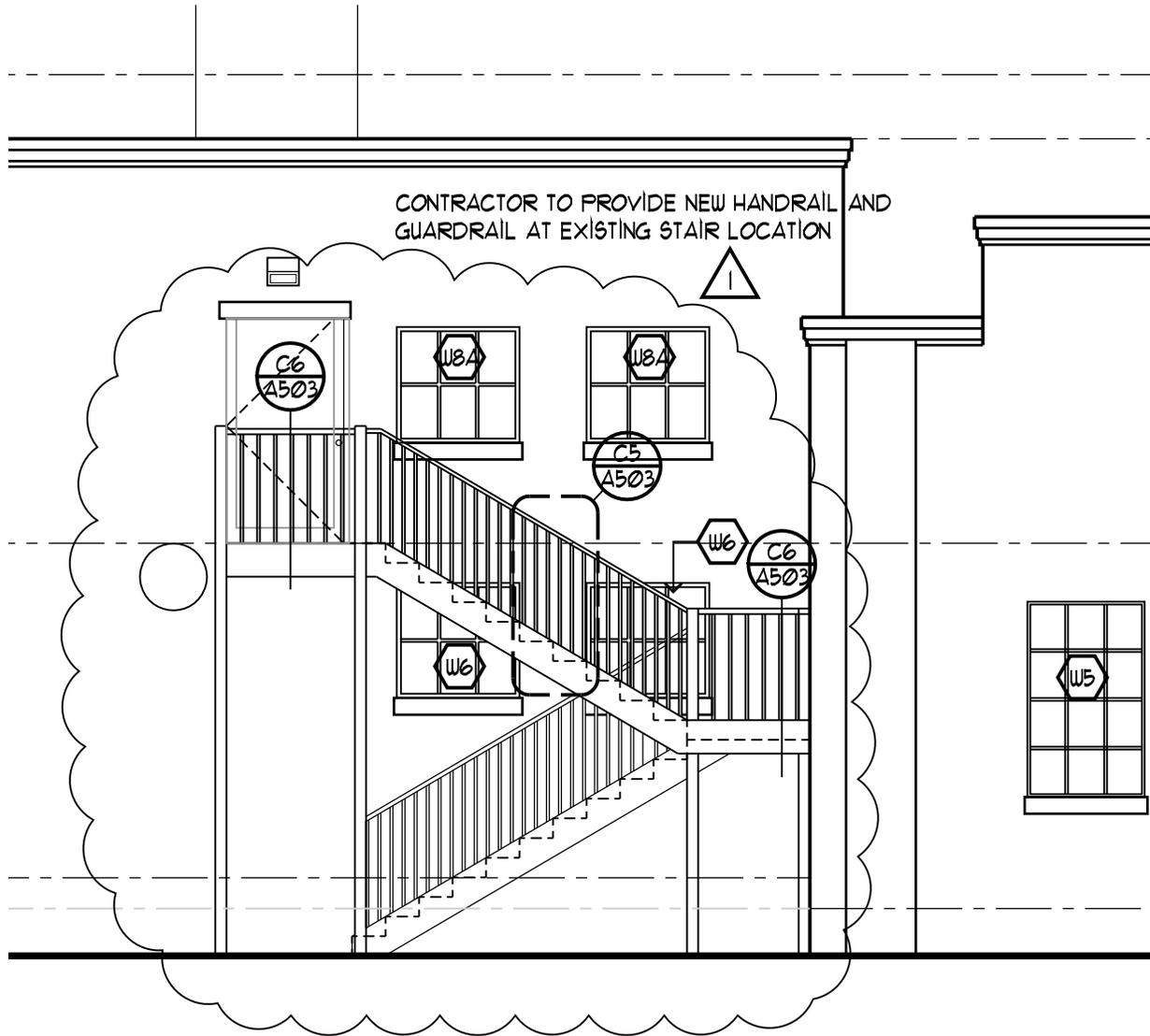
The proposal should identify Contractor resources, offices, and personnel available to the project. The proposal should identify the actual personnel proposed for use on the project, including their relevant qualifications and experience with TIA/568B standards. Contractors must be certified installers of the parts and equipment proposed and install in accordance with manufacturer warranty. Experience should be listed in the following categories: Similar work performed in Utah, similar work performed in the Western United States, and similar work performed for DOD and specifically National Guard. Failure to use the proposed personnel may be grounds for termination of the project.

PROPOSAL SUBMISSION

The completed proposal should be mailed to:

Utah Army National Guard
UT-AAG-SMD, ATTN: Claire Gee
P.O. Box 1776
Draper, UT 84020

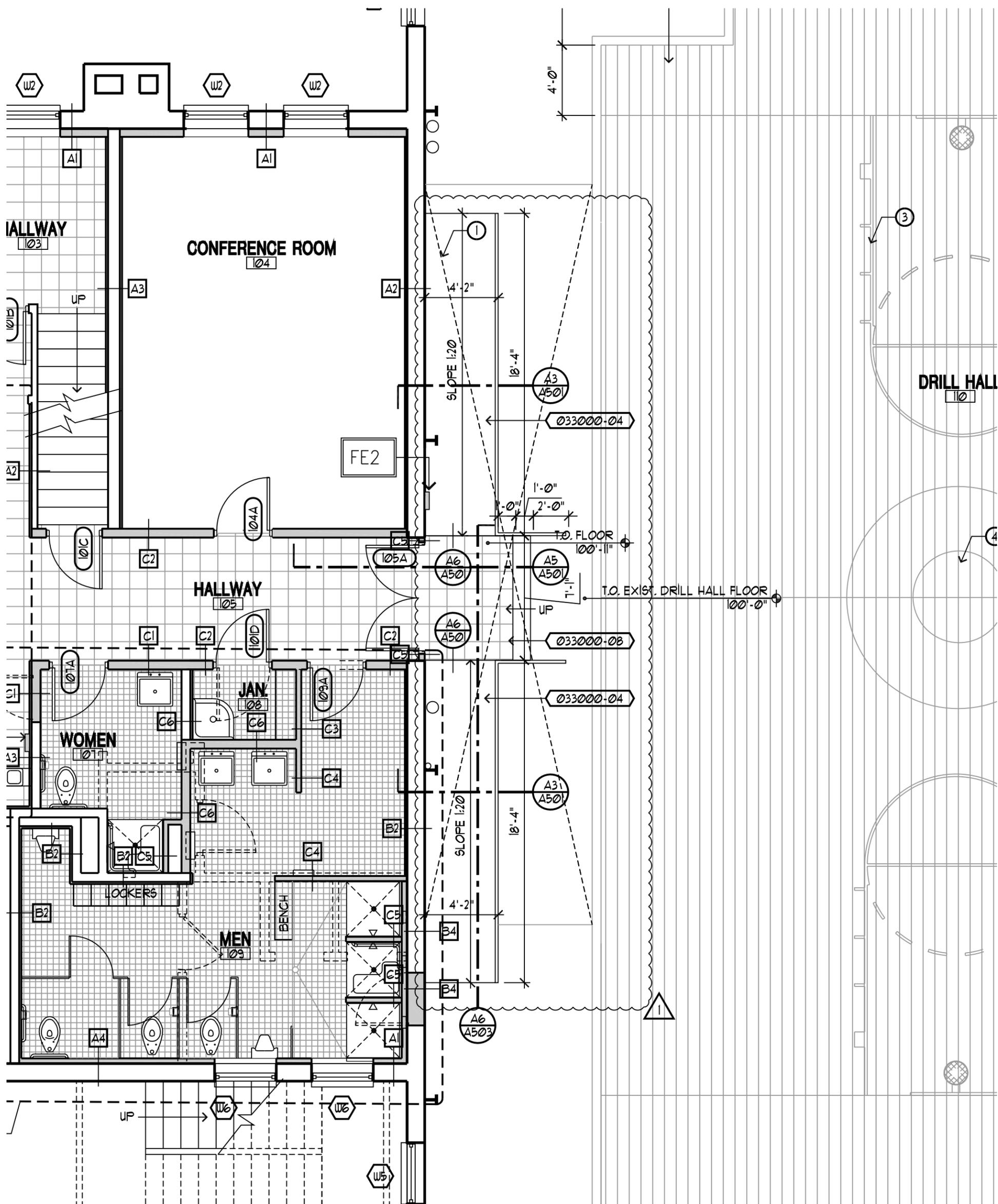
Electronic copies should be sent to cgee@utah.gov accompanied by a hard copy cover letter on letterhead.

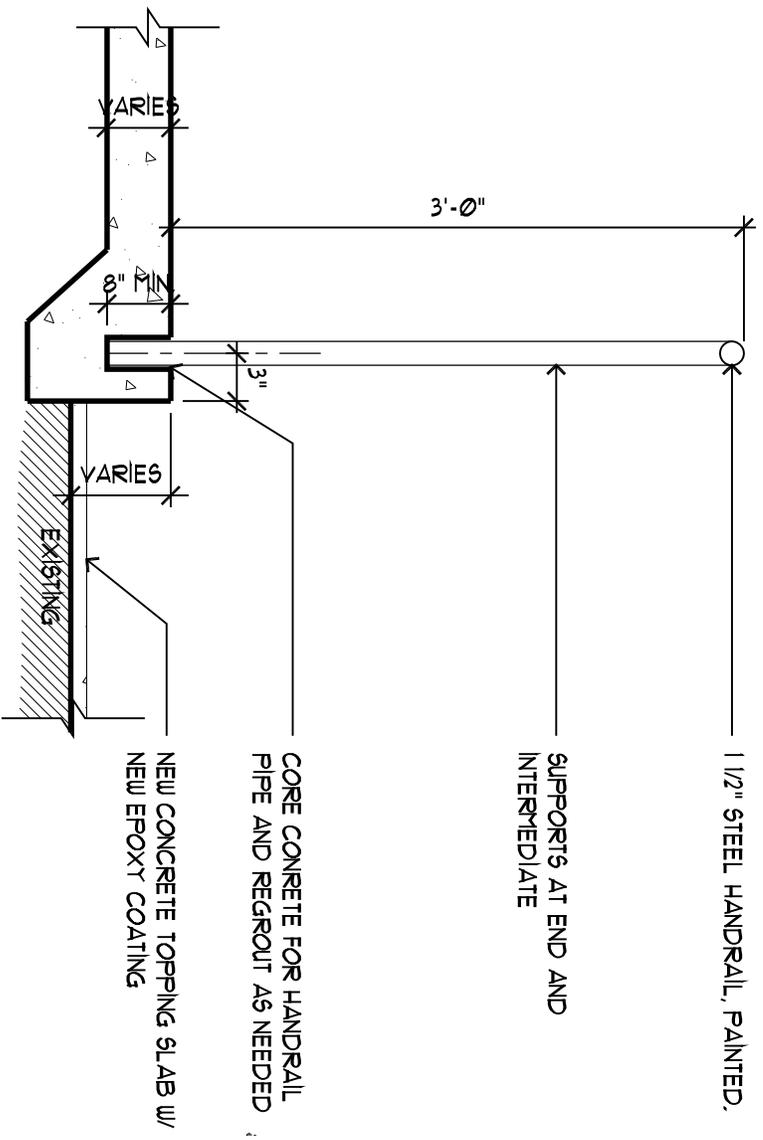


EXISTING WEST EXTERIOR ELEVATION

SCALE: 3/16" = 1'-0"

A5
A201



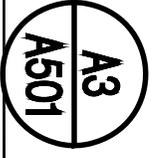


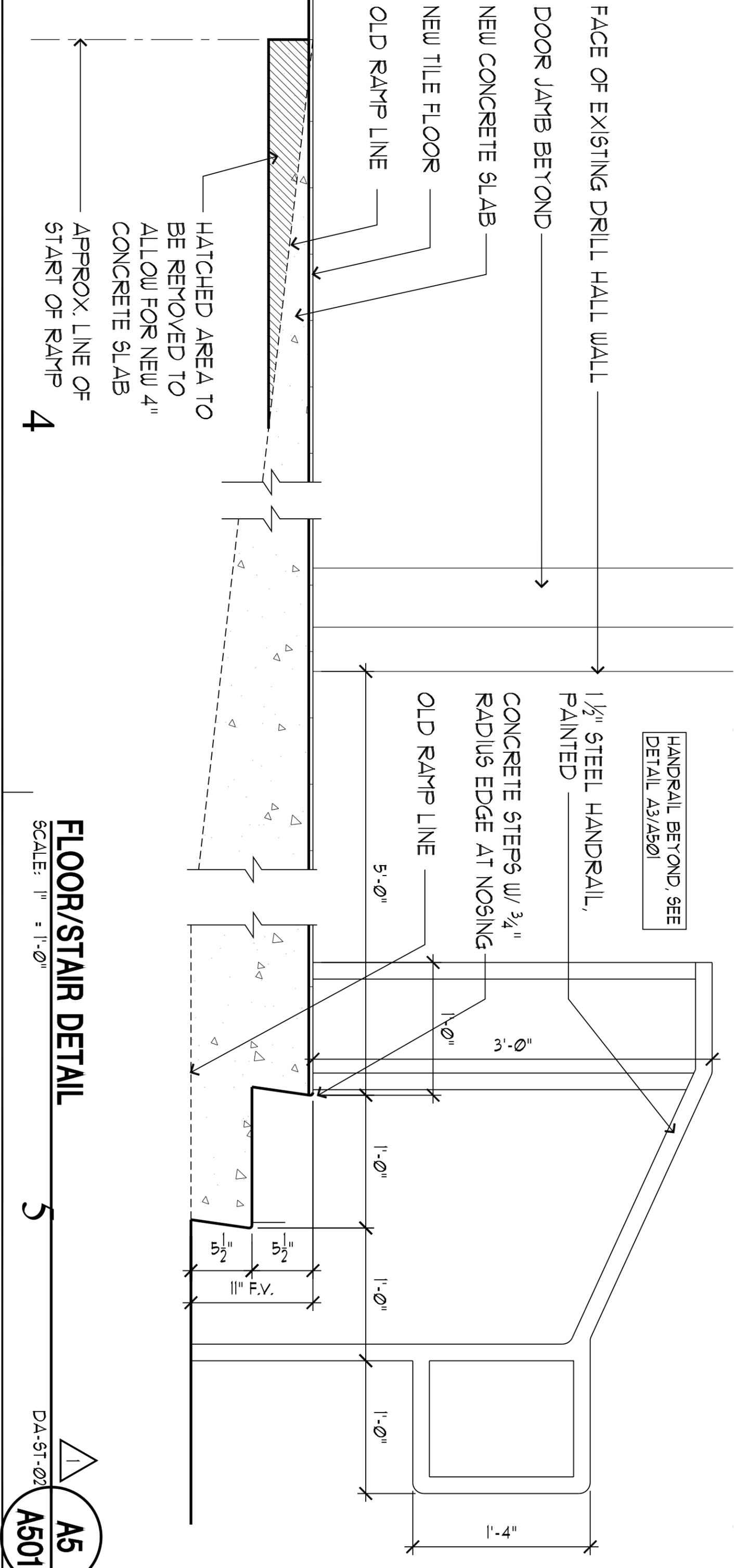
CURB/GUARD DETAIL

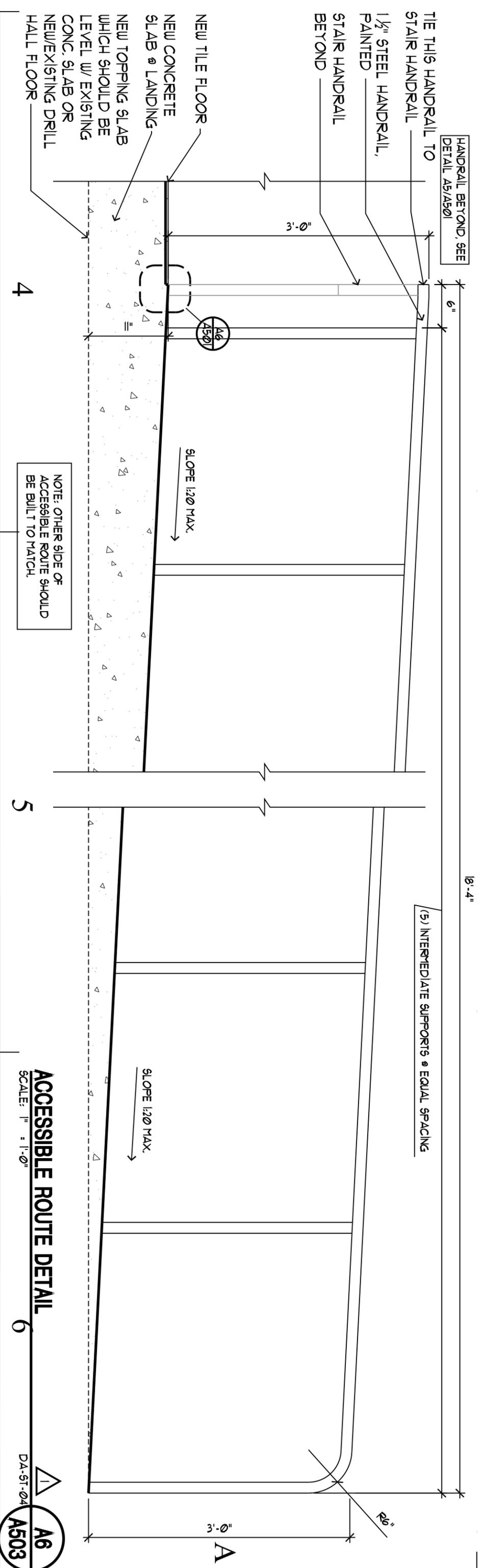
SCALE: 1" = 1'-0"

3

DA-ST-02





HANDRAIL BEYOND, SEE
DETAIL A5/A501

TIE THIS HANDRAIL TO
STAIR HANDRAIL

1 1/2" STEEL HANDRAIL,
PAINTED

STAIR HANDRAIL
BEYOND

18'-4"

(5) INTERMEDIATE SUPPORTS @ EQUAL SPACING

SLOPE 1:20 MAX

SLOPE 1:20 MAX

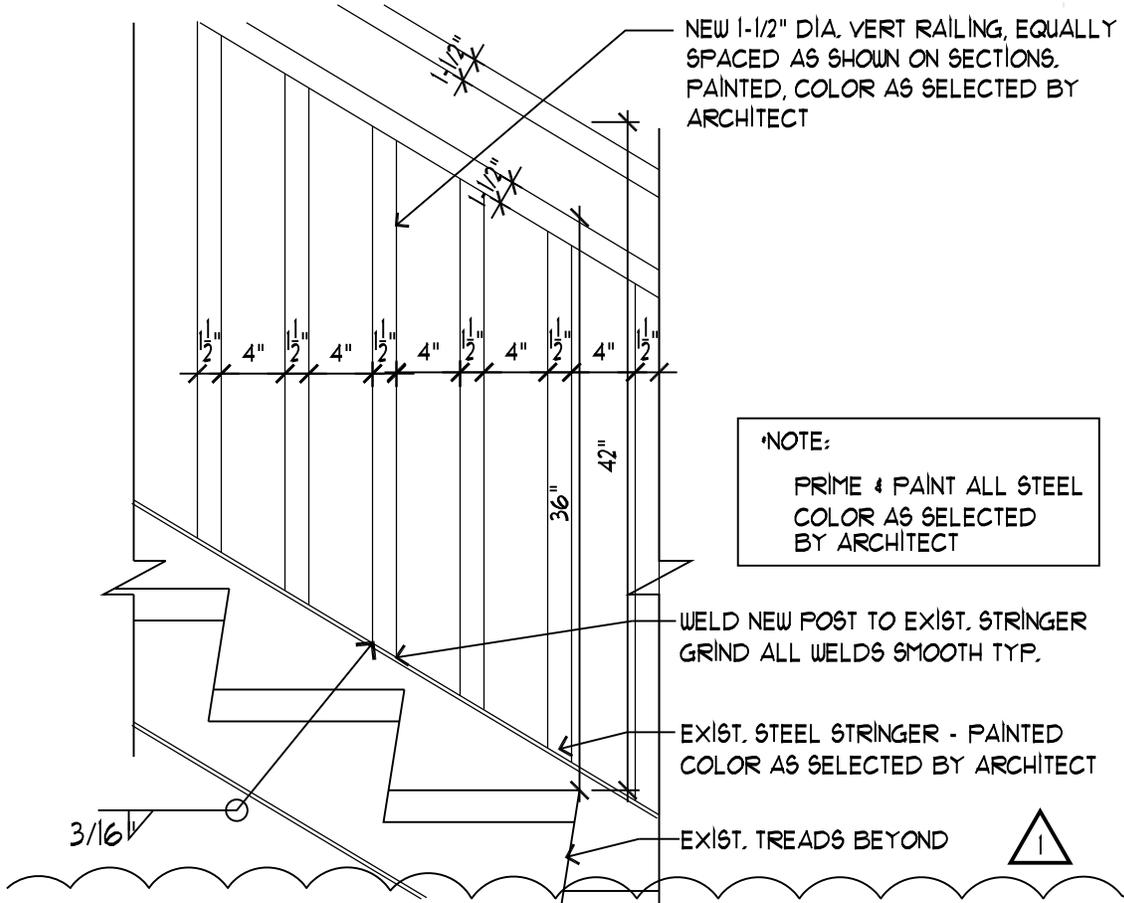
NOTE: OTHER SIDE OF
ACCESSIBLE ROUTE SHOULD
BE BUILT TO MATCH.

ACCESSIBLE ROUTE DETAIL

SCALE: 1" = 1'-0"

A6
A503

DA-ST-04

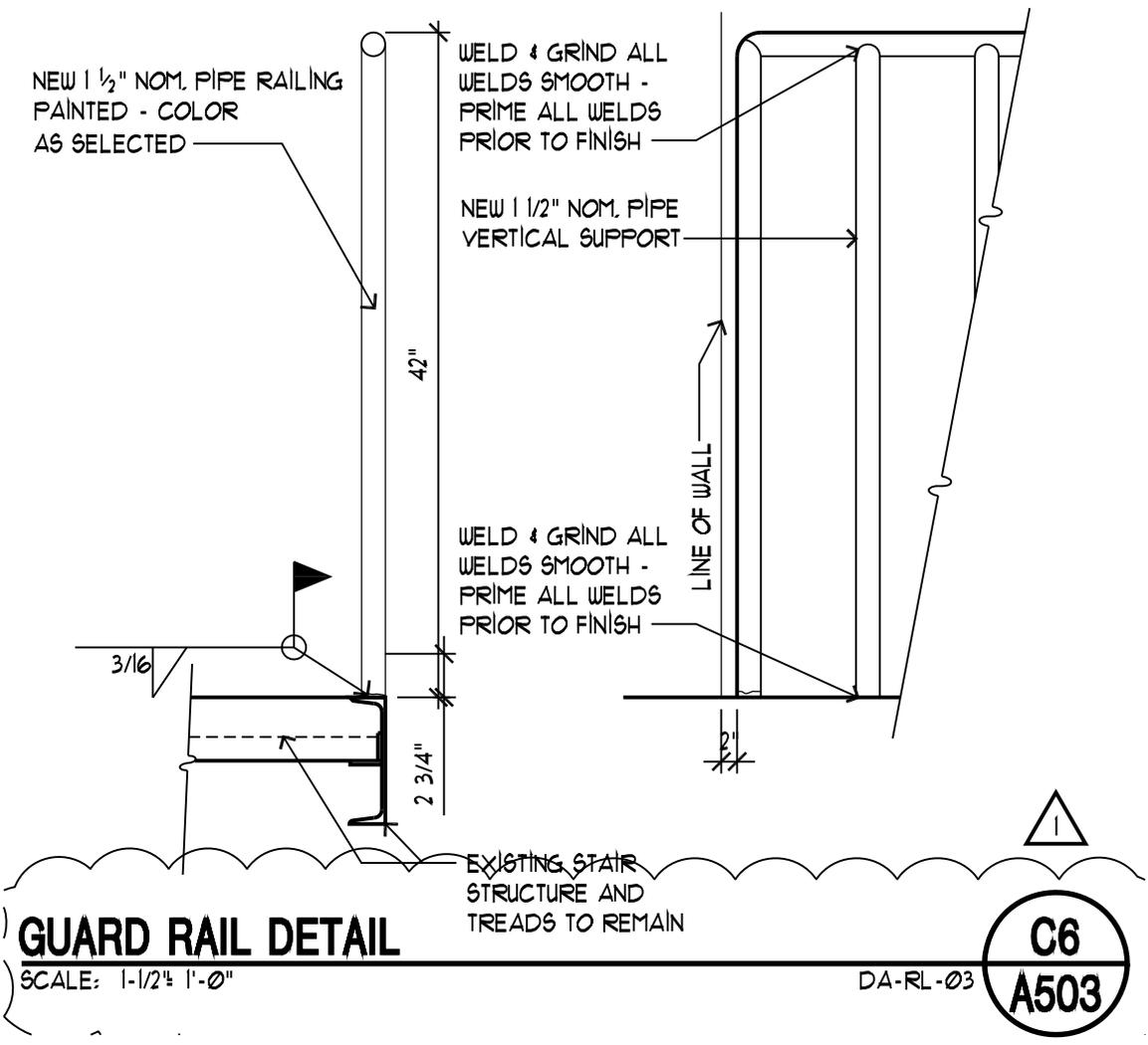


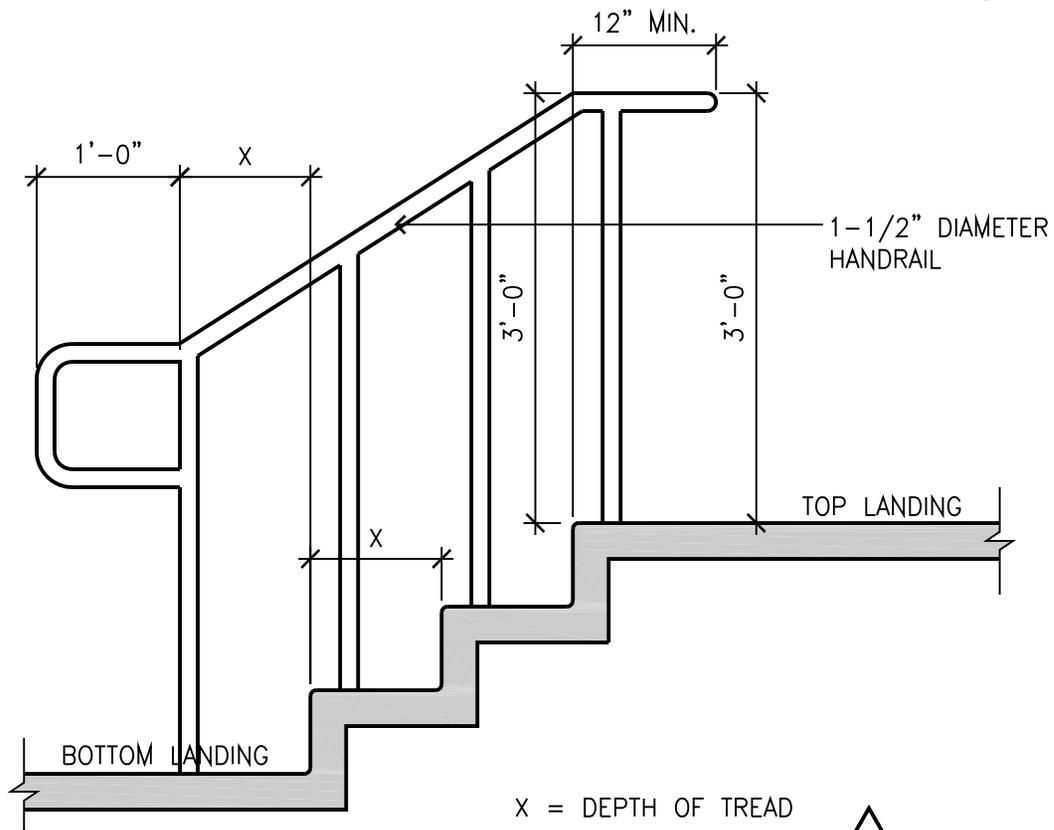
PIPE RAIL DETAIL

SCALE: 1" = 1'-0"

DA-RL-02

C5
A503





ICC/ANSI A117.1-2003 SECTION 505.10



HANDRAIL EXTENSIONS

SCALE: $\frac{3}{4}'' = 1'-0''$

DA-AC-46



E

D

C

B

A

By: pendant, Dec 14, 2009 - 12:06pm, X:\Projects\2009\09184-0201 - 0106 Army Remodel\Fillmore\MSJ - M02 - 09184-00.dwg

FURNACE SCHEDULE													
SYMBOL	INPUT MBTU	OUTPUT MBTU	CFM	OA	EXT. S.P.	FAN SPEED	FILTER NO.	FILTER SIZE	H.P.	VOLT	MOTOR DRIVE	MANUFACTURER AND MODEL NO.	COMMENTS
F-1	97	73	1400	70	0.58	HIGH	1	20"x25"x1"	1/2	1	60	TRANE #TUH1C100A9481A	①③④⑤⑥⑦⑧⑩⑫
F-2	60	45	700	300	0.69	MED	1	17"x25"x1"	1/3	1	60	TRANE #TUH1B080A9361A	①③④⑤⑥⑦⑧⑩⑫
F-3	80	60	1190	590	0.62	HIGH	1	17"x25"x1"	1/2	1	60	TRANE #TUH1B080A9421A	①③④⑤⑥⑦⑧⑩⑫
F-4	97	73	1400	100	0.58	HIGH	1	20"x25"x1"	1/2	1	60	TRANE #TUH1C100A9481A	①③④⑤⑥⑦⑧⑩⑫
F-5	80	60	1190	460	0.62	HIGH	1	17"x25"x1"	1/2	1	60	TRANE #TUH1B080A9421A	①③④⑤⑥⑦⑧⑩⑫

① AFUE - 95 ② AT ELEVATION ③ R-410 ④ PROVIDE W/ EVAPORATOR BY SAME MANUFACTURER ⑤ NATURAL GAS KIT ⑥ CONCENTRIC VENT KIT
 ⑦ CONDENSER, EVAPORATOR AND FURNACE BY SAME MANUFACTURER ⑧ STATIC PRESSURE LOSS IS EXTERNAL TO FURNACE AND DX COIL
 ⑨ DIRECT DRIVE ⑩ VERTICLE INSTALLATION ⑪ 7-DAY PROGRAMMABLE THERMOSTAT ⑫ HORIZONTAL INSTALLATION

CONDENSING UNIT SCHEDULE												
CODE	MFR. & MODEL NO.	SEN. MSH	AMB. TEMP.	SEER	SUCTION TEMP.	NOMINAL UNIT SIZE	FLA	MCA	MOP	VOLTAGE/PHASE	REMARKS	
CU-1	TRANE #41TA3036A3000	27	95	13	45	3.0	12.1	15	-	208 / 3	①②③④⑤⑥⑦⑧⑨⑩	
CU-2	TRANE #41TA3048A3000	32	95	13	45	4.0	15.9	20	-	208 / 3	①②③④⑤⑥⑦⑧⑨⑩	
CU-3	TRANE #41TA3048A3000	32	95	13	45	4.0	15.9	20	-	208 / 3	①②③④⑤⑥⑦⑧⑨⑩	
CU-4	TRANE #41TA3048A3000	32	95	13	45	4.0	15.9	20	-	208 / 3	①②③④⑤⑥⑦⑧⑨⑩	
CU-5	TRANE #41TA3036A3000	27	95	13	45	3.0	12.1	15	-	208 / 3	①②③④⑤⑥⑦⑧⑨⑩	

① PROVIDE WITH FUSED DISCONNECT ② CONNECT TO EVAPORATOR COIL FURNACE WITH SAME NUMBER (e.g. FC-1 CONNECT TO CU-1)
 ③ FACTORY INSTALLED ACCUMULATOR ④ ANTI-SHORT CYCLE ⑤ LOW AMBIENT CONTROL ⑥ HIGH/LOW PRESSURE SWITCH
 ⑦ CONDENSER, EVAPORATOR AND FURNACE BY SAME MANUFACTURER ⑧ INSTALL CONDENSERS ON ROOF ABOVE FURNACE
 ⑨ REFRIGERANT LINE SETS AS RECOMMENDED BY MANUFACTURER
 ⑩ EXTERIOR SUCTION LINE INSULATION TO HAVE MANUFACTURER RECOMMENDED WEATHER / UV PROTECTION

ENERGY RECOVERY VENTILATOR ERV-																											
PLAN CODE	AREA/UNIT SERVED	SUPPLY CFM	EXHAUST CFM	LATENT EFFECTIVENESS (%)	SENSIBLE EFFECTIVENESS (%)	TOTAL EFFECTIVENESS (%)	SUPPLY AIR CONDITIONS										ELECTRICAL	MANUFACTURER MODEL #	REMARKS								
							SUMMER					WINTER								DESIGN LOADS							
							DB (°F)	WB (°F)	ENTHALPY (Btu/lb)	RH (%)	DB (°F)	WB (°F)	ENTHALPY (Btu/lb)	RH (%)	OA SENSIBLE	OA LATENT				OA TOTAL	TOTAL RECOVERED	OA SENSIBLE	OA LATENT	OA TOTAL	TOTAL RECOVERED	VOLTS/PHASE	FLA
ERV-1	RTU-1	6000	6000	62.7	70.0	69.3	81.0	60.39	29.15	32.5	48.28	38.26	-	-	108,047	12,725	120,772	83,750	415,233	109,848	525,080	343,648	208/3	31.06	38.83	MICROMETL ERV H	①②③④⑤⑥

① MONO CURB. ERV AND RTU TO BE MOUNTED ON THE SAME CURB. ② OUTSIDE AIR CFM AND EXHAUST AIR CFM AIRFLOWS ARE MAINTAINED BY ERV
 ③ BUILDING PRESSURE CFM CONTROL WITH CO2 SENSOR. CFM AIRFLOWS ARE MAINTAINED BY ERV. THE BUILDING PRESSURE SENSOR WILL CONTROL HOW MUCH AIR LEAVES THE BUILDING THUS MAINTAINING BUILDING PRESSURE TO 0.05" OF WATER COLUMN. CO2 SENSOR WILL CONTROL THE CARBON DIOXIDE TO A PRESET LEVEL. (400ppm)
 ④ SEPERATE POWER FROM RTU. PROVIDE DISCONNECT ⑤ INSTALL PER MANUFACTURERS REQUIREMENTS
 ⑥ ALTERNATE #3 DELETE ERV

EXHAUST FAN SCHEDULE EF-															
PLAN CODE	AREA SERVED	TYPE	CFM @ ELEV.	ESP	FAN RPM	MOTOR			DAMPER TYPE	METHOD OF CONTROL	OPENING SIZE	OPERATING WT. (LBS)	MANUFACTURER / MODEL	COMMENTS	
						B.H.P.	H.P.	EFFICIENCY %							
EF-1	RESTROOMS	WALL MOUNTED CENTRIFUGAL	730	0.375	1076	0.073	1/6	92	115/1	10.2	BACKDRAFT	①	12" SQ	60	COOK # 120ACWB

① 2 MOTION DETECTORS. ONE DETECTOR IN MEN'S RESTROOM AND ONE DETECTOR IN WOMEN'S RESTROOM. FAN SHALL RUN FOR AN EXTRA 20 MINUTES AFTER MOTION IS NO LONGER DETECTED.

MINI-SPLIT SYSTEM AIR CONDITIONER AC-																		
PLAN CODE	COOLING CAPACITY (BTUH)	HEATING CAPACITY (HEAT PUMP CYCLE) (BTUH)	VOLTAGE & PHASE	F.L.A. (INDOOR UNIT)	F.L.A. (OUTDOOR UNIT)	MAX FUSE SIZE (AMPS)	CIRCUIT AMPACITY	CFM (INDOOR)	CFM VENTILATION	CONTROL	SEER	INDOOR UNIT DIMENSIONS (IN.)			FAN SPEEDS	MANUFACTURER & MODEL NO.	REMARKS	
												L	H	D				
AC-1	9000	-	115/1	-	7.6	20	20	282	-	THERMOSTAT	16	32	12	8	3	-	SANYO #99KLS71	①②③④⑤⑥⑦⑧⑨⑩

① LOW AMBIENT CONTROL ② EQUIPMENT PAD ③ THERMOSTAT ④ CONDENSER ⑤ MANUFACTURER RECOMMENDED REFRIGERANT PIPING ⑥ WHITE LATEX PAINT ON EXTERIOR SUCTION LINE INSULATION
 ⑦ FUSED DISCONNECT ⑧ CRANKCASE HEATER ⑨ CONDENSATE PUMP ⑩ R-410A REFRIGERANT



jsa architects
 architects
 planners
 interior designers
 6465 South 3000 East
 Suite 205
 Salt Lake City, UT 84121
 Ph: 801.733-2500
 Fax: 801.733-2501
 www.jsa-llc.com

CREATED BY: JSA ARCHITECTS

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CONSULTANT:



1040 North 2200 West, Suite 100
 Salt Lake City, UT 84116
 Phone: (801) 359-3158
 Fax: (801) 521-4114

BUILDING NAME:

FILLMORE ARMORY
 UTAH NATIONAL GUARD

PROJECT TITLE:

FILLMORE ARMORY REMODEL

MARK	DATE	DESCRIPTION
1/A	12-16-09	ADDENDUM 1

ISSUE TYPE: CONST. DOCUMENT SET

ISSUE DATE: 12/14/2009

DFCM PROJECT NO: 09242470
 PVE PROJECT NO: 09194.00.01
 CAD DWG FILE: M0.1 - M0.2 - 09194.00
 DRAWN BY: PVE
 CHK'D BY: ADS
 COPYRIGHT: STATE OF UTAH

SHEET TITLE

MECHANICAL SCHEDULES

SHEET NUMBER

M-002

SHEET 36 OF 53

JOB NO. U915-085-091

DATE $\triangle 1$ 12-31-09

PROJECT FILLMORE ARMORY REMODEL

SHEET OF

SUBJECT DETAIL 6/S-401

DESIGNED BDY CHECKED BDY

